NI 43-101 TECHNICAL REPORT ON THE POLYHALITE RESOURCES AND UPDATED PRELIMINARY ECONOMIC ASSESSMENT OF THE OCHOA PROJECT

Lea County, Southeast New Mexico

Prepared for

ICPOTASHCORP

Dated January 14, 2011

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3. SUMMARY

Gustavson Associates, LLC (Gustavson) was commissioned by IC Potash Corp. (ICP) an American company that holds the Ochoa Project, to update the previous Preliminary Economic Assessment (PEA) for the Ochoa Polyhalite Project in southeastern New Mexico.

This updated PEA is compliant with Canadian National Instrument NI 43-101 reporting guidelines. ICP has retained several chemical and process engineering consultants who are highly experienced in potassium mineral processing to contribute to this report. These people include: Donial Felton, Chief Process and Chemical Engineer; B.Sc. Chemical Engineering; Richard Chastain, Principal Process and Chemical Engineer; B.Sc. Chemical Engineering; Thomas Neuman, Principal Process and Chemical Engineer, M.Sc. Chemistry; Deepak Malhotra, PhD Metallurgical Engineer and Qualified Person (Member AusIMM, SME and CIMM); and Patrick Okita, PhD, Principal Economic Geologist is an international expert on evaporite deposit geology, and President of Upstream Resources. Dr. Okita is responsible for geologic aspects of this report. . Gustavson also retained INTERA for opinion of hydrologic conditions and sources of water. Gustavson also retained British Sulfur, a division of CRU, for the price forecast. Arthur Roth, M.Sc. Chemistry, is a potassium fertilizer marketing expert and has provided opinion and plans for introducing ICP's SOP into the potassium market.

Three developments have occurred since the original PEA was published (NI 43-101 Technical Report on the Polyhalite Resources and Preliminary Economic Assessment of the Ochoa Project in Lea County, Southeast New Mexico, dated August19, 2009) that materially affect the company's value requiring an update of the prior PEA.

First, the phase I and II drilling programs were recently completed thereby providing 13 new holes that were cored, probed with a variety of geophysical tools, logged descriptively, and assayed. With this new drilling, mineralogy, and chemical information, the inferred mineral resources in the earlier PEA have been converted to measured and indicated mineral resources as show herein, and additional inferred resources have been defined. Polyhalite grade, thickness, and continuity have been validated and correlated to historic data.

Second, the proposed methods of processing the polyhalite to Sulfate of Potash (SOP) have changed significantly, resulting in simplification of the process flowsheets. Originally ICP planned to calcine and then leach the polyhalite, and then to precipitate the SOP from the leach solution using anhydrous ammonia. Additional analysis revealed the project will have better economics by recovering the SOP after the leaching step using crystallization ponds and solar evaporation. This significantly reduces the complexity of the process, and lowers capital and operating costs.

Finally, ICP has obtained additional mining leases that significantly adds to their mineral lease position, and consequently increases their mineral resource holding.

The Ochoa polyhalite property comprises 13 existing federal potassium prospecting permits and 17 potash mining leases totaling about 113,000 acres, located about 60 miles east-southeast of Carlsbad, New Mexico and less than 20 miles west of the Texas-New Mexico state line.

Drilling, sampling, and analytical programs were prepared and conducted by ICP's senior geologic staff during the period from August 2009 to September 2010. Evaluation, synthesis, and interpretation of the work program was undertaken by Dr. Patrick Okita of Upstream Resources LLC (Upstream) from September to December 2010. Gustavson has independently audited and verified the work done by Upstream including the geologic interpretation and polyhalite thickness estimate and has estimated polyhalite grade. Polyhalite grade was estimated by Gustavson into the gridded model using an inverse distance (1.5 power) logarithm.

Geophysical data from oil and gas wells drilled in and around the Ochoa project area were combined with ICP core drill data, correlating and authenticating the geologic interpretations and polyhalite thickness. A two dimensional gridded model of the polyhalite thickness was generated by Upstream using the Petra® software package. A tonnage factor of 11.43 ft^3/ton was derived from core hole density tests (Chemrox and Gustavson, 2009, p. 66).

The estimate of the polyhalite mineral resource within the Ochoa Project is shown in Table 3-1.

TABLE 3-1 OCHOA PROJECT MINERAL RESOURCE TABULATION

Polyhalite resource equal to or greater than minimum thickness

4 ft Minimum Thickness	Measured	Indicated	Measured plus Indicated	Inferred
Tons	282,200,000	571,900,000	854,100,000	611,100,000
Grade Polyhalite	82.6%	82.5%	82.5%	82.3%
Equivalent Grade K_2SO_4	23.4%	23.4%	23.4%	23.3%

5 ft Minimum Thickness	Measured	Indicated	Measured plus Indicated	Inferred
Tons	238,700,000	461,500,000	700,200,000	352,700,000
Grade Polyhalite	82.7%	82.4%	82.5%	82.2%
Equivalent Grade K_2SO_4	23.4%	23.4%	23.4%	23.3%

6 ft Minimum Thickness	Measured	Indicated	Measured plus Indicated	Inferred
Tons	40,600,000	47,100,000	87,700,000	19,800,000
Grade Polyhalite	86.1%	84.1%	85.0%	82.3%
Equivalent Grade K_2SO_4	24.4%	23.8%	24.1%	23.3%

Gustavson created a 40 year mine plan for a portion of the Mineral Resource based on two different production scenarios. The first scenario is based on an SOP production rate of 660,000 short tons (600,000 long tons) per year, and the second scenario envisions 990,000 short tons (900,000 long tons). Gustavson focused on an area of the deposit that has few producing oil and gas wells, thick polyhalite, homogeneous polyhalite grade, and flat lying polyhalite beds. Gustavson developed the mine and process manpower requirements, capital and operating costs using the 2010 version of Mine and Mill Equipment Costs: An Estimator's Guide (InfoMine), verbal quotes manufacturers and providers of some of the major equipment items, and the personal experience of Messrs Foote, Felton and Chastain.

A detailed, computer model of the process was created using METSIM Process Simulator software by Mr. Felton a highly experienced Chemical Engineer. This computer model added in the formulation of the process flowsheet and equipment specifications. The metallurgical model section of Mr. Felton's simulation was vetted by Tom Neuman, a chemist who has also worked in evaporite mineral chemical processing for 30 years. Gustavson estimated the General and Administrative cost with input from Mr. Foote. The pre-tax economic evaluation includes royalties owing to the federal government, state government, and private royalty holders.

Annual full production mining capacity from the underground room and pillar mine is 3.15 million tons per year for the base case and 4.7 million tons for the higher production scenario. The mine will operate 350 days per year for a full daily production tonnage of 9000 tons base case, and 13,500 for the second case.

All costs are stated in 2010 US dollars. Full capacity operating cost per ton of mill feed estimates are shown in Table 3-2.

TABLE 3-2 OPERATING COST PER TON - TYPICAL YEAR 660K TONS

AREA	Per Ton Feed	Per Ton Product
Mine	$12.36	$61.39
Mill	$19.76	$98.11
G&A	$0.95	$4.72
Total	**$33.07**	**$164.23**

TABLE 3-3 OPERATING COST PER TON - TYPICAL YEAR 990K TONS

AREA	Per Ton Feed	Per Ton Product
Mine	$10.96	$54.41
Mill	$15.91	$79.01
G&A	$0.63	$3.15
Total	**$27.50**	**$136.57**

Total estimated initial capital cost for the mine and plant are shown in Table 3-4:

TABLE 3-4 TOTAL ESTIMATED INITIAL CAPITAL COST 660K TONS PER YEAR

Area	Cost
Mine	$90,000,000
Mill	$318,600,000
G&A, Surface	$63,300,000
EPCM	$47,800,000
Indirects	$33,500,000
Freight	$11,900,000
Contingency	$96,600,000
Total	$661,700,000

TABLE 3-5 TOTAL ESTIMATED INITIAL CAPITAL COST 990K TONS PER YEAR

Area	Cost
Mine	$111,200,000
Mill	$402,300,000
G&A, Surface	$63,300,000
EPCM	$60,300,000
Indirects	$41,000,000
Freight	$15,000,000
Contingency	$120,000,000
Total	$813,100,000

The estimated exploration, engineering and permitting costs total $12.0 million, as shown in Table 3-6, brings the total preproduction expenditure to $673.7 million for the base case and $815.1 for case two.

TABLE 3-6 EXPLORATION, ENGINEERING AND PERMITTING COSTS

Activity	Cost
Definition Drilling	$2,000,000
Prefeasibility Study	$3,000,000
Feasibility Study	$5,000,000
Permitting	$1,000,000
Corporate Costs	$1,000,000
Land Acquisition	Nil
Total	**$12,000,000**

The project has the potential to produce three fertilizer products, potassium sulfate, magnesium sulfate, and polyhalite. The potassium sulfate product is readily marketable as a highly desirable premium fertilizer, and is the only product considered in this study. The sale price forecast was provided by CRU/British Sulfur.

A 2.5% gross royalty will be imposed by the federal government. A $1/ton potassium product produced is included as well as a 3% net profits royalty (NPR) is due after capital payback. The NPR can be reduced to a 1.5% NPR with a one-time payment of $9 million.

The 660K ton per year base case 40-year life project gives a pre-tax IRR of 25% and NPV of $1.43 billion with a 10% discount rate. NPV at other rates are listed in Tables 1-7 and 1-8.

TABLE 3-7 NPV 660K TONS SOP

NPV	BILLION
15%	$.567
12%	$.989
10%	$1.43
8%	$2.07
5%	$3.76

TABLE 3-8 NPV 990K TONS SOP

NPV	BILLION
15%	$1.11
12%	$1.80
10%	$2.51
8%	$3.56
5%	$6.27

The base case project has a payback period of 5 years from the start of production.

Sensitivity analysis was completed for the project to illustrate variation in the three main areas: operating cost, capital cost, and product price. Figure 3-1 shows the project sensitivity for the base case 600,000 long tons (660,000 short tons) at the discount rate of 10%. Figure 3-2 shows the same information for the 900,000 long tons (990,000 short tons) case. The graph shows 80% to 120% of base case values (i.e.; minus 20% to plus 20% operating cost, capital cost, and SOP sale price).

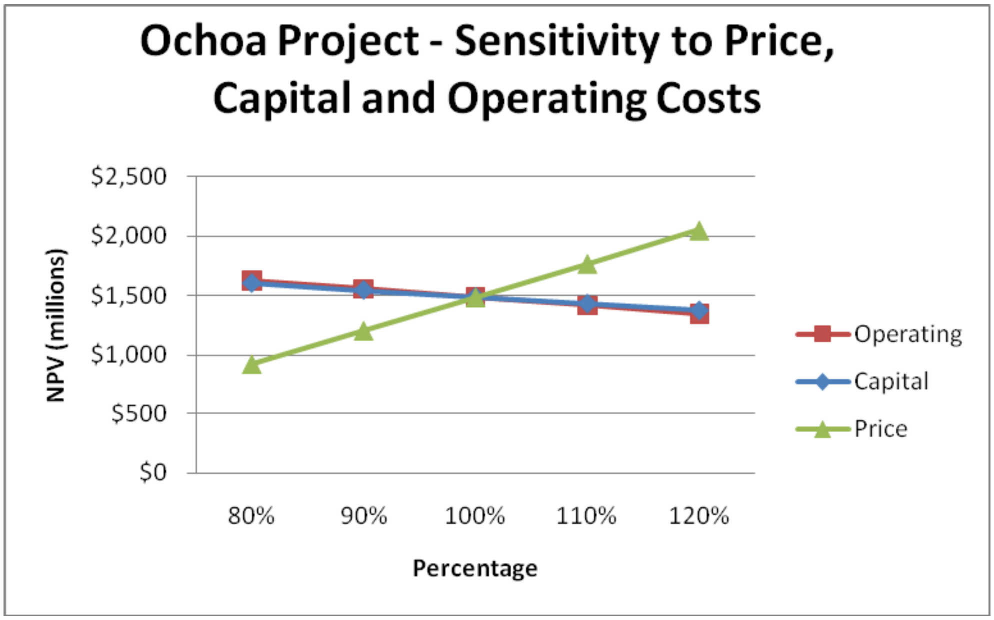


FIGURE 3-1 SULFATE OF POTASH (K_2SO_4) PRICE SENSITIVITY 660K SCENARIO

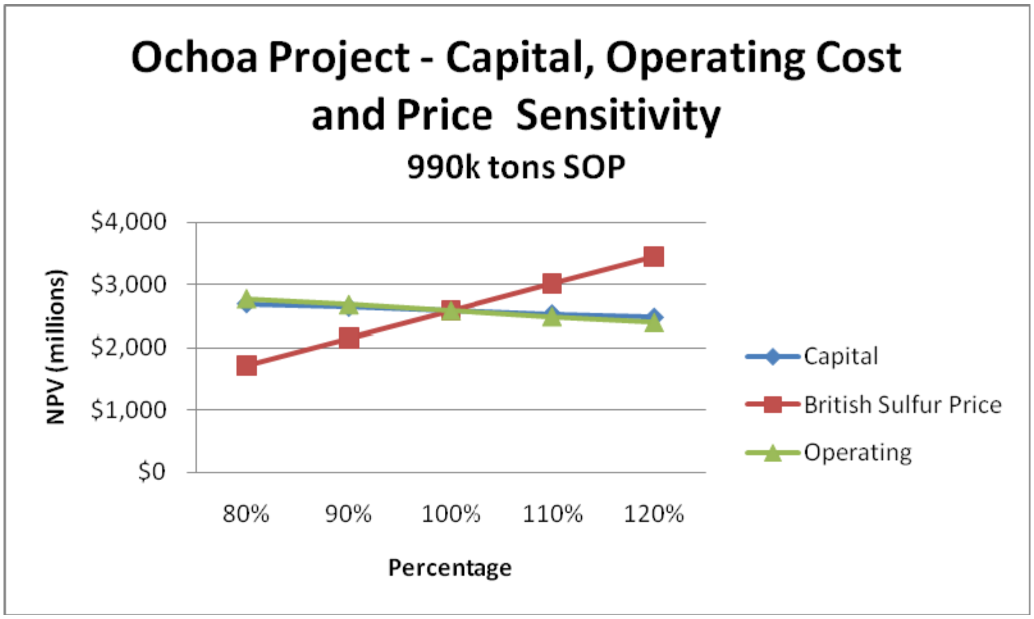


FIGURE 3-2 SULFATE OF POTASH (K_2SO_4) PRICE SENSITIVITY 990K SCENARIO

Based and the results of this PEA, Gustavson believes the Ochoa polyhalite is economically viable and recommends continued development of the project. Gustavson recommends additional drill programs of sufficient size to collect sample for pilot scale metallurgical tests, and complete infill drilling at an appropriate spacing to convert current indicated resource to additional measured resource. Gustavson also recommends the project proceed to a prefeasibility study, bench scale metallurgical tests with currently available sample, and that the company begin baseline environmental programs to initiate the permit process.

Gustavson recommends the following:

- Proceed with a bulk sample drill program in order provide sample for metallurgical test work, define resource within the mine area, and to perform geotechnical testing.
- Bench scale metallurgical testing followed by a pilot scale test run on bulk sample drill core
- Acquire surface rights of proposed surface facilities area.
- Initiate permitting and baseline data collection for environmental permits.
- Hydrology studies will need to continue in order to determine where water will be obtained in the region and how it will be delivered to the plant.

- In depth market study in order to better understand the market conditions and price forecast, this study should also include Kieserite.
- A prefeasibility study should be initiated based on the findings in this report, and should incorporate data gathered in the above programs.

4. INTRODUCTION

Gustavson was retained by ICP to update the previous Preliminary Economic Assessment (NI 43-101 Technical Report on the Polyhalite Resources and Preliminary Economic Assessment of the Ochoa Project in Lea County, Southeast New Mexico, dated August19, 2009) on the Ochoa polyhalite property Area of Interest (OCHOA PROJECT), which is located in Lea County, New Mexico (See Figure 4-1).

The Qualified Persons responsible for this Ochoa Preliminary Economic Assessment (PEA) are William J. Crowl, R.G., Donald E. Hulse, P.E., Terre A. Lane, Member AusIMM and Dr. Deepak Malhotra, AusIMM. Mr. Hulse and Ms. Lane are mining engineers, Mr. Crowl is a geologist, and Dr. Malhotra is a metallurgist and mineral economist. A field site visit to the Ochoa Project was made by Terre Lane, PEA Project Manager, on October 11th and 12th, 2010 to view the site, inspect core, and validate assay certifications and QA/QC documents. Mr. Hulse visited Upstream's office in Virginia on November 30, 2010 to review the geologic database, mapping and modeling procedures, and data control procedures.

The project is located within the Permian Basin of the Great Plains physiographic province. Evaporites in New Mexico and Texas occur in the Permian sedimentary basin which is roughly oval in shape and elongated in a northeast-southwest direction. The Delaware and Midland sub-basins of the upper Permian Basin are separated by the Central Basin Platform and contain extensive evaporite deposits of the Ochoa Series which lie between the Capitan Reef limestone of the underlying Guadalupe Series and the fine clastic sediments of the Dewey Lake red beds.

FIGURE 4-1 GENERAL LOCATION OF THE OCHOA PROJECT RESOURCE AREA

5. RELIANCE ON OTHER EXPERTS

Gustavson has relied on data provided by ICP and the operating experience of ICP's Chief Operating Officer K Randall Foote, B.Sc. Mining Engineering (Member, SME) who has over 27 years experience in mine and mill management, as well as corporate management in the Carlsbad Potash operations, provided complete access to technical data, reports and the project database.

Deepak Malhotra, PhD President of the metallurgical laboratory Resource Development Incorporated (RDi) has conducted metallurgical test programs for several hundred projects. Dr. Malhotra is an adjunct professor of metallurgy at the Colorado School of Mines, and is serving as Processing Advisor. Dr Malhotra is a member of AusIMM, SME and CIMM, and a Qualified Person as defined by NI 43-101.

Mr. Don Felton, of Chemfelt Engineering is a Chief Chemical Process Engineer with 40 years of experience in operating industrial mineral and chemical processing plants. His expertise includes recovery operations, modeling using METSIM, all phases of the permitting application process, pollution scrubber design, fractionator system design, evaporator design, condenser and filter system design, compliance testing, and ground water monitoring. Mr. Felton is providing expertise in the engineering process design of all systems required to convert mined polyhalite ore in final marketable Sulphate of Potash finished product

Mr. Tom Neuman, Principal Chemist of Neuman Consulting, Inc. brings 30 years of analytical development and process development experience to the Ochoa Project. Mr. Neuman has designed and developed directional processes for the leaching of potash from oil and gas caverns. He has developed more efficient systems for the increase of production in solution mining. His work in potash chemical processing, and in the chemical processing of other salts, includes process engineering design, modeling, economic data review, and extensive equipment evaluation. He is also highly experienced in salt processing flow sheet design and material balance analysis for potash solution mining process, analytical instrumentation, and chromatography methodology. Mr. Neuman is providing expertise in the optimization of chemical engineering processes for the conversion of calcined polyhalite into Sulphate of Potash finalized marketable product.

Mr. Rick Chastain is a Process Development and Project Management Consultant with nearly forty years in Chemical plant engineering, design, construction, and operation. Mr. Chastain's experience includes potash due diligence and feasibility studies, process systems design, solution mining, scrubber emissions, storage design, langbeinite production, crystallization processing, and flotation facilities, design. Mr. Chastain is providing expertise in thermal chemistry and all other aspects of process plant design.

Patrick Okita, PhD, Principal Economic Geologist has over 25 years of experience in international minerals, and with specialization in industrial minerals. Dr. Okita's experience ranges from basin wide and regional scale evaluations, through delineation drilling of reserves to feasibility studies. His focus for the purposes of the Ochoa project is directed at field mapping, exploration and development planning and execution, drilling, sampling, and geophysical and chemical testing.

A.J. Roth & Associates, provides business consulting to the agribusiness, fertilizer, and minerals industries worldwide. Arthur Roth has over 25 years of experience in due diligence and feasibility studies, analysis and optimization of potash fertilizer distribution systems, development of marketing and pricing strategies for fertilizer distribution, expert testimony regarding phosphate rock and fertilizer markets, business and commercial development plans, strategic planning, and market analyses and forecasts. Mr. Roth is providing consulting to ICP on entering the North American and international sulphate of potash markets.

6. PROPERTY DESCRIPTION AND LOCATION

The Ochoa project is located about 60 miles east of Carlsbad, New Mexico and less than 20 miles west of the Texas-New Mexico state line. The project spans portions of 10 Township-range blocks, with lease mineral rights totaling 113,000 acres. The general location is shown in Figure 6-1 below:

FIGURE 6-1 GENERAL LOCATION MAP OF THE OCHOA PROJECT AREA IN NEW MEXICO

The Ochoa Project Polyhalite property is comprised of 21 BLM prospecting permits (re: 48,144.58 acres), 17 state mining leases (re: 25,889.83 acres), and 13 new BLM permits (re: 29,520 acres) for potassium minerals that include polyhalite. The term of each leasable mineral exploration prospecting permit is two years, renewable for an additional two years, and convertible to a exploitation (production) lease upon demonstration to the satisfaction of the BLM or state agency that a Chiefly Valuable resource exists. Tables 4-1 and 4-2 list the BLM and New Mexico State exploration permits that are currently held by ICP.

Currently all of the federal permits are for mineral exploration purposes. The state permits are mining leases.

Figure 6-2 shows the areas held by ICP under BLM prospecting permits in the Ochoa Project area plus thirteen new prospecting permit applications that are in the final stage of review and approval. These new prospecting permits are located in T22S R31E, T22S R32E; T22S R33E, T23S R31E, T23S R32E, T23S R33E, T23S R34E, T24S R32E, T24S R33E, T24S R34E, T25S R33E, and T25S R34E as seen in 4-2. ICP will have an exclusive option to lease these tracks from the BLM during the two year option period or extension. The authors of this report expect this Technical Report to demonstrate the Ochoa Polyhalite is a Chiefly Valuable resource allowing ICP to apply to change federal lease status to preference right leases and then mining leases.

6.1 Land Use

The project area is sparsely vegetated and no cultivation is present. Cattle grazing occurs throughout most of the leased areas. In addition, petroleum exploration and development is widespread around the project area. There is a small amount of oil and gas production within the project area, however those wells are generally older wells and are experiencing declining production.

TABLE 6-1 OCHOA PROJECT AREA BLM PROSPECTING PERMITS

SERIAL NUMBER	TOWNSHIP AND RANGE	SECTIONS AND DESCRIPTIONS	BLM APPROVAL DATE	ACREAGE
121100	Township 24 South, Range 35 East, NMPM	Section 27: E2, W2SW Section 28: N2NE, E2SE Section29: W2 Section 31: E2, NW, SWSW Section 33: SW, W2SE, NENE Section 34: NE, S2SW, N2SE, NWNW Section 35: S2NE, S2SE	12/1/2008	2,200.00
121101	Township 24 South, Range 35 East, NMPM	Section 23: All Lands (640ac) Section 24: All Lands (640 ac) Section 25: All Lands (640 ac) Section 26: W2, E2NE, E2SE	12/1/2008	2,400.00
121102	Township 24 South, Range 35 East, NMPM	Section 17: N2, SE Section 20: All Lands (640 ac) Section 21: All Lands (640 ac) Section 22: NE, N2SE, NESW, SENW	12/1/2008	2,080.00
121103	Township 24 South, Range 35 East, NMPM	Section 9: All Lands (640 ac) Section 12: All Lands (640 ac) Section 13: All Lands (640 ac) Section 14: SWNW, E2NW, E2, SW	12/1/2008	2,520.00
121104	Township 24 South, Range 35 East, NMPM	Section 1: W2, W2E2 Section 6: All Lands (640 ac) Section 7: W2, W2SE Section 8: E2, SW, E2NW Section 11: NENE Section 18: SW Section 19: SW Section 35: SENW, SESW	12/1/2008	2,520.00
121105	Township 24 South, Range 34 East, NMPM	Section 9: N2, SE Section 11: W2W2, E2E2 Section 12: E2, SW, E2NW Section 13: All Lands (640 ac) Section 19: N2, SE, N2SW	12/1/2008	2,560.00
121106	Township 24 South, Range 34 East, NMPM	Section 23: E2, SWSW Section 24: SE, NESW, SENE, N2NW Section 25: W2W2, E2E2 Section 26: W2 Section 27: S2, E2NE Section 34: NW, N2SW, W2SE Section 35: E2	12/1/2008	2,360.00
121107	Township 23 South, Range 34 East, NMPM	Section 6: Lots1-7, SENW, E2SW, S2NE, SE Section 7: Lots1-2, E2NW, NE Section 18: Lots3-4, E2SW, SE Section 19: Lots1-4, E2W2, E2	12/1/2008	1,892.00

SERIAL NUMBER	TOWNSHIP AND RANGE	SECTIONS AND DESCRIPTIONS	BLM APPROVAL DATE	ACREAGE
21108	Township 24 South, Range 34 East, NMPM	Section 1: Lots1-4, S2N2, N2SW, SE Section 3: Lots1-2, S2NE, SE Section 4: Lots1-2, S2NE, SE, S2SW, NWSW Section 5: Lots3-4, S2NW, SW Section 7: Lots1-2, E2NW, NE Section 8: N2, SW	12/1/2008	2,439.00
121109	Township 24 South, Range 33 East, NMPM	Section 11: N2 Section 12: All Lands (640 ac) Section 13: SE, E2SW Section 14: W2, W2E2 Section 23: All Lands (640 ac)	12/1/2008	2,320.00
121110	Township 24 South, Range 33 East, NMPM	Section 24: W2 Section 25: W2 Section 26: All Lands (640 ac)	12/1/2008	1,280.00
121111	Township 23 South, Range 33 East, NMPM	Section 24: All Lands (640 ac) Section 25: All Lands (640 ac) Section 26: All Lands (640 ac) Section 28: All Lands (640 ac)	12/1/2008	2,560.00
121112	Township 24 South, Range 34 East, NMPM	Section 17 all Lands (640 ac) Section 18: Lot1, NENW, NE Section 20: All Lands (640 ac) Section 21: N2, SW, W2SE Section 22: N2, SESE	12/1/2008	2,440.00
121113	Township 23 South, Range 33 East, NMPM	Section 13: S2 Section 14: S2 Section 21: All Lands (640 ac) Section 23: All Lands (640 ac)	12/1/2008	1,920.00
121114	Township 23 South, Range 33 East, NMPM	Section 1: Lots1-4, S2N2, S2 Section 4: Lots1-4, S2N2, S2 Section 5: Lots1-4, S2N2, S2 Section 6: Lots1-7, E2SW, SENW, S2NE, SE	12/1/2008	2,547.00
121115	Township 23 South, Range 33 East, NMPM	Section 7: Lots1-4, E2W2, E2 Section8: All Lands (640 ac) Section 9: All Lands (640 ac) Section 11: All Lands (640 ac)	12/1/2008	2,551.00
123690	Township 23 south, Range 32 East NMPM	Section 24: All Lands (640 ac) Section 25: All Lands (640 ac) Section 26: N2 Section 27: N2	3/1/10	1,920.00
123691	Township 23 south, Range 32 East, NMPM	Section 1: SW4, W2SE4 Section 3: All Lands (640 ac) Section 4: All Lands (640 ac) Section 5: All Lands (640 ac)	3/1/10	2156.08
123692	Township 23 south, Range 32 East, NMPM	Section 6: All Lands Section 8: All Lands Section 9: All Lands Section 10: All Lands	3/1/10	2,535.70
123693	Township 23 south, Range 32 East, NMPM	Section 12: W2, w2e2 Section 13: All Lands (640 ac) Section 22: All Lands (640 ac) Section 23: All Lands (640 ac)	3/1/10	2,400.00
123694	Township 23 south, Range 32 East, NMPM	Section 28: All Lands Section 29: All Lands Section 30: All Lands Section 33: All Lands	3/1/10	2534.80
			TOTALS:	**48,144.58**

TABLE 6-2 NEW MEXICO STATE LEASES INCLUDED IN THE OCHOA PROJECT

TRACT NUMBER	TOWNSHIP AND RANGE	SECTIONS AND DESCRIPTIONS	AWARD DATE	ACREAGE
HP-0030	Township 22 South, Range 32 East, NMPM	Section 32	5/24/2010	640
HP-0031	Township 22 South, Range 32 East, NMPM	Section 36	5/24/2010	640
HP-0031	Township 23 South, Range 32 East, NMPM	Section 1: E2SE4, SE4NE4, Lot 1 Section 12: E2E2	5/24/2010	319.95
HP-0032	Township 23 South, Range 32 East, NMPM	Section 3: SW4NW4 Section 4: SE4NE4	5/24/2010	80
HP-0033	Township 23 South, Range 32 East, NMPM	Section 2: S2, S2N2, lots 1,2,3,4	5/24/2010	638.52
HP-0034	Township 23 South, Range 32 East, NMPM	Section 16: All	5/24/2010	640
HP-0035	Township 23 South, Range 32 East, NMPM	Section 21: SE4NE4	5/24/2010	40
HP-0036	Township 22 South, Range 33 East, NMPM	Section 30: E2, E2W2, Lots 1,2,3,4 Section 31: E2, E2W2, Lots 1,2,3,4 Section 32: All Section 33: All	5/24/2010	2533.44
HP-0037	Township 23 South, Range 33 East, NMPM	Section 2: S2, S2N2, Lots 1,2,3,4 Section 3: S2, S2N2, Lots 1,2,3,4 Section 10: All	5/24/2010	1917.64
HP-0038	Township 23 South, Range 33 East, NMPM	Section 12: All	5/24/2010	640
HP-0039	Township 23 South, Range 33 East, NMPM	Section 15: All Section 16: All Section 17: E2, E2NW4, SW4 Section 18: E2, E2W2, Lots 1,2,3,4	5/24/2010	2471.4
HP-0040	Township 23 South, Range 33 East, NMPM	Section 22: All Section 27: All Section 33: All Section 34: All	5/24/2010	2560
HP-0041	Township 23 South, Range 33 East, NMPM	Section 35: All Section 36: All	5/24/2010	2554.8
HP-0041	Township 23 South, Range 34 East, NMPM	Section 31: E2, E2W2, Lots 1,2,3,4		
HP-0042	Township 24 South, Range 33 East, NMPM	Section 1: S2, S2N2, Lots 1,2,3,4 Section 2: S2, S2N2, Lots 1,2,3,4 Section 3: S2, S2N2, Lots 1,2,3,4	5/24/2010	1918.6
HP-0042	Township 24 South, Range 34 East, NMPM	Section 6: SE4, S2NE4, E2SW4, SE4NW4, Lots 1,2,3,4,5,6,7	5/24/2010	636.24
HP-0043	Township 23 South, Range 33 East, NMPM	Section 32: All	5/24/2010	640
HP-0043	Township 24 South, Range 33 East, NMPM	Section 4: S2, S2N2, Lots 1,2,3,4 Section 5: S2, S2N2, Lots 1,2,3,4 Section 8: All	5/24/2010	1918.76
HP-0044	Township 23 South, Range 32 East, NMPM	Section 36: All	5/24/2010	640

TRACT NUMBER	TOWNSHIP AND RANGE	SECTIONS AND DESCRIPTIONS	AWARD DATE	ACREAGE
HP-0044	Township 23 South, Range 33 East, NMPM	Section 31: E2, E2W2, Lots 1,2,3,4	5/24/2010	632.36
HP-0044	Township 24 South, Range 33 East, NMPM	Section 6: SE4, S2NE4, E2SW4, SE4NW4, Lots 1,2,3,4,5,6,7 Section 7: E2, E2W2, Lots 1,2,3,4	5/24/2010	1268.12
HP-0045	Township 24 South, Range 33 East, NMPM	Section 9: All Section 10: All Section 15: All	5/24/2010	1920
HP-0046	Township 23 South, Range 33 East, NMPM	Section 13: N2 Section 14: N2	5/24/2010	640
			TOTALS:	**25,889.83**

TABLE 6-3 OCHOA PROJECT AREA PENDING BLM LEASES

SERIAL NUMBER	TOWNSHIP AND RANGE	SECTIONS AND DESCRIPTIONS	BLM APPROVAL DATE	ACREAGE
124371	Township 22 South, Range 33 East, NMPM	Section 29: S2	5/24/2010	320.00
124371	Township 22 South, Range 32 East, NMPM	Section 19: S2 Section 20: S2 Section 21: All Land Section 22: All Land	5/24/2010	1,920.00
124372	Township 22 South, Range 32 East, NMPM	Section 23: All Lands Section 24: S2 Section 25: All Lands Section 26: All Lands	5/24/2010	2,240.00
124373	Township 22 South, Range 32 East, NMPM	Section 27: All Lands Section 31: All Lands Section 34: All Lands Section 35: All Lands	5/24/2010	2,560.00
124374	Township 22 South, Range 31 East, NMPM	Section 23: All Lands Section 24: All Lands Section 25: All Lands Section 26:All Lands	5/24/2010	2,560.00
124375	Township 22 South, Range 31 East, NMPM	Section 35: All Lands	5/24/2010	640
124375	Township 23 South, Range 31 East, NMPM	Section 1: All lands Section 11: NE4 Section 12: All Lands	5/24/2010	1,440.00
124375	Township 23 South, Range 32 East, NMPM	Section 1: NW4, W2NE4	5/24/2010	240.00
124376	Township 23 South, Range 32 East, NMPM	Section 7: All Lands Section 11: All Lands Section 14: All Lands Section 15: All Lands	5/24/2010	2,560.00
124377	Township 23 South, Range 32 East, NMPM	Section 17: All Lands Section 18: N2 Section 20: N2 Section 21: S2 Section 18: SE4 Section 20: SE4 Section 21: NW4, W2NE4	5/24/2010	2,160.00

SERIAL NUMBER	TOWNSHIP AND RANGE	SECTIONS AND DESCRIPTIONS	BLM APPROVAL DATE	ACREAGE
124378	Township 23 South, Range 32 East, NMPM	Section 26: S2 Section 27: S2 Section 28: N2, SE4 Section 34: N2, SE4 Section 35: All Lands	5/24/2010	2,240.00
124379	Township 23 South, Range 33 East, NMPM	Section 19: All Lands Section 20: All Lands Section 29: All Lands Section 30: All Lands	5/24/2010	2,560.00
124380	Township 23 South, Range 34 East, NMPM	Section 20: S2, NW4 Section 27: S2, NW4 Section 28: All Lands Section 29: S2, NE4	5/24/2010	2,080.00
124381	Township 23 South, Range 34 East, NMPM	Section 30: All Lands	5/24/2010	640.00
124381	Township 24 South, Range 32 East, NMPM	Section 1: All Lands Section 12: N2	5/24/2010	960.00
124381	Township 24 South, Range 33 East, NMPM	Section 35: All Lands	5/24/2010	640.00
124382	Township 24 South, Range 34 East, NMPM	Section 30: E2, NE4SW4, SE4NW4 Section 31: W2	5/24/2010	720.00
124382	Township 25 South, Range 33 East, NMPM	Section 1: All Lands Section 3: All Lands	5/24/2010	1,280.00
124383	Township 25 South, Range 33 East, NMPM	Section 10: NE4 Section 11: All Lands Section 12: W2, NE4, N2SE4	5/24/2010	1,360.00
124383	Township 25 South, Range 34 East, NMPM	Section 6: W2 Section 7: W2NW4	5/24/2010	400.00
			TOTALS:	**29,520.00**

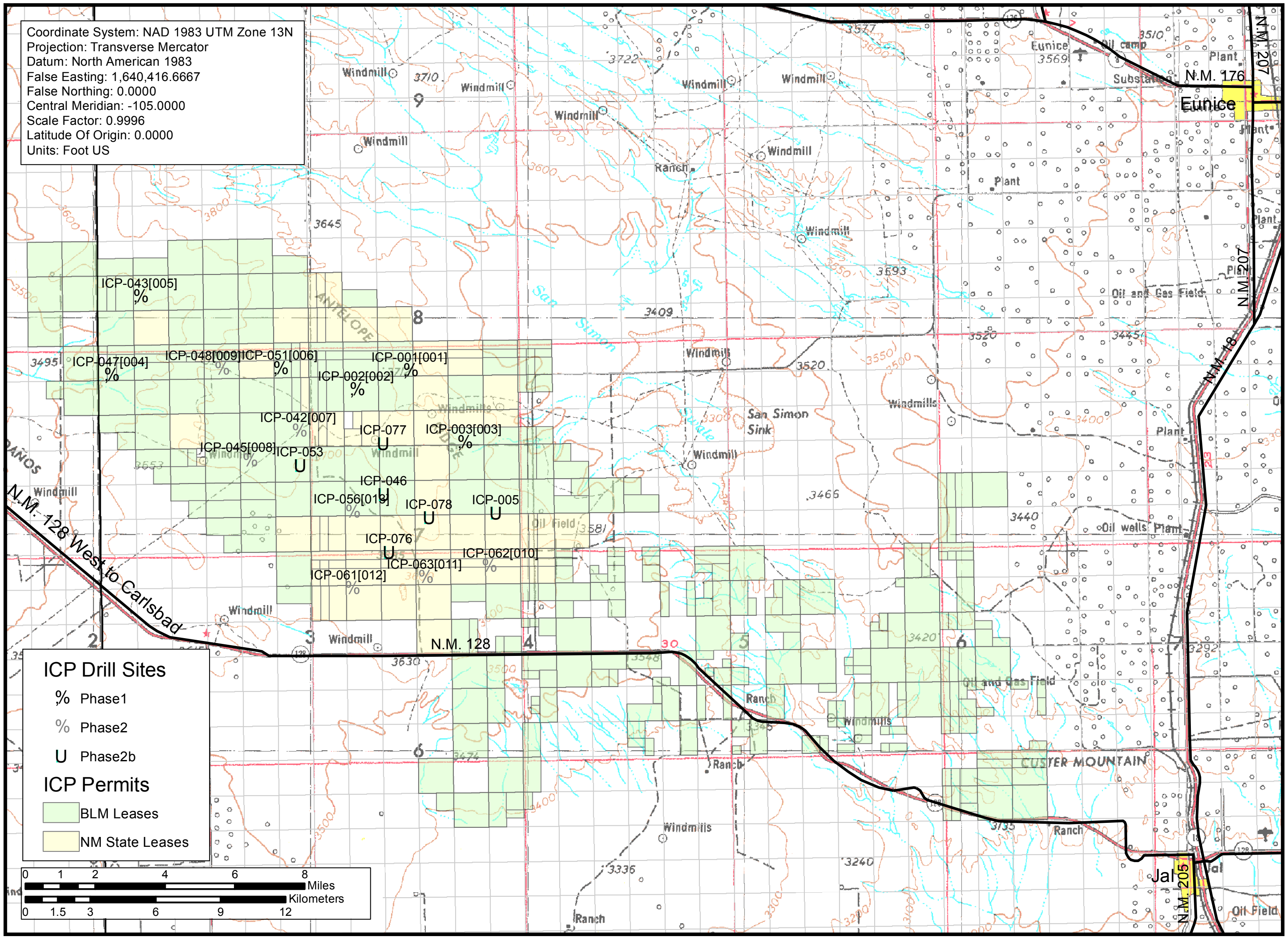


FIGURE 6-2 INTERCONTINENTAL POTASH CORP. (USA) LEASE AND PERMIT MAP

6.2 Other Land Requirements

ICP has maintained good relations with local land owners. ICP will need to obtain the surface rights to land in the vicinity of the planned mine, process facilities, tailings storage areas, and solar evaporation ponds. The final location of these facilities will depend on negotiations with the land owners.

6.3 Royalties

There is a 2.5% gross royalty on potash revenue payable either to the Federal or State Government depending on whose land the polyhalite was extracted from. An additional royalty of $1/ton for any potassium product produced is payable to an individual. There is an additional net profits royalty of 3%, which can be reduced to 1.5 % at a cost of $9 million; further this royalty is not payable until all capital required to build the project is repaid.

6.4 Preliminary Evaluation of Permitting Requirements

The permitting schedule for Ochoa will be significantly influenced by the National Environmental Policy Act (NEPA) process. NEPA typically requires baseline studies for at least one year followed by a public review and comment periods for scoping and draft environmental impact statement (EIS) documents. Other permits include: mine registration, air, underground water, state trust land leases, explosives, and utility location.

Proposed mining projects are typically also evaluated for a range of social, economic, cultural and environmental impacts in response to NEPA and state permitting regulations. The permitting requirements for the Ochoa Project are discussed in detail in Section 23.24 of this report.

7. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

7.1 Accessibility

The Ochoa Project is readily accessible by State Highway 128 and an extensive network of gravel roads. The property is traversed by County Road 2, as well as two track roads and primitive jeep roads. Airports are located in Hobbs (Lea County) and Carlsbad (Eddy County). Electric power is supplied to the area by Xcel Energy. A high voltage power line is located near the southern edge of the property. A rail line runs 24 km (15 miles) to the east of the area of interest, through Jal, south to El Paso, Texas, and a rail spur connects to the WIPP site 10 miles to the west.

FIGURE 7-1 TYPICAL TERRAIN AND VEGETATION OF THE OCHOA PROJECT

There are active and plugged oil and gas wells within the project limits with road, power and pipeline associated with development that has taken place to service these wells. These infrastructure improvements consist of mainly of small dirt roads for vehicle access to the wells.

7.2 Climate

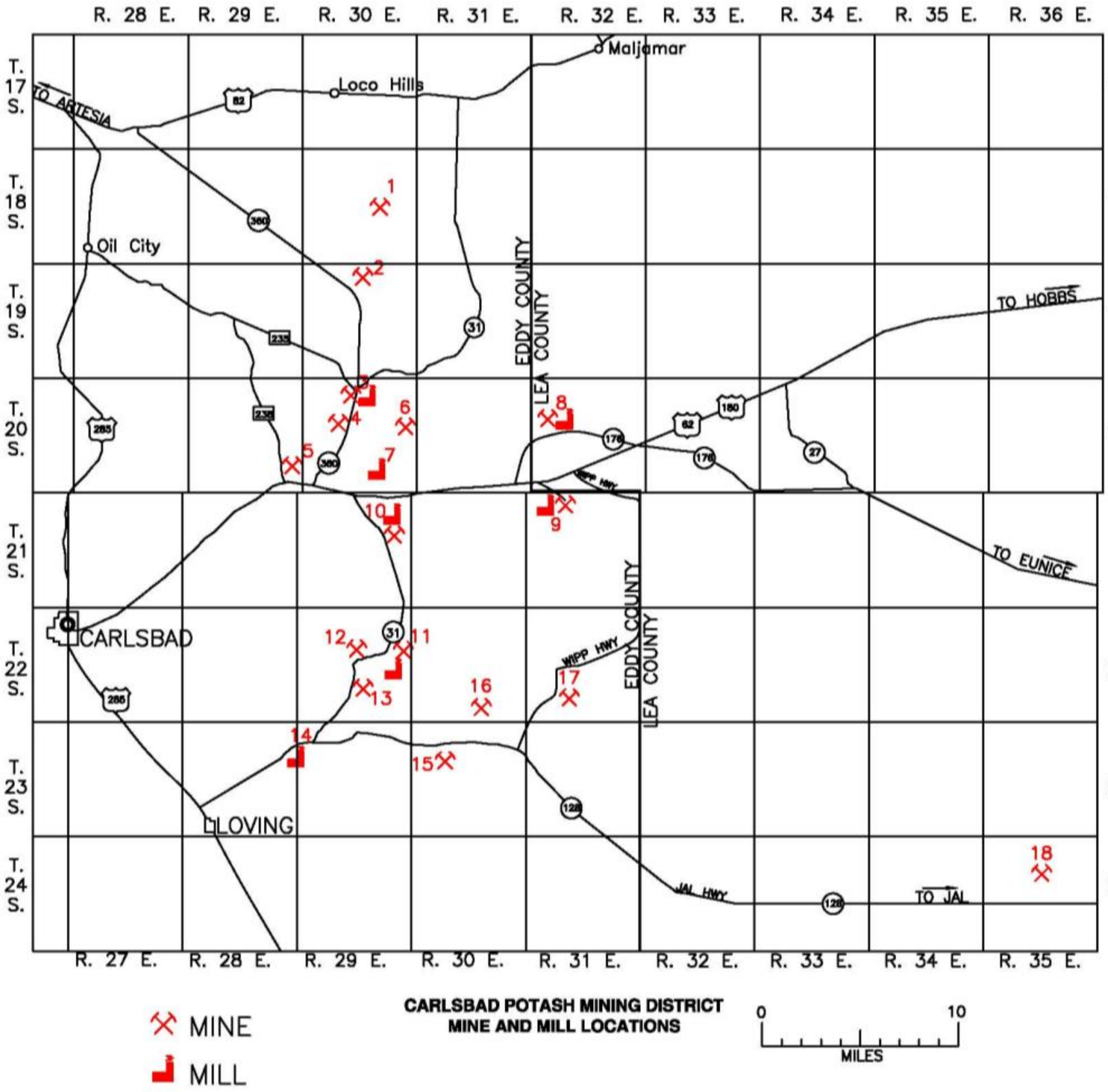
The climate at Ochoa is semi-arid with generally mild temperatures, low precipitation and humidity. The prevailing winds are from the southeast in summer; and during the winter strong winds come from the west. Winter temperatures range from lows of -6°C (20°F) to highs of 10°C (50°F). Summer daytime high temperatures are typically above 32°C (90°F) with nighttime lows of 21°C (70°F). The average precipitation is about 330 mm (13 in) per year, about half of which comes from thunderstorms June through September.

7.3 Local Resources

The project is located in Lea and Eddy Counties of southeast New Mexico. According to the 2000 census, the population of Lea County was 55,500 and Eddy County had 52,000 people. The town of Jal, with a population of about 2000 is the nearest community to the project. Jal is located a couple miles southeast of ICP's land holding of Highway 128. Food, fuel, and a few services are available in Jal. Heavy equipment, industrial supplies, and mining support services are available in Carlsbad, Hobbs, and Albuquerque. An experienced labor force is available for construction, mining, and processing operations from all of the southeastern New Mexico communities like Carlsbad, Loving and Hobbs.

7.4 Infrastructure

The majority of United States potash production is from seven conventional underground mines in the vicinity of the Ochoa Project. These mines, operated by The Mosaic Company (Mosaic) and Intrepid Potash, Inc. (Intrepid) are located near Carlsbad in Eddy County northwest of the Ochoa Project as shown in Figure 7-2 below.



1 WILLS-WEAVER (ABANDONED)
2 AMAX-HORIZON (ABANDONED)
3 HB POTASH (SHAFTS 1 & 2)
4 HB POTASH (SOUTH SHAFT)
5 HB POTASH (EDDY MINE SHAFTS 1 & 2)
6 INTREPID POTASH NM, LLC. #3 SHAFT AREA
7 MOSAIC (OLD SAUNDERS PROPERTY)
8 INTREPID POTASH NM, LLC – NORTH COMPACTOR PLANT (SHAFTS #1 & #2)
9 INTREPID POTASH NM, LLC – EAST CRYSTALLIZATION PLANT (SHAFTS #1 & #2)
10 INTREPID POTASH NM, LLC – WEST FLOTATION PLANT (SHAFTS #1& #2)
11 MOSAIC (PLANTSITE) (#1 & #2 SHAFTS)
12 MOSAIC (#3 SHAFT)
13 MOSAIC (#4 SHAFT)
14 MOSAIC (OLD U.S. POTASH REFINERY)
15 MOSAIC (#5 SHAFT)
16 MOSAIC (NASH DRAW) (#1 & #2 SHAFTS)
17 WIPP SITE
18 INTERCONTINENTAL POTASH {OCHOA PROJECT}

FIGURE 7-2 CARLSBAD MINING DISTRICT MINE AND MILL LOCATIONS

Detailed hydrological studies have not been conducted for the Ochoa Project, however an opinion of the availbility of water and hydrologic conditions is addressed in more detail in Section 23.19 of this report.

7.5 Physiography

The Ochoa Project is located in the Pecos Valley section of the southern Great Plains physiographic province. The climate of the area is characterized as a high plains desert environment. The surface consists of relatively flat terrain with minor arroyos and low-quality semi-arid rangeland. Vegetation is Mesquite, Shinnery oak and coarse grasses. The top soil is caliche rubble and wind-blown sand. The northern portion of the project is situated in sandy dune country having a few different plant species.

Wildlife includes Jack Rabbits, Desert Cotton Tail, Ord's Kangaroo Rat, the Plains Pocket Mouse, Rattle Snakes, Road Runners, and Northern Grasshopper Mouse. Threatened species include the Lesser Prairie Chicken or grouse and Sand Lizard. Larger species include mule deer, pronghorn antelope and coyote. Reptiles include the side-blotched lizard. Bird species include raptors, Loggerhead Shrike, Pyrrhuloxias and Black-throated Sparrows.

Elevation ranges from 900 m to 1,005 m (3,100 ft to 3,750 ft) above sea level. Exploration, mining and mineral processing may take place year-round.

8. HISTORY

In 1856 chemical potash was discovered in Germany with production beginning in 1861. During World War I a German embargo and monopoly inflated US potash prices to $450 per metric ton. Beginning in the 1920's the US Commerce Department and US Bureau of Mines began an exploration program in the Permian Basin of Texas and New Mexico for potassium minerals. This survey revealed quantities of polyhalite unsuitable for mining. Studies of polyhalite were abandoned after the discovery of sylvite (potassium chloride) and langbeinite (potassium-magnesium sulfate) deposits were discovered in Eddy County, New Mexico in 1925.

Until commercial production began in 1931 small plants throughout the country were producing potash. As of 1934, eleven companies were actively exploring for potash minerals in New Mexico; a merger in 1936 formed Mosaic Potash. Production of New Mexico potash peaked between 1966 and 1967 with 2.84 million tonnes produced. Canadian potash imports overtook domestic production in 1971 with the discovery of higher grade potassium deposits.

Large low grade potassium deposits are currently being mined in New Mexico. World demand for potassium sulfate has the New Mexico Bureau of Geology and Mineral Resources examining new technologies to: produce potash from low grade ores, extend existing mine life and use polyhalite as an alternative for potassium sulfate production.

8.1 Polyhalite History

The US Bureau of Mines developed processes to produce potassium sulfate (SOP) fertilizer produced from polyhalite in the 1930's and 1940's. Their work was based on the experimental chemistry done in Germany combined with conventional industry unit operations from the time. Potassium sulfate fertilizer has not been produced from polyhalite on a commercial scale. ICP has rediscovered the previous work and has identified unit operating processes that will utilize polyhalite as the feed stock for potassium sulfate production. Preliminary exploration by ICP for polyhalite started in 2008 under the direction of former USGS geologist, Robert J. Hite. After detailed interpretation of geophysical logs from the oil and gas industry, ICP applied for exploration permits. A scoping study in early 2008 by Mincon also concluded that the Ochoa area had good potential for a large polyhalite deposit.

The August 2009 PEA supported the prospects for polyhalite production from the Ochoa Project. In 2010, ICP completed two phases of drilling. A total of thirteen core holes were drilled. These samples were tested to determine the chemical composition of the polyhalite

9. GEOLOGICAL SETTING

9.1 Regional Geology

The area of interest (AOI) lies at the northeastern margin of the Delaware Basin (Figure 9-2). The Delaware Basin, and neighboring Midland Basin to the east, are structural sub-basins of the large Permian Basin that dominated the region of southeast New Mexico, West Texas, and northern Mexico from 265 Ma to 230 Ma. The AOI has limited bedrock exposures, and surface conditions are dominated by windblown sand dunes, caliche, and poorly developed soil horizon (Figure 9-1).

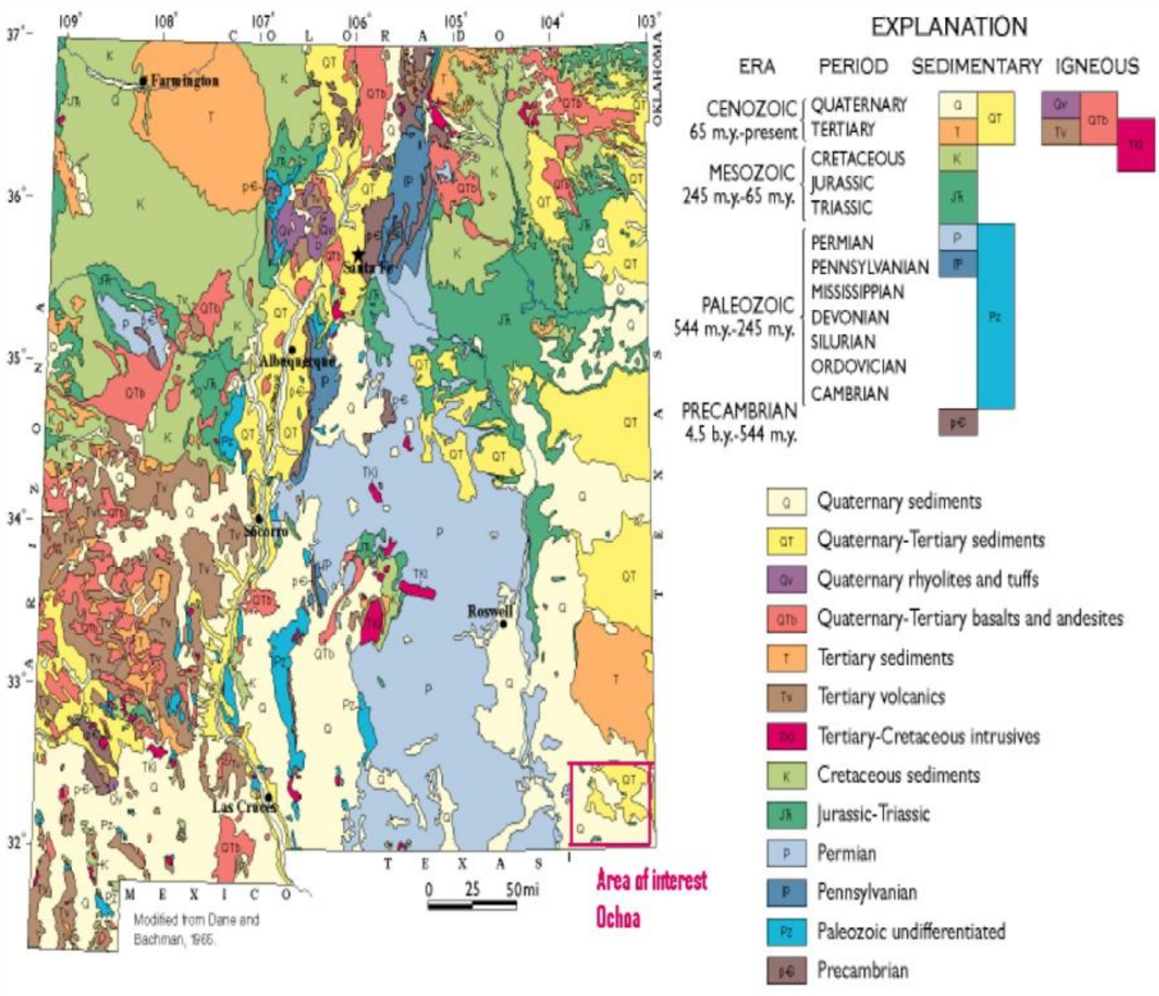


FIGURE 9-1 GEOLOGICAL MAP OF NEW MEXICO

A really extensive and thick evaporite deposits occur throughout the Late Permian (Ochoan) age rocks of the Delaware Basin. These evaporites occur between the Capitan Reef limestone of the underlying Guadalupe Series and the fine clastic sediments of the Triassic Dewey Lake red beds.

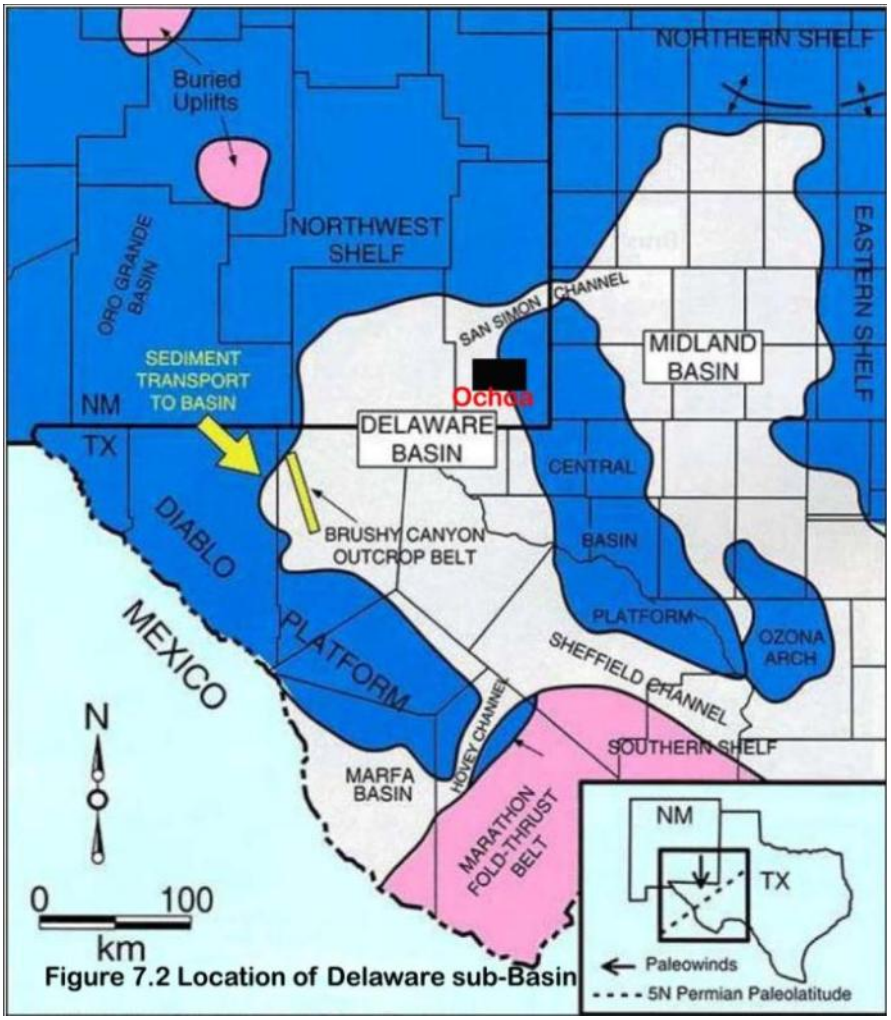
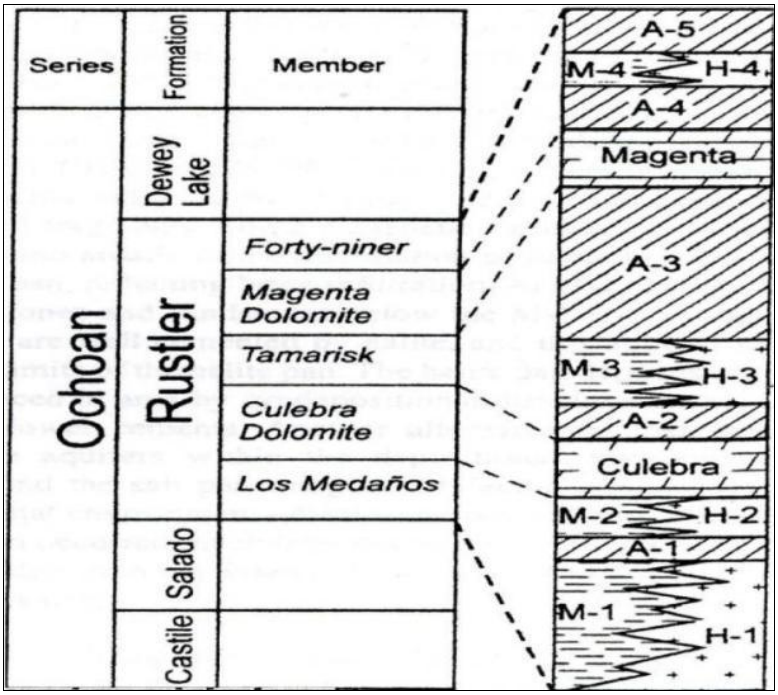


FIGURE 9-2 LOCATION OF DELAWARE SUB-BASIN

The Ochoan Series consists of the Castile, Salado, Rustler, and Dewey Lake Formations in the northeastern Delaware Basin (Figure 9-3). The oldest evaporite cycle of the Ochoa Series is known as the Castile Formation. The Castile consists of anhydrite and halite within the Delaware Basin. The overlying Salado Formation is structurally and lithologically complex and, in addition to the cyclic anhydrite, halite, and clay sedimentation, it is also host to the McNutt potash zone. Potassium-bearing salts accumulated in the northeastern Delaware Basin. With later subsidence, the remainder of the Salado Formation sediments was deposited, followed by anhydrite, interbedded polyhalite, halite, and dolomite of the Rustler Formation and the Dewey Lake Formation continental red beds. Collectively, the Castile, Salado and Rustler evaporite-bearing formations are over 4,000 feet thick.

