

National Instrument 43-101 Technical  
Report for  
Novametal Resources LLC.  
on the  
UNDUR TOLGOI PROJECT  
KHATANBULAG SUBPROVINCE,  
DORNOGOBI PROVINCE, MONGOLIA



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MARCH 11<sup>TH</sup> 2011  
AND REVISED AS AT MAY 4<sup>TH</sup> 2011

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- APPENDIX 1 EXPLORATION LICENCE INFORMATION.
- APPENDIX 2: MONRESCUR LLC SAMPLING INFORMATION.
- APPENDIX 3: MICROMINE ROCK CHIP SAMPLING.

### 3 Summary

“Novametal Resources LLC” (The “Company” or “Novametal”) commissioned Micromine Pty Ltd (Micromine) to complete a National Instrument 43-101 technical report on the Undur Tolgoi Project, licence 8573X (the project). Mr. Warren Woodhouse (Micromine geologist) was the “qualified person” (QP) in the preparation of this document and takes responsibility for the report.

Exploration Licence 8573X is situated 700km south of Ulaan Baatar in the Khatanbulag Subprovince, of the Dornogobi Province. The Sub-provincial centre of Khanbulag village is located 80km to the east of the licence. Exploration Licence 8573X is wholly owned by Novametal Resources LLC.

Micromine QP, Warren Woodhouse visited site on the 3<sup>rd</sup> May 2011. Micromine representative geologists, Mr Muzaffer Bozada and Mr Enkhbayar, Byambajor (Mongolian) completed a visit to site from the 21<sup>st</sup> to 24<sup>th</sup> of January, 2011.

The licence is interpreted to lie at the western end of the Hutag Uul domain, an older cratonic block that formed during the Precambrian. The local geology consists of granite, flanked to the southeast by metasediments including sandstone, schist, and limestone. A zone of quartz veining and silicification trends through the SE section of the licence area. There are substantial Upper Cretaceous and Quaternary sediments in the northwest and southeast sections of the licence.

Exploration work carried out by Micromine in 2011 included prospecting of the southwest (SW) and southeast (SE) sections of the licence. Alteration zones were checked by rock chip sampling. A total of 27 samples were collected in the field and analysed for a wide selection of elements. No significant grades were returned. Due to the cold conditions and limited time in which the field work was carried out, it was impossible to check all the areas which had returned anomalous results during the previous work, some areas were snow covered.

The central part of the licence was found to host granitic rock which was not viewed as prospective. Prospecting of the SE and SW zones confirmed the presence of quartz veining that ranged in width from a few centimetres to a few metres. A SW-NE trending zone of silicification was found to occur to the SE of this zone of quartz veining. The quartz veins are interpreted to be of a mesothermal type and have a sugary texture with rare cross cutting secondary veinlets and have significant stockwork veinlets with disseminated sulphide (pyrite, oxidised pyrite). Rarely malachite, lead and zinc were seen. The silica alteration zone was noted for little if no, quartz veining. The silicified sedimentary rocks were FeOx rich and locally hematitic and limonitic with some geotethite.

Previous rock chipping by Monrescur LLC had returned anomalous samples of up to 0.55g/t Au in quartz veining within the licence area, and a value of 77g/t Au immediately to the south of the southern licence boundary.

The project stage is very early exploration and substantial additional work is required to gauge the potential for mineralisation on the licence area. Specific recommendations for completion of further work are as follows -

- Soil geochemistry should be carried out on a 100 x 50m grid over the zone of silicification and veining to help define the most anomalous sections of the alteration zone.
- Ground Geophysics (IP and magnetics) should be carried out over the zone of silicification and veining to help identify areas of disseminated sulphide at depth.
- Magnetics should be carried out over the areas of colluvium to understand the nature of the stratigraphy that is concealed. It may be more cost effective to fly the licence with airborne magnetics
- Further prospecting and mapping should be carried out to understand and target drill holes from the results of the soil geochemistry and surface geophysics.

- Estimated cost compiled by the Qualified Person; for geophysical and geochemical test work, and for the completion of 2 drill holes to test targets is as follows

<b>Item</b>	<b>Estimated Cost (US\$)</b>
Soil Geochemistry	\$80,000
IP Geophysics	\$30,000
Magnetics	\$100,000
Prospecting	\$15,000
Drilling	\$80,000
Drill Assays	\$8,000
Management	\$45,000
<b>Total</b>	<b>\$377,000</b>

## 4 Introduction

This technical report is prepared for Novametal, which is incorporated in Mongolia. The report has been prepared for the purposes of identifying exploration targets on Licence 8573X. This report may be used by Novametal for regulatory purposes and stock exchange filing.

The QP visited site on the 3<sup>rd</sup> May 2011, Micromine Representative Geologist; Mr Muzaffer Bozada completed the site visit. The author has relied on information from the following sources:

- Information and observations collected during the site visit by Micromine Representative Geologists, Mr Muzaffer Bozada and Mr Enkhbayar, Byambajor conducted between the 21<sup>st</sup> and 24<sup>th</sup> January, 2011 under the supervision of the QP.
- Information and observations collected during the site visit by Micromine qualified person (QP) Mr. Warren Woodhouse, Micromine Principal Consultant for Exploration, on 3<sup>rd</sup> May 2011.
- A report by Monrecurso LLC, on the prospectivity of the licence for Novametal Resources LLC in 2010.
- Geological mapping of the project area by the Mineral Resources Authority of Mongolia.
- Various scientific papers in the public domain.

## 5 Reliance on Other Experts

The QP, the author of the report states that he is a qualified person for those areas as identified in the QP “Certificate of Qualified Person” attached to this report and takes responsibility for the report.

This report has been prepared by Micromine Proprietary Limited (“Micromine”) for Novametal. The information, conclusions, opinions, and estimates contained herein are based on:

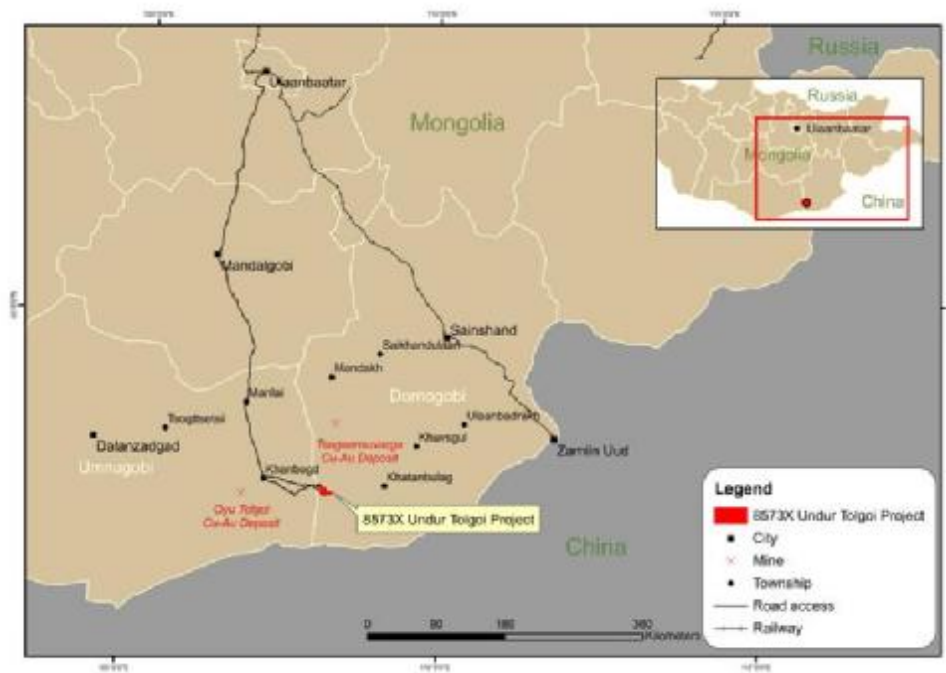
- Information available to Micromine at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by Novametal and other third party sources.

For the purpose of this report, Micromine has relied on ownership information provided by Novametal and detailed in Section 6, Property Description and Location, and in Appendix 1. Micromine has not researched property title or mineral rights for the Undur Tolgoi Project and expresses no opinion as to the ownership status of the property.

## 6 Property Description and Location

### 6.1 Location and Area

Exploration Licence 8573X is situated 700km south of Ulaan Baatar in the Khatanbulag Subprovince, of the Dornogobi Province. The Sub-provincial centre of Khanbulag village is located 80km to the east of the licence. Exploration Licence 8573X is wholly owned by Novametal. The area of the licence is 9,619.7 hectares.



**Figure 6-1: Project location**

## **6.2 Mineral Tenure**

Novametal has advised the author that the company wholly owns the permit covering exploration licence 8573X. The licence is named Undur Tolgoi. The licence is situated 700km south of Ulaan Baatar in the Khatanbulag Subprovince, of the Dornogobi Province, the area of the licence is 9,619.7 hectares, the issue date for the licence is 2004/10/13, the expiration date is 2013/10/13. The licence documents are in Appendix 1. The general location of the licence is shown in Figure 6-1.

The licence was granted to the ASA Group LLC in 2004 and was transferred to Novametal on the 21st May 2010.

Novametal has warranted that the permit is free of any royalties, back-in rights, payments or other agreements and encumbrances to which the property may be subject. Novametal Resources LCC has warranted that the licence is for the exploration of all minerals, with the exception of uranium, petroleum, gas and water exploration as in accordance with the Minerals Law of Mongolia. Novametal warrants that there are no environmental liabilities on the property.

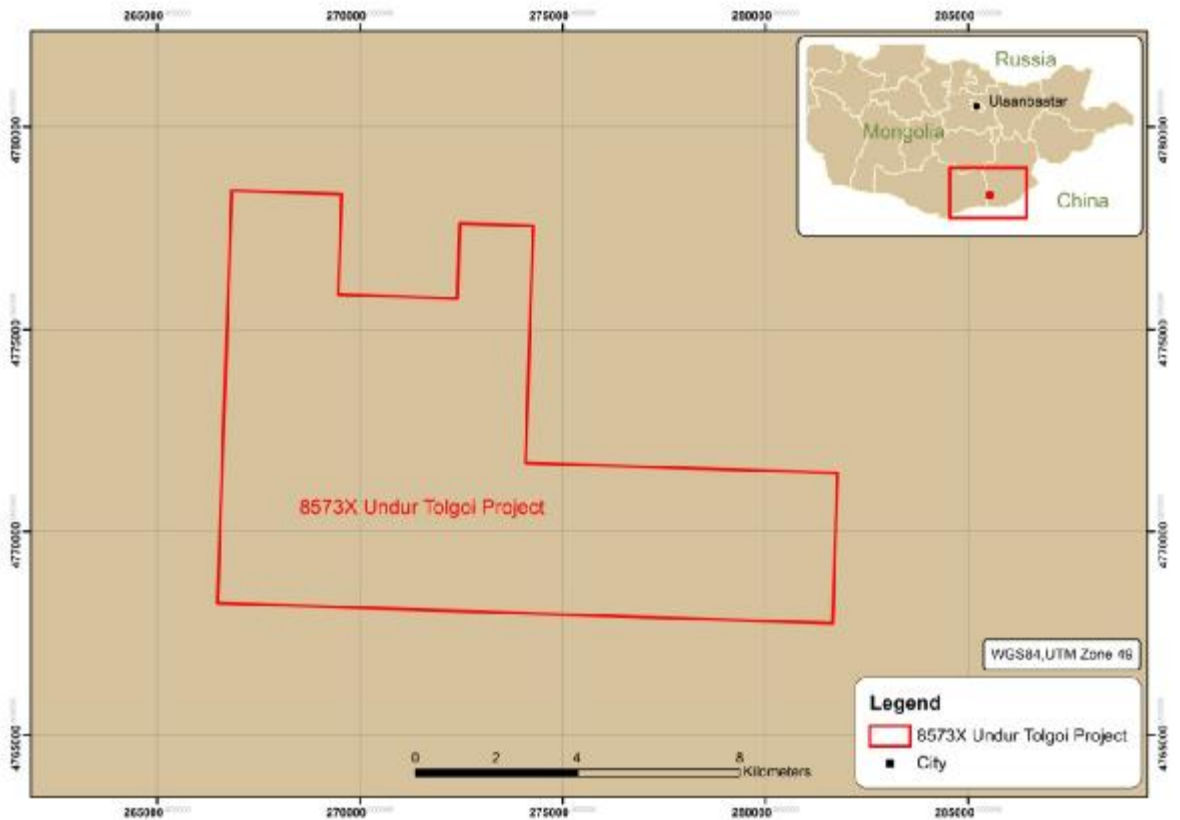
## **6.3 Property Boundaries**

Micromine was unable to confirm if the property boundaries have been surveyed in correctly. All bounding co-ordinates were supplied by the Company to Micromine in WGS84 coordinates, Table 6-1, Figure 6-2.



**Table 6-1: 8573X coordinates**

	latitude	Longitude
1	108°10'1.59"	43°7'21.45"
2	108°10'1.59"	43°6'1.44"
3	108°12'11.59"	43°6'1.44"
4	108°12'11.59"	43°7'1.44"
5	108°13'31.59"	43°7'1.44"
6	108°13'31.58"	43°3'51.43"
7	108°19'11.58"	43°3'51.45"
8	108°19'11.58"	43°1'51.45"
9	108°8'1.58"	43°1'51.44"
10	108°8'1.59"	43°7'21.44"



**Figure 6-2: 8573X property boundary**

## **6.4 Location of sub crop, Resources, Mine Workings & Waste Dumps**

Minor old pit workings were observed during the Micromine site visit.

## **6.5 Obligations**

In accordance with the Mongolian minerals law, Novametals LLC has advised the author that, the following expenses are necessary in order to retain the licence:

1. Licence 8573X is in its 7<sup>th</sup> year of tenure and the annual licence rental payment is US\$1.50 per hectare. The annual licence rental for 8573X is US\$14,429.
2. The minimum expenditure required on exploration is US\$1.50 per hectare. The required minimum expenditure for 8573X is US\$14,429. Novametals LLC has registered an exploration plan for 2011 for US\$35,980 (44,975,350 MNT).
3. The service fee for supervising the exploration plan is US\$100/yr.
4. MRAM 's service fee for auditing exploration expenses is US\$400/yr.
5. The minimum donation amount to local authorities is about US\$500/yr.
6. To ensure of the company's responsibilities with respect to environmental protection, an amount equal to 50% of our environmental protection budget has been deposited with the local soum. Novametals LLC has deposited an amount of 150,000MNT. Novametals LLC has informed the author that it has surface rights to develop a temporary road and camp facilities on the licence area.

## **7 Accessibility, Climate, Local Resources, Infrastructure and Physiography**

### **7.1 Climate and Physiography**

Exploration Licence 8573X is located within the East Govi (Dornogobi) Province in south-eastern Mongolia. The licence is approximately 600km due south of the capital of Mongolia, Ulaan Baatar. The topography of the licence area is mainly flat with some hills in the southern areas. Elevations range between 919m and 1095m. The licence is devoid of any substantial vegetation, Figure 7-1.

The climate of the licence area is noted for short warm summers and long cold winters. At the time of the field review, the temperatures ranged from -10 to -17 degrees Celsius and the area was very windy. There was very little snow present in the area. Temperatures can drop down to -30's in the winter. Summer temperatures can reach the mid 30's. Field access can be carried out all year round, although it is not very conformable during the winter.



**Figure 7-1: Picture of project area**

## **7.2 Access**

The property can be accessed by driving from Ulaan Baatar to Undurduv Tourist Camp, travel is on sealed road for 40km, and for the remainder from Undurduv Tourist Camp to Khanbogd by dirt roads. The driving time from Khanbogd to site is approximately 2 hours.

## **7.3 Local Resources and Infrastructure**

The townships of Khanbogd and Khatanbulag are located approximately 85km to the west and 100km to the east of the licence area respectively. The townships are accessible on dirt tracks using 4WD's.

# **8 History**

## **8.1 Exploration History Summary**

- The first geological work carried out in the area, was geological mapping at 1:200,000 scale in 1959. This work was carried out by Kulesch A.A and Kovalensky E.D in 1959 (Rashkhan, N. and Mungundemberel, S).
- More detailed mapping, at 1:50,000 was carried out in the period 1997-1999 by a MRAM mapping team, led by Ulziibayar, JU, Bumburuu, G., and Aguaansambu, E.
- The project was previously owned by the ASA Group. The extent of work carried out on the project area is not known.
- Subsequent to acquiring the exploration licence Novametal commissioned the consulting company Monrescur LLC to conduct a prospecting review of the project. A total of 45 rock chip samples were analysed for a wide variety of elements.

- Novametal commissioned Micromine Pty Ltd to compile a NI43-101 Technical Report on the prospectivity of the project in January 2011. An additional 27 rock samples were collected and analysed.

- 

Reconnaissance work by Monrescur focussed on the SW and SE sections of the licence where the sedimentary units flank the granite. General prospecting was carried out with various alteration and mineral assemblages identified and sampled. The areas were thought to be prospective for Pb, Zn, Mo, Au and Cu from previous mapping. They contained alteration, weak mineralisation and abundant quartz veining. 46 rock samples were taken for analysis.

A zone of silic alteration ranging in thickness from 10-100m was identified along the main Tumen-Ulzii fault, a fault that is interpreted to continue in a WNW-WSW direction across the southern section of the licence area. Silicification was also observed along NE trending faults. The silicification was hosted within granite and siliceous sandstone. The sandstone units were found to contain lens of limestone, which had been affected by skarn alteration processes.

Within the Silified area, numerous quartz veins and veinlets were identified. In some cases these formed stockworks. Generally veins in the stockworks ranged between 1-50cm in width and strike in the NW and SW directions. Those in the SE section of the licence were found to be more compact ranging in thickness from 1-10cm, whereas those to the SW were thicker, up to 5-10m wide.

Disseminated Galena and Sphalerite were found to occur within the quartz veining within the SE section of the licence. Disseminated copper mineralisation was found in the quartz veining within southern area of the licence area. Disseminated pyrite and ferruginous alteration was found in the quartz veining within the SW section of the licence.

Quartz veining was found to be light grey to white grey, rarely white in colour. It was massive in texture rarely sugary in texture.

Within the licence area sampling by Monrescur returned some anomalous values including

**Table 8-1: Monrescur Sampling**

Sample	Value	Rocktype
NR_0094	0.55g/t Au,	Dark grey quartz vein. 1m 200m long, 5m thick
NR-0119	1132ppm Cu, 4236ppm Zn 8000ppm, Pb 1.11%	Quartz vein with vis malachite and pyrite mineralisation

The results from Monrescur's sampling are documented in Appendix 2. Figure 27-1 to Figure 27-6

show the locations of samples and anomalous values for Au, Cu, Pb, Zn and Mo.

Samples collected during the 2010 were prepared by ACTLABS Asia LLC Laboratories in Ulaan Baatar. The preparation protocol RX2 was used. This involves the crushing (<5kg) of the sample to 2mm (>90%), taking a split of 100g, and pulverising this so that >95% passes minus 75µm.

The samples were then assayed using protocol IA2-30, Au Fire assay using a 30g sample. Over detection limit Au was assayed using protocol IA3-30, Fire Assay Gravimetric using a 30g sample. Base metals were analysed using protocols IEM Aqua regia AAS and 8-BM (2) Aqua regia assay. These protocols used a 2 acid digest.

The lab performed its own QA/QC consisting of internal standards and duplicate analyses.

## 8.2 Prior Ownership and Ownership Changes

The project was previously owned by the ASA Group.

## 8.3 Previous Resource Estimation

To the knowledge of the QP and the company there was no resource estimate available on the project area prior to this report.

## 8.4 Mining History

To the knowledge of the QP and the company there was no mining or excavation completed on the project area prior to this report. Some small pits had been dug on some of the quartz veins.

# 9 Geological Setting

## 9.1 Regional Setting

Mongolia is part of the Central Asian Orogenic Belt (CAOB) that extends from the Urals in the west to the Pacific Ocean in the east. The Central Asian Orogenic Belt is one of the largest accretionary terranes on the earth and records approximately 800 million years of arc and micro-continent accretion from south to north, during the closure of the southwest Pacific type Paleo Asian Ocean in the period between 1000 to 300 Ma (Kroner et al 2007).

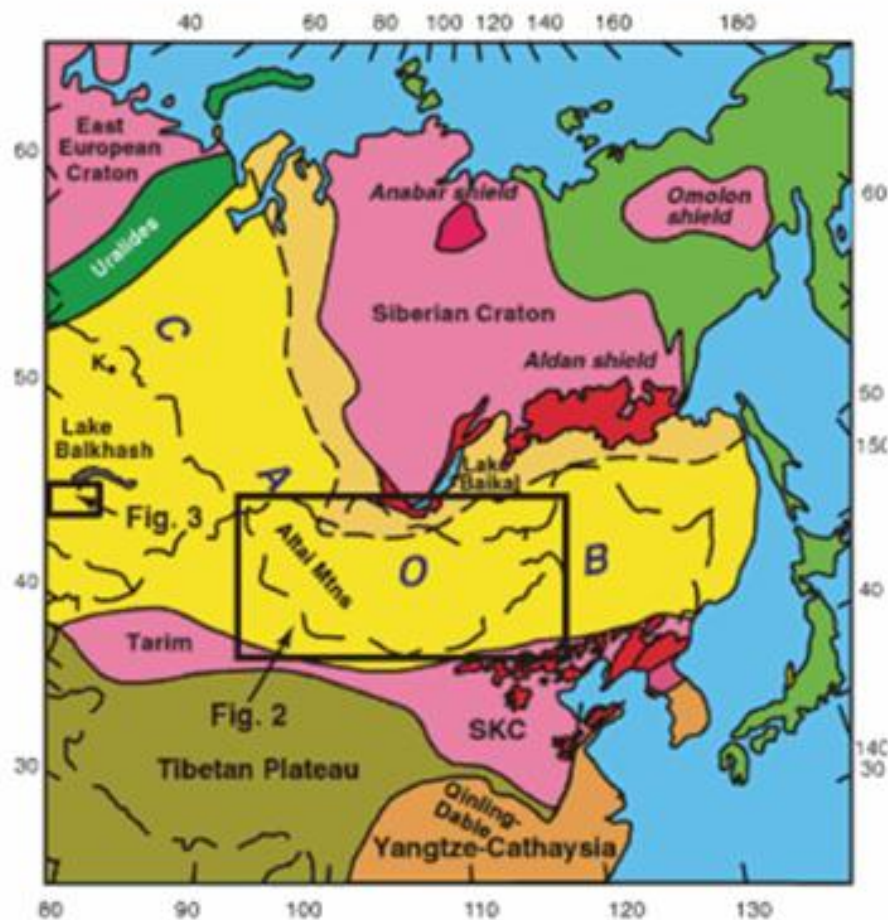
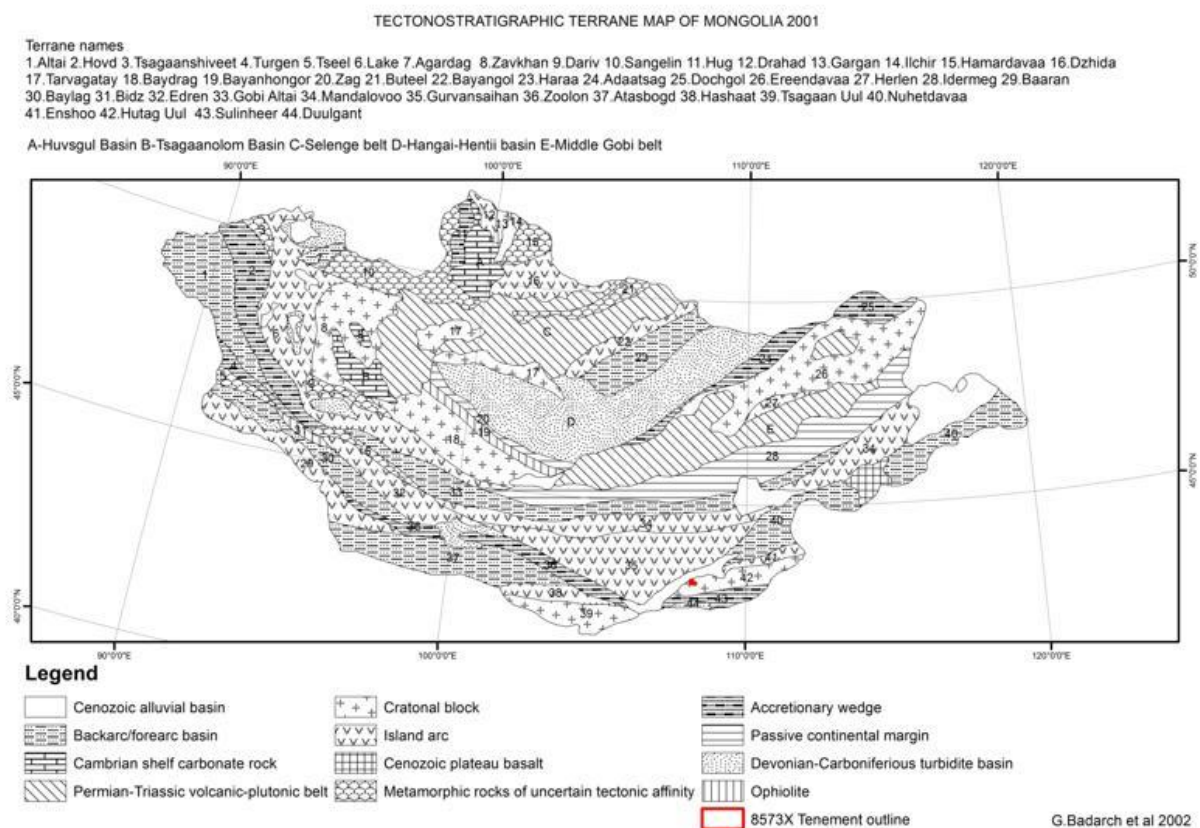


Figure 9-1: The Central Asian Orogenic Belt is situated between the Siberian craton to the north and the Sino-Korean craton to the south (Kroner et al 2007)

The Central Asian Orogenic Belt records the formation of small forearc and backarc basins that probably evolved between island arcs and microcontinents and were closed during continuous accretion between the neoproterozoic and Palaeozoic. During this time the southward growing southern margin of the Siberian craton faced an open ocean. Final closure of the Paleo Asian probably occurred in the late Permian when the north China craton was attached to the orogenic belt, Figure 9-1.

A major Caledonian event cratonized northern Mongolia, while a subsequent Hercynian event affected central and southern Mongolia. Continental uplift exposed tectonic belts with the deposition of terrigenous sediments into thrust controlled foreland basins. Post-Permian intrusions were of anorogenic alkalic affinity, and Mesozoic volcanics were extruded in response to extensional relaxation.

The Unter Tolgoi Licence is interpreted to sit in the Hutag Uul terrane, Figure 9-2. It consists mainly of Precambrian gneiss, schist, marble, quartzite, stromatolitic limestone and meta-sandstone. It is interpreted to be an older craton block (Badarch et al 2002).



**Figure 9-2: Tectono-Stratigraphic Terrane Map of Mongolia**

## 9.2 Stratigraphy

The description of the geology of the licence area is based on 1:50,000 scale mapping that was carried out by Ulziibayar, J., Bumburuu, G and Agauansam Buu, E., of the Khar Tolgoi mapping team during the period 1997-1999. The work was summarised in the report by Monrescur LLC (2010).

The Licence area is dominated by a Grandiorite intrusive complex that stretches from the SW to the NE. The complex is flanked to the SE by sediments, Figure 9-3.



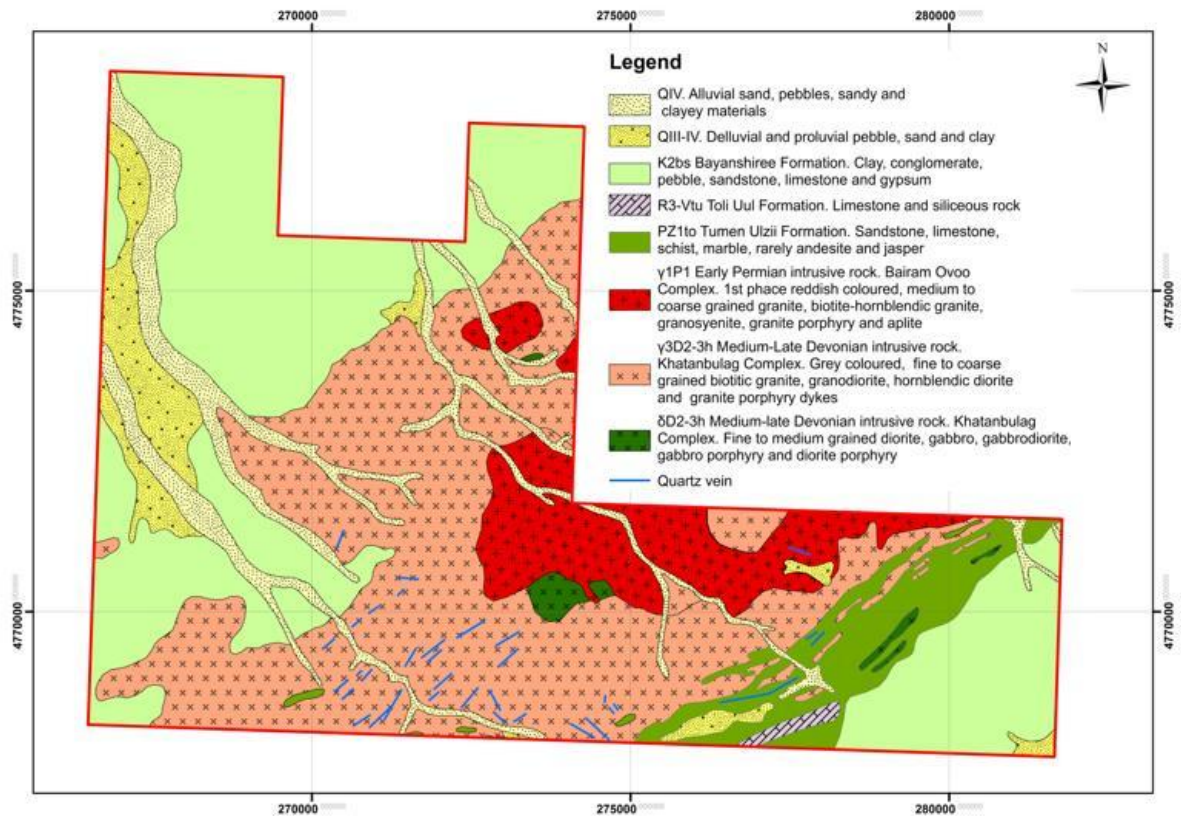


Figure 9-3: Regional Geology as per Bumburuu, G. et al

## 9.2.1 Sedimentary Units

The stratigraphy of the licence areas can be summarised as follows:

### 9.2.1.1 Upper Proterzoic Sediments

The Toli Uul Formation (R3-Vtu) occurs in a minor area near Mt Tumen Ulzii in the SE section of the licence area. The formation consists of fine to moderate grained limestone with silica alteration. Generally the limestone outcrops appear grey in colour, although some appear darkish brown. A faded layer structure is present.

### 9.2.1.2 Lower and Early Proterzoic

The Tumen Ulzii Formation (PZ1) is distributed throughout the SE section of the field area. The formation consists of altered sandstone, conglomerate, quartzite, schist, limestone and marble.

### 9.2.1.3 Upper Cretaceous

The Bayanshree Formation (K2bs) is widely distributed in the large valleys among the NW and SE sections of the study area. The formation consists of poorly cemented lacustrine sediments consisting of clay, conglomerate, sandstone, limestone and sand.

### 9.2.1.4 Quaternary

Quaternary sediments (Qiii-iv) consisting of a variety of granulated, rounded grit, sand, clay, argillite and sandstone are present in the NW and SE sections of the licence in creeks and slopes.

#### 9.2.1.5 Intrusives

Intrusive rocks are widely distributed in the licence area stretching from the SW to the NE of the licence area.

#### 9.2.1.6 Middle Late Devonian Intrusive Complex

The Khatanbulag Suite (3D2-3h) is distributed widely in the licence area and forms one intrusive mass that stretches from the south west section of the licence area to the north east. It consists predominately of diorite, with minor gabbro and gabbrodiorite and granite.

#### 9.2.1.7 Early Permian Complex

The Barian-Ovoo suite (1P1) consists of intrusive rocks of an early Permian age are spread over the study area. They are composed of granite and granitic syenite. They are generally pink in colour.

## 10 Deposit Type

The deposit style most likely to be present in exploration licence 8573x is mesothermal vein gold style mineralisation in the sediments associated with the granite intrusions in the tenement area. The deposit area has only been mapped at a regional scale (1:50,000) and there is limited information about the occurrence of mineralisation.

## 11 Mineralisation

Locally, two types of mineralisation have been noted by regional mapping programs. Within the licence area Mo, anomalism has been noted, and immediately to the north east of the licence area Au anomalism has been detected, Figure 11-1. There is no explanation as to the mineralisation style or size (Dejidmaa, G et al. 2001)

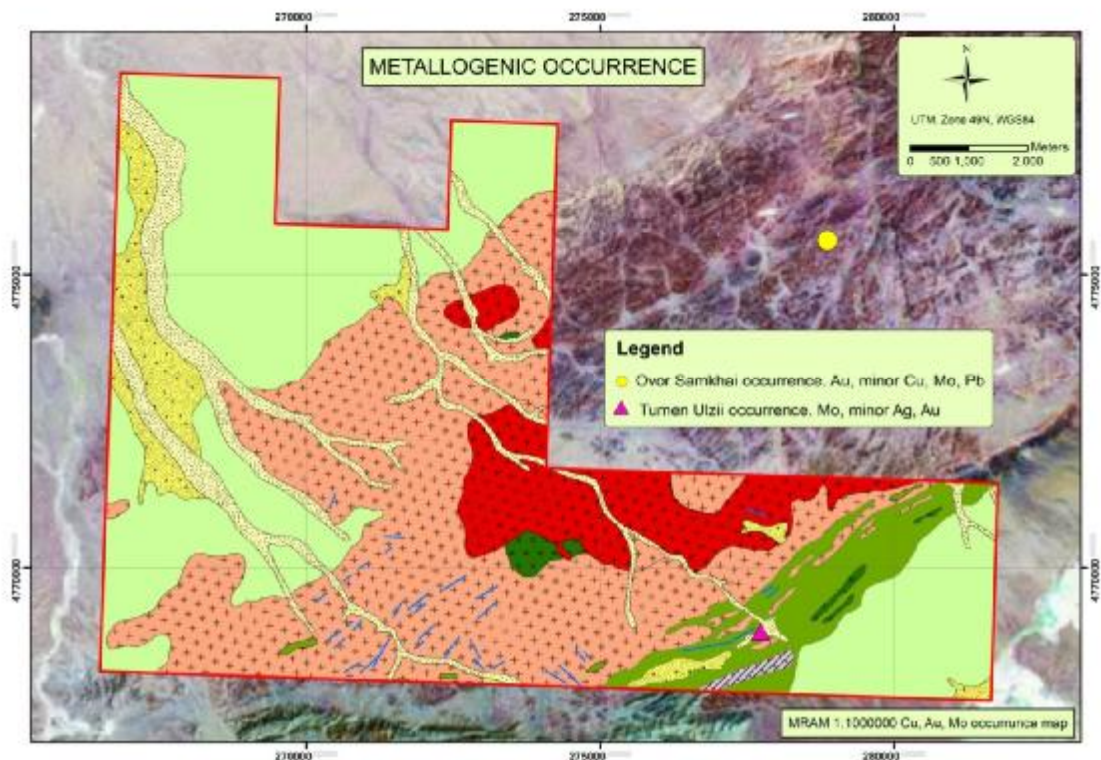


Figure 11-1: Local Metallogenic Occurrences



# 12 Exploration

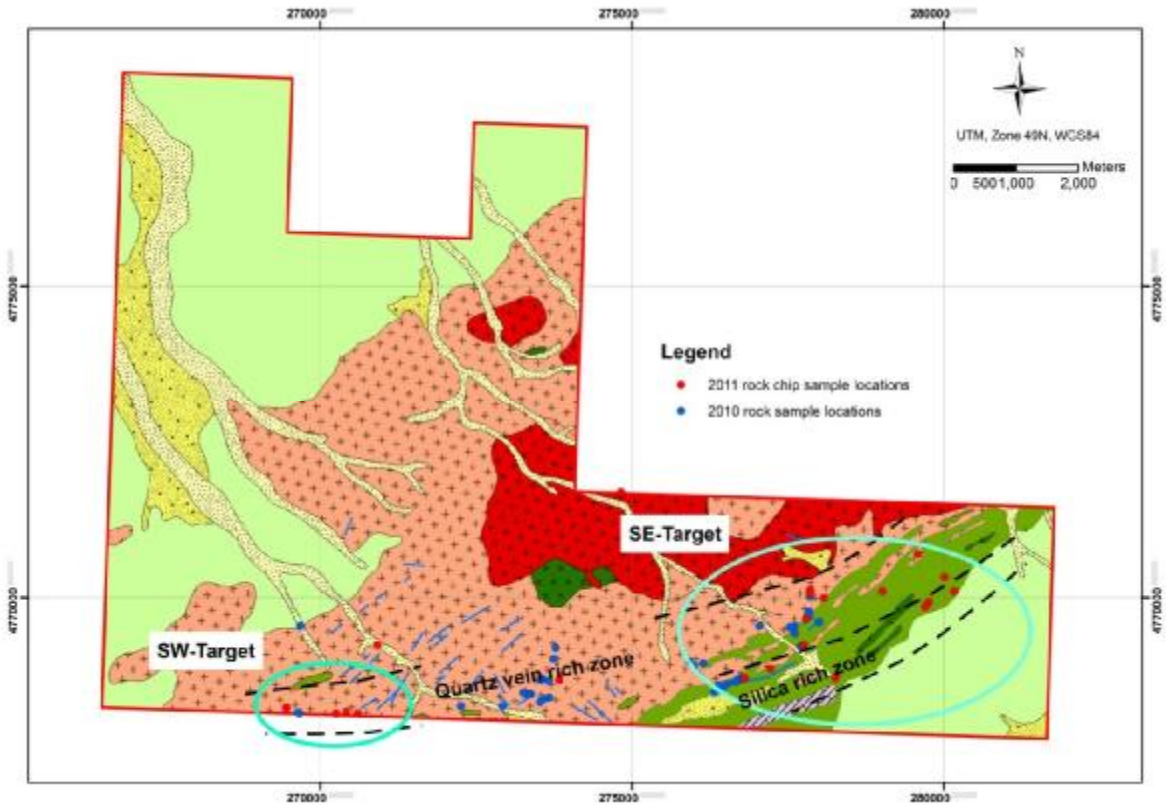
Exploration work carried out by Micromine in 2011 included prospecting of the southwest (SW) and southeast (SE) sections of the licence (Figure 12-1). Alteration zones were checked by rock chip sampling. A total of 27 samples were collected in the field and analysed for a wide selection of elements.

Due to the cold conditions and limited time in which the field work was carried out, it was impossible to check all of the previous work.

The central part of the licence was found to host granitic rock which was not viewed as prospective. Prospecting of the SE and SW zones confirmed the presence of quartz veining that ranged in width from a few centimetres to a few metres. A SW-NE trending zone of silicification was found to occur to the SE of this zone of quartz veining.

The quartz veins are interpreted to be of a mesothermal type and have a sugary texture with rare cross cutting secondary veinlets and have significant stockwork veinlets with disseminated sulphide (pyrite, oxidised pyrite). Rarely malachite, lead and zinc were seen.

The silica alteration zone was noted for little if no, quartz veining. The silicified sedimentary rocks were FeOx rich and locally hematitic and limonitic with some goethite.



**Figure 12-1: Prospects for UT Project**

The results from Micromine Pty Ltd’s sampling are documented in Appendix 3. and Figure 27-1 to Figure 27-6 show the locations of samples and anomalous values for Au, Cu, Pb, Zn and Mo.

### 12.1.1 SW Target

The SW section of the licence has a zone of qtz veining striking in an EW direction. Individual quartz veins strike NE-SW within the zone. The quartz veins in this area vary in thicknesses from a few cm's up to 1.5 meters. Some of the veins that strike approximately 023N are mineralised with disseminated pyrite and vugs after pyrite. The veins are hosted within a silicified sediment sequence, which includes shales and sandstones. A map of the prospect area is shown in Figure 12-2. Note that the prospect occurs on the southern border of the licence.

An example of the veining is shown in Figure 12-3 and Figure 12-4. Here a pit has been sunk on a vein, sample location UT-21. The main vein is approximately 25 cm wide and strikes 23N/48SE. The vein is mineralised with coarse grained pyrite, with vugs after weathered pyrite. Fractures are coated with hematite rich with some limonite. The main vein is cut by another 25 -30 cm wide quartz vein with strike and dip is 65N / 80SE.

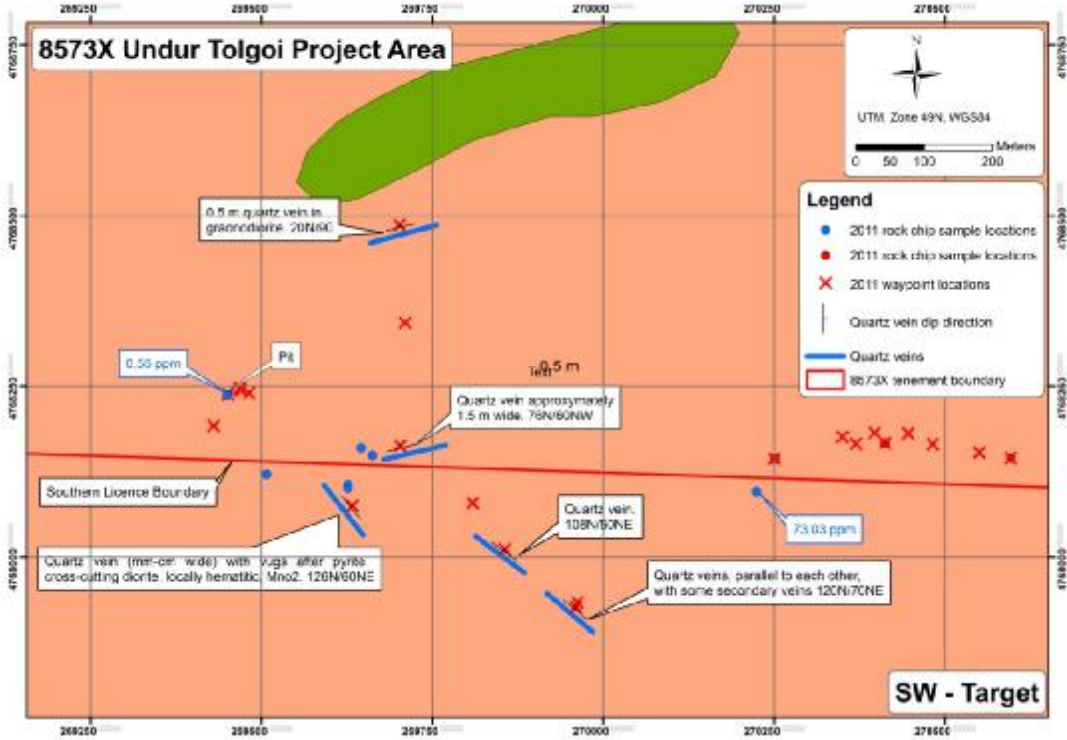


Figure 12-2: SW Target



**Figure 12-3: Sample Location UT-21, SW Target Area. A pit had been dug out on the vein. A sample returning 0.5 g/t Au had been returned from Monrescur's sampling.**



**Figure 12-4: Sample Location UT-21, eastern wall of the pit.**



Some 500m to the east of sample location UT-21, a 350m x 50m zone of quartz veining occurs. The veins are hosted within silicified sandstone and strike EW. Silicification increases in intensity towards the east. Disseminated pyrite (1-2%) occurs within the veining as shown in Figure 12-5 and Figure 12-6 .



**Figure 12-5: Sample location UT-26. East-west striking quartz veining**



**Figure 12-6: Sample Location UT-26. Quartz vein with pyrite layers and possible weathered galena**

### 12.1.2 SE Target

Again prospecting confirmed the quartz veining and silicification identified by Monrescur. The SE target area is characterised by a quartz vein rich zone which is bound to the SE by a silica alteration zone (Figure 12-7). The zones strikes SW-NE and the quartz vein zone is about 1-1.5km in width. It is highly probable that this zone is a continuation of the zone to the SW, although this wasn't checked in the field. Quartz veining is generally better developed than in the SW, with veins generally around 4-5m thick, and rare cases 8m wide. Some of the wide veins contain disseminated pyrite and vugs after pyrite. Haematite and locally limonite and some goethite occur within the quartz veins at NE part of the zone. The veins are hosted within granodiorite to the NE and mudstones and sandstones to the SW. Quartz veins generally strike at 20N and 60N.

The zone of silic alteration encompasses intensely silicified ridges. They are rich in iron oxides and are metamorphosed. On the margins of the ridges, occur silicified sedimentary rocks including mudstone and sandstone. Malachite mineralisation was observed at several locations, including sample locations UT-14 and UT-15.

The zone of silicification marks the last ridge line in the area and to the southeast, colluvium is present in the remainder of the licence area (Figure 12-10).

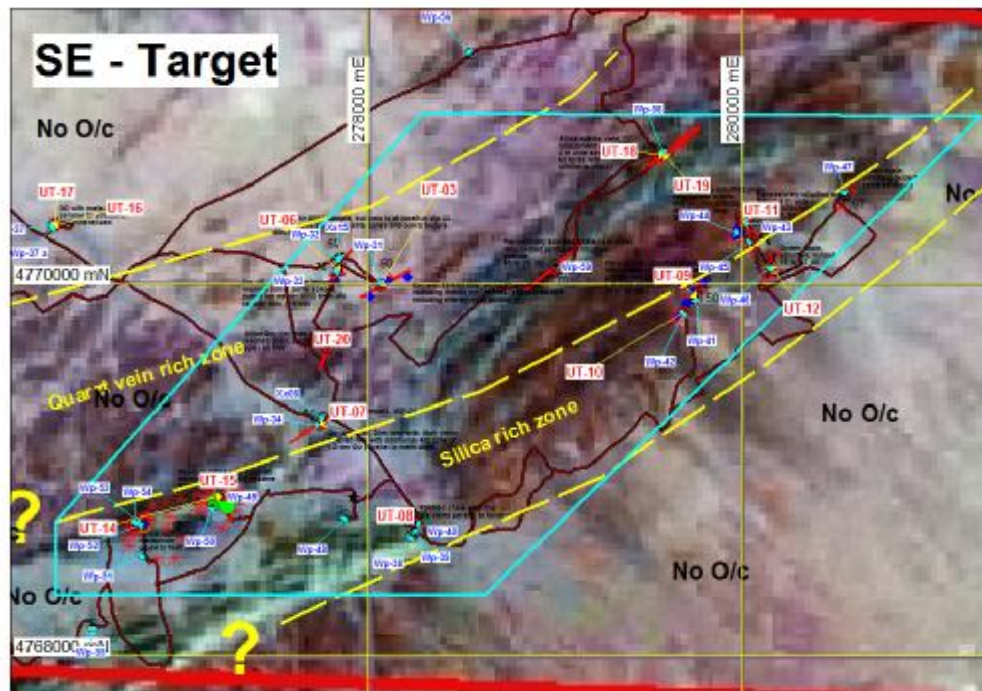


Figure 12-7: SE part of the Undur Tolgoi License area with quartz vein systems and quartz – silica zone in the eastern close to the southern license boarder.

Previous sampling in the SE zone revealed anomalism in Ag, Cu, Pb and Zn. Sampling was most likely taken close to a fault shown in Figure 12-9. . The area is close to a ridge called Tumen Ulzii. Sample location UT-15, had intensely silicified sedimentary rocks, with Cu and Zn mineralisation (Figure 12-10).





**Figure 12-8: Fault looking north from WP-51. On the south side of the slope, east side of the fault sample UT-15 was taken.**



**Figure 12-9: Sample location UT-15. Malachite mineralisation in quartzite**

In the area to the south east of the Tumen Ulzii ridge, a zone of colluvium can be found. The zone was noted for float which contained malachite, which is presumed to have been sourced from the ridge line. (Figure 12-10 and Figure 12-11)



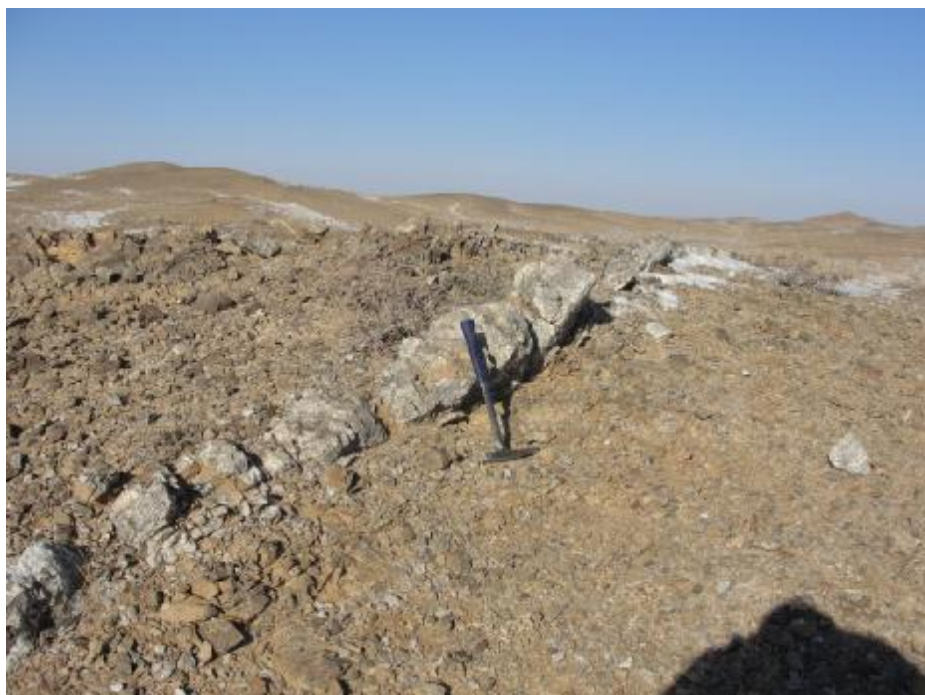
**Figure 12-10: Looking west, from location WP-53 into a zone of colluvium**



**Figure 12-11: Sample location UT-14. Some float in the area has malachite.**



Of interest was a 30 cm wide quartz vein shown at sample location UT-06, (Figure 12-12). The vein has a hematite halo on both sides on the vein and the vein has a comb texture. The outcrop is trending with 40N / 60NW for about 3-5 m on the surface before disappearing into the colluvium.



**Figure 12-12: Location of reported vein NR-008 from the previous report. Re-sampled vein with sample number UT-06**

## **13 Drilling**

To the knowledge of the Qualified Person and the company there was no drilling completed on the project area prior to this report.

## **14 Sampling Method and Approach**

### **14.1 Sampling**

Rock chip samples collected by Micromine were collected generally collected by taking chips off several sections of the rock type being sampled (eg a vein) with a hammer. This was in order to get a representative sample. 2-3kg samples were collected from each location. The samples were bagged in calico bags. The samples were assigned a prefix UT (Under Tolgoi) and surveyed in with a handheld GPS (Garmin GPS60).

The author is of the opinion that all samples subject to laboratory analyses were of sufficient quality and documentation to support the conclusions of the report.

A summary of information pertaining to the samples collected is in Appendix 2.

## **15 Sample Preparation, Analyses and Security**

Samples collected during the Micromine 2011 reconnaissance field prospecting program were prepared and analysed by Stewart Laboratories in Ulaan Baatar. The preparation protocol P6 was used. It involved a dry, crush (-2mm), riffle split, pulverise 0.5kg to >90% minus 75µm (200 mesh). The procedure is designed for samples up to 3kg.

Four samples had duplicate analyses performed by the laboratory, and one Certified Reference Material was inserted into the series.



### **15.1 Laboratory Inspection**

No laboratory inspection was conducted at the time of analysis of this batch of samples. Micromine has inspected this laboratory several times and found the level of hygiene to be high and standard practices to be sound.

### **15.2 Analytical Method**

The samples were then analysed using protocol MA/ES. The samples were digested using a 4 acid digest (HF, HClO<sub>4</sub>, HNO<sub>3</sub> and HCl) and finished with ICP-OES.

Au was analysed by protocol Au3, involving a 30g charge, lead fire assay with AA finish. The detection limit was 2ppb.

### **15.3 Assay Precision**

The sample populations were too small to analyse representative assay precision.

### **15.4 Assay bias**

The sample populations were too small to analyse representative assay bias.

### **15.5 Blanks**

No blank results were submitted to the laboratory for testing.

### **15.6 Standards**

One certified reference standard was placed in the assay batch. It was submitted as UT-28.

	Certified Value	-2sd	+2sd	UT-28
Gold, Au (ppb)	43	39	47	38
Copper, Cu (wt%)	0.166	0.156	0.176	0.155
Molybdenum, Mo (ppm)	40	34	46	38

Note that both gold and copper values just fell outside -2sd, indicating that the lab needs to be monitored. Previous work for other clients through this laboratory has been acceptable.

## **16 Data Verification**

All data was provided to Micromine by the Company in digital format. No meeting in person occurred with previous owners or others who had knowledge of the project. Data provided included -

- Scanned copies of licence documents.
- Digital copy of the report by Rashkhan, N and Mungyndemberel S, titled, Report on Results of the Reconnoitering – Verification Working that conducted at the Special Permit Area named “Undur Tolgoi” which is located in the territory of Khatangbulag Soumb the Dornogobi Province, Monrescsur LLC (for Novametal)

### **16.1 Site Investigation**

Micromine Representative Geologists, Mr Muzaffer Bozada and Mr Enkhbayar, Byambajor (Mongolian) completed a visit to site between the 21<sup>st</sup> and 24<sup>th</sup> January, 2011. QP Warren Woodhouse visited site on the 3<sup>rd</sup> May 2011.

Exploration Licence 8573X is located within the East Govi (Dornogobi) Province in south-eastern Mongolia. The licence is approximately 600km due south of the capital of Mongolia, Ulaan Baatar.

The property can be accessed by driving from Ulaan Baatar to Undurduv Tourist Camp, travel is on sealed road for 40km, and for the remainder from Undurduv Tourist Camp to Khanbogd by dirt roads. The driving time from Khanbogd to site is approximately 2 hours.

Prospecting carried out in 2011 by the Micromine Representative Geologist, tried to verify rock chip sampling carried out by Monrescur. Unfortunately due to harsh winter conditions and difficulties in locating themselves in the field, due to a poorly printed copy of the previous report, it was not possible to replicate any of the high values returned from a select few samples from Monrescur's sampling program.

## **17 Adjacent Properties**

Sampling that had occurred outside, but in the vicinity of the licence boundary returned some encouraging values. Immediately to the south of the SW prospect area, Monrescur LLC(2010) reported a rock chip sample (NR0127) from a stockwork zone returned, 73ppm Au.

## **18 Mineral Processing and Metallurgical Testing**

The property is in an early stage of exploration. As such no metallurgical testwork has been carried out.

## **19 Mineral Resource Estimates**

The property is in an early stage of exploration. As such no mineral resource or reserve estimates have been made.

## **20 Other relevant Data and Information**

The property is in an early stage of exploration and the author knows of no additional relevant data or information.

## **21 Interpretation and Conclusions**

- The licence has been subject to work at a reconnaissance level only.
- The Unter Tolgoi Licence is interpreted to sit in the Hutag Uul terrane. It is interpreted to be an older craton block (Badarch et al 2002).
- An examination of the geology in the field has revealed the licence to be dominated by a granitic pluton with a silicified and quartz veined metasediments on its south eastern flank. The sediments consist of meta sandstones, which include zones of limestone. There is some calc silicate alteration of the limestone.
- The zone of silicification ranges in thickness from 10-100m and was identified along the Tumen-Ulzii fault, a fault that is interpreted to continue in a WNW-WSW direction across the southern section of the licence area. Silicification was also observed along NE trending faults.
- The quartz veins are interpreted to be of a mesothermal type and have a sugary texture with rare cross cutting secondary veinlets and have significant stockwork veinlets with some disseminated sulphide (pyrite, oxidised pyrite). Rarely malachite, galena and sphalerite were seen.
- The north western and south eastern portions of the licence are covered with cretaceous and quaternary sediments, covering the stratigraphy and possibly any mineralisation within it.
- Sampling by the Monrescurer LLC Consulting Group highlighted some anomalous values that included 0.5 g/t Au within the SW section of the licence and 73 g/t Au immediately to the south of the licence area. The quartz veining was also anomalous in base metals such as Pb, Zn and Cu. Values of up to 1.11% Pb and 1132ppm Cu, and 4236ppm Zn were returned from sampling.

- The presence of elevated gold and base metals in the quartz veining warrants further work to define drill targets.

## 22 Recommendations

Preliminary work on the UT licence has defined some areas of alteration that warrant further work. The work that should be carried out at Undur Tolgoi project should be carried out in a systematic fashion to help refine targets for drilling.

Specific recommendations for completion of further work are as follows -

- Soil geochemistry should be carried out on a 100 x 50m grid over the zone of silicification and veining to help define the most anomalous sections of the alteration zone.
- Ground Geophysics (IP and magnetics) should be carried out over the zone of silicification and veining to help identify areas of disseminated sulphide at depth.
- Magnetics should be carried out over the areas of colluvium to understand the nature of the stratigraphy that is concealed. It may be more cost effective to fly the licence with airborne magnetics
- Further prospecting and mapping should be carried out to understand and target drill holes from the results of the soil geochemistry and surface geophysics.
- The Qualified Person has compiled a budget for the work to progress work on the project.
- Estimated cost for the completion of 2 drill holes to test targets is as follows -

**Table 22-1: Exploration Budget 2011**

<b>Item</b>	<b>Estimated Cost (US\$)</b>
Soil Geochemistry	\$80,000
IP Geophysics	\$30,000
Magnetics	\$100,000
Prospecting	\$15,000
Drilling	\$80,000
Drill Assays	\$8,000
Management	\$45,000
<b>Total</b>	<b>\$377,000</b>

## 23 References

- Barach G, 2005, Tectonic Overview of Mongolia, Mongolian Geoscientist no 27, p1-7
- Bumburuu, G., Ulzii Bayar, J., and Aguaansam Buu, E., 1999, 1:50,000 Geological Map Sheet K-49-25-B, Mineral Resources Authority Mongolia.
- Kroner, A. Windley, B.F., Badarch, G., Tomurtogoo, O, Hegner, E., Jahn, B.M, Gruschka, S., Khain, E.V., Demoux, A. and Wingate, M.T.D., 2007, Accretionary growth and crust formation in the Central Orogenic Belt and comparison with the Arabian-Nubian Shield, in Hatcher, R.D., Jr., Carlson, M.P., McBride, J.H., and Martinez Catalan, J.R. eds, 4-D Framework of Continental Crust: Geological Society of America Memoir 200, p181-209.
- Rashkhan, N and Mungyndemberel S, 2010, Report on Results of the Reconnoitering – Verification Working that conducted at the Special Permit Area named “Undur Tolgoi” which is located in the territory of Khatangbulag Soubm the Dornogobi Province, Monrescur LLC (for Novametal Resource LLC)
- Dejidmaa, G Bujinkham, B Eviihuu, B Ganbaatar, B Moenkh-Erdene, N and Oyuntuya, N (2001). Distribution Map of Deposit Occurrences in Mongolia (at the Scale 1:1,000,000). Ministry of Industry and Trade of Mongolia, Mineral Resources Authority of Mongolia.

## 24 Date and Signature Page

I, Warren Woodhouse do hereby certify that:

1. I reside at Suite 401, San Business Centre, Prime Minister Amar Street, Ulaan Bataar Mongolia.
2. I graduated from the Australian National University (Bachelor of Science (Honours) 1990 Geology).
3. I have visited the project site on the 3<sup>rd</sup> May 2011
4. I am a member of the Australasian Institute of Mining and Metallurgy.
5. I have practiced my profession continually for 20 years.
6. I have read the definition of “qualified person” set out in National Instrument 43-101 (NI 43-101) and certify by reason of my education, affiliation with a professional association, and past relevant work experience, I fulfil the requirements to be a “qualified person” for the purposes of the NI 43-101.
7. I am responsible for the preparation of the report titled “National Instrument 43-101 Technical Report for Novametal Resources LLC on the Undur Tolgoi Project Khatanbulag Provinces Mongolia” dated 11th March 2011 and revised as at the 4<sup>th</sup> May 2011.

I personally prepared the following items in the aforementioned report: Item 3: Summary, Item 4: Introduction, Item 5, Reliance on Other Experts, Item 6, Property Description and Location, Item 7 Accessibility, Climate, Local Resources, Infrastructure and Physiography, Item 8 History, Item 9 Geological Summary, Item 10 Deposit Type, Item 11 Mineralisation, Item 13 Drilling, Item 14 Sampling Method and Approach, Item 15 Sample Preparation, Analyses and Security, Item 16 Data Verification, Item 17 Adjacent Properties, Item 18 Mineral Processing and Metallurgical Testing, Item 19 Mineral Resource Estimates, Item 20 Other Relevant Data and Information, Item 21 Interpretation and Conclusions, Item 22 Recommendations, Item 23 References, Item 24 Date and Signature Page, Item 25 Consent of Authors, Item 26 Additional Requirements for Technical Reports on the Development Properties and Production Properties. Item 27 Illustrations and Item 28 Disclaimer.

Item 12 was prepared by Muzaffer Bozada under my supervision and review.

8. I have had no prior involvement with the property that is the subject of this technical report.
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, that a failure to disclose would make the technical report misleading.
10. I am independent of Novametal Resources LLC applying the tests in Section 1.5 of National Instrument 43-101.

11. I have read National Instrument 43-101 and Form 43-101F1 and the Technical report has been prepared in compliance with that Instrument and form.

12. I consent to the filing of the Technical report with any stock exchange and regulatory authority and any publication by them for any regulatory purposes, including electronic publication in the Company files on their websites accessible to the public.

Prepared 11<sup>th</sup> March 2011 and revised as at May 4<sup>th</sup> 2011.

A handwritten signature in black ink, appearing to read 'W. Woodhouse', written in a cursive style.

Warren Woodhouse  
Ulaan Baatar, Mongolia

## 25 Consent of Author



Warren Woodhouse BSc (Hons), MAusIMM  
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Ulaan Baatar, Mongolia  
Telephone: +976 70113889  
Fax: +976 70123889  
Email: [wwoodhouse@micromine.com](mailto:wwoodhouse@micromine.com)

### Consent of Author

**To the Ontario Securities Commission and the Canadian National Stock Exchange;**

I, Warren Woodhouse, do hereby consent to the filing of the written disclosure of the technical report titled "NATIONAL INSTRUMENT 43-101 TECHNICAL REPORT FOR "NOVAMETAL RESOURCES LLC ON THE UNDUR TOLGOI, DORNOGOBI PROVINCE, MONGOLIA" dated 11<sup>ST</sup> March 2011 and revised as at May 4<sup>th</sup> 2011 (the Technical report) and any extracts from or summary of the Technical report in a future disclosure of Novametal Resources LLC and to the filing of the Technical Report with the securities regulatory authorities referred to above.

Dated this day 4<sup>th</sup> day of May 2011



Signature of Qualified Person  
Member of the Australasian Institute of Mining and Metallurgy

## **26 Additional Requirements for Technical Reports on Development Properties and Production Properties**

The Property reviewed for this report was not in a production or development phase at the time of the site visit.

## **27 Illustrations**

All illustrations are included within the report alongside the relevant associated text or are appended below.



## Legend











	QIV. Alluvial sand, pebbles, sandy and clayey materials
	QIII-IV. Delluvial and proluvial pebble, sand and clay
	K2bs Bayanshiree Formation. Clay, conglomerate, pebble, sandstone, limestone and gypsum
	R3-Vtu Toli Uul Formation. Limestone and siliceous rock
	PZ1to Tumen Ulzii Formation. Sandstone, limestone, schist, marble, rarely andesite and jasper
	γ1P1 Early Permian intrusive rock. Bairam Ovoo Complex. 1st phase reddish coloured, medium to coarse grained granite, biotite-hornblende granite, granosyenite, granite porphyry and aplite
	γ3D2-3h Medium-Late Devonian intrusive rock. Khatanbulag Complex. Grey coloured, fine to coarse grained biotitic granite, granodiorite, hornblende diorite and granite porphyry dykes
	δD2-3h Medium-late Devonian intrusive rock. Khatanbulag Complex. Fine to medium grained diorite, gabbro, gabbrodiorite, gabbro porphyry and diorite porphyry
	8573X Tenement outline
	Quartz vein

Figure 27-1: Geology Legend

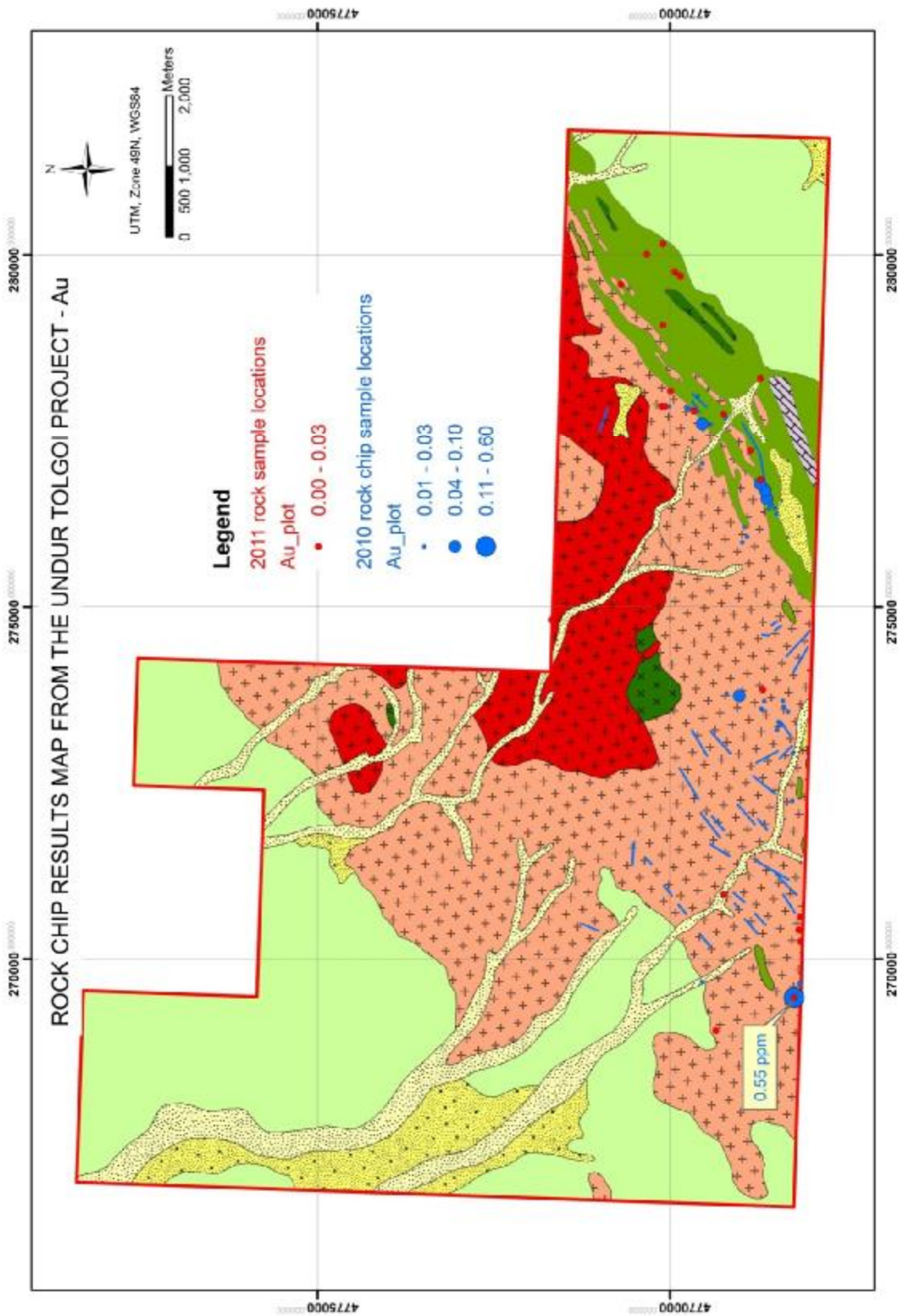


Figure 27-2: Au Results Rock Chip Sampling

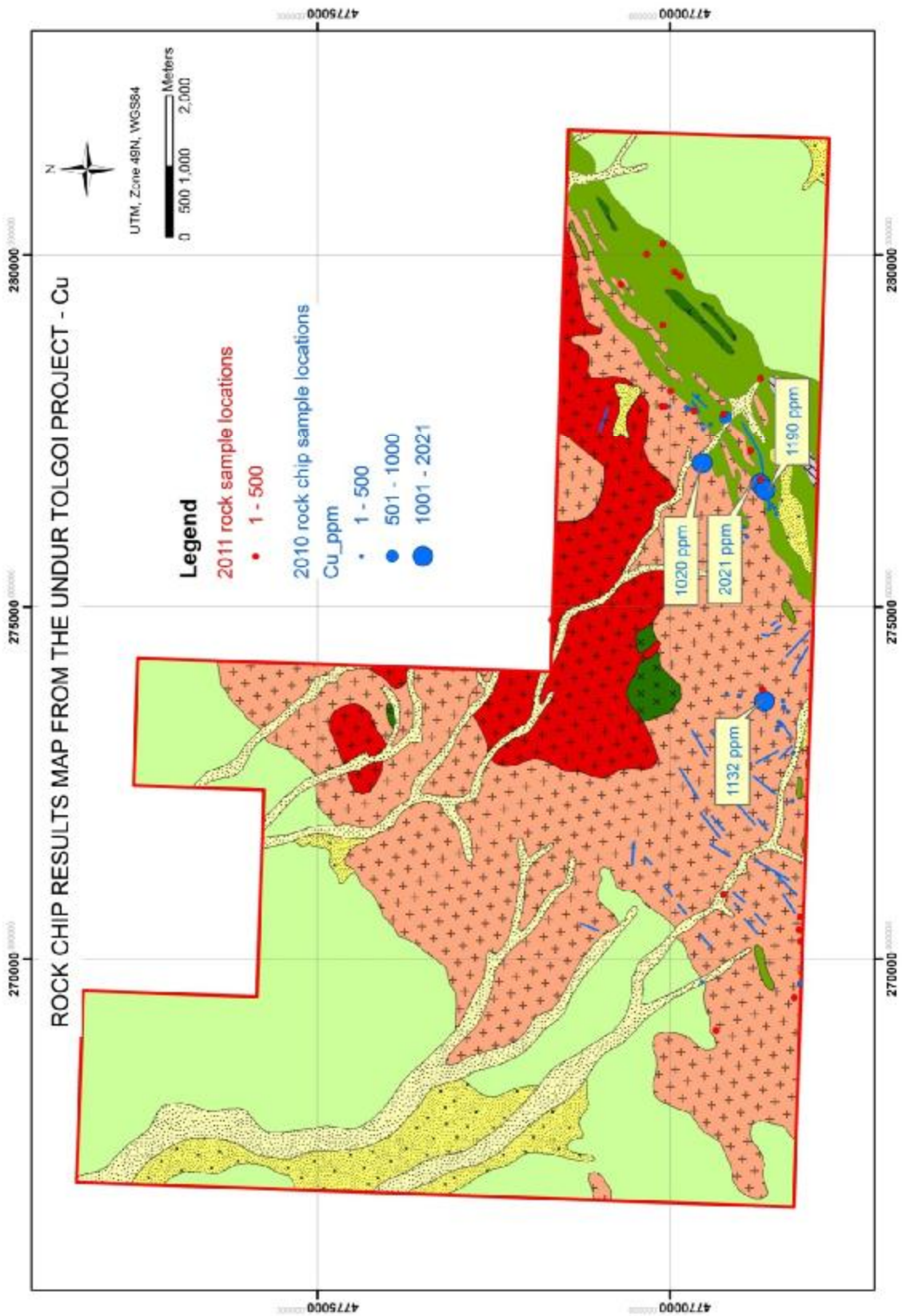


Figure 27-3: Cu Results Rock Chip Sampling



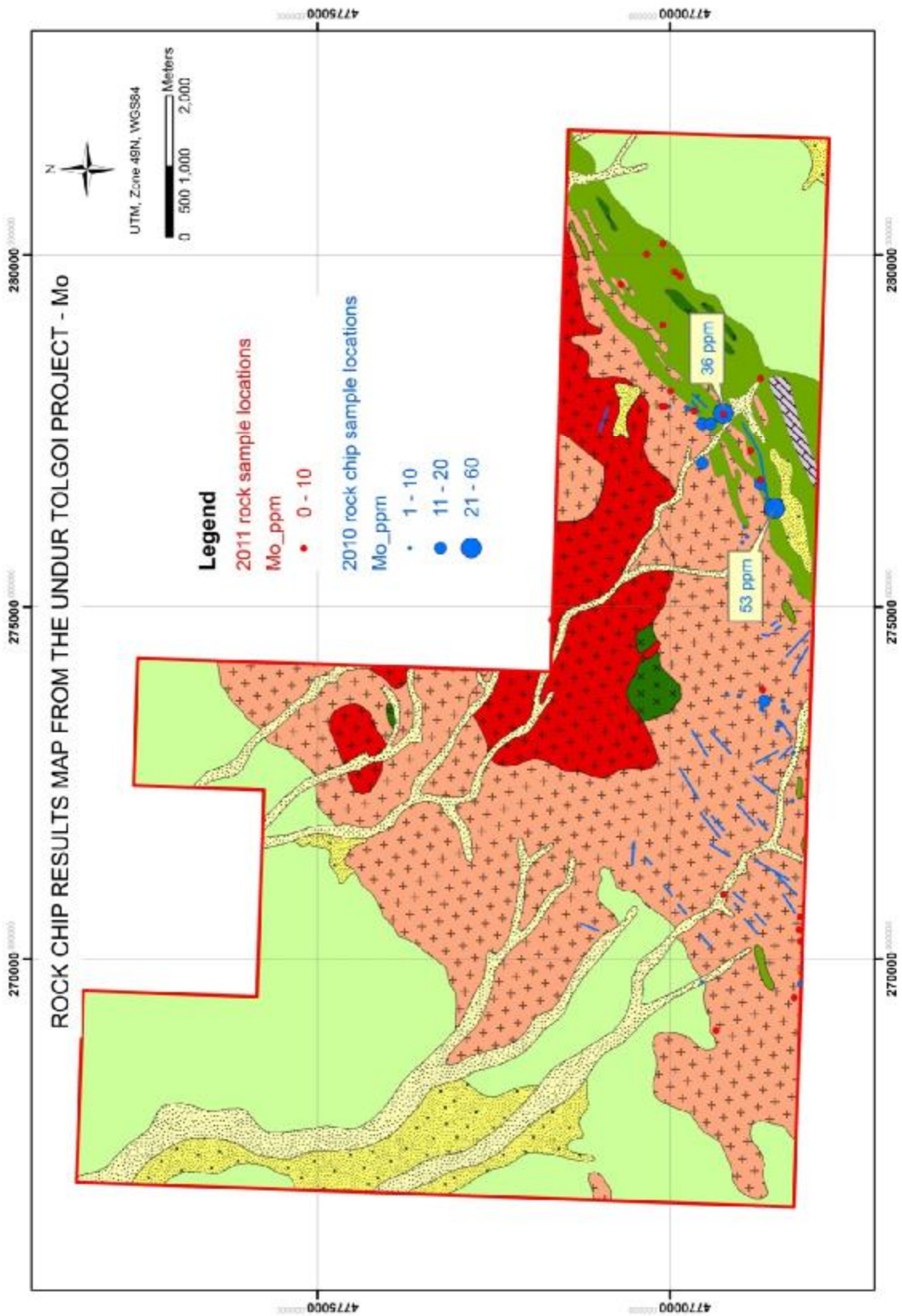


Figure 27-4: Mo results in rock chip sampling

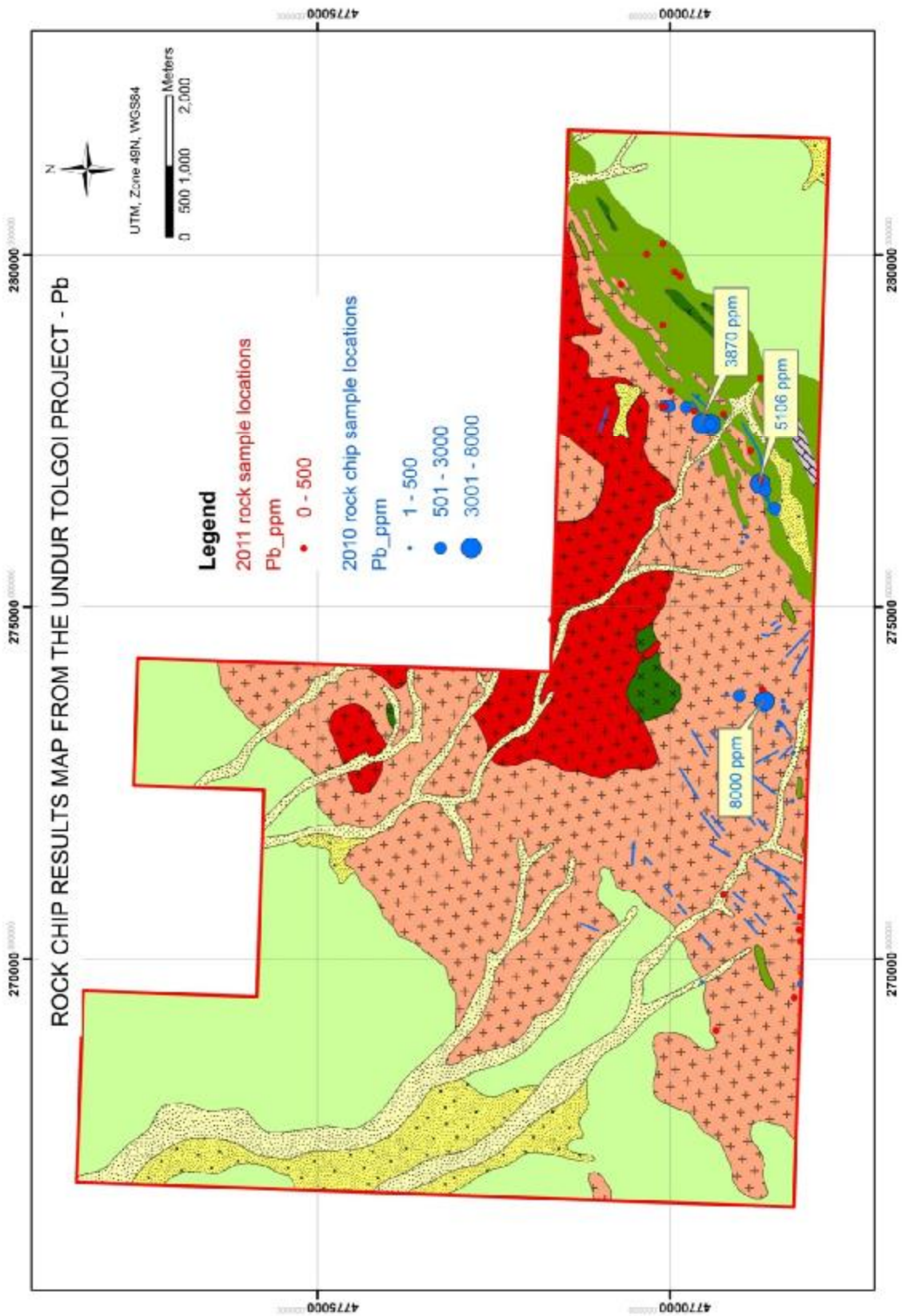


Figure 27-5: Pb results in rock chip sampling

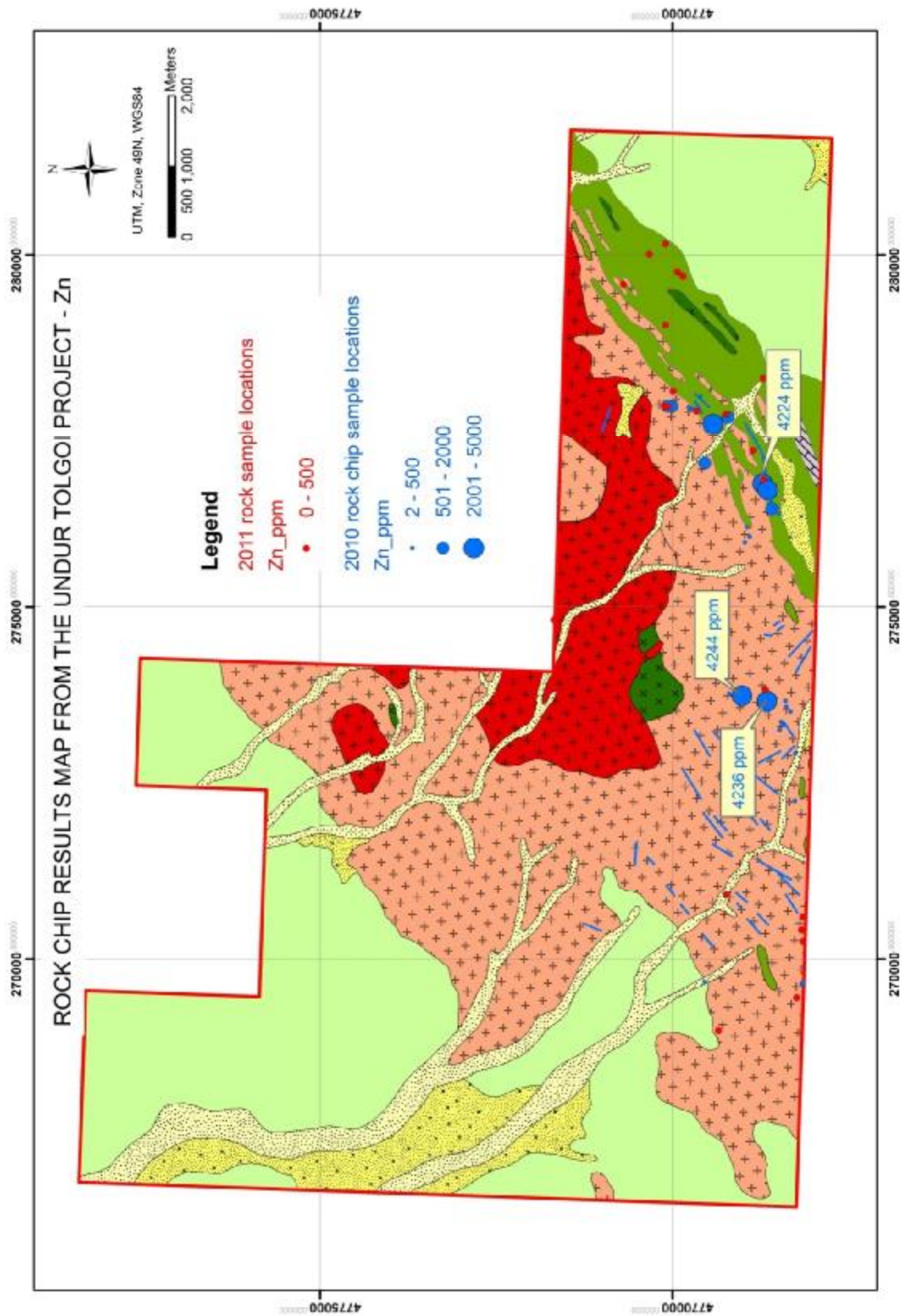


Figure 27-6: Zn results in rock chip sampling

## **28 Disclaimer**

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

## **APPENDIX 1**

### **EXPLORATION LICENCE INFORMATION**

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АШИГТ МАЛТМАЛ, ГАЗРЫН ТОСНЫ ХЭРЭГ  
ЭРХЛЭХ ГАЗАР

АШИГТ МАЛТМАЛЫН ХАЙГУУЛЫН ТУСГАЙ  
**ЗӨВШӨӨРӨЛ**

Дугаар 8573X

Ашигт малтмалын тухай Монгол улсын хуулийн 19 дүгээр зүйлийг үндэслэн

Дорноговь, Ойлог аймаг /хот/-ийн  
Хатандулаг, Хөндөг сум /дүүрэг/-ын  
Өндөр толгой нэртэй газарт орших  
20683 гектар талбайг хамарсан хайгуулын талбайд

хуульд заасан нөхцөл, шаардлагын дагуу ашигт малтмал хайхыг зөвшөөрч улсын бүртгэлийн 9011039072 тоот гэрчилгээтэй

АСА Групп, ХХК -д энэхүү тусгай зөвшөөрлийг 2007-10-13 дуустал жилийн хугацаагаар өгнөв.

Тусгай зөвшөөрөл хавсралтгүй бол хүчингүй.



ГЕОