Preliminary Economic Assessment of the Yerington Copper Project

Lion Copper and Gold Corp.

Yerington, Nevada
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Forward Looking Statements

This Technical Report, including the economics analysis, contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of applicable Canadian securities laws. While these forward-looking statements are based on expectations about future events as at the effective date of this Report, the statements are not a guarantee of Lion CG's future performance and are subject to risks, uncertainties, assumptions, and other factors, which could cause actual results to differ materially from future results expressed or implied by such forward-looking statements. Such risks, uncertainties, factors, and assumptions include, amongst others but not limited to metal prices, mineral resources, mineral reserves, capital and operating cost forecasts, economic analyses, smelter terms, labor rates, consumable costs, and equipment pricing. There can be no assurance that any forward-looking statements contained in this Report will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements.

1 SUMMARY

1.1 Introduction

Lion Copper and Gold Corp. (Lion CG), a Canadian-based mine development company, and its wholly owned U.S. subsidiary, Singatse Peak Services, LLC (SPS), is dedicated to advancing the Yerington Copper Project (Project) in Lyon County, Nevada.

The Yerington Copper Project holds the opportunity to develop a new mine in a historical mining district. Lion CG intends to bring it back into production through the adoption of new processing technologies and a respectful approach to the environment and local communities in the vicinity of the Project.

This Technical Report (Report), prepared by AGP Mining Consultants Inc. (AGP) on behalf of SPS, aims to present the findings of the Preliminary Economic Assessment (PEA) conducted on the Yerington Copper Project in Lyon County, Nevada. This Report adheres to Canadian disclosure requirements under National Instrument 43-101 (NI 43-101) and meets the stipulations of Form 43-101 F1. The Mineral Resources considered for the Yerington Copper Project PEA encompass the Yerington Deposit, W-3 stockpile, Vat Leach Tails (VLT) stockpile and MacArthur Deposit. Unless otherwise stated, all monetary figures presented in this Report are denominated in U.S. Dollars.

The PEA indicates that the Yerington Copper Project holds potential for phased open pit mining. These pits would feed sulfide material to a dedicated Nuton™ (Nuton) Heap Leach Facility (HLF) equipped with a 17 Mtpa crushing and agglomerating system that employs conveyors for material stacking on the HLF. Additionally, oxide material would be placed on a separate HLF near the sulfide facility, involving run-of-mine (ROM) oxide from Yerington and the residuals composed of the W-3 and VLT stockpiles. Oxide material from MacArthur would undergo sizing, conveying, agglomeration and then stacking on the oxide HLF, facilitated by a 25 Mtpa system.

The total sulfide and oxide material stacked would amount to 450.3 Mtons with a grade of 0.21% copper. Of this, the sulfide tonnage of 148.5 Mtons with a grade of 0.29% copper would undergo crushing and agglomeration before placement on the Nuton HLF, while the remaining oxide tonnage of 301.9 Mtons with a grade of 0.18% copper would be situated in the oxide HLF. The processing facility would encompass a conventional solvent extraction electrowinning (SXEW) plant with the integration of Nuton technologies for processing the sulfide materials placed on the heap leach. The proposed site layout, illustrating the locations of proposed mining and processing facilities, is depicted in Figure 1-1.

At a copper price of $3.85/lb, the Project demonstrates an after-tax Internal Rate of Return (IRR) of 17.4% and a pay-back period of 5.0 years from the start of production. Using a discount rate of 7%, the after-tax Net Present Value (NPV) stands at an estimated $356 million.

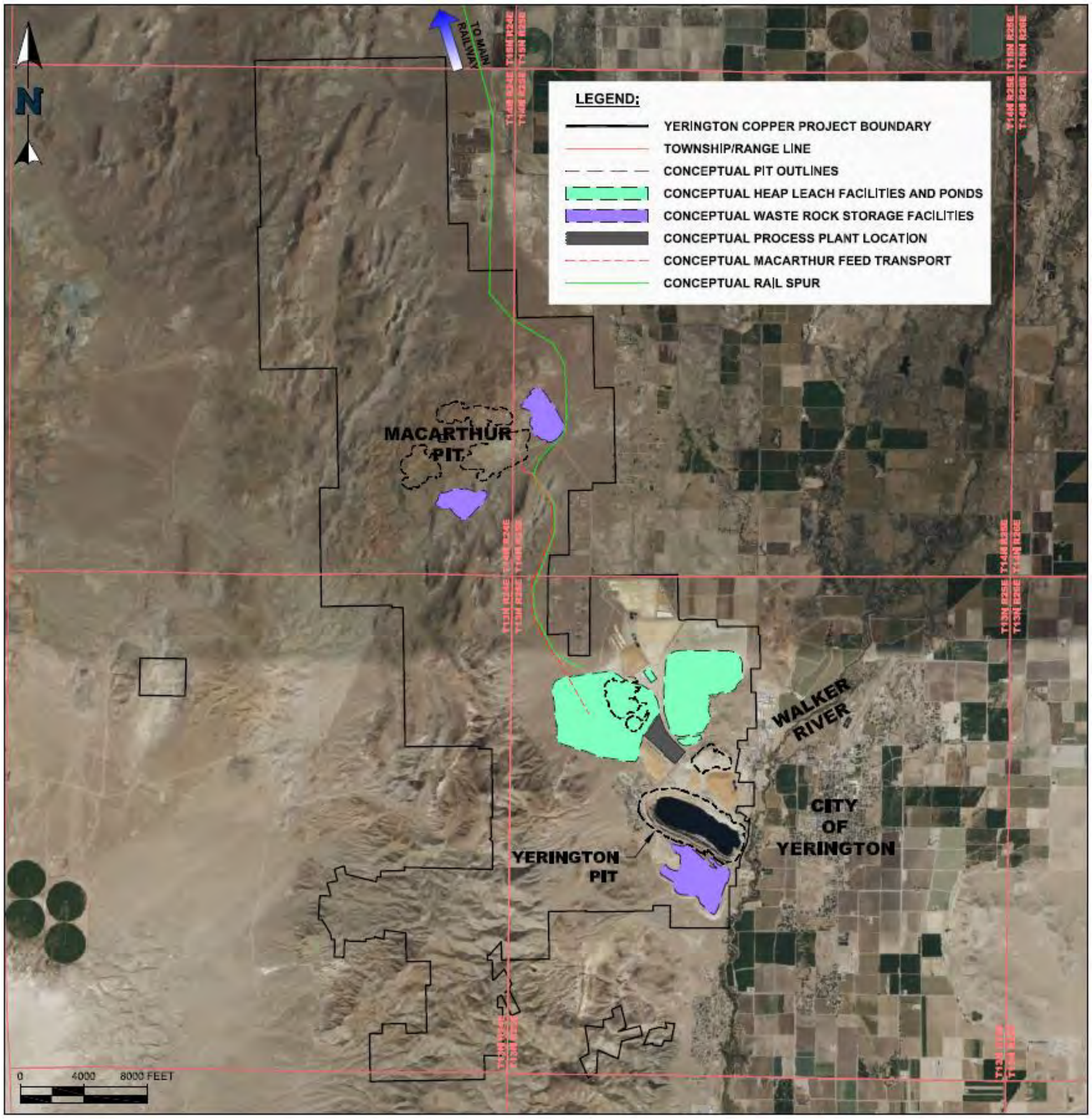
The Project's life-of-mine capital cost is estimated at $1,067 million, comprising an initial capital expenditure of $413 million and sustaining capital of $653 million.

The PEA draws upon Measured, Indicated, and Inferred resources from the Yerington Deposit, W-3 stockpile, VLT stockpile and MacArthur Deposit areas for potential economic calculations. There is no certainty the assumptions utilized in the PEA will be realized. Inferred mineral resources are considered too speculative, lacking geological certainty to be classified as reserves, and do not demonstrate economic viability.

Based on the outcomes of the PEA study, AGP recommends that Lion CG proceed with a Prefeasibility Study (PFS) as part of the project development plan to facilitate informed project execution decisions. The Report provides recommendations and associated budgets to ensure that adequate information is available for further Project advancement.

Given the current Project information level, AGP does not foresee any Mineral Resources, potential economic issues or environmental concerns that would impede the Project from advancing to subsequent stages of study.

Figure 1-1: Yerington Copper Project Site Layout



Source: NewFields 2023

1.2 Location, Property Description and Ownership

The Yerington Copper Project is located near the geographic center of Lyon County, Nevada, U.S.A., along the eastern flank of the Singatse Range. The Project includes both the historical Yerington Property, flanked on the west by Weed Heights, Nevada (a small private community, the original company town of the Anaconda Company), and the historic MacArthur open pit located approximately 4.5 miles to the northwest. The Project is bordered on the east by the town of Yerington, Nevada which provides access via a network of paved and gravel roads that were used during previous mining operations. The Project consists of 5 fee simple parcels and 82 patented mining claims totalling 2,767.66 acres, and 1,113 unpatented lode and placer claims totalling 22,996 acres. The unpatented claims are located on lands administered by the U.S. Department of Interior, Bureau of Land Management (BLM).

1.3 History

Recorded production in the Yerington mining district dates back to 1883 (Moore, 1969) as prospectors were attracted to and investigated colorful oxidized copper staining throughout the Singatse Range. Knopf (1918) reported that oxidized copper cropped out at the historic Nevada-Empire mine located above the south center of the present-day Yerington open pit. Knopf does not show or reference other mines or prospects that are underlain by the Yerington open pit footprint, as gravel and alluvial cover obscure bedrock over an approximate 0.75-mile radius around the Nevada-Empire Mine.

Information is sparse for the period from Knopf's reporting in 1918 until World War II, although it is likely that lessees worked in the Nevada-Empire during spikes in the copper price. Private reports (Hart, 1915 and Sales, 1915) describe ore shipments and planned underground exploration from a northwest striking, southwest dipping structure at the historic Montana-Yerington Property area located approximately one mile west of the present-day Yerington pit.

During the 1940s, the Anaconda Company (Anaconda), at that time one of world's major copper producers, sent geologists to the Yerington district whose exploration outlined a 60-million-ton resource over the Yerington pit. During the early 1950s, the US government, citing the need for domestic copper production, offered "start-up" subsidies to Anaconda to open a copper mine in the Yerington district. Anaconda sank two approximately 400-foot-deep shafts in the present-day open pit and drove crosscuts to obtain bulk samples of oxidized rock for metallurgical study. Anaconda began operating the Yerington Property in 1952 and mined continually through 1979, producing approximately 1.744 billion pounds of copper from an ore body that contained 162 million tons averaging 0.54% Cu. Approximately 104 million tons of this total were oxidized copper ore that was "vat leached" with sulfuric acid in 13,000-ton cement vats on a seven-day leach cycle. Sulfide ores were concentrated on site in a facility that was dismantled and sold following termination of mining in 1979. The cement copper and sulfide concentrates were shipped to the Anaconda's smelter in Montana.

In 1976, all assets of Anaconda, including the Yerington Property, were purchased by the Atlantic Richfield Company (ARC), which subsequently shut down dewatering pumps in the pit and closed the Yerington Property in 1979 due to low copper prices. At closure, before dewatering pumps were shut off, the Yerington Property plan hosted a pre-stripped, non-NI 43-101 compliant reserve of 98 million tons averaging 0.36% Cu (Howard, 1979) within the ultimate pit design.

The Yerington Property and adjacent Weed Heights mining camp were acquired by CopperTek, a private Yerington company owned by Mr. Don Tibbals, in 1982. In the mid-1980's CopperTek began reprocessing waste rock and VLTs on Heap Leach Pads (HLPs), including an SXEW plant to produce cathode copper. CopperTek was acquired by Arimetco Inc. (Arimetco) in 1989. In 1989, Arimetco purchased the mine property from CopperTek, commissioned a 50,000-pound-per-day SXEW plant, and began heap leaching "sub-grade" dump rock stripped from the Yerington pit by Anaconda. Arimetco also processed VLTs (minus 3/8-inch oxidized tailings leached during Anaconda's operation) to some HLPs as well as trucked oxidized ore from the MacArthur property located approximately five miles north of the Yerington Property. Arimetco produced some 95 million pounds of copper from 1989 to 1999 before declaring bankruptcy in 1997 due to low copper prices. Arimetco terminated mining operations in 1997 and abandoned the property in early 2000.

In early 2000 the Nevada Division of Environmental Protection (NDEP) assumed operation of the Yerington Property on a care and maintenance basis, primarily to ensure that HLP drain down solutions would continue to be maintained.

Following four years of due-diligence studies and negotiations with state and federal agencies, the property was acquired by SPS from the Arimetco bankruptcy court in April 2011, after receiving bona fide prospective purchaser (BFPP) letters from the USEPA, NDEP and BLM to protect SPS from liability emanating from activities of the former mine owners and operations.

The Yerington Property is undergoing active remediation of the former Anaconda and Arimetco mining operations. with remediation efforts for priority Operable Units (OUs) such as the existing HLPs being completed in 2022 (WSP, 2023).

1.4 Geological Setting and Mineralization

The Yerington Property (the Property) includes both the Yerington Deposit and a portion of the Bear Deposit which represent two of three known porphyry copper deposits in the Yerington district. Like the Mason copper-molybdenum property located 2.5 miles to the west, the Yerington and Bear Deposits are hosted in Middle Jurassic intrusive rocks of the Yerington Batholith.

Copper mineralization on the Property occurs in all three phases of the Yerington Batholith. Intrusive phases, from oldest to youngest, are known as the McLeod Hill Quartz Monzodiorite (field name granodiorite), the Bear Quartz Monzonite, and the Luhr Hill Granite, the source of quartz monzonitic (i.e. granite) porphyry dikes related to copper mineralization.

Following uplift and erosion, a thick Tertiary volcanic section was deposited, circa 18-17 Ma. This entire rock package was then extended along northerly striking, down-to-the-east normal faults that flatten at depth, creating an estimated 2.5 miles of west to east dilation-displacement (Proffett and Dilles, 1984). The extension rotated the section such that the near vertically emplaced batholiths were tilted 60° to 90° westerly. Pre-tilt, flat-lying Tertiary volcanics now crop out as steeply west dipping units in the Singatse Range west of the Property. The easterly extension thus created a present-day surface such that a plan map view represents a cross-section of the geology.

1.4.1 Yerington Porphyry Copper Deposit

The Yerington Mine produced approximately 162 million tons of ore grading 0.54% Cu, of which oxide copper ores amenable to leaching accounted for approximately 104 million tons. A 1971 snapshot of head grades shows oxide mill head grade averaging 0.53% Cu and sulfide grades ranging from 0.45% to 0.75% Cu (D. Heatwole, personal communication).

The general geometry of copper mineralization below the Yerington pit is an elongate body extending 6,600 feet along a strike of S62ºE. The modeled mineralization has an average width of 2,000 feet and has been defined by drilling to an average depth of 400-500 feet below the pit bottom at the 3,500-foot elevation.

The copper mineralization and alteration throughout the Yerington district and at the Yerington Property are unusual for porphyry copper camps in that the mineralization is “stripey”, occurring in WNW striking bands or stripes between materials of lesser grade. Clearly, much of this geometry is influenced by the strong, district-wide WNW structural grain observed in fault, fracture and, especially, porphyry dike orientations. Altered, mineralized bands range in width from tens of feet to 200-foot-wide mineralized porphyry dikes mined in the Yerington pit by Anaconda.

Oxide copper occurred throughout the extent of the Yerington pit, attracting the early prospectors who sank the Nevada-Empire shaft on copper showings located over the present-day south-central portion of the pit. To extract the copper oxides, Anaconda produced sulfuric acid on site, utilizing native sulfur mined and trucked from Anaconda’s Leviathan Mine located approximately 70 miles west of Yerington.

Greenish, greenish blue chrysocolla ($CuSiO_3.2H_20$) was the dominant copper oxide mineral, occurring as fracture coatings and fillings, easily amenable to an acid leach solution. Historic Anaconda drill logs note lesser neotocite, aka black copper wad (Cu, Fe, Mn), SiO_2 and rare tenorite (CuO) and cuprite (Cu_2O). Oxide copper also occurs in iron oxide/limonite fracture coatings and selvages.

Chalcopyrite ($CuFeS_2$) was the dominant copper sulfide mineral occurring with minor bornite (Cu_5FeS_4) primarily hosted in A-type quartz veins in the older porphyry dikes and in quartz monzonite and granodiorite, as well as disseminated between veins in host rock at lesser grade. The unmined mineralized material below the current pit bottom is primarily of chalcopyrite mineralization.

1.4.2 MacArthur Deposit

The MacArthur Deposit is a large copper mineralized system containing near-surface acid soluble copper and the potential for a significant primary sulfide resource that remains underexplored (IMC, 2022). The MacArthur Deposit is one of several copper deposits and prospects located near the town of Yerington that collectively comprise the Yerington Mining District. The MacArthur Deposit is underlain by Middle Jurassic granodiorite and quartz monzonite intruded by west-northwesterly-trending, moderate to steeply north-dipping quartz porphyry dike swarms.

The MacArthur Deposit consists of a 50 to 150-ft thick, tabular zone of secondary copper (in the form of oxides and/or chalcocite) covering an area of approximately two square miles. This mineralized zone has yet-to-be fully delineated. Limited drilling has also intersected underlying primary copper mineralization open to the north, but only partially tested to the west and east.

Oxide copper mineralization is most abundant and particularly well exposed in the walls of the legacy MacArthur pit. The most common copper mineral is chrysocolla; also present is black copper wad (neotocite) and trace cuprite and tenorite. The flat-lying zones of oxide copper mirror topography, exhibit strong fracture control and range in thickness from 50 to 100 feet. Secondary chalcocite mineralization forms a blanket up to 50 feet or more in thickness that is mixed with and underlies the oxide copper. Primary chalcopyrite mineralization has been intersected in several locations mixed with and below the chalcocite. The extent of the primary copper is unknown as many of the holes bottomed at 400 feet or less.

The MacArthur Deposit is part of a large, partially defined porphyry copper system that has experienced complex faulting and post-mineral tilting. Events leading to the current geometry and distribution of known mineralization include: 1) Middle Jurassic emplacement of primary porphyry copper mineralization by quartz monzonite dikes intruding the Yerington batholith; 2) Late Tertiary westward tilting of the porphyry deposit from 60° to 90° through Basin and Range extensional faulting; 3) secondary (supergene) enrichment resulting in the formation of a widespread, tabular zone of secondary chalcocite mineralization below outcrops of oxidized rocks called leached cap; 4) oxidation of outcropping and near-surface parts of this chalcocite blanket, as well as oxidation of the primary porphyry sulfide system.

1.5 Exploration Status

The Yerington pit area has a rich history of exploration, with extensive drilling conducted by Anaconda, ultimately leading to the extraction of over 1.7 billion pounds of copper.

Lion CG (formerly known as Quaterra Resources, Inc., or Quaterra) has primarily focused its exploration efforts at the Yerington Property on drilling activities conducted along the accessible pit ramps and access roads surrounding the Yerington pit.

1.5.1 Historical Exploration

During the 1952 to 1979 period of mine operation at the Yerington Property, Anaconda completed a number of geophysical surveys, including an aeromagnetic survey, ground magnetic surveys and induced polarization-resistivity (IP) surveys. Published gravity data were examined to estimate alluvial thicknesses in Mason Valley east of the Yerington Property. These surveys covered much more additional ground than SPS's current Property.

One of the more successful ore-finding geophysical techniques was an in-situ IP and magnetic susceptibility survey taken over the pit floor during mining advance. This technology and innovation, developed by Anaconda geophysicist G.H. Ware, was able to define mineralization by tracking secondary magnetite alteration associated with the ore-bearing QMP1 dike within the Yerington pit (Ware, 1979).

In late 2007 and early 2008, Quaterra commissioned a helicopter magnetometer survey covering the entire Yerington district, including the Yerington Property (EDCON-PRJ, 2008). The survey featured a line spacing of 100 meters, with some areas further detailed at a 50-meter separation. Additionally, two helicopter surveys conducted under Anaconda's contract were digitized from contour maps and integrated into the larger district-wide survey. The objective was to create a magnetic dataset for the entire district with significantly improved resolution compared to previous work by Anaconda. The survey commenced in December 2007, concluding in the first quarter of 2008. It resulted in the acquisition of 2,685-line miles of new aeromagnetic data, with an additional 4,732-line miles of older data digitized. This enhanced dataset has been extensively utilized throughout the district to identify new exploration targets and refine targets previously identified by Anaconda.

1.5.2 IP Survey (2016-2017)

A comprehensive IP survey was conducted through the Yerington pit during two separate time periods: November 15-19, 2016, and January 17-19, 2017, led by Zonge International (2017). The survey employed the dipole-dipole method with a dipole length of 300 meters, encompassing readings taken from N=1 to 16, probing responses to an approximate depth of 900 meters below the surface. Given that the survey line traversed the existing pit, including the Yerington Pit Lake (Pit Lake), certain receiver and transmitter stations had to be strategically placed on the pit floor beneath the Pit Lake.

Receiver electrodes within the Pit Lake comprised 1-inch diameter stainless steel rods, each measuring 4 feet in length. Transmitter electrodes, also within the Pit Lake, were constructed from 1-inch diameter copper tubing, 6 feet in length, and filled with steel shot. Electrode placement on the pit floor was facilitated from a small aluminum drift boat. The entire length of the survey line extended to 5.4 kilometers, with approximately 600 meters traversing through the pit itself.

The data quality obtained was good, revealing the presence of four anomalous IP zones. One of these zones, referred to as the 'Native Copper zone,' lies to the south of the pit and aligns with an anomalous zone identified in previous surveys conducted by Anaconda. This zone spans over 500 meters along the survey line and exhibits an intrinsic IP response of 25 milliradians, equivalent to approximately 1-2% by volume of metallic sulfides. Its estimated depth to the top of the zone is 400 meters below the surface.

Directly beneath the Pit Lake, a robust IP anomaly measuring 500 meters in width was detected. This anomaly demonstrates an intrinsic value exceeding 40 milliradians, equating to 3-5% by volume of metallic sulfides.

Two additional anomalies were identified north of the pit, one situated within the mine-waste dumps and the other in the Groundhog Hills area. The anomaly within the waste dumps is relatively shallow and displays weaker intensity, ranging from 20-25 milliradians. Conversely, the anomaly in the Groundhog Hills area exhibits somewhat greater strength, measuring between 25-30 milliradians in magnitude, with the top of the zone estimated to be at a depth of 200 meters below ground-surface.

While the magnetic data across much of the district indicates magnetic lows associated with mineralized areas (such as the Yerington pit, MacArthur, Bear, and Mason), detailed work discussed in section 9.1.1 by Hunter Ware suggests that a coincidence of increased magnetic response and higher IP response defines the higher-grade copper zones. The helicopter magnetic data underwent a 3D Magnetic Vector Inversion (MVI) conducted by a third-party geophysical company. MVI is an inversion technique that takes into account both induced and remnant magnetization (MacLeod, & Ellis., 2013).

1.6 Drilling

Anaconda conducted considerable exploration and production drilling during its long tenancy of the project which resulted in the existing Yerington pit. Although the actual number of exploration drill holes and footages is unknown, historic records indicate that well over a thousand holes, including both core and rotary, were drilled in exploration and development at the Yerington pit alone.

SPS's 2011 drilling program totaled 21,887 feet in 42 holes including 6,871 feet of core in 14 core holes and 15,016 feet of reverse circulation (RC) in 28 RC holes. The core holes and four RC holes were drilled to twin Anaconda core holes, while the remaining RC holes were targeted for expansion of mineralization laterally and below historic Anaconda drill intercepts along the perimeter of the Yerington pit.

Drill hole siting was hampered by pit wall geometry and by the presence of the Pit Lake and was confined to selected benches within the Yerington pit in order to maintain safe access around the existing Pit Lake.

The 2017 and 2022 drilling focused on deeper drill holes to confirm the extents of mineralization. Lion CG completed an additional seven holes totalling 15,636.7 feet. Four of the holes were collared in RC and changed to core.

1.6.1 Residual Drilling

The Yerington Property hosts numerous locations with low-grade mineralization and waste dumps. Some of these sites have been subjected to post-deposition sampling to ascertain their average grade and undergo metallurgical testing. This Report focuses on two specific areas for the estimation of mineral resources (Figure 1-2):

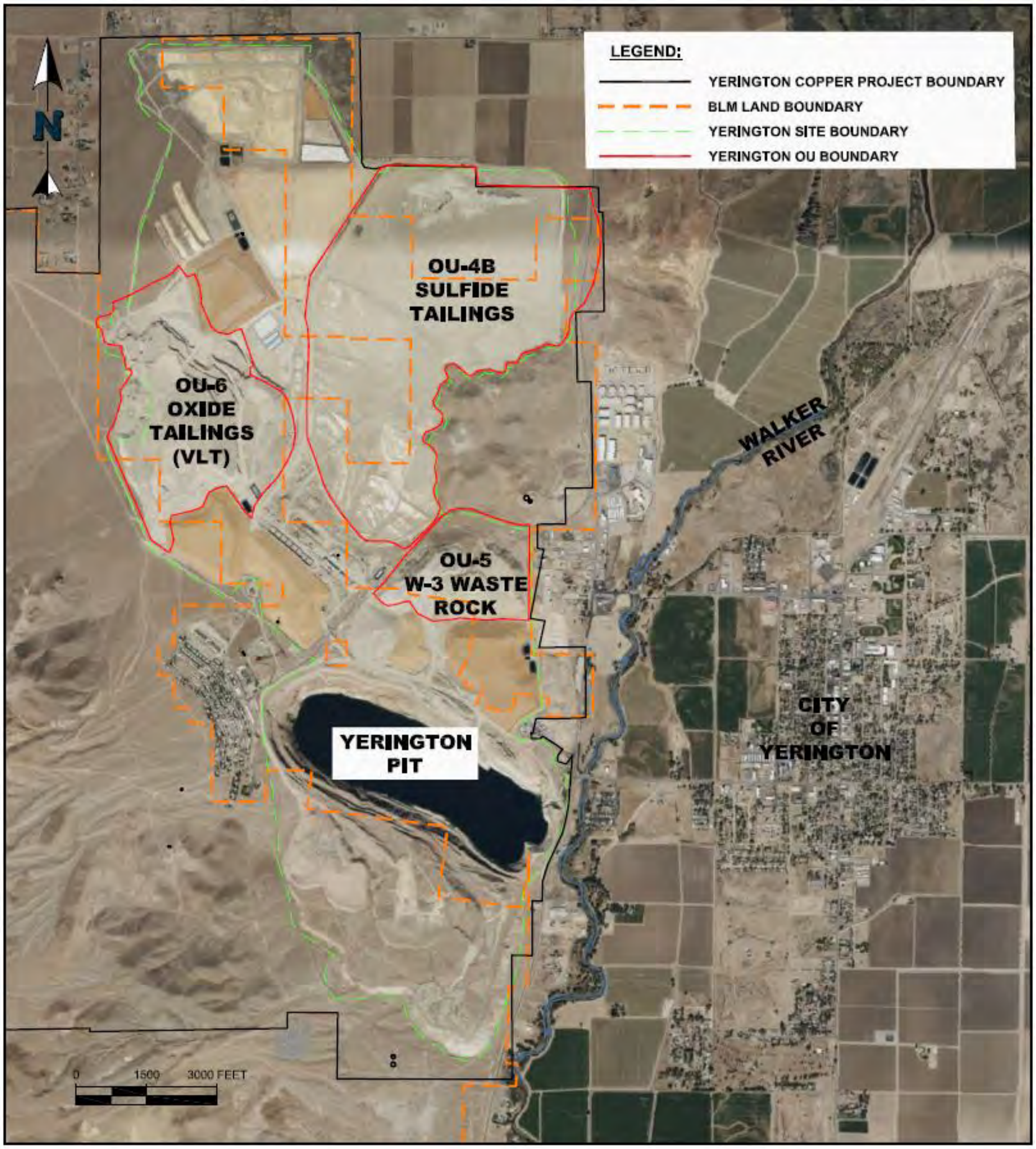
- W-3: This rock disposal unit, situated to the north of the Yerington pit, falls under remediation Operable Unit (OU-5)
- VLT: These low-grade oxide tailings, located northwest of the Yerington pit, belong to remediation Operable Unit (OU-6).

In 2012, as a follow-up to the SRK 2012 report, SPS executed a drilling program that included fourteen Roto-Sonic drill holes (including one twin hole) carried out by Major Drilling. These holes ranged in depth from 95 to 165 feet, with eleven of them being available for subsequent sampling.

METCON Research (METCON) conducted a metallurgical study on behalf of SPS to support a scoping study for the Anaconda VLT (Phase I) Project in Yerington, Nevada. The metallurgical study utilized samples collected from a sonic drilling campaign, which included both wet and dry drilling, conducted on the Anaconda VLT.

For the wet drilling study, a total of 22 drill holes, designated as VLT-001 to VLT-022, were completed. In September 2012, nine dry rotosonic drill holes (Prosonic) were twinned with the wet sonic drill holes. These dry holes were configured with an 8-inch-diameter drill pipe and a 7-inch core.

Figure 1-2 : Yerington Property Layout



Source: NewFields, 2023

1.7 Mineral Processing and Metallurgical Testing

Yerington and MacArthur oxide materials are well-suited to standard heap leaching. The projected copper recoveries for these oxide materials is approximately 70% for Yerington and 75% for MacArthur, with expected net acid consumption of approximately 28.6 lb/ton and 32 lb/ton, respectively.

1.7.1 Yerington Deposits

Nuton technologies comprise a proprietary suite of Rio Tinto-developed copper heap leaching technologies aimed to recover primary copper sulfides. Copper recoveries from Yerington sulfide materials demonstrate an increase from below 25% to 74% for the sample tests to date, with an acid consumption calculated at 32 lb/ton.

At this point in time, the testing of Nuton technology on Yerington sulfide materials is ongoing. Preliminary results are highly promising.

Several synergies exist that improve the metallurgical performance of oxide materials while simultaneously reducing operating costs for both the oxide and Nuton process schemes. Notable examples include the neutralization of excess Nuton acid in the oxide HLF and the generation of ferric iron by Nuton, thereby enhancing the leaching of secondary copper minerals in the oxide feed.

The current phase of Nuton testing and optimization is anticipated to conclude in 2024.

1.7.2 MacArthur Property

Upon reviewing historical and recent metallurgical test results for the MacArthur Property, certain issues were identified that necessitate further testwork to enhance the understanding of copper recovery and sulfuric acid consumption, along with their potential impact on the Project. In 2021, a total of 13 drill holes were executed to collect fresh samples for additional metallurgical testwork, encompassing bottle roll tests and several column tests aimed at refining heap leach recovery.

Analysis of the sieve data from the column tests suggests that finer crushing may offer potential benefits at MacArthur. However, it is essential to conduct additional metallurgical testing to validate this observation and strike a balance between capital and operating costs while maximizing potential recovery improvements.

1.7.3 SXEW Processing

The SXEW facilities will be located near the Nuton HLF. This technology is well-established and has a proven track record in industrial applications, resulting in the production of LME Grade A copper cathode using widely accepted industry reagents. The engineering and design of the SXEW facility is modular in nature, enabling shorter construction timelines and the flexibility to expand as necessary during the ramp-up phase. The initial SXEW production capacity is set at 70 million pounds per annum of copper cathode, with the capability to increase to 140 million pounds per annum through the addition of supplementary SXEW modules. The cathode stripping equipment is highly automated, effectively minimizing labor costs.

1.8 Mineral Resource Estimates

1.8.1 Yerington Copper Project

AGP updated the Yerington Copper Project Mineral Resource estimate, encompassing Measured, Indicated, and Inferred Resources. Mr. Tim Maunula, P.Geo., Principal Geologist is the Qualified Person (QP) responsible for the completion of the 2023 Yerington Copper Project Mineral Resource estimate.

This Yerington Copper Project Mineral Resource estimate drew upon validated historic drill hole data generated by Anaconda, as well as current drilling results conducted by SPS in 2011, 2017 and 2022. All data were referenced to the North American Datum (NAD) 83 Nevada State Plane.

The Yerington Copper Project Mineral Resource estimate involved assay analyses and the interpretation of a geologic model, which describes the spatial distribution of copper within the Yerington Deposit. Interpolation parameters were defined based on geological considerations, drill hole spacing, and geostatistical analysis of the data. Classification of the Yerington Copper Project Mineral Resources was done based on their proximity to sample locations and their suitability for mining production. These classifications adhere to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014). The 2023 Yerington Copper Project Mineral Resource amenable to open pit extraction was reported at 0.038 % total copper (TCu) cut-off grade for oxide mineralization and 0.126 % TCu cut-off grade sulfide mineralization.

The updated Mineral Resources for the Yerington Deposit are as follows: Measured Resources of 62.9 MTons at 0.30 TCu%; Indicated Resources of 94.7 MTons at 0.27 TCu%; and Inferred Resources of 113.2 MTons at 0.22 TCu% (Table 1-1). The effective date of the Mineral Resources is May 1, 2023.

Table 1-1: 2023 Yerington Copper Project Mineral Resource Statement

Material	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs.
Measured Oxide	0.038	20,230,000	0.25	99,367,000
Measured Sulfide	0.126	42,671,000	0.32	274,578,000
Measured Total		**62,901,000**	**0.30**	**373,945,000**
Indicated Oxide	0.038	13,749,000	0.22	60,166,000
Indicated Sulfide	0.126	80,960,000	0.28	457,921,000
Indicated Total		**94,709,000**	**0.27**	**518,087,000**
Measured+Indicated Oxide	0.038	33,979,000	0.23	159,533,000
Measured+Indicated Sulfide	0.126	123,631,000	0.30	732,499,000
Measured+Indicated Total		**157,610,000**	**0.28**	**892,032,000**
Inferred Oxide	0.038	33,347,000	0.18	122,221,000
Inferred Sulfide	0.126	79,881,000	0.24	385,938,000
Inferred Total		**113,229,000**	**0.22**	**508,159,000**

Notes: Effective date for this Mineral Resource estimate is May 1, 2023.

The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.038 % TCu and 0.126% TCu based on assumptions of a net copper price of US$4.08 per pound (after smelting, refining, transportation and royalty charges), 70% recovery in oxide material, 75% recovery in sulfide material

Mineral Resource are not Mineral Reserves and do not demonstrate economic viability.

Mineral Resource estimate reported from within resource pit shell.

There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.

All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

1.8.2 W-3 Stockpile

W-3 is a rock disposal stockpile that lies north-northwest of the current Yerington pit. It was derived from subgrade copper oxide material mined during historical Anaconda mining operations. In 2012, SPS drilled fourteen Roto-Sonic drill holes.

The Mineral Resources have been classified by their proximity to the sample locations and classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014). The 2023 W-3 Stockpile Mineral Resource amenable to open pit extraction was reported at 0.04 % TCu cut-off grade. The Inferred W-3 Stockpile Mineral Resource is 14.1 million tons at 0.11 % TCu (Table 1-2). The effective date of the W-3 Stockpile Mineral Resource estimate is May 1, 2023.

Table 1-2: 2023 W-3 Stockpile Mineral Resource Statement

Class	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs.
Inferred	>= 0.04	14,100,000	0.11	30,571,000

Notes: Effective date for this W-3 Stockpile Mineral Resource estimate is May 1, 2023.

The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.040 % TCu based on assumptions of a net copper price of US$4.08 per pound (after smelting, refining, transportation and royalty charges), and 70% recovery in oxide material

Mineral Resource are not Mineral Reserves and do not demonstrate economic viability.

Mineral Resource estimate reported from within resource pit shell.

There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.

All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

1.8.3 Vat Leach Tailings

Oxide tailings, or VLT, are the leached products of Anaconda's vat leach copper extraction process (CH2M Hill, 2010). The oxide tailings dumps, located north of the Process Areas, contain the crushed rock and the red sludge at the base of the leach vats that remained following the extraction of copper in the vat leaching process.

The Mineral Resources have been classified by their proximity to the sample locations and classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014). The 2023 VLT Mineral Resource amenable to open pit extraction was reported at 0.04 % TCu cut-off grade. The Inferred VLT Mineral Resource is 33.2 million tons at 0.09 % TCu (Table 1-3). The effective date of the VLT Mineral Resource estimate is July 31, 2023.

Table 1-3: 2023 VLT Mineral Resource Statement

Class	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs.
Inferred	>= 0.04	33,160,000	0.09	62,622,000

Notes: Effective date for this VLT Mineral Resource estimate is July 31, 2023

The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.040 % TCu based on assumptions of a net copper price of US$4.08 per pound (after smelting, refining, transportation, and royalty charges), and 70% recovery in oxide material.

Mineral Resource are not Mineral Reserves and do not demonstrate economic viability.

Mineral Resource estimate reported from within resource pit shell.

There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.

All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

1.8.4 MacArthur Deposit

The Mineral Resources for the MacArthur Deposit are contained within a pit shell defined by the current understanding of costs and recovery of copper based on the intended recovery method of heap leaching using sulfuric acid. The MacArthur Deposit Mineral Resources meet the current CIM definitions for classified resources.

The cut-off grades are 0.06% TCu for all material types in the MacArthur pit area and North Ridge, and the Leach Cap, Oxide and Mixed zones in Gallagher This cut-off is at or above an internal cut-off by material type (due to variable recovery) and was selected to have a consistent cut-off for all material types. The cut-off for the Sulfide zone in Gallagher is 0.08% TCu due to the higher acid consumption and low recovery.

The Mineral Resources for the MacArthur Deposit are: Measured Resources of 116.7 MTons at 0.18 TCu%; Indicated Resources of 183.7 MTons at 0.158 TCu%; and Inferred Resources of 156.5 MTons at 0.151 TCu%. The effective date of the Mineral Resource is February 25, 2022 (Table 1-4).

Table 1-4: MacArthur Project -- Summary of Mineral Resource

Classification	Ktons	Total Cu, %	Contained Cu Pounds x 1000
Measured	116,666	0.180	420,929
Indicated	183,665	0.158	579,479
Sum Measured+Indicated	300,331	0.167	1,000,408
Inferred	156,450	0.151	471,714

IMC, 2022

Cut-off grade: 0.06% TCu for Leach Cap, Oxide & Transition; cut-off grade for Sulfide: 0.06% for MacArthur & North Ridge, 0.08% for Gallagher. Total resource shell tonnage = 628,831 ktons

1.9 Mining Methods

Open pit mining offers the most reasonable approach for development of the deposits. This is based on the size of the resource, tenor of the grade, grade distribution and proximity to topography for the deposits.

The mine schedule for open pit mining totals 450.4 Mt of heap leach feed grading 0.21% copper over a processing life of slightly more than 12 years. Open pit waste tonnages from the various areas total 136.8 Mt and will be placed into waste storage areas adjacent to the open pits. The overall open pit strip ratio is 0.30:1 (waste: feed).

Two heap leach facilities will be used to provide copper solution for the SXEW facility. One process stream will utilize the Nuton process for the leaching of sulfide feed from the Yerington pit. The other process stream will employ conventional oxide copper leaching technology with a combination of ROM material and sized material. The Nuton facility will have a peak feed rate of 17 Mtpa through a crushing plant. The Yerington pit is the only supply of sulfide material for the PEA.

The oxide material from MacArthur will be sized at site then conveyed, agglomerated, and stacked at a HLP at the Yerington Property. Peak capacity of the MacArthur sizing facility will be 25 Mtpa.

The current mine plan includes minimal pre-stripping as the bottom of the existing pit still contains material suitable for placement on a heap leach pile with conventional leaching and use of the Nuton process for the sulfide materials.

The open pit mining starts in Year 1 and continues uninterrupted until early in Year 12.

1.10 Infrastructure

Key infrastructure components include Heap Leach Facilities (HLFs) for both sulfide and oxide material, HLF ponds, Waste Rock Storage Facilities (WRSFs), a system for sizing and transporting oxide feed from the MacArthur Property to the oxide HLF at the Yerington Property, process plant, and rail spur from west of Wabuska. The oxide feed from MacArthur and Yerington will be segregated onto an oxide only HLF at the Yerington VLT stockpile after the VLT has been re-mined. Yerington sulfide feed will be handled separately to enable the focused leaching of sulfides using the Nuton process.

To minimize new disturbance areas, efforts have been made to place new infrastructure on existing disturbed areas resulting from past mining activities.

Existing site roads at both the Yerington and MacArthur Properties will be improved and used as both haul roads and as light vehicle access roads. Separate roadways will be designated for light vehicle traffic and heavy haulage equipment as a safety precaution. A rail spur has been included in the Project, facilitating the delivery of essential supplies such as acid and other bulk materials, and establishing a reliable means for transporting the finished copper while minimizing traffic on public roads.

The truck maintenance shop will be situated at the Yerington Property which serves as the focal point for initial mining activities and will continue to play a central role throughout the Project's lifespan. This facility will be designed to accommodate the proposed 100-ton haulage trucks and the necessary support equipment. To enhance convenience and efficiency, a smaller satellite shop will be established at the MacArthur Property. This satellite shop will facilitate minor repairs in close proximity to the mine, reducing the need for travel to the main shop and providing shelter from adverse weather conditions.

Grid power is readily available for the Project due to an existing line to the Yerington Property and the grid line passing within 1 mile to the east of the MacArthur Property. The existing 69kV power line on-site will undergo necessary updates and extensions to connect to the process plant and the Yerington Property. Subsequent expansion plans for the MacArthur Property are included in Year 3, timed ahead of the commencement of mining and crushing/conveying activities.

An analytical laboratory will be constructed at the Yerington Property, serving as an essential support hub for the mining and processing activities of the operation.

A 3.5-mile-long overland conveyor is planned to transport material from MacArthur to the oxide HLF at the Yerington Property. The designated corridor for this conveyor aligns with the existing mine access road.

The Pit Lake, estimated to hold approximately 43,000 acre-feet of water, needs to be fully drained before resuming open pit mining operations. The existing Pit Lake water will be extracted with pumps and four shallow dewatering wells will be strategically placed along the Pit perimeter to assist in draining the Pit Lake and to prevent potential geotechnical instability during the rapid Pit Lake drawdown.

Treatment of Pit Lake water will be conducted to address any constituents of potential concern (COPCs) that might exceed discharge standards. Potential methods for discharge include direct release into the Walker River, discharge to the Walker River Irrigation District (WRID), or utilization of infiltration methods such as Rapid Infiltration Basins (RIBs).

The PEA outlines the construction of separate HLFs for both oxide and sulfide feeds. The sulfide HLF, expected to receive crushed and agglomerated sulfide feed solely from the Yerington pit, will be located at the existing sulfide tailings facility at the Yerington Property.

The oxide HLF will be located at the existing Yerington VLT stockpile and will receive ROM oxide feed from the Yerington pit, W-3 stockpile, and VLTs. MacArthur Pits' oxide feed will be sized and conveyed to the oxide HLF situated at the Yerington VLT pile. Careful mine planning will ensure that the areas designated for re-processing within the VLT are mined out before they are required for pad expansions.

Approximately 78 million tons of waste rock material originating from the Yerington pit will be hauled to the existing Yerington WRSF, situated south of the Yerington pit. The northwestern portion of the current Yerington WRSF area contains alluvial deposits that hold potential as a future source for closure cover material, post-mining. Throughout active mining, concerted efforts will be made to reconfigure the legacy Yerington WRSF area, thereby facilitating a progressive reclamation process.

An estimated 59 million tons of waste rock material from the MacArthur Pits will be hauled to two adjacent WRSFs. These facilities will be contoured with 3H:1V side slopes during waste rock placement to expedite progressive reclamation.

1.11 Environmental

Permitting the Yerington Copper Project, inclusive of the Yerington Property and MacArthur Property, will require approvals and authorizations from various Federal, State and Local agencies. SPS is developing a permitting strategy to identify and address the range of environmental and social requirements and standards applicable to the Project.

SPS intends to ensure that characterization of environmental resources at the Yerington and MacArthur Properties is complete and adequate to support development of a Mine Plan of Operations and Reclamation Plan Permit Application, support analyses and modeling studies to complete impact assessments, and inform and satisfy all other permitting requirements.

The Yerington Property has been thoroughly characterized through previous permitting efforts, environmental studies, and analyses, and as part of the regulatory compliance process during previous operations. SPS is currently developing a regional numerical groundwater model, including a Pit Lake fate and transport model, to assess potential impacts to the groundwater system from dewatering the existing Pit Lake and expanding and deepening the Yerington pit.

The Yerington Property is undergoing active remediation of the former Anaconda and Arimetco mining operations (brownfield site). Prior to acquiring the Yerington Property in 2011, SPS performed due diligence following guidelines of a BFPP defense to shield SPS from legacy liabilities. In 2009, the State of Nevada, EPA and BLM issued letters outlining activities SPS needed to take to achieve and maintain BFPP status under State and Federal law. SPS continues to perform the activities to maintain the BFPP status.

SPS also entered into a Master Agreement with ARC effective June 1, 2015, that outlines the parties' responsibilities concerning cooperation, access, property rights, liabilities, federal land acquisition, preservation of SPS's property and mineral rights and coordination of the use of the brownfield site by ARC to complete remedial actions and by SPS for exploration, mining, and mineral processing activities. These agreements reduce SPS's risks regarding environmental liabilities from past exploration, mining and mineral processing which took place at the Yerington brownfield site prior to SPS's acquisition in 2011. These agreements allow SPS to proceed with mine development and operation in parallel with ARC's ongoing remediation activities. Areas of the Yerington Property that are included in the proposed Yerington Copper Project are not envisioned to require remediation. Rather, closure of these areas would be covered in the new reclamation bond. Synchronization of remediation with mining will be ongoing and refined during the next stage of mine development.

SPS has an active Environmental, Social and Governance (ESG) program and is committed to comply with all regulations and the highest standards of safety, environmental, financial, and business ethics. These topics will remain the foundation of the Company's operating principles through all phases of the Project. SPS is committed to its license to operate in the communities that may be affected by the Yerington Copper Project. The Company recognizes that the support of stakeholders is important to the success of the Project.

SPS intends to reclaim disturbed areas resulting from activities associated with the Project in accordance with BLM Surface Management and the State of Nevada NDEP regulations. The State of Nevada requires development of a Reclamation Plan for any new mining project and for expansions of existing operations meeting requirements to return mined lands to a productive post-mining land use.

1.12 Markets

The Yerington Copper Project production will consist of copper cathodes of LME grade quality suitable for global markets. No long-term sales agreements have been put in place.

The Project long-term copper price used is $3.85/lb. A copper price payable of 99.5% was applied to cover marketing costs and a transportation cost of $0.05/lb.

Acid pricing is based on an assumed price of $160/tonne delivered to site supplied by a major regional supplier. A discount of 25% on the base acid price has been applied on the first 400,000 tonnes of acid per year, and base price used on the remaining annual acid requirements.

1.13 Capital and Operating Costs

1.13.1 Capital Costs

The life of mine (LOM) capital costs are summarized in Table 1-5. All costs are based on 2023 Q3 pricing.

Table 1-5: Yerington Copper Project Capital Cost Estimate

Area	Initial Capital (M$)	Sustaining Capital (M$)	Total Capital (M$)
Open Pit Mining	74.5	93.7	168.2
Processing	72.7	184.3	257.0
Infrastructure	118.1	178.8	296.8
Dewatering	45.0	4.8	49.7
Environmental	7.0	42.5	49.5
Indirects	35.5	51.0	86.5
Contingency	60.8	98.1	158.8
Total	**413.4**	**653.1**	**1,066.5**

1.13.2 Operating Costs

The life of mine operating cost estimate is shown in Table 1-6.

Table 1-6: Yerington Copper Project Operating Cost Estimate

Area	Life of Mine ($/t moved)	Life of Mine ($/t process feed)	Life of Mine ($/lb. copper payable)
Open Pit Mining	2.14	2.79	0.90
Processing		3.55	1.15
G&A		0.30	0.10
Total Operating Cost		**6.63**	**2.14**

Diesel and electricity pricing is obtained locally with a diesel cost of $3.03/gal and electricity pricing of $0.065/kWh.

The mining shovels and drills are electric powered.

The MacArthur feed material is transported to the Yerington Property with a sizer and overland conveyor system then stacked on the oxide HLP. This system has a capacity of 25 Mtpa.

The Nuton system includes a crushing circuit with stacker capable of 17 Mtpa and a 3.5-mile overland conveying system.

1.14 Financial Analysis

Readers are cautioned that this PEA is preliminary in nature. It includes inferred mineral resources considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing and other relevant issues.

A pre-tax and post-tax cash flow model was prepared by AGP on behalf of Lion CG with provision for Lyon County, Nevada, and Federal taxation.

At a copper price of $3.85/lb, the Project is estimated to have an after-tax IRR of 17.4% and a pay-back period of 5.0 years after start of production. At a discount rate of 7%, the after tax NPV is estimated at $356 million.

The life of mine capital cost for the Project is estimated at $1,067 million, with an initial capital expenditure of $413 million. Sustaining capital, which includes the opening of the MacArthur pits is $653 million.

Results of the financial analysis are shown in Table 1-7.

Table 1-7: Yerington Copper Project – Discounted Cash Flow Analysis Summary

Parameter		Units	Pre-Tax	Post-Tax
Copper Price		$US/lb	3.85	
Economic Indicators				
Net Present Value (7%)		$US M	482	356
IRR		%	20.3	17.4
Payback Period		Years	4.7	5.0
Copper Revenue less Royalties		$US M	5,297	5,297
Total Operating Cost		$US M	2,987	2,987
Life of Mine Capital Cost		$US M	1,067	1,067
Net Taxes		$US M	-	243
Net Cash Flow		$US M	1,244	1,001
Cash Costs		$US/lb payable	2.20	2.37
AISC		$US/lb payable	2.96	
Copper – Payable		Mlb	1,394	
Mine Life		Years	12	
Operating Costs				
		$US M	**$/t Feed**	**$/lb payable**
Open Pit Mining		1,254	2.79	0.90
Processing		1,598	3.55	1.15
G & A		134	0.30	0.10
Total		**2,987**	**6.63**	**2.14**
Capital Costs				
Initial Capital		$US M	413	
Sustaining Capital		$US M	653	
Total Capital		$US M	1,067	
		$/lb payable	0.76	
Production Summary				
		Yerington Area	**MacArthur Area**	**Total**
Heap Feed	Mt	246.1	204.2	450.4
Copper Grade	%	0.24	0.18	0.21
Waste	Mt	78.2	58.6	136.8
Strip Ratio	W:F	0.32	0.29	0.30
Copper Pounds (millions)	Insitu	1,298.8	831.5	2,130.3
	Recovered	861.2	547.4	1,408.6

1.15 Recommendations and Proposed Work Plan

The QPs recommend that Lion CG advance to a Prefeasibility level of study as an integral component of the Yerington Copper Project's development roadmap. To facilitate this, the QPs have presented recommendations and associated budgets, ensuring that ample information is accessible for the Project's continued advancement.

While certain costs related to the Prefeasibility study are encompassed within the study's scope, additional supporting studies or field work are outlined in the relevant sections. Estimated costs categorized by area can be found in Table 1-8.

Table 1-8: Recommended Prefeasibility Study Budgets

Area of Study	Approximate Cost ($USD)
Geology	$2,673,000
Geotechnical	$1,150,000
Mining	$210,000
Metallurgy	$500,000
Infrastructure	$820,000
Environmental	$1,325,000
Prefeasibility Study	$795,000
TOTAL	**$7,473,000**

2 INTRODUCTION

2.1 Description

Lion Copper and Gold Corp., a Canadian based mine development company, and its wholly owned U.S. subsidiary, Singatse Peak Services, LLC, are focused on the development of their Yerington Copper Project in Lyon County, Nevada.

SPS commissioned AGP Mining Consultants Inc. to prepare a Canadian National Instrument 43-101 compliant Preliminary Economic Assessment for its Yerington Copper Project located approximately 80 miles southeast of Reno. The Property, with historical resources and water rights, was purchased by SPS in April 2011 after receiving BFPP letters from the USEPA, NDEP and BLM to protect SPS from liability emanating from activities of the former mine owners and operations.

2.2 Terms of Reference

This Technical Report was prepared on behalf of SPS by AGP. The purpose of the Report is to present the results of the PEA on the Yerington Copper Project in Lyon County, Nevada. This Report was prepared in compliance with the Canadian disclosure National Instrument 43-101 and in accordance with the requirements of Form 43-101 F1. The mineral resources used in the PEA were prepared on the Yerington pit, W-3 stockpile, VLT stockpile and MacArthur Deposit within the Yerington Copper Project.

2.3 Qualified Persons

The Qualified Persons (QPs), as that term is defined in NI 43–101, responsible for the preparation of the Report include):

- Tim Maunula, P.Geo., Principal Resource Geologist (TM&A)
- Herb Welhener, MMSA-QPM, Vice President (IMC)
- Jeff Woods, QP, Principal Process Engineer (Woods)
- Adrien Butler, P.E., Senior Civil Engineer (NewFields)
- Gordon Zurowski, P.Eng., Principal Mine Engineer (AGP)

Table 2-1: Yerington Copper Project Technical Report Qualified Persons and Areas of Responsibility

Name	Professional Designation	Title	Responsible for Sections
Mr. Tim Maunula	P.Geo.	Principal Geologist T. Maunula & Associates Consulting Inc.	Sections 1.2 – 1.6, 1.8.1 – 1.8.3, 4 -12, 14.1-14.8, 14.10, 23, 25.1.1, 26.1, 27
Mr. Herb Welhener	MMSA-QPM	Vice President Independent Mining Consultants, Inc.	Sections 1.8.4, 14.9, 25.1.2
Mr. Jeff Woods	SME-RM, MMSA-QP	Principal Metallurgical Engineer Woods Process Services LLC	Sections 1.7, 13, 17, 21.2.3,21.3.3, 25.2, 26.5
Ms. Adrien Butler	P.E.	Senior Civil Engineer NewFields	Sections 1.10, 2.4.4, 18,1. 18.2, 18.5, 18.8 – 18.12, 20.7, 21.2.4, 21.2.5, 25.4, 26.2, 26.51
Mr. Gordon Zurowski	P.Eng.	Principal Mine Engineer AGP Mining Consultants Inc.	Sections 1.1, 1.9, 1.11 – 1.15, 2, 3, 15, 16, 18.3,18.4,18.6,18.7, 18.13, 19, 20, 21.1,21.2.1, 21.2.2, 21.2.4-21.2.8, 21.3.1, 21.3.2, 21.3.4, 21.4, 22, 24, 25.3, 25.5-25.7, 26.1, 26.3, 26.4, 26.7, 26.8

2.4 Site Inspection

Site visits were completed by Mr. Maunula, Mr. Woods, Ms. Butler, and Mr. Zurowski.

2.4.1 Geology (Yerington)

Mr. Maunula conducted a site visit to the Project for two days on February 13th and 14th 2023. The Yerington and MacArthur Properties were visited during the two-day trip.

While on site, Mr. Maunula reviewed drill core from three drill holes and compared with recorded drill logs, visited core sampling and storage facilities, and inspected drilling sites.

Mr. Maunula also visited the pit areas for Yerington and MacArthur, waste dump locations and proposed infrastructure locations including the waste storage areas, conveyor route, pit access roads, proposed plant and heap leach locations and nearby railway sidings.

Meetings were held on site with the various team members including Lion CG personnel responsible for geology, and environmental activities.

2.4.2 Metallurgy and Processing

Mr. Woods, being from Nevada, has visited the Property several times, with a two-day trip on February 13th and 25th 2023 intended to support this report. The Yerington and MacArthur Properties were visited during this trip and subsequent one day trips to site since then as required.

Meetings were held on-site during the initial February visit, with review of both Yerington and MacArthur Properties. The initial visit included a site tour and review of drill core from both pit areas, including visits to both pit areas, waste dump locations, proposed infrastructure locations including the waste storage areas, conveyor route, pit access roads, proposed plant and heap leach locations and nearby railway sidings.

2.4.3 Mining

Mr. Zurowski conducted a site visit to the Property for two days on February 13th and 14th 2023. The Yerington and MacArthur Properties were visited during the two-day trip.

While on site Mr. Zurowski reviewed drill core from the pit areas, visited both pit areas, waste dump locations and proposed infrastructure locations including the waste storage areas, conveyor route, pit access roads, proposed plant and heap leach locations and nearby railway sidings.

Meetings were held on site with the various team members including Lion CG personnel responsible for geology, and environmental activities.

2.4.4 Infrastructure

Ms. Butler conducted a site visit to the Property for two days on January 8th to 10th, 2024, two days on September 13, 2022 (MacArthur and Yerington Properties), and February 14, 2023 (Yerington Property only).

While on site Ms. Butler visited both pit areas, legacy mining infrastructure, and proposed infrastructure locations including waste storage areas, conveyor route, pit access roads, proposed plant location, proposed HLF locations, and nearby railway sidings.

2.4.5 Summary of Site Visits

A summary of the site visits is shown in Table 2-2.

Table 2-2: Dates of Site Visits

Name	Site Visit	Dates
Mr. Tim Maunula, P.Geo.	Yes	February 13-14, 2023
Mr. Herb Welhener	Yes	February 14-15, 2022
Mr. Jeff Woods, QP	Yes	February 13 and 25, 2023
Ms. Adrien Butler, P.E.	Yes	January 8-10, 2024, September 13, 2022, February 14, 2023
Mr. Gordon Zurowski, P.Eng.	Yes	February 13- 14, 2023

2.5 Effective Dates

The effective date for the Mineral Resource Estimate for the Yerington Copper Project and W-3 Stockpile is May 1, 2023, and for the VLT is July 31, 2023.

The effective date for the Mineral Resource Estimate for the MacArthur portion of the Yerington Copper Project is February 25, 2022.

The effective date of the Yerington Copper Project PEA is January 30, 2024.

2.6 Previous Technical Reports

Previous NI 43-101 technical reports on the Project are listed below:

- Rozelle, J.W., MacArthur Copper Project, NI 43-101 Technical Report, Lyon County, Nevada, U.S.A. Tetra Tech Inc. February 17, 2009
- Henderson, M.R., MacArthur Copper Property, NI43-101 Technical Report, Preliminary Economic Assessment, Lyon County, Nevada, U.S.A. M3 Engineering and Technology Corporation May 23, 2012
- Bryan, Rex. C., 2012: NI 43-101 Technical Report, Mineral Resource. Yerington Copper Project, Lyon Count, Nevada. Prepared by Tetra Tech Inc. for Singatse Peak Services, LLC. 152 p.
- Bryan, Rex C., 2014: NI 43-101 Technical Report, Mineral Resource Update. Yerington Copper Project, Lyon Count, Nevada. Prepared by Tetra Tech Inc. for Singatse Peak Services, LLC. 118 p.
- Henderson, M.R., MacArthur Copper Project, Amended NI 43-101 Technical Report, Preliminary Economic Assessment, Lyon County, Nevada, U.S.A. M3 Engineering and Technology Corporation January 17, 2014
- Independent Mining Consultants Inc. 2022, MacArthur Copper Project, Mason Valley, Nevada USA, NI43-101 Technical Report Mineral Resource Estimate. Effective date: February 25, 2022

These reports are filed on the SEDAR website (www.sedar.com). Background information and a portion of the technical data for this report were obtained from these reports. This technical report replaces and supersedes all prior technical reports of the Company.

2.7 Units of Measure

Table 2-3: Units of Measure

Unit	Abbreviation	Unit	Abbreviation
Above mean sea level	amsl	Acre	ac
Ampere	A	Annum (year)	a
Billion	B	Billion tonnes	Bt
British thermal unit	BTU	Centimeter	cm
Cubic centimeter	cm^3	Cubic feet per minute	cfm
Cubic feet	ft^3	Cubic feet per second	ft^3/s
Cubic inch	in^3	Cubic metre	m^3
Cubic yard	yd^3	Coefficients of variation	CVs
Day	d	Days per week	d/wk

Unit	Abbreviation
Days per year (annum)	d/a
Decibel	dB
Degree	°
Diameter	Ø
Dollar (Canadian)	C$
Foot	ft
Gallons per minute (US)	gpm
Gigapascal	GPa
Gram	g
Grams per tonne	g/t
Hectare (10,000 m^2)	ha
Horsepower	hp
Hours per day	h/d
Hours per year	h/a
Kilo (thousand)	k
Kilograms per cubic meter	kg/m^3
Kilograms per square meter	kg/m^2
Kilometers per hour	km/h
Kiloton	Kt, ktons
Kilovolt-ampere	kVA
Kilowatt hour	kWh
Kilowatt hours per year	kWh/a
Liter	L
Megabytes per second	Mb/sec
Megavolt-ampere	MVA
Meter	m
Meters Baltic sea level	mbsl
Meters per second	m/s
Microns	ųm
Milligrams per liter	mg/L
Millimeter	mm
Million bank cubic meters	Mbm^3
Minute (plane angle)	‘
Month	mo
Pascal	Pa
Parts per billion	ppB
Pound(s)	lb(s)
Revolutions per minute	rpm
Second (time)	sec
Square centimeter	cm^2
Square inch	in^2

Unit	Abbreviation
Dead weight tonnes	DWT
Decibel adjusted	dBa
Degrees Celsius	°C
Dollar (American)	$, US$
Dry metric ton	dmt
Gallon	gal
Gigajoule	GJ
Gigawatt	g
Grams per liter	g/L
Greater than	>
Hertz	Hz
Hour	h
Hours per week	h/wk
Inch	“
Kilogram	kg
Kilograms per hour	kg/h
Kilometer	km
Kilopascal	kPa
Kilovolt	kV
Kilowatt	kW
Kilowatt hours per tonne	kWh/t
Less than	<
Liters per minute	L/min
Megapascal	MPa
Megawatt	MW
Meters above sea level	masl
Meters per minute	m/min
Short ton	t
Milligram	mg
Milliliter	mL
Million	M
Million tons	Mt, Mtons
Minute (time)	min
Ounce	oz
Parts per million	ppM
Percent	%
Pounds per square inch	psi
Second (plane angle)	“
Specific gravity	SG
Square foot	ft^2
Square kilometer	km^2

Unit	Abbreviation
Square meter	m^2
Three dimensional	3D
Tons per day	t/d
Tons per year (annum)	t/a
Total	T
Week	wk

Unit	Abbreviation
Tonne (1,000 kg)	mt
Tons per hour	t/h
Tons seconds per hour meter	ts/hm^3
Volt	V
Weight per weight	w/w
Wet metric tonne	wmt

2.8 Terms of Reference (Abbreviations & Acronyms)

Table 2-4 shows Terms and Abbreviations used in this study. Table 2-5 shows the Conversions for Common Units.

Table 2-4: Terms and Abbreviations

Unit	Abbreviation/Acronym
Acid Soluble Copper	ASCu
Anaconda Company	Anaconda
Arimetco Inc,	Arimetco
Atlantic Richfield Company	ARC
Atomic Absorption Spectrophotometer	AAS
Atomic Absorption	AA
Bona Fide Prospective Purchaser	BFPP
Bureau of Mining Regulation and Reclamation	BMRR
Bureau of Water Pollution Control	BWPC
Canadian Institute of Mining	CIM
Coefficient of Variation	CV
Construction Management Unit	CMU
Copper	Cu
Copper Equivalent	CuEq
Cyanide Soluble	CN
Dassault Systems GEOVIA Inc.	GEOVIA
Digital Elevation Model	DEM
Drilling and Blasting	D&B
Ferric Sulphate Copper	QLT
General and Administrative	G&A
Gold	Au
Gold Equivalent	AuEq
Heap Leach Facility	HLF
Heap Leach Pads	HLP
Indicator Kriging	IK
Induced Polarization-Resistivity	IP
Inductively Coupled Plasma	ICP

Unit	Abbreviation/Acronym
Inductively Coupled Plasma Atomic Emission Spectroscopy	ICP-AES
Inspectorate America Corp.	Inspectorate
Internal Rate of Return	IRR
Inverse Distance cubed	ID^3
Inverse Distance squared	ID^2
Lerchs-Grossman	LG
Life-of-Mine	LOM
Load-haul Dump	LHD
National Instrument 43-101	NI 43-101
National Pollutant Discharge Elimination System	NPDES
Nearest Neighbour	NN
Net Present Value	NPV
Net Smelter Return Royalty	NSR
Nevada Division of Environmental Protection	NDEP
Nuton™	Nuton
Ordinary Kriging	OK
Prefeasibility Study	PFS
Preliminary Assessment	PA
Preliminary Economic Assessment	PEA
Qualified Person	QP
Quality Assurance	QA
Quality Control	QC
Quality Assurance and Quality Control	QAQC
Rapid Infiltration Basin	RIB
Record of Decision	ROD
Reverse Circulation	RC
Rock Quality Designation	RQD
Run-of-mine	ROM
Silver	Ag
Solvent Extraction Electrowinning	SXEW
Stanford University Geostatistical Software Library	GSLIB
State of Nevada	State
The Anaconda Company	Anaconda
U.S. Department of Interior, Bureau of Land Management	BLM
U.S. Environmental Protection Agency	EPA
Vat Leach Tailings	VLT
Walker River Irrigation District	WRID
Water Pollution Control Permit	WPCP
X-ray Fluorescence Spectrometer	XRF
Yerington Pit Lake	Pit Lake

Table 2-5: Conversions for Common Units

Metric Unit	Imperial Measure
1 hectare	2.47 acres
1 meter	3.28 feet
1 kilometer	0.62 miles
1 gram	0.032 ounces (troy)
1 tonne	1.102 tons (short)
1 gram/tonne	0.029 ounces (troy)/ton (short)
1 tonne	2,204.62 pounds
Imperial Measure	**Metric Unit**
1 acre	0.4047 hectares
1 foot	0.3048 meters
1 mile	1.609 kilometers
1 ounce (troy)	31.1 grams
1 ton (short)	0.907 tonnes
1 ounce (troy)/ton (short)	34.28 grams/tonne
1 pound	0.00045 tonnes

3 RELIANCE ON OTHER EXPERTS

The Yerington Property, having been an operating mine for many years, has been the subject of numerous written reports. Many of these reports and other documents were prepared by mining consulting firms on behalf of the operators of the mine/property at the time.

The QPs' conclusions, opinions, and estimates contained herein are based on:

- information available at the time of preparation of this report
- assumptions, conditions, and qualifications as set forth in this report
- data, reports, and other information supplied by Lion CG and other third-party sources

AGP has followed standard professional procedures in preparing the content of the Yerington Copper Project PEA report. Data used in this report has been verified where possible, and the report is based upon information believed to be accurate at the time of completion.

3.1 Ownership, Mineral Tenure, and Surface Rights

AGP has not verified the legal status, legal title to any permit, or the legality of any underlying agreements for the subject Properties regarding mineral rights, surface rights, permitting, and environmental issues in sections of this technical report. AGP has relied upon information provided by Lion CG personnel Mr. Todd Bonsall, Geologist, and Taurus Massey, Lands Manager, which forms the basis for Section 4 of this report.

3.2 Environmental Permitting

Explanation of the Environmental Permitting and past activity was provided by Sara Thorne, CEO of Thorne Solutions and Steven Dischler, Vice President ESG for Lion CG. This information provided background context for Section 20.

3.3 The Nuton Technologies

The Nuton technologies are proprietary Rio Tinto-developed copper heap leach related processing and modelling technologies, capability and intellectual property.

Information has been provided by Rio Tinto's Nuton team with respect to input needs for the Nuton process such as acid consumption, other reagents, etc. and expected production results such as copper recovery. AGP and Woods have not independently verified these needs and results but have relied upon their information.

3.4 Taxation

Lion CG provided guidance on applicable taxes, royalties, and other government levies or interests applicable to revenue or income from the Project. The QPs have fully relied upon and disclaim responsibility for taxation information derived from Lion CG for this information.

Lion CG provided the explanation for royalties on the Project which are discussed in more detail in Section 4.3 of this technical report. The QPs have fully relied upon and disclaim responsibility for information derived from this information.

Except for the purposes legislated under provincial securities laws, any use of this report by any third party is at that party's sole risk.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Location

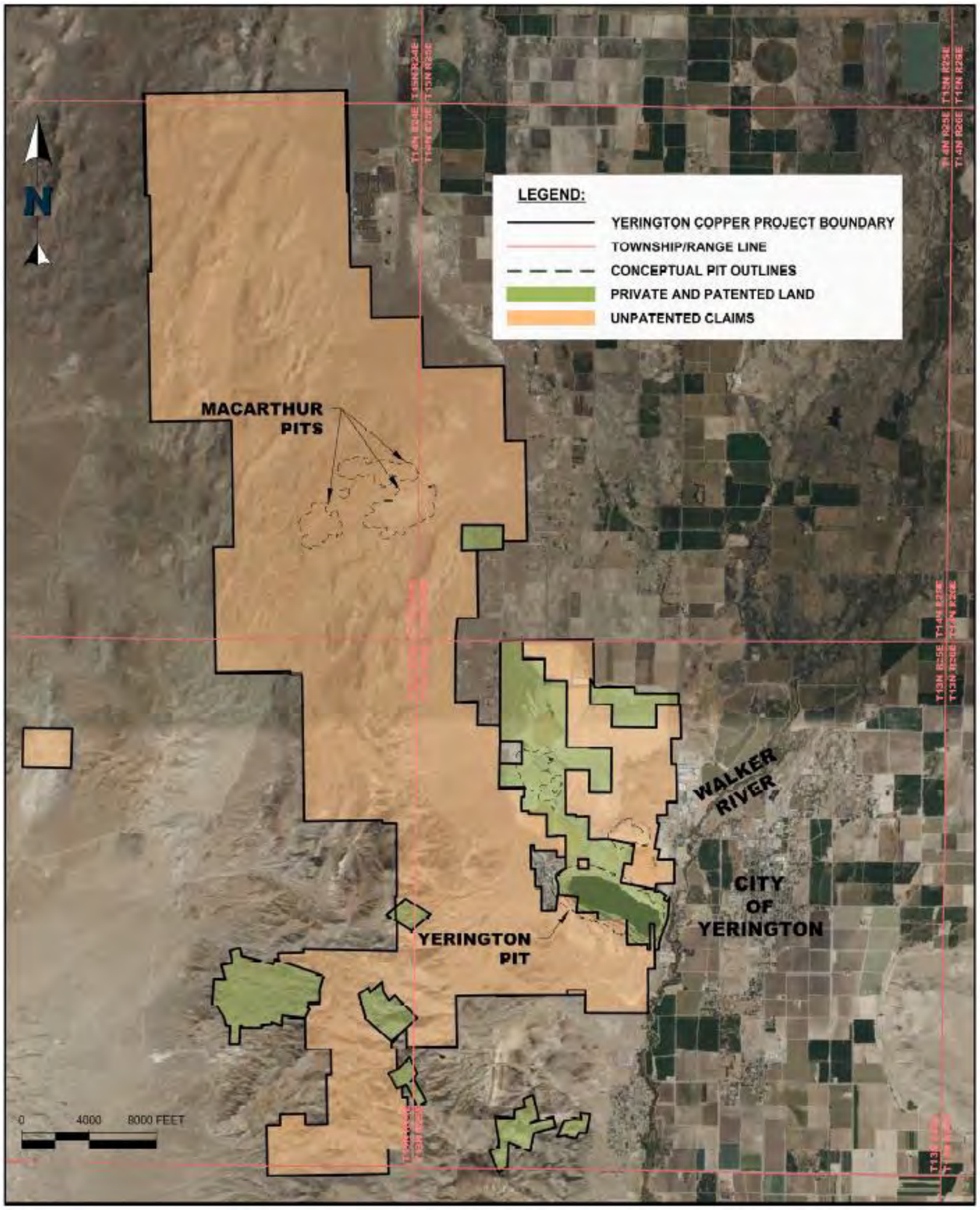
The Yerington Copper Project is located near the geographic center of Lyon County, Nevada, US, along the eastern flank of the Singatse Range (Figure 4-1 and Figure 4-2). The Project includes both the historical Yerington Property, flanked on the west by Weed Heights, Nevada (a small private community, the original company town of Anaconda) and the historic MacArthur open pit located approximately 4.5 miles to the northwest. The Property is bordered on the east by the town of Yerington, Nevada which provides access via a network of paved and gravel roads that were used during previous mining operations.

The Property is approximately 70 miles by road from Reno Nevada, 50 miles south of Tahoe-Reno Industrial Center, and 10 miles from the nearest rail spur of Wabuska. Topographic coverage is provided by the U.S. Geological Survey “Mason Butte”, Lincoln Flat”, and the “Yerington” 7.5’ topographic quadrangles.

Figure 4-1: Yerington Copper Project Location

Source: Tetra Tech, 2014

Figure 4-2: Regional Layout Map



Source: NewFields, 2023

4.2 Property Ownership

4.2.1 Yerington Copper Project

The Project consists of 5 fee simple parcels and 82 patented mining claims totalling 2,767.66 acres, and 1,113 unpatented lode and placer claims totalling 22,996 acres. The unpatented claims are located on lands administered by the BLM (Figure 4-2).

The private land, patented claims, and 23 unpatented mining claims were acquired on April 27, 2011, when SPS closed a transaction under which assets of Arimetco, Inc. (Arimetco), a Nevada corporation, were acquired. Private properties are located in Township 13 North, Range 25 East in Sections 4, 5, 8, 9, 16, 17, and 21, and patented claims are located within Township 13 North, Range 25 East in Sections 16, 17, 19, 21, 31, and 32 and in Township 13 North, Range 24 East in Sections 22-25 and 36.

The additional unpatented claims were staked prior to or subsequent to the acquisition by SPS.

SPS's claims are located in: Sections 1 and 2, Township 12 North, Range 24 East; Sections 1-3, 8, 9, 11-14, 22-27, 35, 36, Township 13 North, Range 24 East; Sections 4-9, 16-21, and 30-32, Township 13 North, Range 25 East; Sections 1-4, 9-16, 22-27, 34-36, Township 14 North, Range 24 East; Sections 19-20, 29-31 Township 14 North, Range 25 East; Sections 33-36 Township 15 North, Range 24 East, Mount Diablo Base & Meridian.

4.3 Mineral Tenure and Title

The purchase of the Arimetco assets was accomplished through a US$500,000 cash payment, 250,000 shares of Quaterra common stock, and a 2% net smelter return royalty capped at $7.5 million on production from any claims owned by its subsidiary Quaterra Alaska, Inc (including Quaterra's MacArthur Property) in the Yerington mining district.

A portion of the claims around the historic MacArthur mine were acquired by exercising a "Mining Lease with Option to Purchase". The original purchase option dated September 13, 2005, between North and the Company, as amended, was exercised on February 9, 2015. The Company's purchase is subject to a two percent NSR with a royalty buy down option of $1,000,000 to purchase one percent of the NSR, leaving a perpetual one percent NSR.

A portion of the MacArthur claim group is also included in the area referred to as the "Royalty Area" in the Company's purchase agreement for the acquisition of Arimetco's Yerington properties. Under this agreement, MacArthur claims within this area (as well as the Yerington properties) are subject to a two percent NSR production royalty derived from the sales of ores, minerals and materials mined and marketed from the Property up to $7,500,000.

Ownership of the patented claims and private land is maintained through payment of county assessed taxes, while unpatented lode claims staked in the United States require a federal annual maintenance fee of $165 each, due by 12:00 pm (noon) on September 1 of each year. Further, each unpatented claim staked in Nevada requires an Intent to Hold fee of $12.00, plus filing fees, due by November 1 of each year payable to the County Recorder of the appropriate Nevada county. All SPS claims are current.

Unpatented lode claims have been staked by placing a location monument (two- by two-in by four-foot-high wood post) along the center line of each claim and two- by two-inch by four-foot-high wood posts at all four corners, with all posts properly identified in accordance with the rules and regulations of the BLM and the State of Nevada. Maximum dimensions of unpatented lode claims are 600 feet × 1,500 feet.

A complete property listing is included in Table 4-1, Table 4-2, and Table 4-3 below (Property).

4.4 Relevant Information

Copper mining was first recorded at the Yerington Mine site from 1918-1920 at the Empire Mine, and later, beginning in 1953 by Anaconda. From that time forward, the mine operated under different companies until 1999 when Arimetco, the last operator, closed the operation. Soil and groundwater contamination from the former mining operations have been identified on the Property.

As a result, a portion of the Property acquired by SPS in 2011 is now being remediated under jurisdiction of NDEP. Liability for the contamination on site is the responsibility of a third party which is actively engaged in remedial investigation and remediation activities under the supervision of NDEP.

In order to establish SPS's position and rights, the acquisition by SPS of the Arimetco properties required a series of rigorous environmental, legal, and technical due diligence studies. In 2008, Chambers Group, Inc. and Golder Associates Inc. conducted a Phase I Environmental Site Assessment (Phase I ESA) for the Yerington Mine Site. A Phase I ESA is intended to serve as an appropriate, commercially prudent, and reasonable inquiry regarding the potential for recognized environmental conditions in connection with the subject property. The 2008 Phase 1 ESA was updated by SRK Consulting (U.S.) Inc. (SRK) in 2010 and again in 2011. These were completed to allow SPS to establish liability protection as a bona fide prospective purchaser (BFPP). Prior to closing on the Property, SPS received letters from the NDEP, BLM and the USEPA indicating the post-closing requirements then applicable to the Site for SPS to maintain its defense to liability as a BFPP regarding the activities of the former mine owners and operators.

Legal due diligence included a legal description of the property, a chain of title report, and an assignment of water rights. BFPP letters have been received from the NDEP, BLM and USEPA which indicate the basic requirements known as "reasonable steps" SPS must take to retain its BFPP defense from existing liabilities on the property.

Technical due diligence included the review and compilation of a wealth of historical data in the Anaconda Collection, American Heritage Center, University of Wyoming, in Laramie. Numerous reports, maps, and historical drilling data have been scanned and entered into an internal data base, allowing an initial review of both past production and remaining mineralization in and around the Yerington pit.

The company controls approximately 6,015-acre feet of certificated primary groundwater rights permitted for mining and milling use at the site. The places of use for each of the water rights which make up this total are on the site, which also contains a Pit Lake now estimated to contain approximately 43,000-acre feet of water to be dewatered during mining activities. The company believes this water will have a variety of beneficial uses but will require some costs to make the water available for those beneficial uses.

There are 3,453 ac-ft of primary water rights that have been declared forfeited by the Nevada Division of Water Resources (NDWR). The Extension of Time for 1,629 ac-ft of primary water rights is subject to a non-renewal notice by the NDWR. SPS is appealing the State's forfeiture notice with the outcome uncertain at the time this PEA has been published. SPS has an option to purchase additional water rights that are attached to the Bear private lands. If additional water is required for mining purposes, SPS may need to acquire additional water rights to meet the operational needs of the mine.

SPS's 2011 drilling program was restricted to fee mineral properties or patented mining claims in or near the Yerington pit and approved by the State of Nevada Bureau of Mining Regulation and Reclamation of the NDEP, as an Interim Exploration Permit "BMRR Reclamation Permit #0321", supported by posting a

$70,363 reclamation bond. The interim permit was approved as a final permit on November 7, 2011, by the NDEP.

If SPS elects to conduct exploration on unpatented lode mining claims on public lands administered by the BLM, a Notice of Intent is required if the proposed disturbance is less than five acres. The Notice of Intent includes a description and map of proposed work, supported by a reclamation bond. Proposed disturbance exceeding five acres requires a Plan of Operation, a more comprehensive evaluation of cultural features, vegetation, wildlife, water, and other items, supported by a reclamation bond.

Table 4-1: Patented Claims

Patented Claims	Mineral Survey Number	County Parcel Number	Parcel Acreage
Know U Don'T	3144	012-111-21	98
January	3145		
Rossland	3367		
Eclipse	4080		
Edwin 1,2,5	4080		
Copper King, Kid	4081		
Copper Queen No. 1	4081		
Santa Cruse 1,3	3075	012-111-23	58
Santa Cruz	3075		
Copper Queen No. 1,3	3655	012-112-01	490
Minnie Edith	3655		
Nevada King	3655		
San Jacinto	3655		
Alcatraz	3656		
Black Horse	3656		
Boston	3656		
Cash Boy	3656		
Christina	3656		
Colorado	3656		
Colorado Springs	3656		
Copper Queen 2,6	3656		
Daisy	3656		
Fortuna	3656		
Iron Cap,Iron Cap 2	3656		
Jack Clubs	3656		
Juanita	3656		
Kathleen	3656		
Monte Cristo	3656		
Pocahontas	3656		
Sage Hen	3656		

Patented Claims	Mineral Survey Number	County Parcel Number	Parcel Acreage
Santa Inez	3656		
Santigo	3656		
Scorpion	3656		
Styx	3656		
No. 102	4850	012-113-01	64.48
No. 73	4850		
No. 74	4850		
Diamond,Diamond 1,2	3736	012-113-02	130
Diamond 3,4	3977		
Diamond Fr.,Diamond Fr. 1	3977		
Lone Star	3977		
Anaconda	3692	012-113-04	19
Copper Canyon	3157	012-113-05	20
A & L	4499	014-451-04	506.86
Wild Rose,Wild Rose 1-2	4499		
Black Horse	4531		
Blue Star	4531		
Canidate	4531		
Consolidated,Consolidated Fr.	4531		
Greenhorn	4531		
Hungry Bill	4531		
Katy Didn'T	4531		
New Blue Bird,New Blue Bird 1,2	4531		
New Royal Blue,New Royal Blue Ext.	4531		
North Star	4531		
Red Star	4531		
Sunlight	4531		
West Starlight	4531		
No. 38	4778		
No. Seven	4778		
No. Thirty-Five Fr.	4778		
No. Twenty-Five	4778		
No. Twenty-Four	4778		
No. Twenty-Six	4778		
No. Twenty-Three	4778		
Total Claims:	**82**	**Total acreage:**	**1386.34**

Table 4-2: Private Ground

Private Ground	Count	County Parcel Number	Acreage
Private	1	014-401-06	182.77
Private	1	014-461-10	12.7
Private	1	014-461-11	31
Private	1	014-401-15	1074.74
Private	1	014-241-09	80
Total Parcels:	**5**	**Total acreage:**	**1381.21**

Table 4-3: Lode and Placer Claims

Program	Type	Claim	Sec-Twp-Range
YERINGTON MINE	LODE	ADP 1	S4, 5-T13N-R25E
YERINGTON MINE	LODE	ADP 10	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 11	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 12	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 13	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 14	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 15	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 16	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 17	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 18	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 19	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 2	S5, 8-T13N-R25E
YERINGTON MINE	LODE	ADP 20	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 21	S16-T13N-R25E
YERINGTON MINE	LODE	ADP 22	S17-T13N-R25E
YERINGTON MINE	LODE	ADP 23	S17-T13N-R25E
YERINGTON MINE	LODE	ADP 3	S5, 8-T13N-R25E
YERINGTON MINE	LODE	ADP 4	S7, 8-T13N-R25E
YERINGTON MINE	LODE	ADP 5	S7, 8-T13N-R25E
YERINGTON MINE	LODE	ADP 6	S17-T13N-R25E
YERINGTON MINE	LODE	ADP 7	S17-T13N-R25E
YERINGTON MINE	LODE	ADP 8	S8-T13N-R25E
YERINGTON MINE	LODE	ADP 9	S8-T13N-R25E
MACARTHUR CU	LODE	AT 1	Sec 9,10,15,16 T14N R24E
MACARTHUR CU	LODE	AT 10	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 100	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 101	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 102	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 103	Sec 22 T14N R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	AT 104	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 105	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 106	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 107	Sec 15,22 T14N R24E
MACARTHUR CU	LODE	AT 108	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 109	Sec 15,22 T14N R24E
MACARTHUR CU	LODE	AT 11	Sec 10,15 T14N R24E
MACARTHUR CU	LODE	AT 110	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 111	Sec 15,22 T14N R24E
MACARTHUR CU	LODE	AT 112	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 113	Sec 15,22 T14N R24E
MACARTHUR CU	LODE	AT 114	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT 115	S9, 10-T14N-R24E
MACARTHUR CU	LODE	AT 116	S9, 10-T14N-R24E
MACARTHUR CU	LODE	AT 117	S10-T14N-R24E
MACARTHUR CU	LODE	AT 118	S10-T14N-R24E
MACARTHUR CU	LODE	AT 119	S10-T14N-R24E
MACARTHUR CU	LODE	AT 12	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 120	S10-T14N-R24E
MACARTHUR CU	LODE	AT 121	S10-T14N-R24E
MACARTHUR CU	LODE	AT 122	S10-T14N-R24E
MACARTHUR CU	LODE	AT 123	S10-T14N-R24E
MACARTHUR CU	LODE	AT 124	S10-T14N-R24E
MACARTHUR CU	LODE	AT 125	S10-T14N-R24E
MACARTHUR CU	LODE	AT 126	S10-T14N-R24E
MACARTHUR CU	LODE	AT 127	S10-T14N-R24E
MACARTHUR CU	LODE	AT 128	S10-T14N-R24E
MACARTHUR CU	LODE	AT 129	S10-T14N-R24E
MACARTHUR CU	LODE	AT 13	Sec 10,15 T14N R24E
MACARTHUR CU	LODE	AT 130	S10-T14N-R24E
MACARTHUR CU	LODE	AT 131	S10-T14N-R24E
MACARTHUR CU	LODE	AT 132	S10-T14N-R24E
MACARTHUR CU	LODE	AT 133	S10, 11-T14N-R24E
MACARTHUR CU	LODE	AT 134	S10, 11-T14N-R24E
MACARTHUR CU	LODE	AT 135	S11-T14N-R24E
MACARTHUR CU	LODE	AT 136	S11-T14N-R24E
MACARTHUR CU	LODE	AT 137	S11-T14N-R24E
MACARTHUR CU	LODE	AT 138	S11-T14N-R24E
MACARTHUR CU	LODE	AT 139	S11-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	AT 14	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 140	S11-T14N-R24E
MACARTHUR CU	LODE	AT 141	S11-T14N-R24E
MACARTHUR CU	LODE	AT 142	S11-T14N-R24E
MACARTHUR CU	LODE	AT 143	S11-T14N-R24E
MACARTHUR CU	LODE	AT 144	S11-T14N-R24E
MACARTHUR CU	LODE	AT 145	S11-T14N-R24E
MACARTHUR CU	LODE	AT 146	S11-T14N-R24E
MACARTHUR CU	LODE	AT 147	S11-T14N-R24E
MACARTHUR CU	LODE	AT 148	S11-T14N-R24E
MACARTHUR CU	LODE	AT 149	S11, 12-T14N-R24E
MACARTHUR CU	LODE	AT 15	Sec 10,15 T14N R24E
MACARTHUR CU	LODE	AT 150	S11, 12-T14N-R24E
MACARTHUR CU	LODE	AT 151	S12-T14N-R24E
MACARTHUR CU	LODE	AT 152	S12-T14N-R24E
MACARTHUR CU	LODE	AT 153	S12-T14N-R24E
MACARTHUR CU	LODE	AT 154	S12-T14N-R24E
MACARTHUR CU	LODE	AT 157	S9, 10-T14N-R24E
MACARTHUR CU	LODE	AT 158	S10-T14N-R24E
MACARTHUR CU	LODE	AT 159	S10-T14N-R24E
MACARTHUR CU	LODE	AT 16	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 160	S10-T14N-R24E
MACARTHUR CU	LODE	AT 161	S10-T14N-R24E
MACARTHUR CU	LODE	AT 162	S10-T14N-R24E
MACARTHUR CU	LODE	AT 163	S10-T14N-R24E
MACARTHUR CU	LODE	AT 164	S10-T14N-R24E
MACARTHUR CU	LODE	AT 165	S10-T14N-R24E
MACARTHUR CU	LODE	AT 166	S10, 11-T14N-R24E
MACARTHUR CU	LODE	AT 167	S2, 11-T14N-R24E
MACARTHUR CU	LODE	AT 168	S2, 11-T14N-R24E
MACARTHUR CU	LODE	AT 169	S2, 11-T14N-R24E
MACARTHUR CU	LODE	AT 17	Sec 10,14,15 T14N R24E
MACARTHUR CU	LODE	AT 170	S2, 11-T14N-R24E
MACARTHUR CU	LODE	AT 171	S2, 11-T14N-R24E
MACARTHUR CU	LODE	AT 172	S2, 11-T14N-R24E
MACARTHUR CU	LODE	AT 173	S2, 11-T14N-R24E
MACARTHUR CU	LODE	AT 174	S2, 11, 12-T14N-R24E
MACARTHUR CU	LODE	AT 175	S1, 2, 11, 12-T14N-R24E
MACARTHUR CU	LODE	AT 176	S1, 12-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	AT 18	Sec 14,15 T14N R24E
MACARTHUR CU	LODE	AT 19	Sec 10,11,14 T14N R24E
MACARTHUR CU	LODE	AT 2	Sec 15,16 T14N R24E
MACARTHUR CU	LODE	AT 20	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 21	Sec 11,14 T14N R24E
MACARTHUR CU	LODE	AT 22	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 23	Sec 11,14 T14N R24E
MACARTHUR CU	LODE	AT 24	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 25	Sec 11,14 T14N R24E
MACARTHUR CU	LODE	AT 26	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 27	Sec 11,14 T14N R24E
MACARTHUR CU	LODE	AT 28	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 29	Sec 11,14 T14N R24E
MACARTHUR CU	LODE	AT 3	Sec 10,15 T14N R24E
MACARTHUR CU	LODE	AT 30	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 31	Sec 11,14 T14N R24E
MACARTHUR CU	LODE	AT 32	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 33	Sec 11,14 T14N R24E
MACARTHUR CU	LODE	AT 34	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 35	Sec 40131 T14N R24E
MACARTHUR CU	LODE	AT 36	Sec 13,14 T14N R24E
MACARTHUR CU	LODE	AT 37	Sec 12,13 T14N R24E
MACARTHUR CU	LODE	AT 38	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 39	Sec 12,13 T14N R24E
MACARTHUR CU	LODE	AT 4	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 40	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 41	Sec 12,13 T14N R24E
MACARTHUR CU	LODE	AT 42	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 43	Sec 12,13 T14N R24E
MACARTHUR CU	LODE	AT 44	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 45	Sec 15,16 T14N R24E
MACARTHUR CU	LODE	AT 46	Sec 15,16,22 T14N R24E
MACARTHUR CU	LODE	AT 47	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 48	Sec 15,22 T14N R24E
MACARTHUR CU	LODE	AT 49	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 5	Sec 10,15 T14N R24E
MACARTHUR CU	LODE	AT 50	Sec 15,22 T14N R24E
MACARTHUR CU	LODE	AT 51	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 52	Sec 15,22 T14N R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	AT 53	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 54	Sec 15,22 T14N R24E
MACARTHUR CU	LODE	AT 55	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 56	Sec 15,22 T14N R24E
MACARTHUR CU	LODE	AT 57	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 58	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 59	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 6	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 60	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 61	Sec 14,15 T14N R24E
MACARTHUR CU	LODE	AT 62	Sec 14,15 T14N R24E
MACARTHUR CU	LODE	AT 63	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 64	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 65	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 66	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 67	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 68	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 69	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 7	Sec 10,15 T14N R24E
MACARTHUR CU	LODE	AT 70	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 71	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 72	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 73	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 74	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 75	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 76	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 77	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 78	Sec 14 T14N R24E
MACARTHUR CU	LODE	AT 79	Sec 13,14 T14N R24E
MACARTHUR CU	LODE	AT 8	Sec 15 T14N R24E
MACARTHUR CU	LODE	AT 80	Sec 13,14 T14N R24E
MACARTHUR CU	LODE	AT 81	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 82	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 83	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 84	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 85	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 86	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 87	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 88	Sec 13 T14N R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	AT 89	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 9	Sec 10,15 T14N R24E
MACARTHUR CU	LODE	AT 90	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 91	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 92	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 93	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 94	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 95	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 96	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 97	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 98	Sec 13 T14N R24E
MACARTHUR CU	LODE	AT 99	Sec 22 T14N R24E
MACARTHUR CU	LODE	AT177	S33-T15N-R24E; S4, T14N-R24E
MACARTHUR CU	LODE	AT178	S4-T14N-R24E
MACARTHUR CU	LODE	AT179	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT180	S3-T14N-R24E
MACARTHUR CU	LODE	AT181	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT182	S3-T14N-R24E
MACARTHUR CU	LODE	AT183	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT184	S3-T14N-R24E
MACARTHUR CU	LODE	AT185	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT186	S3-T14N-R24E
MACARTHUR CU	LODE	AT187	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT188	S3-T14N-R24E
MACARTHUR CU	LODE	AT189	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT190	S3-T14N-R24E
MACARTHUR CU	LODE	AT191	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT192	S3-T14N-R24E
MACARTHUR CU	LODE	AT193	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT194	S3-T14N-R24E
MACARTHUR CU	LODE	AT195	S34-T15N-R24E; S3-T14N-R24E
MACARTHUR CU	LODE	AT196	S3-T14N-R24E
MACARTHUR CU	LODE	AT197	S35-T15N-R24E; S2-T14N-R24E
MACARTHUR CU	LODE	AT198	S2-T14N-R24E
MACARTHUR CU	LODE	AT199	S35-T15N-R24E; S2-T14N-R24E
MACARTHUR CU	LODE	AT200	S2-T14N-R24E
MACARTHUR CU	LODE	AT201	S35-T15N-R24E; S2-T14N-R24E
MACARTHUR CU	LODE	AT202	S2-T14N-R24E
MACARTHUR CU	LODE	AT203	S35-T15N-R24E; S2-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	AT204	S2-T14N-R24E
MACARTHUR CU	LODE	AT205	S35-T15N-R24E; S2-T14N-R24E
MACARTHUR CU	LODE	AT206	S2-T14N-R24E
MACARTHUR CU	LODE	AT207	S35-T15N-R24E; S2-T14N-R24E
MACARTHUR CU	LODE	AT208	S2-T14N-R24E
MACARTHUR CU	LODE	AT209	S35-T15N-R24E; S2-T14N-R24E
MACARTHUR CU	LODE	AT210	S2-T14N-R24E
MACARTHUR CU	LODE	AT211	S35-T15N-R24E; S2-T14N-R24E
MACARTHUR CU	LODE	AT212	S2-T14N-R24E
MACARTHUR CU	LODE	AT213	S35, 36-T15N-R24E; S1, 2-T14N-R24E
MACARTHUR CU	LODE	AT214	S2-T14N-R24E
MACARTHUR CU	LODE	AT215	S36-T15N-R24E; S1-T14N-R24E
MACARTHUR CU	LODE	AT216	S2-T14N-R24E
MACARTHUR CU	LODE	AT217	S4-T14N-R24E
MACARTHUR CU	LODE	AT218	S3, 4, 9, 10-T14NR24E
MACARTHUR CU	LODE	AT219	S3-T14N-R24E
MACARTHUR CU	LODE	AT220	S3, 10-T14N-R24E
MACARTHUR CU	LODE	AT221	S3-T14N-R24E
MACARTHUR CU	LODE	AT222	S3, 10-T14N-R24E
MACARTHUR CU	LODE	AT223	S3-T14N-R24E
MACARTHUR CU	LODE	AT224	S3, 10-T14N-R24E
MACARTHUR CU	LODE	AT225	S3-T14N-R24E
MACARTHUR CU	LODE	AT226	S3, 10-T14N-R24E
MACARTHUR CU	LODE	AT227	S3-T14N-R24E
MACARTHUR CU	LODE	AT228	S3, 10-T14N-R24E
MACARTHUR CU	LODE	AT229	S3-T14N-R24E
MACARTHUR CU	LODE	AT230	S3, 10-T14N-R24E
MACARTHUR CU	LODE	AT231	S3-T14N-R24E
MACARTHUR CU	LODE	AT232	S3, 10-T14N-R24E
MACARTHUR CU	LODE	AT233	S3-T14N-R24E
MACARTHUR CU	LODE	AT234	S3, 10-T14N-R24E
MACARTHUR CU	LODE	AT235	S2, 3-T14N-R24E
MACARTHUR CU	LODE	AT236	S2, 3, 10, 11-T14N-R24E
MACARTHUR CU	LODE	AT237	S2-T14N-R24E
MACARTHUR CU	LODE	AT238	S2, 11-T14N-R24E
MACARTHUR CU	LODE	AT239	S2-T14N-R24E
MACARTHUR CU	LODE	AT240	S2-T14N-R24E
MACARTHUR CU	LODE	AT241	S2-T14N-R24E
MACARTHUR CU	LODE	AT242	S2-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	AT243	S2-T14N-R24E
MACARTHUR CU	LODE	AT244	S2-T14N-R24E
MACARTHUR CU	LODE	AT245	S2-T14N-R24E
MACARTHUR CU	LODE	AT246	S2-T14N-R24E
MACARTHUR CU	LODE	AT247	S2-T14N-R24E
MACARTHUR CU	LODE	AT248	S2-T14N-R24E
MACARTHUR CU	LODE	AT249	S2-T14N-R24E
MACARTHUR CU	LODE	AT250	S2-T14N-R24E
MACARTHUR CU	LODE	AT251	S2-T14N-R24E
MACARTHUR CU	LODE	AT252	S2-T14N-R24E
MACARTHUR CU	LODE	AT253	S1, 2-T14N-R24E
MACARTHUR CU	LODE	AT254	S1, 2-T14N-R24E
MACARTHUR CU	LODE	AT255	S1-T14N-R24E
MACARTHUR CU	LODE	AT256	S1-T14N-R24E
YERINGTON MINE	LODE	BR 1	S32-T14N-R25E S5-T13N-R25E
YERINGTON MINE	LODE	BR 10	S5-T13N-R25E
YERINGTON MINE	LODE	BR 11	S32, 33-T14N-R25E S4, 5-T13N-R25E
YERINGTON MINE	LODE	BR 12	S4, 5-T13N-R25E
YERINGTON MINE	LODE	BR 13	S5-T13N-R25E
YERINGTON MINE	LODE	BR 14	S5, 8-T13N-R25E
YERINGTON MINE	LODE	BR 15	S5-T13N-R25E
YERINGTON MINE	LODE	BR 16	S4, 5-T13N-R25E
YERINGTON MINE	LODE	BR 17	S4-T13N-R25E
YERINGTON MINE	LODE	BR 18	S4, 9-T13N-R25E
YERINGTON MINE	LODE	BR 19	S4-T13N-R25E
YERINGTON MINE	LODE	BR 2	S32-T14N-R25E S5-T13N-R25E
YERINGTON MINE	LODE	BR 20	S4, 9-T13N-R25E
YERINGTON MINE	LODE	BR 21	S5, 8-T13N-R25E
YERINGTON MINE	LODE	BR 22	S8-T13N-R25E
YERINGTON MINE	LODE	BR 23	S4,5,8,9-T13N-R25E
YERINGTON MINE	LODE	BR 24	S8, 9-T13N-R25E
YERINGTON MINE	LODE	BR 25	S9-T13N-R25E
YERINGTON MINE	LODE	BR 26	S9-T13N-R25E
YERINGTON MINE	LODE	BR 27	S4, 9-T13N-R25E
YERINGTON MINE	LODE	BR 28	S9-T13N-R25E
YERINGTON MINE	LODE	BR 29	S4, 9-T13N-R25E
YERINGTON MINE	LODE	BR 3	S32-T14N-R25E S5-T13N-R25E
YERINGTON MINE	LODE	BR 30	S9-T13N-R25E
YERINGTON MINE	LODE	BR 31	S4, 9-T13N-R25E

Program	Type	Claim	Sec-Twp-Range
YERINGTON MINE	LODE	BR 32	S9-T13N-R25E
YERINGTON MINE	LODE	BR 33	S4, 9-T13N-R25E
YERINGTON MINE	LODE	BR 34	S9-T13N-R25E
YERINGTON MINE	LODE	BR 35	S4, 9-T13N-R25E
YERINGTON MINE	LODE	BR 36	S9-T13N-R25E
YERINGTON MINE	LODE	BR 37	S4, 9-T13N-R25E
YERINGTON MINE	LODE	BR 38	S9-T13N-R25E
YERINGTON MINE	LODE	BR 39	S3,4,9,10-T13N-R25E
YERINGTON MINE	LODE	BR 4	S5-T13N-R25E
YERINGTON MINE	LODE	BR 40	S3, 4-T13N-R25E
YERINGTON MINE	LODE	BR 41	S8-T13N-R25E
YERINGTON MINE	LODE	BR 42	S8, 17-T13N-R25E
YERINGTON MINE	LODE	BR 43	S8-T13N-R25E
YERINGTON MINE	LODE	BR 44	S8,9,16,17-T13N-R25E
YERINGTON MINE	LODE	BR 45	S9, 16-T13N-R25E
YERINGTON MINE	LODE	BR 46	S9, 16-T13N-R25E
YERINGTON MINE	LODE	BR 47	S9-T13N-R25E
YERINGTON MINE	LODE	BR 48	S9, 16-T13N-R25E
YERINGTON MINE	LODE	BR 49	S9-T13N-R25E
YERINGTON MINE	LODE	BR 5	S32-T14N-R25E S5-T13N-R25E
YERINGTON MINE	LODE	BR 50	S9-T13N-R25E
YERINGTON MINE	LODE	BR 51	S9-T13N-R25E
YERINGTON MINE	LODE	BR 52	S9-T13N-R25E
YERINGTON MINE	LODE	BR 53	S9-T13N-R25E
YERINGTON MINE	LODE	BR 54	S9-T13N-R25E
YERINGTON MINE	LODE	BR 55	S9-T13N-R25E
YERINGTON MINE	LODE	BR 56	S9-T13N-R25E
YERINGTON MINE	LODE	BR 57	S9-T13N-R25E
YERINGTON MINE	LODE	BR 58	S9-T13N-R25E
YERINGTON MINE	LODE	BR 59	S9-T13N-R25E
YERINGTON MINE	LODE	BR 6	S5-T13N-R25E
MACARTHUR CU	LODE	BR 60	S9-T25E-13N
MACARTHUR CU	LODE	BR 61	S9-T25E-13N
YERINGTON MINE	LODE	BR 7	S32-T14N-R25E S5-T13N-R25E
YERINGTON MINE	LODE	BR 8	S5-T13N-R25E
YERINGTON MINE	LODE	BR 9	S32-T14N-R25E S5-T13N-R25E
MACARTHUR CU	LODE	MP 1	S26-T14N-R24E
MACARTHUR CU	LODE	MP 10	S26,35-T14N-R24E
MACARTHUR CU	LODE	MP 11	S26-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	MP 12	S26,35-T14N-R24E
MACARTHUR CU	LODE	MP 13	S25,26-T14N-R24E
MACARTHUR CU	LODE	MP 14	S25,26,35,36-T14N-R24E
MACARTHUR CU	LODE	MP 15	S25-T14N-R24E
MACARTHUR CU	LODE	MP 16	S25,36-T14N-R24E
MACARTHUR CU	LODE	MP 17	S25-T14N-R24E
MACARTHUR CU	LODE	MP 18	S25,36-T14N-R24E
MACARTHUR CU	LODE	MP 19	S25-T14N-R24E
MACARTHUR CU	LODE	MP 2	S26,35-T14N-R24E
MACARTHUR CU	LODE	MP 20	S25,36-T14N-R24E
MACARTHUR CU	LODE	MP 21	S25-T14N-R24E
MACARTHUR CU	LODE	MP 22	S25,36-T14N-R24E
MACARTHUR CU	LODE	MP 23	S25-T14N-R24E
MACARTHUR CU	LODE	MP 24	S25-T14N-R24E
MACARTHUR CU	LODE	MP 25	S25-T14N-R24E
MACARTHUR CU	LODE	MP 26	S25-T14N-R24E
MACARTHUR CU	LODE	MP 27	S25-T14N-R24E S30-T14N-R25E
MACARTHUR CU	LODE	MP 28	S30-T14N-R25E
MACARTHUR CU	LODE	MP 29	S30-T14N-R25E
MACARTHUR CU	LODE	MP 3	S26-T14N-R24E
MACARTHUR CU	LODE	MP 30	S26-T14N-R24E
MACARTHUR CU	LODE	MP 31	S26-T14N-R24E
MACARTHUR CU	LODE	MP 32	S26-T14N-R24E
MACARTHUR CU	LODE	MP 33	S26-T14N-R24E
MACARTHUR CU	LODE	MP 34	S26-T14N-R24E
MACARTHUR CU	LODE	MP 35	S26-T14N-R24E
MACARTHUR CU	LODE	MP 36	S26-T14N-R24E
MACARTHUR CU	LODE	MP 37	S26-T14N-R24E
MACARTHUR CU	LODE	MP 38	S26-T14N-R24E
MACARTHUR CU	LODE	MP 39	S26-T14N-R24E
MACARTHUR CU	LODE	MP 4	S26,35-T14N-R24E
MACARTHUR CU	LODE	MP 40	S26-T14N-R24E
MACARTHUR CU	LODE	MP 41	S25, 26-T14N-R24E
MACARTHUR CU	LODE	MP 42	S25, 26-T14N-R24E
MACARTHUR CU	LODE	MP 43	S25-T14N-R24E
MACARTHUR CU	LODE	MP 44	S25-T14N-R24E
MACARTHUR CU	LODE	MP 45	S25-T14N-R24E
MACARTHUR CU	LODE	MP 46	S25-T14N-R24E
MACARTHUR CU	LODE	MP 47	S25-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	MP 48	S25-T14N-R24E
MACARTHUR CU	LODE	MP 49	S25-T14N-R24E
MACARTHUR CU	LODE	MP 5	S26-T14N-R24E
MACARTHUR CU	LODE	MP 50	S25-T14N-R24E
MACARTHUR CU	LODE	MP 51	S25-T14N-R24E
MACARTHUR CU	LODE	MP 52	S25-T14N-R24E
MACARTHUR CU	LODE	MP 53	S25-T14N-R24E
MACARTHUR CU	LODE	MP 54	S25-T14N-R24E
MACARTHUR CU	LODE	MP 55	S25-T14N-R24E
MACARTHUR CU	LODE	MP 56	S25-T14N-R24E
MACARTHUR CU	LODE	MP 57	S25-T14N-R24E
MACARTHUR CU	LODE	MP 58	S25-T14N-R24E
MACARTHUR CU	LODE	MP 59	S25-T14N-R24E S30-T14N-R25E
MACARTHUR CU	LODE	MP 6	S26,35-T14N-R24E
MACARTHUR CU	LODE	MP 60	S25-T14N-R24E S30-T14N-R25E
MACARTHUR CU	LODE	MP 61	S30-T14N-R25E
MACARTHUR CU	LODE	MP 62	S30-T14N-R25E
MACARTHUR CU	LODE	MP 63	S30-T14N-R25E
MACARTHUR CU	LODE	MP 64	S30-T14N-R25E
MACARTHUR CU	LODE	MP 65	S30-T14N-R25E
MACARTHUR CU	LODE	MP 66	S30-T14N-R25E
MACARTHUR CU	LODE	MP 67	S30-T14N-R25E
MACARTHUR CU	LODE	MP 68	S30-T14N-R25E
MACARTHUR CU	LODE	MP 69	S30-T14N-R25E
MACARTHUR CU	LODE	MP 7	S26-T14N-R24E
MACARTHUR CU	LODE	MP 70	S30-T14N-R25E
MACARTHUR CU	LODE	MP 71	S30-T14N-R25E
MACARTHUR CU	LODE	MP 72	S30-T14N-R25E
MACARTHUR CU	LODE	MP 73	S24, 25-T14N-R24E
MACARTHUR CU	LODE	MP 74	S24, 25-T14N-R24E
MACARTHUR CU	LODE	MP 75	S24, 25-T14N-R24E
MACARTHUR CU	LODE	MP 76	S24, 25-T14N-R24E
MACARTHUR CU	LODE	MP 77	S24, 25-T14N-R24E
MACARTHUR CU	LODE	MP 78	S24, 25-T14N-R24E
MACARTHUR CU	LODE	MP 79	S24, 25-T14N-R24E
MACARTHUR CU	LODE	MP 8	S26,35-T14N-R24E
MACARTHUR CU	LODE	MP 80	S24, 25-T14N-R24E S19, 30-T14N-R25E
MACARTHUR CU	LODE	MP 81	S19, 30-T14N-R25E
MACARTHUR CU	LODE	MP 82	S19, 30-T14N-R25E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	MP 83	S19, 30-T14N-R25E
MACARTHUR CU	LODE	MP 84	S19, 30-T14N-R25E
MACARTHUR CU	LODE	MP 85	S19, 30-T14N-R25E
MACARTHUR CU	LODE	MP 9	S26-T14N-R24E
YERINGTON MINE	PLACER	PLOXI 1	S5-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 11	S4-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 13	S4-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 14	S4-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 15	S5-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 16	S5-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 19	S8-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 2	S5-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 20	S8-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 21	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 22	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 23	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 24	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 25	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 26	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 27	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 28	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 29	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 3	S5-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 30	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 31	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 32	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 33	S8-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 34	S8-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 35	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 36	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 37	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 38	S9-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 39	S8-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 40	S8-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 41	S8-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 42	S8-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 43	S17-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 44	S17-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 45	S17-T13S-R25E

Program	Type	Claim	Sec-Twp-Range
YERINGTON MINE	PLACER	PLOXI 46	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 47	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 48	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 49	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 5	S5-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 50	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 51	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 53	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 54	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 55	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 56	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 57	S17-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 58	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 59	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 6	S5-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 60	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 61	S16-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 62	S20-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 63	S20-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 64	S20-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 65	S20-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 66	S20-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 67	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 68	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 69	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 70	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 71	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 72	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 73	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 74	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 75	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 76	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 77	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 78	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 79	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 80	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 81	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 82	S20-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 83	S21-T13S-R25E

Program	Type	Claim	Sec-Twp-Range
YERINGTON MINE	PLACER	PLOXI 84	S21-T13S-R25E
YERINGTON MINE	PLACER	PLOXI 85	S21-T13S-R25E
MACARTHUR CU	LODE	QT 1	S14,15,22,23-T14N-R24E
MACARTHUR CU	LODE	QT 10	S23-T14N-R24E
MACARTHUR CU	LODE	QT 101	S19-T14N-R25E
MACARTHUR CU	LODE	QT 103	S19-T14N-R25E
MACARTHUR CU	LODE	QT 104	S19, 30-T14N-R25E
MACARTHUR CU	LODE	QT 105	S19-T14N-R25E
MACARTHUR CU	LODE	QT 106	S19, 30-T14N-R25E
MACARTHUR CU	LODE	QT 107	S19, 20-T14N-R25E
MACARTHUR CU	LODE	QT 108	S19,20,29,30-T14N-R25E
MACARTHUR CU	LODE	QT 109	S20, 29-T14N-R25E
MACARTHUR CU	LODE	QT 11	S14, 23-T14N-R24E
MACARTHUR CU	LODE	QT 110	S20, 29-T14N-R25E
MACARTHUR CU	LODE	QT 111	S26, 27-T14N-R24E
MACARTHUR CU	LODE	QT 112	S26, 27-T14N-R24E
MACARTHUR CU	LODE	QT 113	S26-T14N-R24E
MACARTHUR CU	LODE	QT 114	S26-T14N-R24E
MACARTHUR CU	LODE	QT 115	S26-T14N-R24E
MACARTHUR CU	LODE	QT 116	S26-T14N-R24E
MACARTHUR CU	LODE	QT 117	S26-T14N-R24E
MACARTHUR CU	LODE	QT 12	S24-T14N-R24E
MACARTHUR CU	LODE	QT 13	S14, 23-T14N-R24E
MACARTHUR CU	LODE	QT 133	S30-T14N-R25E
MACARTHUR CU	LODE	QT 135	S29, 30-T14N-R25E
MACARTHUR CU	LODE	QT 136	S29, 30-T14N-R25E
MACARTHUR CU	LODE	QT 137	S29-T14N-R25E
MACARTHUR CU	LODE	QT 138	S29-T14N-R25E
MACARTHUR CU	LODE	QT 139	S29-T14N-R25E
MACARTHUR CU	LODE	QT 14	S23-T14N-R24E
MACARTHUR CU	LODE	QT 140	S29-T14N-R25E
MACARTHUR CU	LODE	QT 141	S26, 27-T14N-R24E
MACARTHUR CU	LODE	QT 142	S26, 27-T14N-R24E
MACARTHUR CU	LODE	QT 143	S26-T14N-R24E
MACARTHUR CU	LODE	QT 144	S26, 35-T14N-R24E
MACARTHUR CU	LODE	QT 145	S26-T14N-R24E
MACARTHUR CU	LODE	QT 146	S26, 35-T14N-R24E
MACARTHUR CU	LODE	QT 15	S14, 23-T14N-R24E
MACARTHUR CU	LODE	QT 152	S25, 36-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	QT 154	S25, 36-T14N-R24E
MACARTHUR CU	LODE	QT 156	S25, 36-T14N-R24E
MACARTHUR CU	LODE	QT 158	S25, 36-T14N-R24E
MACARTHUR CU	LODE	QT 16	S23-T14N-R24E
MACARTHUR CU	LODE	QT 160	S25, 36-T14N-R24E S30, 31-T14N-R25E
MACARTHUR CU	LODE	QT 161	S30-T14N-R25E
MACARTHUR CU	LODE	QT 162	S30, 31-T14N-R25E
MACARTHUR CU	LODE	QT 163	S30-T14N-R25E
MACARTHUR CU	LODE	QT 164	S30, 31-T14N-R25E
MACARTHUR CU	LODE	QT 165	S30-T14N-R25E
MACARTHUR CU	LODE	QT 166	S30, 31-T14N-R25E
MACARTHUR CU	LODE	QT 167	S30-T14N-R25E
MACARTHUR CU	LODE	QT 168	S30, 31-T14N-R25E
MACARTHUR CU	LODE	QT 17	S14, 23-T14N-R24E
MACARTHUR CU	LODE	QT 170	S30, 31-T14N-R25E
MACARTHUR CU	LODE	QT 171	S30-T14N-R25E
MACARTHUR CU	LODE	QT 173	S29, 30-T14N-R25E
MACARTHUR CU	LODE	QT 174	S29, 30-T14N-R25E
MACARTHUR CU	LODE	QT 175	S29-T14N-R25E
MACARTHUR CU	LODE	QT 176	S29-T14N-R25E
MACARTHUR CU	LODE	QT 177	S34, 35-T14N-R24E
MACARTHUR CU	LODE	QT 178	S35-T14N-R24E
MACARTHUR CU	LODE	QT 179	S35-T14N-R24E
MACARTHUR CU	LODE	QT 18	S23-T14N-R24E
MACARTHUR CU	LODE	QT 180	S35-T14N-R24E
MACARTHUR CU	LODE	QT 181	S35-T14N-R24E
MACARTHUR CU	LODE	QT 182	S35-T14N-R24E
MACARTHUR CU	LODE	QT 183	S35-T14N-R24E
MACARTHUR CU	LODE	QT 184	S35-T14N-R24E
MACARTHUR CU	LODE	QT 185	S35-T14N-R24E
MACARTHUR CU	LODE	QT 186	S35-T14N-R24E
MACARTHUR CU	LODE	QT 187	S35-T14N-R24E
MACARTHUR CU	LODE	QT 188	S35-T14N-R24E
MACARTHUR CU	LODE	QT 189	S35-T14N-R24E
MACARTHUR CU	LODE	QT 19	S13,14,23,24-T14N-R24E
MACARTHUR CU	LODE	QT 190	S35-T14N-R24E
MACARTHUR CU	LODE	QT 191	S35-T14N-R24E
MACARTHUR CU	LODE	QT 192	S35-T14N-R24E
MACARTHUR CU	LODE	QT 193	S35-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	QT 194	S35-T14N-R24E
MACARTHUR CU	LODE	QT 195	S35-T14N-R24E
MACARTHUR CU	LODE	QT 196	S35, 36-T14N-R24E
MACARTHUR CU	LODE	QT 197	S36-T14N-R24E
MACARTHUR CU	LODE	QT 198	S36-T14N-R24E
MACARTHUR CU	LODE	QT 199	S36-T14N-R24E
MACARTHUR CU	LODE	QT 2	S22, 23-T14N-R24E
MACARTHUR CU	LODE	QT 20	S23, 24-T14N-R24E
MACARTHUR CU	LODE	QT 200	S36-T14N-R24E
MACARTHUR CU	LODE	QT 201	S36-T14N-R24E
MACARTHUR CU	LODE	QT 202	S36-T14N-R24E
MACARTHUR CU	LODE	QT 203	S36-T14N-R24E
MACARTHUR CU	LODE	QT 204	S36-T14N-R24E
MACARTHUR CU	LODE	QT 205	S36-T14N-R24E
MACARTHUR CU	LODE	QT 206	S36-T14N-R24E
MACARTHUR CU	LODE	QT 207	S36-T14N-R24E
MACARTHUR CU	LODE	QT 208	S36-T14N-R24E
MACARTHUR CU	LODE	QT 209	S36-T14N-R24E
MACARTHUR CU	LODE	QT 21	S13, 24-T14N-R24E
MACARTHUR CU	LODE	QT 210	S36-T14N-R24E
MACARTHUR CU	LODE	QT 211	S36-T14N-R24E S31-T14N-R25E
MACARTHUR CU	LODE	QT 212	S36-T14N-R24E S31-T14N-R25E
MACARTHUR CU	LODE	QT 213	S31-T14N-R25E
MACARTHUR CU	LODE	QT 214	S31-T14N-R25E
MACARTHUR CU	LODE	QT 215	S31-T14N-R25E
MACARTHUR CU	LODE	QT 216	S31-T14N-R25E
MACARTHUR CU	LODE	QT 217	S31-T14N-R25E
MACARTHUR CU	LODE	QT 218	S31-T14N-R25E
MACARTHUR CU	LODE	QT 219	S31-T14N-R25E
MACARTHUR CU	LODE	QT 22	S24-T14N-R24E
MACARTHUR CU	LODE	QT 220	S31-T14N-R25E
MACARTHUR CU	LODE	QT 221	S31-T14N-R25E
MACARTHUR CU	LODE	QT 222	S31-T14N-R25E
MACARTHUR CU	LODE	QT 223	S31-T14N-R25E
MACARTHUR CU	LODE	QT 224	S31-T14N-R25E
MACARTHUR CU	LODE	QT 23	S13, 24-T14N-R24E
MACARTHUR CU	LODE	QT 24	S24-T14N-R24E
MACARTHUR CU	LODE	QT 25	S13, 24-T14N-R24E
MACARTHUR CU	LODE	QT 251	S27-T14N-R24E S34-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	QT 252	S27-T14N-R24E S34-T14N-R24E
MACARTHUR CU	LODE	QT 253	S34-T14N-R24E
MACARTHUR CU	LODE	QT 254	S34-T14N-R24E
MACARTHUR CU	LODE	QT 255	S34-T14N-R24E
MACARTHUR CU	LODE	QT 256	S34-T14N-R24E
MACARTHUR CU	LODE	QT 257	S3-T13N-R24E S34-T14N-R24E
MACARTHUR CU	LODE	QT 258	S3-T13N-R24E
MACARTHUR CU	LODE	QT 259	S3-T13N-R24E S34-T14N-R24E
MACARTHUR CU	LODE	QT 26	S24-T14N-R24E
MACARTHUR CU	LODE	QT 260	S3-T13N-R24E
MACARTHUR CU	LODE	QT 261	S2, 3-T13N-R24E S34, 35-T14N-R24E
MACARTHUR CU	LODE	QT 262	S2, 3-T13N-R24E
MACARTHUR CU	LODE	QT 263	S2-T13N-R24E S35-T14N-R24E
MACARTHUR CU	LODE	QT 264	S2-T13N-R24E
MACARTHUR CU	LODE	QT 265	S2-T13N-R24E S35-T14N-R24E
MACARTHUR CU	LODE	QT 266	S2-T13N-R24E
MACARTHUR CU	LODE	QT 267	S2-T13N-R24E S35-T14N-R24E
MACARTHUR CU	LODE	QT 268	S2-T13N-R24E
MACARTHUR CU	LODE	QT 269	S2-T13N-R24E S35-T14N-R24E
MACARTHUR CU	LODE	QT 27	S13, 24-T14N-R24E
MACARTHUR CU	LODE	QT 270	S2-T13N-R24E
MACARTHUR CU	LODE	QT 271	S2-T13N-R24E S35-T14N-R24E
MACARTHUR CU	LODE	QT 272	S2-T13N-R24E
MACARTHUR CU	LODE	QT 273	S2-T13N-R24E S35-T14N-R24E
MACARTHUR CU	LODE	QT 274	S2-T13N-R24E
MACARTHUR CU	LODE	QT 275	S2-T13N-R24E S35-T14N-R24E
MACARTHUR CU	LODE	QT 276	S2-T13N-R24E
MACARTHUR CU	LODE	QT 28	S24-T14N-R24E
MACARTHUR CU	LODE	QT 29	S13, 24-T14N-R24E
MACARTHUR CU	LODE	QT 3	S14, 23-T14N-R24E
MACARTHUR CU	LODE	QT 30	S24-T14N-R24E
MACARTHUR CU	LODE	QT 31	S13, 24-T14N-R24E
MACARTHUR CU	LODE	QT 32	S24-T14N-R24E
MACARTHUR CU	LODE	QT 33	S13, 24-T14N-R24E
MACARTHUR CU	LODE	QT 34	S24-T14N-R24E
MACARTHUR CU	LODE	QT 35	S13, 24-T14N-R24E
MACARTHUR CU	LODE	QT 36	S24-T14N-R24E
MACARTHUR CU	LODE	QT 37	S13, 24-T14N-R24E S18, 19-T14N-R25E
MACARTHUR CU	LODE	QT 38	S24-T14N-R24E S19-T14N-R25E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	QT 39	S18, 19-T14N-R25E
MACARTHUR CU	LODE	QT 4	S23-T14N-R24E
MACARTHUR CU	LODE	QT 40	S19-T14N-R25E
MACARTHUR CU	LODE	QT 41	S18, 19-T14N-R25E
MACARTHUR CU	LODE	QT 42	S19-T14N-R25E
MACARTHUR CU	LODE	QT 43	S18, 19-T14N-R25E
MACARTHUR CU	LODE	QT 44	S19-T14N-R25E
MACARTHUR CU	LODE	QT 45	S18, 19-T14N-R25E
MACARTHUR CU	LODE	QT 46	S19-T14N-R25E
MACARTHUR CU	LODE	QT 47	S18, 19-T14N-R25E
MACARTHUR CU	LODE	QT 48	S19-T14N-R25E
MACARTHUR CU	LODE	QT 49	S18, 19-T14N-R25E
MACARTHUR CU	LODE	QT 5	S14, 23-T14N-R24E
MACARTHUR CU	LODE	QT 50	S19-T14N-R25E
MACARTHUR CU	LODE	QT 51	S18, 19-T14N-R25E
MACARTHUR CU	LODE	QT 52	S19-T14N-R25E
MACARTHUR CU	LODE	QT 53	S17,18,19,20-T14N-R25E
MACARTHUR CU	LODE	QT 54	S19, 20-T14N-R25E
MACARTHUR CU	LODE	QT 55	S22, 23-T14N-R24E
MACARTHUR CU	LODE	QT 56	S22,23,26,27-T14N-R24E
MACARTHUR CU	LODE	QT 57	S23-T14N-R24E
MACARTHUR CU	LODE	QT 58	S23, 26-T14N-R24E
MACARTHUR CU	LODE	QT 59	S23-T14N-R24E
MACARTHUR CU	LODE	QT 6	S23-T14N-R24E
MACARTHUR CU	LODE	QT 60	S23, 26-T14N-R24E
MACARTHUR CU	LODE	QT 61	S23-T14N-R24E
MACARTHUR CU	LODE	QT 62	S23, 26-T14N-R24E
MACARTHUR CU	LODE	QT 63	S23-T14N-R24E
MACARTHUR CU	LODE	QT 64	S23, 26-T14N-R24E
MACARTHUR CU	LODE	QT 65	S23-T14N-R24E
MACARTHUR CU	LODE	QT 66	S23, 26-T14N-R24E
MACARTHUR CU	LODE	QT 67	S23-T14N-R24E
MACARTHUR CU	LODE	QT 68	S23, 26-T14N-R24E
MACARTHUR CU	LODE	QT 69	S23-T14N-R24E
MACARTHUR CU	LODE	QT 7	S14, 23-T14N-R24E
MACARTHUR CU	LODE	QT 70	S23, 26-T14N-R24E
MACARTHUR CU	LODE	QT 71	S23-T14N-R24E
MACARTHUR CU	LODE	QT 72	S23, 26-T14N-R24E
MACARTHUR CU	LODE	QT 73	S23, 24-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	QT 74	S23,24,25,26-T14N-R24E
MACARTHUR CU	LODE	QT 75	S24-T14N-R24E
MACARTHUR CU	LODE	QT 76	S24, 25-T14N-R24E
MACARTHUR CU	LODE	QT 77	S24-T14N-R24E
MACARTHUR CU	LODE	QT 79	S24-T14N-R24E
MACARTHUR CU	LODE	QT 8	S23-T14N-R24E
MACARTHUR CU	LODE	QT 81	S24-T14N-R24E
MACARTHUR CU	LODE	QT 83	S24-T14N-R24E
MACARTHUR CU	LODE	QT 85	S24-T14N-R24E
MACARTHUR CU	LODE	QT 87	S24-T14N-R24E
MACARTHUR CU	LODE	QT 89	S24-T14N-R24E
MACARTHUR CU	LODE	QT 9	S14, 23-T14N-R24E
MACARTHUR CU	LODE	QT 91	S24-T14N-R24E S19-T14N-R25E
MACARTHUR CU	LODE	QT 93	S19-T14N-R25E
MACARTHUR CU	LODE	QT 95	S19-T14N-R25E
MACARTHUR CU	LODE	QT 97	S19-T14N-R25E
MACARTHUR CU	LODE	QT 99	S19-T14N-R25E
MACARTHUR CU	LODE	SC 1	S19,20-T13N-R25E
MACARTHUR CU	LODE	SC 10	S20,29-T13N-R25E
MACARTHUR CU	LODE	SC 100	S18-T13N-R25E
MACARTHUR CU	LODE	SC 101	S18-T13N-R25E
MACARTHUR CU	LODE	SC 102	S18-T13N-R25E
MACARTHUR CU	LODE	SC 103	S18-T13N-R25E
MACARTHUR CU	LODE	SC 104	S18-T13N-R25E
MACARTHUR CU	LODE	SC 105	S18-T13N-R25E
MACARTHUR CU	LODE	SC 106	S18-T13N-R25E
MACARTHUR CU	LODE	SC 107	S18-T13N-R25E
MACARTHUR CU	LODE	SC 108	S18-T13N-R25E
MACARTHUR CU	LODE	SC 109	S17,18-T13N-R25E
MACARTHUR CU	LODE	SC 11	S20-T13N-R25E
MACARTHUR CU	LODE	SC 110	S17,18-T13N-R25E
MACARTHUR CU	LODE	SC 111	S17-T13N-R25E
MACARTHUR CU	LODE	SC 112	S17-T13N-R25E
MACARTHUR CU	LODE	SC 113	S17-T13N-R25E
MACARTHUR CU	LODE	SC 114	S17-T13N-R25E
MACARTHUR CU	LODE	SC 115	S12-T13N-R24E
MACARTHUR CU	LODE	SC 116	S12,13-T13N-R24E
MACARTHUR CU	LODE	SC 117	S12-T13N-R24E
MACARTHUR CU	LODE	SC 118	S12,13-T13N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 119	S12-T13N-R24E
MACARTHUR CU	LODE	SC 12	S20,29-T13N-R25E
MACARTHUR CU	LODE	SC 120	S12,13-T13N-R24E
MACARTHUR CU	LODE	SC 121	S12-T13N-R24E
MACARTHUR CU	LODE	SC 122	S12,13-T13N-R24E
MACARTHUR CU	LODE	SC 123	S12-T13N-R24E; S7-T13N-R25E
MACARTHUR CU	LODE	SC 124	S12,13-T13N-R24E; S7,18-T13N-R25E
MACARTHUR CU	LODE	SC 125	S7-T13N-R25E
MACARTHUR CU	LODE	SC 126	S7,18-T13N-R25E
MACARTHUR CU	LODE	SC 127	S7-T13N-R25E
MACARTHUR CU	LODE	SC 128	S7,18-T13N-R25E
MACARTHUR CU	LODE	SC 129	S7-T13N-R25E
YERINGTON MINE	LODE	SC 13	S20-T13N-R25E
MACARTHUR CU	LODE	SC 130	S7,18-T13N-R25E
MACARTHUR CU	LODE	SC 131	S7-T13N-R25E
MACARTHUR CU	LODE	SC 132	S7,18-T13N-R25E
MACARTHUR CU	LODE	SC 133	S7-T13N-R25E
MACARTHUR CU	LODE	SC 134	S7,18-T13N-R25E
MACARTHUR CU	LODE	SC 135	S7-T13N-R25E
MACARTHUR CU	LODE	SC 136	S7,18-T13N-R25E
MACARTHUR CU	LODE	SC 137	S7-T13N-R25E
MACARTHUR CU	LODE	SC 138	S7,18-T13N-R25E
MACARTHUR CU	LODE	SC 139	S7,8-T13N-R25E
MACARTHUR CU	LODE	SC 14	S20,29-T13N-R25E
MACARTHUR CU	LODE	SC 140	S7,8,17,18-T13N-R25E
MACARTHUR CU	LODE	SC 141	S1,2,11,12-T13N-R24E
MACARTHUR CU	LODE	SC 142	S11,12-T13N-R24E
MACARTHUR CU	LODE	SC 143	S1,12-T13N-R24E
MACARTHUR CU	LODE	SC 144	S12-T13N-R24E
MACARTHUR CU	LODE	SC 145	S1,12-T13N-R24E
MACARTHUR CU	LODE	SC 146	S12-T13N-R24E
MACARTHUR CU	LODE	SC 147	S1,12-T13N-R24E
MACARTHUR CU	LODE	SC 148	S12-T13N-R24E
MACARTHUR CU	LODE	SC 149	S1,12-T13N-R24E
YERINGTON MINE	LODE	SC 15	S20-T13N-R25E
MACARTHUR CU	LODE	SC 150	S12-T13N-R24E
MACARTHUR CU	LODE	SC 151	S1,12-T13N-R24E
MACARTHUR CU	LODE	SC 152	S12-T13N-R24E
MACARTHUR CU	LODE	SC 153	S1,12-T13N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 154	S12-T13N-R24E
MACARTHUR CU	LODE	SC 155	S1,12-T13N-R24E
MACARTHUR CU	LODE	SC 156	S12-T13N-R24E
MACARTHUR CU	LODE	SC 157	S1,12-T13N-R24E
MACARTHUR CU	LODE	SC 158	S12-T13N-R24E
MACARTHUR CU	LODE	SC 159	S1,12-T13N-R24E; S6,7-T13N-R25E
YERINGTON MINE	LODE	SC 16	S20,29-T13N-R25E
MACARTHUR CU	LODE	SC 160	S12-T13N-R24E; S7-T13N-R25E
MACARTHUR CU	LODE	SC 161	S6,7-T13N-R25E
MACARTHUR CU	LODE	SC 162	S7-T13N-R25E
MACARTHUR CU	LODE	SC 163	S6,7-T13N-R25E
MACARTHUR CU	LODE	SC 164	S7-T13N-R25E
MACARTHUR CU	LODE	SC 165	S6,7-T13N-R25E
MACARTHUR CU	LODE	SC 166	S7-T13N-R25E
MACARTHUR CU	LODE	SC 167	S6,7-T13N-R25E
MACARTHUR CU	LODE	SC 168	S7-T13N-R25E
MACARTHUR CU	LODE	SC 169	S6,7-T13N-R25E
YERINGTON MINE	LODE	SC 17	S20-T13N-R25E
MACARTHUR CU	LODE	SC 170	S7-T13N-R25E
MACARTHUR CU	LODE	SC 171	S6,7-T13N-R25E
MACARTHUR CU	LODE	SC 172	S7-T13N-R25E
MACARTHUR CU	LODE	SC 173	S6,7-T13N-R25E
MACARTHUR CU	LODE	SC 174	S7-T13N-R25E
MACARTHUR CU	LODE	SC 175	S5,6,7,8-T13N-R25E
MACARTHUR CU	LODE	SC 176	S7,8-T13N-R25E
MACARTHUR CU	LODE	SC 177	S1,2-T13N-R24E
MACARTHUR CU	LODE	SC 178	S1,2-T13N-R24E
MACARTHUR CU	LODE	SC 179	S1-T13N-R24E
YERINGTON MINE	LODE	SC 18	S20,29-T13N-R25E
MACARTHUR CU	LODE	SC 180	S1-T13N-R24E
MACARTHUR CU	LODE	SC 181	S1-T13N-R24E
MACARTHUR CU	LODE	SC 182	S1-T13N-R24E
MACARTHUR CU	LODE	SC 183	S1-T13N-R24E
MACARTHUR CU	LODE	SC 184	S1-T13N-R24E
MACARTHUR CU	LODE	SC 185	S1-T13N-R24E
MACARTHUR CU	LODE	SC 186	S1-T13N-R24E
MACARTHUR CU	LODE	SC 187	S1-T13N-R24E
MACARTHUR CU	LODE	SC 188	S1-T13N-R24E
MACARTHUR CU	LODE	SC 189	S1-T13N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 19	S19,20-T13N-R25E
MACARTHUR CU	LODE	SC 190	S1-T13N-R24E
MACARTHUR CU	LODE	SC 191	S1-T13N-R24E
MACARTHUR CU	LODE	SC 192	S1-T13N-R24E
MACARTHUR CU	LODE	SC 193	S1-T13N-R24E
MACARTHUR CU	LODE	SC 194	S1-T13N-R24E
MACARTHUR CU	LODE	SC 195	S1-T13N-R24E; S6-T13N-R25E
MACARTHUR CU	LODE	SC 196	S1-T13N-R24E; S6-T13N-R25E
MACARTHUR CU	LODE	SC 197	S6-T13N-R25E
MACARTHUR CU	LODE	SC 198	S6-T13N-R25E
MACARTHUR CU	LODE	SC 199	S6-T13N-R25E
MACARTHUR CU	LODE	SC 2	S19,20,29,30-T13N-R25E
MACARTHUR CU	LODE	SC 20	S20-T13N-R25E
MACARTHUR CU	LODE	SC 200	S6-T13N-R25E
MACARTHUR CU	LODE	SC 201	S6-T13N-R25E
MACARTHUR CU	LODE	SC 202	S6-T13N-R25E
MACARTHUR CU	LODE	SC 203	S6-T13N-R25E
MACARTHUR CU	LODE	SC 204	S6-T13N-R25E
MACARTHUR CU	LODE	SC 205	S6-T13N-R25E
MACARTHUR CU	LODE	SC 206	S6-T13N-R25E
MACARTHUR CU	LODE	SC 207	S1,2-T13N-R24E; S35-T14N-R24E
MACARTHUR CU	LODE	SC 208	S1,2-T13N-R24E
MACARTHUR CU	LODE	SC 209	S1-T13N-R24E; S35,36-T14N-R24E
MACARTHUR CU	LODE	SC 21	S20-T13N-R25E
MACARTHUR CU	LODE	SC 210	S1-T13N-R24E
MACARTHUR CU	LODE	SC 211	S1-T13N-R24E; S36-T14N-R24E
MACARTHUR CU	LODE	SC 212	S1-T13N-R24E
MACARTHUR CU	LODE	SC 213	S1-T13N-R24E; S36-T14N-R24E
MACARTHUR CU	LODE	SC 214	S1-T13N-R24E
MACARTHUR CU	LODE	SC 215	S1-T13N-R24E; S36-T14N-R24E
MACARTHUR CU	LODE	SC 216	S1-T13N-R24E
MACARTHUR CU	LODE	SC 217	S1-T13N-R24E; S36-T14N-R24E
MACARTHUR CU	LODE	SC 218	S1-T13N-R24E
MACARTHUR CU	LODE	SC 219	S1-T13N-R24E; S36-T14N-R24E
MACARTHUR CU	LODE	SC 22	S20-T13N-R25E
MACARTHUR CU	LODE	SC 220	S1-T13N-R24E
MACARTHUR CU	LODE	SC 221	S1-T13N-R24E; S36-T14N-R24E
MACARTHUR CU	LODE	SC 222	S1-T13N-R24E
MACARTHUR CU	LODE	SC 223	S1-T13N-R24E; S36-T14N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 224	S1-T13N-R24E
MACARTHUR CU	LODE	SC 225	S1-T13N-R24E; S6-T13N-R25E; S36-T14N-R24E; S31-T14N-R25E
MACARTHUR CU	LODE	SC 226	S1-T13N-R24E; S6-T13N-R25E
MACARTHUR CU	LODE	SC 227	S6-T13N-R25E; S31-T14N-R25E
MACARTHUR CU	LODE	SC 229	S6-T13N-R25E; S31-T14N-R25E
MACARTHUR CU	LODE	SC 23	S20-T13N-R25E
MACARTHUR CU	LODE	SC 231	S6-T13N-R25E; S31-T14N-R25E
MACARTHUR CU	LODE	SC 232	S6-T13N-R25E
MACARTHUR CU	LODE	SC 233	S6-T13N-R25E; S31-T14N-R25E
MACARTHUR CU	LODE	SC 234	S6-T13N-R25E
MACARTHUR CU	LODE	SC 235	S11-T13N-R24E
MACARTHUR CU	LODE	SC 236	S11, 14-T13N-R24E
MACARTHUR CU	LODE	SC 237	S11-T13N-R24E
MACARTHUR CU	LODE	SC 238	S11, 14-T13N-R24E
MACARTHUR CU	LODE	SC 239	S11, 12-T13N-R24E
MACARTHUR CU	LODE	SC 24	S20-T13N-R25E
MACARTHUR CU	LODE	SC 240	S11, 12, 13, 14-T13N-R24E
MACARTHUR CU	LODE	SC 241	S12-T13N-R24E
MACARTHUR CU	LODE	SC 242	S12, 13-T13N-R24E
MACARTHUR CU	LODE	SC 243	S12-T13N-R24E
MACARTHUR CU	LODE	SC 244	S12, 13-T13N-R24E
MACARTHUR CU	LODE	SC 245	S12-T13N-R24E
MACARTHUR CU	LODE	SC 246	S12-T13N-R24E
MACARTHUR CU	LODE	SC 247	S12-T13N-R24E
MACARTHUR CU	LODE	SC 248	S12, 13-T13N-R24E
MACARTHUR CU	LODE	SC 249	S2, 11-T13N-R24E
YERINGTON MINE	LODE	SC 25	S20-T13N-R25E
MACARTHUR CU	LODE	SC 250	S11-T13N-R24E
MACARTHUR CU	LODE	SC 251	S2, 11-T13N-R24E
MACARTHUR CU	LODE	SC 252	S11-T13N-R24E
MACARTHUR CU	LODE	SC 253	S2-T13N-R24E
MACARTHUR CU	LODE	SC 254	S2-T13N-R24E
MACARTHUR CU	LODE	SC 255	S2-T13N-R24E
MACARTHUR CU	LODE	SC 256	S2-T13N-R24E
MACARTHUR CU	LODE	SC 257	S13-T13N-R24E
MACARTHUR CU	LODE	SC 258	S13-T13N-R24E
MACARTHUR CU	LODE	SC 259	S13-T13N-R24E
YERINGTON MINE	LODE	SC 26	S20-T13N-R25E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 260	S13, 24-T13N-R24E
MACARTHUR CU	LODE	SC 261	S13, 24-T13N-R24E
MACARTHUR CU	LODE	SC 262	S24-T13N-R24E
MACARTHUR CU	LODE	SC 263	S24-T13N-R24E; S19-T13N-R25E
MACARTHUR CU	LODE	SC 264	S13-T13N-R24E
MACARTHUR CU	LODE	SC 265	S13-T13N-R24E
MACARTHUR CU	LODE	SC 266	S13-T13N-R24E
MACARTHUR CU	LODE	SC 267	S2-T13N-R24E
YERINGTON MINE	LODE	SC 27	S20-T13N-R25E
YERINGTON MINE	LODE	SC 28	S20,21-T13N-R25E
YERINGTON MINE	LODE	SC 29	S20,21-T13N-R25E
MACARTHUR CU	LODE	SC 294	S26-T13N-R24E
MACARTHUR CU	LODE	SC 295	S26-T13N-R24E
MACARTHUR CU	LODE	SC 296	S25,26-T13N-R24E
MACARTHUR CU	LODE	SC 297	S25,26-T13N-R24E
MACARTHUR CU	LODE	SC 298	S25-T13N-R24E
MACARTHUR CU	LODE	SC 299	S25-T13N-R24E
MACARTHUR CU	LODE	SC 3	S20-T13N-R25E
YERINGTON MINE	LODE	SC 30	S21-T13N-R25E
MACARTHUR CU	LODE	SC 300	S25-T13N-R24E
MACARTHUR CU	LODE	SC 301	S25-T13N-R24E
MACARTHUR CU	LODE	SC 302	S25-T13N-R24E
MACARTHUR CU	LODE	SC 303	S25-T13N-R24E
MACARTHUR CU	LODE	SC 304	S25-T13N-R24E
MACARTHUR CU	LODE	SC 305	S25-T13N-R24E
MACARTHUR CU	LODE	SC 306	S25-T13N-R24E
MACARTHUR CU	LODE	SC 307	S25-T13N-R24E
MACARTHUR CU	LODE	SC 308	S25-T13N-R24E
MACARTHUR CU	LODE	SC 309	S25-T13N-R24E
YERINGTON MINE	LODE	SC 31	S21-T13N-R25E
MACARTHUR CU	LODE	SC 310	S25-T13N-R24E
MACARTHUR CU	LODE	SC 311	S25-T13N-R24E
MACARTHUR CU	LODE	SC 312	S25-T13N-R24E
MACARTHUR CU	LODE	SC 313	S25-T13N-R24E
MACARTHUR CU	LODE	SC 314	S30-T13N-R25E
MACARTHUR CU	LODE	SC 315	S30-T13N-R25E
MACARTHUR CU	LODE	SC 316	S30-T13N-R25E
MACARTHUR CU	LODE	SC 317	S30-T13N-R25E
MACARTHUR CU	LODE	SC 318	S30-T13N-R25E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 319	S30-T13N-R25E
YERINGTON MINE	LODE	SC 32	S21-T13N-R25E
MACARTHUR CU	LODE	SC 320	S30-T13N-R25E
MACARTHUR CU	LODE	SC 321	S30-T13N-R25E
MACARTHUR CU	LODE	SC 322	S25,36-T13N-R25E
MACARTHUR CU	LODE	SC 323	S25-T13N-R24E
MACARTHUR CU	LODE	SC 324	S25,36-T13N-R24E
MACARTHUR CU	LODE	SC 325	S25-T13N-R24E
MACARTHUR CU	LODE	SC 326	S25,36-T13N-R24E
MACARTHUR CU	LODE	SC 327	S25-T13N-R24E
MACARTHUR CU	LODE	SC 328	S25,36-T13N-R24E
MACARTHUR CU	LODE	SC 329	S25-T13N-R24E
YERINGTON MINE	LODE	SC 33	S21-T13N-R25E
MACARTHUR CU	LODE	SC 330	S25,36-T13N-R24E
MACARTHUR CU	LODE	SC 331	S25-T13N-R24E
MACARTHUR CU	LODE	SC 332	S25,36-T13N-R24E
MACARTHUR CU	LODE	SC 333	S25-T13N-R24E
MACARTHUR CU	LODE	SC 334	S25,36-T13N-R24E
MACARTHUR CU	LODE	SC 335	S25-T13N-R24E
MACARTHUR CU	LODE	SC 336	S35,36-T13N-R24E
MACARTHUR CU	LODE	SC 337	S36-T13N-R24E
MACARTHUR CU	LODE	SC 338	S36-T13N-R24E
MACARTHUR CU	LODE	SC 339	S36-T13N-R24E
YERINGTON MINE	LODE	SC 34	S21-T13N-R25E
MACARTHUR CU	LODE	SC 340	S36-T13N-R24E
MACARTHUR CU	LODE	SC 341	S36-T13N-R24E
MACARTHUR CU	LODE	SC 342	S36-T13N-R24E
MACARTHUR CU	LODE	SC 343	S36-T13N-R24E
MACARTHUR CU	LODE	SC 344	S36-T13N-R24E
MACARTHUR CU	LODE	SC 345	S36-T13N-R24E
MACARTHUR CU	LODE	SC 346	S36-T13N-R24E
MACARTHUR CU	LODE	SC 347	S36-T13N-R24E
MACARTHUR CU	LODE	SC 348	S36-T13N-R24E
MACARTHUR CU	LODE	SC 349	S36-T13N-R24E
YERINGTON MINE	LODE	SC 35	S20,21,28,29-T13N-R25E
MACARTHUR CU	LODE	SC 350	S36-T13N-R24E
MACARTHUR CU	LODE	SC 351	S36-T13N-R24E
MACARTHUR CU	LODE	SC 352	S36-T13N-R24E
MACARTHUR CU	LODE	SC 353	S35-T13N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 354	S2-T12N-R24E
MACARTHUR CU	LODE	SC 355	S35-T13N-R24E
MACARTHUR CU	LODE	SC 356	S2-T12N-R24E, S35-T13N-R24E
MACARTHUR CU	LODE	SC 357	S35-T13N-R24E
MACARTHUR CU	LODE	SC 358	S2-T12N-R24E, S35-T13N-R24E
MACARTHUR CU	LODE	SC 359	S35-T13N-R24E
YERINGTON MINE	LODE	SC 36	S21,28-T13N-R25E
MACARTHUR CU	LODE	SC 360	S2-T12N-R24E, S35-T13N-R24E
MACARTHUR CU	LODE	SC 361	S35-T13N-R24E
MACARTHUR CU	LODE	SC 362	S2-T12N-R24E, S35-T13N-R24E
MACARTHUR CU	LODE	SC 363	S1,2-T12N-R24E, S35,36-T13N-R24E
MACARTHUR CU	LODE	SC 364	S1-T12N-R24E, S36-T13N-R24E
MACARTHUR CU	LODE	SC 365	S1-T12N-R24E, S36-T13N-R24E
MACARTHUR CU	LODE	SC 366	S1-T12N-R24E, S36-T13N-R24E
MACARTHUR CU	LODE	SC 367	S1-T12N-R24E, S36-T13N-R24E
MACARTHUR CU	LODE	SC 368	S1-T12N-R24E, S36-T13N-R24E
MACARTHUR CU	LODE	SC 369	S1-T12N-R24E, S36-T13N-R24E
YERINGTON MINE	LODE	SC 37	S21,28-T13N-R25E
MACARTHUR CU	LODE	SC 370	S35-T13N-R24E
MACARTHUR CU	LODE	SC 371	S25,36-T13N-R24E
YERINGTON MINE	LODE	SC 38	S21,28-T13N-R25E
YERINGTON MINE	LODE	SC 39	S21-T13N-R25E
MACARTHUR CU	LODE	SC 4	S20,29-T13N-R25E
YERINGTON MINE	LODE	SC 40	S21,28-T13N-R25E
YERINGTON MINE	LODE	SC 41	S21-T13N-R25E
YERINGTON MINE	LODE	SC 42	S21,28-T13N-R25E
YERINGTON MINE	LODE	SC 43	S21-T13N-R25E
MACARTHUR CU	LODE	SC 44	S19,30-T13N-R25E
MACARTHUR CU	LODE	SC 45	S19,30-T13N-R25E
MACARTHUR CU	LODE	SC 46	S19,30-T13N-R25E
MACARTHUR CU	LODE	SC 47	S19,30-T13N-R25E
MACARTHUR CU	LODE	SC 48	S19,30-T13N-R25E
MACARTHUR CU	LODE	SC 49	S19,30-T13N-R25E
MACARTHUR CU	LODE	SC 5	S20-T13N-R25E
MACARTHUR CU	LODE	SC 50	S19,30-T13N-R25E
YERINGTON MINE	LODE	SC 506	S28-T13N-R25E
YERINGTON MINE	LODE	SC 507	S28-T13N-R25E
YERINGTON MINE	LODE	SC 508	S28-T13N-R25E
YERINGTON MINE	LODE	SC 509	S28-T13N-R25E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 51	S19,30-T13N-R25E
YERINGTON MINE	LODE	SC 510	S28-T13N-R25E
YERINGTON MINE	LODE	SC 511	S28-T13N-R25E
YERINGTON MINE	LODE	SC 512	S28-T13N-R25E
MACARTHUR CU	LODE	SC 52	S19-T13N-R25E
MACARTHUR CU	LODE	SC 53	S24-T13N-R24E; S19-T13N-R25E
MACARTHUR CU	LODE	SC 54	S19-T13N-R25E
MACARTHUR CU	LODE	SC 55	S19-T13N-R25E
MACARTHUR CU	LODE	SC 56	S19-T13N-R25E
MACARTHUR CU	LODE	SC 57	S19-T13N-R25E
MACARTHUR CU	LODE	SC 58	S19-T13N-R25E
MACARTHUR CU	LODE	SC 59	S19-T13N-R25E
MACARTHUR CU	LODE	SC 6	S20,29-T13N-R25E
MACARTHUR CU	LODE	SC 60	S19-T13N-R25E
MACARTHUR CU	LODE	SC 61	S19-T13N-R25E
MACARTHUR CU	LODE	SC 62	S19-T13N-R25E
MACARTHUR CU	LODE	SC 63	S19-T13N-R25E
MACARTHUR CU	LODE	SC 64	S19-T13N-R25E
MACARTHUR CU	LODE	SC 65	S19-T13N-R25E
MACARTHUR CU	LODE	SC 66	S19-T13N-R25E
MACARTHUR CU	LODE	SC 67	S19-T13N-R25E
MACARTHUR CU	LODE	SC 68	S13,24-T13N-R24E; S18,19-T13N-R25E
MACARTHUR CU	LODE	SC 69	S13-T13N-R24E; S18-T13N-R25E
MACARTHUR CU	LODE	SC 7	S20-T13N-R25E
MACARTHUR CU	LODE	SC 70	S18,19-T13N-R25E
MACARTHUR CU	LODE	SC 71	S18-T13N-R25E
MACARTHUR CU	LODE	SC 72	S18,19-T13N-R25E
MACARTHUR CU	LODE	SC 73	S18-T13N-R25E
MACARTHUR CU	LODE	SC 74	S18,19-T13N-R25E
MACARTHUR CU	LODE	SC 75	S18-T13N-R25E
MACARTHUR CU	LODE	SC 76	S18,19-T13N-R25E
MACARTHUR CU	LODE	SC 77	S18-T13N-R25E
MACARTHUR CU	LODE	SC 78	S18,19-T13N-R25E
MACARTHUR CU	LODE	SC 79	S18-T13N-R25E
MACARTHUR CU	LODE	SC 8	S20,29-T13N-R25E
MACARTHUR CU	LODE	SC 80	S18,19-T13N-R25E
MACARTHUR CU	LODE	SC 81	S18-T13N-R25E
MACARTHUR CU	LODE	SC 82	S18,19-T13N-R25E
MACARTHUR CU	LODE	SC 83	S18-T13N-R25E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC 84	S17,18,19,20-T13N-R25E
MACARTHUR CU	LODE	SC 85	S17,18-T13N-R25E
MACARTHUR CU	LODE	SC 86	S17,20-T13N-R25E
MACARTHUR CU	LODE	SC 87	S17-T13N-R25E
MACARTHUR CU	LODE	SC 88	S17,20-T13N-R25E
MACARTHUR CU	LODE	SC 89	S17-T13N-R25E
MACARTHUR CU	LODE	SC 9	S20-T13N-R25E
MACARTHUR CU	LODE	SC 90	S17,20-T13N-R25E
MACARTHUR CU	LODE	SC 91	S19,20-T13N-R25E
MACARTHUR CU	LODE	SC 92	S20-T13N-R25E
MACARTHUR CU	LODE	SC 93	S13-T13N-R24E; S18-T13N-R25E
MACARTHUR CU	LODE	SC 94	S13-T13N-R24E; S18-T13N-R25E
MACARTHUR CU	LODE	SC 95	S18-T13N-R25E
MACARTHUR CU	LODE	SC 96	S18-T13N-R25E
MACARTHUR CU	LODE	SC 97	S18-T13N-R25E
MACARTHUR CU	LODE	SC 98	S18-T13N-R25E
MACARTHUR CU	LODE	SC 99	S18-T13N-R25E
MACARTHUR CU	LODE	SC268	S13-T13N-R24E
MACARTHUR CU	LODE	SC269	S23-T13N-R24E
MACARTHUR CU	LODE	SC270	S23, 26-T13N-R24E
MACARTHUR CU	LODE	SC271	S23-T13N-R24E
MACARTHUR CU	LODE	SC272	S23, 24, 25, 26-T13N-R24E
MACARTHUR CU	LODE	SC273	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC274	S23, 24, 25-T13N-R24E
MACARTHUR CU	LODE	SC275	S24-T13N-R24E
MACARTHUR CU	LODE	SC276	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC277	S24-T13N-R24E
MACARTHUR CU	LODE	SC278	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC279	S24-T13N-R24E
MACARTHUR CU	LODE	SC280	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC281	S24-T13N-R24E
MACARTHUR CU	LODE	SC282	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC283	S24-T13N-R24E
MACARTHUR CU	LODE	SC284	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC285	S24-T13N-R24E
MACARTHUR CU	LODE	SC286	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC287	S24-T13N-R24E
MACARTHUR CU	LODE	SC288	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC289	S24-T13N-R24E

Program	Type	Claim	Sec-Twp-Range
MACARTHUR CU	LODE	SC290	S24, 25-T13N-R24E
MACARTHUR CU	LODE	SC291	S23-T13N-R24E
MACARTHUR CU	LODE	SC292	S23-T13N-R24E
MACARTHUR CU	LODE	SC293	S23-T13N-R24E
YERINGTON MINE	LODE	SC-500	S17,20-T13N-R25E
YERINGTON MINE	LODE	SC-501	S17,20-T13N-R25E
YERINGTON MINE	LODE	SC502	S9, 16-T13N-R24E
YERINGTON MINE	LODE	SC503	S9, 16-T13N-R24E
YERINGTON MINE	LODE	SC504	S21-T13N-R24E
YERINGTON MINE	LODE	SC505	S21-T13N-R24E
YERINGTON MINE	LODE	SCY-1	S8-T13N-R25E
YERINGTON MINE	LODE	SCY-10	S20-T13N-R25E
YERINGTON MINE	LODE	SCY-11	S20, 21-T13N-R25E
YERINGTON MINE	LODE	SCY-12 AMENDED	S16-T13N-R25E
YERINGTON MINE	LODE	SCY-13 AMENDED	S16-T13N-R25E
YERINGTON MINE	LODE	SCY-2	S8, 17-T13N-R25E
YERINGTON MINE	LODE	SCY-3	S17-T13N-R25E
YERINGTON MINE	LODE	SCY-4	S17-T13N-R25E
YERINGTON MINE	LODE	SCY-5	S17-T13N-R25E
YERINGTON MINE	LODE	SCY-6	S17-T13N-R25E
YERINGTON MINE	LODE	SCY-7	S17-T13N-R25E
YERINGTON MINE	LODE	SCY-8	S17, 20-T13N-R25E
YERINGTON MINE	LODE	SCY-9	S20-T13N-R25E
MACARTHUR CU	LODE	TAUBERT HILLS	S24-T14N-R24E
MACARTHUR CU	LODE	WEST SIDE 1	S8-T13N-R24E
MACARTHUR CU	LODE	WEST SIDE 2	S8,9-T13N-R24E
MACARTHUR CU	LODE	WEST SIDE 3	S8-T13N-R24E
MACARTHUR CU	LODE	WEST SIDE 4	S8,9-T13N-R24E
MACARTHUR CU	LODE	WEST SIDE 5	S8-T13N-R24E
MACARTHUR CU	LODE	WEST SIDE 6	S8,9-T13N-R24E
MACARTHUR CU	LODE	WEST SIDE 7	S8-T13N-R24E
MACARTHUR CU	LODE	WEST SIDE 8	S8,9-T13N-R24E
Total Claims:	**1113**	**Total acreage:**	**22995.77**

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Accessibility

Access to the Property from the town of Yerington follows US Highway ALT 95 north about one mile to the Burch Street turnoff, a paved road that leads west into the Yerington Property. Access into the mine area is fenced and restricted. Inside the fenced area a series of roads provide access to all of the Property in Township 13 North, Range 25 East. Claims in Township 13 North, Range 24 East are accessed by a number of existing dirt roads leading west from US Highway ALT 95, from one to three miles south of the town of Yerington.

5.2 Climate

The climate is temperate and is characterized by cool winters with temperatures between zero- and 50-degrees Fahrenheit and warm to hot summers with temperatures between 50- and 100-degrees Fahrenheit. Average annual precipitation is estimated at three to eight inches per year, with a significant part of this total precipitation falling as snow and increasing with elevation. Work can be conducted throughout the year with only minor delays during winter months due to heavy snowfall or unsafe travel conditions when roads are particularly muddy.

Elevations on the Property range from approximately 3,700 feet at the bottom of the Yerington pit to 4,600 feet in the Yerington Mine area and approximately 4,600 feet to 5,800 feet in the uplands to the west. The Yerington pit contains approximately 43,000 acre-feet of water, based upon the December 2022 water elevation at 4,251 feet and available post-mining pit topography. The Pit Lake is currently actively fed from the Walker River, the result of a trench cut from the river to the pit during a flood in the late 1990s diverting water into the pit to prevent flooding of the Yerington town site, and from a seep in the west wall of the Yerington pit approximately 100 feet above water level. It is a ground water sink and water levels are shown to be increasing at a decreasing rate, with a 1.3-foot increase measured in 2022 and a projected equilibrium elevation at approximately 4,260 feet, by year 2030. Yerington pit dimensions are approximately 6,200 feet long ESE to WNW, 2,500 feet wide, and 800 feet deep.

There are no active streams or springs on the remainder of the SPS Property. The terrain is moderately steep and sparsely covered by sagebrush and interspersed low profile desert shrubs. All gulches that traverse the Property are normally dry.

5.3 Local Resources and Infrastructure

The nearest population center is the agricultural community of Yerington, one mile east of the Yerington pit. Formerly an active mining center from 1953 to 1978 and from 1989 to 1997, Yerington now serves as a base for three active exploration groups: SPS; Hudbay Minerals Inc. (Mason Project copper-molybdenum property); and Nevada Copper Corporation (Pumpkin Hollow Copper Project). Yerington hosts a work force active in, qualified for, and familiar with mining operations within a one-hour drive.

Yerington offers most necessities and amenities including police, hospital, groceries, fuel, regional airport, hardware, and other necessary infrastructure. One core drilling contractor is based in Yerington. Drilling supplies and assay laboratories can be found in Reno, a 1.5-hour drive. Reverse circulation drilling contractors are found in Silver Springs, Nevada, 33 miles north, as well as in the Winnemucca and Elko, Nevada areas, within a three- to five-hour drive from the site.

Power is available at the Yerington Property. NV Energy operates a 226 MW natural gas fueled power plant within ten miles of the Project site. The power infrastructure at the Yerington Property is expected to be readily available for a future mining operation due to the historical mine operations.

SPS has approximately 2,562 acre-feet of primary groundwater rights. An additional 3,453 acre-feet of SPS primary groundwater rights have been declared forfeited and are under appeal.

6 HISTORY

6.1 Ownership/Property History

Recorded production in the Yerington mining district dates back to 1883 (Moore, 1969) as prospectors were attracted to and investigated colorful oxidized copper staining throughout the Singatse Range. Knopf (1918) reported that oxidized copper cropped out at the historic Nevada-Empire mine located above the south center of the present-day Yerington open pit. Knopf does not show or reference other mines or prospects that are underlain by the Yerington open pit footprint, as gravel and alluvial cover obscure bedrock over an approximate 0.75-mile radius around the Nevada-Empire Mine.

Information is sparse for the period from Knopf's reporting in 1918 until World War II, although it is likely that lessees worked in the Nevada-Empire during spikes in the copper price. Private reports (Hart, 1915 and Sales, 1915) describe ore shipments and planned underground exploration from a northwest striking, southwest dipping structure at the historic Montana-Yerington Mine area located approximately one mile west of the present-day Yerington pit.

During the 1940s, the Anaconda, at that time one of world's major copper producers, sent geologists to the Yerington district whose exploration outlined a 60-million-ton resource over the Yerington pit. During the early 1950s, the US government, citing the need for domestic copper production, offered "start-up" subsidies to Anaconda to open a copper mine in the Yerington district. Anaconda sank two approximately 400-foot-deep shafts in the present-day Yerington open pit and drove crosscuts to obtain bulk samples of oxidized rock for metallurgical study. Anaconda began operating the Yerington Mine in 1952 and mined continually through 1979, producing approximately 1.744 billion pounds of copper from an ore body that contained 162 million tons averaging 0.54% Cu. Approximately 104 million tons of this total were oxidized copper ore that was "vat leached" with sulfuric acid in 13,000-ton cement vats on a seven-day leach cycle. Sulfide ores were concentrated on site in a facility that was dismantled and sold following termination of mining in 1979. The cement copper and sulfide concentrates were shipped to the Anaconda's smelter in Montana.

In 1976, all assets of Anaconda, including the Yerington Mine, were purchased by ARC, which shut down dewatering pumps in the pit and closed the Yerington Mine in 1979 due to low copper prices. At closure, before dewatering pumps were shut off, the Yerington mine plan hosted a pre-stripped, non-NI 43-101 compliant reserve of 98 million tons averaging 0.36% Cu (Howard, 1979) within their ultimate pit design.

The Yerington Mine site and adjacent Weed Heights mining camp were acquired by CopperTek, a private Yerington company owned by Mr. Don Tibbals, in 1982. In the mid-1980's CopperTek began reprocessing waste rock and VLT on HLPs and an SXEW plant to produce cathode copper. CopperTek was acquired by Arimetco in 1989. In 1989, Arimetco purchased the mine property from CopperTek, commissioned a 50,000-pound-per-day solvent extraction/electrowinning plant, and began heap leaching "sub-grade" dump rock stripped from the Yerington pit by Anaconda. Arimetco also processed VLTs (minus 3/8-inch oxidized tailings leached during Anaconda's operation) to some HLPs as well as trucking oxidized ore from the MacArthur property, located approximately five miles north of the Yerington Mine site. Arimetco produced some 95 million pounds of copper from 1989 to 1999 before declaring bankruptcy in 1997 due to low copper prices. Arimetco terminated mining operations in 1997 and abandoned the property in early 2000.

Armimetco production records are summarized below in Table 6-1.

Table 6-1: Yerington Mine Production

Year	Yearly Totals Mined Tons	Grade	Pounds	Yearly Totals Pounds Sold
1989	233,037	0.39	1,795,025	375,260
1990	1,489,452	0.24	7,181,516	2,659,738
1991	2,915,234	0.18	10,494,842	3,817,612
1992	4,405,469	0.18	16,112,430	9,190,619
1993	7,613,820	0.15	22,303,920	10,522,515
1994	7,617,264	0.21	32,706,247	14,301,007
1995	9,399,061	0.17	32,559,773	14,286,796
1996	5,000,906	0.26	25,788,439	14,838,074
1997	2,941,166	0.23	13,725,306	10,030,256
1998	9,360,826	0.11	20,182,155	12,379,969
1999	0	0.00	0	3,008,989

Source: Arimetco, 2000

In early 2000 the NDEP assumed operation of the site on a care and maintenance basis, primarily to ensure that HLP drain down solutions would continue to be maintained.

Following four years of due-diligence studies and negotiations with State and federal agencies, the property was acquired by SPS from the Arimetco bankruptcy court in April 2011, after receiving BFPP letters from the USEPA, NDEP and BLM to protect SPS from liability emanating from activities of the former mine owners and operations.

The MacArthur Property history is referenced in IMC's 2022 technical report and not repeated here.

6.1.1 Yerington Property Remediation History

ARC, as successor in interest to the Anaconda Mining Company, is responsible for remediation of the Yerington Property under NDEP and EPA administrative orders that have been in place since the early 1980s. After ARC shut down mining operations, they continued to maintain the site under the jurisdiction of NDEP. EPA took over jurisdiction of the site under CERCLA in 2004, during which numerous remedial efforts took place to investigate ground water contamination, demolish mine infrastructure and manage drain down fluids from the Arimetco HLPs. ARC continued remedial activities under EPA Administrative Orders until 2018. At that time, the site was proposed for Superfund listing to fund remediation of the former Arimetco HLPs and associated mining infrastructure (OU-8, the orphan share which was previously operated by Arimetco). The listing proposal was withdrawn in 2018 and the site went back under jurisdiction of NDEP under the NPL Deferral Agreement, with ARC agreeing to remediate the entire site, including OU-8, under an Interim Administrative Order on Consent (IAOC).

The site is divided into 8 Operable Units and 10 Construction Management Units (CMUs). The OUs delineate the site into areas according to legacy mining operations of Anaconda and Arimetco. The CMUs are logical groupings of the OUs to facilitate efficient remedial construction at the site. The regulatory, legal, and technical requirements for remediation of the OUs and CMUs will be defined in three (3) Records of Decision (RODs). Remedial work is ongoing by ARC following a CERCLA-equivalent process under the Interim Administrative Order on Consent (IAOC) between NDEP and ARC. Remediation of the site is scheduled for completion in 2029. The delineation of OUs, CMUs and RODs is shown below.

6.1.2 SPS Ownership of the Yerington Property

Following several years of due diligence, SPS acquired the Yerington Property from the Arimetco Bankruptcy Court in 2011. The acquisition included the private land, mineral rights, and water rights at the Yerington Property. During this period, SPS also acquired all of the unpatented mining claims at the site. Since owning the Property and controlling the unpatented mining claims, SPS has completed exploration drilling and published a 43-101 Technical Report, as discussed in Section 6.2.

Since acquiring the site, SPS has taken actions to shield it from the legacy environmental liability at the site. These actions include obtaining 'reasonable steps' letters from EPA, NDEP and BLM to qualify as a Bonafide Prospective Purchaser (BFPP) for redevelopment of a brownfield site, entering into a Settlement Agreement with EPA that includes a sitewide covenant not to sue for existing contamination at the site, implementing deed restrictions to prevent non-industrial use of the site, and entered into an Agreement with ARC that defines how both Companies will work together to allow simultaneously advancing mine development (SPS) and remediation (ARC).

In order to facilitate remediation by ARC, advanced discussions are ongoing between ARC and BLM for ARC to acquire the BLM unpatented mining claims at the Yerington Property. Upon acquisition, ARC will convey title to all minerals to SPS and the parties will execute a Surface Use Agreement allowing SPS the right to explore and mine the property. To complete the sale, BLM needs to prepare an Environmental Assessment (EA) and an appraisal of the property. The draft EA has been prepared and will be finalized when the appraisal is completed. The appraisal is underway by the Department of Interior's Appraisal and Valuation Services Office (AVSO). The appraisal will not value the minerals on the private/patented claims, which includes the open pit, the VLT and W-3 locations. SPS is coordinating with ARC regarding the timing and outcome of the BLM property transfer. This PEA has been prepared assuming the land sale of BLM properties will be completed prior to the start of mining.

6.2 Historical Resources

The Mineral Resource estimate (effective date of May 31, 2023) discussed herein (Section 14) supersedes historical and past Mineral Resource estimates presented in this section. The following historical information is relevant to provide context but is not current and should not be relied upon. The QPs responsible for the preparation of this Technical Report have not done sufficient work to classify the historical estimate as current Mineral Resources or Mineral Reserves, and Lion CG is not treating any historical estimates as Mineral Resource estimates.

6.2.1 2011 Yerington Mine

At the time the Yerington Property was acquired by SPS in 2011, the historical non-compliant resource at the Yerington Mine itself was reported to be over 120 million tons in the ground at a grade of 0.34% Cu, representing material both within their ultimate pit design (98 million tons of 0.36% Cu) and material outside their design.

6.2.2 Tetra Tech (2012)

In January 2012, Tetra Tech, Inc. completed an NI 43-101 compliant independent resource estimate for mineralization in and around the historic Yerington Mine previously owned and operated by Anaconda. Using a cut-off of 0.2% TCu, the Yerington Mine's measured and indicated primary copper resource totals

71.8 million tons averaging 0.30% TCu and contains 430 million pounds of copper. An inferred primary copper resource of 63.9 million tons averaging 0.25% TCu contains 323 million pounds of copper. Acid-soluble oxide/chalcocite mineralization includes a measured and indicated resource of 9.4 million tons averaging 0.30% TCu (57 million pounds of copper) and an inferred resource of 8.6 million tons averaging 0.28% TCu (47 million pounds of copper).

6.2.3 Tetra Tech (2014)

Tetra Tech (Bryan, 2014) updated the Yerington Mine resource including newly digitized historic data from 232 drill holes not included in the 2012 estimate.

At a copper cut-off grade of 0.12%, measured and indicated oxide resources increased 28% in tons, 37% in pounds of contained copper and 9% in grade. At a copper cut-off grade of 0.15%, sulfide measured and indicated resources increased 12% in tons, 25% in pounds of contained copper and 12% in grade. Inferred oxide and sulfide resources combined reflect similar increases (4% in tons, 10% in grade and 14% in pounds of contained copper). The historic mineral resource estimate prepared by Tetra Tech (Bryan, 2014) is summarized in Table 6-2.

Table 6-2: Historic Mineral Resource Estimate (Bryan, 2014)

Class	Material	Cut-off Grade	2013 MRE Tonsx1000	%Cu	Lbsx1000
MEA	OX	0.12	6,500	0.25	33,000
	SU	0.15	31,000	0.33	205,000
	Combined		**37,500**	**0.32**	**238,000**
IND	OX	0.12	17,000	0.25	85,000
	SU	0.15	74,000	0.30	428,000
	Combined		**90,000**	**0.29**	**513,000**
MEA+IND	OX	0.12	23,500	0.25	118,000
	SU	0.15	105,000	0.30	633,000
	Combined		**128,500**	**0.29**	**751,000**
INF	OX	0.12	26,000	0.23	118,000
	SU	0.15	128,000	0.23	600,000
	Combined		**154,000**	**0.23**	**718,000**

Notes:

Effective date for this historic resource was November 20, 2013

Inferred mineral resources have a great amount of uncertainty as to existence and as to whether they can be mined economically. It cannot be assumed that all or any part of the inferred mineral resources will ever be upgraded to a higher category.

Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Totals may not add up due to rounding.

Mineral resources classifications are based on CIM definitions.

6.2.4 Residuals

No copper extraction from the Arimetco heaps or mining has occurred since the Arimetco closure in 1999, but residuals from leaching and processing operations conducted by Anaconda and Arimetco (Figure 6-1) are reported to contain additional, non-compliant resources including (SRK, 2012):

- Vat leach tailings (VLT) from the former Anaconda processing of oxide ore; referred to as VLT
- Low grade oxide ore stockpile from the Yerington pit that was below Anaconda's cut-off grade for oxide ore; referred to as W-3
- Low grade sulfide ore stockpile from the Yerington pit that was below Anaconda's cut-off grade for sulfide ore; referred to as S-23
- Arimetco's heap leach operations for Anaconda oxide tailings, low grade oxide ore from Anaconda's operations, and copper oxide ore mined from the MacArthur Mine located approximately five miles north of the Yerington Property

Table 6-3 summarizes a non-compliant resource summary of the volume and grade of the residual stockpiles and tailings on site (SRK, 2005). The historical information is relevant to provide context but is not current and should not be relied upon. The QPs responsible for the preparation of this Technical Report have not done sufficient work to classify the historical estimate as current Mineral Resources or Mineral Reserves, and Lion CG is not treating any historical estimates as Mineral Resource estimates. Mineral Resource estimates for W-3 and VLT have been updated in this report (refer to Section 14).

6.2.5 MacArthur Deposit

Two historic resource models were completed for the MacArthur Deposit, one in 2009 and a second in 2014 (IMC, 2022). For the oxide plus chalcocite zones, the measured plus indicated (M&I) mineral resource in 2009 was estimated to be 51.4 million tons at a total copper (TCu) grade of 0.24% (cut-off of 0.18% TCu) and in 2014 this mineral resource was estimated to be 159.1 million tons at a TCu grade of 0.21% (cut-off of 0.12% TCu). The sulfide M&I mineral resource in 2009 was 0.8 million tons at a TCu grade of 0.34% (cut-off of 0.30 TCu) and in 2014 this mineral resource was 1.1 million tons at a TCu grade of 0.29% (0.15% TCu cut-off). The inferred mineral resources for the oxide plus chalcocite zones was 75.8 million tons at a TCu grade of 0.28% in 2009 and 243.4 million tons at a TCu grade of 0.20% in 2014 using the same cut-off grades as used for the M&I tabulation. The sulfide inferred mineral resource was 6.4 million tons at a TCu grade of 0.54% in 2009 and 134.9 million tons at a 0.28% TCu grade in 2014, both using the same cut-off grades as used for the M&I tabulation.

The historical information is relevant to provide context but is not current and should not be relied upon. The QPs responsible for the preparation of this Technical Report have not done sufficient work to classify the MacArthur historical estimate as current Mineral Resources or Mineral Reserves, and Lion CG is not treating any MacArthur historical estimates as Mineral Resource estimates.

The current Mineral Resource estimate for MacArthur is reported in Section 14 of this report.

6.2.6 Bear Deposit

The Bear Deposit is one of three known porphyry copper deposits in the Yerington copper district.

The mineralization of the Bear copper deposit, located partially in the northeast corner of the Yerington Property, represents primary copper mineralization related to micaceous veining rather than A-type quartz veining common in the Yerington Mine porphyry system.

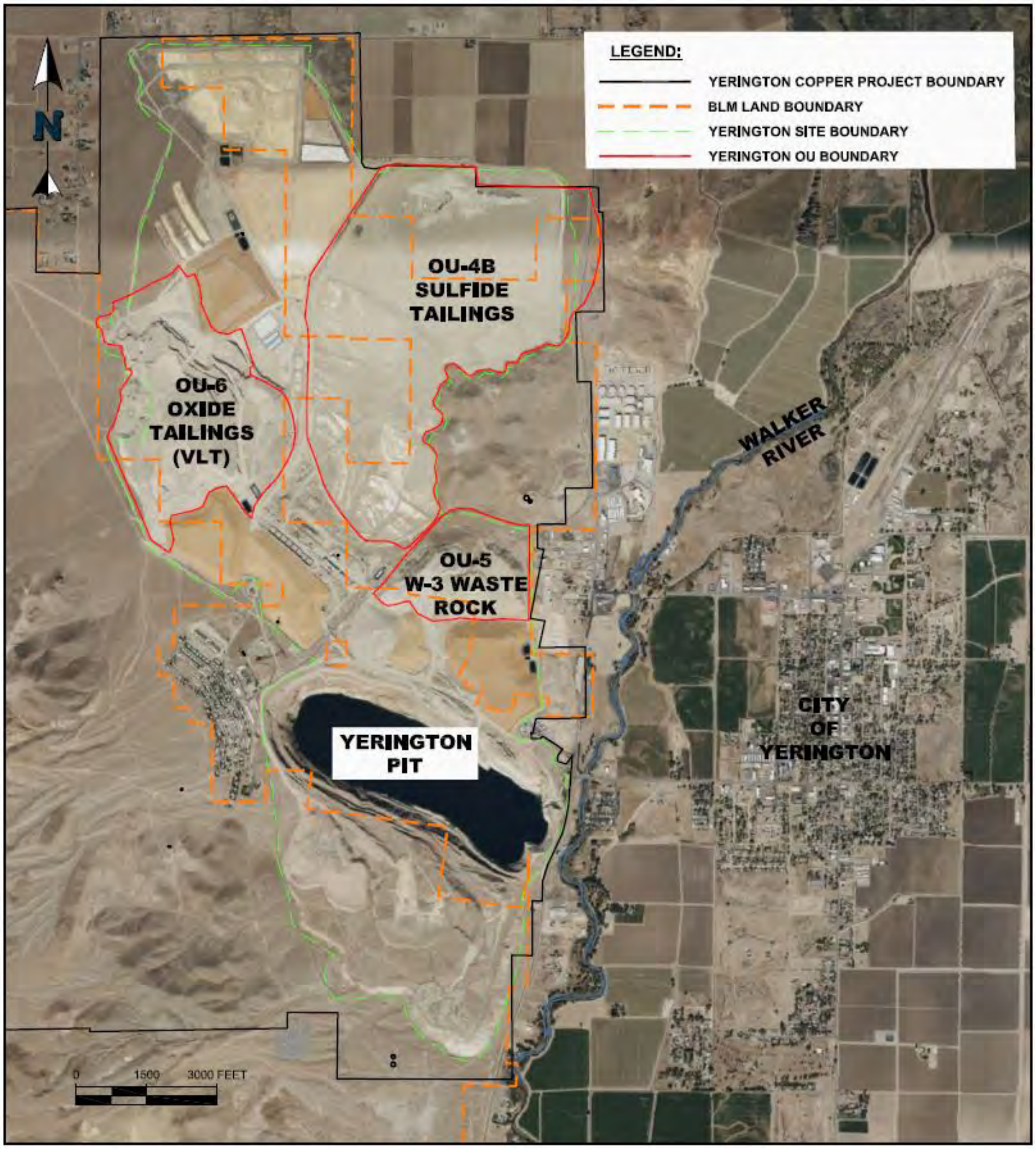
The Bear Deposit was discovered in 1961 by Anaconda during condemnation drilling in the sulfide tailings disposal area. The program identified chalcopyrite mineralization hosted in a porphyry system below 500 to 1,000 feet of valley fill and unmineralized bedrock. Historic resources in the Bear Deposit are reportedly more than 500 million tons of material averaging 0.4% copper (Dilles and Proffett, 1995).

Historic estimates of the Bear Deposit are not NI 43-101 compliant and should not be relied upon. A qualified person has not done sufficient work to classify these historic estimates as a current mineral resource and Lion CG does not treat them as such. In order to do so, they will have to be confirmed by additional drilling.

Table 6-3: Yerington Mine - Historic Non-Compliant Resource in Residual Stockpiles and Tailings (SRK, 2012)

Residual Source	Volume Cu Ft (000's)	Est tons (000's)	Assumed TCu %	Contained Cu lbs. (000's)	Particle Size	Assumed Recovery %	Recoverable Cu lbs. (000's)
Anaconda Oxide Tails (VLT)	35,545	57,572	0.130	149,686	<0.5 in	75	112,265
Anaconda Oxide Waste Rock W-3	12,128	19,643	0.200	78,572	ROM	60	47,143
Anaconda Sulfide Low Grade Ore S-23	1,430	2,316	0.200	9,266	ROM	NA	9,266
Arimetco Phase 1/2 HLP	1,363	2,105	0.099	4,159	ROM <6 in	50	2,080
Arimetco Phase 3 HLP 4	5,147	8,547	0.120	20,513	ROM <6 in	50	10,257
Arimetco Phase 3 HLP S	5,837	10,118	0.083	16,714	ROM <6 in	50	8,357
Arimetco Phase 4 Slot HLP	8,794	12,928	0.091	23,399	ROM <6 in	50	11,700
Arimetco Phase 4 VLT HLP	6,539	11,556	0.075	17,242	ROM <6 in	50	8,621
Total	**76,783**	**124,785**	**-**	**319,551**	**-**	**-**	**209,687**

Figure 6-1: Yerington Property Operable Units and Site Layout



Source: NewFields, 2023

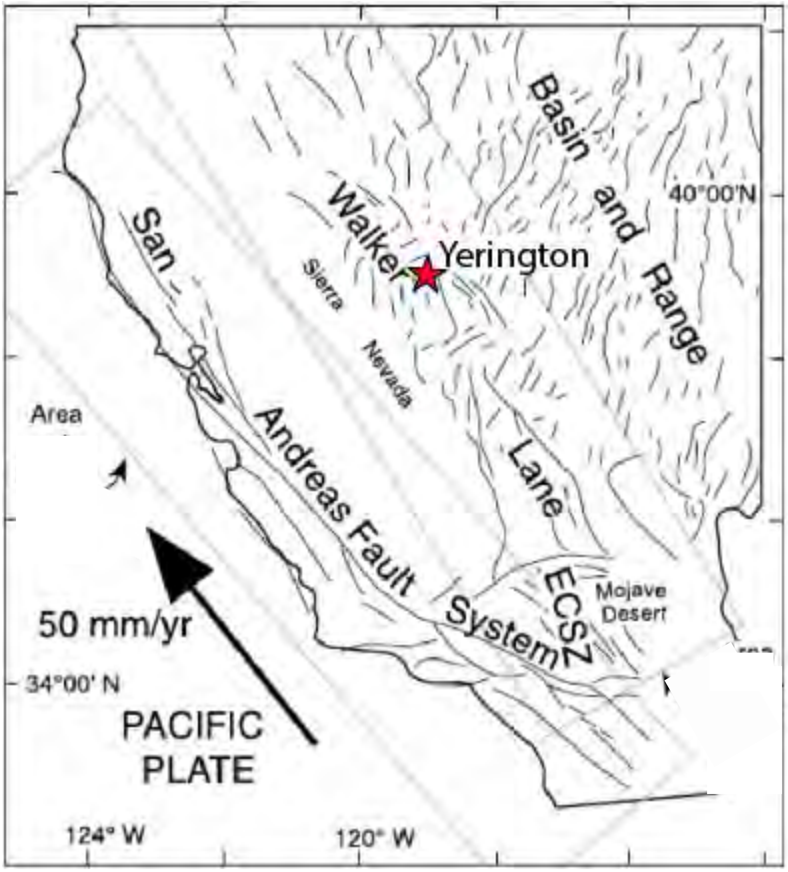
7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Yerington Property is located in western Nevada near the western boundary of the Basin and Range Province, a land mass of internal drainage encompassing most of the state of Nevada. Basin and Range physiography consists of a series of nearly north-trending ranges separated by alluvial-filled, normal fault-bounded basins. The valley infill may range from tens to thousands of feet of alluvium.

In western Nevada, overprinted on the Basin and Range but not altering its physiographic character, is a major right lateral, northwest trending structural zone called the “Walker Lane” approximately 60 miles wide and generally parallel to the Nevada-California border, between Reno to the northwest and Las Vegas to the southeast (Figure 7-1). Major deposits, principally precious metals, occur in the Walker Lane as does the Yerington copper mining district.

Figure 7-1: Structural Geology Map of Western United States



Source: Modified Wesnousky, 2005

Within Lyon County in the state of Nevada, the Yerington Copper Project area occupies the alluvial-covered eastern flank and bedrock uplands of the central Singatse Range, a modest sized, north trending mountain range.

Regional geology of the Singatse Range, including the Yerington mining district is displayed in Figure 7-2 (Proffett and Dilles, 1984) from which the following text has been adapted.

The oldest rocks of the Singatse Range are an approximate 4,000-foot section of Late Triassic, intermediate and felsic metavolcanics, and sedimentary rocks forming the McConnell Canyon Formation, associated with volcanic arc development along the North American Continent during the Mesozoic Period.

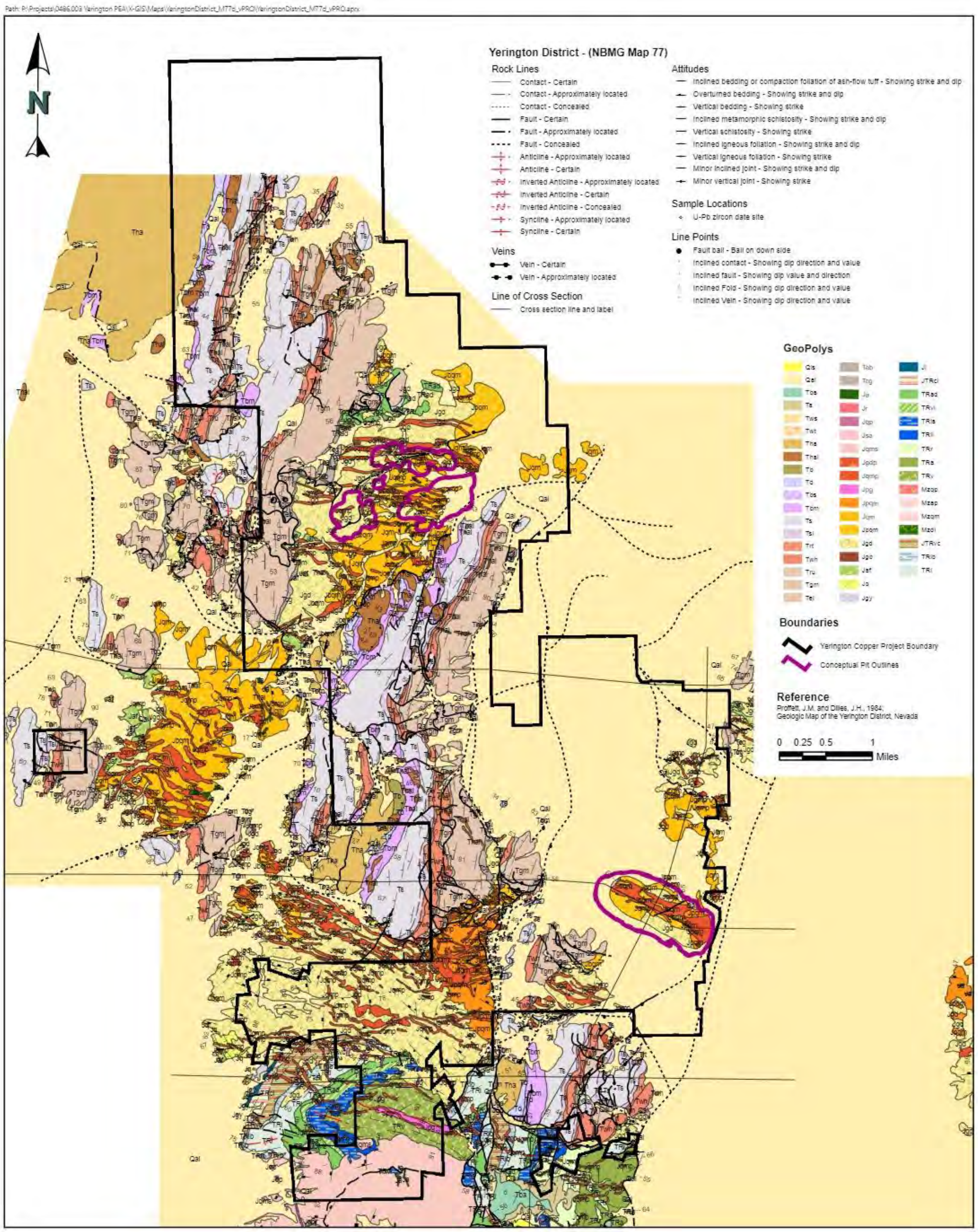
This sequence is disconformably overlain by a series of Upper Triassic carbonates, meta-sediments, and volcaniclastics that are, in turn, overlain by Upper Triassic limestone, siltstone, and tuffs, and by argillite thought to span the Triassic-Jurassic boundary. Jurassic limestone is succeeded by gypsum and sandstone, and by andesitic volcanics that may signal the beginning pulse of middle Jurassic plutonism.

Middle Jurassic plutonism, possibly related to the igneous activity that formed the Sierra Nevada Mountains to the west, resulted in emplacement of two batholiths comprising the Singatse Range, including the Yerington Batholith extending across 40 miles from the Wassuk Range on the east to the Pine Nut Range on the west. East-west striking structural zones mark the contacts between igneous rock and older, outlying Mesozoic basement at the north and south ends of the Singatse Range; the structures can be projected through the adjoining basins.

The Yerington Batholith comprises three intrusive phases emplaced between 169 Ma to 168 Ma (Figure 7-2, Proffett and Dilles, 1984): an early granodiorite pluton; a second phase of medium-grained quartz monzonite, creating a finer-grained ‘’border phase quartz monzonite” where in contact with granodiorite; and, finally, a medium-grained porphyritic quartz monzonite emplaced as a stock with cupolas developed over its top. Porphyry dike swarms sourced from the youngest phase, the porphyritic quartz monzonite, cut the cupolas. Copper mineralization formed contemporaneously with the dike swarms. Andesite and rhyolite dikes represent the final phase of Mesozoic igneous activity.

Mesozoic rocks were deeply eroded and then covered by Mid-Tertiary tuffs and lesser sedimentary rocks. The entire package was subsequently faulted along north-trending, downward and east dipping faults that resulted in extension and major westerly tilting.

Figure 7-2: Regional Geology Map and Lion CG Property Boundary



Source: Modified Profett and Dilles, 1984

7.2 Local Geology

The Yerington Property includes both the Yerington Deposit and a portion of the Bear Deposit which represent two of three known porphyry copper deposits in the Yerington district. Like the Mason copper-molybdenum property located 2.5 miles to the west, the Yerington and Bear Deposits are hosted in Middle Jurassic intrusive rocks of the Yerington Batholith.

Copper mineralization on the Property occurs in all three phases of the Yerington Batholith. Intrusive phases, from oldest to youngest, are known as the McLeod Hill Quartz Monzodiorite (field name granodiorite), the Bear Quartz Monzonite, and the Luhr Hill Granite, the source of quartz monzonitic (*i.e*. granite) porphyry dikes related to copper mineralization.

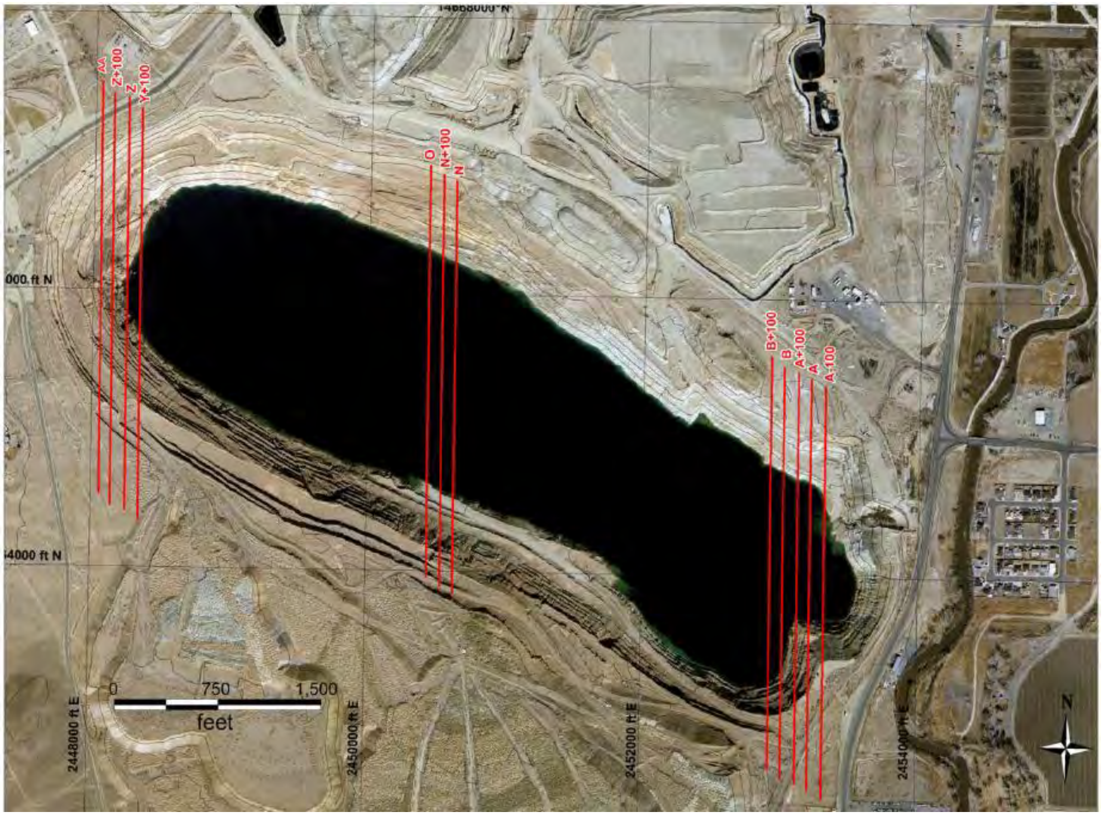
Following uplift and erosion, a thick Tertiary volcanic section was deposited, circa 18-17 Ma. This entire rock package was then extended along northerly striking, down-to-the-east normal faults that flatten at depth, creating an estimated 2.5 miles of west to east dilation-displacement (Proffett and Dilles, 1984). The extension rotated the section such that the near vertically emplaced batholiths were tilted 60° to 90° westerly. Pre-tilt, flat-lying Tertiary volcanics now crop out as steeply west dipping units in the Singatse Range west of the Yerington Property. The easterly extension thus created a present-day surface such that a plan map view actually represents a cross-section of the geology.

7.3 Property Geology

Current knowledge of Yerington Mine geology benefits from detailed geologic mapping by Anaconda geologists on various pit benches during mining operations from the 1950s to the 1970s. SPS gained access to this data through membership in the Anaconda Collection – American Heritage Center housed on the campus of the University of Wyoming, Laramie, Wyoming. Further, of the approximately 700 exploration core holes drilled by Anaconda to define the Yerington Mine ore body, one-half splits of approximately 20 percent of the core were stored in a recoverable manner on the mine site. SPS moved the core to a dry location for relogging and reassay to understand Anaconda geology as it relates to copper mineralization.

Anaconda referenced Yerington pit geology and drill hole locations alphabetically, on a 100-foot by 100-foot north-south/east-west grid, beginning at the east end of the pit with cross section “A minus 100”, “A”, “A+100”, “B”, “B+100”, etc. progressing westerly to “Z+100”, ending westerly with “AA”, as illustrated in Figure 7-3.

Figure 7-3: Anaconda Section Lines



Source: Tetra Tech, 2014

The three intrusive phases of the middle Jurassic Yerington Batholith, exposed in the Yerington pit, have been intruded by at least six porphyry dikes originating from the youngest batholithic phase, the Luhr Hill Granite, also referred to as the Porphyritic Quartz Monzonite (PQM). Anaconda geologists identified petrographically similar porphyry dikes by number, e.g. QMP1, QMP1.5, QMP2, QMP2.5, QMP2.7, QMP3, with the lowest numbers representing the earliest and strongest copper mineralized dike activity. Younger Jurassic rhyolite and andesite dikes followed. Cross-cutting relationships in pit walls allowed Anaconda geologists to determine age relationships of the dikes. A determination in core is more difficult. The oldest dikes are the best mineralized, especially QMP1 which averaged 0.80% to 2.0% TCu (J. Proffett, 2010, personal communication).

Yerington Mine rock descriptions were used by SPS to log drill holes and to re-log historic Anaconda core.

7.3.1 Porphyritic Quartz Monzonite (Jpqm)

Medium-grained equigranular to porphyritic quartz monzonite with large (1-2 cm) K-feldspar phenocrysts, 5-10% hornblende, 5-10% biotite, 10-20% anhedral quartz, and plagioclase more abundant than K-feldspar. The large K-feldspar phenocrysts are pink and constitute 5-10% of the rock; however, K-feldspar also occurs as 1-4 mm anhedral grains intergrown with plagioclase and quartz. The rock is differentiated from the quartz monzonite porphyries by the lack of an aplitic groundmass (Jpqm has a more intergrown texture). Also, feldspar phenocrysts are commonly in contact.

Jpqm represents the cupola of porphyry copper deposits throughout the Yerington district and is the source for the porphyry dikes. It most commonly occurs on the northeastern and southeastern portions of the pit.

7.3.2 Granodiorite (Jgd)

An olive-green fine-grained rock with 5-15% hornblende, 2-10% biotite, 20% quartz, and a one-third K-feldspar/plagioclase ratio. Minor magnetite and other opaques are common. Jgd is the finest-grained and most mafic-rich of the equigranular rocks. It is not commonly mapped in the Yerington pit but, when present, it most commonly occurs on the western portion of the pit.

7.3.3 Quartz Monzonite (Jqm)

Medium-grained equigranular whitish rock with 5-10% hornblende, 1-2% biotite, 10-15% quartz, 1-3% sphene, and nearly equal amounts of plagioclase and K-feldspar. It is usually coarser grained than the border phase quartz monzonite and granodiorite. Jqm is most commonly observed on the eastern and east-central portion of the pit.

7.3.4 Border Phase Quartz Monzonite (Jbqm)

Jbqm represents the contact ‘rind’ between the quartz monzonite and granodiorite. The rock is the most common equigranular rock mapped in the pit and finer grained than the quartz monzonite. It is characteristically fine- to medium-grained but locally subequigranular to subporphyritic Jbqm. It has a pinkish hue and contains 5-10% hornblende, 2-5% biotite, 15-20% quartz and nearly equal amounts of plagioclase and K-feldspar. It most commonly occurs in the east-central to western portions of the pit.

7.3.5 Equigranular Quartz Monzonite (Jqme)

Found in the east-central to western portions of the pit, Jqme is described as an ‘igneous breccia’ related to the Quartz monzonite porphyries at Yerington. The rock is difficult to distinguish from the border phase quartz monzonite as it differs only in age relationships and in the presence of quartz vein fragments. Jqme was the first equigranular rock mapped in the pit, later removed, and then reinstated as a valid rock type. The rock is differentiated by age relationships as it contains fragments of the QMP2 dike and granodiorite within it.

7.3.6 Porphyry Dikes

Porphyry dikes are almost impossible to differentiate without cross-cutting relationships observed on pit benches by Anaconda geologists.

7.3.7 Jqmp1

Jqmp1 is the main mineralized host in the Yerington pit. It contains 70-95% fine-grained groundmass with granular quartz and K-spar with minor biotite (aplitic). The phenocrysts consist of 2-10% hornblende, 2-10% biotite, 1-10% quartz eyes, 2-10% K-spar, and 35-40% 2-4 mm plagioclase. Phenocrysts are commonly not in contact or are in point contact.

Jqmp1 almost always grades better than 1% Cu and commonly grades higher than 2% Cu. It contains at least 10% quartz (A-type) veinlets, but locally contains 30-40% quartz veinlets. The veining commonly obscures the porphyritic texture. Bornite and chalcopyrite are present as well as secondary magnetite occurring in distinct veinlets or with quartz (A-type) veins.

Primary potassium feldspar crystals turn a purple-gray color upon altering to plagioclase. Fine, shreddy biotite is also observed due to the potassic alteration. The lens-shaped dike has been mapped as far west as the N and N+100 section lines.

7.3.8 Jqmp1.5

Jqmp1.5 is commonly chilled and is differentiated from the Jqmp1 and Jqmp2 as it cuts the Jqme. The rock has abundant A-veins with bornite, chalcopyrite, and secondary magnetite. The percent of sulfide and veining is less than that of the Jqmp1. Jqmp1.5 commonly runs 0.8-1% Cu but mineralogically it is the same as the Jqmp1.

Jqmp1.5 has been mapped from at least the N+100 to the V+100-section line; the eastern extension is unknown. The thickest development is from the T+100 section line to the V-section line (on the 4,000-foot bench elevation).

7.3.9 Jqmpc

Any of the porphyry dikes can have a chilled margin at the contact with another rock type causing a dark green to gray fine-grained groundmass with 2-4 mm white feldspar phenocrysts. However, there seems to be a Jqmpc dike that is separate from this contact phase; it may be the same dike as Jqmp1.5. It is possible that its occurrence is coeval with Jqmp1. It is described as having 70-95% fine-grained groundmass containing granular quartz and K-feldspar as well as biotite and muscovite (which make up 30% of groundmass). This dike has chalcopyrite and bornite as well as secondary magnetite occurring in abundant A-veins.

7.3.10 Jqmp2

Jqmp2 is mineralogically similar to the Jqmp1 and Jqmp1.5 dikes but does have a few slight differences. It contains 50-80% fine-grained groundmass with granular quartz and K-feldspar (aplitic, but without biotite). Mafic phenocrysts are hornblende and biotite, but hornblende is more abundant than in the Jqmp1 and Jqmp1.5 (causing a higher hornblende: biotite ratio). K-feldspar phenocrysts are also generally larger than that of the Jqmp1 and Jqmp1.5.

Proffett (J. Proffett, verbal communication) describes it as a “run of the mill porphyry”. Mineralization consists mainly as chalcopyrite with some bornite. The grade varies from 0.2 to 0.8% Cu. Distinct A-veinlets are rare (1-2%) with more common B-type veinlets. B-type veinlets are quartz veinlets with coarse-grained inward growing quartz crystals. Magnetite is usually absent or sparsely present. Its groundmass is usually lighter in color than that of the Jqmp1 and Jqmp1.5.

USTs (unidirectional solidification textures) are commonly associated with the Jqmp2 which represent the apex of the porphyry. These are identified by quartz crystals growing in a distinct direction (downward on the porphyry). It is sometimes described as ‘brain-rock’. This porphyry has been identified from at least the N section line to the U-section line but is cut off in spots due to the Jqmp2.5.

7.3.11 Jqmp2.5

Porphyry dikes mapped as Jqmp2.5 are mineralogically similar to Jqmp2 but have a higher hornblende: biotite ratio. They are characteristically low in grade (0.1-0.2% Cu) but do “get good in spots” (J. Proffett, personal communication). Mafics are weakly biotized to unbiotized. Jqmp2.5 has little to no quartz veining and a high pyrite to chalcopyrite ratio.

East of the O-section line there are areas where the dike has 2-10% quartz veining with a grade of 0.4% Cu and even as high as 0.6% Cu with chalcopyrite and bornite. In this zone, the dike contains rectangular mafics that were hornblende, but are now chlorite. It cuts off the Jqmp2 and exists from at least the N-section line to the S+100-section line.

7.3.12 Jqmp3

Jqmp3 is probably the most easily recognized porphyry at the Yerington pit. The dike contains 60-80% fine-grained groundmass with angular K-feldspar and quartz and subhedral plagioclase laths. The groundmass can contain fine shreds of chlorite and muscovite. Mafic phenocrysts are mostly hornblende with minor biotite. Mafic phenocrysts are fresh to chloritized with little to no biotization. The rock has very few quartz veins (≤1%) and pyrite is the most abundant sulfide mineral. The grade ranges from <0.1 to 0.1% Cu.

7.3.13 Andesite (AND)

A fine-grained dark gray to green rock with a commonly chloritized groundmass is mapped as andesite. The groundmass is composed mainly of hornblende and biotite. The rock contains 10-15% plagioclase phenocrysts, 2-4 mm in length, that may be epidotized. The andesite is not mineralized but may contain up to 2% pyrite with only trace amounts of chalcopyrite. These dikes range from 1-10 foot in thickness and occur sporadically throughout the pit.

7.3.14 Aplite (APL)

A fine-grained pink to white dike. These dikes are 50-60% quartz, 30-40% pink K-feldspar, 1-10% white plagioclase. Traces of biotite, muscovite, and hornblende are also occasionally present. These dikes have little to no mineralization. Generally, these dikes are 1-10 foot in thickness and occur sporadically throughout the pit.

7.3.15 Hornblende Andesite (ANDh)

A fine-grained dark gray to green rock. The rock contains 15-20% 2-4 mm in length fresh black hornblende phenocrysts and 10-15% white plagioclase phenocrysts. This rock is part of the Tertiary section and contains no mineralization. These dikes range from 1-10 foot in thickness and occur sporadically throughout the pit.

7.4 Alteration

Alteration types recognized in drill core at the Property are common to those found in many mineralized porphyry copper systems. Mid-Tertiary downward and eastward extensional faulting exposes a porphyry copper deposit in cross section lying on its side with its top toward the west end of the Yerington pit. Limonite brownish sericite alteration (the pre-tilt upper, original pyrite-rich phyllic shell) is exposed at the west end of the pit. Potassically altered secondary biotite and magnetite dominant alteration in the center of the pit grades easterly into off-white sodic-rich rock (sodic-calcic alteration), the pre-tilt base near the eastern pit boundary. A thin slice of Tertiary volcanics underlying the alluvial gravels is exposed in pit benches at the west end of the pit.

7.4.1 Propylitic

Propylitic alteration is common throughout the Property in all rock types. This alteration type occurs as chlorite replacing hornblende, and especially epidotization as veining, coatings, and/or flooding on the granodiorite. Calcite veining is present but not commonly observed in core or drill cuttings. Feldspars are commonly unaltered. Propylitic alteration frequently overprints or occurs with the alteration types described below.

7.4.2 Quartz-Sericite-Pyrite (QSP)

Phyllic alteration is most frequently characterized by tan to light green sericite partially or completely replacing hornblende and/or biotite sites. When phyllic alteration becomes more intense, plagioclase and/or K-feldspar sites are also replaced by sericite. The altered mafics and feldspars are accompanied by a significant addition of pyrite, locally up to 10%. However, these minerals do not replace mafic or felsic sites. Sericitic altered zones are often quite siliceous; however, it is unclear if this is due to quartz addition or just the destruction of other primary minerals.

Phyllic alteration is most pervasive and intense in the west-central to west portion of the Yerington pit. The alteration type does not show preference with rock type and has been described in the granodiorite, quartz monzonite, and the porphyries.

7.4.3 Potassic Alteration

Potassic alteration occurs as shreddy, fine-grained biotite replacing hornblende along with secondary disseminated magnetite. To a lesser extent, there is potassium feldspar replacing plagioclase within the rock as well as in vein halos. Potassic alteration occurs in the central part of the Yerington pit coinciding with the most intense and extensive quartz veining, and highest-grade copper mineralization.

Potassic alteration is best observed in oldest (highest grade) porphyry dikes as well as the granodiorite and quartz monzonite hosts.

7.4.4 Sodic-Calcic Alteration

Pervasive sodic-calcic alteration, described by Anaconda geologists as sodic flooding, occurs at the east end (pre-tilt base) of the Yerington pit, creating off-white, hard altered rock. This type of alteration most frequently occurs as albite replacing K-feldspar and as chlorite, epidote, or actinolite replacing hornblende and/or biotite. In the most intense zones of sodic alteration, the mafics are completely destroyed.

7.4.5 Silicification

Silicification occurs as a wholesale replacement of the rock, occurring in an irregular nature.

7.4.6 Supergene Alteration

Supergene, or secondary enriched copper minerals, made only a minor contribution to Yerington Mine production due to insufficient pyrite available for oxidation and creation of sulfuric acid. Chalcocite, the primary result of secondary enrichment, occurs randomly toward the west end (pre-tilt top) of the Yerington pit. Chalcocite is rarely mentioned in review of historic Anaconda drill logs.

SPS's drill holes collared on the west-northwest side of the pit intersected narrow, isolated chalcocite mineralization typically 0.1x% Cu over 10 to 20 feet thickness. The transition from oxide (green and / or black) copper to primary sulfide copper mineralization is sharp and consistently chalcocite-absent throughout the pit excepting the west pit area.

The oxide – sulfide surface across the Yerington pit generally occupies the 4,100-foot elevation as a rather smooth, undulating surface with local "divots" down to 3900 feet in places, ostensibly where oxidation followed fracturing downward. Base of oxidation in limited SPS drilling confirmed the general 4,100-foot elevation.

7.5 Mineralization

7.5.1 Yerington Porphyry Copper Deposit

Under previous operators, the Yerington Mine produced approximately 162 million tons of ore grading 0.54% Cu, of which oxide copper ores amenable to leaching accounted for approximately 104 million tons. A 1971 snapshot of head grades shows oxide mill head grade averaging 0.53% Cu and sulfide grades ranging from 0.45% to 0.75% Cu (D. Heatwole, personal communication).

The general geometry of copper mineralization below the Yerington pit is an elongate body extending 6,600 feet along a strike of S62ºE. The modeled mineralization has an average width of 2,000 feet and has been defined by drilling to an average depth of 400-500 feet below the pit bottom at the 3,500-foot elevation.

The copper mineralization and alteration throughout the Yerington district and at the Yerington Property are unusual for porphyry copper camps in that the mineralization is "stripey", occurring in WNW striking bands or stripes between materials of lesser grade. Clearly, much of this geometry is influenced by the strong, district-wide WNW structural grain observed in fault, fracture and, especially, porphyry dike orientations. Altered, mineralized bands range in width from tens of feet to 200-foot-wide mineralized porphyry dikes mined in the Yerington pit by Anaconda.

Oxide copper occurred throughout the extent of the Yerington pit, attracting the early prospectors who sank the Nevada-Empire shaft on copper showings located over the present-day south-central portion of the pit. To extract the copper oxides, Anaconda produced sulfuric acid on site, utilizing native sulfur mined and trucked from Anaconda's Leviathan Mine located approximately 70 miles west of Yerington.

Greenish, greenish blue chrysocolla ($CuSiO_3.2H_20$) was the dominant copper oxide mineral, occurring as fracture coatings and fillings, easily amenable to an acid leach solution. Historic Anaconda drill logs note lesser neotocite, *aka* black copper wad (Cu, Fe, Mn), SiO_2 and rare tenorite (CuO) and cuprite (Cu_2O). Oxide copper also occurs in iron oxide/limonite fracture coatings and selvages.

Chalcopyrite ($CuFeS_2$) was the dominant copper sulfide mineral occurring with minor bornite (Cu_5FeS_4) primarily hosted in A-type quartz veins in the older porphyry dikes and in quartz monzonite and granodiorite, as well as disseminated between veins in host rock at lesser grade. The unmined mineralized material below the current pit bottom is primarily of chalcopyrite mineralization.

7.5.2 MacArthur Deposit

The MacArthur Deposit is a large copper mineralized system containing near-surface acid soluble copper and the potential for a significant primary sulfide resource that remains underexplored (IMC, 2022). The Deposit is one of several copper deposits and prospects located near the town of Yerington that collectively comprise the Yerington Mining District. The Deposit is underlain by Middle Jurassic granodiorite and quartz monzonite intruded by west-northwesterly-trending, moderate to steeply north-dipping quartz porphyry dike swarms.

The MacArthur Deposit consists of a 50 to 150-ft thick, tabular zone of secondary copper (oxides and/or chalcocite) covering an area of approximately two square miles. This mineralized zone has yet to be fully delineated. Limited drilling has also intersected underlying primary copper mineralization open to the north, but only partially tested to the west and east.

Oxide copper mineralization is most abundant and particularly well exposed in the walls of the legacy MacArthur pit. The most common copper mineral is chrysocolla; also present is black copper wad (neotocite) and trace cuprite and tenorite. The flat-lying zones of oxide copper mirror topography, exhibit strong fracture control and range in thickness from 50 to 100 feet. Secondary chalcocite mineralization forms a blanket up to 50 feet or more in thickness that is mixed with and underlies the oxide copper. Primary chalcopyrite mineralization has been intersected in several locations mixed with and below the chalcocite. The extent of the primary copper is unknown as many of the holes bottomed at 400 feet or less.

The MacArthur Deposit is part of a large, partially defined porphyry copper system that has experienced complex faulting and post-mineral tilting. Events leading to the current geometry and distribution of known mineralization include: 1) Middle Jurassic emplacement of primary porphyry copper mineralization by quartz monzonite dikes intruding the Yerington batholith; 2) Late Tertiary westward tilting of the porphyry deposit from 60° to 90° through Basin and Range extensional faulting; 3) secondary (supergene) enrichment resulting in the formation of a widespread, tabular zone of secondary chalcocite mineralization below outcrops of oxidized rocks called leached cap; 4) oxidation of outcropping and near-surface parts of this chalcocite blanket, as well as oxidation of the primary porphyry sulfide system.

8 DEPOSIT TYPES

The Yerington Deposit represents a partially mined porphyry copper deposit hosted in porphyry dikes that formed in stocks of the upper Yerington Batholith. The Yerington porphyry system has been tilted westerly so that the plan view of the deposit is a cross sectional exposure. Mining has revealed an alteration geometry displaying the original pyrite-rich cap (present-day leached sericite-limonite on the west end of the Yerington pit) grading downward easterly to quartz-sericite-pyrite alteration and to potassic alteration in the central portion of the pit, and then continuing to a soda-flooded root zone at the eastern end.

9 EXPLORATION

Historically, the Property in the area of the Yerington pit has been drilled extensively by Anaconda and ultimately resulted in the extraction of over 1.7 billion pounds of copper.

Lion CG (and its predecessor Quaterra) exploration at the Yerington Property has been primarily confined to drilling along accessible pit ramps and access roads along the sides of the Yerington pit.

9.1 Geophysics

9.1.1 Historical

During the 1952 to 1979 period of mine operation at the Yerington Mine, Anaconda completed a number of geophysical surveys, including an aeromagnetic survey, a ground magnetic survey, and an IP survey. Published gravity data were examined to estimate alluvial thicknesses in Mason Valley east of the Yerington Property. These surveys covered much more additional ground than SPS's current Property.

One of the more successful ore-finding geophysical techniques was an in-situ IP and magnetic susceptibility survey taken over the pit floor during mining advance. This technology and innovation, developed by Anaconda geophysicist G.H. Ware, was able to define mineralization by tracking secondary magnetite alteration associated with the ore-bearing QMP1 dike within the Yerington pit (Ware, 1979).

In late 2007 and early 2008, Quaterra contracted a helicopter magnetometer survey to be conducted over the entire Yerington district, including the Yerington Property (EDCON-PRJ, 2008). The survey was flown with a line spacing of 100 m separation with some areas in-filled to 50 m separation. In addition, two helicopter surveys flown under contract to Anaconda were also digitized from contour maps and then merged with the larger district-wide survey. The objective of the survey was to create a magnetic data set for the entire district with significantly greater resolution than previous work by Anaconda. The survey began and was completed in December 2007 and the data was delivered in the first quarter of 2008. A total of 2,685-line miles of new aeromagnetic data were acquired, and 4,732-line miles of older data were digitized. This greatly improved data set has been used extensively throughout the district to identify new targets as well as refine targets previously identified by Anaconda.

9.1.2 Induced Polarization-Resistivity Survey (2016-2017)

A single IP line was surveyed through the Yerington pit during the time periods Nov 15-19, 2016, and Jan 17-19, 2017 (Zonge International, 2017). The line was surveyed using the dipole-dipole method with a dipole length of 300 m with readings taken from N=1 to 16, which senses response to an approximate depth of 900 m below surface. Because this line crossed the existing pit including Pit Lake it was necessary to place some receiver and transmitter stations on the pit bottom beneath the Pit Lake. Receiver electrodes in Pit Lake consisted of 1 inch diameter stainless steel rods 4 ft in length. Transmitter electrodes in the Pit Lake consisted of 1 inch diameter copper tubing, 6 feet in length, and filled with steel shot. Electrodes were placed on the pit bottom from a small aluminum drift boat. The total length of the line was 5.4 km of which approximately 600 m was in the pit itself.

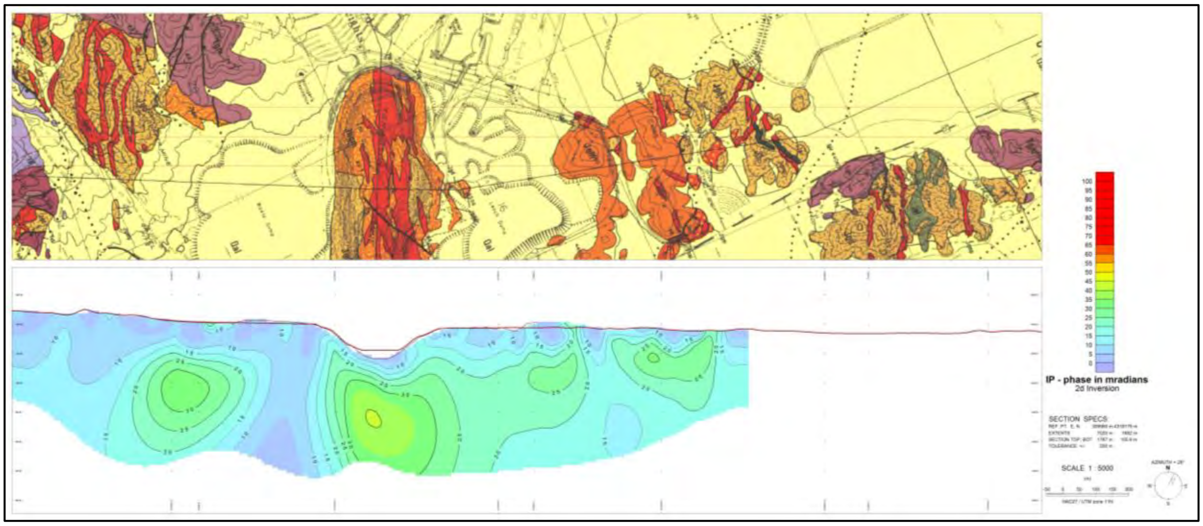
Data quality was good and four anomalous IP zones were detected. Figure 9-1 contains the IP response from 2D inversion of the observed data (lower panel). The location of the section and the IP line is shown in the upper panel (single red line) on the district geology map. One zone occurs south of the pit, coincident with an anomalous zone defined by past Anaconda surveys. This zone is referred to as the Native Copper zone. The zone extends over 500 m along the line with an intrinsic IP response of 25 milliradians which is equivalent to approximately 1-2 % by volume of metallic sulfides. The depth to the top of the zone is estimated at 400 m below surface.

A strong IP anomaly was detected directly below the Yerington pit and is 500 m wide along the line. The anomaly has an intrinsic value exceeding 40 milliradians which is equivalent to 3-5% by volume metallic sulfides.

Two additional anomalies were detected north of the pit, one within the mine-waste dumps and one in the area known as Groundhog Hills. The anomaly in the waste dumps is shallow and weak, on the order of 20-25 milliradians. The anomaly in the Groundhog Hills area is somewhat stronger, being 25-30 milliradians in magnitude. The top of this zone is at a depth of 200 m below ground-surface.

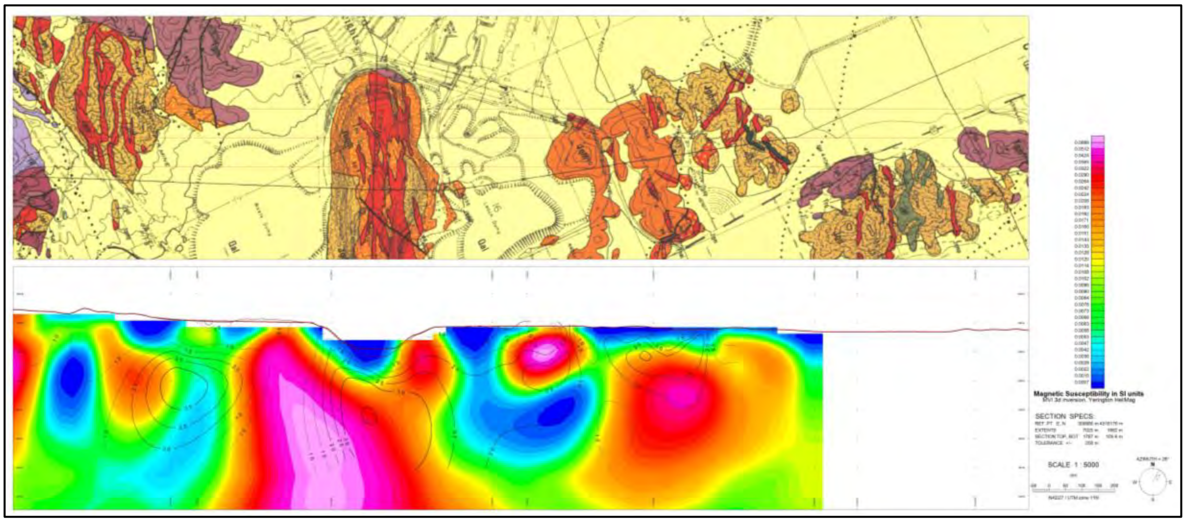
Although the observed magnetic data over much of the district indicates magnetic low response defines mineralized areas (Yerington pit, MacArthur, Bear, and Mason) the detailed work referred to in section 9.1.1 by Hunter Ware suggests coincidence of increased magnetic response and higher IP response defines the higher-grade copper zones. The helicopter magnetic data underwent a 3D Magnetic Vector Inversion (MVI) that was completed by the geophysicist of a third-party company. MVI is an inversion technique that accounts for both induced and remnant magnetization (MacLeod, & Ellis., 2013). Figure 9-2 is a cross-section along the same path as in Figure 9-1. The bottom panel has the extracted color grid from the amplitude of the 3D MVI model. The contours of the IP response from Figure 9-1 are shown with the color grid and from this figure it is evident that each of the four anomalous IP zones are either coincident or very closely adjacent with magnetization amplitude highs.

Figure 9-1: IP Response from 2D Inversion (Section 309980 E)



Source: Zonge International, 2017

Figure 9-2: Magnetic Vector Inversion Model (Section 309980 E)



Source: Zonge International, 2017

10 DRILLING

10.1 Historical Drilling

Anaconda conducted considerable exploration and production drilling during its long tenancy of the project which resulted in the existing Yerington pit. Although the actual number of exploration drill holes and footages is unknown, historic records indicate that well over a thousand holes, including both core and rotary, were drilled in exploration and development at the Yerington pit alone.

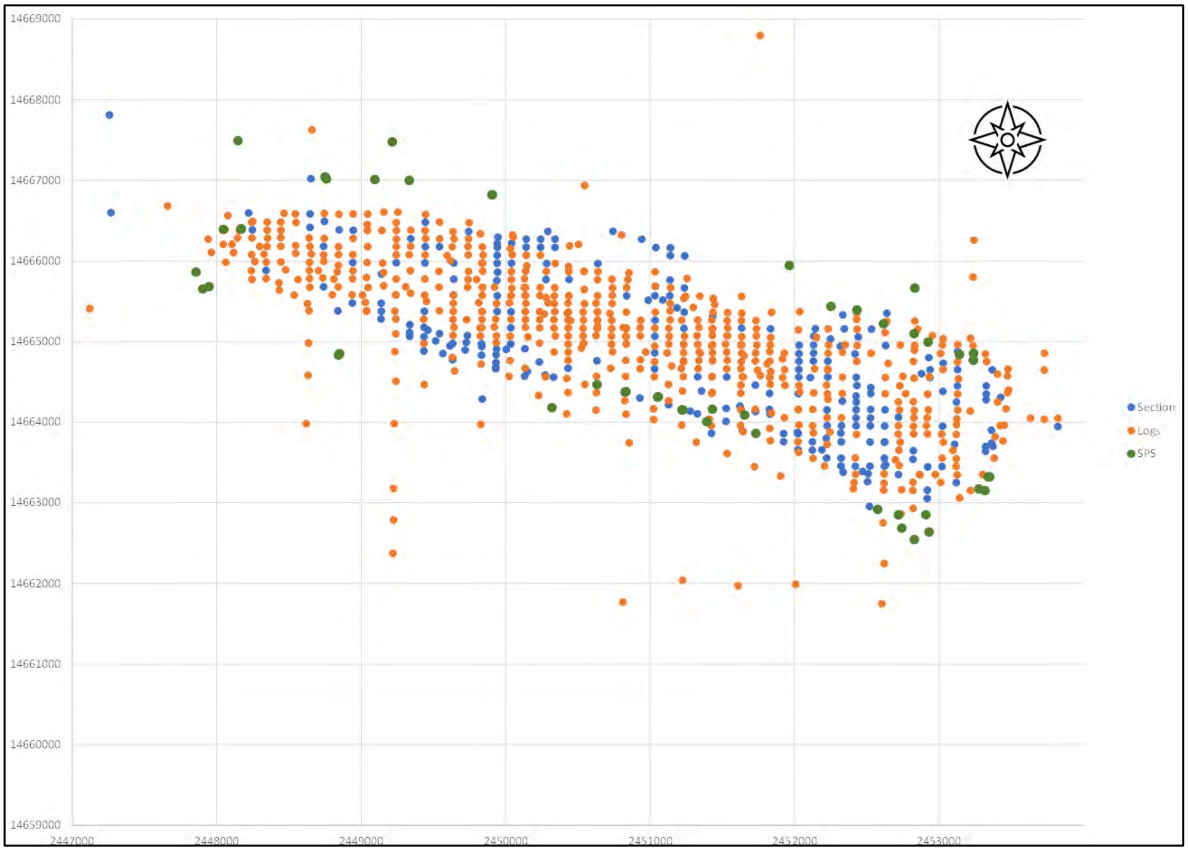
At the Anaconda Collection – American Heritage Center, University of Wyoming at Laramie, a large inventory of Anaconda data is available for review. In an effort to obtain drill hole information on the Yerington Project, approximately 10,000 pages of scanned drill hole records from the library were reviewed and drill hole lithology, assays, and/or survey coordinates were initially recorded on 840 drill holes by SPS. While some holes contained only lithologic or assay summary information, after final verification (discussed further in Section 12), 561 of those contained adequate detailed assay, hole location and orientation information to be used in the resource estimation. An additional 232 drill holes were digitized from sections as explained in Section 12 and included in the drill hole database.

Questionable hole location or inadequacy of detailed assay data were the primary reasons for a hole being considered unacceptable for inclusion in the data base. The cross-section validation performed for the 2012 resource also confirmed that the bench composites posted correctly provided a cross check that section data was the same as that which what was being found in the records.

Of additional benefit to the SPS program, core left on site by Anaconda was available for assay by SPS. As part of the validation of the Anaconda data, selected intervals from 45 Anaconda core holes were submitted to Skyline Labs for assay to compare with assays recorded from the historic documents. A further discussion is found in the Section 12 of this report.

Although historic drilling included intervals which were subsequently mined by Anaconda, they remained in the data base for statistical and interpolation purposes. Anaconda drill hole locations (based on drill logs and digitized sections) incorporated into the SPS data base are shown in Figure 10-1 along with SPS drill hole locations.

Figure 10-1: Yerington pit Showing Historic and SPS Drilling



Source: AGP 2023

Notes: Green-SPS, Orange-Historical drill logs, Blue-Historical digitized from sections
Grid is 1000 x 1000 m

10.2 Current Drilling

SPS's 2011 drilling program totaled 21,887 feet in 42 holes including 6,871 feet of core in 14 core holes and 15,016 feet of reverse circulation (RC) in 28 RC holes (Figure 10-1). The core holes and four RC holes were drilled to twin Anaconda core holes, while the remaining RC holes were targeted for expansion of mineralization laterally and below historic Anaconda drill intercepts along the perimeter of the Yerington pit.

Drill hole siting was hampered by pit wall geometry and by the presence of the Pit Lake and was confined to selected benches within the Yerington pit in order to maintain safe access around the existing Pit Lake.

The total area covered by the drilling resembles an elliptical doughnut (the accessible ramps and roads along perimeter within the Yerington pit) measuring approximately 6,000 feet west-northwest by 2,500 feet. Drill hole spacing is irregular due to access and safety limitations within the pit.

The 2017 and 2022 drilling focused on deeper drill holes to confirm the extents of mineralization. Lion CG completed an additional seven holes totalling 15,636.7 feet. Four of the holes were collared in RC and changed to core.

Table 10-1 provides basic information for 2011 drilling by SPS, and Table 10-2 details the new drilling conducted in 2017 and 2022 that were added to the data base.

Table 10-1: 2011 Drilling Yerington Copper Project

Drill Hole	Azimuth	Dip	Total Depth (ft)	Purpose	Type
SP-001	0	-90	207.5	Twin	Core
SP-002	0	-90	259	Twin	Core
SP-003	0	-90	405	Twin	Core
SP-004	0	-90	803.5	Twin	Core
SP-005	0	-90	390	Expl	RC
SP-006	0	-90	791	Twin	Core
SP-007	0	-90	340	Expl	RC
SP-008	0	-90	435	Expl	RC
SP-009	0	-90	355	Expl	RC
SP-010	90	-70	741	Twin	Core
SP-011	180	-60	500	Expl	RC
SP-012	180	-60	1000	Expl	RC
SP-013	180	-70	1000	Expl	RC
SP-014	0	-90	341.5	Twin	Core
SP-014A	180	-90	1000	Expl	RC
SP-015	0	-90	438	Twin	Core
SP-016	180	-70	780	Expl	RC
SP-017	0	-90	216.5	Twin	Core
SP-018	90	-70	530	Expl	RC
SP-019	0	-90	300	Twin	Core
SP-020	180	-80	265	Expl	RC
SP-021	180	-60	720	Expl	RC
SP-022	180	-60	940	Expl	RC
SP-023	180	-60	596	Twin	RC
SP-024	0	-90	780	Expl	RC
SP-025	0	-90	610	Expl	RC
SP-026	180	-60	655	Expl	RC
SP-027	0	-90	797	Twin	Core
SP-028	0	-90	300	Twin	RC
SP-029	0	-90	560	Twin	RC
SP-030	0	-90	460	Twin	RC
SP-031	0	-90	162	Twin	Core
SP-032	0	-90	506	Twin	Core
SP-033	0	-90	190	Expl	RC
SP-034	180	-60	903	Twin	Core

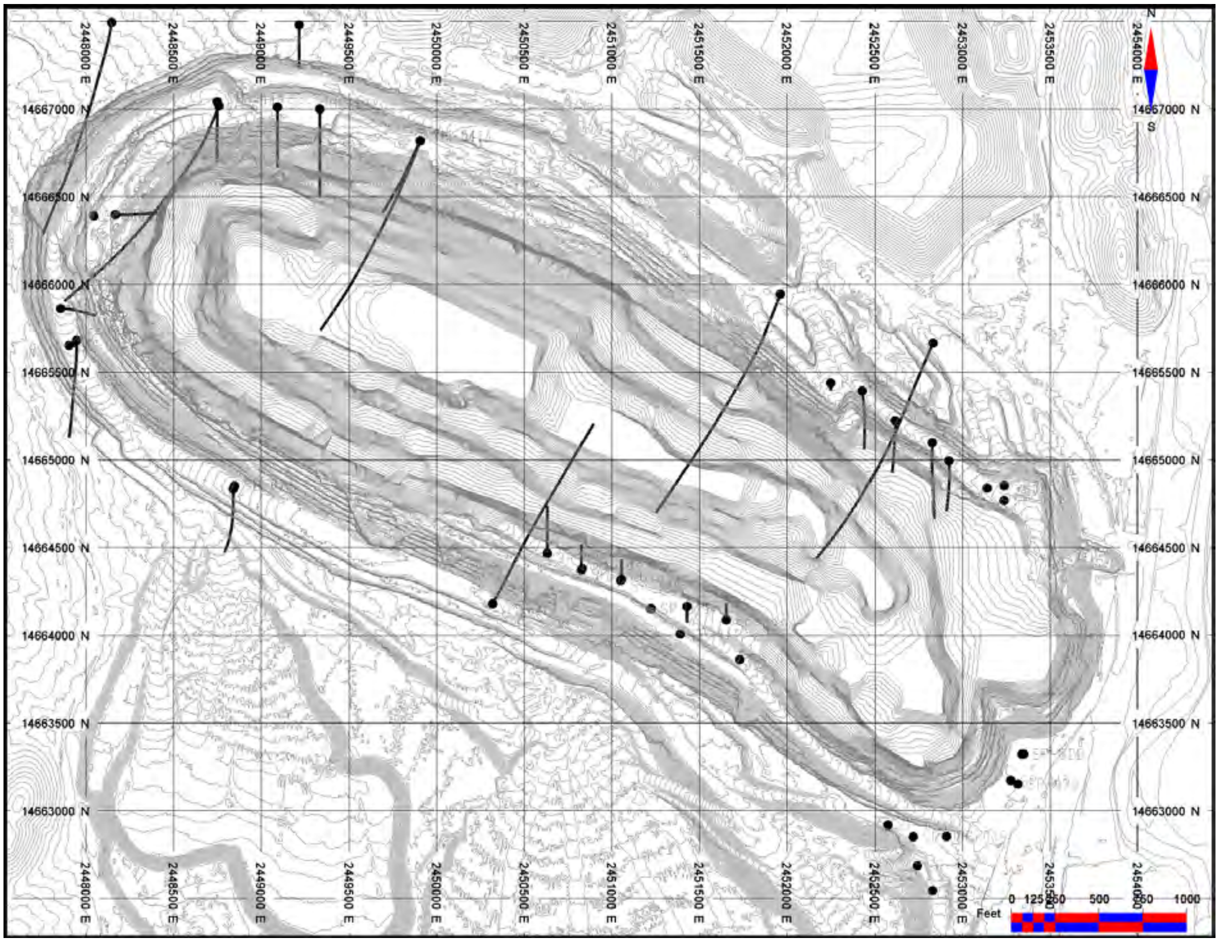
Drill Hole	Azimuth	Dip	Total Depth (ft)	Purpose	Type
SP-034A	0	-90	365	Expl	RC
SP-035	0	-60	190	Expl	RC
SP-036	0	-60	550	Expl	RC
SP-037	180	-60	180	Expl	RC
SP-038	90	-60	830	Expl	RC
SP-039	0	-60	295	Expl	RC
SP-040	0	-55	200	Expl	RC

Table 10-2: 2017/2022 Drilling Yerington Copper Project

Drill Hole	Year Drilled	Azimuth	Dip	Total Depth (ft)	Purpose	Type
YM-041	2017	205.00	-55.00	714.0	Expl	RC
YM-041A	2017	201.77	-53.83	2589.7	Expl	RC/Core
YM-042	2017	202.27	-56.80	2770.6	Expl	RC/Core
YM-043	2017	200.59	-52.38	2490.0	Expl	RC/Core
YM-044	2017	189.09	-58.44	2746.7	Expl	RC/Core
YM-045	2017	204.03	-54.34	2533.2	Expl	Core
YM-046	2022	29.18	-47.20	1792.5	Expl	Core

Figure 10-2 illustrates the drilling conducted by SPS and Lion CG relative to the current topography and historic Anaconda open pit.

Figure 10-2: Diamond Drilling by SPS



Source: AGP 2023

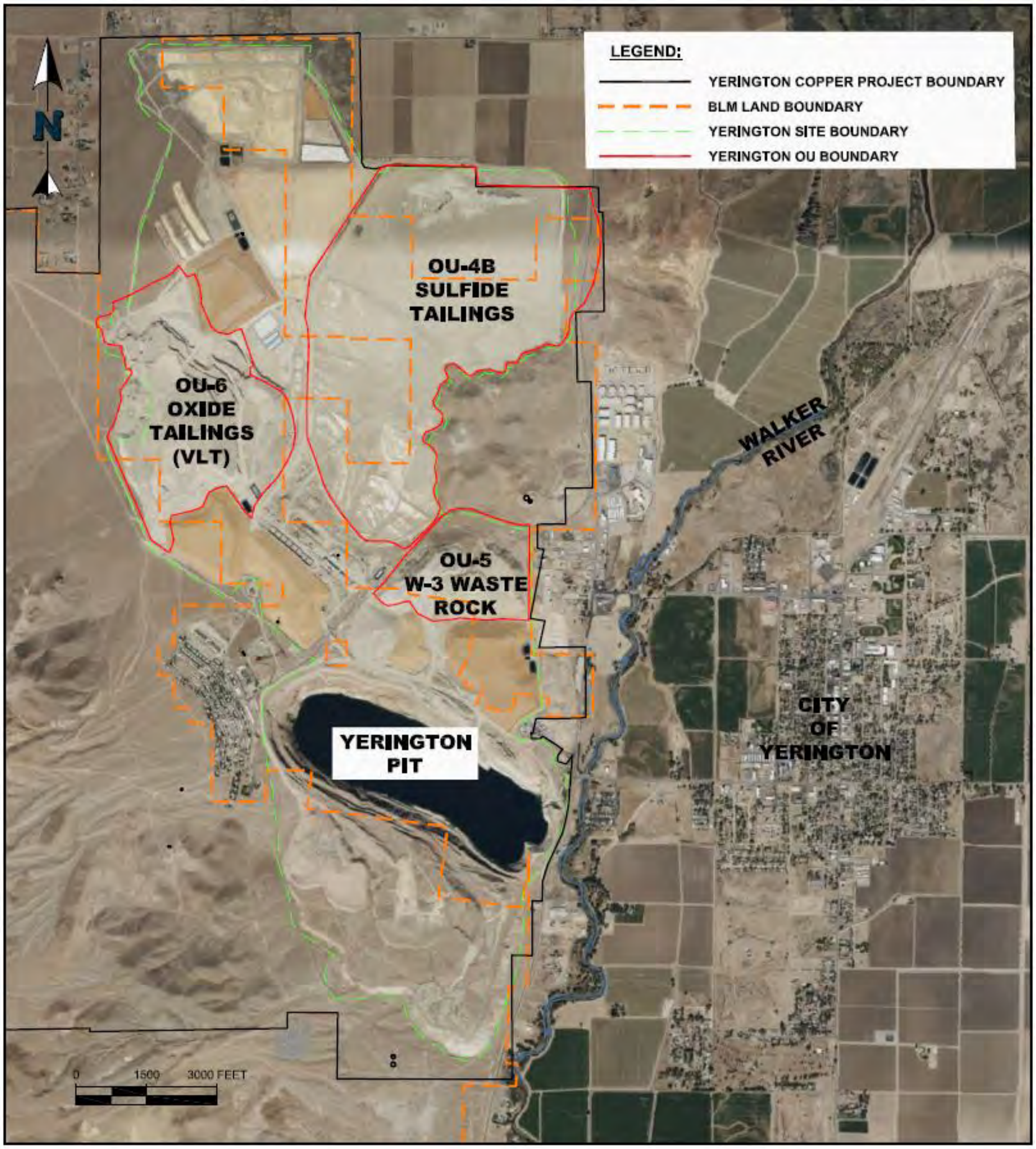
Notes: Drill holes projected on current topography

10.3 Residuals Drilling

Numerous sites of low-grade mineralization and waste dumps are present at the Yerington Property (Figure 10-3). Some of these have been sampled, post deposition, to determine an average grade and to conduct metallurgical testing. Two areas have been selected for inclusion within this report for estimation of the mineral resource:

- W-3 which is a rock disposal unit that lies north of the Yerington pit (Operable Unit (OU)-5, Figure 10-3) and
- VLT which are low-grade oxide tailings that lie northwest of the Yerington pit (OU-6, Figure 10-3).

Figure 10-3: Yerington Property Layout



Source: NewFields, 2023

10.3.1 W-3

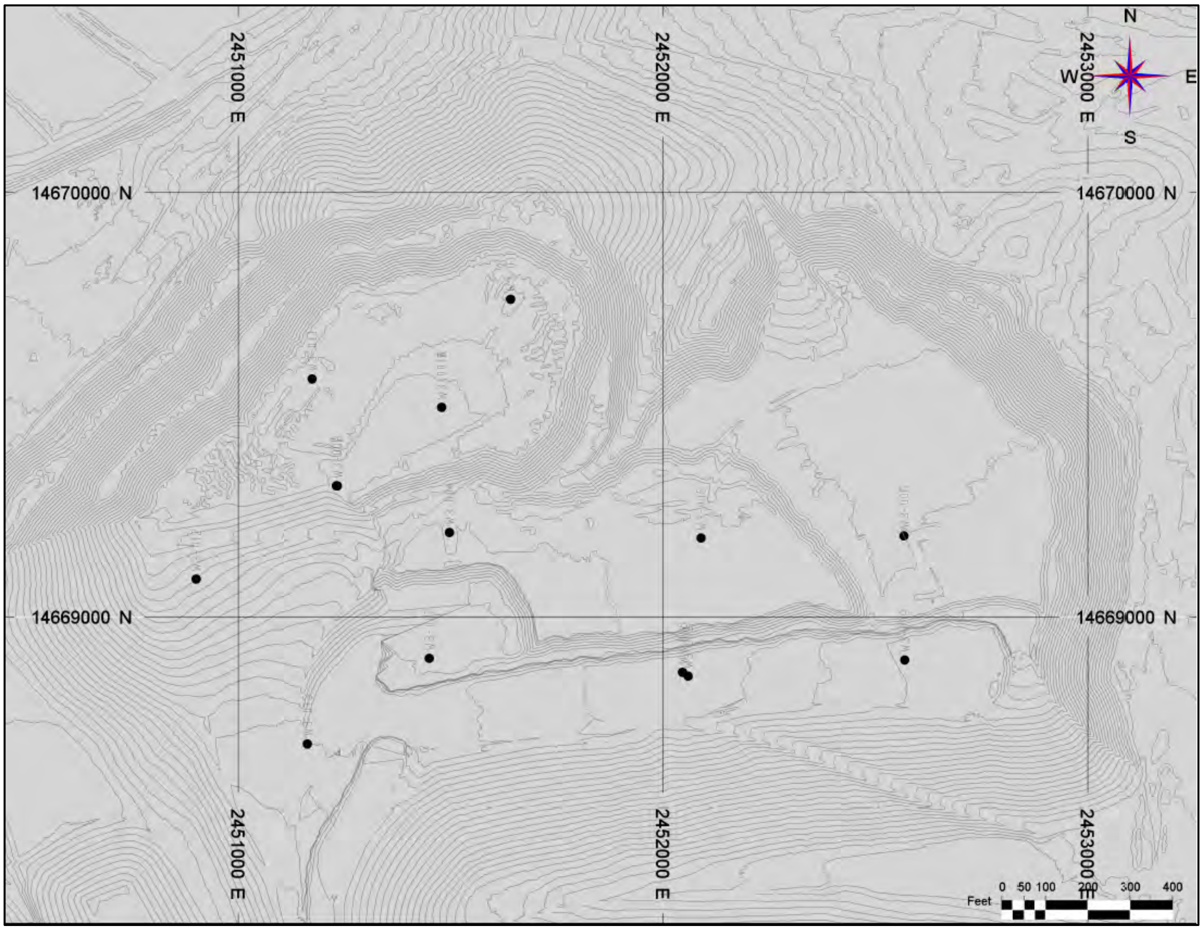
W-3 is a rock disposal unit that lies north of the current Yerington pit. It is composed of subgrade copper oxide ore from Anaconda mining operations. Per SRK scoping studies it was below the Anaconda operating cut-off of 0.3% Cu, but above a 0.2% Cu threshold (SRK, 2012). Copper mineralization is predominantly oxide with lesser amounts of chalcocite. SRK reported a volumetric estimate of 19,643,073 tons potentially grading 0.20% Cu with expected leach recovery of approximately 60%. Arimetco production summaries indicate approximately 50,976,235 tons at 0.18% Cu was mined from 1989-1998 (Table 6-1).

In 2012, to follow-up on the SRK report, SPS drilled fourteen (one twin) Roto-Sonic drill holes (performed by Major Drilling), ranging in depth from 95-165 feet (Table 10-3). All residual drill holes are shown on the attached map (Figure 10-4). Eleven of these drill holes were available for sampling. During the drill program, 5-foot intervals of 6-inch core were drilled and put directly into plastic bags. At the conclusion of the drilling program, SPS split the samples and stored each split in a heavy-duty plastic sample bag. The bags were clearly marked and labeled with the drill hole number and sample interval and sealed shut.

Table 10-3: W-3 Drill Holes

DHID	Easting	Northing	Elevation	Depth (ft.)
W-3-001a	2451477	14669493	4679.0	105
W-3-001b	2451477	14669493	4679.0	85
W-3-002	2452059	14668860	4610.0	100
W-3-003	2451231	14669308	4678.0	100
W-3-004	2451496	14669198	4638.0	100
W-3-005	2452090	14669185	4638.0	100
W-3-006	2452569	14669190	4608.0	100
W-3-007	2451448	14668902	4608.0	100
W-3-008	2452046	14668869	4576.0	100
W-3-009	2452570	14668898	4570.0	165
W-3-010	2451640	14669748	4594.0	95
W-3-011	2451174	14669560	4650.3	100
W-3-012	2450900	14669089	4636.9	100
W-3-013	2451163	14668700	4636.9	100

Figure 10-4: W-3 Collar Plot



Source: AGP 2023

10.3.2 Vat Leach Tails

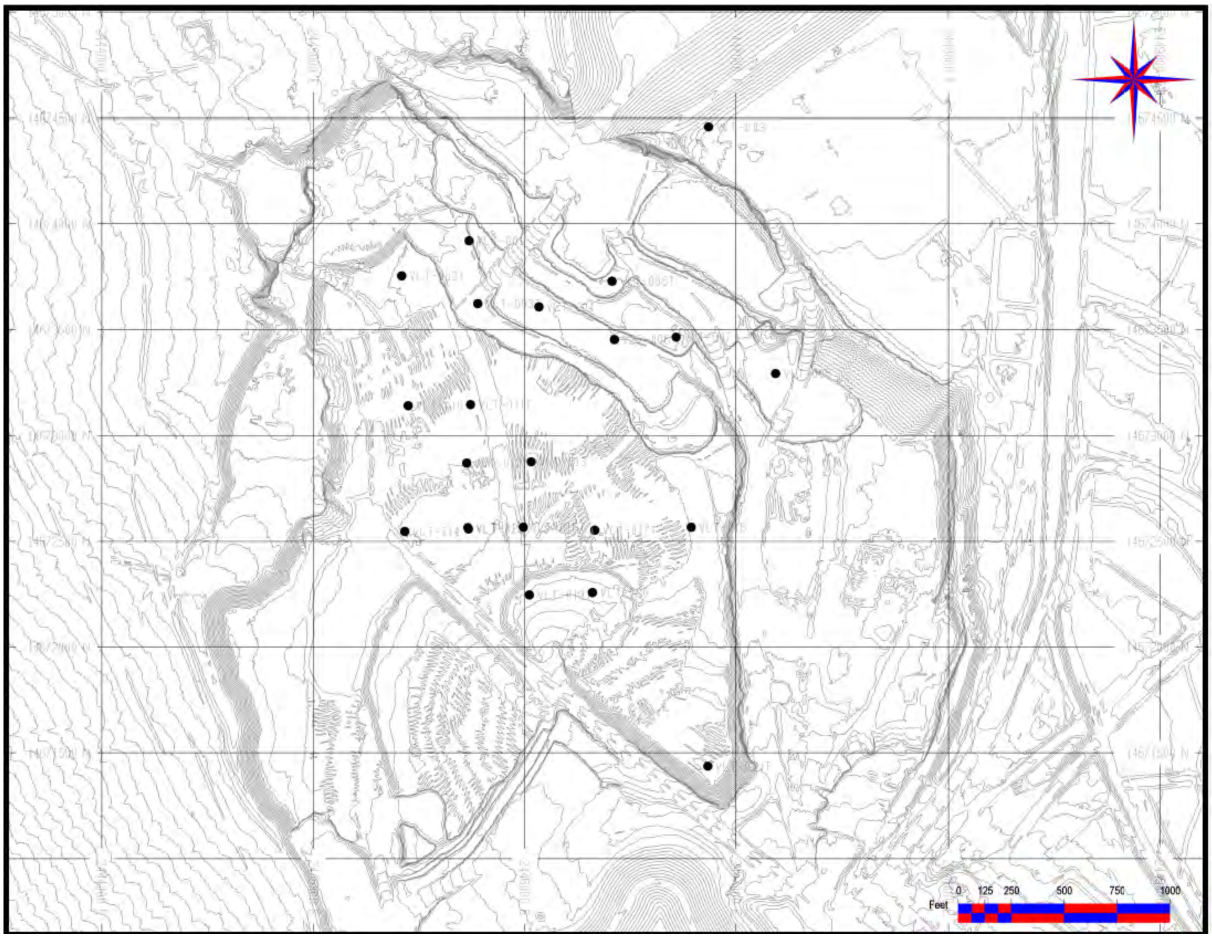
Oxide tailings, or VLT, are the leached products of Anaconda's vat leach copper extraction process (CH2M Hill, 2010). The oxide tailings dumps, located north of the Process Areas, contain the crushed rock and the red sludge at the base of the leach vats that remained following the extraction of copper in the vat leaching process. The vat leach process involved crushing ore into a uniform minus 0.5-inch size and loading it into one of eight large concrete leach vats where weak sulfuric acid was circulated over an 8-day period. Following the 8-day cycle, the spent ore was removed from the vats and transferred to haul trucks for conveyance to the oxide tailings area (OU-8 Figure 10-3).

METCON Research (METCON) conducted a metallurgical study for SPS to support a scoping study for the Anaconda Vat Leach Tailings (Phase I) Project in Yerington, Nevada. The metallurgical study was conducted on drill hole samples obtained from a wet and dry sonic drilling campaign from the Anaconda Vat Leach Tailings.

The average total copper grade is expected to be approximately 0.13% Cu and the mineralization is expected to be primarily oxide forms of copper, chrysocolla, neodecite, others, and secondary sulfide (chalcocite) (SRK, 2012).

There were 22 drill holes, VLT-001 to VLT-022, completed for the wet drilling study. In September 2012, nine dry rotosonic drill holes (Prosonic) by Boart Longyear twinned the wet sonic drill holes configured with an 8-inch-diameter drill pipe and a 7-inch core. “T” was added to the hole number to identify the twin holes: VLT-12-002, VLT-12-003T, VLT-12-005T, VLT-12-006T, VLT-12-011T, VLT-12-016T, VLT-12-017T, VLT-12-019T and VLT-12-021T (Figure 10-5).

Figure 10-5: VLT Collar Plot



Source: AGP, 2023

10.4 Drilling Procedures

SPS’s drill holes, as well as other necessary survey control, have been surveyed by SPS staff using a Trimble XHT unit with horizontal accuracy to within one-half meter and vertical accuracy from one-half to one meter.

The downhole survey work, using a surface recording gyro system, was contracted to International Directional Services LLC based in Elko, Nevada.

For the 2011, core drilling was contracted to Ruen Drilling, Inc., Clark Fork, Idaho, who operated a track-mounted rig. Two RC drill contractors were engaged: George DeLong Construction, Inc., Winnemucca, Nevada, operating a truck-mounted rig, and Diversified Drilling LLC, Missoula, Montana, operating a track-mounted rig.

In 2017, drilling for the YM series holes was contracted to Layne Christensen Drilling from Winnemucca, Nevada. InterGeo Drilling (IG Drilling LLC), a subsidiary of Provo Mining & Construction Inc. was contracted for the drilling of YM-046.

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sample Preparation and Security

Samples were analyzed for total copper (TCu), gold, and a 47-element trace element package. Samples representing oxide mineralization were also analyzed for acid soluble copper and for ferric sulfate soluble copper. Rock quality designations (RQD) and magnetic susceptibility measurements were taken on all core which was photographed following geologic logging. Selected core was used to provide bulk density measurements.

Figure 11-1 shows the core sampling facility at the Yerington Copper Project. The sampling area is connected to the logging area via conveyor.

Figure 11-1: Core Sampling Facility

Source: AGP, 2023

11.1.1 RC Drilling Sampling Method

Samples are collected in a conventional manner via a cyclone and standard wet splitter. Samples are collected in 17-in by 26-in cloth bags placed in five-gallon buckets to avoid spillage of material. Sample bags are pre-marked by SPS personnel at five-foot intervals and also include a numbered tag inserted into a plastic bag bearing the hole number and footage interval. Collected samples, weighing approximately 15 to 20 pounds each, are wire tied and then loaded onto a ten-foot trailer with wood bed allowing initial draining and drying. Each day SPS personnel or the drillers at the end of their shift, haul the sample trailer from the drill site to SPS's secure sample preparation warehouse in Yerington, Nevada. Samples for geologic logging are collected at the drill site in a mesh strainer, washed, and placed in standard plastic chip trays collected daily by SPS personnel.

RC sample bags, having been transported on a ten-foot trailer by drill crews or by SPS personnel from the drill site to the secure sample warehouse, are unloaded onto suspended wire mesh frames for further drying. Diesel-charged space heaters assist in drying during winter months. Once dry, four to five samples are combined in a 24- by 36-inch woven polypropylene transport ("rice") bag, wire tied, and carefully loaded on plastic lined pallets. Each pallet, holding approximately 13 to 15 rice bags, is shrink-wrapped, and further secured with wire bands. Each pallet is weighed.

In the 2011 drill program, pallets were picked up and trucked by Skyline Assayers & Laboratories (Skyline) personnel who operate a sample preparation facility in Battle Mountain, Nevada. A chain of custody form accompanied all shipments from Yerington to Battle Mountain. Once Skyline prepared each sample in its Battle Mountain facility, approximately 50-gram sample pulps are air-freighted to Skyline's analytical laboratory in Tucson, Arizona for analyses and assay.

In 2017, Bureau Veritas' personnel picked up the samples, which were prepped in the Sparks, NV facility and then forwarded to their Vancouver laboratory for analysis.

In 2022, Skyline personnel (from Tucson) picked up the samples which were prepped and analyzed in their Tucson laboratory.

11.1.2 Core Drilling Sampling Method

Core diameter was HQ (approximately 2.75-inch diameter). Following convention, the drill crew at the drill site placed core samples in wax-impregnated, ten-foot capacity cardboard boxes.

Drill core, having been transported at end of each shift by the drill crew to SPS's secure sample warehouse, is logged by a SPS geologist who marks appropriate sample intervals (one to nominal five feet) with colored flagging tape. Lines are marked along the length of core with red wax crayons to indicate where the core piece should be sawed. Each core box, bearing a label tag showing drill hole number, box number, and box footage interval, is then photographed. Rock quality designations (RQD), magnetic susceptibility, and recovery measurements are taken. Figure 11-2 shows the logging tables at the Yerington Copper Project.

Figure 11-2: Core Logging Facility

Source: AGP, 2023

11.1.3 W-3 Sampling

Ten-foot intervals of 6-in. core were drilled and put directly into plastic bags. At the conclusion of the drilling program, SPS split the samples into 5-ft. intervals and stored each split in a heavy-duty plastic sample bag. The bags were clearly marked and labeled with the drill hole number and sample interval and sealed shut. The samples were not initially submitted for assay and were stored at the Yerington Property.

In an effort to better determine the copper remaining in the W-3 stockpile, composites of the available splits were made. Composites were unbiased grab samples from each 5-ft. interval plastic bag from the available drill holes (W-3-001, W-3-003, W-3-004, W-3-005, W-3-007 through W-3-013). These composites were each 3-4 kg each and sent to FLSmidth, Inc for characterization and assaying.

The remainder of the split samples were tagged with a sample number and submitted for assaying to Woods Process Services, LLC.

11.2 Sample Analysis

While no details are available regarding Anaconda's exact assaying protocol and quality control during previous operations, public records of profit and cost confirmed that the techniques and procedures implemented conformed to industry standards for that era.

Samples processed by SPS between 2011 and 2022 from the Yerington Copper Project were analyzed by:

- Skyline Assayers and Laboratories: Tucson, Arizona.
- Bureau Veritas Commodities Canada Ltd.: Reno, Nevada.
- Woods Process Services, LLC: Sparks, Nevada.

Sample preparation (crush-split-pulverize) was generally completed at local facilities in Nevada before shipment to the primary assay laboratories.

Table 11-1 summarizes the analytical packages and laboratories used by SPS.

Skyline was used for the 2011 SP series of drilling and in 2022 YM-046. Bureau Veritas was used for the 2017 YM series drill holes.

Woods Process analyzed selected intervals for drill hole samples from W-3 and VLT.

ALS Minerals Laboratory was used for check samples.

Table 11-1: Summary of Analytical Packages and Laboratories

Laboratory	Procedure Code	Procedure Description
Skyline Assayers	MULTI-AAS SEQ-AAS-AS SEQ-AAS-CN SEA-CuSAP FA-1 TE-7	Multi-acid digestion AAS Copper Sequential Analysis Copper AAS Acid Soluble Sequential Analysis Copper AAS CN Soluble Sequential Analysis Copper AAS Ferric Sulfate Soluble Au Fire Assay – AA (Geochem) 30 g Trace Elements by Multi Acid (with HF), ICP-MS
Bureau Veritas	FA430 MA300	Au by 30 g fire assay, AAS finish 4 Acid digestion ICP-ES analysis 0.25 g
Woods Process Services		3 Acid microwave digestion
ALS Minerals	CU-OG62 ME-OG62	Ore Grade Cu – Four Acid Ore Grade Elements – Four Acid, ICP-AES analysis

11.3 Quality Control

SPS implemented a quality assurance and quality control assay protocol whereby either one blank or one standard is inserted with every ten samples into the assay stream. Additional check samples were submitted to ALS Minerals Laboratories in Sparks, Nevada.

Lot failure criteria were established as any standard assaying beyond two standard deviations of the expected value, or any blank assay greater than 0.015 percent TCu.

Geochemical reference standards are listed in Table 11-2.

Table 11-2: Geochemical Reference Standard

Standard	Source	Accepted Value, % Cu
A106010X	Shea Clark Smith, Moment Exploration GeoServices	0.215
A106009X		0.136
A106012X		0.388
A106013X		0.574
A106014X		1.428

11.3.1 SPS Drilling Prior to 2017

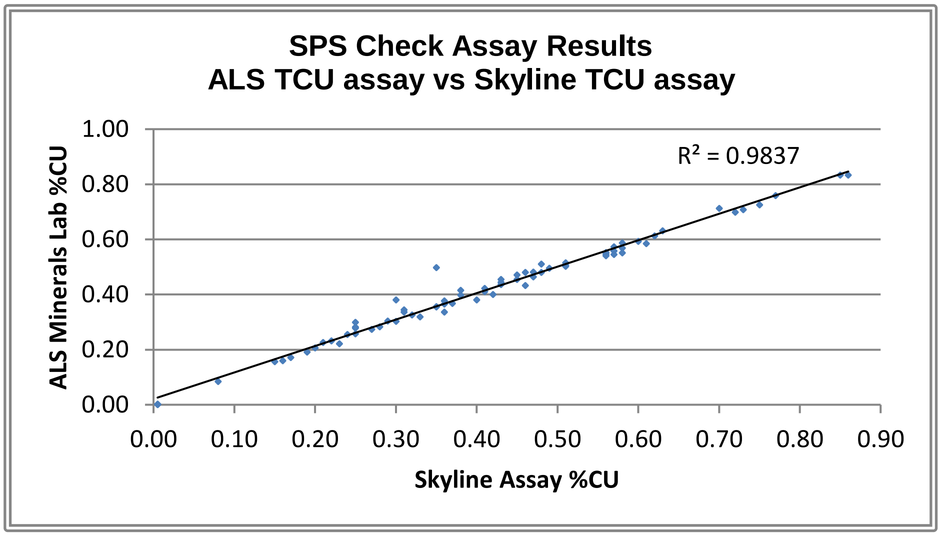
As part of the SPS quality control program, 220 standards and 222 blanks were submitted (Table 11-3) along with 5,557 individual drill hole samples to Skyline Laboratories. Additionally, 68 check assays plus seven quality control samples were submitted to ALS Mineral Labs, Reno, and 137 samples plus seven quality control samples were submitted for reassay to Skyline. No quality control failures were found during the reassaying (Table 11-3).

Table 11-3: SPS 2011 QAQC Program Results

	Skyline Labs	ALS Mineral Labs
Total Drill Hole Samples	5694	68
Submitted Standards	220	3
Failed Standards	8	0
% Standards Failure	**3.6%**	**0**
Submitted Blanks	222	4
Failed Blanks	4	0
% Blank Failure	**1.8%**	**0**

Check assays from ALS Mineral Labs compared well with Skyline assays, providing additional confidence in the assay database, as shown in Figure 11-3.

Figure 11-3: SPS Check Assay Results



11.3.2 SPS Drilling 2017-2022

Six drill holes were completed in 2017 by SPS and one additional hole in 2022. Table 11-4 summarizes the results of the QAQC program. No issues were noted.

Table 11-4: 2017-2022 QAQC Program Results

	Skyline Assays (2022)	Bureau Veritas (2017)
Total Drill Hole Samples	325	2436
Submitted Standards	16	125
Failed Standards	1	2
% Standards Failure	**1.6%**	**6.3%**
Submitted Blanks	16	121
Failed Blanks	0	0
% Blank Failure	**0.0%**	**0.0%**

11.3.3 W-3 Drilling

Eleven drill holes from the residual W-3 were submitted for analysis by Woods Processing. SPS modified the quality assurance and quality control assay protocol for this analysis whereby one standard was inserted with every ten samples into the assay stream and one blank for every 20 samples. Table 11-5 reports the QAQC results for W-3 sampling. The grades were within two standard deviations except for one failure. But more than 50% were outside of the 95% confidence limits. In general, the assayed grades were averaging higher than the accepted value of the standard.

Table 11-5: W-3 QAQC Program Results

	Woods Processing (2023)
Total Drill Hole Samples	223
Submitted Standards	23
Failed Standards	1
% Standards Failure	**4.3%**
Submitted Blanks	11
Failed Blanks	0
% Blank Failure	**0.0%**

11.3.4 Vat Leach Tails Drilling

Samples were processed by METCON Research (Tucson, AZ) to determine moisture content, particle size distribution, head assay analysis and agitated leach testing (Guntumur, 2012a and 2012b). METCON Research was an international consulting group that delivered a broad range of services including analytical testing, metallurgical research, and process engineering design for the global minerals and mining industry. No details were provided with respect to the assay methodology, but assay certificates were provided.

A total of 472 samples were submitted for analysis which included 53 duplicate samples (11.2%), 12 blank material samples (2.5%) and 18 standard reference materials (3.8%).

The SRMs were obtained from Canadian Certified Reference Materials Project (CCRMP) operated by CANMET Mining and Mineral Sciences Laboratories in Ottawa, Ontario. Three SRMS used were HV-2, SU-1b and MP-1b.

No outliers or bias were noted in the review of the SRMs, blanks and duplicates.

11.4 Adequacy Statement

It is the opinion of the QP, Tim Maunula, P.Geo., that the sampling preparation, security, analytical procedures, and quality control protocols used are consistent with generally accepted industry best practices and therefore reliable for the purpose of Mineral Resource estimation.

12 DATA VERIFICATION

Data verification has been conducted by SPS to validate the historic data. To support the updated mineral resource estimate, AGP conducted independent data verification.

12.1 SPS Data Verification Procedures

SPS carried out detailed data capturing and verification processes in 2011 from Anaconda archives available through the Anaconda Collection – American Heritage Center, University of Wyoming at Laramie. In order to verify and validate this data, three programs were completed:

- cross sections with composites of captured data were generated to compare against Anaconda archived cross sections with posted composites for 560 historic holes
- eighteen twin holes were drilled to confirm historic data
- utilizing Anaconda core remaining on site, selected intervals from 45 holes were sent for assay to compare against historic results
- subsequent data for 232 additional holes was captured directly from historic cross sections after the 2011 validation program established that the sections were accurately reflecting data found in the records

12.1.1 Results of Verification Programs

Cross Section Verification

Some type of data for almost 800 drill holes was initially captured from over 10,000 pages of scanned records from the Anaconda archives. Values were recorded for assay intervals, core recovery (where applicable), total copper grade (TCu), oxidized copper grade (ASCU), and, when present, grades for sludge collected during core drilling. These sludge grades were used by Anaconda in conjunction with core assays through zones of poor core recovery as a way to compensate for lost material. Although attempts were made to recreate their methodology, the lack of details and supplemental data ultimately restricted our use of the information to the original assays.

In addition to the assay information, cross sections showing bench composites were available from the Anaconda archives. By bench compositing the captured data and comparing to the bench composite values posted on the cross sections, Tetra Tech (Bryan, 2012) was able to identify and isolate bench differences and determine the cause. When incorporation of the sludge factors by Anaconda in its bench composites was identified as the cause but the data capture from the scanned sheets was correct, the data were deemed acceptable.

Drill holes not retained in the data set were those which contained only summary data of the assays, often reporting intervals several times larger than bench height. Only those holes which reported grades for the normal sampling intervals (generally 5 feet) were utilized for the Tetra Tech's 2012 resource work.

The cross-section validation also confirmed that the bench composites posted correctly provided a cross check that section data was the same as that which what was being found in the records. Subsequently, a program to capture available data for drill holes found only on the cross sections was undertaken, and

232 additional drill holes were added to the database. Ultimately, information from 561 historic holes with detailed assay data and 232 holes with composite assay data was ultimately used for this current resource estimation (Bryan, 2014).

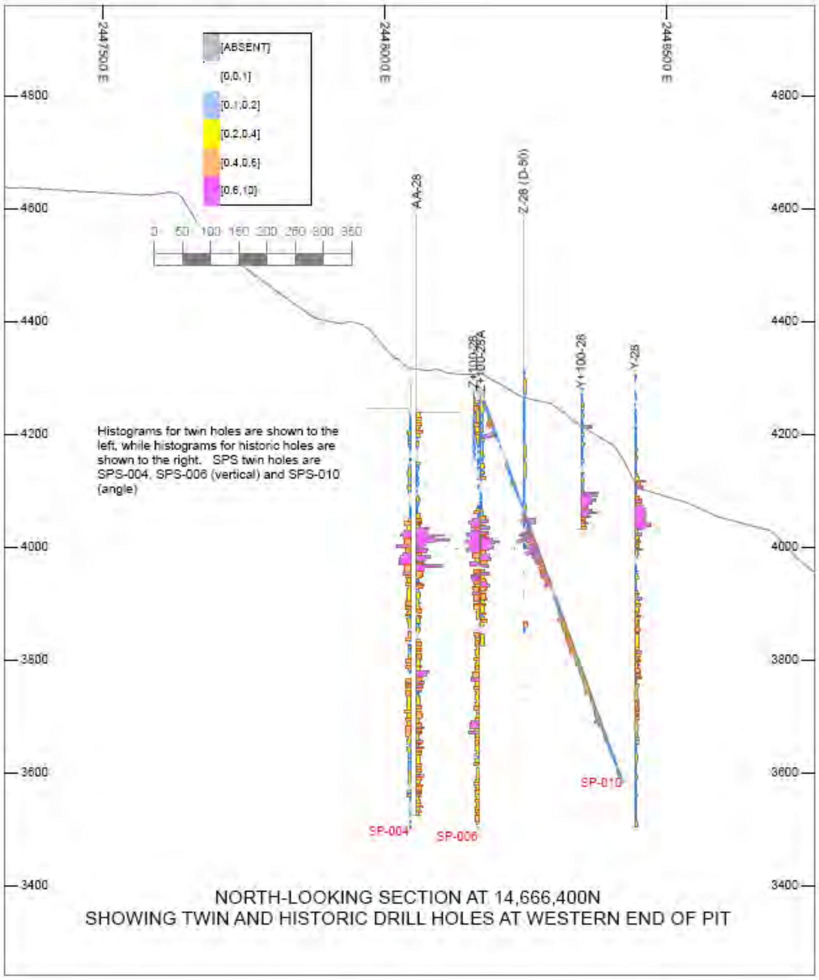
Drill Hole Twinning

Fourteen core and two RC holes were drilled in an effort to twin Anaconda holes to confirm mineralization, and two RC holes were drilled to twin two of the SPS core holes.

Figure 12-1 shows a portion of the “twin” drilling study performed to determine if the historical data from Anaconda can be used in a 43-101 resource estimation. The newer SPS data have the appropriate chain-of-custody along with modern analytical assays. Of interest is the comparison of the new data to the historical data. The original Anaconda data were documented in hard copy sections that were rekeyed into a computer data base. The position of SPS drill holes was compared to Anaconda data by both visual inspection of plotted sections and by the application of a strategy of using jackknife estimates of proximal data. The latter method produced 48 pairs of Anaconda and SPS data that were, on the average, 12 feet apart (Bryan 2014).

Figure 12-2 shows the side-by-side histograms of the 48 pairs. Visually, the Anaconda drilling data are slightly higher in grade than the SPS twins. No statistical difference can be shown. More formally stated, a T-test of the twins shows that the null hypothesis of the two populations being the same cannot be rejected at a 95% confidence level (alpha of 0.05) (Bryan, 2014).

Figure 12-1: Section Showing Twin Data

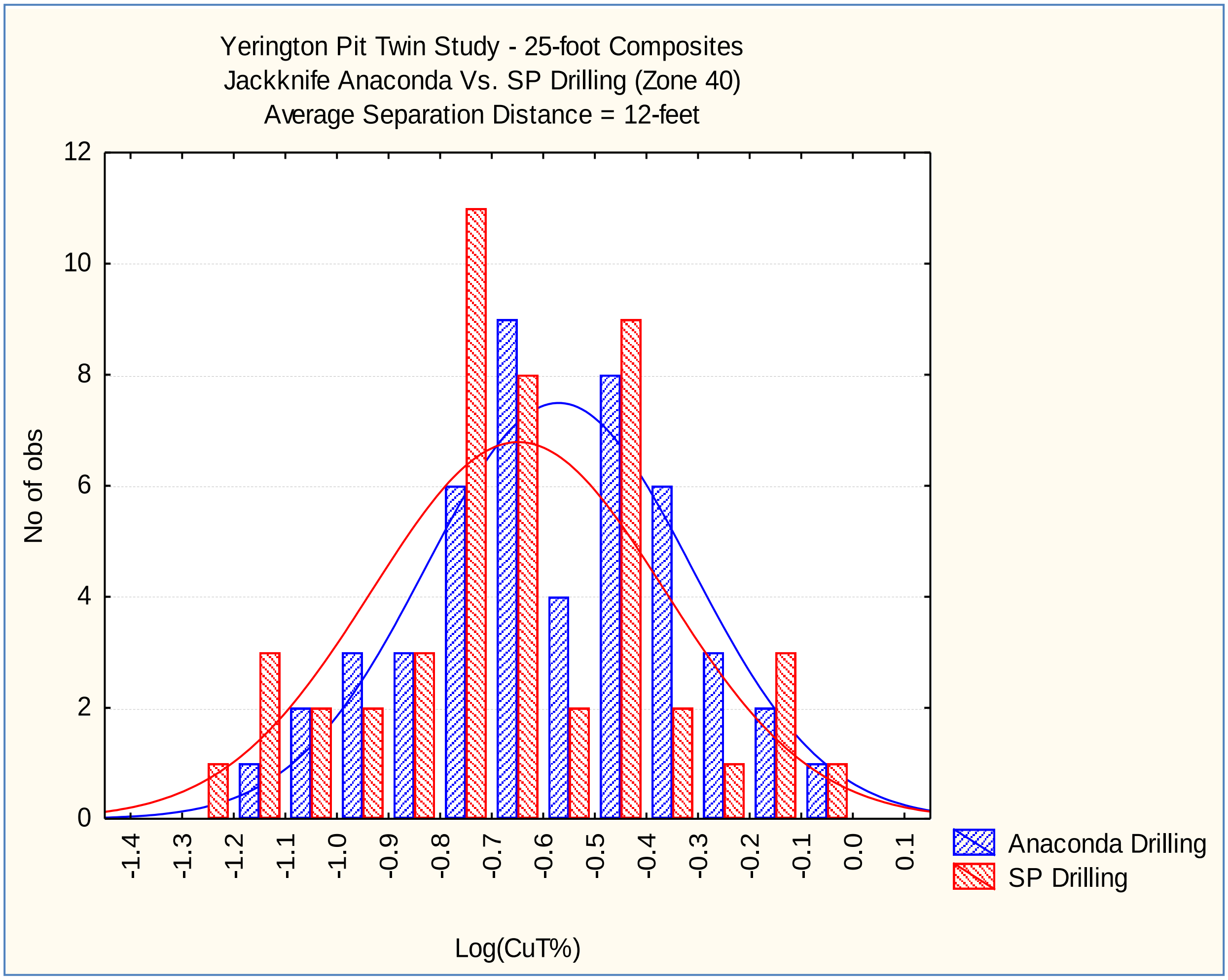


Histograms for twin holes are shown to the left, while histograms for historic holes are shown to the right. SPS twin holes are SPS-004, SPS-006 (vertical) and SPS-010 (angle)

NORTH-LOOKING SECTION AT 14,666,400N
SHOWING TWIN AND HISTORIC DRILL HOLES AT WESTERN END OF PIT

Source: Bryan 2014

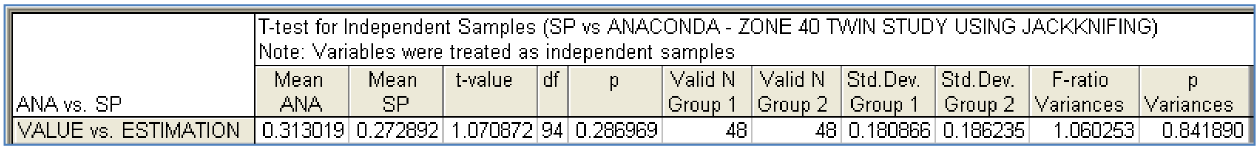
Figure 12-2: Histogram and T-Test Comparison of Anaconda and SPS Drilling



Source: Bryan 2014

Figure 12-3 shows that the 48 twin samples have a correlation of 84%, with a regression equation showing an equivalent grade at 0.5% copper. Figure 12-4 shows the scatter plot of the twins.

Figure 12-3: Twin Sample Correlation

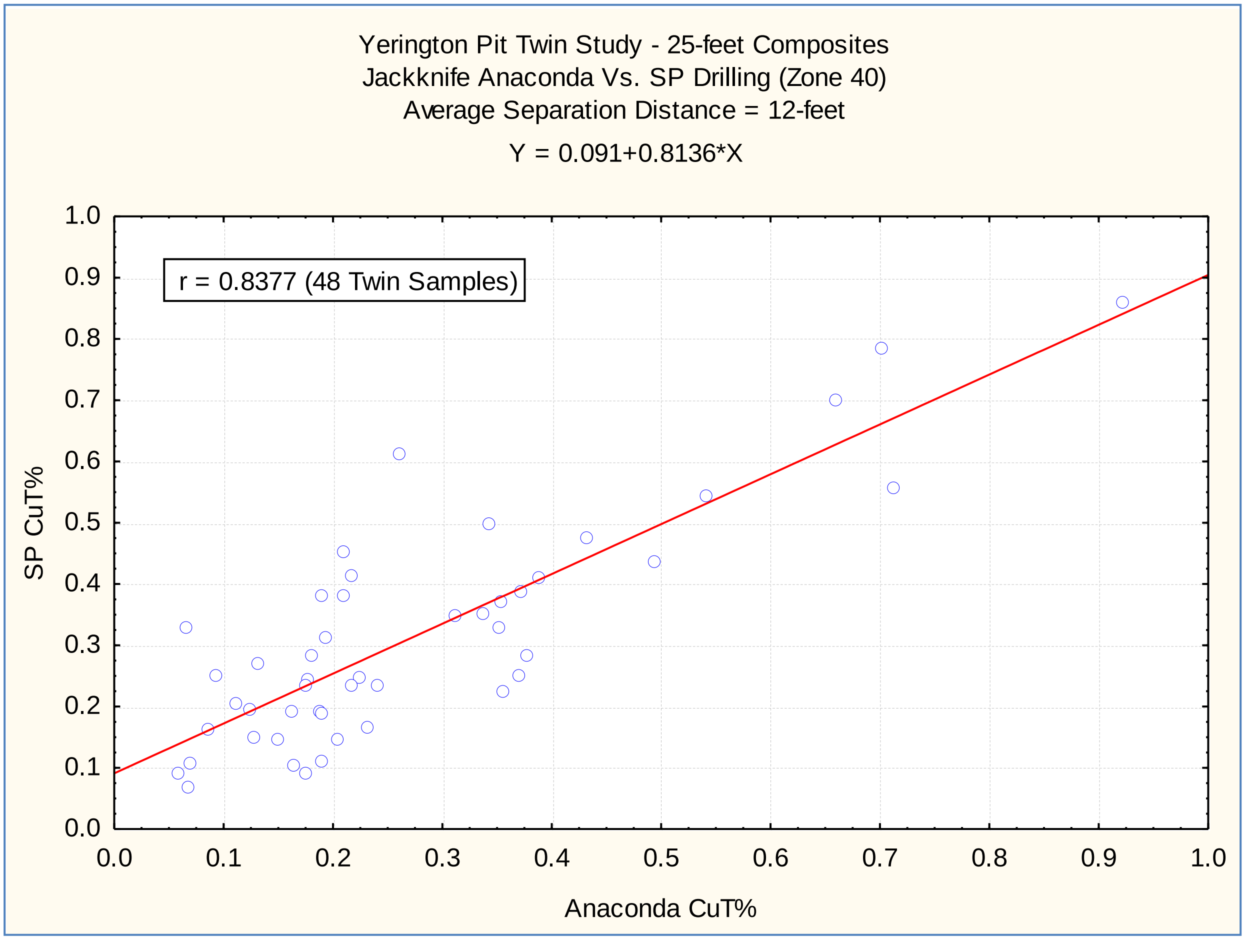


T-test for Independent Samples (SP vs ANACONDA - ZONE 40 TWIN STUDY USING JACKKNIFING)
Note: Variables were treated as independent samples

ANA vs. SP	Mean ANA	Mean SP	t-value	df	p	Valid N Group 1	Valid N Group 2	Std.Dev. Group 1	Std.Dev. Group 2	F-ratio Variances	p Variances
VALUE vs. ESTIMATION	0.313019	0.272892	1.070872	94	0.286969	48	48	0.180866	0.186235	1.060253	0.841890

Source: Bryan, 2014

Figure 12-4: Scatterplot Showing Anaconda and SPS Twin Data



Source: Bryan, 2014

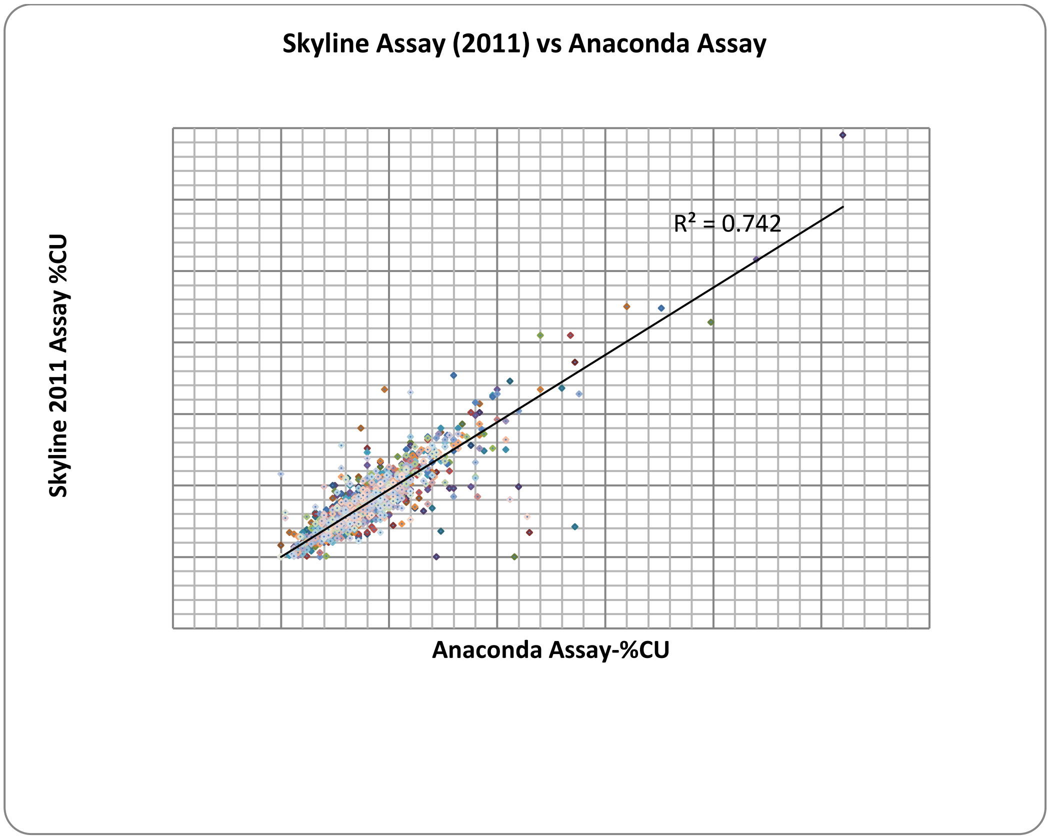
12.1.2 Re-assay of Anaconda Core

In addition to the twin study, selected intervals from archived Anaconda core were re-assayed following chain-of-custody procedures and utilizing modern analytical techniques.

Core intervals from 45 holes, well distributed across the pit, were relogged and photographed prior to being sent to Skyline Labs for re-assaying and represented 5,446 feet of drilling. A total of 1,396 total copper (TCu) assays were completed by Skyline.

In comparing the Skyline and Anaconda Assay data, Figure 12-5 shows a good correlation between the historic assays and reassayed intervals. The coefficient of determination, R^2, with a value of 0.742, shows that the two data sets are well correlated, further validating the historic data.

Figure 12-5: Skyline Assay (2011) vs Anaconda Assay



Source: Bryan, 2014

12.2 AGP Data Verification

AGP conducted data verification during the update of the current Mineral Resource estimate. This included the built-in checks associated with importing data in MineSight, random checks of database assays compared with assay certificates, and review of the QAQC performance (Section 11). This data verification was supported by a site visit conducted from February 13 to 15, 2023. Exploratory data analysis, as discussed in Section 14, was an additional component of the data verification process.

12.2.1 AGP Site Visit

Mr. Tim Maunula, QP, conducted a site visit on February 13-15, 2023. The core logging facilities are located at Project site in Yerington, Nevada (Figure 12-6). No drilling or core logging was currently underway.

Figure 12-6: Yerington Property

Source: AGP 2023

The site visit was completed to obtain a general view of the Project, to determine if there were any obvious concerns and to review current exploration work. Drill holes YM-046-22 (Figure 12-7), SP-010 and Q+100-22 were reviewed to compare core versus logging sheets. The comparison did not identify any material differences.

Figure 12-7: YM-046-22 Core Box Labelling

Source: AGP 2023

Figure 12-8: YM-046-022 Sample Tags

Source: AGP 2023

12.3 Adequacy of Data

On completion of the data verification process, it is the QP's opinion that the geological data collection, sampling, and QAQC procedures used by Lion CG are consistent with accepted industry practices, and that the database is of suitable quality to support the 2023 Mineral Resource estimate, as reported in Section 14.

It is QP's opinion that the data collection of historic data by Lion CG is adequate for the use of the 2023 Mineral Resource estimate for the following reasons:

- sampling is representative of the deposit in both survey and geological context
- twin holes and check assays have confirmed historical assays
- drill hole cores have been archived and are available for further checking

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Summary

Copper mineralization at the Yerington Copper Project exhibits features typical of deposits in the Western United States, with the unique orientation of the mineralized zones and the existence of both the Yerington and MacArthur deposits allowing the potential to process oxide, transitional and sulfide copper materials simultaneously.

Recent advances in processing technology, in particular the Nuton process, show promise for improving recovery of the mixed lower grade sulfide ores without the use of flotation concentration and smelting. Modelling and associated test work indicates copper recoveries up to 74% may be possible on primary Yerington sulfides using Nuton techniques.

Ongoing test campaigns aim to optimize Nuton parameters and quantify potential synergies across proposed flowsheets incorporating heap leach processing of legacy, oxide, transitional and sulfide materials.

13.1.1 Nuton

In early 2022, an agreement was entered into between Lion CG and Rio Tinto to assess Nuton technologies on oxide, sulfide, and residual materials from both the Yerington and MacArthur Properties. Initial test work focused on residual materials and fresh rock from both properties.

Results quickly showed Nuton processing could effectively treat chalcopyrite-bearing rock types from Yerington, achieving copper recoveries exceeding 74% in modeling simulations.

Testwork is ongoing and additional tests are scheduled for 2024 that will confirm metallurgical performance and operating parameters including scale-up. Hydrodynamic testing will also be conducted in this next phase of testing in 2024.

13.1.2 Yerington Oxide ore

Yerington and MacArthur oxide materials share similar characteristics and have historically demonstrated comparable metallurgical performance. No recent test work has been conducted on the Yerington oxides due to lack of samples. Additional drilling and sampling are proposed in a future PFS to provide fresh material for column testing.

Samples were obtained via sonic drilling from the W-3 oxide stockpile for speciation, geochemistry, and acid consumption analysis. Results indicate median copper recovery of 68% TCu is possible at an ASCu cut-off of 0.06% using standard acid heap leaching. Average acid consumption is projected at 24 lb/ton. Further testing will examine potential improvements from introducing Nuton raffinate to the Yerington oxide processing.

Preliminary analysis of sampling from the VLT suggests global median grades of 0.089% TCu and 0.51% ASCu, with an ASCu:TCu ratio of 51%. Testing above a 0.06% cut-off shows average copper recovery around 65% of the TCu head grade. Leveraging ferric iron rich Nuton byproducts could further increase VLT recovery. Additional VLT test work is slated for early 2024.

Recent 120-day column testing of MacArthur oxide material returned copper recoveries ranging from 30.9% to 87.2%, averaging 57.1%. Acid consumption ran from 26 to 42 lb/ton without supplemental ferric or bacteria. Historically MacArthur testing focused on ROM processing schemes. The addition of Nuton may unlock synergies across the flow sheet through detailed examination in upcoming studies.

13.1.3 Copper Recovery Projections

Preliminary metallurgical recovery estimates for the Yerington Copper Project are summarized in Table 13-1. These projections are based on initial test results and analog data from similar projects. Refinements are expected as additional representative samples from Yerington become available for optimized Nuton processing.

Ongoing Nuton testwork continues to demonstrate improving performance and copper recoveries. Further studies aimed at a PFS level will focus on replicating results and confirming operating parameters.

Table 13-1: Yerington Copper Project Projected Recoveries by Deposit/Ore Type/Process.

Deposit	Feed Type	Crush Size	TCu Recovery	Acid Consumption (lb./t)	Notes:
MacArthur	Oxide: MacArthur	6-inch	82%	26	Sized and Conveyor Stacked
	Oxide: Gallagher	6-inch	54%	42	Sized and Conveyor Stacked
	Oxide: MacArthur North	6-inch	64%	38	Sized and Conveyor Stacked
	Sulfide: Nuton	0.5-inch	70%	34	Tertiary Crushed Agglomerated Conveyor Stacked: Nuton Process
Yerington	Oxide	ROM	70%	25	ROM
	Sulfide: Nuton	0.5-inch	74%	32	Tertiary Crushed Agglomerated Conveyor Stacked: Nuton Process
	Residual: VLT	As Received	75%	15	Leach Pad Over Liner: and Oxide Heap Leach
	Residual: W-3	As Received	68%	34	ROM Oxide Heap Leach

Source: WPS 2023

13.2 Yerington Metallurgical Testing

13.2.1 Yerington Sulfides - Nuton

Initial mineralogy and geochemical sample analyses was completed at the Rio Tinto Technology Development Centre in Bundoora, Australia. Results indicated a high probability of success in treating Yerington primary sulfide material using Nuton technologies, with copper recoveries projected up to 74%.

Collaboration between Lion CG and Nuton also revealed several opportunities for improving oxide and transitional material recovery across both deposits through synergistic effects. Nuton's process integrates column leaching using proprietary solutions augmented with bacteria and additives to optimize key performance attributes of the Yerington mineralization, including copper recovery, leach kinetics, and acid consumption.

To date, three test series have been initiated on Yerington sulfide material: the S-23 stockpile, Life of Asset Blend #1, and Life of Asset Blend #2. Testing aims to demonstrate replicated metallurgical results and continue refining process parameters.

13.2.2 S-23 Sulfide Stockpile

Testing using the Nuton technologies on sulfide material from the S-23 stockpile is underway. Preliminary results based on a range of test conditions are summarized in Table 13-2, with corresponding leach rate and net acid consumption profile plots presented in Figure 13-1.

Data shows progress in enhancing S-23 metallurgical performance by optimizing combinations of sulfur, pyrite, and proprietary Nuton additives. Phase one projections indicate copper extraction of 74% is possible.

As trials continue, copper extraction levels are trending higher under certain test scenarios. This demonstrates continued opportunity for refinement as the reactions and impacts of various augmentation strategies are evaluated.

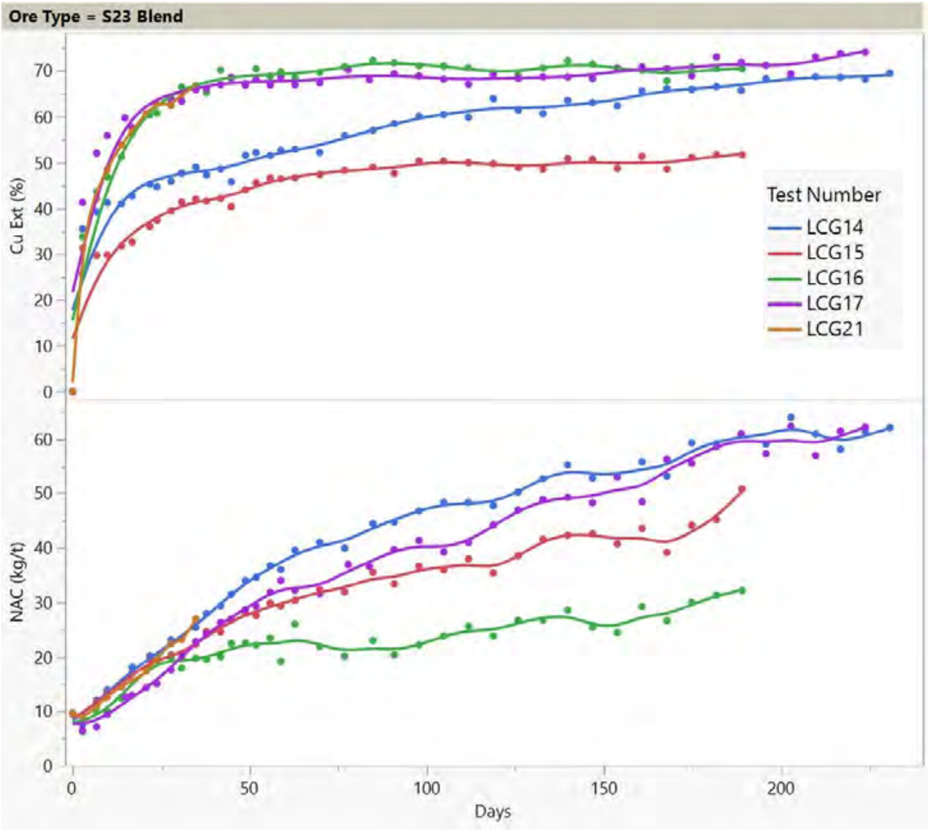
The current phase of S-23 test work is expected to conclude by mid-2024. Findings will guide the next round of optimization while providing design criteria for larger scale testing, process development and engineering design.

Table 13-2: Nuton Scoping Series: S-23 Sulfide Stockpile

Yerington LoA Blend #1	Test Conditions					Column Test KPI		
Test ID	pH	Sulfur Addition	Pyrite Addition	Additives	Days Leaching	Cu Ext (%)	Fe Ext (%)	NAC (kg/t)
LCG14	1.2	Yes	No	1, & 2	231	69.49	3.92	64.02
LCG15	1.2	Yes	No	1 & 2	189	51.70	5.06	50.83
LCG16	1.2	Yes	No	1, 4 & 5	189	72.26	14.48	32.15
LCG17	1.2	Yes	Yes	1 & 2	224	74.09	24.86	62.35
LCG21	1.2	Yes	Yes	1 & 2	35	66.73	14.81	26.96

Source: November 2023 Nuton Update

Figure 13-1: Nuton Scoping Series: Yerington S-23 Stockpile Recovery and NET vs. Leach Days



Source: November 2023 Nuton Update

13.2.3 Life of Asset Blend #1

Drill core samples representing the Life of Asset production schedule were compiled into a composite called LoA Blend #1. Preliminary test data using this feed composite is shown in Table 13-3. The corresponding leach rate and net acid consumption profiles over time is displayed in Figure 13-2.

As testing proceeds on LoA #1, results show copper extractions of up to 75% for the testing period. This confirms projections while allowing further optimization of parameters such as sulfur additions and proprietary modifiers to incrementally improve kinetics and extraction.

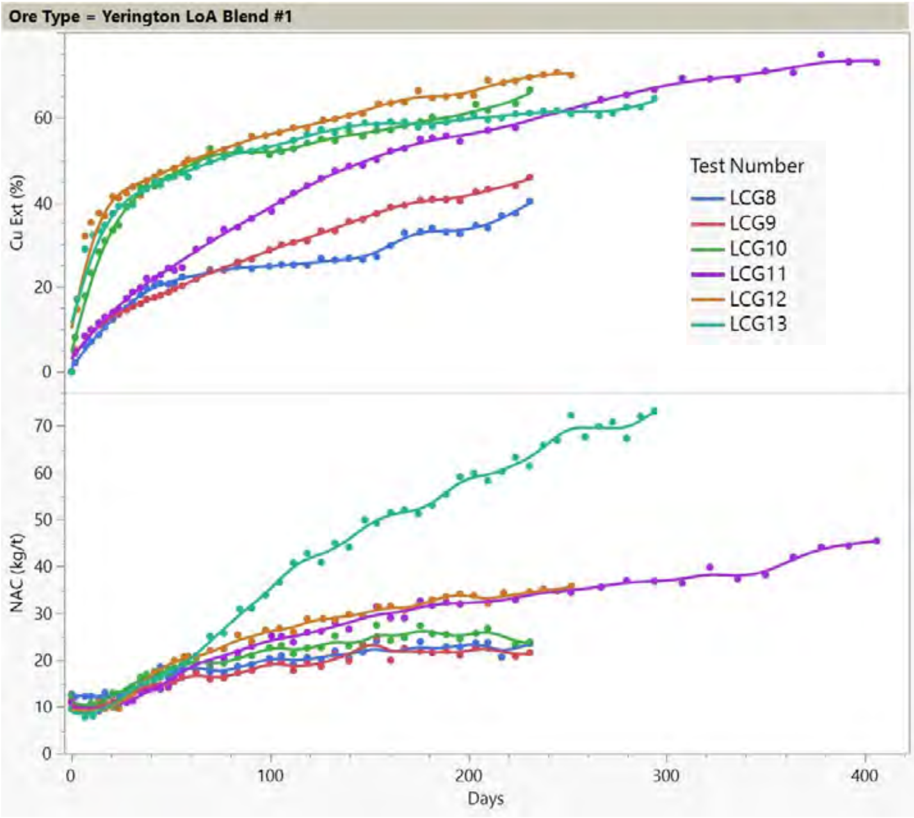
Work is ongoing, with the first phase on LoA Blend #1 scheduled for completion by mid-2024. Outcomes will provide the baseline criteria for feasibility assessments and design using ROM materials.

Table 13-3: Nuton Scoping Series: Yerington Life of Asset Blend #1

Yerington LoA Blend #1	Test Conditions					Column Test KPI		
Test ID	pH	Sulfur Addition	Pyrite Addition	Additives	Days Leaching	Cu Ext (%)	Fe Ext (%)	NAC (kg/t)
LCG8	1.5	No	No	1, 4 & 5	231	40.21	6.48	24.09
LCG9	1.5	No	Yes	4 & 5	231	45.85	4.9	24.9
LCG10	1.5	No	Yes	1, 4 & 5	231	66.46	11.18	27.46
LCG11	1.5	No	Yes	2	406	74.77	3.75	45.45
LCG12	1.5	No	Yes	1 & 2	252	70.62	3.03	35.78
LCG13	1.5/1.2	No	Yes	1 & 2	294	64.45	11.53	73.23

Source: November 2023 Nuton Update

Figure 13-2: Nuton Scoping Series: Yerington LoA Blend #1 Recovery and NAC vs. Leach Days



Source: November 2023 Nuton Update

13.2.4 Life of Asset Blend #2

A second Life of Asset blend was generated from additional drill core samples to provide confirmation and allow further optimization beyond the initial LoA test series. This composite, LoA Blend #2, was tested using Nuton processing conditions and preliminary results are summarized in Table 13-4 with copper extraction shown in Figure 13-3.

Data clearly shows enhanced performance in terms of copper recovery, leach kinetics, and acid consumption compared to prior rounds. This demonstrates continued opportunity for advancing parameters as testing progresses.

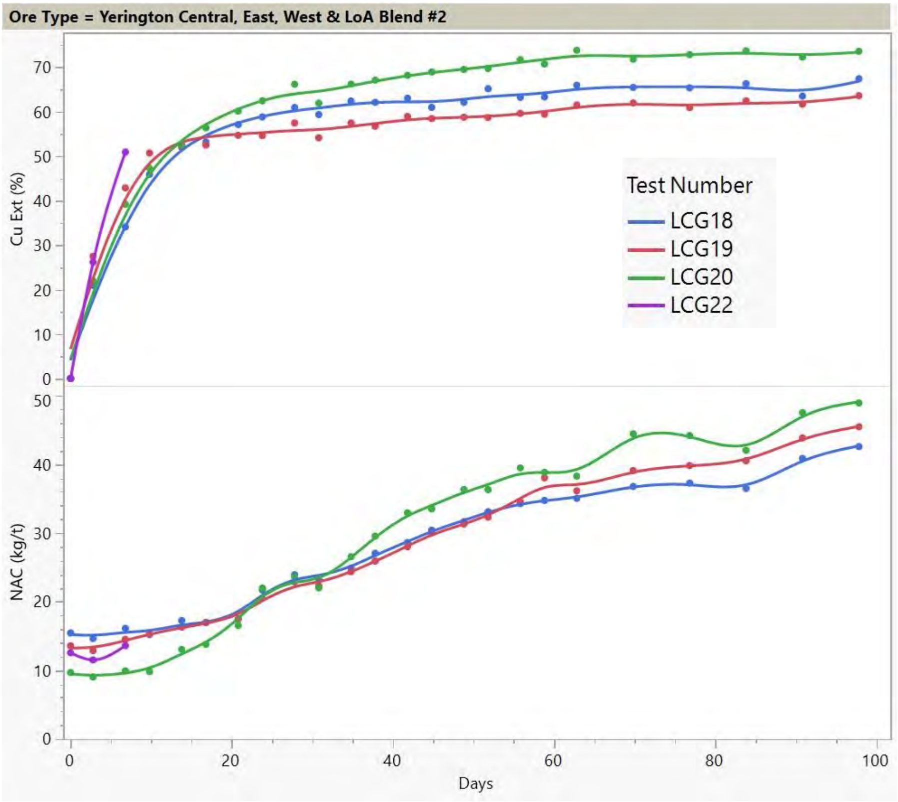
The ongoing LoA Blend #2 campaign builds on preceding refinements, with completion expected by mid-2024. Outcomes will help validate model projections and provide design criteria for processing sulfide material using Nuton.

Table 13-4: Nuton Scoping Series: Yerington Life of Asset Blend #2

Yerington LoA Blend #2	Test Conditions					Column Test KPI		
Test ID	pH	Sulfur Addition	Pyrite Addition	Additives	Days Leaching	Cu Ext (%)	Fe Ext (%)	NAC (kg/t)
LCG18	1.2	No	Yes	1 & 2	98	67.31	4.46	42.63
LCG19	1.2	No	Yes	1 & 2	98	63.51	2.85	45.51
LCG20	1.2	No	Yes	1 & 2	98	73.71	14.95	48.99
LCG22	1.2	No	Yes	1 & 2	7	50.83	2.58	13.59

Source: November 2023 Nuton Update

Figure 13-3: Nuton Scoping Series: Yerington LoA Blend #2 Recovery and NET vs. Leach Days



Source: November 2023 Nuton Update

13.2.5 Yerington Oxide Materials

There is limited recent metallurgical data available on Yerington oxide materials, so surface and core drilling campaigns are proposed to collect fresh samples for column testing. Focus areas for testing will include verifying recovery projections benchmarked from past production and quantifying potential synergies with Nuton processing.

Anaconda historically operated a vat leach plant at Yerington to process in-situ oxide material, well-documented over years of operation. More recently between 1989-1995, Arimetco successfully heap leached newly mined oxide and transition material from the pit.

While this provides a baseline, applying modern geo-metallurgical techniques and leveraging Nuton technologies require representative sampling and further testwork. Proposed drill programs aim to address this gap and further testing will be focused on confirming heap leach recovery projections and optimize blends and conditions to maximize copper recovery.

13.2.6 W-3 Stockpile

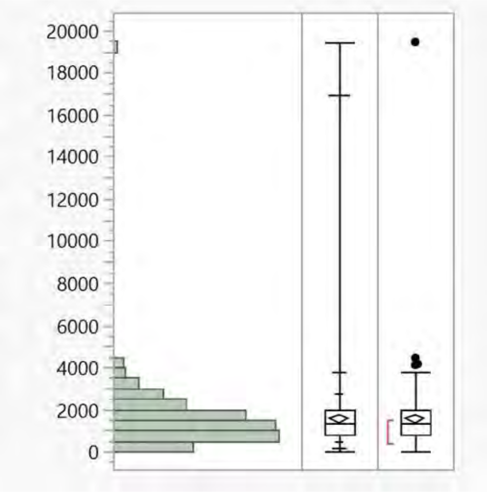
The W-3 stockpile consists of low-grade oxide material below Anaconda's historical operating cut-off of 0.3% Cu, but above a 0.2% Cu lower limit. The copper oxide mineralization includes chrysocolla, neotocite and other secondary minerals along with some chalcocite.

Detailed modern geo-metallurgical analysis has not yet been conducted on W-3 material. Column testing is proposed as part of a PFS to quantify potential performance. Until then, assumptions rely on 232 sonic drill samples analyzed for total copper (TCu), acid soluble copper (ASCu), sequential copper (SEQCu) and acid consumption.

Preliminary indications are that acid soluble copper assays (ASCu) combined with cyanide soluble copper assays (CNCu) provide reasonable estimates for copper recovery through conventional heap leaching. Recent analytical improvements provide more textural context to interpret release dynamics versus older empirical factors.

As shown in Figure 13-4, total copper assays (TCu) for W-3 range from 0.02% to 1.9%, averaging 0.15% with a median grade of 0.14% TCu. Targeted column work can validate copper recovery projections at relevant crush sizes and reagent conditions.

Figure 13-4: Yerington W-3 Stockpile Interval Analysis: TCu (ppm)



Quantiles

100.0%	maximum	19451.8
99.5%		16974.2
97.5%		3768.0
90.0%		2760.5
75.0%	quartile	1993.6
50.0%	median	1317.3
25.0%	quartile	758.9
10.0%		471.5
2.5%		201.7
0.5%		0.0
0.0%	minimum	0.0

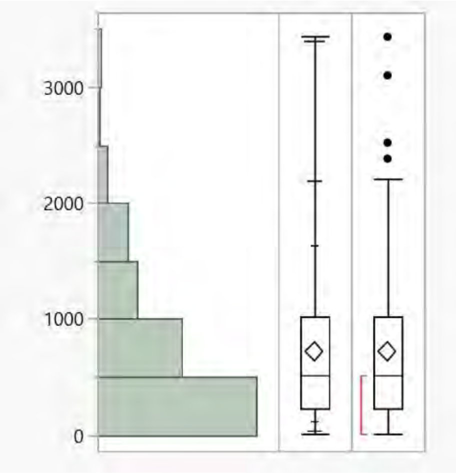
Summary Statistics

Mean	1557.5
Std Dev	1473.1
Std Err Mean	96.7
Upper 95% Mean	1748.1
Lower 95% Mean	1367.0
N	232.0
N Missing	0.0

Source: Lion CG W-3 Sample Interval Database 2012

Figure 13-5 displays the acid soluble copper component from W-3 sequential analyses. The ASCu levels ranged from 9.9 ppm to 3431 ppm across all samples. The dataset shows mean values of 720 ppm (0.07% ASCu) and a median of 518 ppm (0.05% ASCu).

Figure 13-5: Yerington W-3 Stockpile Interval Analysis: Sequential Copper ASCu Component (ppm)



Quantiles

100.0%	maximum	3431.1
99.5%		3401.2
97.5%		2187.7
90.0%		1627.2
75.0%	quartile	1019.1
50.0%	median	518.7
25.0%	quartile	231.0
10.0%		120.1
2.5%		34.4
0.5%		10.0
0.0%	minimum	9.1

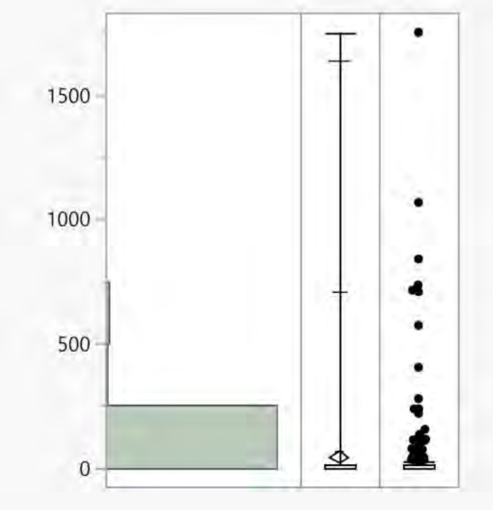
Summary Statistics

Mean	720.6
Std Dev	617.0
Std Err Mean	41.9
Upper 95% Mean	803.1
Lower 95% Mean	638.0
N	217.0
N Missing	15.0

Source: Lion CG W-3 Sample Interval Database 2012

Figure 13-6 shows the cyanide soluble copper component from W-3 sequential analyses. CNCuSeq levels ranged from below detection limit to 1746 ppm (0.17% CNCu), reflecting the dominantly oxide nature of the material, with a mean value of 720 ppm (0.07 % CNCu), indicating low levels of transition copper mineralization present in the W-3 oxide material.

Figure 13-6: Yerington W-3 Stockpile Interval Analysis: Cyanide Soluble Component (ppm)



Quantiles

100.0%	maximum	1746.8
99.5%		1634.2
97.5%		707.6
90.0%		66.9
75.0%	quartile	10.6
50.0%	median	0.0
25.0%	quartile	0.0
10.0%		0.0
2.5%		0.0
0.5%		0.0
0.0%	minimum	0.0

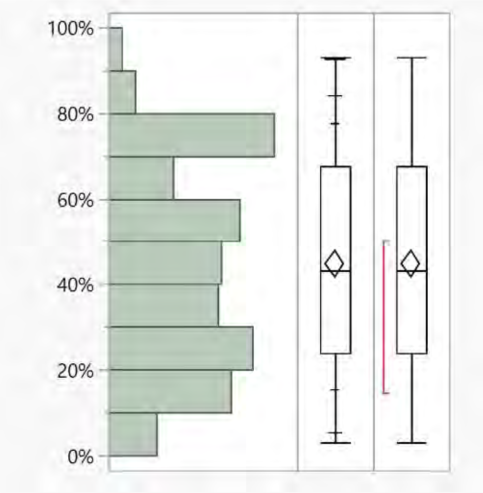
Summary Statistics

Mean	43.3
Std Dev	172.6
Std Err Mean	11.3
Upper 95% Mean	65.7
Lower 95% Mean	21.0
N	232.0
N Missing	0.0

Source: Lion CG W-3 Sample Interval Database 2012

Figure 13-7 shows estimated recoverable copper content as a percentage of total copper based on W-3 sequential analyses. The recoverable copper ranges between 3.1% and 92.8 % of the TCu content, with Mean and Median 44.9 % and 43.2 %, respectively. Nuton testing aims to validate and potentially boost recovery through optimized leaching. Ongoing sampling and test initiatives as part of the Prefeasibility Study will clarify recoverable fractions by rock type while assessing opportunities to leverage Nuton.

Figure 13-7: Yerington W-3 Stockpile Interval Analysis: Sequential Copper CNCu Component (ppm)



Quantiles

100.0%	maximum	92.82%
99.5%		92.63%
97.5%		84.27%
90.0%		77.42%
75.0%	quartile	67.63%
50.0%	median	43.16%
25.0%	quartile	23.95%
10.0%		15.56%
2.5%		5.54%
0.5%		3.14%
0.0%	minimum	3.10%

Summary Statistics

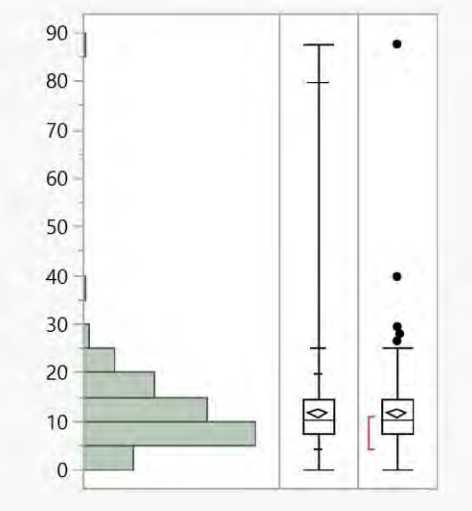
Mean	44.89%
Std Dev	23.59%
Std Err Mean	1.61%
Upper 95% Mean	48.06%
Lower 95% Mean	41.72%
N	215
N Missing	17

Source: Lion CG W-3 Sample Interval Database 2012

A bench analytical method was utilized to estimate acid consumption of W-3 oxide material. Results were scaled to forecast consumption rates under commercial heap leach conditions.

Figure 13-8 presents statistical analysis of the projected acid addition requirements across all W-3 samples. Total net acid consumption levels ranged from 0 to 87.5 kg/t, with an average of 11.5 kg/t and a comparable median value of 10.3 kg/t.

Figure 13-8: Yerington W-3 Stockpile Interval: Net Acid Consumption Estimate (kg/t)



Quantiles

100.0%	maximum	87.5
99.5%		79.6
97.5%		25.2
90.0%		19.8
75.0%	quartile	14.7
50.0%	median	10.3
25.0%	quartile	7.3
10.0%		4.4
2.5%		0.0
0.5%		0.0
0.0%	minimum	0.0

Summary Statistics

Mean	11.5
Std Dev	7.9
Std Err Mean	0.5
Upper 95% Mean	12.5
Lower 95% Mean	10.5
N	232.0
N Missing	0.0

Source: Lion CG W-3 Sample Interval Database 2012

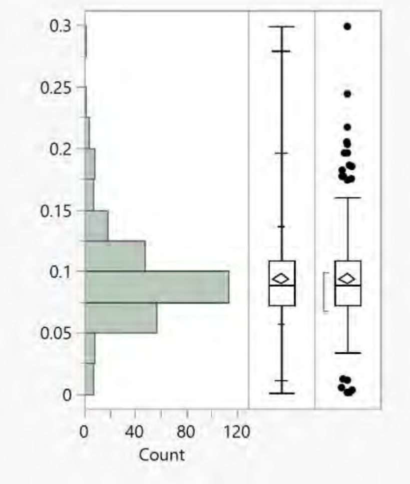
13.2.7 Vat Leach Tailings Stockpile

Residue material remains in the legacy Yerington VLT stockpile from inefficient copper extraction during the original Anaconda processing. Recent sonic drilling across 270 locations shows residual mineralization.

Assay statistics indicate median VLT feed grades of 0.089% TCu and 0.051% ASCu based on global composite samples. The average ASCu:TCu ratio equals 51%.

Grade distribution plots for VLT samples are displayed in Figure 13-9 (TCu), Figure 13-10 (ASCu), and Figure 13-11 (ASCu:TCu ratio). These initial results suggest meaningful recoverable copper persists in unrealized portions of the stockpile.

Figure 13-9: Yerington VLT Sonic Drill Interval TCu Assays



Quantiles

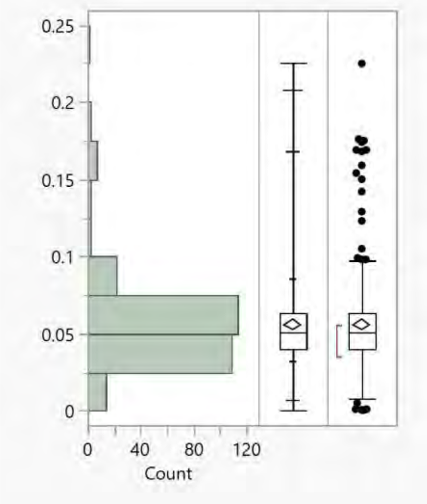
100.0%	maximum	0.299
99.5%		0.279
97.5%		0.196
90.0%		0.137
75.0%	quartile	0.108
50.0%	median	0.089
25.0%	quartile	0.073
10.0%		0.057
2.5%		0.012
0.5%		0.001
0.0%	minimum	0.001

Summary Statistics

Mean	0.094
Std Dev	0.038
Std Err Mean	0.002
Upper 95% Mean	0.098
Lower 95% Mean	0.089
N	270
N Missing	0

Source: Lion CG VAT Sonic Drill Interval Database 2012

Figure 13-10: Yerington VLT Sonic Drill Interval ASCu Assays



Quantiles

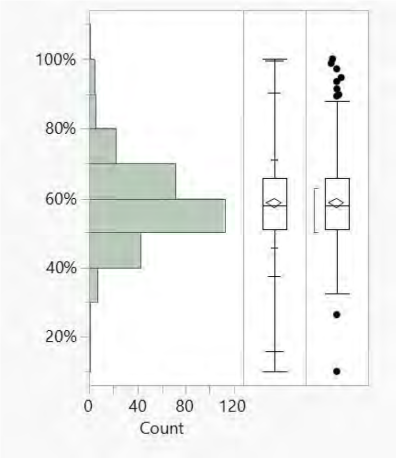
100.0%	maximum	0.225
99.5%		0.208
97.5%		0.168
90.0%		0.086
75.0%	quartile	0.063
50.0%	median	0.051
25.0%	quartile	0.040
10.0%		0.032
2.5%		0.007
0.5%		0.001
0.0%	minimum	0.001

Summary Statistics

Mean	0.056
Std Dev	0.031
Std Err Mean	0.002
Upper 95% Mean	0.060
Lower 95% Mean	0.052
N	270
N Missing	0

Source: Lion CG VAT Sonic Drill Interval Database 2012

Figure 13-11: Yerington VLT Sonic Drill Interval ASCu:TCu Ratio



Quantiles

100.0%	maximum	100.00%
99.5%		99.54%
97.5%		90.09%
90.0%		71.19%
75.0%	quartile	65.64%
50.0%	median	57.75%
25.0%	quartile	50.74%
10.0%		45.62%
2.5%		37.67%
0.5%		15.80%
0.0%	minimum	10.00%

Summary Statistics

Mean	58.51%
Std Dev	11.87%
Std Err Mean	0.72%
Upper 95% Mean	59.93%
Lower 95% Mean	57.08%
N	270
N Missing	0

Source: Lion CG VAT Sonic Drill Interval Database 2012

To estimate overall recoverable copper, 48 VLT samples were randomly selected across grade distributions for expanded analysis using thresholds (0.06% TCu cut-off) matching prospective heap leach feed. These specimens underwent total copper (TCu) assays along with testing by a ferric sulfate acid leach method (SAPCu).

The SAPCu technique approximates recoverable copper levels under simulated heap conditions using a ferric lixiviant. Results are summarized in Table 13-5. Based on SAPCu/TCu ratios, average VLT copper recovery is projected at 65%.

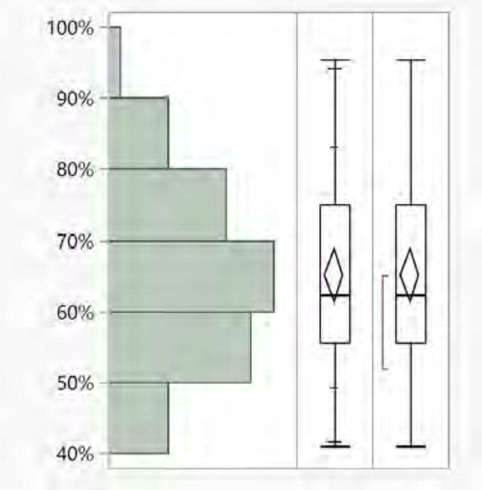
Figure 13-12 displays these data ratios providing a preliminary proxy for acid-based extraction performance. While useful for initial forecasting, demonstrating actual metallurgical response requires bench and column testing using the proposed comminution and leaching parameters.

Table 13-5: VLT Subset Analytical Results and Recovery Projection

Analytical Method	Mean	Std. Dev	Min	Max	Median
TCu (%)	0.11	0.03	0.06	0.17	0.11
SAPCu (%)	0.007	0.02	0.03	0.14	0.07
SAPCu:TCu	65.04%	12.60%	40.87%	95.25%	62.32%

Source: WPS 2023 Analytical Results

Figure 13-12: Yerington VLT Subset for Additional Analyses: TCu %



Quantiles

100.0%	maximum	95.25%
99.5%		95.25%
97.5%		94.13%
90.0%		83.13%
75.0%	quartile	75.09%
50.0%	median	62.32%
25.0%	quartile	55.62%
10.0%		49.36%
2.5%		41.74%
0.5%		40.87%
0.0%	minimum	40.87%

Summary Statistics

Mean	65.04%
Std Dev	12.60%
Std Err Mean	1.84%
Upper 95% Mean	68.74%
Lower 95% Mean	61.34%
N	47
N Missing	1

Source: 2023 WPS Analytical Results

Initial bottle roll analysis to estimate VLT acid consumption suggests net acid demand averaging 15 lb./ton of feed material. Additional testwork in later stages of study is required to refine this value for use in reserves statements.

13.3 MacArthur Metallurgical Testing

The MacArthur copper mineralization has an extensive metallurgical testing history spanning numerous operators over multiple decades:

- Anaconda (1976): Bottle roll and column testing on surface trench material
- Arimetco (1992-1995): Various bottle and column leach tests using multiple external labs on surface samples
- Quaterra (2010-2011): Bottle roll and column analysis performed at METCON Research in Arizona
- Lion CG (2020-2023): Recent column testing programs on drill core at McClelland Laboratories in Nevada. Samples covered the MacArthur, MacArthur North, North Zone, and Gallagher deposit areas.

13.3.1 2011 METCON Metallurgical Test Work: MacArthur

METCON's 2011 analysis on MacArthur used drill core samples spanning deposit zones rather than analog surface trenches as in prior eras. Material representing 32 holes was compiled into column test charges. Results showed good copper extraction but variable acid consumption between areas.

One composite failed mid-test due to high localized clay content, originally presumed to be caliche. However, a review found the core intercepted a fault zone rather than caliche. This clay occurrence appears restricted with minimal dissemination regionally.

Excluding the failed column, 31 working columns provide a performance baseline. Generally, the old MacArthur pit domains returned higher median recoveries around 80% and lower acid consumptions than North MacArthur, Gallagher, or Northern zones.

Table 13-6 summarizes pertinent column feed data including deposit location, source hole ID, test intervals, and critical output metrics for each specimen. The following figures present statistics across the combined global column dataset.

Table 13-6: METCON Testwork Column Test Summary Table

						Copper Grades					Gangue Acid Consumption	
Column Test ID	Deposit	DHID	From	To	Leach Days	TCu (%)	ASCu (%)	CNCu (%)	Residual Cu (%)	Cu Extraction (%)	(kg/tonne)	(lb./ton)
CL-01	Gallagher	PQ-11-QM-139	80	140	120	0.166	0.07	0.016	0.092	51.21	46.32	92.64
CL-02	Gallagher	PQ-11-QM-106	0	30	120	0.335	0.208	0.015	0.096	72.69	56.64	113.28
CL-03	Gallagher	PQ-11-QM-90 Part 1	0	70	120	0.125	0.037	0.005	0.078	41.97	43.22	86.44
CL-04	Gallagher	PQ-11-QM-90 Part 2	80	130	120	0.363	0.108	0.203	0.051	56.43	22.78	45.56
CL-05	Gallagher	PQ-11-QM-038	35	175	120	0.122	0.049	0.032	0.050	48.66	35.63	71.26
CL-06	Gallagher	PQ-11-QM-035	15	90	120	0.168	0.054	0.01	0.095	48.01	34.38	68.76
CL-07	Gallagher	PQ-11-QM-037	15	70	120	0.220	0.068	0.007	0.110	52.26	34.88	69.76
CL-08	Other	PQ-11-QM-144	115	225	120	0.144	0.049	0.023	0.053	56.21	28.13	56.26
CL-09	MacArthur Pit Area	PQ-11-QM-145	0	50	120	0.113	0.062	0.005	0.041	58.73	17.76	35.52
CL-10	MacArthur Pit Area	PQ-11-QM-119	30	80	0	0.145	0.092	0.008	0.041			
CL-11	MacArthur Pit Area	PQ-11-QMT-1	0	145	120	0.311	0.183	0.007	0.064	59.08	20.80	41.60
CL-12	MacArthur Pit Area	PQ-11-QME-3	72.5	118	120	0.145	0.084	0.004	0.057	61.97	19.74	39.48
CL-13	MacArthur Pit Area	PQ-11-QMT-9	13	91.1	120	0.575	0.453	0.012	0.046	80.86	22.01	44.02
CL-14	MacArthur Pit Area	PQ-11-QM-083	100	170	120	0.170	0.105	0.008	0.045	69.57	24.75	49.50
CL-15	MacArthur Pit Area	PQ-11-QMT-14 Part 1	5	17	120	0.207	0.14	0.004	0.035	87.15	14.38	28.76
CL-16	MacArthur Pit Area	PQ-11-QMT-14 Part 2	36.2	118	120	0.376	0.32	0.012	0.052	87.16	25.15	50.30
CL-17	MacArthur Pit Area	PQ-11-QMT-15 Part 1	12.5	118	120	0.271	0.207	0.005	0.049	84.44	27.40	54.80
CL-18	MacArthur Pit Area	PQ-11-QMT-15 Part 2	118	180	120	0.089	0.068	0.003	0.023	80.29	20.70	41.40
CL-19	MacArthur Pit Area	PQ-11-QMT-17 Part 1	52	94.7	120	0.093	0.03	0.007	0.056	47.56	32.30	64.60
CL-20	MacArthur Pit Area	PQ-11-QMT-17 Part 2	99	154	120	0.264	0.19	0.008	0.020	79.90	31.31	62.62
CL-21	North MacArthur Pit	PQ-11-QM-095	95	140	120	0.105	0.05	0.026	0.041	69.02	34.92	69.84
CL-22	North MacArthur Pit	PQ-11-QMT-6	33	128	120	0.154	0.049	0.100	0.099	44.28	26.54	53.08
CL-23	North MacArthur Pit	PQ-11-QM-020	40	180	120	0.092	0.044	0.006	0.052	61.38	27.49	54.98

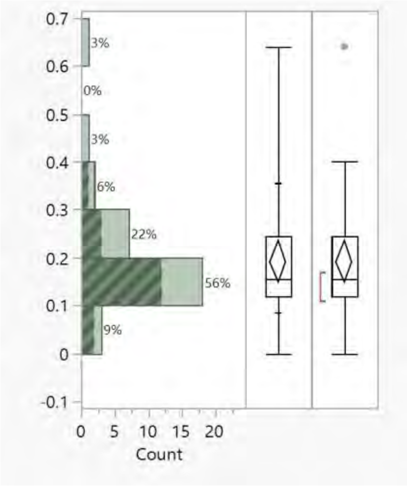
						Copper Grades					Gangue Acid Consumption	
Column Test ID	**Deposit**	**DHID**	**From**	**To**	**Leach Days**	**TCu (%)**	**ASCu (%)**	**CNCu (%)**	**Residual Cu (%)**	**Cu Extraction (%)**	**(kg/tonne)**	**(lb./ton)**
CL-24	North MacArthur Pit	PQ-11-QM-029	10	70	120	0.271	0.128	0.012	0.146	60.99	48.42	96.84
CL-25	North	PQ-11-QMCC-1 Part 1	71.5	119	120	0.126	0.047	0.009	0.073	51.81	17.34	34.68
CL-26	North	PQ-11-QMCC-1 Part 2	119	149	120	0.135	0.069	0.022	0.041	55.53	19.20	38.40
CL-27	North	PQ-11-QMCC-11	94	194	120	0.146	0.087	0.012	0.051	57.12	22.80	45.60
CL-28	North	PQ-11-QMCC-13 Part 1	7	62	120	0.186	0.113	0.011	0.066	62.53	22.01	44.02
CL-29	North	PQ-11-QMCC-13 Part 2	63	114	120	0.142	0.029	0.002	0.085	49.31	23.64	47.28
CL-30	North	PQ-11-QM-080	0	100	120	0.33	0.182	0.011	0.136	50.56	23.76	47.52
CL-31	North	PQ-11-QMCC-14	21	88	120	0.06	0.017	0.006	0.031	30.89	22.41	44.82
CL-32	North	PQ-11-QM-055	0	90	120	0.067	0.027	0.005	0.047	50.51	45.60	91.20

Figure 13-13 shows calculated total copper head grade statistics for the 31 successful METCON columns. Copper assays ranged from 0.086% TCu to 0.64% across all samples, with median grades of 0.155% TCu and a comparable mean of 0.191%.

Highlighted histogram regions indicate columns returning less than 60% copper recovery. The leftmost bar chart displays potential outliers, while the rightmost shows grade distribution quintiles.

Initial review suggests recovery shortfalls in lower grade ranges, pointing to opportunities for optimization. However, applied testing is needed to systematically refine performance by geo-domain using fresh drill core intersects. Note that the two bar charts below represent the "Outlier" and "Quantile", from left to right.

Figure 13-13: 2011 MacArthur Project Column Test Series: Global Calculated Head Cu (%)



Quantiles

100.0%	maximum	0.64
99.5%		0.64
97.5%		0.64
90.0%		0.354
75.0%	quartile	0.245
50.0%	median	0.155
25.0%	quartile	0.12
10.0%		0.086
2.5%		0
0.5%		0
0.0%	minimum	0

Summary Statistics

Mean	0.192
Std Dev	0.121
Std Err Mean	0.021
Upper 95% Mean	0.235
Lower 95% Mean	0.149
N	32

Source: METCON Research: MacArthur Project Preliminary Column Leach Study, Dec. 2011

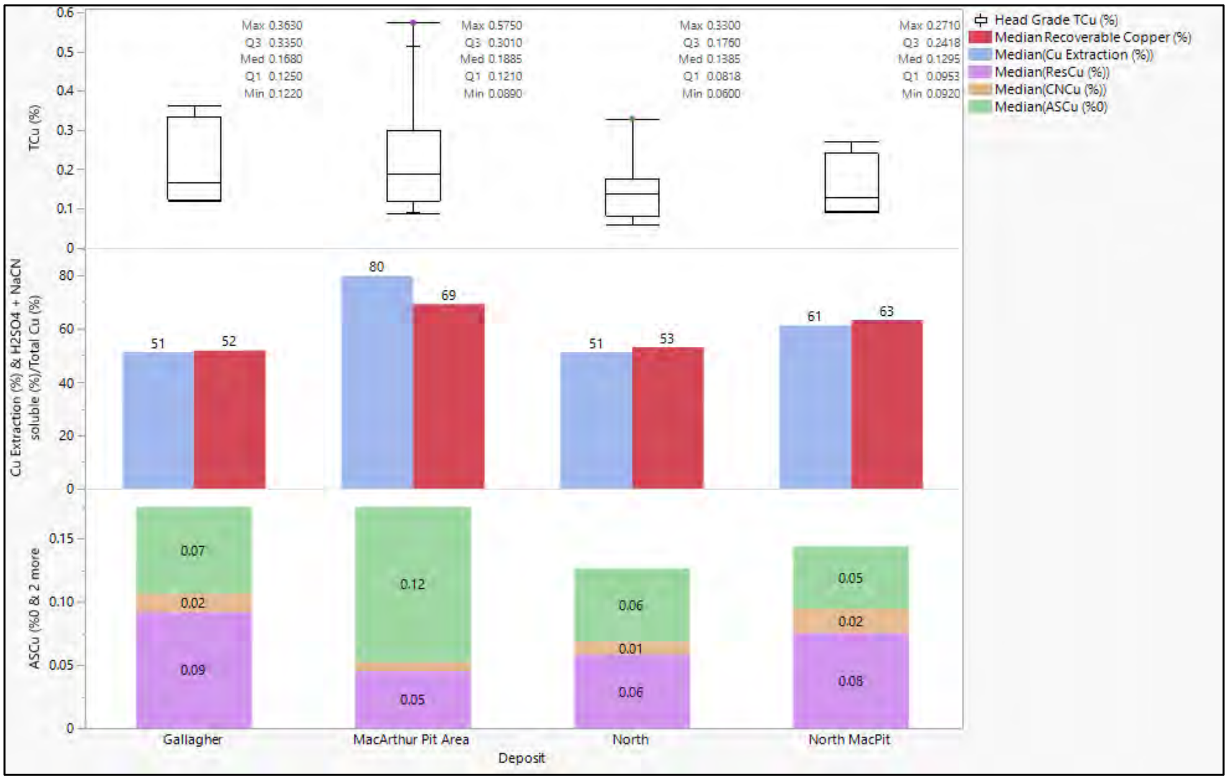
Figure 13-14 presents copper recovery statistics for the 31 METCON columns using calculated head grades. Recoveries ranged from 30.9% to 87.2%, averaging 57.1% overall with a comparable median of 60.2%.

The chart also graphs recovery versus the ASCu+CNCu to TCu ratio. This shows strong correlation to TCu extraction by acid leaching, providing a useful predictive proxy. It is expected that using the Nuton raffinate would improve overall Cu recovery from the MacArthur oxide material by 10% based on initial projections, pending confirmation through further studies.

Review of sequential copper analysis trends indicates transition zones and fresh sulfide bearing material generally returned lower extractions. As expected, composites richer in acid soluble oxides and secondary copper minerals achieved higher and faster copper liberation.

Specimens from the old MacArthur pit returned the best median recovery at 80%, reflecting a higher proportion of readily soluble mineralization. Geo-domain performance aligns with the oxidation and enrichment profile.

Figure 13-14: MacArthur Project METCON Column Test KPIs by Deposit with Sequential Copper Analyses

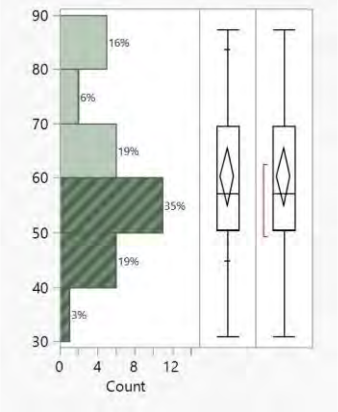


Source: METCON Research: MacArthur Project Preliminary Column Leach Study, Dec. 2011

Figure 13-15 shows overall copper extraction statistics across the 31 METCON columns. Highlighted regions indicate tests returning less than 60% recovery. After 120 days of leaching, copper extractions ranged from 30.9% to 87.2%, with median and average values of 57.1% and 57.2%, respectively.

It is important to note these results reflect a simplified acid-only leach scheme on composite samples. The presence of primary and secondary copper minerals clearly impacted extraction. Significantly higher recoveries are expected by incorporating an augmented raffinate solution similar to the ferric/bacterial lixiviant generated from Nuton processes.

Figure 13-15: MacArthur Project Column Test Series Copper Extraction Summary Statistics.



Quantiles

100.0%	maximum	87.16
99.5%		87.16
97.5%		87.16
90.0%		83.724
75.0%	quartile	69.57
50.0%	median	57.12
25.0%	quartile	50.51
10.0%		44.936
2.5%		30.89
0.5%		30.89
0.0%	minimum	30.89

Summary Statistics

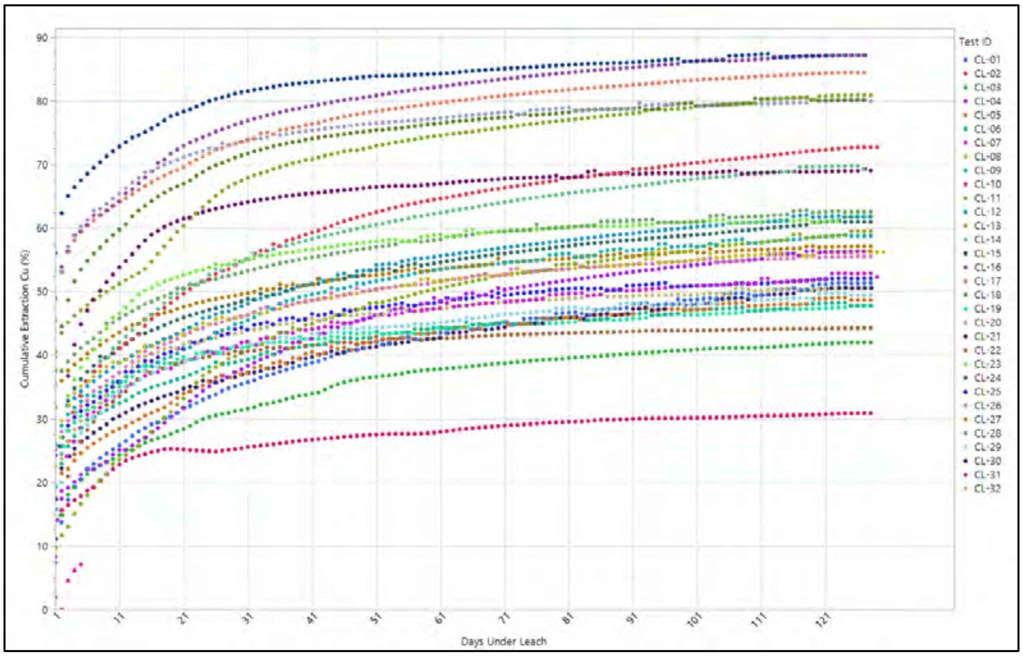
Mean	60.261
Std Dev	14.215
Std Err Mean	2.553
Upper 95% Mean	65.475
Lower 95% Mean	55.046
N	31

Source: METCON Research: MacArthur Project Preliminary Column Leach Study, Dec. 2011

Figure 13-16 displays copper leach rate profiles over time for the 2011 METCON column tests. Recoveries use calculated head grades as bases. Significantly, most columns still showed measurable copper extraction at the end of the 120-day primary leach cycle.

While PLS grades may not economically justify extended leaching in a single lift, results suggest high likelihood for additional recovery through secondary leach cycles in a multi-lift heap configuration. Adjusting lixiviant application rates can also improve PLS quality and moderate acid use during initial and future lifts.

Figure 13-16: 2011 MacArthur Project METCON Column Test Leach Rate Profiles

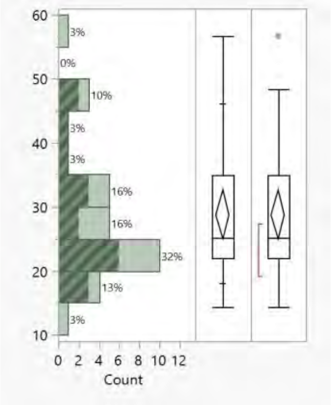


Source: METCON Research: MacArthur Project Preliminary Column Leach Study, Dec. 2011

Figure 13-17 summarizes acid consumption statistics across the 31 METCON columns. Total consumption ranged from 14.8 to 56.6 kg/tonne acid per tonne of feed. The median acid demand equaled 25.5 kg/tonne, with a comparable average of 28.8 kg/tonne.

Notably, acid cure additions represented approximately 50% of overall acid volumes. This overseeding suggests opportunities to optimize initial cure rates for reduced reagent costs.

Figure 13-17: 2011 MacArthur Project Column Test Series: Global Gangue Acid Consumption



Quantiles

100.0%	maximum	56.64
99.5%		56.64
97.5%		56.64
90.0%		46.176
75.0%	quartile	34.88
50.0%	median	25.15
25.0%	quartile	22.01
10.0%		18.048
2.5%		14.38
0.5%		14.38
0.0%	minimum	14.38

Summary Statistics

Mean	28.787
Std Dev	10.310
Std Err Mean	1.852
Upper 95% Mean	32.569
Lower 95% Mean	25.005
N	31

Source: METCON Research: MacArthur Project Preliminary Column Leach Study, Dec. 2011

13.3.2 McClelland Laboratories Test Work: MacArthur 2022

METCON's column test composites were compiled based on deposit zones rather than rock types, as detailed geo-metallurgical data was unavailable. Discussion here focuses on critical leach performance factors for process design.

In 2022, McClelland Laboratories received core from 13 MacArthur holes to generate 6 column composites spatially representing Year 0 through Year 5 planned mining sequences. Unfortunately, grade continuity challenges prevented preparing distinct Year 2 and 3 specimens, so a combined composite for Years 2 and 3 was prepared.

This test work assumed standalone heap leach operations on ROM material at MacArthur. Crushing aimed to replicate a nominal 150 mm top size for average ROM conditions.

Results are summarized in Table 13-7 on the 6 columns. Leach cycles ranged from 139-164 days duration. Calculated head grades spanned 0.133-0.331% TCu. Final copper extractions varied from 51.1% to 75.8%, with total net acid consumptions of 40.6 lb./ton and 60.1 lb/ton (20.3-30.0 kg/tonne).

Table 13-7: MLI 2022 MacArthur Project Column Test Pertinent KPI Summary Table.

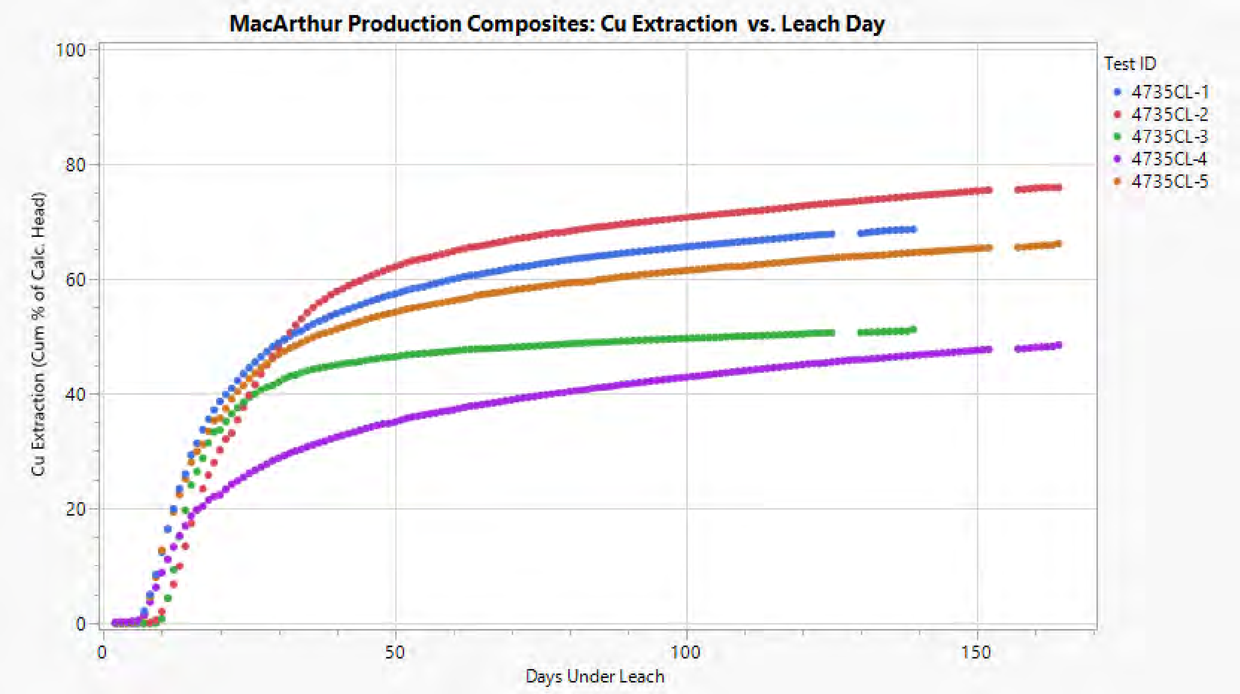
MLI Test #	Composite	Leach/Rinse Time, Days	Cu Recovery, %TCu	Assays % Cu				H2SO4 Consumption		
				Extracted	Tail	Calc'd. Head	Avg. Head	Gross, lb./ton ore	Net, lb./ton ore	Specific (Net), lb./lb. Cu
CL-1	Year 0	139	68.5	0.148	0.068	0.216	0.210	41.22	36.66	12.39
CL-2	Year 1	164	75.8	0.251	0.080	0.331	0.335	60.11	52.37	10.42
CL-3	Year 2/3	139	51.1	0.068	0.065	0.133	0.131	41.72	39.64	29.32
CL-4	Year 4	164	48.4	0.093	0.099	0.192	0.193	40.06	37.21	20.10
CL-5	Year 5	164	66.1	0.111	0.057	0.168	0.174	43.22	39.81	17.99

Source: Data from McClelland Laboratories: Column Leach Testing-MacArthur Project Drill Core Composites: August 31, 2023

Figure 13-18 displays MLI column leach rate curves over time. Copper continued extracting upon test conclusion, indicating additional recovery potential. Lower relative extractions for CL-3 (Years 2&3) and CL-5 (Year 5) columns likely reflect higher proportions of transitional copper minerals.

As with prior datasets, results show copper release sustaining beyond 120 days. This suggests an opportunity to enhance ultimate recovery through secondary leaching cycles.

Figure 13-18: MLI MacArthur Project 2022 Column Test Leach Rate Profiles



Source: McClelland Laboratories: Column Leach Testing - MacArthur Drill Core Composites: August 31, 2023

13.4 Historical Heap Leach Production

Considerable metallurgical work has focused on heap leaching at Yerington and MacArthur since the late 1970s. Yerington processing history includes flotation, vat leaching, cementation, and

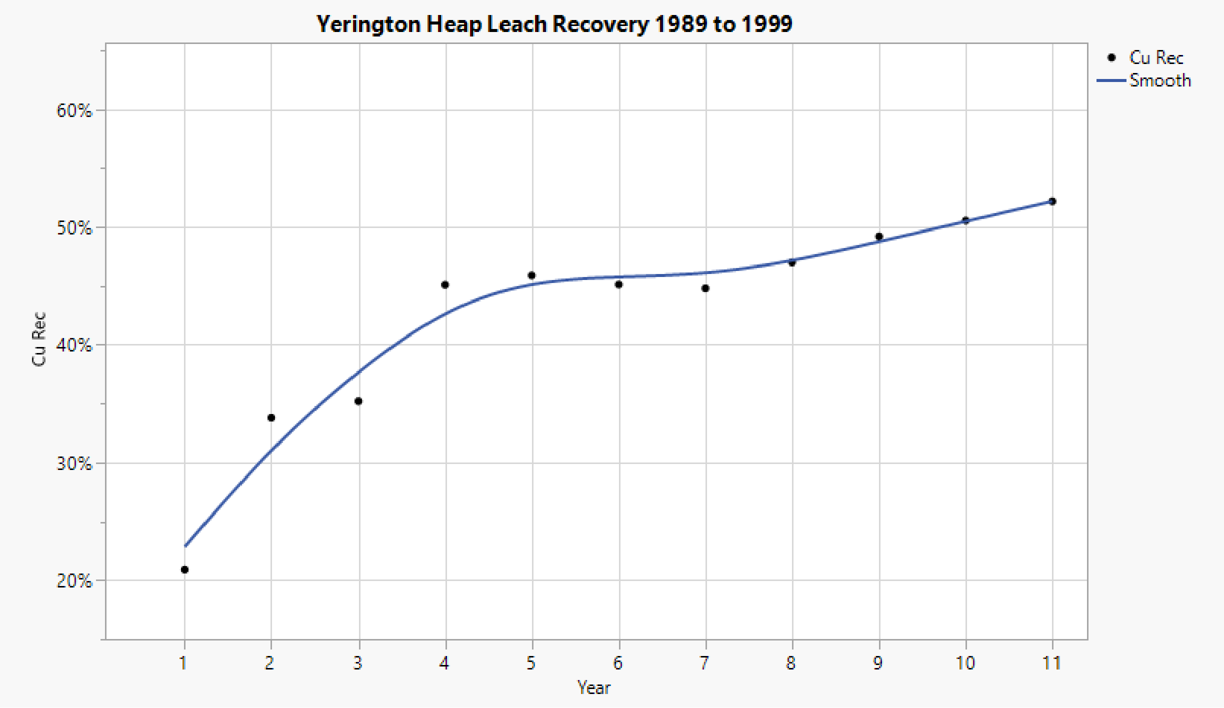
ROM heap leaching of oxides. However, detailed operational data from past heap operations is unavailable.

Reviewing summaries, heap leaching at Yerington restarted in 1989 on ROM "Slot Ore" from the pit, containing notable secondary/transitional minerals. This was supplemented by VLTs in 1993 and MacArthur oxide feed material in 1994.

Approximately 51 million tons grading 0.18% TCu were stacked, carrying 182.85 million lbs Cu. Copper recovery equaled 52.2%, with 94.41 million lbs sold over the campaign. The projected leach curve is shown in Figure 13-19. Shorter 60-day primary cycles and high solution rates reflected simpler ROM practices resulting in lower PLS grades and higher acid consumption versus current industry standards.

The ongoing slope in Figure 13-19 indicates potential for ultimate recovery approaching 55% with extended leaching, reasonable given the mineralization blend. Modern geo-metallurgical methods now allow targeting zones matching historical analog performance.

Figure 13-19: Arimetco Yerington Heap Leach Recovery Profile



Source: Arimetco Production 1999

13.5 Recovery Estimates – All Areas

Table 13-8 outlines preliminary estimated metallurgical recoveries for the Yerington Project mineralization types. These projections remain subject to revisions as additional representative data becomes available.

Of note are the early-stage recovery estimates for Nuton processing of the primary sulfide material. As testing continues, further improvements are expected once optimal process parameters are refined through the ongoing optimization program.

Table 13-8: Yerington – MacArthur Recovery Projections by Processing Method

Deposit	Feed Type	Crush	TCu Recovery	Notes:
MacArthur	Oxide	ROM	70%	ROM
		6-inch	75%	Primary Crushed and Conveyor Stacked
		2-inch	77%	Secondary Crushed Agglomerated Conveyor Stacked
		0.5 inch	82%	Tertiary Crushed Agglomerated Conveyor Stacked
	Transition	ROM	50%	ROM
		6-inch	55%	Primary Crushed and Conveyor Stacked
		2-inch	57%	Secondary Crushed Agglomerated Conveyor Stacked
		0.5 inch	60%	Tertiary Crushed Agglomerated Conveyor Stacked
	Sulfide	ROM	25%	ROM
		6-inch	30%	Primary Crushed and Conveyor Stacked
		2-inch	35%	Secondary Crushed Agglomerated Conveyor Stacked
		0.5-inch	40%	Tertiary Crushed Agglomerated Conveyor Stacked
	Sulfide-Nuton	0.5-inch	74%	Tertiary Crushed Agglomerated Conveyor Stacked: Nuton Process (to be confirmed)
Yerington	Oxide	ROM	70%	ROM
		6-inch	75%	Primary Crushed and Conveyor Stacked
		2-inch	77%	Secondary Crushed Agglomerated Conveyor Stacked
		0.5 inch	80%	Tertiary Crushed Agglomerated Conveyor Stacked
	Transition	ROM	50%	ROM
		6-inch	55%	Primary Crushed and Conveyor Stacked
		2-inch	57%	Secondary Crushed Agglomerated Conveyor Stacked
		0.5 inch	60%	Tertiary Crushed Agglomerated Conveyor Stacked
	Sulfide	ROM	25%	ROM
		6-inch	30%	Primary Crushed and Conveyor Stacked
		2-inch	35%	Secondary Crushed Agglomerated Conveyor Stacked
		0.5 inch	40%	Tertiary Crushed Agglomerated Conveyor Stacked
	Sulfide-Nuton	0.5-inch	74%	Tertiary Crushed Agglomerated Conveyor Stacked: Nuton Process
	Residual: VLT	As Received	65%	Leach Pad Over Liner: and Oxide Heap Leach
	Residual W-3	ROM	68%	ROM Oxide Heap Leach

13.6 Deleterious Elements

Preliminary assessments have not identified any deleterious elements present in the Yerington or MacArthur mineralization expected to materially impact copper cathode quality or marketability. Produced cathode should readily meet LME Grade A standards for purity.

13.7 Conclusions

Preliminary indications are that Yerington sulfide and oxide materials are well-suited to heap leaching, which can be optimized for higher copper recovery at lower consumable costs through continued testing.

Portions of the MacArthur North and Gallagher "oxide" zones contain 20-30% transitional copper minerals which led to comparatively reduced empirical recovery historically. However, dynamic solution management coupled with introduction of ferric lixiviant from the Nuton process can effectively treat blended materials.

13.8 Recommendations

Applied test work programs are recommended targeting enhanced copper recovery and reduced acid consumptions across Yerington and MacArthur materials. Areas of focus include solution management optimization and controlled acid dosage protocols.

Regarding primary Yerington sulfides, additional Nuton testing aims to refine operating parameters as the Project shifts into larger scale testing and PFS design.

Moreover, all existing geological, mining, and metallurgical information should be compiled into an integrated geo-metallurgical model.

14 MINERAL RESOURCE ESTIMATES

14.1 Introduction

AGP updated the Yerington Copper Project Mineral Resource estimate for the consisting of Measured, Indicated, and Inferred Resources. Mr. Tim Maunula, P.Geo., Principal Geologist is the QP responsible for the completion of the 2023 Yerington Copper Project Mineral Resource estimate. The effective date of the Yerington Copper Project Mineral Resource estimate is May 31, 2023.

This Yerington Copper Project Mineral Resource estimate used validated historic drill hole data generated by Anaconda and current drilling results by SPS in 2011, 2017 and 2022. All data received was based on the North American Datum (NAD) 83 Nevada State Plane.

The Yerington Copper Project Mineral Resource estimate has been generated from assay analyses and the interpretation of a geologic model which relates to the spatial distribution of copper in the Yerington deposit. Interpolation parameters have been defined based on the geology, drill hole spacing, and geostatistical analysis of the data. The Yerington Copper Project Mineral Resources have been classified by their proximity to the sample locations and mining production. The Yerington Copper Project Mineral Resource was classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014). The 2023 Yerington Copper Project Mineral Resource amenable to open pit extraction was reported at 0.038 % total copper (TCu) cut-off grade for oxide mineralization and 0.126 % TCu cut-off grade sulfide mineralization.

The Mineral Resource estimates were prepared using HxGN MinePlan 3D 16.1.0 (MinePlan).

14.1.1 Residuals

<u>W-3 Stockpile</u>

W-3 is a rock disposal stockpile that lies north-northwest of the current Yerington pit. It was derived from subgrade copper oxide material mined during historical Anaconda mining operations. In 2012, SPS drilled fourteen Roto-Sonic drill holes.

In an effort to better determine the copper remaining in the W-3 stockpile, composites of the available splits were made. Composites were unbiased grab samples from the available drill holes (W-3-001, W-3-003, W-3-004, W-3-005, W-3-007 through W-3-013).

The Mineral Resources have been classified by their proximity to the sample locations and classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014). The 2023 W-3 Stockpile Mineral Resource amenable to open pit extraction was reported at 0.04 % TCu cut-off grade. The Inferred W-3 Stockpile Mineral Resource is 14.1 million tons at 0.11 % TCu. The effective date of the W-3 Stockpile Mineral Resource estimate is May 1, 2023.

<u>VAT Leach Tailings</u>

Oxide tailings or VLT are the leached products of Anaconda's vat leach copper extraction process (CH2M Hill, 2010). The oxide tailings dumps, located north of the Process Areas, contain the crushed rock and the red sludge at the base of the leach vats that remained following the extraction of copper in the vat leaching process.

There were 22 drill holes, VLT-001 to VLT-022, completed for the study. In September 2012, nine holes were twinned using Boart Longyear and sampled by SPS.

The Mineral Resources have been classified by their proximity to the sample locations and classified according to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014). The 2023 VLT Mineral Resource amenable to open pit extraction was reported at 0.04 % TCu cut-off grade. The Inferred VLT Mineral Resource is 33.2 million tons at 0.09 % TCu. The effective date of the VLT Mineral Resource estimate is July 31, 2023.

14.2 Database

The 2023 Mineral Resource estimate for the Yerington Copper Project is based on drill hole data consisting of total copper (TCu) assays, geological descriptions, recovery, and density measurements.

Limited assays were available for acid-soluble copper (ASCu) from both Anaconda and SPS. Ferric sulphate copper (QLT) assays were available from SPS drilling. These datasets provided incomplete coverage so were not used in the current mineral resource.

Data was provided to AGP by Lion CG in electronic formats—Microsoft Excel and DXF files—and imported into MinePlan. The database was additionally verified using the validation tool in MinePlan to determine errors and overlapping or out-of-sequence intervals. Minor errors were noted, and the database updated.

The drill hole database received from Lion CG consisted of 1,683 drill holes totalling 570,861 ft of drilling. However, not all datasets (i.e., surveys, assays, lithology, or recovery) were available for the historic holes, therefore, only a total of 840 drill hole collars totalling 336,701.1 ft (246,848.6 ft core and 89,852.5 ft reverse circulation/rotary drilling) were used in this Mineral Resource update. Although historic data include material some of which has been mined, inclusion of that data was useful in establishing statistical parameters for grade interpolation into unmined blocks.

14.3 Geological Domaining

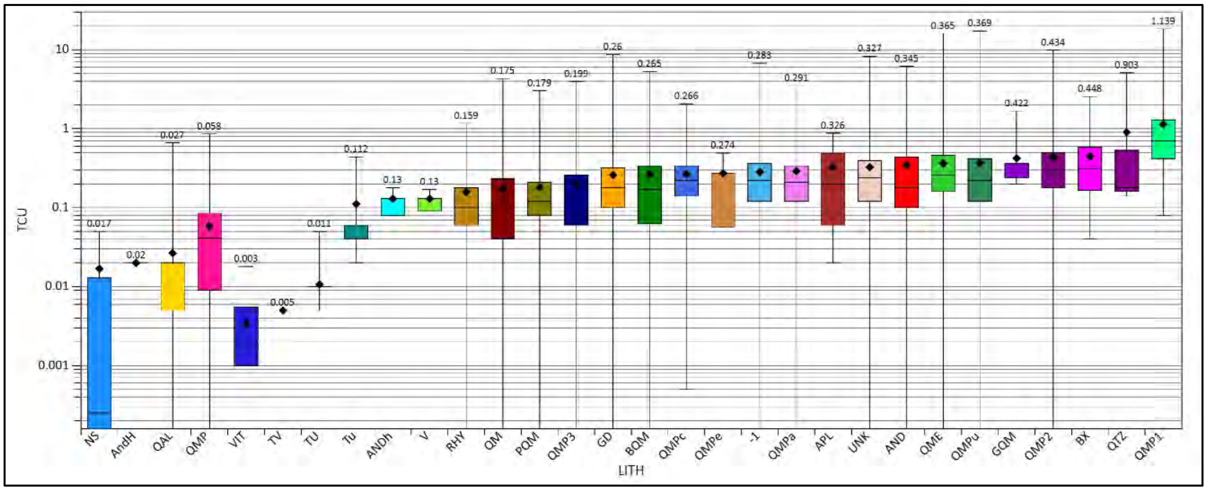
Lithology, as recovered from Anaconda archives or logged by SPS geologists, is included in the database. When lithology was not available, intervals were recorded as "UNK" or unknown. Table 14-1 lists the lithology codes included in the database. Section 7.3 provides the detailed descriptions associated with these lithology codes.

Table 14-1: Lithology Codes

Lithology Code	Description
NS	No sample
AND	andesite
APL	aplite
BQM	border quartz monzonite
BX	breccia
GD	granodiorite
QAL	alluvium
QM	quartz monzonite
QME	equigranular quartz monzonite
QMP1	quartz monzonite porphyry dike 1
QMP1.5	quartz monzonite porphyry dike 1.5
QMP2	quartz monzonite porphyry dike 2
QMP2.5	quartz monzonite porphyry dike 2.5
QMP3	quartz monzonite porphyry dike 3
QMPa	unidentified code found hist records
QMPc	fine grained qtz monzonite por dike
QMPu	undifferentiated qtz monzonite por dike
QTZ	quartz
TU	Tertiary undefined
TV	Tertiary volcanics
UNK	unknown

An examination of the relationship of grade to the various lithologies shows low variability in the average grade and that the bulk of the mineralization is generally independent of lithology (Figure 14-1).

Figure 14-1: Boxplot by Lithology Code (TCu%)

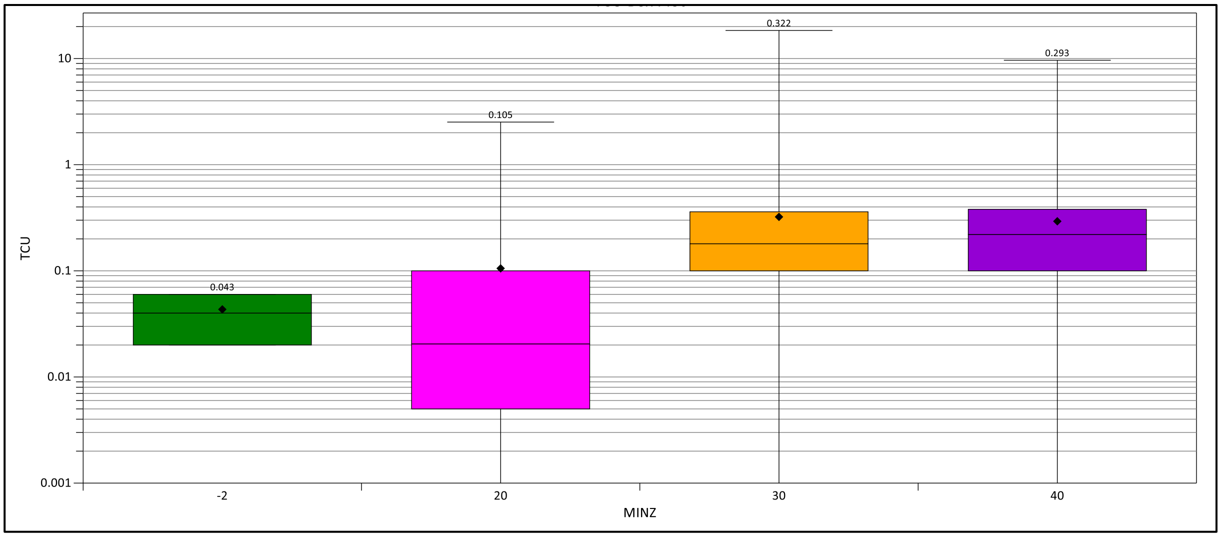


Source: AGP 2023

The issue of metallurgical recovery is more a function of the mineralogical species of copper. With this is mind, the Lion CG geologists, incorporating their data and data from the Anaconda archives, interpreted two mineral zones, representing oxide and sulfide mineralization for grade interpolation. A third zone, Alluvium, was modelled to represent the overburden material.

Figure 14-2 illustrates the domains of the Yerington Copper Project: Alluvium (20), Oxide (30) and Sulfide (40). No material differences were noted in the average grade of the copper mineralization contained with the Oxide or Sulfide domains. Grades were not interpolated for Alluvium.

Figure 14-2: Average Grade by Domain (TCu%)

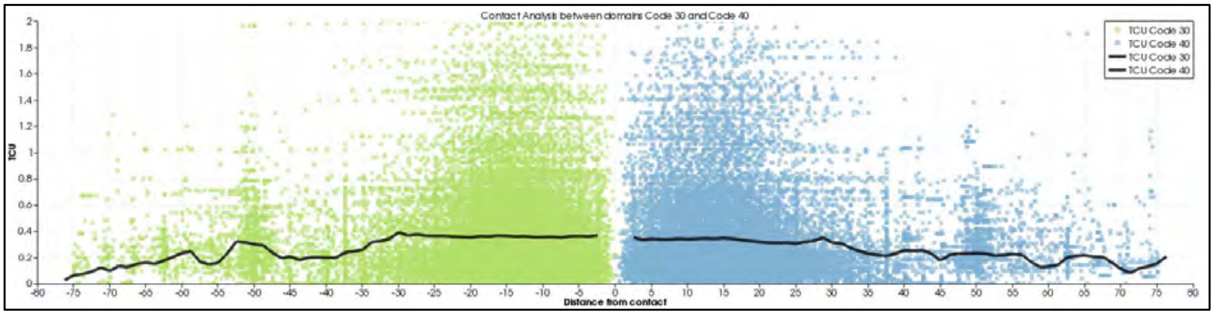


Source: AGP 2023

14.3.1 Contact Analysis

Contact grade analysis was conducted for Oxide and Sulfide assays (Figure 14-3). The average grade of each of the domains is similar and would support a soft contact. However, the Oxide domain contained some higher grades of TCu% and different mineralogy so a hard boundary was used to control extrapolation of these higher grades.

Figure 14-3: Contact Grade Analysis (TCu%)



Source: AGP 2023

14.4 Exploratory Data Analysis

14.4.1 Assays

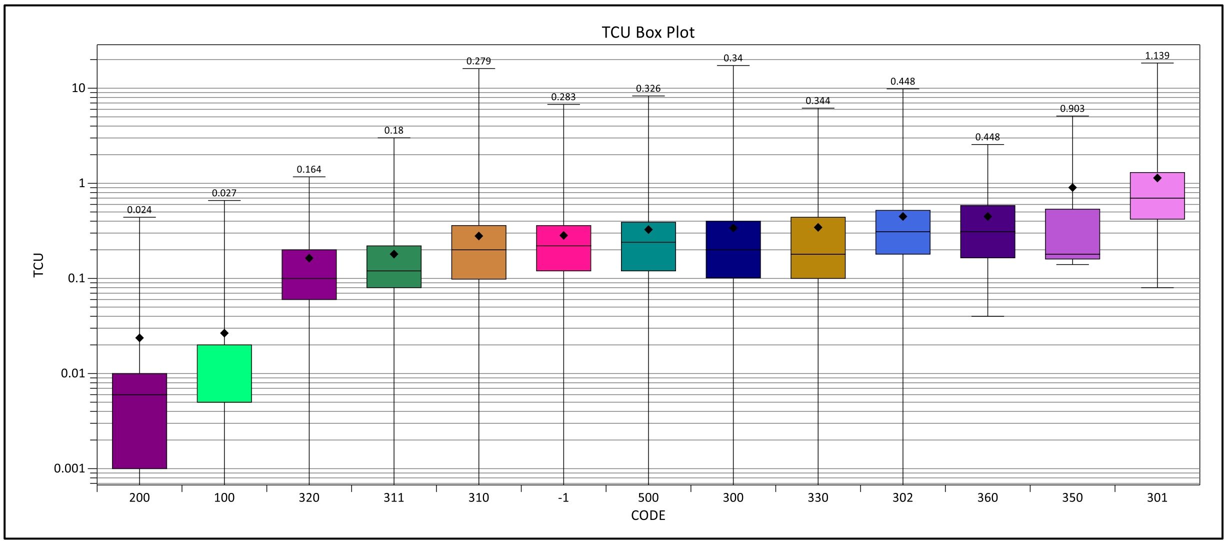
The “as logged” lithology were reviewed for copper mineralization (Figure 14-1). In discussion with Lion CG, lithologies were grouped for review (Table 14-2). Figure 14-4 illustrates the grade sorted by increasing TCu% for each of the codes.

Table 14-2: Grouped Lithology Codes

Grouped Code	As Logged Lithology
100	Qal
200	Thai+Tu+Tru+Tgm+Tei+Tcg
300	Jqmpa+Jqmp2.5+Jqmp3+Jqmpc+Jqmp1.5
301	Jqmp1
302	Jqmp2
310	Jqm+Jbqm+Jgd+Jqme
311	Jpqm
320	Jr
330	Ja
340	Jbg
350	Qtz
360	Bx
400	Ts
500	NS+Unk

Jqmp1 is the primary mineralized host and almost always grades better than 1% TCu. It contains at least 10% quartz (A-type) veinlets, but locally contains 30-40% quartz veinlets. The veining commonly obscures the porphyritic texture. Bornite and chalcopyrite are present as well as secondary magnetite occurring in distinct veinlets or with quartz (A-type) veins.

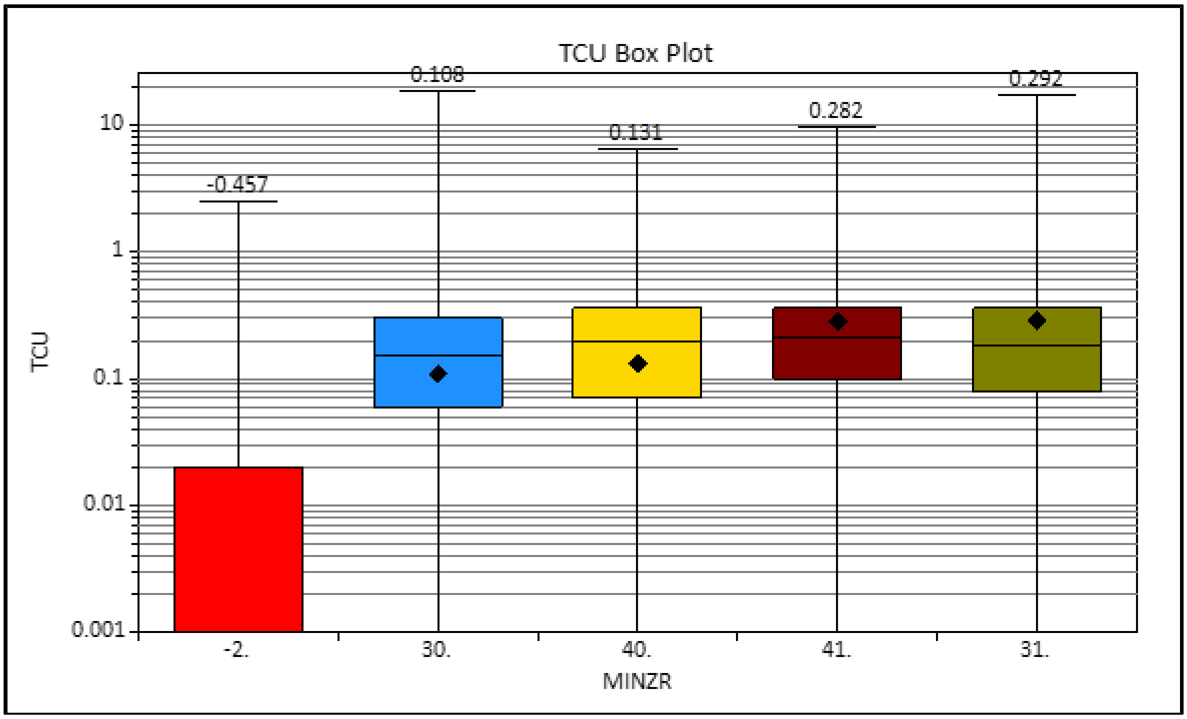
Figure 14-4: Grouped Lithology Codes Sorted by Increasing Grade (TCu%)



Source: AGP 2023

Core recovery was used as a factor to evaluate the assays. If the recovery was greater than 40%, the assay was flagged (added 1 to domain code). Approximately 15% of the assays reported a core recovery of 40% or less. Figure 14-5 illustrates the differences between assays with recovery less than 40% (30 or 40) versus those with recovery greater than 40% (31 or 41).

Figure 14-5: Boxplot of Assays Reported by Recovery (TCu%)

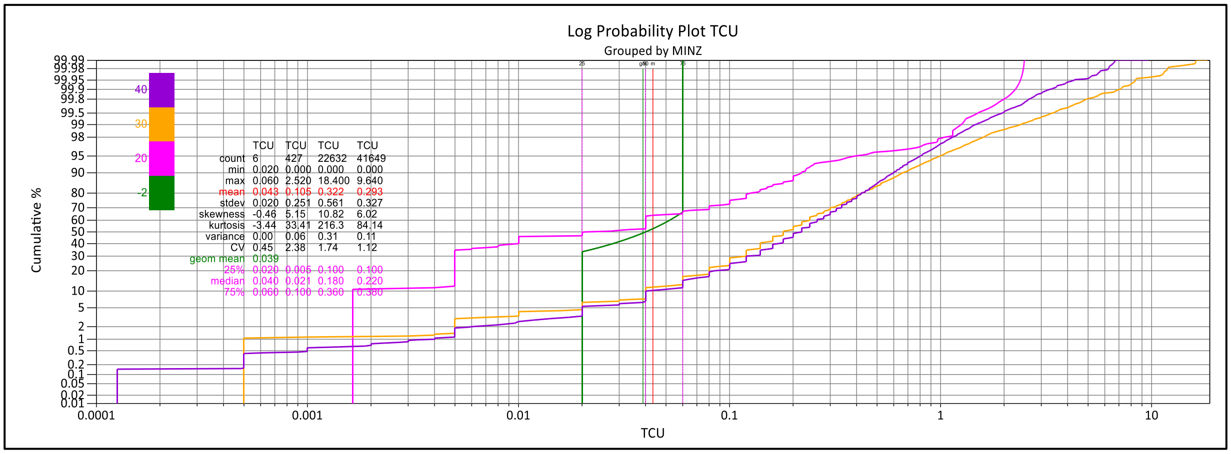


Source: AGP 2023

14.4.2 Outlier Analysis

TCu% grades were reviewed for capping using probability plots (Figure 14-6) and disintegration analysis. The log probability shows a linear trend for the final highest grades, without any observable “break”. This, along with low coefficient of variation (CV) supports using uncapped grades for grade interpolation.

Figure 14-6: Probability Plots by Domain (TCu%)



	TCU	TCU	TCU	TCU
count	6	427	22632	41649
min	0.020	0.000	0.000	0.000
max	0.060	2.520	18.400	9.640
mean	0.043	0.105	0.322	0.293
stdev	0.020	0.251	0.561	0.327
skewness	-0.46	5.15	10.82	6.02
kurtosis	-3.44	33.41	216.3	84.14
variance	0.00	0.06	0.31	0.11
CV	0.45	2.38	1.74	1.12
geom mean	0.039			
25%	0.020	0.005	0.100	0.100
median	0.040	0.021	0.180	0.220
75%	0.060	0.100	0.360	0.380

Source: AGP 2023

14.4.3 Compositing

For purposes of normalizing the assay data for further analysis, the raw assay values were composited to 25 ft intervals within the mineralized domains Oxide and Sulfide. Composite values were then tagged by domain codes. Table 14-3 summarizes the descriptive statistics for the 25 ft composites. Samples were coded based on core recovery to minimize potential bias. Only composites with >=40% core recovery were used for grade estimation.

Table 14-3: Composite Statistics Table (TCu%)

	Core Recovery	Domain	Count	Minimum	Maximum	Mean	StDev	CV
Oxide	<40%	30	646	0	5.968	0.366	0.535	1.46
	>= 40%	31	3449	0	7.624	0.317	0.402	1.27
Sulfide	<40%	40	747	0	2.762	0.384	0.326	0.85
	>= 40%	41	6204	0	5.722	0.299	0.254	0.85

Notes: StDev = Standard Deviation; CV = Coefficient of Variation

As discussed in Section 14.4.1, no capping was applied as the coefficient of variation (CV) is within an acceptable range to confirm no material outliers were present in the grade population.

14.4.4 Spatial Analysis

Geostatisticians use a variety of tools to describe the pattern of spatial continuity or strength of the spatial similarity of a variable with separation distance and direction. One of these is the correlogram, which measures the correlation between data values as a function of their separation distance and direction. If we compare samples that are close together, it is common to observe that their values are quite similar and the correlation coefficient for closely spaced samples is near 1.0. As the separation between samples increases, there is likely to be less similarity in the values, and the correlogram tends to decrease toward 0.0. The distance at which the correlogram reaches zero is called the range of correlation or simply the range. The range of the correlogram corresponds roughly to the more qualitative notion of the range of influence of a sample; it is the distance over which sample values show some persistence or correlation. The shape of the correlogram describes the pattern of spatial continuity. A very rapid decrease near the origin is indicative of short scale variability. A more gradual decrease moving away from the origin suggests more short scale continuity. A plot of 1-correlation is made so the result looks like the more familiar variogram plot.

The approach used to develop the variogram models employed Sage2001© software. Directional sample correlograms were calculated along horizontal azimuths of 0, 30, 60, 120, 150, 180, 210, 240, 270, 300, and 330 degrees. For each azimuth, sample correlograms were also calculated at dips of 30 and 60 degrees in addition to horizontally. Lastly, a correlogram was calculated in the vertical direction. Using the thirty-seven sample correlograms, an algorithm determined the best-fit model nugget effect and two-nested structure variance contributions. After fitting the variance parameters, the algorithm then fitted an ellipsoid to the thirty-seven ranges from the directional models for each structure. The anisotropy of the correlation was given by the range along the major, semi-major, and minor axes of the ellipsoids and the orientations of these axes for each structure. AGP reviewed the fitted variogram and adjusted to reflect the mineralization.

Table 14-4 presents the variogram parameters used for ordinary kriging.

Table 14-4: Variogram Parameters

Domain	Structure	Sill = 1.00	LH Rot Z (°)	RH Rot X (°)	RH Rot Y (°)	X Range (ft)	Y Range (ft)	X Range (ft)
Oxide (30)	Nugget	$C^0 = 0.20$	-53	55	-40	70	90	50
	Spherical	$C^1 = 0.40$	-53	55	-40	70	90	50
	Spherical	$C^2 = 0.40$	15	-5	-1	600	400	400
Sulfide (40)	Nugget	$C^0 = 0.10$	-89	15	30	70	75	150
	Spherical	$C^1 = 0.40$	-89	15	30	70	75	150
	Spherical	$C^2 = 0.50$	25	5	-80	600	400	600

Note: GSLIB Rotation Convention

14.4.5 Bulk Density Measurements

Table 14-5 shows the results of 23 density tests which were completed in November 2011, by Kappes, Cassiday & Associates, based in Reno, Nevada, on samples from the current SPS drilling, resulting in an average tonnage factor of 12.62 cubic feet per ton (cu.ft./ton) for oxide material and 12.61 for sulfide. A final value 12.6 cu.ft./ton was used for the resource model and compares well to the 12.5 cu.ft./ton historically used by Anaconda.

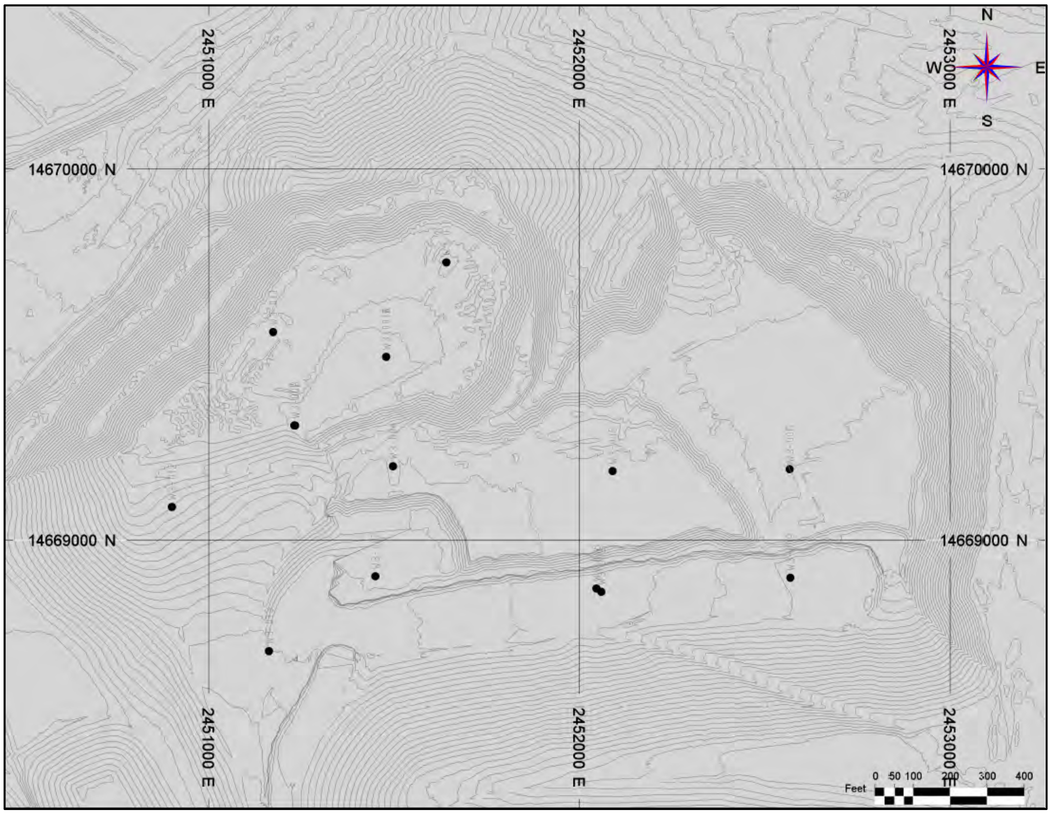
Table 14-5: Yerington Copper Project Bulk Density Tests

Rock Type	SP-Hole Number	From	To	Density, grams/cu.cm	Tonnage Factor cu.ft./ton	Mineral Species	Mineral Zone
Granodiorite	006	39.00	39.80	2.5	12.87	cuprite	Oxide
Granodiorite	004	426.20	426.90	2.2	14.31	py	Sulfide
Granodiorite	010	465.00	465.80	2.6	12.57	cpy	Sulfide
Granodiorite	004	313.00	313.30	2.5	12.77	cpy	Oxide
Granodiorite	027	640.50	641.50	2.7	11.82	cpy	Sulfide
Porphyritic Quartz Monzonite	002	37.10	37.80	2.4	13.19	gm,blk Cu	Oxide
Porphyritic Quartz Monzonite	002	37.10	37.80	2.5	12.87	gm,blk Cu	Oxide
Porphyritic Quartz Monzonite	001	2.50	3.00	2.6	12.42	gm Cu	Oxide
Porphyritic Quartz Monzonite	015	201.50	202.10	2.6	12.14	gm,blk Cu	Oxide
Porphyritic Quartz Monzonite	034	421.00	421.70	2.6	12.28	cpy	Sulfide
Quartz Monzonite Porphyry-2	006	602.00	602.20	2.5	12.62	cpy	Sulfide
Quartz Monzonite Porphyry-2	034	421.00	421.70	2.6	12.52	cpy	Sulfide
Border Quartz Monzonite	006	556.00	556.50	2.5	12.77	py	Sulfide
Border Quartz Monzonite	010	705.00	705.50	2.6	12.23	cpy	Sulfide
Border Quartz Monzonite	010	710.00	710.50	2.6	12.42	cpy	Sulfide
Quartz Monzonite	001	116.00	116.50	2.6	12.47	gm Cu	Oxide
Quartz Monzonite	034	30.20	30.50	2.6	12.37	ox	Oxide
Quartz Monzonite	001	104.50	105.00	2.7	11.74	gm,blk Cu	Oxide
Quartz Monzonite Porphyry-u	004	261.60	262.00	2.5	12.67	lim	Oxide
Quartz Monzonite Porphyry-u	002	122.00	122.50	2.6	12.23	gm Cu	Oxide
Quartz Monzonite Porphyry-u	006	167.00	167.30	2.5	13.03	cuprite	Oxide
Quartz Monzonite Porphyry-u	006	166.10	166.30	2.4	13.24	cuprite	Oxide
Quartz Monzonite Porphyry-u	003	310.00	310.40	1.7	19.42	cpy	Sulfide
		Average Oxide		**2.54**	**12.62**		
		Average Sulfide		**2.54**	**12.62**	(excluding 62053A)	
		Average		**2.54**	**12.62**	(excluding 62053A)	

14.4.6 W-3 Stockpile

In 2012, SPS drilled fourteen Roto-Sonic drill holes were performed by Major Drilling, including one twin drill hole, ranging in depth from 95 ft to 165 ft. All residual drill holes are shown in Figure 14-7 on the current topography surface. Eleven of these drill holes were available for sampling by SPS.

Figure 14-7: W-3 Collar Plot



Source: AGP 2023

Table 14-6 summarizes the statistics for W-3 assays and composites.

Table 14-6: W-3 Stockpile Assay and Composite Statistics (TCu%)

	Count	Min	Max	Mean	CV
Assays	231	0.010	0.460	0.156	0.60
Composites	55	0.043	0.354	0.149	0.49

14.4.7 Vat Leach Tailings

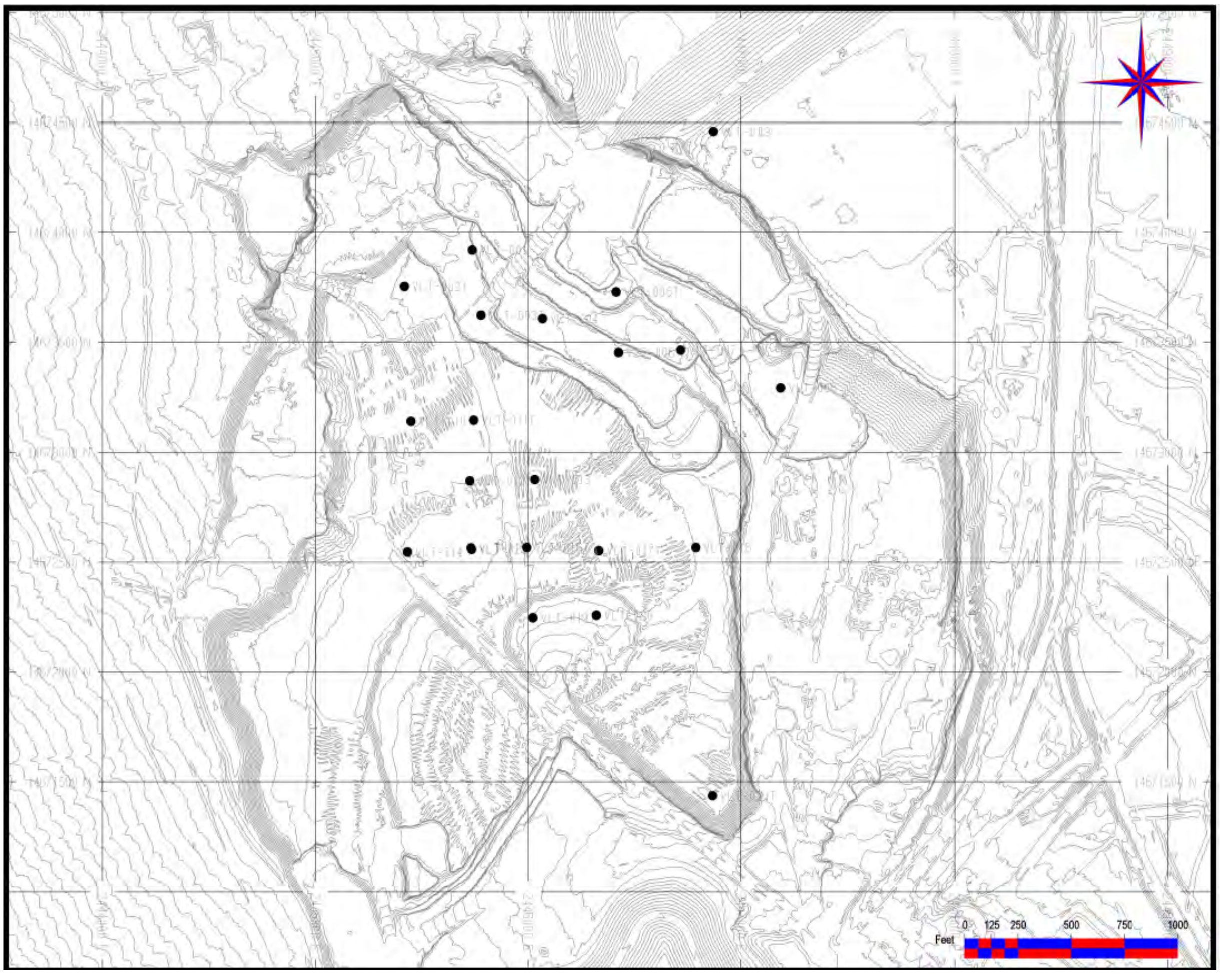
METCON Research (METCON) conducted a metallurgical study for SPS to support a metallurgical scoping study for the Anaconda Vat Leach Tailings (Phase I) Project in Yerington, Nevada.

The metallurgical study was conducted on drill hole samples obtained from a wet sonic drilling campaign from the Anaconda Vat Leach Tailings. There were 22 drill holes, VLT-001 to VLT-022, completed for the study. In September 2012, nine holes were twinned using Boart Longyear and sampled by SPS using a dry sonic drilling method. Figure 14-8 illustrates the collar locations on the current topography (25 ft contours).

The original holes sampled composites ranging from 5 to 77 ft and averaging 37.9 ft. The twin holes were generally sampled on a five-foot interval with the length ranging from 0.5 to 6.5 ft and averaging 4.8 ft.

The composite samples were compared with the twin hole samples for average grade, no material bias was noted between the two samples. Where available, the twin holes were selected for use in the Mineral Resource estimate.

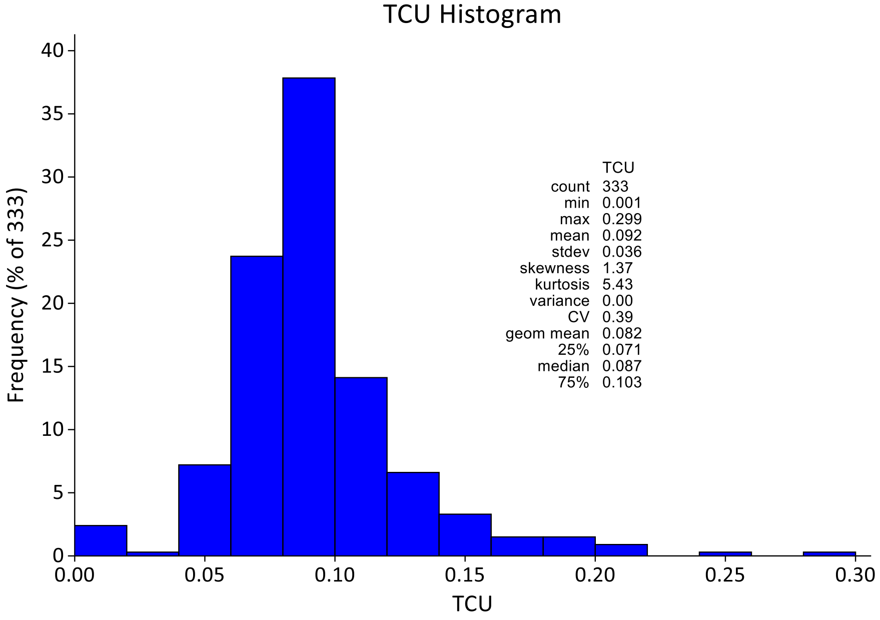
Figure 14-8: VLT Drill Hole Collars (Planview)



Source: AGP 2023

Assay statistics are illustrated in the histogram shown in Figure 14-9, the mean assay grade is 0.02% TCu. Capping was evaluated using disintegration analysis for the VLT data but determined that it was not required. The low CV of 0.39 (Figure 14-9) supports this too. Twenty-five-foot composites were created.

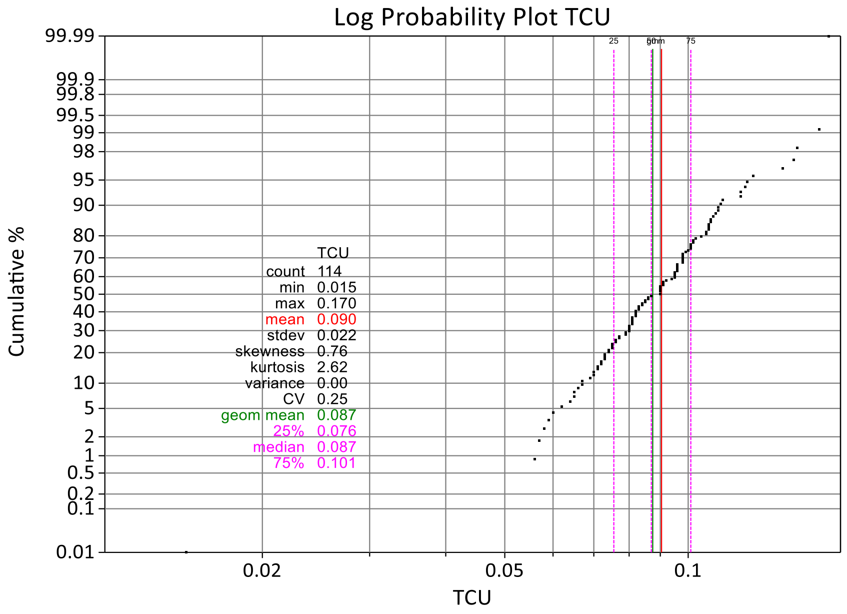
Figure 14-9: VLT Assays



Source: AGP 2023

Figure 14-10 illustrates the 25-foot composite statistics using a log probability plot. A total of 114 composites were created from the 333 assays.

Figure 14-10: VLT 25 ft Composites (TCu%)



Source: AGP 2023

14.5 Block Model and Resource Estimation

Block model parameters for Yerington were defined to best reflect both the drill spacing and geometry of the deposit, and selective mining unit (SMU). Table 14-7 shows the Yerington block model parameters.

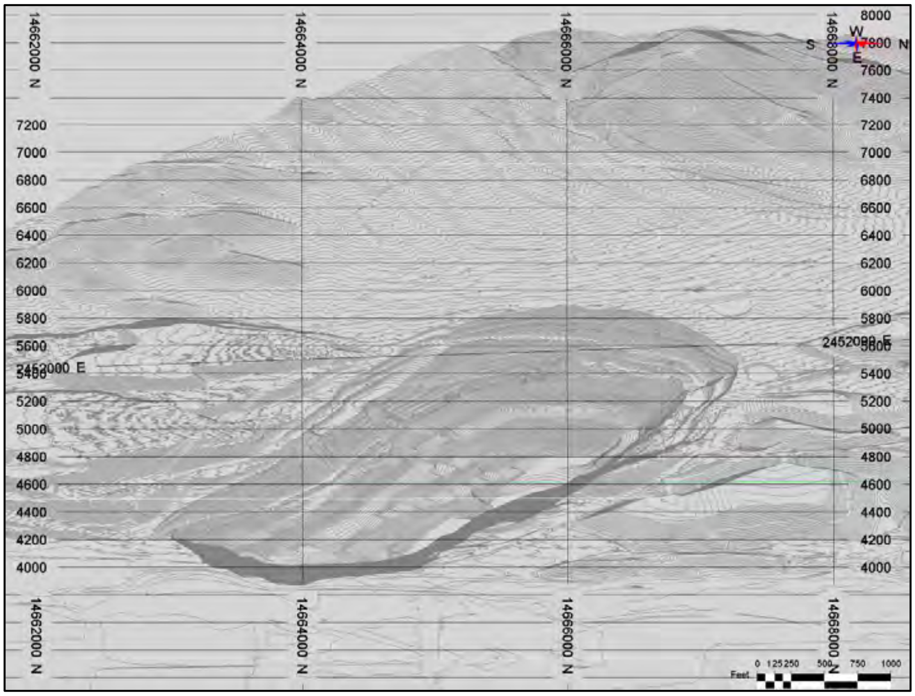
Table 14-7: Yerington Model Parameters

Yerington Model Parameters	X (Columns)	Y (Rows)	Z (Levels)
Origin (feet):	2,446,400	14,669,000	2,900
Block size (feet)	25	25	25
Number of Blocks	360	320	100
Rotation	No rotation		

14.5.1 Wireframes

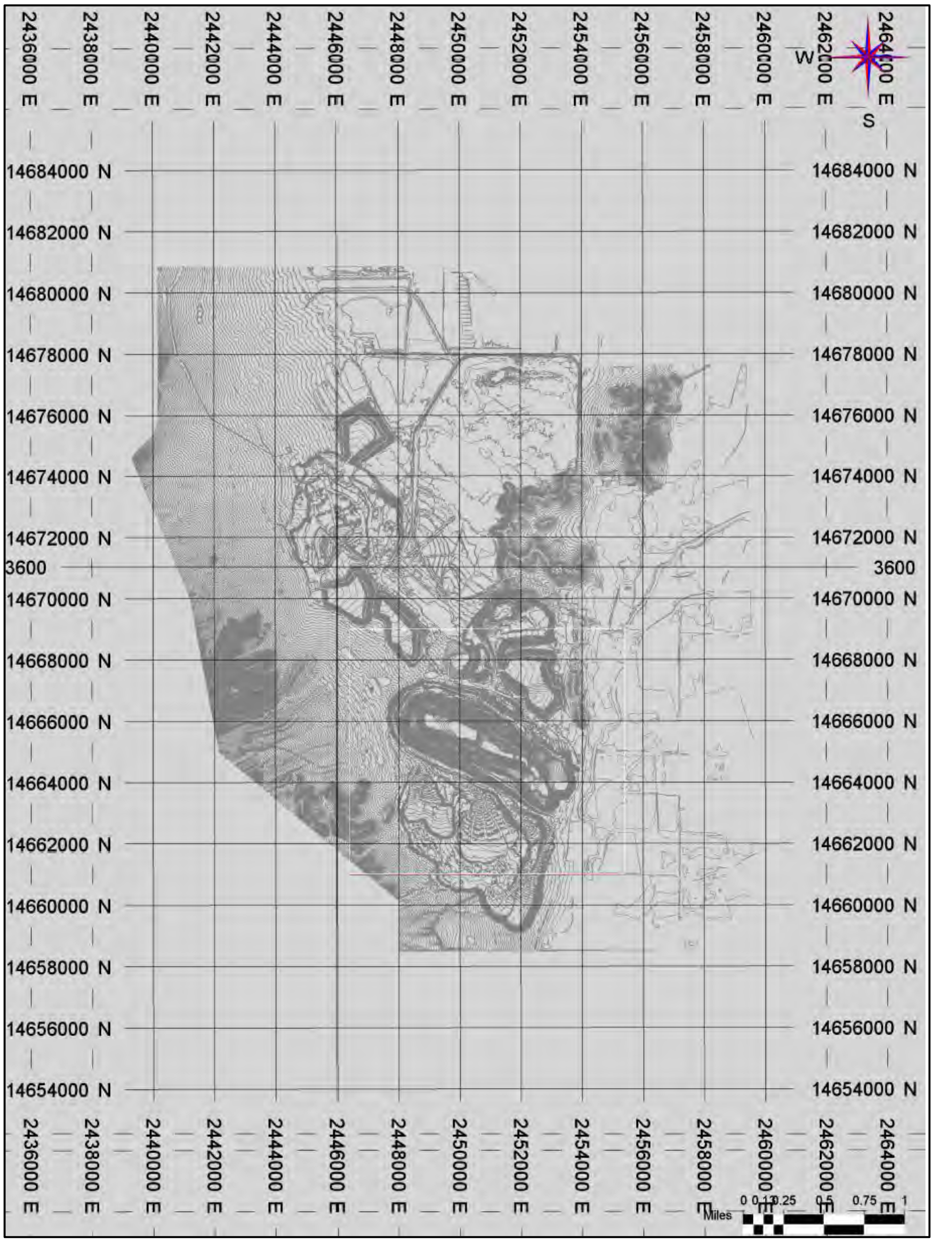
NewFields provided 5 ft contours and 3D faces for the current Yerington Copper Project topography in Nevada State Plane NAD83 coordinates (Figure 14-11 and Figure 14-12).

Figure 14-11: Yerington Copper Project 3D Perspective (Looking West)



Source: AGP 2023

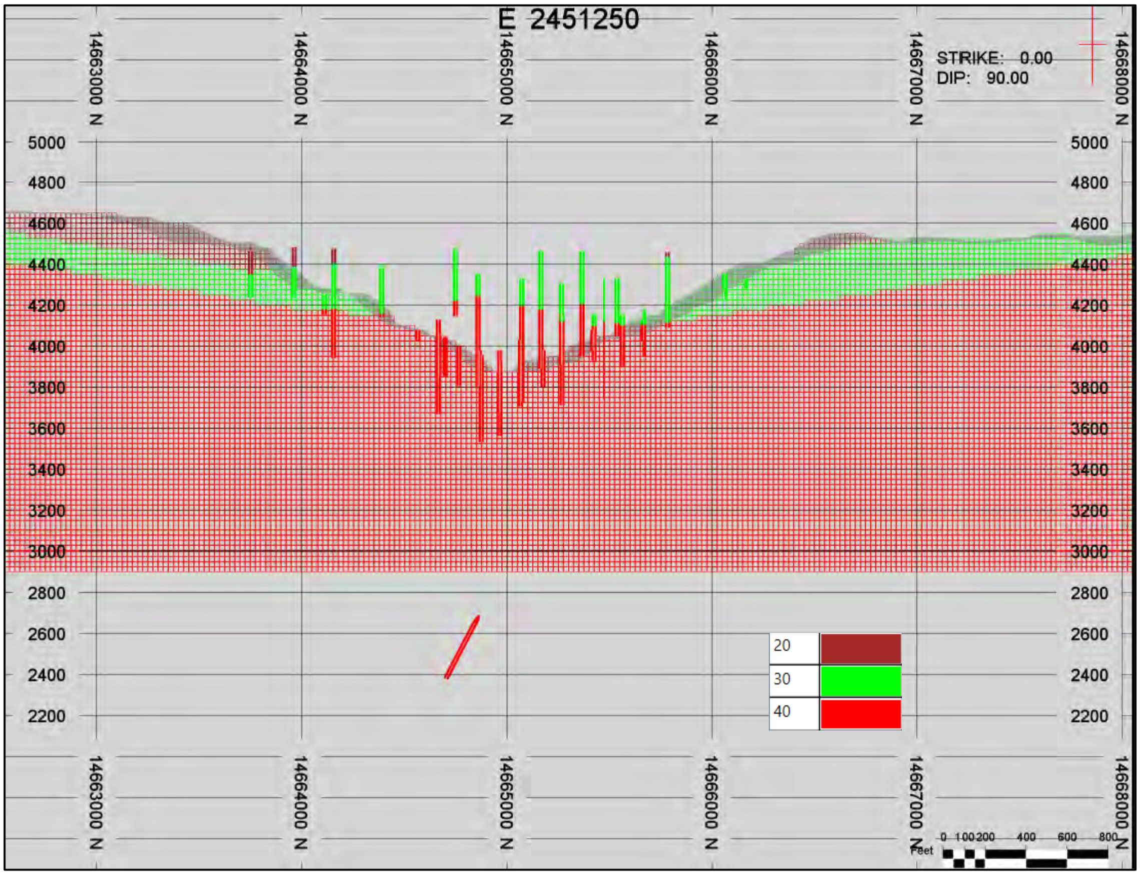
Figure 14-12: Yerington Copper Project Planview 5 ft Contours



Source: AGP 2023

Surfaces were provided by SPS for the Alluvium (20), Oxide (30) and Sulfide (40) contacts. The block model rock type model was coded based on these surfaces as shown for Section 2451250E (Figure 14-13).

Figure 14-13: Rock Type Section 2451250 E (Looking North ±100 ft)



Source: AGP 2023

Note: Brown=Alluvium (20), Green=Oxide (30), Red=Sulfide (40)

14.5.2 Grade Interpolation

Three methods of grade interpolation were used to estimate uncapped total copper (TCu):

- Nearest neighbor (NN)
- Inverse Distance Squared (ID^2)
- Ordinary Kriging (OK)

The block models were interpolated in two passes using 25 ft composites. Table 14-8 summarizes the sample selection controls used with the various interpolation methods.

The software used for the 2023 Mineral Resource estimate was Leica Geosystems HxGN MinePlan 3D 15.80-7 (build 83317-118) (MinePlan).

Table 14-8: Summary of Sample Selection

	Minimum No. of Samples	Maximum No. of Samples	Maximum No. of Samples/Drill Hole
NN	1	1	1
ID^2	5	8	2
OK	5	8	2

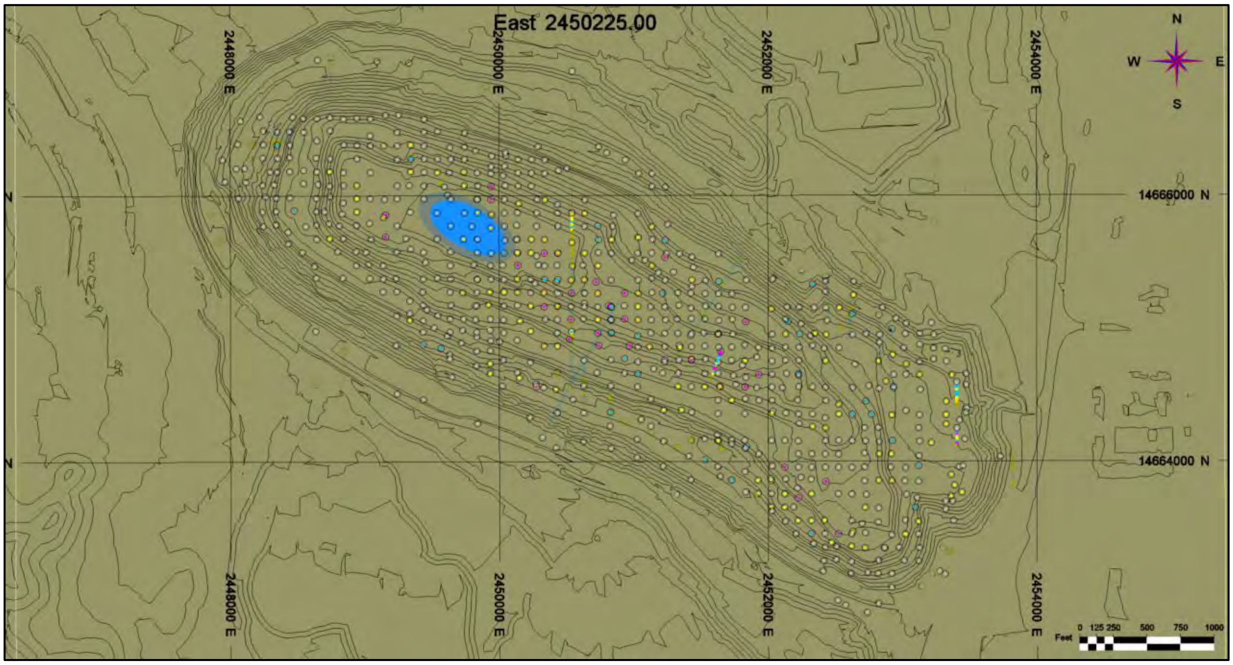
Search Ellipses

Table 14-9 summarizes the search ellipse parameters for the Yerington Copper Project. These parameters were based on the geological interpretation and spatial analysis. The same search ellipses were used for NN, ID^2, and OK grade interpolation. Figure 14-14 shows the orientation of Pass 1.

Table 14-9: Search Ellipse Specifications

Pass	Search Anisotropy	Rotation Z (°)	Rotation Y (°)	Rotation X (°)	X Range (ft)	Y Range (ft)	Z Range (ft)
1	ZXY-LRR	300	0	0	400	200	200
2	ZXY-LRR	300	0	0	100	75	75

Figure 14-14: Pass 1 Search Ellipse



Source: AGP 2023

14.5.3 Special Model Attributes

Additional models were used to capture interpolation statistics to assist with the evaluation of confidence (Table 14-10).

Table 14-10: Special Models

Parameter	NN	OK
Local Error		KE0, KE1
Distance to Nearest Sample	DSTN0, DSTN1	DSTK0, DSTK1
Number of Samples Used		NCMP0, NCMP1
Kriging Variance		KV0, KV1
Number of Sectors Used		NSEC0, NSEC1
Number of Drillholes Used		NDDH0, NDDH1
Average Distance to Samples Used		DSAV0, DSAV1
Pass Number		PASS0, PASS1

14.5.4 W-3 Stockpile

The W-3 block model TCu was interpolated using NN and Inverse Distance Cubed (ID^3) methods. A flat one pass 700 ft. isotropic search was used. No controls for oxide or sulfide mineralization were used as this is primarily broken low-grade oxide mineralization.

Special models captured information for the NN model on distance to nearest composite (DNN) and for the ID model: distance to nearest composite (DID), average distance to composites used (AVGD), maximum number of composites used (NCMP) and maximum number of drill holes used (NDDH).

The tonnage factor applied was 16.67 cu.ft./ton which is appropriate for broken material.

14.5.5 Vat Leach Tailings

The VLT block model TCu was interpolated using NN and Inverse Distance Cubed (ID^3) methods. A flat one pass 500 ft. isotropic XY search with a 25 ft Z search was used. No controls for mineralization were used.

Special models captured information for the NN model on distance to nearest composite (DNN) and for the ID model: distance to nearest composite (DID), average distance to composites uesd (AVGD), maximum number of composites used (NCMP) and maximum number of drill holes used (NDDH).

The tonnage factor applied was 16.67 cu.ft./ton which is appropriate for broken material.

14.6 Model Verification and Validation

AGP distinguishes between verification and validation of the block model:

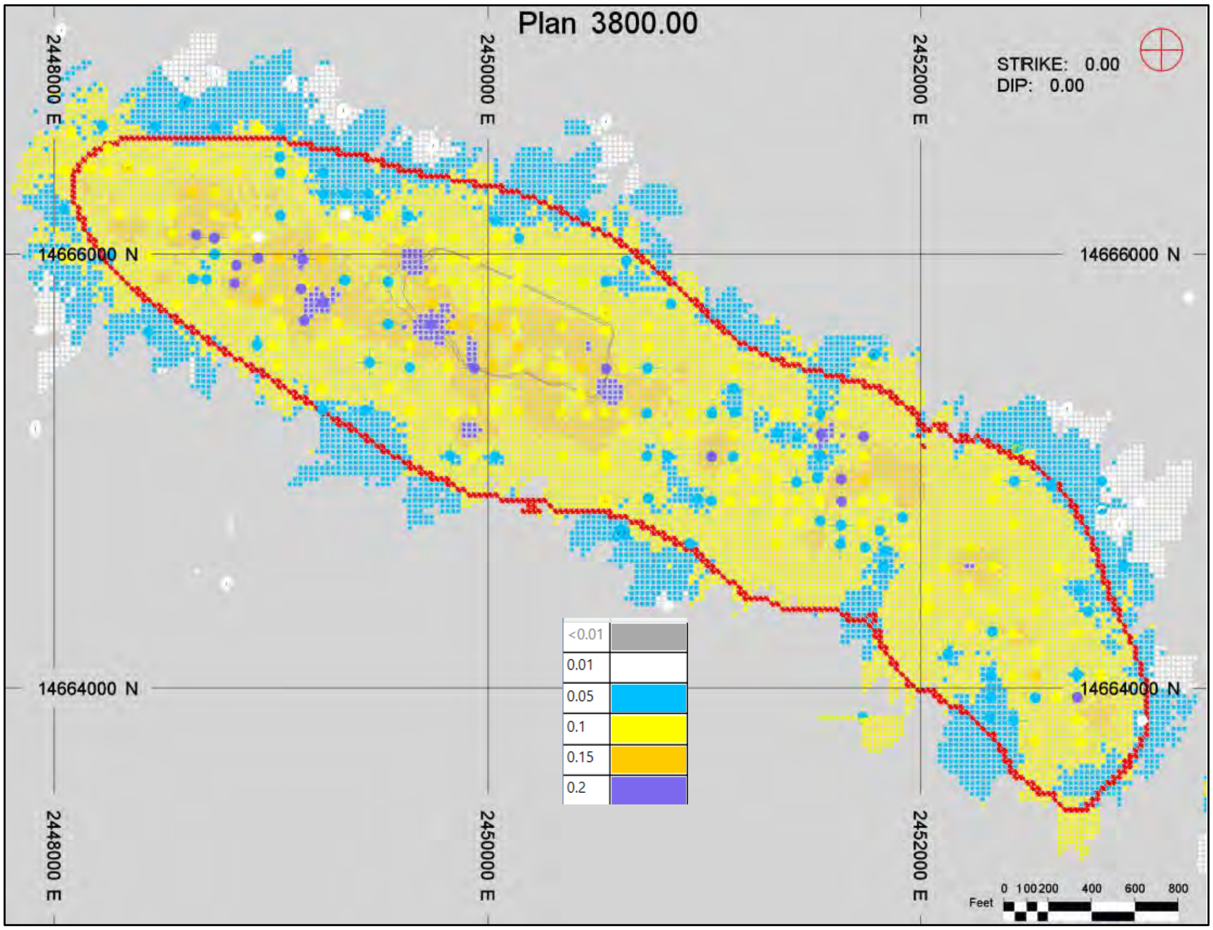
- Verification is a manual check (i.e., visual inspection) or quasi-manual check (i.e., spreadsheet) of the actual procedure used
- Validation is a test for reasonableness using a parallel procedure, which may be manual or a computer-based procedure (i.e., different interpolation methods).

14.6.1 Visual Verification

The block model was validated by visually inspecting the block model results in section and plan compared with the drill hole composite data.

Figure 14-15 is a plan view comparing block model grades with composite grades. Figure 14-16 is a North-South section comparing the block model and composite grades. The grades of the blocks agreed well with the composite data used in the interpolation.

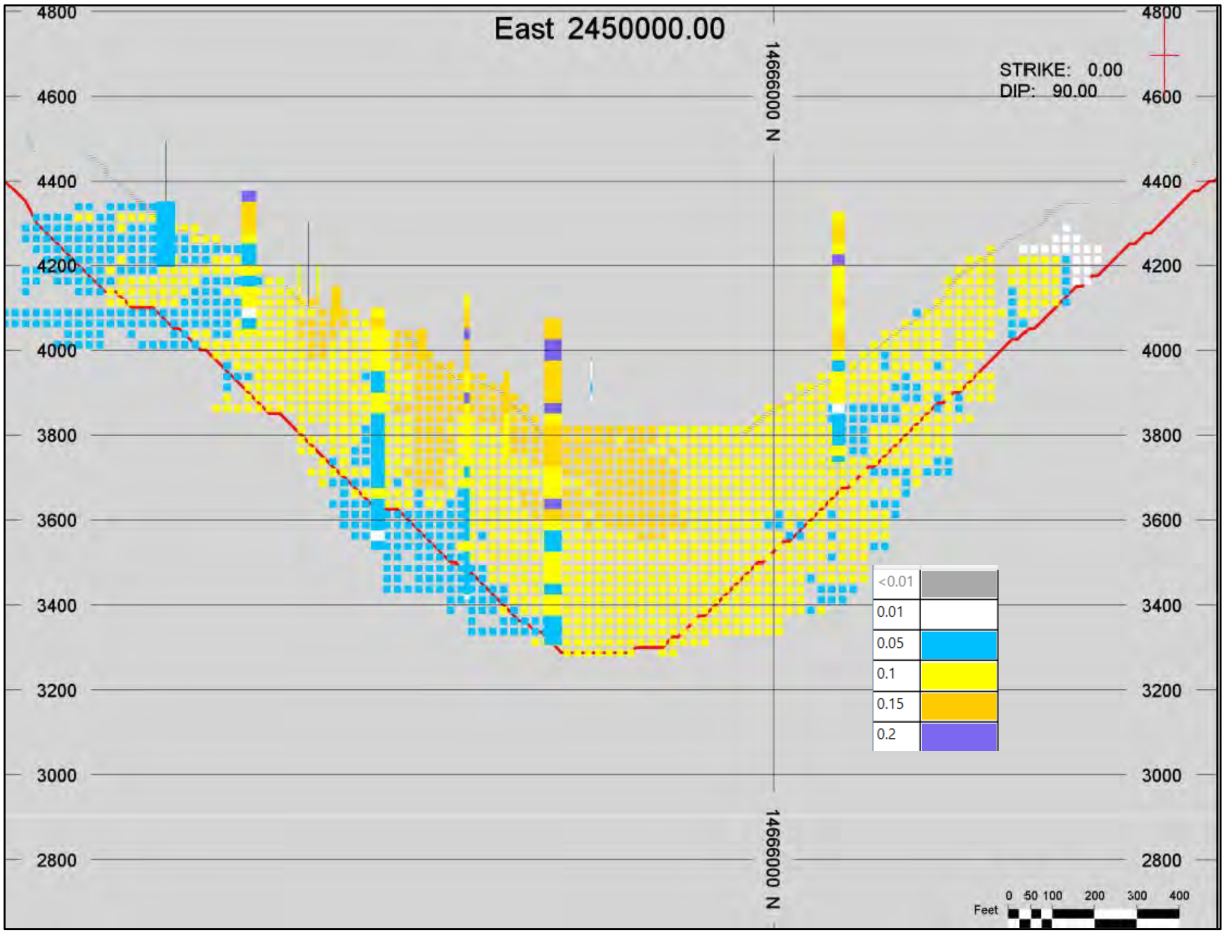
Figure 14-15: TCu% - 3800 ft Plan (±12.5 ft)



Source: AGP 2023

Note: Current topography: grey, 2023 Resource Pit:red

Figure 14-16: TCu% -- Section 2450000 E (Looking West ±12.5 ft)



Source: AGP 2023

Note: Current topography: grey line, 2023 Resource Pit:red line

14.6.2 Statistical Validation

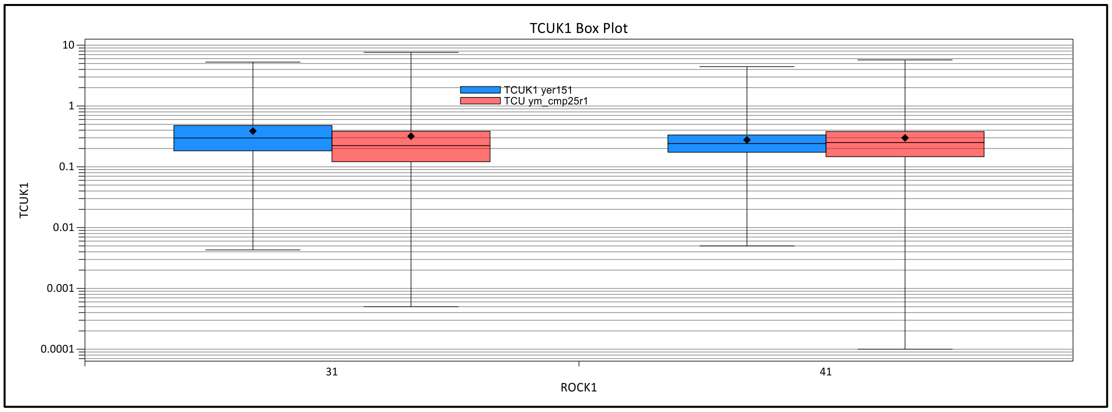
The block model statistics were reviewed, and no bias was found between the different interpolation methods and the 25 ft composites (Table 14-11). The composite versus interpolated grade appears to indicate an overestimation. However, the composite grades reflect mined out material about the current open pit surface.

Table 14-11: Comparison of Composite Grades by Interpolation Method

Rock Type	25 ft Comp.	NN Mean	IDW-3 Mean	OK Mean
	TCu%	CUNN%	CUID%	TCUK1%
Oxide (30)	0.319	0.382	0.389	0.388
Sulfide (40)	0.299	0.277	0.278	0.278

Similarly, the boxplot shown in Figure 14-17 visually confirms the grade agreement between the composites and kriged grade.

Figure 14-17: Boxplot Comparison of 25 ft Composites with Kriged Grade (TCu%)

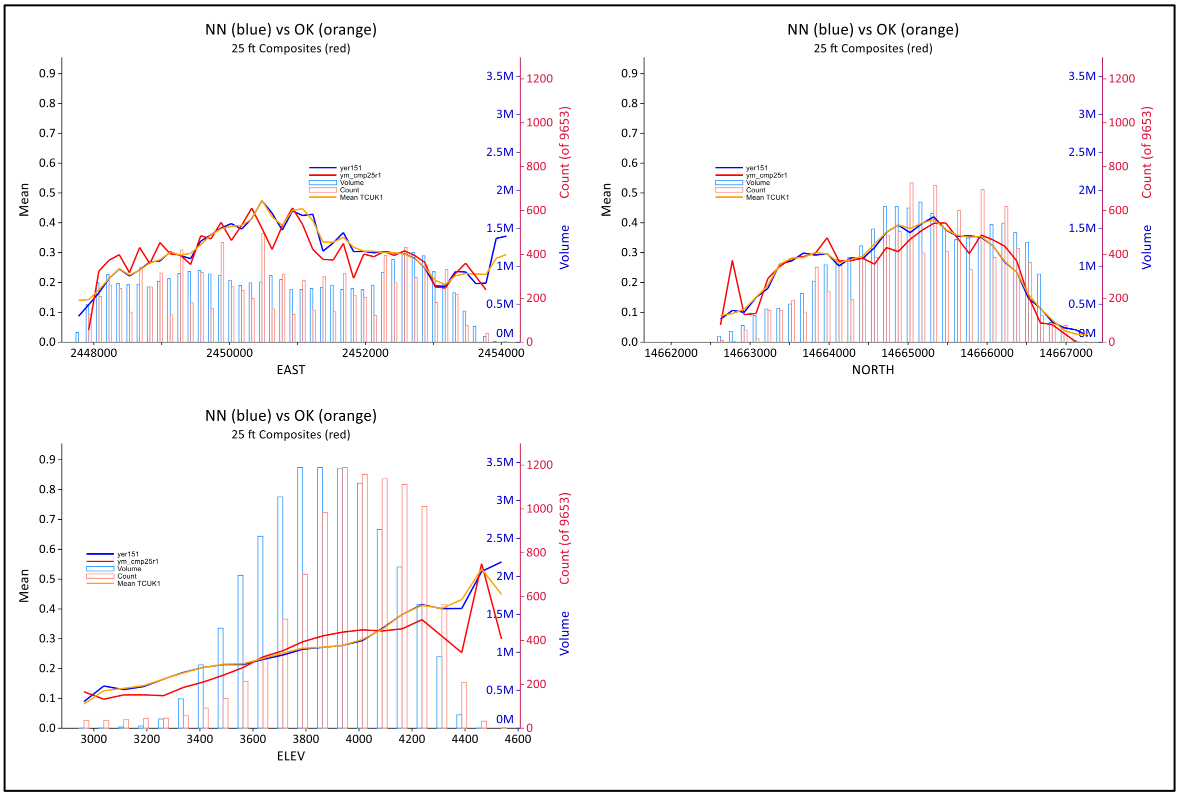


Source: AGP 2023

14.6.3 Swath Plots

A series of swath plots (grades accumulated by spatial coordinates) were generated to compare the composite grades with the NN, ID and OK interpolation methods. As shown in Figure 14-18, there appears to be agreement between the 25 ft composites and interpolated grades.

Figure 14-18: Swath Plots Comparing NN and OK Grades with 25 ft Composites



Source: AGP 2023

14.6.4 W-3 Stockpile

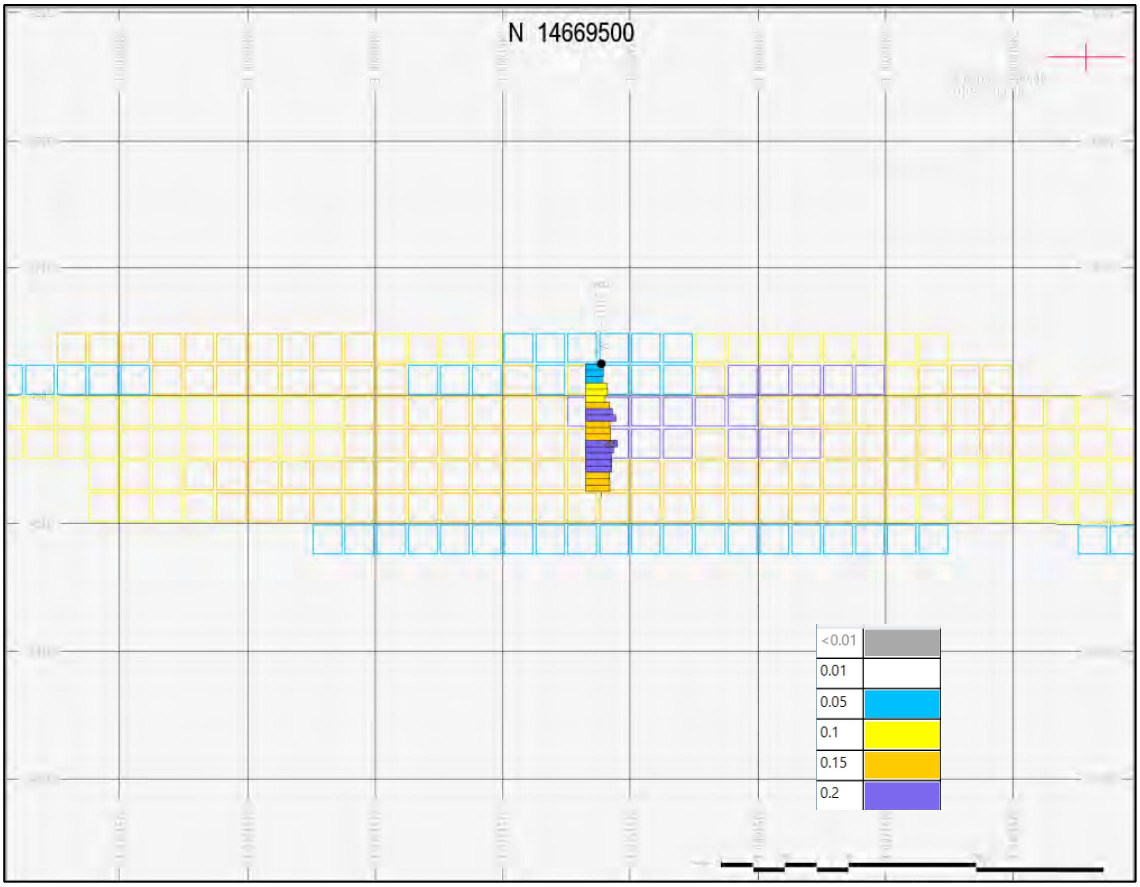
W-3 grade interpolation was visually verified and validated using swath plots to compare the composite, NN and ID grades.

Figure 14-19 confirms the correlation between the TCu% grade in the drill hole versus the interpolated CUID% on Section 14669500N.

The swath plot shown in Figure 14-20 illustrates the correlation (by elevation) between the drill hole grade TCu% with the interpolated grades CUNN% and CUID%.

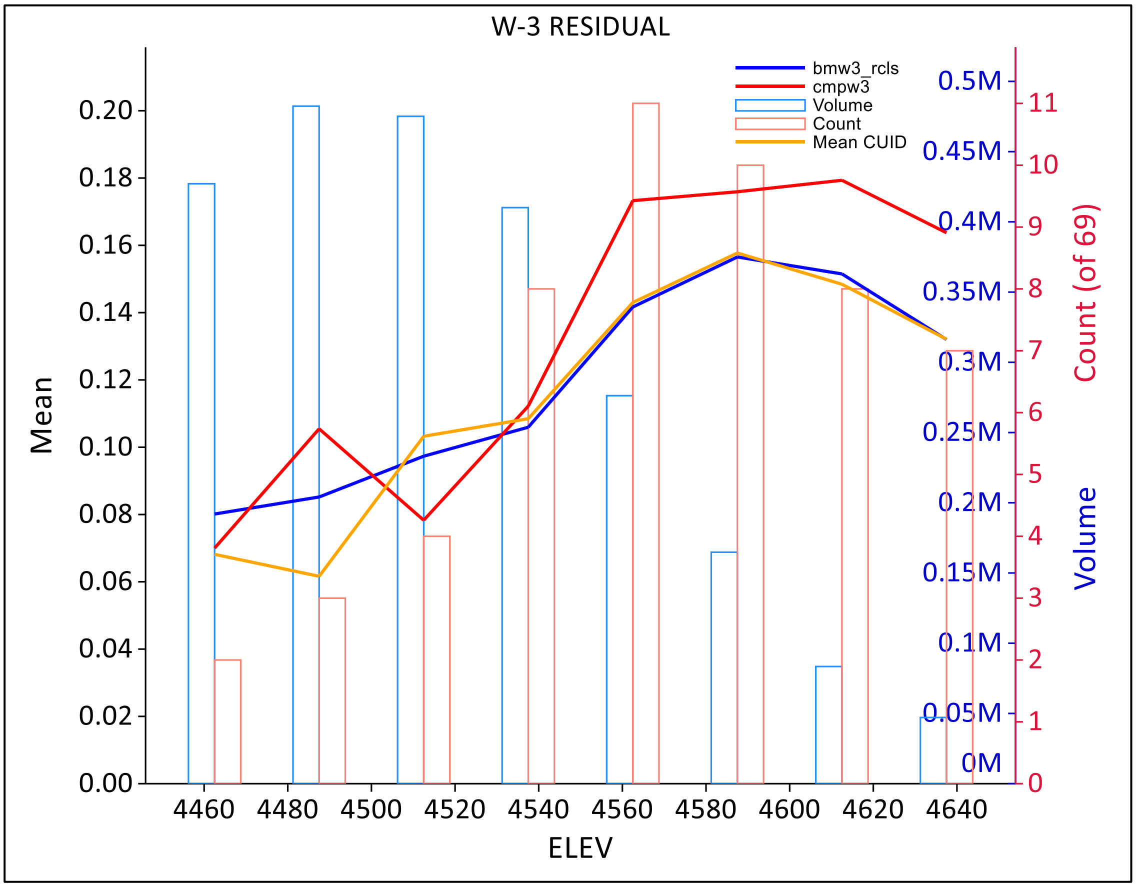
The visual verification has confirmed the agreement between the drill hole grades and interpolated grades.

Figure 14-19: Section 14669500N, CUID (Block Model) Compared with TCu (Drill Hole)



Source: AGP 2023

Figure 14-20: W-3 Swath Plot by Elevation



Source: AGP 2023

14.6.5 Vat Leach Tailings

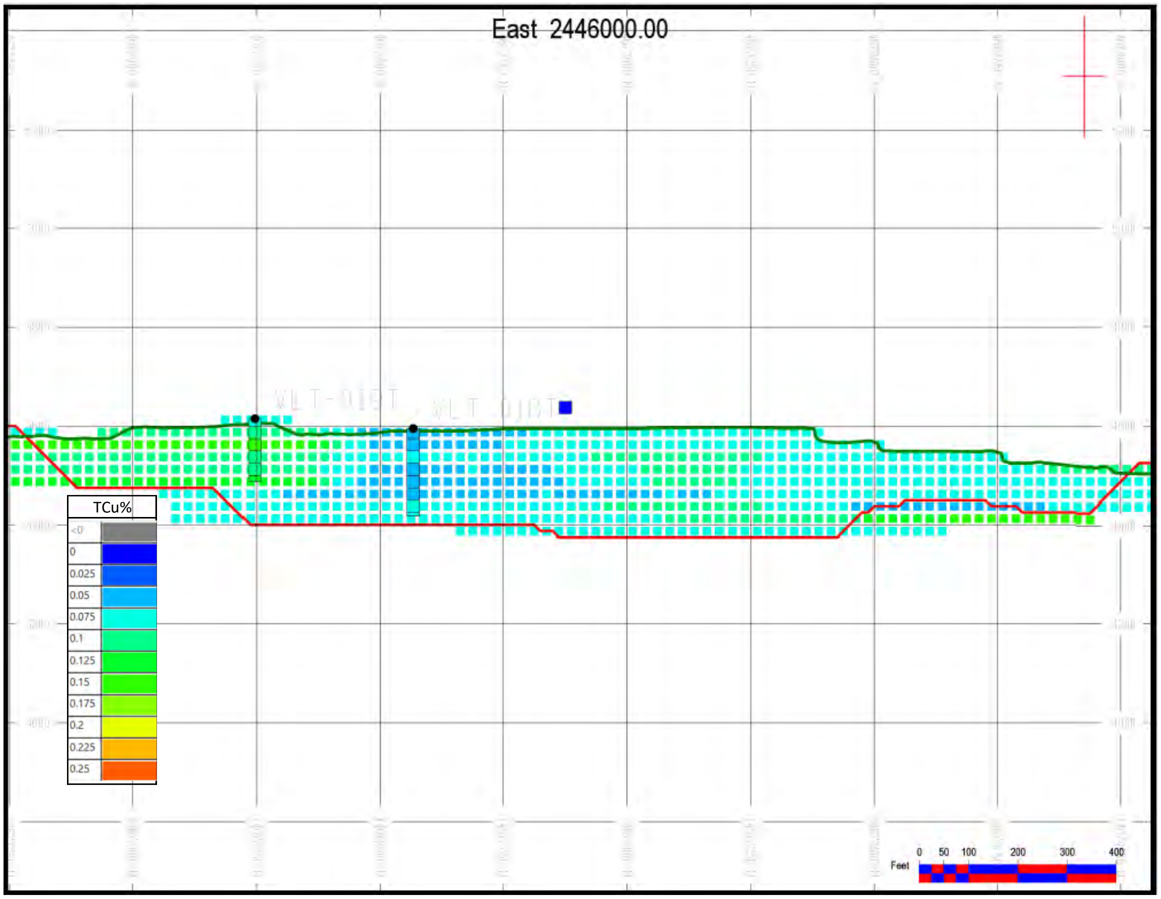
VLT grade interpolation was visually verified and validated using swath plots to compare the composite, NN and ID grades.

Figure 14-21 confirms the correlation between the TCu% grade in the drill hole versus the interpolated CUID%.

Figure 14-22 illustrates the correlation (by elevation) between the drill hole grade TCu% with the interpolated grades CUNN% and CUID%.

The visual verification has confirmed the agreement between the drill hole grades and interpolated grades.

Figure 14-21: VLT Section Block Model CUID% vs Drill Hole TCu%



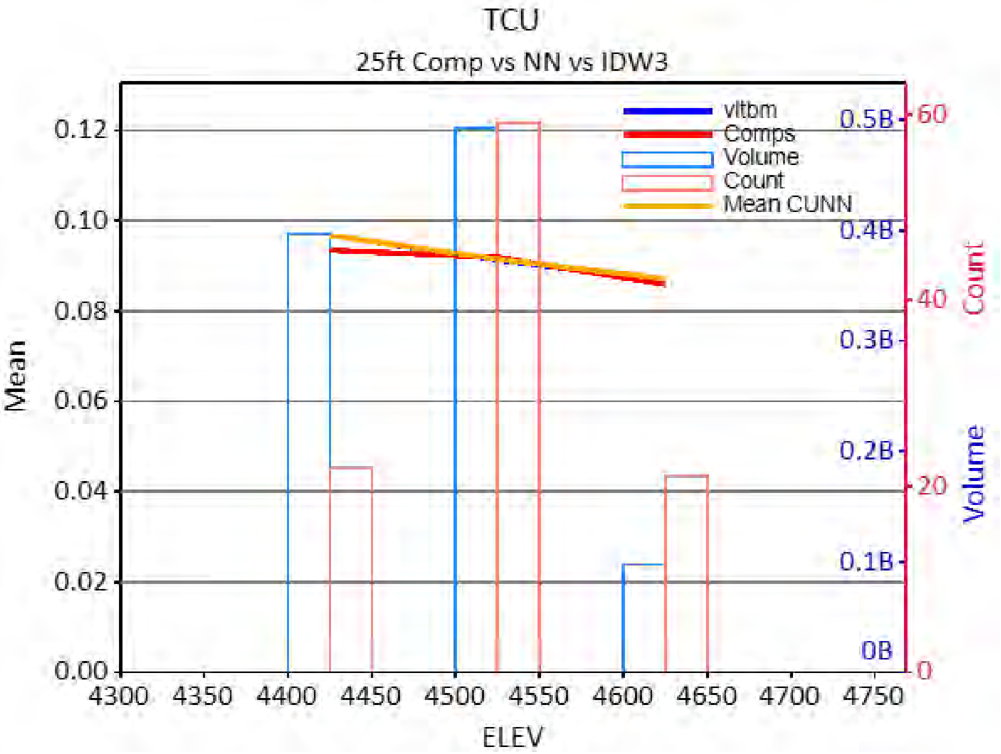
Source: AGP 2023

Notes: Resource Pit Shell=Red

Current Topography=Green

Looking West ±25 ft

Figure 14-22: VLT Swath Plot by Elevation



Source: AGP 2023

Notes: Drill Hole Grade TCu% (red)

Block Model Grades: CUNN% (orange) and CUID% (blue)

14.7 Mineral Resource Tabulation

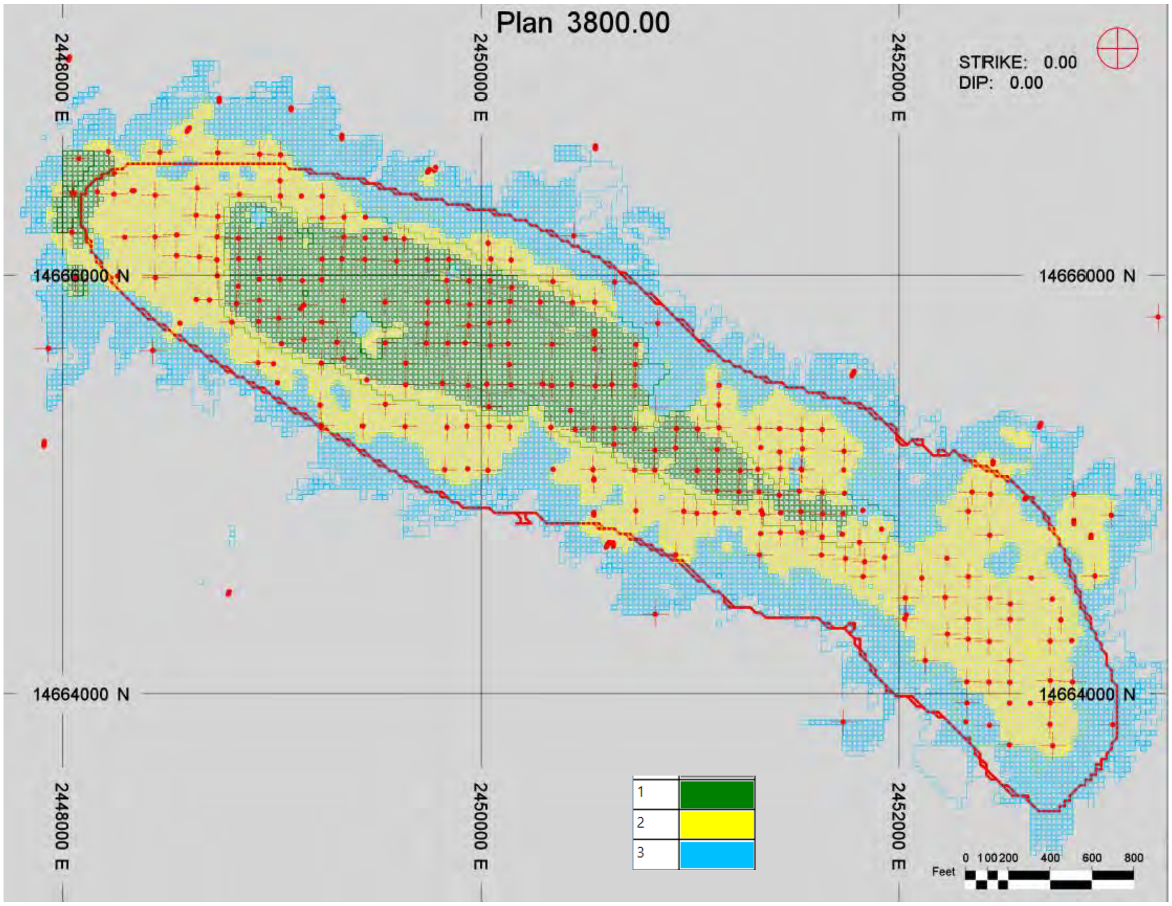
14.7.1 Mineral Resource Classification

Mineral Resource estimates were classified in accordance with definitions provided by CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM, 2014).

The Mineral Resource estimates were initially assigned based on data density in coordination with mineralization continuity. Mineral Resource classification was then refined based on the statistics collected during interpolation, geologic continuity, and mining production. The nominal spacing for the current Measured Mineral Resource estimates, based on distance to nearest composite, was 100 ft. For the current Indicated Mineral Resource estimates, the spacing was 150 ft, and for Inferred Mineral Resource estimates less than 350 ft. Grades beyond 350 ft were unclassified.

Grooming was conducted on the initial resource classification to remove isolated pockets of different resource classifications. Figure 14-23 shows the mineral resource classification at the bottom of the existing pit. The red outline is the 2023 resource pit shell for the current mineral resource.

Figure 14-23: Resource Classification - Plan 3800 ft Elevation



Source: AGP 2023

14.7.2 Cut-off Grade

Yerington Deposit

A variable cut-off grade of 0.038% TCu for Oxide material and 0.126% TCu for Sulfide material was determined based on the assumptions listed in Table 14-12. Mineral Resource estimates can be sensitive to the reporting cut-off grade.

Table 14-12: Yerington Copper Project Cut-off Grade Assumptions

Description	Parameter
Metal Price, US$/lb	4.30
Net Price after Smelting, Refining, Transportation and Royalty, US$/lb	4.08
Oxide Recovery	70%
Sulfide (Nuton) Recovery	75%
Oxide (ROM) Cut-off Grade, TCu%	0.038
Transition Cut-off Grade, TCu%	0.053
Sulfide (Nuton) Cut-off Grade, TCu%	0.126

W-3 Residuals

Two options were considered for the W-3 cut-off grade:

- Oxide ROM – marginal cut-off grade = 0.04% TCu (only processing and G&A)
- Oxide ROM – mining cut-off grade = 0.08% TCu (mining, processing, and G&A)

For VLT, the marginal cut-off grade of 0.04% TCu was selected.

14.7.3 Reasonable Prospects for Eventual Economic Extraction

To satisfy the requirements for reasonable prospects for eventual economic extraction, AGP generated a resource pit shell to report the Mineral Resources for the Yerington deposits. The assumed parameters are outlined in Table 14-14.

Table 14-13: Yerington Copper Project Pit Slope Assumptions

Description	Parameter
Overall pit slopes (°)	40-45
Alluvium Pit Slope (°)	40
Oxides with slumping in walls (°)	40
Oxides with no slumping in walls (°)	45
Sulfides (°)	42

14.7.4 Mineral Resource Statement

The updated Mineral Resources for the Yerington Deposit are: Measured Resources of 62.9 MTons at 0.30 TCu%; Indicated Resources of 94.7 MTons at 0.27 TCu%; and Inferred Resources of 113.2 MTons at 0.22 TCu%. The effective date of the Mineral Resources is May 1, 2023.

Table 14-14 presents the Mineral Resources for the Yerington Deposit.

Table 14-14: 2023 Yerington Copper Project Mineral Resource Statement

Material	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs
Measured Oxide	0.038	20,230,000	0.25	99,367,000
Measured Sulfide	0.126	42,671,000	0.32	274,578,000
Measured Total		**62,901,000**	**0.30**	**373,945,000**
Indicated Oxide	0.038	13,749,000	0.22	60,166,000
Indicated Sulfide	0.126	80,960,000	0.28	457,921,000
Indicated Total		**94,709,000**	**0.27**	**518,087,000**
Measured+Indicated Oxide	0.038	33,979,000	0.23	159,533,000
Measured+Indicated Sulfide	0.126	123,631,000	0.30	732,499,000
Measured+Indicated Total		**157,610,000**	**0.28**	**892,032,000**
Inferred Oxide	0.038	33,347,000	0.18	122,221,000
Inferred Sulfide	0.126	79,881,000	0.24	385,938,000
Inferred Total		**113,229,000**	**0.22**	**508,159,000**

Notes: Effective date for this Mineral Resource estimate is May 1, 2023.
The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.038 % TCu and 0.126% TCu based on assumptions of a net copper price of US$4.08 per pound (after smelting, refining, transportation, and royalty charges), 70% recovery in oxide material, 75% recovery in sulfide material.
Mineral Resource are not Mineral Reserves and do not demonstrate economic viability.
Mineral Resource estimate reported from within resource pit shell.
There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.
All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

14.7.5 Copper Grade Sensitivity

Table 14-15 brackets the selected cut-off grades 0.038 TCu% for Oxide and 0.126 TCu% for Sulfide to demonstrate the sensitivity to cut-off grades. The cut-off grades selected for reporting the current Mineral Resource estimate are highlighted in bold.

Table 14-15: Copper Grade Sensitivity (TCu%)

Class	Material	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs
Measured	Oxide	0.01	20,255,000	0.25	99,383,000
		0.02	20,255,000	0.25	99,383,000
		0.03	20,251,000	0.25	99,381,000
		0.038	**20,230,000**	**0.25**	**99,367,000**
		0.05	20,143,000	0.25	99,290,000
		0.10	19,062,000	0.26	97,569,000
		0.20	12,755,000	0.30	77,557,000
	Sulfide	0.01	43,320,000	0.32	275,986,000
		0.10	43,177,000	0.32	275,753,000

Class	Material	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs
		0.126	**42,671,000**	**0.32**	**274,578,000**
		0.20	37,819,000	0.34	258,266,000
		0.30	22,490,000	0.40	180,306,000
		0.40	9,060,000	0.48	87,830,000
		0.50	2,961,000	0.57	33,851,000
		0.60	689,000	0.68	9,362,000
Indicated	Oxide	0.01	14,313,000	0.21	60,417,000
		0.02	14,029,000	0.22	60,333,000
		0.03	13,904,000	0.22	60,273,000
		0.038	**13,749,000**	**0.22**	**60,166,000**
		0.05	13,508,000	0.22	59,956,000
		0.10	12,241,000	0.24	57,954,000
		0.20	6,443,000	0.31	40,217,000
	Sulfide	0.01	83,016,000	0.28	462,232,000
		0.10	82,355,000	0.28	461,124,000
		0.126	**80,960,000**	**0.28**	**457,921,000**
		0.20	66,435,000	0.31	407,928,000
		0.30	28,192,000	0.39	217,941,000
		0.40	8,438,000	0.49	83,174,000
		0.50	2,361,000	0.63	29,870,000
		0.60	956,000	0.77	14,742,000
Measured+ Indicated	Oxide	0.01	34,567,000	0.23	159,799,000
		0.02	34,284,000	0.23	159,716,000
		0.03	34,155,000	0.23	159,653,000
		0.038	**33,979,000**	**0.23**	**159,533,000**
		0.05	33,652,000	0.24	159,245,000
		0.10	31,303,000	0.25	155,523,000
		0.20	19,197,000	0.31	117,774,000
	Sulfide	0.01	126,336,000	0.29	738,218,000
		0.10	125,532,000	0.29	736,877,000
		0.126	**123,631,000**	**0.30**	**732,499,000**
		0.20	104,254,000	0.32	666,194,000
		0.30	50,682,000	0.39	398,247,000
		0.40	17,499,000	0.49	171,004,000
		0.50	5,322,000	0.60	63,721,000
		0.60	1,645,000	0.73	24,104,000
Inferred	Oxide	0.01	37,508,000	0.17	124,184,000

Class	Material	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs
		0.02	35,944,000	0.17	123,681,000
		0.03	34,333,000	0.18	122,885,000
		0.038	**33,347,000**	**0.18**	**122,221,000**
		0.05	32,493,000	0.19	121,475,000
		0.10	27,966,000	0.20	114,394,000
		0.20	11,993,000	0.28	66,396,000
	Sulfide	0.01	84,098,000	0.23	394,245,000
		0.10	82,410,000	0.24	391,725,000
		0.126	**79,881,000**	**0.24**	**385,938,000**
		0.20	58,168,000	0.27	310,838,000
		0.30	12,813,000	0.35	89,092,000
		0.40	1,420,000	0.47	13,334,000
		0.50	248,000	0.64	3,186,000
		0.60	114,000	0.76	1,740,000

14.7.6 Comparison to the Prior Mineral Resource Estimation

Results of the 2014 Tetra Tech resource estimation are summarized in Table 14-16.

Table 14-16: Yerington Copper Resources – January 2014 (Bryan, 2014)

Class	Material	Cut-off Grade TCu%	Tons (,000 t)	Average Grade TCu%	Contained Copper (,000 lbs)
Measured	OX	0.12	6,500	0.25	33,000
	SU	0.15	31,000	0.33	205,000
	Combined		37,500	0.32	238,000
Indicated	OX	0.12	17,000	0.25	85,000
	SU	0.15	74,000	0.30	428,000
	Combined		90,000	0.29	513,000
Measured+Indicated	OX	0.12	23,500	0.25	118,000
	SU	0.15	105,000	0.30	633,000
	Combined		128,500	0.29	751,000
Inferred	OX	0.12	26,000	0.23	118,000
	SU	0.15	128,000	0.23	600,000
	Combined		154,000	0.23	718,000

Notes: Effective date for this historic resource was November 20, 2013

No reserves have been estimated within this report.

Inferred mineral resources have a great amount of uncertainty as to existence and as to whether they can be mined economically. It cannot be assumed that all or any part of the Inferred mineral resources will ever be upgraded to a higher category.

Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Totals may not add up due to rounding.
Mineral resources classifications are based on CIM definitions.

Table 14-17 shows a comparison of the current Mineral Resource with the 2014 historical Mineral Resource.

Table 14-17: Comparison of May 2023 vs. January 2014 Mineral Resources – Yerington Deposit

	AGP (May 2023) within pit constraint Variable Cut-off Grade			Tetra Tech (January 2014) unconstrained Variable Cut-off Grade			Difference		
Class	**Tons (,000 t)**	**TCu%**	**Contained TCu (,000 lbs)**	**Tons (,000 t)**	**TCu%**	**Contained TCu (,000 lbs)**	**Tons (,000 t)**	**TCu%**	**Contained TCu (,000 lbs)**
Measured	62,901	0.30	379,945	37,500	0.32	238,000	25,401	-0.02	141,945
Indicated	94,709	0.27	518,087	90,000	0.29	513,000	4,709	-0.02	5,087
Measured+Indicated	157,610	0.28	892,032	128,500	0.29	751,000	29,110	-0.01	141,032
Inferred	113229	0.22	508,159	154000	0.23	718,000	-40,771	-0.01	-209,841

14.8 Residual Mineral Resources

14.8.1 W-3 Stockpile

The resource classification was applied based on the distance to nearest composite reported for the ID^3 interpolation. Blocks within 400 ft. were assigned as Inferred (3). All remaining interpolated blocks were classified as Uncategorized (4).

Figure 14-24 illustrates a plan view of the resource classification for W-3 Stockpile. Inferred blocks are colored red and unclassified blocks that have an estimated grade are cyan.

The marginal cut-off grade of 0.04% TCu was selected for reporting the W-3 Mineral Resource. Table 14-18 summarizes the W-3 Mineral Resources.

Table 14-18: 2023 W-3 Stockpile Mineral Resource Statement

Class	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs
Inferred	>= 0.04	14,100,000	0.11	30,571,000

Notes: Effective date for this W-3 Stockpile Mineral Resource estimate is May 1, 2023.

The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.040 % TCu based on assumptions of a net copper price of US$4.08 per pound (after smelting, refining, transportation, and royalty charges), and 70% recovery in oxide material.

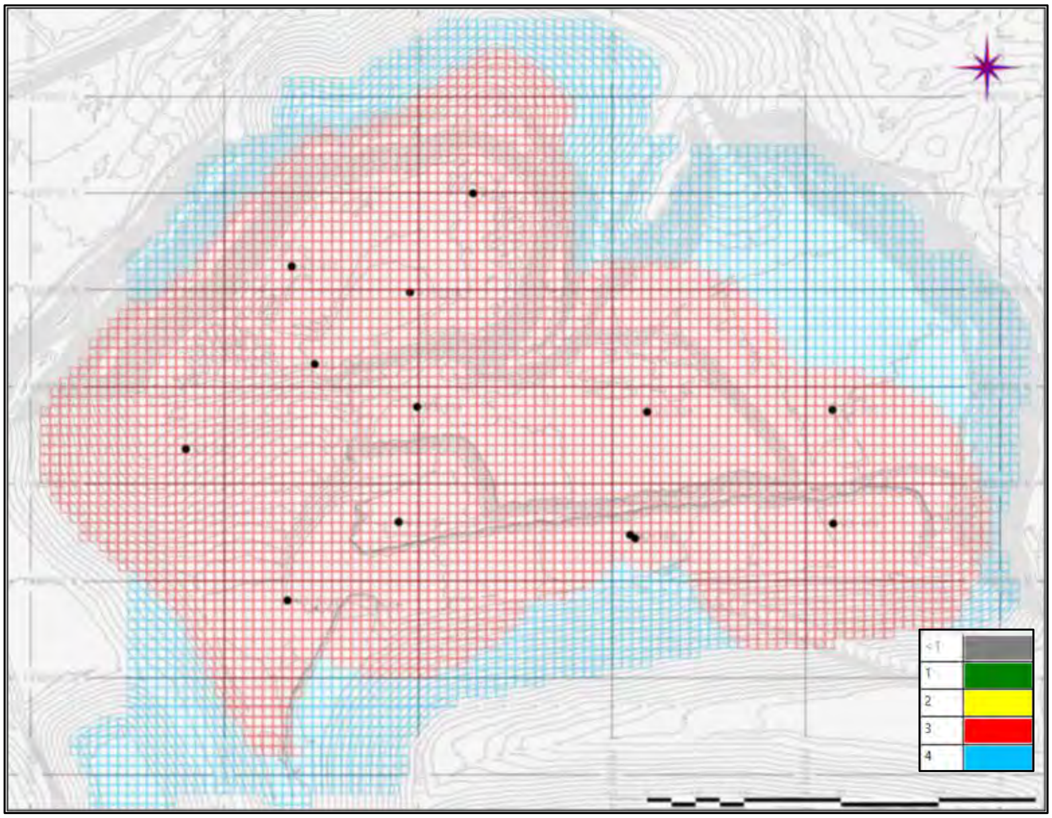
Mineral Resource are not Mineral Reserves and do not demonstrate economic viability.

Mineral Resource estimate reported from within resource pit shell.

There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.

All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

Figure 14-24: W-3 Resource Classification (Planview)



Source: AGP 2023

Notes: Measured=1, Indicated=2, Inferred=3, Other=4

14.8.2 Vat Leach Tailings

The resource classification was applied based on the distance to nearest composite reported for the ID^3 interpolation. Blocks within 400 ft. were assigned as Inferred (3). All remaining interpolated blocks were classified as Uncategorized (4).

Figure 14-25 illustrates a plan view of the resource classification for VLT. Inferred blocks are colored red and unclassified blocks that have an estimated grade are cyan.

The marginal cut-off grade of 0.04% TCu was selected for reporting the VLT Mineral Resource.

Table 14-19 summarizes the VLT Mineral Resources.

Table 14-19: 2023 VLT Mineral Resource Statement

Class	Cut-off Grade (TCu%)	Tons	TCu%	TCu lbs
Inferred	>= 0.04	33,160,000	0.09	62,622,000

Notes: Effective date for this VLT Mineral Resource estimate is July 31, 2023

The 2023 Mineral Resource estimate uses a variable break-even economic cut-off grade of 0.040 % TCu based on assumptions of a net copper price of US$4.08 per pound (after smelting, refining, transportation, and royalty charges), and 70% recovery in oxide material.

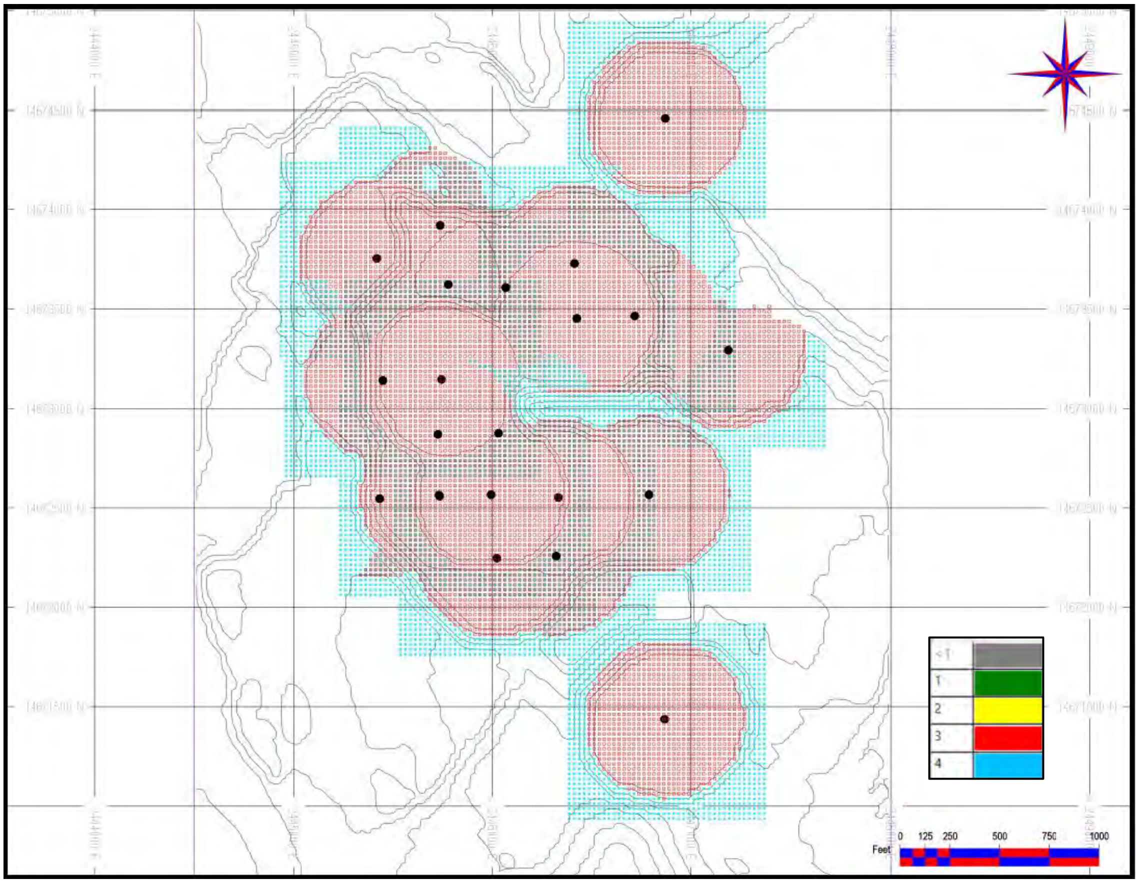
Mineral Resource are not Mineral Reserves and do not demonstrate economic viability.

Mineral Resource estimate reported from within resource pit shell.

There is no certainty that all or any part of the Mineral Resource estimate will be converted into Mineral Reserves.

All figures are rounded to reflect the relative accuracy of the estimates and totals may not add correctly.

Figure 14-25: VLT Resource Classification (Planview)



Source: AGP 2023

Notes: Measured=1, Indicated=2, Inferred=3, Other=4

Resource Pit Shell Contours = 25 ft.

14.9 MacArthur Mineral Resource

A summary of Section 14 of the Technical Report titled “MacArthur Copper Project, Mason Valley, Nevada, USA, Mineral Resource Estimate” prepared for Lion Copper and Gold Corporation, dated February 25, 2022, is presented in the following paragraphs. No update to the MacArthur Mineral Resource has been done since the publication of the February 25, 2022, Technical Report. Table 14-20 shows a summary of the Mineral Resource.

Table 14-20: MacArthur - Summary of Mineral Resource

Classification	Ktons	Total Cu, %	Contained Cu Pounds x 1000
Measured	116,666	0.180	420,929
Indicated	183,665	0.158	579,479
Sum Measured+Indicated	300,331	0.167	1,000,408
Inferred	156,450	0.151	471,714

Cut-off grade: 0.06% TCu for Leach Cap, Oxide & Transition; cut-off grade for Sulfide: 0.06% for MacArthur & North Ridge, 0.08% for Gallagher. Total resource shell tonnage = 628,831 ktons

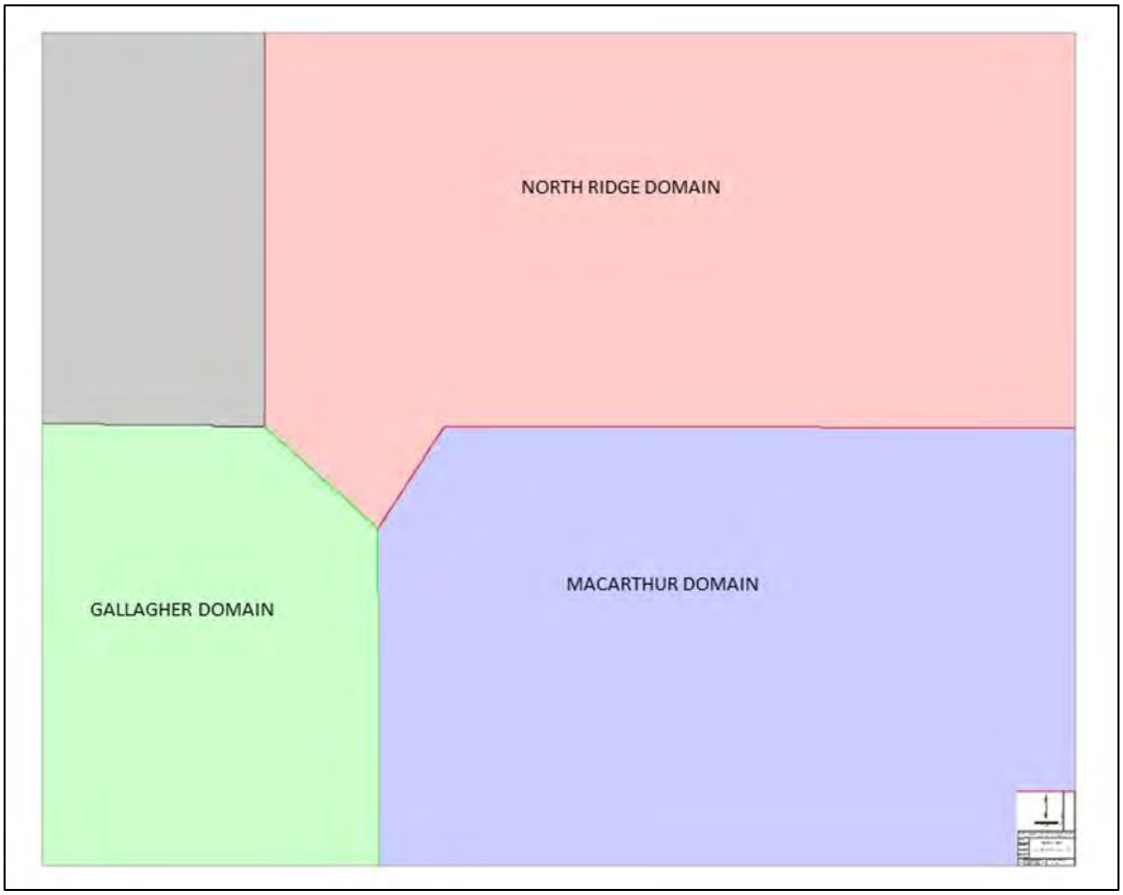
14.9.1 Model Framework

The resource model covers the areas of MacArthur Main (MacArthur pit area), North Ridge and Gallagher domains. Blocks were sized 25 feet x 25 feet x 25 feet in order to model the mineralization zones to provide a reasonable block size that could be used for open pit mine planning. The Project coordinate system is in UTM feet. Table 14-21 summarizes the size and location of the block model. Figure 14-26 illustrates the domain splits within the resource block model. The largest components of mineral resources are in the MacArthur pit area and North Ridge domains followed by the Gallagher area.

Table 14-21: MacArthur Model Size and Location, November 2021

	MacArthur UTM Feet Model – New Block Corners (November 2021)			
	Southwest	Northwest	Northeast	Southeast
Easting	996,100	996,100	1,014,200	1,014,200
Northing	14,180,800	14,195,400	14,195,400	14,180,800
Elevation Range		2,625.00	5,700.00	
No Model Rotation, Primary Axis =			0.0 degrees	
Model			724 Blocks in Easting	
Size			584 Blocks in Northing	
Block Size 25 ft x 25 ft x 25 ft high			123 Levels	

Figure 14-26: MacArthur Block Model Area and Domains



Source: IMC 2022

14.9.2 Drill Hole Database

The drill data for the MacArthur Project is a combination of core, reverse circulation (RC), air track and churn drilling. Of the combined historic and Lion CG holes numbering 766, 747 are within the block model boundaries for a total 299,043.7 feet of drilling comprising 57,410 assay intervals. A total of 55,726 intervals were assayed for total copper with only 1,019 intervals assayed for other metals. Table 14-22 is a summary of the assaying for total copper by company; only Lion CG drilling has been assayed for soluble copper (ASCu, CNCu and QLT).

Table 14-22: Summary of Assay Intervals for Total Copper by Company

	Lion CG	Anaconda	Bear Creek	Superior	USBM
No. of Intervals	42,722	11,537	60	740	667
TCu, mean	0.093	0.218	0.378	0.125	0.149
TCu, minimum	0.00	0.00	0.10	0.001	0.01
TCu, maximum	13.80	5.38	1.84	2.34	1.94

MacArthur assay grade capping was completed on total copper by oxidation zone (Leach Cap, Oxide, Mixed, Sulfide). The oxidization zone was assigned to each assay interval from the zones within the resource block model. Capping was applied to assays prior to compositing. The capped assays were composited into irregular target length 25-foot length composites that respect the mineral zone (redox) boundaries. The capping values were based on a review of cumulative frequency plots of each of the mineral zones to identify the few samples that were outliers. Table 14-23 summarizes the capping applied on the MacArthur Property.

Table 14-23: Assay Cap Levels by Oxidation Zone

Oxidization or Mineral Zone	Oxide Code	Number of Assays	Original Mean TCu%	Cap Grade TCu%	Number of Capped Intervals	Mean TCu% with Cap Grade
Leach Cap	10	8,183	0.089	1.70	1	0.089
Oxide	1	25,673	0.155	2.50	7	0.154
Mixed	2	5,836	0.158	4.00	4	0.155
Sulfide	3	14,651	0.072	2.50	12	0.071

The block model has a bench height of 25 feet and after studying drill hole composite lengths ranging from 10 to 50 feet, respecting the oxidation boundaries, a target composite length of 25 feet was selected. The basic statistics of the 25-foot irregular composites are shown in Table 14-24.

Table 14-24: Basic Statistics of 25-foot Irregular Composites for Total Copper

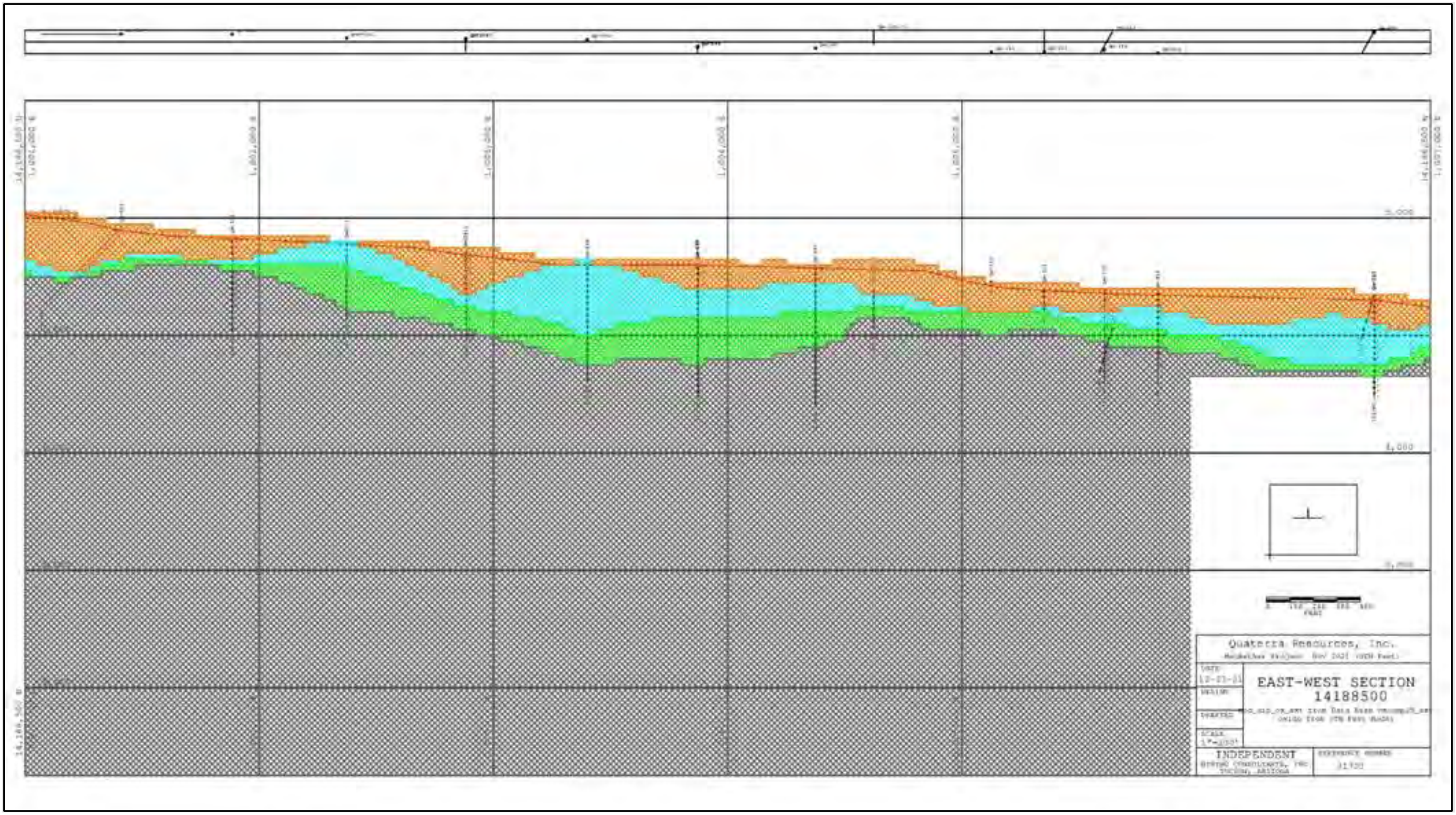
	Leach Cap	Oxide	Mixed	Sulfide
Number	1,700	5,148	1,183	2,967
Mean, TCu %	0.093	0.155	0.154	0.070
Maximum, TCu %	1.247	1.488	2.692	2.073
Minimum, TCu, %	0.004	0.004	0.002	0.001

14.9.3 Resource Block Model

The main attribute of the mineral resource model is the oxidation state of the mineralization. The mineral zones were developed as surfaces by a collaboration of the Lion CG geologic staff and IMC. There are four major mineralization zones which were assigned to the resource block model: Leach Cap (code 10), Oxide (code 1), Mixed (code 2) and Sulfide (code 3).

Each of the zones represents different minerology and different amenability to the leach process. The Leach Cap is generally quite low in copper grade which has been removed from the rock mass and re-precipitated at the original water table in the Mixed zone as secondary sulfides, typically chalcocite, covellite, ordigenite. The Oxide zone reflects oxide minerals which are readily soluble in sulfuric acid. The Mixed zone contains both primary and secondary copper minerals, transported down from the Leach Cap and re-deposited. The Sulfide zone is predominately unaltered mineralization. In addition to the changes in mineralogy within these zones, there is often a corresponding change in the grade of each zone as seen by the mean grades of the assay intervals in Table 14-23. Figure 14-27 is an east-west cross section through the block model in the Gallagher (west side) and MacArthur domains showing the mineralization zones and Figure 14-28 is a north-south cross section through the MacArthur (south) and North Ridge domains. The drill holes on the section show 25-foot composites of the oxidization zones. Additional cross sections are included in the 2022 Independent Mining Consultants, Inc. (IMC) report.

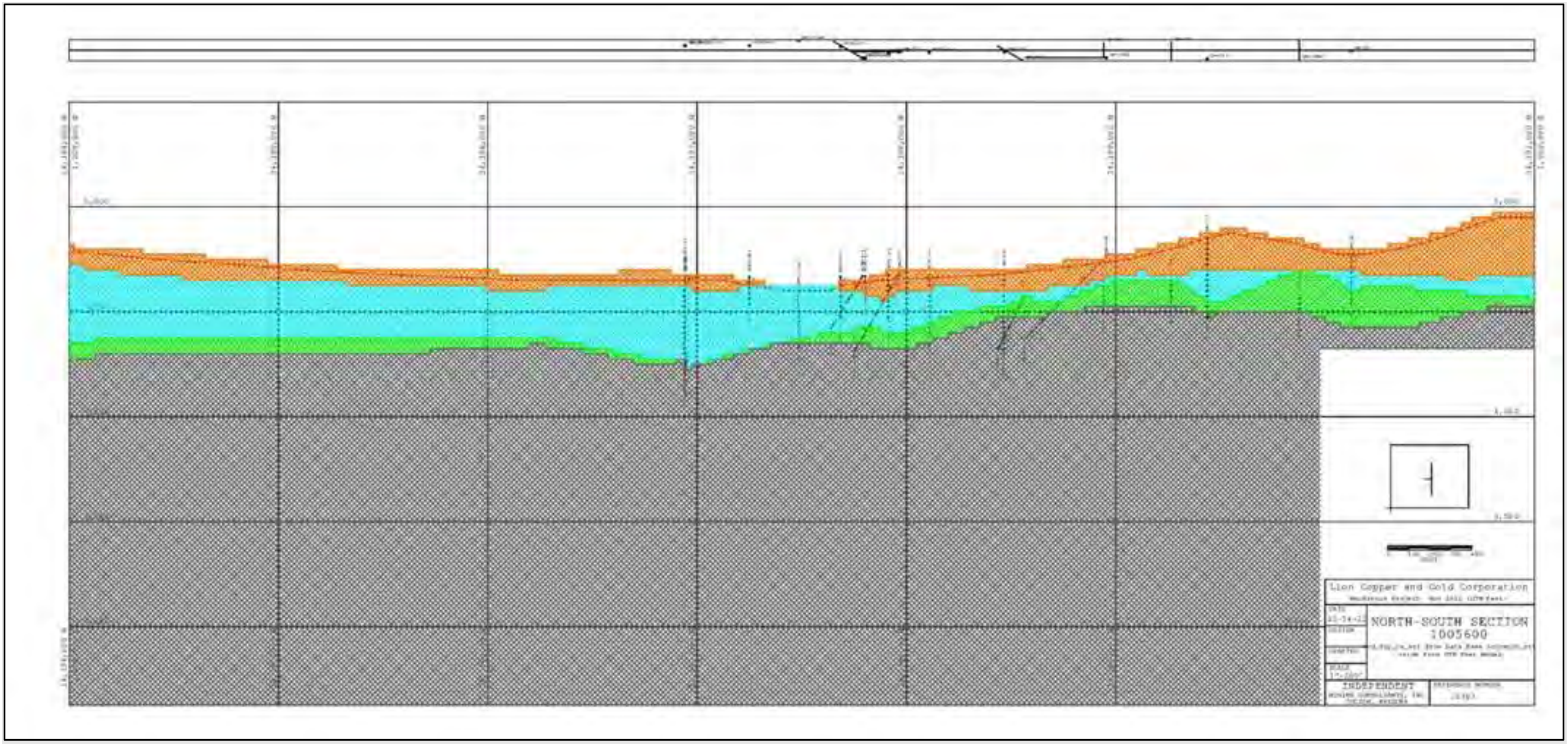
Figure 14-27: East-West Cross-Section Looking North at 14,188,500 North



Source: IMC 2022

Colors: Orange = Leach Cap, Blue = Oxide, Green=Mixed, Grey = Sulfide; Horizontal Grid is 1,000 feet

Figure 14-28: North-South Cross-Section Looking West at 1,005,600 East – Through MacArthur & North Ridge



Source: IMC 2022

Colors: Orange = Leach Cap, Blue = Oxide, Green=Mixed, Grey = Sulfide; Horizontal Grid is 1,000 feet

14.9.4 Block Model Grade Estimation

A boundary analysis was performed at the boundaries between each of the four mineralized domains and the results indicate that each domain should be estimated separately, thus all boundaries were treated as 'hard' boundaries for the estimation of grades. A study of the leach cap composites showed a population break at 0.10% total copper. The leach cap was separated into two zones using an indicator method with a 0.10% total copper discriminator.

Variograms were run for total copper in each of the mineralization domains. The intent was to provide guidance to the search orientation and search distance for the grade estimation. The 25-foot irregular composites bounded by rock type were used as input for the total copper variograms and ranges between 200 and 900 feet were obtained which support the search distances used to estimate the model grades.

Total copper grades were estimated using inverse distance techniques (ID^3) in the Oxide, Mixed, and Sulfide mineral zone domains. Leach Cap was segregated into two populations using an indicator method to address the plus 0.10% grade distribution separately from the sub 0.10% distribution in the Leached Cap with total copper grades estimated using ID^3 in each population. Indicator procedures were tested for all of the domains, but the inverse distance cubed results appear to follow the data better in the Oxide, Mixed and Sulfide zones. All of the estimation runs used a minimum of two drill hole grade composites, a maximum of 10 composites with a maximum of three composites per hole. All of the search orientations were horizontal with the exception of the deeper sulfide zone in the North Ridge domain (north of 14,190,378) where a dipped search of 30 degrees to the north connected up like mineralized zones in the area of wide spaced drilling. The search distances in each zone are:

- Leach Cap: Indicator with 0.10% TCu discriminator, 180 x 180 x 55 feet
  Grade inside higher grade zone, 180 x 180 x 55 feet (minimum composite)
  Grade outside higher grade zone 330 x 330 x 115 feet
- Oxide: 250 NS x 300 EW x 160 feet
- Mixed: 250 NS x 250 EW x 80 feet
- Sulfide: South: 200 NS x 200 EW x 180 feet
  North: 500 NS x 500 EW x 180 feet with dip 30 degrees to north

Figure 14-29 is a north-south cross section looking west at 1,005,660 east showing the total copper grades in the block model and is at the same model location as Figure 14-28.

An ordinary kriging run (OK) was completed using similar searches to the grade estimation runs and respecting the oxidation zones. The number of composites used to estimate a block grade and the standard deviation were stored in the model blocks and used as part of the criteria for assigning classification to a model block. The classification criteria used:

- Measured: Number of composites = 10 (minimum 4 holes) and standard deviation <= 0.65
- Indicated: Number of composites = 7 (minimum 3 holes) and standard deviation <= 0.94
- Inferred: Any block with an estimate for copper

14.9.5 Model Verification

Numerous tests were performed to confirm that the model is a reasonable representation of the data for the determination of mineral resources. The sections and plans from the block model were reviewed with the supporting composite data during the model assembly process.

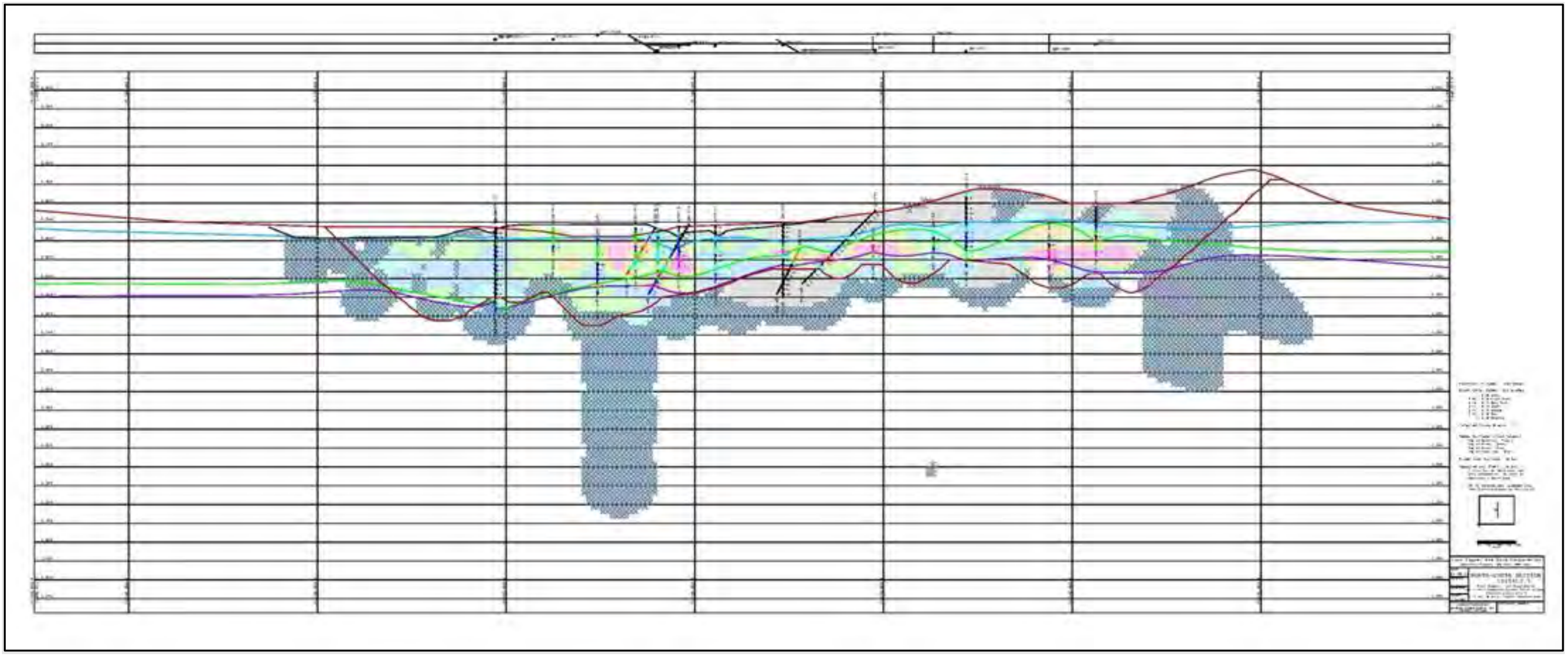
A nearest neighbor (polygon) estimate of copper was completed using the same domains and search radii that were applied to the inverse distance estimate. The comparison of the nearest neighbor and the inverse distance estimates at a zero-cut-off grade is a check designed to determine if the selected method has incorporated bias. The ID^3 estimate for the leach cap underestimates the number of blocks and grade in part because of the indication approach compared to the nearest neighbor (polygon) approach. The ID^3 estimate for the other zones (oxide, mixed and sulfide) is within 0 to 8 percents of the polygon estimate when comparing the results of number of blocks estimated times the average grade of those blocks (an approximation of contained metal).

Another test looked at how the block model grades followed the local grade changes when compared to the contained drill hole composites. A range of cut-off grades was tested for each of the mineral zones. At each cut-off, the blocks above cut-off within the model were selected. All composites within those blocks were found and compared to the average grade of the blocks. The results of this work indicate that the block model follows the data and is not overly smoothed.

14.9.6 Density Assignment to the Block Model

Density was estimated based on the density data collected by Lion CG personnel. In total there were 37 density determinations available in the assay data base, which averaged 12.40 cubic feet per short ton. Block densities were assigned based on data respecting the model variable that separates hard rock from alluvium. Hard rock material, Oxide, Mixed and Sulfide used 12.5 cubic feet per short ton while the alluvium used 14.0 cubic feet per short ton.

Figure 14-29: North-South Cross Section Looking West at 1,005,600 East (MacArthur: left, North Ridge: right)



Source: IMC 2022

The color ranges representing the TCu grades are:

< 0.06%	Grey
0.06 – 0.10%	Light Blue
0.10 – 0.15%	Dark Blue
0.15 – 0.25%	Green
0.25 – 0.35%	Orange
0.35 – 0.50%	Red
= 0.50%	Magenta

Inferred Class blocks have an X through them

Resource pit shell is shown in brown along with the topographic surface

Top of Sulfide – purple, top of Mixed – green, top of Oxide – blue, top of Leach Cap – black

14.9.7 Mineral Resources

The Mineral Resources for MacArthur are contained within a pit shell defined by the current understanding of costs and recovery of copper based on the intended recovery method of heap leaching using sulfuric acid. The MacArthur Mineral Resources meet the current CIM definitions for classified resources. It should be noted that:

> *Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.*

The copper price used to define the mineral resource pit shell is $3.75 per pound. The copper price and all costs are in U.S. dollars. The recoveries and costs are based on recent reviews and adjustments to the 2012 PEA and subsequent work on MacArthur. The sulfuric acid cost assumes an onsite acid plant. The mining costs were determined by an internal review of IMC and are felt to be valid as of the date of the IMC 2022 report. The input parameters for the definition of the pit shell using a floating cone algorithm are given in Table 14-25 and Table 14-26. The resulting resource is summarized in and Table 14-27 with the details given in Table 14-28 and Table 14-29. The cut-off grades are 0.06% TCu for all material types in the MacArthur pit area and North Ridge, and the Leach Cap, Oxide and Mixed zones in Gallagher This cut-off is at or above an internal cut-off by material type (due to variable recovery) and was selected to have a consistent cut-off for all material types. The cut-off for the Sulfide zone in Gallagher is 0.08% TCu due to the higher acid consumption and low recovery. A plot of the pit shells is shown in Figure 14-30.

Table 14-25: Inputs to Definition of Pit-Constrained Mineral Resource – Recoveries

Mineralization	Recovery of Total Copper
Leach Cap	60.0%
Oxide	71.0%
Transition	65.0%
Sulfide	40.0%

Table 14-26: Inputs to Definition of Pit-Constrained Mineral Resource – Costs

Cost Center	Unit	Cost
SXEW (no sulfuric acid)	Per Cu lb	$0.31
General & Administrative	Per Cu lb	$0.11
Cathode Transport	Per Cu lb	$0.05
Total per Cu pound cost	Per Cu lb	$0.47
Sulfuric Acid, cost	Per short ton	$63.50
Acid Consumption:		
MacArthur – North Ridge	Per short ton	30 lbs/st
Gallagher	Per short ton	50 lbs/st
MacArthur – North Ridge	Cost/st	$0.95/st
Gallagher	Cost/st	$1.59/st
Cost per heap ton:		
Heap management (doze, rip)	Per short ton	$0.30
Heap foundation and liner	Per short ton	$0.67
Mining Cost	Per total st	$1.92

Table 14-27: MacArthur– Summary of Mineral Resource

Classification	Ktons	Total Cu, %	Contained Cu Pounds x 1000
Measured	116,666	0.180	420,929
Indicated	183,665	0.158	579,479
Sum Measured+Indicated	300,331	0.167	1,000,408
Inferred	156,450	0.151	471,714

Cut-off grade: 0.06% TCu for Leach Cap, Oxide & Transition; cut-off grade for Sulfide: 0.06% for MacArthur & North Ridge, 0.08% for Gallagher. Total resource shell tonnage = 628,831 ktons

Table 14-28: Mineral Resource by Domain

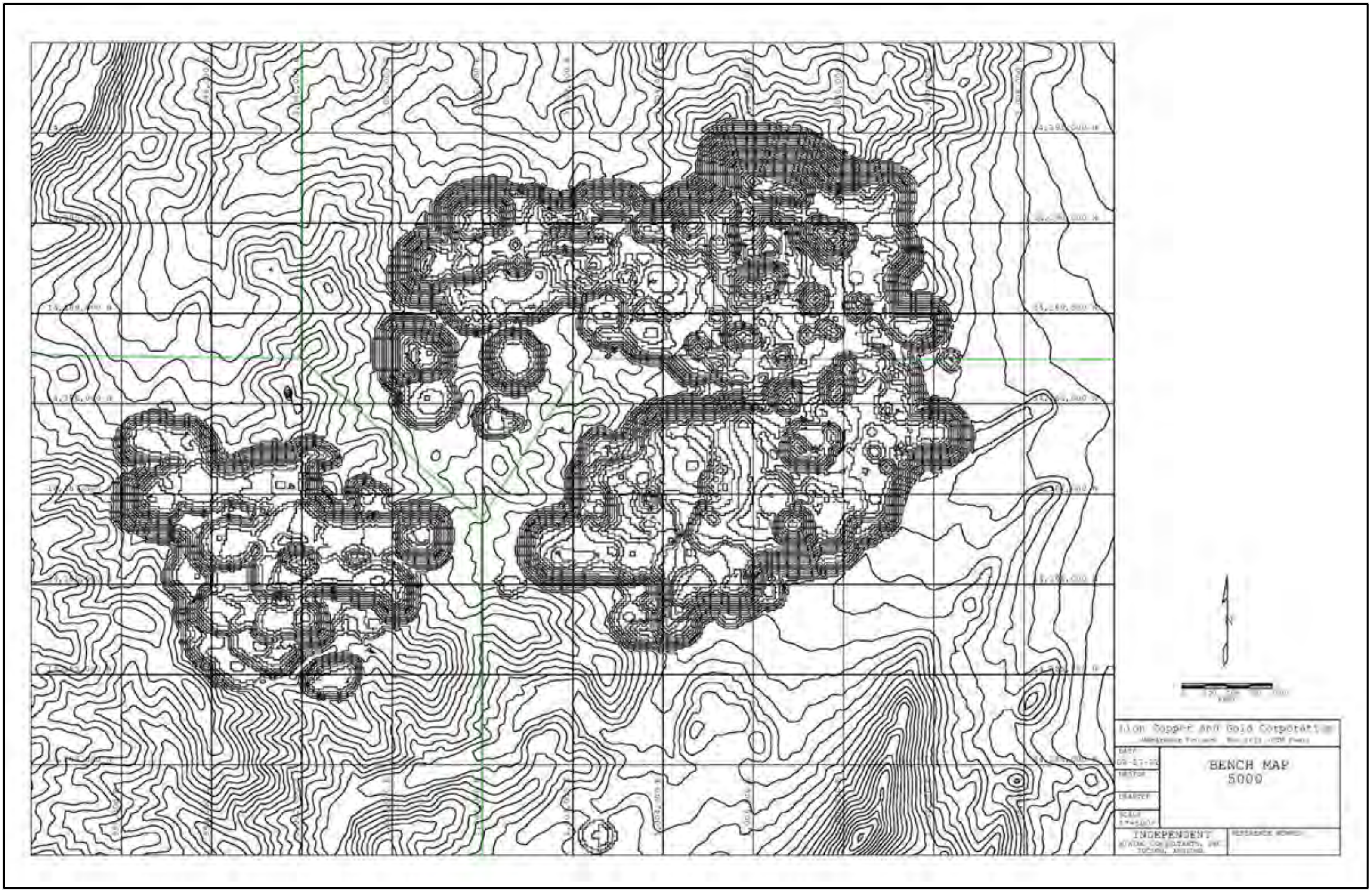
Domain	Total Copper Cut-off, %	MEASURED Ktons & Grade Above Cut-off			INDICATED Ktons & Grade Above Cut-off			MEASURED & INDICATED Ktons & Grade Above Cut-off		
		Ktons	TCu, %	Contained Cu Pounds x 1000	Ktons	TCu, %	Contained Cu Pounds x 1000	Ktons	TCu, %	Contained Cu Pounds x 1000
MacArthur	0.06	82,983	0.184	305,303	77,171	0.151	233,446	160,154	0.168	538,749
North Ridge	0.06	25,149	0.176	88,507	78,305	0.166	259,558	103,454	0.168	348,065
Gallagher	0.06, 0.08	8,534	0.159	27,119	28,189	0.153	86,475	36,723	0.155	113,594
	Total	**116,666**	**0.180**	**420,929**	**183,665**	**0.158**	**579,479**	**300,331**	**0.167**	**1,000,408**

Domain	Total Copper Cut-off, %	INFERRED Ktons & Grade Above Cut-off		
		Ktons	TCu, %	Contained Cu Pounds x 1000
MacArthur	0.06	30,815	0.158	97,490
North Ridge	0.06	62,593	0.154	192,187
Gallagher	0.06, 0.08	63,042	0.144	182,037
	Total	**156,450**	**0.151**	**471,714**

Table 14-29: Mineral Resource by Domain and Oxidation Zone

Oxidation Zone	Total Copper Cut-off, %	MEASURED Ktons & Grade Above Cut-off			INDICATED Ktons & Grade Above Cut-off			MEASURED & INDICATED Ktons & Grade Above Cut-off			INFERRED Ktons & Grade Above Cut-off		
		Ktons	Total Cu, %	Contained Pounds x 1000	Ktons	Total Cu, %	Contained Pounds x 1000	Ktons	Total Cu, %	Contained Pounds x 1000	Ktons	Total Cu, %	Contained Pounds x 1000
MacArthur													
Leach Cap	0.06	5,169	0.140	14,473	4,820	0.128	12,339	9,989	0.134	26,812	3,349	0.129	8,640
Oxide	0.06	74,542	0.187	278,787	62,903	0.149	187,451	137,445	0.170	466,238	16,023	0.138	44,223
Mixed	0.06	2,053	0.190	7,801	6,418	0.181	23,233	8,471	0.183	31,034	8,169	0.197	32,186
Sulfide	0.06	1,219	0.174	4,242	3,030	0.172	10,423	4,249	0.173	14,665	3,274	0.190	12,441
Total		**82,983**	**0.184**	**305,303**	**77,171**	**0.151**	**233,446**	**160,154**	**0.168**	**538,749**	**30,815**	**0.158**	**97,490**
North Ridge													
Leach Cap	0.06	1,813	0.097	3,517	3,798	0.094	7,140	5,611	0.095	10,657	11,209	0.075	16,814
Oxide	0.06	13,699	0.139	38,083	39,485	0.132	104,240	53,184	0.134	142,323	32,791	0.148	97,061
Mixed	0.06	8,208	0.245	40,219	26,554	0.213	113,120	34,762	0.221	153,339	13,050	0.210	54,810
Sulfide	0.06	1,429	0.234	6,688	8,468	0.207	35,058	9,897	0.211	41,746	5,543	0.212	23,502
Total		**25,149**	**0.176**	**88,507**	**78,305**	**0.166**	**259,558**	**103,454**	**0.168**	**348,065**	**62,593**	**0.154**	**192,187**
Gallagher													
Leach Cap	0.06	9	0.065	12	1	0.063	1	10	0.065	13	4,021	0.075	6,032
Oxide	0.06	8,416	0.158	26,595	27,479	0.152	83,536	35,895	0.153	110,131	56,711	0.148	167,865
Mixed	0.06	0		0	149	0.227	676	149	0.227	676	2,064	0.173	7,141
Sulfide	0.08	109	0.235	512	560	0.202	2,262	669	0.207	2,774	246	0.203	999
Total		**8,534**	**0.159**	**27,119**	**28,189**	**0.153**	**86,475**	**36,723**	**0.155**	**113,594**	**63,042**	**0.144**	**182,037**
Total													
Leach Cap	0.06	6,991	0.129	18,002	8,619	0.113	19,480	15,610	0.120	37,482	18,579	0.085	31,486
Oxide	0.06	96,657	0.178	343,465	129,867	0.144	375,227	226,524	0.159	718,692	105,525	0.146	309,149
Mixed	0.06	10,261	0.234	48,020	33,121	0.207	137,029	43,382	0.213	185,049	23,283	0.202	94,137
Sulfide	0.06,0.08	2,757	0.208	11,442	12,058	0.198	47,743	14,815	0.200	59,185	9,063	0.204	36,942
Total		**116,666**	**0.180**	**420,929**	**183,665**	**0.158**	**579,479**	**300,331**	**0.167**	**1,000,408**	**156,450**	**0.151**	**471,714**

Figure 14-30: Mineral Resource Pit Shell



Source: IMC 2022

Green lines separate the domains. The MacArthur pit area lies to the southeast, North Ridge to the north/northeast and Gallagher to the west.

14.10 Factors That May Affect the Mineral Resource Estimate

Factors that may affect the Mineral Resource estimates include:

- metal price and exchange rate assumptions
- changes to the assumptions used to generate the copper grade cut-off grade
- changes in local interpretations of mineralization geometry and continuity of mineralized zones
- changes to geological and mineralization shape and geological and grade continuity assumptions
- density and domain assignments
- changes to geotechnical, mining, and metallurgical recovery assumptions
- change to the input and design parameter assumptions that pertain to the conceptual pit and stope designs constraining the mineral resources.
- assumptions as to the continued ability to access the site, retain mineral and surface rights titles, maintain environment and other regulatory permits, and maintain the social license to operate.

15 MINERAL RESERVE ESTIMATES

The Yerington Copper Project is at a PEA level of study and therefore currently has no reserves.

16 MINING METHODS

16.1 Introduction

The Yerington Copper Project is located adjacent to the city of Yerington, Nevada. Historic open pit mining has occurred both at the Yerington pit as well as at MacArthur. It has been established that there are still significant open pit mineral resources in the area.

The Mineral Resources for the Project include the Yerington deposit, W-3 stockpile, VLT stockpile and the MacArthur deposits (MacArthur, Gallagher, and MacArthur North). AGP's opinion is that with current metal pricing levels, knowledge of the mineralization and previous mining activities, open pit mining offers the most reasonable approach for development of the deposits. This is based on the size of the resource, tenor of the grade, grade distribution and proximity to topography for the deposits.

The mine schedule for open pit mining totals 450.4 Mt of heap leach feed grading 0.21% copper over a processing life of slightly more than 12 years. Open pit waste tonnages from the various areas total 136.8 Mt and will be placed into waste storage areas adjacent to the open pits. The overall open pit strip ratio is 0.30:1 (waste: feed).

Two heap leach facilities will be used to provide copper solution for the SXEW facility. One process stream will utilize the Nuton process for the leaching of sulfide feed from the Yerington pit. The other process stream will employ conventional oxide copper leaching technology with a combination of run of mine (ROM) material and sized material. The Nuton facility will have a peak feed rate of 17 Mtpa through a crushing plant. The Yerington pit is the only supply of sulfide material for the PEA.

The oxide material from MacArthur will be sized at site then conveyed, agglomerated, and stacked at a facility near the Yerington residual piles from past mining. Peak capacity of the MacArthur sizing facility will be 25 Mtpa. Oxide materials from the Yerington pit, W-3 and VLT stockpiles will be placed in the same HLP as the MacArthur material.

The current mine plan includes minimal prestripping as the bottom of the existing pit still contains material suitable for placement on a heap leach pile with conventional leaching and use of the Nuton process for the sulfide materials.

The open pit mining starts in Year 1 and continues uninterrupted until early in Year 12.

16.2 Mining Geotechnical

16.2.1 Yerington pit Area

AGP reviewed previous geotechnical work completed for the Yerington pit, focused on two completed reports: Seegmiller (1979) and Golder (2008).

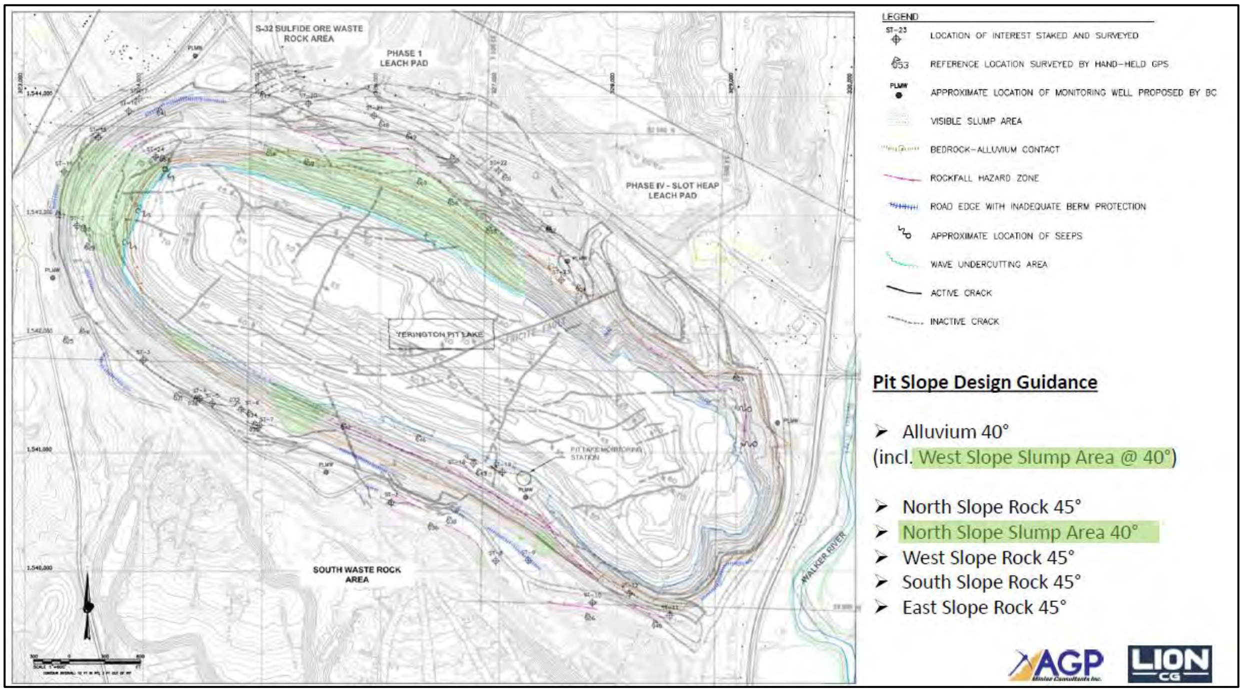
Previous mining provided guidance on some initial wall slope parameters for use at the Yerington pit. These slopes are based on the same 25-foot-high benches to match existing bench levels.

The western end of the pit "slumped" in the thicker, weaker alluvial sands above the quartz-monzonite intrusive. The alluvial material is present in the eastern end of the pit but at thickness in the order of 10 to 20 feet and not 300 feet as is present in the western end. The western area has a flatter slope applied to it for mine design purposes.

The pit slopes appear generally stable after decades of exposure and infilling which has not caused major issues.

Figure 16-1 shows the Yerington pit Slope guidance and outlines the areas of slumping and its corresponding reduced wall slope angles.

Figure 16-1: Yerington pit Slope Design Guidance



Source: AGP 2023 (Modified Golder 2008)

16.2.2 MacArthur, W-3 and VLT

No geotechnical investigations were completed for any of the MacArthur pit areas considered in the PEA. A default inter-ramp angle of 45 degrees was applied with no consideration of ramps in the walls due to the expected pit configuration which facilitates daylight access.

Default slopes of 40 degrees overall were used for the W-3 and VLT stockpile areas.

16.2.3 Pit Slope Parameters

Table 16-1 shows the overall slope angles applied for the resource constraining pit shells and pit optimizations in the Yerington Copper Project PEA by area.

Table 16-1: LG Shell Slope Parameters (Overall Angles)

Rock Type	Yerington	W-3	VLT	MacArthur
Alluvium	40	-	-	-
Oxide (Slump Area)	40	-	-	-
Oxide (Outside Slump Area)	45	-	-	-
Sulfides	42	-	-	-
Default	-	40	40	45

The Yerington Sulfide zone was modified from a 45-degree inter-ramp angle to include a ramp width of 93 feet to determine the overall angle. All other Yerington slopes were not modified to consider a ramp in the overall angle.

16.3 Open Pit

16.3.1 Geologic Model Importation

The 2023 resource estimates for the Yerington, W-3 and VLT deposits were created using Hexagon's MinePlan software for mineralization domains, estimation, and block modelling. The block model was provided in the MinePlan format for open pit mine engineering purposes.

The MacArthur deposits were also created in MinePlan but exported in CSV format and a mining model was then created for open pit planning.

Framework details of the open pit block models by area are provided in Table 16-2. The final mine planning model items are displayed in Table 16-3 to Table 16-6.

The mining model created by AGP in Hexagon MinePlan® includes additional items for mine planning purposes. MinePlan® was used for the mining portion of the PEA, utilizing their Lerchs Grossman (LG) shell generation, pit and dump design and mine scheduling tools.

Measured, Indicated and Inferred Mineral Resources were used in the PEA. There is no certainty the assumptions utilized in the PEA will be realized. Inferred mineral resources are presently considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as reserves. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

Table 16-2: Open Pit Model Framework

Framework Description	Yerington	W-3	VLT	MacArthur
MinePlan® file 10 (control file)	YER10.dat	W-310.dat	vlt10.dat	mcft10.dat
MinePlan® file 15 (model file)	Yer15.m01	W-315.dat	vlt15.dat	mcft15.mp1
X origin (m)	2446400	2446400	2446400	996100
Y origin (m)	14661000	14661000	14670500	14180800
Z origin (m) (max)	2900	2900	2900	2625
Rotation (degrees clockwise)	0	0	0	0
Number of blocks in X direction	360	360	140	724
Number of blocks in Y direction	320	392	180	584
Number of blocks in Z direction	100	100	100	123
X block size (m)	25	25	25	25
Y block size (m)	25	25	25	25
Z block size (m)	25	25	25	25

Table 16-3: Open Pit Model Item Descriptions for Yerington

Field Name	Min	Max	Precision	Units	Comments
TOPO	0	100	0.01	%	Percent below topographic surface
ROCK	0	100	1	-	Rock code where 21=alluvium, 31=oxides,41=sulfides
TCU	0	10	0	%	Total Cu% OK (using filtered data set)
TF	0	100	0.01	cf/ton	Tonnage factor, 12.62
RCLS	0	10	1	-	Smoothed resource classification, 1,2,3 (4=undefined)
CLASS	0	500	1	-	Smoothed resource classification (RCLS * 100 + ROCK1), 131,141,231,241,331,341 (499=undefined)
RKTMP	0	99	1	-	Coded expanded rock model values using trade-off surfaces (expanded 2000ft)
RSCO2	-1	1	1	-	mining restriction, road only (-1=no mining, 1=mining allowed)
VLT1	0	9999	0.01	US$/t	Value per ton for pit shell run 1 (Nuton PC/GA=7.59/t, restricted by road, but not Weed Height), trade-off params
VLB1	-9999	99999	1	US$	Value per block for pit shell run 1 (Nuton PC/GA=7.59/t, restricted by road, but not Weed Height), trade-off params
SLUMP	0	1	1	-	Slump areas near north wall in oxide (0=no slumping, 1=slumping)
SLP	0	9	1	-	Slope code where 1=alluvium, 2= oxides with slumping, 3=oxides outside slump area, 4= sulfides
MCWA	0	9	0.01	US$/t	Mining cost of waste
MCOX	0	9	0.01	US$/t	Mining cost of oxide ore
MSCU	0	9	0.01	US$/t	Mining cost of sulfide ore
VLT2	0	9999	0.01	US$/t	Value per ton for pit shell run 2 (restricted by road, but not Weed Height), PEA parameters
VLB2	-9999	99999	1	US$	Value per block for pit shell run 2 (restricted by road, but not Weed Height), PEA parameters
LBSCU	0	99999999	0.1	lbs	Copper Pound calculation per block
ACCOS	0	100000	0.01	US$/t	Acid cost calculation per ton

Table 16-4: Open Pit Model Item Descriptions for W-3

Field Name	Min	Max	Precision	Units	Comments
TOPO	0	100	0.01	%	Percent below topographic surface
TCU	0	100	0.0001	%	Not used
ZONE	0	100	1	-	Not used
CODE	0	100	1	-	3 used for calculation
CUNN	0	100	0.0001	%	NN grade model
CUID	0	100	0.0001	%	IDW-3 grade model
TEMP3	0	1000	1	-	Temporal code used for calculation
TEMP4	0	100	1	-	Temporal code used for calculation
RCLS	0	10	1	-	Smoothed resource classification 3 Inferred (DID<=400ft), 4 Potential Resource (-1=undefined)
DNN	0	1000	0.01	ft	Distance to nearest composite (NN)
DID	0	1000	0.01	ft	Distance to nearest composite (IDW-3)
DOK	0	1000	0.01	-	Not used
NCMP	0	100	1	-	Number of composites used (IDW-3)
NDDH	0	100	1	-	Number of drill holes used (IDW-3)
AVGD	0	1000	0.1	ft	Average distance of composites used (IDW-3)
TF	0	20	0.01	cf/ton	Tonnages Factor, 16.67
MINE	0	1	1	-	Used for calculation - LG calculation 1 mine 0 air
LBSCU	0	99999999	0.01	lbs	Copper Pound calculation per block
ACCOS	0	100000	0.01	US$/t	Acid cost calculation per tons

Table 16-5: Open Pit Model Item Descriptions for VLT

Field Name	Min	Max	Precision	Units	Comments
TOPO	0	100	0.01	%	Percent below topographic surface
TCU	0	100	0.0001	%	IDW-3 estimated grade. % Cu
ZONE	0	100	1	-	Not used
VLT	0	100	1	-	Not used
TCUC	0	100	0.0001	%	Not used
ASCU	0	100	0.0001	%	IDW-3 grade model
RCLS	0	10	1	-	Smoothed resource classification 3 Inferred
DNN	0	1000	0.01	ft	Distance to nearest composite (NN)
DID	0	1000	0.01	ft	Distance to nearest composite (IDW-3)
DOK	0	1000	0.01	-	Not used
NCMP	0	100	1	-	Number of composites used (IDW-3)
NDDH	0	100	1	-	Number of drill holes used (IDW-3)
AVGD	0	1000	0.1	ft	Average distance of composites used (IDW-3)
TF	0	20	0.01	cf/ton	Tonnages Factor, 16.67
MRE	0	100	1	ft	Block below topo within 300ft
WCU	0	100	0.0001	ft	Distance to nearest composite (IDW-3)
TEMP3	0	1000	0.01	-	Not used
CUCNN	0	100	0.0001	%	NN estimated grade, % Cu
MINE	0	2	1	-	Used for calculation - LG calculation 1 mine 0 air
LBSCU	0	99999	0.1	lbs	Copper Pound calculation per block
ACCOS	0	9999990	0.1	US$/t	Acid cost calculation per tons
VLT2	0	99999	0.1	US$/t	Not used
VLB	-999999	999990	1	US$	Not used

Table 16-6: Open Pit Model Item Descriptions for MacArthur

Field Name	Min	Max	Precision	Units	Comments
VTOPO	0	100	0.01	%	Percent below Original topographic surface
MTOPO	0	100	0.01	%	Percent below Mined topographic surface
KTONS	0	2	0.001	Ktons	KTONS is short tons x 1000 per block (no topo fraction) based on 12.5 cuft/ton for rock and 14.0 cuft/ton for alluvium.
OXIDE	0	100	1	-	Oxide classification 10=leach cap, 1=oxide, 2=mixed, 3-sulfide
LITH	0	350	1	-	Lithology
CLASS	0	5	1	-	Classification 0=undefined, 1=measured, 2=indicated, 3=inferred
CUPDP	0	3	0.001	%	Total Copper grade model
DOMIN	0	5	1	-	Domain 1=MacArthur, 2=North Area, 3 = Gallager
PSHEL	0	5	1	-	Pit shell number
TF	0	15	0.01	cf/ton	TF is tonnage factor. 12.5 cuft/ton for rock and 14.0 cuft/ton for alluvium.
TAG	0	1	1	-	flag for MSOPIT runs
ROUTE	0	10	1	-	Number of drill holes used (IDW-3)
BKVL	-100000	10000000	1	US$	Block value
NVLT1	0	1000	0.01	US$/t	Net value per ton
NVLT2	0	1000	0.01	US$/t	Net value per ton
REC	0	100	0.01	%	Process recovery Net value per ton
LBSCU	0	100000	0.1	lbs	Copper Pound calculation per block
ACCOS	0	100000	0.01	US$/t	Acid cost calculation per tons

16.3.2 Economic Pit Shell Development

The open pit ultimate size and phasing opportunities were completed with various input parameters including estimates of the expected mining, processing, and G&A costs, as well as metallurgical recoveries, pit slopes and reasonable long-term metal price assumptions. AGP worked together with Lion CG and the study team personnel to select appropriate operating cost parameters for the open pits.

Wall slopes for pit optimization were based on the assessment discussed in Section 16.2.

The mining costs are estimates based on cost estimates for equipment from vendors specific to the Yerington Copper Project and previous studies completed by AGP. The costs represent a base cost from the pit edge and an incremental cost below the pit elevation for the Yerington pit, but a fixed average cost for the other pit areas due to their geometry being less influenced by the depth of the potential pit. Mill feed material is sent to separate destinations and the costs reflect that. Process costs by feed type were developed jointly with the Lion CG team and the Nuton team.

The parameters used for pit shell generation are shown in Table 16-7. The mining cost estimates are based on the use of 100-ton trucks using an approximate waste dump configuration to determine incremental hauls for mill feed and waste.

Total copper grades are used in the revenue calculations with the recoveries applied to them. The recovery assumptions are based on the process flow sheet the feed material will be subjected to on the heap. Copper cathode is produced from all process flowsheets.

For block valuation, an NSR value ($/t) was determined for every block and used with the Lerchs-Grossman routine within MinePlan. The cut-offs used were based on the block value but equated to the copper cut-off shown in Table 16-7. These were used for the pit design process also.

Table 16-7: Economic Pit Shell Parameters by Area

Description		Units	Yerington	W-3	VLT	MacArthur
Resource Model						
	Resource class		M+I+I	M+I+I	M+I+I	M+I+I
	Block/Bench Height	ft	25	25	25	25
Metal Prices						
	Cu	US$/lb	3.75	3.75	3.75	3.50
Royalty						
	Royalty	%	2.5	2.5	2.5	2.5
Payable Metal and Deductions						
	Cu Payable	%	98	98	98	98
	Cathode Trucking Cost	US$/ton	30	30	30	30
	Cathode Port Cost	US$/ton	5	5	5	5
	Cathode Shipping Cost	US$/ton	30	30	30	30
Net Metal Price Calculation						
	Cu Payable	%	98	98	98	98
	Cathode Trucking Cost	US$/lb	0.015	0.015	0.015	0.015

Description	Units	Yerington	W-3	VLT	MacArthur
Cathode Port Cost	US$/lb	0.003	0.003	0.003	0.003
Cathode Shipping Cost	US$/lb	0.015	0.015	0.015	0.015
Total Transportation Cost	US$/lb	0.033	0.033	0.033	0.033
Subtotal Copper Price	US$/lb	3.64	3.64	3.64	3.40
Less Royalty	US$/lb	0.09	0.09	0.09	0.00
Net Copper Price	US$/lb	**3.55**	**3.55**	**3.55**	**3.40**
Process Recoveries					
Oxide – ROM	%	70	70	70	70
Transition	%	50	50	50	50
Sulfide – Non-Nuton	%	40	40	40	40
Sulfide - Nuton	%	75	75	75	82
Mining Cost					
Base Elevation	feet	4225	-	-	-
Waste Base Rate	US/t moved	2.53	1.80	1.75	2.18
Oxide Feed	US/t moved	2.49	1.80	1.72	2.18
Sulfide Feed	US/t moved	2.22	1.80	2.22	2.18
Incremental Rate Below Base Elevation					
Waste Base Rate	US/t moved	0.027	-	-	-
Oxide Feed	US/t moved	0.027	-	-	-
Sulfide Feed	US/t moved	0.024	-	-	-
Processing and G&A					
Oxide – ROM	US$/t feed	1.65	1.65	1.65	2.54
Transition – ROM	US$/t feed	1.65	1.65	1.65	2.54
Sulfides - Nuton	US$/t feed	7.21	7.21	7.21	7.09
G&A Cost	US$/t feed	0.49	0.49	0.49	0.50
Process + G&A					
Oxide – ROM	US$/t feed	2.14	2.14	2.14	3.04
Transition – ROM	US$/t feed	2.14	2.14	2.14	3.04
Sulfides - Nuton	US$/t feed	7.70	7.70	7.70	7.59
Marginal Cut-off Grades					
Oxide – ROM	% Copper	0.043	0.043	0.043	0.046
Transition – ROM	% Copper	0.060	0.060	0.060	0.065
Sulfides - Nuton	% Copper	0.145	0.145	0.145	0.155

Pit optimization shells were completed for each area. These were plotted to determine the best shell for pit design purposes and also to help in phase determination. The plot of pit profit versus copper price for the Yerington pit is displayed in Figure 16-2 and illustrates various break points in the pit shells.

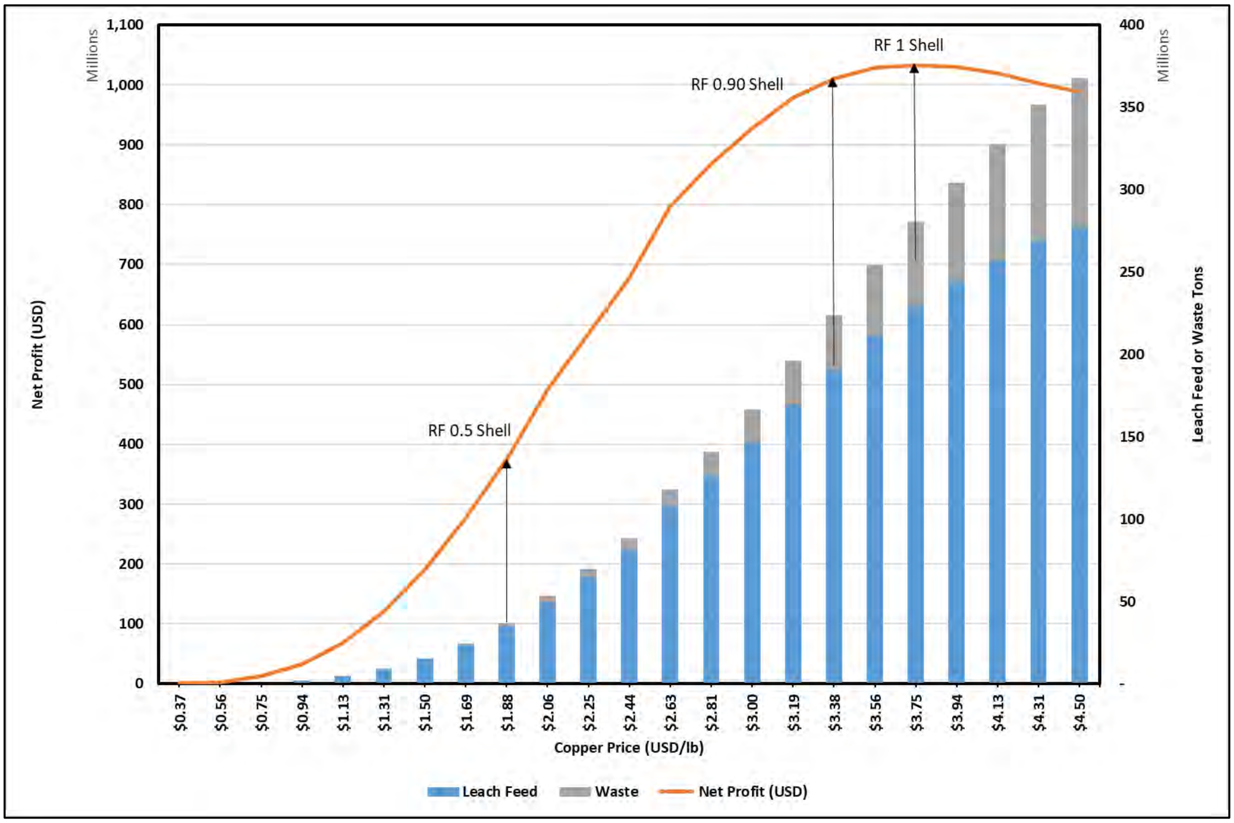
A restriction was placed on the pit optimization run so that pit shells were not expanded to the east past the highway into close proximity with the Walker River.

There is a steady increase in value and size of the pit shell as the copper price increases, while very little waste is mined in the lower copper price pits. A total of 1.8 million tons of waste is required to move with the revenue factor (RF) = 0.5 pit shell ($1.88/lb copper). This refers to the copper price being 50% of the base price of $3.75/lb. That pit shell mines 3% of the RF=1 pit waste tonnage but contains 36% of the full RF=1 pit value. This pit shell was selected for the initial two phases to avoid having to mine the existing wall slopes other than remedial cleaning.

The next breakpoint in the curve at RF=0.9 ($3.38/lb copper) is where 98% of the RF=1 pit revenue is achieved but with the need to only move 64% of the waste material. This was selected as the ultimate pit shell for design purposes.

Further subdividing of the pit between those two shells was completed based on access considerations rather than specific economic break points.

Figure 16-2: Yerington Profit vs. Price by Pit Shell

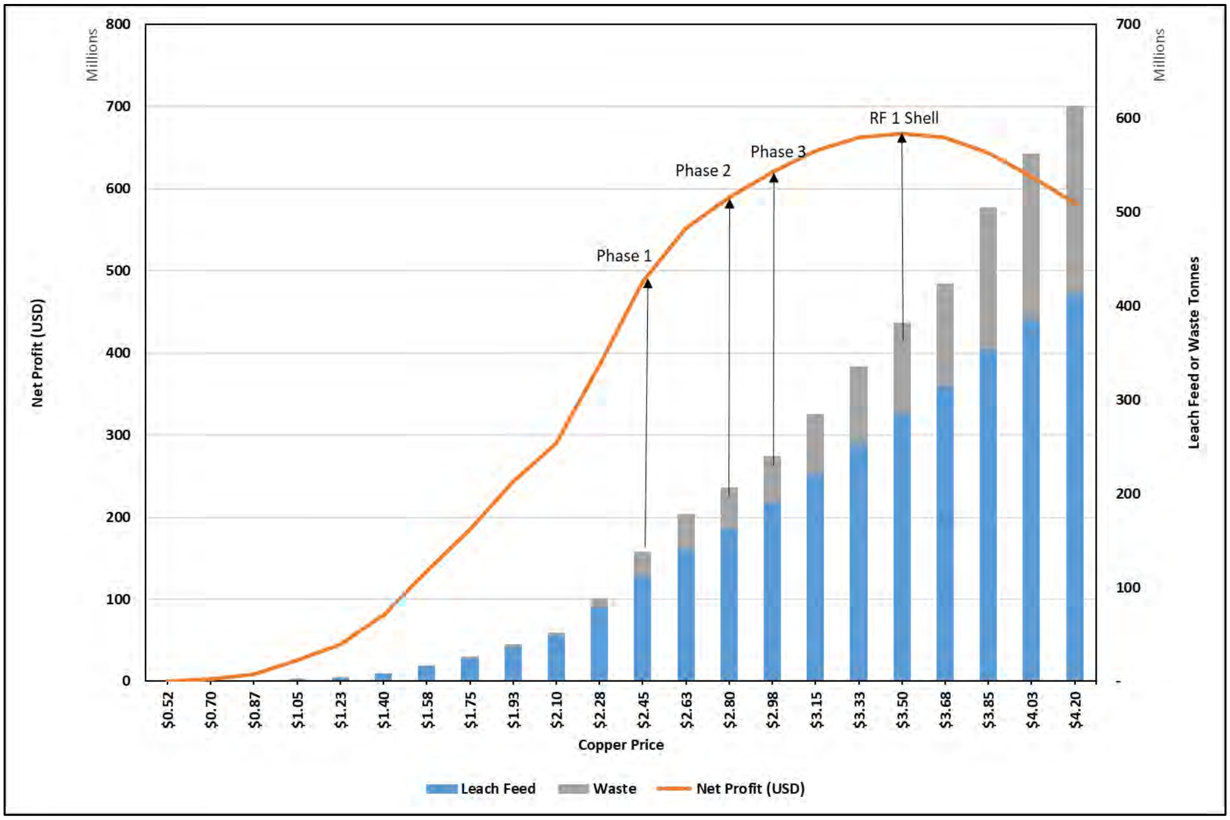


Source: AGP 2023

For the W-3 and VLT areas, pits were generated but the RF=1 pits were selected.

Pit optimization for MacArthur was completed in the same manner. Various pits were examined from a phasing perspective but in the end the RF=0.85 pit was selected as a single phase (Figure 16-3). This shell was used for all three areas in MacArthur for the designs. It represents 93% of the revenue with 51% of the waste at a copper price of $2.98/lb.

Figure 16-3: MacArthur Profit vs Price by Pit Shell



Source: AGP 2023

16.3.3 Dilution

The provided resource models are in a whole block format. A whole block model means that for any given block, it is routed as either mill feed or waste. The block size within each of the models was 25 ft by 25 ft in plan, and 25 ft high. The resource grade model includes some internal dilution, where the grade from the assays was interpolated over the full volume of the block to arrive at a diluted smooth block grade.

The contacts between feed and waste are transitional, typical of copper projects. For this PEA, dilution has been assumed to be equal to the feed loss from mining. Therefore, no additional dilution has been included in the tonnages in the mine designs.

16.3.4 Pit Design

The pit designs vary by area. For Yerington, a multi-phase approach was developed to allow the mining of the first two phases within the current wall slopes. This is to provide initial feed material while the sides of the pit are pushed back to allow the overall pit to go deeper than previously mined.

For the W-3 and VLT areas, the pits are designed to mine the value material while leaving waste material in place.

MacArthur pit designs are single phase but are composed of different areas. The Gallagher and North Area pits are smaller in size and do not afford room for phasing. The MacArthur Area has already been opened with previous mining and mining a larger area allows for efficient mining to occur, helping to keep the mining cost down.

Phase tonnages and grades are displayed in Table 16-8.

Table 16-8: Pit Phase Tonnages and Grades

Phase	Oxide (Mt)	Cu (%)	Sulfide (Mt)	Cu (%)	Waste (Mt)	Total (Mt)	Strip Ratio (w: f)
Yerington							
Phase 1	2.5	0.33	2.5	0.25	0.4	5.4	0.08
Phase 2	-	-	2.3	0.43	-	2.3	-
Phase 3	33.8	0.22	111.3	0.29	25.7	170.8	0.18
Phase 4	19.3	0.18	32.3	0.27	52.2	103.7	1.01
Subtotal Yerington	**55.6**	**0.21**	**148.5**	**0.29**	**78.2**	**282.3**	**0.38**
W-3	13.6	0.11	-	-	-	13.6	-
VLT	28.4	0.10	-	-	-	28.4	-
MacArthur							
MacArthur	120.4	0.19	-	-	17.1	137.5	0.14
Gallagher	45.8	0.18	-	-	17.7	63.5	0.39
North Area	38.0	0.19	-	-	23.8	61.8	0.63
Subtotal MacArthur	**204.2**	**0.18**	**-**	**-**	**58.6**	**262.8**	**0.29**
Total Pits	**301.9**	**0.18**	**148.5**	**0.29**	**136.8**	**587.2**	**0.30**

Contained within the waste for MacArthur is 1.3 million tons of sulfide material grading 0.33% copper. This is stored in a separate portion of the waste pile that may allow it to be processed with Nuton after metallurgical testing is completed in later stages of study.

Geotechnical parameters discussed in Section 16.2 were applied to pit designs developed. Ramp widths sufficient for 100-ton mining trucks (93 feet) have also been included where needed. The design criteria used is shown in Table 16-9.

Table 16-9: Pit Slope Design Criteria

Pit Area	Inter-ramp Angle (degrees)	Bench Face Angle (degrees)	Bench Height (ft)	Height Between Berms (ft)	Berm Width (ft)
Yerington - Alluvium	40	70	25	50	41.4
Yerington – Oxides Slump areas	40	70	25	50	41.4
Yerington – Oxides out of Slump areas	45	70	25	50	31.8
Yerington - Sulfides	45	70	25	50	31.8
W-3	45	70	25	25	20.7
VLT	45	70	25	25	20.7
MacArthur	45	70	25	50	31.8
Gallagher	45	70	25	50	31.8
North Area	45	70	25	50	31.8

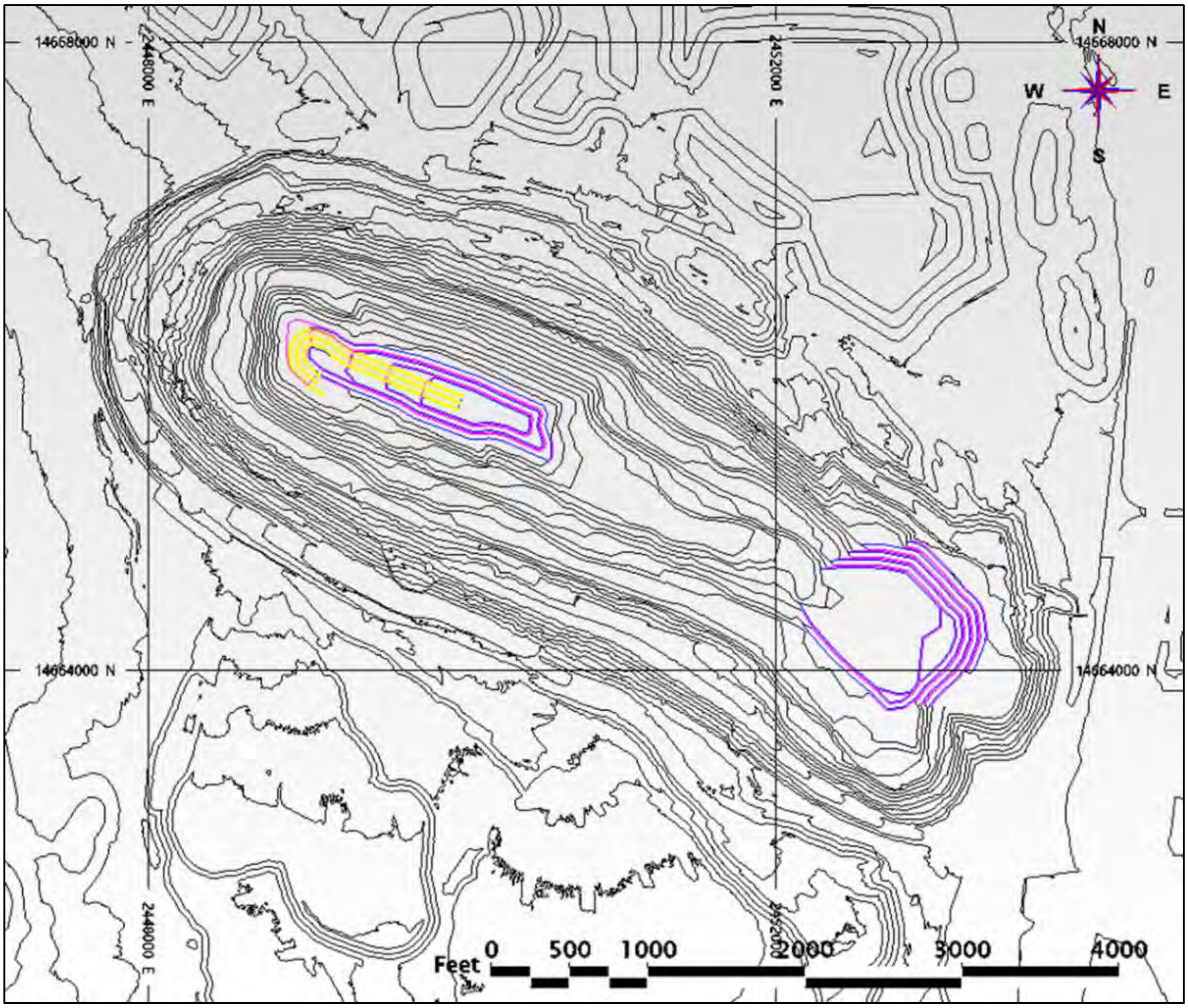
16.3.5 Yerington Phase 1 and 2

The first phases in the Yerington pit are within the current pit footprint wall slopes and will provide feed material to ramp up the Nuton process and provide value from oxide. The phases are designed to follow the water level down as the current Pit Lake is dewatered.

Phase 1 is predominantly oxide material while Phase 2 is primarily sulfide. The previous ramp system will be rehabilitated and used for these phases while the side slopes are being mined in Phase 3.

The designs for Phases 1 and 2 are shown in Figure 16-4.

Figure 16-4: Yerington Phase 1 and 2 Designs

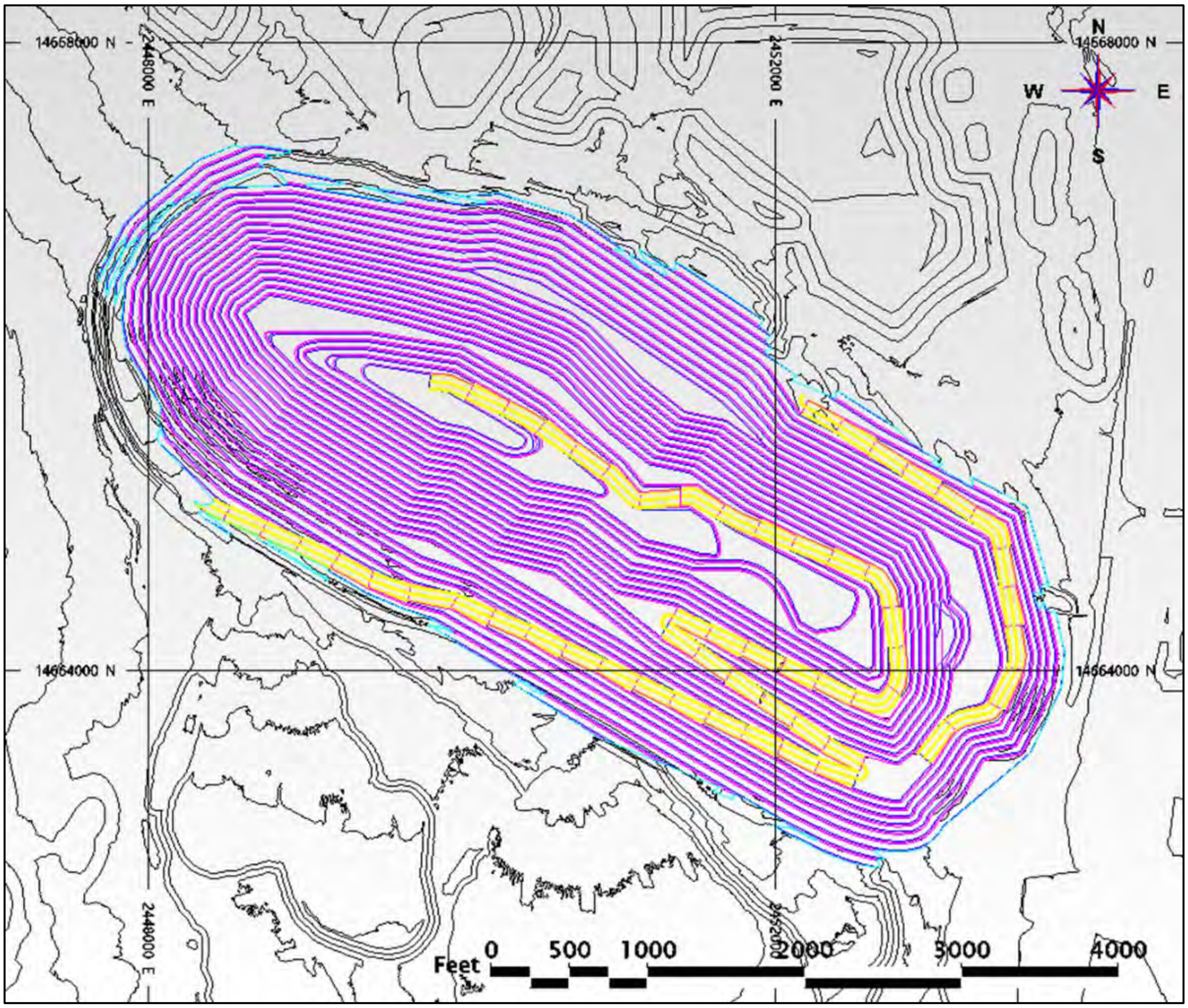


Source: AGP 2023

16.3.6 Yerington Phase 3

Phase 3 is the largest of the Yerington phases and the predominant source of sulfide feed material for Nuton. This is also the phase where new access ramps are developed. The design provides for leach feed access to the crusher on the northeast side and waste access on the western side. The design is shown in Figure 16-5.

Figure 16-5: Yerington Phase 3 Design



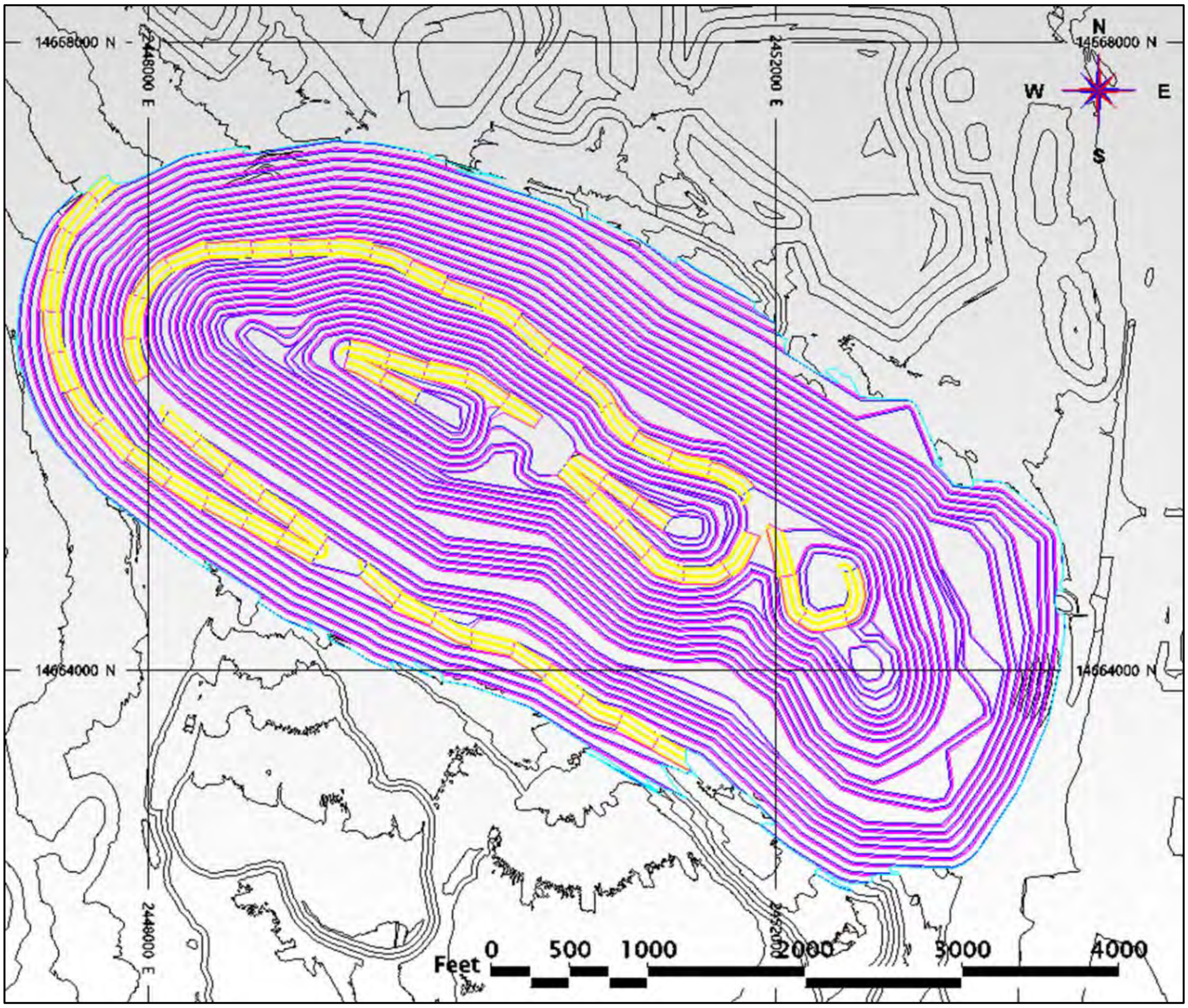
Source: AGP 2023

16.3.7 Yerington Phase 4

Phase 4 drives deeper in the center and western ends of the pit. To do this the pit wall is trimmed with the final push on the southeast side completed. Doing this cuts the access road on the northeast side to allow the pit to go deeper in the eastern end. Feed access to the crusher is along the western slope and waste access is on the southeastern side of the pit.

The design is shown in Figure 16-6 below.

Figure 16-6: Yerington Phase 4 Design

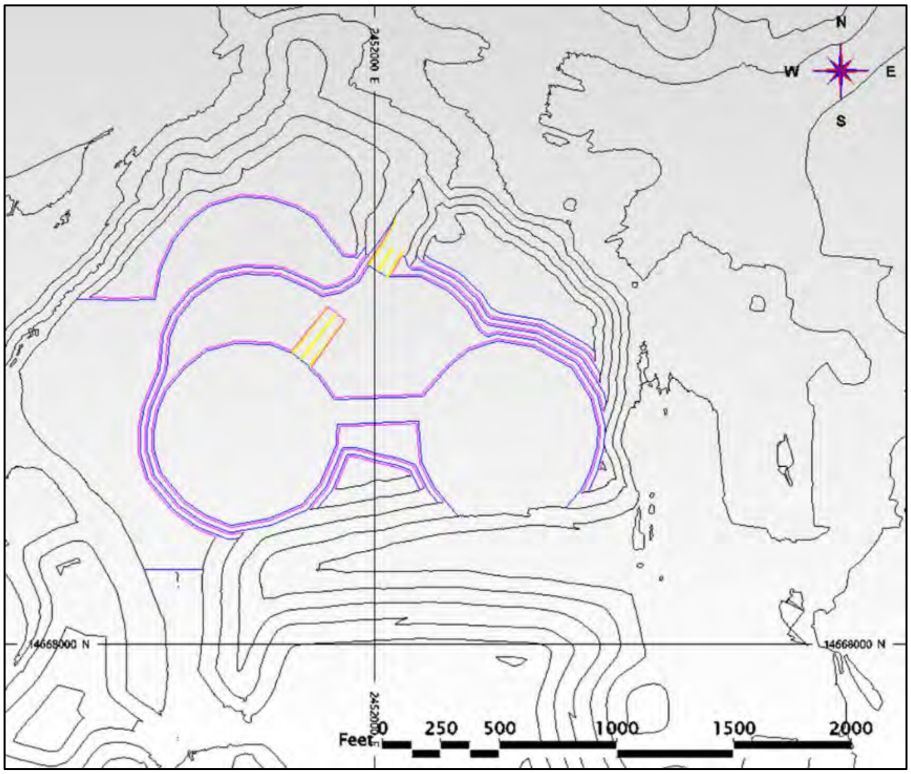


Source: AGP 2023

16.3.8 W-3 Pit

The W-3 pit design is a simple extraction with an access to the material on the northern side. The levels will be taken off and hauled to the oxide leach facility to the northwest. The design is shown in Figure 16-7.

Figure 16-7: W-3 Pit Design



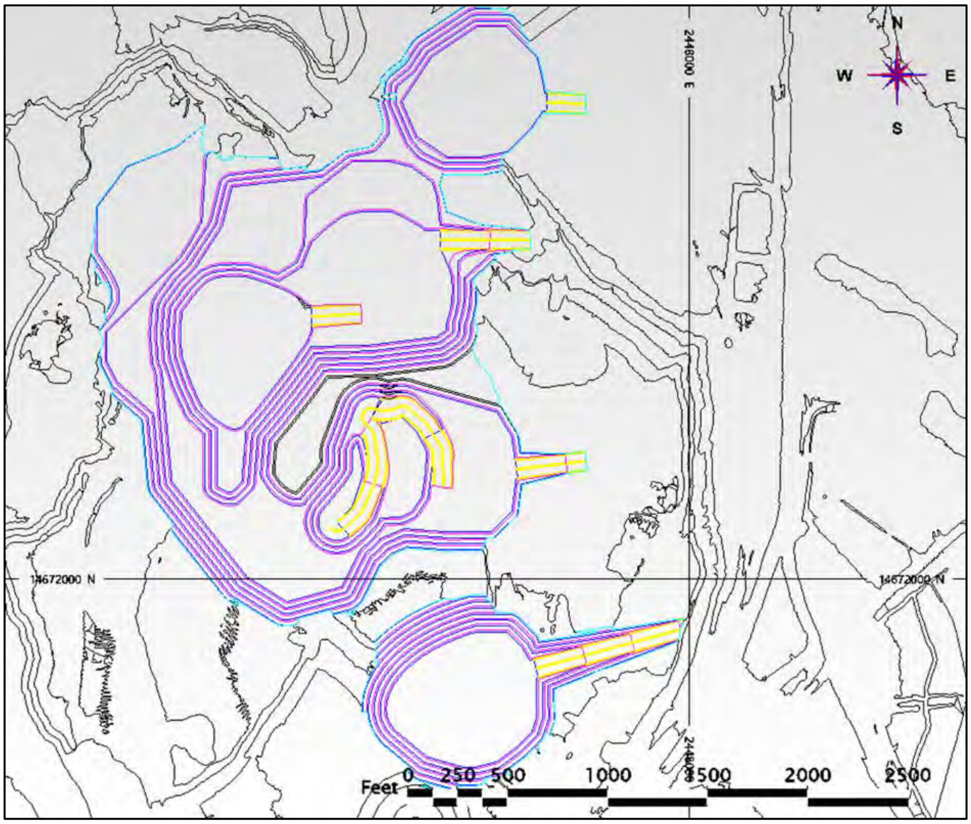
Source: AGP 2023

16.3.9 Vat Leach Tails Pit

The VLT pit is the selective extraction of material within the VLT stockpile defined by a previous drilling program. Accesses are designed to exit to the east with limited ramping required. The material remaining will be reconfigured for the base of the Oxide HLF.

The design is shown in Figure 16-8.

Figure 16-8: VLT Pit Design

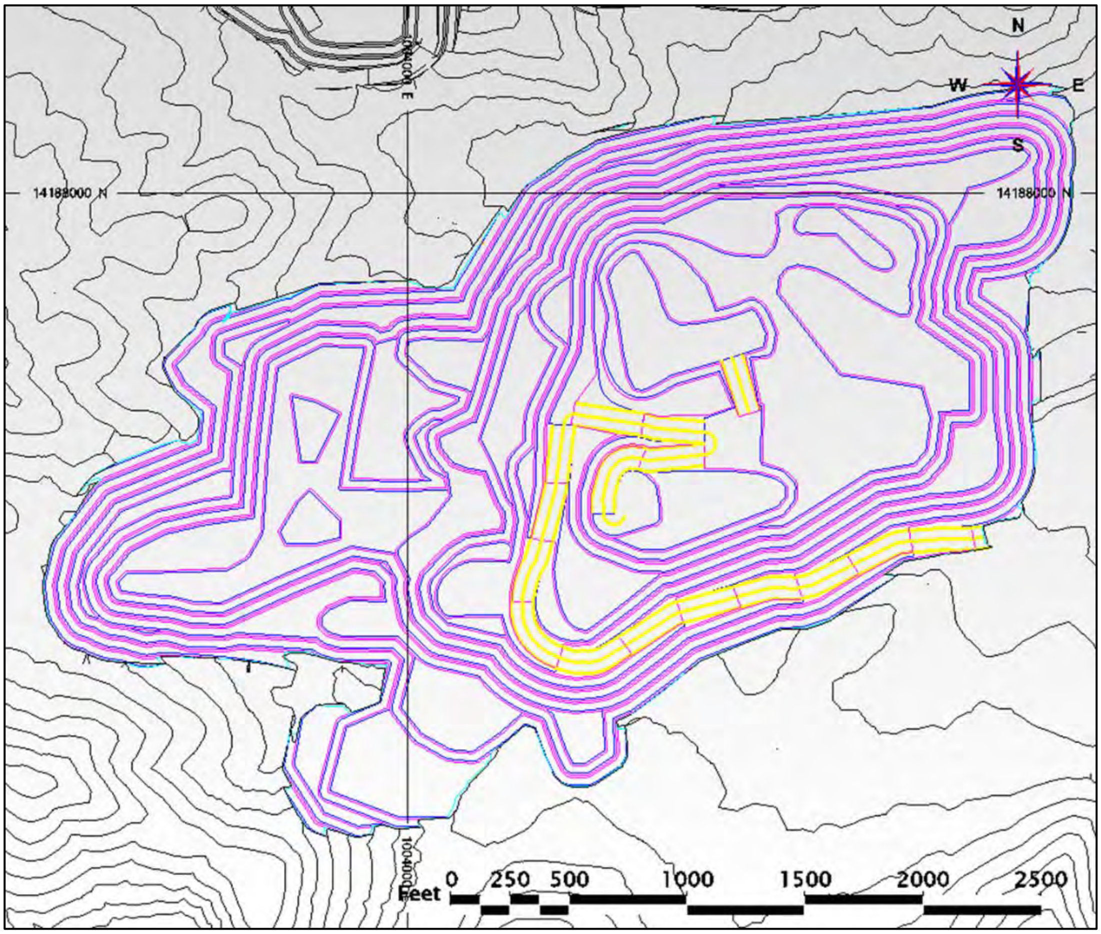


Source: AGP 2023

16.3.10 MacArthur Pit

The MacArthur pit (Figure 16-9) is the main source of feed in the MacArthur area. This pit has been mined previously and the design follows a similar development approach with access from the east on the various levels. A limited ramp system along the southern wall is required.

Figure 16-9: MacArthur Pit



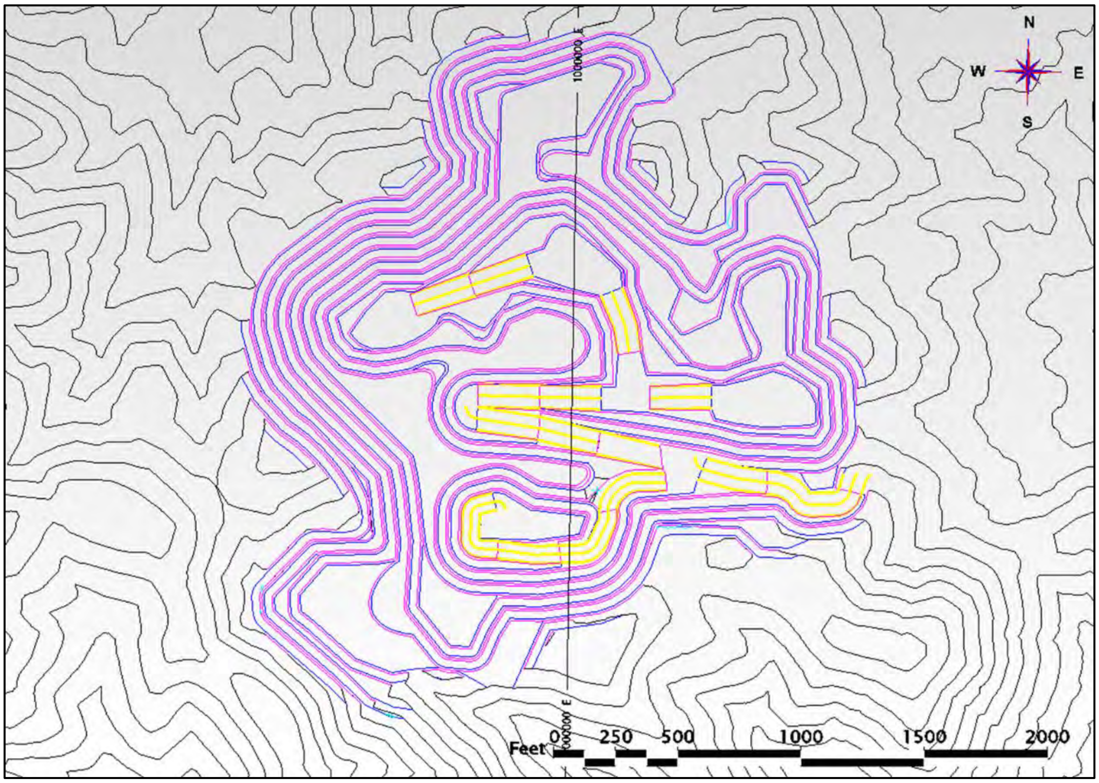
Source: AGP 2023

16.3.11 Gallagher Pit

The Gallagher pit utilizes access from current topography for the initial levels. As the pit deepens, ramp access is required from the east to develop the undulating oxide levels.

The design is shown in Figure 16-10.

Figure 16-10: Gallagher Pit

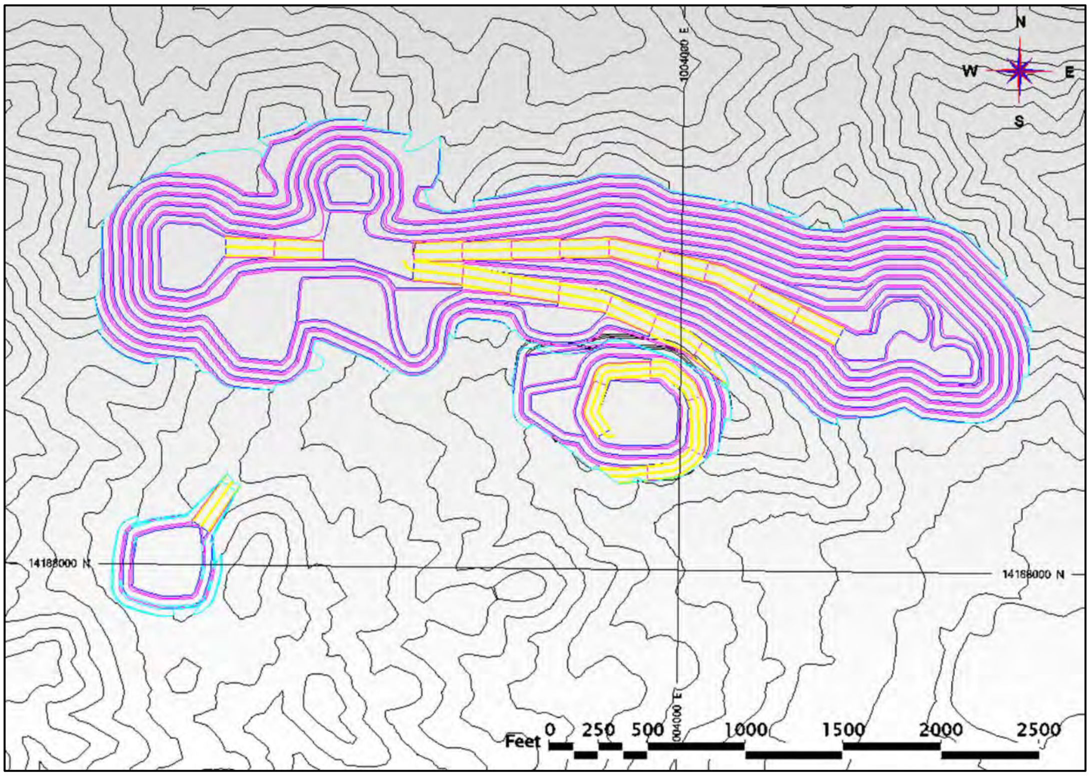


Source: AGP 2023

16.3.12 MacArthur North Area Pit

The MacArthur North Area is primarily a slot extraction of the oxide within the narrow zone. A ramp is used to access the deep portions to the east within the deposit. The design is shown in Figure 16-11.

Figure 16-11: MacArthur North Area Pit



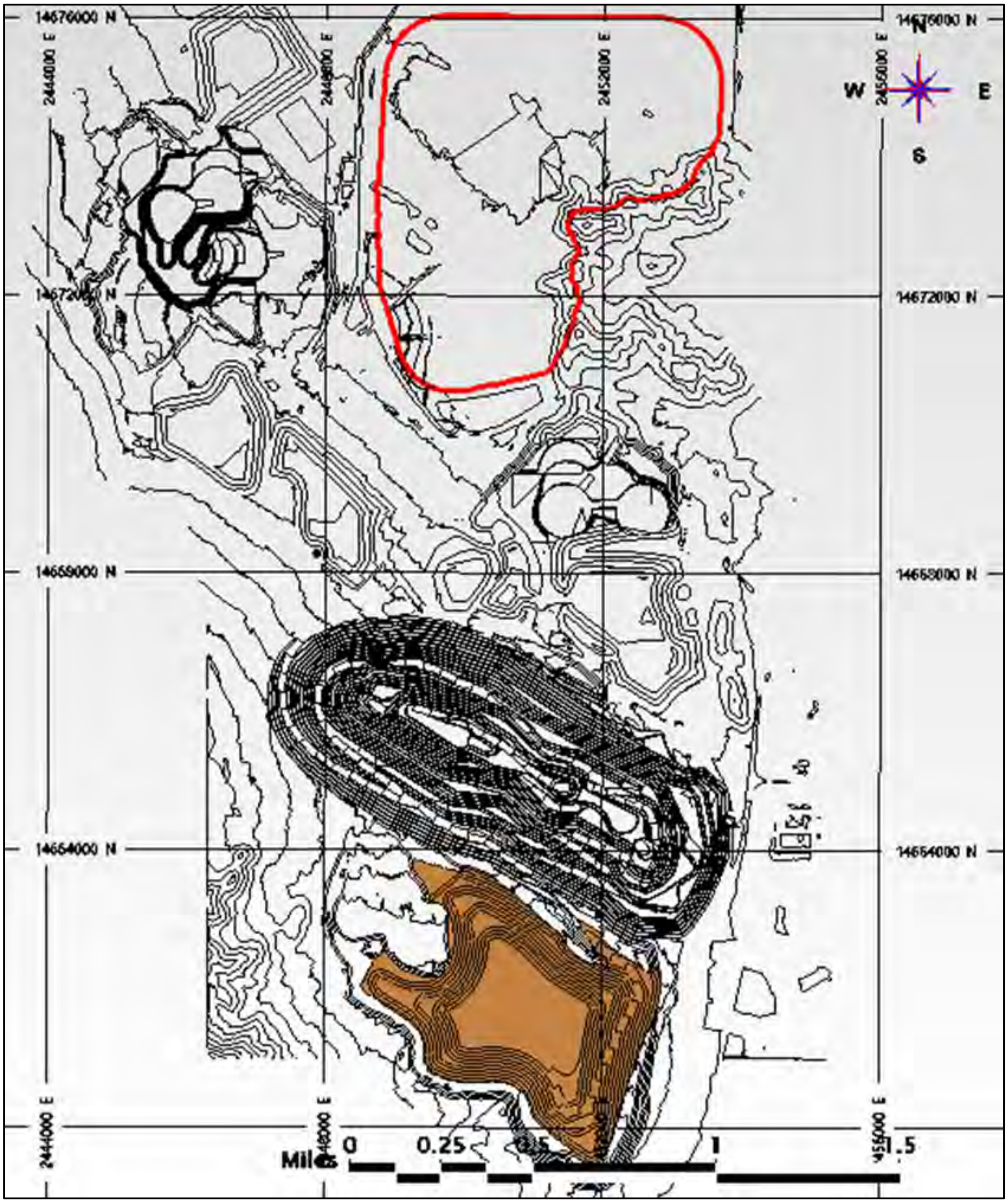
Source: AGP 2023

16.3.13 Rock Storage Facilities

The total amount of waste mined and stored within the mine plan is 136.8 Mtons. This is the total of the two main areas: Yerington and MacArthur. Yerington will have a total of 78.2 Mtons of waste generated from the Yerington pit while MacArthur will have 58.6 Mtons generated from the three mining areas.

A swell factor of 1.30 was applied to the rock waste dumps, which were designed with an overall 25° face slope to mimic a final reclamation slope. The Yerington waste rock will be placed atop the existing waste facility. The intention is to not extend beyond the current limits while also not burying the alluvial material at the north end of the existing facility, which may be useful for HLF and other infrastructure construction and capping of the HLFs upon closure. The facility is shown in Figure 16-12.

Figure 16-12: Yerington Rock Storage Facility



Source: AGP 2023

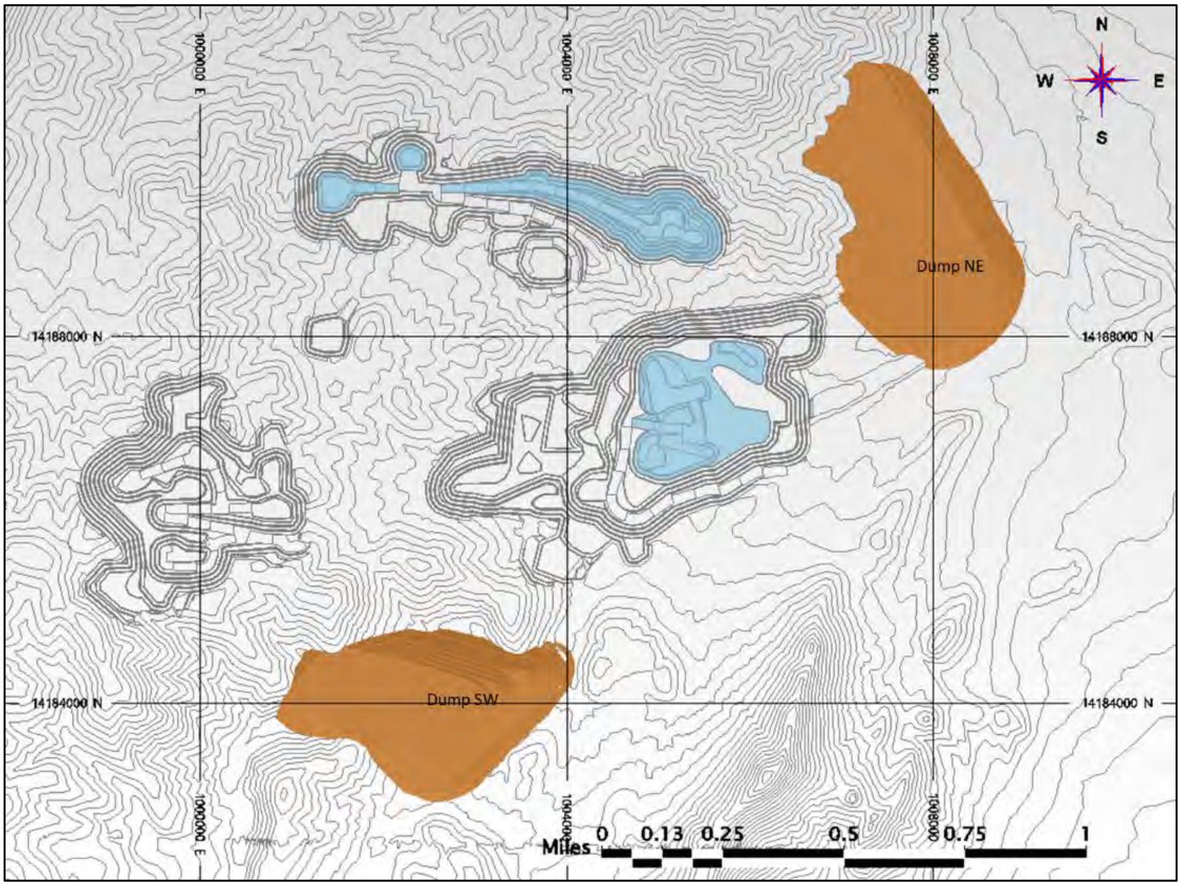
The MacArthur waste will be split between two facilities: the Southwest Facility and the Northeast Facility. The Southwest Facility will accommodate all Gallagher waste and a portion of MacArthur waste. The

Northeast Facility will provide space for all of MacArthur North material and the remaining portion of MacArthur waste. The locations of the facilities are shown in Figure 16-13.

The Northeast Facility at MacArthur will also serve as a view berm for people in the north Yerington area.

There remains an opportunity to store a small amount of waste generated from Gallagher within the confines of the MacArthur pit. This aspect will be subject to further investigation in subsequent stages of the study.

Figure 16-13: MacArthur Rock Storage Facilities



Source: AGP 2023

16.3.14 Mine Schedule

The mining rate targets the release of 140 Mlbs of copper annually. There is an initial ramp up period to allow the Nuton process to come online. The Nuton crushing circuit is set at 17 Mtpa and the MacArthur sizing circuit is sized for 25 Mtpa. This combination provides for 140 Mlbs of copper annually over the life of the mine.

Oxide and sulfide material will be handled differently depending on their point of origin. Yerington oxide materials which include the Yerington oxide, W-3 and VLT are assumed to be placed on the Oxide HLF as run of mine (ROM). The MacArthur oxides must be sized prior to conveying to the Oxide HLF and will also be agglomerated prior to stacking.

The sulfide material destined for the Nuton HLF is first sent to a crushing facility to the northwest of the Yerington pit. The material will be crushed, agglomerated, and then conveyed to the HLF to be stacked on the facility.

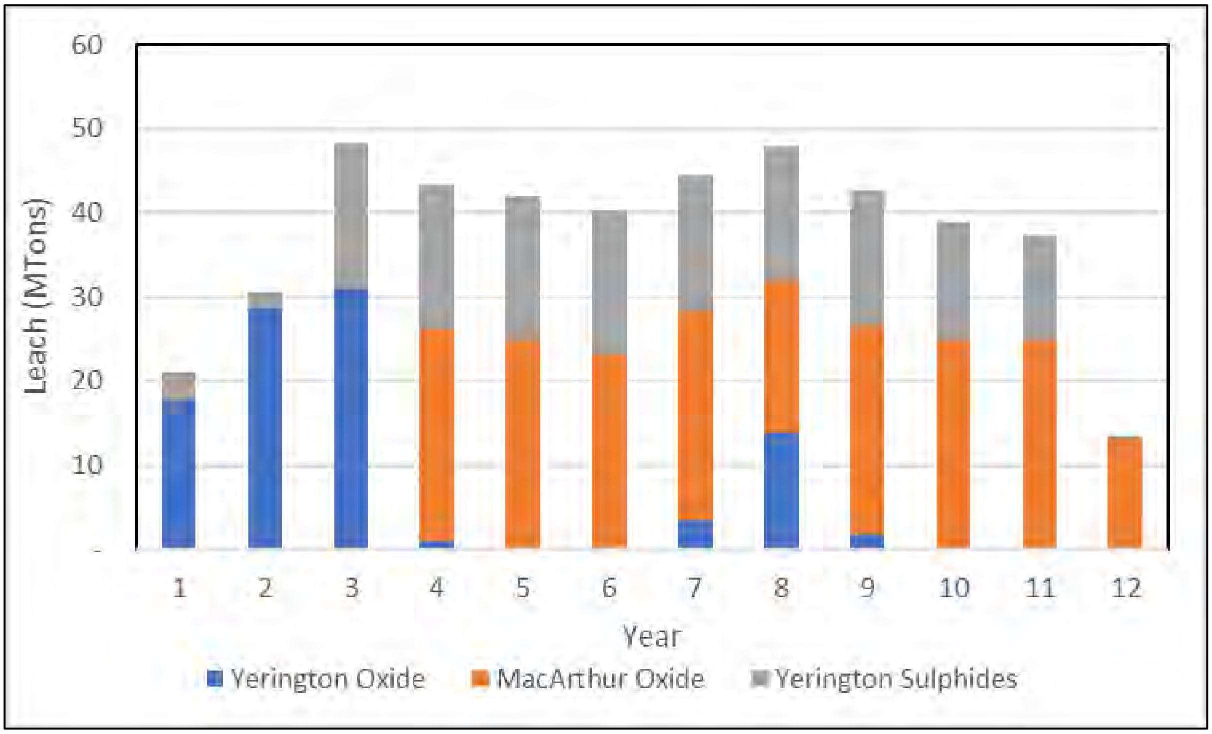
Total life of mine heap leach production will be 450.4 million tons grading 0.21% copper. The Yerington pit will deliver 148.5 million tons of sulfide material grading 0.29% copper to the Nuton HLF. Yerington oxides will total 97.7 million tonnes grading 0.16 % copper. MacArthur produces 204.2 million tons of oxide leach material with an average copper grade of 0.18%.

The overall mine strip ratio for the PEA is 0.30:1 (waste: feed). MacArthur has a strip ratio of 0.29:1 (waste: feed) and Yerington's is 0.32:1 (waste: feed).

The annual leach tonnages by area and type are shown in Figure 16-14. Annual feed grades by type and area are shown in Figure 16-15.

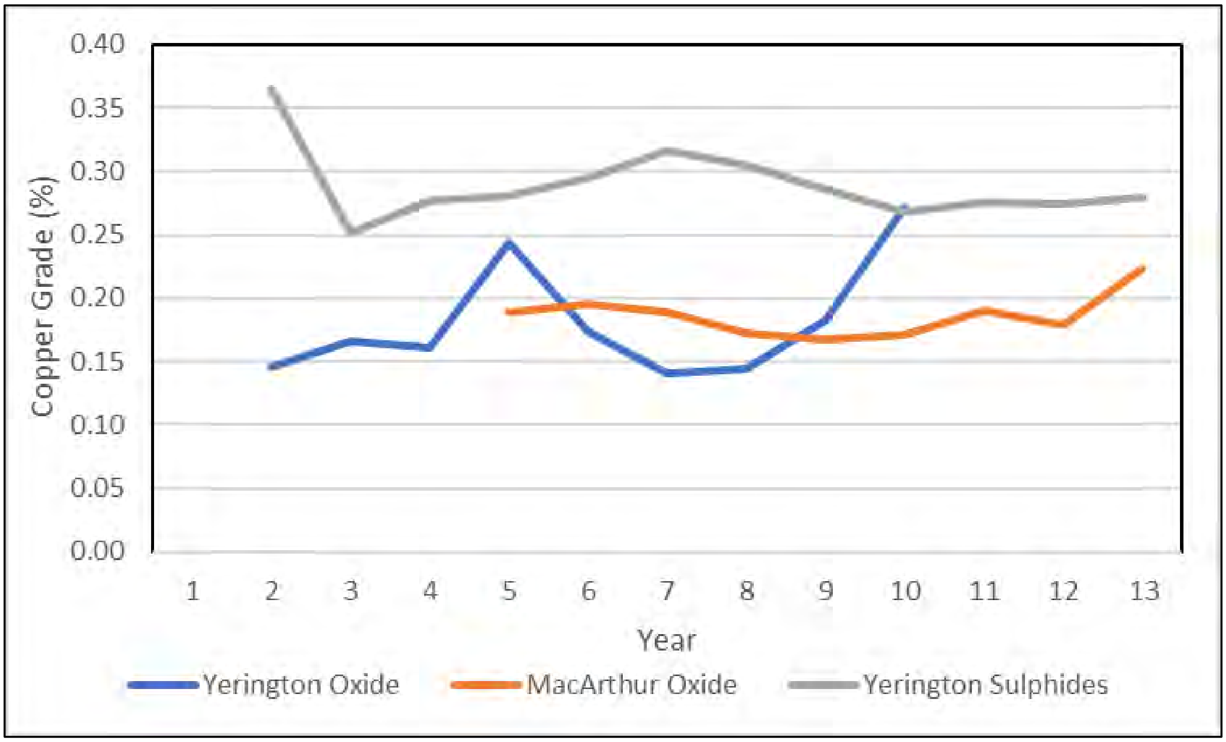
The detailed annual mining summary is shown in Table 16-10.

Figure 16-14: Annual Heap Leach Tonnages (Type and Area)



Source: AGP 2023

Figure 16-15: Annual Feed Grade by Type and Area



Source: AGP 2023

Table 16-10: Annual Mining and Heap Leach Feed Schedule Details

Description		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Total
Yerington Mining Summary	Waste (Mt)	**8.7**	**9.5**	**9.7**	**8.6**	**6.5**	**10.4**	**11.2**	**8.2**	**4.1**	**0.8**	**0.6**	**0.1**	**78.2**
	Sulfide (Mt)	**3.5**	**1.9**	**17.3**	**17.1**	**17.1**	**17.0**	**16.0**	**16.0**	**16.0**	**14.0**	**12.3**	**0.3**	**148.5**
	Cu (%)	0.37	0.25	0.28	0.28	0.30	0.32	0.30	0.29	0.27	0.28	0.27	0.28	0.29
	Yerington Oxide (Mt)	4.1	18.5	12.7	1.0	0.1	0.25	3.4	13.9	1.7	-	-	-	55.6
	Cu (%)	0.27	0.20	0.26	0.24	0.17	0.14	0.14	0.18	0.27	-	-	-	0.21
	W-3 Oxide (Mt)	13.6	-	-	-	-	-	-	-	-	-	-	-	13.6
	Cu (%t)	0.11	-	-	-	-	-	-	-	-	-	-	-	0.11
	VLT Oxide (Mt)	-	10.1	18.3	-	-	-	-	-	-	-	-	-	28.4
	Cu (%)	-	0.10	0.10	-	-	-	-	-	-	-	-	-	0.10
	Total Feed (Mt)	21.2	30.6	48.3	18.1	17.1	17.3	19.4	29.9	17.7	14.0	12.3	0.3	246.1
	Cu (%)	0.18	0.17	0.20	0.28	0.29	0.31	0.28	0.24	0.27	0.28	0.27	0.28	0.24
	Total Yerington Mined (Mt)	**29.8**	**40.0**	**579**	**26.7**	**23.6**	**27.7**	**30.6**	**38.2**	**21.8**	**14.8**	**12.9**	**0.4**	**324.4**
MacArthur Mining Summary	Waste (Mt)	-	-	-	**6.7**	**7.9**	**9.3**	**4.4**	**3.9**	**5.0**	**2.8**	**15.0**	**3.7**	**58.6**
	MacArthur Oxide (Mt)	-	-	-	**25.2**	**24.9**	**20.5**	**19.1**	**6.7**	**10.8**	**6.6**	**1.3**	**5.5**	**120.4**
	Cu (%)	-	-	-	**0.19**	**0.19**	**0.20**	**0.18**	**0.17**	**0.17**	**0.17**	**0.19**	**0.19**	**0.19**
	Gallagher Oxide (Mt)	-	-	-	-	-	**1.2**	**4.3**	**9.5**	**12.6**	**18.1**	-	-	**45.8**
	Cu (%)	-	-	-	-	-	**0.13**	**0.16**	**0.17**	**0.18**	**0.20**	-	-	**0.18**
	MacArthur North Oxide (Mt)	-	-	-	-	-	**1.4**	**1.6**	**1.8**	**1.5**	**0.3**	**23.7**	**7.7**	**38.0**
	Cu (%)	-	-	-	-	-	**0.12**	**0.14**	**0.16**	**0.11**	**0.27**	**0.18**	**0.25**	**0.19**
	Total Feed (Mt)	-	-	-	**25.2**	**24.9**	**23.0**	**25.0**	**18.0**	**25.0**	**25.0**	**25.0**	**13.2**	**204.2**
	Cu (%)	-	-	-	**0.19**	**0.19**	**0.19**	**0.17**	**0.17**	**0.17**	**0.19**	**0.18**	**0.22**	**0.18**
	Total MacArthur Mined (Mt)	-	-	-	**31.9**	**32.8**	**32.3**	**29.4**	**21.9**	**29.9**	**27.8**	**40.0**	**17.0**	**262.8**
Total	Total Waste Material (Mt)	**8.7**	**9.5**	**9.7**	**15.3**	**14.4**	**19.7**	**15.6**	**12.1**	**9.1**	**3.6**	**15.6**	**3.8**	**136.8**
	Total Heap Material (Mt)	**21.2**	**30.6**	**48.3**	**43.3**	**41.9**	**40.3**	**44.4**	**47.9**	**42.7**	**39.0**	**37.3**	**13.5**	**450.4**
	Total Material (Mt)	**29.8**	**40.0**	**57.9**	**58.6**	**56.4**	**60.0**	**60.0**	**60.0**	**51.7**	**42.6**	**52.8**	**17.3**	**587.2**
Processing Summary	Sulfide - Nuton (Mt)	**3.4**	**1.9**	**17.0**	**17.0**	**17.0**	**17.0**	**16.0**	**16.0**	**16.0**	**14.0**	**12.8**	**0.3**	**148.5**
	Cu (%)	0.37	0.25	0.28	0.28	030	0.32	0.30	0.29	0.27	0.28	0.27	0.28	0.29
	Yerington Oxide (Mt)	4.1	18.5	12.7	1.0	0.1	0.25	3.4	13.9	1.7	-	-	-	55.6
	Cu (%)	0.27	0.20	0.26	0.24	0.17	0.14	0.14	0.18	0.27	-	-	-	0.21
	W-3 Oxide (Mt)	13.6	-	-	-	-	-	-	-	-	-	-	-	13.6
	Cu (%)	0.11	-	-	-	-	-	-	-	-	-	-	-	0.11
	VLT Oxide (%)	-	10.1	18.3	-	-	-	-	-	-	-	-	-	28.4
	Cu (%)	-	0.10	0.10	-	-	-	-	-	-	-	-	-	0.10
	MacArthur Oxide (Mt)	-	-	-	25.2	24.9	20.5	19.1	6.7	10.8	6.6	1.3	5.5	120.4
	Cu (%)	-	-	-	0.19	0.19	0.20	0.18	0.17	0.17	0.17	0.19	0.19	0.19
	Gallagher Oxide (Mt)	-	-	-	-	-	1.2	4.3	9.5	12.6	18.1	-	-	45.8
	Cu (%)	-	-	-	-	-	0.13	0.16	0.17	0.18	0.20	-	-	0.18
	MacArthur North Oxide (Mt)	-	-	-	-	-	1.4	1.6	1.8	1.5	0.3	23.7	7.7	38.0
	Cu (%)	-	-	-	-	-	0.12	0.14	0.16	0.11	0.27	0.18	0.25	0.19
	Oxide - Total (Mt)	**17.7**	**28.6**	**31.0**	**26.2**	**24.9**	**23.3**	**28.4**	**31.9**	**26.7**	**25.0**	**25.0**	**13.2**	**301.9**
	Cu (%)	0.14	0.17	0.16	0.19	0.19	0.19	0.17	0.17	0.18	0.19	0.18	0.22	0.18

Description		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Total
Stockpile	Sulfide Balance (Mt)	0.1	0.1	0.3	0.4	0.5	0.5	0.6	0.6	0.6	0.6	-	-	
	Cu (%))	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	015	-	-	
	Reclaim (Mt)	-	-	-	-	-	-	-	-	-	**0.6**	-	-	
	Total Moved (Mt)	**29.8**	**40.0**	**57.9**	**58.6**	**56.4**	**60.0**	**60.0**	**60.0**	**51.7**	**42.6**	**53.4**	**17.3**	**587.8**

Before the onset of production, several critical infrastructure components must be fully prepared or nearing completion. This includes the development of the HLFs, the setup of the crusher and conveyor systems for sulfide materials, and the readiness of the processing facility. While the HLFs represent a substantial portion of the endeavor, they can be developed in phases.

Of paramount importance is the dewatering of the existing Yerington pit, which is essential to gaining access to the material at the pit's base. As the water level gradually recedes through the pumping process, the eastern section of the pit bottom — where Yerington Phase 1 is situated — will progressively become accessible.

In Year 1, as the water level decreases, efforts will be directed towards the restoration of the old ramp system. This rehabilitation will occur concurrently with the mining activities focused on the oxide materials in Phase 1. Additionally, Year 1 encompasses Phase 2, which involves the restoration of the ramp leading to the lower phase location and the final phases of pit dewatering.

Year 1 marks the initiation of Yerington Phase 3, focusing on the initial mining of slopes above Phases 1 and 2. While a small portion of oxide material is extracted during Phase 3, its primary function during this period is waste mining. Concurrently, Year 1 witnesses the start and completion of mining operations at the W-3 stockpile, which contributes the bulk of oxide tonnage for the year.

Year 2 maintains its focus on mining at the Yerington pit, culminating in the final completion of Phase 1. Phase 3 remains the sole active Yerington pit phase during this time, while the VLT pit mining begins with approximately 35% of its material being extracted.

Year 3 sees Phase 3 continuing as the primary area for material movement within the Yerington pit, contributing the entire 17 million tons of sulfide material for the Nuton process during this year. Phase 4 commences as a pushback phase, primarily involving waste mining in the upper levels of the pit. Additionally, the completion of the VLT phase takes place in this period, while the sizing circuit and conveying system installation at MacArthur are finalized in preparation for upcoming mining activities.

Year 4 marks the commencement of mining operations in the MacArthur Area within the MacArthur Property. It provides the majority of the oxide material stacked for the year, with Phase 3 at Yerington contributing slightly over 1 million tons. Phase 4 at Yerington primarily involves waste mining as the pit walls are excavated.

Year 5 continues to rely on Phase 3 at Yerington as the primary source of sulfide material for the Nuton process. Phase 4 remains focused on waste mining as it progresses deeper into the pit. At MacArthur, the MacArthur phase becomes the exclusive source of oxide material from the area, while prestripping activities commence in Gallagher.

Year 6 witnesses the continuation of Phase 3 at Yerington as the exclusive supplier of sulfide material for Nuton. Although a small amount of oxide material is released from Yerington Phase 4, it predominantly involves waste stripping activities in that phase. Simultaneously, all three phases at MacArthur are fully operational, collectively providing oxide material for the oxide HLF. While the MacArthur phase remains the primary source, it is no longer the sole contributor.

Year 7 reflects a decrease in sulfide material extracted from Yerington Phase 3, as Phase 4 begins encountering sulfide material. MacArthur maintains its oxide material production, with the MacArthur phase leading, followed by Gallagher and North MacArthur, all three phases now actively contributing.

Year 8 experiences a further decline in sulfide output from Yerington Phase 3, with Phase 4 contributing additional tonnage to meet the Nuton material requirement. During this year, approximately 16 million tons of sulfide material are directed to the heap leach for Nuton processing. In a noteworthy shift, Gallagher emerges as the primary provider of oxide material for the oxide heap leach, surpassing MacArthur. Meanwhile, North MacArthur lags behind in third place, contributing 1.8 million tons of oxide due to its more limited phase configuration.

Year 9 witnesses Yerington Phase 4 taking the lead in sulfide supply for Nuton, contributing 13 million tons, with the remainder sourced from Phase 3. Phase 4 also contributes 1.7 million tons of oxide material to the oxide heap leach.

Gallagher continues to serve as the primary oxide source from MacArthur, closely followed by the MacArthur phase itself. North MacArthur provides only 1.5 million tons of oxide material.

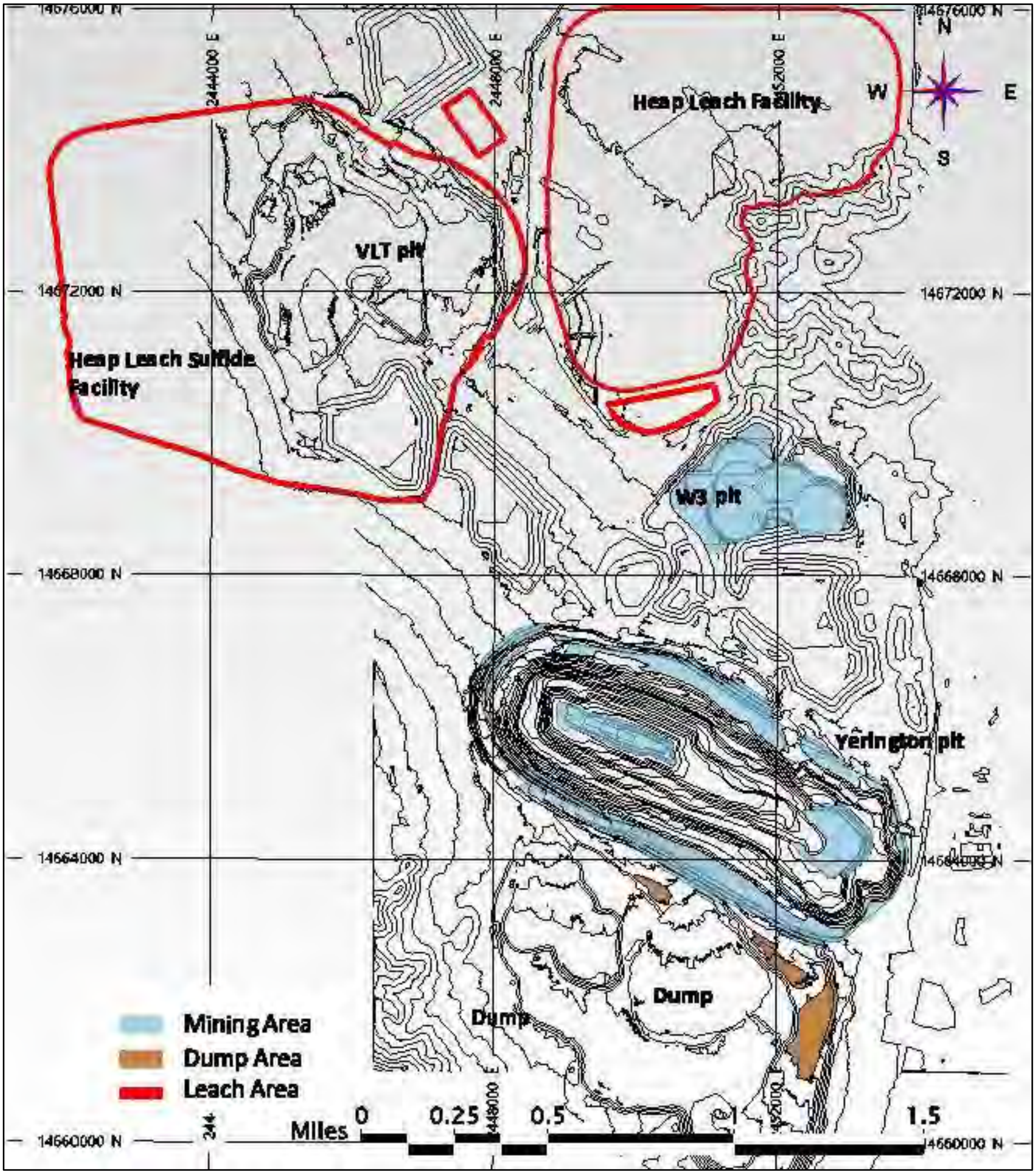
Year 10 predominantly relies on Phase 4 for sulfide production, with 2.2 million tons from Phase 3. Notably, there is no oxide material supplied by the Yerington phases in this year or beyond. Gallagher becomes the primary oxide provider with a substantial 18.1 million tons, compared to MacArthur's 6.6 million tons. North MacArthur contributes only a small fraction, releasing just a couple hundred thousand tons of oxide. This marks the final year of Gallagher's contribution to the oxide heap leach as the phase reaches completion.

Year 11 signifies the last year for Yerington Phase 3, with 6.8 million tons of sulfide material, and an additional 5.4 million tons sourced from Phase 4. In a notable development, North MacArthur becomes the primary oxide supplier this year, contributing a substantial 23.7 million tons, with only 1.3 million tons from MacArthur.

Finally, Year 12 represents the last year of production. Only a small remnant of sulfide, totaling 300,000 tons, remains in Phase 4. Both MacArthur and North MacArthur phases are also completed during this year, with 5.5 million tons and 7.7 million tons respectively. The year concludes with the final reclamation of 600,000 tons of sulfide material from the Yerington stockpile, marking the completion of all mining activities.

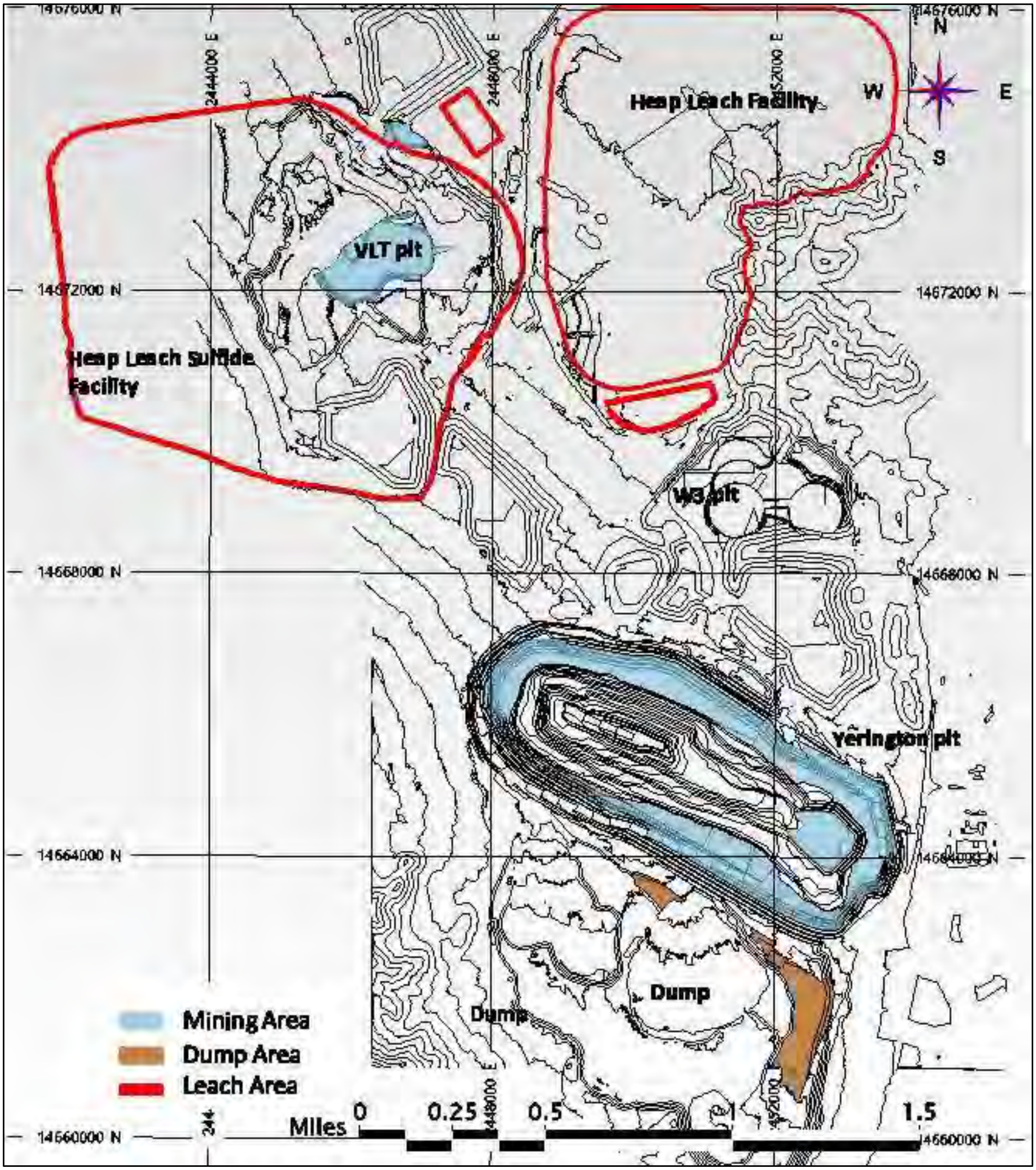
The end of period plans for the mine schedule are shown in Figure 16-16 to Figure 16-36 below.

Figure 16-16: End of Year 1 Yerington



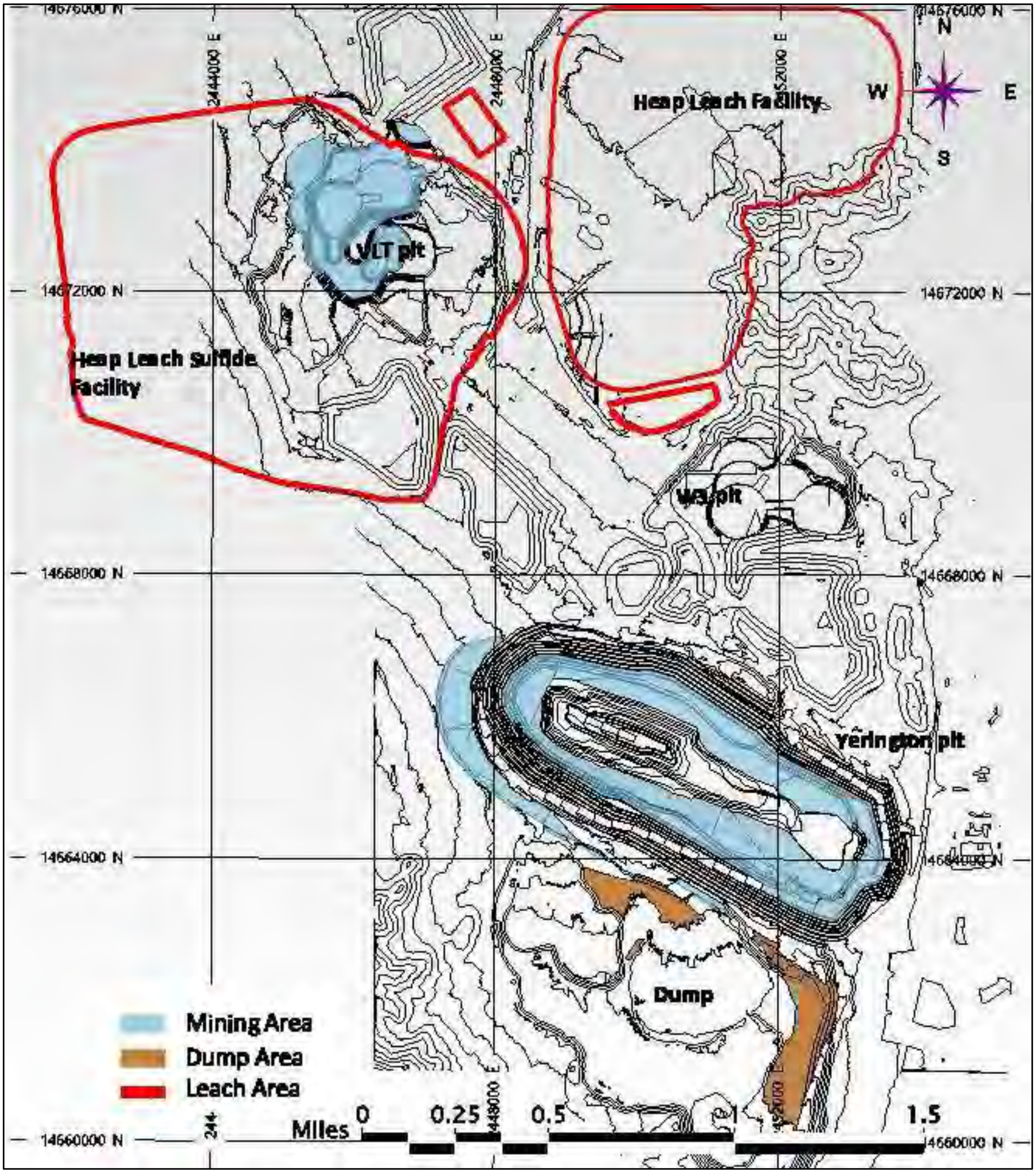
Source: AGP 2023

Figure 16-17: End of Year 2 Yerington



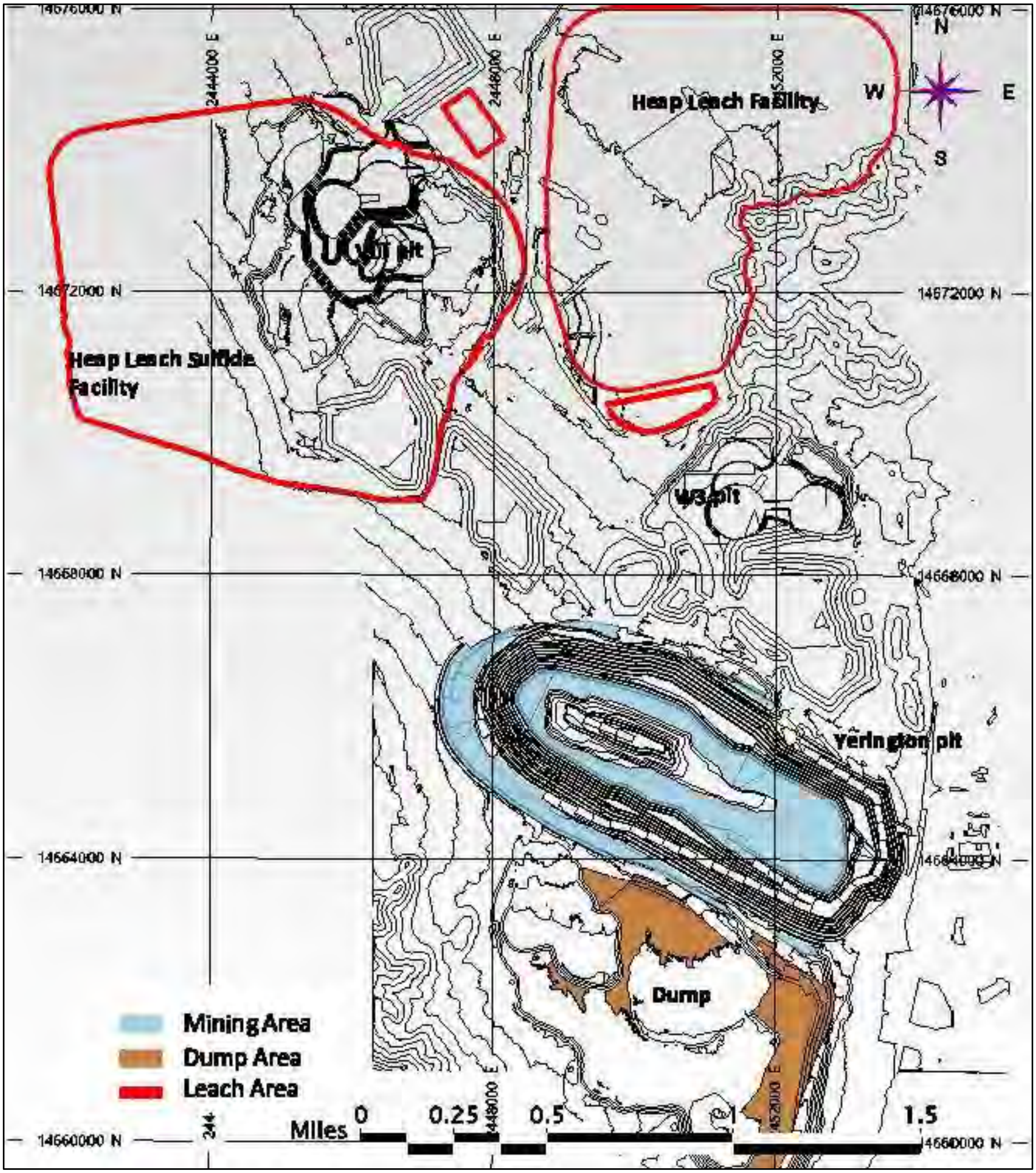
Source: AGP 2023

Figure 16-18: End of Year 3 Yerington



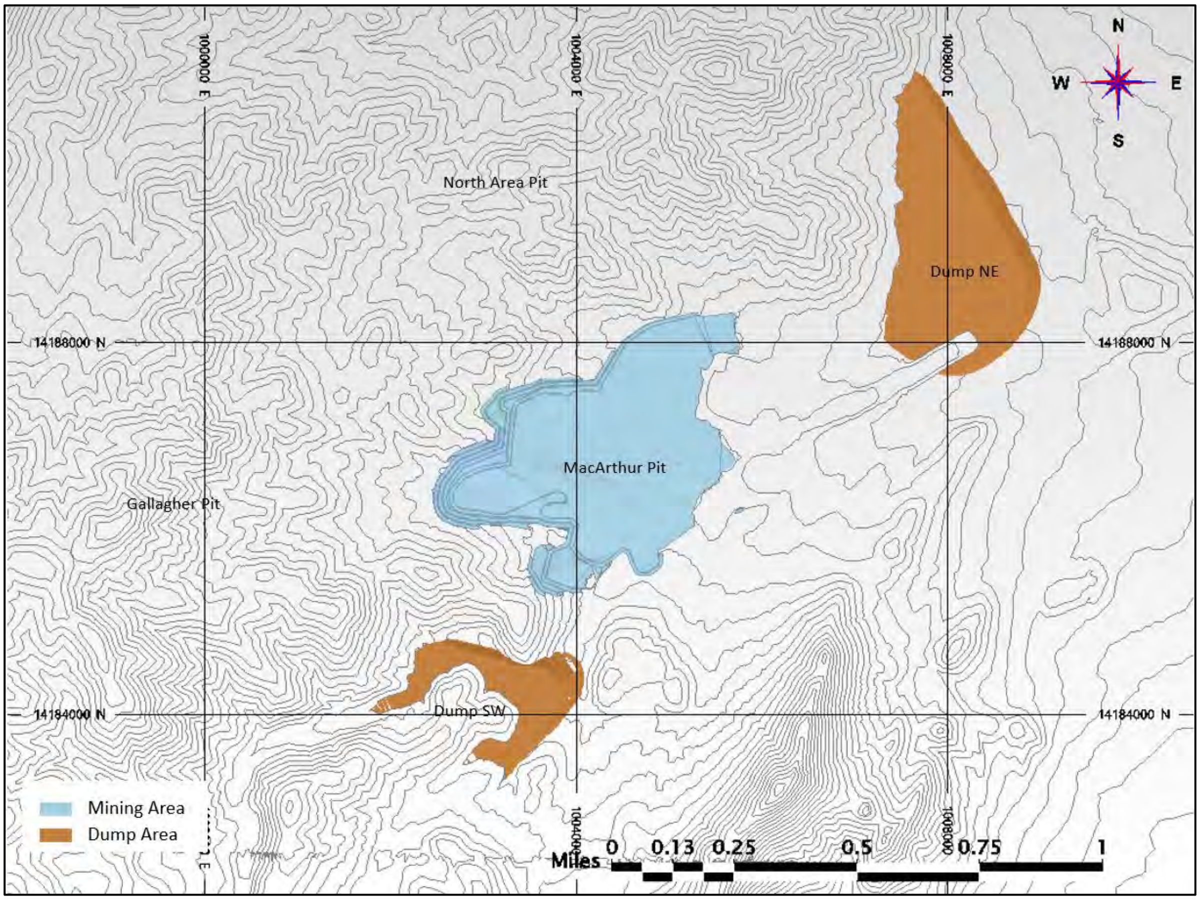
Source: AGP 2023

Figure 16-19: End of Year 4 - Yerington



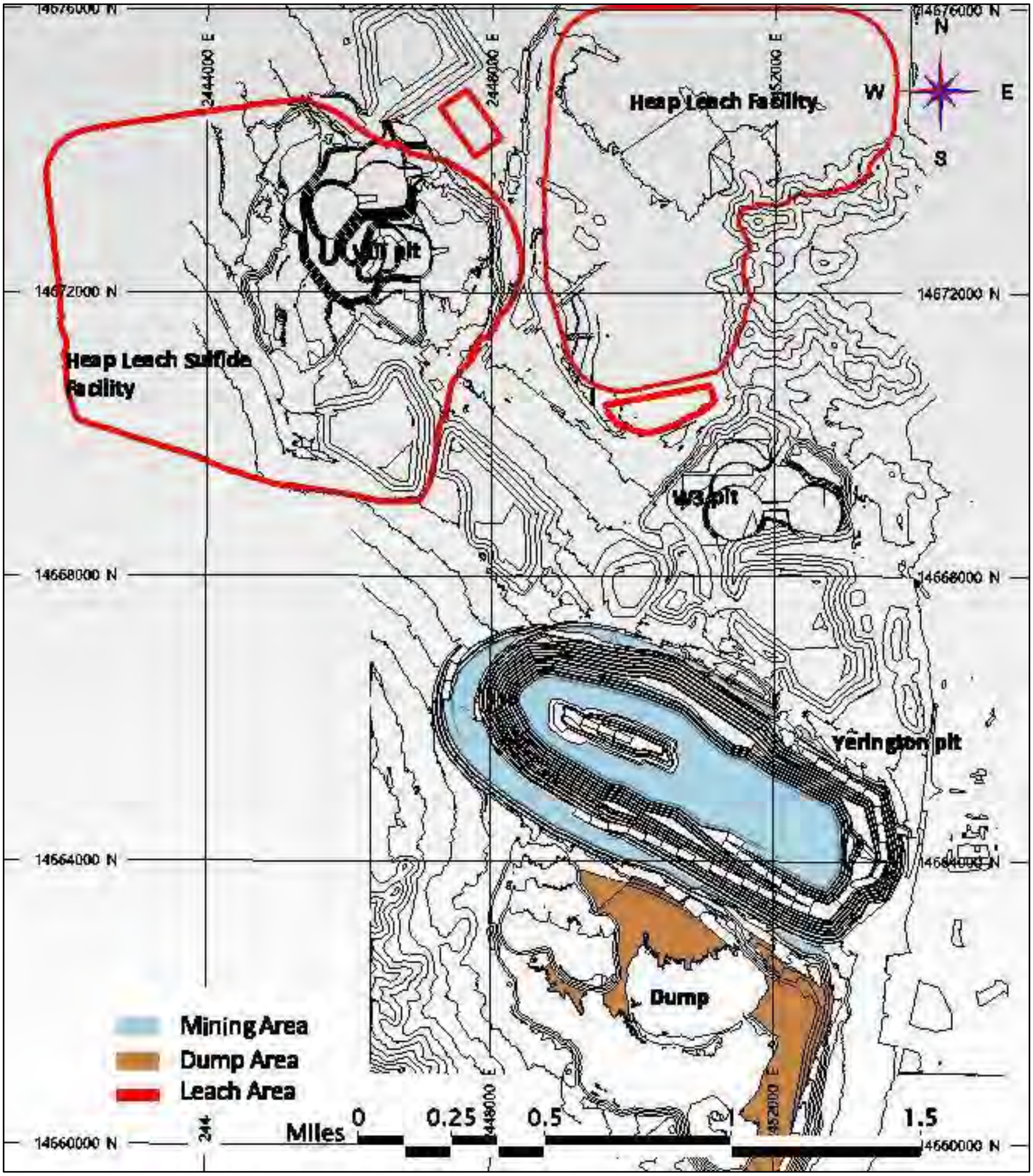
Source: AGP 2023

Figure 16-20: End of Year 4 – MacArthur Pit



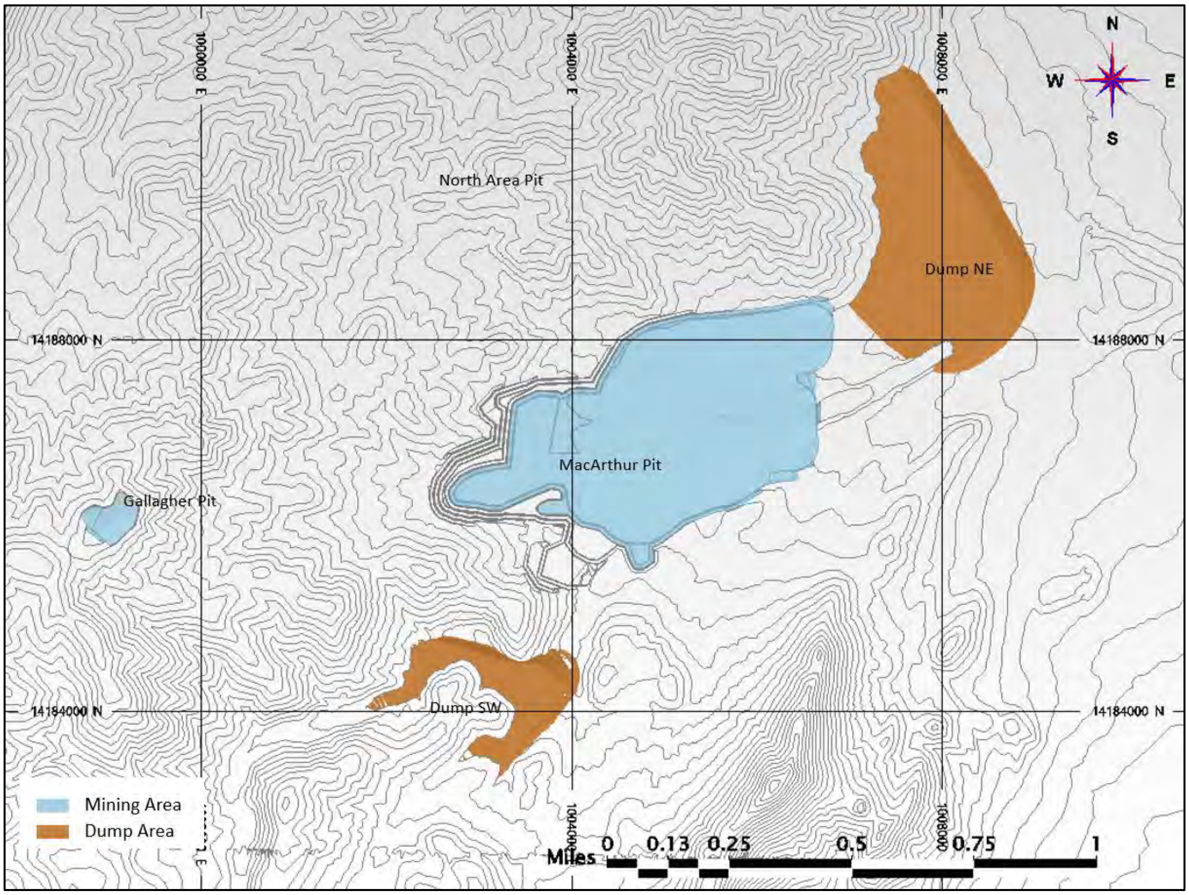
Source: AGP 2023

Figure 16-21: End of Year 5 – Yerington pit



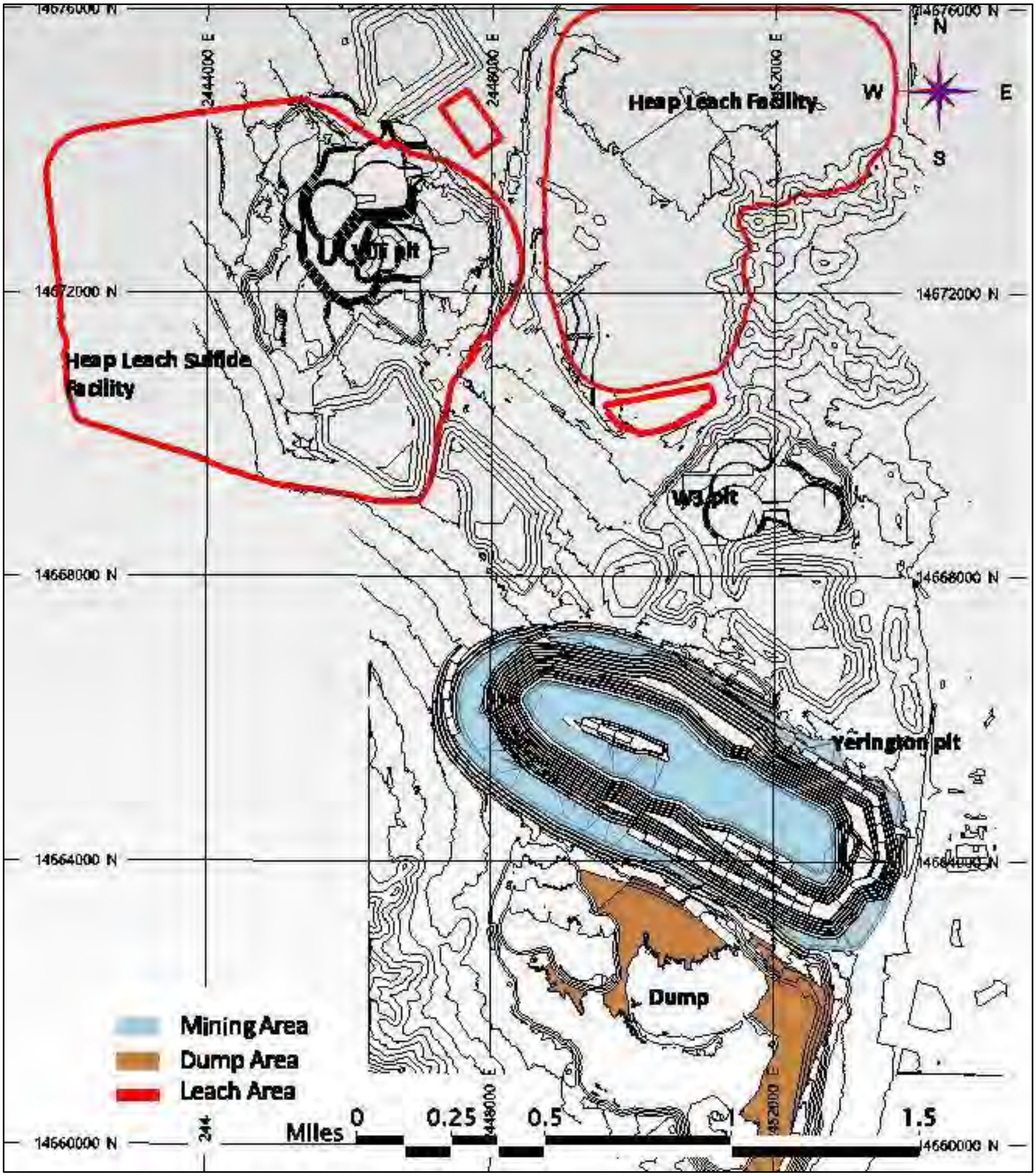
Source: AGP 2023

Figure 16-22: End of Year 5 – MacArthur Pit



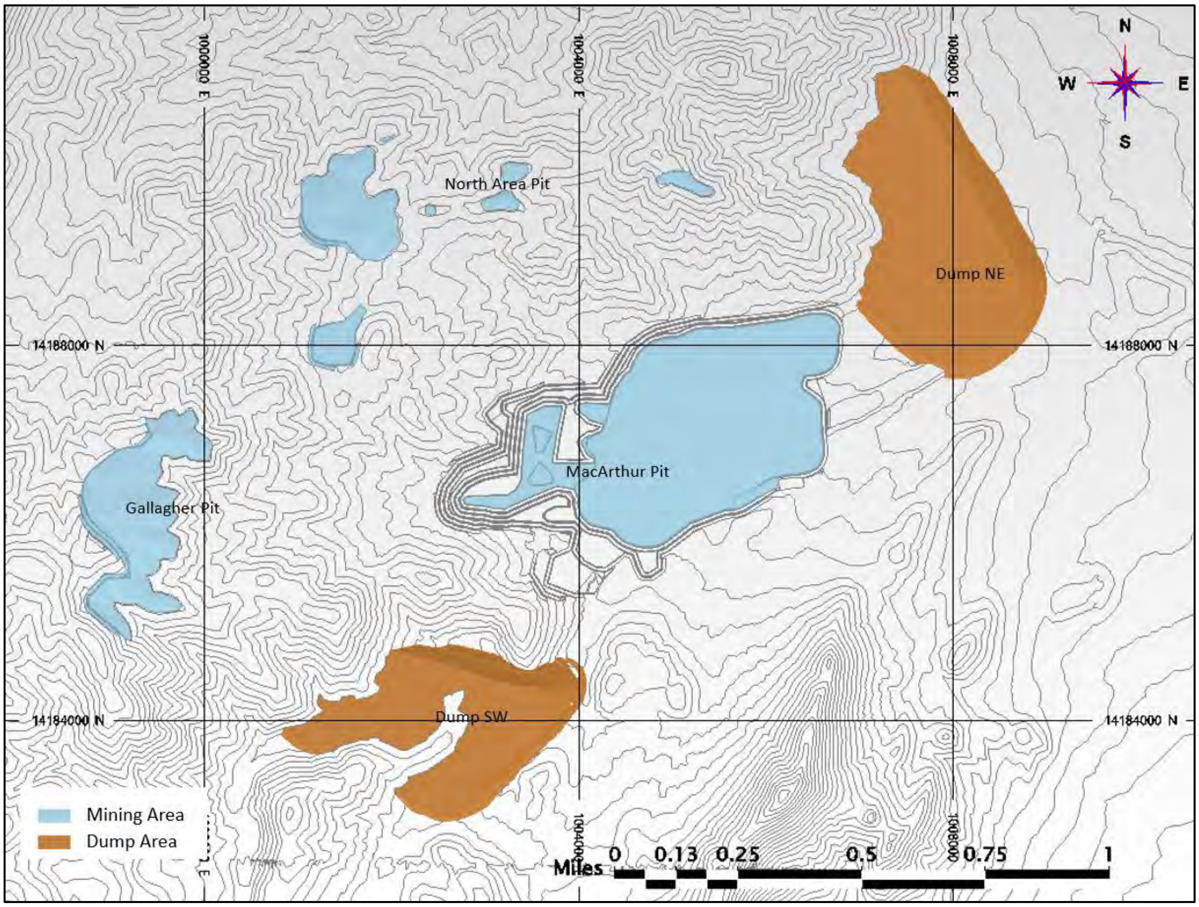
Source: AGP 2023

Figure 16-23: End of Year 6 – Yerington Pit



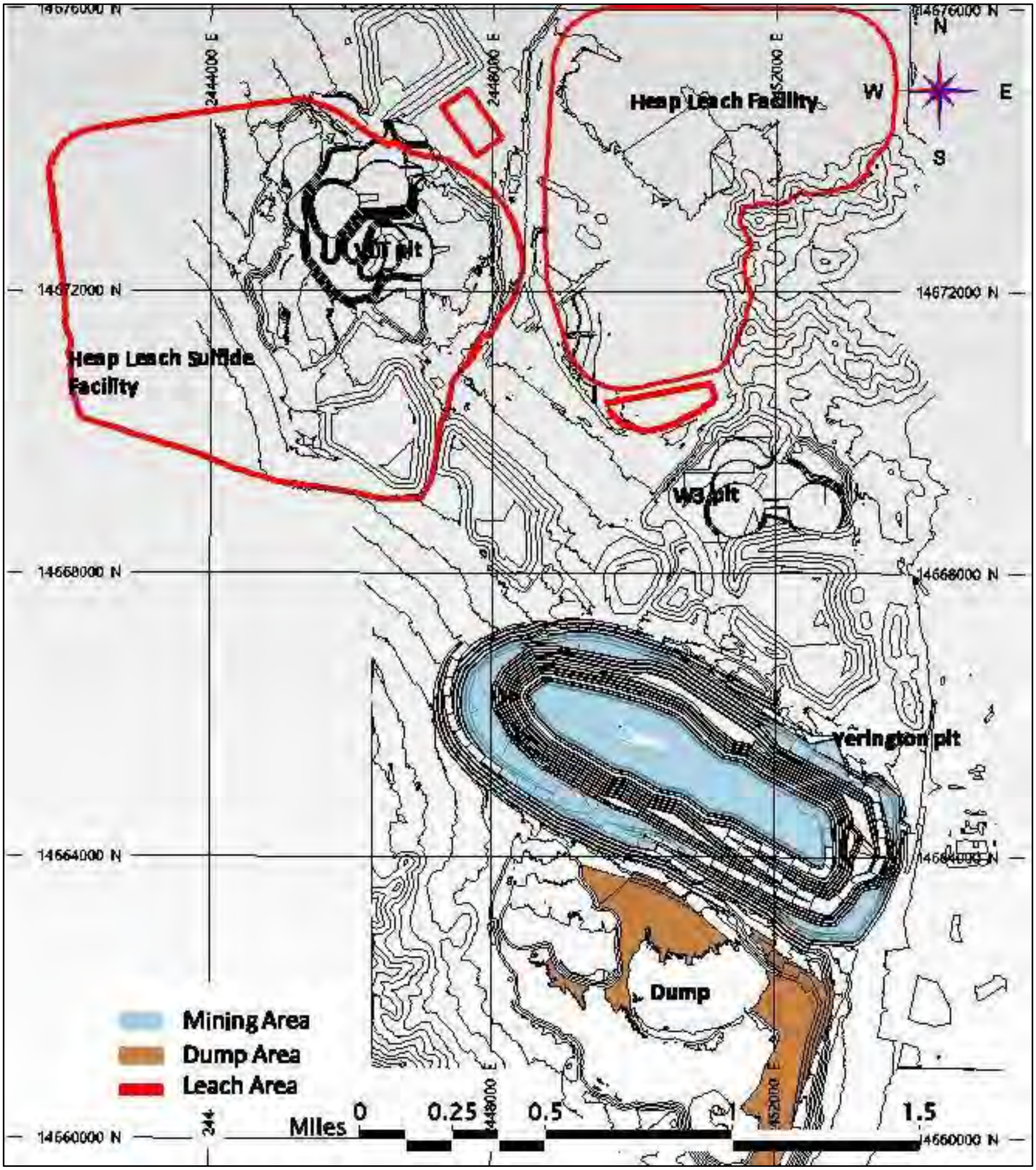
Source: AGP 2023

Figure 16-24: End of Year 6 – MacArthur Pit



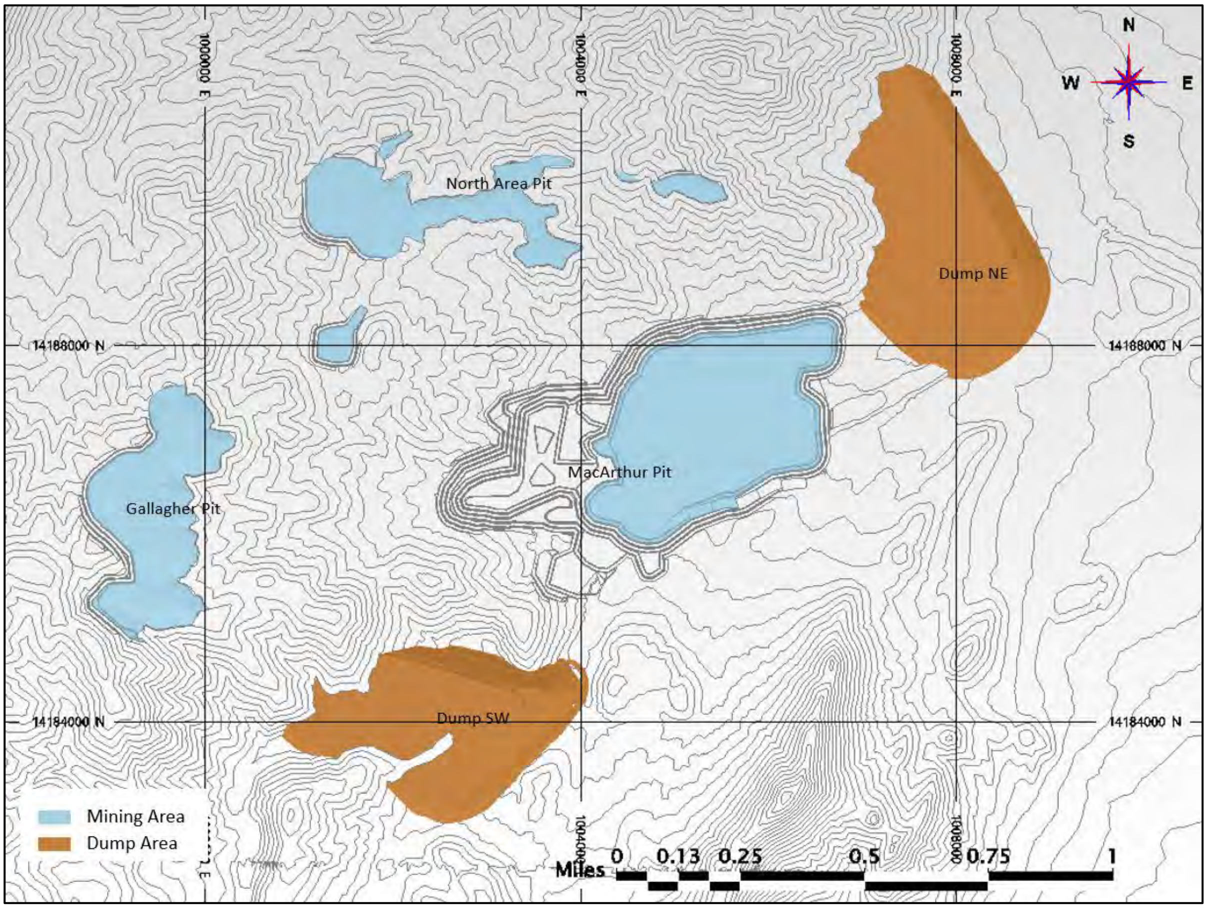
Source: AGP 2023

Figure 16-25: End of Year 7 – Yerington pit



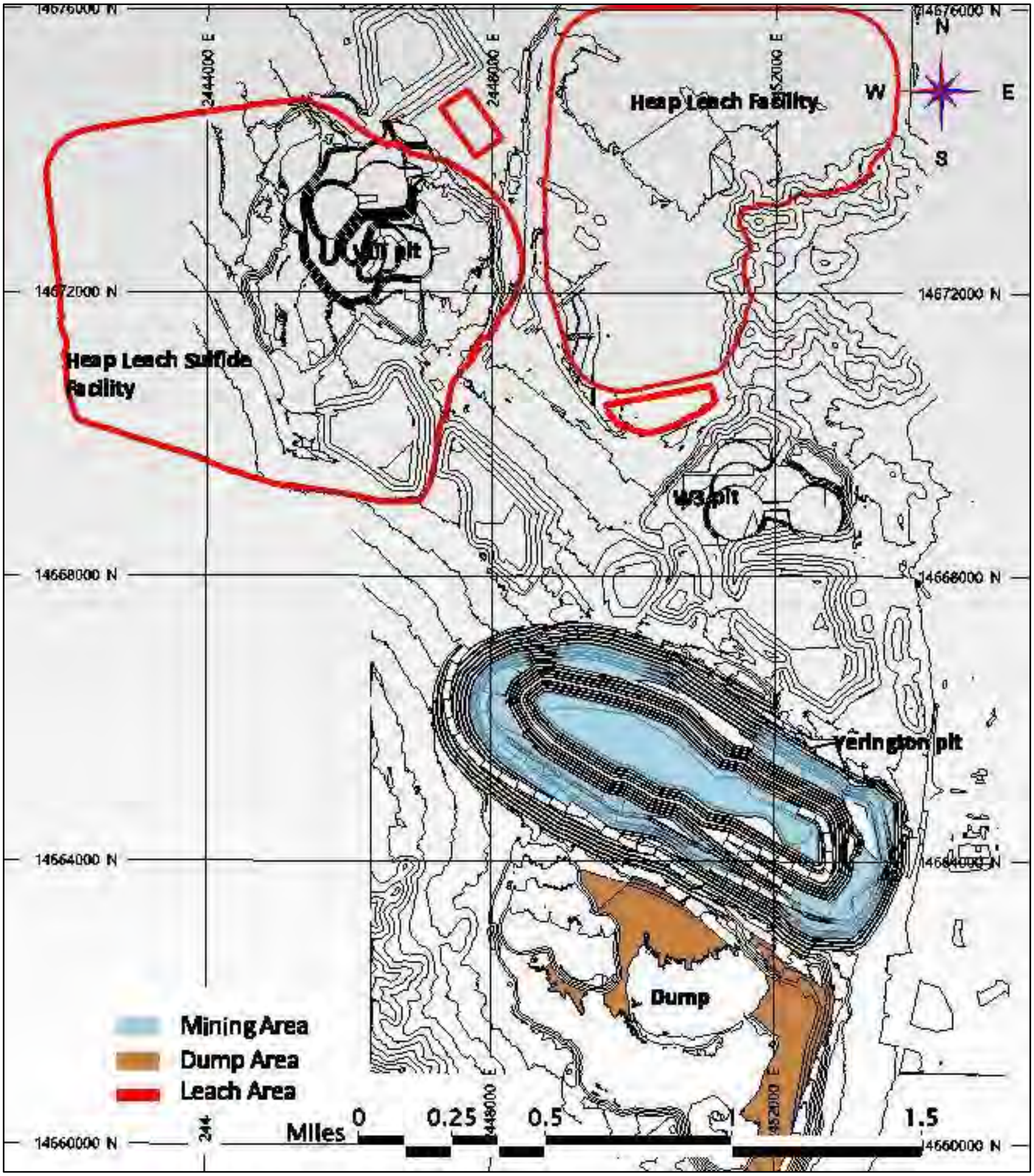
Source: AGP 2023

Figure 16-26: End of Year 7 – MacArthur Pit



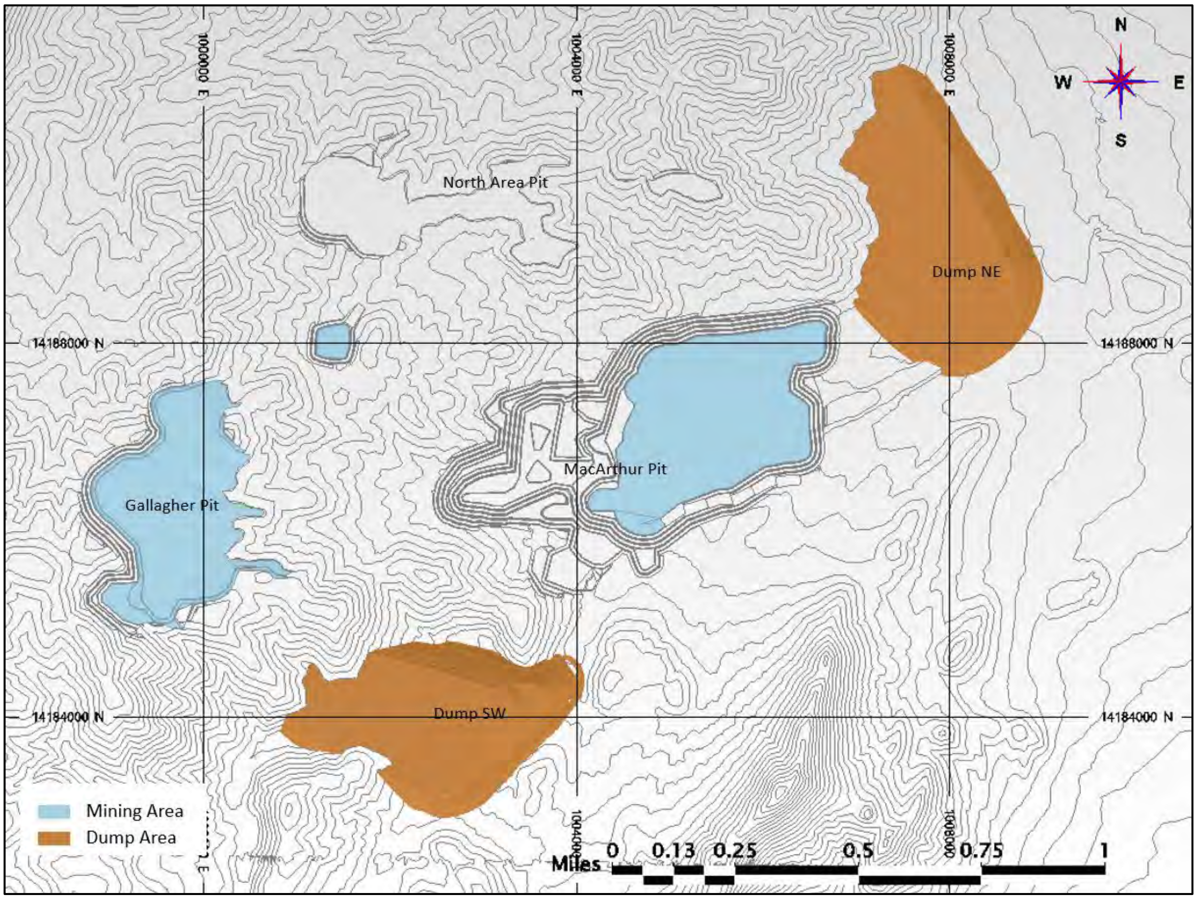
Source: AGP 2023

Figure 16-27: End of Year 8 – Yerington pit



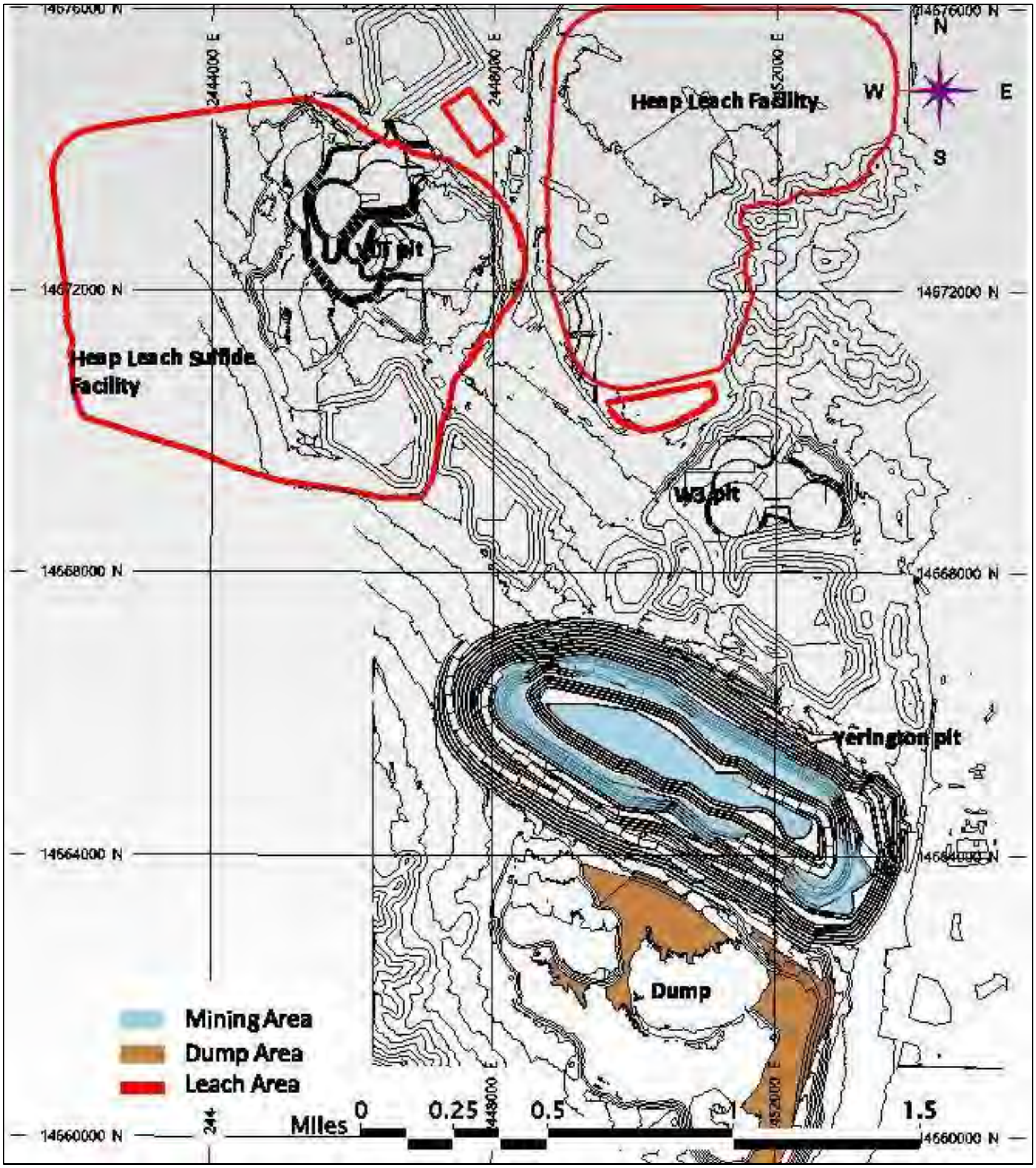
Source: AGP 2023

Figure 16-28: End of Year 8 – MacArthur Pit



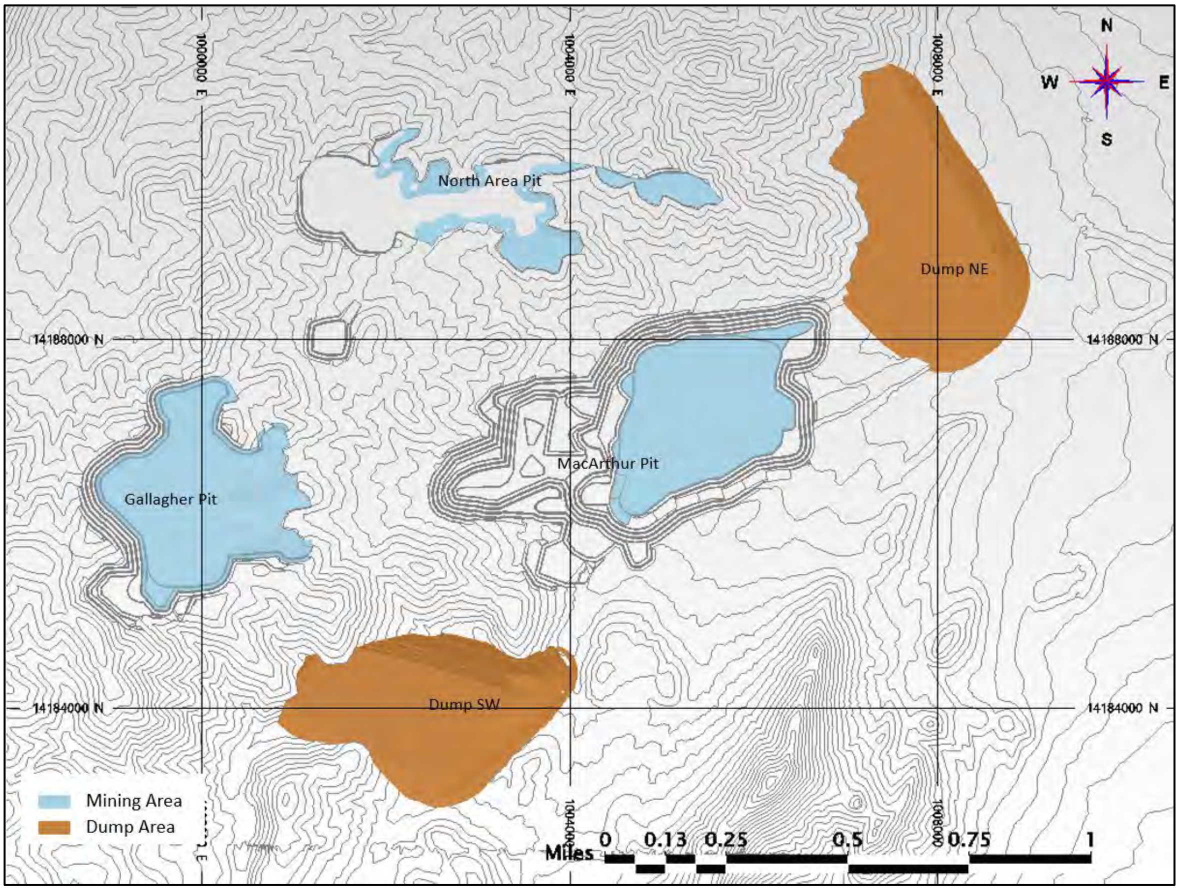
Source: AGP 2023

Figure 16-29: End of Year 9 – Yerington pit



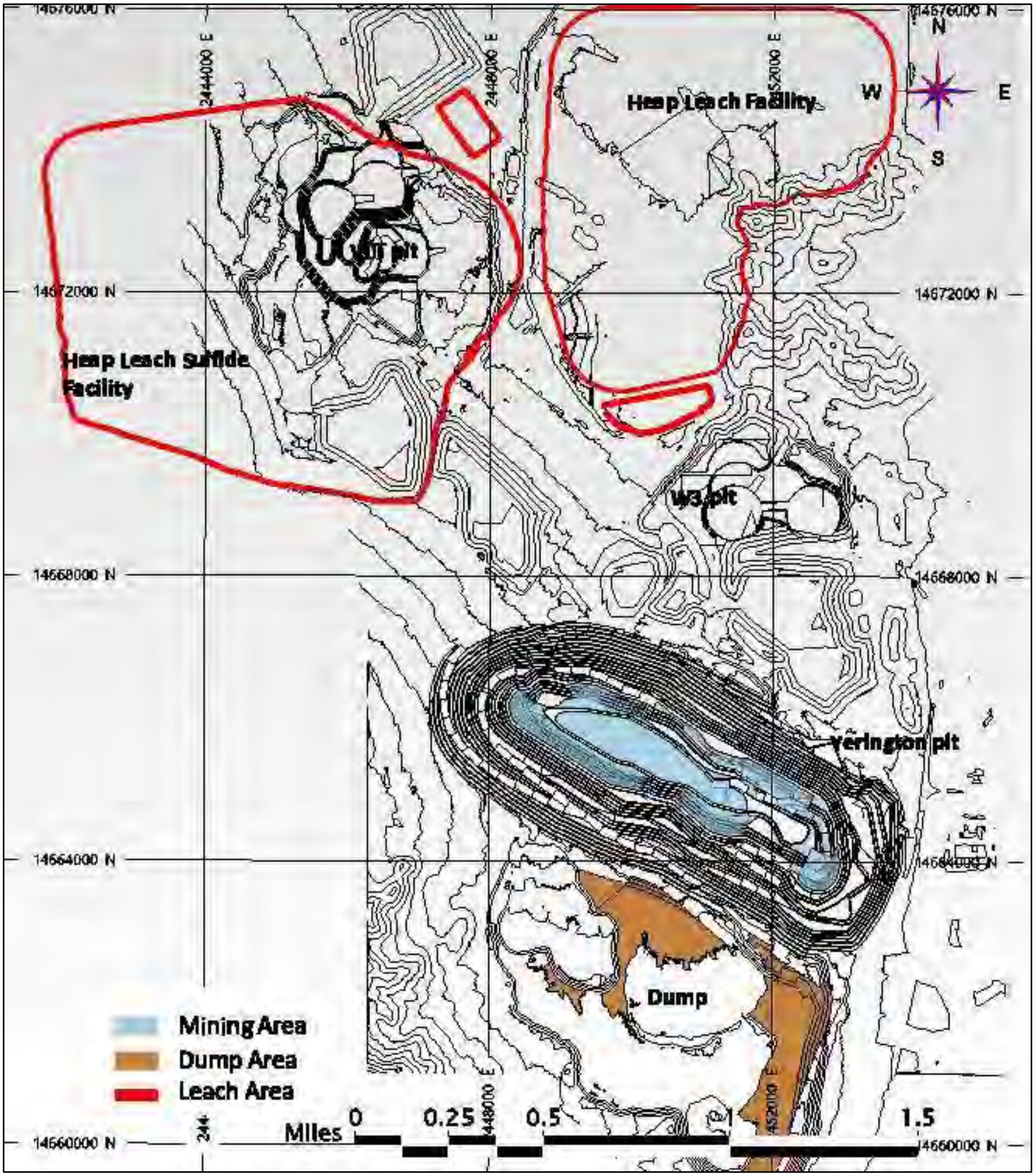
Source: AGP 2023

Figure 16-30: End of Year 9 – MacArthur Pit



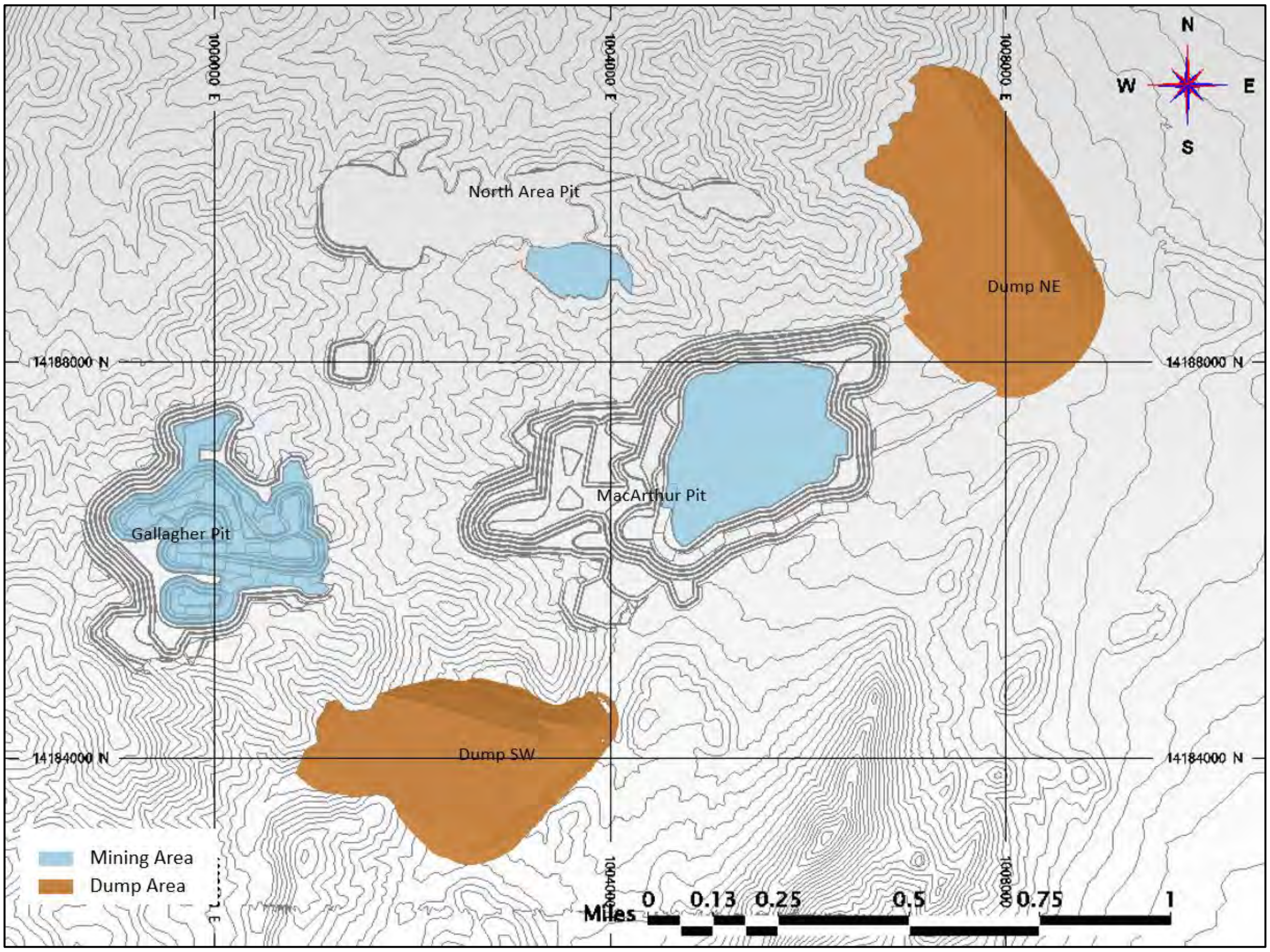
Source: AGP 2023

Figure 16-31: End of Year 10 – Yerington pit



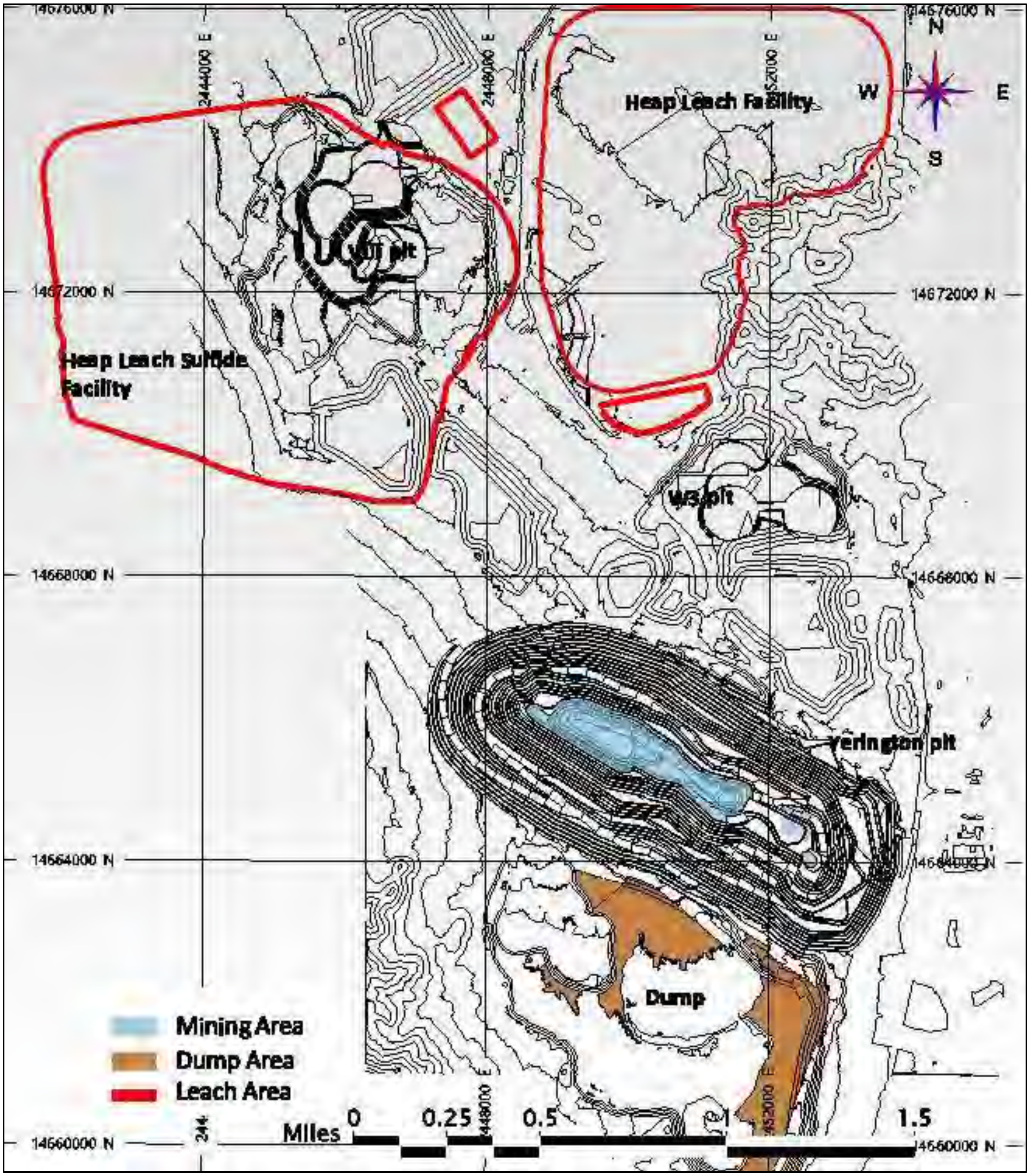
Source: AGP 2023

Figure 16-32: End of Year 10 – MacArthur Pit



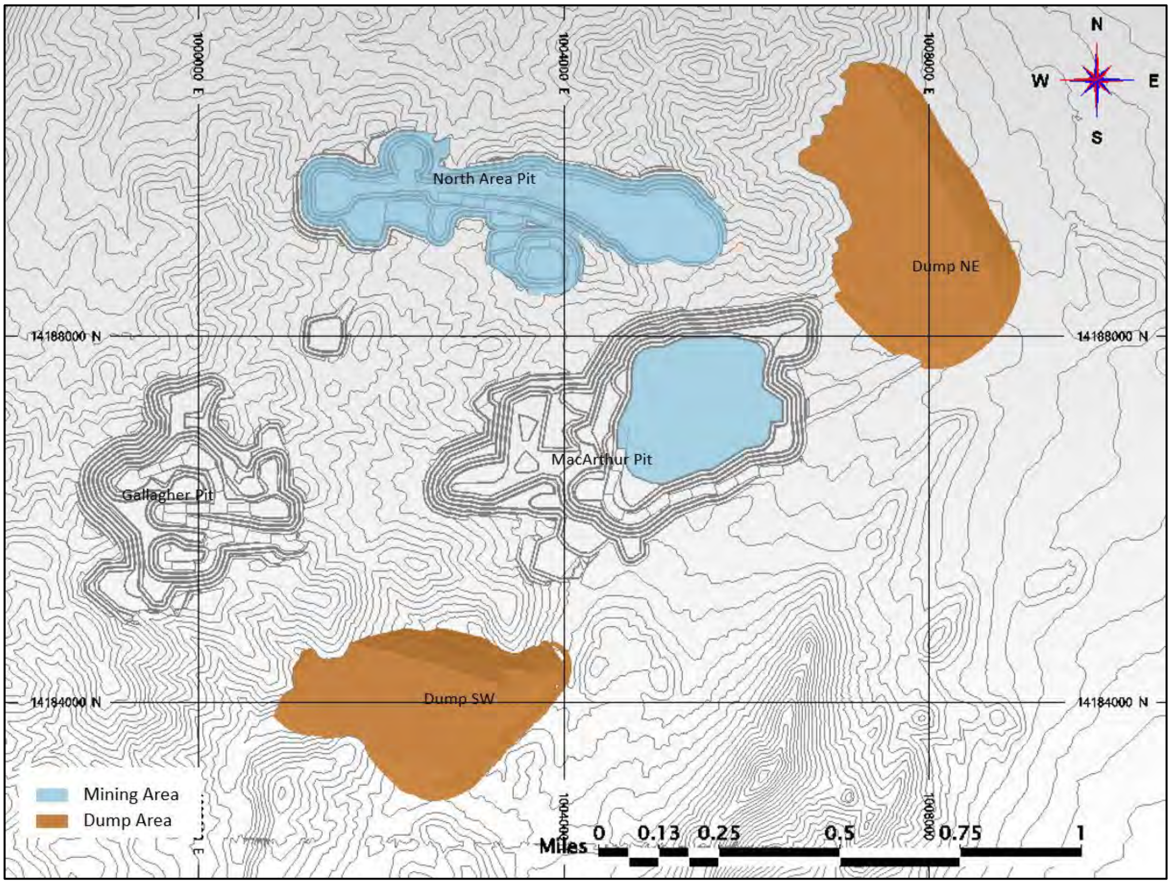
Source: AGP 2023

Figure 16-33: End of Year 11 – Yerington pit



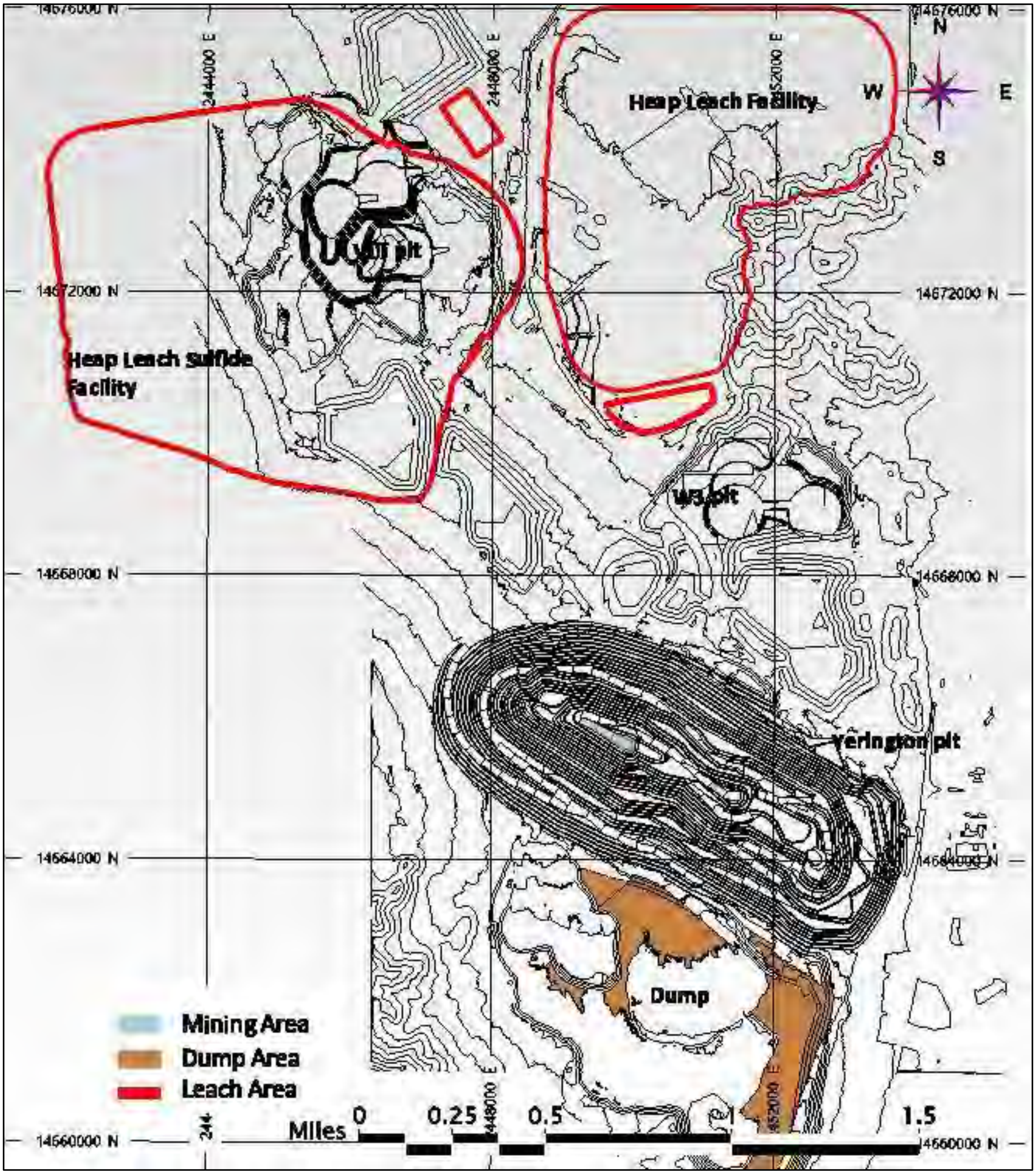
Source: AGP 2023

Figure 16-34: End of Year 11 – MacArthur Pit



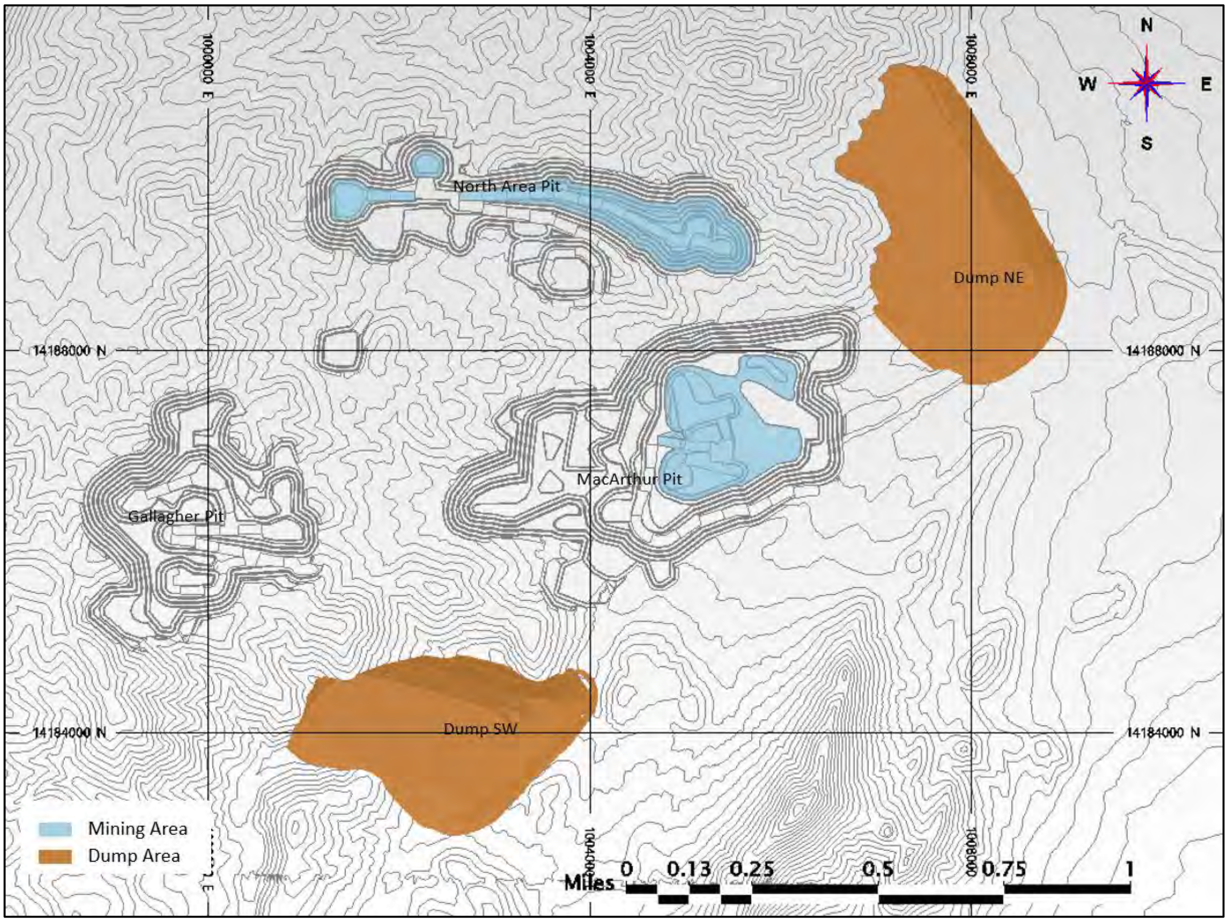
Source: AGP 2023

Figure 16-35: End of Year 12 – Yerington pit



Source: AGP 2023

Figure 16-36: End of Year 12 – MacArthur Pit



Source: AGP 2023

16.4 Mine Equipment Selection

Conventional mining equipment was selected to meet the required production schedule, with additional support equipment for road, dump, and bench maintenance as is typical in an open pit mine.

Drilling will be completed with down-the-hole-hammer (DTH) electric drills with 6 ¾” bits. This provides the capability to drill 25-foot heights in a single pass. A smaller 5 1/2” drill is used for tighter working areas.

The primary loading units will be 19.5 yd^3 electric hydraulic shovels. Additional loading will be completed by 15 yd^3 loaders. It is expected that one of the loaders will be at the primary crusher for the majority of its operating time. The haulage trucks will be conventional 100-ton rigid body trucks.

The support equipment fleet will be responsible for the usual road, pit, and dump maintenance requirements. In addition, smaller road maintenance equipment is included to keep drainage ditches open and sedimentation ponds functional.

Additional fleet detail is included in Section 21.

16.5 Blasting and Explosives

Blast patterns are the same for feed and waste material. The blast patterns will be 17.7 ft x 15.4 ft (spacing x burden). Holes will be 25 feet plus an additional 4.3 feet of sub-drill for a total 29.3 feet.

The power factor with this pattern size will be 0.69 lb/t. ANFO will be used 80% of the time with emulsion used only when wet conditions are encountered.

The blasting cost was estimated using quotations from a local vendor. The mine is responsible for guiding the loading process, including placement of boosters/Nonels, and stemming and firing the shot.

Total monthly cost in the service of delivering the explosives to the hole is estimated to be $35,950/month for the vendor’s pickup trucks, pumps, and labor. The explosives vendor will lease the explosives and accessories magazines as part of that cost. Further explosives details are included in Section 21.

16.6 Grade Control

Grade control will be completed with the blast hole drill cuttings. These cuttings will be collected at the drill hole and analyzed for the various copper grades (total, acid soluble and cyanide soluble) to assist in recovery calculation and to help in making a short-range grade control model for the mine planners.

In areas of low-grade mineralization or waste, 25% of the blasthole cuttings will be sampled to confirm or identify undiscovered veinlets or pockets of mineralization.

These grade control holes will serve to define the heap feed grade and mineralization contacts.

Samples collected will be sent to the assay laboratory and assayed for use in the short-range mining model.

16.7 Pit Dewatering

Efficient and cost-effective dewatering will play a role in the Project development. Dewatered slopes may allow a reduction in the strip ratio by permitting steeper inter-ramp angles while also being inherently safer.

The dewatering system includes the pumps, sumps, and pipelines responsible for moving water from the pit to the discharge points. Labor for this is already included in the General and Mine Engineering category of the mine operating cost. The mine is assumed to have a dedicated road/pump crew.

Additional dewatering in the form of horizontal drain holes is also contained in the dewatering operating cost. These holes will be drilled in annual campaigns starting in Year 2. The design concept is a series of holes 150 feet in length, angled up slightly and drilled into the highwalls. They will allow the water behind the wall to drain freely and prevent pore water pressure build-up particularly during freezing conditions.

16.8 Pit Slope Monitoring

Slope movement monitoring will be required during operations. Initial slope monitoring could be conducted with prisms read by manual or automated survey methods. A permanent, automated system may be necessary once operating slope measurement results for the first several years have been gathered and analysed. Radar systems are one of the possible methods for gathering monitoring information. Detailed slope movement information will be useful for calibrating future numerical models to support detailed pit designs at depth.

A limited number of vibrating wire piezometers are envisioned to be installed around the pit to capture information about the drawdown cones / pore pressure distributions as the pit gets deeper, in order to evaluate effectiveness of installed drains. Horizontal passive drains at 50 m spacing have been included in the costing to provide local depressurization to improve slope performance.

Pit wall mapping may be conducted using either digital or physical methods. The mapping results can then be reviewed and interpreted for use in verifying suitability of slope and blast designs.

Operating practices will need to be developed so that blast designs and vibrations are monitored for their impact on pit walls. Equipment operator training is also recommended to ensure that scaling and clean-up near walls is completed adequately.

17 RECOVERY METHODS

The selection of processing methods for the Yerington Copper Project has been carefully made, drawing upon the metallurgical response observed during the previously discussed metallurgical test work programs outlined in Section 13. Initially, production will be sourced from Residual Materials stemming from prior operations at Yerington, encompassing, among others, the VLT and the Oxide Waste stockpile (W-3). It's important to note that initial production rates will be considerably lower than the process facilities' nameplate throughput. Nevertheless, this approach affords an opportunity to commence commissioning early through the prioritized processing of legacy residual materials, thereby streamlining the ramp-up phases.

Subsequently, fresh materials extracted from the Yerington and MacArthur deposits will undergo processing using state-of-the-art heap leaching methods. These advanced methods will encompass the utilization of the Nuton bioleaching heap leach process for treating primary sulfide materials from Yerington, alongside modern oxide heap leaching techniques applicable to both Yerington and MacArthur oxides.

17.1 High Level Process Design Criteria

The initial phase of processing will focus on utilizing residual materials remaining from previous operational activities. This approach serves multiple purposes, including facilitating commissioning, providing essential operator training, and generating early revenue. The residual material primarily consists of the Vat Leach Tailings (oxide) and the W-3 stockpile (oxide).

Table 17-1 presents the High-Level Process Design Criteria tailored to different phases and feed sources within the various metallurgical zones of the Project. The preliminary processing of the residual materials will involve ROM heap leaching for oxide and a portable crushing circuit for the sulfide material, applying the Nuton process as necessary.

Table 17-1: Yerington/MacArthur High Level Process Design Criteria

		JLW Calc Yerington Sulfide Crushed Starter 2023		JLW Calc Yerington Oxide ROM Starter 2023		JLW Calc Yerington Sulfide Crushed 2023		JLW Calc Yerington Oxide ROM 2023		JLW Calc MacArthur Oxide Crushed 2023	
Design Criteria, Phase 1 Oxide Material	**Units**	**Parameter**	**Source**	**Parameter**	**Source**	**Parameter**	**Source**	**Parameter**	**Source**	**Parameter**	**Source**
Feed Source	**ID**		**AGP**	**W-3**	**AGP**	**Yerington Sulfide**	**AGP**	**Yerington Oxide**	**AGP**	**MacArthur Oxide**	**AGP**
Resource Tonnes of Oxide/Sulfide Material	t	5,836,558	TBC: 23022 CF model	13,613,695	TBC: 23022 CF model	148,452,804	TBC: 23022 CF model	55,636,617	TBC: 23022 CF model	204,228,743	TBC: 23022 CF model
Cu Head Grade	% TCu	0.29%	TBC: 23022 CF model	0.11%	TBC: 23022 CF model	0.29%	TBC: 23022 CF model	0.21%	TBC: 23022 CF model	0.18%	TBC: 23022 CF model
Mining Years		2.00	Calc: TBC	1.00	Calc: TBC	9.00	Calc: TBC	14.00	Calc: TBC	8.00	Calc: TBC
Annual Processing Rate (Avg)	tpa	2,918,279	Calc.	13,613,695	Calc.	12,371,067	Calc.	3,974,044	Calc.	22,692,083	Calc.
Annual Processing Rate (max)	tpa	2,918,279	Calc.	13,613,695	Calc.	17,276,417	Calc.	17,903,970	Calc.	25,179,983	Calc.
Annual Processing Rate (min)	tpa	2,918,279	Calc.	13,613,695	Calc.	2,861,976	Calc.	5,845	Calc.	12,385,112	Calc.
Operating Days per Year	days	365	WPS	365	WPS	365	WPS	365	WPS	365	WPS
Tonnage to Heap Leach per Day	tpd	7,995	Calc.	37,298	Calc.	33,893	Calc.	10,888	Calc.	68,986	Calc.
Tonnage to Heap Leach Design	tpd	7,550	2023 Mine Sch.	20,000	2023 Mine Sch.	47,333	2023 Mine Sch.	5,000	2023 Mine Sch.	70,000	2023 Mine Sch.
Max Tonnage to Heap Leach Design for Water Balance	tpd	7,550	2023 Mine Sch.	20,000	2023 Mine Sch.	48,000	2023 Mine Sch.	49,052	2023 Mine Sch.	70,000	2023 Mine Sch.
Operating Hours Per Day	days	20	JLW	24	JLW	24	JLW	24	JLW	24	JLW
Feed Prep. Method		Crushed 3 Stages Closed Circuit with Agglomeration	RIO/JLW	ROM	JLW	Crushed 3 Stages Closed Circuit with Agglomeration	RIO/JLW	3 Stages Crushed Open Circuit Agglomerated	JLW TBC	Single Stage MMD Sizer Open Circuit (Agglomerated	JLW
Heap Leach Feed Particle Size	in	0.375	Nuton			0.375	Nuton	0.375	JLW TBC	0.50	JLW TBC
Crushing Plant Availability	%	85%	JLW	85%	JLW	85%	JLW	85%	JLW	85%	JLW
Crushing Rate	tph	470	Calc.	1,828	Calc.	1,661	Calc.	534	Calc.	3,382	Calc.
Agglomeration and Stacking Availability	%	95%	JLW	95%	JLW	95%	JLW	95%	JLW	95%	JLW
Agglomeration and Stacking Rate	tph	421	Calc.	1,636	Calc.	1,487	Calc.	478	Calc.	3,026	Calc.
Hydromet Process		Nuton		Normal-Standard		Nuton		Normal -Standard		Normal -Standard	
Cu Grade	%	0.290%	WPS	0.110%	WPS	0.290%	WPS	0.210%	WPS	0.180%	WPS
Cu Recovery (feed to cathode)	%	74%	Nuton TBC	70%	TBC	74%	Nuton TBC	75%	TBC	75%	TBC
SXEW Availability	%	98%	JLW	98%	JLW	98%	JLW	98%	JLW	98%	JLW
Cu Cathode Produced per Year	tpa	6,263	Calc.	10,483	Calc.	26,548	Calc.	6,259	Calc.	30,634	Calc.
Cu Cathode Produced per ***Operating*** Hour	tph	0.70	Calc.	1.17	Calc.	2.97	Calc.	0.70	Calc.	3.43	Calc.
Cu Cathode Produced for Life of Phase	t	12,525	Calc.	10,483	Calc.	318,580	Calc.	87,628	Calc.	275,709	Calc.
Crushed Product Size	in	3/8"	Nuton	ROM	JLW	3/8"	Nuton	ROM	JLW	ROM	JLW
Acid Addition to Agglomeration	lb/t	12	Nuton	0	WPS	12	Nuton	0	WPS	2	WPS
Curing Time	days	1 to 2	WPS	1 to 2	WPS	1 to 2	WPS	1 to 2	WPS	1 to 2	WPS
Fresh Stacked Heap Leach in situ Density	lb/ft3	100	WPS	100	WPS	100	WPS	100	WPS	100	WPS
Feed Volume to Heap Leach per Year	ft3/y	58,365,580	Calculated	272,273,899	Calculated	247,421,340	Calculated	79,480,882	Calculated	453,841,660	Calculated
Feed Volume to Heap Leach Daily	ft3/d	159,906	Calculated	745,956	Calculated	677,867	Calculated	217,756	Calculated	1,379,725	Calculated
Heap Leach Cycle Time	days	200	WPS	200	WPS	200	WPS	200	WPS	200	WPS
Feed Volume per Cycle	ft3	31,981,140	WPS	149,191,177	WPS	135,573,337	WPS	43,551,168	WPS	275,945,019	WPS
Heap Leach Lift Height	ft	30	WPS	30	WPS	30	WPS	30	WPS	30	WPS
Heap Leach Surface Area Irrigated	ft2	1,066,038	Calculated	4,973,039	Calculated	4,519,111	Calculated	1,451,706	Calculated	9,198,167	Calculated
Irrigation Rate	gpm/ft2	0.0025	Nuton	0.0024	WPS	0.0025	Nuton	0.0024	WPS	0.0024	WPS
Solution Applied per tonne of Ore	t/t	2.00	Calculated	1.92	Calculated	2.00	Calculated	1.92	Calculated	1.92	Calculated
Raff Flow Rate	gpm	2,665	Calculated	11,935	Calculated	11,298	Calculated	3,484	Calculated	22,076	Calculated
Make up Water Requirement	%	10%	Calculated	6%	Calculated	10%	Calculated	6%	Calculated	6%	Calculated
Make up Water Requirement	gpm	267	Calculated	716	Calculated	1,130	Calculated	209	Calculated	1,325	Calculated
Make up Water Requirement	Acft/yr	429		1,153		1,819		337		2,133	
PLS Flow Rate	gpm	2,399	Calculated	11,219	Calculated	10,168	Calculated	3,275	Calculated	20,751	Calculated
PLS Cu Grade	g/L	1.17	Calculated	0.42	Calculated	1.17	Calculated	0.85	Calculated	0.66	Calculated
SX Extraction Stages	#	2	WPS	2	WPS	2	WPS	2	WPS	2	WPS
SX Strip Stages	#	1	WPS	1	WPS	1	WPS	1	WPS	1	WPS
SX Extractant and Diluent	ex	LIX984N, Shellsol2046	WPS	LIX984N, Shellsol2046	WPS	LIX984N, Shellsol2046	WPS	LIX984N, Shellsol2046	WPS	LIX984N, Shellsol2046	WPS
Raffinate Grade Cu	g/L	<0.2	WPS	<0.2	WPS	<0.2	WPS	<0.2	WPS	<0.2	WPS
Raffinate Free Acid	g/L	1.73		0.62		1.73		1.26		0.98	
Rich Electrolyte Grade Cu	g/L	50	WPS	50	WPS	50	WPS	50	WPS	50	WPS
Lean Electrolyte Grade Cu	g/L	35	WPS	35	WPS	35	WPS	35	WPS	35	WPS

		JLW Calc Yerington Sulfide Crushed Starter 2023		JLW Calc Yerington Oxide ROM Starter 2023		JLW Calc Yerington Sulfide Crushed 2023		JLW Calc Yerington Oxide ROM 2023		JLW Calc MacArthur Oxide Crushed 2023	
Design Criteria, Phase 1 Oxide Material	**Units**	**Parameter**	**Source**	**Parameter**	**Source**	**Parameter**	**Source**	**Parameter**	**Source**	**Parameter**	**Source**
H_2SO_4 Consumption (Stated)	lb/t	32	WPS	25	WPS	32	WPS	25	WPS	26	WPS
H_2SO_4 Consumption (Net)	lb/t	27.7	Nuton	23.5	WPS	34.0	Nuton	21.9	WPS	23.3	WPS

17.2 Process Flow Sheet

17.2.1 Summary Process Definition

The Project will predominantly employ established and proven processing technologies for handling oxide materials. For sulfide material, primarily composed of chalcopyrite, a proprietary bioleaching process called Nuton will be employed. Nuton, developed by Rio Tinto, has demonstrated significant recovery of sulfide materials through heap leaching, while simultaneously reducing operating costs and minimizing the environmental impact typically associated with sulfide material processing.

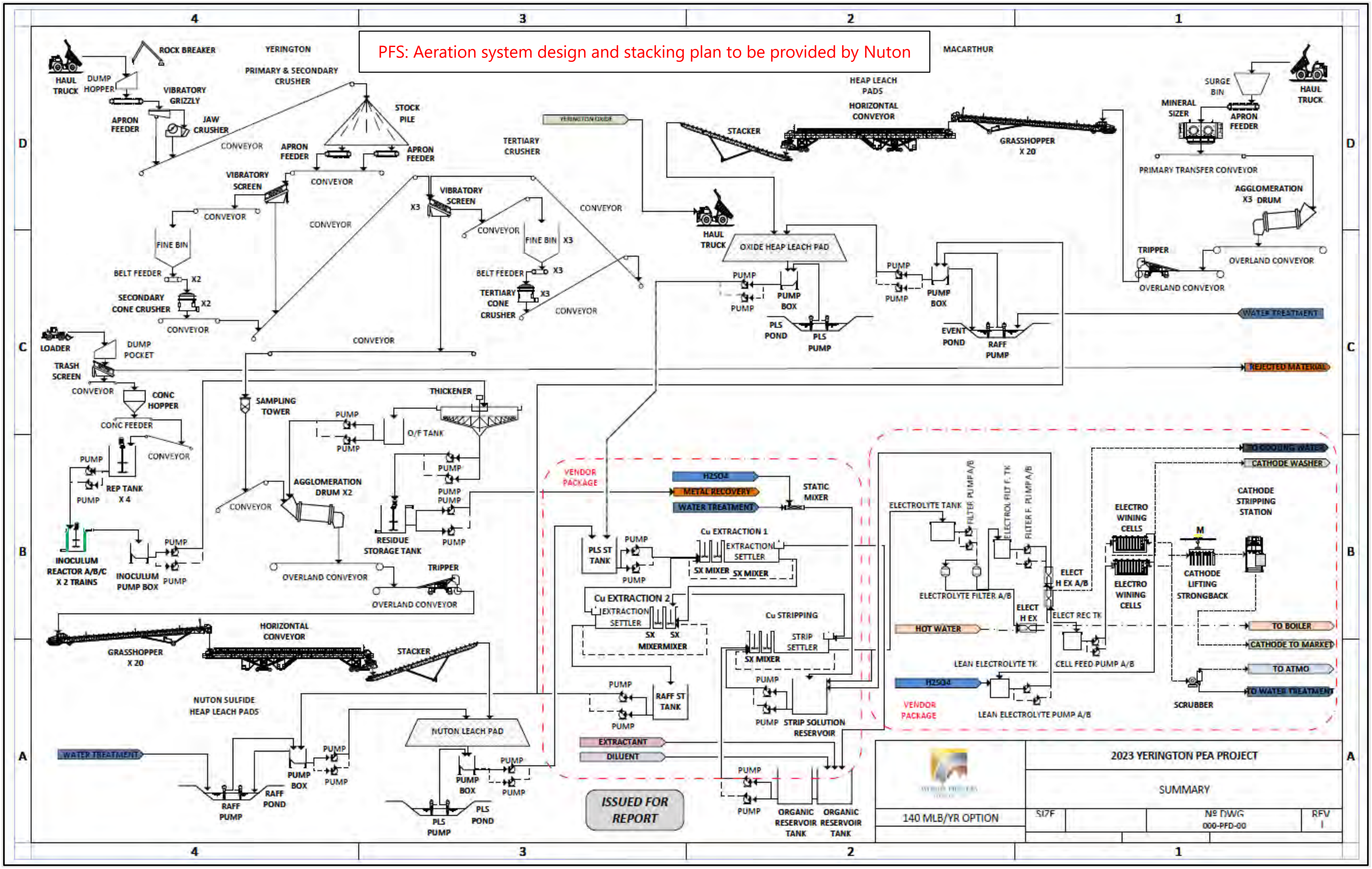
In the case of Yerington oxide material, the processing approach will involve conventional ROM copper heap leaching, followed by a standard solvent extraction and electrowinning process to recover copper in the form of LME grade cathode.

For MacArthur oxide material, sizing will be achieved using an MMD sizer to facilitate transport via an overland conveyor located in close proximity to the Yerington HLP and the SXEW facilities.

A visual representation of the Nuton process, highlighting its key aspects, can be found in Figure 17-1.

While Oxide material will be processed separately in dedicated heap leach facilities, the resulting copper leach solutions from both facilities will be directed to a shared SXEW circuit.

Figure 17-1: Yerington MacArthur Summary Process Flowsheet



Source: Woods Process 2023

The process facilities have been categorized into 19 distinct areas, each corresponding to specific process unit operations and physical locations. Table 17-2 provides a list of these process areas, complete with their respective work breakdown structure areas. In the following subsections, concise descriptions of each area are provided along with accompanying process flowsheets for reference.

Table 17-2: Yerington/MacArthur Process Areas

Area	Area Name
100	Yerington Crushing
200	Pyrite Concentrate Repulping
300	Inoculum Build-Up
400	Inoculum Liquid/Solid Separation
500	Agglomeration/ Overland Conveying
600	Heap Leach Stacking System
700	Nuton Heap Leach
800	Yerington Oxide ROM Heap Leach
900	MacArthur Oxide Sizing and Transport
1000	MacArthur Agglomeration/Overland Conveying
1100	MacArthur Heap Stacking
1200	MacArthur Heap Leach
1300	Yerington Solvent Extraction
1400	Yerington Tank Farm
1500	Yerington Electrowinning
1600	Yerington Reagents
1700	Utilities
1800	Water Treatment
1900	Acid Plant (Included as a place holder)

17.2.2 Area 100: Yerington: Primary and Secondary Crushing

In this section, haul trucks are responsible for transporting ROM sulfide material from the deposit to the crushing facility. Oxide material from Yerington follows a direct route to the oxide HLF where it is stacked as ROM. Within the crushing facility, the ROM material undergoes crushing in a gyratory crusher (GC-01) to achieve a nominal 4-inch particle size. A rock breaker (RB-01) assists in breaking down rocks that may obstruct the crusher and aids in bin cleanup.

The crushed product from the crusher is then discharged onto an apron feeder (AF-01) and subsequently onto a coarse feed stacking conveyor, CV-01. This conveyor is equipped with a belt magnet (BM-01) to remove any tramp iron from the crushed material before it is transferred to the stockpile.

From the stockpile, material is reclaimed through two apron feeders (AF-02 and AF-03) that feed into two secondary vibratory screens, VS-01 and VS-02, which operate in parallel. Screen oversize material from these screens is conveyed to the Secondary Feed Bin (FB-01) via conveyor CV-03, while screen undersize material reports to the secondary product conveyor (CV-05) for further processing in the tertiary crushing circuit.

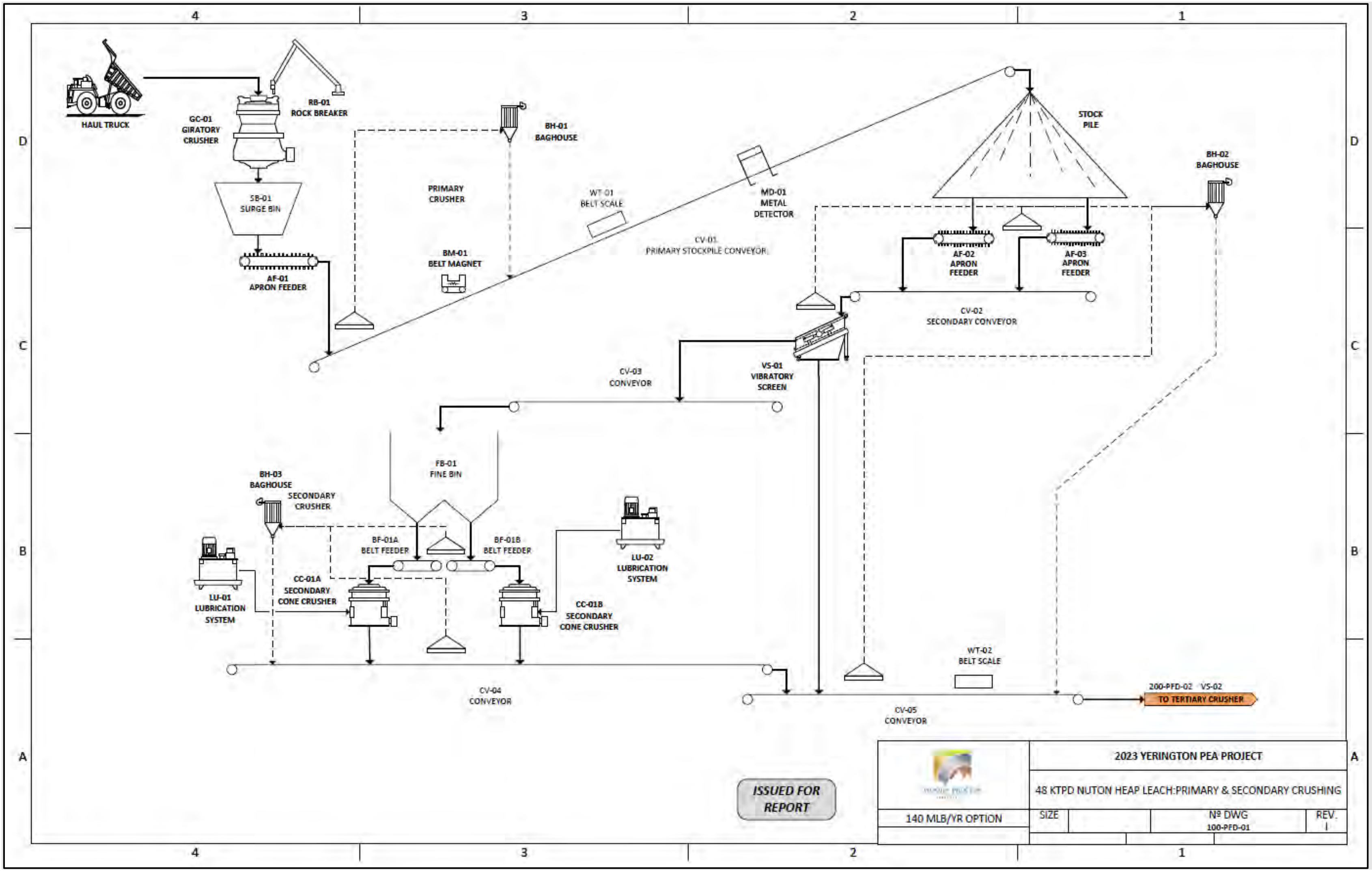
To control dust emissions and maintain air quality, fugitive dust present at various drop points is collected by a ductwork and baghouse system (BH-02).

Oversize material from the vibratory screens is directed to feed bin (FB-01), and this material is evenly distributed to two belt feeders (BF-01 and BF-02) to ensure a controlled and even flow to two secondary cone crushers (CC-01, CC-02) for further size reduction. These cone crushers are equipped with independent lubrication systems (LU-01, LU-02) to provide lubrication and cooling. The product from the secondary cone crushers discharges onto the secondary crusher product conveyor (CV-04), which combines the secondary crusher product with the undersize material before transferring it to the tertiary crushing circuit.

Dust generated at the transfer points is collected by a separate baghouse and ductwork system (BH-03) to effectively control dust emissions and maintain air quality.

A visual representation of the Crushing Flowsheet is provided in Figure 17-2.

Figure 17-2: Area 100: Yerington Primary and Secondary Crushing Flowsheet



Source: Woods Process 2023

17.2.3 Area 200: Tertiary Crushing

In this section, the secondary crushed material undergoes further processing. Initially, the material is directed to a set of three vibratory screens (VS-03 through VS-05) that operate in parallel. The screen oversize is then directed onto a tertiary feed conveyor (CV-06 through CV-08), also operating in parallel. These conveyors transfer the material to the feed bins (FB-02A/B/C) for the tertiary crushers.

Three belt feeders (BF-02A/B/C) work in parallel to accurately meter the material from the tertiary feed bins into one of three tertiary cone crushers: CC-03, CC-04, and CC-05. Each of these tertiary cone crushers is equipped with its own dedicated lubrication system (LU-03, LU-04, and LU-05, respectively) to ensure efficient and reliable operation. The tertiary cone crushers operate in a closed circuit and discharge the product onto CV-16. This crushed material is subsequently conveyed back to the vibratory screens for further classification via conveyor CV-16. To ensure no additional metal pieces are present in the material, a metal detector (MD-02) is installed on CV-16.

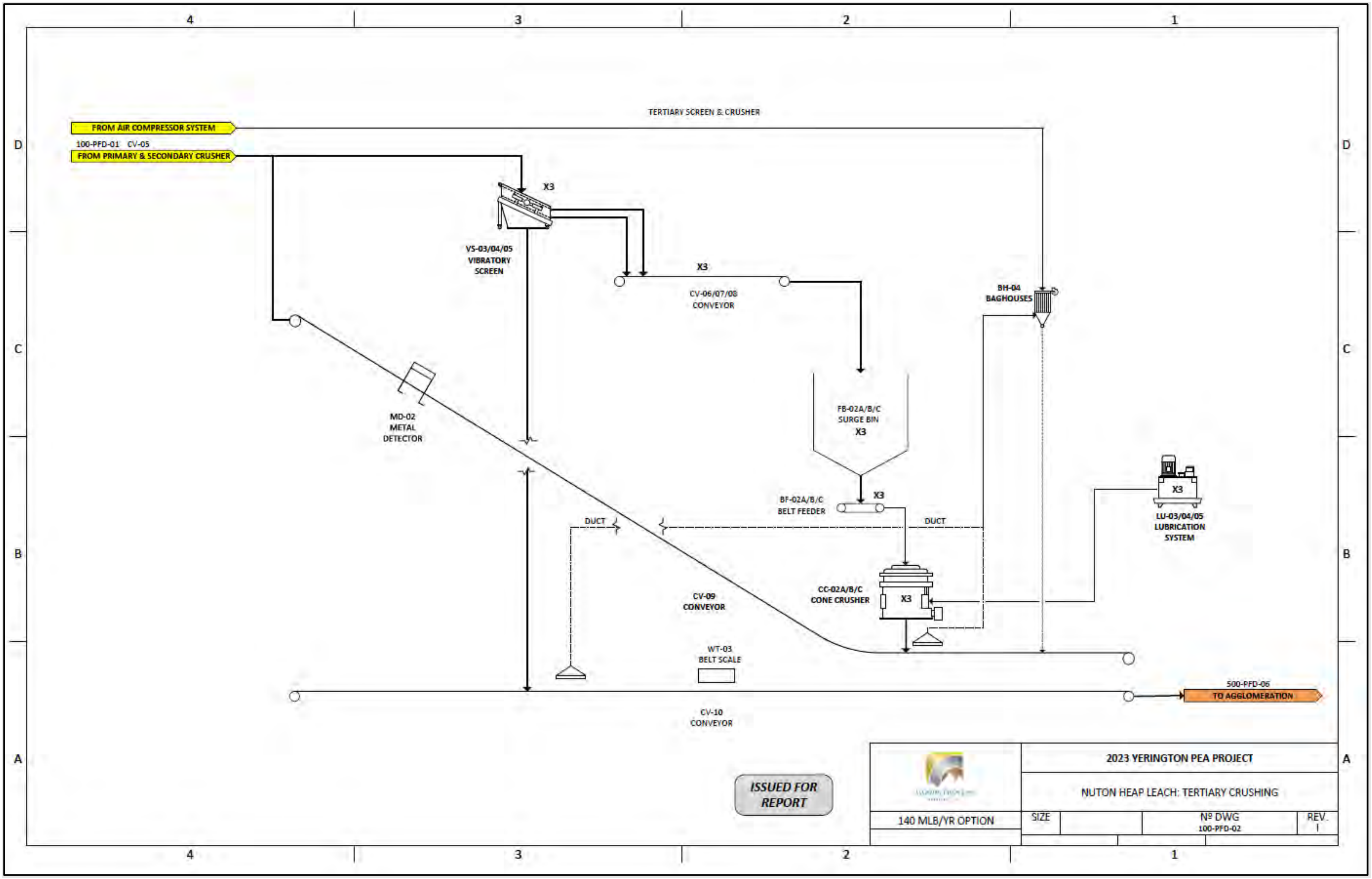
Any material that successfully passes through the vibratory screens (VS-02 through VS-07) is separated and dropped onto conveyor CV-13 for further processing in the agglomeration circuit.

To control dust emissions and maintain air quality, separate baghouses are installed around the drop points of the vibratory screens (BH-04) and around the transfer points of the tertiary crushers (BH-05). The product collected by the baghouses is directed to conveyor CV-09. A belt scale (WT-03) is installed on CV-13 to accurately measure the feed to the agglomeration process.

Separate baghouses are installed around the drop points of the vibratory screen (BH-04) and around the transfer points of the tertiary crushers (BH-05). The product from the bag houses is also reports conveyor CV-09. A belt scale (WT-03) is installed on the CV-13 to measure feed to agglomeration.

For a visual reference, please consult Figure 17-3.

Figure 17-3: Area 200: Yerington Tertiary Crushing Flowsheet



Source: Woods Process 2023

17.2.4 Area 300: Yerington-Nuton Pyrite Concentrate, Repulping, and Acidulation

In this section, the Nuton process is employed to enhance the heap leach kinetics of Yerington sulfide material by introducing sulfide in the form of a pyrite-rich concentrate. This concentrate will be procured from an off-site source and transported to the Project for further processing.

The delivery of the flotation concentrate can be accomplished using conventional highway trucks or railcars from the rail spur. Upon arrival, it will be offloaded in a contained storage area and, if necessary, blended before use. Blended concentrate will be transferred to a Dump Hopper (DP-02) via a front-end loader. To remove trash and oversize material, the concentrate undergoes screening with the Vibratory Trash Screen (TS-01). The undersize material is then directed to the Concentrate Transfer conveyor (CV-10) and transported to the Concentrate Storage Hopper (CH-01). Oversize material from TS-01 is sent to a Trash Bin for disposal or potential further processing.

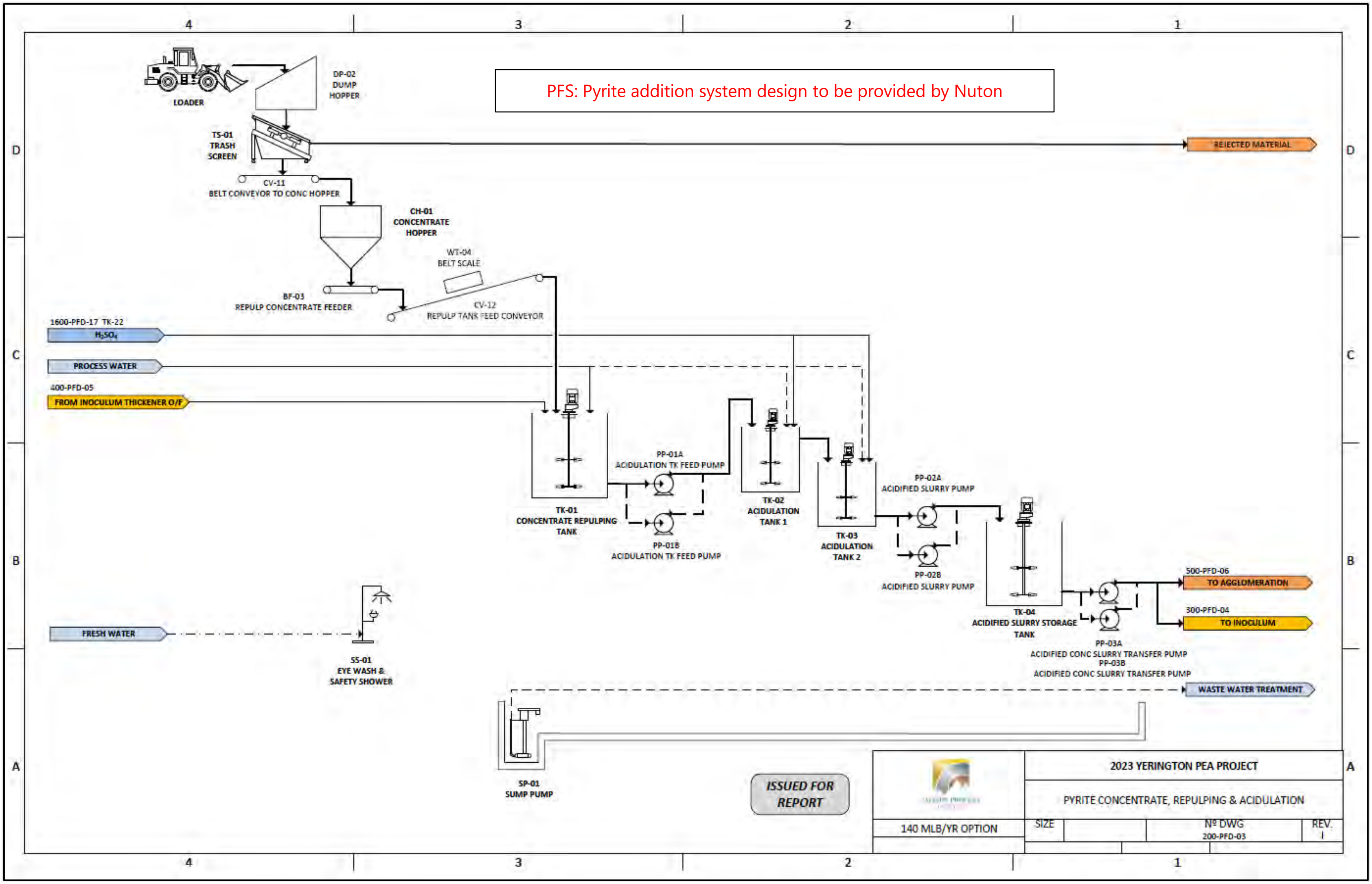
Concentrate from CH-01 is channeled to the Concentrate Repulp belt feeder (BF-03), which, in turn, feeds the Repulp Tank Feed Conveyor (CV-11). The Repulp Tank Feed Conveyor is equipped with a weightometer (WT-04) to measure the concentrate as it enters the Concentrate Repulping Tank (TK-01). In this tank, concentrate is mixed with a solution to achieve a predetermined solids density. TK-01 includes an agitator to ensure thorough mixing before being transferred to the Acidulation stage via the Acidulation Tank Feed pumps (PP-01A and PP-01B), which supply the first of two Acidulation Tanks operating in series, TK-02 and TK-03, respectively. These Acidulation Tank Feed Pumps (PP-01 A/B) are installed in parallel, with one operating and one on standby. Sulfuric acid is added to the Acidulation tanks to precondition the concentrate slurry, facilitating reactions with any Lime (CaO) and residual reagents from the flotation process, while adjusting the slurry pH to promote optimal bacterial growth.

Subsequently, the slurry is pumped from the acidulation tanks to the acidified slurry storage tank using pumps PP-02A/B (one operating and one standby) before being transferred to the agglomeration or inoculum circuit by slurry pumps PP-03A/B (one operating and one standby). The slurry storage tank ensures a consistent feed supply for downstream processing circuits.

The repulping and acidulation area is designed within an independent containment area, equipped with a sump pump (SP-01) to manage potential spills. Safety measures include the provision of an emergency eye wash and shower station (SS-01) to address any contact with acid or other chemical hazards.

For reference, please refer to the following Figure 17-4.

Figure 17-4: Area 300 Yerington-Nuton Pyrite Concentrate, Repulping and Acidulation Flowsheet



Source: Woods Process 2023

17.2.5 Area 400: Yerington Inoculum/Biomass build-up

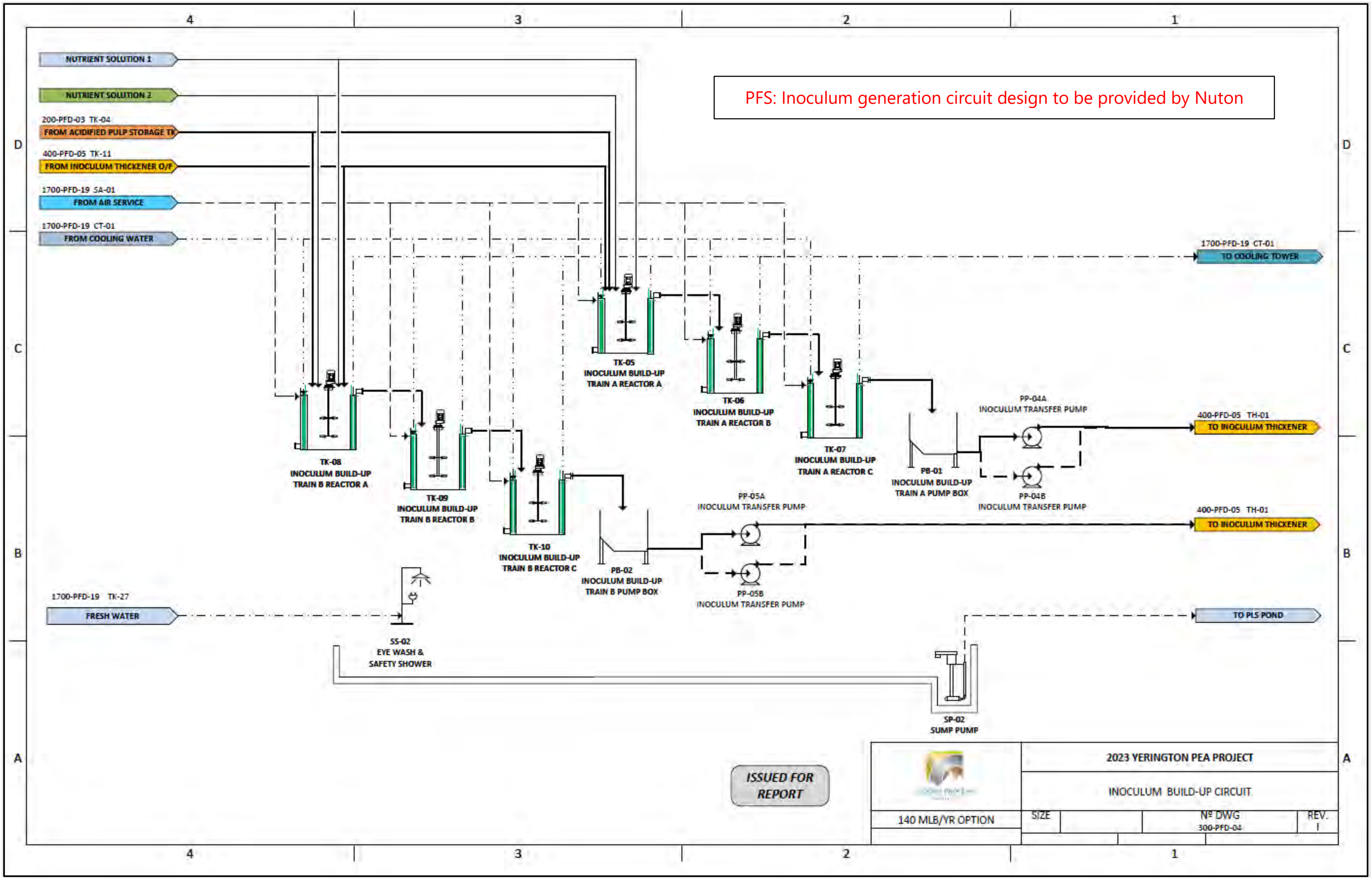
Following the acidulation tank, the acidified slurry proceeds to the inoculum build-up phase, where bio-oxidation of the acidified slurry takes place. This critical step involves two parallel trains, known as Train A and Train B, each comprising three reactors operating in series (TK-05 through TK-07 for Train A and TK-08 through TK-10 for Train B). These reactors are specifically designed to foster the growth and activity of bacteria essential for the Nuton bioleaching process. Equipped with cooling and heating systems, air injection mechanisms, and nutrient addition capabilities, the reactors create optimal conditions for biomass generation. Acidified slurry is introduced into the reactors along with a recycle stream from the Inoculum Thickener to inoculate fresh acidified slurry effectively.

Upon completion of the inoculum build-up phase, the oxidized slurry is directed to the Inoculum Pump Box (PB-01 and PB-02 for trains A and B, respectively). The active inoculum slurry is then transferred from both pump boxes to the Inoculum Slurry Thickener via the Inoculum Transfer Pumps (PP-04 A/B and PP-05 A/B), installed in parallel, with one pump operating and the other serving as a standby.

This dedicated inoculum build-up circuit, referred to as Circuit I, is situated within an isolated containment area. This area features a sump pump (SP-02) for managing potential spills and is equipped with a safety eye wash and shower station (SS-01) to address any safety concerns arising from contact with chemicals or hazardous substances.

For a visual representation of the current process flowsheet, please refer to Figure 17-5.

Figure 17-5: Area 400 Yerington Inoculum Build-Up Circuit Flowsheet



Source: Woods Process 2023

17.2.6 Area 500: Inoculum Liquid Solid Separation

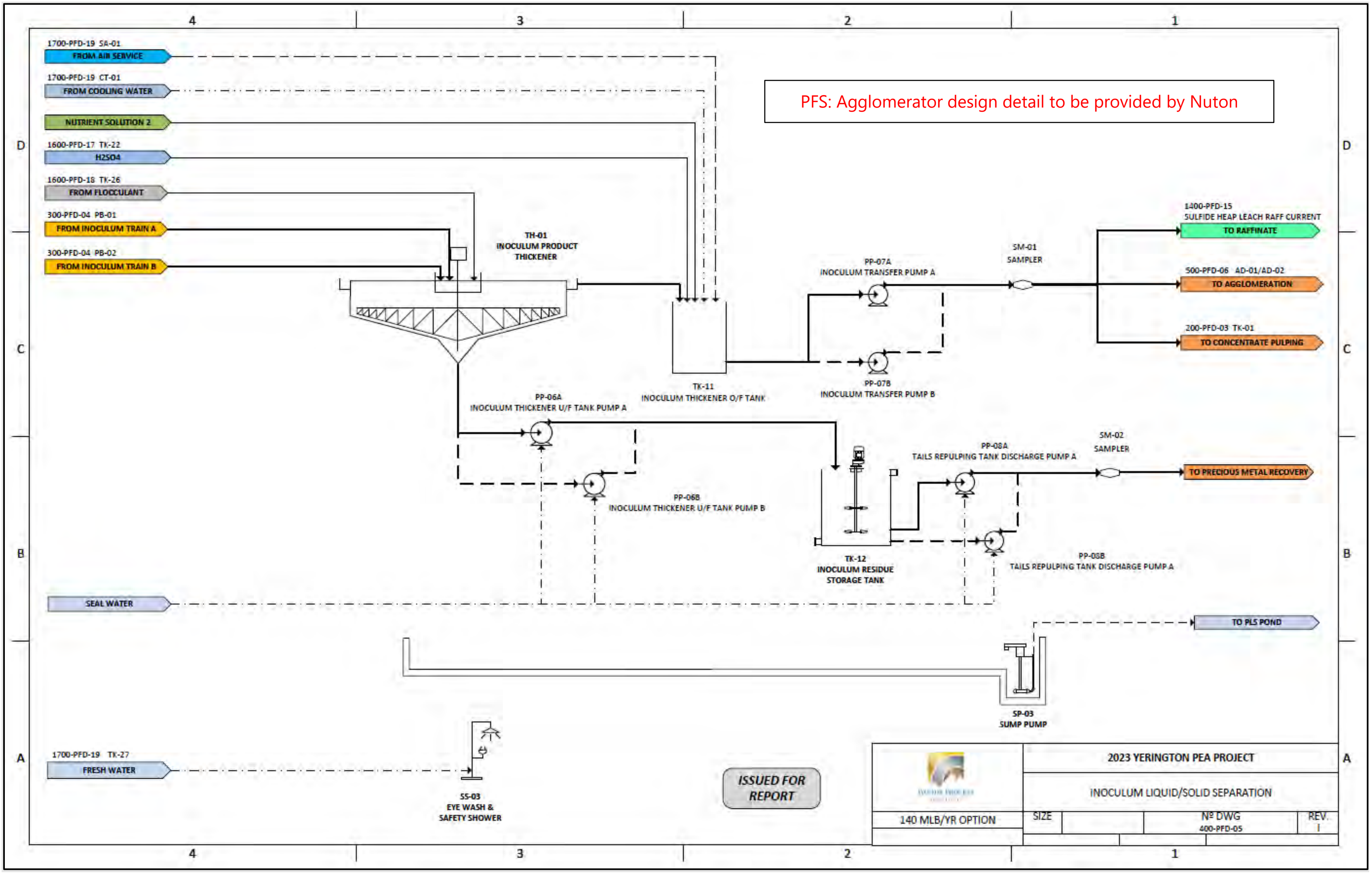
The bioactive slurry, originating from the biomass build-up reactors, is conveyed to the inoculum thickener (TH-01) for the crucial process of liquid-solid separation. The thickener's underflow, containing solid components, is efficiently pumped to the inoculum residue storage tank (TK-12) through the inoculum thickener underflow tank pumps (PP-06 A/B). As the slurry is transferred to the storage tank, it undergoes sampling via a slurry sampler (SM-02) and is then directed to the Agglomeration circuit. Here, it is blended with the fresh heap leach feed, enriching the mixture with the essential microbial activity.

Concurrently, the overflow from the Inoculum Thickener is directed to the inoculum thickener overflow tank (TK-11). This overflow, which primarily consists of liquid components, is subsequently pumped into the agglomeration circuit. A portion is redirected to the heap leach feed raffinate and recycled back to the concentrate repulping tank to inoculate the sulfide concentrate. To facilitate accurate metal accounting and maintain precise process control, the overflow is subject to sampling through a solution sampler (SM-01).

This dedicated inoculum liquid-solid separation circuit is enclosed within its own containment area and is equipped with a sump pump (SP-03) for managing potential spills. Furthermore, an emergency safety eye wash (SS-03) is readily available for any unforeseen safety incidents.

For a visual representation of the current process, please refer to Figure 17-6.

Figure 17-6: Area 500 Yerington-Nuton Inoculum Liquid/Solid Separation



Source: Woods Process 2023

17.2.7 Area 600: Yerington Agglomeration/Overland Conveying

The material, having undergone tertiary crushing and already reduced to the desired size, undergoes quality control verification. Passing through a sample tower (SM-03), it is examined to ensure it adheres to the specified criteria and for accurate metallurgical accounting. To sample the slurried concentrate, a dedicated slurry sampler (SM-04) is employed.

The tertiary crushed material is then conveyed via a specialized conveyor (CV-12), fitted with a precision belt scale (WT-05) to ensure precise measurement. The material is then directed into a pant leg chute (PL-01), serving the purpose of bifurcating it into two distinct streams. Each stream is directed into one of the two agglomeration drums (AD-01 and AD-02).

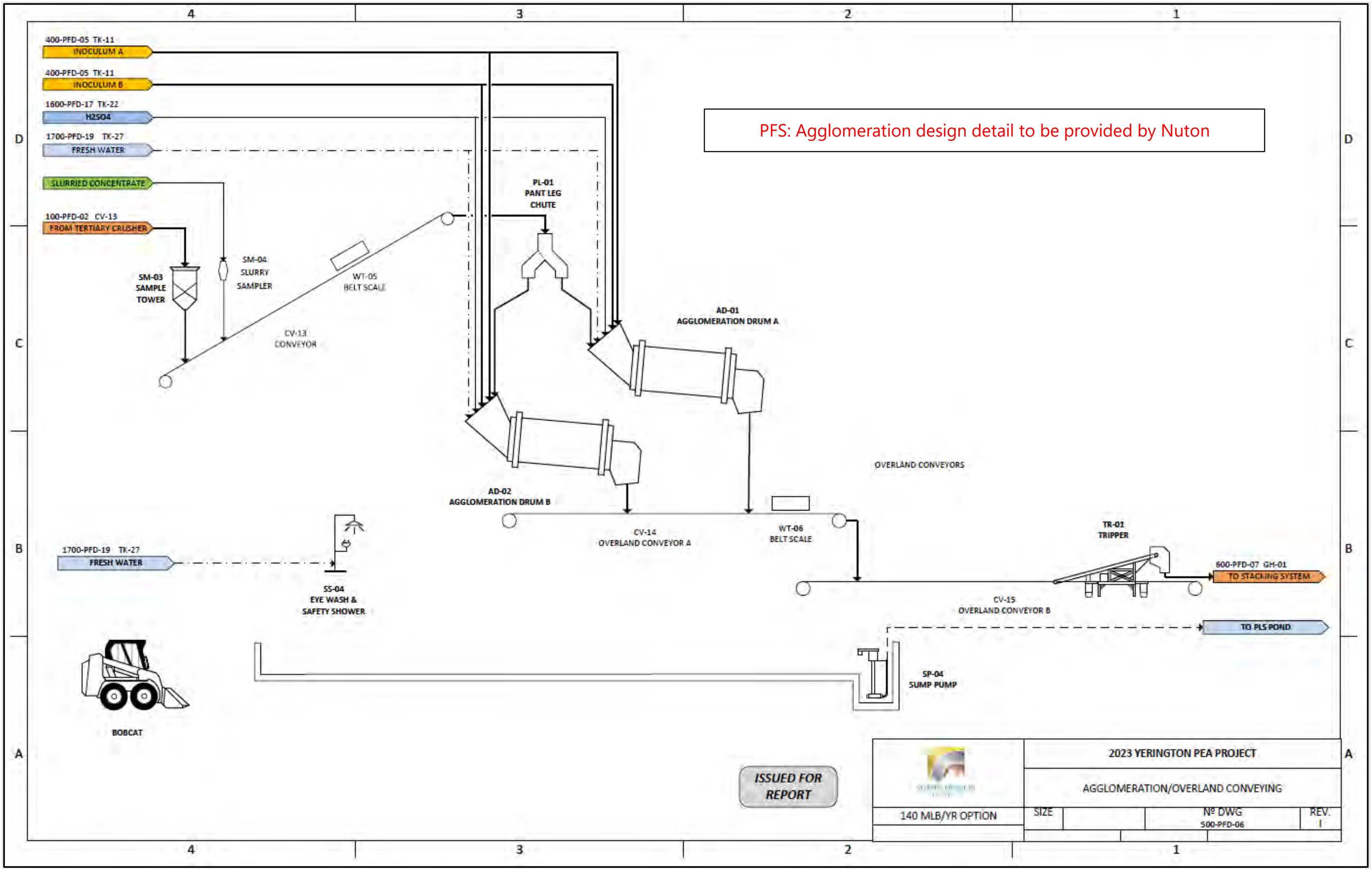
Within the agglomeration drums, the tertiary crusher material, acidulated concentrate, and inoculum thickener underflow are blended to generate agglomerates enriched with inoculum-enhanced raffinate. As needed, additional reagents and moisture, including sulfuric acid, fresh water, and inoculum thickener overflow, are introduced to facilitate the agglomeration process.

Upon completion of agglomeration, the resulting agglomerated material is primed for transport to the HLF via the overland conveyor (OL-1). This conveyor is equipped with a belt scale (WT-06) to ensure accurate measurement. Subsequently, the material is transferred onto another overland conveyor (OL-2) for close proximity to the HLF. Ultimately, the agglomeration product is conveyed onto the grasshopper stacking system via the shiftable tripper (TR-01).

This dedicated agglomeration circuit is confined within its designated containment area and is equipped with a sump pump (SP-04) for efficient spill management. Additionally, an emergency safety eye wash (SS-04) station is readily accessible in case of unforeseen safety incidents.

For a visual representation of this process, please refer to Figure 17-7.

Figure 17-7: Agglomeration and Overland Conveying



Source: Woods Process 2023

17.2.8 Area 700 Yerington-Nuton Heap Leach Stacking System

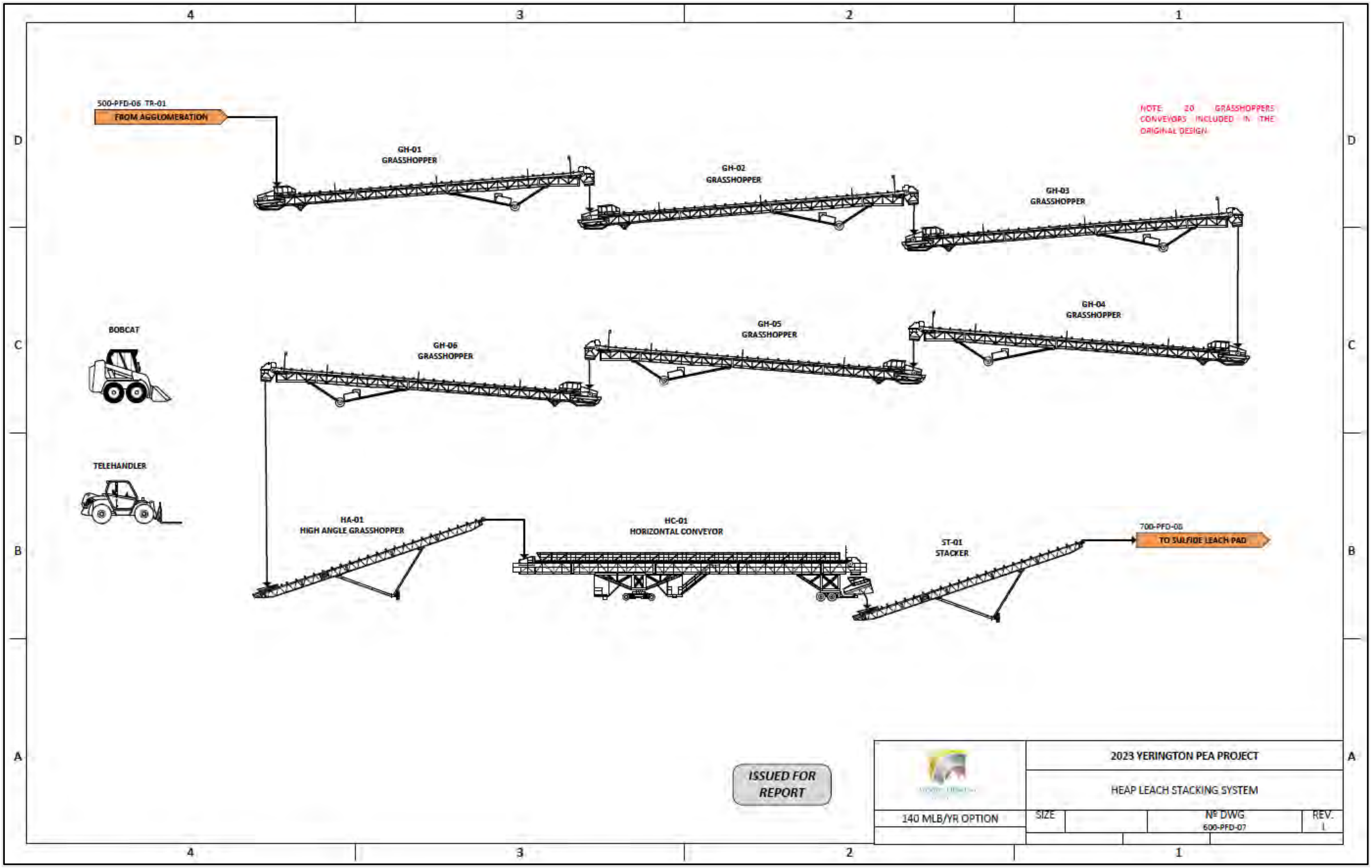
Upon reaching the shiftable tripper, the agglomerated material enters a grasshopper conveyor circuit. Twenty portable conveyors (GH-01 through GH-20), known as grasshopper conveyors, will be situated to facilitate the transport of heap leach feed material to the radial stacking system.

The radial stacking system encompasses several key components, including the high-angle portable conveyor (HA-01) and the horizontal conveyor (HC-01), which serves as the feeder for the radial stacker (ST-01). This system is optimized to stack the heap leach feed material in a retreat mode, achieving a nominal height of 30 feet. What sets the radial stacker apart is its unique "stinger," enabling precise adjustments to the stacking distance without necessitating the movement of the entire radial stacker. Furthermore, the coupling of the horizontal conveyor and radial stacker allows for continuous conveyor retreat while remaining operational, enhancing the mechanical availability of the stacking system.

The innovative stinger feature empowers operators to minimize "windrow" heights, thereby reducing the potential for ponding on the heap surface.

For a visual representation of this process, please refer to Figure 17-8.

Figure 17-8: Area 700 Yerington Stacking System Flowsheet



Source: Woods Process 2023

17.2.9 Area 800 Nuton Sulfide Heap Leach

The agglomerated heap leach feed will be stacked in approximately 30-foot-high lifts on a geomembrane-lined HLF. In the Nuton process, naturally occurring bacteria, cultivated to boost biomass, will play a pivotal role in facilitating the leaching of copper minerals.

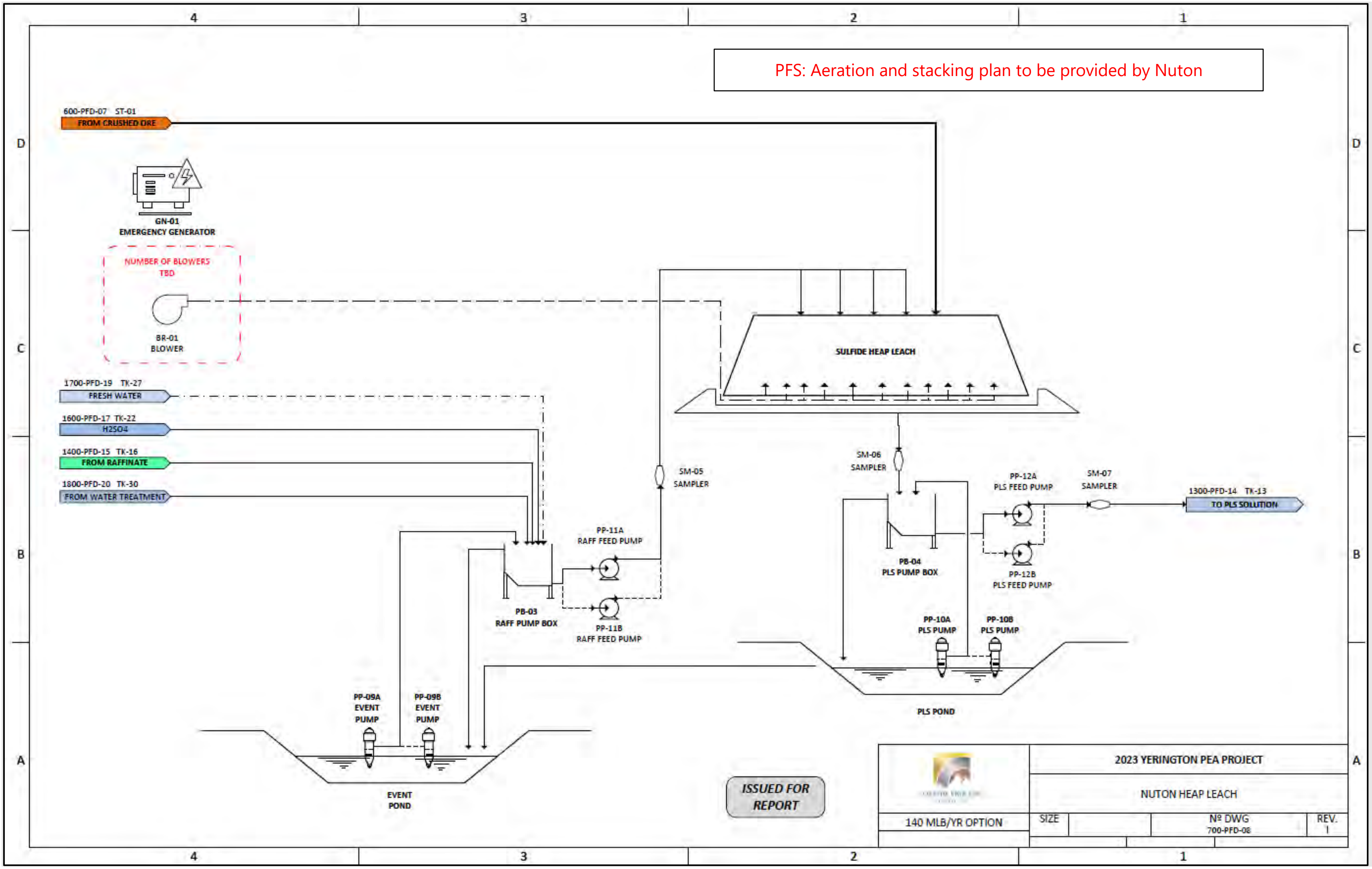
Raffinate, derived from the solvent extraction process and augmented with sulfuric acid and/or inoculum thickener overflow, is directed to a raffinate pump box (PB-03). From there, it is elevated to the top of the leach pad by one of two raffinate feed pumps (PP-11 A/B, with one operating and one on standby). Prior to application on the HLF, a representative sample is collected by a sampler (SM-05). The augmented raffinate solution is evenly distributed across the upper surface of the heap via a network of piping headers, sub-headers, and drip line emitters. As this solution percolates through the heap, it initiates reactions with the copper minerals, effectively leaching out the copper.

As the augmented raffinate solution percolates through the heap, it undergoes copper extraction and transitions into what is known as PLS (Pregnant Leach Solution). The PLS accumulates at the interface of the geomembrane liner and is then conveyed through perforated HDPE drainpipes out of the heap. Subsequently, the PLS is directed to the heap collection piping and subsequently to the PLS Pump Box (PB-04). To ensure accurate copper content determination and assess overall solution chemistry, the PLS is subjected to sampling via a solution sampler (SM-06) before entering the solvent extraction circuit.

As a precautionary measure for potential overflow scenarios, two critical ponds will be constructed. The first is an event pond, located near the PLS pump box, which serves as an integral overflow containment area and accommodates surplus solution during rain events, including extreme occurrences like a 100-year rain event. This event pond is equipped with two submersible pumps (PP-09 A/B) designed to collect any excess solution and return it to the raffinate pump box, thereby preventing environmental contamination. The second pond, known as the pregnant leach solution pond, is situated near the pregnant leach solution pump box (PB-04) and serves as an additional safeguard against potential overflow situations. This PLS pond is also outfitted with two submersible pumps (PP-10 A/B) for collecting and rerouting any excess solution back to the pregnant solution pump box.

For a visual representation of this process, please refer to Figure 17-9.

Figure 17-9: Area 800 Nuton Sulfide Heap Leach Flowsheet



Source: Woods 2023

17.2.10 Area 900 Yerington Oxide Heap Leach

The transportation of ROM oxide feed material to the Yerington oxide HLF is accomplished using mine haul trucks. The design of the oxide HLF prioritizes effective drainage and the collection of PLS, including a geomembrane-lined pad equipped with drainage piping and a solution collection system. Additionally, a rock-based drainage layer is integrated into the leach pad to facilitate proper drainage while safeguarding the geomembrane liner.

Upon arrival, the oxide ROM material is deposited onto the leach pad via truck dumping. Subsequently, it is leveled and subjected to ripping using a low-ground-pressure dozer. After the heap surface has been adequately ripped, a network of solution distribution piping is installed, accompanied by the layout of drip line emitters across the heap surface.

Augmented raffinate, often referred to as RAFF, is methodically applied to the heap surface. This solution percolates through the heap, effectively extracting copper from the material. As it becomes copper-rich, the solution transforms into pregnant leach solution (PLS). The PLS accumulates at the geomembrane liner, subsequently draining into the solution collection system.

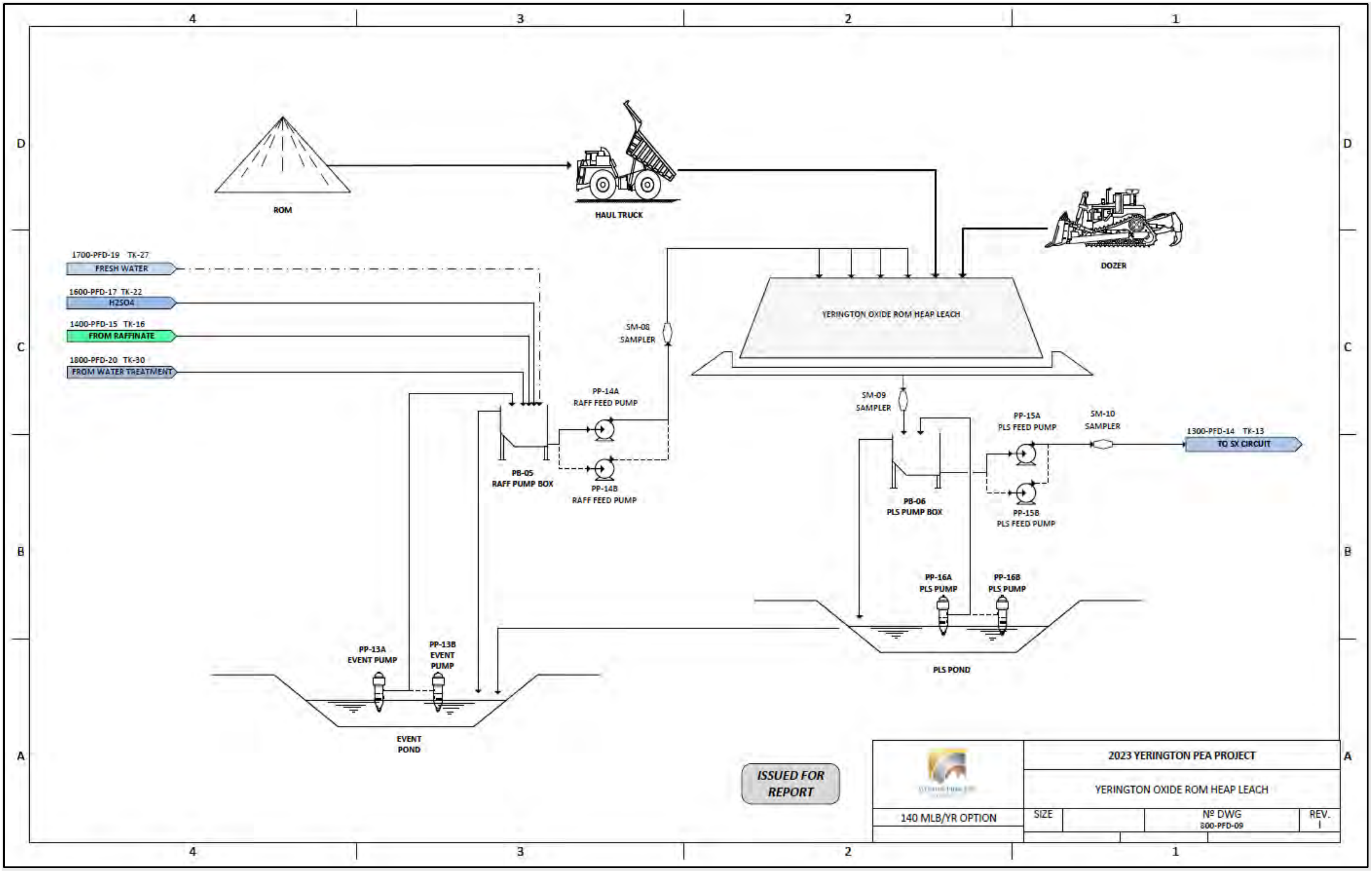
The PLS is then directed to the PLS pump box (PB-06) and pumped to the solvent extraction circuit through PLS Feed Pumps (PP-15 A/B), with one operating and one on standby. The PLS ultimately reaches the PLS Storage Tank (TK-13), situated at the Solvent Extraction Tank Farm. Before processing, the PLS is subject to sampling via a solution sampler (SM-09) for analysis, encompassing copper content and other pertinent solution chemistry variables.

To provide additional solution storage during rain events and temporarily store excess PLS solution, an event pond is strategically located near the PLS pump box. This pond is equipped with an overflow mechanism that facilitates the transfer of PLS to the storage pond. In the event of excess solution, two submersible pumps (PP-13 A/B) are on standby to transfer it back to the process through the raffinate pump box.

A separate pond, referred to as the PLS pond, is positioned near the pregnant leach solution pump box (PB-06) and features an overflow mechanism linked to the PLS pond. This design allows the PLS pond to serve as a buffer for storing excess process solutions when necessary. The PLS pond is also equipped with two submersible pumps (PP-16 A/B) that facilitate the return of any surplus solution to the PLS pump box for transport to the solvent extraction circuit.

For a visual representation of this process, please refer to Figure 17-10.

Figure 17-10: Area 900 Yerington Oxide Heap Leach



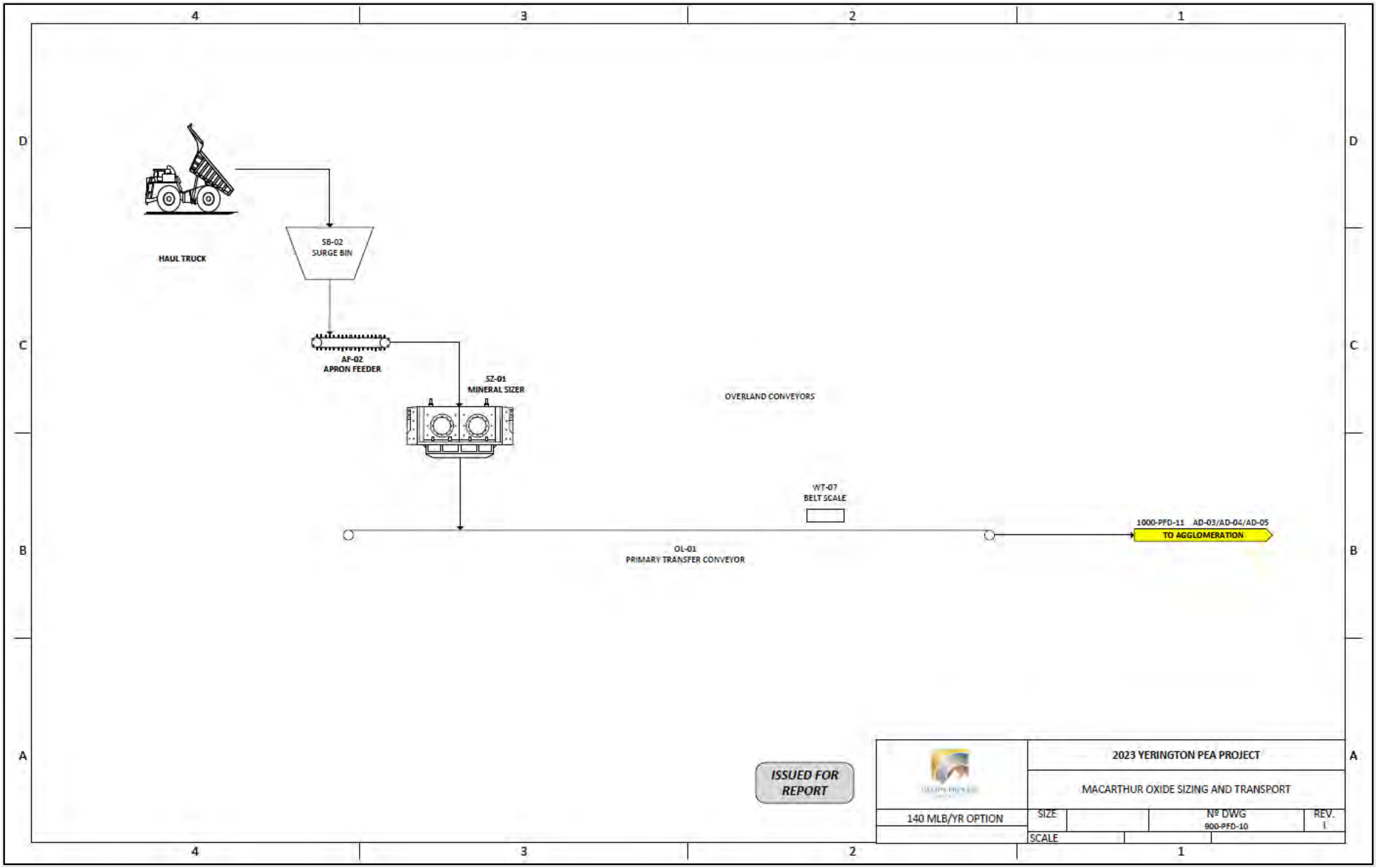
Source: Woods Process 2023

17.2.11 Area 1000 MacArthur Sizing and Transfer Circuit

The commencement of MacArthur process operations involves the arrival of haul trucks laden with MacArthur ROM raw materials. These materials are carefully unloaded into the MacArthur Sizer Feed Bin (FB-03), from where they are directed to an apron feeder (AF-02) and subsequently conveyed to the Mineral Sizer SZ-01. The primary function of the Mineral Sizer is to break down coarser rock elements, rendering them more amenable to conveyor transport. Following sizing, the Mineral Sizer product is directed to the Transfer Conveyor TC-01, which effectively conveys the sized MacArthur product to the agglomeration circuit located in close proximity to the Yerington oxide HLF.

For a visual representation of this process, please refer to Figure 17-11.

Figure 17-11: Area 1000 MacArthur Mineral Sizer/ Feed Transport Flowsheet



Source: Woods Process 2023

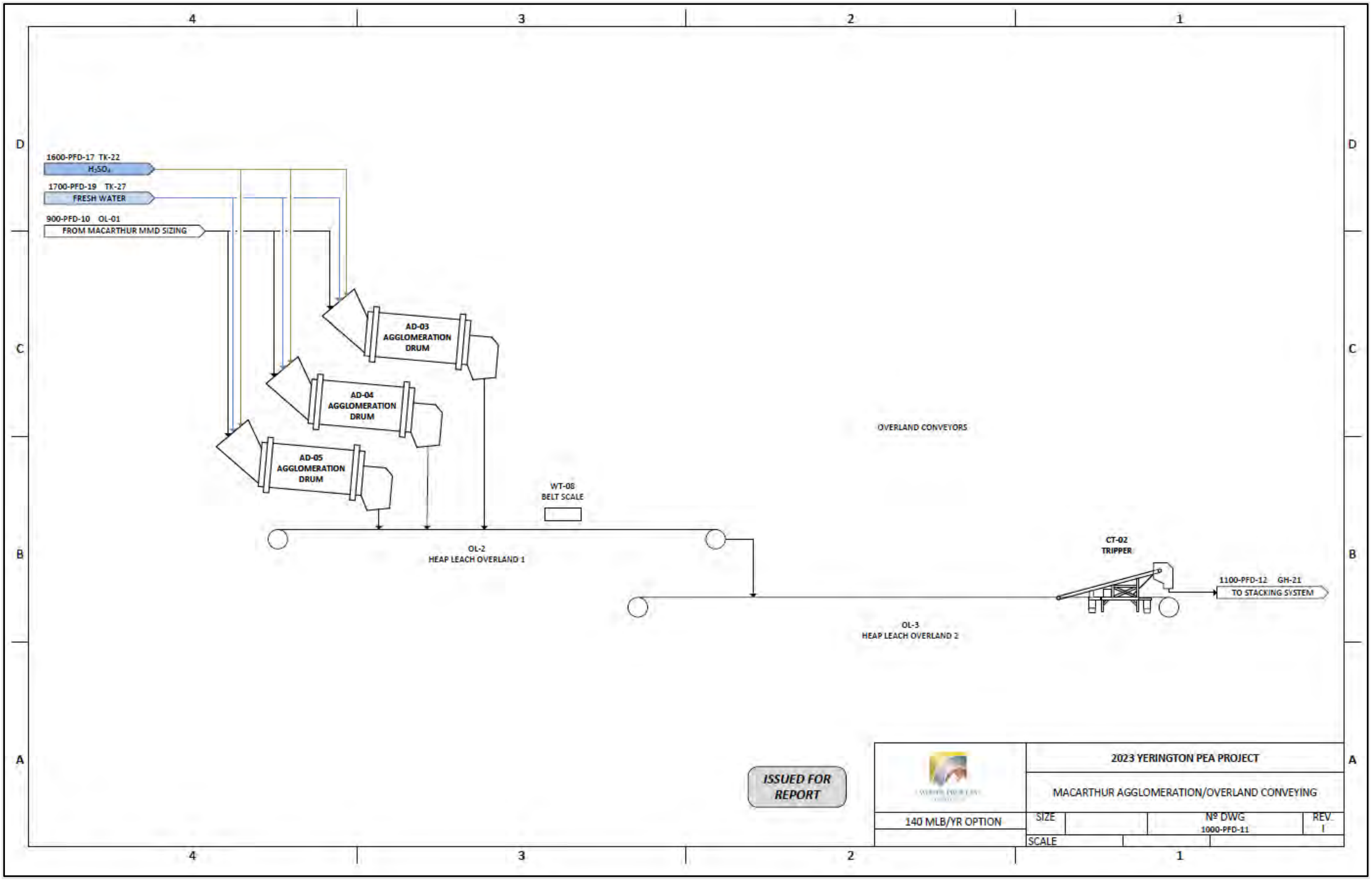
17.2.12 Area 1100: MacArthur Oxide Agglomeration

Following sizing by the mineral sizer and subsequent transport via TC-01, the material is directed to three parallel-operating agglomeration drums, denoted as AD-01, AD-02, and AD-03. These agglomeration drums are designed to ensure that two concurrently operational drums can efficiently manage the full design throughput. The agglomeration process involves the addition of sulfuric acid, Inoculum Thickener Overflow, and fresh water to promote agglomeration and pretreat the feed material for subsequent leaching.

Once agglomerated, the material is further conveyed to an overland conveyor (OL-03) via a shorter conveyor (OL-01), equipped with a belt scale (WT-08) for measurement. OL-03 transports the material to a car tripper (TR-02), which then directs the material to the stacking system circuit.

For a visual representation of this process, please refer to Figure 17-12.

Figure 17-12: MacArthur Agglomeration/Heap Overland Conveyor Flowsheet



Source: Woods Process 2023

17.2.13 Area 1200: MacArthur Heap Stacking

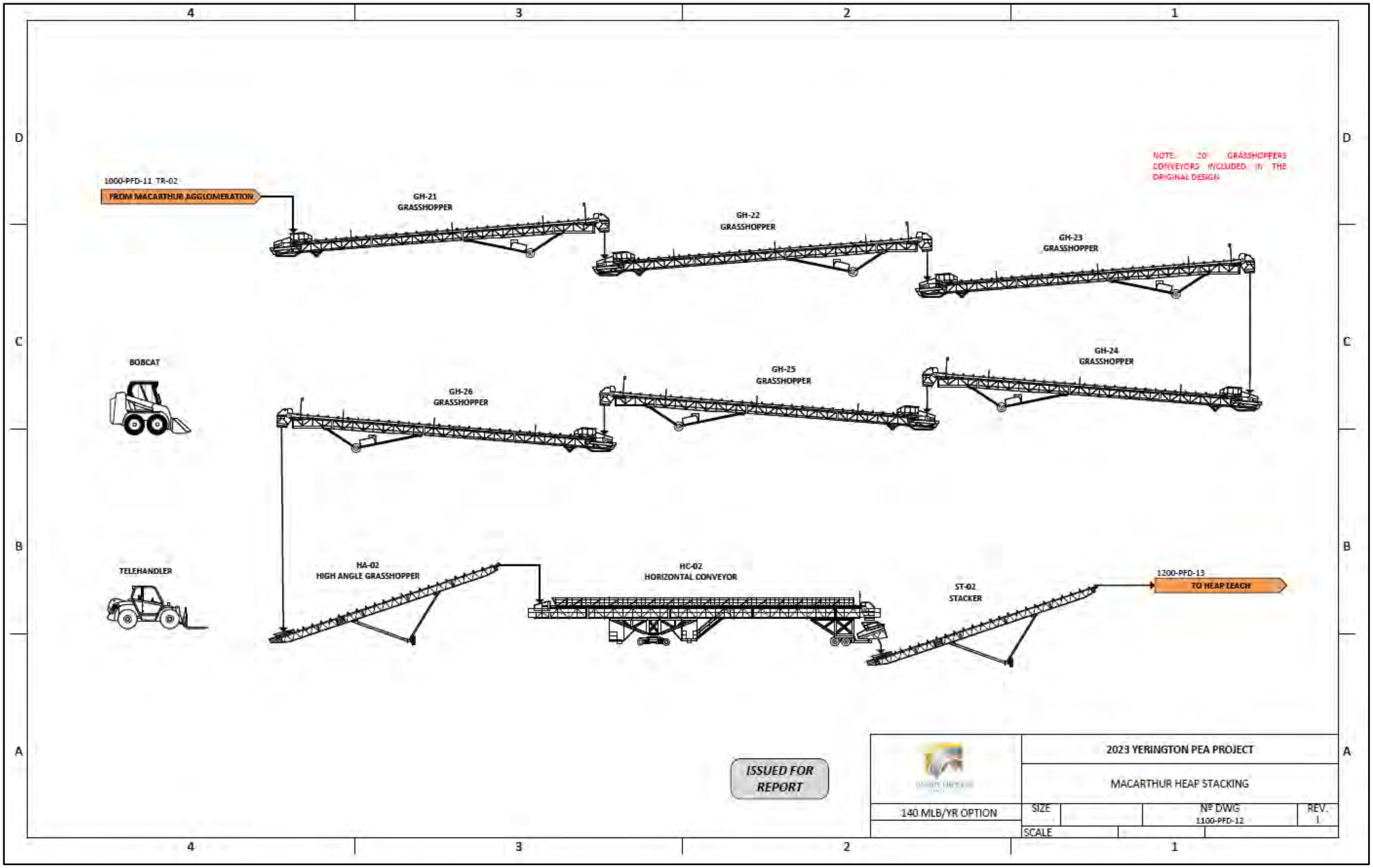
The agglomerated material is transported via OL-3 and is directed to the shiftable tripper (TR-02), which in turn transfers the heap leach feed to the grasshopper conveyor circuit. This circuit employs twenty portable conveyors, identified as GH-21 through GH-40, to convey the heap feed to the stacking conveyor system. The stacking conveyor system consists of the High Angle Grasshopper Conveyor (HA-02), Horizontal Conveyor (HC-02) and the Radial Stacker (ST-02).

The Radial Stacker (ST-02) is noteworthy for its retractable stinger, which serves to minimize stacker movements and the formation of windrows atop the heap. This stacking system is designed to allow for continuous retreat and stacking of material without interrupting the feed.

To maintain the operational efficiency, supplementary equipment such as a bobcat for cleanup and a telehandler for conveyor adjustments are utilized.

For a visual representation of this process, please refer to Figure 17-13.

Figure 17-13: MacArthur Heap Leach Stacking Flowsheet



Source: Woods Process 2023

17.2.14 Area 1300: MacArthur Heap Leach

The MacArthur HLF and pond system is the same HLF, and pond system described for the Yerington oxide feed material. The sulfuric acid raffinate solution, generated from the solvent extraction circuit, undergoes collection, and is directed to a raffinate pump box (PB-08) for further distribution. A sample of this raffinate solution is collected prior to its journey to the leach pads, ensuring quality and consistency. The prepared raffinate solution is then pumped to the top of the leach pad by dedicated pumps (PP-17 A/B).

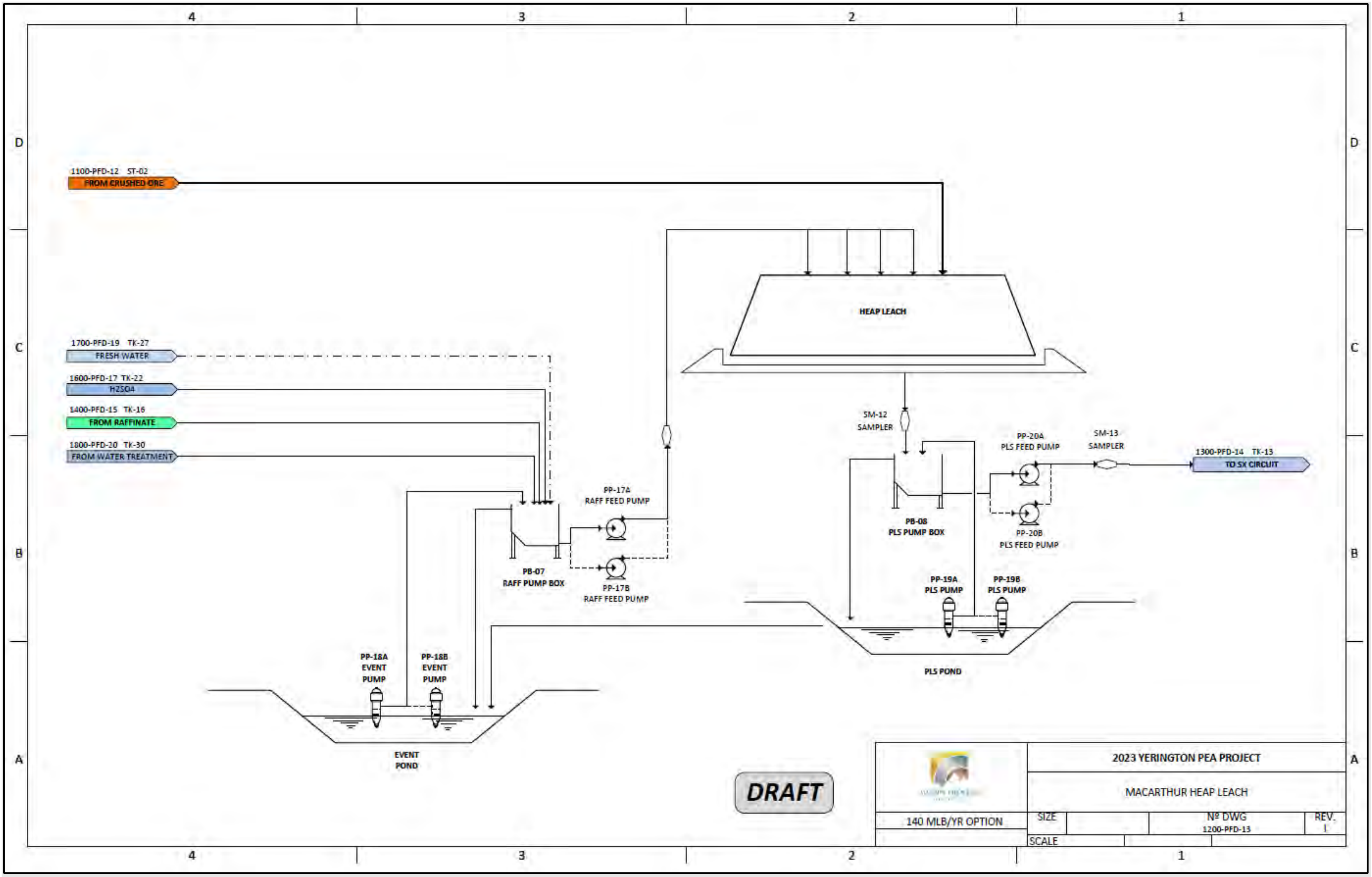
As the PLS flows from the HLF solution collection system, it enters a dedicated PLS pump box (PB-09) for further management. Here, a sample of the PLS is carefully extracted before proceeding to the Yerington solvent extraction circuit, a process overseen by solution samplers (SM-12 and SM-13).

To address potential fluctuations and ensure environmental compliance, an event pond is located near the raffinate pump box, effectively managing excess solution as required. This event pond will have two submersible pumps (PP-18 A/B) that facilitate the transfer of stored solution from the pond back to the raffinate pump box.

Additionally, a PLS pond is situated nearby, complete with two submersible pumps (PP-19 A/B). This setup allows for the efficient transfer of excess solution from the pond back to the PLS pump box, ensuring a continuation of the process towards the SX plant for further processing.

For a visual representation of this process, please refer to Figure 17-14.

Figure 17-14: Area 1300 MacArthur Heap Leach Flowsheet



Source: Woods Process 2023

17.2.15 Area 1400: Yerington Solvent Extraction

The Solvent Extraction ("SX") process commences with the collection and combination of PLS for subsequent processing in a modular vendor-supplied solvent extraction package. The PLS from the Nuton sulfide and oxide heaps convene at the PLS storage tank (TK-13). This combined PLS is then pumped from the storage tank to the solvent extraction circuit by pumps (PP-20 A/B), ensuring a smooth and reliable flow.

The solvent extraction process is orchestrated through two extraction mixer/settlers (SX-01 and SX-02) in series, complemented by a stripping mixer/settler (SX-03). Each extraction mixer/settler features dual agitators, expertly blending the organic liquid with the PLS. Copper is extracted from the aqueous PLS phase into the organic phase during the mixing stages. Subsequently, the phases are allowed to separate within the settlers, with a countercurrent flow—where the aqueous phase progresses downstream while the organic phase moves upstream. Post-separation in the first extraction mixer/settler (SX-01), the organic solution flows into an organic tank reservoir (TK-15A/B).

The organic solution is then pumped to the stripping mixer/settler (SX-03) through pumps (PP-22 A/B). Meanwhile, the PLS exiting the first extraction mixer/settler (SX-01), now with reduced copper content, enters the second extraction mixer/settler (SX-02), where it mingles with the stripped organic solution from the stripping mixer/settler (SX-03). Copper extraction from the PLS continues at this stage.

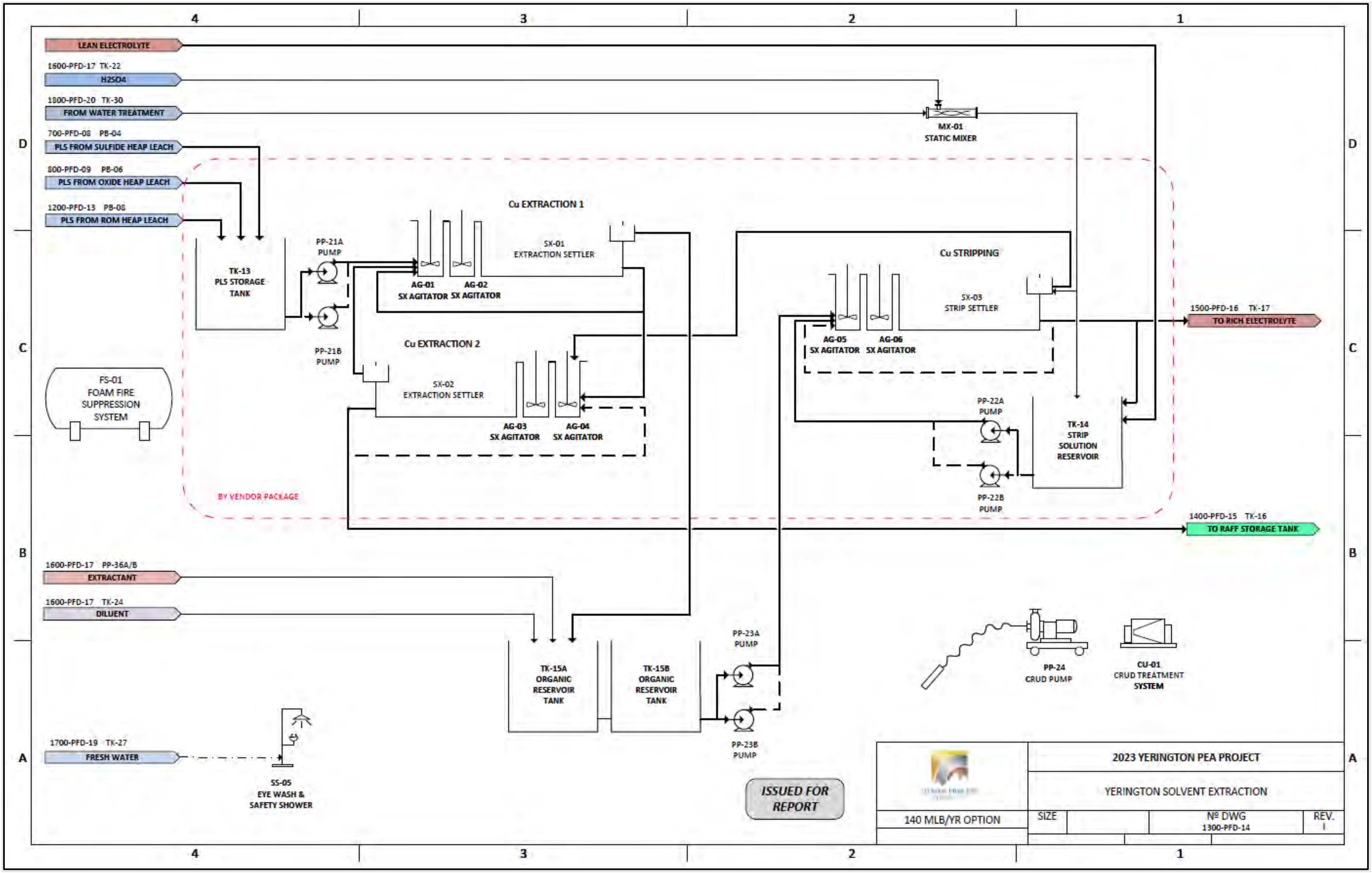
The partially loaded organic solution from the second extraction mixer/settler returns to the first extraction mixer/settler to collect more copper. Conversely, the raffinate from the second extraction mixer/settler, now copper-depleted, is directed to a raffinate storage tank. Here, additional sulfuric acid is mixed with the raffinate before it is recycled back to the HLFs.

Electrolyte solution is pumped to the strip mixer/settler, where it combines with the loaded organic from the first extraction mixer/settler. This results in a copper transfer from the organic to the aqueous electrolyte. The copper-rich electrolyte is then routed to the electrowinning circuit, where copper is electrowon onto cathodes. Once fully loaded, the copper cathodes are harvested and stripped using the vendor package stripping machine.

Safety measures in the area include a foam fire suppression system (FS-01) due to the organic's flammability, a copper crud pump (PP-23), and a copper crud treatment system (CU-01). Additionally, an eye wash and safety shower station (SS-05) will be readily accessible.

For a visual representation, please refer to Figure 17-15.

Figure 17-15: Yerington Solvent Extraction Flowsheet



Source: Woods Process 2023

17.2.16 Area 1500: Raffinate Distribution Circuit

The raffinate solution from Solvent Extraction converges at the central raffinate storage tank (TK-16), serving as the hub for storing and disseminating the raffinate solution. The Raffinate solution from SX is pumped to the raffinate storage tank (TK-16), which serves as a central point for storing and distributing the Raffinate solution.

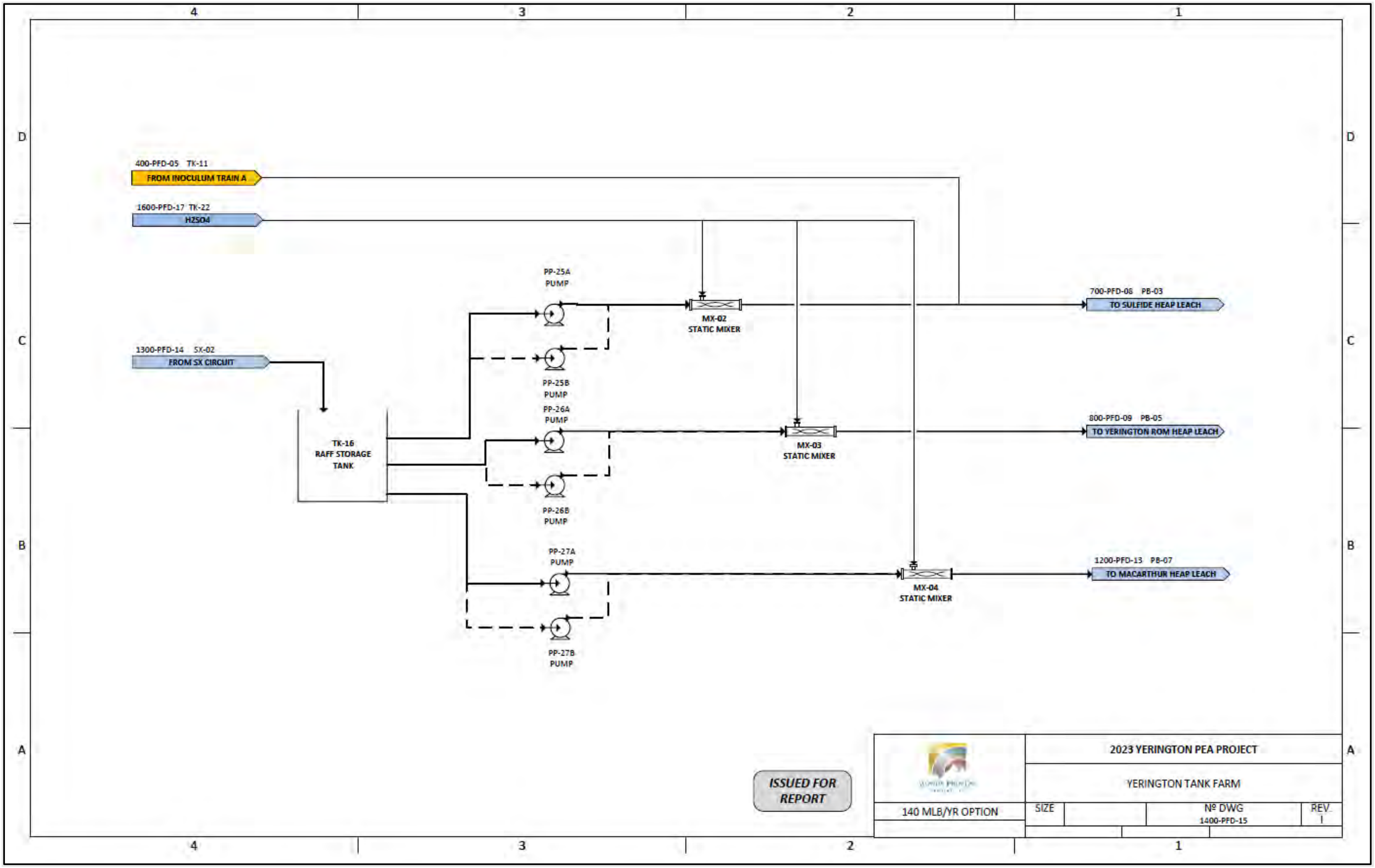
1. Yerington sulfide HLF
    a. One stream of raffinate is pumped to the sulfide HLF, where it is used for the leaching of sulfide feed material.
2. Yerington ROM HLF
    a. Another stream of raffinate is directed to the ROM HLF, contributing to the heap leaching process.
3. MacArthur HLF
    a. A third stream of raffinate is pumped to the MacArthur HLF to facilitate heap leaching operations.

Each of the three streams directed to the HLFs incorporates its inline static mixer (MX-02, MX-03, and MX-04). Sulfuric acid is judiciously introduced into the raffinate solutions to maintain the appropriate free acid dosage for heap leaching.

Within the raffinate stream bound for the sulfide HLF, the inoculum overflow solution is introduced. This inoculum solution contains essential microbial cultures or bio-organisms that play a pivotal role in the bioleaching process. Bioleaching leverages microorganisms to aid in the extraction of metals from sulfide ores. The addition of the inoculum overflow solution enhances the bioleaching process, resulting in improved metal recovery.

For a visual representation of this process, please refer to Figure 17-16.

Figure 17-16: Area 1500 Yerington Raff Pumping Flowsheet



Source: Woods Process 2023

17.2.17 Area 1600: Electrowinning

In the Electrowinning ("EW") process, the enriched electrolyte is initially directed to the electrolyte filter feed tank (TK-17). It then undergoes filtration via electrolyte filters (EF-01 and EF-02) to eliminate any suspended solids. Once filtration is complete, the refined electrolyte proceeds to the rich electrolyte storage tank (TK-18).

Prior to entering the electrowinning phase, the rich electrolyte solution is routed through heat exchangers (EE-01 and EE-02). This process heats the rich electrolyte, preparing it for electrowinning and ensuring an optimal temperature. The preheated rich electrolyte solution is then directed to the electrolyte recirculation tank (TK-19), which allows for a controlled supply to the electrowinning cells.

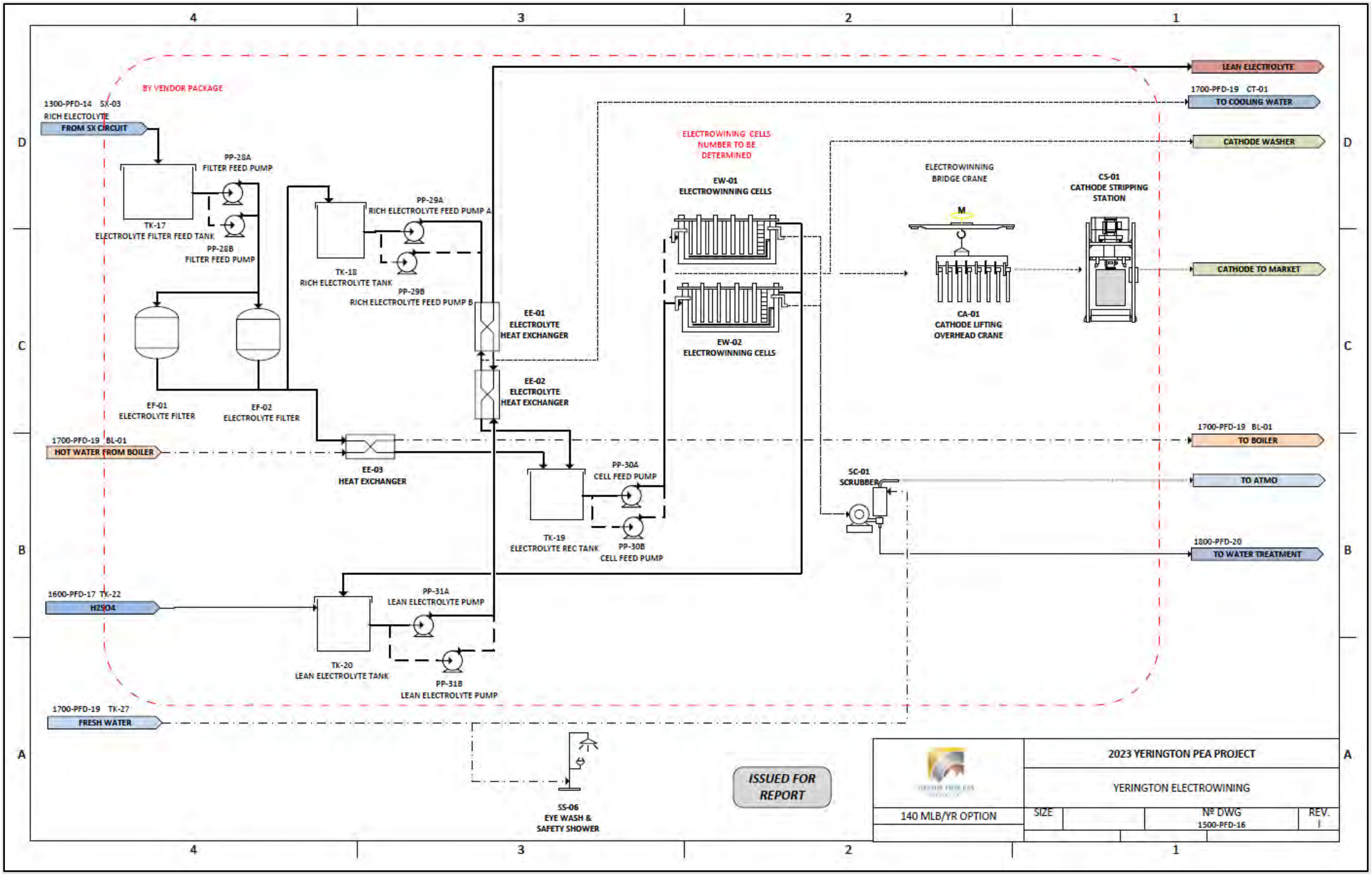
The electrowinning circuit comprises multiple electrowinning cells, represented here as (EW-01 and EW-02) for simplicity. These cells are responsible for the electrowinning process itself, during which copper ions are reduced and deposited onto cathodes. The hot rich electrolyte solution is propelled through these cells using the EW cell feed pumps.

Following the electrowinning process, the copper cathodes are harvested with the assistance of an electrowinning bridge crane (CA-01). These cathodes are subsequently transported to the cathode stripping station (CS-01), where they are stripped and prepared for shipment off-site. Meanwhile, the lean electrolyte generated during electrowinning is directed to a lean electrolyte tank (TK-20) and subsequently pumped back to the strip solution reservoir (TK-14) in the solvent extraction circuit by pumps (PP-30A/B).

The electrowinning process may generate acid mist. To ensure a safe working environment and effectively control emissions, a scrubber system (SC-01) is employed to capture and neutralize any acid mist produced within the electrowinning cells.

For a visual representation of this process, please refer to Figure 17-17.

Figure 17-17: Area 1600 Electrowinning Flowsheet



Source: Woods Process 2023

17.2.18 Area 1700: Reagents Area 1

The handling and distribution of sulfuric acid, diluent, and extractant play vital roles in various critical processes throughout the process flowsheet.

Sulfuric Acid Management:

Sulfuric acid is transported to the mine site via tanker and unloaded into the sulfuric acid tank (TK-21) within the reagents area. From there, it is transferred to the day sulfuric acid tank (TK-22) through pumps (PP-31 A/B). This day tank serves as an intermediate storage point for the reagent. It supplies sulfuric acid to several key process areas within the mining site through pumps (PP-32 A/B):

- Pyrite Concentration Circuit: A portion of the sulfuric acid is directed to the pyrite concentration circuit, where it aids in the pretreatment of pyrite to remove lime or flotation reagents.
- HLFs: Another portion of the sulfuric acid is essential for the HLFs, playing a crucial role in the heap leaching process.
- Solvent Extraction: Sulfuric acid is also used in the solvent extraction circuit, where it participates in the extraction and separation of valuable metals from pregnant leach solutions.

Precise distribution of sulfuric acid to these specific process areas is important for the efficient operation of the processing facility. Proper reagent management ensures that the necessary chemical conditions are maintained for each process, all while adhering to safety and environmental standards.

Diluent Handling:

Diluent is delivered to the site in bulk via truck and transferred to the diluent storage tank (TK-23). For routine use, diluent is further transferred to a day storage tank (TK-24) through pumps (PP-33 A/B). Finally, the diluent is pumped to the solvent extraction circuit via pumps (PP-34 A/B).

Extractant Addition:

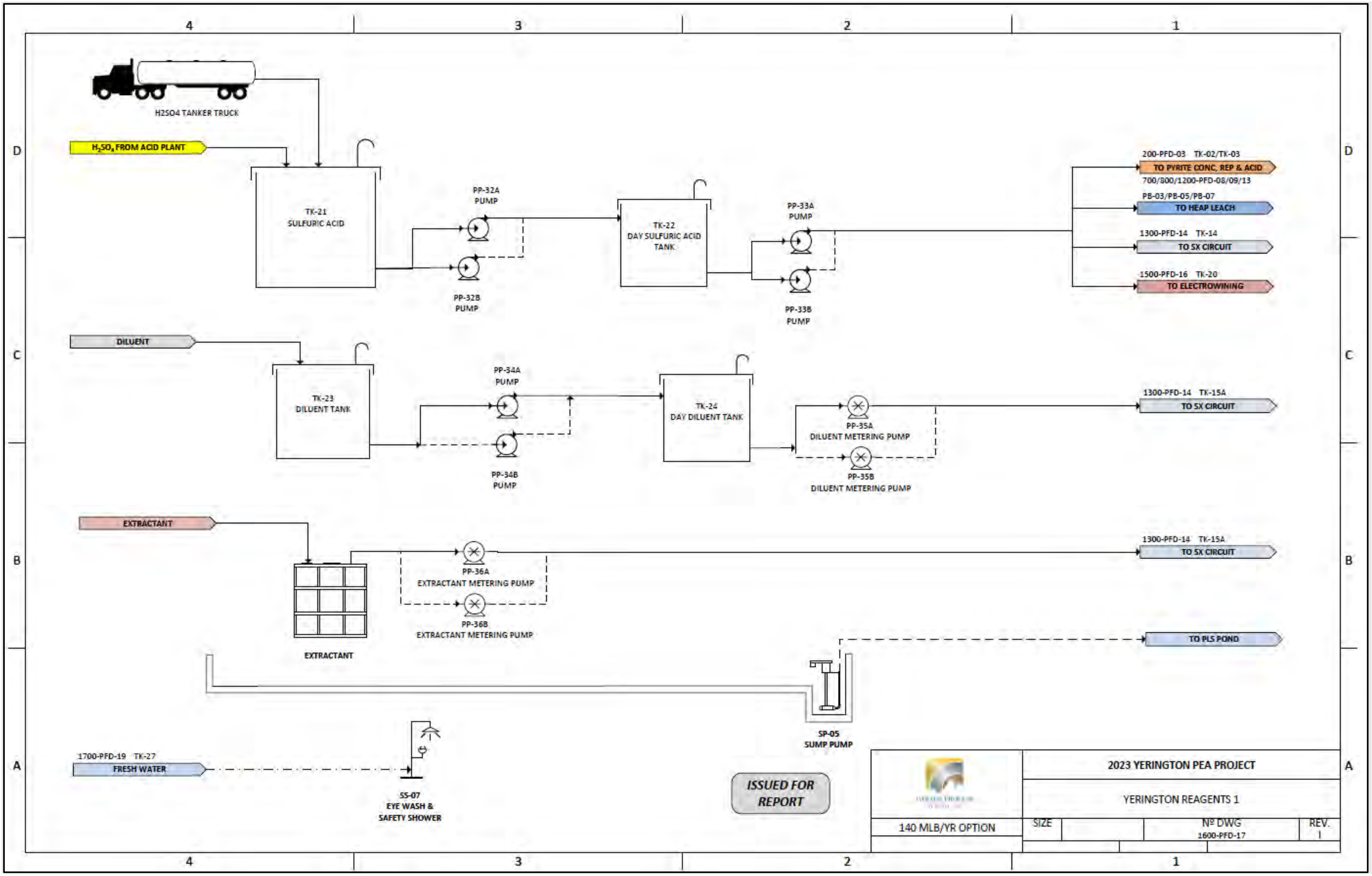
The extractant, typically delivered in totes, is added to the diluent at the appropriate dosage using metering pumps (PP-36 A/B).

The reagent storage area within the process facility is designed to prioritize the safe storage of various chemicals and reagents critical for copper recovery processes. This area incorporates an integrated containment system to prevent potential chemical spills or leaks into the surrounding environment. Additionally, a sump pump (SP-05) is installed in the reagents storage area, serving as a crucial component of the containment system.

To enhance safety, an easily accessible eye wash station (SS-07) will be strategically positioned near the reagent storage area, ensuring quick access for operators and personnel working in the vicinity.

For a visual representation of this process, please refer to Figure 17-18.

Figure 17-18: Area 1700 Reagents Area 1 Flowsheet



Source: Woods Process 2023

17.2.19 Area 1800: Reagents Area 2

The controlled management of flocculant is crucial for optimizing solid-liquid separation at various process stages.

Flocculant Handling:

Flocculant, employed to aid in the solid-liquid separation process, is typically delivered in bags. Upon arrival, the dry flocculant from the bags is loaded into a vendor-provided screw auger system. This auger system serves the function of evenly distributing the dry flocculant into a designated tank (TK-25).

Flocculant Activation:

Within this tank, water is introduced to the dry flocculant, and an agitator is employed to mix the flocculant and water. The resulting mixed flocculant is then transferred using a dedicated flocculant transfer pump (PP-37) to a day tank (TK-26), serving as an intermediate storage point for the flocculant.

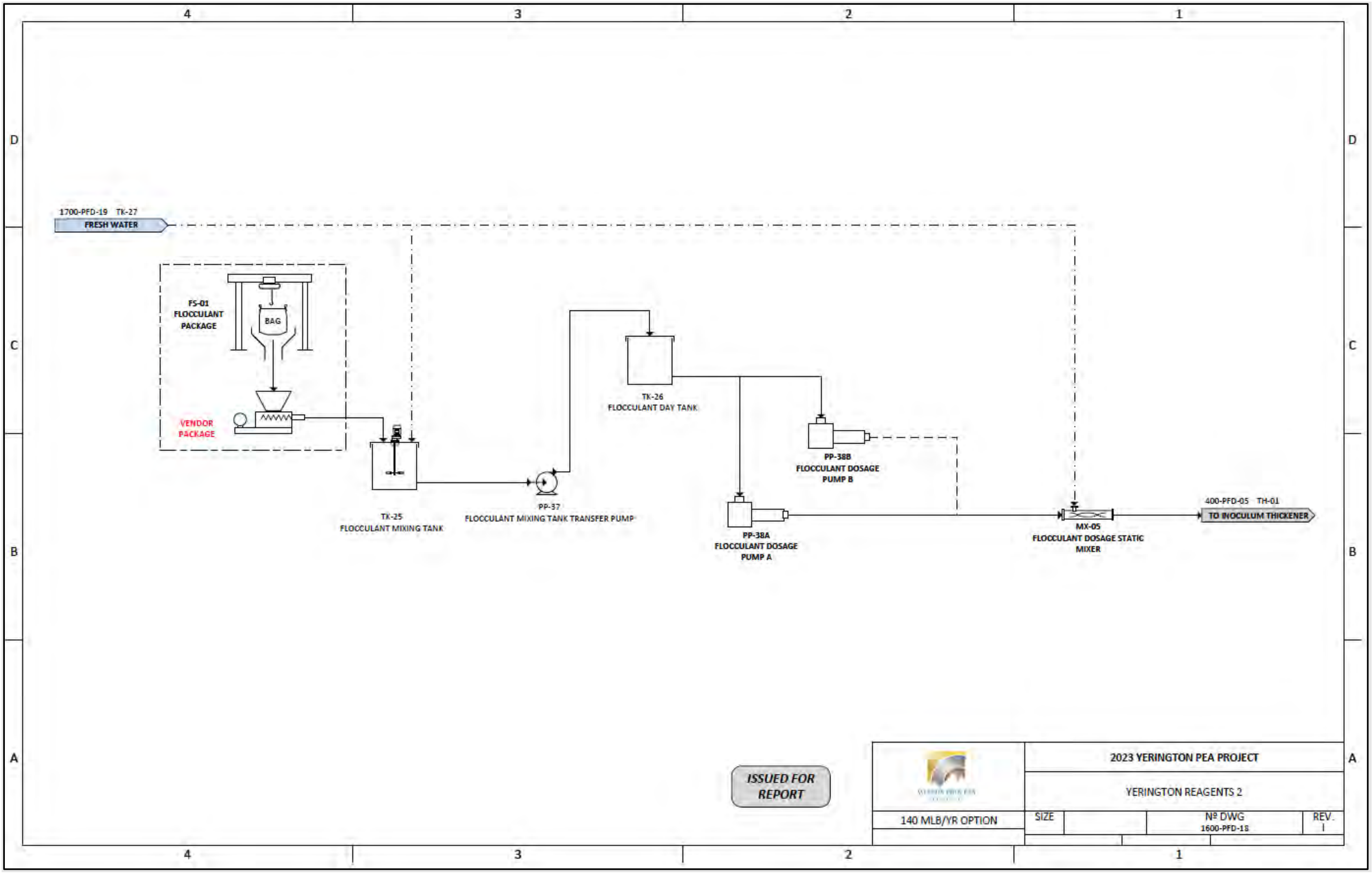
Precise Dosing:

From the day tank, the flocculant is dosed into the inoculum thickener feed through dosing pumps (PP-38 A/B). These pumps play a crucial role in controlling the rate at which the flocculant is introduced into the process. Simultaneously, water is introduced into the flocculant using an inline flocculant static mixer (MX-05). This mixer ensures the effective and uniform distribution of the flocculant throughout the thickener feed, optimizing its performance.

The careful management of flocculant in this area enhances the efficiency of solid-liquid separation processes, contributing to the overall success of the operation.

For a visual representation of this process, please refer to Figure 17-19.

Figure 17-19: Area 1800 Reagents Area 2 Flowsheet



Source: Woods Process 2023

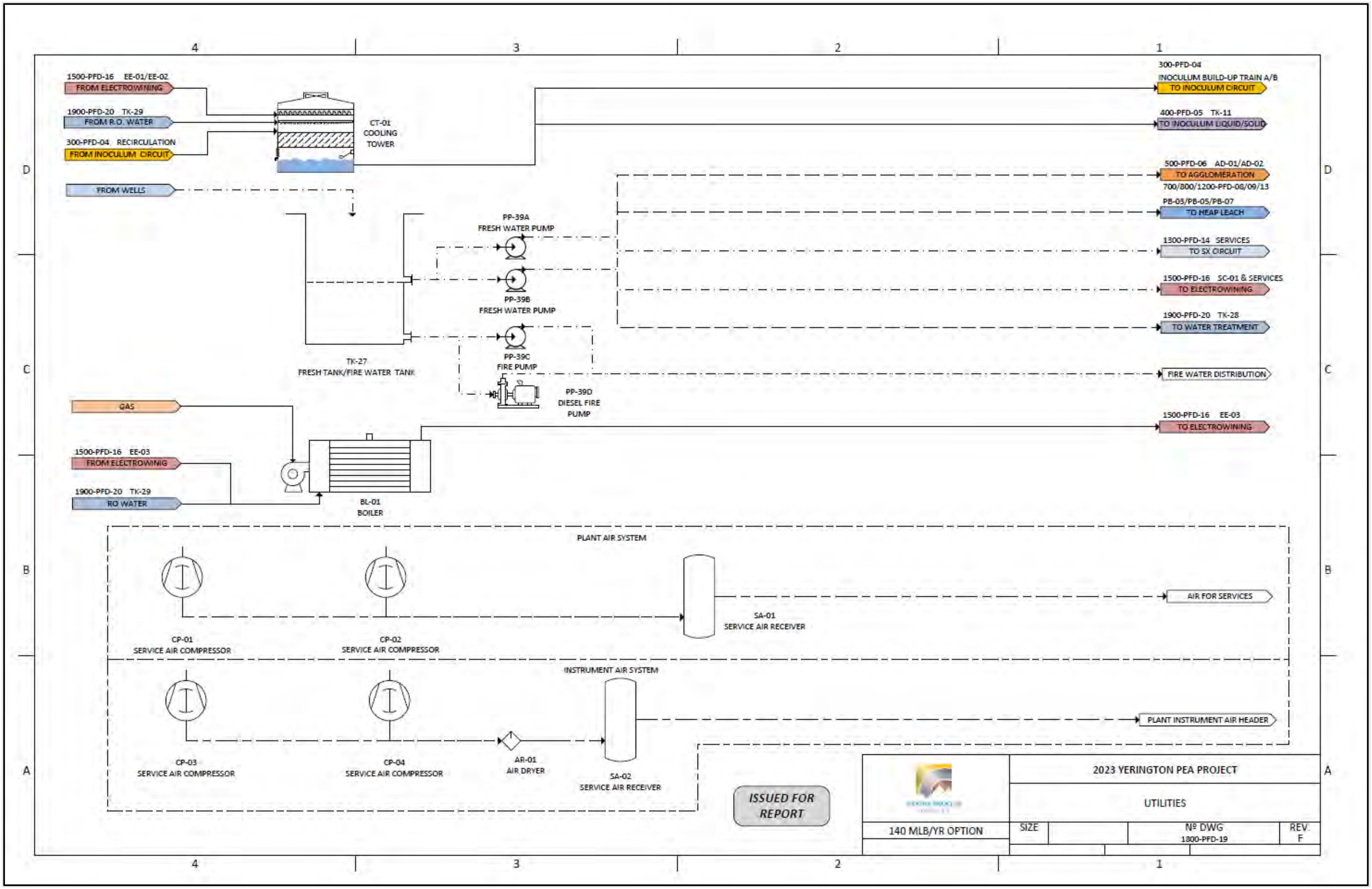
17.2.20 Area 1900: Utilities

Process area utilities comprise several essential components:

- Fresh Water Distribution:
    - Fresh Water distribution is managed through the Fresh Water Tank (TK-27) and Fresh Water Pumps (PP-39A, PP-39B, PP-39C). This distribution system serves multiple functions, including supplying:
    - Raw Water for the Reverse Osmosis treatment circuit.
    - Fire Water for the Fire Water system. Notably, all Fresh Water pumps can provide Fire Water supply and are further supported by a backup diesel-powered Jockey Pump (PP-39D).
- Cooling Water:
    - Cooling Water is primarily utilized for cooling the Inoculum Build-up Reactors and is facilitated by the Cooling Tower (CT-01).
- Steam Boiler (BL-01):
    - The Steam Boiler (BL-01) serves as a source of initial startup heat for the Inoculum Build-up Reactors and the Electrowinning Circuits.
- Plant Air Services:
    - Plant Air Services are provided by Service Air Compressors (CP-01 and CP-02).
- Instrument Air Services:
    - Instrument Air Services are supplied by Service Air Compressors (CP-03 and CP-04). All air compressors are designed to be interchangeable and interconnected, providing redundancy in the event of equipment failure.

For a visual representation, please refer to Figure 17-20.

Figure 17-20: Area 1800 Utilities Flowsheet



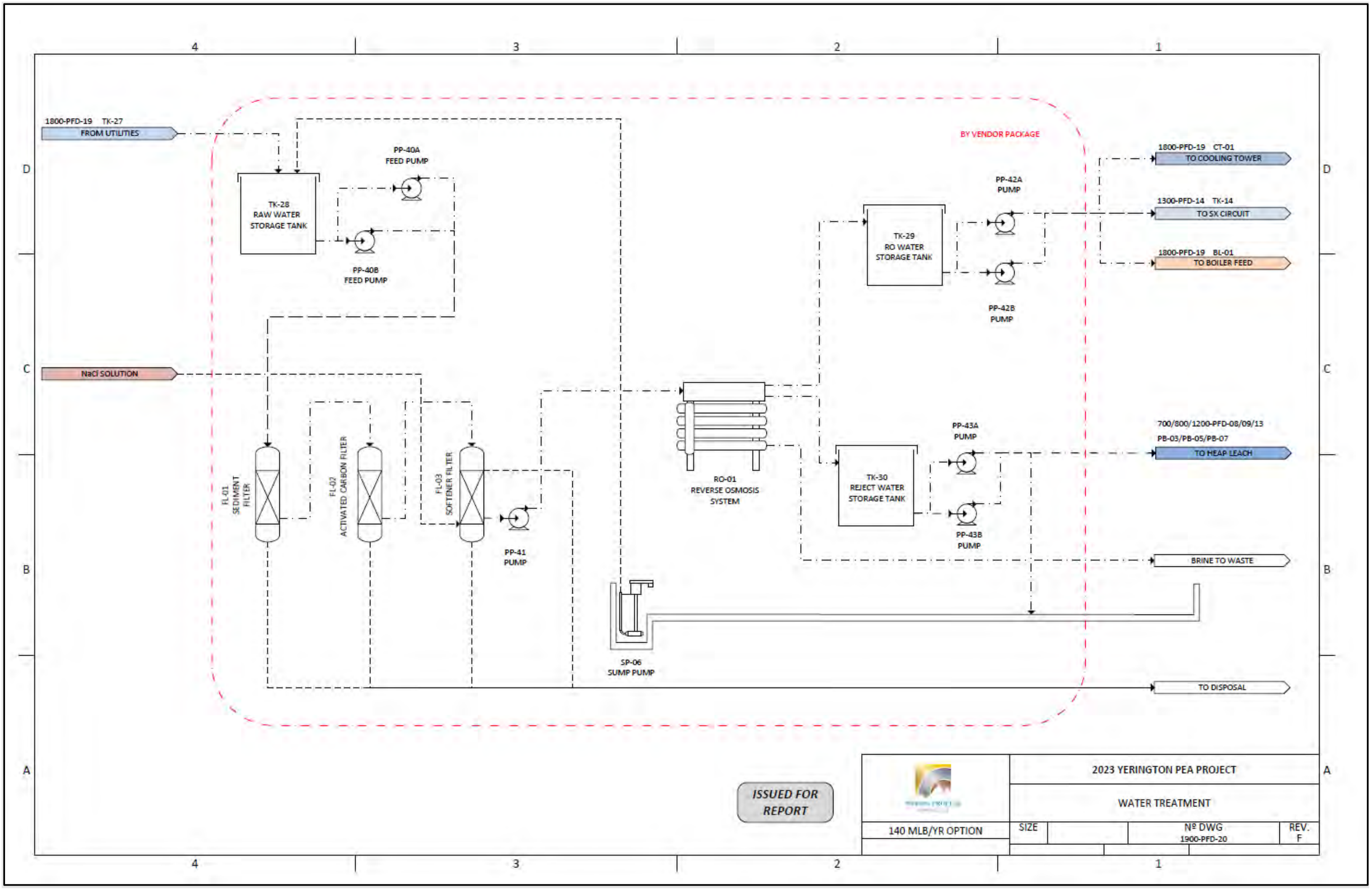
Source: Woods Process 2023

17.2.21 Area 2000: Raw Water Treatment – Reverse Osmosis

The Reverse Osmosis system, a vendor-supplied package, serves a dual-purpose within the facility. Its primary functions are to provide high-purity water for steam generation in the boiler and to deliver quality water for use in the inoculum build-up reactors.

For a visual representation of this system, please refer to Figure 17-21.

Figure 17-21: Reverse Osmosis Flowsheet



Source: Woods Process 2023

17.3 Product/Materials Handling

The copper cathode product will be weighed and stacked in nominal 1 ton palleted bundles and readied for shipment on a production lot basis. Each cathode lot will be sampled and analyzed to ensure the lot meets LME Grade A specifications. Cathode lots that do not meet LME Grade A specifications by be either reprocessed (dissolved in the process) or sold at a lower grade. Cathode bundles are typically loaded on flat bed tractor trailer for direct delivery to the buyer or can be shipped by rail via the rail spur.

18 PROJECT INFRASTRUCTURE

18.1 Site Layout

The conceptual site layout for the Yerington Copper Project is illustrated in Figure 18-1. Key infrastructure components include the oxide HLF, sulfide HLF, HLF ponds, Waste Rock Storage Facilities (WRSFs), a system for sizing and transporting oxide feed from the MacArthur Property to the oxide HLF at the Yerington Property, process plant, and rail spur west of Wabuska. The oxide feed from MacArthur and Yerington will be segregated onto an oxide only HLF. Yerington sulfide feed will be handled separately from oxide feed to enable the focused leaching of sulfides using the Nuton process.

To minimize new disturbance areas, efforts have been made to place new infrastructure on existing disturbed areas resulting from past mining activities.

Facility siting decisions were made without considering BLM-controlled or private land, with the assumption that the pending sale of BLM land at the Yerington Property (discussed in Section 6) would be completed before the commencement of permitting and construction activities.

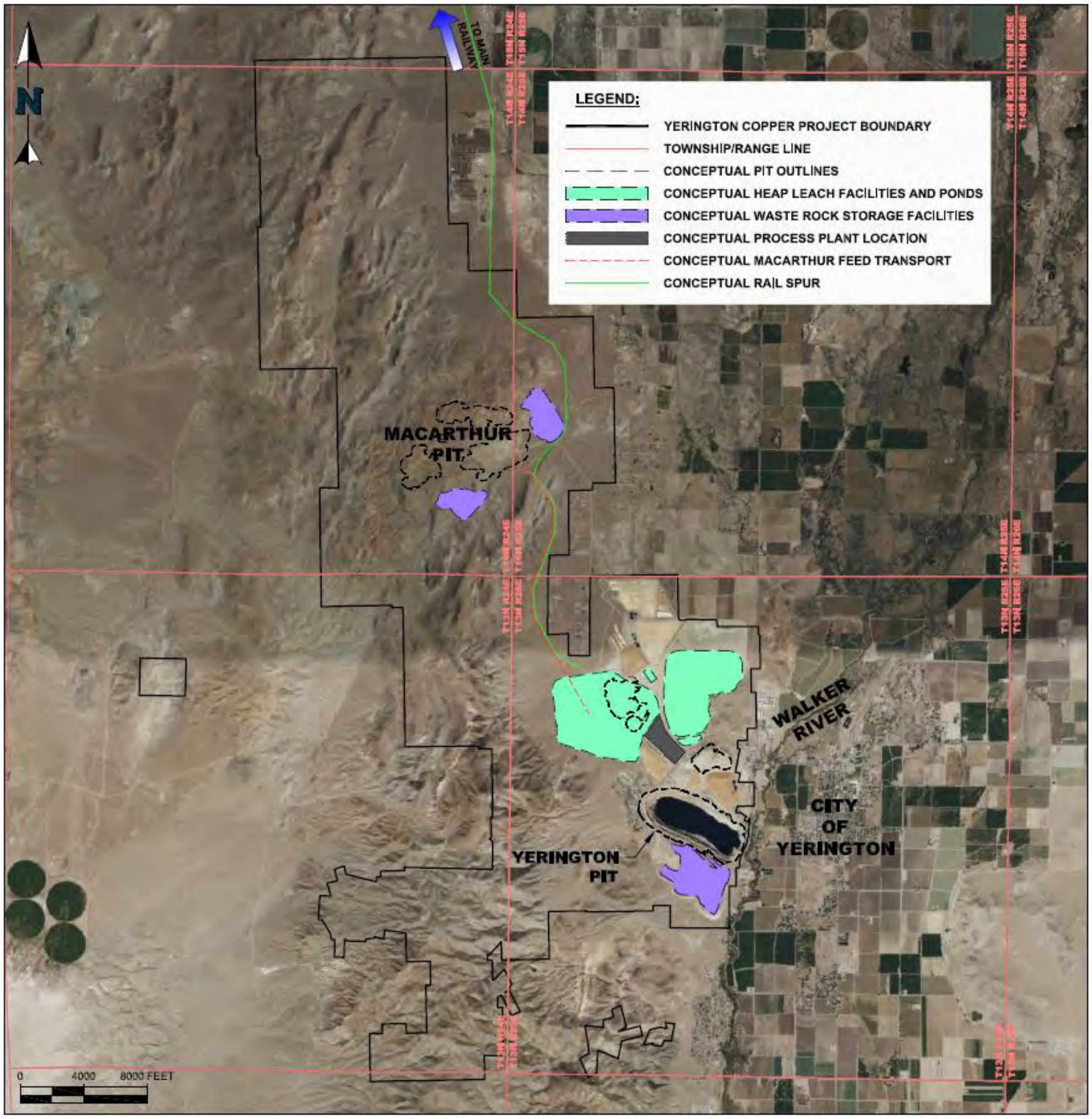
18.2 Roads and Rail Spur

Existing site roads at the Yerington and MacArthur properties will be improved and used as both haul roads and as light vehicle access roads. New roads will be constructed as needed. Separate roadways will be designated for light vehicle traffic and heavy haulage equipment as a safety precaution.

The truck maintenance shop will be situated at the Yerington Property. However, when mining operations are active at MacArthur, trucks will utilize the existing haul road connecting the MacArthur and Yerington properties to access the maintenance facilities. This arrangement ensures efficient access to maintenance resources for the MacArthur operation.

The rail spur serves multiple purposes, facilitating the delivery of essential supplies such as acid and other bulk materials while also establishing a reliable means for transporting the finished copper. The conceptual 12-mile-long rail spur alignment will extend from the tie-in point approximately 3 miles west of Wabuska and terminate on the west side of the Yerington Property as shown on Figure 18-1.

Figure 18-1: Yerington Copper Project Site Layout



Source: NewFields, 2023

18.3 Power Supply and Electrical

Grid power is readily available for the Project due to an existing line to the Yerington Property and the grid line passing within 1 mile to the east of the MacArthur Property.

The existing 69kV power line on-site will undergo necessary updates and extensions to connect to the process plant and the Yerington Property. Subsequent expansion plans for the MacArthur Property are included in Year 3, timed ahead of the commencement of mining and crushing/conveying activities.

For the process plant, ponds and the mine, overhead lines operating at 4160 volts will be installed. The mine's power system will be designed to encircle the pit area, ensuring adequate drop-off points before extending down the pit walls.

For the MacArthur Property, power will be extended to each of the three pit areas from the substation located near the sizer.

18.4 Fuel Supply

A fuel tank farm will be located in close proximity to the Yerington process plant. To accommodate the mining operations at the MacArthur Property, a satellite tank farm will be established near the pits before mining activities commence. These storage facilities will feature foundations and bund walls provided by Lion CG, while the tanks and pumps will be supplied by vendors as part of the fuel purchase agreement.

18.5 MacArthur Oxide Feed Transport

A 3.5-mile-long overland conveyor is planned to transport material from the MacArthur Property to the oxide HLF at the Yerington Property. The designated corridor for this conveyor is depicted in Figure 18-1, aligning with the existing mine access road. A geomembrane-lined containment system will not be required due to the absence of sulfuric acid in the transport system.

18.6 Mine Services Facilities

The mine truck shop and warehouse will be positioned at the Yerington Property, which serves as the focal point for initial mining activities and will continue to play a central role throughout the Project's lifespan. This facility will be designed to accommodate the proposed 100-ton haulage trucks and the necessary support equipment.

The larger mining shovels will receive field servicing, while drills may undergo either field or shop repairs, depending on the nature of the required maintenance, and will be transported using lowboy trailers.

To enhance convenience and efficiency, a smaller satellite shop will be established at the MacArthur Property. This satellite shop will facilitate minor repairs in close proximity to the mine, reducing the need for travel to the main shop and providing shelter from adverse weather conditions. Additionally, it will include a small warehouse composed of vendor-supplied minor items, such as hoses and belts, stored in sea containers to eliminate the need for mechanics to return to the Yerington Property for minor parts.

Tire maintenance operations will be conducted at the primary Yerington Property and will include a dedicated tire storage yard. The shop facilities will feature overhead cranes for seamless operations, and an adjacent wash bay facility will be available for cleaning trucks prior to maintenance procedures.

18.7 Mine Site Analytical and Metallurgical Laboratory

An analytical laboratory will be constructed at the Yerington Property, serving as an essential support hub for the mining and processing activities. This state-of-the-art laboratory will be fully equipped to analyze a comprehensive range of samples, including mine production samples (blast-holes), process samples (solid and solution samples), and geologic samples as required. Equipped with advanced sample preparation tools and cutting-edge laboratory instrumentation, it will possess the capability to conduct a wide array of analytical methods directly on-site. Furthermore, the laboratory will be outfitted with a robust Laboratory Information Management System (LIMS) to efficiently manage all laboratory data.

In addition to the analytical laboratory, a dedicated metallurgical testing laboratory will be established. This specialized facility will be instrumental in conducting routine metallurgical testing, refining process optimization strategies, and driving process development initiatives. It will be fully equipped with the requisite sample preparation and metallurgical testing apparatus, supporting the operations of the HLFs, bio-oxidation and SXEW processes.

18.8 Site Security

The existing security gate situated at the Yerington Property will serve as the principal point of access to the Yerington Copper Project. Any essential enhancements to this gate will be implemented as deemed necessary. Both the Yerington and MacArthur Properties are predominantly enclosed by an existing 8-foot-high chain-link fence, which will be complemented by the installation of additional fencing in specific areas currently lacking complete perimeter coverage.

18.9 Yerington Pit Lake Dewatering

Before resuming open pit mining operations, the Pit Lake (estimated to hold approximately 43,000 acre-feet of water) needs to be fully drained and equipped with dewatering wells. The existing Pit Lake water will be extracted using shore-mounted pumps with floating intakes, progressively relocating them along the existing pit haul road as the water level recedes. Additionally, four shallow dewatering wells will be strategically placed along the Pit perimeter to assist in draining the Pit Lake and to prevent potential geotechnical instability during the rapid Pit Lake drawdown.

Potential methods for discharging the Pit Lake water include direct release into the Walker River, discharge to the WRID, or utilization of infiltration methods such as RIBs.

Water quality assessments over the last 30 years have shown an improvement in the Pit Lake's water quality. Although the water quality has approached drinking water quality standards throughout the historical record, the Project conservatively assumed water treatment would be required to fully remove any constituents of potential concern (COPCs) that may exceed specific discharge standards for the discharge method. Ongoing assessments will be conducted to further evaluate water quality, water rights, and other aspects related to the dewatering process.

18.10 Pit Dewatering During Mining

Throughout the active mining phase at the Yerington pit, the operation of the four shallow wells mentioned in Section 18.9 will continue, alongside the introduction of five deep dewatering wells to accommodate the increased Yerington pit depth. The anticipated expansion of the Yerington pit will extend approximately 500 feet deeper than the existing pit, and the nature of the deeper groundwater system remains largely unknown. To account for this uncertainty, three in-pit sumps have been incorporated into the plan to capture precipitation occurring within the Yerington pit.

Mining within the MacArthur pits is not expected to encounter significant groundwater. Hence, maintaining a dry condition within the MacArthur pits will primarily rely on dewatering sumps.

Water extracted from the dewatering wells and sumps during active mining will find multiple uses across the Project, including in the process circuit and for dust suppression among other applications. Considering the uncertainty surrounding water quality resulting from pit dewatering, it is assumed that water treatment might be necessary throughout the mine's operational life to address potential COPCs.

18.11 Site Wide Water Management

At this phase of the Project, detailed plans for site-wide water management have not been fully developed. However, the conceptual water management strategy essentially entails minimizing contact water volumes by separating non-contact water surface flows from contact water sources. Contact water sources/areas include the HLFs, process plant, geomembrane-lined corridors for pipes and conveyors, and other areas where process solution may be handled. Direct precipitation on these contact areas will remain within geomembrane-lined containment areas and ponds. Runoff from precipitation outside these contact areas will be diverted away from the contact areas and routed to downstream drainages after engineered sediment and erosion controls (if necessary).

18.12 Heap Leach Facilities

The PEA outlines the construction of separate HLFs for both oxide and sulfide feeds, as shown in Figure 18-2. To adhere to the requirements specified in the Nevada Administrative Code (NAC) 445A.434 (NAC, 2022), the HLFs will include an 80-mil high-density polyethylene (HDPE) geomembrane liner underlain by 12 inches of compacted soil with a maximum permeability of 1 x 10^{-6} centimeters per second (cm/s). A system of corrugated and perforated pipes, along with crushed rock, will be placed above the geomembrane to collect solution drain down (process solution) from leaching activities. Earthworks materials such as compacted soil and crushed rock materials are expected to be sourced locally, based on prior investigations and material characterization studies at the Yerington Property. Borrow source investigations were not conducted during this PEA.

After leaching and collection, process solution will be directed to a process pond situated at the topographic low for each respective HLF. An adjacent pond, separated by a divider berm and spillway, will serve as an event or overflow pond to contain excess contact solution during periods of heavy precipitation. The ponds will feature a dual layer of 80-mil HDPE geomembrane, separated by a geonet to create a leak detection system equipped with a pump-back system for the primary liner.

The sulfide HLF will be located at the existing sulfide tailings facility at the Yerington Property. It is expected to receive sulfide feed solely from the Yerington pit and can accommodate the 150 million tons of sulfide feed included in the mine plan. While the current conceptual HLF offers excess capacity (up to 200 million tons at an in-place dry density of 115 pounds per cubic foot), adjustments may be needed due to estimated primary leach cycle times, warranting further refinement in subsequent studies. Careful consideration of this interplay between mining, processing, and pad development will be essential for efficient operations. The HLF has been designed with flexibility in mind and can accommodate future expansion as required.

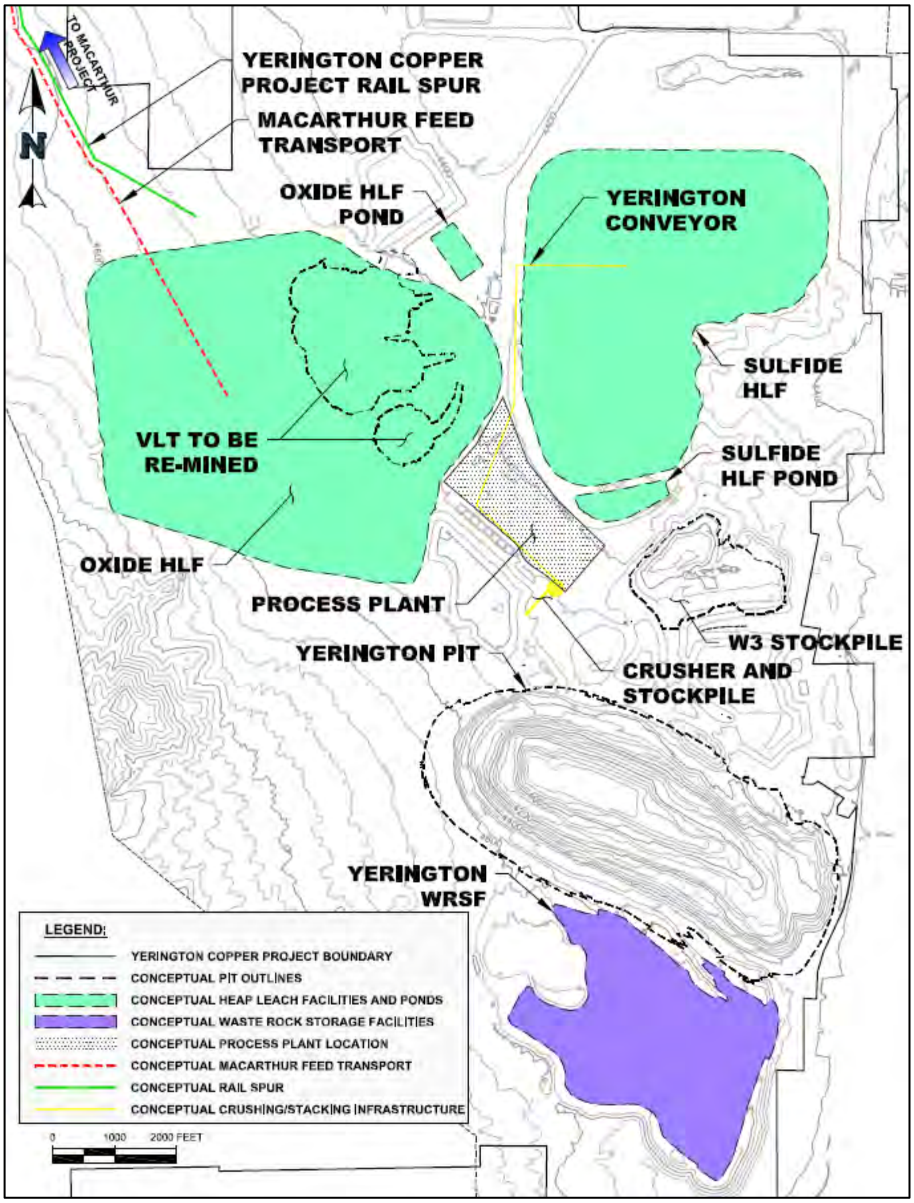
A high-level staging exercise indicates that approximately 25% of the sulfide HLF should be constructed initially, followed by two additional expansions. Crushed and agglomerated sulfide feed will be stacked in approximately 30-foot-high lifts, with an ultimate maximum height anticipated to be 300 feet. The HLF will feature 3H:1V overall side slopes to meet geotechnical stability requirements and facilitate future closure and reclamation activities.

The selection of the existing sulfide tailings facility for the sulfide HLF was influenced by its substantial surface area, proximity to the Yerington pit and processing facilities, and disturbance from previous mining operations. Detailed geotechnical investigations and evaluations will be necessary to determine whether the existing tailings can be appropriately graded or modified to create a suitable surface for the HLF. Future studies will delve into aspects such as geomembrane liner integrity, slope stability, and other geotechnical considerations, as well as the potential for consolidation and liquefaction of existing tailings and any requisite mitigations.

The oxide HLF will be located at the existing Yerington VLT pile and will contain ROM oxide feed from the Yerington pit, W-3 stockpile, and VLTs. MacArthur Pits' oxide feed will be sized and conveyed to the oxide HLF. A phased approach will be adopted, with around 35% of the oxide HLF constructed initially, followed by three additional expansions. Careful mine planning will be essential to ensure that the areas designated for re-processing within the VLT are mined out before areas are required for pad expansions.

The oxide HLF is located within the footprint of an existing reclaimed leach pad from previous mining operations. This presents two options: either the material from the reclaimed leach pad can be placed on the new oxide HLF and re-leached, or it can be left in place and covered with the composite liner system for the oxide HLF. Future studies will thoroughly evaluate both scenarios, including geotechnical assessments to address potential consolidation effects and impacts on geomembrane liner integrity.

Figure 18-2: Yerington Conceptual Infrastructure



Source: NewFields, 2023

18.13 Waste Rock Facilities

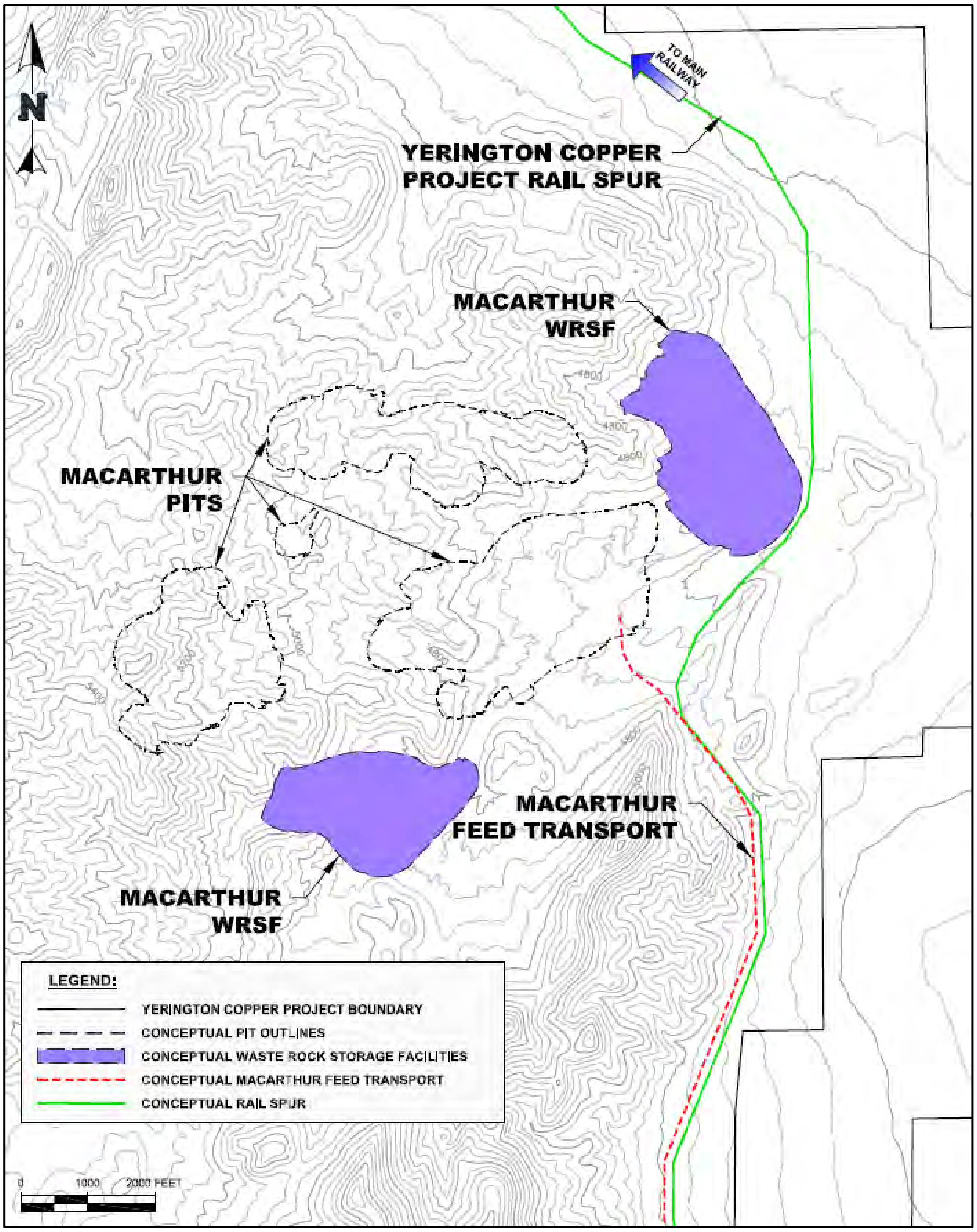
Approximately 78 million tons of waste rock material originating from the Yerington pit will be hauled to the existing Yerington WRSF, situated south of the Yerington pit, as indicated in Figure 18-2. The northwestern portion of the current Yerington WRSF area contains stockpiled alluvium from previous mining activities that hold potential as a future source for closure cover material, post-mining. This specific area will be preserved in its current state, and any additional overburden resulting from open pit mining activities will be stockpiled over the existing alluvium to ensure their availability for use in closure and reclamation efforts. Throughout active mining, concerted efforts will be made to reconfigure the legacy Yerington WRSF area, thereby facilitating a progressive reclamation process. An estimated 59 million tons of waste rock material from the MacArthur pits will be hauled to two adjacent WRSFs as shown in Figure 18-3. These facilities will be contoured with 3H:1V side slopes during waste rock placement as a part of progressive reclamation efforts.

There are no visible signs of acid rock drainage (ARD) from legacy waste rock stockpiles at either the Yerington or MacArthur sites. In addition, the pit lake water quality has circum-neutral pH (pH > 7.0) with low concentrations of metals and other contaminants.

The historic waste rock stockpiles at Yerington have been partially characterized as part of ongoing remediation of the site by others. In general, these studies show that oxide waste rock has low potential for generating ARD. While the sulfide waste rock has more material that is potentially acid generating (PAG), it represents a smaller tonnage of overall waste rock to be generated during pit expansion at both Properties. Although geochemical data are not currently available for MacArthur waste rock, it is estimated to have less PAG than Yerington waste rock given greater presence of calcium mineralogy.

Based on these preliminary findings, it is assumed for the PEA that new waste rock storage facilities at both Yerington and MacArthur will not require liners or covers. The waste rock stockpiles will be graded to stable slopes as part of ongoing reclamation during operations. Waste rock facility design and closure details, including the need for liners or covers, will be updated for the PFS by collecting detailed waste rock geochemical data at both sites to include mineralogy, Acid Base Accounting (ABA) and Humidity Cell Tests (HCT).

Figure 18-3: MacArthur Conceptual Infrastructure



Source: NewFields, 2023

19 MARKET STUDIES AND CONTRACTS

The Yerington Copper Project production will consist of copper cathodes. No long-term sales agreements have been put in place. The expected product is readily marketable copper and standard terms would apply. Later stages of study will look at a specific market entry strategy, including the potential premium for an ESG-forward product.

19.1 Market Studies

The copper cathode produced at Yerington will be of LME grade quality, suitable for global markets. However, the Project is well-positioned to serve strong domestic demand within the continental United States.

The U.S. is among the world's largest consumers of refined copper, with demand exceeding domestic mine production. Yerington can help supply this sizable import-reliant market, with the advantage of short trucking distance to rail loadout for national distribution.

Focusing cathode sales domestically rather than overseas maximizes returns by reducing shipping costs and lead times. The scale of western U.S. consumption also provides a stable regional outlet for full production, reducing marketing risks.

A copper price payable of 98% was applied to cover marketing costs and a transportation cost of $0.05/lb.

19.2 Commodity Price Projections

The Yerington Copper Project long-term copper price selected is $3.85/lb. The base case metal price is based on a November 3rd, 2023, update, and a review of independent market analyst consensus pricing. This pricing reflects the mid-range of expected long-term copper pricing to provide a representative and reasonable base case scenario. The copper price history is shown in Table 19-1.

Copper cathode is not considered to be sold at a premium for the PEA study.

Table 19-1: Copper Price History and Study Price

	Unit	Spot Price November 3, 2023	2 Year Average	3 Year Average	5 Year Average	10 Year Average	Study Price
Copper	$/lb	$3.66	$3.97	$4.00	$3.49	$3.11	$3.85

Acid pricing is based on an assumed price of $160/tonne delivered to site supplied by a major regional supplier. A discount of 25% on the base acid price has been applied on the first 400,000 tonnes of acid per year, and base price used on the remaining annual acid requirements.

19.3 QP Comments

- Metal prices were set by AGP together with Lion and are aligned with current market metal pricing and therefore are appropriate for the PEA study.
- Yerington's copper cathode is expected to be sold with normal market terms.
- The acid price assumed is supported with communication from Kennecott Copper.

20 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

This section outlines environmental studies, permitting requirements, and potential social/community impacts for the Yerington Copper Project.

This section also describes potential social or community considerations including stakeholder engagement, and mine closure requirements. A comprehensive understanding of environmental conditions and regulatory processes is critical to responsible development. Consultation and partnerships with local stakeholders will remain a priority throughout Project planning.

20.1 Permitting

Permitting the Yerington Copper Project, inclusive of the Yerington Property and MacArthur Property, will require approvals and authorizations from various Federal, State and Local agencies. SPS is developing a permitting strategy to identify and address the range of environmental and social requirements and standards applicable to the Project.

The Yerington and MacArthur Properties are located on a combination of private land controlled by SPS and unpatented federal mining claims administered by the BLM Sierra Front Field Office in Carson City District. Proposed mining operations for the Project will trigger federal involvement and require that a Mine Plan of Operations and Reclamation Plan Permit Application and supporting studies be analyzed under the National Environmental Protection Act (NEPA).

Table 20-1 provides an overview of the Federal, State and County permits and approvals that may be required to dewater the Yerington pit and construct and operate the Yerington Copper Project.

Table 20-1: Permit Requirements

Permit	Regulatory Agency
Federal Permitting	
Mine Plan of Operations/Record of Decision	United States Department of the Interior, Bureau of Land Management (BLM)
404 Permit	U.S. Army Corps of Engineers (USACE)
Incidental Take Permit (Golden Eagle)	U.S. Fish and Wildlife Services (USFWS)
Explosives Permit	U.S. Department of Treasury, Bureau of Alcohol, Tobacco, Firearms, and Explosives
Hazardous Waste Identification Number	Environmental Protection Agency (EPA)
State Permitting	
Water Pollution Control Permit	Nevada Division of Environmental Protection (NDEP) Bureau of Mining Regulation and Reclamation (BMRR)
Reclamation Permit	Nevada Division of Environmental Protection (NDEP) Bureau of Mining Regulation and Reclamation (BMRR)
Air Quality Permit	Nevada Division of Environmental Protection (NDEP) Bureau of Air Pollution Control (BAPC)
Water Rights Appropriation	Nevada Division of Water Resources (NDWR)
Stormwater National Pollutant Discharge Elimination System (NPDES) General Permit	Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control (BWPC)
Rapid Infiltration Basin (RIB) Permit	Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control (BWPC)
Notice of Dam Construction*	Nevada Division of Water Resources (NDWR)
Water Rights Appropriation	Nevada Division of Water Resources (NDWR)
Dam Safety Permit*	Nevada Division of Water Resources (NDWR)
Public Water System Permit	NDEP, Bureau of Safe Drinking Water
Hazardous Waste Management Permit	NDEP, Bureau of Waste Management
Industrial Artificial Pond Permit	Nevada Department of Wildlife, Habitat Division
Septic System Permit	Nevada Division of Public Health
Hazardous Materials Permit	State Fire Marshal
Hazardous Materials Storage Permit	State Fire Marshal
Local (County)	
Project Notification	Lyon County
Special Use Permit	Lyon County
Building Permit	Lyon County
Business License	Lyon County

*Not anticipated at this time, but if the HLF ponds are deemed jurisdictional dams, these permits may be required.

20.1.1 Federal Permitting

SPS intends to prepare a Mine Plan of Operations per 43 CFR § 3809 regulations associated with preparation of Mine Plan of Operations and Reclamation Plan (43 CFR § 3809.400-424); and Nevada guidance for Preparation of Operating Plans for Mining Facilities (NAC 445A.398) including all associated engineering design drawings, maps, graphics, and attachments, as outlined in 43 CFR § 3809 regulations. The BLM and NDEP-BMRR will concurrently review the Yerington Copper Project Mine Plan of Operations and Reclamation Plan Permit Application under a Memorandum of Understanding (MOU) between these two agencies.

BLM's Nevada Instruction Memorandum (NV-IM) 2023-003 provides the current protocol all Nevada BLM offices must follow for processing and approving federal actions, including implementation and procedural guidance for project initiation and preplanning, NEPA compliance, and ensuring consistent compliance with applicable regulations when authorizing federal actions.

NV-IM-2023-003 describes the initial project review process which includes submittal of a project proposal, multi-agency/stakeholder baseline kickoff meeting, and determination of baseline surveys requirements. Under this NV-IM, all baseline reports as determined by the baseline data needs assessment, the Mine Plan of Operations and Reclamation Plan Permit Application, Supplemental Environmental Reports (SERs), and Supplemental Information Report (SIR) need to be completed and approved by BLM prior to initiating the NEPA process.

NEPA requires BLM to assess the environmental effects of the proposed action prior to making decisions. SPS anticipates that the BLM will determine that an Environmental Impact Statement (EIS)-level review will be required for the Yerington Copper Project.

The NEPA process begins with BLM issuance of a Notice of Intent (NOI) in the Federal Register. NV-IM-2023-0003 outlines the typical process by which BLM will complete an EIS and receiving an ROD within 365 days. A ROD explains the agency's decision, describes the alternatives the agency considered, and discusses the agency's plans for mitigation and monitoring, if necessary.

Based on the results of golden eagle and raptor nesting surveys at the Yerington Property, it may be necessary for SPS to apply for an Incidental Take Permit with the United States Fish and Wildlife Service (USFWS) under the Bald and Golden Eagle Protection Act (50 Code Federal Regulations [CFR] 22). If an Incidental Take Permit is required, the USFWS will also be required to conduct some level of review under NEPA.

Other federal permits that may be required include explosives use permit from the Bureau of Alcohol, Tobacco, Firearms, and Explosives and a hazardous waste identification number from the EPA.

20.1.2 State Permitting

The most comprehensive State operational permits include the Water Pollution Control Permit (WPCP), the Reclamation Permit, the Air Quality Operating Permit, and the closure plan (discussed in Section 20.7); all issued by NDEP.

The State of Nevada requires permits for all mineral exploration and mining operations regardless of the land status. NDEP-BMRR is the primary State agency regulating mining. The Bureau of Water Pollution Control (BWPC) protects the waters of the State from the discharge of pollutants. The BWPC regulates all discharges to waters of the State through issuing permits and enforcing the State's water pollution control laws and regulations. NDEP Bureau of Air Pollution Control (BAPC) works closely with NDEP-BMRR on mining projects and issues permits to construct facilities that emit gases or particulate matter to the atmosphere. NDWR issues an appropriation to use groundwater for mining, milling, and domestic purposes.

Reclamation Permits are issued to an operator prior to construction of any exploration, mining, milling, or other beneficiation process activity that proposes to create disturbance over five acres. Reclamation is regulated in Nevada under the authority of the Nevada Revised Statutes (NRS) 519A.010 - NRS 519A.280 and NAC 519A.010 - NAC 519A.415.

SPS intends to prepare a WPCP application for proposed mine facilities and associated buildings and structures that have the potential to degrade the waters of the State. A WPCP is valid for a duration of 5 years, provided the operator remains in compliance with the regulations. NDEP-BMRR administers the State of Nevada WPCP application process for the mine, material processing, and operation of the fluid management system in accordance with NAC 445A.350 through NAC 445A.447. A WPCP includes requirements for the management and monitoring of the mine and material processing operations, including the fluid management system, to prevent the degradation of waters of the State. The permit also includes procedures for temporary, seasonal, and tentative permanent closure of mine and material processing operations.

NDEP BAPC issues Air Quality Permits for the construction and operation of mine and process facilities to maintain ambient air quality. Permits are issued in accordance with NAC 445B.001 through NAC 445B.3689. NDEP-BAPC has primacy for air quality activities in Lyon County under the Federal Clean Air Act of 1970, as amended. The type of permit is dependent upon threshold exceedances (e.g., Class I, Class II). As part of the air permitting process, the Project's Potential to Emit (PTE) is reviewed to determine whether it constitutes a major stationary source.

NDWR issues the approval to use groundwater for mining, milling, and domestic purposes for the life of the mine. SPS is proposing to source water supply for the Project from groundwater sources using existing and/or new water rights and continue to explore additional options for on-site or off-site locations or sources of water (non-contact stormwater, off-site wells, Yerington pit, etc.).

Dewatering the Pit Lake to provide access to the Yerington pit may be authorized independent of a Mine Plan of Operations and Reclamation Plan Permit Application. NDEP BWPC will be responsible for issuing discharge permits for the Pit Lake water, which defines the quality of discharge necessary to protect Waters of the State (NRS 445A.415). SPS is considering the following discharge methods for the Pit Lake water:

- Discharge to the Walker River
- Discharge to the WRID ditch system
- Discharge to an Infiltration Basin system

It will be necessary for SPS to secure a National Pollutant Discharge Elimination System (NPDES) Permit from BWPC for discharging Pit Lake water to the Walker River and WRID irrigation system, and a Permit for discharging to an Infiltration Basin.

While NDEP has primacy for issuance of NPDES permits, the U.S. Environmental Protection Agency (EPA) oversees the federal program and has authority to review draft permits issued by NDEP. In addition, any disturbance below the ordinary high-water mark of Walker River or an adjacent wetland could also trigger involvement by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act. The Walker River is jurisdictional given it is an interstate waterway (Nevada-California) and the primary tributary to Walker Lake. USACE issued a Navigable-in-Fact determination on Walker Lake in February 2022. While dredge and fill activities below the high-water mark will trigger USACE involvement under Section 404 (including some level of associated NEPA review), dewatering discharge to Walker River alone will not involve Section 404.

20.1.3 Local Permitting

SPS intends to prepare amendments of the Yerington Special Use Permit for submittal to Lyon County to received authorization to conduct mining and processing at the Yerington and MacArthur Properties. The County Building Department will also issue various permits to construct and inhabit structures and facilities at the mine, including building, electrical, plumbing, and mechanical permits, and inspections.

20.2 Environmental Studies

SPS intends to ensure that characterization of environmental resources at the Yerington and MacArthur Properties is complete and adequate to support development of a Mine Plan of Operations and Reclamation Plan Permit Application, support analyses and modeling studies to complete impact assessments, and inform and satisfy all permitting requirements.

The Yerington Property has been thoroughly characterized through previous permitting efforts, environmental studies, and analyses, and as part of the regulatory compliance process under previous mining operations. SPS is currently developing a regional numerical groundwater model, including a Pit Lake fate and transport model, as well as geochemical modeling for Pit Lake water quality and waste rock chemistry to assess potential impacts to the surface and groundwater system from dewatering the existing Pit Lake and expanding and deepening the Yerington pit.

SPS will review available information and identify potential data gaps based on the proposed Mine Plan of Operations and Reclamation Plan Permit Application for the Project. As part of the State permitting, SPS intends to consult with regulatory agencies such as NDEP and NDWR to refine the baseline data needs that will support the preparation of a Reclamation Plan, WPCP, and Air Permit.

SPS intends to collect, analyze, and interpret baseline characterization data at the MacArthur Property. SPS has previously completed biological surveys and cultural resources surveys on portions of the MacArthur Property to support the preparation of an Exploration Plan of Operations and 2009 Environmental Review (EA).

SPS intends to complete a baseline characterization program to support permitting of the Project that will include, but not be limited to, the studies presented in Table 20-2. To the extent feasible, and in recognition of BLM’s current protocols, SPS plans to initiate these studies concurrently at Yerington and MacArthur.

Table 20-2: Potential Baseline Surveys and Studies

Studies	Scope of Work
Wetlands, seeps and springs, and Waters of the US	▪ Geomorphology survey ▪ Hydrology (field measurements and water quality sampling) ▪ Vegetation and fauna observations ▪ Soils and moisture observations ▪ Proper functioning conditions ▪ Aquatic resources (e.g., spring snails and macroinvertebrates)

Studies	Scope of Work
Groundwater and surface water characterization	▪ Groundwater baseline characterization (groundwater level and water quality sampling) ▪ Aquifer testing ▪ Pit Lake and groundwater flow model (water balance, dewatering rate(s), temporal water quality changes) ▪ Groundwater contaminant transport model ▪ Stream delineation (flow rates and water quality sampling)
Geochemistry characterization	▪ Waste rock characterization: ▪ Static testing (discrete and composite): Acid Base Accounting (ABA)and paste pH, Net Acid Generation (NAGpH) and Net Acidity Testing ▪ Kinetic testing: Humidity Cell Testing (HCT) on waste rock, and Trickle Leach Column Testing on synthesized heap leach/feed composite(s). ▪ Pit Lake modeling
Vegetation and wildlife	▪ Biological inventory ▪ Ecological risk assessment ▪ Golden eagle consultations
Cultural resources	▪ Class III (intensive) cultural resources inventory
Air quality	▪ Baseline data collection ▪ Dispersion air modeling ▪ Green House Gas (GHGs) emissions inventory
Noise	▪ Baseline data collection ▪ Noise modeling
Soil and rangeland	▪ Desktop review of publicly available information and previous studies/surveys
Geology and mineral resources	▪ Desktop review to characterize the physiographic and topographic setting, regional geology, site geology, mineralization, historic mining, and geologic hazards and features of the Project area
Traffic and transportation study	▪ Traffic study ▪ Desktop review of public access, transportation, and traffic patterns in the Yerington area

Studies	Scope of Work
Recreation	▪ Review of federal, state, and local laws, regulations, and guidelines for recreation and wilderness resources management to describe recreational use
Socioeconomic	▪ Study to describe the socioeconomic characteristics and conditions ▪ Environmental justice assessment
Visual resources	▪ Viewshed analysis ▪ Digital photography survey and computer-generated visual simulations

SPS may expand these surveys and/or perform additional baseline characterization studies on other resources as deemed necessary by the agencies to support State and Federal permitting processes, including the forthcoming NEPA review.

20.3 Environmental Issues

The Yerington Property is undergoing active remediation of the former Anaconda and Arimetco mining operations (brownfield site) as previously described in Section 6.1.1.

As discussed in Section 6.1.2, prior to acquiring the Yerington Property in 2011, SPS performed due diligence following guidelines of a BFPP defense to shield SPS from legacy liabilities. In 2009, the State of Nevada, EPA and BLM issued letters outlining activities SPS needed to take to achieve and maintain BFPP status under State and Federal law. SPS continues to perform the activities to maintain the BFPP status.

Effective July 24, 2012, the EPA and SPS entered into an agreement that required SPS to perform a specific scope of work at the Yerington brownfield site in exchange for which EPA agreed to a covenant not to sue or take administrative actions against SPS for response costs, existing contamination, and other matters addressed in the agreement. This agreement constitutes an administrative settlement under CERCLA and states that SPS is entitled to protection from contribution claims or actions for existing contamination and for other matters as addressed in the agreement. The agreement also states that SPS has resolved its liability for all response actions at the brownfield site in the event that SPS lose its status as a BFPP, and to release and waive any lien EPA may have at the time the agreement was signed or in the future for costs incurred by EPA. EPA issued a Notice of Completion for the work SPS was required to perform under the settlement on January 7, 2015.

SPS also entered into a Master Agreement with ARC effective June 1, 2015, that outlines the Parties' responsibilities concerning cooperation, access, property rights, liabilities, federal land acquisition, preservation of SPS's property and mineral rights and coordination of the use of the brownfield site by ARC to complete remedial actions and by SPS for exploration, mining, and mineral processing activities. This Master Agreement also contains covenants not to sue and indemnification provisions between the Parties.

These agreements reduce SPS's risks regarding environmental liabilities from past exploration, mining and mineral processing which took place at the Yerington brownfield site prior to SPS's acquisition in 2011. These agreements allow SPS to proceed with mine development and operation in parallel with ARC's ongoing remediation activities. Areas of the Yerington Property that are included in the proposed Yerington Copper Project are not envisioned to require remediation. Rather, closure of these areas would be covered in the new reclamation bond. Synchronization of remediation with mining will be ongoing and refined during the next stage of mine development.

20.4 Waste and Fluid Management

BLM requires that mining and processing operations on public lands prevent unnecessary or undue degradation of the land. State requirements mandate that mine, material processing, and fluid management system operations do not degrade waters of the State. As presented in this PEA, the Yerington Copper Project will not produce any tailings.

SPS intends to submit a WPCP to NDEP-BMRR for the Yerington Copper Project that will include a Fluid Management Plan describing management of process fluids including the HLFs, acid plant, and SXEW plant. The WPCP will also describe the methods used for monitoring and controlling process fluids including evaluating the available storage for meteoric water.

20.5 Site Monitoring

All Federal, State, and County agencies are expected to require monitoring of the mine, material processing operations, and the fluid management system to ensure compliance with the Project permits. As part of both the State WPCP and the BLM Mine Plan of Operations and Reclamation Plan Permit Application, SPS intends to submit a detailed monitoring plan to demonstrate compliance with the permits and other federal or State environmental regulations, to provide early detection of potential problems, and to assist in directing potential corrective actions (if necessary).

The site-wide monitoring plan is envisioned to include a discussion on area water quality; monitoring locations, analytical profiles (NDEP Profiles I, II, or III), and sampling/reporting frequency. Typical monitoring programs include surface- and groundwater quality and quantity, air quality, revegetation, stability, noise levels, and wildlife mortality.

BLM monitoring requirements will be included as part of the ROD. NDEP-BMRR monitoring requirements will be included in the WPCP issued for the Project.

20.6 Considerations of Social and Community Impacts

SPS has an active ESG program and is committed to comply with all regulations and the highest standards of safety, environmental, financial, and business ethics. These topics will remain the foundation of the Company's operating principles through all phases of the Project.

SPS is committed to its license to operate in the communities that may be affected by the Yerington Copper Project. The Company recognizes that the support of stakeholders is important to the success of the Project. SPS will focus on delivering transparent and ongoing communication with all stakeholders. SPS employs a Stakeholder Engagement Plan that is updated regularly based on feedback received during the engagements. SPS's goal is to advance the Project including community and stakeholder input. SPS will consider potential issues and concerns shared by the participants during these engagements and will incorporate input received in the development of the Mine Plan of Operations and Reclamation Plan

Permit Application (to the extent feasible) to avoid, minimize, or mitigate potential negative impact on the communities and enhance Project benefits.

SPS anticipates initiating stakeholder outreach in late 2023. Stakeholder groups may include (but are not limited to) the following:

- Native American Indian Tribes
- Regulatory Agencies
- Water Authorities
- Elected Officials
- Non-Governmental Organizations (NGOs)
- Local Community Organizations & Businesses
- Local Residents
- Agricultural Industry
- Area Schools & Universities
- Utilities & Infrastructure
- Mining Organizations
- Media

SPS intends to host townhall meetings, present Project information to individual groups of stakeholders, participate in community events, organize open house events, and offer guided tours of the Properties.

With the proposed reactivation of the Yerington pit, portions of the Weed Heights community would be affected by mining activity. SPS will evaluate potential impacts to Weed Heights as the Project advances through the next stages of study.

20.7 Closure and Reclamation Plan

SPS intends to reclaim disturbed areas resulting from activities associated with the Project in accordance with BLM Subpart 43 CFR 3809 - Surface Management and the State of Nevada NDEP regulations (NAC 519A and NAC 445A.350 through NAC 445A.447).

The State of Nevada requires development of a Reclamation Plan for any new mining project and for expansions of existing operations meeting requirements to return mined lands to a productive post-mining land use. SPS will design and implement a strategy for mine closure and Reclamation Plan that will meet the following objectives:

- Comply with applicable State and federal environmental rules and regulations.
- Stabilize the disturbed areas to a safe condition.
- Reduce visual impacts.
- Limit and/or eliminate long-term maintenance following reclamation to the extent practical.
- Protect both disturbed and undisturbed areas from unnecessary and undue degradation.

SPS intends to manage closure and reclamation in a similar manner for the Yerington and MacArthur Properties. Other legacy mining areas from previous operations exist at the brownfield site that are being managed by and are under the responsibility of third parties. SPS expects to assume responsibility for closure of legacy facilities that are incorporated into the Project.

During construction activities, SPS intends to salvage and stockpile suitable and available growth media material for use in future reclamation activities. When possible, SPS will perform concurrent reclamation of areas no longer required for mining and processing operations. As part of the Project, SPS will reprocess legacy materials (W-3 Stockpile, VLT), turning them in valuable assets while ensuring adequate closure and reclamation of these sites by reducing long-term potential impacts to the environment.

SPS intends to close and reclaim the mine facilities as summarized below:

- Mine pit(s): Once mining and dewatering activities cease; the pit(s) will fill with water and form a lake.
- WRSFs: Regrade and recontour the exterior slopes of the facilities concurrently with operations to ensure an overall slope no steeper than 3H:1V. To the extent possible, ensure the slopes are stable and graded using dozers to blend with the surrounding topography.
- HLFs: Proceed with depletion of process fluids from the facilities (chemical stabilization and draindown), regrade and recontour the exterior slopes of the facilities to ensure an overall slope no steeper than 3H:1V, place a growth media cover on all slopes of the facilities, and revegetate with an approved reclamation seed mix. At the Yerington Property, the exposed sulfide tailings, and embankment (outside the HLF footprint) will be regraded to overall 3H:1V or flatter slopes, covered with growth media, and seeded with an approved seed mix.
- Process facilities: Decontaminate, decommission, demolish, and dispose of the crushing facility and conveyors, the SXEW plant, the acid plant, water treatment plant, and the fluid management system. Salvageable equipment may be sold.
- MacArthur feed transport: Remove the feed transport infrastructure between the Yerington and MacArthur Properties, regrade the area to match the surrounding topography, and seed with an approved seed mix.
- Buildings (not identified as part of the post-mining use): Demolish and remove the building material from site, if appropriate; Remove above-ground concrete or bury on site and cover below-ground concrete in place. In those cases where the buildings may not be demolished, burial with inert material may be used as the method of site reclamation.
- Roads (not identified as part of the post-mining use and/or not needed for long-term monitoring access): Regrade the road surfaces to tie into existing ground contours, rip and scarify the area to alleviate compaction and allow for root penetration, and revegetate.
- Post-closure monitoring: Continue monitoring activities at both Properties. Perform post-mining groundwater quality monitoring in accordance with NDEP requirements and the approved water pollution control permit for at least five years; revegetation monitoring for a minimum of three years following implementation of revegetation activities or until revegetation success has been achieved; and monitor and control noxious weeds for three years following closure. Conduct slope stability monitoring, berm and sign maintenance, site

inspections, and any other necessary monitoring for the period of reclamation responsibility following mine closure.

The Yerington Copper Project Mine Plan of Operations and Reclamation Plan Permit Application submitted to BLM and NDEP-BMRR will describe the closure activities for the various mine facilities at both Properties. A reclamation surety adequate for the reclamation of the entire Project, which includes development of the patented and unpatented claims, must be posted before SPS will be authorized to proceed with activities. SPS expects to provide a bond equivalent (using a phased approach) to the actual cost of performing the agreed upon reclamation measures. BLM and NDEP-BMRR will approve the bond prior to approving the Mine Plan of Operations and issuing the Reclamation Permit. The reclamation surety will be administered by NDEP. Estimated closure costs for the Yerington Copper Project are approximately $43 million.

SPS intends to submit a Final Plan for Permanent Closure (FPCC) to NDEP-BMRR at least two years before the anticipated date of permanent closure. The FPPC will incorporate procedures, methods, and schedules for stabilizing spent process materials based on information and experience gathered throughout the active life of the facility.

21 CAPITAL AND OPERATING COSTS

21.1 Summary

Life of mine (LOM) capital costs are summarized in Table 21-1. All costs based on 2023 Q3 pricing.

Table 21-1: Yerington Copper Project Capital Cost Estimate

Area	Initial Capital (M$)	Sustaining Capital (M$)	Total Capital (M$)
Open Pit Mining	74.5	93.7	168.2
Processing	72.7	184.3	257.0
Infrastructure	118.1	178.8	296.8
Dewatering	45.0	4.8	49.7
Environmental	7.0	42.5	49.5
Indirects	35.5	51.0	86.5
Contingency	60.8	98.1	158.8
Total	**413.4**	**653.1**	**1,066.5**

Life of mine operating costs are shown in Table 21-2.

Table 21-2: Yerington Copper Project Operating Cost Estimate

Area	Life of Mine ($/t moved)	Life of Mine ($/t process feed)	Life of Mine ($/lb. copper payable)
Open Pit Mining	2.14	2.79	0.90
Processing		3.55	1.15
G&A		0.30	0.10
Total Operating Cost		**6.63**	**2.14**

21.2 Capital Cost

21.2.1 Summary – Capital Cost

This section provides an overview of the capital costs associated with the Yerington Copper Project, which has been designed to achieve an annual copper production rate of approximately 140 million pounds.

The capital cost estimate encompasses all direct and indirect expenses, complete with appropriate contingencies for the various facilities required to initiate production, as outlined in this study. It's important to note that all equipment and materials are assumed to be new, and the estimate does not incorporate allowances for potential scope changes, escalation, or fluctuations in exchange rates. The execution strategy is rooted in an engineering, procurement, and construction management (EPCM) implementation approach, with Lion CG overseeing construction management and the packaging of horizontal (discipline-based) construction contracts.

This capital cost estimate for the Project has been developed to align with the requirements of a Preliminary Economic Analysis (PEA), encompassing the costs associated with designing, constructing, and commissioning the necessary facilities.

Table 21-3 outlines the total capital costs for the Project, encompassing the mine, process facilities (including the 17 Mtpa crushing plant), the MacArthur sizer (25 Mtpa), overland conveyor, HLFs, on-site infrastructure, dewatering of the existing Pit Lake, and all associated Project-related indirect expenses and contingencies across major areas. The total capital cost estimate for the Project stands at approximately $1,067 million, with prices expressed in terms of Q3 2023 levels.

Table 21-3: Yerington Project Capital Cost Estimate

Area	Initial Capital (M$)	Sustaining Capital (M$)	Total Capital (M$)
Open Pit Mining	74.5	93.7	168.2
Processing	72.7	184.3	257.0
Infrastructure	118.1	178.8	296.8
Dewatering	45.0	4.8	49.7
Environmental	7.0	42.5	49.5
Indirects	35.5	51.0	86.5
Contingency	60.8	98.1	158.8
Total	**413.4**	**653.1**	**1,066.5**

Estimate Responsibility

This capital cost estimate reflects the joint efforts of NewFields, Woods Processing, Lion CG and AGP. AGP was responsible for compiling the submitted data into the overall estimate. Table 21-4 outlines the responsibilities of each company for input of information into the capital cost estimate.

Table 21-4: Capital Cost Estimate Responsibilities

Company	Responsibility
Woods Processing	Process plant, MacArthur sizer, overland conveyor, on-site infrastructure
AGP	Mining
NewFields	Infrastructure, HLFs, site water management, and closure.
Lion CG	Owner’s costs, closure costs and taxes (included in the financial model).

Escalation

There is no allowance for escalation beyond Q2 2023 in the estimate.

Exclusions

The following items are specifically excluded from the capital cost estimate:

- permits and licences.
- Project sunk costs.
- escalation beyond the base date of the estimate

- exchange rate variation

Capital Cost Risks

It is important to recognize that the costs of many items may currently be influenced by prevailing global market conditions. This estimate does not account for such uncertainties. The capital cost estimate provided is valid as of Q3 2023.

In light of the challenges outlined above, a thorough examination of capital cost sensitivity is conducted as an integral part of the financial modeling process.

21.2.2 Mine Capital Costs

The capital costs associated with mining equipment were derived from the assumption of acquiring a mining fleet, with Lion CG serving as the mine operator. Equipment pricing was predominantly sourced from quotations provided by local vendors, supplemented by data from AGP's database of recent projects for certain smaller equipment. The vendor's initial cost estimates for each unit were incorporated into the calculation of unit costs, and additional options were factored in to arrive at the final capital cost per unit, as detailed in Table 21-5.

Table 21-5: Major Mine Equipment – Capital Cost ($USD)

Equipment	Unit	Capacity	Capital Cost
Production Drill	inch	5.5	1,274,000
Production Drill	inch	6.75	2,935,200
Production Loader	yd³	15	2,345,000
Electric Hydraulic Shovel	yd³	21	6,350,000
Hydraulic Excavator	yd³	8.8	1,796,000
Haulage Truck	t	102	1,692,000
Crusher Loader	m³	15	2,345,000
Track Dozer	HP	636	1,439,000
Grader	HP	218	427,000

Certain items, such as spare truck boxes and shovel buckets, were considered as capital expenses and procured concurrently with the mine equipment. For haulage trucks, the estimate assumes one spare box for every four trucks, while for hydraulic shovels and loaders, it anticipates one spare bucket for every two loading units.

The allocation of capital costs is determined based on the units required within a specific timeframe. If new or replacement units are necessary, their quantity, multiplied by the unit cost, defines the capital expenditure for that period. Please note that no provision is made for potential cost escalation in these calculations. Major capital equipment costs are anticipated one year in advance of their actual need. Consequently, if the equipment is required in Year 1, the cost is attributed to Year -1.

The quantity of units is contingent upon the mine schedule and the operating cost estimate, which is based on the required operating hours. These figures are balanced over time, ensuring that fluctuations in hours, whether from one period to another or from year to year, are evenly distributed across the entire equipment fleet to maintain equilibrium.

Replacement intervals for equipment are derived from average values gleaned from AGP's experience. Factors like equipment rebuilds and recertifications, as well as the consideration of used equipment, are not factored into these calculations. However, they should be contemplated during the procurement of the mine fleet.

The alignment of equipment units with operating hours is established for each major piece of mining equipment. Smaller equipment quantities are determined based on operational requirements, such as pickup trucks (dependent on field crews), lighting plants, mechanics trucks, and so forth.

The most substantial component of the major mine equipment is the haulage trucks. In Year 7, the demand for the truck fleet reaches its peak, with thirty-two units of 102-ton capacity required to sustain mine production. A maximum of 6,000 hours per truck per year is considered, even though there are periods where this maximum utilization is not reached. In such cases, the required hours are evenly distributed among the trucks within the fleet.

The calculation method remains consistent for other major mine equipment. Consequently, some smaller production loaders may have a longer lifespan (i.e., the same number of hours between replacements) due to the sharing of operational hours with other units in the fleet.

Support equipment is typically replaced on a periodic basis. For instance, pickup trucks are exchanged every four years, with older units potentially reallocated to other departments on the mine site. Nevertheless, for the purposes of capital cost estimation, new units are taken into account for mine operations, engineering, and geology.

Table 21-6 displays the timing of equipment purchases, both initial and sustaining, and provides insight into the projected operating life by unit. Meanwhile, Table 21-7 offers a comprehensive overview of the total number of units on-site by year.

Table 21-6: Equipment Purchases – Initial and Sustaining

Equipment	Unit Life (hrs.)	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12
Drill (5.5 inch)	25,000	1			1			1				1		
Electric Drill (6.75 inch)	45,000	2	1	2	2				1					
Loader (15 yd^3)	35,000	2	1						1		1			
Electric Hydraulic Shovel	50,000	2		1	1									
Hydraulic Excavator	7 years	1			1				1					
Truck (102t)	60,000	16	5	6				2	3		5			
Crusher Loader	35,000	-	1											
Tracked Dozer	35,000	7										1		
Grader	20,000	3							2		1			

Table 21-7: Equipment Fleet Size

Equipment	Unit Life (hrs.)	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12
Drill (5.5 inch)	25,000	1	1	1	2	2	2	2	2	2	2	2	2	2
Electric Drill (6.75 inch)	45,000	2	3	5	7	7	7	7	7	7	7	7	7	7
Loader (15 yd^3)	35,000	2	3	3	3	3	3	3	3	3	3	3	3	3
Electric Hydraulic Shovel	50,000	2	2	3	4	4	4	4	4	4	4	4	4	4
Hydraulic Excavator	7 years	1	1	1	2	2	2	2	2	2	2	2	2	2
Truck (102t)	60,000	16	21	27	27	27	27	27	29	32	32	32	32	32
Crusher Loader	35,000	-	1	1	1	1	1	1	1	1	1	1	1	1
Tracked Dozer	35,000	7	7	7	7	7	7	7	7	7	7	7	7	7
Grader	20,000	3	3	3	3	3	3	3	3	3	3	3	3	3

The mining capital is tabulated in Table 21-8.

Table 21-8: Mining Capital Cost Estimate ($USD)

Mining Category	Preproduction ($M)	Sustaining ($M)	Total ($M)
Mining Equipment			
Major Equipment	66.0	86.9	152.9
Support Equipment	8.5	6.8	15.3
Total Mine Capital	**74.5**	**93.7**	**168.2**

Pre-Production Stripping

There is no need for pre-production stripping, as the construction materials necessary for the HLFs are readily accessible and initial feed to the HLF comes from other sources including W-3 and the VLT. This encompasses Phase 1 in Yerington, W-3 and the VLT stockpile. Consequently, no expenses have been allocated to this category.

Mining Equipment

In this analysis, all mining equipment is regarded as capital acquisitions, and the consideration of leasing options has been excluded from the scope of this study. This category encompasses the comprehensive cost of all mining equipment, including spare buckets for shovels and loaders, as well as spare boxes for truck rebuilds. Additionally, it incorporates various standard support equipment such as track dozers, graders, water trucks, and pump trucks. Furthermore, it encompasses specialized vehicles like the blaster's truck, along with essential emergency response assets such as ambulances, fire trucks, and associated rescue equipment.

The equipment roster also includes a 35-ton rough terrain crane and a 100-ton lowboy and tractor specifically designated for transporting drills and dozers between different pit areas.

Mining Infrastructure

Power for the mine equipment is factored into the infrastructure capital and is not individually earmarked for the mine. Additionally, the maintenance facilities situated at Yerington (Main Facility) and MacArthur are integrated into the Infrastructure category, rather than being accounted for within the mining capital expenditure.

21.2.3 Process Plant Capital Cost

The process capital cost encompasses various components, including those tailored to meet the specific requirements of Nuton technologies, alongside the more traditional oxide HLF. The detailed breakdown of costs for these facilities is provided in Table 21-9.

Table 21-9: Process Capital Cost Estimate

Area	Initial Cost ($M)	Sustaining Cost ($M)	Total Cost ($M)
Crushing System	12.6	29.8	42.4
Overland Conveyor	-	21.1	21.1
Nuton	7.4	-	7.4
Agglomeration System	6.2	14.1	20.3
Stacking System	6.1	26.7	32.8
Heap Leach	0.9	16.1	17.0
SX Circuit	16.9	36.8	53.7
Electrowinning	14.4	31.4	45.8
Reagents	0.6	0.7	1.3
Utilities	1.9	-	1.9
Water Treatment	3.0	-	3.0
Laboratory	2.5	2.5	5.0
Sustaining Maintenance Capital (2%)	-	5.0	5.0
Total	**72.7**	**184.3**	**257.0**

The processing capital cost is composed of several distinct components, each contributing to the overall Project cost:

Crushing System

This encompasses two types of crushers: a primary crusher with secondary and tertiary crushing and conveying for the Nuton process stream, capable of processing 17 Mtpa.

A semi-mobile MMD sizer, located at the MacArthur pits, processing 25 Mtpa to size the heap leach feed material to 6-inch minus for conveyance to the oxide HLF at Yerington.

Overland Conveyor

A 3.5-mile-long system employing a 72-inch rubber belt to transport heap material from the MacArthur pit to the Yerington oxide HLF, with an interim feed to the MacArthur agglomeration system.

Nuton

This includes unit operations specific to generating and nurturing bacterial inoculum, sulfide augmentation of the Yerington sulfide feed, and heap leach operational modifications to facilitate chalcopyrite leaching. The system will also maintain a biomass held in reserve if needed to augment the in-situ heap leach biomass cultivation.

Agglomeration System

Capital costs associated with both Yerington and MacArthur installations for stacking sulfide and oxide heap leach feeds.

Stacking System

Two independent stacking systems, one for the Yerington Nuton circuit and one for MacArthur, designed for retreat stacking to improve mechanical utilization.

Heap Leach

Primarily included in infrastructure, this covers mechanical equipment, piping, valves, controls, power systems, and installation costs.

SX Circuit

A modular design, allowing for expansion as needed when MacArthur comes online, minimizing downtime during system expansion. Owing to the nature of the design, downtime for an expansion to the system is minimized.

Electrowinning

Another modular design that adapts to increased copper cathode production rates, including an automatic cathode stripping unit.

Reagents

Capital for reagent handling and make-up, including mixing and day-tank storage, sized for high consumption reagents like sulfuric acid.

Process Utilities

Encompassing plant and instrument air, freshwater make-up, and hot water.

Raw Water Treatment

Capital costs for a Reverse Osmosis (R/O) system to provide R/O quality water for boiler make-up, reagent mixing and inoculum build-up.

Laboratory

Initially designed to support Yerington, W-3, and VLT material sampling, with expansion planned when MacArthur comes online in Year 4 to accommodate the larger sampling load and requirements associated with the blast hole cuttings.

Sustaining Maintenance Capital

Sustaining capital of 2% of initial capital is distributed over the Project's lifespan for sustaining maintenance needs.

Estimating Methodology

Engineering lists, process flow diagrams, other process deliverables have been produced with sufficient detail to permit the determination of capital costs at a PEA level of study. Engineering quantities for concrete, steelwork, mechanical, and electrical for the process plant and associated infrastructure have been factored based on accepted factors (Lang) and similar projects.

The unit rates and labor rates are based on historical rates and Nevada salary surveys. Budgetary quotes for mechanical and electrical equipment were obtained from reputable international suppliers.

Pricing Basis

Costs are based on recent quotations for major process equipment, factored to accommodate specific Project configurations.

Contractor Indirects

Based on historical cost information and include offsite management, onsite staff and supervision above trade level, crane drivers, equipment and labor mobilization and demobilization.

Construction indirect costs for all direct labor is included in the capital cost estimate and is inclusive of PPE, fuel, travel, and clothing.

21.2.4 Infrastructure Capital Cost

The Yerington Copper Project primarily centers its infrastructure capital requirements at the Yerington Property, where the majority of essential facilities are centered. The proximity of both HLFs to the process plant streamlines operations. While some minor support facilities will be situated in the MacArthur Property, the core infrastructure is strategically positioned at the Yerington Property.

The construction of the HLFs is a pivotal aspect of the Project, and it has been phased to distribute the necessary capital expenditure effectively, ensuring alignment with material placement and operational requirements.

Infrastructure costs are categorized into significant segments, each contributing to the overall Project, as detailed in Table 21-10.

Table 21-10: Yerington Copper Project Infrastructure Costing

Area	Initial Cost ($M)	Sustaining Cost ($M)	Total Cost ($M)
Electrical System – site, pit electrification	6.0	8.0	14.0
Oxide HLF	45.8	86.7	132.4
Sulfide HLF	24.1	69.5	93.6
Rail Spur (12 miles)	16.1	-	16.1
Mine Maintenance Shop	3.3	10.2	13.5
Site roads, equipment, WRSF preparation, etc	22.9	4.4	27.3
Total	**118.1**	**178.8**	**296.8**

Electrical System

The electrical system expenses encompass two key components: the connection to the existing 69 kV line and the extension of this line to accommodate the needs of the process plant and mine distribution.

The electrification of the pit area entails the installation of utility poles encircling the pit and extending along its walls. This electrification effort encompasses both MacArthur and Yerington Properties, ensuring accessibility for shovels and drills, optimizing mining operations.

Oxide Heap Leach Facility

The oxide HLF will be strategically situated, partially encompassing the existing VLT stockpile (after re-mining). The construction of this facility unfolds over multiple phases, commencing in Year -2 and -1, with subsequent expansions in Year 3, 5, and 8. Each phase of pad construction aligns with the mining schedule, ensuring that the targeted VLT areas for re-processing are fully extracted before pad expansions are initiated.

The cost estimate encompasses all aspects of pad development, spanning site preparation, earthwork, geosynthetic materials, collection ponds and solution collection pipework.

Sulfide Heap Leach Facility

The sulfide HLF, also known as the Nuton HLF, will be strategically situated atop the existing sulfide tailings. This choice stems from the large surface area, proximity to both the Yerington pit and processing facilities, and use of the existing disturbance footprint. Detailed geotechnical investigations and assessments will be conducted to confirm that the sulfide tailings can be adequately graded or otherwise prepared to serve as a suitable surface for the HLF.

The development of the initial pad will commence in Year -1, with subsequent expansions planned for Years 4 and 6. The comprehensive cost estimate encompasses all aspects of pad construction, covering site preparation, earthwork, geosynthetic materials, collection ponds and solution collection pipework.

Rail Spur

The rail spur is strategically planned to link up with the main rail line near Wabuska, and from there, it will traverse the ridge of hills to the northwest of Yerington, leading directly to the Yerington Property.

This rail spur serves multiple purposes, facilitating the delivery of essential supplies such as acid and other bulk materials while also establishing a reliable means for transporting the finished copper.

Precise details regarding the exact location of the rail spur will be subject to further engineering in subsequent stages of the study.

Mine Maintenance Shop

The construction of the mine maintenance shop will be phased to align with the growth of the equipment fleet. Initially, the shop will be sized to accommodate the requirements of the new equipment and the lower stripping demands associated with mining W-3 and VLT. As MacArthur operations commence, the facility will be expanded to effectively manage the growing number of units.

The cost estimate for the shop encompasses outfitting various areas within, including the tire bay, welding bay, and other essential sections.

Other Infrastructure

This category encompasses various elements of additional infrastructure, including site roads, fencing, waste dump preparation, mobile site equipment, truck weigh scales, and explosives storage.

21.2.5 Dewatering Capital Cost

Before commencing mining activities in the Yerington pit, it is essential to remove the existing Pit Lake water. The destination of the water is being determined as part of the overall permitting effort, in coordination with local entities.

The dewatering cost covers the following components:

- Pit Lake Dewatering: This includes the capital cost for pumps, pipes, discharge infrastructure, and related equipment.
- Shallow Dewatering Wells: These wells are installed during Pit Lake dewatering to prevent potential pit slope instability during rapid Pit Lake drawdown.
- Deep Dewatering Wells: These wells are essential for long-term dewatering during pit operations.
- In-pit Dewatering Sumps/Pumps: These systems are responsible for capturing and removing direct precipitation within the Yerington pit and MacArthur Pit during active operations.
- Water Treatment Plant: An allowance for a treatment facility is included should it be required after additional evaluations.
- Pond: A geomembrane-lined pond is provided for potential mixing, settling, and/or upset conditions, as needed.
- Pumping Cost: Capitalization of pit dewatering operating costs.

The estimated costs associated with the dewatering of the Yerington pit and the establishment of infrastructure needed to maintain both the Yerington pit and MacArthur Pit in dry conditions during active mining total $49.7 million. Of this, $45 million is allocated for initial capital needs, while the remaining $4.7 million represents sustaining capital for the establishment of longer-term dewatering wells and sumps for pit operations.

21.2.6 Environmental Capital Cost

The environmental capital cost comprises several components, including:

- Permit Application Costs: This covers expenses associated with permit applications for both the Yerington and MacArthur Properties. It also includes anticipated costs related to obtaining permits for the dewatering of the current Yerington pit.
- Closure Costs: Closure costs are included for each area, encompassing the final reclamation of site facilities, heap leach facilities, and open pits. Additionally, it accounts for monitoring activities after mining operations have ceased.

The environmental costs by mining area are provided in Table 21-11.

Table 21-11: Yerington Copper Project Environmental Cost Estimate

Area	Initial Cost ($M)	Sustaining Cost ($M)	Total Cost ($M)
Yerington			
Permitting Activities	3.0	-	3.0
Dewatering Permit	1.0	-	1.0
Closure Costs	-	25.0	25.0
MacArthur			
Permitting Activities	3.0	-	3.0
Closure Costs	-	17.5	17.5
Total	**7.0**	**42.5**	**49.5**

21.2.7 Indirect Costs

The Indirect costs have been applied as a percentage for each estimation area. The Owner’s cost, which has been included in the Indirect category, is a calculated number based on the construction needs anticipated for the Project construction.

The various items considered in determining the Indirects percentages include:

Engineering, Procurement and Construction Management (EPCM)

- EPCM costs are factored based on historical ratios.
- Construction management (CM) costs are included in the owner's cost since Lion CG will oversee construction management.
- EPCM services for the Project encompass detailed engineering, procurement, equipment, and material purchases, contracting, project management, and controls.

Construction Indirects

- Construction indirect costs are factored and cover items not within the contractor or client scope, such as temporary facilities, warehousing, utilities, and infrastructure available on-site as directed by Lion CG.
- Costs for fuel, meals, accommodation, and vehicles have been estimated.
- Construction camp costs have been included in G&A costs.
- Room and board costs during construction are estimated based on camp loading, construction duration, and recent pricing for camp maintenance.

Spares

- Commissioning spares for major equipment have been quoted by vendors.
- Costs for commissioning spares for other equipment have been factored.
- Capital and operating spares are included in the sustaining cost estimate.

Vendor Representatives

- Certain equipment will require vendor representation during construction and/or commissioning.
- The estimate includes a provision to cover vendor representatives' services based on major mechanical equipment packages.

Freight

- Freight costs are calculated as a percentage of the supply cost.
- Factors for freight costs were obtained from vendor quotations, and if unavailable, an approximation of 8% to 20% of equipment supply cost was used, based on historical rates and sourcing of materials and equipment.

Owner's Costs/Royalty Buydown

- Owner's costs, including the construction management team's salaries and other Lion CG-directed expenses, have been estimated and included in the estimate.
- An expense of $10.4 million is allocated for owner's costs in the initial capital expenses.

To buy down the MacArthur royalty to 1%, $1 million is allocated in Year 3.

Indirect Percentages and Cost

Indirect percentages and costs for various areas, including estimate costs, are detailed in Table 21-12

Table 21-12: Indirect Percentages and Cost Estimate

Area	Indirect (%)	Initial Cost ($M)	Sustaining Cost ($M)	Total Cost ($M)
Open Pit Mining	5	3.7	4.7	8.4
Processing	12	8.7	22.1	30.8
Infrastructure	10	11.8	17.9	29.7
Dewatering	-	-	-	-
Environmental	12.5	0.9	5.3	6.2
Owners Cost/Royalty Buydown		10.4	1.0	11.4
Total		**35.5**	**51.0**	**86.5**

21.2.8 Contingency

The estimate incorporates a contingency fund to address unforeseen variances between the specific items considered in the estimate and the eventual total installed Project cost. It's essential to clarify that this contingency is not intended to cover scope changes or design expansions.

Contingency has been allocated to the estimate on an area basis, with varying percentages reflecting the level of confidence associated with each estimate area. It's worth noting that contingency is independent of the specified estimate accuracy and should be evaluated in the context of the Project's total cost, inclusive of contingency. In total, the contingency for the Capital

Cost Estimate amounts to approximately 15% of the total Project cost, equating to $158.8 million over the mine's operational lifespan.

Table 21-13 presents the contingency percentages and costs applied to each respective area for reference.

Table 21-13: Project Area Contingency Percentages

Area	Contingency (%)	Initial Cost ($M)	Sustaining Cost ($M)	Total Cost ($M)
Open Pit Mining	5	3.7	4.7	8.4
Processing	20	14.5	36.8	51.3
Infrastructure	25	29.5	44.7	74.2
Dewatering	25	11.2	1.2	12.4
Environmental	25	1.8	10.5	12.3
	Total	**60.8**	**98.1**	**158.8**

21.3 Operating Cost Estimates

21.3.1 Operating Cost Summary

The estimated Project operating costs are shown in Table 21-14.

Table 21-14: Yerington Copper Project Operating Costs – Life of Mine

Area	Life of Mine ($/t moved)	Life of Mine ($/t process feed)	Life of Mine ($/lb. copper payable)
Open Pit Mining	2.14	2.79	0.90
Processing		3.55	1.15
G&A		0.30	0.10
Total Operating Cost		**6.63**	**2.14**

General data sources and assumptions used as the basis for estimating the process operating costs include:

- process design criteria in Section 17
- average production rate of 17 Mtpa for the Nuton circuit
- MacArthur sizing plant is capable of 25 Mtpa
- labor requirements as developed by AGP and Woods
- unit cost of electrical energy of $0.065/kWhr
- unit cost of diesel fuel of $3.03/gal
- taxes are excluded from the G&A but are applied to the financial model.

21.3.2 Mine Operating Costs

Mine operating costs are estimated from base principles. Key inputs to the mine costs are fuel, electricity, and labor. The fuel cost is estimated using local vendor quotations for fuel delivered to site. A value of $3.03/gallon is used in this estimate. For electricity, a price of $0.065/kWhr has been used.

Open Pit Mine Operating Cost Estimate

Labor cost estimates were based on queries to other operations and recent salary surveys for Nevada. Shift schedules are 12-hour shifts with a 4 days on/4 days off schedule. Management will be on a 5x2 shift pattern. A burden rate of 35% was applied to all rates. Mine positions and salaries are shown in Table 21-15.

Table 21-15: Open Pit Mine Staffing Requirements and Annual Salaries (Year 5)

Staff Position	Employees	Full Load Annual Salary ($/a)
Mine Maintenance		
Maintenance Shift Foremen	4	150,000
Maintenance Planner/Contract Admin	3	121,000
Clerk	1	74,000
Subtotal	**8**	
Mine Operations		
Mine Operations General Foreman	1	162,000
Mine Shift Foreman (4 per mining area)	8	150,000
Road Crew/Services Foreman	1	150,000
Clerk	1	74,000
Subtotal	**11**	
Mine Engineering		
Chief Engineer	1	158,000
Senior Engineer	1	136,000
Open Pit Planning Engineer	2	113,000
Surveyor/Mining Technician	2	98,000
Surveyor/Mine Technician Helper	2	83,000
Subtotal	**8**	
Geology		
Chief Geologist	1	158,000
Senior Geologist	1	136,000
Grade Control Geologist/Modeler	2	113,000
Sampling/Geology Technician	4	98,000
Clerk	1	74,000
Subtotal	**9**	
Total Mine Staff	**36**	

Mine staff labor is lower during the initial three years, coinciding with Yerington being the sole active pit. As Year 4 marks the commencement of operations at MacArthur, an additional mine operations crew is introduced. Notably, Year 5 does not feature the trainer position, which is prevalent in the initial four years but becomes obsolete afterward. This strategic phasing facilitates employee training at Yerington during the initial years, with a subsequent transfer to MacArthur starting from Year 4 onwards.

From Year 5 through Year 11, the staff level remains steady at thirty-six individuals before experiencing a gradual decline as the mine nears completion.

The hourly employee labor force in both the mine operations and maintenance departments fluctuates in response to production requirements. Table 21-16 provides a snapshot of the labor composition for Year 5.

Table 21-16: Hourly Labor Requirements and Annual Salary (Year 5)

Hourly Position	Employees	Full Load Annual Salary ($/a)
Mine General		
General Equipment Operator	8	118,000
Road/Pump Crew	4	106,000
General Mine Laborer	8	92,000
Trainee	4	86,000
Light Duty Mechanic	3	125,000
Tire Repair	6	136,000
Lube Truck Driver	8	118,000
Subtotal	**41**	
Mine Operations		
Driller	36	133,000
Blaster	2	125,000
Blaster’s Helper	4	114,000
Loader Operator	12	133,000
Hydraulic Shovel Operator	16	133,000
Haul Truck Driver	92	114,000
Dozer Operator	16	125,000
Grader Operator	9	125,000
Transfer Loader	3	125,000
Water Truck	14	114,000
Subtotal	**204**	
Mine Maintenance		
Heavy Duty Mechanic	49	136,000
Welder	32	136,000
Electrician	3	136,000
Apprentice	10	115,000
Subtotal	**94**	
Total Hourly	**339**	

Labor costs are computed based on an owner-operated model, with Lion CG assuming responsibility for equipment maintenance through its in-house staff.

Supervising various mine departments, including operations, engineering, and geology, is the Mine General Foreman. Reporting to the Mine General Foreman are the Mine Maintenance Superintendent, Chief Engineer, and Chief Geologist, who, in turn, report to the Mine General Manager.

Directly under the purview of the Mine General Foreman are the shift foremen. The mine maintains four mine operations crews on rotation. Upon the initiation of operations at MacArthur in Year 4, an additional four crews are established, each with its Shift Foreman. A Road Crew/Services Foreman, responsible for roads, drainage, and pumping around the mine, also serves as a backup Mine Shift Foreman. The Mine Operations department features its own clerk.

In the engineering department, the Chief Engineer supervises one Senior Engineer and two open-pit engineers. These open-pit engineers handle blasting, short-range, and long-term planning tasks. The short-range planning group in engineering includes two surveyor/mine technicians and two surveyors/mine helpers who assist in field activities like staking, surveying, and sample collection, collaborating closely with the geology group and participating in blast pattern design.

Within the Geology department, the Chief Geologist leads one Senior Geologist. Additionally, two grade control geologists/modellers contribute—one in short-range and grade control drilling and the other in long-range/reserves. Four grade control geologists (one per mine operations crew) and one clerk/administrative assistant complete the team.

The Mine Maintenance Shift Foremen report directly to the Mine General Foreman. Three maintenance planners/contract administrators and a clerk support maintenance operation.

Hourly labor positions include light-duty mechanics, tire repair technicians, and lube truck drivers, each with one position per crew. Upon MacArthur's commencement, an extra light-duty mechanic, two tire technicians, and four lube truck drivers join the team. General mine labor comprises two laborers per crew and trainees (one per crew until Year 6).

The drilling labor force is structured with one operator per drill, per crew, totaling an average of nine drillers per crew. Shovel and loader operators peak at thirty-six in Year 9 before gradually decreasing. Haulage truck drivers reach one hundred and forty-eight in Year 8 and then taper off toward the end of the mine's life.

Maintenance staffing levels are determined using maintenance factors based on the number of drill operators. The calculation equates to 0.25 mechanics required for each drill operator, 0.25 welders per drill operator, and 0.05 electricians per drill operator. This approach for estimating maintenance requirements is consistently applied across each category of mine operating cost, as summarized in Table 21-17.

Table 21-17: Maintenance Labor Factors (Maintenance per Operator)

Maintenance Job Class	Drilling	Loading	Hauling	Mine Operations Support
Heavy Duty Mechanic	0.25	0.25	0.25	0.25
Welder	0.250	0.25	0.25	0.25
Electrician	0.05	0.01	-	-
Apprentice	-	-	-	0.25

The estimation of loader, truck, and support equipment operators is based on projected equipment operating hours, with a maximum of four employees per unit to align with the mine crews.

Repair and maintenance (R&M) costs for each piece of equipment were provided by the vendors as part of the capital cost quotations. Fuel consumption rates were also estimated for the anticipated conditions at Yerington and are factored into the detailed costs for the mine equipment. These R&M costs are represented in a $/h format.

The costs associated with different tire sizes, to be utilized during the Project, were provided by various suppliers. Tire life estimates were derived from AGP's experience and discussions with mine operators. The operating cost of haulage truck tires is expressed in $/h. Haulage truck tires are expected to have a life of 5,500 hours per tire with proper rotation from front to back. Given that each tire for the haulage trucks costs $13,400, the tire cost per hour amounts to $14.62/h for trucks, factoring in the use of six tires in the calculation.

Ground Engaging Tool (GET) costs were estimated based on data from previous projects and conversations with personnel at other operations. This is an area of cost expected to undergo refinement during mine operations.

The estimation of drill consumables was conducted by considering a complete drill string, utilizing the parts list and component lifespans provided by the vendor. Drill productivity was projected to be 81.4 ft/h for the 5.5-inch drill and 79.4 ft/h for the 6.75-inch drill. Equipment costs used in the estimate can be found in Table 21-18.

Table 21-18: Major Equipment Operating Costs – no labor ($/h)

Equipment	Fuel/ Power	Lube/ Oil	Tires	Under-Carriage	Repair & Maintenance	GET/ Consumables	Total
Support Drill (5.5 inch)	48.03	4.80	-	3.00	70.00	111.49	237.32
Electric Drill (6.75 inch)	30.36	-	-	6.00	65.00	184.47	285.83
Production Loader (15 yd^3)	68.85	6.88	29.76	-	98.25	10.00	213.74
Electric Hydraulic Shovel (21 yd^3)	46.22	-	-	50.00	105.00	35.00	236.22
Haulage Truck – 102 t	60.04	6.00	14.62	-	67.00	3.00	150.66
Crusher Loader	68.85	6.88	29.76	-	98.25	10.00	213.74
Track Dozer	47.23	4.72	-	15.00	74.00	7.00	147.95
Grader	12.01	1.20	2.53	-	14.00	2.00	31.74

Open pit drilling operations will employ conventional down-the-hole (DTH) blasthole rigs equipped with 5.5 and 6.75-inch drill bits. The blast patterns for both heap feed and waste materials remain consistent, taking into account the rock's competence. A finer material size is chosen to enhance productivity and minimize maintenance costs within the crushing and sizing circuits. Details regarding the drill pattern parameters can be found in Table 21-19.

Table 21-19: Drill Pattern Specification

Specification	Unit	Heap Feed/Waste (5.5 inch)	Heap Feed/Waste (6.75 inch)
Bench Height	ft	25	25
Sub-Drill	ft	3.9	4.3
Blasthole Diameter	inch	5.5	6.75
Pattern Spacing – Staggered	ft	15.1	17.7
Pattern Burden – Staggered	ft	13.1	15.4
Hole Depth	ft	28.9	29.3

The inclusion of a sub-drill is essential to accommodate hole caving in weaker zones, preventing the need for hole re-drilling or short holes that could negatively impact bench floor conditions, ultimately leading to increased tire and overall maintenance costs.

For reference, the parameters utilized to estimate drill productivity are provided in Table 21-20. The electric drill is configured for single pass drilling of the blasthole, while the smaller drill requires steel breaking to complete the hole.

Table 21-20: Drill Productivity Criteria

Drill Activity	Unit	Heap Feed/Waste (5.5 inch)	Heap Feed/Waste (6.75 inch)
Pure Penetration Rate	ft/min	1.8	1.6
Hole Depth	ft	28.9	29.3
Drill Time	min	16.73	21.09
Move, Spot, and Collar Blasthole	min	3.00	3.00
Level Drill	min	0.50	0.50
Add Steel	min	0.50	0.00
Pull Drill Rods	min	1.50	1.00
Total Setup/Breakdown Time	min	5.50	4.50
Total Drill Time per Hole	min	22.2	23.1
Drill Productivity	ft/h	81.5	79.3

An emulsion product will be employed for blasting to ensure water protection when required, although the predominant explosive used will be ANFO, constituting 80% of the total explosive usage. The specific powder factors utilized for the explosive calculation are outlined in Table 21-21.

Table 21-21: Design Powder Factors

	Unit	Heap Feed/Waste (5.5 inch)	Heap Feed/Waste (6.75 inch)
Powder Factor	lb/yd3	1.03	1.05
Powder Factor	lb/t	0.48	0.49

The blasting cost estimation is derived from quotations obtained from a local vendor. The pricing for emulsion explosives stands at $820 per ton, while ANFO explosives are priced at $650 per ton. The mine assumes responsibility for overseeing the loading process, encompassing the placement of boosters/Nonels, stemming, and the firing of the shot.

Additionally, a monthly cost is incurred for the delivery of explosives to the hole, which includes expenses for the vendor's pickup trucks, pumps, and labor, covering the cost of the explosives plant. It's worth noting that the explosives vendor also leases the explosives and accessories magazines to Lion CG as part of this cost.

Regarding the loading of mill feed and waste, this is primarily carried out by front-end loaders and hydraulic shovels, with the shovels being the primary excavation equipment for mill feed and waste. Front-end loaders serve as a backup. Table 21-22 provides the average percentage breakdown of material types handled by these loading units, emphasizing the prominent role of the shovels over the loaders.

Table 21-22: Loading Parameters – Year 5

	Unit	Front-End Loader	Hydraulic Shovel
Bucket Capacity	yd^3	15	21
Waste Tonnage Loaded	%	35	65
Heap Feed Tonnage Mined	%	33	67
Bucket Fill Factor	%	88	79

	Unit	Front-End Loader	Hydraulic Shovel
Cycle Time	sec	40	35
Trucks Present at the Loading Unit	%	80	80
Loading Time	min	3.4	2.5

The standard bucket on the shovel is not ideally matched to the 100-ton trucks, and future studies will explore optimizing bucket sizes to better accommodate different material densities. For the current estimate, fill factors were utilized to ensure that trucks reach their 102-ton capacity.

The term "trucks present at the loading unit" signifies the percentage of time a truck is available for loading. To enhance truck productivity and reduce operating costs, it is more efficient to slightly undersize the truck fleet compared to the loader or shovel capacity. This approach helps minimize the standby time that shovels often experience due to a shortage of available trucks. The choice of an 80% value is informed by the typical standby time observed in shovels due to truck shortages.

Haulage profiles were developed for each pit phase, considering destinations such as the primary crusher or waste rock management facility. Cycle times were calculated based on the tonnage, destination, and phase to estimate haulage costs. It's important to note that the maximum speed for trucks is limited to 30 mph, primarily to extend tire life and ensure safety. Table 21-23 provides details on the calculated speeds for various segments.

Table 21-23: Haulage Cycle Speeds

	Flat (0%) on surface	Flat (0%) Inpit, Crusher, Dump	Slope Up (8%)	Slope Up (10%)	Slope Down (8%)	Slope Down (10%)	Acceleration or Deceleration
Loaded (mph)	30	25	10	7.5	19	19	12.5
Empty (mph)	30	25	22	15.5	22	22	12.5

Support equipment hours and costs are determined using the percentages shown in Table 21-24.

Table 21-24: Support Equipment Operating Factors

Mine Equipment	Factor	Factor Units
Track Dozer	25%	Of haulage hours to a maximum of 7 dozers
Grader	10%	Of haulage hours to a maximum of 3 graders
Crusher Loader	35%	Of loading hours to maximum of 1 loader
Support Backhoe	20%	Of loading hours to maximum of 1 backhoe
Water Truck	7%	Of haulage hours to a maximum of 3 trucks
Lube/Fuel Truck	6	h/d
Mechanic's Truck	12	h/d
Welding Truck	8	h/d
Blasting Loader	8	h/d
Blaster's Truck	8	h/d
Integrated Tool Carrier	4	h/d
Compactor	1	h/d
Lighting Plants	12	h/d
Pickup Trucks	10	h/d
Dump Truck – 20 ton	2	h/d

Based on these percentages, the operational requirements call for seven track dozers, three graders, and one support backhoe. This allocation is partly influenced by the dispersed layout of the various pit areas, which can at times restrict equipment movement. The roles of these machines encompass tasks such as clearing loader faces, maintaining roads, managing dumps, and addressing blast patterns.

The graders will be responsible for the upkeep of routes used for heap feed and waste hauling. Additionally, water trucks will play a crucial role in monitoring haul roads and controlling fugitive dust, a measure taken for both safety and environmental considerations. The support backhoe will assist in dilution control during heap feed/waste separation. A smaller backhoe will handle maintenance and operational support for water management facilities, in conjunction with two small dump trucks.

These equipment hours are factored into the individual operating costs for each piece of equipment. It's worth noting that some of these units are categorized as support equipment, and as such, no direct labor force is allocated to them, given their specialized functions.

Grade Control

Grade control will be conducted using blasthole cuttings collected from the existing drill fleet. Given the deposit's characteristics, this approach should prove sufficient for segregating heap feed material from waste. There is no need for a separate fleet of reverse circulation (RC) drill rigs.

The anticipated cost for grade control is expected to average $0.25 million per year, with a peak of $0.6 million in Year 3. This translates to approximately $0.01 per ton moved over the mine's operational lifespan.

Dewatering

Pit dewatering holds significant importance in the Yerington mining operations, especially since the pit lies below the river level and is currently inundated. Efficient and cost-effective dewatering will be a pivotal aspect of the Yerington Copper Project's development, potentially allowing for a reduction in the strip ratio by enabling steeper inter-ramp angles, which inherently enhance safety.

The infrastructure capital encompasses shallow and deep dewatering wells to aid in managing seepage from the Walker River and groundwater sources, with pumped water being centralized for potential treatment and reuse in the processing circuit.

The dewatering system encompasses pumps, sumps, and pipelines responsible for transporting water from the pit to designated discharge points after water treatment (if necessary). Labor costs for this aspect are already incorporated into the General and Mine Engineering category of the mine operating cost, complete with a dedicated pump crew and pump crew foreman.

The cost estimate also includes a $0.01 per ton moved allowance for operating the dewatering system after the Pit Lake has been fully drained.

Total Open Pit Mine Costs

The total life of mine operating costs per ton of material moved and per ton of mill feed processed are shown in Table 21-25 and Table 21-26.

Table 21-25: Open Pit Mine Operating Cost ($/t Total Material)

Open Pit Operating Category	Unit	Year 1	Year 5	LOM Average Cost
General Mine and Engineering	$/t	0.22	0.17	0.17
Drilling	$/t	0.19	0.33	0.31
Blasting	$/t	0.16	0.26	0.24
Loading	$/t	0.29	0.26	0.28
Hauling	$/t	0.84	0.62	0.77
Support	$/t	0.65	0.32	0.34
Grade Control	$/t	0.01	0.01	0.01
Dewatering	$/t	0.01	0.01	0.01
Total	**$/t**	**2.37**	**1.98**	**2.14**

Table 21-26: Open Pit Mine Operating Cost ($/t Heap Feed)

Open Pit Operating Category	Unit	Year 1	Year 5	LOM Average Cost
General Mine and Engineering	$/t heap feed	0.31	0.23	0.22
Drilling	$/t heap feed	0.27	0.45	0.41
Blasting	$/t heap feed	0.23	0.35	0.32
Loading	$/t heap feed	0.41	0.35	0.37
Hauling	$/t heap feed	1.18	0.83	1.00
Support	$/t heap feed	0.91	0.42	0.45
Grade Control	$/t heap feed	0.01	0.01	0.01
Dewatering	$/t heap feed	0.02	0.02	0.01
Total	**$/t heap feed**	**3.34**	**2.66**	**2.79**

21.3.3 Process Operating Costs

The operating costs for the process plant have been established based on a designed processing rate of 48,000 tons per day for the Nuton sulfide process and 70,000 tons per day for MacArthur oxide heap leaching, equating to overall feed material of approximately 17 million tons per annum at Yerington and 25 million tons per annum at MacArthur. All cost estimates are provided with an accuracy range of +25% to -25% and are derived from pricing data available as of Q3 2023.

These process operating costs adhere to industry norms for a copper heap leach and SXEW processing plant. Quantities and cost information have been compiled from diverse sources, encompassing:

- metallurgical test work
- consumable prices from suppliers
- Woods internal data
- first principal calculations

The estimation of process operating costs encompasses the following major categories:

- operating consumables (reagents, steel, fuel, tools, and safety supplies)
- plant maintenance costs
- power
- labor (operations and maintenance)
- laboratory costs

Table 21-27: Process Operating Cost (Nuton)

Production Criteria	Units	Value
Feed Processed	tpd	46,575
Feed Processed	tpa	17,000,000
Copper Head Grade	%	0.29
Operating Cost Summary		
Operations Labor	$/t feed	0.71
Reagents/Supplies	$/t feed	2.27
Power	$/t feed	1.07
Leach Pad	$/t feed	-
TOTAL - Operating	**$/t feed**	**4.05**

Table 21-28: Mineral Processing – Power Costs (Nuton)

	Installed	Operating
Operating Power (kW)	35,677	30,504
Annual Operating Hours	8,760	8,760
Annual KWhr	312,534,462	267,216,965
Power Costs $/KWhr	0.065	0.065
Annual Power Cost	$20,252,233	$17,315,659
Equipment Allowance	5%	5%
Estimated Annual Power Cost	$21,264,845	$18,181,442
Power Costs $/ton	$1.25	$1.07

Table 21-29: Consumables and Reagents (Nuton)

Supplies	Usage (lb./t)	Total Cost ($/year)	Unit Cost ($/t)
Crusher Liners	n/a	1,000,000	0.03
Ball Mill Balls	n/a	-	-
Ball Mill Liners	n/a	-	-
Sulfuric Acid	32.000	39,507,500	1.32
Sulfur	0.000	-	-
Diluent	0.200	154,300	0.01
Extractant	0.100	100,300	0.00
Drip Line	0.020	28,700	0.00
Additive Supplies (Nuton)		16,000,000	**0.53**
Electrowinning Supplies		2,000,000	0.07
Maintenance Supplies		7,500,000	0.25
Acid Plant Supplies		1,250,000	0.04
Laboratory Supplies		500,000	0.02
Total Reagents		**68,040,800**	**2.27**

Operating Consumables

The consumables category encompasses a variety of items, including reagents, fuel, and operational consumables like wear iron, conveyor belting, screen panels, lubricants, solvent extraction reagents, and cathode production consumables. It's important to note that this category excludes general maintenance consumables such as greases, lubricants, equipment spare parts, and pump wear parts, which are accounted for in maintenance costs. The estimation of consumption rates and pricing for consumables and reagents was carried out as follows:

- Consumption rates for comminution consumables, such as crusher wear iron, were projected based on factors like the material bond abrasion index and crusher power consumption.
- Reagent consumption figures were derived from metallurgical testwork and established operational practices.
- Fuel consumption for mobile equipment was calculated using standard fuel consumption rates and equipment utilization data.
- Reagent prices were determined through supplier quotations or sourced from the Woods database, which includes recent project data and market studies.

Maintenance

Maintenance costs, excluding labor and consumable expenses, were estimated as a percentage of capital costs. Specifically, a 2% factor was applied, aligning with Woods' experience on similar projects.

Power

The power consumption of the process plant was calculated based on the installed motor size of individual equipment units, excluding standby equipment. This value was adjusted using efficiency, load, and utilization factors to obtain an annual average power draw. The result was then multiplied by the total annual operating hours and the electricity price to determine the overall power cost. The process plant is expected to consume an average of 64 MW, operating for 7,884 hours annually, with a total annual power cost estimated at $14 million.

Labor

Operating and maintenance labor costs for the process plant were determined from first principles, taking into account a typical organizational structure and labor rates sourced from the AGP project database. Labor for the process plant comprises a combination of day and shift work. A summary of the labor complement is provided below in Table 21-30.

Table 21-30: Process Labor

Location	Number of Employees
Operations	66
Maintenance	49
Laboratory	13
Total	**128**

The following shift rotations are assumed:

- professional employees and management – 5 days on/2 days off
- operations and maintenance staff – 12-hour shifts, 4 days on, 4 days off rotation

Laboratory Costs

Laboratory costs cover necessary plant samples for monitoring metallurgical performance, including sample preparation, digestion, size analysis, and chemical analyses of production samples. Grade control costs are not included here and fall under mining expenses. The average laboratory cost is approximately $0.02 per ton of material processed.

21.3.4 General and Administrative Operating Costs

General and administrative costs were estimated for each year of the Project schedule. No camp facilities are required due to the proximity to the city of Yerington other than temporary construction offices. G&A costs are $10.4 million per year and remain at that level until Year 12 then gradually decreasing until Year 13. Although mining ceases in Year 12, G&A costs are extended for an additional year to cover all closure-related activities. Wages for staff and hourly personnel in the G&A area total $5.1 million per year. The life-of-mine average G&A cost amounts to $0.30 per ton of feed or a total of $134.0 million over the entire mine life.

21.4 Life of Mine Operating Cost Estimate

The life of mine operating cost estimate summary is shown in Table 21-31 and Table 21-32.

Table 21-31: Yerington Copper Project Operating Cost Estimate

Area	Units	Year 1 – 3	Year 4 – 12	Life of Mine (Year 1-12)
Open Pit Mining	$/t moved	2.08	2.15	2.14
	$/t heap feed	2.67	2.82	2.79
Processing	$/t heap feed	2.81	3.76	3.55
G&A	$/t heap feed	0.31	0.29	0.30
Total Operating Cost	**$/t heap feed**	**5.79**	**6.87**	**6.63**

Table 21-32: Yerington Copper Project Operating Cost Estimate ($/lb Copper payable)

Area	Units	Year 1 – 3	Year 4 – 12	Life of Mine (Year 1-12)
Open Pit Mining	$/lb copper	1.10	0.86	0.90
Processing	$/lb copper	1.16	1.14	1.15
G&A	$/lb copper	0.13	0.09	0.10
Total Operating Cost	**$/lb copper**	**2.39**	**2.09**	**2.14**

22 ECONOMIC ANALYSIS

22.1 Introduction

A PEA of the Yerington Copper Project has been conducted which includes the use of a simple pre-tax and post-tax cash flow model in Excel prepared by AGP on behalf of Lion CG.

The PEA was prepared in accordance with NI 43-101 Standards of Disclosure for Mineral Projects. Readers are cautioned that the PEA is preliminary in nature. It includes inferred mineral resources considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues.

Annual cash flow projections were estimated over the life of the mine based on the current estimates of capital expenditures and production costs developed specifically for this Project and presented in earlier sections of this report. Production costs are estimated with the use of an owner operated fleet and a SXEW plant utilizing conventional and Nuton technologies. One of the HLFs has been designed specifically for Nuton, with the other for oxide materials only. The sales revenue is based on the production of LME grade copper.

The following key parameters were used in the construction of the cash flow model and the economic results:

- copper price at US$3.85/lb
- 100% equity financing with no debt component
- revenues and costs reported in constant Q3 2023 U.S. dollar terms without escalation.

This analysis was completed primarily utilizing a Microsoft Excel-based discounted cash flow model.

22.2 Summary Economic Analysis

Table 22-1 presents the summary economic analysis results for the Yerington Copper Project PEA at $3.85/lb copper price.

Table 22-1: Yerington Copper Project – Discounted Cash Flow Financial Summary

Parameter		Units	Pre-Tax	Post-Tax
Copper Price		$US/lb	3.85	
Economic Indicators				
Net Present Value (7%)		$US M	482	356
IRR		%	20.3	17.4
Payback Period		Years	4.7	5.0
Copper Revenue less Royalties		$US M	5,297	5,297
Total Operating Cost		$US M	2,987	2,987
Life of Mine Capital Cost		$US M	1,067	1,067
Net Taxes		$US M	-	243
Net Cash Flow		$US M	1,244	1,001
Cash Costs		$US/lb payable	2.20	2.37
AISC		$US/lb payable	2.96	
Copper – Payable		Mlb	1,394	
Mine Life		Years	12	
Operating Costs				
		$US M	**$/t Feed**	**$/lb payable**
Open Pit Mining		1,254	2.79	0.90
Processing		1,598	3.55	1.15
G & A		134	0.30	0.10
Total		**2,987**	**6.63**	**2.14**
Capital Costs				
Initial Capital		$US M	413	
Sustaining Capital		$US M	653	
Total Capital		$US M	1,066	
		$/lb payable	0.76	
Production Summary				
		Yerington	**MacArthur**	**Total**
Heap Feed	Mt	246.1	204.2	450.4
Copper Grade	%	0.24	0.18	0.21
Waste	Mt	78.2	58.6	136.8
Strip Ratio	W:F	0.32	0.29	0.30
Copper Pounds (millions)	Insitu	1,298.8	831.5	2,130.3
	Recovered	861.2	547.4	1,408.6

The PEA is preliminary in nature. It includes inferred mineral resources considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues.

22.3 Mine Production Statistics

Mine production is reported as open pit feed. The feed for Yerington comes from the Yerington pit, W-3 and VLT area. MacArthur feed comes from the MacArthur, Gallagher, and North Pit Areas. The annual production figures were obtained from the mine plans discussed in Section 16 earlier in this report. The life of mine feed, waste quantities, and grades are presented in Table 22-2.

Table 22-2: Heap Feed, Waste and Metal Grades

	Units	Yerington Area	MacArthur Area	Total
Heap Feed	Mt	246.1	204.2	450.4
Copper Grade	%	0.24	0.18	0.21
Waste	Mt	78.2	58.6	136.8
Total	**Mt**	**324.4**	**262.8**	**587.2**

22.4 Process Plant Production

The feed supplied by the open pits comprises a blend of oxides and sulfides. Over the life of mine, sulfide feed for Nuton accounts for 33% of the total material. The 17 Mtpa crushing system for Nuton feed material is a conventional crushing and agglomerating circuit.

The oxide material is placed on a separate HLF than the Nuton material and is a mixture of ROM and sized material. The MacArthur material will be sized before placement on the overland conveying system to transport the material to the Yerington Property. The material is then agglomerated and stacked. The sizer is capable of 25 Mtpa.

The estimated copper recoveries varied by material type and area but over the life of mine the average is 66.5%.

22.5 Marketing Terms

The LME grade copper plate is shipped to market with an assumption of 99.5% payable for additional marketing charges and $0.05/lb for transportation.

A price of $160/tonne, delivered to the Yerington Copper Project site, is included in the cashflow calculation as the base acid price. A discount of 25% off the market price has been implemented for the initial annual quantity of 400,000 tonnes of acid. This discount is based on discussions with a prominent regional acid supplier. Any acid requirements exceeding this specified amount are procured at the base market price of $160/tonne.

22.6 Capital Expenditures

22.6.1 Capital

The financial indicators have been determined with 100% equity financing of the initial capital. Capital costs included in the financial model are shown below in Table 22-3, and detailed in Section 21.

Table 22-3: Yerington Copper Project Capital Costs (US$)

Area	Initial Capital (M$)	Sustaining Capital (M$)	Total Capital (M$)
Open Pit Mining	74.5	93.7	168.2
Processing	72.7	184.3	257.0
Infrastructure	118.1	178.8	296.8
Dewatering	45.0	4.8	49.7
Environmental	7.0	42.5	49.5
Indirects	35.5	51.0	86.5
Contingency	60.8	98.1	158.8
Total	**413.4**	**653.1**	**1,066.5**

22.6.2 Salvage Value

No allowance has been included in the cash flow analysis for salvage value.

22.6.3 Reclamation/Closure Costs

Reclamation and closure costs are estimated to be $43 million and account for activities required to comply with current regulations. These activities include facility decommissioning, land recontouring, HLF capping and revegetation.

22.7 Net Revenue

The spot copper price on the London Metal Exchange (LME) on November 3, 2023, was $3.66/lb. The two-year, three-year, five-year, and ten-year rolling average prices to November 3rd of the years has been $3.97, $4.00, $3.49 and $3.11/lb respectively.

Net revenue was determined by applying estimated copper price to the payable copper estimated for each year. Sales prices have been applied to all life of mine production without escalation or hedging. The revenue is the value of payable metals sold minus treatment and transportation charges. The copper sales price used in the evaluation is $3.85/lb considering the long-term nature of the Project.

22.8 Royalties

The MacArthur royalty payments are based on a 2.0% royalty to North Exploration which can be reduced to 1% with a $1 million buydown. This has been assumed to occur in Year 3 prior to mining commencing at MacArthur.

Arimetco has a 2% royalty on the Yerington Property with a cap at $7.5 million on total cumulative payments. That has been applied.

The estimated royalty payments for the life of the mine total $28 million.

22.9 Operating Cost

Life of mine Cash Operating Costs include mine operations, process plant operations and general & administrative costs per ton of heap leach feed and payable copper pound and are shown in Table 22-4. These are detailed in Section 21.

Table 22-4: Operating Cost Summary

Area	Life of Mine ($/t moved)	Life of Mine ($/t process feed)	Life of Mine ($/lb. copper payable)
Open Pit Mining	2.14	2.79	0.90
Processing		3.55	1.15
G&A		0.30	0.10
Total Operating Cost		**6.63**	**2.14**

22.10 Taxation

The taxation on the Yerington Copper Project reflects the current local, Nevada and Federal legislation. The relevant taxes and fiscal benefits by level of government are summarized below.

The total taxes paid life of mine is $243.2 million.

22.10.1 Applicable Taxes

Municipal Tax – Lyon County

The Lyon County tax is calculated at 1.86% of the estimated assessed value, factoring in depreciation. To determine the tax levy, a rate of 35% is first applied to the assessed value.

In total, taxes payable to Lyon County amount to $36.8 million over the Project's lifespan.

Nevada State Tax

The Nevada State tax calculation considers revenue in relation to operating costs, Lyon County tax, Federal depreciation, and Depletion, which is set at the standard rate of 15% for copper projects.

A tax rate of 5% is used for the Nevada State Tax, resulting in a total tax payable of $47.6 million throughout the Project's duration.

Federal Tax

Federal tax liability is determined by applying a rate of 21% to the net income before taxes, following deductions for the Nevada Net Proceeds tax.

The total Federal Corporate tax paid over the Project's life amounts to $158.7 million.

22.10.2 Depreciation / Depletion

Depreciation expenses have been estimated using the following methods and rates shown in Table 22-5. Depletion was estimated at 15%.

Table 22-5: Depreciation Rates

Depreciation Item	Nevada		Federal	
	Type	Years	Type	Years
Mining	Straight Line	7	MACRS	7
Process	Straight Line	7	MACRS	7
Infrastructure	Straight Line	39	MACRS	39
Dewatering	Straight Line	5	MACRS	5
Environmental	Straight Line	5	MACRS	5
Indirects	Straight Line	10	MACRS	10
Contingency	Straight Line	10	MACRS	10

22.11 Project Financial Indicators

The financial evaluation presents the determination of the Net Present Value for the Yerington Copper Project PEA. The evaluation shows the following financial indicators with an owner operated scenario for the open pits and a $3.85/lb copper price:

Undiscounted Cashflow, Post-Tax	$1,001 million
NPV @ 7%, After-Tax	$356 million
IRR, After-Tax	17.4%

The detailed information in the cashflow model is shown in Table 22-6. The Yerington Copper Project Cumulative Cashflow is shown in Figure 22-1. The Net Revenue versus operating and capital costs plus taxes is shown in Figure 22-2.

Table 22-6: Detailed Financial Model

		Total		Year -4	Year -3	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Pre-Tax Cashflow																							
Revenue	dollars	5,297,445,798		-	-	-	-	160,119,397	259,536,897	490,065,948	575,313,581	578,167,342	567,272,870	547,863,673	536,438,291	493,344,034	442,840,448	410,443,053	206,609,279	29,427,717	3,268	-	-
Operating Cost	dollars	2,986,810,763		-	-	-	-	144,313,039	164,941,088	267,668,483	280,458,427	274,672,800	284,898,778	301,569,484	323,440,938	293,910,483	269,914,518	278,150,655	92,860,168	10,011,900	-	-	-
Capital Cost	dollars	1,066,524,789		2,900,000	29,274,372	131,465,383	249,791,415	27,424,199	181,684,648	154,335,507	33,334,186	28,239,825	69,989,369	16,211,790	63,083,943	13,861,716	5,716,288	750,351	4,829,332	9,658,664	23,384,719	13,726,054	6,863,027
Working Capital	dollars	(0)		-	-	-	-	-	996,597	6,282,572	5,429,812	947,852	(2,156,173)	(3,650,569)	(3,635,553)	98,747	(1,192,573)	(3,120,713)	5,533,071	(4,348,698)	(1,184,104)	(269)	-
Pre-Tax Cashflow	dollars	1,244,110,245		(2,900,000)	(29,274,372)	(131,465,383)	(249,791,415)	(11,617,841)	(88,085,436)	61,779,386	256,091,156	274,306,865	214,540,895	233,732,968	153,548,962	185,473,088	168,402,214	134,662,759	103,386,708	14,105,851	(22,197,346)	(13,725,785)	(6,863,027)
Pre-Tax Cumulative Cashflow	dollars			(2,900,000)	(32,174,372)	(163,639,755)	(413,431,170)	(425,049,011)	(513,134,447)	(451,355,062)	(195,263,906)	79,042,959	293,583,855	527,316,822	680,865,785	866,338,872	1,034,741,087	1,169,403,846	1,272,790,553	1,286,896,404	1,264,699,058	1,250,973,272	1,244,110,245
		Pre-Tax Payback										4.7											
Post-Tax Cashflow																							
Property Tax - Lyon County	dollars	36,838,595		-	-	-	-	2,710,009	3,502,831	3,988,197	3,629,132	3,226,656	3,115,593	2,672,401	2,592,896	2,317,550	2,081,806	1,881,824	1,752,658	1,675,020	1,692,023	-	-
Nevada Net Proceeds Tax	dollars	47,626,410		-	-	-	-	-	2,065,882	4,832,709	6,335,731	6,687,186	5,872,762	4,370,336	3,464,165	3,862,675	3,639,779	2,872,021	3,315,720	307,445	-	-	-
Federal Corporate Tax	dollars	158,712,703		-	-	-	-	-	-	403,220	20,600,995	26,701,577	25,249,631	19,672,313	15,268,133	15,515,011	13,709,862	10,278,197	11,313,763	-	-	-	-
Total Taxes	dollars	243,177,708		-	-	-	-	2,710,009	5,568,713	9,224,125	30,565,857	36,615,419	34,237,985	26,715,050	21,325,194	21,695,237	19,431,447	15,032,042	16,382,141	1,982,465	1,692,023	-	-
Post-Tax Cashflow	dollars	1,000,932,537		(2,900,000)	(29,274,372)	(131,465,383)	(249,791,415)	(14,327,850)	(93,654,149)	52,555,260	225,525,299	237,691,446	180,302,910	207,017,918	132,223,768	163,777,851	148,970,767	119,630,717	87,004,566	12,123,386	(23,889,370)	(13,725,785)	(6,863,027)
Post-Tax Cumulative Cashflow	dollars			(2,900,000)	(32,174,372)	(163,639,755)	(413,431,170)	(427,759,020)	(521,413,169)	(468,857,909)	(243,332,610)	(5,641,164)	174,661,746	381,679,664	513,903,432	677,681,283	826,652,050	946,282,767	1,033,287,334	1,045,410,719	1,021,521,350	1,007,795,564	1,000,932,537
		Post-Tax Payback											5.0										

		Pre-Tax	Post Tax
NPV (millions) @	**7%**	$482	$356
Payback Period	**years**	4.7	5.0
IRR	**%**	20.3%	17.4%

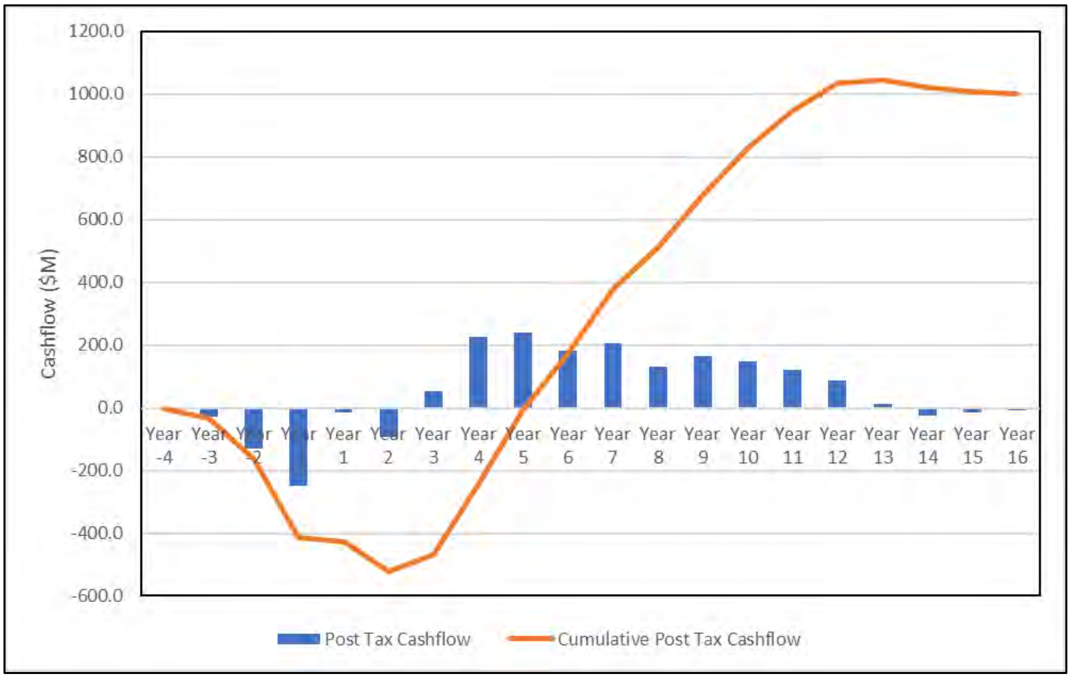
		Total		Year -4	Year -3	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Mine Schedule																							
Yerington																							
Leach - Nuton																							
Feed	tons	148,452,803						3,472,628	1,909,838	17,276,417	17,094,402	17,051,366	17,028,650	16,031,889	16,000,000	16,000,000	14,000,000	12,278,753	308,861	-	-	-	-
Tcu	%	0.29						0.37	0.25	0.28	0.28	0.30	0.32	0.30	0.29	0.27	0.28	0.27	0.28	-	-	-	-
Leach - Oxide																							
Feed	tons	55,636,617						4,088,596	18,549,844	12,625,373	1,035,597	40,571	253,284	3,390,499	13,932,850	1,720,001	-	-	-	-	-	-	-
Tcu	%	0.21						0.27	0.20	0.26	0.24	0.17	0.14	0.14	0.18	0.27	-	-	-	-	-	-	-
Leach - Oxide (W3)																							
Feed	tons	13,613,695						13,613,695	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tcu	%	0.11						0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leach - Oxide (VLT)																							
Feed	tons	28,435,635						-	10,091,048.30	18,344,586.92	-	-	-	-	-	-	-	-	-	-	-	-	-
Tcu	%	0.10						-	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-
Waste																							
Waste	tons	78,233,298						8,669,505	9,449,270	9,663,843	8,596,403	6,482,878	10,375,880	11,220,516	8,215,808	4,093,464	838,016	588,376	39,340	-	-	-	-
Total																							
Leach	tons	246,138,751						21,174,919	30,550,730	48,246,377	18,129,999	17,091,938	17,281,935	19,422,387	29,932,850	17,720,001	14,000,000	12,278,753	308,861	-	-	-	-
Waste	tons	78,233,298						8,669,505	9,449,270	9,663,843	8,596,403	6,482,878	10,375,880	11,220,516	8,215,808	4,093,464	838,016	588,376	39,340	-	-	-	-
Total Yerington	tons	324,372,049						29,844,424	40,000,000	57,910,219	26,726,401	23,574,815	27,657,815	30,642,904	38,148,659	21,813,465	14,838,016	12,867,129	348,201	-	-	-	-
Strip Ratio		0.32																					
MacArthur																							
MacArthur Leach - Oxide																							
Feed	tons	120,437,482						-	-	-	25,179,983	24,854,324	20,451,241	19,138,443	6,659,915	10,779,415	6,587,091	1,261,406	5,525,663	-	-	-	-
Tcu	%	0.19						-	-	-	0.19	0.19	0.20	0.18	0.17	0.17	0.17	0.19	0.19	-	-	-	-
Gallagher Leach - Oxide																							
Feed	tons	45,764,246						-	-	-	-	-	1,215,730	4,283,076	9,502,277	12,644,205	18,118,958	-	-	-	-	-	-
Tcu	%	0.18						-	-	-	-	-	0.13	0.16	0.17	0.18	0.20	-	-	-	-	-	-
MacArthur North Leach - Oxide																							
Feed	tons	38,027,015						-	-	-	-	-	1,365,615	1,578,481	1,829,757	1,522,934	293,951	23,738,594	7,697,683	-	-	-	-
Tcu	%	0.19						-	-	-	-	-	0.12	0.14	0.16	0.11	0.27	0.18	0.25	-	-	-	-
North Leach - Oxide																							
Feed	tons	-																					
Tcu	%	-																					
Waste																							
Waste	tons	58,606,292						-	-	-	6,684,202	7,949,087	9,309,600	4,357,096	3,859,392	4,964,493	2,776,585	14,978,331	3,727,505	-	-	-	-
Total																							
Leach	tons	204,228,743						-	-	-	25,179,983	24,854,324	23,032,586	25,000,000	17,991,949	24,946,555	25,000,000	25,000,000	13,223,346	-	-	-	-
Waste	tons	58,606,292						-	-	-	6,684,202	7,949,087	9,309,600	4,357,096	3,859,392	4,964,493	2,776,585	14,978,331	3,727,505	-	-	-	-
Total	tons	262,835,035						-	-	-	31,864,186	32,803,412	32,342,185	29,357,096	21,851,341	29,911,048	27,776,585	39,978,331	16,950,850	-	-	-	-
Strip Ratio		0.29																					
Total																							
Total																							
Leach	tons	450,367,494						21,174,919	30,550,730	48,246,377	43,309,982	41,946,262	40,314,520	44,422,387	47,924,800	42,666,556	39,000,000	37,278,753	13,532,207	-	-	-	-
Waste	tons	136,839,590						8,669,505	9,449,270	9,663,843	15,280,605	14,431,965	19,685,480	15,577,613	12,075,200	9,057,957	3,614,601	15,566,707	3,766,845	-	-	-	-
Total	tons	587,207,084						29,844,424	40,000,000	57,910,219	58,590,587	56,378,227	60,000,000	60,000,000	60,000,000	51,724,513	42,614,601	52,845,460	17,299,052	-	-	-	-
Strip Ratio		0.30																					

			Total		Year -4	Year -3	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
	Process Feed																							
	Oxide - Direct (Yerington)	tons	55,636,617						4,088,596	18,549,844	12,625,373	1,035,597	40,571	253,284	3,390,499	13,932,850	1,720,001	-	-	-	-	-	-	-
	Cu%	%	0.21						0.27	0.20	0.26	0.24	0.17	0.14	0.14	0.18	0.27	-	-	-	-	-	-	-
	Sulphide - Crushed (Nuton)	tons	148,452,803						3,444,081	1,852,780	17,000,000	17,000,000	17,000,000	17,000,000	16,000,000	16,000,000	16,000,000	14,000,000	12,847,081	308,861	-	-	-	-
	Cu%	%	0.29						0.37	0.25	0.28	0.28	0.30	0.32	0.30	0.29	0.27	0.28	0.27	0.28	-	-	-	-
	Oxide - Direct (W3)	tons	13,613,695						13,613,695	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cu%	%	0.11						0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Oxide - Direct (VLT)	tons	28,435,635						-	10,091,048	18,344,587	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cu%	%	0.10						-	0.10	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-
	Oxide - Direct (MacArthur)	tons	120,437,482						-	-	-	25,179,983	24,854,324	20,451,241	19,138,443	6,659,915	10,779,415	6,587,091	1,261,406	5,525,663	-	-	-	-
	Cu%	%	0.19						-	-	-	0.19	0.19	0.20	0.18	0.17	0.17	0.17	0.19	0.19	-	-	-	-
	Oxide - Direct (Gallagher)	tons	45,764,246						-	-	-	-	-	1,215,730	4,283,076	9,502,277	12,644,205	18,118,958	-	-	-	-	-	-
	Cu%	%	0.18						-	-	-	-	-	0.13	0.16	0.17	0.18	0.20	-	-	-	-	-	-
	Oxide - Direct (MacArthur North)	tons	38,027,015						-	-	-	-	-	1,365,615	1,578,481	1,829,757	1,522,934	293,951	23,738,594	7,697,683	-	-	-	-
	Cu%	%	0.19						-	-	-	-	-	0.12	0.14	0.16	0.11	0.27	0.18	0.25	-	-	-	-
	Oxide - Direct (North)	tons	-																					
	Cu%	%	-																					
			0.18	2,130																				
	Total	tons	450,367,494						21,146,372	30,493,673	47,969,960	43,215,580	41,894,896	40,285,870	44,390,499	47,924,800	42,666,556	39,000,000	37,847,081	13,532,207	-	-	-	-
	Cu%	%	0.21						0.18	0.17	0.20	0.23	0.24	0.24	0.22	0.21	0.21	0.22	0.21	0.23	-	-	-	-
Recovered Copper																								
	Yerington																							
	Leach - Nuton	lbs	633,898,174	45%			-	-	15,362,001	9,049,858	58,976,254	70,703,325	73,732,613	78,781,943	73,463,745	68,563,289	64,288,054	58,312,817	52,209,693	10,191,410	262,308	864	-	-
	First Year	61%					-	-	15,362,001	5,719,634	57,723,695	58,185,091	61,071,572	65,494,782	59,215,331	55,672,516	52,170,470	46,957,333	41,987,210	1,050,655	-	-	-	-
	Second Year	13%					-	-	-	3,330,224	1,239,921	12,513,528	12,613,551	13,239,292	14,198,170	12,836,890	12,068,867	11,309,682	10,179,562	9,102,122	227,764	-	-	-
	Third Year	0%					-	-	-	-	12,638	4,706	47,490	47,869	50,244	53,883	48,717	45,802	42,921	38,632	34,543	864	-	-
	Leach - Oxide	lbs	166,719,983				-	-	12,375,303	44,821,075	46,824,632	12,326,526	821,563	414,424	5,501,484	29,584,460	12,673,074	1,377,443	-	-	-	-	-	-
	First Year	55%					-	-	12,375,303	41,517,261	35,740,839	2,784,855	78,095	393,575	5,396,412	28,143,789	5,159,573	-	-	-	-	-	-	-
	Second Year	15%					-	-	-	3,303,814	11,083,794	9,541,672	743,468	20,849	105,072	1,440,671	7,513,500	1,377,443	-	-	-	-	-	-
	Third Year	0%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Leach - Oxide (W3)	lbs	19,673,268				-	-	15,478,233	4,195,035	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	First Year	54%					-	-	15,478,233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Second Year	15%					-	-	-	4,195,035	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Third Year	0%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Leach - Oxide (VLT)	lbs	40,932,177				-	-	-	11,700,390	23,820,472	5,411,316	-	-	-	-	-	-	-	-	-	-	-	-
	First Year	60%					-	-	-	11,700,390	20,772,471	-	-	-	-	-	-	-	-	-	-	-	-	-
	Second Year	16%					-	-	-	-	3,048,001	5,411,316	-	-	-	-	-	-	-	-	-	-	-	-
	Third Year	0%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sub-Total Yerington	lbs	861,223,603				-	-	43,215,537	69,766,357	129,621,358	88,441,168	74,554,176	79,196,367	78,965,229	98,147,750	76,961,128	59,690,260	52,209,693	10,191,410	262,308	864	-	-
	MacArthur																							
	Leach - Oxide (MacArthur)	lbs	368,948,116				-	-	-	-	-	64,371,717	79,161,419	68,529,607	57,577,338	25,135,302	28,592,384	20,934,782	6,505,398	15,088,088	3,052,079	-	-	-
	First Year	68%					-	-	-	-	-	64,371,717	65,526,031	54,649,709	46,001,292	15,391,186	25,332,182	15,568,852	3,207,562	14,408,654	-	-	-	-
	Second Year	14%					-	-	-	-	-	-	13,635,388	13,879,898	11,576,047	9,744,116	3,260,202	5,365,930	3,297,836	679,434	3,052,079	-	-	-
	Third Year	0%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Leach - Oxide (Gallagher)	lbs	88,361,666				-	-	-	-	-	-	-	1,381,354	6,370,500	15,414,436	22,991,689	35,841,492	6,362,195	-	-	-	-	-
	First Year	45%					-	-	-	-	-	-	-	1,381,354	6,094,229	14,195,590	20,152,571	31,810,977	-	-	-	-	-	-
	Second Year	9%					-	-	-	-	-	-	-	-	276,271	1,218,846	2,839,118	4,030,514	6,362,195	-	-	-	-	-
	Third Year	0%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Leach - Oxide (MacArthur North)	lbs	90,086,995				-	-	-	-	-	-	-	1,650,706	2,661,757	3,631,060	2,483,882	1,243,986	44,053,200	29,817,252	4,545,151	-	-	-
	First Year	52%					-	-	-	-	-	-	-	1,650,706	2,280,824	3,104,716	1,767,410	836,123	43,860,249	19,695,656	-	-	-	-
	Second Year	12%					-	-	-	-	-	-	-	-	380,932	526,344	716,473	407,864	192,951	10,121,596	4,545,151	-	-	-
	Third Year	0%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Leach - Oxide (North)	lbs	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	First Year	44%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Second Year	9%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Third Year	0%					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Sub-Total MacArthur	lbs	547,396,777	55%	-	-	-	-	-	-	-	64,371,717	79,161,419	71,561,667	66,609,595	44,180,798	54,067,956	58,020,260	56,920,793	44,905,340	7,597,231	-	-	-
	Total Recovered Copper	lbs	1,408,620,380		-	-	-	-	43,215,537	69,766,357	129,621,358	152,812,885	153,715,595	150,758,034	145,574,824	142,328,548	131,029,084	117,710,520	109,130,486	55,096,750	7,859,538	864	-	-
			704,310.19																					

			Total		Year -4	Year -3	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Acid Calculation																								
	Acid Consumption																							
25	Oxide - Direct (Yerington)	lbs	1,390,915,427	23.3	-	-	-	-	102,214,911	463,746,108	315,634,334	25,889,922	1,014,287	6,332,109	84,762,463	348,321,259	43,000,035	-	-	-	-	-	-	-
32	Sulphide - Crushed (Nuton)	lbs	4,750,489,712	28.6	-	-	-	-	110,210,589	59,288,971	544,000,000	544,000,000	544,000,000	544,000,000	512,000,000	512,000,000	512,000,000	448,000,000	411,106,597	9,883,555	-	-	-	-
34	Oxide - Direct (W3)	lbs	462,865,628		-	-	-	-	462,865,628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Oxide - Direct (VLT)	lbs	426,534,528		-	-	-	-	-	151,365,725	275,168,804	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Oxide - Direct (MacArthur)	lbs	3,131,374,544	32	-	-	-	-	-	-	-	654,679,563	646,212,435	531,732,275	497,599,519	173,157,799	280,264,794	171,264,366	32,796,564	143,667,230	-	-	-	-
42	Oxide - Direct (Gallagher)	lbs	1,922,098,334		-	-	-	-	-	-	-	-	-	51,060,643	179,889,190	399,095,651	531,056,627	760,996,222	-	-	-	-	-	-
38	Oxide - Direct (MacArthur North)	lbs	1,445,026,552		-	-	-	-	-	-	-	-	-	51,893,366	59,982,278	69,530,756	57,871,493	11,170,150	902,066,560	292,511,948	-	-	-	-
28	Oxide - Direct (North)	lbs	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	lbs	13,529,304,725		-	-	-	-	675,291,127	674,400,803	1,134,803,137	1,224,569,484	1,191,226,722	1,185,018,393	1,334,233,451	1,502,105,466	1,424,192,949	1,391,430,739	1,345,969,721	446,062,733	-	-	-	-
		tonnes	6,136,788		-	-	-	-	306,307	305,903	514,738	555,455	540,331	537,515	605,198	681,343	646,003	631,142	610,521	202,331	-	-	-	-
		tonnes/day			-	-	-	-	839	838	1,410	1,522	1,480	1,473	1,658	1,867	1,770	1,729	1,673	554	-	-	-	-
	Rio Acid Purchase	tonnes	4,414,540					-	306,307	305,903	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	202,331	-	-	-	-
	Market Acid Purchase	tonnes	1,722,248					-	-	-	114,738	155,455	140,331	137,515	205,198	281,343	246,003	231,142	210,521	-	-	-	-	-
	Blended Purchase Acid Cost	$/tonne						-	$ 120.00	$ 120.00	$ 128.92	$ 131.19	$ 130.39	$ 130.23	$ 133.56	$ 136.52	$ 135.23	$ 134.65	$ 133.79	$ 120.00	$ -	$ -	$ -	$ -
		$/lb						-	$ 0.05	$ 0.05	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.06	$ 0.05	$ -	$ -	$ -	$ -
									3,267,743	5,275,383	9,801,319	6,687,479	5,637,414	5,988,433	5,970,956	7,421,442	5,819,416	4,513,479	3,947,836	770,623	19,834	65	-	-
Revenue					-	-	-	-	3,267,743	8,543,126	18,344,445	25,031,924	30,669,338	36,657,771	42,628,727	50,050,169	55,869,585	60,383,064	64,330,900	65,101,523	65,121,357	65,121,423	65,121,423	65,121,423
	Yerington				(7,500,000)	(7,500,000)	(7,500,000)	(7,500,000)	(4,232,257)	1,043,126	10,844,445	17,531,924	23,169,338	29,157,771	35,128,727	42,550,169	48,369,585	52,883,064	56,830,900	57,601,523	57,621,357	57,621,423	57,621,423	57,621,423
	Recovered Copper	lbs	861,223,603		-	-	-	-	43,215,537	69,766,357	129,621,358	88,441,168	74,554,176	79,196,367	78,965,229	98,147,750	76,961,128	59,690,260	52,209,693	10,191,410	262,308	864	-	-
	Payable Copper	lbs	856,917,485		-	-	-	-	42,999,459	69,417,525	128,973,251	87,998,962	74,181,405	78,800,385	78,570,403	97,657,011	76,576,322	59,391,809	51,948,644	10,140,453	260,996	860	-	-
	Gross Revenue	dollars	3,299,132,316		-	-	-	-	165,547,917	267,257,472	496,547,016	338,796,003	285,598,410	303,381,482	302,496,051	375,979,492	294,818,841	228,658,463	200,002,280	39,040,743	1,004,835	3,311	-	-
	less transportation	dollars	43,061,180		-	-	-	-	2,160,777	3,488,318	6,481,068	4,422,058	3,727,709	3,959,818	3,948,261	4,907,387	3,848,056	2,984,513	2,610,485	509,570	13,115	43	-	-
	less Royalty	dollars	7,500,000		-	-	-	-	3,267,743	4,232,257	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Yerington Revenue		3,248,571,136		-	-	-	-	160,119,397	259,536,897	490,065,948	334,373,944	281,870,701	299,421,664	298,547,790	371,072,104	290,970,785	225,673,950	197,391,796	38,531,173	991,719	3,268	-	-
	MacArthur																							
	Recovered Copper	lbs	547,396,777		-	-	-	-	-	-	-	64,371,717	79,161,419	71,561,667	66,609,595	44,180,798	54,067,956	58,020,260	56,920,793	44,905,340	7,597,231	-	-	-
	Payable Copper	lbs	544,659,793		-	-	-	-	-	-	-	64,049,859	78,765,612	71,203,859	66,276,547	43,959,894	53,797,616	57,730,159	56,636,190	44,680,813	7,559,245	-	-	-
	Gross Revenue	dollars	2,096,940,204		-	-	-	-	-	-	-	246,591,956	303,247,607	274,134,857	255,164,705	169,245,592	207,120,821	222,261,112	218,049,330	172,021,132	29,103,092	-	-	-
	less transportation	dollars	27,369,839		-	-	-	-	-	-	-	3,218,586	3,958,071	3,578,083	3,330,480	2,209,040	2,703,398	2,901,013	2,846,040	2,245,267	379,862	-	-	-
	less Royalty	dollars	20,695,704		-	-	-	-	-	-	-	2,433,734	2,992,895	2,705,568	2,518,342	1,670,366	2,044,174	2,193,601	2,152,033	1,697,759	287,232	-	-	-
	Total Yerington Revenue		2,048,874,662		-	-	-	-	-	-	-	240,939,637	296,296,641	267,851,206	249,315,883	165,366,187	202,373,249	217,166,498	213,051,257	168,078,106	28,435,998	-	-	-
	Total Project Copper Revenue	dollars	5,297,445,798		-	-	-	-	160,119,397	259,536,897	490,065,948	575,313,581	578,167,342	567,272,870	547,863,673	536,438,291	493,344,034	442,840,448	410,443,053	206,609,279	29,427,717	3,268	-	-
	Total Project Revenue	dollars	**5,297,445,798**		-	-	-	-	160,119,397	259,536,897	490,065,948	575,313,581	578,167,342	567,272,870	547,863,673	536,438,291	493,344,034	442,840,448	410,443,053	206,609,279	29,427,717	3,268	-	-

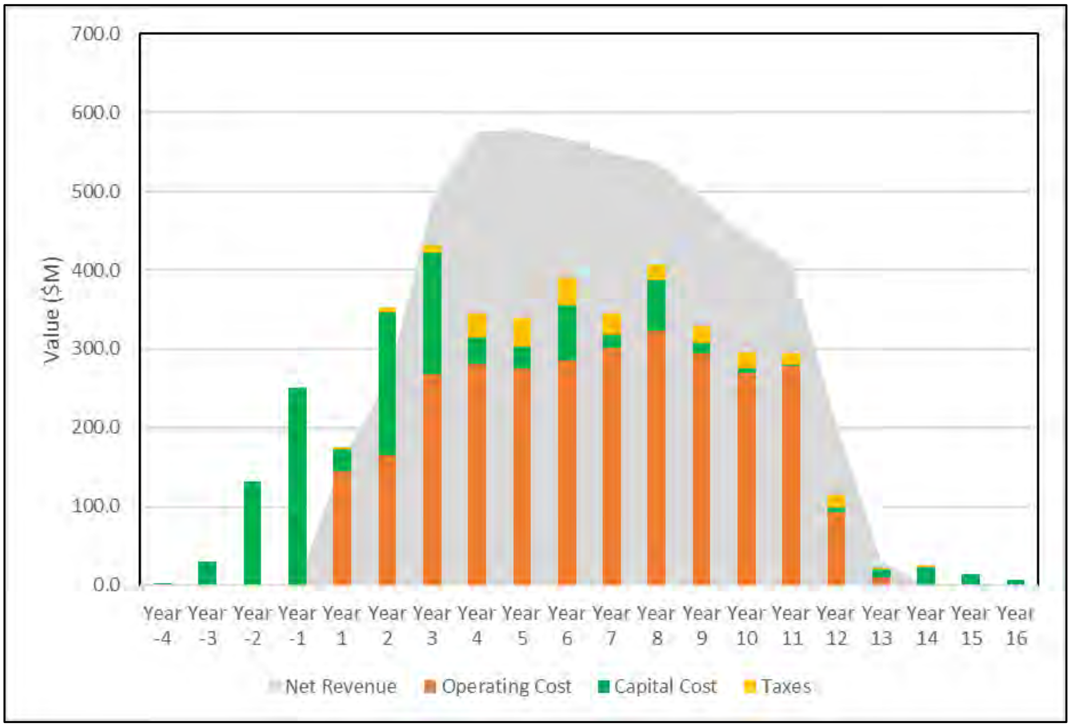
			Total		Year -4	Year -3	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16
Operating Costs																								
				Yerington					70,047	86,710	106,182	112,583	110,449	122,722	127,246	135,063	114,694	101,379	116,858	44,035	-	-	-	-
	Mining			$/t feed																				
	Yerington																							
	Mining	dollars	1,247,966,478		-	-	-	-	70,046,704	86,709,934	106,182,129	112,582,683	110,448,657	122,721,882	127,245,814	135,063,244	114,693,820	101,378,981	116,857,664	44,034,965	-	-	-	-
0.02	Dewatering & Grade Control	dollars	6,487,441		-	-	-	-	596,888	800,000	1,158,204	534,528	471,496	553,156	612,858	762,973	436,269	296,760	257,343	6,964	-	-	-	-
$ 0.89	Total Mine Operating Cost		1,254,453,919	$ 2.14	-	-	-	-	70,643,592	87,509,934	107,340,334	113,117,211	110,920,153	123,275,039	127,858,672	135,826,217	115,130,090	101,675,742	117,115,007	44,041,929	-	-	-	-
				$ 2.79																				
	Processing																							
	Yerington Oxide - ROM	dollars	82,144,709	$ 0.84			-	-	14,885,965	24,084,301	26,042,829	870,840	34,117	212,988	2,851,091	11,716,219	1,446,360	-	-	-	-	-	-	-
	Yerington Purchase Acid Cost	dollars	130,103,400	$ 1.33			-	-	30,757,983	33,481,244	34,547,500	1,540,684	59,988	374,056	5,135,160	21,569,145	2,637,640	-	-	-	-	-	-	-
	MacArthur Oxide - Crushed	dollars	208,205,380	$ 1.02			-	-	-	-	-	25,670,275	25,338,275	23,481,065	25,486,787	18,342,280	25,432,301	25,486,787	25,486,787	13,480,824	-	-	-	-
	MacArthur Oxide Acid Cost	dollars	390,504,517	$ 1.91			-	-	-	-	-	38,959,347	38,219,146	37,492,789	44,678,164	39,741,290	53,316,656	57,620,876	56,734,514	23,741,734	-	-	-	-
	Sulphide (Nuton)	dollars	502,663,443	$ 3.39			-	-	11,661,710	6,273,542	57,562,258	57,562,258	57,562,258	57,562,258	54,176,243	54,176,243	54,176,243	47,404,212	43,500,412	1,045,808	-	-	-	-
	Sulphide (Nuton) - Purchase Acid Cost	dollars	284,697,695	$ 1.92			-	-	5,998,889	3,227,167	31,810,664	32,372,913	32,173,963	32,135,683	31,018,468	31,704,645	31,406,294	27,362,001	24,949,035	537,973	-	-	-	-
$ 1.13	Total Processing Cost	dollars	1,598,319,144	$ 3.55	-	-	-	-	63,304,547	67,066,254	149,963,250	156,976,316	153,387,747	151,258,839	163,345,912	177,249,821	168,415,493	157,873,876	150,670,748	38,806,339	-	-	-	-
	General and Administrative																							
$ 0.10	G&A Cost	dollars	134,037,700	$ 0.30	-	-	-	-	10,364,900	10,364,900	10,364,900	10,364,900	10,364,900	10,364,900	10,364,900	10,364,900	10,364,900	10,364,900	10,364,900	10,011,900	10,011,900	-	-	-
Capital Costs																								
	Mining	dollars	168,177,823		-	-	-	74,504,350	16,386,931	22,859,554	15,684,504	1,723,077	907,692	5,148,104	14,055,854	473,846	11,919,423	4,514,488	-	-	-	-	-	-
	Process	dollars	256,975,172		-	-	11,264,692	61,393,431	-	114,949,103	64,820,365	568,448	568,448	568,448	568,448	568,448	568,448	568,448	568,448	-	-	-	-	-
	Infrastructure	dollars	296,834,214		-	-	68,868,772	49,187,722	2,560,000	3,560,239	37,421,979	22,732,185	19,622,972	47,093,411	-	45,786,935	-	-	-	-	-	-	-	-
	Dewatering	dollars	49,718,377		-	20,456,297	13,198,518	11,309,501	4,754,060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Environmental	dollars	49,517,670		2,000,000	2,000,000	2,000,000	1,000,000	-	-	-	-	-	-	-	-	-	-	-	3,512,242	7,024,483	17,007,068	9,982,585	4,991,292
	Indirects	dollars	86,480,042		400,000	1,204,000	12,863,640	21,018,201	1,075,347	15,292,894	13,304,867	2,427,586	2,075,896	5,034,960	771,006	4,670,599	664,185	293,938	68,214	439,030	878,060	2,125,884	1,247,823	623,912
	Contingency	dollars	158,821,491		500,000	5,614,074	23,269,761	31,378,209	2,647,862	25,022,858	23,103,793	5,882,890	5,064,817	12,144,447	816,482	11,584,115	709,661	339,414	113,690	878,060	1,756,121	4,251,767	2,495,646	1,247,823
	Total Capital	dollars	1,066,524,789	0.76	2,900,000	29,274,372	131,465,383	249,791,415	27,424,199	181,684,648	154,335,507	33,334,186	28,239,825	69,989,369	16,211,790	63,083,943	13,861,716	5,716,288	750,351	4,829,332	9,658,664	23,384,719	13,726,054	6,863,027

Figure 22-1: Yerington Copper Project PEA Cashflow – Post Tax



Source: AGP 2023

Figure 22-2: Net Revenue versus Operating Cost, Capital Cost and Taxes



Source: AGP 2023

22.11.1 Sensitivity Analysis

The following tables illustrate the Base Case Project economics and the sensitivity of the Project to changes in the base case copper prices, acid price, operating costs, and capital costs. The Yerington Copper Project is most sensitive to copper prices, followed by operating costs, capital costs and acid price. The sensitivities are presented in Table 22-7 for NPV and Table 22-8 for IRR and are also shown graphically in Figure 22-3 for the NPV.

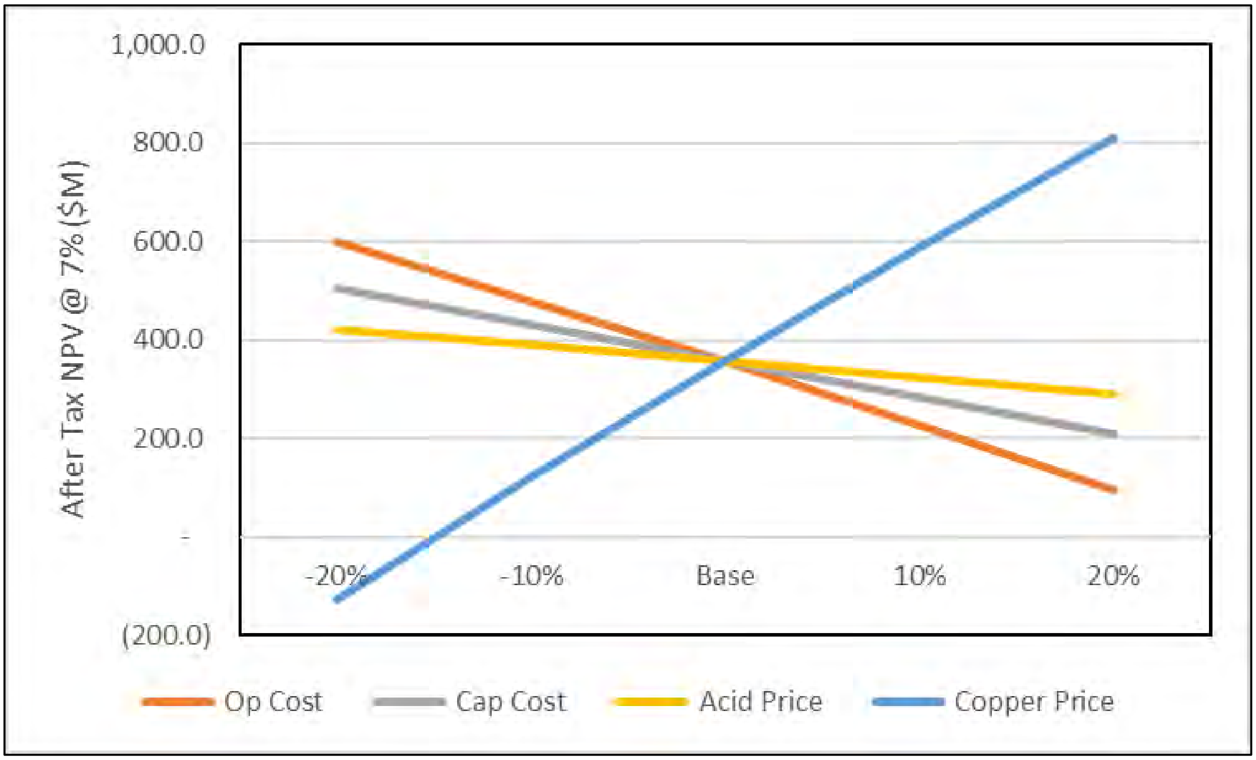
Table 22-7: After Tax Sensitivity - NPV

Variance	Operating Cost NPV @7% $M	Capital Cost NPV @7% $M	Acid Price		Copper Price	
			($US/tonne)	NPV @7% $M	$/lb.	NPV @7% $M
-20 %	600.4	504.9	128	420.9	$3.08	(129.4)
-10 %	479.1	430.6	144	389.3	$3.47	122.2
Base	**356.3**	**356.3**	**160**	**356.3**	**$3.85**	**356.3**
10 %	227.3	282.0	176	322.6	$4.24	588.5
20%	93.3	207.7	192	288.5	$4.62	811.6

Table 22-8: After Tax Sensitivity – IRR%

Variance	Operating Cost IRR%	Capital Cost IRR%	Acid Price		Copper Price	
			($US/tonne)	IRR%	$/lb.	IRR%
-20 %	23.3	23.7	128	19.0	$3.08	2.1
-10 %	20.4	20.4	144	18.2	$3.47	11.0
Base	**17.4**	**17.4**	**160**	**17.4**	**$3.85**	**17.4**
10 %	14.0	14.8	176	16.6	$4.24	22.9
20%	10.1	12.5	192	15.7	$4.62	27.6

Figure 22-3: Sensitivity Analysis – NPV @ 7%



Source: AGP 2023

23 ADJACENT PROPERTIES

23.1 Mason Project

The Mason Project, which is held by Hudbay Minerals Inc. (Hudbay) is located approximately 3 miles (5 km) west of the Yerington pit. The Mason Project is a typical copper-molybdenum porphyry system hosted within a Jurassic quartz monzonite. The mineralization is described as being closely associated with the quartz monzonite porphyry dikes. The QP was not able to independently verify the information Hudbay (2023) provided. The mineralization for the Mason Project is not necessarily indicative of the mineralization present at the Yerington Copper Project.

The current mineral resource estimate for the Mason Project is summarized in Table 23-1.

Table 23-1: Mason Project Mineral Resource (Hudbay, 2023)

Category	Tonnes (000s)	Cu (%)	Mo (g/t)	Au (g/t)	Ag (g/t)
Measured	1,417,000	0.29	59	0.031	0.66
Indicated	801,000	0.30	80	0.025	0.57
Measured and Indicated	2,219,000	0.29	67	0.029	0.63
Inferred	237,000	0.24	78	0.033	0.73

Note: Totals may not add up correctly due to rounding.

1 Mineral resource estimates that are not mineral reserves do not have demonstrated economic viability.

2 Mineral resource estimates do not include factors for mining recovery or dilution.

3 Metal prices of $3.10 per pound copper, $11.00 per pound molybdenum, $1,500 per ounce gold, and $18.00 per ounce silver were used to estimate mineral resources.

4 Mineral resources are estimated using a minimum NSR cut-off of $6.25 per tonne.

5 Mineral resources are based on resource pit designs containing measured, indicated, and inferred mineral resources.

23.2 Pumpkin Hollow Project

The Pumpkin Hollow Project, which is held by Nevada Copper Inc. (Nevada Copper), is located about 10 miles southeast of the Yerington pit. The Pumpkin Hollow Project is dominantly a copper and magnetite skarn, forming from Jurassic quartz monzonite and quartz monzonite porphyries intruding the limestones of the Triassic Mason Valley Formation and calcareous argillites and siliceous shales, siltstones, and limestones of the Triassic Gardnerville Formation. The QP was not able to independently verify the information Nevada Copper (2019) provided. The mineralization for the Pumpkin Hollow Project is not necessarily indicative of the mineralization present at the Yerington Copper Project.

The current mineral resource estimate for the Pumpkin Hollow Project is summarized in Table 23-2 and Table 23-3 for underground and open pit mineral resources respectively.

Table 23-2: Pumpkin Hollow Project, Underground Mineral Resource (2019)

Category	Cut-off Grade Cu (%)	Tons (millions)	Cu (%)	Au (oz/t)	Ag (oz/t)
Measured	0.75	12.1	1.60	0.006	0.127
Indicated	0.75	41.9	1.33	0.005	0.112
Measured and Indicated	0.75	54.1	1.39	0.005	0.116
Inferred	0.75	29.2	1.09	0.003	0.064

Notes: Totals may not add up correctly due to rounding.

1. Includes East and E2 deposits.
2. Measured and Indicated Resources are stated as inclusive of reserves.
3. Resources are constrained by a 0.5% Cu mineralized interpretation.
4. Effective date for the Underground Mineral Resource is April 15, 2015.
5. Mineral resource estimates that are not mineral reserves do not have demonstrated economic viability.

Table 23-3: Pumpkin Hollow Project, Open Pit Mineral Resource (2019)

Category	Cut-off Grade Cu (%)	Tons (millions)	Cu (%)	Au (oz/t)	Ag (oz/t)
Measured	0.12	134.0	0.561	0.002	0.064
Indicated	0.12	419.0	0.417	0.001	0.051
Measured and Indicated	0.12	553.0	0.452	0.002	0.054
Inferred	0.12	28.0	0.358	0.001	0.040

Notes: Totals may not add up correctly due to rounding.

1. Cut-off grades are based on a price of US3.75/lb Cu, US$1,343/oz Au, and US$19.86/oz Ag.
2. Metallurgical recoveries of 90% were used for the North Pit and 88% for the South Pit.
3. Measured and Indicated Resources are stated as inclusive of reserves.
4. Effective date for the Open Pit Mineral Resource is January 21, 2019.
5. Mineral resource estimates that are not mineral reserves do not have demonstrated economic viability.

24 OTHER RELEVANT DATA AND INFORMATION

This section discusses additional environmental and stakeholder engagement activities related to the Yerington Copper Project. These topics are often referred to using a variety of terms such as ESG, Sustainability, Social Responsibility, License to Operate and other similar terms. Simply put, a commitment to ESG means that the project development will take into account the environmental and social context in which it operates, striving to minimize its footprint and amplify the opportunities to achieve positive outcomes for the communities in the vicinity of the Project. This has been a central consideration for Lion CG since the Project was envisioned, and it remains the foundation of the Company's operating principles. The current partnership with Nuton as a technology provider and an investor further supports the Project's ambition to be a force for good in the Mason Valley area.

24.1 Environmental Footprint and Benchmarking

Copper is a critical mineral as the world transitions to a low-carbon future to address global climate change and moves toward electrification and renewable energy sources. The Project aspires to produce Copper to support this global transition, while creatively utilizing the latest technologies to minimize its own environmental footprint.

Guiding principles for setting SPS's environmental stewardship goals were developed to significantly reduce the environmental footprint of the mining operations, including lowering energy and water consumption, minimizing operational land disturbed, addressing greenhouse gas emissions, and reducing waste. SPS has committed to achieving these goals by applying environmentally responsible technologies and processes during the entire lifecycle of the proposed mine and through mine closure. The Project is also seeking to have long-term positive impacts on the greater Mason Valley area and the people who live in nearby communities, while contributing positively to the local economy. Details regarding how to achieve these goals will be refined during the next stage of Project development.

The environmental footprint of the Yerington Copper Project is categorized into five areas: Energy consumption, Water consumption, Land acreage disturbed, Greenhouse Gas emissions and Waste Recovery and Reduction.

24.2 Environmental Optimizations - Nuton Technology

One of the key considerations of any mining project is the selection of an appropriate processing technology for the feed material under consideration. This decision is informed by the characteristics of the resource, the economics of the project and increasingly by the environmental impacts of the technology in question. In this case, the Yerington Copper Project consists of oxide, transition, and primary sulfide copper resources. Primary sulfide copper resources are traditionally processed through a concentrator, smelter, and refinery in order to produce copper cathode. This is a water, land, and power intensive process, often involving complex supply-chain logistics across borders and large capital expense. At the Project, processing of the primary sulfide resources takes advantage of Nuton, a proprietary catalytic bio-heap leaching technology. Nuton is able to process sulfide copper ores with market-leading copper recoveries, unlocking primary copper resources more economically, with lower environmental impact and with the benefit of producing copper cathode on-site that will be available to domestic consumers. Application of the Nuton technology also eliminates the need to permit, build and manage a tailing storage facility, and eliminates risks associated with it.

Given the host of benefits of Nuton over the traditional route to process sulfides, this is the Project's preferred path and informs the base case for this PEA. Development work is ongoing to refine the process design and reduce the uncertainty associated with the Nuton hydrometallurgical process. Nuton has successfully completed extensive laboratory-level and pilot scale testing and has developed proprietary modeling techniques to simulate results suitable for a PEA. Commercial-scale applications of the Nuton technologies are not yet operating at the time of this report, and therefore, is considered a risk. A significant testing program for Nuton will be required for the PFS to validate the estimates provided in this PEA.

24.3 Environmental Optimization Trade-offs

In addition to the environmental benefits of utilizing the Nuton technology to process the sulfide resource, the Project team carried out several engineering trade-off studies to evaluate opportunities to amplify the positive social and environmental impacts of the Project. These trade-off studies reflect the Project's commitment to choose long-term value over near-term financial metrics. The following trade-off studies were performed:

- Co-locating the MacArthur oxide HLF at the Yerington Property to reduce greenfield land disturbance.
- Crushing and conveying MacArthur oxide material via conveyor to the HLF at the Yerington Property to reduce haulage distance, diesel consumption and carbon dioxide (CO_2) emissions compared to truck haulage.
- Adding a rail spur from the Union Pacific cross-country line at Wabuska to the Yerington Property to ease highway traffic, reduce dust and noise pollution and lower CO_2 emissions.
- Eliminating the acid plant and replacing it with purchased acid railed directly to the Yerington Property.
- Reprocessing sub-grade 'waste rock' material and tailings from legacy Anaconda mining operations to recover otherwise 'stranded' copper, reduce waste, improve containment, and free up brownfield real estate for mine infrastructure.
- Adopting electric shovels and drills to reduce reliance on diesel equipment.
- Sourcing renewable diesel to power trucks instead of regular diesel to reduce CO_2 emissions in the near-term, while fully electrified haulage solutions reach technical and commercial maturity. Future considerations will be given to the use of electric- or Hydrogen-powered trucks to further reduce emissions.
- Dewatering of the Pit Lake and discharging quality water back to the watershed to recharge the Mason Valley ground water aquifer systems.

Below, the potential environmental benefits of selecting Nuton as a processing technology are mapped into areas of impact for the Project.

Energy Consumption

The power needs of the Project are greatly reduced by utilizing the Nuton leach technology and eliminating the need for a mill/concentrator and smelter/refinery. In addition to the reduced power requirements due to Nuton, SPS aims to cover 100% of its electricity needs from renewable sources. Several offsite renewable energy projects are in operation or under development and expected to be online when the Mine is operational. These renewable energy projects include the Wabuska Geothermal plant in operation at the northern end of Mason Valley, a 25 MW manure digester project under development located within 2 miles of MacArthur, and five (5) solar projects (approximately 2,000 MW) in various stages of permitting and development. In addition, a regional transmission line, "Greenlink Nevada", is under construction making these solar projects viable with connection to Mason Valley (https://www.nvenergy.com/cleanenergy/greenlink).

Carbon Footprint

The Nuton-enhanced Project will produce copper with a lower carbon intensity compared to a traditional mill/concentrator/smelter/refinery. Furthermore, by producing onsite LME Grade A copper cathode, Nuton eliminates the carbon emissions associated with the transport of copper concentrate to an overseas smelter and refinery. The baseline Project includes use of electric drills and shovels instead of diesel-powered equipment. Furthermore, the Project is actively evaluating the possibility to replace fossil fuel diesel with a lower-carbon renewable diesel alternative, and also to electrify haulage by adopting battery electric trucks in the future. These electrification efforts, combined with renewable energy sourcing could significantly reduce the Scope 1 and 2 carbon footprints over the lifecycle of the Project. In addition to the emissions generated by power and diesel, the Project will generate carbon emissions in the heap, resulting from the reaction of the carbonates in the feed material to the application of sulfuric acid. The Project will measure and explore potential opportunities to address these emissions. Considering the reduced power requirements due to Nuton, the ambition to electrify as much as possible our mining equipment, and the availability of local renewable energy sources to cover our needs, SPS has the goal to become a net-zero copper operation. A more detailed plan and timeline to becoming net zero will be shared in the next stage of the Project.

Carbon Footprint

Water is a critical natural resource in Mason Valley that is required to support the local agriculture, mining, municipal, commercial and conservation needs in Mason Valley (Basin 108). Ground water permits in Mason Valley are over-appropriated and could be subject to curtailment in the future. Therefore, water conservation is a key metric for the success of the Project. The water consumption per unit of copper required by Nuton technologies is substantially lower compared to a traditional process, which locks water in the copper concentrate that gets shipped offsite to a smelter and might require water to operate a wet tailings facility. In addition, the use of drip emitters and possibly temporary modular leach pad covers will reduce evaporation on the leach pad. The temporary covers can also reduce heat loss as well as controlling evaporation. Lower water consumption is not only beneficial for the environment, but also reduces operational risks in a water constrained environment like the Mason Valley.

Dewatering of the Pit Lake will provide important beneficial uses of water in Mason Valley. The Pit Lake holds approximately 43,000 ac-ft of clean water that will require pumping to empty the pit. This water is planned to be removed over a two-year period with the water used to offset current irrigation needs and to recharge the ground water aquifer. Based on over three decades of testing, the water quality in the Pit Lake has improved over time, currently at or near drinking water standards and is suitable for multiple beneficial uses. Water treatment will be performed during pit dewatering if/as needed to meet the regulatory requirements for discharge water quality standards.

Maintenance dewatering to keep the pit dry during mining will be used for mining and mineral processing (e.g., HLFs, dust control, SXEW, etc.). Estimates of maintenance dewatering are based on detailed pumping records from Anaconda and are estimated to be in the range of 1,300 to 2,800 gpm. This will be further evaluated and refined during the next stage of the Project.

Following mining of the Yerington pit, consideration is being given to re-purposing the pit as a reservoir for flood mitigation in wet years and drought mitigation in dry years. This post-mining use of the pit has support from multiple local stakeholders and will be further evaluated during the next stage of Project development.

Land Disturbance

From the inception of its efforts at Yerington, SPS believed that the best way to clean up the former Yerington Mine was to start a new mine. One of the benefits of restarting mining at Yerington is that it was formerly an active mine site located on approximately 3,500 ac. of previously disturbed land. By utilizing the central brownfield real estate at the Yerington Property for new mine infrastructure, the disturbance of new land is significantly reduced. A study funded by EPA regarding the Yerington Property concluded “Given these [BLM and Quaterra] primary landowner interests, mining is the most likely anticipated future land use for the Site” (E2, April 2010).

The application of Nuton technology means there is no need for land use to be allocated to a concentrator or to a tailings dam, reducing the land footprint required per unit of copper production. The proposed leach pad is located on top of the existing sulfide tailings, eliminating the need for approximately 600 acres of greenfield disturbance. Additional geotechnical testing and analyses are planned for the next stage of the Project to verify the suitability of constructing the leach pad on top of existing tailings.

Reprocessing of legacy mine residuals will make available additional previously disturbed real estate for new mine infrastructure. The new mine will have an adequate mine closure plan and a reclamation bond in place prior to mining which enhances ongoing remediation efforts and assures reclamation of the property to the latest environmental and safety standards following completion of mining.

24.3.1 Waste Recovery and Reduction

In addition to the re-development of the brownfield real estate discussed above, reprocessing legacy mine waste enhances remediation and frees up previously disturbed land for mine infrastructure. The Nuton-enhanced mine plan unlocks the value of reprocessing W-3 waste rock and the VLTs to recover copper which will occur while the pit is dewatered. When dewatering is complete, the pit will be expanded to extract the oxide and sulfide copper resources present. Nuton also optimizes the use of residue streams from one process as a valuable input for another process. The low pH raffinate solution generated from the Nuton leach process of primary sulfide material also has potential use to irrigate oxide material from the Macarthur pit, enabling greater resource utilization and reducing operating unit costs.

Table 24-1 summarizes the environmental optimizations derived from the adoption of Nuton and the potential implementation of the trade-off studies.

Table 24-1: Environmental optimizations performed to Lower the Project Footprint

Project Trade-off Study	Lower Environmental Footprint				
	Energy Consumption	Water Consumption	Land Acreage Disturbed	Greenhouse Gas Emissions	Wast Reduction & Recovery
Nuton Technology	√	√	√	√	√
Co-locate from MacArthur to Yerington			√	√	
Conveyor from MacArthur to Yerington				√	
Rail spur from Wabuska to Mine				√	
Eliminate acid plant		√	√	√	
Reprocess subgrade waste rock and tailings			√		√
Electric shovel/drills				√	
Yerington pit dewatering for aquifer recharge		√			

24.4 Stakeholder Engagement

SPS has a Stakeholder Engagement Plan (SEP) that identifies stakeholders that may have an interest in or will be affected by the Project. The SEP is used to guide SPS's engagement efforts with the local Communities, Lyon County, Tribes, Regulatory Agencies and Elected Officials. Stakeholder engagement will continue to be an important element of the Company's ESG program going forward. Our goal is to advance this important Project with full community and stakeholder input and develop the Project with the end in mind.

SPS is committed to transparent and ongoing communication with all stakeholders that will be affected by the Yerington Copper Project. Telling a cohesive story about the Project is essential. SPS will continue to provide details of the Project as they are developed, so that key stakeholders can formulate fact-based perceptions about the Project. The following key messages are guiding ongoing public communications and stakeholder outreach regarding the Project.

24.4.1 Reclaiming 100 Years of Mining History

The long history of mining at the Yerington Copper Project location is well-known. The boom times of the active Anaconda mine brought jobs and growth to the region but left legacy contamination and ongoing challenges for the communities near the mine. SPS is committed to operate the best of modern mining technologies to extract the unrealized value of the mine and, in doing so, fully reclaim the mine following the completion of operations.

24.4.2 Delivering a World-Class Mining Operation

SPS's goal is to deliver a world-class mining operation that leverages the most advanced modern technologies in the world and is designed with the highest environmental standards. By partnering with Rio Tinto, a global company with some of the most advanced mining technologies in the world, as well as other experts and consultants, SPS is designing this Project with the end in mind. Emphasis on a robust closure plan and an adequately funded reclamation bond will ensure safe closure of the mine at the end of operations. By utilizing technology that did not exist when the mine was previously active, SPS will be able to enhance current remediation efforts.

24.4.3 Local Prosperity through Local Control

SPS believes this Project has the potential to deliver economic benefits for the people of Yerington and northern Nevada in the form direct and indirect employment opportunities, wider economic benefits for the region, and support for local aquifers and water resources. While there have been previous attempts to restart mining operations at this mine, SPS believes that the changes in regulatory oversight of the Project and advancements in mining technology and the global market will result in a viable, thriving Project that will generate decades of domestic copper cathode production in Yerington, Nevada.

25 INTERPRETATION AND CONCLUSIONS

25.1 Yerington Copper Project

25.1.1 Yerington Property Mineral Resource

AGP updated the Yerington Copper Project Mineral Resource estimate consisting of pit constrained Measured, Indicated, and Inferred Resources. This Yerington Copper Project Mineral Resource estimate used validated historic drill hole data generated by Anaconda and current drilling results by SPS in 2011, 2017 and 2022.

Historic and current drilling indicate that limits to the mineralization at the Yerington Mine have not yet been found, both horizontally and vertically, and additional exploration and in-fill drilling are warranted and are expected to both expand and upgrade the current NI 43-101 compliant copper resources.

Historic resources in the residuals which are part of the Yerington Copper Project reflect a potential to be evaluated in order to bring those resources into NI 43-101 compliant standards. Mineral Resources were reported for two residuals: W-3 Stockpile and Vat Leach Tailings.

The updated Mineral Resources for the Yerington Deposit are: Measured Resources of 62.9 MTons at 0.30 TCu%; Indicated Resources of 94.7 MTons at 0.27 TCu%; and Inferred Resources of 113.2 MTons at 0.22 TCu%. The cut-off grade used for Measured, Indicated and Inferred Oxide Resources is 0.038% copper. The Sulfide Resource cut-off grade for Measured, Indicated, and Inferred material is 0.126% copper. The effective date of the Yerington Deposit Mineral Resources is May 1, 2023.

The W-3 Stockpile Mineral Resource amenable to open pit extraction was reported at 0.04 % TCu cut-off grade. The Inferred W-3 Stockpile Mineral Resource is 14.1 million tons at 0.11 % TCu. The effective date of the W-3 Stockpile Mineral Resource estimate is May 1, 2023.

The VLT Mineral Resource amenable to open pit extraction was reported at 0.04 % TCu cut-off grade. The Inferred VLT Mineral Resource is 33.2 million tons at 0.09 % TCu. The effective date of the VLT Mineral Resource estimate is July 31, 2023.

25.1.2 MacArthur Property

It is the opinion of IMC (2022) that the Mineral Resource presented in this report has been completed in accordance with all requirements of NI 43-101 and has the potential to be expanded with additional drilling. The proposed metallurgical program is appropriate for the continued understanding of copper recovery and acid consumption for a heap leach operation. The environmental program as proposed and delineated should be implemented as well.

The Mineral Resource is updated with the drilling and geological interpretations current through the end of 2021. The reported Mineral Resource is pit shell constrained which differs from previous reported mineral resources which were model contained with no economic constraints except total copper cut-off grades. A pit-constrained resource has a higher probability of converting a larger percentage of the mineral resource to a future mineral reserve when compared to an unconstrained mineral resource (IMC, 2022).

The cut-off grades are 0.06% TCu for all material types in the MacArthur pit area and North Ridge, and the Leach Cap, Oxide and Mixed zones in Gallagher This cut-off is at or above an internal cut-off by material type (due to variable recovery) and was selected to have a consistent cut-off for all material types. The cut-off for the Sulfide zone in Gallagher is 0.08% TCu due to the higher acid consumption and low recovery.

The Mineral Resources for the MacArthur Deposit are: Measured Resources of 116.7 MTons at 0.18 TCu%; Indicated Resources of 183.7 MTons at 0.158 TCu%; and Inferred Resources of 156.5 MTons at 0.151 TCu%. The effective date of the Mineral Resource is February 25, 2022.

25.2 Metallurgy and Processing

25.2.1 Yerington Deposits

The Yerington and MacArthur oxide materials are amenable to standard heap leaching processing with nominal copper recoveries at 70% and 75% for Yerington and MacArthur respectively. Nominal net acid consumptions are projected to be 28.6 lb/ton and 32 lb/ton net acid consumption for Yerington and MacArthur oxides respectively.

With the addition of Nuton to the processing scheme, not only is the heap leach recoveries of the primary sulfide mineralization improved, sub-25% to over 75%, with acid consumption of 28.6/lb ton. Several synergies exist with improves the metallurgical performance of the oxide material while lowering the operating costs of both process schemes. Prime examples are neutralization of Nuton excess acid in the oxide HLF and Nuton generation of ferric iron for improved leaching of secondary copper minerals in the oxide feed.

At the time of writing, Nuton technology test work is still underway, but the preliminary results are very encouraging. The Nuton technology is a proprietary package of primary copper heap leaching technologies being developed to improve the overall environmental, social and governance performance of the copper producing industry.

Baseline copper recoveries using non-optimized Nuton parameters have shown an improvement in copper recoveries approaching 80 % while minimizing acid consumption. The current phase of Nuton testing and optimization is expected to be complete in Q1 2024.

25.2.2 MacArthur Property

During the review of historic and recent metallurgical testwork for the MacArthur Deposit, issues were identified that require additional testwork to improve understanding of copper recovery and sulfuric acid consumption and what impact they may have on the Project. During 2021, 13 holes were drilled to collect fresh samples for additional metallurgical testwork including bottle roll tests and several columns to further define heap leach recovery.

Review of the column test sieve analyses indicate that finer crushing may be of benefit at MacArthur. Additional metallurgical testing is required to verify this observation and to balance the capital and operating costs versus the potential recovery improvements.

25.2.3 SXEW Processing

The Solvent Extraction and Electrowinning (SXEW) facilities will be located proximal to the Nuton HLF. The technology is industrially proven technology resulting in the production of LME Grade A copper cathode using industry accepted reagents. The engineering and design of the SXEW is modular in nature, which will allow for shorter construction time and the ability to expand as needed during ramp up. The initial SXEW production capacity is rated and 70Mlb per annum of copper cathode. This will increase to 140 Mlb per annum with additional SX and EW modules. The Cathode stripping equipment if highly automated minimizing labor costs.

25.3 Open Pit Mining

The Mineral Resources for the Project include the Yerington deposit, W-3 stockpile, VLT stockpile and the MacArthur deposits (MacArthur, Gallagher, and MacArthur North). Open pit mining offers the most reasonable approach for development of the deposits based on the size of the resource, tenor of the grade, grade distribution and proximity to topography for the deposits.

The mine schedule for open pit mining totals 450.4 Mt of heap leach feed grading 0.21% copper over a processing life of slightly more than 12 years. Open pit waste tonnages from the various areas total 136.8 Mt and will be placed into waste storage areas adjacent to the open pits. The overall open pit strip ratio is 0.30:1 (waste: feed).

Two HLFs will be used to provide copper solution for the SXEW facility. One process stream will utilize the Nuton process for the leaching of sulfide feed from the Yerington pit. The other process stream will employ conventional oxide copper leaching technology with a combination of run of mine (ROM) material and sized material. The Nuton facility will have a peak feed rate of 17 Mtpa through a crushing plant. The Yerington pit is the only supply of sulfide material for the PEA.

The oxide material from MacArthur will be sized at site then conveyed, agglomerated, and stacked at a facility near the Yerington residual piles from past mining. Peak capacity of the MacArthur sizing facility will be 25 Mtpa. Oxide materials from the Yerington pit, W-3 and VLT stockpiles will be placed in the same HLF as the MacArthur oxide material.

The current mine plan includes minimal prestripping as the bottom of the existing pit still contains material suitable for placement on a HLF with conventional leaching and use of the Nuton process for the sulfide materials.

25.4 Infrastructure and Site Layout

Key infrastructure components include HLFs for both sulfide and oxide material, HLF ponds, WRSFs, a system for sizing and transporting oxide feed from the MacArthur pit to the oxide HLF at the Yerington Property, process plant, and rail spur from west of Wabuska. The oxide feed from MacArthur and Yerington will be segregated onto an oxide only HLF, located at the Yerington Property. Yerington sulfide feed will be handled separately to enable the focused leaching of sulfides using the Nuton process.

To minimize new disturbance areas, efforts have been made to place new infrastructure on existing disturbed areas resulting from past mining activities.

Existing site roads at the Yerington and MacArthur Properties will be improved and used as both haul roads and as light vehicle access roads. Separate roadways will be designated for light vehicle traffic and heavy haulage equipment as a safety precaution.

The truck maintenance shop will be situated at the Yerington Property which serves as the focal point for initial mining activities and will continue to play a central role throughout the Project's lifespan. This facility will be designed to accommodate the proposed 100-ton haulage trucks and the necessary support equipment. To enhance convenience and efficiency, a smaller satellite shop will be established at MacArthur. This satellite shop will facilitate minor repairs in close proximity to the mine, reducing the need for travel to the main shop and providing shelter from adverse weather conditions.

Grid power is readily available for the Project due to an existing line to the Yerington Property and the grid line passing within 1 mile to the east of MacArthur. The existing 69kV power line on-site will undergo necessary updates and extensions to connect to the process plant and the Yerington Mine. Subsequent expansion plans for MacArthur are included in Year 3, timed ahead of the commencement of mining and crushing/conveying activities.

An analytical laboratory will be constructed at the Yerington Property, serving as an essential support hub for the mining and processing activities of the operation.

A 3.5-mile-long overland conveyor is planned to transport material from MacArthur to the oxide HLF at the Yerington Property. The designated corridor for this conveyor aligns with the existing mine access road.

The Pit Lake, estimated to hold approximately 43,000 acre-feet of water needs to be fully drained before resuming open pit mining operations. The existing Pit Lake water will be extracted with pumping and four shallow dewatering wells will be strategically placed along the pit perimeter to assist in draining the Pit Lake and to prevent potential geotechnical instability during the rapid Pit Lake drawdown.

Treatment of Pit Lake water has been conservatively assumed for the Project to address any constituents of potential concern (COPCs) that might exceed discharge standards. Potential methods for discharge include direct release into the Walker River, discharge to the Walker River Irrigation District (WRID), or utilization of infiltration methods such as RIBs.

The PEA outlines the construction of separate HLFs for both oxide and sulfide feeds. The sulfide HLF, expected to receive crushed and agglomerated sulfide feed solely from the Yerington pit, will be located at the existing sulfide tailings facility at the Yerington Property. Detailed geotechnical investigations and evaluations will be necessary to determine whether the existing tailings can be appropriately graded or modified to create a suitable surface for the sulfide HLF.

The oxide HLF will be located at the existing Yerington VLT pile and will receive ROM oxide feed from the Yerington pit, W-3 stockpile, and VLTs. MacArthur Pits' oxide feed will be sized and conveyed to the oxide HLF situated at the Yerington VLT pile. Careful mine planning will ensure that the areas designated for re-processing within the VLT are mined out before they are required for pad expansions. The oxide HLF is strategically located within the footprint of an existing reclaimed HLF at the Yerington Property.

Approximately 78 million tons of waste rock material originating from the Yerington pit will be hauled to the existing Yerington WRSF, situated south of the Yerington pit. The northwestern portion of the current Yerington WRSF area contains alluvial deposits that hold potential as a future source for closure cover material, post-mining. Throughout active mining, concerted efforts will be made to reconfigure the legacy Yerington WRSF area, thereby facilitating a progressive reclamation process.

An estimated 59 million tons of waste rock material from the MacArthur Pits will be hauled to two adjacent WRSFs. These facilities will be contoured with 3H:1V side slopes during waste rock placement to expedite progressive reclamation.

Facility siting decisions were made without considering BLM-controlled or private land, with the assumption that the pending sale of BLM land at the Yerington Property would be completed before the commencement of permitting and construction activities.

25.5 Permitting

Permitting the Yerington Copper Project, inclusive of the Yerington Property and MacArthur Property, will require approvals and authorizations from various Federal, State and Local agencies. SPS is developing a permitting strategy to identify and address the range of environmental and social requirements and standards applicable to the Project.

SPS intends to ensure that characterization of environmental resources at the Yerington and MacArthur Properties is complete and adequate to support development of a Mine Plan of Operations and Reclamation Plan Permit Application, support analyses and modeling studies to complete impact assessments, and inform and satisfy all permitting requirements.

The Yerington Property has been thoroughly characterized through previous permitting efforts, environmental studies, and analyses, and as part of the regulatory compliance process during previous mining operations. SPS is currently developing a regional numerical groundwater model, including a Pit Lake fate and transport model, to assess potential impacts to the groundwater system from dewatering the existing Pit Lake and expanding and deepening the Yerington pit.

The Yerington Property is undergoing active remediation of the former Anaconda and Arimetco mining operations (brownfield site). Prior to acquiring the Yerington Property in 2011, SPS performed due diligence following guidelines of a BFPP defense to shield SPS from legacy liabilities. In 2009, the State of Nevada, EPA and BLM issued letters outlining activities SPS needed to take to achieve and maintain BFPP status under State and Federal law. SPS continues to perform the activities to maintain the BFPP status.

SPS also entered into a Master Agreement with ARC effective June 1, 2015, that outlines the Parties' responsibilities concerning cooperation, access, property rights, liabilities, federal land acquisition, preservation of SPS's property and mineral rights and coordination of the use of the brownfield site by ARC to complete remedial actions and by SPS for exploration, mining, and mineral processing activities. These agreements reduce SPS's risks regarding environmental liabilities from past exploration, mining and mineral processing which took place at the Yerington brownfield site prior to SPS's acquisition in 2011. These agreements allow SPS to proceed with mine development and operation in parallel with ARC's ongoing remediation activities. Areas of the Yerington Property that are included in the proposed Yerington Copper Project are not envisioned to require remediation. Rather, closure of these areas would be covered in the new reclamation bond. Synchronization of remediation with mining will be ongoing and refined during the next stage of mine development.

SPS has an active ESG program and is committed to comply with all regulations and the highest standards of safety, environmental, financial, and business ethics. These topics will remain the foundation of the

Company's operating principles through all phases of the Project. SPS is committed to its license to operate in the communities that may be affected by the Yerington Copper Project. The Company recognizes that the support of stakeholders is important to the success of the Project.

SPS intends to reclaim disturbed areas resulting from activities associated with the Project in accordance with BLM Surface Management and the State of Nevada NDEP regulations. The State of Nevada requires development of a Reclamation Plan for any new mining project and for expansions of existing operations meeting requirements to return mined lands to a productive post-mining land use.

25.6 Capital and Operating Costs

Detailed capital and operating cost estimates were developed for the PEA study and include consideration for all direct and indirect costs associated with the mine development and production. This includes the initial capital requirements for the mine, process facility, HLFs, permitting and dewatering of the existing Yerington pit.

Life of mine the operating cost per ton of process feed material is $6.63/ton. On a per pound of copper payable the operating cost is $2.14/lb copper payable.

Capital costs over total $1,067 million for the Project with $413 million in initial capital. The capital cost is $0.76/lb copper payable.

Costs for closure and reclamation have also been included.

25.7 Economic Analysis

The PEA is preliminary in nature. It includes inferred mineral resources considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty the PEA will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, socio-political, marketing, or other relevant issues.

The life of mine capital cost for the Project is estimated at $1,067 million, with an initial capital expenditure of $413 million. Sustaining capital, which includes the opening of the MacArthur pits is $653 million.

At a copper price of $3.85/lb, the Project is estimated to have an after-tax IRR of 17.4% and a pay-back period of 5.0 years after start of production. At a discount rate of 7%, the after tax NPV is estimated at $356 million.

The cash flow model has been based on a four-year Project development period, and that copper production commences in month one of Year 1.

Provision has been made for Lyon County, Nevada, and Federal taxation. Taxes total $243 million over the life of mine. Royalties vary between 1% and 2% with a buydown provision from 2% to 1% for MacArthur and a payment cap for the Yerington royalty of $7.5 million. Total royalties paid over the Project life is $28 million.

The cashflow model assumes full equity financing.

The Project is most sensitive to changes in copper price, and acid price.

26 RECOMMENDATIONS

The QPs recommend that Lion Copper and Gold Corp. advance to a Prefeasibility level of study as an integral component of the Yerington Copper Project's development strategy. In this regard, the QPs have presented recommendations and accompanying budgetary allocations to ensure the availability of adequate information for the Project's ongoing progression.

While certain costs associated with the PFS are incorporated within the study's framework, additional expenses related to supporting studies or fieldwork are itemized in the relevant sections. For detailed cost estimates categorized by area, please refer to Table 26-1.

Table 26-1: Recommended Prefeasibility Study Budgets

Area of Study	Approximate Cost ($USD)
Geology	$2,673,000
Geotechnical	$1,150,000
Mining	$210,000
Metallurgy	$500,000
Infrastructure	$820,000
Environmental	$1,325,000
Prefeasibility Study	$795,000
TOTAL	**$7,473,000**

26.1 Geology

In order to further advance the resource development for the Project, the following recommendations are made:

- Conduct core drilling and associated testing beneath the Yerington pit, with the dual objective of elevating the classification of Inferred resources to Measured and Indicated and exploring the underexplored deeper extensions of mineralization below the 3,000-foot level.
- Execute core and reverse circulation (RC) drilling alongside associated testing to enhance the classification of MacArthur's Inferred resources to Measured and Indicated, while also investigating the presence of additional deeper sulfide mineralization.
- Implement a sonic or hollow stem auger (HSA) drilling program for the VLT and W-3 stockpile, aimed at upgrading the classification of Inferred resources to Measured and Indicated. Similarly, HSA or sonic drilling should be carried out on the south waste dump and S-23 stockpile to explore the potential for additional resources.

The cost of geology fieldwork is estimated to be $2.673 million during the course of the PFS.

26.2 Geotechnical

Geotechnical fieldwork and studies are required across the Yerington Copper Project to characterize subsurface conditions, provide parameters for geotechnical evaluations and analyses, and inform geology exploration. The following investigations are recommended to progress the various Project components to a PFS level:

- Pit Drilling: To inform pit slope stability analyses at both the Yerington and MacArthur pits.
- Seismic Cone Penetration Testing (SCPTu): Conducted at the Yerington sulfide tailings to determine in-situ geotechnical properties and evaluate its suitability as the foundation for the sulfide HLF.
- Geotechnical Drilling: Utilizing methods such as solid stem, hollow stem auger, wireline coring, and sonic drilling. Target areas encompass the sulfide HLF and its adjacent native ground, the oxide HLF and its adjacent native ground, and the proposed MacArthur WRSF footprint.
- Test Pits and Sample Collection: For the identification of potential borrow sources for construction materials.
- IP Geophysics: Applied over the Yerington sulfide tailings to refine the characterization of a chargeability high.

Following the aforementioned investigations and fieldwork, subsequent geotechnical evaluations and analyses will be conducted, encompassing:

- Pit Slope Stability Analysis: Evaluating the stability of pit slopes to inform target angles for pit slope walls.
- Laboratory Testing for Foundation Materials: Including subsurface soils and legacy residuals, to establish parameters for geotechnical evaluations and analyses.
- Laboratory Testing for Mined Materials: Including waste rock and oxide/sulfide feed, to establish parameters for geotechnical evaluations and analyses.
- Geotechnical Evaluations and Analyses: Including slope stability, settlement/consolidation, seepage, and liquefaction analyses for major infrastructure components such as the sulfide HLF, oxide HLF, and MacArthur WRSF.
- Hydrodynamic Testing: Including the oxide and sulfide feeds, to inform the heap design.
- Residual Material Testing: Assessing suitability as construction material.

The cost of geotechnical investigations and analysis is estimated to be $1.15 million during the course of the PFS.

26.3 Mining

In addition to the standard analysis and design elements essential for a PFS Mine design, the following mining activities are recommended:

- Mining Throughput Analysis: Evaluating mining throughput to enhance efficiency.
- Waste Rock Storage Facility Optimization: Optimizing the design of waste storage facilities.
- Equipment Selection and Contract Mining Comparison: Conducting a comprehensive assessment of equipment selection and comparing it with contract mining options.

The cost of mining analysis and optimization is estimated to be $0.2 million during the course of the PFS.

26.4 Metallurgy and Mineral Processing

In light of the favorable economic outcomes from the PEA, it is strongly recommended that the Project proceed to PFS. Additional metallurgical testing is imperative, with a primary focus on the further development and optimization of Nuton technology for Yerington. Other areas also merit further evaluation and advancement, including:

- Development of a Geometallurgical Model: Establishing a comprehensive geometallurgical model for both the Yerington and MacArthur deposits.
- Nuton Optimization Testing: Continuing and expanding Nuton optimization testing, encompassing various materials in accordance with the geometallurgical model.
- Synergy Evaluation: Assessing potential synergies between conventional heap leaching for oxide material and Nuton for sulfides. This involves conducting closed circuit Nuton /oxide column tests to determine acid consumption and the neutralization potential of the oxide circuit.
- Heap Leach Residual and Waste Rock Characterization: Comprehensive characterization work for heap leach residuals and waste rock from previous mining operations.
- Size Versus Recovery Testing: Executing size versus recovery testing for MacArthur materials to support a trade-off study.
- "Spent Acid" Recovery Methods: Evaluating potential methods for the recovery of "spent acid" for use at Yerington.
- Precious Metal Recovery: Investigating the feasibility of recovering precious metals from spent inoculum build-up residues.
- Nuton Inputs: Further design details of the processing flowsheet, material stacking, and agglomeration approaches will be provided by Nuton in the next stage of the Project.

The cost of metallurgical test work is estimated to be $0.5 million during the course of the PFS.

26.5 Infrastructure

To elevate infrastructure facility designs to the PFS level, the following work is recommended:

- HLF Design: Thoroughly designing HLFs to meet PFS standards.
- Site Electrical Study and Costing: Conducting a comprehensive electrical study and cost analysis for the site.
- Solar Power Generation and Alternative Green Power Options Study: Investigating the feasibility and cost-effectiveness of solar power generation and exploring other environmentally friendly energy alternatives.
- Rail Spur Detailed Design and Costing: Developing appropriate level of detailed designs and cost estimates for the rail spur.
- Surveying of Yerington and MacArthur Properties: Conducting detailed site surveys with an appropriate level of accuracy to produce topographical maps featuring a minimum 5-foot contour interval.

- Ancillary Facilities Design and Costing: Designing ancillary facilities and estimating associated costs.
- Site Road Layouts: Designing road layouts within the site.
- Overland Conveyor Detailed Design and Costing: Developing detailed designs and cost estimates for overland conveyors.
- Borrow Material Location Sourcing: Identifying suitable sources for borrow materials.

The cost of infrastructure design work is estimated to be $0.8 million during the course of the PFS.

26.6 Environmental

To advance the permitting process and provide essential data for design work, further environmental investigations are recommended. The scope of these environmental tasks is diverse, and the following activities are advised:

- MacArthur and Yerington - Drilling and Completion of Water Monitoring Boreholes with Instrumentation: Conduct drilling and install instrumentation for water monitoring holes at both MacArthur and Yerington Properties.
- Yerington - Drilling and Installation of Three Water Monitoring Boreholes: Specifically at the Yerington Property, drill and install three additional water monitoring holes.
- Evaluation of Water Treatment Needs and Methods: Assess the necessity for water treatment and explore suitable methods if required.
- Continuation of Hydrogeological Assessment: Carry on with the hydrogeological assessment.
- Geochemical Study Analysis Continuation: Continue analyzing the results of the geochemical study.
- Site-Wide Water Balance Model: Develop a comprehensive water balance model for the Yerington and MacArthur Properties to a level of detail appropriate for a PFS.
- Development of Contact and Non-Contact Water Management Plan: Create a plan for managing both contact and non-contact water.
- Evaluation of Water Conservation and Storage Measures: Assess strategies for water conservation and storage.
- Greenhouse Gas Analysis of the Yerington Copper Project: Conduct a thorough analysis of greenhouse gas emissions associated with the Project.
- Closure Costing: Estimate the costs associated with Project closure.

The cost of the environmental component of the Project is estimated to be $1.3 million during the course of the PFS.

26.7 Prefeasibility Study

To carry out the standard design activities for a PFS, a consortium of qualified firms, each specialized in their respective fields, will be engaged. The typical expenses for the PFS study encompass their fees, site visits, and collaborative design efforts. The management of these teams is encompassed within the customary costs of a PFS.

The overall estimated expenditure, covering the various groups and associated expenses linked to the PFS, is estimated to be $0.8 million.

27 REFERENCES

Anaconda Collection – American Heritage Center, University of Wyoming, Laramie, Wyoming.

Arimetco Production 1999: Sawyer, Joe, 1999: Production history summary: private report, Arimetco

Bonsall, T., 2012: South Dump Report. Internal Memo. Prepared for Singatse Peak Services, LLC. 19 p.

Bryan, Rex. C., 2012: NI 43-101 Technical Report, Mineral Resource. Yerington Copper Project, Lyon Count, Nevada. Prepared by Tetra Tech Inc. for Singatse Peak Services, LLC. 152 p.

Bryan, Rex C., 2014: NI 43-101 Technical Report, Mineral Resource Update. Yerington Copper Project, Lyon Count, Nevada. Prepared by Tetra Tech Inc. for Singatse Peak Services, LLC. 118 p.

Carten, Richard B., 1986: Sodium-Calcium Metasomatism: Chemical, Temporal, and Spatial Relationships at the Yerington Nevada Porphyry Copper Deposit: Economic Geology, Vol 81, pp. 1495-1519.

Dilles, J.H. and Proffett, J.M., 1995: Porphyry Copper Deposits of the American Cordillera: Arizona Geological Society Digest 20, p.306-315.

EDCON-PRJ, Inc., 2008: Acquisition and Processing of a Detailed Aeromagnetic Survey, Yerington Project. Prepared for Quaterra Alaska Inc. 12 p

Einaudi M.T, 1970: Final Report Deep Drilling Project Yerington Mine: unpublished private report for The Anaconda Company, 9p.

Gantumur, Natska, 2012a: Metallurgical Study on Anaconda Vat Leach Tailings (Dry Sonic Drilling Samples). Prepared by METCON Research, Tucson, Az. 144p.

Gantumur, Natska, 2012b: Metallurgical Study on Anaconda Vat Leach Tailings. Prepared by METCON Research, Tucson, Az. 296p.

Hart, V. A., 1915: Report Montana-Yerington Prospect and Adjoining Properties near Yerington, Nevada: unpublished private report for International Smelting Company: Anaconda Collection – American Heritage Center, University of Wyoming, 11p.

Howard, Jr., K. L., 1979: Geological Reserves – Yerington District: unpublished private report for The Anaconda Company: Anaconda Collection – American Heritage Center, University of Wyoming, 4p.

Hudbay Minerals Incl, 2023: Hudbay Provides Annual Reserve and Resource Update. News Release 2023 No. 3.

Independent Mining Consultants, Inc., 2022: MacArthur Copper Project, Mason Valley, Nevada, USA. NI 43-101 Technical Report, Mineral Resource Estimate.

Knopf, Adolph, 1918: Geology and ore deposits of the Yerington district, Nevada: U.S. Geol. Survey Professional Paper 114, 68p.

MacLeod, I. N., Ellis, R. G., 2013: Magnetic Vector Inversion, a simple approach to the challenge of varying direction of rock magnetization; ASEG Forum on the Application of Remanent Magnetization, 2013 ASEG general meeting.

McClelland Laboratories: Column Leach Testing-MacArthur Project Drill Core Composites: August 31, 2023: McClelland Laboratories Inc.: Report on Column Leach Testing - MacArthur Drill Core Composites MLI Job No 4735, August 31, 2023.

METCON Research: MacArthur Project Preliminary Column Leach Study Report, Dec. 2011: Gantumur, Natska, 2011: MacArthur Project Preliminary Column Leach Study(Volumes I, II 7 III), Prepared by METCON Research, Tucson, AZ.

Moore, James G., 1969: Geology and Mineral Deposits of Lyon, Douglas, and Ormsby Counties, Nevada: Nevada Bureau of Mines and Geology, Bulletin 75, 45p.

Nelson, P.H. and Van Voorhis, G.D., 1983: Estimation of sulfide content from induced polarization data, GEOPHYSICS, V.48, No. 1, pp. 62-75.

Nesbitt, M., 1971: Unpublished private report, The Anaconda Company.

Nevada Administrative Code (NAC), 2022. Chapter 445A – Water Controls. Revised Date: 5-22.

Nevada Copper Corp., 2019: Pumpkin Hollow Project, Open Pit and Underground Mine Prefeasibility Study, Nevada U.S.A.

Nuton Update November 2023: Charles Abbey, internal email Nov. 27, 2023: 231121 Lion CG Columns Dashboard.xlsx Spread Sheet, Prepared by Nuton.

Proffett, Jr., J. M., and Dilles, J. H., 1984: Geologic Map of the Yerington District, Nevada: Nevada Bureau of Mines and Geology, Map 77.

Proffett, J.M. and Proffett, B.H., 1976: Stratigraphy of the Tertiary Ash-Flow Tuffs in the Yerington District, Nevada: Nevada Bureau of Mines and Geology, Report 27.

Sales, Reno H., 1915: Report on the Montana Yerington mine, Yerington, Nevada: unpublished private report for Anaconda Copper Mining Company: Anaconda Collection – American Heritage Center, University of Wyoming, 7p.

Sawyer, Joe, 1999: Production history summary: private report, Arimetco, 7p.

Schmidt, R., 1996: Copper Mineralogy of Four Samples: Hazen Research, Inc.: unpublished private report for Arimetco, Inc., 10p.

Souviron, Alavaro, 1976: Exploration Possibilities of the Yerington Mine, unpublished report, Anaconda Collection – American Heritage Center, University of Wyoming, 11p.

SRK Consulting (U.S.), Inc., 2005: Scoping Study to Evaluate the Processing of Leach Tailings & Low-Grade Ore Stockpile at the Yerington Mine, Lyon County, Nevada. Prepared for Atlantic Richfield Company. 48 p.

SRK Consulting (U.S.), Inc., 2012: Scoping Study for the Re-mining and Processing of Residual Ore Stockpiles and Tailings, Yerington Copper Mine, Lyon County, Nevada. Report prepared for Singatse Peak Services, LLC. 78 p.

Tingley, J.V., Horton, R.C., and Lincoln, F.C., 1993: Outline of Nevada Mining History: Nevada Bureau of Mines and Geology, Special Publication 15, 48p.

USEPA, 2011: Supplemental Remedial Investigation Report, Arimetco Facilities Operable Unit 8, Anaconda Copper Yerington Mine, Yerington, NV.

USEPA, 2008: Public Review Draft, Remedial Investigation Report, Arimetco Facilities Operable Unit 8, Anaconda Copper Yerington Mine, pp. 170-172.

USEPA, 2010: Data Summary Report for the Characterization of Vat Leach Tailings (VLT) Using X-Ray Fluorescence (XRF) - Yerington Mine Site.

USEPA, 2010: Historical Summary Report – Anaconda-Yerington Mine Site – Yerington, NV. Prepared by CH2M Hill, Inc. 112 p.

Ware, G. H., 1979: In-situ induced-polarization and magnetic susceptibility measurements – Yerington mine, GEOPHYSICS, V. 44, No. 8, pp.1417-1428.

Wesnousky, S.G., 2005: The San Andreas and Walker Lane fault systems, western North America: transpression, transtension, cumulative slip and the structural evolution of a major transform plate boundary: Journal of Structural Geology, v. 27, no. 8, p. 1505–1512.

WSP, 2023: Heap Regrading and Capping Record of Construction Summary Report ROD 1/1A, Anaconda Copper Mine Site, Lyon County, Nevada. Prepared for Atlantic Richfield Company. May 10, 2023.

Zonge International Inc., 2017: Induced Polarization Survey, YMD IP Project. Lyon County, Nevada. Prepared for Singatse Peak Services, LLC. 55p.

28 CERTIFICATE OF AUTHORS

28.1 Tim Maunula, P.Geo.

CERTIFICATE OF QUALIFIED PERSON

To accompany the technical report entitled: Preliminary Economic Assessment of the Yerington Copper Project, Yerington Nevada (the Technical Report) dated March 12, 2024, with an effective date of January 30, 2024.

I, Tim Maunula, P.Geo., do hereby certify that:

- I am a Principal Resource Geologist with T. Maunula & Associates Consulting Inc., with a business address at 15 Valencia Dr., Chatham ON N7L 0A9, Canada.
- I am a graduate of Lakehead University with a H.B.Sc. in Geology (1979). In addition, I earned a Citation in Geostatistics from the University of Alberta in 2004.
- I am a member in good standing of the Association of Professional Geoscientists of Ontario (Registration Number 1115).
- I have practiced my profession in the mining industry continuously since graduation.
- I have worked as a Geologist for 40 years since my graduation from university. This experience comprised 15 years in exploration (including airborne, ground geophysical surveys and data processing) and 25 years in Mineral Resource estimation activities.
- I have read the definition of QP set out in NI 43-101 and certify that by reason of education, affiliation with a professional association, and past relevant work experience, I fulfill the requirements to be a QP for NI 43-101.
- I am responsible for Sections 1.2 to 1.6, 1.8.1 to 1.8.3, 4 -12, 14.1 to 14.8, 14.10, 23, 25.1.1, 26.1, and 27 of this technical report titled Yerington Copper Project PEA NI 43-101 Technical Report.
- I have had no prior involvement with the Yerington Copper Project that is the subject of the Technical Report.
- My most recent site visit to the Yerington Copper Project described in this report was from February 13 and 14, 2023 for two days.
- As of the date of this Certificate, to my knowledge, information, and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- I am independent of Lion Copper and Gold Corp. as defined by Section 1.5 of the Instrument.
- I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Signed and dated this 12th day of March 2024, at Chatham, Ontario.

“signed electronically”

Tim Maunula, P. Geo.

28.2 Herb Welhener, MMSA-QPM

CERTIFICATE OF QUALIFIED PERSON

To accompany the technical report entitled: Preliminary Economic Assessment of the Yerington Copper Project, Yerington Nevada (the Technical Report) dated March 12, 2024, with an effective date of January 30, 2024. I, Herb Welhener, MMSA-QPM, do hereby certify that:

- I am a Vice President with Independent Mining Consultants, Inc., with a business address at 3560 E Gas Road, Tucson Arizona 85714, USA.
- I am a graduate of the University of Arizona with a degree in Bachelor of Science – Geology in 1973.
- I am a member in good standing of the Mining and Metallurgical Society of America (#01307QP).
- I have practiced my profession in the mining industry continuously since graduation. My relevant experience includes over 50 years of working in the geological and mining consultancy field on various base metal and precious metal geologic environments worldwide. I have read the definition of “qualified person” set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (“NI 43-101”) and certify that by virtue of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
- I am independent of the issuer, Lion Copper and Gold Corp. as defined in Section 1.5 of NI 43-101.
- I am responsible for Sections 1.8.4, 14.9, and 25.1.2 of the Technical Report and accept professional responsibility for those sections of the Technical Report.
- I have had prior experience with the property as a consultant to Lion Copper and Gold Corp. in the preparation of previous internal studies on the MacArthur Project and the mine plan for the 2021 PEA. I was an author to the technical report titled "MacArthur Project , NI 43-101 Technical Report, Mineral Resource Estimate, Lyon County, Nevada, USA” dated February 25, 2022.
- My most recent site visit to the Yerington Copper Project was from February 14 to February 15, 2022, for two days.
- As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.
- I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Dated this 12th day of March 2024, in Tucson Arizona, USA

“signed electronically”

Herb Welhener, MMSA-QPM

28.3 Jeff Woods

CERTIFICATE OF QUALIFIED PERSON

To accompany the technical report entitled: Preliminary Economic Assessment of the Yerington Copper Project, Yerington Nevada (the Technical Report) dated March 12, 2024, with an effective date of January 30, 2024.

I, Jeff Woods, do hereby certify that:

- I am a Principal Metallurgical Engineer with Woods Process Services LLC, with a business address at PO Box 20897, Reno Nevada 89515, USA.
- I am a graduate of the University of Nevada, Mackay School of Mines with a degree of Bachelor of Science Metallurgical Engineering in 1988.
- I am a member in good standing of the Society of Mining, Metallurgy and Exploration (SME:#408591) and the Mining & Metallurgical Society of America (MMSA: #01368QP)
- I have practiced my profession in the mining industry continuously since graduation. My relevant experience includes over 35 years, with the direct involvement in copper heap leaching processing including design, and operation ins the United States and globally. I have read the definition of "qualified person" set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101") and certify that by virtue of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I am independent of the issuer, Lion Copper and Gold Corp. as defined in Section 1.5 of NI 43-101.
- I am responsible for Sections 1.7, 13, 17, 21.2.3,21.3.3, 25.2, and 26.5 of the Technical Report and accept professional responsibility for those sections of the Technical Report.
- I have had no previous involvement with the Yerington Copper Project.
- My most recent technical site visit to the Yerington Copper Project was from February 13 to February 14, 2023, for two days.
- As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.
- I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Dated this 12th day of March 2024, in Reno, Nevada, USA

"signed electronically"

Jeff Woods

28.4 Adrien Butler, P.E.

CERTIFICATE OF QUALIFIED PERSON

To accompany the technical report entitled: Preliminary Economic Assessment of the Yerington Copper Project, Yerington Nevada (the Technical Report) dated March 12, 2024, with an effective date of January 30, 2024.

I, Adrien Butler, P.E., do hereby certify that:

- I am a Senior Civil Engineer with NewFields Mining Design and Technical Services (MDTS), with a business address at 9540 Maroon Circle, Suite 300, Englewood, CO 80112.
- I am a graduate of the Colorado School of Mines with a degree in Engineering, Civil Specialty in 2004.
- I am a member in good standing of the Nevada Board of Professional Engineers and Land Surveyors 022244.
- I have practiced my profession in the mining industry continuously since graduation. My relevant experience includes almost 20 years of designing mining infrastructure such as tailings facilities and heap leach pads. I have read the definition of “qualified person” set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* (“NI 43-101”) and certify that by virtue of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
- I am independent of the issuer, Lion Copper and Gold Corp. as defined in Section 1.5 of NI 43-101.
- I am responsible for Sections 1.10, 2.4.4, 18,1, 18.2, 18.5, 18.8 to 18.12, 20.7, 21.2.4, 21.2.5, 25.4, 26.2, and 26.5 of the Technical Report and accept professional responsibility for those sections of the Technical Report.
- I have previously worked on siting studies at both the MacArthur and Yerington Properties.
- My most recent site visit to the Yerington Copper Project was January 8-10, 2024, and September 13, 2022 (MacArthur and Yerington Properties), and February 14, 2023 (Yerington Property only).
- As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.
- I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Dated this 12th day of March 2024, in Englewood, Colorado.

“signed electronically”

Adrien K. Butler, P.E.

28.5 Gordon Zurowski, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

To accompany the technical report entitled: Preliminary Economic Assessment of the Yerington Copper Project, Yerington Nevada (the Technical Report) dated March 12, 2024, with an effective date of January 30, 2024.

I, Gordon Zurowski, P.Eng. do hereby certify that:

- I am a Principal Mining Engineer with AGP Mining Consultants Inc., with a business address at #246-132K Commerce Park Dr., Barrie, Ontario L4N 0Z7, Canada.
- I am a graduate of the University if Saskatchewan with a degree in Bachelor of Applied Science in Geological Engineering in 1989.
- I am a member in good standing of the Professional Engineers of Ontario (#100077750).
- I have practiced my profession in the mining industry continuously since graduation. My relevant experience includes over 30 years and have been directly involved in open pit mining including operating, design, and evaluation in Canada and worldwide. I have been the QP for statement of reserves for and the Mesquite mine updated reserve statement.
- I have read the definition of "qualified person" set out in National Instrument 43-101 *Standards of Disclosure for Mineral Projects* ("NI 43-101") and certify that by virtue of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I am independent of the issuer, Lion Copper and Gold Corp. as defined in Section 1.5 of NI 43-101.
- I am responsible for Sections 1.1, 1.9, 1.11 to 1.15, 2, 3, 15, 16, 18.3,18.4,18.6,18.7, 18.13, 19, 20, 21.1,21.2.1, 21.2.2, 21.2.4 to 21.2.8, 21.3.1, 21.3.2, 21.3.4, 21.4, 22, 24, 25.3, 25.5 to 25.7, 26.1, 26.3, 26.4, 26.7, and 26.8 of the Technical Report and accept professional responsibility for those sections of the Technical Report.
- I have had no previous involvement with Yerington Copper Project.
- My most recent site visit to the Yerington Copper and Gold Project was from February 13 to February 14, 2023, for two days.
- As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make the portions of the Technical Report for which I am responsible not misleading.
- I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in accordance with NI 43-101 and Form 43-101F1.

Dated this 12th day of March 2024, in Stouffville, Ontario, Canada.

"signed electronically"

Gordon Zurowski, P.Eng.