Rocks of the Ochoa Series underlie an area of about 400,000 square miles. Potash salts are found throughout the southern half of the area of that area. Potash in the Salado Formation occurs as interbeds within both the anhydrite and halite units of the cyclic units. In the former, it occurs in the form of polyhalite and in the latter as sylvite, langbeinite or carnallite. The Salado Formation in the northern Delaware Basin is divided into three units of which the middle zone, known as the McNutt potash zone, varies in thickness between 120 ft in the northwest part of the Delaware Basin to over 590 ft in the eastern part of the basin. Within the McNutt zone, there are 11 distinct potash cycles of which five have been commercially developed in the Carlsbad area. The McNutt zone has not been evaluated in the AOI.



NOTE: Units on the right labeled A- are dominated by anhydrite, those labeled H- are halite dominated, and those labeled M- are mudstone or clay.

FIGURE 9-3 OCHOAN STRATIGRAPHIC MAPPING UNITS DEFINED BY POWERS (2006)

The target horizon of ICP's Ochoa Project is the polyhalite within the Rustler Formation. The Rustler Formation disconformably overlies the Salado Formation. The occurrence of polyhalite in the AOI was inferred by ICP by analyzing geophysical logs of oil and gas wells. Elevated gamma ray readings were observed in the Tamarisk member of the Rustler Formation at a depth between 1,200 and 2,000 feet. Subsequent core drilling by ICP confirmed the mineralogy to be polyhalite.

Polyhalite shows a high gamma ray response, high velocity on sonic logs and relatively high formation density as seen in Figure 9-4 below. Figure 9-5 shows the Rustler stratigraphy and that of the underlying Salado Formation that produces sylvite and langbeinite in mines near Carlsbad.

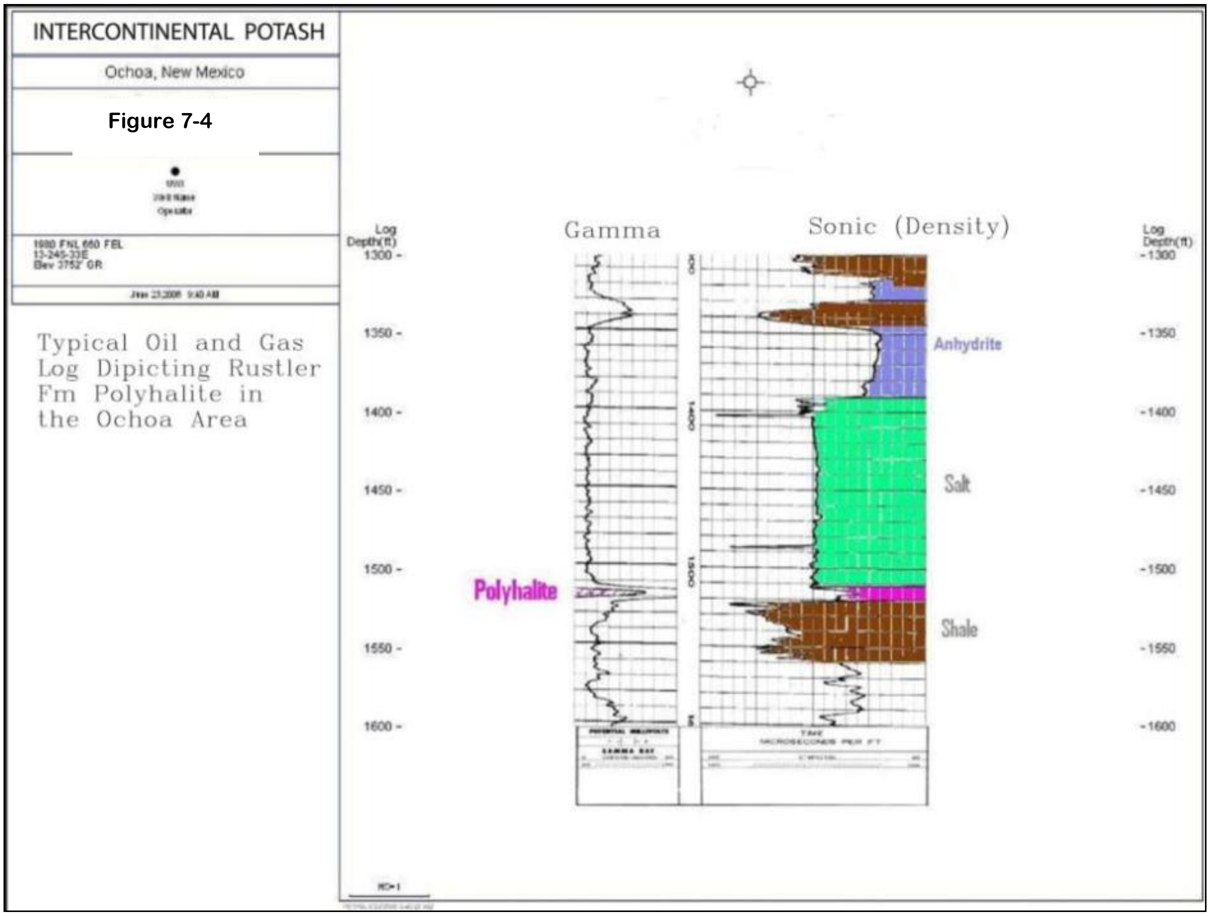


FIGURE 9-4 POLYHALITE SHOWING A HIGH GAMMA RAY RESONSE AND A HIGH VELOCITY ON LOGS AND RELATIVELY HIGH DENSITY

Polyhalite has a bulk density lower than anhydrite and higher than halite. The potassium-bearing component of polyhalite accounts for its high gamma ray response.

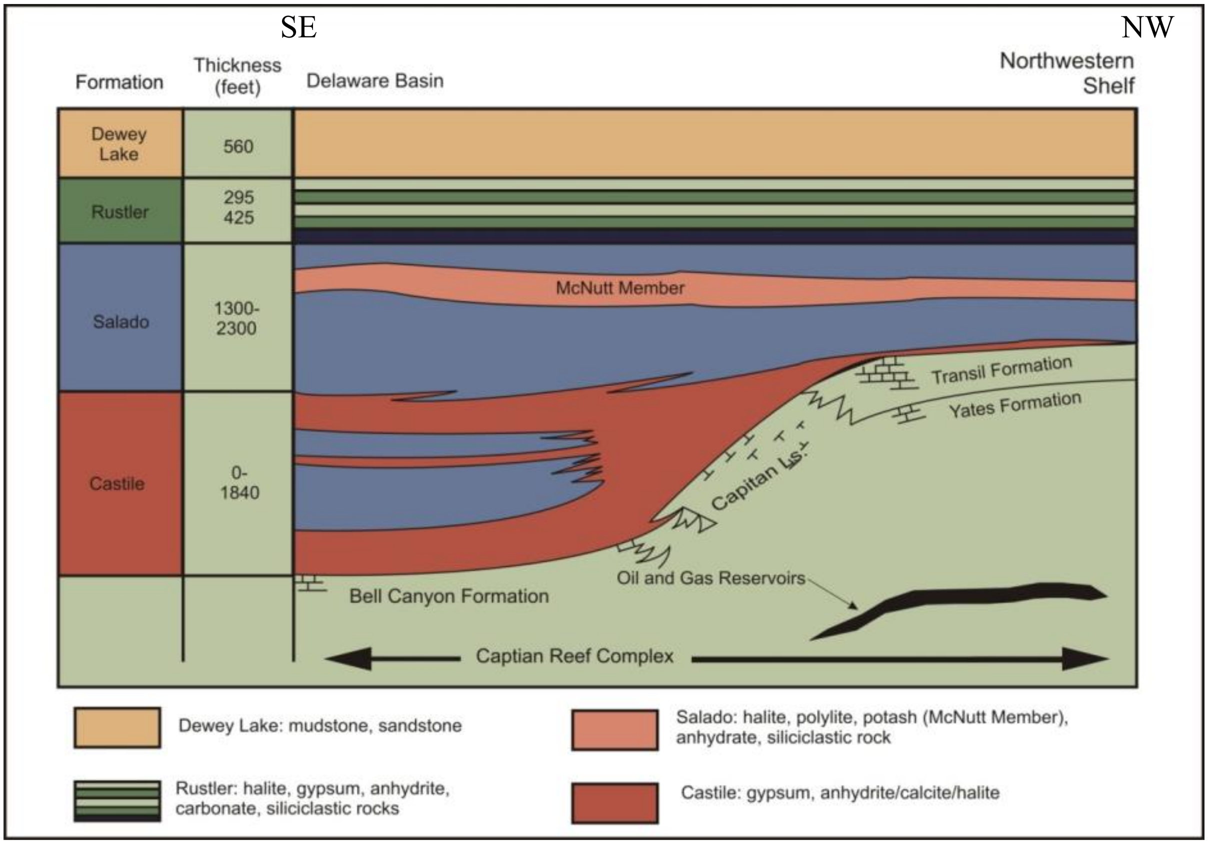


FIGURE 9-5 CONCEPTUAL CROSS SECTION OF THE PERMIAN BASIN

The Castile Formation includes anhydrite, halite, and anhydrite interbedded with limestone. The Salado Formation includes halite with beds of anhydrite, polyhalite, magnesite and claystone, and massive potash deposits locally. The Rustler Formation includes anhydrite, halite, dolomite, sandy siltstone, and polyhalite. (After Jones, 1972)

9.2 Local Geology

The AOI is located in the southeast corner of New Mexico, approximately 25 miles east of the major potash producing area near Carlsbad. ICP's exploration target is polyhalite in the Rustler Formation which overlies the Salado Formation. The Salado is host to the McNutt potash zone in the Carlsbad area. The Rustler Formation is predominantly made up of marine anhydrite and dolomite and represents the transition from the predominantly halite-bearing evaporites of the Salado Formation to the continental red beds of the Dewey Lake Formation. There are 5 recognized members of the Rustler Formation. They are, from oldest to youngest, the: Lost

Medanos, Culebra, Tamarisk, Magenta, and Forty-niner members. Polyhalite occurs in the Tamarisk Member of the Rustler Formation.

The Los Medaños member consists of siliclastics, halitic mudstones and muddy halite, and sulfate minerals, principally anhydrite (Powers and Holt, 1999). The Culebra Member consists of pinkish gray dolomite. The Tamarisk Member is comprised of 3 sub-units which are a lower basal anhydrite, a middle mudstone, and an upper anhydrite. Polyhalite occurs within the upper anhydrite. The thickness of the Tamarisk varies principally as a function of the thickness of the middle halite unit. The Magenta Member is predominantly dolomite with minor amounts of gypsum. The Forty-niner member has a similar general stratigraphy to the Tamarisk. It is made up of a lower and an upper anhydrite with a middle siltstone.

9.3 Identification of Polyhalite in Geophysical Well Logs

The following geophysical responses characterize the identification of several evaporite minerals, namely:

- Halite is identified by a uniformly low gamma ray response similar to anhydrite, an oversized hole (owing to its high solubility) on caliper logs, moderate to low neutron response, moderate formation density and sonic log response, and high resistivity.
- Anhydrite beds are recognized by low response on gamma ray logs, normal borehole diameter on caliper logs, low count on neutron logs, high velocity on sonic logs, and high formation density log response.
- Polyhalite can be identified by high gamma ray response due to the presence of potassium, an in-gauge borehole diameter on caliper logs, high velocity on sonic logs, relatively high density on formation density logs, and apparent limestone porosity on neutron log. Its response on caliper and neutron logs distinguishes polyhalite from sylvite.
- Sylvite is identified by high gamma ray response, an enlarged borehole diameter on caliper logs, relatively low density, low sonic transit time, and low neutron density response.

Table 9-1 shows the borehole geophysical response of select evaporite minerals.

TABLE 9-1 LOG CHARACTERISTICS OF EVAPORITE MINERALS

Mineral	Specific Gravity	Log Density	Average Interval Transit Time	Gamma Ray Deflection (API, d=8")
Halite	2.165	2.032	67	0
Anhydrite	2.960	2.977	50	0
Gypsum	2.320	2.351	52	0
Sylvite	1.984	1.863	74	~500
Carnallite	1.610	1.570	78	200
Langbeinite	2.830	2.820	52	275
Polyhalite	2.780	2.810	58	180
Kainite	2.130	2.120	-	225

***Modified after Nurmi (1978)**

Thus, a combination of common geophysical log curves from drill holes can be used to identify various evaporite minerals.

9.4 General Property Geology

The AOI is characterized by simple structural setting and conformable stratigraphic sequences. The stratigraphy of interest, the Rustler Formation, is present in its entirety throughout the AOI. In general, the AOI overlies a gentle, symmetrical synform with an NW-SE axial orientation. The synform appears to have full closure in the NW and dips slightly to the SE. The locations of two representative, regional geologic cross sections are shown in Figure 9-6. The NW-SE cross section in Figure 9-7 is shown looking eastward from the western part of the AOI. This section is coincides approximately with the axis of the synform. Figure 9-8 shows a W-E cross section, looking north, and illustrates the symmetry of the synform. These sections use only a few wells that shown equally spaced and not spaced proportionally. The large distance between wells and very small vertical change in beds and markers cannot be represented in small page size diagrams. Correlations are possible over hundreds of miles and vertical variation is limited to feet or tens of feet.

Correlation of markers and the polyhalite bed was achieved over several hundred square miles throughout the AOI. The key findings are that the structural surfaces of the top Salado Formation (i.e. base Rustler Formation), of all member and markers – including the polyhalite bed, and the top Rustler Formation are very similar in characteristic (i.e. sub-parallel to each other). This, for example, is illustrated by the structure map on the top of the claystone immediately below the polyhalite bed (informal marker named BPH_01; Figure 9-9). Furthermore, this is an approximation of the basin floor at the time when accumulation of the polyhalite or its precursor mineral began.

Figure 9-10 is a computer generated thickness isopach for the polyhalite bed in the Tamarisk Member (Rustler Formation) in the AOI. Note that the bed has homogenous thickness throughout most of the mineralized area; with the thinning (i.e. from 4 feet to 0 feet) restricted to a narrow zone at the periphery of the mineralized area. Only a few zero thickness spots are interpreted within the main mineralized area.

Additional structure maps and mapping discussion is presented in section 9 and 10.

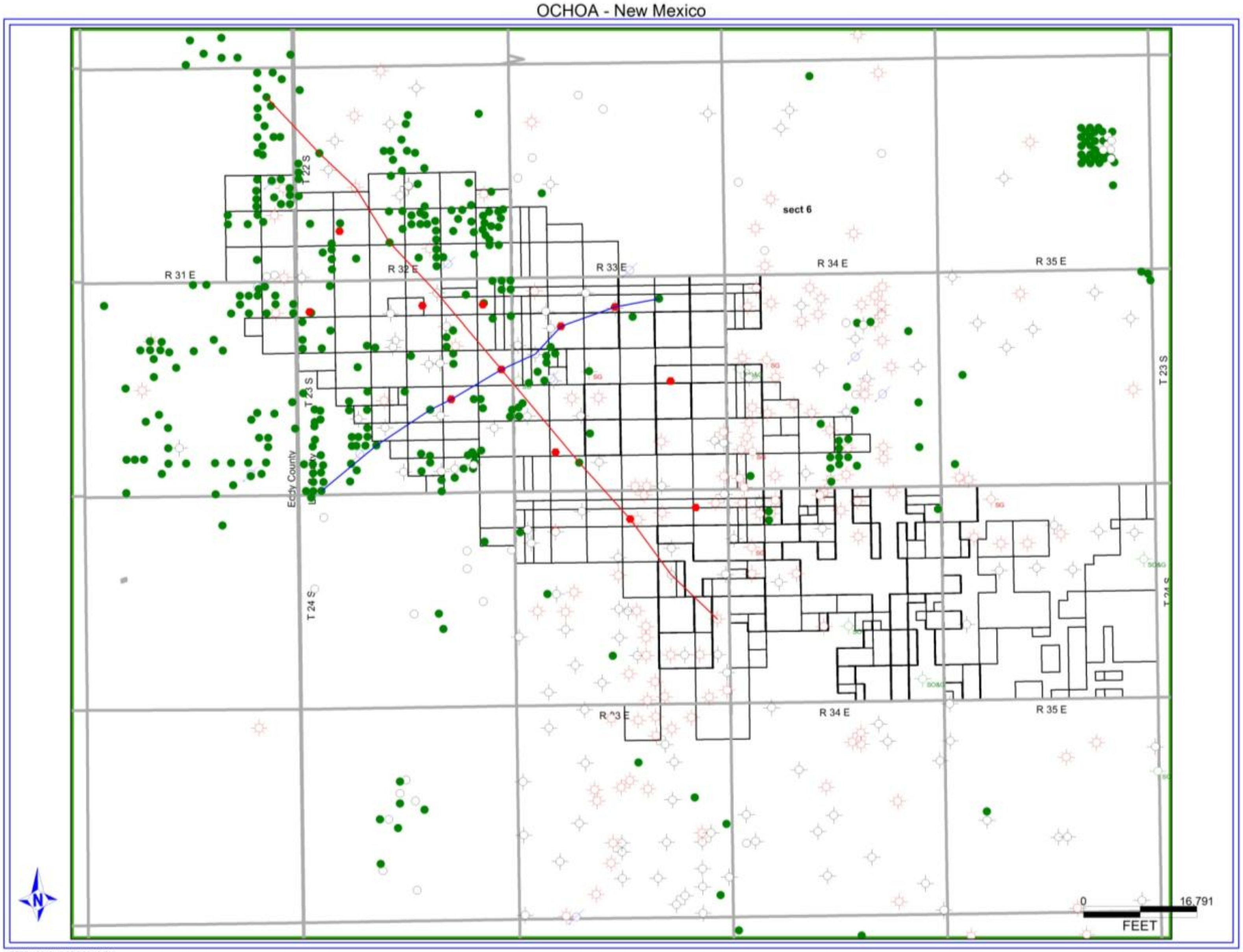


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FIGURE 9-6 LOCATION MAP SHOWING 2 REPRESENTATIVE CROSS SECTIONS

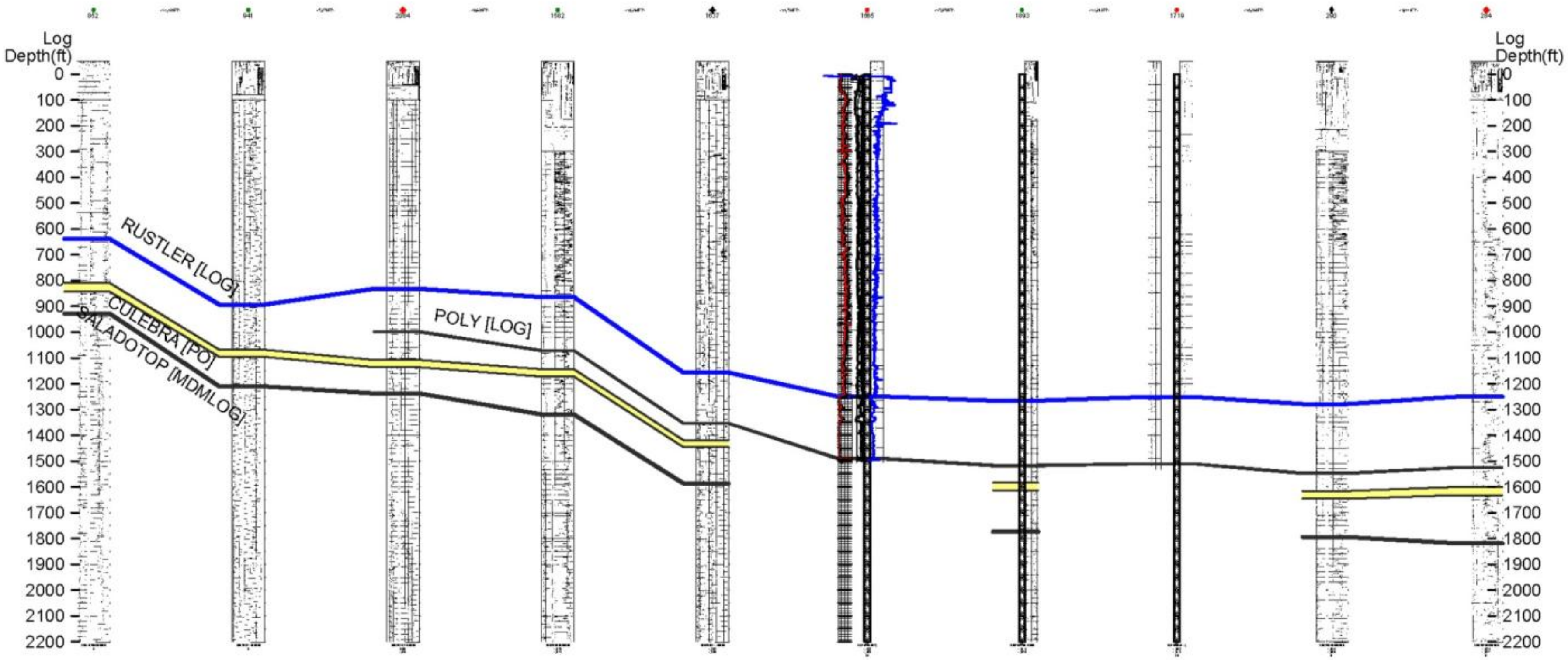


FIGURE 9-7 NW-SE CROSS SECTION ACROSS AOI

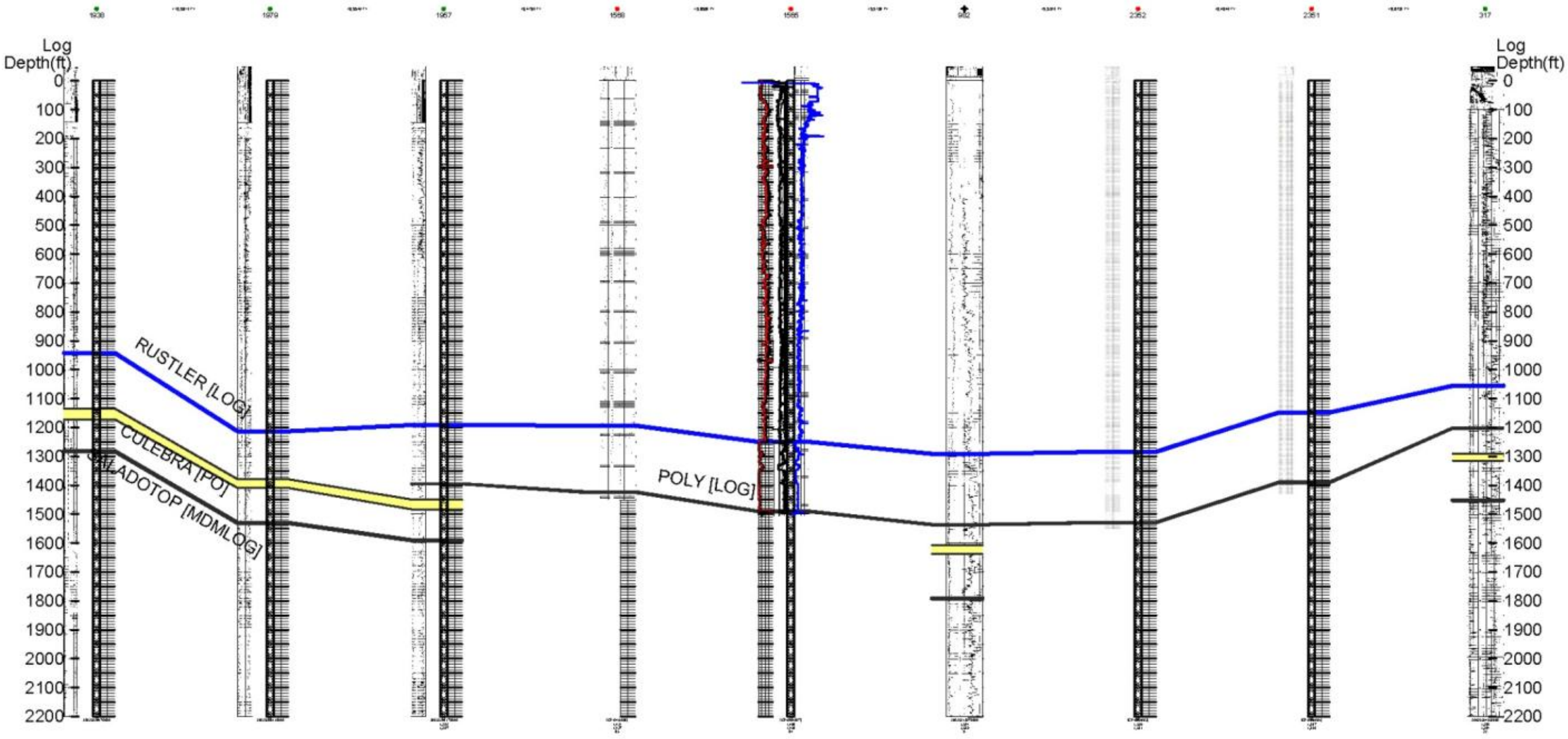


FIGURE 9-8 WEST-EAST CROSS SECTION ACROSS AOI

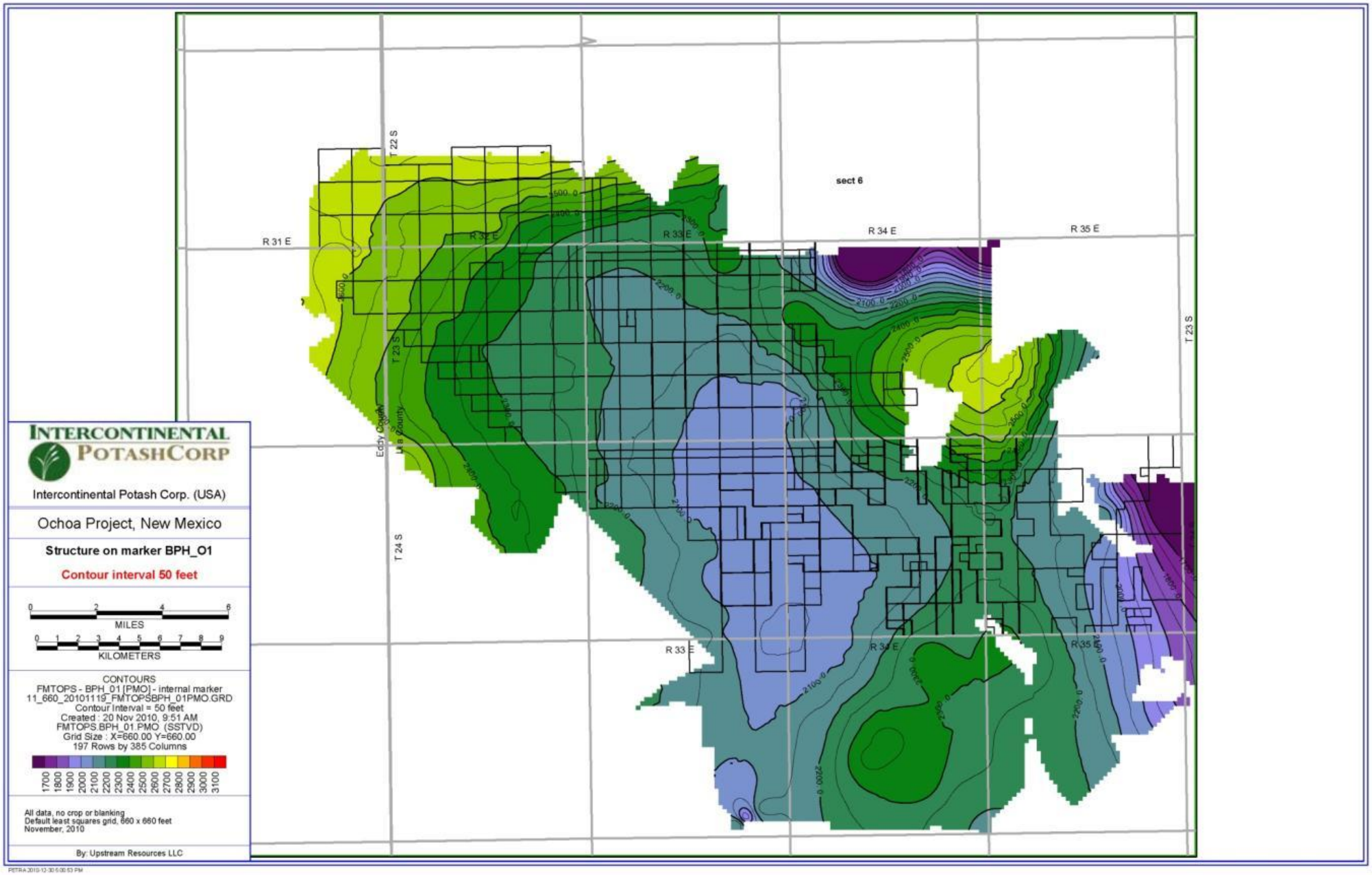


FIGURE 9-9 STRUCTURE MAP ON INFORMAL MARKER (BPH_01) IMMEDIATELY BELOW POLYHALITE BED

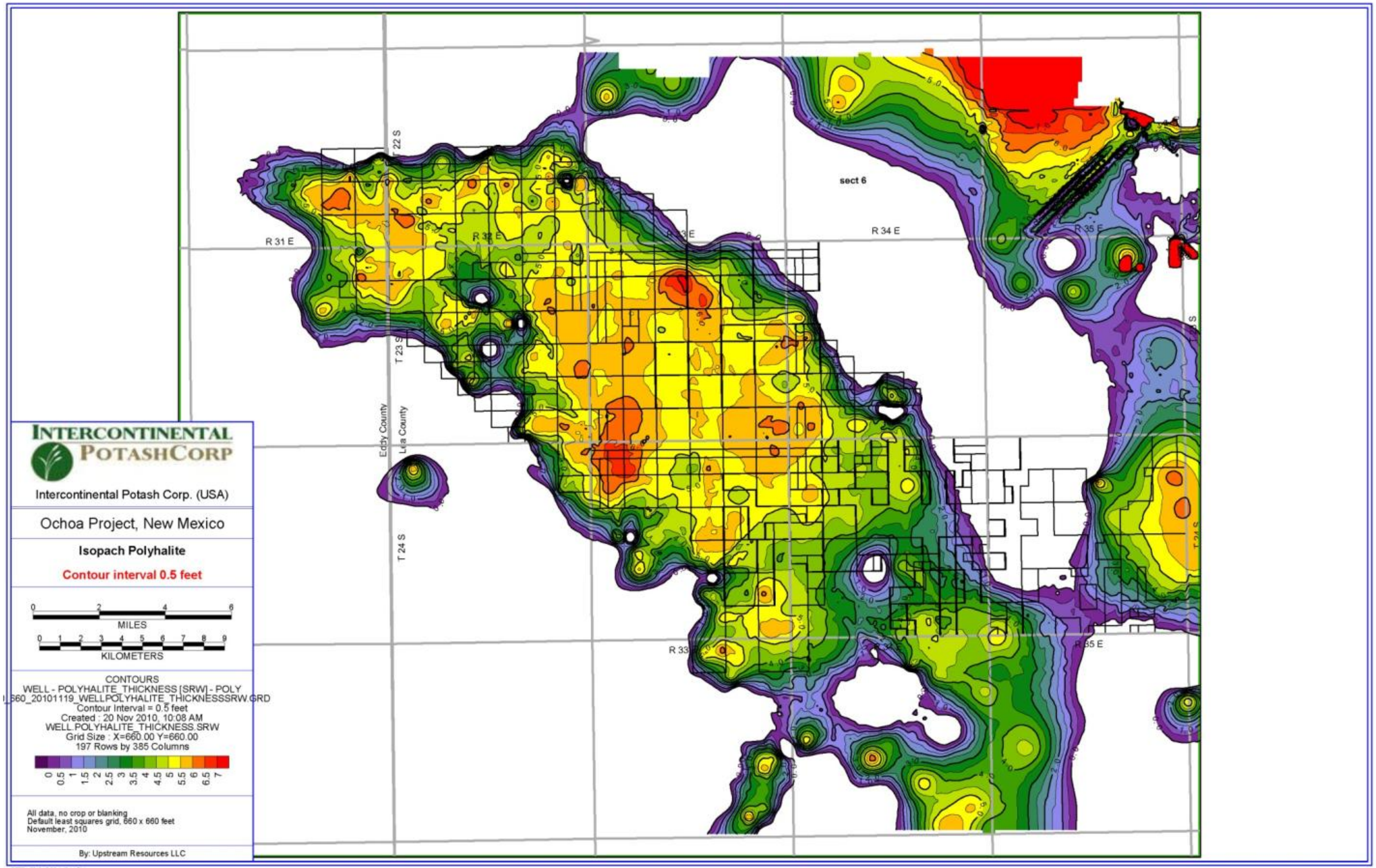


FIGURE 9-10 ISOPACH OF POLYHALITE BED

10. DEPOSIT TYPES

Economic potash resources are chemical sedimentary deposits. Potash mineralization is typically a consequence of low temperature chemical processes governed by evaporative concentration of a fluid such as seawater or freshwater. Consequently, bedded potash deposits commonly occur in basins that have restricted connection to more dilute fluid. Diagenetic processes play an important role in modifying initial evaporite mineralogy.

Potash mineralization characteristically occurs as either predominantly potassium chloride or potassium sulfate mineral assemblages. The assemblages can be found interbedded or adjacent, but rarely as a mixed assemblage in one bed.

In addition, potash beds typically can be correlated and mapped over large areas. Similarly, anomalous lithologies, such as shale beds often extend over the same large areas which can provide excellent stratigraphic control for mapping.

Bedding is often simple and conformable with the dip of the host basin unless significant post-lithification tectonic processes affect the basin. Localized folding and faulting can occur as a result. Salt tectonic processes are also possible, but this is primarily a concern in thick halite sequences in structurally disturbed terrains.

Polyhalite is an evaporite mineral that is a hydrated potassium-calcium-magnesium-sulfate salt. Polyhalite is white, colorless or gray but may be brick red or pink if it contains traces of iron oxide. It has a hardness of 2.5 to 3.5 on the Moh's scale and a specific gravity of approximately 2.8 g/cc. Polyhalite exhibits a triclinic crystal habit although it is commonly extremely fine-grained or aphanitic. When large enough crystals are present to get an interference figure, polyhalite is biaxial negative as opposed to anhydrite which is biaxial positive. Anhydrite, a common polyhalite gangue mineral, is orthorhombic with perfect cleavage and produces a biaxial positive interference figure. Physical properties such as cleavage and crystal form are sometimes observed (i.e. Schaller and Henderson, 1932) to be inherited from parent alteration phases, which sometimes results in polyhalite appearing to have the crystal form, structure and cleavage of anhydrite for instance. Another common gangue mineral with polyhalite, particularly in the underlying beds of the Salado Formation, is halite or sodium chloride salt.

Polyhalite is reported from ancient evaporite deposits in Carlsbad, New Mexico; west Texas, Hallstatt, Austria; Galicia in Poland; Stassfurt, Germany; and the Middle East. It occurs in direct association anhydrite; although kainite, carnallite and sylvite are present as separate beds deposits.

Modern occurrences of polyhalite include Ojo de Liebre, Mexico; Salar de Uyuni, Bolivia; Sebkha el Melah, Tunisia; and Tuz Gölü, Turkey. In these modern occurrences, polyhalite forms by the diagenetic alteration of gypsum. The alteration is described to occur by the reaction of increasingly concentrated brines, formed in the evaporative facies of the basin, that accumulate high K and Mg concentrations.

11. MINERALIZATION

11.1 Polyhalite Occurrence

In reconnaissance studies the polyhalite bed was defined using total gamma curve. The pick of the base and top contacts was selected at the inflection point of the gamma curve. Accurately determining the inflection point is very difficult because the ratio of the amplitude of the gamma peak to the thickness of the bed is very high. In many cases the historical interpretation was determined to overestimate the thickness of the polyhalite bed. The overestimation could be as much as 25%.

The true thickness of the polyhalite bed is only reliably known from the ICP core holes because mineral and chemical analyses were made to define the upper and lower boundaries. Comparison of the polyhalite contact with various wireline logs collected in the same core holes was made in an attempt to better define the log pattern that more closely approximates the bed.

A relationship between the resistivity curve and the polyhalite contacts was observed in the ICP core hole logs and analytical data (Figure 11-1 and 11-2). This relationship is believed to provide interpretation of the polyhalite contacts that is closer to the actual contacts and provide a more systematic control than relying on estimating the inflection point of the gamma curve.

All well control was revised using this procedure.

In addition, ICP core hole data for top and bottom of polyhalite were entered in the mapping programs to ensure maps and models correctly reflect these data points.

The resulting correlations for the top and base of the polyhalite bed portray a thinner bed than originally mapped. Thickness ranged from 0 to 6.9 feet.

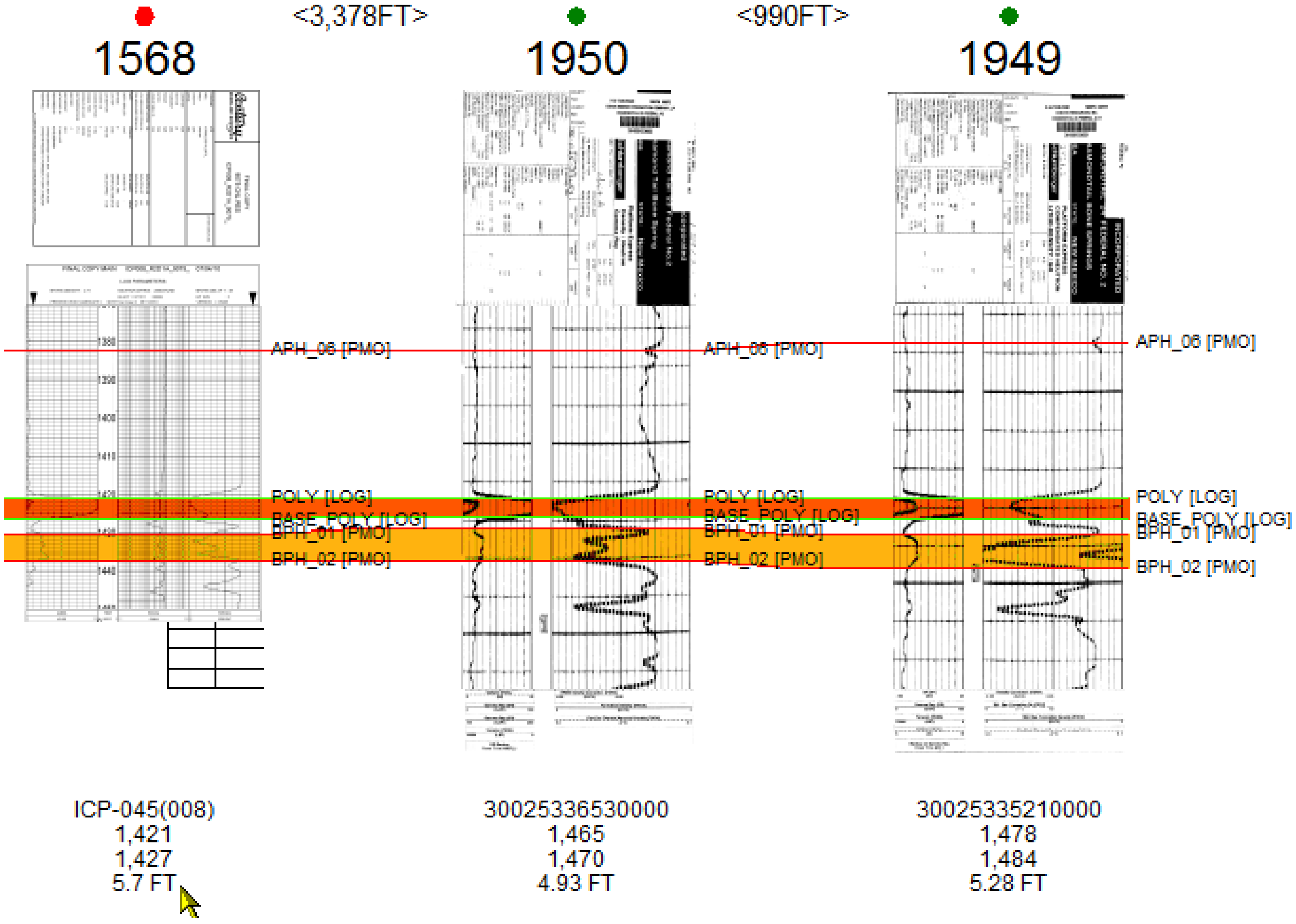


FIGURE 11-1 EXAMPLE WIRELINE LOG CORRELATION

The Figure 11-1 comparison between an ICP core hole and two nearby petroleum wells shows the detail of the typical gamma and resistivity signatures used in most correlations. Note the doublet on the resistivity curve. The 'left-right' deflection (moving up hole) corresponds closely to the base of the polyhalite bed as determined by mineral and chemical analysis. This deflection may only be a tool response that is an artifact of the thin bed transition between the underlying shale unit and the anhydritic polyhalite. Regardless of the causative relationship it provides a correlation closer to the actual base of polyhalite mineralization.

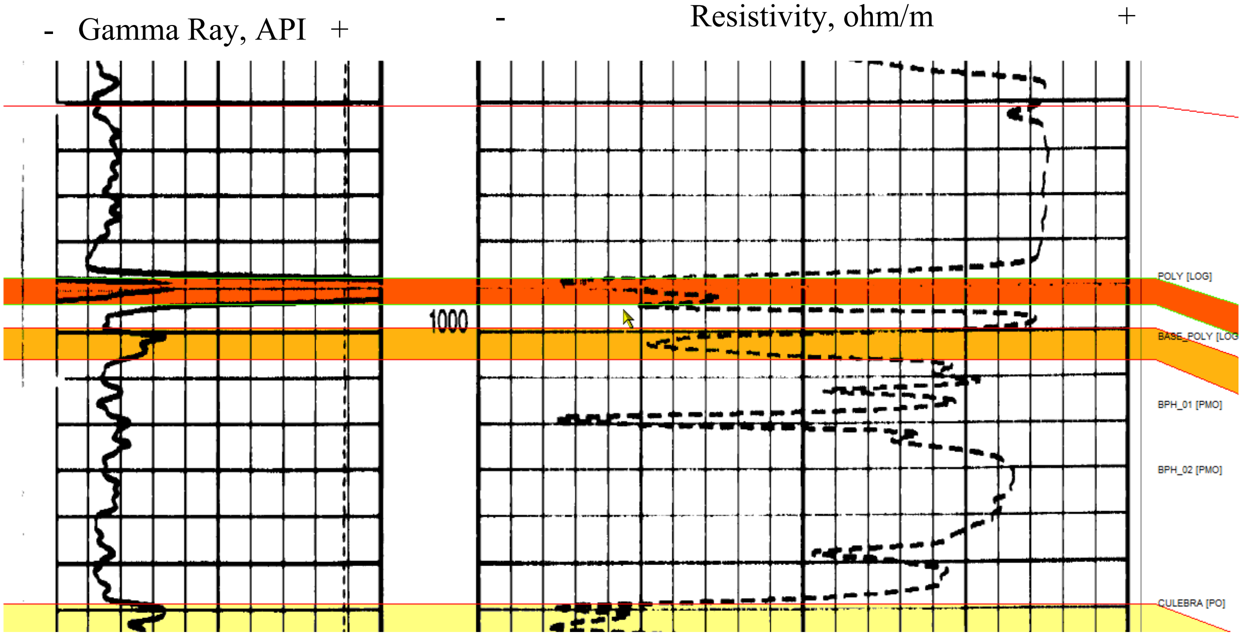


FIGURE 11-2 DETAIL OF GAMMA RAY AND ELECTRICAL LOG CORRELATION

In Figure 11-2, the left track includes the gamma ray log as a solid line with low values on the left and high values on the right. The right track has an electrical log, specifically a resistivity curve, as a dashed line. Low values are on the left and high values are on the right. Depths are in feet.

A better pick of the polyhalite bed is made in combination with the resistivity curve. Note the doublet on the resistivity curve. The base is better picked at the minimum of the lower part of the doublet. Similarly the top is better picked at the minimum of the upper part of the doublet. This results in a pick closer to the upper shoulder of the gamma curve, which occurs further to the right of the track than the inflection point.

11.2 Correlation

All available logs were reviewed and correlated using the more stringent criteria. Approximately 1,385 wells were evaluated and 802 wells were used in and immediately surrounding the AOI. This includes the 13 ICP core holes.

The ICP core holes were used to anchor all correlation efforts. The thickness of polyhalite from core analysis was tied to the wireline log signatures. Correlations were made working outward from ICP core holes. Correlation confidence is extremely high between all well control for all formation and markers, as well as for the top and base of polyhalite. Informal makers also exhibited high correlation confidence and provided additional constraint on the volume within which the polyhalite bed occurs. These informal markers also provide addition insight on lithologic characteristics associated with polyhalite mineralization.

11.3 Polyhalite Isopach

The isopach map for polyhalite was built on a 660 ft x 660 ft grid and contoured on 0.5 foot interval for thickness from 0 to 7 feet (Figure 11-10). A simple least-squares method was used because of the highly connected characteristic of the correlation and large number of control points. .

The zero line is well defined for the periphery of the main area of interest. Several zero thickness points occur within the area of interest but do not appear to persist over large areas. There is a strong association between zero thickness and increased elevation of underlying units (i.e., buried highs). Review of facies distribution is ongoing and may provide for better understanding of the associations between mineralization and the members and markers mapped.

Thickness variation within the main area of interest is relatively low. The greatest changes in thickness occur close to the margins of the polyhalite mineralization and depict an abrupt termination.

The largest effect on apparent thickness is still the positioning of contacts from log correlation. A subtle error in picking a single contact can result in 0.5 to 0.75 foot difference in apparent bed thickness.

Variation was assessed in part by compiling volume estimates at thickness cut-offs of 6, 5, and 4 feet. The following table shows the summary of the area hosting polyhalite ore at the stated cut-off thickness. The rock density determined from wireline log and core samples are the same as the density of the mineral polyhalite, all being approximately 2.78 g/cc. For simplicity in evaluating the bed thickness and mineralized volume the tonnage calculation is not adjusted for grade and is based on 100% polyhalite over the unit's entire thickness.

TABLE 11-1 COMPARISON OF POLYHALITE MINERALIZED TONNAGES AT THREE CUTOFF THICKNESSES

Cutoff thickness(FT)	Total Area (FT x FT)	Data Area (FT x FT)	Range (Ft)	Polyhalite (TONS)
6	4,143,479,100.60	182,102,091.73	6.00 – 7.00	99,042,617.61
5	4,143,479,100.60	2,047,521,539.53	5.01 – 7.00	982,315,645.02
4	4,143,479,100.60	3,041,429,545.28	4.02 – 7.00	1,377,146,145.51

For a 6 foot cutoff, 2 focus areas are evident. In the northwest, 14 contiguous parcels contain an estimated potential for 9,379,000 tons of polyhalite (not adjusted for grade). In the south central part of the study area a 25 parcel group contains an estimated potential for 49,776,000 tons of polyhalite (not adjusted for grade). An additional estimated 21,787,000 tons are estimated in 5 closely neighboring parcels to the northwest, and another estimated 8,241,000 tons are in present in 15 parcels to the east. Together these three groups amount to about 79,805,000 tons of polyhalite (not adjusted for grade).

Using a 5 foot cutoff makes substantially all parcels significant in terms of potential polyhalite tonnage. Note that both high tonnage and high average thickness occur in a persistent west to east trend across the center of the lease area. The northwestern parcels contain marginally lower apparent tonnage and average thickness but are still significant.

A 4 foot cutoff was used to assess the sensitivity of the tonnage and thickness model. The inclusion of the extra 1 foot added approximately 400,000,000 tons to the model over a 50% increase in data area in contrast to the 10-fold increase in tons over a 10-fold increase in data area between the 6 foot and 5 foot cutoff. This suggests little variability throughout the mineralized area, and largely adds tonnage at the margin of the mineralized area. Similarly, the average thickness calculated in each parcel shows no or very small (e.g. 0.1 ft) decrease from the 5 foot cutoff average to the 4 foot cutoff average. This too supports the position that thickness variation is small at locations inward from the margin of mineralization.

12. EXPLORATION

Exploration efforts over the past 15 months accomplished the recommendations of the August 2009 PEA. Furthermore, ICP cored 7 additional locations, collected comprehensive petrophysical borehole logs, and completed extensive mineral and chemical analyses of the lithologies from the target zone.

ICP has utilized this information and improved its understanding and interpretation of the geologic setting, nature and control of polyhalite mineralization, and characteristics of grade of the polyhalite bed.

12.1 Subsurface Mapping

Fifteen (15) petrophysical wireline log markers were defined for the rock package between the top Rustler Formation to the top Salado Formation (inclusive). Six of these are formal lithostratigraphic units and commonly mapped in the study area (Figure 12-2). The remaining seven markers are related to beds within the formal members and unique petrophysical responses observed in particular logs. Table 10-2 summarizes the correlation markers, and Figure 12-3 illustrates the log pattern for the markers and units.

At this stage, correlation and mapping is not interpretive for depositional environment or facies analysis. In other words, the mapping is limited to establishing structural framework, defining lithostratigraphic volumes, and evaluating physical trends such as changes in elevation and thickness.

Variations in some marker units were observed but those have not been evaluated in detail or made consistent in the mapping procedures. For example, the unit between APH-01 and APH-02 was initially defined on one elevated gamma bed but as mapping continued two beds became apparent. Thus the APH-02 marker should be reviewed and moved downward to include the second bed where the second bed is present.

Another example relates to the Halite_U marker and subjacent markers APH_05 and APH_06. One type of appearance for the pick of Halite_U is characterized by a sharp deflection to lower resistivity readings and a subtle increase in baseline gamma (see well 343 in Figure 12-3). Another appearance for the pick is characterized by a well defined, high amplitude doublet or triplet (see well 988 in Figure 12-3). The doublet or triplet can appear over a thick interval (e.g. up to 25 feet) and also seen to occur lower in the section closer to the polyhalite bed.

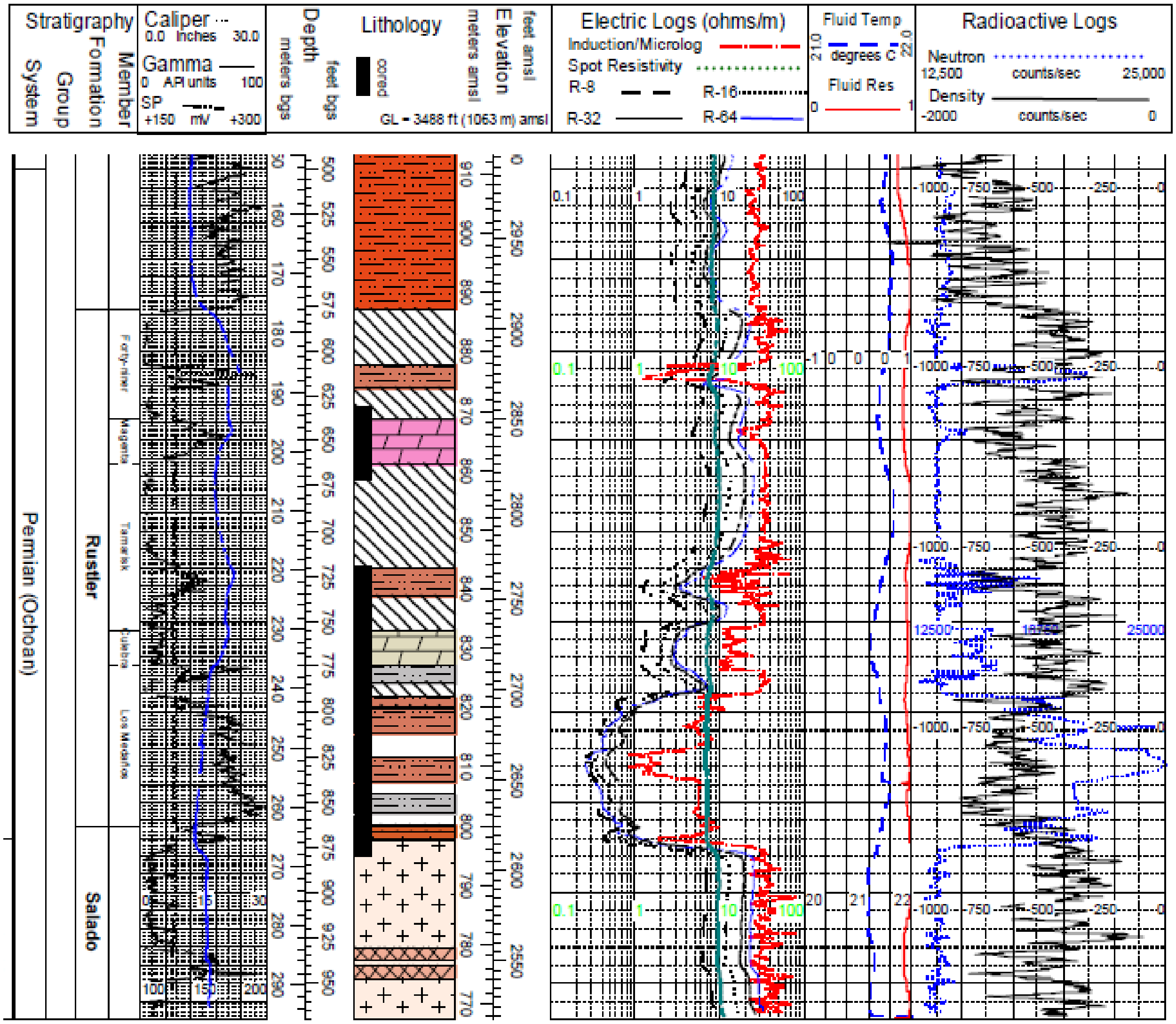


FIGURE 12-1 TYPICAL WIRELINE LOG SUITE WITH INTERPRETED LITHOLOGIC LOG

Formation and member contacts are based on conventional definitions in the immediate area of the project as exemplified by following excerpt from Powers and Richardson (2004).

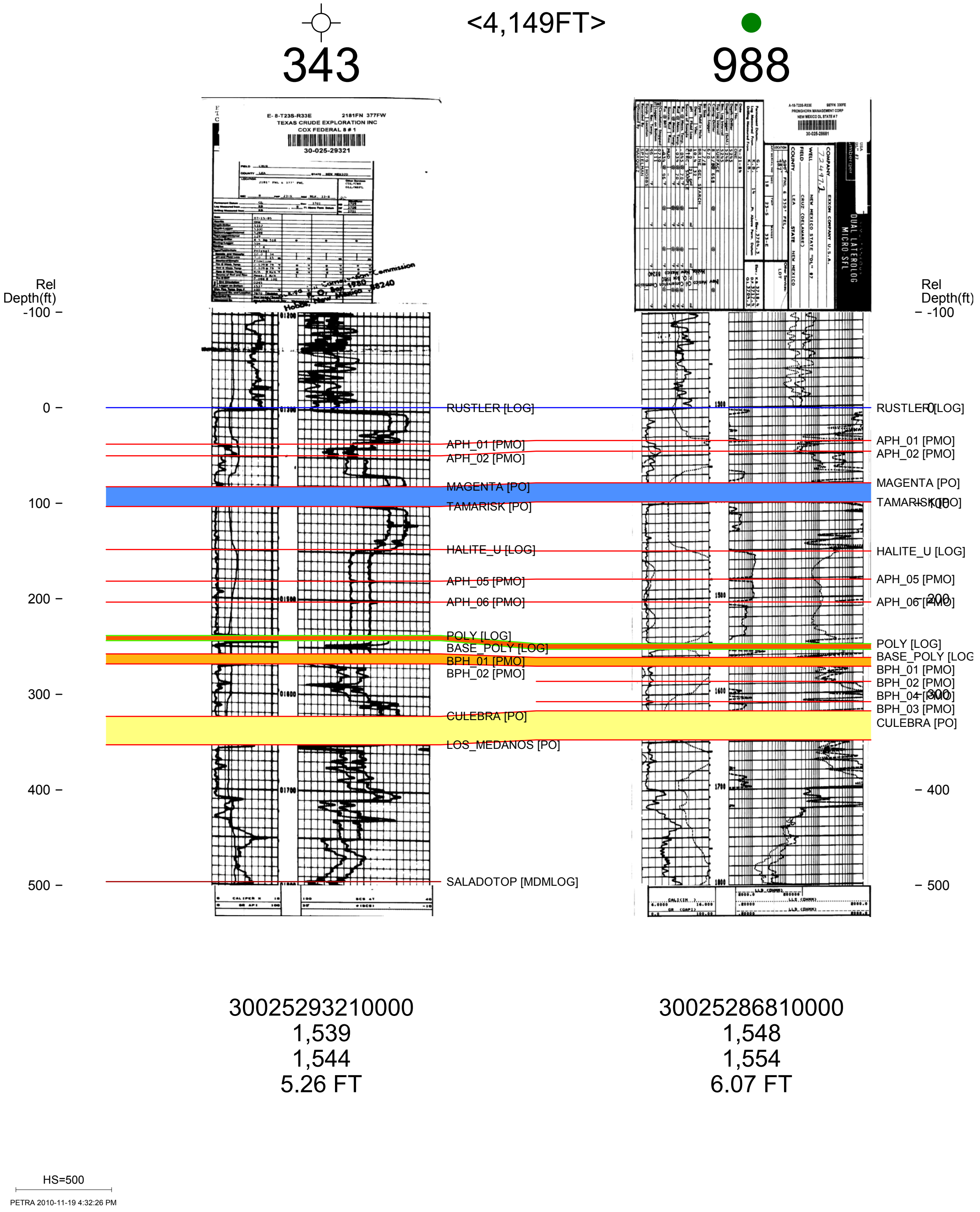


FIGURE 12-2 TYPICAL LOGS

Example of formations, members, and markers correlated and mapped in ICP's most recent work. Note: Usefulness of BPH-03 and BPH-04 were low and mapping of these markers was abandoned.

12.2 General Structural Framework and Fabric

All 15 markers are unique and easily discernable. However, the following markers were not always present: Halite_U, APH_05, APH_06, Top Polyhalite, and Base Polyhalite.

12.2.1 Pre-polyhalite Markers

The Salado, Los Medanos, and Culebra can be correlated confidently throughout the study area and therefore provide very strong interpretation of the basin structure and extent of depositional conditions before deposition of the polyhalite host unit.

The structure map on the top Salado Formation (Appendix Figure A01) reveals a northwest-southeast trending sub-basin with closure on the northwest end. The sub-basin is bound on the northeast margin by a narrow elevated ridge which is in turn bordered by an abrupt depression. The depression corresponds to the location of the San Simon Swale. The western margin is a broad ramp increasing in elevation to the west.

A secondary ridge is indicated in the southeast end of the sub-basin located in T25S-R34E. This ridge is oriented north-south

The top Los Medanos and top Culebra mirror the top Salado Formation fabric (Appendix Figures A02 and A03). The slope of these three surfaces are similar throughout the study area.

The BPH_02 and BPH_01 markers are also reliable but slightly less prevalent than the other pre-polyhalite bed markers. The markers define the base and top of a claystone-siltstone bed. It is always present below the anhydrite-polyhalite bed, but it also found in some ares where polyhalite does not appear to be developed.

Structure mapping on the top BPH_01 reveals a similar fabric as the subjacent markers (Appendix Figure A04). The slope appears slightly flatter throughout the study area. The secondary ridge in T25S-R34E is still present and shows an indication of developing a saddle in the northeast quadrant of the township.

12.2.2 Polyhalite Mineralization

Base and top polyhalite strucuture maps mirror the top BPH_01 map (Appendix Figure A05). The polyhalite isopach map reveals that thickness variation is not strongly related to the structural position within the basin (Appendix Figure A10). Polyhalite thickness does not appear to thin gradually with a change in structural depth. However, polyhalite mineralization clearly thins over a short horizontal distance and a well defined zero thickness line is present.

Note the compression of isopach lines for the 0 through 4 feet into a narrow band. This band and the zero line broadly coincide with a constant structural depth. In addition, polyhalite thickness is variable, being thin or absent, over the secondary ridge in T25S-R34E.

Well control in the northeast (T22S, R34E to R36E) and east (T23S and T24S, R36E) is too sparse to provide reliable insight. This is not a concern because the northeast and east area are approximately 700 feet deeper than the study area, which makes it too deep for consideration.

12.2.3 Post-Polyhalite Stratigraphy

The most persistent markers superjacent to polyhalite mineralization are: Halite_U, top Tamarisk member, top Magenta member, and top Rustler Formation (see Appendix Figures A06 through A09). These markers indicate that the same structure framework below polyhalite mineralization continued throughout the remainder of Rustler time. Slope is also similar at all markers.

The APH_05 and APH-06 markers are not mappable throughout the study area. In some areas it is clear that the markers are not present, whereas in other areas the available logs do not permit identification. In areas where the markers are clearly not present it appears to be caused by thinning of the lithology between the top polyhalite and the top Halite_U markers.

The APH_01 and APH_02 markers, located just below the top Rustler Formation are mappable throughout the area. The APH_01 marker is defined to be the top of the first high gamma unit below the top Rustler Formation. The APH_02 was initially defined to be the base of the first high gamma unit. Later in the mapping program a second high gamma unit was found which was clearly not the top Magenta marker. This requires that the markers be re-evaluated throughout the study area to be sure they are consistently mapped. However, these two markers are not significant to the structural and depositional evaluation of the study area. The review of the markers is a low priority.

12.2.4 Basin Interpretation

Mapping the subsurface markers of the Rustler Formation throughout the reconnaissance area is summarized by:

- Elongate depression oriented northwest-southeast
- Closed in the northwest and open but restricted in the southeast
- Bounded on the east by a well defined ridge (50 to 200 ft relief, 2 to 3 miles wide)
- Bounded on the west and north by broad sloping ramp
- No disruptions were identified (e.g. sharp elevation changes, sharp isopach variations, or sharp slope changes from marker to marker)
- No significant migration of the basin depocenter axis or other framework features including highs, lows, and edges
- Variation in thickness between markers is very consistent, but clearly thin or truncate toward and at the edges of the sub-basin.
- No clear evidence of significant faults were seen

The study area is interpreted to be a depositional basin that has undergone uplift and minor structural changes. Very strong correlation of markers, consistent thickness between markers, consistent slope of surfaces within the sub-basin, and thinning and truncation of markers near areas where underlying markers shallow support the interpretation of a structurally quiescent depositional basin. The present shape and slope in the basin is probably enhanced by post-lithification events in the region. The most important being salt dissolution and subsidence in the Nash Draw to the west and the San Simon Swale to the east. The structural overprinting is minor.

13. DRILLING

13.1 Drilling and coring

ICP has successfully drilled, cored, logged, and abandoned thirteen (13) holes across the permit area during a two phase exploration drilling campaign, see Table 13-1 and Figure 13-1 below. The basic well plan for all holes involved drilling the uphole section from surface to near the top Rustler Formation using water based mud. In most holes casing was set to isolate the uphole units to protect shallow aquifers and isolate potential porous and permeable drilling fluid loss zones. No aquifers were detected. Loss zones did occur in several holes but were managed with lost circulation materials. In one case a cement plug was set to heal a loss zone. No holes were abandoned prematurely.

TABLE 13-1 DRILLHOLE LOCATION SUMMARY

Hole ID	Latitude	Longitude	Exploration Period	
ICP-021(001)	32.32863	-103.57034	Phase 1	
ICP-022(002)	32.32112	-103.59638	Phase 1	
ICP-026(003)	32.29826	-103.54411	Phase 1	
ICP-047(004)	32.32817	-103.71689	Phase 1	
ICP-043(005)	32.36093	-103.70203	Phase 1	
ICP-051(006)	32.33037	-103.63364	Phase 1	
ICP-042(007)	32.30387	-103.62519	Phase 2	2 sidetrack core runs followed vertical
ICP-045(008)	32.29200	-103.64948	Phase 2	
ICP-048(009)	32.33019	-103.66262	Phase 2	
ICP-062(010)	32.24656	-103.53288	Phase 2	
ICP-063(011)	32.24222	-103.56439	Phase 2	
ICP-061(012)	32.23798	-103.60031	Phase 2	
ICP-056(013)	32.26985	-103.59969	Phase 2	

For the target evaporite intervals, drilling fluid was changed to salt saturated mud and drilling continued to the core point. The core point was forecast using offset well control and confirmed during drilling by interception of an anhydrite marker bed approximately 20 feet above the polyhalite. At that point, the bit was tripped out, swapped for a core barrel and bit, tripped back in, and coring was initiated for a forty foot core run cut to total depth (TD). The core barrel and drill string was then tripped out.

Upon completion of coring, the hole was logged with wireline petrophysical tools. Phase 1 work collected only basic logs including total gamma, caliper, and electric logs. No density or neutron logs were acquired. The specific tools used in Phase 1 varied and presentation was not standardized. Phase 2 holes were logged using a consistent suite of tools and included additional curves such as spectral gamma, additional electric logs including laterolog and induction logs, formation density, and neutron density.

TABLE 13-2 SUMMARY OF WIRELINE LOGS COLLECTED

	Hole ID	Caliper*	Gamma	Spectral Gamma	Sonic	Density	Neutron	Resistivity*	Directional survey
Phase 1 Drilling Program	ICP-021(001)	x	x	n	x	n	n	n	x
	ICP-022(002)	x	x	n	x	n	n	n	x
	ICP-026(003)	x	x	n	n	n	n	n	x
	ICP-047(004)	x	x	n	x	n	n	n	x
	ICP-043(005)	x	x	n	n	n	n	x	x
	ICP-051(006)	x	x	n	x	n	n	x	x
Phase 2 Drilling Program	ICP-042(007)	x	x	x	x	x	x	x	x
	ICP-045(008)	x	x	x	x	x	x	x	x
	ICP-048(009)	x	x	x	x	x	x	x	x
	ICP-062(010)	x	x	x	x	x	x	x	x
	ICP-063(011)	x	x	p	x	x	p	x	x
	ICP-061(012)	x	x	x	x	x	x	x	x
	ICP-056(013)	x	x	x	x	x	x	x	x

***1-arm caliper run in all holes, 3-arm caliper run in Phase 2 holes; resistivity logs variously included guard, induction, and normal**
N = not run
P = hole problems prevented complete run

Core recovery in the polyhalite and anhydrite zones was excellent in terms of both length and minimal alteration of the rock by the salt based drilling fluid. Halite zones above and below the polyhalite reacted with the drilling fluid and partially dissolved. The degree of dissolution depended on the salt saturation condition of the drilling fluid. In most cases, the core was under gauge by less than 1 to 2 mm. Severe reduction in gauge (e.g. 1 cm radial reduction) occurred when the drilling fluid was not properly conditioned or maintained near salt saturation or when there was a prolonged coring time caused by slow penetration rate at the anhydrite and polyhalite horizons.

Chemical alteration (reaction) between the drilling fluid and rock-forming minerals is possible but does not appear to be a significant issue. Visual appearance of the surface of the core does not show any significant pitting or efflorescence. The core was not washed or scrubbed to remove drilling fluid. Thus it is possible that some amount of the halite detected by XRD is drilling fluid contamination.

In addition to core, drill cuttings were collected at 5 foot intervals from spud to total depth. After completion of drilling and logging operations, all wells were plugged from total depth to surface.

Well summary reports were not prepared for Phase 1 wells (ICP001 through ICP006). However, well documents and logs are on file in ICP's field office. Well summary reports were compiled for Phase 2 wells (ICP007 through ICP013). These too are on file in the field office.

FIGURE 13-1 CORE HOLE LOCATIONS.

Location map showing ICP core holes from Phase 1 and Phase 2 drilling campaigns.

14. SAMPLING METHOD AND APPROACH

14.1.1 Core Recovery and Handling

Core drilling was conducted in salt brine drilling fluid. Brine composition was checked by the drilling fluid contractor upon delivery of the brine. The brine was acceptable if it contained no potassium and density was at least 9.5 pounds per gallon. Halite was added to the brine and the density was raised to 10.0 pounds per gallon prior to starting the salt mud section of the hole. Effort was made to ensure the brine was at halite saturation throughout the salt mud section of the hole and all core runs by regularly checking brine composition and density.

Coring was conducted using conventional core barrel. No liner or splits were used. The cored interval was usually 40 feet in length and required one connection be made (2 x 20 foot joints). Retrieval was made by tripping the drilling string and using a standard core jack to control the removal of the core from the barrel. Removal was done with the barrel hanging vertically in the tower.

Core was labeled to indicate vertical orientation and boxed at the catwalk. After recovery the core was immediately laid out, measured, briefly described, and labeled with drilling depth. The core was boxed in labeled core boxes and transported to the core storage facility.

Core recovery was very good in terms of length. Gauge or diameter of the core was variable in halite sections but full gauge in anhydrite and polyhalite zones.

Core logging was conducted at the core facility. The core was laid out and depth matched to petrophysical logs prior to sampling. The upper and lower polyhalite-anhydrite contact was identified visually as well as with the assistance of a handheld gamma ray detector.

14.1.2 Sample Selection and Processing

The polyhalite interval was marked in 6 inch sample intervals. In addition, sample intervals were extended 12 to 24 inches above and 12 to 18 inches below the polyhalite contacts. The core was split in half using a hydraulic splitter, and one half was split again. The analytical sample was taken from the quarter core. The unused half and quarter were bagged in plastic sleeves, sealed and returned to the core boxes for storage.

The analytical sample was assigned a sample number and the rock and sample tag were sealed in a plastic bag. If a duplicate sample was prepared the other quarter core was submitted separately. The duplicate was assigned a different sample number.

An analytical batch consisted of 12 to 20 samples made up of: core samples, 1 or 2 duplicates, 1 standard reference material (SRM), and 1 blank. In Phase 1, no duplicates were run, SRM was polyhalite, sylvite, langbeinite, or commercial fertilizer; and the blank was quartz sand. Upon review of the first program a decision was made that too many standards were being used and the composition of those standards were not established. In addition, the blank (a silicate) was determined to be inappropriate because it was not of similar matrix to the sample (i.e. sulfate). Therefore, in Phase 2 the SRM was limited to langbeinite, polyhalite, and arcanite (reagent grade K_2SO_4); and the blank was reagent grade $CaSO_4$.

15. SAMPLE PREPARATION, ANALYSES, AND SECURITY

15.1 Sample Preparation

Samples were shipped to a contract lab that performed the sample preparation followed by x-ray diffraction (XRD) and x-ray fluorescent (XRF) analysis. Following is the sample and analytical procedure as described by each lab:

The Mineral Lab, Inc. **12929 W. 26th Avenue, Suite 100** **Golden, Colorado 80401** **Tel. 303-232-8708** **Peggy Dalheim**	**H & M Analytical Services, Inc.** **35 Hutchinson Road** **Allentown, NJ 08501** **Tel. 609-758-7500** **William E. Mayo, Ph.D. Chief Scientist**
“The core samples were crushed to -1/4" size before grinding and analysis. A representative portion of each sample was then ground to approximately -400 mesh in a steel swing mill and analyzed by our standard XRF procedure for 31 major, minor and trace elements. The relative precision/accuracy for this procedure is ~5–10% for major–minor elements and ~10–15% for trace elements (those elements listed in ppm) at levels greater than twice the detection limit in samples of average geologic composition. A replicate sample and a standard reference material ("SY4", a CANMET standard rock) were analyzed with the samples to demonstrate analytical reproducibility for your samples and analytical accuracy for a geologic standard, respectively. The accepted ("known") values for the quality control standard are listed with the XRF results. A representative portion of each ground sample was packed into a well-type holder and scanned with the diffractometer over the range, 3-61° 22 using Cu-K" radiation. The results of the scans are summarized as approximate mineral weight percent concentrations on the Table 15-1. Estimates of mineral concentrations were made using our XRF-determined quantitative elemental compositions and the relative peak heights/areas on the XRD scans. The detection limit for an average mineral in these samples is ~1-3% and the analytical reproducibility is approximately equal to the square root of the amount.”	“The solid samples were crushed with a jaw crusher to <6mm and then split into two subsamples of approximately 80% and 20% by volume. The smaller subsample was kept for archival purposes while the larger subsample was ground to <100µm in a Retsch Planetary Mill. A small portion of this homogenized powder was further ground with a mortar and pestle to a fine powder that was suitable for XRD and XRF analyses. A small amount of each fine powder was placed into a standard sample holder and put into a Bruker D4 X-ray diffractometer using Cu radiation at 40KV/40mA. Scans were run over the range of 10° - 80° with a step size of 0.02° and a counting time of 143 seconds per step. Once the diffraction patterns had been collected I used the ICSD database to identify the phases. Finally, the quantitative phase analysis was performed with a Rietveld Refinement analysis, which is considered the gold standard with a typical accuracy of about 1%. The fluorescence samples were mixed with 20% Paraffin and pressed in a die at 30 tons for 5 minutes to produce a standard 40mm XRF specimen. Each pellet was then tested on a Bruker S4 Wavelength Dispersive X-ray Fluorescence Spectrometer for elements between Na and U. This spectrometer is a sequential instrument that examines one element at a time using KV settings, filters, collimators and monochromators that are optimized for each element. Semi-quantitative analysis is then performed with the aid of a Fundamental Parameters method that is a standardless technique. This method takes into account the fluorescence yield, absorption and matrix effects to estimate the atomic chemical analysis. This technique has an accuracy of about 5% for the major elements.”

The analytical sample, the pulp, was returned to ICP. The samples were then sent to a contract laboratory for OES, carbon, and sulfur analysis. The same sample numbers were used.

Sample preparation for OES analysis utilized several digestion approaches. Phase 1 samples were prepared using either aqua regia (hydrochloric and nitric acid mixture) or a 4-acid (nitric, perchloric, hydrofluoric, and hydrochloric acid mixture) at 260 degrees C. Review of the results for standard reference material indicated the OES data were under-reporting K as well as probably Ca, Mg, and Sr. Chemists from the analytical facility suggested that a precipitate may have formed or incomplete digestion occurred causing the lower than expected values.

Due to this under-reporting of potassium, assessment of lithium metaborate fusion as an alternative preparation technique was undertaken using the same standard reference materials and also including a second laboratory. The result was judged to be better and the procedure was adopted for use in Phase 2. Thus, all Phase 2 samples were prepared using the lithium metaborate technique. In addition, ICP001 from Phase 1 was rerun using this preparation technique and the data were compared with the initial prep technique. These data are being reviewed to determine if they provide a significant benefit over the XRD-XRF procedure. Results for three core holes are pending, therefore the evaluation will take place Q1 of 2011.

OES analysis does not measure sulfur and carbon. Therefore, these elements must be determined separately. Sulfate sulfur was analyzed using a gravimetric technique. The sample was boiled with sodium carbonate and filtered. The solution was treated with hydroxylamine hydrochloride to reduce iron and filtered. The final solution was titrated with barium chloride and to precipitate sulfate as barite. The barite was filtered and weighed to calculate total sulfate sulfur. The detection range is reportedly 0.01% to 50% sulfur.

Carbonate carbon was measured coulometrically by acidifying the sample with perchloric acid. The evolved carbon dioxide was passed through the coulometer equipped with a photo cell detector. The detection range is reportedly 0.05% to 13.6% carbon.

Note that Phase 1 samples were not analyzed for carbonate carbon and in four cases were not analyzed for sulfate sulfur. This hampers the process for normalizing data to calculate mineral abundance because the estimates of magnesite, polyhalite, and anhydrite cannot be additionally constrained by the amount of carbonate and sulfate in the sample.

Table 15-1 below summarizes the analytical procedures and lab used for samples from each core hole.

TABLE 15-1 CORE SAMPLE ANALYSES AND LABS

Drill Hole	XRD	XRF	OES	C	S	Cl
ICP001	TML (Mineral Table)	Not Purchased	ALS (06, 61a)	ALS (C-GAS05)	not analyzed	Cl-NAA07
ICP002	TML (Mineral Table)	Not Purchased	ALS (61a)	ALS (C-GAS05)	not analyzed	Cl-NAA07
ICP003	TML (Mineral Table)	Not Purchased	ALS (61a)	not analyzed	not analyzed	not analyzed
ICP004	TML (Mineral Table)	Not Purchased	ALS (61a)	not analyzed	not analyzed	not analyzed
ICP005	TML (Mineral Table)	Not Purchased	ALS (61a)	not analyzed	not analyzed	not analyzed
ICP006	TML (Mineral Table)	Not Purchased	ALS (61a)	not analyzed	not analyzed	not analyzed
ICP007	TML (Mineral Table, Traces)	TML (Element Table)	ALS (06)	ALS (C-GAS05)	ALS (S-GRA06)	not analyzed
ICP008	TML (Mineral Table, Traces)	TML (Element Table)	ALS (06)	ALS (C-GAS05)	ALS (S-GRA06)	not analyzed
ICP009	TML (Mineral Table)	TML (Element Table)	ALS (06)	ALS (C-GAS05)	ALS (S-GRA06)	not analyzed
ICP010	TML (Mineral Table)	TML (Element Table)	ALS (06)	ALS (C-GAS05)	ALS (S-GRA06)	not analyzed
ICP011	H&M (Mineral Table, Traces)	H&M (Element Table)	*in lab*	*in lab*	*in lab*	not analyzed
ICP012	H&M (Mineral Table, Traces)	H&M (Element Table)	*in lab*	*in lab*	*in lab*	not analyzed
ICP013	H&M (Mineral Table, Traces)	H&M (Element Table)	*in lab*	*in lab*	*in lab*	not analyzed
Note:	ICP001 was re-analyzed using lithium metaborate preparation procedures (ALS06) to verify that Li metaborate prep was yielding					
	better analytical results. Incomplete sample digestion was interpreted in the data from samples prepared by aqua regia, and					
	precipiation or complexing of K-bearing compound was interpreted in the data from samples prepared by 4-acid digestion.					
Key:						
Abbreviation	**ALS Code**	**Procedure**				
C-GAS05	C-GAS05	Inorganic Carbon (CO2)				
Cl-NAA07	Cl-NAA07	High Grade Chlorine by NAA				
6	ME-ICP06	Whole rock package - ICP-AES	Lithium metaborate fusion prep			
61a	ME-ICP61a	High grade four acid ICP-AES	4-acid or aqua regia prep			
S-GRA06	S-GRA06	Sulfate sulfur- carbonate leach				

15.2 Data Used in Grade Determination

The quantitative XRD-XRF procedures currently provide the best evaluation of mineralogy and grade. The XRD analysis is critical to identifying the major and minor minerals (e.g. polyhalite, anhydrite, magnesite, and halite) and confirming the absence or very low abundance of certain minerals (e.g. langbeinite, kainite, gypsum, calcite, dolomite, quartz, and clays).

The XRF results are well suited for use in calculating mineral abundance in this project because the procedure reports S and Cl. This avoids the use of sample splits as is required by the OES technique, which may introduce variability between splits cause by sample heterogeneity and analytical procedures (i.e. gravimetric and coulometric preparation and analysis).

The XRD-XRF reporting for grade does suffer one limitation attributable to one of the labs. In the case of results presented by The Mineral Lab (TML) the weight percent mineral reported is sometimes as a semi-quantitative value in the form of ‘greater than’ an amount. This limitation is caused by the lab’s data reduction method. In contrast, results from H&M Analytical are reported to a greater degree of certainty. H&M was used only for holes ICP011, ICP012, and ICP013.

Calculations of mineral abundance utilized TML results by using the threshold value in the calculation. Thus a value reported as “>85” was entered into equations as “85”. The consequence of this treatment is that the grade estimate is probably a minimum grade. The threshold problem only affects situations of high abundance.

15.3 Mineralized Thickness and Grade

Analytical data was composited to identify the optimum thickness and grade for each core hole. Comparison of the mineral abundance, chemical concentration, and borehole geophysical logs was made to assess the nature of the top and bottom contacts, as well as any zonation and interburden.

Both upper and lower contacts are sharp and occur as an abrupt change from anhydrite to polyhalite. Sampling intervals were typically 6 inches or 3 inches and clearly defined the boundary in either case. No interburden was observed.

A subtle vertical increase in polyhalite abundance is evident. This creates lower and upper zones which appear as approximately sub-equal portions of the polyhalite bed (i.e. half the bed thickness). This pattern is evident in the mineral abundance and chemical data as well as the log patters for gamma, spectral gamma, and neutron porosity (reflecting the hydrous nature of the polyhalite).

Details for the analytical data are tabulated in Appendix Figures A11 through A23. Also included are composite logs showing the relationship between chemistry, mineralogy, and petrophysical logs (Appendix Figures A24 through A36). Grade was calculated as a weighted average in each hole. The range and average of these calculations are tabulated below. Tables 13-2 and 13-3 below summarize the compositions of the polyhalite zone intercepted by the core holes.

TABLE 15-2 WEIGHTED AVERAGE MINERAL COMPOSITIONOF CORE HOLES

HoleID	Thickness	Polyhalite	Anhydrite	Halite	Magnesite
ICP-021(001)	5.99	0.85	0.03	0.04	0.02
ICP-022(002)	5.3	0.81	0.09	0.03	0.05
ICP-026(003)	5.03	0.79	0.07	0.05	0.07
ICP-047(004)	4.8	0.78	0.12	0.02	0.06
ICP-043(005)	6.26	0.86	0.02	0.06	0.05
ICP-051(006)	5.65	0.76	0.06	0.09	0.07
ICP-042(007)	5.8	0.84	0.06	0.01	0.05
ICP-045(008)	5.7	0.85	0.01	0.07	0.05
ICP-048(009)	4.98	0.84	0.04	0.05	0.06
ICP-062(010)	5.8	0.84	0.06	0.02	0.06
ICP-063(011)	4.3	0.80	0.05	0.06	0.09
ICP-061(012)	6.6	0.89	0.04	0.03	0.04
ICP-056(013)	6.2	0.88	0.04	0.03	0.05

TABLE 15-3 COMPOSITION STATISTICS FOR CORE HOLE SAMPLES

	Thickness	Polyhalite	Anhydrite	Halite	Magnesite
Maximum	6.60	89%	12%	9%	9%
Minimum	4.30	76%	1%	1%	2%
Average	5.57	83%	5%	4%	6%
Standard deviation	0.66	4%	3%	2%	2%

Figure 15-1 below illustrates the mineral abundance, grade, and thickness for each hole. It also shows the variation in those calculations when changes are made in the position of either or both bed boundaries. Addition or exclusion of one sample at the contact can have a significant effect. This indicates that bed boundaries for the polyhalite mineralization are well identified and correctly placed.

Figure 15-2 below illustrates the average grade by location for ICP core holes. No pattern for the occurrence of polyhalite grade is evident. The distribution of grade throughout the study area is considered to be relatively even and consistent. The calculated average grade of the 13 holes is 83% polyhalite which is used for resource estimation calculations.

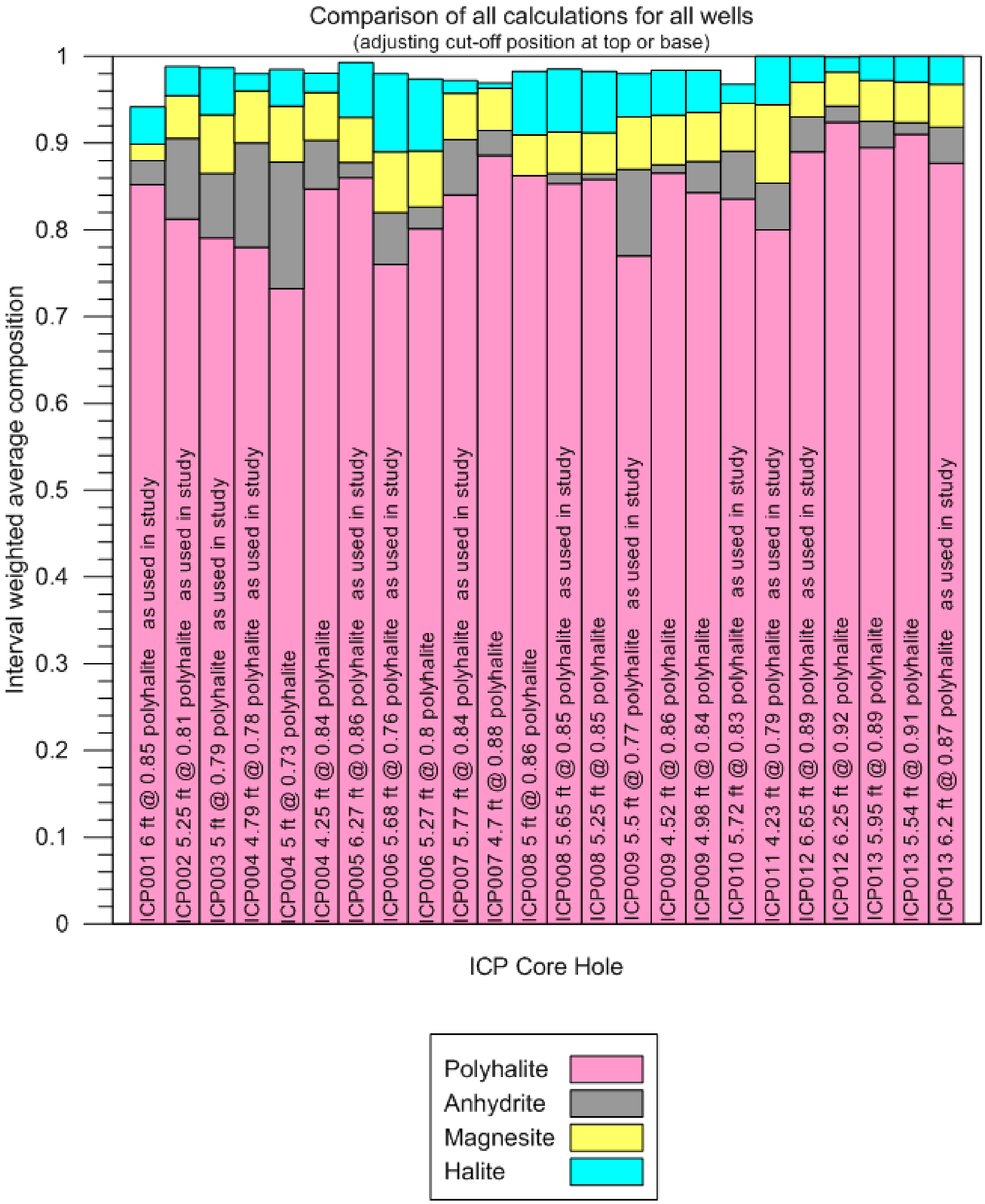


FIGURE 15-1 BED THICKNESS AND GRADECOMPARISON OF POLYHALITE BED THICKNESS AND GRADE BETWEEN ALL ICP CORE HOLES.

Also shown is the variation in thickness and grade for certain holes where the selection of the top or bottom contact could influence the calculation.

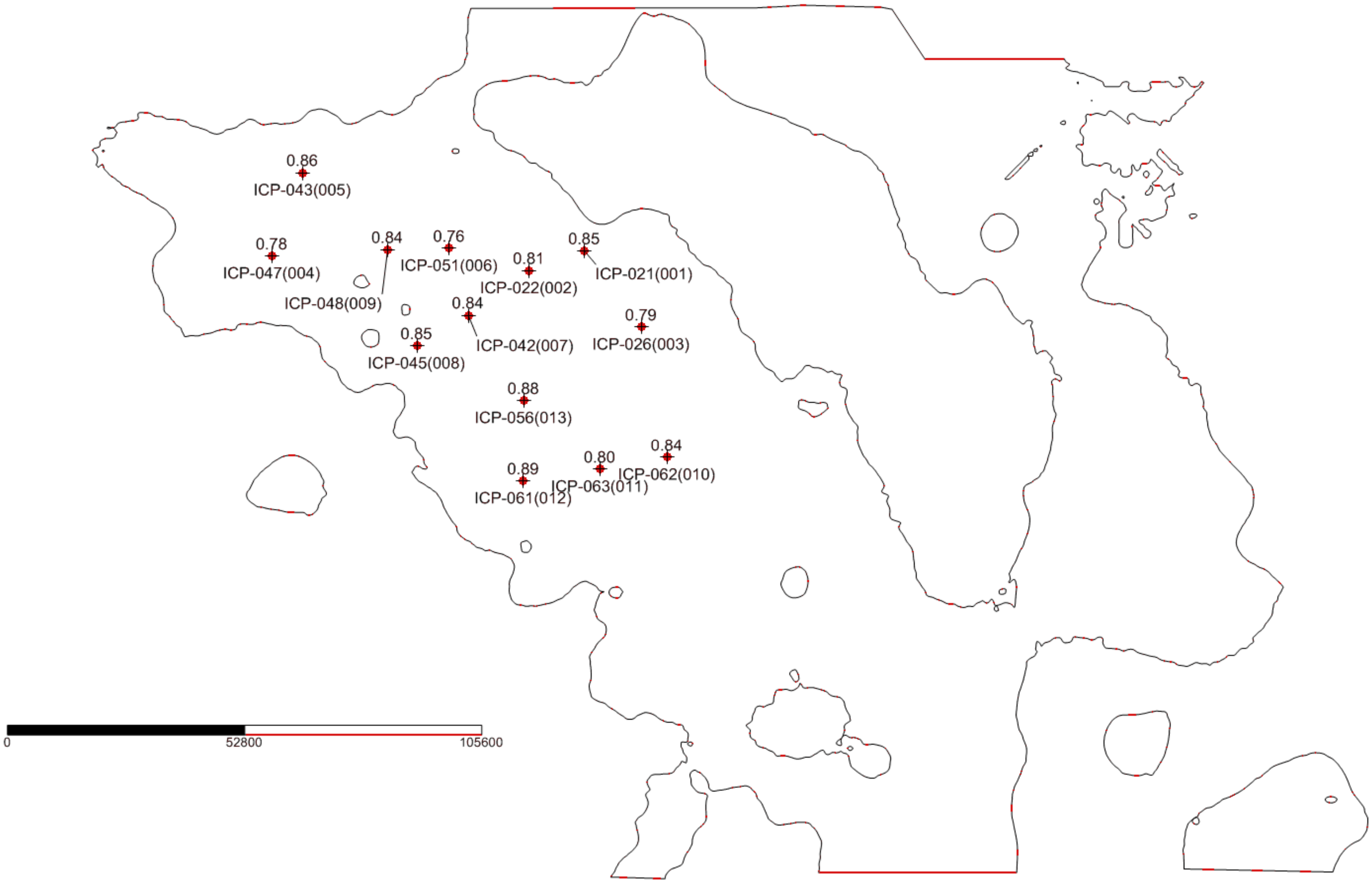


FIGURE 15-2 DISTRIBUTION OF AVERAGE GRADE FOR ICP CORE HOLES.

Note: Solid line is zero thickness limit, scale bar in feet.

16. DATA VERIFICATION

Data verification is conducted at several points along the process from identifying potash bearing stratigraphy to measuring the potash content of the polyhalite ore zone. This data verification is required to ensure adequate quality feedstock to a processing plant so that SOP fertilizer production from polyhalite is economic. Some of these points of data verification include at the stages of polyhalite ore zone delineation, polyhalite ore zone sampling and testing, and potassium grade measurements of polyhalite in samples.

Stratigraphic Control of the Polyhalite Ore Zone
Sampling procedures included sampling 12 to 24 inches above the polyhalite ore zone and 12 to 18 inches below it to ensure that the entire zone is sampled and that there is a reference for the compositions of the overlying and underlying lithologies. This reference allows for comparison in composition between ore and non-ore zones and helps confirm the locations of the top and base of the polyhalite zone.

Wireline logs from oil and gas wells have been correlated with ICP drilling program wireline logs and cores, WIPP logs and cores, and with some underground exposures in potash mines to the west of the Ochoa Project area. The ICP drilling program boreholes have provided an important cross check between wireline log character on a coarse scale (up to 1-2 foot resolution) and the cores cut from the polyhalite zone that can be logged in much finer resolution and detail.

16.1 Sampling Program Design

A well designed sampling program utilizes duplicate, blank, and standard samples inserted into the sample batches for testing alongside the samples from intervals of interest. These allow for checking the lab results and making corrections to sample testing results, when required. Duplicate samples are duplicates or splits of samples collected and they provide a measure of the repeatability of the test results including sample homogeneity and testing procedures. When duplicates of analytical samples are inserted into the sample run, they are assigned different sample numbers than their counterpart sample. Blank samples do not contain the material of interest, potassium in this case, and provide a measure of cross-contamination between individual samples as they are prepared and tested. Standard samples have a known composition and allow a comparison between their lab test results and their known composition. These standards or standard reference materials (SRM) provide a comparison to identify instances and degrees or under- or over-reporting of chemical species in the sample testing results.

An analytical batch consisted of 12 to 20 samples made up of: core samples, 1 or 2 duplicates, 1 standard reference material (SRM), and 1 blank. In Phase 1, no duplicates were run, SRM was polyhalite, sylvite, langbeinite, or commercial fertilizer; and the blanks were quartz sand. Upon review of the first program a decision was made that too many standards were being used and the composition of those standards were not established. In addition, the blank (a silicate) was determined to be inappropriate because it was not of similar matrix to the sample (i.e. sulfate). Therefore, in Phase 2 the SRM was limited to langbeinite, polyhalite, or arcanite (reagent grade K_2SO_4); and the blank was reagent grade CaSO4.

16.2 Grade Measurements of Samples

Grades or composition percentages have been obtained from XRD-XRF and several other types of analytical tests. When not using XRD-XRF, several different analytical tests are required to obtain data on the different elemental constituents of the samples, including potassium (K), sulfur(S), carbon (C), and chlorine (Cl) that make up the portion of polyhalite that will be used to produce end product K_2SO_4 fertilizer. Method 1 is XRD-XRF and is the primary approach. Method 2 is inductively coupled plasma optical emission spectrometry (OES), but it must be supplemented with gravimetric and coulometric techniques for measuring sulfate sulfur and carbonate carbon concentrations. Several sample preparation techniques for sample digestion have been undertaken and are being compared so that the digestion method ultimately selected results in the most representative test results with minimal under-reporting of potassium. The comparison of the method 1 XRD-XRF with the method 2 suite of OES and supplemental tests allows the comparison of results from these two testing "methods" and data verification of their results

17. ADJACENT PROPERTIES

The property and area of interest lie outside the area designated by the federal government as the Known Potash Leasing Area (KPLA) of about 1,100 km^2 (425 square miles) and which covers the area of potash mineral reserves and resources in the upper Permian Salado Formation east of Carlsbad, New Mexico. The KPLA consists of that part of the Carlsbad potash district where federal lands under BLM management require competitive bidding for mineral leases. The mines in the Carlsbad district are the only potash mines in the state and produce potassium chloride from the mineral sylvite and potassium-magnesium sulfate from the mineral langbeinite. These potassium salts are used primarily by the fertilizer industry as sources of potassium (or potash) and magnesium. The eastern boundary of the KPLA is 14.5 km (9 miles) from the west boundary of the area of interest. Land outside the KPLA is available for potash exploration by means of filing prospecting permits.

At present, other than oil and gas development and local caliche mining, there are no active mines in the immediate Ochoa area. ICP cannot use any of these activities as examples which might suggest the potential for polyhalite in the OCHOA PROJECT.

ICP's polyhalite target is in the Tamarisk Member of the Rustler Formation, stratigraphically overlying the Salado Formation that produces potash minerals in what is known as the Carlsbad District. There are no publicly available reports on polyhalite occurrences immediately adjacent to ICP's property.

18. MINERAL PROCESSING AND METALLURGICAL TESTING

Past test work included extensive research by the US Bureau of Mines, and a Pilot Plant test, run for 8 months by a private corporation in 1955.

ICP intends to generate potassium and magnesium sulfate liquors by one of the processes proposed by the Bureau of Mines in the 1930's and 1940's. These process were extensively studied by the Bureau of Mines, and the fundamentals underlying the processes are well understood. The processes were demonstrated on a laboratory scale, and work was done to develop the parameters needed to implement the processes on an industrial scale.

The Pilot Plant referred to above was successfully operated on a continuous basis for 8 months in 1955 utilizing the technology developed by the Bureau of Mines.

Polyhalite was mined and crushed to -10 mesh using a hammer mill. The crushed polyhalite was then washed with cold water to remove soluble chlorides. The wash water was removed from the polyhalite using a bowl centrifuge. The polyhalite was then calcined in a 2 foot diameter, 20 foot long rotary kiln operating at 950 degrees Fahrenheit. The calcined Polyhalite was then leached in hot water, in leach tanks operating a counter current configuration. The $CaSO_4$ was removed by vacuum filters and agglomerates (flocculants), and then the leach liquor was "polished", removing the last bit of solids with a pressure filter. The leach liquor was then sent to a mechanical evaporation circuit where 92% of the water was evaporated from the liquor. The concentrated evaporator liquor was then sent to a crystallizer, where the liquor was cooled and Magnesium Sulfate, and Potassium Sulfate crystallized. The K_2SO_4 was harvested from the liquor using batch filters and dried in a rotary gas fired drier. The dried product very easily pelletized by outside companies. The report prepared by those running the test included estimates of revenue, capital, operating cost, and project economics for a 50,000 and 100,000 ton per year plant. The report recommended the company proceed with an industrial scale project.

Recent metallurgical test work has been limited to two Polyhalite samples from the Salado Formation, and one from core from the Rustler Formation. The samples were crushed to 10 mesh and a screen analysis performed. The analysis showed the Salado samples were approximately 80% polyhalite with the main gangue constituent being halite. The halite tended to report to the fine fraction, likely due to differential hardness and cleavage. Polyhalite was upgraded to nearly 100% Polyhalite with a fresh water wash.

A Polyhalite core sample was obtained from the Rustler Formation west of Ochoa was carefully logged and split. The sample is from the Ochoa Project Polyhalite bed of the Rustler Formation. Discrete 6 inch intervals were collected and several evaluated by microscopy. Some of the samples were also examined by Scanning Electron Microprobe. . The chief gangue constituent of the Sandia Core sample was anhydrite which has a similar hardness and specific gravity to polyhalite.

A Rustler core sample was crushed, split, and analyzed using the same testing procedures as the Salado samples, described above. Resource Development Inc (RDi) performed initial calcine and leach test on the composite sample confirming USBM and PCA test work. These tests showed 97% the potassium of the polyhalite went into solution during leaching.

18.1 Process Modeling

Mr. Don Felton of Chemfelt Engineering has provided a detailed METSIM model of the processing plans to convert polyhalite into potassium sulfate product. The model has been reviewed by Mr. Neuman, Mr. Chastain and Gustavson. The following describes the interaction between the modeling effort, past work, and future testing, and supports ICP's approach to developing a full scale process.

The METSIM model built by Chemfelt follows the design envisioned by the Bureau of Mines and subsequently pilot tested by a private corporation, and provides reasonable estimates the full scale equipment requirements.

It is important to understand that the Bureau of Mines and the private company demonstrated conclusively the validity of the process. Additional work is needed to develop the data required for size, optimize and scale up the process up to a 660,000 tpy or a 990,000 tpy facility. The test work planned to be done by Hazen Research in coordination with the manufacturers of the proposed equipment, will focus on process optimization. Hazen Research is an internationally recognized process development facility located in Golden, Colorado.

A comprehensive test program is planned, culminating with pilot scale testing. For example, while it is known that polyhalite can be ground with many types of equipment, studies must be undertaken to determine the optimal equipment. Therefore, Hazen will be perform tests to generate data needed to select the crushing, sizing, and grinding equipment. Similarly, data will be collected to determine the best possible calcination equipment (rotary kilns, fluid bed devices, etc.). Leaching configuration is another area needing optimization. The Bureau of Mines investigated both co-current leaching and counter-current leaching. Subsequent private pilot testing used a counter current approach. Both processes were demonstrated to work well. The best configuration and most suitable commercially available 21st century equipment need to be established.

Once the potassium and magnesium sulfate liquors are produced, they will be sent to solar ponds and will follow the process pioneered and now used by Great Salt Lake Minerals and also SQM in Chile. The most significant difference between these operations and the Ochoa project process is the relative simplicity of the Ochoa brines. The pond operations at these other facilities are extremely complex because of the presence of large quantities of sodium and chloride and other cations and anions. The Ochoa brines will have very low levels of these cations and anions apart from potassium, sulphate and magnesium, and this lack of complexity will simplify pond management. The testing will include laboratory scale solar pond operations, schoenite decomposition reactions, as well as drying, screening and granulation steps.

Once each of the processes are studied and optimized, the overall process will be tested in a continuous pilot scale test at the Hazen facilities to confirm that there are no unexpected issues from the planned ICP processes. ICP will also be using Hazen Research to investigate several potential improvements to the process developed by the Bureau of Mines. These studies could result in a significant reduction water consumption and pond size. ICP intends to protect any process improvements it generates.

By the end of the feasibility stage of process development the entire process will have been tested at pilot scale in the Hazen Research facilities. This will ensure a minimum of start-up issues when the process is brought on-line in full scale operations.

19. MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

19.1 ICP Exploration Permits and Acreage

ICP currently holds 113,000 net acres under federal and state exploration permits issued and pending imminent issuance. This permit acreage is summarized in Table 19-1 below.

TABLE 19-1 OCHOA PROJECT EXPLORATION PERMIT ACREAGE

	Issued	Issuance Pending	Application Pending
BLM Federal	48,144.58	29,520.00	9,123.66
NM State	25,889.83	0	0
Total acres	**74,034.41**	**29,520.00**	9,123.66

19.2 Mineral Resource Estimates

The Ochoa Mineral Resource was estimated using Petra and Techbase. The Mineral Resources were assigned categories of confidence based on a radius from the ICP core holes.

The bulk density of the ore bed was determined from petrophysical logs and ranges between 2.70 and 2.85 g/cc (see composite logs in Appendix Figures A24 through A26). The principal mineral in the ore bed is polyhalite (ρ = 2.78) with minor amounts of anhydrite (ρ =2.97) and magnesite (ρ =2.98). Halite (ρ = 2.17) is present in minor amounts primarily in the lower half of the ore bed, which corresponds to the interval of the ore having an overall lower bulk density (e.g. 2.70 to 2.75). No attempt was made to compile the petrophysical logging data and calculate an apparent average density because the resolution of the logging tool for spatial (i.e., vertical sampling) and density measurements are not detailed enough to assign values to the sample intervals used for lab analysis. In addition, the semi-quantitative results for mineral abundance estimation in some of the XRD-XRF reports prevent calculating an apparent bulk density based on mineral components. Therefore, the density used in this evaluation is 2.78 g/cc. This is reasonable given the predominance of polyhalite and the observation that the two most common contaminants in the ore are anhydrite and magnesite which have greater densities of 2.97 and 2.98 g/cc respectively.

Ore in place was calculated using the polyhalite thickness from each of the rotary and IC Potash core holes. Thickness was estimated into a 2 dimensional gridded model with a grid cell size of 660 feet north south, by 660 feet east west, and with 303 columns and 196 rows covering the entire area of interest. PETRA was used to estimate thickness using a Least Squares algorithm. Measured resources are within a 0.75 mile radius from ICP core holes, indicated resources are within a 1.50 mile radius of ICP core holes, and inferred resources are beyond 1.5 miles. These dimensions are considered reasonable based on the large number of well control points, excellent definition of the sub-basin, characterization of the host and mineralized units as continuous and unaffected by significant disruptions (e.g. faulting, pinch, swell, channels, and karst), low variability in polyhalite bed thickness, and homogeneity of composition and grade. Figure 19-1 shows the estimated thickness also showing the Measured and Indicated resource around ICP drill holes.

TABLE 19-2 ESTIMATES OF ORE RESOURCE

Ochoa Project - Mineral Resource

All Polyhalite over Minimum Thickness

	Measured	**Indicated**	**Measured plus Indicated**	**Inferred**
4 ft Minimum Thickness				
Tons (million)	282,200,000	571,900,000	854,100,000	611,100,000
Grade Polyhalite	82.6%	82.5%	82.5%	82.3%
Eq Grade K_2SO_4	23.4%	23.4%	23.4%	23.3%

5 ft Minimum Thickness				
Tons (million)	238,700,000	461,500,000	700,200,000	352,700,000
Grade Polyhalite	82.7%	82.4%	82.5%	82.2%
Eq Grade K_2SO_4	23.4%	23.4%	23.4%	23.3%

6 ft Minimum Thickness				
Tons (million)	40,600,000	47,100,000	87,700,000	19,800,000
Grade Polyhalite	86.1%	84.1%	85.0%	82.3%
Eq Grade K_2SO_4	24.4%	23.8%	24.1%	23.3%

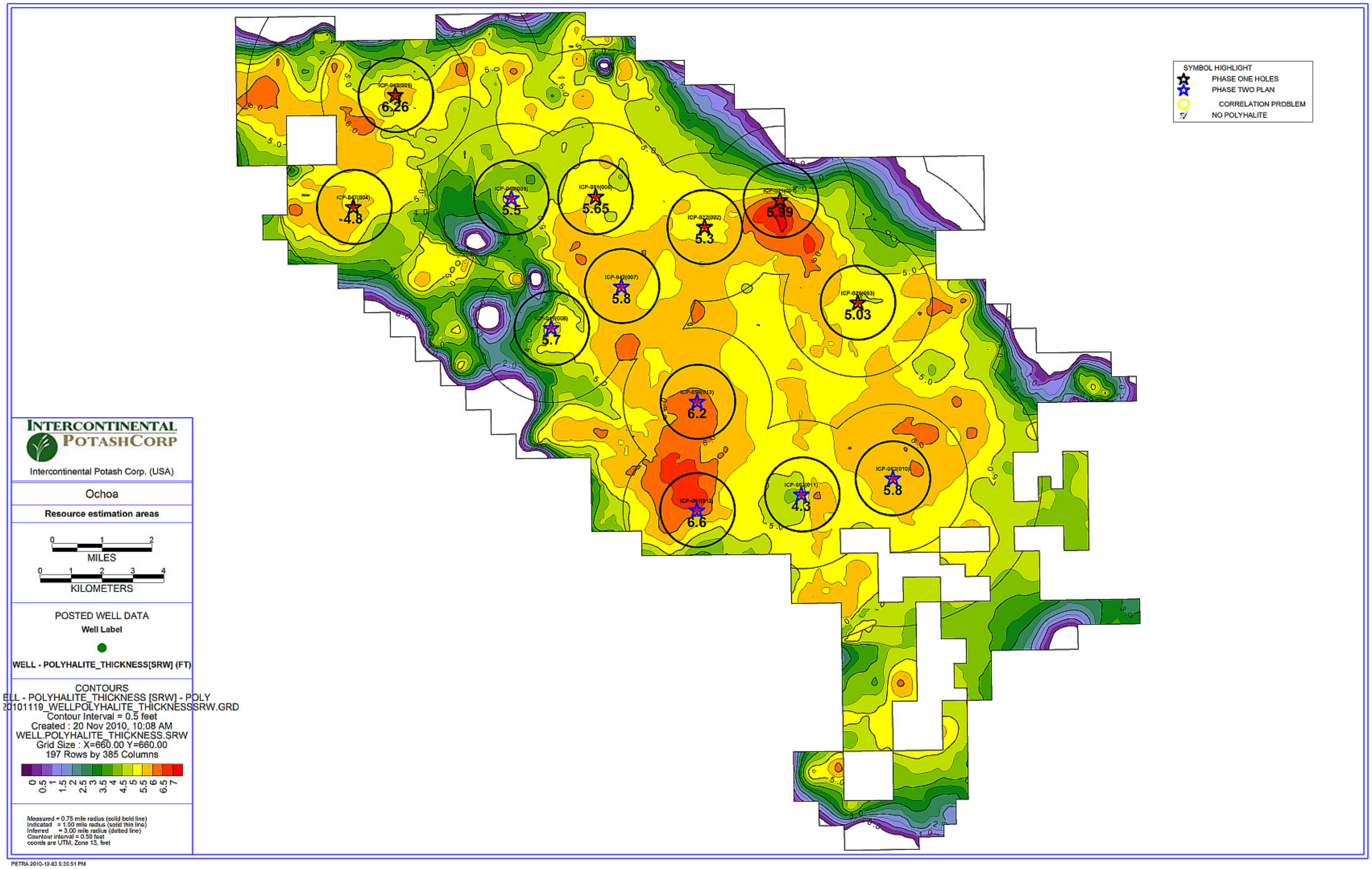


FIGURE 19-1 RESOURCE CALCULATION POLYGONS SUPERIMPOSED ON ISOPACH OF POLYHALITE.

Measured resources inside circle with bold line weight (0.75 mile radius), indicated resources inside circle with normal line weight (1.50 mile radius), and inferred resources are outside the 1.5 mile radius.

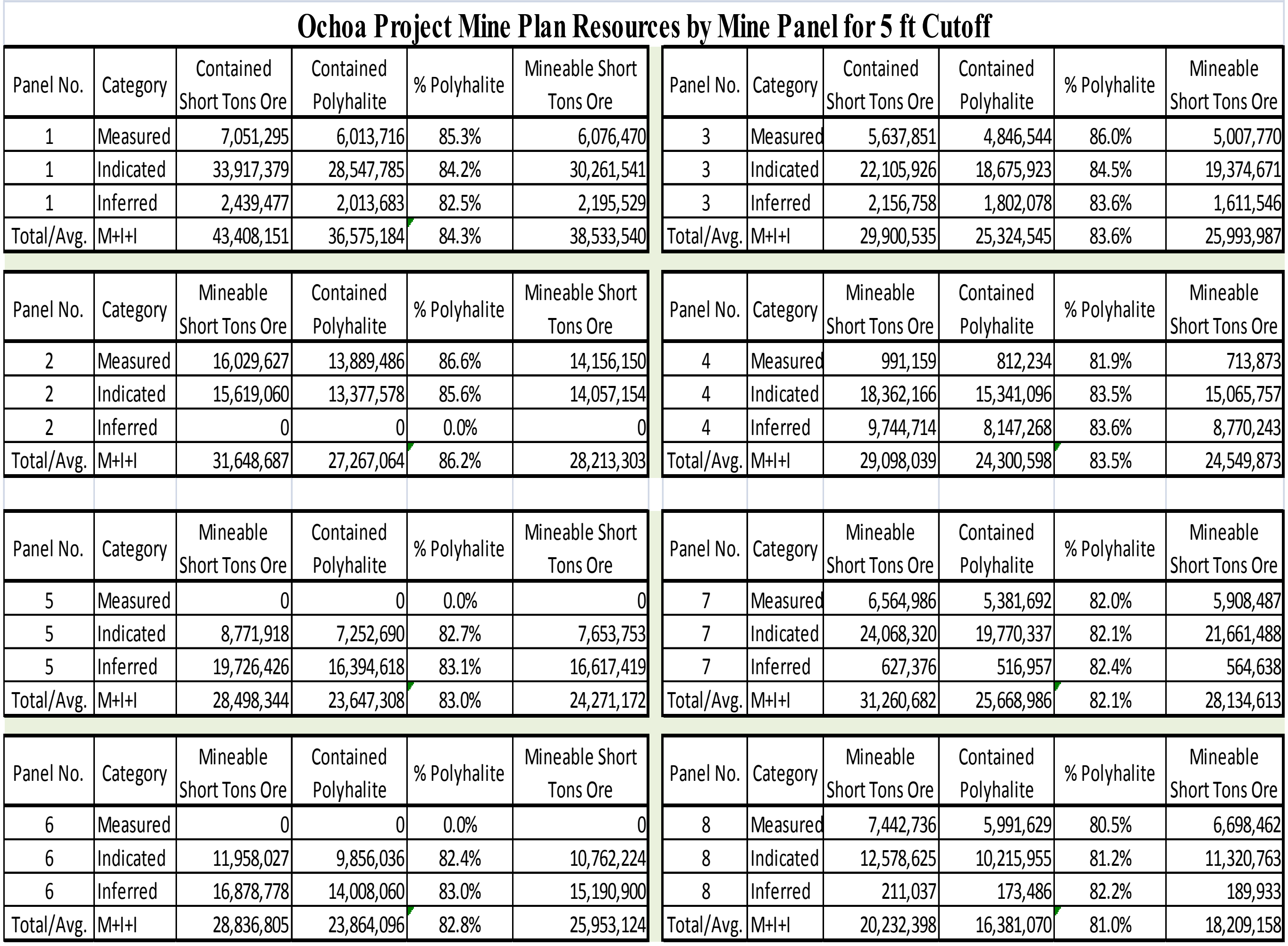
Polyhalite grade was estimated from ICP core holes using an inverse distance to the 1.5 power algorithm in Techbase. The selected grade intervals were considered minable intervals using the very selective continuous mining equipment and additional dilution was not added. Figure 19-2 below shows the estimated polyhalite grade overlaying the polyhalite thickness contours. All grid cells within 1500 feet of active oil and gas wells are shown in grey. The area that has been included in the 40 year mine plan is shown. Figure 19-3 shows the elevation of the polyhalite, with the property boundary, mine plan, and grid cells within 1500 feet of active wells. Figure 19-4 shows the same information overlying the depth below surface contours. The polyhalite in the area of the mine plan is very flat lying, and 1500 to 1600 feet below the surface. Only six active oil and gas wells will have an impact the 40 year mine plan. Table 19-3 shows the 40 Year Mine Plan Polyhalite Mineral Resource contained within the mine plan. The mineable portion of the Mineral Resource incorporates a 90% mine recovery in areas away from oil and gas production, and 60% mine recovery within 1500 feet of an active well, preventing surface subsidence. The mine will be divided into eight different panels to be mined at different times, which is shown in Figure 19-5. The mineable resource of each panel is show in Table 19-4.

TABLE 19-3 OCHOA MINE PLAN MINERAL RESOURCE ESTIMATES

5 ft. Thick Cutoff

Category	Total Short Tons of Ore	Total Short Tons of PH	Grade of PH	Mineable Short Tons of Ore
Measured	43,717,276	36,935,301	84.5%	38,561,212
Indicated	147,381,421	123,037,400	83.5%	130,157,350
Inferred	51,784,566	43,056,150	83.1%	45,140,208
Total/Avg.	242,883,263	203,028,851	83.6%	213,858,771

TABLE 19-4 OCHOA MINE PLAN RECOVERALBE MINERAL RESOURCE ESTIMATES BY PANEL



Ochoa Project Mine Plan Resources by Mine Panel for 5 ft Cutoff

Panel No.	Category	Contained Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
1	Measured	7,051,295	6,013,716	85.3%	6,076,470
1	Indicated	33,917,379	28,547,785	84.2%	30,261,541
1	Inferred	2,439,477	2,013,683	82.5%	2,195,529
Total/Avg.	M+I+I	43,408,151	36,575,184	84.3%	38,533,540

Panel No.	Category	Contained Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
3	Measured	5,637,851	4,846,544	86.0%	5,007,770
3	Indicated	22,105,926	18,675,923	84.5%	19,374,671
3	Inferred	2,156,758	1,802,078	83.6%	1,611,546
Total/Avg.	M+I+I	29,900,535	25,324,545	83.6%	25,993,987

Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
2	Measured	16,029,627	13,889,486	86.6%	14,156,150
2	Indicated	15,619,060	13,377,578	85.6%	14,057,154
2	Inferred	0	0	0.0%	0
Total/Avg.	M+I+I	31,648,687	27,267,064	86.2%	28,213,303

Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
4	Measured	991,159	812,234	81.9%	713,873
4	Indicated	18,362,166	15,341,096	83.5%	15,065,757
4	Inferred	9,744,714	8,147,268	83.6%	8,770,243
Total/Avg.	M+I+I	29,098,039	24,300,598	83.5%	24,549,873

Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
5	Measured	0	0	0.0%	0
5	Indicated	8,771,918	7,252,690	82.7%	7,653,753
5	Inferred	19,726,426	16,394,618	83.1%	16,617,419
Total/Avg.	M+I+I	28,498,344	23,647,308	83.0%	24,271,172

Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
7	Measured	6,564,986	5,381,692	82.0%	5,908,487
7	Indicated	24,068,320	19,770,337	82.1%	21,661,488
7	Inferred	627,376	516,957	82.4%	564,638
Total/Avg.	M+I+I	31,260,682	25,668,986	82.1%	28,134,613

Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
6	Measured	0	0	0.0%	0
6	Indicated	11,958,027	9,856,036	82.4%	10,762,224
6	Inferred	16,878,778	14,008,060	83.0%	15,190,900
Total/Avg.	M+I+I	28,836,805	23,864,096	82.8%	25,953,124

Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
8	Measured	7,442,736	5,991,629	80.5%	6,698,462
8	Indicated	12,578,625	10,215,955	81.2%	11,320,763
8	Inferred	211,037	173,486	82.2%	189,933
Total/Avg.	M+I+I	20,232,398	16,381,070	81.0%	18,209,158

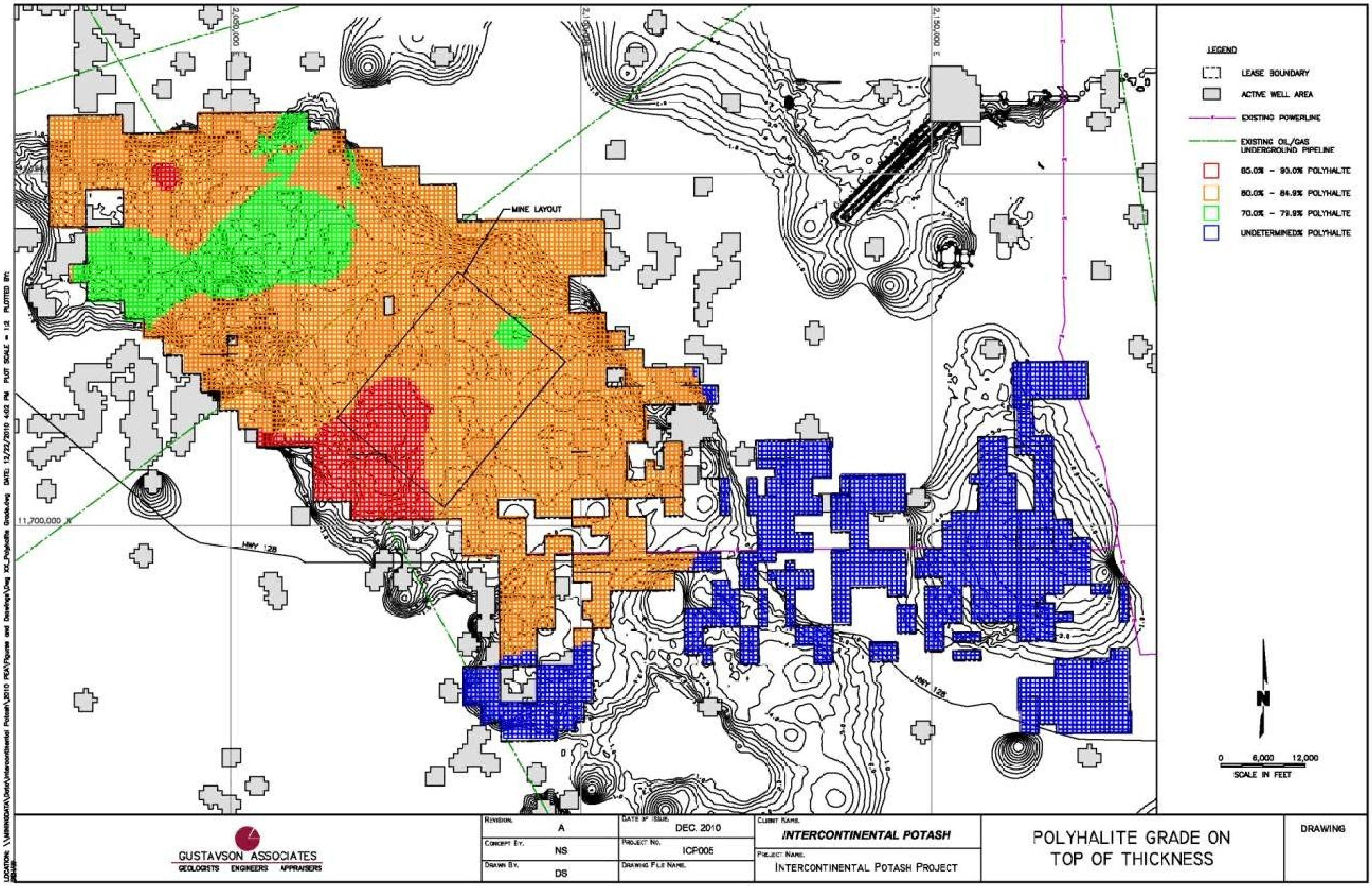


FIGURE 19-2 POLYHALITE GRADE ON TOP OF THICKNESS

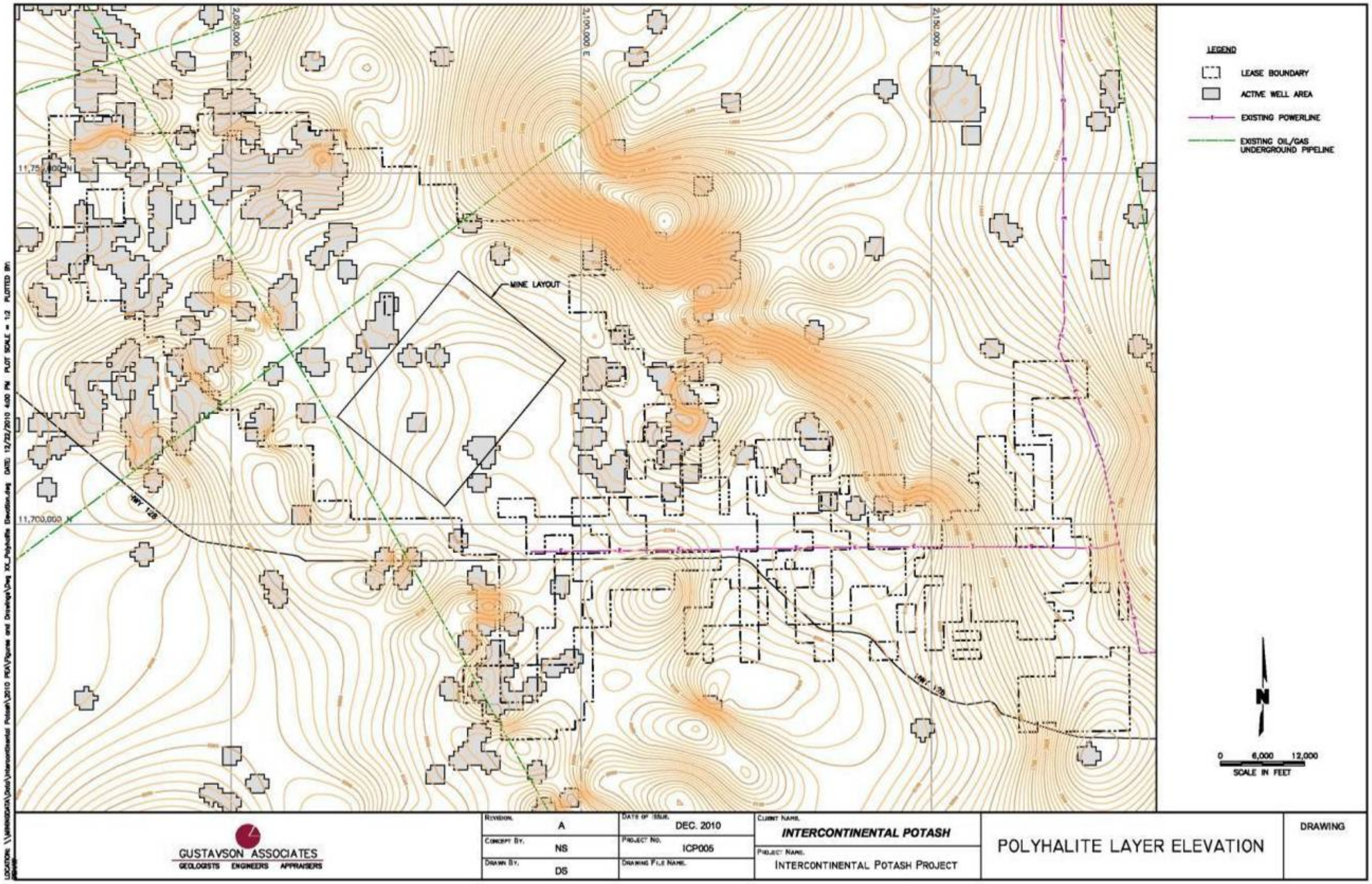


FIGURE 19-3 POLYHALITE LAYER ELEVATION

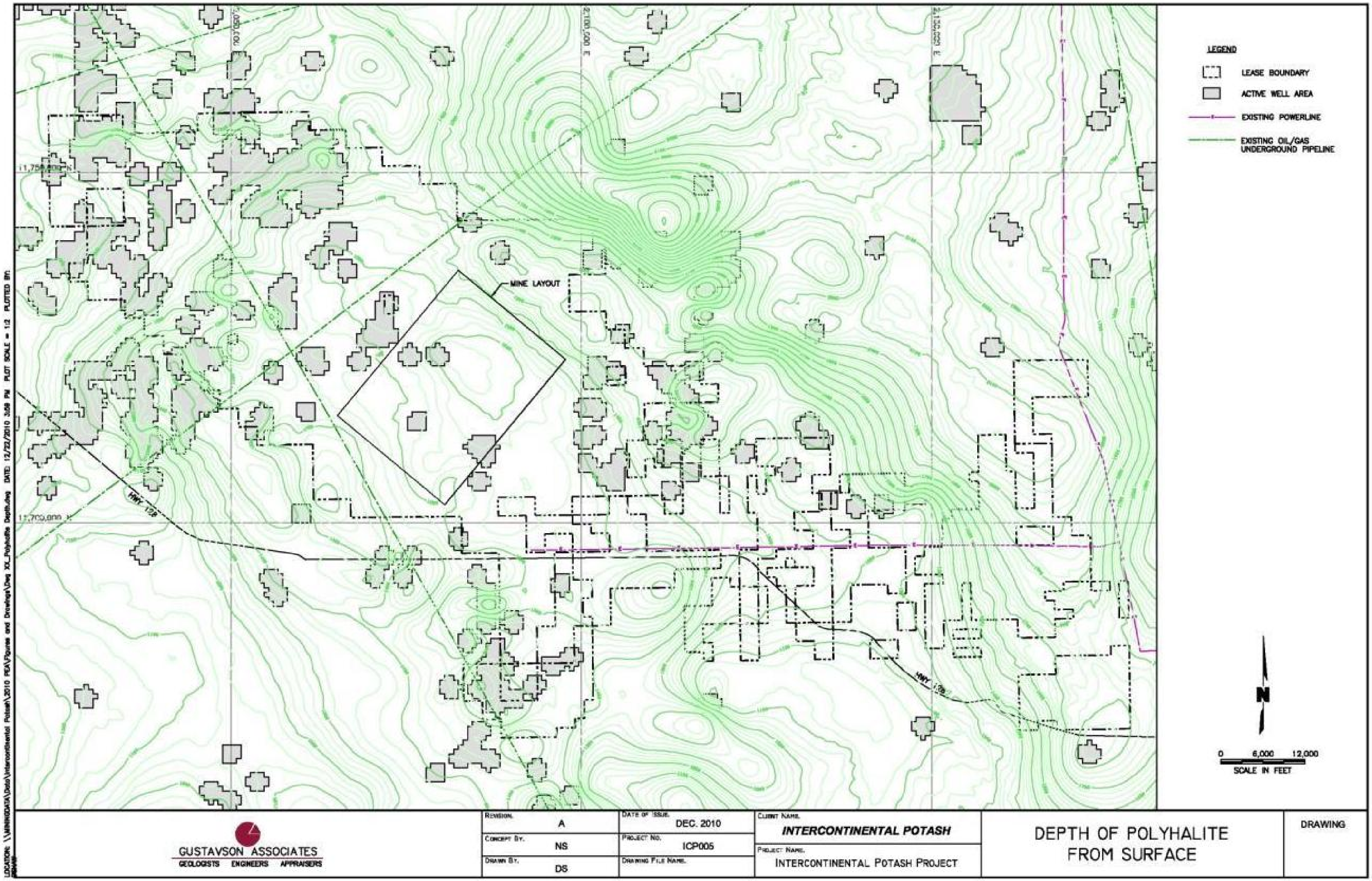


FIGURE 19-4 DEPTH OF POLYHALITE FROM SURFACE

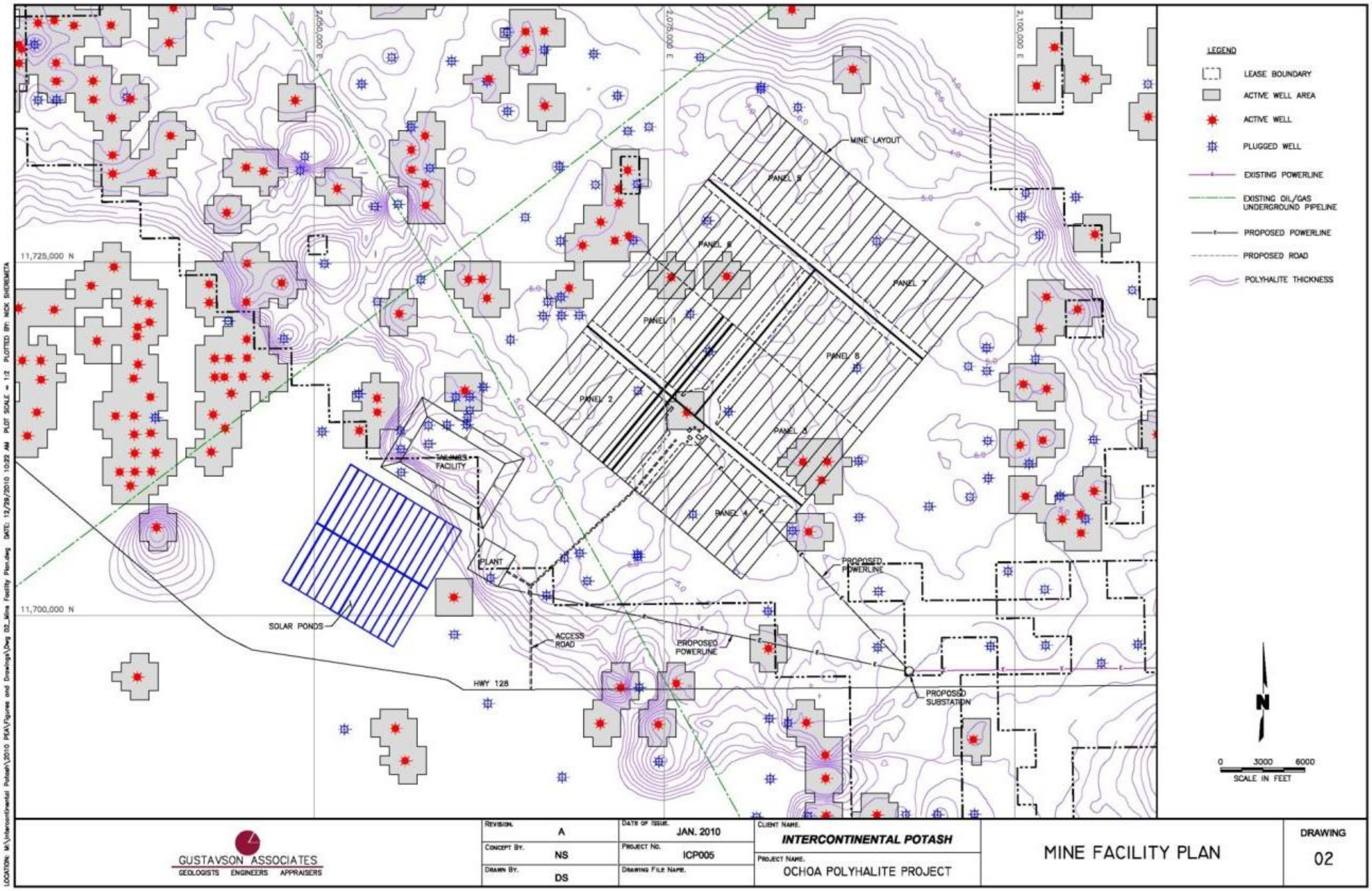


FIGURE 19-5 MINE FACILITY PLAN SHOWING MAIN MINING PANELS

20. OTHER RELEVANT DATA AND INFORMATION

IC Potash plans to explore and develop polyhalite mineralization within the Tamarisk member of the Rustler Formation on its OCHOA PROJECT. Although polyhalite was considered as a potential source of potash fertilizer in the 1940s (Conley and Partridge, 1944), this consideration pre-dated the development of the extensive sylvinite resources of Saskatchewan, Canada, and the former Soviet Union (Belarus and Russia). The development of potash operations based on sylvinite in Saskatchewan, Canada, in the early-1960s (where the grade of sylvinite was particularly high at approximately 25% K_2O) and the expansion of output in the USSR resulted in those two countries holding the first-ranking positions until the breakup of the former Soviet Union in 1989.

20.1 Background to the Potash Industry

Potash was first produced near Carlsbad, New Mexico in 1931. At that time, world production was approximately 1.5 million tons K_2O and Germany and France together accounted for 1.3 million tons K_2O. By 1943, the United States had overtaken France as the second largest potash producer. The majority of United States output was from mines established in Eddy County, New Mexico. The first potash mine in Lea County, New Mexico was opened in 1957 and closed between 1968 and 1974. The second mine in Lea County was opened in 1965. At that time, world potash production had increased to over 13.5 million tons K_2O and the United States was the largest single producer, with output of 2.8 million tons K_2O, followed by the then USSR and West Germany, each with output of around 2.4 million tons K_2O.

The majority of potash output in New Mexico has been based on mining sylvinite and the First Ore Zone of the McNutt Potash Zone has provided the greater proportion of mined ore. Langbeinite is also mined to recover a beneficiated potassium-magnesium sulfate fertilizer. At present, two companies, Intrepid and Mosaic, mine and process sylvinite and langbeinite in New Mexico. The USGS reports that sales from these two companies account for nearly 80% of total United States producer sales of potash.

The development of potash operations based on sylvinite in Saskatchewan, Canada in the early-1960s and the expansion of output in the USSR resulted in those two countries holding the first-ranking positions until the breakup of the former Soviet Union in 1989. Table 20-1 shows the development of world potash output since 1990.

TABLE 20-1 WORLD POTASH PRODUCTION[1] (THOUSAND TONS K_2O)

Country	1990	2000	2005	2006	2007[P]
Belarus[2]	n.a.	3,400	4,928	4,605	5,400
Brazil	98	340	385	424	410
Canada	7,002	9,033	10,596	8.36	11,426
Chile	20	355	431	374	450
China	46	380	1,480	1,572	1,700
Former Soviet Union	9,126	-	-	-	-
France	1,292	321	-	-	-
Germany	4,850	3,409	3,665	3,616	3,700
Israel	1,311	1,710	2,224	2,123	2,000
Italy	68	-	-	-	-
Jordan	841	1,180	1,098	1,020	1,105
Russia2	n.a.	3,680	6,265	5,724	6,460
Spain	686	522	494	437	450
Ukraine2	n.a.	30	20	60	65
United Kingdom	488	590	439	430	450
United States	1,654	1,300	1,200	1,100	1,200
Total	**27,482**	**26,250**	**33,225**	**29,845**	**34,816**

[1] Includes estimated output of primary sulfate and nitrate salts.
[2] Reported as Former Soviet Union in 1990.
[P] Sources: USGS; Natural Resources, Canada; corporate reports.

20.1.1 Fertilizer Products

Micon (2008) reported that approximately 93% of world potash production is used by the fertilizer industry as a source of potassium which is one of the three essential plant nutrients, along with nitrogen and phosphorus. Potassium salts are also used in a wide range of non-fertilizer applications, including glass and ceramics, soaps and detergents, synthetic rubber and chemicals.

21. INTERPRETATION AND CONCLUSIONS

- ICP controls a large land package that hosts a substantial polyhalite resource
- ICP has drilled 13 core holes into the Ochoa Polyhalite bed.
- The Resource has been estimated from 789 rotary holes and 13 core holes, and the Measured and Indicated Mineral Resource now stands at 700 million tons grading 82.5% polyhalite, at a 5 foot minimum thickness.
- The polyhalite within the mine plan occurs at depths of 1500 to 1600 feet and is considered to be minable using conventional Room and Pillar mining methods with continuous miners and other underground mining equipment.
- The proposed ICP processing methods have previously been demonstrated on a pilot scale.
- Operating costs appear to be in the lowest quartile of the SOP market.
- Capital costs were developed on a major equipment price factored basis. Future work will be much more detailed.
- The Ochoa Projects project as described in this updated PEA produces a positive economic outcome.

22. RECOMMENDATIONS

Gustavson recommends the following:

- Proceed with a bulk sample drill program in order provide sample for metallurgical test work, define resource within the mine area, and to perform geotechnical testing.
- Bench scale metallurgical testing followed by a pilot scale test run on bulk sample drill core
- Acquire surface rights of proposed surface facilities area.
- Initiate permitting and baseline data collection for environmental permits.
- Hydrology studies will need to continue in order to determine where water will be obtained in the region and how it will be delivered to the plant.
- In depth market study in order to better understand the market conditions and price forecast, this study should also include Kieserite.
- A prefeasibility study should be initiated based on the findings in this report, and should incorporate data gathered in the above programs.

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1. I am currently employed as Vice President, Mining by Gustavson Associates, LLC at:

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2. I am a graduate of the University of Southern California with a Bachelor of Arts in Earth Science (1968), and a M.Sc. In Economic Geology from the University of Arizona in 1979, and have practiced my profession continuously since 1973.
3. I am a registered Professional Geologist in the State of Oregon (G573) and am a member in good standing of the Australian Institute of Mining and Metallurgy and the Society of Economic Geologists.
4. I have worked as a geologist for a total of 35 years since my graduation from university; as a graduate student, as an employee of a major mining company, a major engineering company, and as a consulting geologist.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason 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.
6. I am responsible for the preparation of the technical report titled “NI 43-101 Technical Report on the Polyhalite Resources and Updated Preliminary Economic Assessment of the Ochoa Project” dated January 14, 2011 (the “Technical Report”). I personally conducted a visit to the Ochoa Project Site April 28-29, 2010.
7. I have personally completed an independent review and analysis of the data and written information contained in this Technical Report.

8. I previously contributed to the preparation of the technical report on this property titled "NI 43-101 Technical Report on the Polyhalite Resources and Preliminary Economic Assessment of the Ochoa Project in Lea County, Southeast New Mexico," dated August19, 2009. I have previously worked on the Ochoa project as a consultant.
9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
10. I do not hold, nor do I expect to receive, any securities or any other interest in any corporate entity, private or public, with interests in the properties that are the subject of this report or in the properties themselves, nor do I have any business relationship with any such entity apart from a professional consulting relationship with the issuer, nor to the best of my knowledge do I have any interest in any securities of any corporate entity with property within a two (2) kilometer distance of any of the subject properties.
11. I have read National Instrument 43-101 and Form 43-101, and the Technical Report has been prepared in compliance with that instrument and form.
12. I consent to the filing of the Technical Report with any stock exchanges or other regulatory authority and any publication by them, including electronic publication in the public company files on the websites accessible by the public, of the Technical Report.

Dated this 14th day of January, 2011.

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5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason 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.
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12. I consent to the filing of the Technical Report with any stock exchanges or other regulatory authority and any publication by them, including electronic publication in the public company files on the websites accessible by the public, of the Technical Report.

Dated this 14th day of January, 2011

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2. I am a graduate of the Michigan Technological University of Michigan with a Bachelor of Science degree in Mining Engineering (1982).
3. I am a member in good standing of the Australian Institute of Mining and Metallurgy.
4. I have worked as a Mine Engineer for a total of 20 years since my graduation from university; as an employee of several mining companies, an engineering company, a mine development and mine construction company, an exploration company, and as a consulting engineer.
5. I have read the definition of “qualified person” set out in National Instrument 43-101 (“NI 43-101”) and certify that by reason 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.
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12. I consent to the filing of the Technical Report with any stock exchanges or other regulatory authority and any publication by them, including electronic publication in the public company files on the websites accessible by the public, of the Technical Report.

Dated this 14th day of January, 2011.

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4. I have worked as a Metallurgist/Mineral Economist for a total of 38 years since my graduation from university; as an employee of several mining companies, an engineering company, a mine development and mine construction company, an exploration company, and as a consulting engineer.
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Dated this 14th day of January, 2011.

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Print name of Qualified Person

25. ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

25.1 Preliminary Economic Assessment

In order to evaluate the potential economic viability of the Ochoa polyhalite deposit, this updated Preliminary Economic Assessment (PEA) has been prepared. The proposed mine plan was developed by Gustavson based on information obtained from other similar mines in the area as well as from the experience of Randy Foote, Chief Operating Officer for ICP. Gustavson developed the mine staffing, capital and operating costs using the Western Mine Engineering Cost Estimators Guide (2010) as well as from quotes directly from suppliers. The conceptual process flowsheet was developed by Chemfelt Engineering and is based on work done by the USBM and others through the late 1950's. Process operating and capital costs were estimated by Gustavson, Messrs. Felton, Neuman, Chastain and Foote, and from supplier quotes. Gustavson estimated the General and Administrative costs as well. The pre-tax economic evaluation included revenue royalties due to the Federal Government and the state of New Mexico, production royalties, and royalties on net profits.

Two different economic scenarios were examined for this PEA. The base case scenario assumes that ICP will produce 660,000 tons of K_2SO_4 on an annual basis. Gustavson also examined the economic effects of producing 990,000 tons of K_2SO_4 per year. Mineral resources in the proposed mine are sufficient for 990,000 tons of K_2SO_4 per year. Mining and processing methods will be identical for both scenarios. Differences in capital and operating costs are reflected in the economic analysis contained later in this section. This PEA is based on measured, indicated, and inferred mineral resources.

25.2 Operations

K_2SO_4 production involves two separate operations. The first operation is to mine raw polyhalite underground. The polyhalite is hoisted to the surface and delivered to the processing plant where the polyhalite is processed to produce K_2SO_4, the saleable product. The final product will be trucked to a load out facility near Hobbs or Carlsbad, where it will be loaded on trucks and trains and distributed.

25.3 Mining

The Ochoa mine will require sinking a production shaft, and a man and materials shaft, installation of ventilation systems, development of underground facilities, the acquisition of an entire mining equipment fleet and the hiring of an underground mine workforce.

Mining will be conventional Room and Pillar similar to the other mines in the Carlsbad mining district. The polyhalite bed is 1,500 feet below the surface with an average thickness of 5 to 6 feet in the proposed mine area. ICP has elected to consider the proposed development under MSHA non metal gassy mine rule because there are active oil and gas wells within the proposed mine area. Natural sources of gas are not anticipated.

25.3.1 Mine and Facility Location

The Ochoa mine and facilities are shown in Figures 23-1 and 23-2. The proposed mine is laid out in an area of the mineral lease boundary that has a low number of active drill holes and thick polyhalite, with an overall polyhalite thickness of over 5ft. The mine shaft and facilities are approximately 2 miles from state highway 128 and will be accessed by building a road from the highway to the mine. The processing, tailings, and solar ponds facilities are located southwest of the mine in areas that are flat and have no active oil or gas wells and near the edge of the area underlain by polyhalite. There are 2 existing underground pipelines in the mining area but these pipelines do not interfere with any of the mine or processing facilities and will not need to be moved.

Electric utilities are planned via the existing transmission lines that run adjacent to highway 128. A substation and 2 miles of transmission lines will be built in order to bring electricity to the mine and plant. For the purposes of this study, fresh water will be supplied by drilling into the Capitan aquifer and treating the brackish water by a reverse osmosis, engineered membrane plant. A hydrology report is included later in this section.

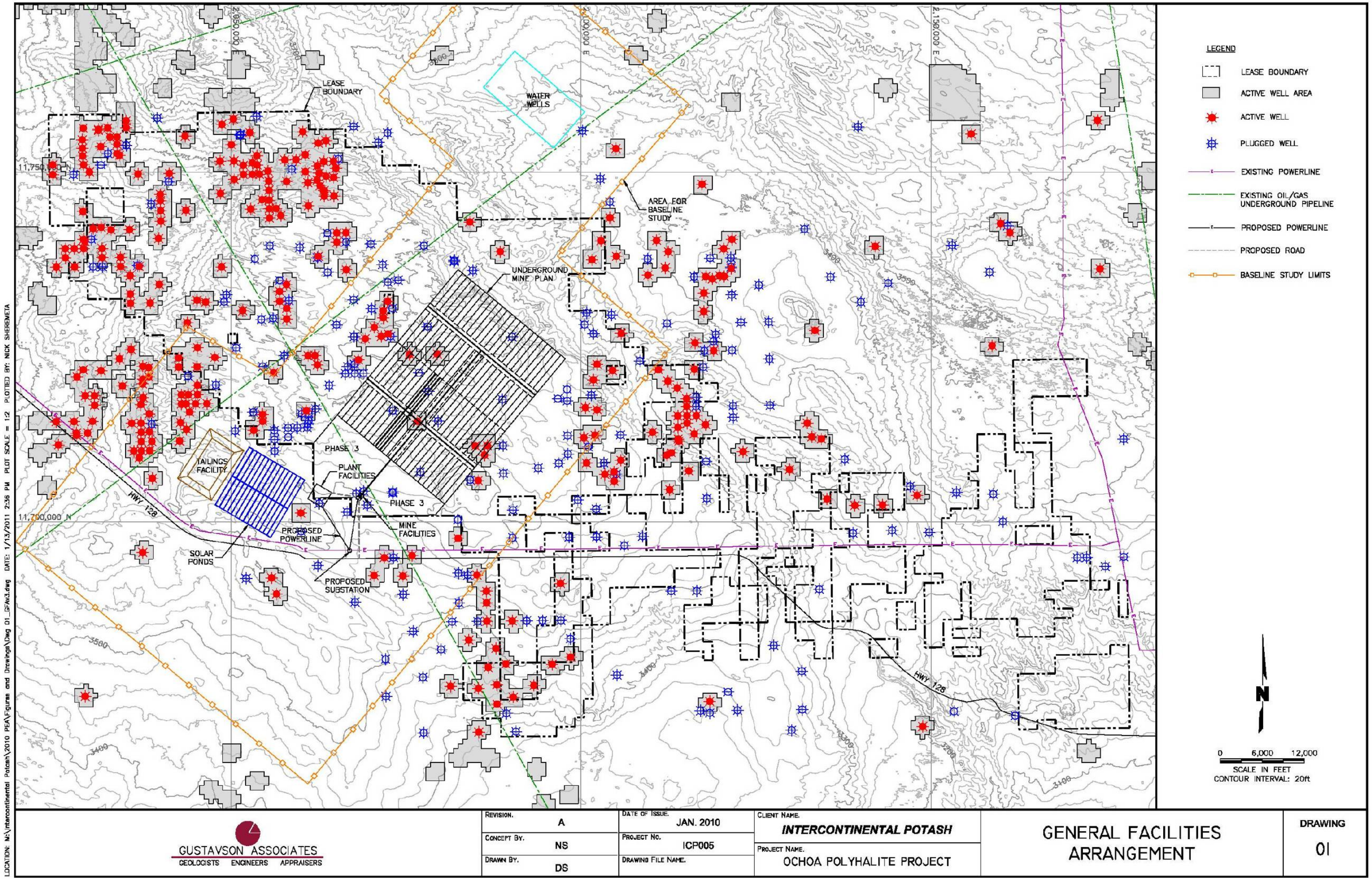


FIGURE 25-1 GENERAL FACILITIES ARRANGEMENT

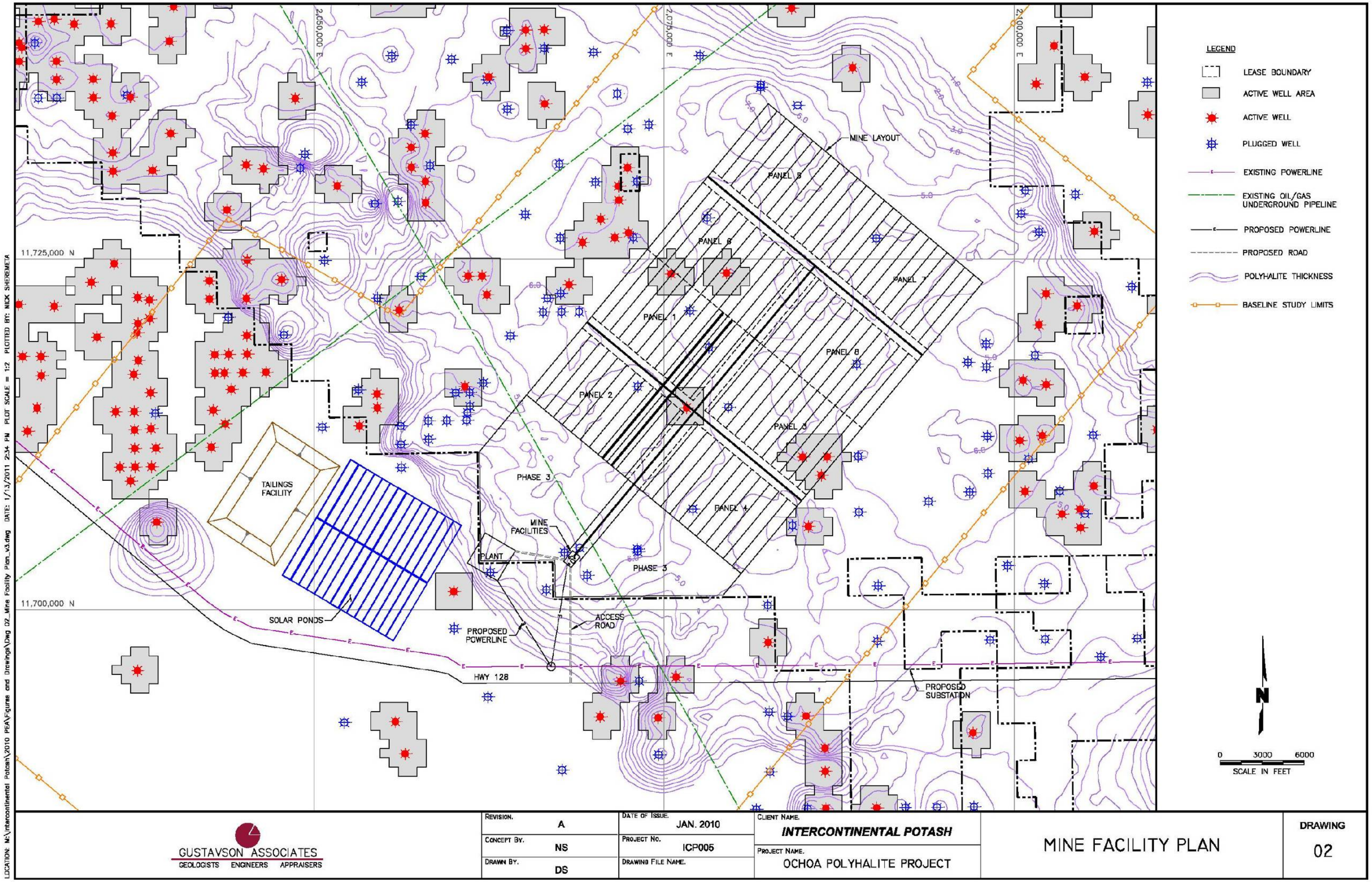


FIGURE 25-2 MINE FACILITY PLAN

25.3.2 Mining Method Selection

The mining method selected for the extraction of polyhalite will be room and pillar retreat with an overall extraction rate of 85%. This method is consistent with adjacent potash mines in the area. An overall extraction rate of 90% is targeted for most portions of the mine; however, in areas of the mine that there is an active gas or oil well, only 60% of the polyhalite will be extracted in order to insure the stability of the active well and that there is no ground subsidence in areas around the wells.

Mining will be in a herringbone pattern. The mine is divided into eight separate panels and each panel is further divided into 12 subpanels. Each subpanel will be developed and mined by continuous miners. Once a subpanel has been completely developed, mining will progress in a retreating manner, which will allow for minimal pillars left for support and increase the mining extraction rate up to 90% of total polyhalite within the subpanel. As in the adjacent mines, it is expected that the rooms in each subpanel will slowly close through plastic deformation or crushing of the pillars and deformation of the overlying strata. A 60 foot thick layer of halite lies directly above the polyhalite beds, and this layer of salt is compatible with the plastic/crushing failure model for the pillars. Laboratory tests are currently underway to determine the behavior of the each of the rock units.

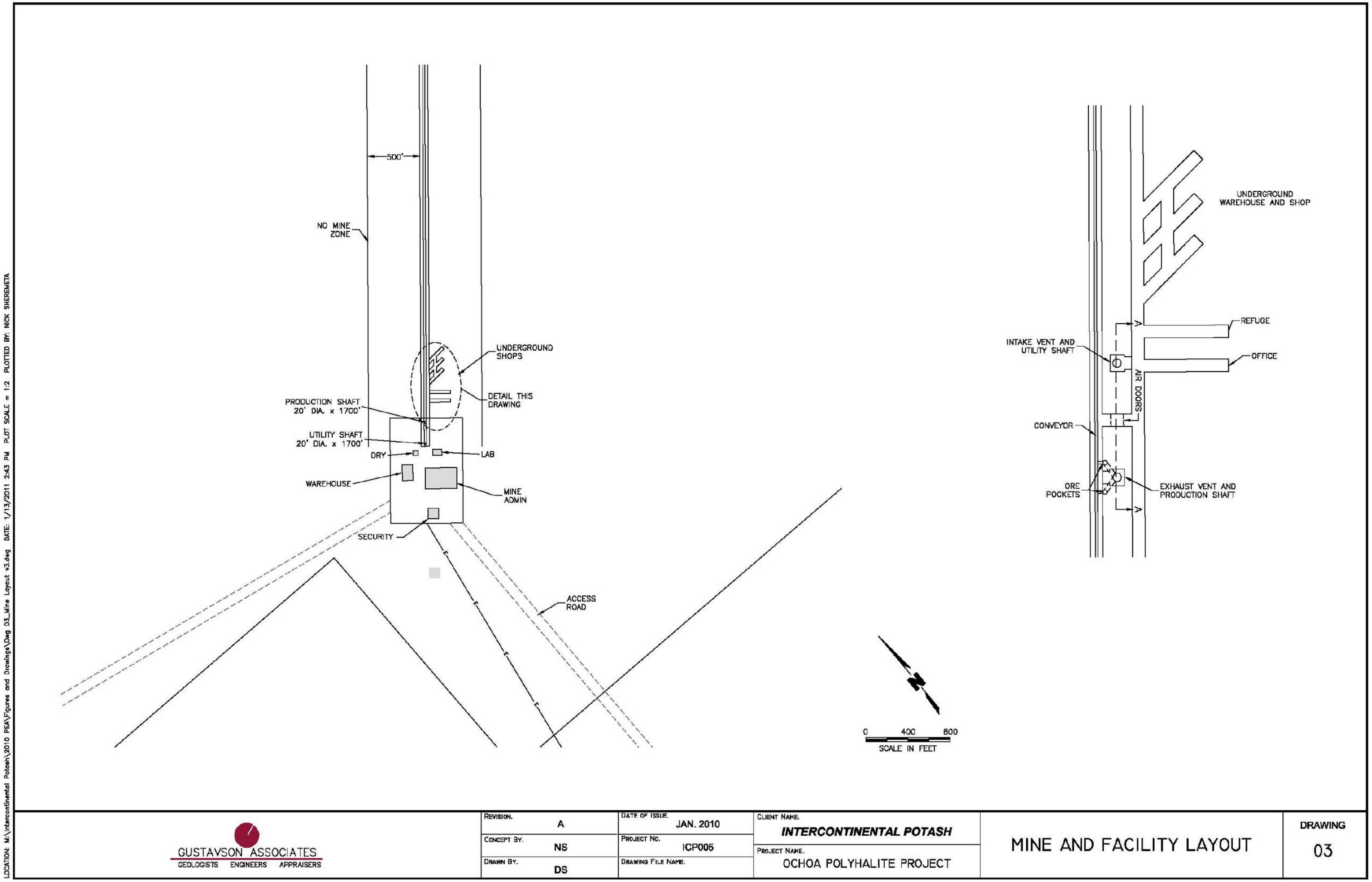


FIGURE 25-3 MINE AND FACILITY LAYOUT

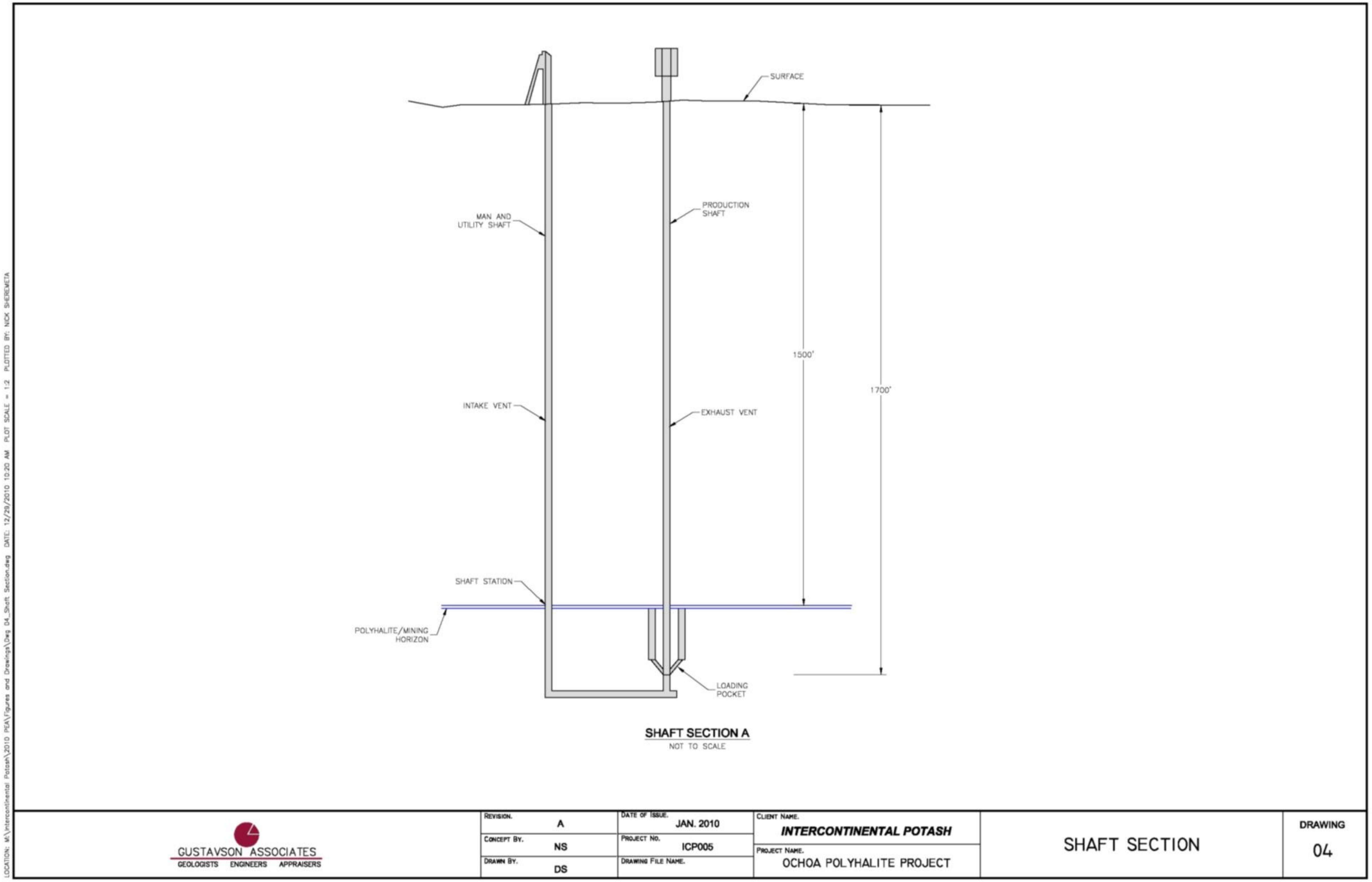


FIGURE 25-4 SHAFT SECTION

25.3.3 Mine Design – Shafts

Two adjacent concrete lined circular shafts 20 feet in diameter will serve the underground mine as shown in Figure 25-4. One shaft will be dedicated to production, while the second shaft will be a utility shaft for men and material transportation. The two shafts will provide ventilation for the mine, the utility shaft will serve as intake and the production shaft will be used for exhaust. Ventilation will follow the rules for gassy mines which must provide a minimum of 9,000 cubic feet per minute of fresh air to the working face for mines that use continuous miners. Each shaft will be 1,700 feet in depth, extending approximately 200 feet below the polyhalite beds. This additional depth will be used for ore pockets on the production shaft and access to the pockets from the utility shaft. A barrier pillar of 1,500 ft. in diameter will protect the shafts and surface facilities from damage.

25.3.4 Mine Development Design

The Ochoa mine is to be divided into 8 separate panel sections as shown in Figure 25-2. Each panel section is further divided into 12 subpanels which will be mined with a single continuous miner. Mains heading north from the shafts will be developed in order to gain access to the mine panels. Once these mains reach the first panel areas, additional main drifts will be developed at different time in the mine life to gain access to different panels. Each main consists of two drifts that are 30 feet wide by 8 feet in height. One drift is used for fresh air and the other will carry exhausted air back out of the mine. Along each main drift there will be a 500 foot wide barrier pillar in order to ensure that the main drifts do not collapse. The barrier pillars will be recovered at the end of the mine life.

The main haulage drifts that allows for access to the initial development panels is 13,415 feet in length and goes from the shaft entrance to the northeast where other mains will branch off of it to access the mine panels. The next main to be developed will feed panels one and two. This main extends northeast from the end of the initial main for 9,920 feet. Once this main drift is completed, then the development crew will begin developing the main haulage drifts that extend southeast from the access main for 9,920 feet in order to open access to panels three and four for the mining crews. Once completed, the main access drift will be extended to the northeast for an additional 13,420 feet. This main is necessary in order to gain access to panels five through eight. At the end of this haulage drift, a main will be developed perpendicular in the northwest direction for 9,920 feet in order to open access to panels five and six. The final main will be developed in the opposite direction of the previous one extending to the southeast for 9,920 feet which will open panels seven and eight for mining.

Upon completion of all mining and development within a main panel, the barrier pillar that was left around each main will be mined as crews retreat from the panel.

Each subpanel will be developed at right angles to the main heading illustrated in Figure 25-5. These subpanels are 830 feet wide by 6,210 feet in length and the drifts within the panel are 30 feet wide by 8 feet in height. Once the drifts in the subpanels are completely developed, polyhalite will be mined out in a retreating fashion. The amount of polyhalite that is extracted will be based on whether there are oil and gas well in the area, at a 90% extraction rate or 60% rate. In the areas of 90% extraction, the remaining pillars will deform plastically and eventually collapse closing off the mined room of the subpanel and causing subsidence on surface. In areas of 60% extraction, the pillars will remain intact, there will be no roof collapse, and there will be no subsidence on surface.

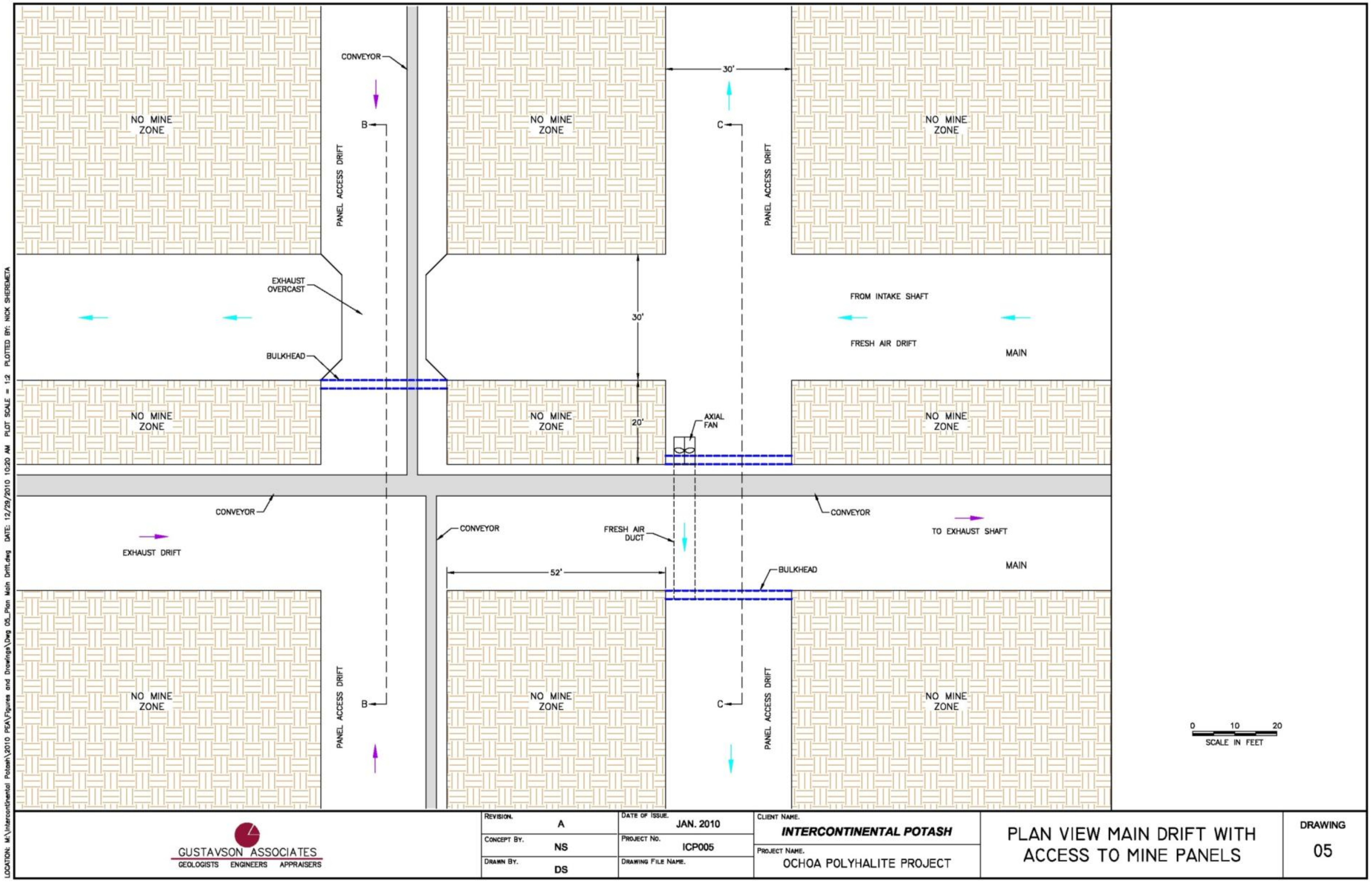


FIGURE 25-5 PLAN VIEW MAIN DRIFT WITH ACCESS TO MINE PANELS

25.3.5 Polyhalite Extraction

Polyhalite extraction will target a 90% extraction rate in most areas of the mine and 60% in areas within 1,500 feet of active oil and gas wells as shown in Figures 23-6 and 23-7. A single continuous miner will be employed in each subpanel extracting polyhalite ore. 2 shuttle cars support each continuous miner and bring ore and waste from the continuous miner to the feeder breaker where the material will enter the conveyor belt system. Each subpanel has a feeder breaker and a conveyor which feeds to the main conveyor belt in the main drift.

In areas of 90% extraction a room of 50 feet wide will be mined with pillars that are 8 foot by 20 foot separating the rooms. A 12 foot space will separate the pillars. The design of these pillars is not large enough to support the roof load and will deform plastically or crush over time, eventually collapsing the room.

In areas of 60% extraction rooms of 32 feet are will be mined with pillars that are 26 feet by 116 feet between the rooms. A 12 foot space will be separate the pillars from each other. The size of the pillars in the 60% extraction areas are will support the load of the roof above.

As mining retreats towards the main drifts, sections of the conveyor in each sub panel will be removed and moved to a different sub panel that is being developed for future mining. The feeder breaker will be moved closer to the mains as a room is completed. The pillar spacing and size are designed so that each subpanel can support both 90% and 60% extraction.

It will be necessary for the continuous miner to make two separate passes when mining the polyhalite as shown in Figure 25-8. The polyhalite has a thin layer of anhydrite above and below it. This thin anhydrite layer is expected to be unstable and will have to be removed, leaving a strong layer of halite in the back. Rock bolts in the halite back will insure a safe working environment. In the first mining pass, the continuous miner will extract the polyhalite ore leaving the anhydrite layer above the polyhalite. The anhydrite layer will be mined before the continuous miner operator is exposed to potential rock fall. The anhydrite will be gobbed into a mined out stope. After the anhydrite has been removed, a roof bolter will insert roof bolts into the halite, further strengthening the back.

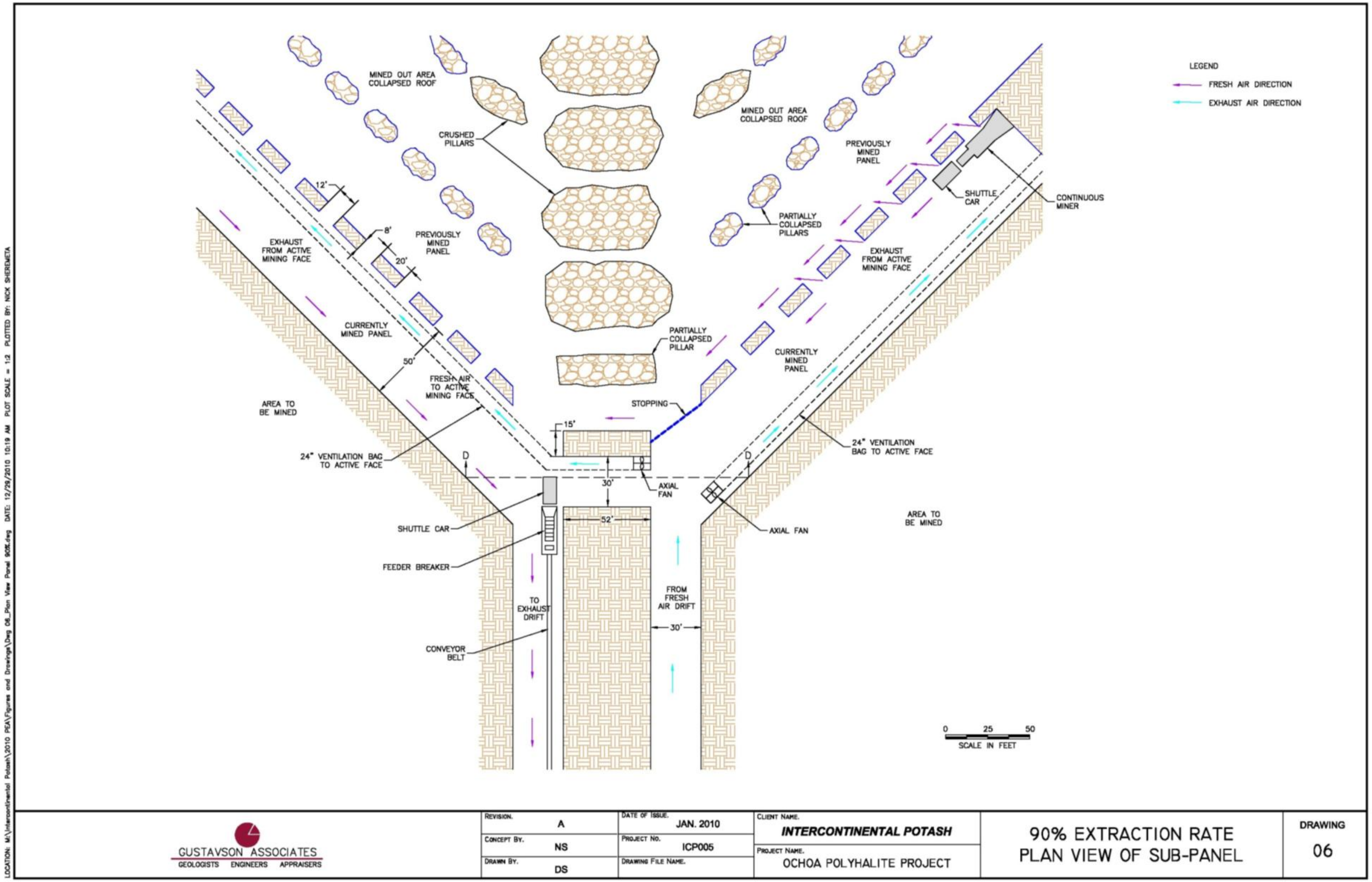


FIGURE 25-6 90% EXTRACTION RATE PLAN VIEW OF SUB-PANEL

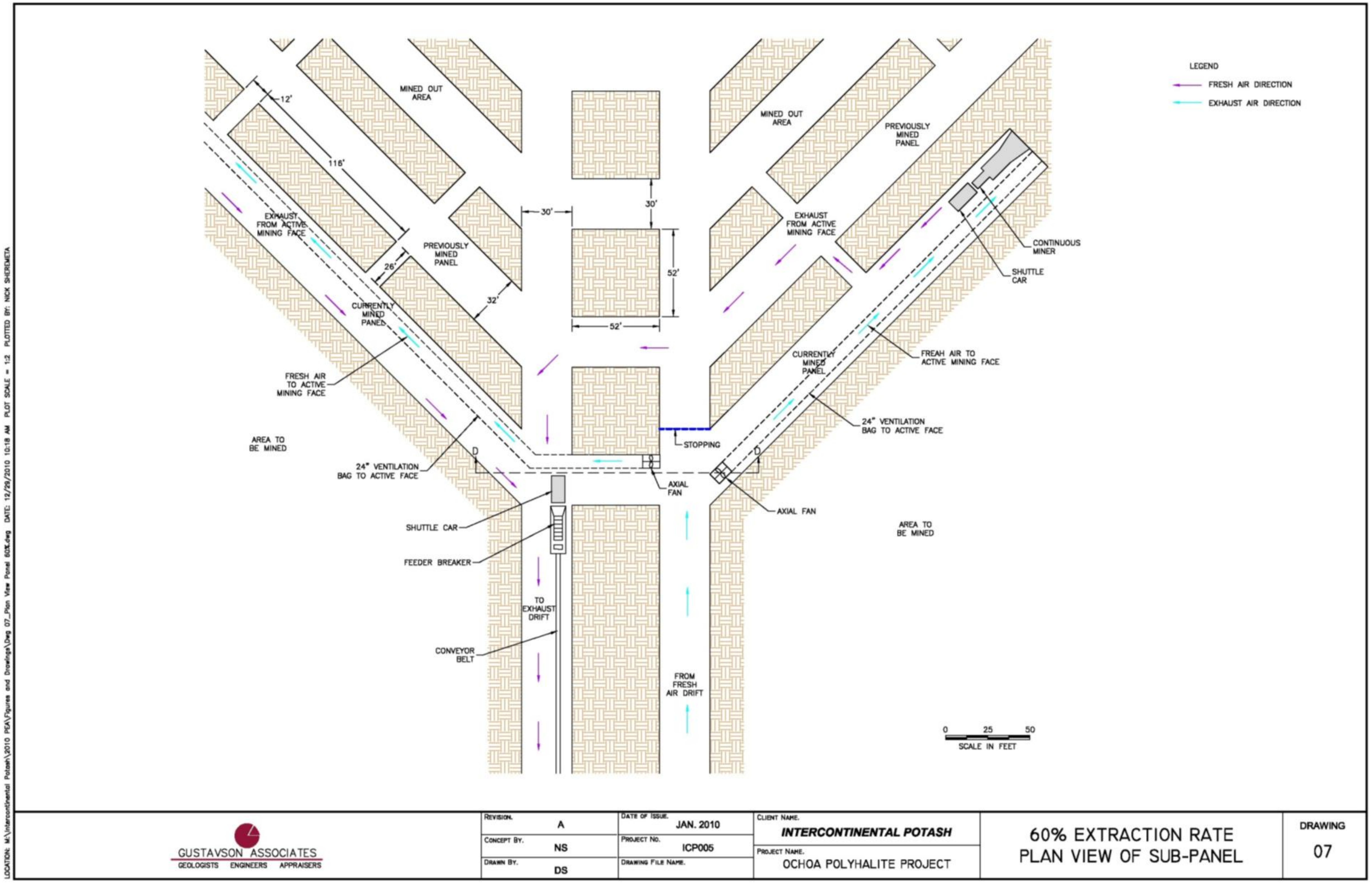


FIGURE 25-7 60% EXTRACTION RATE PLAN VIEW OF SUB-PANEL

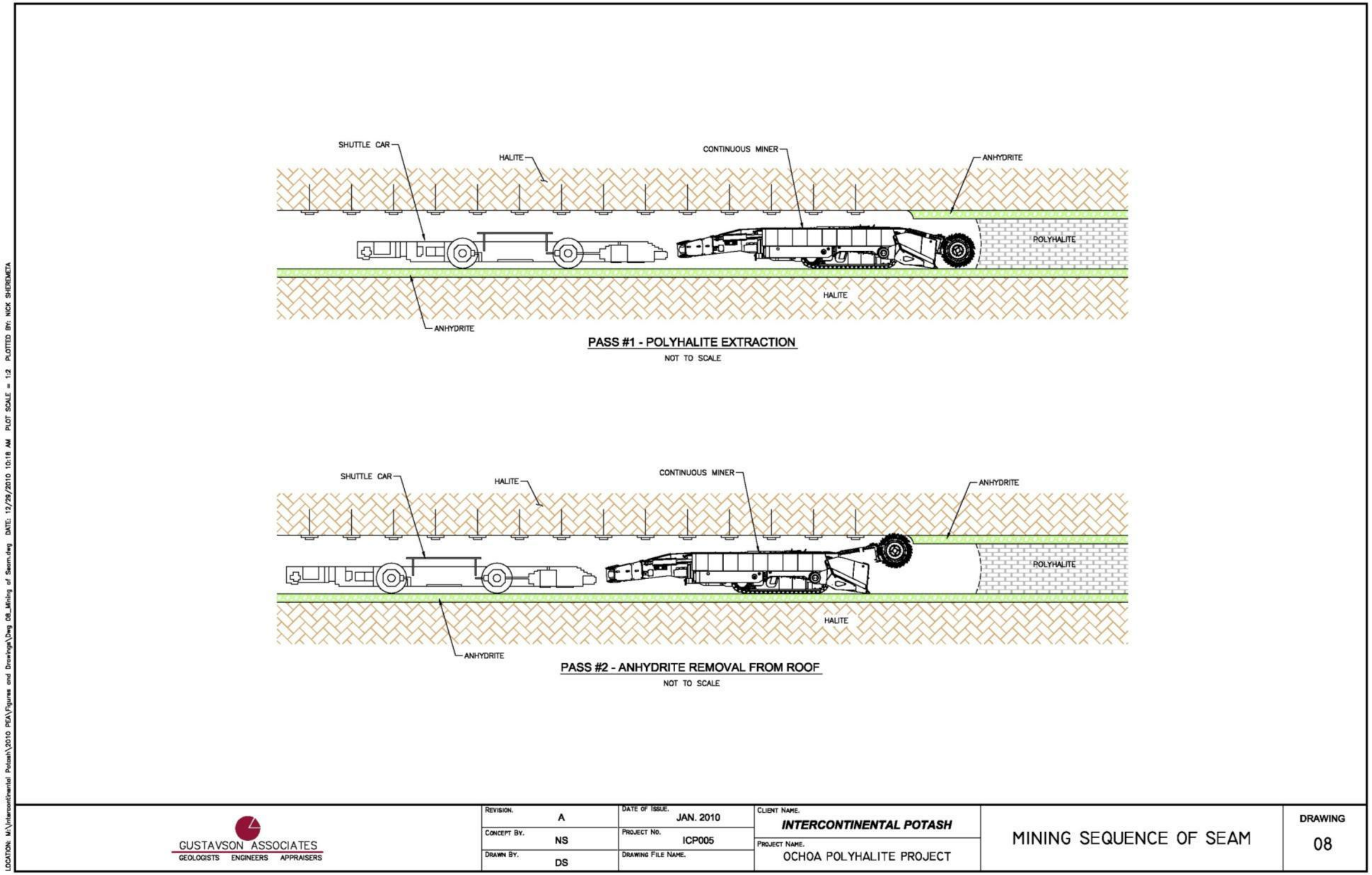


FIGURE 25-8 MINING SEQUENCE OF SEAM

25.3.6 Ventilation

The Ochoa mine will follow the rules of a gassy mine because there are active gas wells within the mining limits. Gassy mine rules stipulate that 9,000 cubic feet of fresh air needs to be provided to the active mining face if a continuous miner is being used. Fresh air and exhaust air will travel down separate drifts in both the mains and the subpanels. In order to keep the air separated and moving throughout the mine without mixing or contamination, air doors, bulkheads, stoppings, and overheads will be built throughout the mine. Plan views of air movement in the main drifts and in subpanels are shown in Figures 23-5 through 23-7.

The main drift subpanels are being developed bulkheads with doors wide enough to allow mining machinery through and will be constructed at the cross cuts in order to prevent the fresh and exhausted air from mixing and to maintain adequate pressure differential. In drifts where fresh air needs to cross over the exhausted air in order to have fresh air sent to the subpanels, an enclosed air duct with an axial fan will be constructed through the exhaust main and into the fresh air drift for the subpanel. In the areas where exhausted air from the subpanel crosses over the fresh air main, construction of an overcast is necessary in order to carry exhausted air and the conveyor belt to the exhaust main and primary conveyor belt. Section views of these air crossings are shown in Figure 25-9.

The main ventilation fans will be axial flow fans on surface, exhausting air from the production shaft and or forcing fresh air down the man and materials shaft.

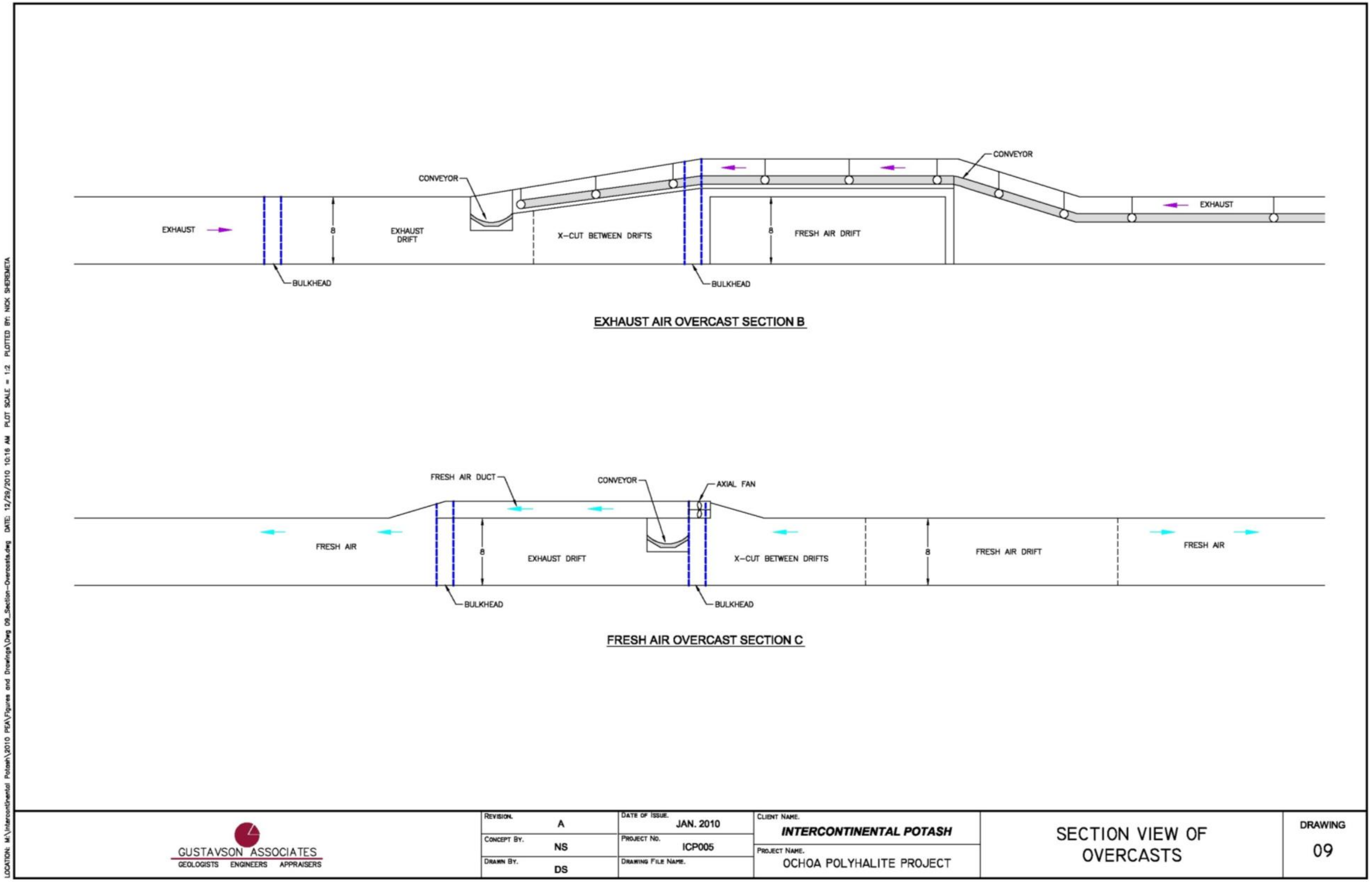


FIGURE 25-9 SECTION VIEW OF OVERCASTS

Subpanel ventilation is similar to that of the main drifts. However large bulkheads are not necessary to be built in the cross sections. Stoppings will be built in the fresh air drift where mining has been completed in order to prevent fresh air from going into areas of the mine that are already completed and closed. Axial fans and ventilation bags are necessary to carry fresh air to the active mining face. Adequate pressure differential will be kept throughout the mine in order to ensure that exhausted air is being carried out of the subpanel and back to the mains. A section view of the ventilation in the active panels is shown in Figure 25-10.

Mining equipment will be permissible in order to comply with gassy mine regulations. Nearly all the underground equipment is electric, with the exception of diesel powered man trips which shuttle workers to and from the active mining areas to the shaft. Extra maintenance has been included for the permissible equipment.

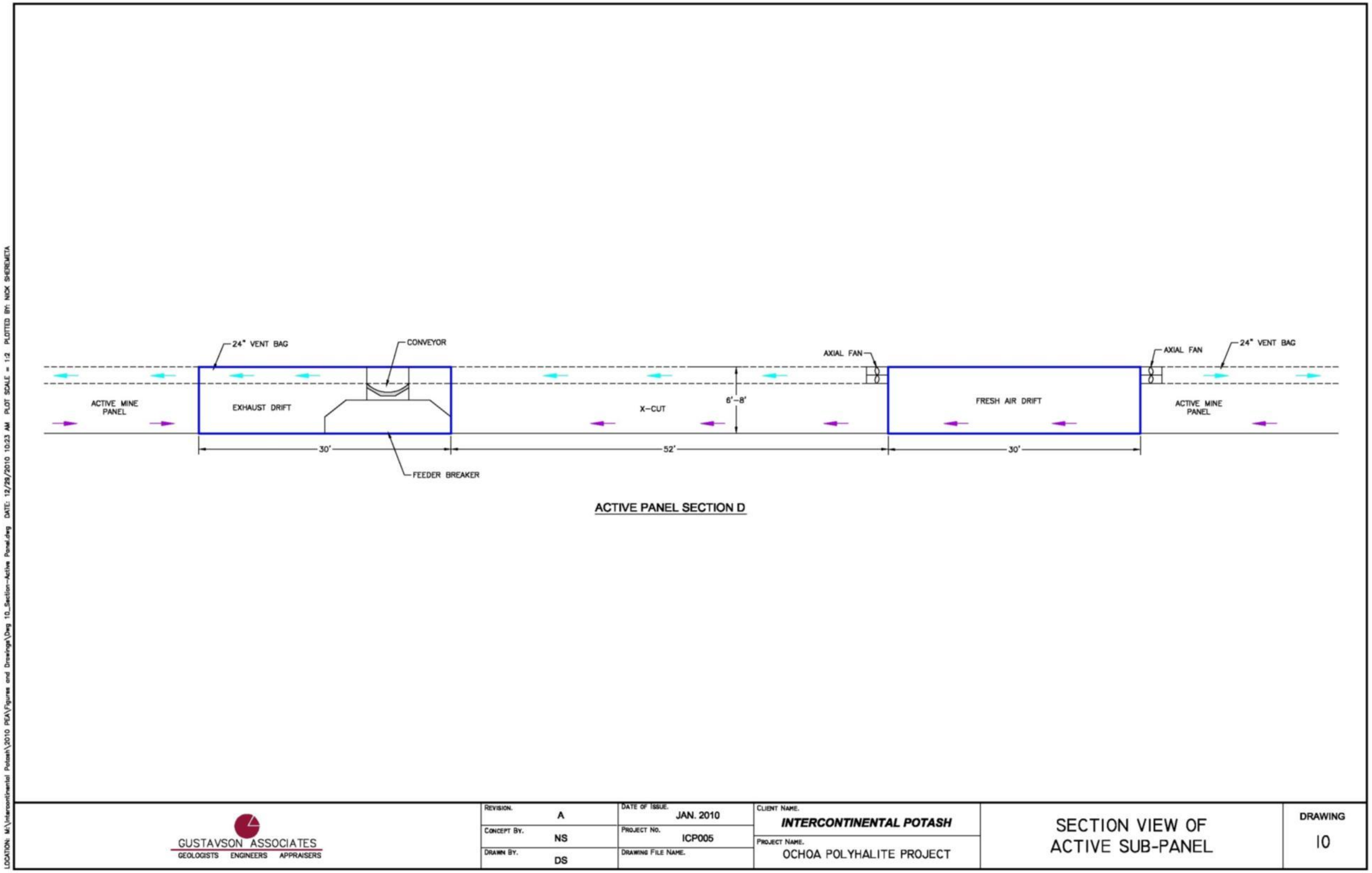


FIGURE 25-10 SECTION VIEW OF ACTIVE SUB-PANEL

25.3.7 Underground Equipment

Capital and operating costs for the required underground equipment has been included within the economic analysis. Underground mobile equipment for both the 660K ton and 990K ton scenarios will consist of the items as listed in the following tables.

TABLE 25-1 MOBILE UNDERGROUND MINING EQUIPMENT FOR 660K TON SCENARIO

Quantity	Description
7 ea	Continuous miners – Joy 12HM
14 ea	Shuttle cars
7 ea	Man trips – diesel
7 ea	Rock bolters
7 ea	Feeder Breaker

TABLE 25-2 MOBILE UNDERGROUND MINING EQUIPMENT FOR 990K TON SCENARIO

Quantity	Description
10 ea	Continuous miners – Joy 12HM
20 ea	Shuttle cars
10 ea	Man trips – diesel
10 ea	Rock bolters
10 ea	Feeder Breaker

25.3.8 Mining Support Services

Mining support services include engineering, mechanical, and electrical maintenance. Underground shop and offices as well as surface laboratory, warehouse, and other facilities have been included as part of mining support.

25.4 Mining Recovery

Mining recovery varies within the mine based on the amount of polyhalite in the ore and whether the ore is being extracted in a 90% area or 60% area. In the proposed mine, ore is 83.6% polyhalite overall. There are only a few areas within the mine area that are within the 60% extraction areas of active wells. Gustavson expects that overall extraction will be 85% of the polyhalite ore within the mining area. Most of the ore that remains in place will be in areas where roof collapse is not permitted.

Overall resources of the proposed mine using a 5 foot cutoff is 225.4 million tons of polyhalite with an average grade of 83.6%. When applying the extraction rates of 60% around active wells and 90% everywhere else in the mine area, the actual mineable resources of raw ore is 213.9 million tons at a grade of 83.6% available for mining within the mine plan area. The proposed mine has sufficient polyhalite to produce 990K tons of product for 43.4 years. For the 660K ton scenario, only 158 million tons of raw ore at an average grade of 83.6% is mined over the course of the 40 year mine plan. Table 25-3 shows the resource estimates of the 5 foot thick cutoff for the entire mine plan.

TABLE 25-3 OCHOA MINE PLAN MINERAL RESOURCE ESTIMATES

5 ft. Thick Cutoff

Category	Total Short Tons of Ore	Total Short Tons of PH	Grade of PH	Mineable Short Tons of Ore
Measured	43,717,276	36,935,301	84.5%	38,561,212
Indicated	147,381,421	123,037,400	83.5%	130,157,350
Inferred	51,784,566	43,056,150	83.1%	45,140,208
Total/Avg.	242,883,263	203,028,851	83.6%	213,858,771

The proposed mine is divided into 8 separate panels as show in Figure 25-2 Mine Facility Plan. In order to keep development and maintenance costs down, mining will only occur in panels that share the same main drift and mining will not progress to other parts of the mine until that area has been completely mined out. The resource estimates for each panel using a 5 foot thick polyhalite cutoff is shown in Table 25-4.

TABLE 25-4 OCHOA MINE PLAN RECOVERABLE MINERAL RESOURCE ESTIMATES BY PANEL

Ochoa Project Mine Plan Resources by Mine Panel for 5 ft Cutoff

Panel No.	Category	Contained Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore	Panel No.	Category	Contained Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
1	Measured	7,051,295	6,013,716	85.3%	6,076,470	3	Measured	5,637,851	4,846,544	86.0%	5,007,770
1	Indicated	33,917,379	28,547,785	84.2%	30,261,541	3	Indicated	22,105,926	18,675,923	84.5%	19,374,671
1	Inferred	2,439,477	2,013,683	82.5%	2,195,529	3	Inferred	2,156,758	1,802,078	83.6%	1,611,546
Total/Avg.	M+I+I	43,408,151	36,575,184	84.3%	38,533,540	Total/Avg.	M+I+I	29,900,535	25,324,545	83.6%	25,993,987
Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore	Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
2	Measured	16,029,627	13,889,486	86.6%	14,156,150	4	Measured	991,159	812,234	81.9%	713,873
2	Indicated	15,619,060	13,377,578	85.6%	14,057,154	4	Indicated	18,362,166	15,341,096	83.5%	15,065,757
2	Inferred	0	0	0.0%	0	4	Inferred	9,744,714	8,147,268	83.6%	8,770,243
Total/Avg.	M+I+I	31,648,687	27,267,064	86.2%	28,213,303	Total/Avg.	M+I+I	29,098,039	24,300,598	83.5%	24,549,873
Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore	Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
5	Measured	0	0	0.0%	0	7	Measured	6,564,986	5,381,692	82.0%	5,908,487
5	Indicated	8,771,918	7,252,690	82.7%	7,653,753	7	Indicated	24,068,320	19,770,337	82.1%	21,661,488
5	Inferred	19,726,426	16,394,618	83.1%	16,617,419	7	Inferred	627,376	516,957	82.4%	564,638
Total/Avg.	M+I+I	28,498,344	23,647,308	83.0%	24,271,172	Total/Avg.	M+I+I	31,260,682	25,668,986	82.1%	28,134,613
Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore	Panel No.	Category	Mineable Short Tons Ore	Contained Polyhalite	% Polyhalite	Mineable Short Tons Ore
6	Measured	0	0	0.0%	0	8	Measured	7,442,736	5,991,629	80.5%	6,698,462
6	Indicated	11,958,027	9,856,036	82.4%	10,762,224	8	Indicated	12,578,625	10,215,955	81.2%	11,320,763
6	Inferred	16,878,778	14,008,060	83.0%	15,190,900	8	Inferred	211,037	173,486	82.2%	189,933
Total/Avg.	M+I+I	28,836,805	23,864,096	82.8%	25,953,124	Total/Avg.	M+I+I	20,232,398	16,381,070	81.0%	18,209,158

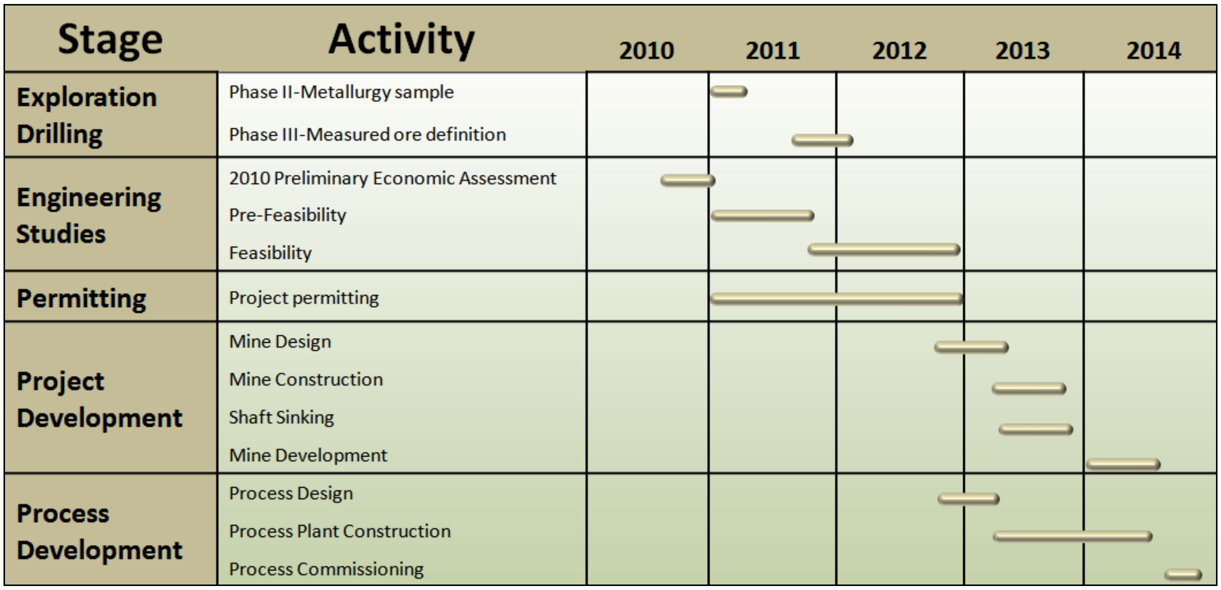
25.4.1 Project Development and Production Schedules

The Ochoa mine will start at 50% of the proposed maximum production rate and ramp up to full production over a 12 month period. In the base case 660K ton scenario, annualized production rate will begin at 1.64 million tons of ore for the first month of mine production and gradually ramp up to 3.28 million tons of ore annually by the completion of the first full year of mining. The processing plant is also assumed to follow this schedule with first month production an annualized rate 398,626 tons of K_2SO_4 delivered to ponds, building to an annual rate of 795,250 tons of K_2SO_4 by the end of 12 months. No saleable product during the first year of operation as the solar ponds must go through one summer evaporation cycle to produce product. The solar ponds begin harvesting at the end of the first solar evaporation cycle, and SOP is finally produced for sale 13 months after the initial mining had begun. We have assumed SOP that is sent to the solar pond after the first of August of any year, cannot be harvested until the following September. Final production of SOP follows the same ramp up schedule following September harvesting. The solar salt processing initially produces an annualized amount of 330,000 tons of finished product the first month and reaches an annualized production rate of

661,380 tons by the end of the first year. The 990K ton scenario follows the same production ramp up scenario as the 660K ton case. Required labor and equipment for full production are included during production build up.

According to the development schedule, exploration drilling for metallurgical samples will take place at the end of 2010 into the beginning of 2011. Definition drilling will occur in the second half of 2011 into 2012. The pre-feasibility study has already begun and will be completed by the end of 2011, followed by the feasibility study in 2012. Permitting will take a little more than two years and baseline studies for the permitting is scheduled to begin at the beginning of the 2011. Mine and process design is scheduled to begin in 2012 and end in 2013 when construction will begin on the mine and processing plant. Finally, mine production will begin towards the end of 2014 and the first product to be sold in the second half of 2015. Table 25-5 below presents the project development schedule.

TABLE 25-5 DEVELOPMENT SCHEDULE



25.5 Processing

The following processing model is based upon the 660,000 ton per year scenario. The processing capital cost estimate for the 990,000 ton scenario were scaled up from the 660,000 ton scenario using a factor of (990/660)^0.6 or 1.275.

25.5.1 Introduction

The ICP processes to convert polyhalite into SOP use unit operations common to the industrial minerals industry. ICP's process involves six major unit operation steps; crushing, calcination, leaching, solar evaporation, schoenite conversion, and granulation. Polyhalite, $K_2Ca_2Mg(SO_4)_4{\cdot}2(H_2O)$, is first crushed to produce material that can be quickly and easily calcined, driving off the two waters of hydration and greatly increasing solubility. The calcined product is then leached in hot water. The potassium and magnesium sulfates are significantly more soluble than the calcium sulfate and quickly dissolve leaving calcium sulfate residue. The calcium sulfate is removed producing a potassium and magnesium sulfate rich brine that is pumped to solar evaporation ponds where the sun's energy evaporates water from the brine. As the water evaporates, the ionic concentration increases until the solution becomes saturated and potassium sulfate bearing schoenite $K_2Mg(SO_4)_2{\cdot}6(H_2O)$ begins to crystallize from the solution. After a period of time, a thick bed of crystallized material accumulates on the pond floor. The remaining solution is pumped out of the pond and the crystallized precipitate material (solar salt) is harvested with rubber tired equipment, piled in a stockpile and allowed to drain. The fifth step of the process treats the potassium sulfate bearing schoenite solar salt product with the proper amount of water in a draft tube reaction vessel to selectively leach the magnesium sulfate from the schoenite crystals, leaving a pure potassium sulfate product. The final step of the process, granulation, involves drying the potassium sulfate and then granulating the crystals to produce a product that is easy to handle and transport. Figure 25-11 below shows the generalized flowsheet, more detailed discussion of the unit operations follow.

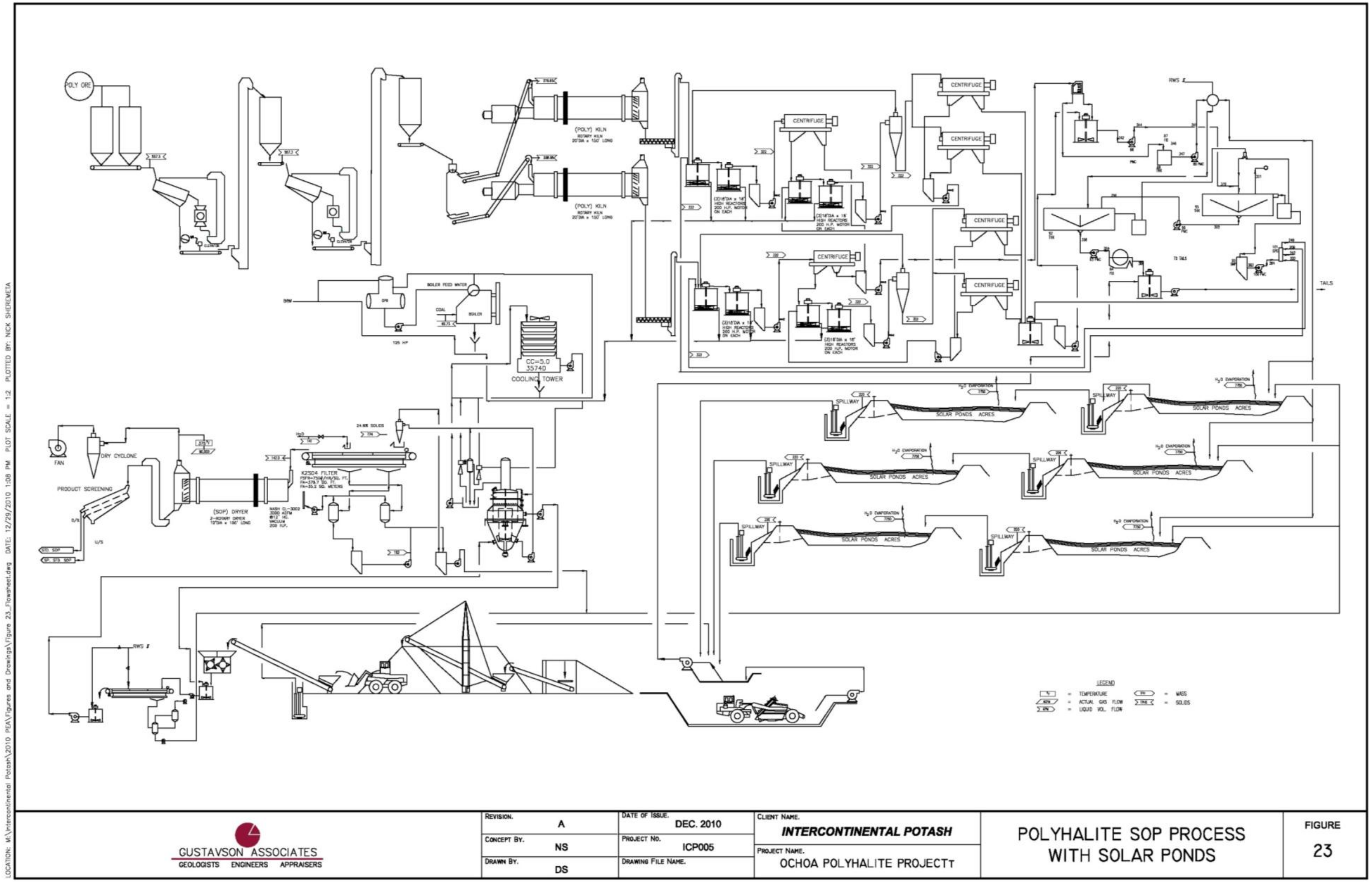


FIGURE 25-11 POLYHALITE TO POTASSIUM SULFATE PROCESSING FLOWSHEET BY CHEMFELT

25.5.1.1 Step 1 - Crushing

Raw polyhalite ore is planned to be processed at a rate of 350 tons per hour through two parallel, two stage, crushing circuits. One of the goals of the crushing system is to produce as uniform a product as possible, to aid in the calcining step. Finely crushed polyhalite will reduce the time necessary for the calcination process. These crushing circuits will therefore utilize impact crushers and heavy duty screens operated in closed circuit, to produce a P80 -8 mesh product.

The first stage of the crushing will reduce the material to less than half an inch. Two 12x24 foot screen decks will be used to deliver oversize back to the impact crusher, with the undersize going to the second stage of crushing. The four second stage crushers reduce the polyhalite to -8 mesh in a closed loop circuit using twelve 12x24 foot screens.

25.5.1.2 Step 2 - Calcination

The crushed polyhalite ore will be fed to two separate 18x250 foot rotary kilns that are equipped with 250 million BTU per hour burners, and a ceramic lined fire box. The crushed polyhalite will be heated to 950° F and held at this temperature for 15 minutes by controlling the flue gas temperature. Calcination drives off the water of crystallization allowing the polyhalite to decompose which makes the magnesium and potassium sulphates become soluble in water. The other chemical constituents of the polyhalite, such as magnesite ($MgSO_4$), and anhydrite ($CaSO_4$) decompose at higher temperatures and their solubility in water will not be affected. Any halite in the ore will pass through the kiln without melting. Calcined polyhalite is discharged from the two kilns at a rate of 166 tons per hour, each, to mixing boxes that feed the leach circuit. The water vapor, and particulate laden exhaust gas at a temperature of 1100 degrees will be sent to a cyclonic separator where 95% of the solids will be captured and recombined with kiln discharge. The exhaust gas and remaining particulate will then be sent to air pollution scrubbers.

25.5.1.3 Step 3 - Leaching

Calcined solids enter one of two parallel leaching circuits at a temperature of 832° F where they are mixed with brine from the washing and centrifuge processes step, in a mixing box. The recycled brine has a temperature of about 158° F when it enters the mixing box, and after the addition of the calcined solids the temperature rises to 195°F. The mixture exits the mixing box and enters a series of temperature controlled leach tanks in order to completely dissolve the potassium and magnesium sulphates. The solution is sent to hydrocyclones after leaching, where it is thickened to 50% solids. The thickened solution is then fed to centrifuges in order to separate the solids from solution. The solids are pumped to a final stage leach tank sequence in order to dissolve any remaining potassium and magnesium sulfate.

Effluent discharged from the hydrocyclones and the centrifuge processes are sent to large agitation tanks. This solution is then filtered through two parallel banks of Larox filters in order to remove any fine solids that may be suspended in solution, in order to prevent syngenite formation during evaporation. The filtered potassium / magnesium sulfate rich brine is pumped to a large heat exchanger where the brine is cooled from 195°F to 100°F. The brine is further cooled in the heat exchanger against plant feed water to a temperature of 70°F. The cooled high sulfate brine is then sent to collection tanks and then finally to the solar evaporation ponds at a rate of 3280 gpm.

The tails generated in the leach system will be thickened and washed to remove remaining potassium sulfate in a series of washing thickeners. The first washing thickener will be 150 feet in diameter and have 15 foot side walls. The underflow from the first thickener will be fed to the feed well of the second washing thickener where the solids content will be raised to 40%. After thickening, four centrifuges are used to remove remaining brine, and then the centrifuge solids are repulped to 55% solids using solar pond end brine, and pumped to the tailings pond.

25.5.1.4 Step 4 - Solar Pond Harvesting and Solar Salt Preparation

The cooled potassium and magnesium sulfate rich brine exiting the heat exchangers is pumped to a series of six solar evaporation ponds in four pond batteries. Weather data for southeastern New Mexico indicate cycles of about four year periods. The solar pond acreages must be varied from about 750 acres in warmer periods to about 1500 acres in colder periods. The adjustments will require adding ponds online to prevent solar ponds from overflowing in colder periods and taking ponds offline in warmer periods to prevent them from running dry. This can be done by direct observation by the operator.

The first pond in the series must accumulate liquid during the colder months when the entire evaporation is depressed severely. The first pond is constructed with an working depth of 9.5

feet to accommodate variation in weather related evaporation, and additional free board of 0.50 feet for a total depth of 10 feet. The ponds downstream from the first pond have a depth of 5 feet. Each of the ponds are approximately 65 acres in area, for a total of 1,560 acres. Four spare ponds are rotated in an out of service for harvesting and maintenance.

On the phase diagram for the D'Ans phase diagram for the K_2SO_4-$MgSO_4$-H_2O system, evaporation of the solution proceeds from the starting brine composition on a line extending to a point parallel to the intersection point of the arcanite (K_2SO_4) and schoenite phase boundaries as shown on Figure 25-12 below. The first crystals precipitating are arcanite or K_2SO_4 and this crystallization proceeds along a horizontal line back to the arcanite-schoenite phase boundary intersection point. The evaporation then proceeds from the intersection point along line from the origin toward a maximum concentration point. The length of the crystallization line back down toward the schoenite phase diagram will vary with evaporation each day, depending on the weather at the time of the year.

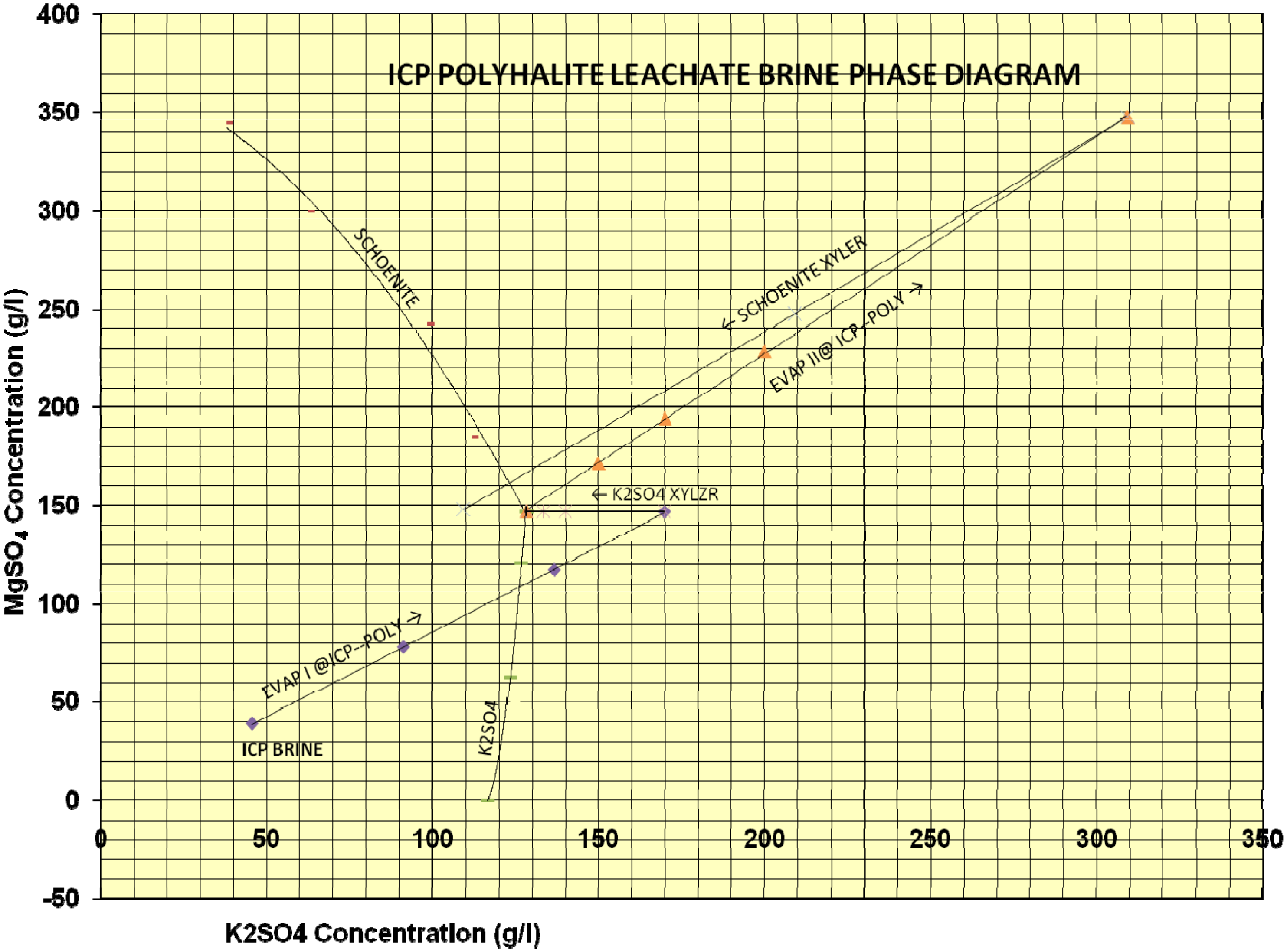


FIGURE 25-12 POLYHALITE D'ANS PHASE DIAGRAM.

Solar salts produced in the solar ponds will be harvested by rubber tire self loading scrapers. The solar salts (excluding entrained remnant non-combined water) will be ~67% by weight schoenite (K_2SO_4•$MgSO_4$•$6H_2O$), ~11% by weight arcanite (K_2SO_4) and the remaining ~22% being leonite (K_2Mg (SO_4)2•$4H_2O$). The salts will be slab-shaped with most particles less than 6 inches in size. The scrapers will dump the solar salts into a grizzly breaking the lumps to six inch or less in size. The solar salts will be stockpiled and allowed to drain.

Processing of the solar salts will continue by feeding the coarse salts into a crushing circuit where two impact crushers will reduce the size to minus 8 mesh. After crushing, the salts will be pulped with overflow brine from the draft tube baffle (DTB) reactor crystallizer. The pulped salts will be pumped to a feed box and fed to a belt filter where the DTB reactor liquor is washed away with water. The slurry is dried into cake and the mass is measured. The filter cake will then enter a repulp tank where the stoichiometric amount of water based on the filter mass will be added. The resultant slurry will be pumped from the repulp tank to the draft tube baffle crystallizer.

25.5.1.5 *<u>Step 5 - Draft Tube Baffle (DTB) Reactor Crystallizer</u>*

This step of the process removes the magnesium from the solar salts and leaves pure K_2SO_4 as the only solid salt remaining. The draft tube baffle reactor crystallizer operates under a vacuum (2.1kpa) and a three stage steam jet ejector system with a large barometric condenser. Chilled water (70° F) from a cooling tower is supplied to the condenser at a flow rate of 1922 gpm. A mass of K_2SO_4 seed crystals are circulated through the DTB reactor which will allow the potassium sulfate, that was part of the schoenite, to precipitate out of the solution onto the seed crystals. The slurry is pumped out of the DBT reactor to be filtered and lightly washed, separating the solid potassium sulfate from the DTB liquor. Some of the filtered DBT liquor is fed to the solar salt pulp tank and the remaining is sent to a collection tank where it will either be mixed with brine going to the solar ponds or mixed with the solid tailings and sent to the tailings pond.

The potassium sulfate filter cake is then sent to the product dryer where it is heated to 330° F. Water vapor and particulate laden exhaust gas is emitted from the dryer. These gases enter a dry cyclonic separator where approximately 90% of the particulates are recovered and recombined with the dried potassium sulfate solids.

25.5.1.6 Step 6 - Product Granulation

The dried product is screened and the coarse fraction pulverized in order to be granulated. The granulation feed will have a minimum of 20% by weight pulverized at roughly 90% passing a 325 mesh. The pulverized potassium sulfate is mixed with larger sized product that is near standard size prill, to provide a prill matrix that will be rigid enough after wet granulation to withstand impact at transfer points that will occur during transportation. This mixture is combined in a drum granulator with a water starch mix to get the fine portion to stick to the larger prill matrix. The finished granular product is then screened and warehoused where it is sold as final product.

25.6 Environmental

The following sections provide a preliminary evaluation of the project's impact on the environment and a description of potential permitting requirements.

25.6.1 Preliminary Evaluation of Potential Impact

Proposed mining projects are typically evaluated for a range of potential social, economic, cultural, and environmental impacts in response to national regulations such as the National Environmental Policy Act of 1969 (NEPA) and state permitting regulations. The potential socioeconomic, cultural, and environmental impacts that could result from the Ochoa Project include:

- Ground and surface water impacts related to seepage of solutions from the solar ponds, tailings facility, and solution transportation facilities;
- Ground and surface water impacts from seepage of process solutions from processing operations;
- Air quality impacts due to dust and emissions from construction activities;
- Air quality impacts due to emissions from the operation of the processing facility and transportation equipment;
- Impacts to soils from disturbance-related activities;

- Impacts to vegetation and wildlife habitat from disturbance-related activities;
- Impacts to federal Threatened and Endangered (T&E), and state listed sensitive plant and animal species due to disturbance and habitat removal;
- Archaeological and cultural impacts due to disturbance activities;
- Socioeconomic impacts (most likely positive) due to employment of residents and tax and royalty revenues paid to state and local governments;
- Socioeconomic impacts due to strains on existing local resources caused by increased population;
- Land use impacts due to changes in the use status of large tracts of land, including grazing;
- Recreation impacts due to changes in recreational use patterns;
- Visual impacts due to changes in the view shed; and
- Environmental justice impacts due to selective placement of the mine or hiring practices.

The majority of these impacts would either be minor or would be eliminated through relatively easy and/or required mitigation measures. However, recent projects in the area indicate that some impacts will require attention, including investigation, study, and potentially extensive mitigation to address.

Based on the Special Status Species Resource Plan Amendment and EIS (Bureau of Land Management [BLM] 2007), the Waste Isolation Pilot Plant (WIPP) Supplemental EIS II (U.S. Department of Energy [DOE] 1997), and the on-going EIS currently being prepared for the Intrepid Potash Mine about 20 miles away; groundwater, threatened and endangered species, and air quality will be the major issues for any new potash mine in the region. In addition to these, procuring a supply of fresh water sufficient for processing operations may also be a major issue.

New Mexico is an anti-degradation state and any discharges must not degrade the existing groundwater quality in the area above the standards set by the New Mexico Water Quality Control Commission. Groundwater protection may be required for facilities such as the solar ponds, tailings facility, processing facility, and solution pipelines. These requirements could include liners, double liners, and/or leak detection systems for the facilities. The purpose would be to protect groundwater below the facilities. However, it is also understood that the existing groundwater in the area is deep, already saline, and of poor quality.

T&E species, specifically lesser prairie chicken and sand dune lizard, were the focus of the BLM's Resource Management Plan Amendment and EIS (BLM 2007). A site-specific evaluation of T&E and special status species (state and BLM) will be required for project permitting. This data would be used to determine potential impacts and mitigation requirements for protecting any species or habitat found in the area of the project. While not threatened or endangered, migrating birds (Migratory Bird Treaty Act) and bats (potentially sensitive species) will also be important because they will be attracted to the solar ponds.

BLM and other agencies will impose restrictions and special reclamation requirements to protect the lesser prairie-chicken, the sand dune lizard, and perhaps migratory birds and bats, and their habitat. Timing limitations on when land disturbance activities or work in certain areas can occur may result due to breeding seasons of lesser prairie-chicken. On- or off-site mitigation may also be required depending on whether there is habitat for these species within the proposed project area slated for disturbance. Migratory birds and bats may require additional mitigation.

The U.S. Environmental Protection Agency (EPA) has classified Eddy County, New Mexico, where the Ochoa property is located, as an attainment area for all six of the criteria pollutants under the National Ambient Air Quality Standards (NAAQS). This means that the area currently meets EPA and/or state air quality requirements. There are two air quality programs: Prevention of Significant Deterioration (PSD) and Air Quality Related Values (AQRVs).

A land classification scheme was developed for NAAQS. Class I allows very little deterioration of air quality; Class II allows moderate deterioration; and Class III allow more deterioration; but in all cases, the pollution concentrations shall not violate any of the NAAQS. Class I areas include national parks and wilderness areas. Proximity to a park could present additional air quality considerations because the facility would be prohibited from degrading the air quality of a Class I area including visibility AQRVs. The Class I PSD areas nearest to the property are: Carlsbad Caverns National Park, approximately 45 miles west of the Ochoa site, and Guadalupe Mountains National Park, which is approximately 80 miles southwest of the site. The project area is in a Class II PSD area and air quality permitting may result in very specific requirements for emissions at the site.

25.6.2 Permitting

The permitting schedule for the Ochoa Project would be dominated by the NEPA process. Typical requirements of the NEPA process include baseline studies of at least one year and public review and comment periods for scoping and Draft EIS documents. Typically, an EIS for a new mining project requires between 18 and 24 months for completion. Adding at least six months for baseline studies, which can overlap the beginning months of the NEPA process, results in a minimum of 24 to 30 months. With the exception of air permits, the remaining major permits for the project would likely require the NEPA Record of Decision (ROD) before the agency would sign their permit into effect. A diagram of the interaction of permitting agencies is shown on Figure 25-13 below. Time periods for completion of applications, submittal, review and approval for the other permits are typically much less than 24 to 30 months, more on the order of six to 12 months.

As mentioned above, air permits are an exception to this typical schedule. This is because air permits are more like building permits in nature than other environmental permits; you build it according to set standards, and request an inspection, as opposed to submitting a design and getting approval before construction. For this reason, preliminary approval of air permits can often be obtained prior to completion of the NEPA process.

A preliminary permitting schedule is shown as Figure 25-13 below.

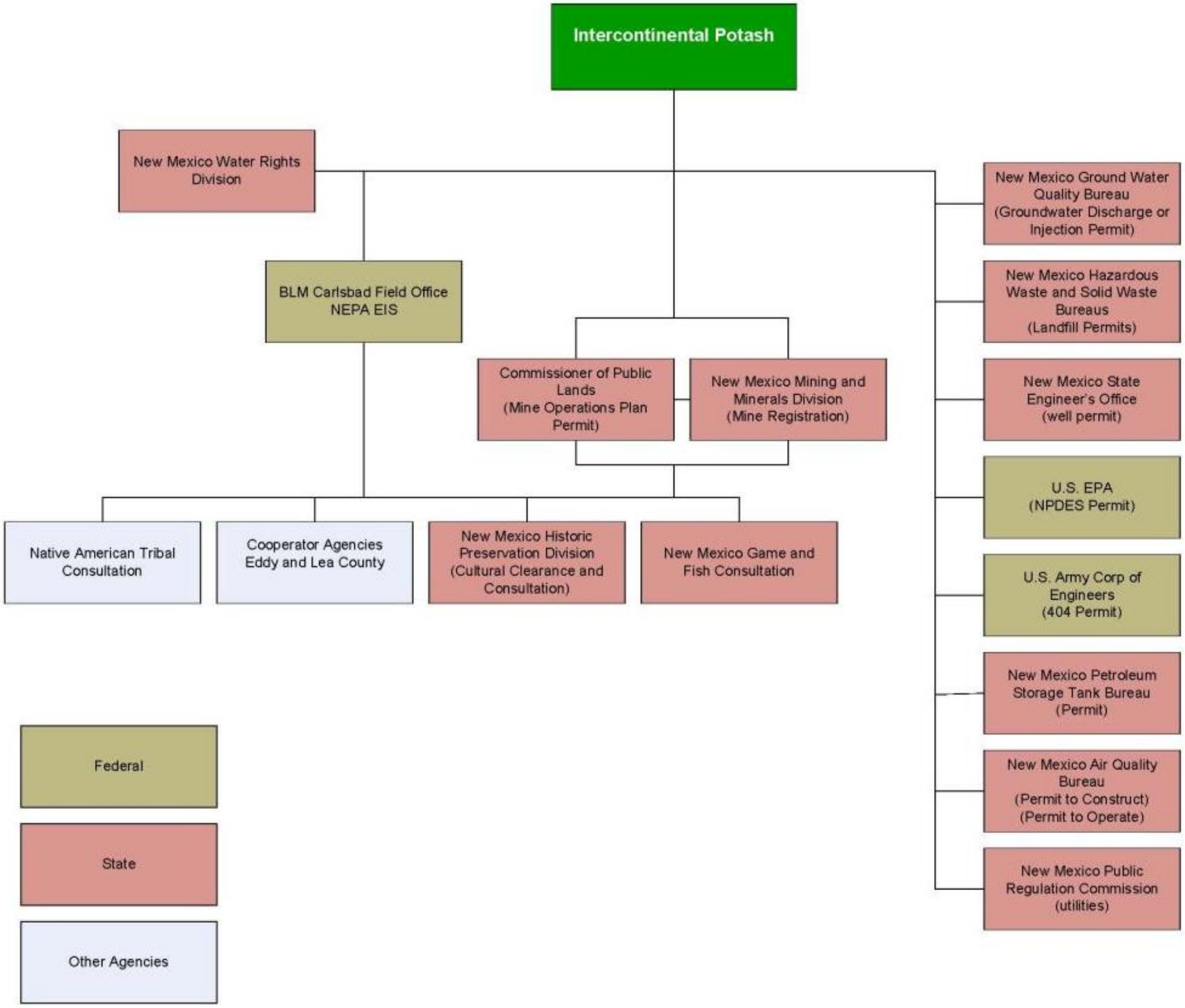
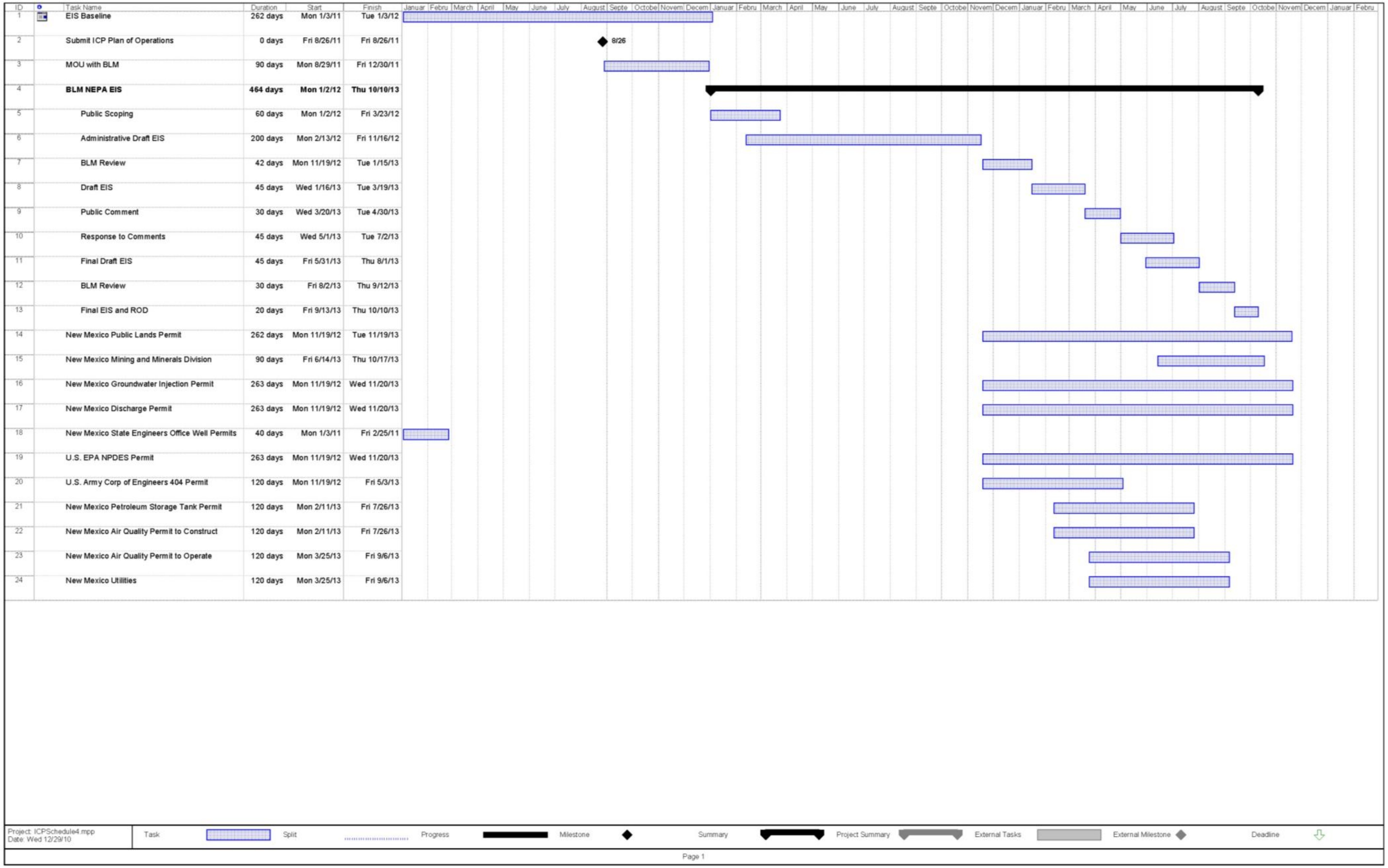


FIGURE 25-13 DIAGRAM OF PERMITTING AGENCY INTERACTIONS



ID	Task Name	Duration	Start	Finish
1	EIS Baseline	262 days	Mon 1/3/11	Tue 1/3/12
2	Submit ICP Plan of Operations	0 days	Fri 8/26/11	Fri 8/26/11
3	MOU with BLM	90 days	Mon 8/29/11	Fri 12/30/11
4	**BLM NEPA EIS**	**464 days**	**Mon 1/2/12**	**Thu 10/10/13**
5	Public Scoping	60 days	Mon 1/2/12	Fri 3/23/12
6	Administrative Draft EIS	200 days	Mon 2/13/12	Fri 11/16/12
7	BLM Review	42 days	Mon 11/19/12	Tue 1/15/13
8	Draft EIS	45 days	Wed 1/16/13	Tue 3/19/13
9	Public Comment	30 days	Wed 3/20/13	Tue 4/30/13
10	Response to Comments	45 days	Wed 5/1/13	Tue 7/2/13
11	Final Draft EIS	45 days	Fri 5/31/13	Thu 8/1/13
12	BLM Review	30 days	Fri 8/2/13	Thu 9/12/13
13	Final EIS and ROD	20 days	Fri 9/13/13	Thu 10/10/13
14	New Mexico Public Lands Permit	262 days	Mon 11/19/12	Tue 11/19/13
15	New Mexico Mining and Minerals Division	90 days	Fri 6/14/13	Thu 10/17/13
16	New Mexico Groundwater Injection Permit	263 days	Mon 11/19/12	Wed 11/20/13
17	New Mexico Discharge Permit	263 days	Mon 11/19/12	Wed 11/20/13
18	New Mexico State Engineers Office Well Permits	40 days	Mon 1/3/11	Fri 2/25/11
19	U.S. EPA NPDES Permit	263 days	Mon 11/19/12	Wed 11/20/13
20	U.S. Army Corp of Engineers 404 Permit	120 days	Mon 11/19/12	Fri 5/3/13
21	New Mexico Petroleum Storage Tank Permit	120 days	Mon 2/11/13	Fri 7/26/13
22	New Mexico Air Quality Permit to Construct	120 days	Mon 2/11/13	Fri 7/26/13
23	New Mexico Air Quality Permit to Operate	120 days	Mon 3/25/13	Fri 9/6/13
24	New Mexico Utilities	120 days	Mon 3/25/13	Fri 9/6/13

FIGURE 25-14 PRELIMINARY PERMITTING SCHEDULE

25.6.3 NEPA Environmental Impact Assessment Process

Under NEPA, if social, economic, cultural, or environmental impacts are not anticipated, a Categorical Exclusion is warranted; if impacts may occur or if impacts would not be considered significant, an Environmental Assessment (EA) is required; and, if significant impacts are anticipated an Environmental Impact Statement (EIS) is required. Because some impact would occur for almost any large scale mining operation, and no new major mine with a Federal nexus has been approved in the last 10 years without an EIS, an EIS would likely be the outcome of the initial NEPA evaluation. The remainder of this discussion will focus on the NEPA EIS process

Mining projects located on federally-administered land are required to submit a Plan of Operations (POO) and reclamation plan. The lead federal agency, in this case BLM, must then evaluate this plan and conduct a NEPA evaluation. While the lead federal agency is responsible for funding and conducting the EIS, federal agencies generally do not have the staff or funding to complete large scale, mining-related EISs in a timely manner. In these cases, the mining proponent may fund the EIS and the federal agency may direct a third party contractor to conduct the EIS.

The numerous other federal, state and local permits and approvals, discussed below, that are required for the project are prepared separately from, and outside of, the NEPA process. When these approvals are dependent upon the NEPA findings, they are generally obtained following the NEPA process. Frequently, BLM will include other federal or state agencies in the NEPA process as “cooperators”. The cooperators may have frequent meetings to discuss issues of concern, for example – U.S. Fish and Wildlife or the New Mexico Department of Game and Fish could be cooperators for endangered species.

The NEPA process will be triggered by submittal of a mine plan or plan of operations. If an EIS is required, a Memorandum of Understanding (MOU) is typically prepared to define the relationship between the BLM, the proponent and the third party consultant just prior to or just following the selection of a third party consultant. There is opportunity to discuss and obtain concurrence from BLM on issues of concern including baseline requirements and the depth of analysis. The requirements are shown in Figure 25-15 and the NEPA process is discussed below.

The NEPA process generally includes the following components: Development of a Proposed Action; baseline data collection; scoping; development of alternatives; description of the existing environment; mitigation measures; impact evaluation; preparation of both a Draft and Final EIS; and a public participation and review process. A general NEPA schedule includes:

- Public Scoping – 2 to 3 months
- Draft EIS – 1 year to 18 months
- BLM review – 2 months
- Public Comment – 1 month
- Response to Comments – 2 months
- Final Draft – 2 month
- BLM Review – 1 month
- Record of Decision (ROD) – 1 month

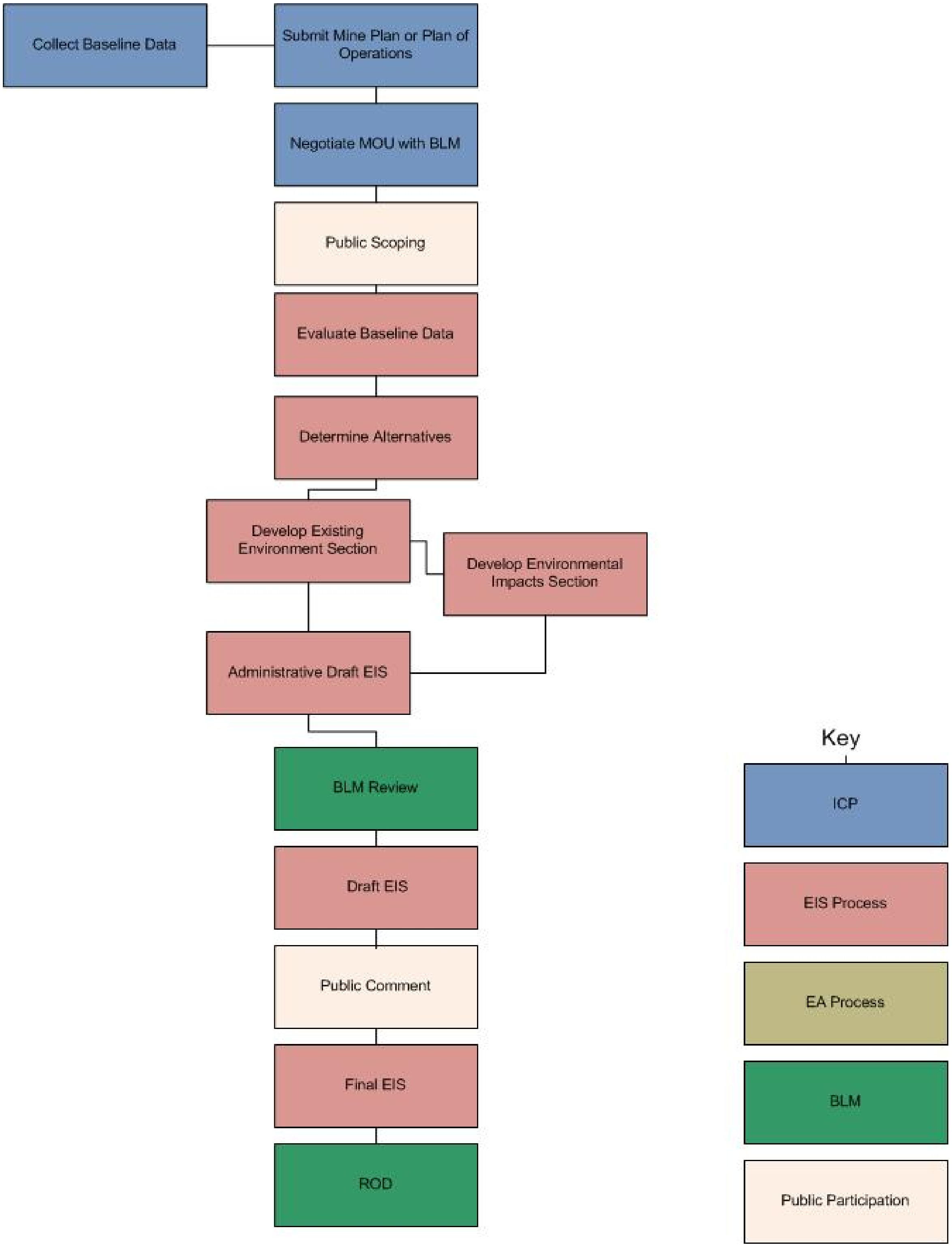


FIGURE 25-15 DIAGRAM OF NEPA PROCESS

25.6.4 Baseline Studies

Typically, baseline studies of at least one year are required for NEPA processes. In cases where it takes more than one year of data to understand a resource, even more data may be required. In the case of the Ochoa Project, where numerous other NEPA analyses have been conducted in the general area, one year of baseline data would likely be adequate. There have been several NEPA documents completed for the area: NEPA documents prepared to support the original and amendments to the BLM's Resource Management Plan (RMP) that covers the area; EISs for the WIPP site (approximately 12 miles to the west of the Ochoa property); and the EIS for the expansion of the Intrepid Potash Mining Corporation potash mine in the Carlsbad area began in March 2010. Information from these studies and other permitting documents could be used, if appropriate, to reduce baseline data collection schedules and costs. Whether the data is appropriate would rely on distance and direction from the Ochoa property (especially for air and water). The WIPP site has decades of air and water sampling data and data from the eastern sampling stations may be useful. Additionally, WIPP has conducted extensive air and groundwater modeling as part of the NEPA and permitting process.

An estimate of baseline sampling schedules before possible reductions discussed above is shown below.

- Air monitoring – 1 year
- Groundwater Monitoring – 1 year
- Surface Water Monitoring – 1 year
- Soil – (Desktop, but may need soil sampling for reclamation planning), 3 months
- Geology – Have from existing documents
- Archeological and Cultural Resources – spring, summer
- Vegetation – Field Survey – 3 months, but there are seasonal requirements
- Wildlife – Field Survey – 6 to 9 months
    - Migrating birds – spring and fall
    - Bats – summer and fall
    - Raptors – spring
    - Prairie chicken – spring
    - General wildlife – spring, summer.

It is critical to the EIS schedule that all parties are in agreement on the adequacy and depth of the baseline studies. Many NEPA projects are needlessly delayed because of disagreements on the level or scope of information required. Good communication and documentation of all discussions are critical. Once agreements are made and documented, the baseline data can be collected by either the proponent or a third-party contractor.

25.6.5 Purpose and Need

The Purpose and Need is developed from the proponents' POO and reclamation plan. It is critical that the POO and reclamation plan be complete because the NEPA analysis will rely upon the information in these two documents.

25.6.6 Scoping

Scoping meetings are held to obtain public input in the NEPA process. The Proposed Action is presented and the public is allowed to comment on the proposed project. The results of scoping are summarized in the EIS and a scoping document becomes an appendix to the EIS.

25.6.7 Alternatives

The proposed action will be developed from the POO and reclamation plan. BLM will also evaluate a "No Action" alternative and will develop additional alternatives as necessary. These additional alternatives could include mitigation actions or operational variations. The alternatives will become the basis for the impact evaluation.

25.6.8 Existing Environment

Once the baseline data are complete, the existing environment is described. This part of the EIS will contain existing information from BLM, the proponent, other studies, and the baseline. This section will be used as a baseline for measuring impacts. The existing environment will include all resources that BLM considers for the analysis including the natural and human environment.

25.6.9 Impact Analysis

NEPA provides very little guidance as to the depth of study required in the impact analysis. The regulations state that "a study of reasonable depth" be conducted. This has been interpreted to both extremes in the past. NEPA encourages EISs be limited to 200 pages or less, conserve the use of paper, run concurrently with other permitting processes, and be prepared in concise layman's terms, indicating that the EIS documents should be as succinct as possible. Regardless of intent, the level of detail in the documents is generally determined by the lead agency.

The impact analysis will include a description of the types and magnitude of the impact. For example: an impact could be long- or short-term, adverse or beneficial. Mitigation measures are part of the analysis and additional ones may be proposed as part of the impact analysis.

Cumulative impacts are determined by evaluating the effect of the residual impacts of the proposed project in light of any other "past, existing or reasonably foreseeable" activities in the area. For example, a proposed project may add a small amount of emissions into the air which combine with other existing or proposed projects could impair existing air quality. Cumulative impact determination has been a matter of contention in numerous mining-related NEPA processes and must be defined and addressed early in the process to successfully avoid delays.

25.6.10 Draft EIS, Public Comment, Final EIS

The Draft EIS is prepared and released for a 30-day public review process. Public meetings are generally held during this time to facilitate public response. These meetings are typically presentations of the project and identified impacts with opportunity for verbal or written public response. The public comments are summarized in the Final EIS and generally included as an appendix. BLM takes into account public comment and develops a Final EIS that may include additional information or clarifications. For mining-related projects, the Final EIS is most often a clarified version of the Draft EIS. Public comments are summarized and included as an appendix.

25.6.11 Record of Decision

BLM will prepare the Record of Decision (ROD). The ROD is the final statement of approval or denial of the NEPA process. It will contain the requirements which the project must adhere to if it is to go forward, usually by referral to the EIS. Typically, all of the other permitting agencies will set standards equal to or exceeding those in the ROD. Following this period, if all other permits have been obtained, work can begin at the site.

It is important to realize that NEPA is a public environmental review process. The EIS is not a permit document or a design report. This is a significant difference from permitting processes in that the Draft and Final EISs are intended to document the impacts and the review process, not provide a starting point for negotiations, or ultimate designs. Therefore, any commitments, alternatives, or mitigation measures which are part of the EIS documents become available for selection as the preferred alternative or as a requirement in the ROD. These items must be negotiated during the process, before they are published in a Final EIS.

25.6.12 The BLM Resource Management Plans

The existing Carlsbad Resource Management Plan (RMP) includes potash mining as an approved land use within the BLM management area. This plan was modified through the 1997 Resource Management Plan Amendment for Oil & Gas in the Carlsbad Resource Area, and again by the 2008 Special Status Species Resource Management Plan Amendment and EIS. Currently, the existing plan, prepared in 1988, is under the process of being replaced with an entirely new plan. Funding is currently being obtained by the BLM to accomplish this, and data collection is already underway. The writing of the new plan, and the NEPA process to approve the new plan, are anticipated to begin in early 2011 and be completed by 2013.

It is anticipated that potash mining will also be an approved activity under the new RMP as it currently is under the existing RMP. However, the stipulations, mitigations and protections required to allow mining may change in the new RMP. Therefore, it is advisable to get the permitting process started, and if possible, completed before the new plan is approved through the NEPA process.

25.7 Archeological and Cultural Resource Considerations

Archeological and cultural resources will generally be addressed during the NEPA process because the information will become part of the EIS. However, there are additional requirements. In accordance with the National Historic Preservation Act (NHPA) and State Historic Preservation Act, Section 106 consultation and cultural resource surveys are required. The BLM will consult with the State Historic Preservation Officer on cultural issues in the area. Additionally, consultation with Tribal entities is required to determine if there are sites or artifacts of special tribal significance in the area. The proponent will be required to conduct a Class I Research survey and Class III pedestrian survey of the proposed site.

The Cultural Resources Class I and Class III surveys and State Historic Preservation Office (SHPO) consultation will include the following:

- Efforts made to identify and consult with Indian tribes and other interested stakeholders;
- Historic properties that may be affected by the proposed project; and
- Alternatives and mitigation for potential affects from the proposed project.

All historic and cultural resources within the vicinity of the proposed project will be identified and the effect of the project on any cultural or historic resources will be disclosed.

25.8 Permit Requirements

The following section provides a comprehensive overview and listing of permits potentially required for the Ochoa Project.

25.8.1 List of Permits and Registrations

Table 25-6 below, is a list of permits potentially necessary for the Ochoa Project, and the agencies for each permit. It is premature to develop a complete list of permits for the project, until the project is delineated in greater detail as development progresses. However, the major permits, and many of the minor permits, are included in the list.

TABLE 25-6 PERMITS AND REGISTRATIONS

Permit	Agency	Approximate Timing
Mine Registration	Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department (NMEMNRD)	3 Months, but not approved until after ROD
Air Permit to Construct	Air Quality Bureau (AQB) of the New Mexico Environment Department (NMED)	6 Months
Air Permit to Operate	AQB, NMED	6 Months
State Trust Land Leases and Permits	Commissioner of Public Lands of the New Mexico State Land Office	1 Year, but not approved until after ROD
County Land Use Permits	Eddy and Lea Counties	Not approved until after ROD
Permit to Appropriate Underground Waters of New Mexico	Water Rights Division of the Office of the State Engineer	6 Months
NMED Groundwater Discharge Permit	Ground Water Quality Bureau (GWQB), NMED	1 Year
Mine Drill Holes That Encounter Water – Plugging Permit	Water Rights Division of the Office of the State engineer	6 Months
NPDES Stormwater Permit	Environmental Protection Agency (EPA)	1 Year
Fuel Storage Tanks Permits (need not anticipated)	Petroleum Storage Tank (PST), NMED	6 Months
Utility Location Permit	New Mexico Public Regulation Commission	6 Months
Section 404 Wetlands and Section 401 Water Certification Permits (need not anticipated)	U.S. Army Corps of Engineers	6 Months
Endangered Species Takings Permit	Conservation Services Division (CSD) of the New Mexico Department of Game and Fish	3 Months, if necessary

25.8.1.1 Mine Registration

Potash mining is exempt from both the New Mexico Hardrock Mining Act and the New Mexico Coal Mining Act and is therefore not required to obtain Mine Closure and Closeout Permits. However, the Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals and Natural Resources Department registers all mines (including potash mines, borrow pits and sand and gravel mines), mills, concentrators and smelters prior to startup of the mining operation. The purpose of this registration is to inform MMD of the location, operator, commodity and type of operation. Annual production, sales, and employment data are collected annually from registrants for MMD's use in evaluating extractive industry trends. Production information for individual operators is held confidential in accordance with state law. Permanent or temporary closures, reactivations, and safeguarding after operation closure are also required to be reported. Additionally, any changes in the original registration, such as change in owner or operator, must be reported.

25.8.1.2 Air Permit to Construct

The Air Quality Bureau (AQB) of the New Mexico Environment Department (NMED), under the authority of the Air Quality Control Act, issues air quality Construction and Operating Permits. This authority applies to all New Mexico counties except Bernalillo County and Indian Lands. The AQB administers most Federal Air Programs, which include: New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAPS), PSD, Title V Operating Permits, Title III Air Toxics, and Title IV Acid Rain.

The purpose of the permits is to ensure that air pollution sources meet applicable regulations and will not exceed ambient concentration standards for air pollutants. This permit must be approved and issued before construction or modification begins.

25.8.1.3 Air Permit to Operate

The New Mexico Operating Permit Program (20.2.70 NMAC) applies to major sources and sources which emit substantial amounts of hazardous air pollutants. Significant documentation and recordkeeping requirements are incorporated in the Operating Permit Program. The Operating Permit will specify all regulations and limits, which apply to a source. Possible alternate operating scenarios, which could affect the facility, must be identified and detailed. No provisions for "Grandfathered Facilities” are included.

25.8.1.4 State Trust Land Leases and Permits

State Trust Land Leases, administered by the Commissioner of Public Lands of the New Mexico State Land Office, are required of persons desiring to lease State Trust Land for mineral exploration and development activities. The leases provide for controlled development of state property and protection of natural resources of the State of New Mexico. For different types of exploration and prospecting, various permits are required.

The requirements for each resource are unique, therefore contacting the Commissioner of Public Lands for detailed information is required.

25.8.1.5 County Land Use Permit

County Land Use Permits may be required from both Lea and Eddy Counties. Additional information on local government land use and natural resource control enabling laws can be obtained from the appropriate agencies.

25.8.1.6 Permit to Appropriate Underground Waters of New Mexico

The Water Rights Division of the Office of the State Engineer has responsibility for issuance of permits to appropriate the public underground waters of the State of New Mexico under the authority of NMSA 1978, Chapter 72.

25.8.1.7 NMED Groundwater Discharge Permit

The Ground Water Quality Bureau (GWQB) of the NMED has responsibility for issuance of ground water discharge permits, other than those related to production and refinement of oil or natural gas, under the authority of the New Mexico Water Quality Act. The purpose of this permit process is to prevent ground water pollution which could result from discharges of effluent or leachate, and to abate any ground water pollution that occurs at permitted facilities. Discharge permits are required for all discharges of effluent or leachate that may move directly or indirectly into ground water that has an existing concentration of 10,000 mg/l or less of total dissolved solids. Mill tailings, waste rock stockpiles, leach ore stockpiles, as well as other mine facilities, are regulated under this requirement. Additionally, the GWQB has primacy for non oil and gas related underground injection wells under the Underground Injection Control Program of the federal Safe Drinking Water Act, including injection wells associated with uranium or other subsurface in situ leach mining operations. Authority for brine production wells has been assigned to the Oil Conservation Division.

25.8.1.8 Mine Drill Holes That Encounter Water – Plugging Permit

Approval of drill hole plugging is required by the Water Rights Division of the Office of the State Engineer to ensure that water encountered during drilling activities is confined to the aquifer in which it was encountered.

25.8.1.9 NPDES Permit

The National Pollutant Discharge Elimination System (NPDES) program requires a permit for discharge of pollutants from a point source into waters of the United States. These terms are mandated by the Clean Water Act and outlined in 40 CFR Part 122.2. The EPA issues NPDES permits in the six states, including New Mexico that have not been authorized to issue these permits. "Pollutants" are defined as any material that is added to water, which changes the physical, chemical and/or biological nature of the receiving water. "Waters of the United States" includes most surface waters as well as adjacent wetlands, and also includes intermittent streams and arroyos associated with tributary systems. Permits may also be required for discharges comprised entirely of surface runoff from rainfall events. However, uncontaminated runoff, as spelled out in 40 CFR Part 122.26 (c)(1)(iii) and (iv), from mining operations or oil and gas exploration, production, processing and transmission facilities, that is not associated with construction of those types of facilities, is exempted from permit requirements. An application for a NPDES permit must be filed at least 180 days before the discharge is expected to commence. The EPA will make a final determination as to whether an NPDES permit is required for a particular operation.

25.8.1.10 Fuel Storage Tank Permits

The Petroleum Storage Tank (PST) Bureau of the New Mexico Environment Department (NMED) oversees the installation, operation, closure, investigation, and cleanup of sites with Above Ground Storage Tanks (ASTs) and Underground Storage Tanks (USTs). The PST Bureau's authority is under the New Mexico Hazardous Waste Act, which implements the provisions of federal Resource Conservation and Recovery Act (RCRA) Subtitle I for USTs.

25.8.1.11 Utility Location Permit

A Location Permit administered by the New Mexico Public Regulation Commission is required of any person, including a municipality, prior to construction of any plant designed to generate more than 300 MW of electricity or transmission lines designed to operate at 230 kV or more.

25.8.1.12 Section 404 Wetlands and Section 401 Water Certification Permits

Section 404 of the Clean Water Act (CWA) falls under the direction of the U.S. Army Corps of Engineers (USACE) and requires permitting for dredging or filling into any waters of the U.S.

"Waters of the United States" includes most surface waters as well as adjacent wetlands, and also includes intermittent streams and arroyos associated with tributary systems. Although no surface water is anticipated to be found on-site, a survey for Waters of the U.S., conducted by a knowledgeable expert, and agreement by the USACE should be made before eliminating this procedure. No issues are anticipated.

25.8.1.13 Endangered Species Takings Permit

The Conservation Services Division (CSD) of the New Mexico Department of Game and Fish issues authorizations and permits for taking of protected wildlife, including endangered species listed under the New Mexico Wildlife Conservation Act. Consultations regarding the possible existence and potential impacts on threatened or endangered species in the areas affected by mining are encouraged. Applications for permits and other communication should be addressed to the Director of the Department of Game and Fish. The permit is required when any protected wildlife species is taken. “Taking” means the capture, sacrifice, salvage, retention, transport, possession, or the attempted capture, sacrifice, salvage, retention, transport, or possession of protected wildlife. “

25.9 Water Availability

INTERA was retained by Gustavson to perform a preliminary evaluation of water availability for the Ochoa Project in Lea County, New Mexico. INTERA’s analysis included an evaluation of water for purchase, transfers of water rights, new appropriations, and brackish groundwater development. Evaluation of potential new appropriations and brackish groundwater development necessitates an understanding of local geology and hydrogeology, a discussion of which has been included here. While development of brackish water does not require a water right, there is an administrative review process that must be adhered to, and we have summarized that process as well.

For the purpose of INTERA’s work, it was assumed the Ochoa Project is projected to require between 6,500 and 10,500 gallons per minute (gpm) for the 660K ton scenario. This translates to approximately 9 – 15 million gallons per day (mgd), or 10,500 – 17,000 acre-feet per year (ac-ft/yr). For comparison, other potash operations in the vicinity of proposed Ochoa Project hold water rights generally in the range of 3,000 – 20,000 ac-ft/yr or more, as summarized in Table 25-7.

Water is available for the Ochoa Project. Options for supplying the Ochoa Project include:

(1) Purchasing water from the City of Carlsbad's Double Eagle Water System (DEWS) or others,
(2) Purchasing and transferring water rights,
(3) Applying for a new appropriation from the Capitan Administrative Basin, or
(4) Developing deep brackish groundwater (for which a water right is not required).

Note that the IC Potash (ICP) Ochoa Project lease holdings straddle the Capitan and Carlsbad Administrative Basins, as shown in Figure 25-16 below, and the Carlsbad Basin is closed to new appropriations.

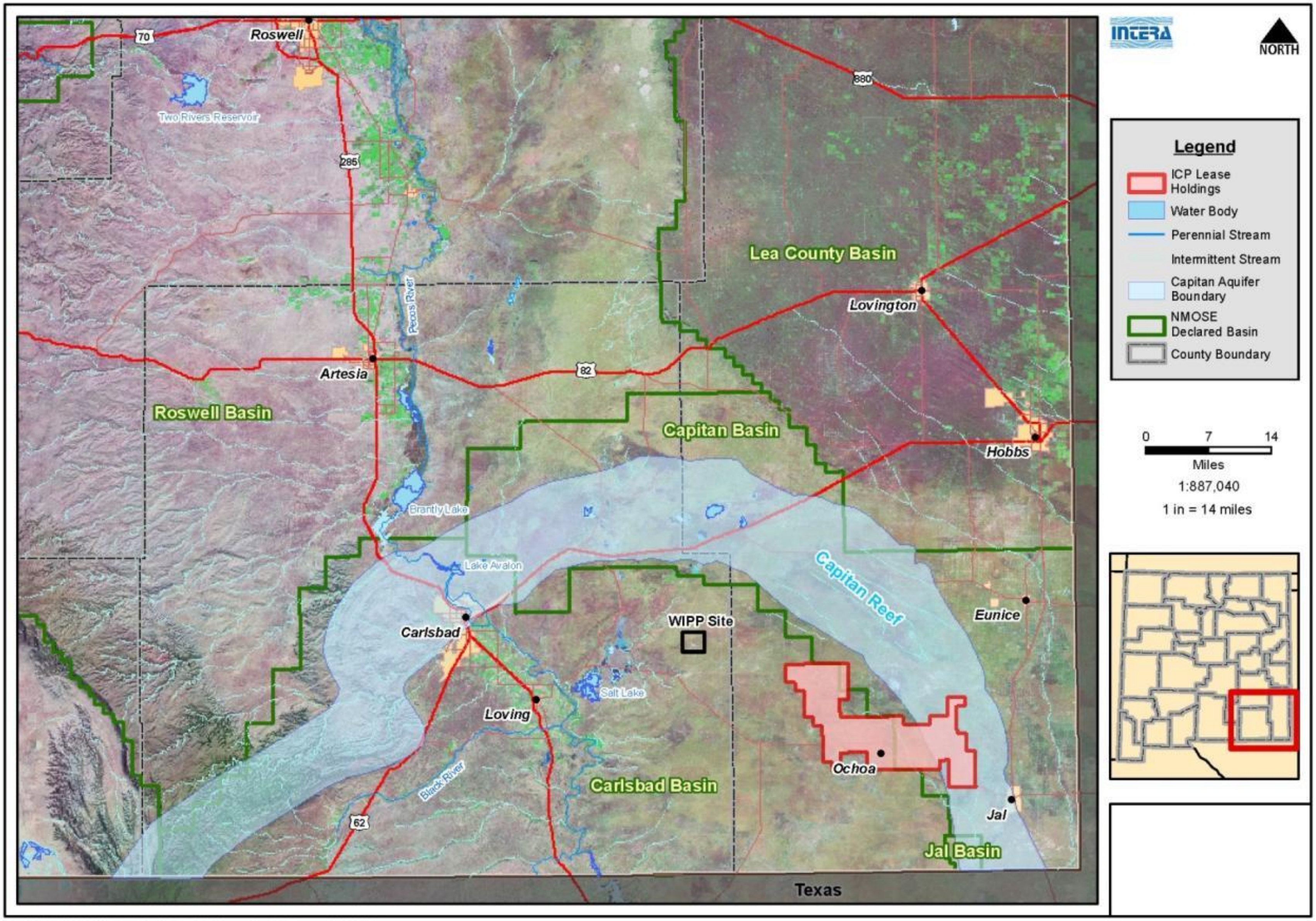


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FIGURE 25-16 OCHOA PROJECT LOCATION WITH NEW MEXICO ADMINISTRATIVE WATER BASIN BOUNDARIES

TABLE 25-7 WATER RIGHTS HELD BY POTASH COMPANIES IN THE CARLSBAD AREA.

Owner	Well Number	Diversion Right (ac-ft/yr)	Basin
HB Potash LLC	CP 00645	1,451	Capitan
	CP 00648	1,451	Capitan
	L 01880	3,953	Lea County
	Total	**6,855**	
Intrepid Mining NM LLC	L 02724	2,410	Lea County
	L 04247 A	1,400	Lea County
	SP 00302	4,640	Surface Permit
	SP 01942	10,868	Surface Permit
	SP 02045	18,100	Surface Permit
	Total	**37,418**	
Mississippi Potash, Inc.	L 01613	1,410	Lea County
	L 02347	3,220	Lea County
	L 02680	3,500	Lea County
	Total	**8,130**	
Mosaic Potash Carlsbad Inc.	CP 00378	1,371	Capitan
	CP 00379	484	Capitan
	L 01695	786	Lea County
	C 00110	4,152	Carlsbad
	Total	**6,793**	
Potash Company (NSL) a Corp.	SD 01094	382	Surface Declaration
	Total	**382**	
Western Ag-Minerals Co.	CP 00788	1,000	Capitan
	C 02111	47	Carlsbad
	L 03616	2,257	Lea County
	Total	**3,304**	

The geology, hydrogeology, and water availability of the ICP lease holdings area are discussed in more detail below.

25.9.1 General Geology of the ICP Lease Holdings Area

The area of interest consists of almost 12,000 feet of Permian age deposits. Older Permian deposits, the Wolfcampian and Leonardian Series, consist of approximately 4,000 feet of mostly fine-grained sandstones, siltstones, shales and various types of limestone deposited before the Capitan reef was built and the Delaware Basin formed (Figure 25-17). The Delaware Basin deposits of Permian age in southeastern New Mexico are divided into the Guadalupian and the Ochoan Series. The Guadalupian Series consists primarily of sandstones that make up the Delaware Mountain Group (Bjorklund and Motts, 1959). The Ochoa Series is composed of, oldest to youngest, the Castile Formation, Salado Formation, Rustler Formation, and Dewey Lake redbeds (Bachman, 1983). The Castile Formation is composed primarily of anhydrite and halite and rests unconformably on the upper member of the Bell Canyon Formation, the last sequence of the Delaware Mountain Group (Bjorklund and Motts, 1959). The Salado Formation consists primarily of cyclic anhydrite, halite, and clay sedimentation and interfingers laterally with the underlying Castile Formation (Bjorklund and Motts, 1959). Near the Capitan Reef escarpment, a thin clay layer is present at the contact between the upper Salado Formation and the overlying Rustler Formation which creates a local barrier to downward water movement (Bjorklund and Motts, 1959; Bachman, 1983). The Rustler Formation is composed of anhydrite, halite, and two carbonate beds (Bjorklund and Motts, 1959). The Dewey Lake redbeds conformably overlie the Rustler Formation and consist of red siltstone, sandstone and shale (Bjorklund and Motts, 1959). The Dewey Lake redbeds are the youngest of the Ochoan Series.

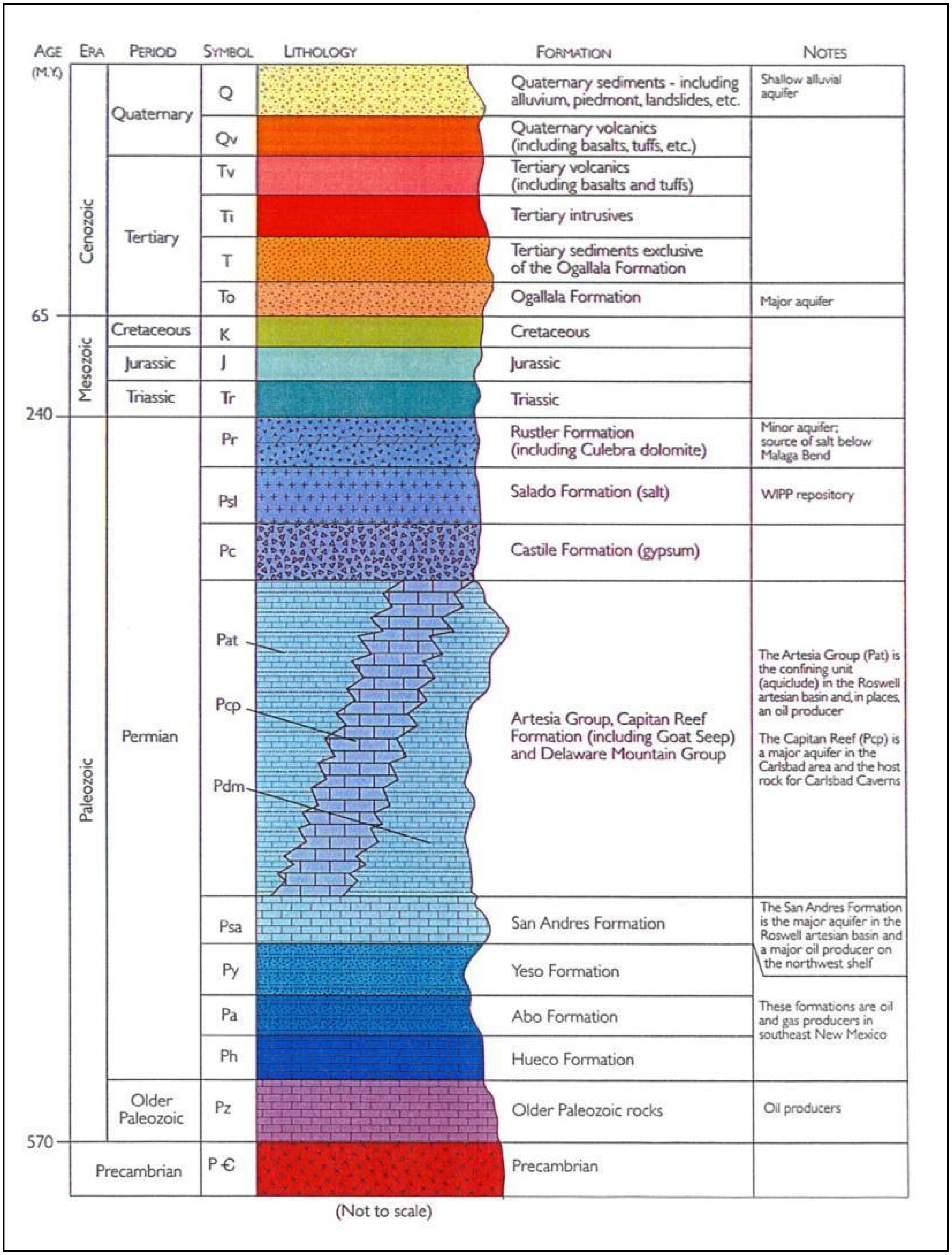


FIGURE 25-17 GENERALIZED STRATIGRAPHIC COLUMN FOR SOUTHEASTERN NEW MEXICO

(From Johnson et al., 2003)

25.9.2 Hydrostratigraphic Units

The Delaware Basin Permian sediments contain aquifer units with low permeabilities, poor-quality water, and low well yields (Uliana, 2001). Aquifer yields in the Permian shelf facies are highly dependent on fracture and karst porosity (Uliana, 2001). The Capitan aquifer exhibits higher permeability and yields than either the Permian basin or shelf facies. While the Capitan aquifer produces large quantities of water, water quality throughout the reef is highly variable (Uliana, 2001). The geologic units around the Capitan Reef complex are less permeable and have lower conductivity and so act as barriers to significant horizontal groundwater movement to or from the Capitan Aquifer (Leedshill-Herkenhoff Inc. et al., 2000).

There are a number of potential site specific target hydrostratigraphic units for both fresh and brackish water development, each of which is discussed below, in order of depth below ground surface.

25.9.2.1 Alluvium (surface to 700 ft bgs)

Quaternary alluvial deposits exist throughout Lea County, though the saturated thickness of the alluvium is only sufficient in a few places to provide a significant water source (Leedshill-Herkenhoff Inc. et al., 2000 [Lea County Regional Water Plan]). Most of the wells accessing the Alluvial Aquifer in the Capitan Basin are completed near Monument Draw on the Mescalero Ridge, and less are located on the Querecho Plains and the northeast San Simon Swale (Leedshill-Herkenhoff Inc. et al., 2000). The amount and characteristics of water in storage in the Alluvial Aquifer is difficult to estimate because the aquifer is not continuous and in most areas the extent of saturated alluvium is quite small (Leedshill-Herkenhoff Inc. et al., 2000).

The Dewey Lake Formation consists of clastic red beds that unconformably overlie the Rustler Formation and are considered part of the Ochoan Series (Summers, 1972). The Dewey Lake beds are presumed to have very low permeability and would yield very little water, if any, though very little data are available about the hydraulic properties of the beds (Summers, 1972).

25.9.2.2 Santa Rosa Sandstone of the Dockum Group (150 to 2,000 ft bgs)

The Triassic Dockum Group has thick areas of sediments and is estimated to have large amounts of stored groundwater, however low permeability appears to have limited well completion in the

Santa Rosa Aquifer (Leedshill-Herkenhoff Inc. et al., 2000; Summers, 1972). The Santa Rosa Aquifer is the principal aquifer of the Dockum Group and has well yields that average 25 to 30 gpm in southern Lea County (Summers, 1972). Depth to water in the Santa Rosa Aquifer ranges from 120 to 700 ft (Leedshill-Herkenhoff Inc. et al., 2000).

25.9.2.3 Rustler Formation (1,200 to 1,600 feet below ground surface [ft bgs])

This is the target formation for the Ochoa Project. The Rustler Formation contains aquifers east of the Pecos River with variable yields and water quality (Bjorklund and Motts, 1959). Well yields are quite variable, and have been reported from 7 to 4,400 gpm throughout the formation south of the ICP lease holdings in Texas. Aquifer permeability is believed to be locally enhanced by carbonate and evaporite dissolution (Boghici and Van Broekhoven, 2001). Water from the Rustler contains relatively large amounts of sulfate and chloride (Bjorklund and Motts, 1959). Discharge from the aquifer is from pumping wells and flow into the overlying Edwards-Trinity aquifer in Texas (Boghici and Van Broekhoven, 2001). The Rustler is also the source of saline water discharging to the Pecos River in the vicinity of Malaga Bend.

25.9.2.4 Salado Formation (1,600 to 2,700 ft bgs)

The Salado Formation is not water bearing (Bjorklund and Motts, 1959) and is the host formation for the WIPP site. A red silt and clay layer at the contact of the Salado and the overlying Rustler Formation acts as a barrier to the vertical movement of water (Bjorklund and Motts, 1959; Bachman, 1983).

25.9.2.5 Castile Formation (2,700 to 4,200 ft bgs)

The Castile Formation does not contain any appreciable amount of groundwater and acts as a barrier to the movement of water from the Capitan Limestone into the Castile Formation. Only in areas of outcrop does the Castile Formation contain water, typically in small caverns (Bjorklund and Motts, 1959). Water found in the Castile Formation is highly mineralized, including high sulfate, and has been used for stock wells west of Carlsbad, near the Guadalupe Mountains (Bjorklund and Motts, 1959), but not generally as a significant source of fresh water for uses other than stock watering.

25.9.2.6 Capitan Aquifer (2,000 to 4,000 ft bgs)

The Capitan Aquifer is composed of the Capitan Formation, parts of the Goat Sheep Formation, and the Carlsbad Formation (Uliana, 2001; Hiss, 1980). The high permeability of the Capitan Aquifer is due to solution channels (Bjorklund and Motts, 1959; Uliana, 2001). In the vicinity of Carlsbad, the Capitan Aquifer produces potable water but the water quality decreases to the south and east of the Pecos River (Uliana, 2001; Leedshill-Herkenhoff, Inc. et al., 2000; Hiss, 1975). Average hydraulic conductivity of the Capitan Aquifer east of the Pecos is approximately 5 feet per day (Leedshill-Herkenhoff, Inc. et al., 2000). Within Lea County, the aquifer ranges from 800 to 2,200 feet thick and is approximately 12 miles wide near the Eddy and Lea County boundary and 6 miles wide near Jal, New Mexico (Leedshill-Herkenhoff, Inc. et al., 2000). Groundwater flow in the Capitan Aquifer in the area of interest flows southeast and south, following the preferential path of the reef facies (Uliana, 2001; Hiss, 1980). According to Bjorklund and Motts (1959), the Delaware Mountain Group formation underlying the reef acts as a barrier to downward movement of the groundwater in the Capitan Aquifer. The basin deposits along the inner arc of the reef also create a barrier to groundwater movement, however groundwater interaction does occur with the outer arc deposits, particularly the Tansil and Yates Formations (Bjorklund and Motts, 1959; Barroll et al., 2004). According to Hiss (1975), a constriction in the reef aquifer near the boundary between Lea County and Eddy County reduces transmissivity of the Capitan aquifer. Hydraulic heads east of the county line have dramatically declined in response to large withdrawals while hydraulic heads west of the county line remain relatively stable (Barroll et al., 2004).

Based on long-term monitoring in Lea County, water-level drops as great as 160 feet from 1967 through 1975 were observed. Withdrawal of water from adjacent Guadalupian-age formations that are in hydraulic connection with the Capitan aquifer is also thought to have contributed to water-level declines in the Capitan aquifer (Leedshill-Herkenhoff, Inc. et al., 2000).

25.9.2.7 Delaware Mountain Group (4,200 to 8,000 ft bgs)

Little or no fresh groundwater has been found in the Delaware Mountain Group in the vicinity of Carlsbad, though some wells have drilled to beds containing saline water and others to beds containing petroleum and gas (Bjorklund and Motts, 1959). The Delaware Mountain group appears to act as the lower confining beds of the reef aquifer as well as constraining lateral flow on the basin side of reef facies (Bjorklund and Motts, 1959).

25.9.2.8 Victorio Peak/Bone Spring Limestone (8,000 to 11,000 ft bgs)

The Permian Leonardian Series Victorio Peak and Bone Spring Limestone has not been characterized for aquifer characteristics in the vicinity of the area of interest. The Diablo Plateau Aquifer systems consist of interconnected solution cavities in the Victorio Peak and Bone Spring Formations west of the Guadalupe Mountains (Ashworth, 2001). Groundwater of the Diablo Plateau Aquifer is generally poor quality with TDS ranging from approximately 1,000 to more than 6,500 milligrams per liter (mg/L) (Ashworth, 2001). This unit is a productive aquifer elsewhere, but has not been studied at this location due to its depth.

25.9.3 Fresh Water Availability

As discussed above, sources of fresh water available for processing operations include purchasing water from the City of Carlsbad's Double Eagle Water System (DEWS), purchasing and transferring freshwater water rights, or applying for a new appropriation from the Capitan Administrative Basin.

The City of Carlsbad's DEWS draws water from the Ogallala aquifer northeast of Carlsbad, and serves, in addition to other areas, the Department of Energy's Waste Isolation Pilot Plant (WIPP). The WIPP is located approximately 10 miles northwest of the western boundary of the ICP lease holdings. The section of pipeline that serves the WIPP is 24 inches in diameter, and has an estimated capacity of 6,000 gpm, according to the City of Carlsbad. The pipeline terminates at the WIPP site, but could be extended. The City of Carlsbad may be willing to upgrade or add to the existing pipeline to serve new users. In addition, there may be excess capacity in the pipeline for wheeling (transfer of water between water users) purchased irrigation water from the Lea County Basin or elsewhere via the DEWS facilities. In addition, due to the ICP lease holdings' proximity to the New Mexico-Texas border, it may be economical to purchase water for the Ochoa Project from an out-of-state provider.

Options for purchase of water rights include purchases from the Carlsbad, Capitan, or Lea County Administrative Basins. Since portions of the ICP lease holdings are within the Capitan

Administrative Basin (Capitan Basin) and Carlsbad Administrative Basin (Carlsbad Basin), it is likely that water rights purchased in either basin could be physically transferred to a well or wells within the ICP lease holdings area. Purchase and transfer of water rights would trigger the New Mexico Office of the State Engineer (NM OSE) administrative process for change of place of use, and possibly change of purpose (if non-industrial water rights were purchased). This process includes public notification and a hearing before the NM OSE before the transfer can be approved. Irrigation water rights may also be available for sale in the Lea County Basin to the north. Accessing this water may involve transfer via pipeline, again possibly via the existing DEWS pipeline.

New appropriations may be allowed in the Capitan Basin in areas other than the vicinity of the Pecos River, near the towns of Eunice and Jal, or within the Capitan aquifer. Potential aquifers for new appropriations within the Capitan Basin include the Rustler, the Santa Rosa Sandstone of the Dockum Group, the Dewey Lake Formation, and the alluvium (also called Quaternary Bolson in some areas). While water is available within the Capitan Basin in areas outside of the Capitan aquifer, the water availability in these areas is not expected to be high.

25.9.4 Brackish Water Availability

The most promising target zone for brackish groundwater in the vicinity of the ICP lease holdings is the Capitan Reef aquifer. According to NM OSE guidance (72-12-25 NMSA) brackish groundwater is defined as water in aquifers whose top is below 2,500 ft bgs with greater than 1,000 parts per million (ppm) total dissolved solids (TDS). This water is available for development without a water right from NM OSE for oil and gas exploration and production, prospecting, mining, road construction, agriculture, generation of electricity, industrial, or geothermal uses.

Pursuant to NMSA 1978 72-12-26 and 27, the NM OSE requires that a Notice of Intent (NOI) be filed when proposing to develop brackish groundwater. The NOI requirements include:

- Description of the target aquifer and overlying confining strata;
- Development of geologic cross-sections of the target aquifer and overlying confining strata;
- Definition of lateral extent of the target aquifer and overlying confining strata;

- Determination of TDS of groundwater from the target aquifer; and
- Proof of hydraulic separation of the target aquifer from shallower freshwater aquifer systems and surface water.

While it is clear that there are portions of the Capitan aquifer where the top of the aquifer is below 2,500 ft bgs and the TDS exceeds 1,000 ppm, the high transmissivity and extent of hydraulic connectivity within the Capitan aquifer makes development of brackish groundwater challenging. This is because the NM OSE requires that any aquifer developed for brackish groundwater be demonstrated to be hydraulically separated from any other freshwater aquifer. In general this is not true for the Capitan aquifer. Thus while brackish groundwater availability is high, successfully accessing it within the context of NM OSE guidance may be problematic.

25.9.5 Conclusions

Water is available for the Ochoa Project from a number of different sources. Options for supplying the Ochoa Project with water include purchasing from the City of Carlsbad's DEWS or others, purchasing and transferring water rights, applying for a new appropriation from the Capitan Administrative Basin, or developing deep brackish groundwater (for which a water right is not required).

Of these options, the most promising appear to be purchasing water from the City of Carlsbad or others (potentially outside of New Mexico) or purchasing and transferring water rights within the Carlsbad or Capitan Administrative Basins. Opportunities for new appropriations appear limited, although they are not out of the question. Similarly, while brackish groundwater is abundant in the Capitan aquifer, the degree of hydraulic connectivity between it and shallower freshwater resources makes brackish groundwater development subject to extensive analyses and potential legal challenges.

For the purpose of this PEA, Gustavson assumed brackish water could be utilized for the process plant. Gustavson included the cost for a reverse osmosis plant to produce fresh water from the brackish water.

25.10 Markets

The Ochoa project will produce highly desirable K_2SO_4 (SOP) fertilizer. A marketing study follows later in this section. The price projections that were used for the economic analysis of the project vary from year to year which is shown in the following table.

TABLE 25-8 BRITISH SULFUR PRICE FORECAST PER SHORT TON

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025-2053
Price	444	562	571	553	522	508	531	576	640	712	780	857	948	789	735	717

25.11 Taxes

Economic modeling was completed pre-tax.

25.12 Royalties

It is assumed a 2.5% gross royalty based on revenue would be imposed by either the federal government or by the state depending on whose land the polyhalite is extracted from. In addition to the state and BLM royalty on revenue, a $1/ton potassium sulfate product produced will be incurred. Finally, a 3% royalty will be charged to net profits before depreciation and after all initial capital costs (debt financed) are paid back. This net profit royalty will incur a one-time charge of $9 million dollars in the first year that the initial mine capital has been paid off in order to pay down the royalty from 3% to 1.5%.

25.13 Operating Cost Estimates (OPEX)

Operating costs for the project were developed using the InfoMine Mine and Mill Equipment Costs Estimators Guide, Gustavson's experience, Mr. Foote's firsthand knowledge of the potash operations in Carlsbad, and the METSIM processing model, Messer's Felton, Chastain, and Neuman. Staffing levels and operating positions were generated including overtime allowance and burden at 40% of the base cost.

Detailed equipment costs were developed for the mine and processing plant, including overhaul parts, maintenance parts, power / fuel costs, lubricants, wear parts, water and gas usage. All necessary maintenance and operational staff were included in the staff and operating personnel detail. All operating costs were determined by the 660K ton base case scenario. The 990K scenario costs were scaled up from the 660K ton scenario at a factor of 1.275.

25.13.1 Mining OPEX

In the 660K ton scenario, mining costs will be $12.36 per ton of feed for a typical full production year and $61.39 per ton of product produced. Table 25-9 shows the details of the operating costs on a per ton basis and Table 25-10 is a detailed listing of the staffing for the mine. There are 232 people working in the mine at a fully loaded annual cost of $17.4 million.

The 990K ton scenario has a typical full production year operating cost of $10.96 per ton of ore and $54.41 per ton of product produced. Table 25-9 shows the details of the operating costs and Table 25-10 shows the detailed listing of the staffing requirement for this scenario. There are a total of 299 people employed to support the mining portion of the 990K project at an annual cost of $21,852,362.

TABLE 25-9 MINE OPERATING COSTS FOR 660K TON SCENARIO

Mining	Per Finished Ton	Per Ton of Ore	Annual Cost
Supplies	$1.28	$0.26	$847,778
Overhaul Parts	$6.92	$1.39	$4,575,764
Maintenance Parts	$8.73	$1.76	$5,772,572
Fuel / Power	$10.10	$2.03	$6,677,820
Lube	$2.99	$0.60	$1,975,768
Tires	$1.41	$0.28	$933,304
Wear Parts	$2.80	$0.56	$1,852,617
Surface Facilities	$0.66	$0.13	$438,592
Stoppings	$0.22	$0.05	$147,805
Labor	$26.28	$5.29	$17,381,428
Subtotal	**$61.39**	**$12.36**	**$40,603,448**

TABLE 25-10 MINE STAFF FOR 660K TON SCENARIO

Mine Staff	QTY	Salary	Hourly rate	Roll up	OT allowance	Burden	Annual Cost
Mine Management							
Mine Manager	1	$134,400				$53,760	$188,160
Mine Superintendent	1	$104,700				$41,880	$146,580
Maintenance Superintendent	1	$104,700				$41,880	$146,580
Chief Mine Engineer	1	$89,600				$35,840	$125,440
Mine Engineers	6	$72,000		$432,000		$172,800	$604,800
Surveyors	2	$44,800		$89,600		$35,840	$125,440
Shift bosses	8	$66,900		$535,200		$26,760	$561,960
Geologists	2	$72,000		$144,000		$28,800	$172,800
Technicians	4	$70,000		$280,000		$28,000	$308,000
							$2,379,760
Mining Crew, (6 panels, 24 crews)							
Foremen	8		$37.70	$627,328	$55,494	$250,931	$933,754
Miner	24		$22.40	$1,118,208	$98,918	$447,283	$1,664,410
Operators	24		$22.40	$1,118,208	$98,918	$447,283	$1,664,410
Shuttle operators	48		$20.00	$1,996,800	$176,640	$798,720	$2,972,160
Skip Tender	4		$22.40	$186,368	$16,486	$74,547	$277,402
Electrician	4		$27.40	$227,968	$20,166	$91,187	$339,322
Oilers	8		$23.00	$382,720	$33,856	$153,088	$569,664
Mechanics	8		$26.40	$439,296	$38,861	$175,718	$653,875
							$9,074,995
Mine Maintenance (Days)							
Electrical Foreman	1		$37.70	$78,416	$6,937	$31,366	$116,719
Electricians	9		$27.40	$512,928	$45,374	$205,171	$763,474
Mechanical Foreman	4		$36.40	$302,848	$26,790	$121,139	$450,778
Mechanics	24		$26.40	$1,317,888	$116,582	$527,155	$1,961,626
Utility	22		$21.00	$960,960	$85,008	$384,384	$1,430,352
							$4,722,948
Development Crew, (4 crews)							
Miner	4		$22.40	$186,368	$16,486	$74,547	$277,402
Operators	8		$22.40	$372,736	$32,973	$149,094	$554,803
Shuttle operators	6		$20.00	$249,600	$22,080	$99,840	$371,520
							$1,203,725

TABLE 25-11 MINE STAFF FOR 990K TON SCENARIO

Mining	Per Finished Ton	Per Ton of Ore	Annual Cost
Supplies	$1.22	$0.25	$1,211,112
Overhaul Parts	$6.46	$1.30	$6,411,667
Maintenance Parts	$8.14	$1.64	$8,070,534
Fuel / Power	$9.07	$1.83	$8,995,508
Lube	$2.82	$0.57	$2,799,82
Tires	$1.34	$0.27	$1,333,291
Wear Parts	$2.66	$0.54	$2,642,616
Surface Facilities	$0.44	$0.09	$438,592
Stoppings	$0.22	$0.05	$221,708
Labor	$22.03	$4.44	$21,852,362
Total	**$54.41**	**$10.96**	**$53,977,217**

TABLE 25-12 MINE STAFF FOR 990K TON SCENARIO

Mine Staff

	QTY	Salary	Hourly rate	Roll up	OT allowance	Burden	Annual Cost
Mine Management							
Mine Manager	1	$134,400				$53,760	$188,160
Mine Superintendent	1	$104,700				$41,880	$146,580
Maintenance Superintendent	1	$104,700				$41,880	$146,580
Chief Mine Engineer	1	$89,600				$35,840	$125,440
Mine Engineers	6	$72,000		$432,000		$172,800	$604,800
Surveyors	2	$44,800		$89,600		$35,840	$125,440
Shift bosses	8	$66,900		$535,200		$26,760	$561,960
Geologists	2	$72,000		$144,000		$28,800	$172,800
Technicians	4	$70,000		$280,000		$28,000	$308,000
							$2,379,760
Mining Crew, (6 panels, 24 crews)							
Foremen	9		$37.70	$705,744	$62,431	$282,298	$1,050,473
Miner	36		$22.40	$1,677,312	$148,378	$670,925	$2,496,614
Operators	36		$22.40	$1,677,312	$148,378	$670,925	$2,496,614
Shuttle operators	72		$20.00	$2,995,200	$264,960	$1,198,080	$4,458,240
Skip Tender	4		$22.40	$186,368	$16,486	$74,547	$277,402
Electrician	4		$27.40	$227,968	$20,166	$91,187	$339,322
Oilers	8		$23.00	$382,720	$33,856	$153,088	$569,664
Mechanics	8		$26.40	$439,296	$38,861	$175,718	$653,875
							$12,342,204
Mine Maintenance (Days)							
Electrical Foreman	1		$37.70	$78,416	$6,937	$31,366	$116,719
Electricians	9		$27.40	$512,928	$45,374	$205,171	$763,474
Mechanical Foreman	4		$36.40	$302,848	$26,790	$121,139	$450,778
Mechanics	24		$26.40	$1,317,888	$116,582	$527,155	$1,961,626
Utility	22		$21.00	$960,960	$85,008	$384,384	$1,430,352
							$4,722,948
Development Crew, (4 crews)							
Miner	8		$22.40	$372,736	$32,973	$149,094	$554,803
Operators	16		$22.40	$745,472	$65,946	$298,189	$1,109,606
Shuttle operators	12		$20.00	$499,200	$44,160	$199,680	$743,040
							$2,407,450

25.13.2 Mineral Processing OPEX and Beneficiation

For the 660K ton scenario, the equipment and materials portion of the processing costs is on average $98.11 per ton of SOP for an average yearly cost of $64.89 million. Plant labor at full production is $8.48 million, per year employing 107 people. Table 25-9 is a detailed listing of the staffing for the processing plant. Table 25-10 shows the operating costs by processing plant components.

In the 990K ton scenario, equipment and materials for the processing plant costs an average of $79.01 per ton of saleable SOP for an average annual cost of $78.37 million. Plant labor in this scenario at full production is $10.35 million per year with 130 employees. Table 25-12 lists the detailed staffing requirements for this scenario. Table 25-14 is a break-down of the operating costs of the processing plant by component.

TABLE 25-13 PLANT STAFF FOR 660K TON SCENARIO

Plant Staffing								
		QTY	Salary	Hourly rate	Roll up	OT allowance	Burden	Annual Cost
Plant Management								
	Mill superintendant	1	$100,800				$40,320	$141,120
	Maintenance Superintendant	1	$100,800				$40,320	$141,120
	Chief process engineer	1	$95,200				$38,080	$133,280
	Process engineers	4	$78,400		$313,600		$125,440	$439,040
	Lab technician	1	$44,800				$17,920	$62,720
								$917,280
Hot Leach Plant (total staff 4 crews)								
	Shift Supervisor	4		$37.70	$313,664	$27,747	$125,466	$466,877
	Crush grind	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Calcination	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Leach area	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Evaporation Pond	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Harvesting	4		$23.00	$191,360	$16,928	$76,544	$284,832
	DBT Reactor	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Granulation	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Drying and Screening	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Control room	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Relief	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Electrician	4		$27.40	$227,968	$20,166	$91,187	$339,322
	Mechanic	6		$26.40	$329,472	$29,146	$131,789	$490,406
								$4,144,925
Surface Maintenance								
	Electrical Foreman	1		$37.70	$78,416	$15,683	$31,366	$125,466
	Electricians	4		$27.40	$227,968	$45,594	$91,187	$364,749
	Instrument technicians	3		$27.40	$170,976	$34,195	$68,390	$273,562
	Mechanical Foreman	2		$37.70	$156,832	$31,366	$62,733	$250,931
	Mechanics	8		$26.40	$439,296	$87,859	$175,718	$702,874
	Utility Foreman	1		$24.00	$49,920	$9,984	$19,968	$79,872
	Utility Crew	8		$18.00	$299,520	$59,904	$119,808	$479,232
								$2,276,685
Lab support								
	Lab Supervisor	1	$56,000		$56,000		$22,400	$78,400
	Lab technician	8	$44,800		$358,400		$143,360	$501,760
								$580,160
Product Loadout Crew								
	Loadout Foreman	1		$24.00	$49,920	$9,984	$19,968	$79,872
	Loadout crew	8		$18.00	$299,520	$59,904	$119,808	$479,232
								$559,104

TABLE 25-14 PLANT STAFF FOR 990K TON SCENARIO

Plant Staffing		QTY	Salary	Hourly rate	Roll up	OT allowance	Burden	Annual Cost
Plant Management								
	Mill superintendant	1	$100,800				$40,320	$141,120
	Maintenance Superintendant	1	$100,800				$40,320	$141,120
	Chief process engineer	1	$95,200				$38,080	$133,280
	Process engineers	4	$78,400		$313,600		$125,440	$439,040
	Lab technician	1	$44,800				$17,920	$62,720
								$917,280
Hot Leach Plant (total staff 4 crews)								
	Shift Supervisor	6		$37.70	$470,496	$41,621	$188,198	$700,315
	Crush grind	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Calcination	6		$23.00	$287,040	$25,392	$114,816	$427,248
	Leach area	6		$23.00	$287,040	$25,392	$114,816	$427,248
	Evaporation Pond	6		$23.00	$287,040	$25,392	$114,816	$427,248
	Harvesting	6		$23.00	$287,040	$25,392	$114,816	$427,248
	DBT Reactor	6		$23.00	$287,040	$25,392	$114,816	$427,248
	Granulation	6		$23.00	$287,040	$25,392	$114,816	$427,248
	Drying and Screening	6		$23.00	$287,040	$25,392	$114,816	$427,248
	Control room	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Relief	4		$23.00	$191,360	$16,928	$76,544	$284,832
	Electrician	6		$27.40	$341,952	$30,250	$136,781	$508,982
	Mechanic	8		$26.40	$439,296	$38,861	$175,718	$653,875
								$5,708,405
Surface Maintenance								
	Electrical Foreman	2		$37.70	$156,832	$31,366	$62,733	$250,931
	Electricians	6		$27.40	$341,952	$68,390	$136,781	$547,123
	Instrument technicians	3		$27.40	$170,976	$34,195	$68,390	$273,562
	Mechanical Foreman	2		$37.70	$156,832	$31,366	$62,733	$250,931
	Mechanics	8		$26.40	$439,296	$87,859	$175,718	$702,874
	Utility Foreman	1		$24.00	$49,920	$9,984	$19,968	$79,872
	Utility Crew	8		$18.00	$299,520	$59,904	$119,808	$479,232
								$2,584,525
Lab support								
	Lab Supervisor	1	$56,000		$56,000		$22,400	$78,400
	Lab technician	8	$44,800		$358,400		$143,360	$501,760
								$580,160
Product Loadout Crew								
	Loadout Foreman	1		$24.00	$49,920	$9,984	$19,968	$79,872
	Loadout crew	8		$18.00	$299,520	$59,904	$119,808	$479,232
								$559,104

Process operating costs were estimated based upon the selected equipment from Chemfelt and information provided by InfoMine. Treatment flowsheets as shown previously were updated by Chemfelt to represent current processes and costs.

TABLE 25-15 PROCESS OPERATING COSTS 660K TON SCENARIO

Processing	Per Finished Ton	Per Ton of Ore	Annual Cost
Overhaul Parts	$4.35	$0.88	$2,878,389
Maintenance Parts	$9.10	$1.83	$6,017,316
Fuel / Power	$17.07	$3.44	$11,289,306
Lube	$4.45	$0.90	$2,942,901
Tires	$0.27	$0.05	$176,339
Wear Parts	$0.63	$0.13	$418,010
Labor	$12.82	$2.58	$8,478,154
Gas	$35.00	$7.05	$23,148,300
Water	$14.42	$2.90	$9,539,640
Total	**$98.11**	**$19.76**	**$64,888,355**

TABLE 25-16 PROCESS OPERATING OSTS 990K TON SCENARIO – EXCLUDING LABOR

Processing	Per Finished Ton	Per Ton of Ore	Annual Cost
Overhaul Parts	$2.83	$0.57	$2,809,684.15
Maintenance Parts	$5.95	$1.20	$5,901,202.03
Fuel / Power	$11.54	$2.32	$11,451,576.58
Lube	$3.04	$0.61	$3,017,677.21
Tires	$0.18	$0.04	$176,338.80
Wear Parts	$0.42	$0.08	$418,009.68
Labor	$10.43	$2.10	$10,349,473.60
Gas	$35.00	$7.05	$34,722,450.00
Water	$9.62	$1.94	$9,539,640.00
Total	**$79.01**	**$15.91**	**$78,386,052.05**

25.13.3 General and Administration and Site Services OPEX

General and administrative (G&A) costs will be the same amount for both scenarios and will average $0.95 per ton for the 660K ton scenario and $0.63 per ton for the 990K ton scenario during a typical full production year. Annual G&A costs will be $3.12 million and employ 48 people at full production schedule. Table 25-13 below summarizes the G&A cost estimates for the Ochoa project.

TABLE 25-17 SURFACE STAFF

Surface Staff								
		QTY	Salary	Hourly rate	Roll up	OT allowance	Burden	Annual Cost
Administration								
	General Manager	1	$168,000				$67,200	$235,200
	Mill Manager	1	$134,400				$53,760	$188,160
	Controller	1	$89,600				$35,840	$125,440
	Controller support	5	$44,800		$224,000		$89,600	$313,600
	Secretary	8	$36,700				$14,680	$51,380
								$913,780
Safety								
	Safety director	1	$89,600				$35,840	$125,440
	Safety support	5	$44,800		$224,000		$89,600	$313,600
								$439,040
Environmental								
	Environmental Manager	1	$89,600				$35,840	$125,440
	Environmental support	2	$44,800		$89,600		$35,840	$125,440
								$250,880
Service								
	Purchasing	5	$56,000		$280,000		$112,000	$392,000
	Warehouse	10	$44,800		$448,000		$179,200	$627,200
								$1,019,200
Customer Service								
	Orders and Distribution	8	$44,800		$358,400		$143,360	$501,760
								$501,760

25.13.4 OPEX Summary

Tables 23-14 and 23-15 below summarize the cost estimates for the major divisions of operating expense for both scenarios for the Ochoa Project.

TABLE 25-18 OPERATING COSTS PER TON FOR 660K TON SCENARIO

AREA	Per Ton Feed	Per Ton Product
Mine	$12.36	$61.39
Mill	$19.76	$98.11
G&A	$0.95	$4.72
Total	**$33.07**	**$164.23**

TABLE 25-19 OPERATING COSTS PER TON FOR 990K TON SCENARIO

AREA	Per Ton Feed	Per Ton Product
Mine	$10.96	$54.41
Mill	$15.91	$79.01
G&A	$0.63	$3.15
Total	**$27.50**	**$136.57**

25.14 Capital Cost Estimates (CAPEX)

The total estimated initial capital cost for the project is $661.7 million for the 660K ton scenario and $813.1 million for the 990K ton scenario. The capital estimate has been broken into three general areas

1. Mine and surface capital;
2. Process capital; and
3. Exploration, engineering and permitting.

The following sections contain the detail for the above-mentioned areas. An additional capital amount of $839 million will be required as sustaining capital over the life of the mine in the 660K ton scenario and $1.04 billion for the 990K ton scenario.

25.14.1 Mine and Surface Capital

Initial development capital totals $153.3 million for the 660K ton scenario and $174.5 for the 990K ton scenario. This includes all the direct costs for necessary equipment and mine pre-production. When indirect costs, contingency, and owners costs are included with the mine capital estimate, the total costs for the two scenarios are $180.5 million for the 660K ton scenario and $205.3 million for the 990K ton one. Development of the main access and production panels is accounted for in the working capital as all of this development produces mill feedstock. Typically underground mines produce significant amounts of waste during development. This is not the case in bedded evaporite deposits, like the Ochoa Project polyhalite zone. Tables 23-16 and 23-17 below summarize the mine development capital cost estimates for the Ochoa Project.

TABLE 25-20 MINE AND SURFACE DEVELOPMENT CAPITAL COSTS PHASE FOR 660K TON SCENARIO

Underground Development	**Initial Cap. No.**	**Quantity**	**Units**	**Cost per Unit**	**Total Cost**
Drill Pilot Hole		1700	feet	$100	$170,000
Sinking		3400	feet	$3,756	$12,770,400
Head Frame		2	ea	$1,500,000	$3,000,000
Koepe Hoist / skip / cage		1	2000 hp	$3,800,000	$3,800,000
Double drum hoist/skip cage		2	1800 hp	$2,500,000	$5,000,000
Concrete Lining (in shaft sinking cost)		0			$0
Shaft Equip (in shaft sinking cost)		0			$0
Loading Station		1	ea	$250,000	$250,000
Ore Pocket		3	ea	$706,903	$2,120,709
Feeders/conveyor to loading pocket		4	ea	$20,000	$80,000
Level Development		16000	feet	$300	$4,800,000
Refuge Station		2	ea	$200,000	$400,000
Underground Shop		1	ea	$500,000	$500,000
Underground Shop Equipment		1	ea	$1,500,000	$1,500,000
Underground warehouse / spares		1	ea	$1,500,000	$1,500,000
Mine transformer and switch gear		1	ea	$1,500,000	$1,500,000
Main Vent Fans		2	ea	$1,500,000	$3,000,000
Communication system		1	ea	$1,000,000	$1,000,000
Total Underground Development					**$41,391,109**
Production & Development Equipment					
Panel transformer	7		ea	$150,000	$1,050,000
Continuous Miner - Joy 12 HM	7		ea	$2,500,000	$17,500,000
Feeder Breaker	7		ea	$400,000	$2,800,000
Sub - conveyor 48"	6	6710	ft	$400	$16,104,000
Main - conveyor 72"	1	3000	ft	$600	$1,800,000
shuttle car	14		ea	$500,000	$7,000,000
Man trip	7		ea	$50,000	$350,000
Rock bolter	7		ea	$150,000	$1,050,000
Vent Fans	16		ea	$20,000	$320,000
Vent tube	15000		ft	$10	$150,000
trash pump - pipe	3		ea	$10,000	$30,000
Electrical - Wire/switch gear	10		ea	$50,000	$500,000
Total Mine Equipment and Development Capital					**$48,654,000**

TABLE 25-20 CONTINUED

Surface Development					
Buildings					
Hoist house	1		ea	$1,000,000	$1,000,000
Mine Admin building	1		ea	$500,000	$500,000
Shop - Plant Maintenance	1		ea	$1,500,000	$1,500,000
Dry	1		ea	$500,000	$500,000
Process Warehouse	1		ea	$500,000	$500,000
Assay Lab	1		ea	$500,000	$500,000
Security	1		ea	$50,000	$50,000
Water Supply & Engineered Membrane Plant	1		ea	$35,000,000	$35,000,000
Infrastructure					
Railroad Line	19.7		miles	$1,000,000	$0
Conveyor	0		ft	$600	$0
Access Roads	5		miles	$250,000	$1,250,000
Transmission Lines	10		miles	$250,000	$2,500,000
Water Pipelines	0		miles	$500,000	$0
Load Out Facility	1		Each	$20,000,000	$20,000,000
Total Surface Development					**$63,300,000**

TABLE 25-21 MINE AND SURFACE DEVELOPMENT CAPITAL COSTS PHASE FOR 990K TON SCENARIO

Underground Development					
Drill Pilot Hole		1700	feet	$100	$170,000
Sinking		3400	feet	$3,756	$12,770,400
Head Frame		2	ea	$1,500,000	$3,000,000
Koepe Hoist / skip / cage		1	2000 hp	$3,800,000	$3,800,000
Double drum hoist/skip cage		2	1800 hp	$2,500,000	$5,000,000
Concrete Lining (in shaft sinking cost)		0			$0
Shaft Equip (in shaft sinking cost)		0			$0
Loading Station		1	ea	$250,000	$250,000
Ore Pocket		3	ea	$706,903	$2,120,709
Feeders/conveyor to loading pocket		4	ea	$20,000	$80,000
Level Development		16000	feet	$300	$4,800,000
Refuge Station		2	ea	$200,000	$400,000
Underground Shop		1	ea	$500,000	$500,000
Underground Shop Equipment		1	ea	$1,500,000	$1,500,000
Underground warehouse / spares		1	ea	$1,500,000	$1,500,000
Mine transformer and switch gear		1	ea	$1,500,000	$1,500,000
Main Vent Fans		2	ea	$1,500,000	$3,000,000
Communication system		1	ea	$1,000,000	$1,000,000
Total Underground Development					**$41,391,109**

Production and Development Equipment					
panel transformer	10		ea	$150,000	$1,500,000
Continuous Miner - Joy 12 HM	10		ea	$2,500,000	$25,000,000
Feeder Breaker	10		ea	$400,000	$4,000,000
Sub - conveyor 48"	9	6710	ft	$400	$24,156,000
Main - conveyor 72"	1	3000	ft	$600	$1,800,000
shuttle car	20		ea	$500,000	$10,000,000
Man trip	10		ea	$50,000	$500,000
Rock bolter	10		ea	$150,000	$1,500,000
Vent Fans	30		ea	$20,000	$600,000
Vent tube	15000		ft	$10	$150,000
trash pump - pipe	10		ea	$10,000	$100,000
Electrical - Wire/switch gear	10		ea	$50,000	$500,000
Total Mine Equipment and Development Capital					**$69,806,000**

TABLE 25-21 CONTINUED

Surface Development					
Buildings					
Hoist house	1		ea	$1,000,000	$1,000,000
Mine Admin building	1		ea	$500,000	$500,000
Shop - Plant Maintenance	1		ea	$1,500,000	$1,500,000
Dry	1		ea	$500,000	$500,000
Process Warehouse	1		ea	$500,000	$500,000
Assay Lab	1		ea	$500,000	$500,000
Security	1		ea	$50,000	$50,000
Water Supply & Engineered Membrane Plant	1		ea	$35,000,000	$35,000,000
Infrastructure					
Railroad Line	19.7		miles	$1,000,000	$0
Conveyor	0		ft	$600	$0
Access Roads	5		miles	$250,000	$1,250,000
Transmission Lines	10		miles	$250,000	$2,500,000
Water Pipelines	0		miles	$500,000	$0
Load Out Facility	1		Each	$20,000,000	$20,000,000
Total Surface Development					**$63,300,000**

25.14.2 Mineral Processing

Mineral processing capital costs are presented within Tables 23-18 and 23-19 below. The tables show all the direct capital costs as well as indirect costs for the processing plant, solar ponds, and tailings pond. Mineral processing capital costs were developed based upon experience of ICP personnel and from the Chemfelt processing report.

TABLE 25-22 PROCESS COST-CAPITAL SUMMMARY 660K TON SCENARIO

Processing Cost - Capital Summary

Process	Initial Material Cost	Mechanical Labor (50% of Initial Material Cost)	Piping Material (40% of InitialMaterial Cost)	Piping Labor (100% oof Piping Material)	Structural Material (25% of Initial Material Costs)	Structural Labor (50% of Structural Material)	Civil & Concrete Material (15% of Initial Material)	Civil & Concrete Labor (50% of Civil Material)	Electrical Material (30% of Initial Material)	Electrical Labor (50% of Electrical Material)	Painting (2% of Initial Equipment)	Insulation (11% of Initial Equipment)	Total
Secondary Crushing	$5,265,464	$2,632,732	$2,106,186	$2,106,186	$1,316,366	$658,183	$789,820	$394,910	$1,579,639	$789,820	$105,309	$0	**$17,744,614**
Calcination	$26,913,502	$13,456,751	$10,765,401	$10,765,401	$6,728,376	$3,364,188	$4,037,025	$2,018,513	$8,074,051	$4,037,025	$538,270	$0	**$90,698,502**
Leaching	$2,260,900	$1,130,450	$904,360	$904,360	$565,225	$282,613	$339,135	$169,568	$678,270	$339,135	$45,218	$0	**$7,619,233**
Preparation for Solar Pond Brine Feed	$8,688,664	$4,344,332	$3,475,466	$3,475,466	$2,172,166	$1,086,083	$1,303,300	$651,650	$2,606,599	$1,303,300	$173,773	$0	**$29,280,798**
Tails Washing Thickeners	$5,138,536	$2,569,268	$2,055,414	$2,055,414	$1,284,634	$642,317	$770,780	$385,390	$1,541,561	$770,780	$102,771	$0	**$17,316,865**
Solar Pond Harvesting	$3,719,535	$1,859,768	$1,487,814	$1,487,814	$929,884	$464,942	$557,930	$278,965	$1,115,861	$557,930	$74,391	$0	**$12,534,833**
Solar Salt Filtration	$2,398,850	$1,199,425	$959,540	$959,540	$599,713	$299,856	$359,828	$179,914	$719,655	$359,828	$47,977	$0	**$8,084,125**
DTB Reactor Crystallizer	$2,636,200	$1,318,100	$1,054,480	$1,054,480	$659,050	$329,525	$395,430	$197,715	$790,860	$395,430	$52,724	$0	**$8,883,994**
Product Filter	$254,910	$127,455	$101,964	$101,964	$63,728	$31,864	$38,237	$19,118	$76,473	$38,237	$5,098	$0	**$859,047**
Product Dryer & Air Pollution Scrubber	$8,500,686	$4,250,343	$3,400,274	$3,400,274	$2,125,172	$1,062,586	$1,275,103	$637,551	$2,550,206	$1,275,103	$170,014	$0	**$28,647,312**
Primary Product Screening	$700,290	$350,145	$280,116	$280,116	$175,073	$87,536	$105,044	$52,522	$210,087	$105,044	$14,006	$0	**$2,359,977**
Product Granulation Pland Feed Prep	$850,530	$425,265	$340,212	$340,212	$212,633	$106,316	$127,580	$63,790	$255,159	$127,580	$17,011	$0	**$2,866,286**
Product Granulator and Dryer	$2,162,980	$1,081,490	$865,192	$865,192	$540,745	$270,373	$324,447	$162,224	$648,894	$324,447	$43,260	$0	**$7,289,243**
Product Granulator Screens and Warehousing	$1,137,766	$568,883	$455,106	$455,106	$284,442	$142,221	$170,665	$85,332	$341,330	$170,665	$22,755	$0	**$3,834,271**
Solar Ponds For Evaporation (Lump Sum Cost)	$55,980,812	$0	$0	$1,000,000	$0	$0	$0	$0	$250,000	$500,000	$0	$0	**$57,730,812**
Tailings Ponds (Lump Sum Cost)	$21,058,482	$0	$0	$1,000,000	$0	$0	$0	$0	$250,000	$500,000	$0	$0	**$22,808,482**
Sub Totals	**$147,668,106.15**	**$35,314,406**	**$28,251,525**	**$30,251,525.06**	**$17,657,203.16**	**$8,828,601.58**	**$10,594,321.90**	**$5,297,160.95**	**$21,688,643.80**	**$11,594,321.90**	**$1,412,576.25**	**$0.00**	**$318,558,392.13**
											Engineering	9%	$28,670,255.29
											Construction Management	6%	$19,113,503.53
											Field Backcharges	5%	$15,927,919.61
											Insurance	2.15%	$6,849,005.43
											Initial Material Freight	6%	$8,860,086.37
											Piping Freight	6%	$1,695,091.50
											Electrical Freight	6%	$1,301,318.63
											Subtotal		**$400,975,572.49**
											Contingency	20%	$80,195,114.50
											Subtotal		**$481,170,686.99**
											Overhead	0%	$0.00
											Markup		$0.00
											Grand Total		**$481,170,686.99**

TABLE 25-23 PROCESS COST-CAPITAL SUMMMARY 990K TON SCENARIO

Processing Cost - Capital Summary													
Process	Initial Material Cost	Mechanical Labor (50% of Initial Material Cost)	Piping Material (40% of InitialMaterial Cost)	Piping Labor (100% oof Piping Material)	Structural Material (25% of Initial Material Costs)	Structural Labor (50% of Structural Material)	Civil & Concrete Material (15% of Initial Material)	Civil & Concrete Labor (50% of Civil Material)	Electrical Material (30% of Initial Material)	Electrical Labor (50% of Electrical Material)	Painting (2% of Initial Equipment)	Insulation (11% of Initial Equipment)	Total
Secondary Crushing	$6,715,702	$3,357,851	$2,686,281	$2,686,281	$1,678,925	$839,463	$1,007,355	$503,678	$2,014,711	$1,007,355	$134,314	$0	**$22,631,915**
Calcination	$34,326,140	$17,163,070	$13,730,456	$13,730,456	$8,581,535	$4,290,767	$5,148,921	$2,574,460	$10,297,842	$5,148,921	$686,523	$0	**$115,679,091**
Leaching	$3,319,278	$1,659,639	$1,327,711	$1,327,711	$829,820	$414,910	$497,892	$248,946	$995,783	$497,892	$66,386	$0	**$11,185,967**
Preparation for Solar Pond Brine Feed	$11,699,719	$5,849,859	$4,679,888	$4,679,888	$2,924,930	$1,462,465	$1,754,958	$877,479	$3,509,916	$1,754,958	$233,994	$0	**$39,428,053**
Tails Washing Thickeners	$6,553,814	$3,276,907	$2,621,526	$2,621,526	$1,638,454	$819,227	$983,072	$491,536	$1,966,144	$983,072	$131,076	$0	**$22,086,354**
Solar Pond Harvesting	$4,743,986	$2,371,993	$1,897,594	$1,897,594	$1,185,997	$592,998	$711,598	$355,799	$1,423,196	$711,598	$94,880	$0	**$15,987,233**
Solar Salt Filtration	$3,112,610	$1,556,305	$1,245,044	$1,245,044	$778,152	$389,076	$466,891	$233,446	$933,783	$466,891	$62,252	$0	**$10,489,495**
DTB Reactor Crystallizer	$3,362,274	$1,681,137	$1,344,910	$1,344,910	$840,569	$420,284	$504,341	$252,171	$1,008,682	$504,341	$67,245	$0	**$11,330,864**
Product Filter	$325,118	$162,559	$130,047	$130,047	$81,280	$40,640	$48,768	$24,384	$97,536	$48,768	$6,502	$0	**$1,095,649**
Product Dryer & Air Pollution Scrubber	$8,928,846	$4,464,423	$3,571,539	$3,571,539	$2,232,212	$1,116,106	$1,339,327	$669,663	$2,678,654	$1,339,327	$178,577	$0	**$30,090,213**
Primary Product Screening	$800,061	$400,031	$320,024	$320,024	$200,015	$100,008	$120,009	$60,005	$240,018	$120,009	$16,001	$0	**$2,696,206**
Product Granulation Pland Feed Prep	$1,084,787	$542,393	$433,915	$433,915	$271,197	$135,598	$162,718	$81,359	$325,436	$162,718	$21,696	$0	**$3,655,732**
Product Granulator and Dryer	$2,758,718	$1,379,359	$1,103,487	$1,103,487	$689,679	$344,840	$413,808	$206,904	$827,615	$413,808	$55,174	$0	**$9,296,879**
Product Granulator Screens and Warehousing	$1,451,135	$725,567	$580,454	$580,454	$362,784	$181,392	$217,670	$108,835	$435,340	$217,670	$29,023	$0	**$4,890,324**
Solar Ponds For Evaporation (Lump Sum Cost)	$71,399,299	$0	$0	$1,000,000	$0	$0	$0	$0	$250,000	$500,000	$0	$0	**$73,149,299**
Tailings Ponds (Lump Sum Cost)	$26,858,504	$0	$0	$1,000,000	$0	$0	$0	$0	$250,000	$500,000	$0	$0	**$28,608,504**
Sub Totals	**$187,439,990.26**	**$44,591,094**	**$35,672,875**	**$37,672,875**	**$22,295,546.95**	**$11,147,773.48**	**$13,377,328.17**	**$6,688,664.09**	**$27,254,656.35**	**$14,377,328.17**	**$1,783,643.76**	**$0.00**	**$402,301,775.39**
											Engineering	9%	$36,207,159.78
											Construction Management	6%	$24,138,106.52
											Field Backcharges	5%	$20,115,088.77
											Insurance	2.15%	$8,649,488.17
											Initial Material Freight	6%	$11,246,399.42
											Piping Freight	6%	$2,140,372.51
											Electrical Freight	6%	$1,635,279.38
											Subtotal		**$506,433,669.94**
											Contingency	20%	$101,286,733.99
											Subtotal		**$607,720,403.93**
											Overhead	0%	$0.00
											Markup		$0.00
											Grand Total		**$607,720,403.93**

25.14.3 Exploration and Permitting

Estimated costs prior to a production decision are estimated to be $12 million for both scenarios as shown in Table 25-24 below. This will allow completion of the necessary exploration drilling, engineering studies and permitting efforts. Funding is in place for this work and the costs are not included as part of the initial capital.

TABLE 25-24 EXPLORATION, ENGINEERING AND PERMITTING COSTS

Activity	Cost
Definition Drilling	$2,000,000
Prefeasibility Study	$3,000,000
Feasibility Study	$5,000,000
Permitting	$1,000,000
Corporate Costs	$1,000,000
Land Acquisition	Nil
Total	**$12,000,000**

25.14.4 CAPEX Summary

The total initial capital for the mine and plant in the 660K ton scenario is $661.66 million as shown in Table 25-25 below plus an additional $839.3 million for sustaining capital and $12 million for permitting and drilling. The total initial capital for the 990K ton scenario is $813.1 million plus an additional $1.04 billion for sustaining capital and $12 million for drilling as shown in Table 25-24 above.

TABLE 25-25 TOTAL ESTIMATED INITIAL CAPITAL COST FOR THE MINE AND PLANT FOR 660K TON SCENARIO

Total Mine Capital				**$153,345,109**
Total Direct Costs				**$153,345,109**
EPCM	0%	*included in # above*		$0
Indirects	4%	*direct*		$6,133,804
Subtotal Direct plus Indirect				**$159,478,913**
Owners costs	3%	*direct*		$4,600,353
Contingency	10%	*total*		$16,407,927
Subtotal Other Costs				**$21,008,280**
Total Mining costs				**$180,487,193**
Subtotal Processing Costs				**$481,170,687**
Total Estimated Costs				**$661,657,880**

TABLE 25-26 TOTAL ESTIMATED INITIAL CAPITAL COST FOR THE MINE AND PLANT FOR 990K TON SCENARIO

Total Mine Capital				**$174,497,109**
Total Direct Costs				**$174,497,109**
EPCM	0%	*included in # above*		$0
Indirects	4%	*direct*		$6,979,884
Subtotal Direct plus Indirect				**$181,476,993**
Owners costs	3%	*direct*		$5,234,913
Contingency	10%	*total*		$18,671,191
Subtotal Other Costs				**$23,906,104**
Total Mining costs				**$205,383,097**
Subtotal Processing Costs				**$607,720,404**
Total Estimated Costs				**$813,103,501**

25.15 Economic Analysis

In the 660K ton scenario, a 40-year life project at an average annual production rate of 661,380 tons of potassium sulfate product, gives a pre-tax internal rate of return (IRR) of 25% and net present value (NPV) of $1.43 billion with a 10% discount rate. NPV's at other rates are listed in Table 25-23. The Cash flow model at a 10% discount rate is shown in Table 25-24.

TABLE 25-27 NPV'S OF 660K TON SCENARIO

NPV	BILLION
15%	$.567
12%	$.989
10%	$1.43
8%	$2.07
5%	$3.76

In the 990K ton scenario, a 40 year project has an annual production rate of 997,000 tons of SOP produces a pre-tax IRR of 32% and an NPV of $2.58 billion using a 10% discount rate. NPV at other rates are shown in Table 25-25 below and the cash flow for the 990K scenario is shown in Table 25-26.

TABLE 25-28 NPV'S OF 990K TON SCENARIO

NPV	BILLION
15%	$1.11
12%	$1.80
10%	$2.51
8%	$3.56
5%	$6.27

TABLE 25-29 ECONOMIC MODEL OF 660K TON SCENARIO

			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	
	Basis	Units	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	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Totals
PRODUCTION																																															
Tons Raw Ore		Tons 000's					771	3,041	3,294	3,285	3,285	3,285	3,294	3,285	3,285	3,285	3,294	3,285	3,285	3,285	3,294	3,285	3,285	3,285	3,294	3,285	3,285	3,285	3,294	3,285	3,285	3,285	3,294	3,285	3,285	3,285	3,294	3,285	3,285	3,285	3,294	3,285	3,285	3,285	3,294	3,285	128,716
Tons of PH Feed To Plant		Tons 000's					657	2,591	2,806	2,798	2,798	2,798	2,806	2,798	2,798	2,798	2,806	2,798	2,798	2,798	2,806	2,798	2,798	2,788	2,763	2,756	2,756	2,756	2,763	2,756	2,763	2,764	2,771	2,764	2,764	2,764	2,771	2,764	2,759	2,750	2,758	2,750	2,750	2,750	2,758	2,746	108,740
Tons of raw K_2SO_4 to Ponds		Tons 000's					186	734	795	793	793	793	795	793	793	793	795	793	793	793	795	793	793	790	783	781	781	781	783	781	783	783	785	783	783	783	785	783	782	779	782	779	779	779	782	778	30,817
Tons Finished Product K_2SO_4		Tons 000's					0	135	626	674	674	674	676	674	674	674	676	674	674	674	676	674	674	674	674	664	664	664	666	664	664	666	668	666	666	666	668	666	666	665	664	663	663	663	664	663	25,510
REVENUE																																															
Sale Price K_2SO_4 (FOB Mine)	british sulfur	$/TON					522	508	531	576	640	712	780	857	948	789	735	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	709
Total Revenue		$000's					0	68,676	331,952	388,303	431,108	480,028	527,332	577,868	639,018	532,006	496,673	483,086	483,086	483,086	484,409	483,086	483,086	483,086	483,050	475,743	475,743	475,743	477,046	475,743	475,743	476,947	478,383	477,076	477,076	477,076	478,383	477,076	477,076	476,514	476,080	474,779	474,779	474,779	476,080	474,779	18,341,580
CASH PRODUCTION COSTS																																															
Controllable Costs																																															
Labor (000's)																																															
Plant/Surface	$8,478	$000's					2,150	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	8,478	332,798
Mine	$17,381	$000's					4,408	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	17,381	682,283
G&A	$3,125	$000's					792	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	122,654
Total Labor	$28,984	$000's					7,350	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984.24	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	28,984	1,137,735
Mine Operating Costs	$23,809	$000's					6,038	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	23,809	934,592
Plant Operating Cost (annual)	$16.82	$ ton Feed					12,975	51,166	55,413	55,261	55,261	55,261	55,413	55,261	55,261	55,261	55,413	55,261	55,261	55,261	55,413	55,261	55,261	55,261	55,413	55,261	55,261	55,261	55,413	55,261	55,261	55,261	55,413	55,261	55,261	55,261	55,413	55,261	55,261	55,261	55,413	55,261	55,261	55,261	55,413	55,261	2,165,588
Total Controllable Costs		**$000's**					**26,363**	**103,959**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**108,055**	**108,055**	**108,206**	**108,055**	**4,237,915**
$/TON ORE		**$000's**						**34.18**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.90**	**32.90**	**32.85**	**32.90**	**32.92**
$/SALES TON ($K_2SO_4$)								**768.97**	**172.98**	**160.29**	**160.29**	**160.29**	**160.08**	**160.29**	**160.29**	**160.29**	**160.08**	**160.29**	**160.29**	**160.29**	**160.08**	**160.29**	**160.29**	**160.29**	**160.53**	**162.76**	**162.76**	**162.76**	**162.55**	**162.76**	**162.76**	**162.35**	**162.09**	**162.31**	**162.31**	**162.31**	**162.09**	**162.31**	**162.31**	**162.50**	**162.88**	**163.09**	**163.09**	**163.09**	**162.88**	**163.09**	**166.13**
NON-CONTROLLABLE COSTS																																															
State/BLM Royalties on Revenue	2.5%	% of Revenue					0	1,717	8,299	9,708	10,778	12,001	13,183	14,447	15,975	13,300	12,417	12,077	12,077	12,077	12,110	12,077	12,077	12,077	12,076	11,894	11,894	11,894	11,926	11,894	11,894	11,924	11,960	11,927	11,927	11,927	11,960	11,927	11,927	11,913	11,902	11,869	11,869	11,869	11,902	11,869	458,540
Production Royalty	$1.00	per ton of product					0	135	626	674	674	674	676	674	674	674	676	674	674	674	676	674	674	674	674	664	664	664	666	664	664	666	668	666	666	666	668	666	666	665	664	663	663	663	664	663	25,510
General Insurance		$000's					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Other		$000's					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-
Total Non Controllable Costs (K2SO4)		**$000's**					**0**	**1,852**	**8,924**	**10,382**	**11,452**	**12,675**	**13,859**	**15,121**	**16,650**	**13,974**	**13,093**	**12,751**	**12,751**	**12,751**	**12,786**	**12,751**	**12,751**	**12,751**	**12,750**	**12,557**	**12,557**	**12,557**	**12,592**	**12,557**	**12,557**	**12,589**	**12,627**	**12,593**	**12,593**	**12,593**	**12,627**	**12,593**	**12,593**	**12,578**	**12,566**	**12,532**	**12,532**	**12,532**	**12,566**	**12,532**	**484,050**
$/TON FEED		**$/ton**					**-**	**0.61**	**2.71**	**3.16**	**3.49**	**3.86**	**4.21**	**4.60**	**5.07**	**4.25**	**3.98**	**3.88**	**3.88**	**3.88**	**3.88**	**3.88**	**3.88**	**3.88**	**3.87**	**3.82**	**3.82**	**3.82**	**3.82**	**3.82**	**3.82**	**3.83**	**3.83**	**3.83**	**3.83**	**3.83**	**3.83**	**3.83**	**3.83**	**3.83**	**3.82**	**3.82**	**3.82**	**3.82**	**3.82**	**3.82**	**3,760.61**
$/SALES TON ($K_2SO_4$)		**$/ton**						**13.70**	**14.27**	**15.40**	**16.99**	**18.80**	**20.50**	**22.43**	**24.70**	**20.73**	**19.37**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.97**
TOTAL CASH COSTS																																															
Subtotal		**$000's**					**26,363**	**105,811**	**117,130**	**118,436**	**119,507**	**120,730**	**122,065**	**123,176**	**124,704**	**122,029**	**121,299**	**120,806**	**120,806**	**120,806**	**120,992**	**120,806**	**120,806**	**120,806**	**120,956**	**120,612**	**120,612**	**120,612**	**120,798**	**120,612**	**120,612**	**120,644**	**120,833**	**120,647**	**120,647**	**120,647**	**120,833**	**120,647**	**120,647**	**120,633**	**120,772**	**120,587**	**120,587**	**120,587**	**120,772**	**120,587**	**4,721,965**
Contingency	0%	**% of Cash Costs**					**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**
Total EBITDA		**$000's**					**-26,363**	**-37,136**	**214,822**	**269,867**	**311,602**	**359,299**	**405,266**	**454,693**	**514,314**	**409,977**	**375,374**	**362,280**	**362,280**	**362,280**	**363,417**	**362,280**	**362,280**	**362,280**	**362,094**	**355,131**	**355,131**	**355,131**	**356,248**	**355,131**	**355,131**	**356,303**	**357,549**	**356,428**	**356,428**	**356,428**	**357,549**	**356,428**	**356,428**	**355,881**	**355,307**	**354,192**	**354,192**	**354,192**	**355,307**	**354,192**	**13,619,615**
$/TON FEED		**$/ton**						**(12.21)**	**65.22**	**82.16**	**94.87**	**109.39**	**123.05**	**138.43**	**156.59**	**124.82**	**113.97**	**110.30**	**110.30**	**110.30**	**110.34**	**110.30**	**110.30**	**110.30**	**109.94**	**108.12**	**108.12**	**108.12**	**108.17**	**108.12**	**108.12**	**108.48**	**108.56**	**108.52**	**108.52**	**108.52**	**108.56**	**108.52**	**108.52**	**108.35**	**107.88**	**107.84**	**107.84**	**107.84**	**107.88**	**107.84**	**105,811.50**
$/SALES TON ($K_2SO_4$)		**$/ton**						**(274.69)**	**343.41**	**400.33**	**462.24**	**532.99**	**599.54**	**674.50**	**762.94**	**608.17**	**555.32**	**537.41**	**537.41**	**537.41**	**537.63**	**537.41**	**537.41**	**537.41**	**537.18**	**534.94**	**534.94**	**534.94**	**535.16**	**534.94**	**534.94**	**535.35**	**535.61**	**535.39**	**535.39**	**535.39**	**535.61**	**535.39**	**535.39**	**535.20**	**534.83**	**534.61**	**534.61**	**534.61**	**534.83**	**534.61**	**534.92**
NET INCOME BEFORE FINANCIALS																																															
Net Income Before Financials		$000's					(26,363)	(37,136)	214,822	269,867	311,602	359,299	405,266	454,693	514,314	409,977	375,374	362,280	362,280	362,280	363,417	362,280	362,280	362,280	362,094	355,131	355,131	355,131	356,248	355,131	355,131	356,303	357,549	356,428	356,428	356,428	357,549	356,428	356,428	355,881	355,307	354,192	354,192	354,192	355,307	354,192	13,619,615
CAPITAL																																															
Mine Facilities and Equipment		$000s																																													
Mine Development	$41,391	$000s	-	-	9,329	19,202	12,860	-	-																																						41,391
Mine Equipment	$48,654	$000s				24,327	24,327																																								
Surface Facilities	$63,300	$000s			31,650	31,650																																									63,300
EPCM	$6,134	$000s			3,067	3,067																																									6,134
Owner's Cost	$4,600	$000s			2,300	2,300																																									4,600
Rebuild and Replace	$0	$000s						11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	11,521	449,327
Contingency	$16,408	$000s			8,204	8,204																																									16,408
Plant Facilities and Equipment																																															
Process Plant	$318,558	$000s			159,279	159,279																																									318,558
Rebuild and Replace	$0	$000s						10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	390,000
Engineering	$28,670	$000s			14,335	14,335																																									28,670
Construction Management	$19,114	$000s			9,557	9,557																																									19,114
Field Backcharges	$15,928	$000s			7,964	7,964																																									15,928
Insurance	$6,849	$000s			3,425	3,425																																									6,849
Initial Material Freight	$8,860	$000s			4,430	4,430																																									8,860
Piping Freight	$1,695	$000s			848	848																																									1,695
Electrical Freight	$1,301	$000s			651	651																																									1,301
Contingency	$80,195	$000s			40,098	40,098																																									80,195
Overhead	$0	$000s			-	-																																									-
Markup	$0	$000s			-	-																																									-
Exploration and Permitting	$0	Corporate cost, not included																																													-
Definition Drilling	$0	Corporate cost, not included		-																																											-
Prefeasibility Study	$0	Corporate cost, not included		-																																											-
Feasibility Study	$0	Corporate cost, not included		-																																											-
Permitting	$0	Corporate cost, not included	-	-																																											-
Corporate Costs	$0	Corporate cost, not included		-	-	-																																									-
Total Initial Capital	**$661,658**	$000s	-	-	295,135	329,336	12,860																																								637,331
																																															-
Sustaining & Replacement Capital (Years 2 - 40)	**$839,327**	$000s					0	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	839,327
Total Capital	1,476,658	$000s	0	0	295,135	329,336	12,860	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	1,476,658
CASH FLOW & NPV																																															
Net Income before Financials							(26,363)	(37,136)	214,822	269,867	311,602	359,299	405,266	454,693	514,314	409,977	375,374	362,280	362,280	362,280	363,417	362,280	362,280	362,280	362,094	355,131	355,131	355,131	356,248	355,131	355,131	356,303	357,549	356,428	356,428	356,428	357,549	356,428	356,428	355,881	355,307	354,192	354,192	354,192	355,307	354,192	13,619,615
Less Capital			0	0	295,135	329,336	12,860	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	21,521	1,476,658
			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																									Totals
Net Cash Flow		$000s	**0**	**0**	**(295,135)**	**(329,336)**	**(39,223)**	**(58,657)**	**193,300**	**248,345**	**290,080**	**337,777**	**383,745**	**433,172**	**492,793**	**388,456**	**353,853**	**340,759**	**340,759**	**340,759**	**341,896**	**340,759**	**340,759**	**340,759**	**340,573**	**333,610**	**333,610**	**333,610**	**334,727**	**333,610**	**333,610**	**334,782**	**336,028**	**334,907**	**334,907**	**334,907**	**336,028**	**334,907**	**334,907**	**334,360**	**333,786**	**332,671**	**332,671**	**332,671**	**333,786**	**332,671**	**12,142,957**
Cumulative Net Cash Flow		$000s	**0**	**0**	**(295,135)**	**(624,471)**	**(663,694)**	**(722,351)**	**(529,050)**	**(280,705)**	**9,376**	**347,153**	**730,898**	**1,164,070**	**1,656,863**	**2,045,318**	**2,399,171**	**2,739,930**	**3,080,688**	**3,421,447**	**3,763,343**	**4,104,101**	**4,444,860**	**4,785,618**	**5,126,191**	**5,459,801**	**5,793,410**	**6,127,020**	**6,461,747**	**6,795,357**	**7,128,967**	**7,463,749**	**7,799,777**	**8,134,684**	**8,469,591**	**8,804,498**	**9,140,526**	**9,475,433**	**9,810,340**	**10,144,700**	**10,478,486**	**10,811,157**	**11,143,829**	**11,476,500**	**11,810,286**	**12,142,957**	**221,576,436**
70% Debt Finance, Cumulative Net Cash Flow		$000s			**(206,595)**	**(437,129)**	**(472,494)**	**(524,695)**	**(324,938)**	**(70,136)**	**226,400**	**570,634**	**960,836**	**1,400,464**	**1,899,713**	**2,294,625**	**2,654,934**	**3,002,149**	**3,349,364**	**3,696,579**	**4,044,931**	**4,392,146**	**4,739,361**	**5,086,576**	**5,433,605**	**5,773,671**	**6,113,737**	**6,453,803**	**6,794,986**	**7,135,053**	**7,475,119**	**7,816,357**	**8,158,842**	**8,500,205**	**8,841,568**	**9,182,932**	**9,525,416**	**9,866,779**	**10,208,143**	**10,548,959**	**10,889,202**	**11,228,329**	**11,567,457**	**11,906,584**	**12,246,827**	**12,585,955**	**234,536,249**
Net Profit Royalty 1.5% after buy back $9n	1.5%	$000s									**12,396**	**5,067**	**5,756**	**6,498**	**7,392**	**5,827**	**5,308**	**5,111**	**5,111**	**5,111**	**5,128**	**5,111**	**5,111**	**5,111**	**5,109**	**5,004**	**5,004**	**5,004**	**5,021**	**5,004**	**5,004**	**5,022**	**5,040**	**5,024**	**5,024**	**5,024**	**5,040**	**5,024**	**5,024**	**5,015**	**5,007**	**4,990**	**4,990**	**4,990**	**5,007**	**4,990**	**194,400**
Gross Cash Flow		$000s	**0**	**0**	**(295,135)**	**(329,336)**	**(39,223)**	**(58,657)**	**193,300**	**248,345**	**277,684**	**332,711**	**377,989**	**426,674**	**485,401**	**382,629**	**348,545**	**335,647**	**335,647**	**335,647**	**336,767**	**335,647**	**335,647**	**335,647**	**335,464**	**328,606**	**328,606**	**328,606**	**329,706**	**328,606**	**328,606**	**329,760**	**330,988**	**329,883**	**329,883**	**329,883**	**330,988**	**329,883**	**329,883**	**329,345**	**328,779**	**327,681**	**327,681**	**327,681**	**328,779**	**327,681**	**11,948,558**
Cumulative Gross Cash Flow		$000s	**0**	**0**	**(295,135)**	**(624,471)**	**(663,694)**	**(722,351)**	**(529,050)**	**(280,705)**	**(3,020)**	**329,691**	**707,679**	**1,134,353**	**1,619,754**	**2,002,383**	**2,350,928**	**2,686,575**	**3,022,223**	**3,357,870**	**3,694,637**	**4,030,284**	**4,365,931**	**4,701,579**	**5,037,043**	**5,365,648**	**5,694,254**	**6,022,859**	**6,352,566**	**6,681,171**	**7,009,777**	**7,339,537**	**7,670,525**	**8,000,408**	**8,330,292**	**8,660,175**	**8,991,163**	**9,321,046**	**9,650,929**	**9,980,274**	**10,309,054**	**10,636,735**	**10,964,416**	**11,292,097**	**11,620,876**	**11,948,558**	**217,764,865**
$/TON FEED							**(50.86)**	**(19.29)**	**58.69**	**75.61**	**84.54**	**101.30**	**114.77**	**129.90**	**147.78**	**116.49**	**105.83**	**102.19**	**102.19**	**102.19**	**102.25**	**102.19**	**102.19**	**102.19**	**101.85**	**100.05**	**100.05**	**100.05**	**100.11**	**100.05**	**100.05**	**100.40**	**100.50**	**100.43**	**100.43**	**100.43**	**100.50**	**100.43**	**100.43**	**100.27**	**99.82**	**99.76**	**99.76**	**99.76**	**99.82**	**99.76**	**92.83**
$/SALES TON								**(433.87)**	**309.01**	**368.40**	**411.92**	**493.55**	**559.18**	**632.94**	**720.05**	**567.60**	**515.63**	**497.91**	**497.91**	**497.91**	**498.20**	**497.91**	**497.91**	**497.91**	**497.67**	**494.98**	**494.98**	**494.98**	**495.28**	**494.98**	**494.98**	**495.47**	**495.82**	**495.52**	**495.52**	**495.52**	**495.82**	**495.52**	**495.52**	**495.29**	**494.89**	**494.59**	**494.59**	**494.59**	**494.89**	**494.59**	**468.38**
NPV	10%	**$1,426,656**																																													
IRR		**25%**																																													
Payback from Mine Production Start	Years	**5.0**																																													

TABLE 25-30 ECONOMIC MODEL OF 990K TON SCENARIO

			2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	Basis	Units	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
PRODUCTION																		
Tons Raw Ore		Tons 000's					1,186	4,677	5,065	5,051	5,051	5,051	5,065	5,051	5,051	5,051	5,065	5,051
Tons of PH Feed To Plant		Tons 000's					1,011	3,985	4,316	4,304	4,304	4,304	4,316	4,304	4,304	4,304	4,316	4,287
Tons of raw K_2SO_4 to Ponds		Tons 000's					286	1,129	1,223	1,220	1,220	1,220	1,223	1,220	1,220	1,220	1,223	1,215
Tons Finished Product K_2SO_4		Tons 000's					0	208	962	1,037	1,037	1,037	1,040	1,037	1,037	1,037	1,040	1,037
REVENUE																		
Sale Price K_2SO_4 (FOB Mine)	british sulfur	$/TON					522	508	531	576	640	712	780	857	948	789	735	717
Total Revenue		$000's					0	105,618	510,516	597,180	663,010	738,246	810,995	888,716	982,760	818,183	763,844	742,948
CASH PRODUCTION COSTS																		
Controllable Costs																		
Labor (000's)																		
Plant/Surface	$10,349	$000's					2,625	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349
Mine	$21,852	$000's					5,541	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852
G&A	$3,125	$000's					792	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125
Total Labor	$35,326	$000's					8,958	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326
Mine Operating Costs	$32,937	$000's					8,352	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937
Plant Operating Cost (annual)	$15.62	$ ton Feed					18,528	73,064	79,129	78,913	78,913	78,913	79,129	78,913	78,913	78,913	79,129	78,913
Total Controllable Costs		**$000's**					**35,839**	**141,328**	**147,392**	**147,176**	**147,176**	**147,176**	**147,392**	**147,176**	**147,176**	**147,176**	**147,392**	**147,176**
$/TON ORE		**$000's**						**30.22**	**29.10**	**29.14**	**29.14**	**29.14**	**29.10**	**29.14**	**29.14**	**29.14**	**29.10**	**29.14**
$/SALES TON ($K_2SO_4$)								**679.73**	**153.21**	**141.96**	**141.96**	**141.96**	**141.78**	**141.96**	**141.96**	**141.96**	**141.78**	**141.96**
NON-CONTROLLABLE COSTS																		
State/BLM Royalties on Revenue	2.5%	$000's					0	2,640	12,763	14,929	16,575	18,456	20,275	22,218	24,569	20,455	19,096	18,574
Production Royalty	$1.00	$000's					0	208	962	1,037	1,037	1,037	1,040	1,037	1,037	1,037	1,040	1,037
General Insurance		$000's					0	0	0	0	0	0	0	0	0	0	0	0
Other		$000's					0	0	0	0	0	0	0	0	0	0	0	0
Total Non Controllable Costs (K2SO4)		**$000's**					**0**	**2,848**	**13,725**	**15,966**	**17,612**	**19,493**	**21,314**	**23,255**	**25,606**	**21,491**	**20,136**	**19,610**
$/TON FEED		**$/ton**					**-**	**0.61**	**2.71**	**3.16**	**3.49**	**3.86**	**4.21**	**4.60**	**5.07**	**4.25**	**3.98**	**3.88**
$/SALES TON ($K_2SO_4$)		**$/ton**						**13.70**	**14.27**	**15.40**	**16.99**	**18.80**	**20.50**	**22.43**	**24.70**	**20.73**	**19.37**	**18.92**
TOTAL CASH COSTS																		
Subtotal		**$000's**					**35,839**	**144,176**	**161,117**	**163,142**	**164,788**	**166,669**	**168,707**	**170,431**	**172,782**	**168,667**	**167,528**	**166,787**
Contingency	0%	**% of Cash Costs**					**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total EBITDA		**$000's**					**-35,839**	**-38,558**	**349,399**	**434,037**	**498,222**	**571,577**	**642,288**	**718,285**	**809,978**	**649,516**	**596,316**	**576,161**
$/TON FEED		**$/ton**						**(8.24)**	**68.98**	**85.92**	**98.63**	**113.15**	**126.80**	**142.20**	**160.35**	**128.58**	**117.73**	**114.06**
$/SALES TON ($K_2SO_4$)		**$/ton**						**(185.45)**	**363.19**	**418.66**	**480.57**	**551.32**	**617.83**	**692.83**	**781.27**	**626.50**	**573.61**	**555.74**
NET INCOME BEFORE FINANCIALS																		
Net Income Before Financials		$000's					(35,839)	(38,558)	349,399	434,037	498,222	571,577	642,288	718,285	809,978	649,516	596,316	576,161
CAPITAL																		
Mine Facilities and Equipment		$000s																
Mine Development	$41,391	$000s	-	-	9,329	19,202	12,860	-	-									
Mine Equipment	$69,806	$000s				34,903	34,903											
Surface Facilities	$63,301	$000s			31,651	31,651												
EPCM	$6,980	$000s			3,490	3,490												
Owner's Cost	$5,235	$000s			2,617	2,617												
Rebuild and Replace	$0	$000s						16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557
Contingency	$18,671	$000s			9,336	9,336												
Plant Facilities and Equipment																		
Process Plant	$402,302	$000s			201,151	201,151												
Rebuild and Replace	$0	$000s						10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Engineering	$36,207	$000s			18,104	18,104												
Construction Management	$24,138	$000s			12,069	12,069												
Field Backcharges	$20,115	$000s			10,058	10,058												
Insurance	$8,649	$000s			4,325	4,325												
Initial Material Freight	$11,246	$000s			5,623	5,623												
Piping Freight	$2,140	$000s			1,070	1,070												
Electrical Freight	$1,635	$000s			818	818												
Contingency	$101,287	$000s			50,643	50,643												
Overhead	$0	$000s			-	-												
Markup	$0	$000s			-	-												
Exploration and Permitting		Corporate cost, not included																
Definition Drilling	$0	Corporate cost, not included		-														
Prefeasibility Study	$0	Corporate cost, not included		-														
Feasibility Study	$0	Corporate cost, not included		-														
Permitting	$0	Corporate cost, not included	-	-														
Corporate Costs	$0	Corporate cost, not included		-	-	-												
Total Initial Capital	**$813,105**		-	-	360,282	405,059	12,860											
Sustaining & Replacement Capital (Years 2 - 30)	**$1,035,715**	$000s					0	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557
Total Capital	1,813,917	$000s	0	0	360,282	405,059	12,860	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557
CASH FLOW & NPV																		
Net Income before Financials							(35,839)	(38,558)	349,399	434,037	498,222	571,577	642,288	718,285	809,978	649,516	596,316	576,161
Less Capital			0	0	360,282	405,059	12,860	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557
			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
Net Cash Flow		$000s	**0**	**0**	**(360,282)**	**(405,059)**	**(48,699)**	**(65,115)**	**322,842**	**407,481**	**471,666**	**545,020**	**615,731**	**691,729**	**783,422**	**622,959**	**569,759**	**549,605**
Cumulative Net Cash Flow		$000s	**0**	**0**	**(360,282)**	**(765,341)**	**(814,041)**	**(879,156)**	**(556,314)**	**(148,833)**	**322,832**	**867,852**	**1,483,583**	**2,175,312**	**2,958,733**	**3,581,692**	**4,151,451**	**4,701,056**
70% Debt Finance, Cumulative Net Cash Flow					**(252,198)**	**(535,739)**	**(580,580)**	**(637,728)**	**(306,919)**	**108,528**	**588,161**	**1,141,148**	**1,764,846**	**2,464,542**	**3,255,930**	**3,886,856**	**4,464,582**	**5,022,154**
Net Profit Royalty 1.5% after buy back $9m pa	1.5%	$000s								**10,628**	**7,075**	**8,175**	**9,236**	**10,376**	**11,751**	**9,344**	**8,546**	**8,244**
Gross Cash Flow		$000s	**0**	**0**	**(360,282)**	**(405,059)**	**(48,699)**	**(65,115)**	**322,842**	**396,853**	**464,591**	**536,845**	**606,495**	**681,353**	**771,670**	**613,615**	**561,213**	**541,360**
Cumulative Gross Cash Flow		$000s	**0**	**0**	**(360,282)**	**(765,341)**	**(814,041)**	**(879,156)**	**(556,314)**	**(159,461)**	**305,130**	**841,974**	**1,448,469**	**2,129,822**	**2,901,492**	**3,515,107**	**4,076,319**	**4,617,680**
$/TON FEED							**(41.06)**	**(13.92)**	**63.74**	**78.56**	**91.97**	**106.28**	**119.74**	**134.88**	**152.76**	**121.47**	**110.80**	**107.17**
$/SALES TON								**(313.18)**	**335.58**	**382.79**	**448.13**	**517.82**	**583.40**	**657.21**	**744.32**	**591.87**	**539.84**	**522.18**
NPV	5%	**$6,273,272**																
IRR		**30%**																
Payback from Mine Production Start	Years	**4.3**																

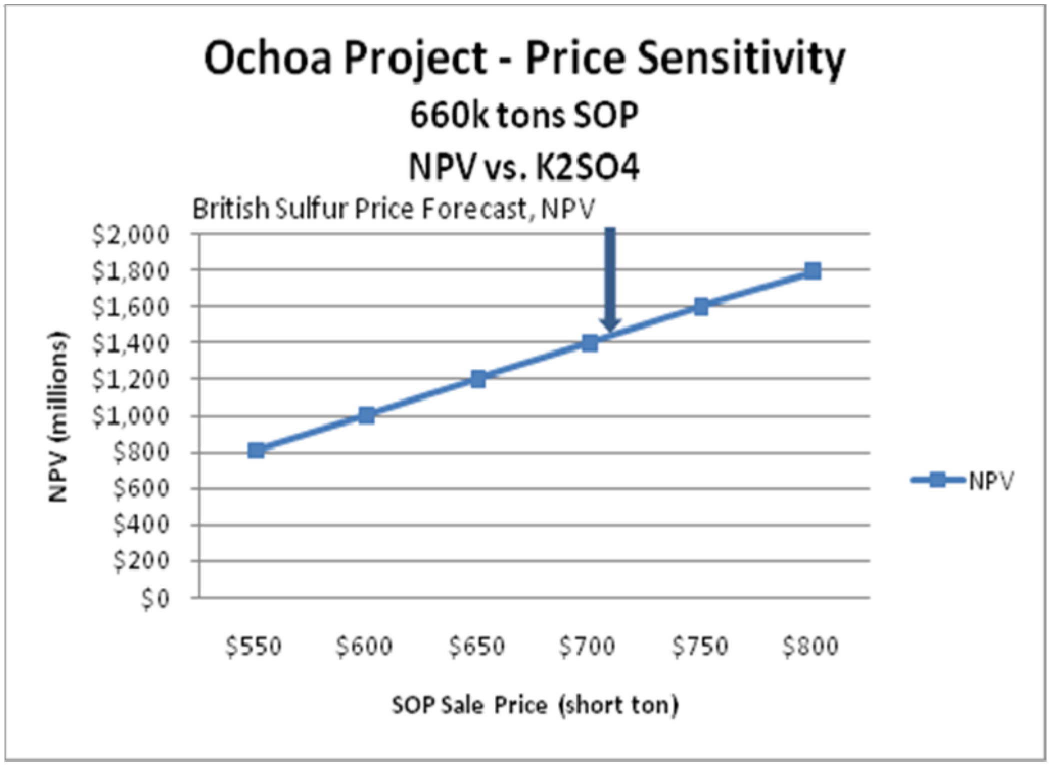
	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28
PRODUCTION																
Tons Raw Ore	5,051	5,051	5,065	5,051	5,051	5,051	5,065	5,051	5,051	5,051	5,065	5,051	5,051	5,051	5,065	5,051
Tons of PH Feed To Plant	4,238	4,238	4,250	4,240	4,250	4,250	4,262	4,250	4,250	4,239	4,241	4,230	4,230	4,230	4,202	4,186
Tons of raw K_2SO_4 to Ponds	1,201	1,201	1,204	1,202	1,205	1,205	1,208	1,205	1,205	1,201	1,202	1,199	1,199	1,199	1,191	1,186
Tons Finished Product K_2SO_4	1,034	1,021	1,024	1,021	1,021	1,024	1,027	1,024	1,024	1,024	1,024	1,019	1,019	1,019	1,022	1,010
REVENUE																
Sale Price K_2SO_4 (FOB Mine)	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717	717
Total Revenue	740,820	731,655	733,660	731,655	731,871	733,705	735,715	733,705	733,705	733,705	734,032	730,173	730,173	730,173	732,173	723,905
CASH PRODUCTION COSTS																
Controllable Costs																
Labor (000's)																
Plant/Surface	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349
Mine	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852
G&A	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125
Total Labor	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326
Mine Operating Costs	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937
Plant Operating Cost (annual)	78,913	78,913	79,129	78,913	78,913	78,913	79,129	78,913	78,913	78,913	79,129	78,913	78,913	78,913	79,129	78,913
Total Controllable Costs	**147,176**	**147,176**	**147,392**	**147,176**	**147,176**	**147,176**	**147,392**	**147,176**	**147,176**	**147,176**	**147,392**	**147,176**	**147,176**	**147,176**	**147,392**	**147,176**
$/TON ORE	**29.14**	**29.14**	**29.10**	**29.14**	**29.14**	**29.14**	**29.10**	**29.14**	**29.14**	**29.14**	**29.10**	**29.14**	**29.14**	**29.14**	**29.10**	**29.14**
$/SALES TON ($K_2SO_4$)	**142.37**	**144.15**	**143.97**	**144.15**	**144.11**	**143.75**	**143.57**	**143.75**	**143.75**	**143.75**	**143.90**	**144.44**	**144.44**	**144.44**	**144.26**	**145.69**
NON-CONTROLLABLE COSTS																
State/BLM Royalties on Revenue	18,521	18,291	18,341	18,291	18,297	18,343	18,393	18,343	18,343	18,343	18,351	18,254	18,254	18,254	18,304	18,098
Production Royalty	1,034	1,021	1,024	1,021	1,021	1,024	1,027	1,024	1,024	1,024	1,024	1,019	1,019	1,019	1,022	1,010
General Insurance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Non Controllable Costs (K2SO4)	**19,554**	**19,312**	**19,365**	**19,312**	**19,318**	**19,366**	**19,420**	**19,366**	**19,366**	**19,366**	**19,375**	**19,273**	**19,273**	**19,273**	**19,326**	**19,108**
$/TON FEED	**3.87**	**3.82**	**3.82**	**3.82**	**3.82**	**3.83**	**3.83**	**3.83**	**3.83**	**3.83**	**3.83**	**3.82**	**3.82**	**3.82**	**3.82**	**3.78**
$/SALES TON ($K_2SO_4$)	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**
TOTAL CASH COSTS																
Subtotal	**166,730**	**166,488**	**166,758**	**166,488**	**166,494**	**166,543**	**166,812**	**166,543**	**166,543**	**166,543**	**166,767**	**166,449**	**166,449**	**166,449**	**166,718**	**166,284**
Contingency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total EBITDA	**574,090**	**565,167**	**566,902**	**565,167**	**565,377**	**567,162**	**568,903**	**567,162**	**567,162**	**567,162**	**567,264**	**563,724**	**563,724**	**563,724**	**565,455**	**557,621**
$/TON FEED	**113.65**	**111.88**	**111.92**	**111.88**	**111.92**	**112.28**	**112.32**	**112.28**	**112.28**	**112.28**	**111.99**	**111.60**	**111.60**	**111.60**	**111.63**	**110.39**
$/SALES TON ($K_2SO_4$)	**555.33**	**553.55**	**553.73**	**553.55**	**553.59**	**553.95**	**554.14**	**553.95**	**553.95**	**553.95**	**553.81**	**553.26**	**553.26**	**553.26**	**553.44**	**552.01**
NET INCOME BEFORE FINANCIALS																
Net Income Before Financials	574,090	565,167	566,902	565,167	565,377	567,162	568,903	567,162	567,162	567,162	567,264	563,724	563,724	563,724	565,455	557,621
CAPITAL																
Mine Facilities and Equipment																
Mine Development																
Mine Equipment																
Surface Facilities																
EPCM																
Owner's Cost																
Rebuild and Replace	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557
Contingency																
Plant Facilities and Equipment																
Process Plant																
Rebuild and Replace	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Engineering																
Construction Management																
Field Backcharges																
Insurance																
Initial Material Freight																
Piping Freight																
Electrical Freight																
Contingency																
Overhead																
Markup																
Exploration and Permitting																
Definition Drilling																
Prefeasibility Study																
Feasibility Study																
Permitting																
Corporate Costs																
Total Initial Capital																
Sustaining & Replacement Capital (Years 2 - 30)	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557
Total Capital	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557
CASH FLOW & NPV																
Net Income before Financials	574,090	565,167	566,902	565,167	565,377	567,162	568,903	567,162	567,162	567,162	567,264	563,724	563,724	563,724	565,455	557,621
Less Capital	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557
	Year 13	Year 14	Year 15	Year 16												
Net Cash Flow	**547,533**	**538,610**	**540,346**	**538,610**	**538,820**	**540,605**	**542,346**	**540,605**	**540,605**	**540,605**	**540,707**	**537,167**	**537,167**	**537,167**	**538,898**	**531,064**
Cumulative Net Cash Flow	**5,248,589**	**5,787,199**	**6,327,545**	**6,866,155**	**7,404,975**	**7,945,580**	**8,487,926**	**9,028,531**	**9,569,137**	**10,109,742**	**10,650,449**	**11,187,616**	**11,724,783**	**12,261,950**	**12,800,848**	**13,331,912**
70% Debt Finance, Cumulative Net Cash Flow	**5,577,654**	**6,124,231**	**6,672,544**	**7,219,121**	**7,765,908**	**8,314,480**	**8,864,793**	**9,413,365**	**9,961,938**	**10,510,510**	**11,059,185**	**11,604,318**	**12,149,452**	**12,694,586**	**13,241,452**	**13,780,483**
Net Profit Royalty 1.5% after buy back $9m pa	**8,213**	**8,079**	**8,105**	**8,079**	**8,082**	**8,109**	**8,135**	**8,109**	**8,109**	**8,109**	**8,111**	**8,058**	**8,058**	**8,058**	**8,083**	**7,966**
Gross Cash Flow	**539,320**	**530,531**	**532,240**	**530,531**	**530,738**	**532,496**	**534,211**	**532,496**	**532,496**	**532,496**	**532,597**	**529,109**	**529,109**	**529,109**	**530,815**	**523,098**
Cumulative Gross Cash Flow	**5,157,000**	**5,687,531**	**6,219,771**	**6,750,302**	**7,281,039**	**7,813,536**	**8,347,747**	**8,880,243**	**9,412,739**	**9,945,235**	**10,477,832**	**11,006,941**	**11,536,051**	**12,065,160**	**12,595,975**	**13,119,073**
$/TON FEED	**106.77**	**105.03**	**105.08**	**105.03**	**105.07**	**105.42**	**105.47**	**105.42**	**105.42**	**105.42**	**105.15**	**104.75**	**104.75**	**104.75**	**104.80**	**103.56**
$/SALES TON	**521.70**	**519.63**	**519.88**	**519.63**	**519.68**	**520.10**	**520.34**	**520.10**	**520.10**	**520.10**	**519.96**	**519.29**	**519.29**	**519.29**	**519.54**	**517.83**
NPV																
IRR																
Payback from Mine Production Start																

	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	
	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Totals
PRODUCTION													
Tons Raw Ore	5,051	5,051	5,065	5,051	5,051	5,051	5,065	5,051	5,051	5,051	4,886	2,526	195,250
Tons of PH Feed To Plant	4,186	4,186	4,197	4,173	4,140	4,140	4,151	4,134	4,119	4,119	3,985	2,074	163,443
Tons of raw K_2SO_4 to Ponds	1,186	1,186	1,189	1,183	1,173	1,173	1,177	1,172	1,167	1,167	1,129	588	46,320
Tons Finished Product K_2SO_4	1,008	1,008	1,011	1,008	1,006	997	1,000	997	996	992	995	991	38,873
REVENUE													
Sale Price K_2SO_4 (FOB Mine)	717	717	717	717	717	717	717	717	717	717	717	717	709
Total Revenue	722,543	722,543	724,523	722,543	720,922	714,695	716,653	714,695	713,890	710,989	712,937	710,131	27,949,902
CASH PRODUCTION COSTS													
Controllable Costs													
Labor (000's)													
Plant/Surface	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	10,349	406,254
Mine	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	21,852	857,784
G&A	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	3,125	122,654
Total Labor	35,326.50	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	35,326	1,386,692
Mine Operating Costs	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	32,937	1,292,895
Plant Operating Cost (annual)	78,913	78,913	79,129	78,913	78,913	78,913	79,129	78,913	78,913	78,913	76,330	39,456	3,050,178
Total Controllable Costs	**147,176**	**147,176**	**147,392**	**147,176**	**147,176**	**147,176**	**147,392**	**147,176**	**147,176**	**147,176**	**144,594**	**107,720**	**5,729,765**
$/TON ORE	**29.14**	**29.14**	**29.10**	**29.14**	**29.14**	**29.14**	**29.10**	**29.14**	**29.14**	**29.14**	**29.59**	**42.65**	**29.35**
$/SALES TON ($K_2SO_4$)	**145.97**	**145.97**	**145.78**	**145.97**	**146.30**	**147.57**	**147.39**	**147.57**	**147.74**	**148.34**	**145.34**	**108.70**	**147.40**
NON-CONTROLLABLE COSTS													
State/BLM Royalties on Revenue	18,064	18,064	18,113	18,064	18,023	17,867	17,916	17,867	17,847	17,775	17,823	17,753	698,748
Production Royalty	1,008	1,008	1,011	1,008	1,006	997	1,000	997	996	992	995	991	38,873
General Insurance	0	0	0	0	0	0	0	0	0	0	0	0	-
Other	0	0	0	0	0	0	0	0	0	0	0	0	-
Total Non Controllable Costs (K2SO4)	**19,072**	**19,072**	**19,124**	**19,072**	**19,029**	**18,865**	**18,916**	**18,865**	**18,843**	**18,767**	**18,818**	**18,744**	**737,620**
$/TON FEED	**3.78**	**3.78**	**3.78**	**3.78**	**3.77**	**3.73**	**3.73**	**3.73**	**3.73**	**3.72**	**3.85**	**7.42**	**3,777.82**
$/SALES TON ($K_2SO_4$)	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.92**	**18.98**
TOTAL CASH COSTS													
Subtotal	**166,248**	**166,248**	**166,516**	**166,248**	**166,205**	**166,041**	**166,309**	**166,041**	**166,020**	**165,943**	**163,412**	**126,464**	**6,467,385**
Contingency	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**
Total EBITDA	**556,295**	**556,295**	**558,006**	**556,295**	**554,717**	**548,654**	**550,344**	**548,654**	**547,870**	**545,046**	**549,525**	**583,667**	**21,482,516**
$/TON FEED	**110.13**	**110.13**	**110.16**	**110.13**	**109.81**	**108.61**	**108.65**	**108.61**	**108.46**	**107.90**	**112.47**	**231.09**	**110,025.70**
$/SALES TON ($K_2SO_4$)	**551.73**	**551.73**	**551.92**	**551.73**	**551.41**	**550.13**	**550.32**	**550.13**	**549.96**	**549.36**	**552.36**	**589.00**	**553.56**
NET INCOME BEFORE FINANCIALS													
Net Income Before Financials	556,295	556,295	558,006	556,295	554,717	548,654	550,344	548,654	547,870	545,046	549,525	583,667	21,482,516
CAPITAL													
Mine Facilities and Equipment													
Mine Development													41,391
Mine Equipment													
Surface Facilities													63,301
EPCM													6,980
Owner's Cost													5,235
Rebuild and Replace	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	16,557	645,715
Contingency													18,671
Plant Facilities and Equipment													
Process Plant													
Rebuild and Replace	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	
Engineering													
Construction Management													
Field Backcharges													
Insurance													
Initial Material Freight													
Piping Freight													
Electrical Freight													
Contingency													101,287
Overhead													
Markup													
Exploration and Permitting													
Definition Drilling													-
Prefeasibility Study													-
Feasibility Study													-
Permitting													-
Corporate Costs													-
Total Initial Capital													778,202
													-
Sustaining & Replacement Capital (Years 2 - 30)	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	1,035,715
Total Capital	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	1,813,917
CASH FLOW & NPV													
Net Income before Financials	556,295	556,295	558,006	556,295	554,717	548,654	550,344	548,654	547,870	545,046	549,525	583,667	21,482,516
Less Capital	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	26,557	1,813,917
													Totals
Net Cash Flow	**529,738**	**529,738**	**531,449**	**529,738**	**528,160**	**522,097**	**523,788**	**522,097**	**521,313**	**518,489**	**522,968**	**557,110**	**19,668,600**
Cumulative Net Cash Flow	**13,861,651**	**14,391,389**	**14,922,838**	**15,452,576**	**15,980,737**	**16,502,834**	**17,026,622**	**17,548,719**	**18,070,032**	**18,588,522**	**19,111,489**	**19,668,600**	**366,577,492**
70% Debt Finance, Cumulative Net Cash Flow	**14,318,188**	**14,855,893**	**15,395,310**	**15,933,015**	**16,469,143**	**16,999,207**	**17,530,962**	**18,061,026**	**18,590,306**	**19,116,763**	**19,647,697**	**20,212,775**	**382,467,889**
Net Profit Royalty 1.5% after buy back $9m pa	**7,946**	**7,946**	**7,972**	**7,946**	**7,922**	**7,831**	**7,857**	**7,831**	**7,820**	**7,777**	**7,845**	**8,357**	**307,889**
Gross Cash Flow	**521,792**	**521,792**	**523,478**	**521,792**	**520,238**	**514,266**	**515,931**	**514,266**	**513,494**	**510,712**	**515,123**	**548,754**	**19,360,710**
Cumulative Gross Cash Flow	**13,640,865**	**14,162,658**	**14,686,135**	**15,207,927**	**15,728,165**	**16,242,431**	**16,758,362**	**17,272,628**	**17,786,122**	**18,296,833**	**18,811,957**	**19,360,710**	**360,552,367**
$/TON FEED	**103.30**	**103.30**	**103.35**	**103.30**	**102.99**	**101.81**	**101.86**	**101.81**	**101.65**	**101.10**	**105.43**	**217.27**	**99.16**
$/SALES TON	**517.51**	**517.51**	**517.77**	**517.51**	**517.13**	**515.65**	**515.91**	**515.65**	**515.46**	**514.76**	**517.78**	**553.77**	**498.05**
NPV													
IRR													
Payback from Mine Production Start													

25.15.1 Sensitivity Analysis

Sensitivity analysis was completed on the project to determine those costs to which the project was most sensitive. The project is most sensitive to the selling price of SOP (K_2SO_4), followed by, capital cost, price of water and gas, overall processing costs, and metallurgical recovery. Figures 23-18 through 23-23 present the sensitivities graphically.

Regarding the price sensitivity of SOP the arrow in the chart is pointing to the NPV of the British Sulfur pricing which is used in the economic model. The British Sulfur pricing estimates vary from year to year. The Sensitivity of the SOP price versus NPV is based on constant prices throughout the entire life of mine.



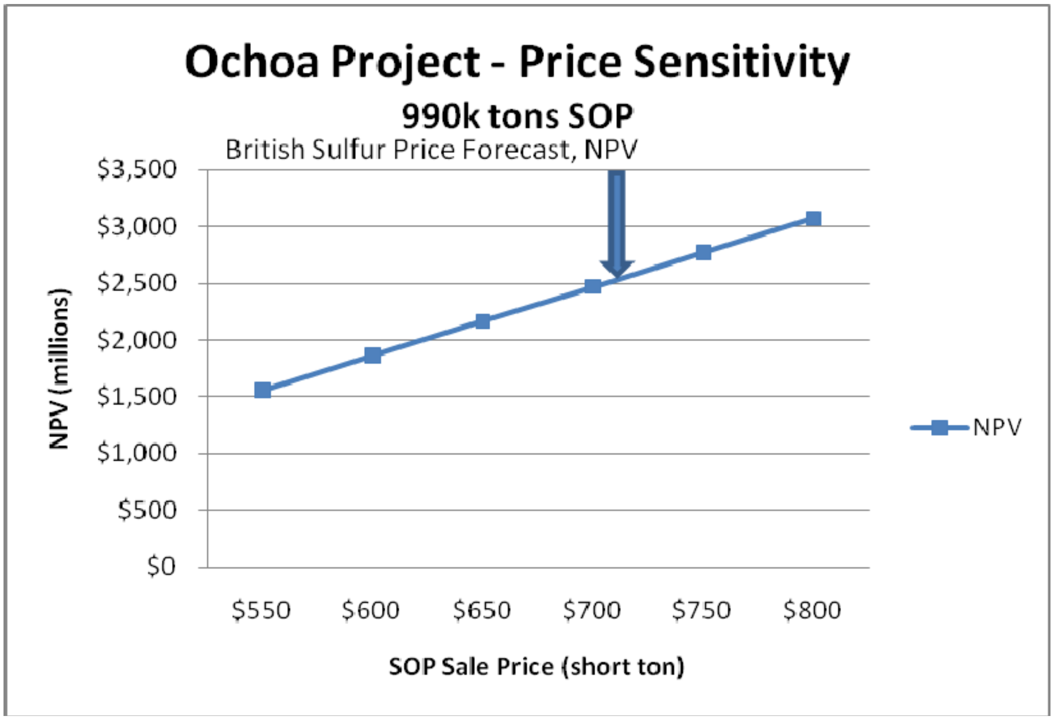
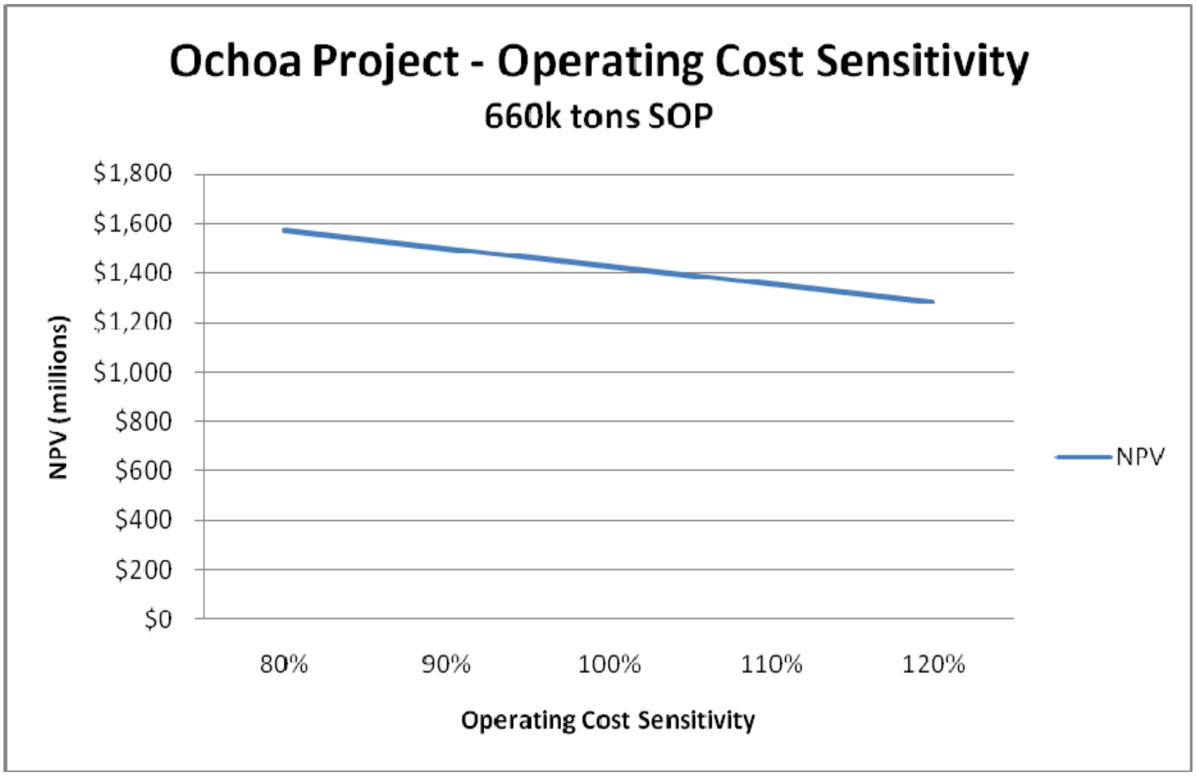


FIGURE 25-18 K_2SO_4 PRICE SENSITIVITY



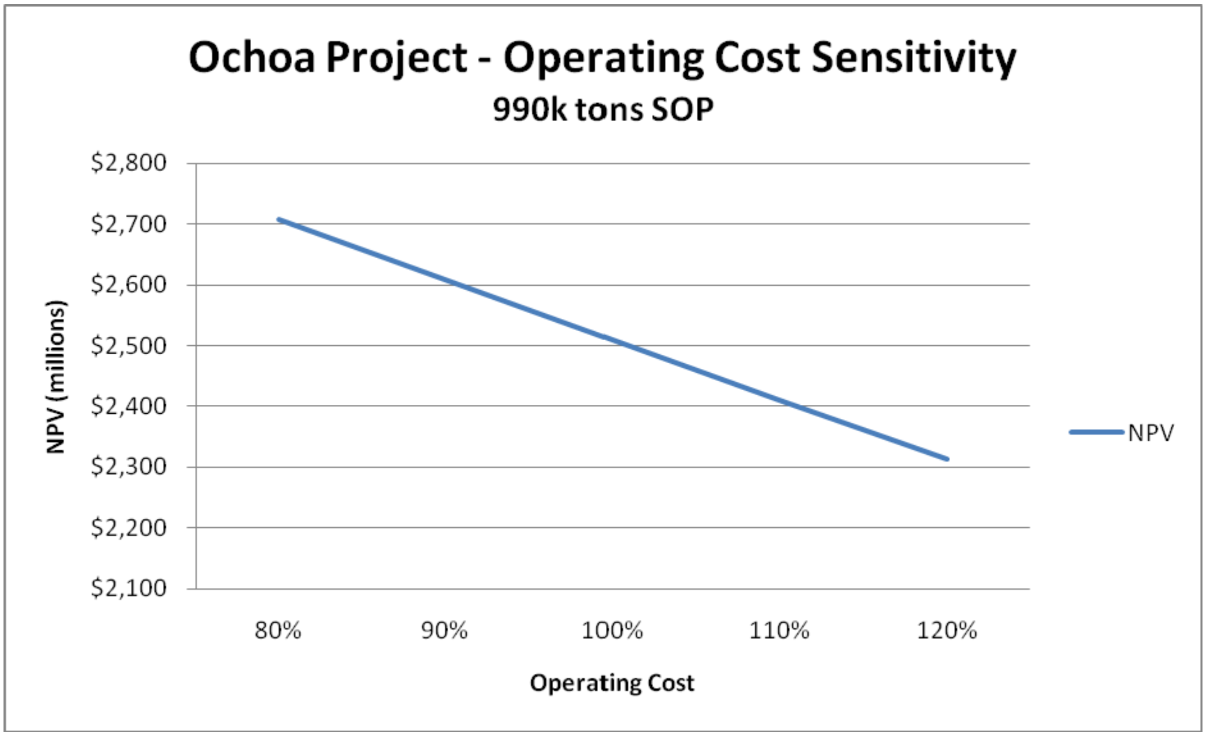
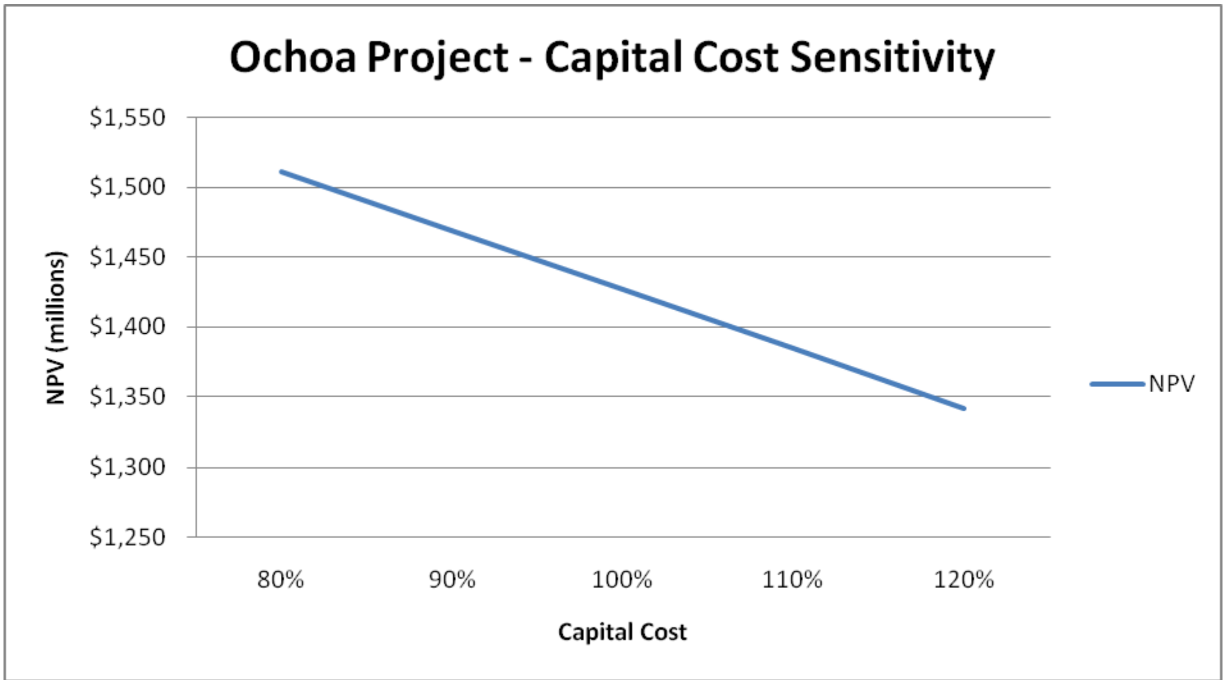


FIGURE 25-19 OPERATING COST SENSITIVITY



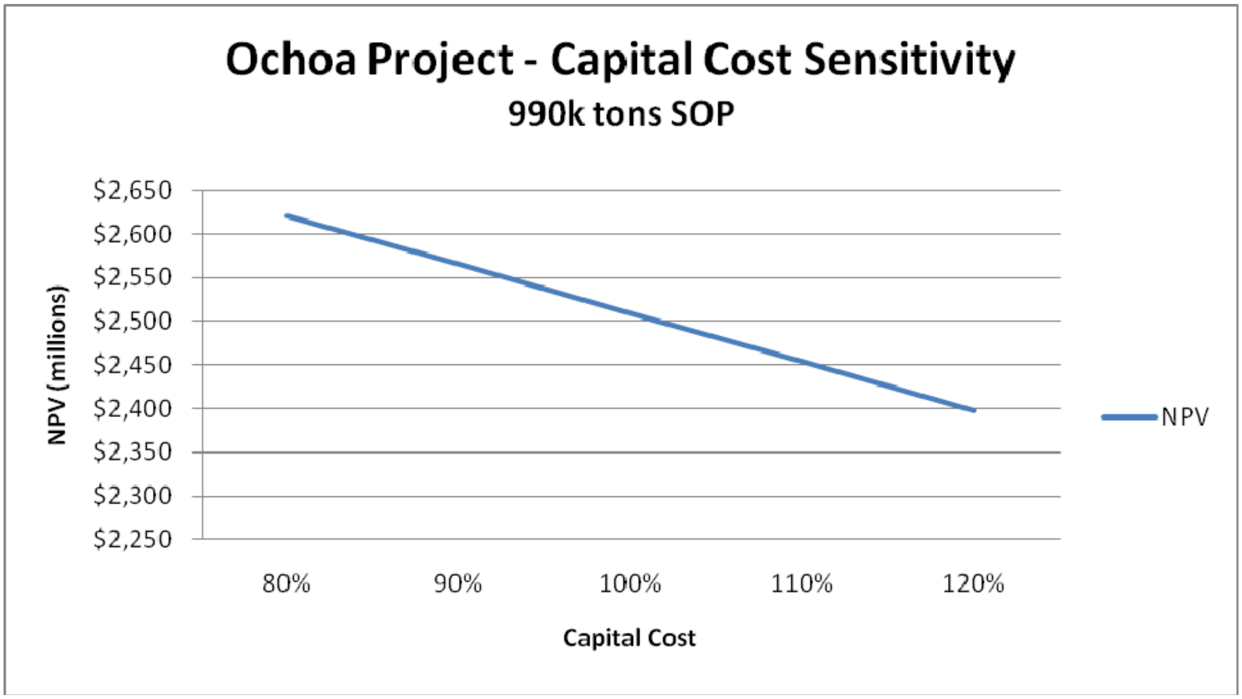
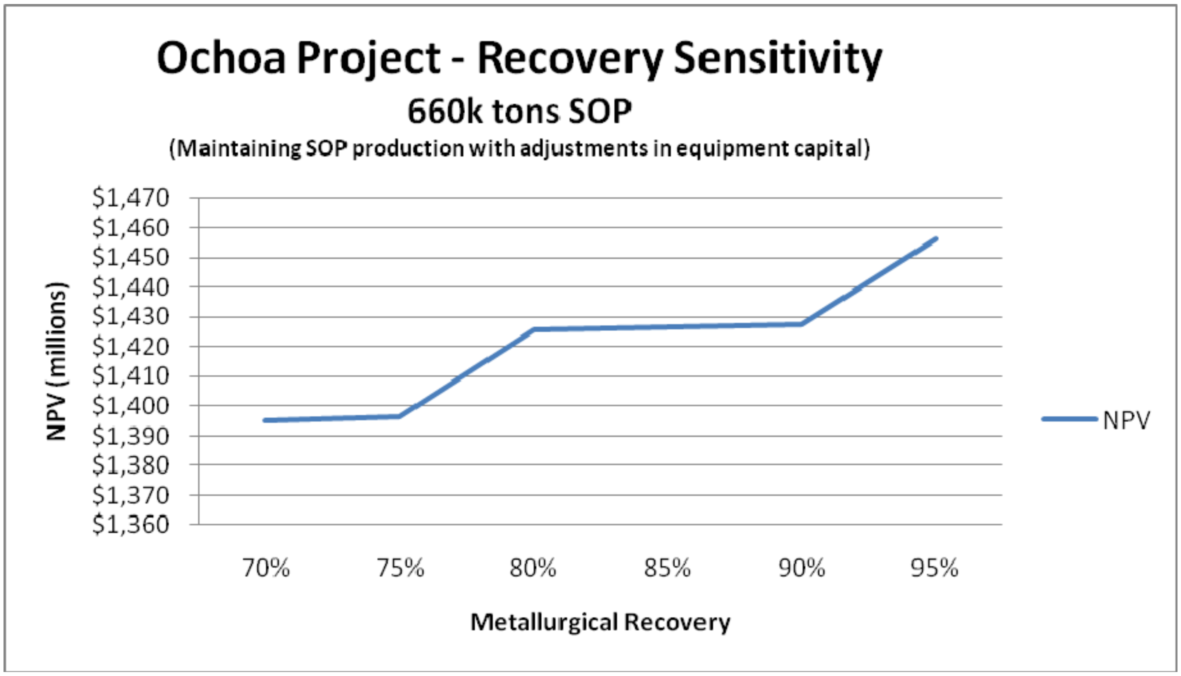


FIGURE 25-20 CAPITAL COST SENSITIVITY



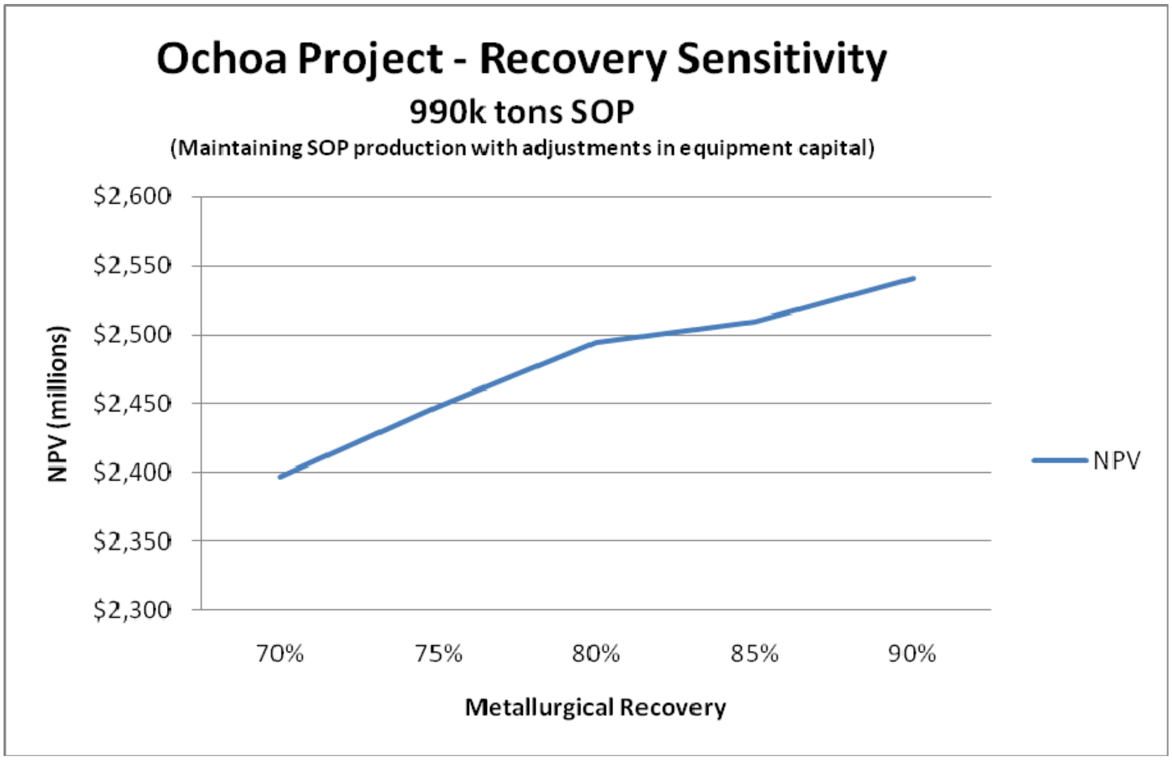
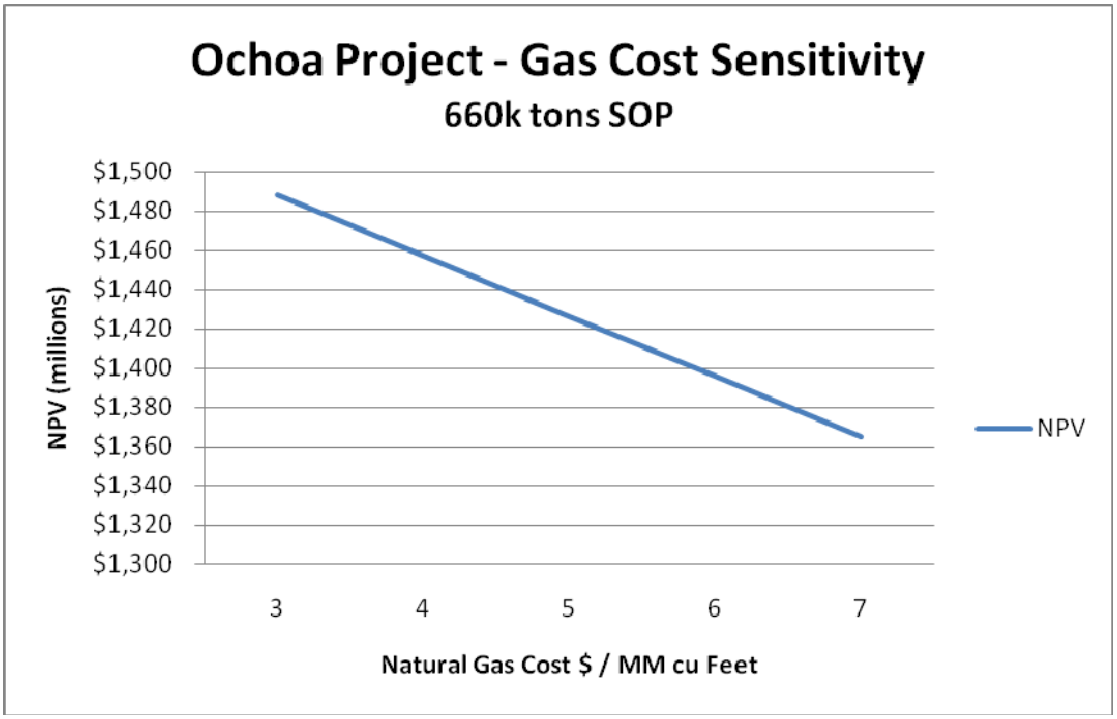


FIGURE 25-21 METALLURGICAL RECOVERY SENSITIVITY



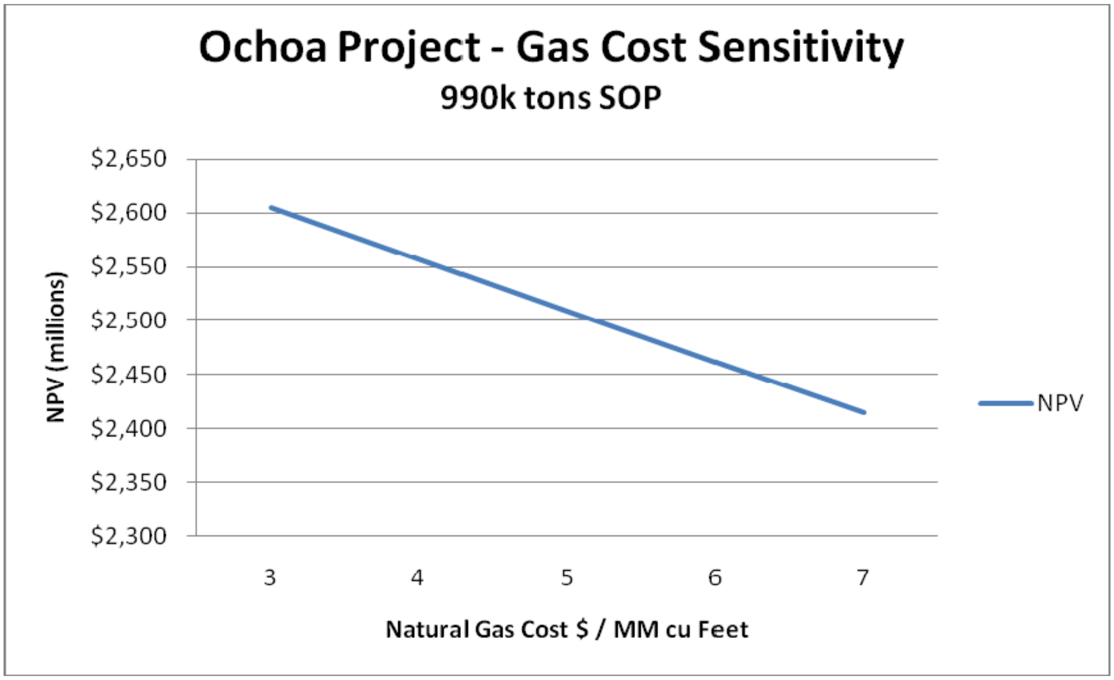
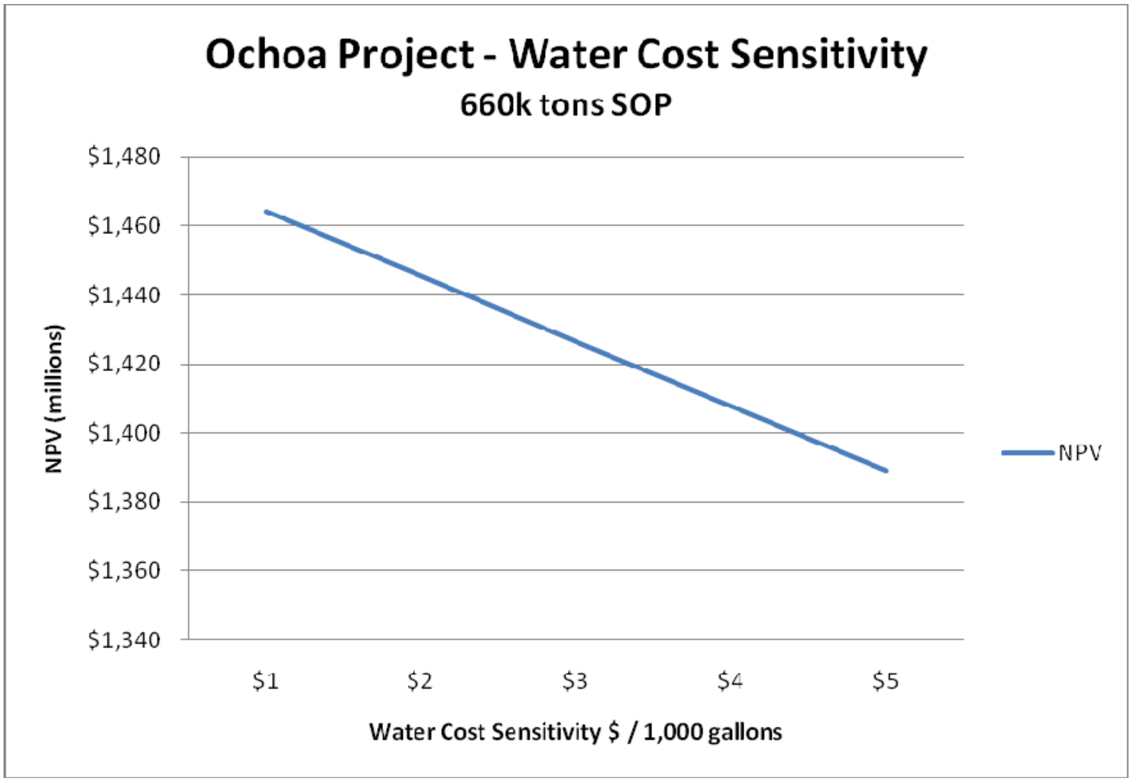


FIGURE 25-22 GAS COST SENSITIVITY



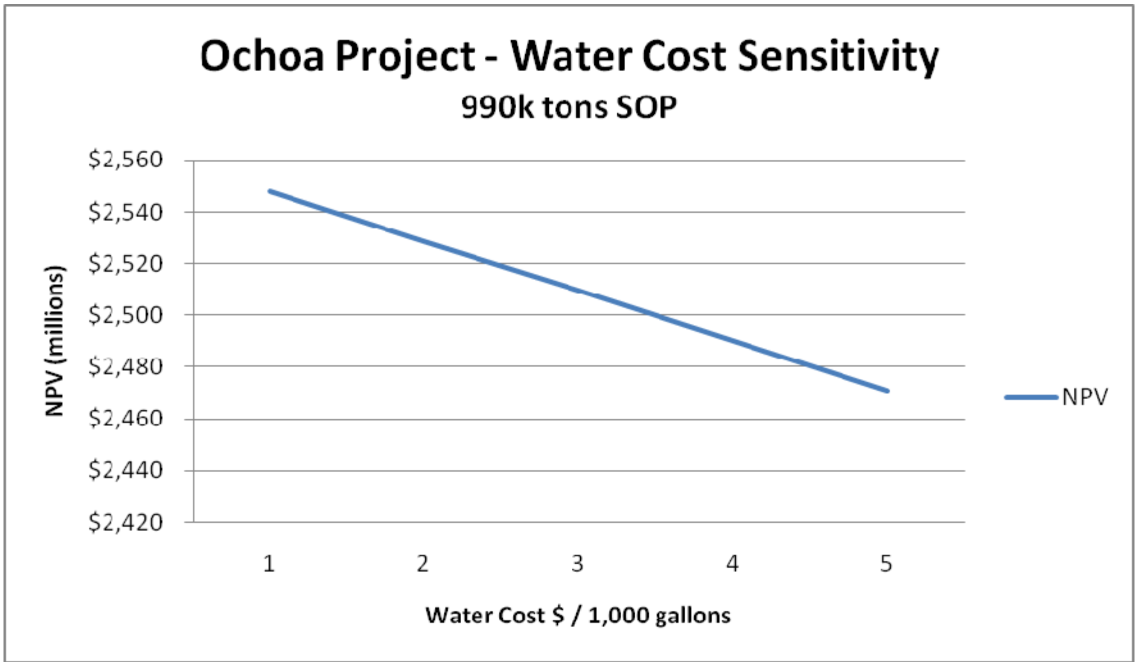


FIGURE 25-23 WATER COST SENSITIVITY

25.16 Payback

The project has a payback period of 5 years from the beginning of mine production in the 660K ton scenario and 4.4 years for the 990K ton scenario.

25.17 Mine Life

The current mine life for both scenarios is 40 years for the areas selected to begin operations. Based upon the resource models there is plenty of available ore to both increase the production rate and extend the life of mine.

25.18 Marketing

25.18.1 Introduction

Potassium is the seventh most abundant element on earth and, along with nitrogen and phosphorous, one of the three essential nutrients required by all living things. There is no substitute for potassium in plant and animal nutrition.

While there are several potassium salts that are used as fertilizers, there are only two that are of major global importance. These are potassium chloride, i.e. potash or muriate of potash (MOP), and potassium sulfate, i.e. sulfate of potash (SOP).

Most of the requirement for potassium in fertilizers is supplied by potassium chloride because this form of potash has historically been the most plentiful and the least expensive. Since fertilizer cost is a major part of crop production costs, for those crops and soils where the presence of chloride ion is not of concern, potassium chloride is usually the potassium fertilizer of choice. However, there are a number of high value crops such as tobacco, certain fruits and vegetables as well as arid soils in certain parts of the world that are sensitive to the chloride ion. It is for these crops and soils that sulfate of potash is the preferred source of potassium nutrient and for which farmers and growers will pay a premium price.

The content of potassium in fertilizers is measured and referred to in terms of the percentage of potassium oxide or K_2O. With the exception of soluble and industrial grades of potassium chloride, fertilizer grade MOP potash must contain a minimum K_2O content of 60% while potassium sulfate (SOP) fertilizer must contain a minimum K_2O content of 50%.

IC Potash Corporation is in the process of developing a major mineral deposit in Lea County, NM that will become a new, low cost source of sulfate of potash.

Although the focus of this SOP market overview is on the U.S. market, because the export market is likely to become a more important factor in the future, especially for IC Potash as a new producer of sulfate of potash located in the southwestern U.S., some comments about the international marketing of sulfate of potash are included.

The overview includes the following:

- An overview of the sulfate of potash industry.
- General information about the grades of sulfate of potash most popular in the U.S. market and the reasons for this preference,
- Brief comments about sulfate of potash prices and pricing,
- General comments about becoming a supplier of sulfate of potash to the international market.

In any discussion dealing with the marketing of sulfate of potash in particular and fertilizer products in general, there are three important factors that together play the most critical role in the buyer's decision to select one producer's SOP product over another's. These are:

- The quality of the product, that is, not only should the product from a given supplier meet industry chemical and physical specification guarantees, but its quality must remain consistent shipment after shipment.
- The reliability of the supplier, that is, can the supplier always be counted on to deliver product when promised and will the supplier quickly seek to resolve any problems with the product or delivery if and when they arise.
- Finally, the supplier must be able to offer his product at a competitive price in the market and with similar terms and conditions of delivery.

If IC Potash will always meet and continually strive to exceed these criteria, it will, in time, be able to achieve a significant share of the market for sulfate of potash in the U.S. and overseas and maintain this position over the long term.

25.18.2 Sulfate of Potash

Almost all of the potassium sulfate produced is used as fertilizer. World demand for potassium sulfate grew from about 2.5 million tonnes of SOP product in 1995 to more than 5 million tonnes in 2007. The most significant factor behind the rapid growth in sulfate of potash demand from 1995 to 2007 was the development of the market in China. Increased consumption in China accounted for almost 69% of the total demand growth over this period. Nevertheless, growth in demand in markets other than China over the same period approached 900,000 tonnes of potassium sulfate product.

Demand for potassium sulfate parallels to a large extent demand for all potash fertilizers and is influenced by many of the same factors. It should be no surprise then that the difficult economic times experienced over the past few years had a significant impact of SOP consumption, see Figure 25-24 below. From its peak in 2007, sulfate of potash demand declined by slightly more than 10% until it bottomed out in 2009 at about 4.8 million tonnes. Reflecting the greatly improved economic conditions in agriculture today, SOP demand is recovering sharply. Preliminary estimates of SOP consumption in 2010 indicate an increase in use of almost 28% over the amount of SOP consumed in 2009. Although the great majority of this increase in demand this year is the result of increased applications of fertilizer, some portion represents the rebuilding of inventories at distributors that were depleted during the difficult economic times of the past several years. It is interesting to note that, on a percentage basis, the decline in demand for potassium sulfate that occurred during the 2007 – 2009 period was less than that experienced by the potash industry as a whole and the recovery in demand for SOP has been more dramatic. This reflects the fact that for those important high value crops that are chloride sensitive and for which there is no substitute for the sulfate form of potassium nutrient, growers will continue to buy and apply at least some SOP based fertilizers regardless of the economic times.

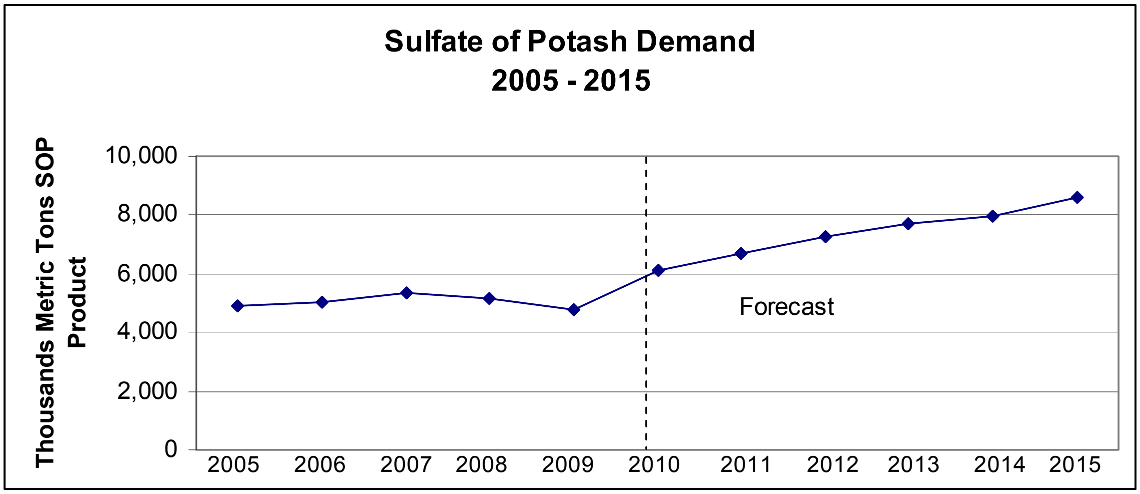


FIGURE 25-24 SULFATE OF POTASH DEMAND PROJECTION, 2005-2015

Looking to the future, growth in demand for potassium sulfate is projected to average a little less than 6% per year. From a low of 4.8 million tonnes in 2009, demand for sulfate of potash is forecast to reach 8.6 million tonnes in 2015.

Historically, on a K_2O tonnage basis, demand for potassium sulfate has averaged about 9% of total potash fertilizer demand. However this relationship is changing as shown in Figure 25-25 below. From a little more than 9% of total potash consumption in 2007, indications are that sulfate of potash will represent 10.6% of total potash consumption in 2010 and is projected to represent almost 12% of total potash consumption by 2015. Again, this is a reflection of the agronomic and economic benefits of sulfate of potash fertilization in the production of high value crops and in soils sensitive to chloride.

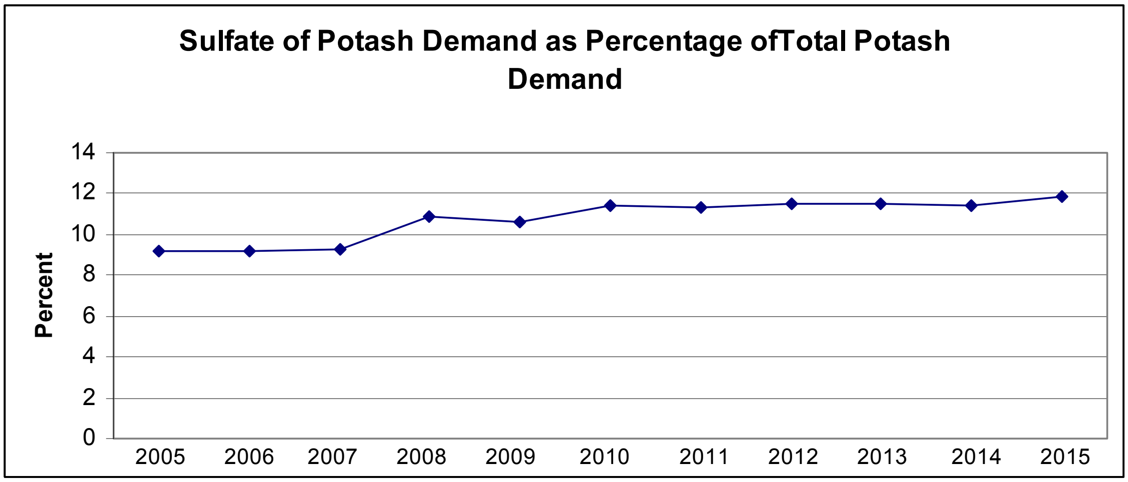


FIGURE 25-25 SULFATE OF POTASH DEMAND PROJECTION AS A PERCENTAGE OF TOTAL POTASH DEMAND

Although there are a number of sulfate of potash operations scattered around the world, in terms of production capacity, the supply of potassium sulfate is dominated by several large producers as shown in Figure 25-26 below. Until recently, western European producers were the most important sources of SOP. However, over the past 15 years, producers in China, led by SDIC Luobupo Potash, which has developed brine deposits in western China, has become the world's largest producer of potassium sulfate. Others of the world's largest producers of SOP include K+S in Germany, Tessenderlo Chemie in Belgium, Great Salt Lake Minerals in Ogden, UT, and Sociedad Quimica y Minera de Chile (SQM) in Chile.

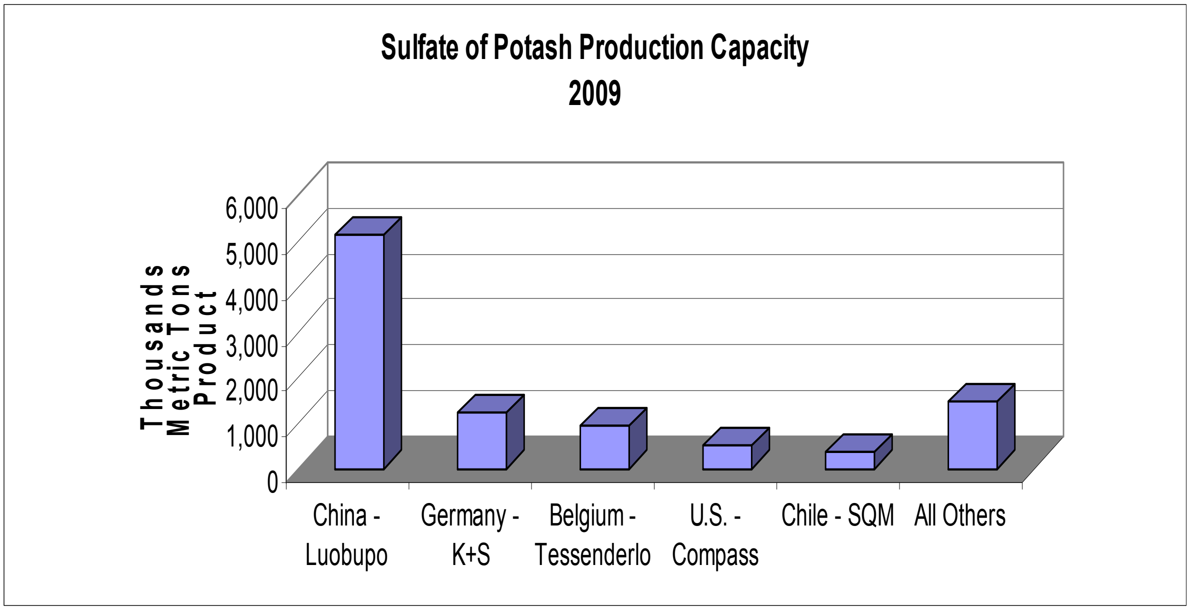


FIGURE 25-26 SULFATE OF POTASH PRODUCTION CAPACITY, 2009

25.18.3 Sulfate of Potash Products

There are three types or grades of sulfate of potash available in the U.S. today. These are standard grade, granular grade and soluble grade. Although all three grades are essentially identical chemically and all guarantee a minimum K2O content of 50%, they differ significantly in particle size range and are used for different purposes in the fertilizer industry.

Standard grade SOP has a typical particle size range of 1.68 mm to 0.21 mm (Tyler -10 + 65). Soluble grade SOP has a typical particle size range of 0.30 mm to 0.106 mm (Tyler -48 +150) while granular grade SOP particle size ranges from 3.36 mm to 0.84 mm (Tyler -6 +20).

However, of the three grades of SOP, granular grade is by far the most important and widely used in the U.S. and many other parts of the world. Granular grade SOP is usually produced by mechanically compacting fine product and then breaking and screening it to achieve the desired particle size range or by granulating the fine material using a binding agent.

The reason for the popularity of granular SOP is that it is designed to be used in the production of bulk blended fertilizers. For very significant economic, agronomic and environmental reasons, bulk blended fertilizers have become the dominant form of balanced NPK fertilizers used in the U.S. and Latin America and are of growing importance in many other parts of the world.

25.18.4 Prices

CRU Strategies made a sulfate of potash (SOP) price forecast for the IC Potash Ochoa Project near Carlsbad, New Mexico. Since the world-wide SOP market is comparatively small with limited international trade, U.S. SOP trade data is quite limited, being available only since the beginning of 2008. The historical SOP price data from Chile was used to construct a price forecast due to the limited U.S. SOP price data available and the fact that Chile's SOP price data is the most comprehensive so it provides the most complete dataset. Comparing the available U.S. data with the corresponding Chilean data showed that the Chilean benchmark prices are similar to the U.S. prices. Forecasts were made for both nominal (inflation not accounted for) and real (inflation accounted for). The real price forecast for 2010-2025 was estimated using a U.S. GDP deflator produced by the CRU in-house economics department. The SOP price forecast shows a decline to a low in 2010 before rising, then decreasing gently through 2015, rising sharply through 2022 and then finally decreasing to a lower level in 2025.

25.18.5 International Markets

Exports of sulfate of potash from the U.S. have been quite modest since IMC-Mosaic ceased production of SOP at its Carlsbad operations in the early part of this decade. However, there appears to be a growing market for sulfate of potash in Mexico supported by the increase in production of tomatoes and other chloride sensitive vegetables to supply the U.S. market. A few years ago, Mexico imported about 65,000 – 75,000 tonnes of SOP. Although imports of SOP by Mexico have fallen off, most likely the result of the recent global recession, they are likely to increase again as the economy improves.

There is other market potential in Latin America for SOP exported from the U.S primarily for use on tobacco. Although most countries in South America use some SOP, Brazil is the largest market, though small in comparison to the U.S. market.

Product sold internationally is most often quoted in US $ per metric ton basis FOB vessel although prices can also be quoted CFR (cost and freight) at the port of import.

25.19 Opportunity and Risks

25.19.1 Opportunities

- Small scale process piloting plant and refined process development could potentially reduce the capital costs.
- Additional exploration drilling may indicate a larger resource.
- Scaling up the operation from 660K tons per year to 990K ton production rate show that NPV increases significantly.

25.19.2 Risks

- Financing may be difficult in current economic environment.
- Process plant may be more expensive than anticipated as this is the only large scale plant to convert polyhalite into SOP.
- Product quality must be consistent over long periods of time.
- Capital costs may increase due to heavy demand in mining equipment.
- Major suppliers may undercut prices to prevent additional competition.
- Market risk: the SOP market may be more difficult to develop than anticipated.
- Permitting, bonding, and permit requirements may increase the capital requirements, and the time necessary to develop the project.
- Fresh water may be more difficult to obtain.

25.20 Recommendations

Gustavson recommends the following:

- Proceed with a bulk sample drill program in order provide sample for metallurgical test work, define resource within the mine area, and to perform geotechnical testing.
- Bench scale metallurgical testing followed by small scale pilot scale testing
- Acquire surface rights of proposed surface facilities area.
- Initiate permitting and baseline data collection for environmental permits.
- Hydrology studies will need to continue in order to determine where water will be obtained in the region and how it will be delivered to the plant.
- In depth market study in order to better understand the market conditions and price forecast, this study should also include Kieserite.
- A prefeasibility study should be initiated based on the findings in this report, and should incorporate data gathered in the above programs.
-

26. ILLUSTRATIONS

Figures and illustrations have been included throughout the body of the report. Additional maps, tables and figures with regard to geology and resource are also included in the Appendix A.

APPENDIX A

Additional Maps, Tables, and Figures relative to Geology and Resource:

Insert PDF of Compiled Appendix A here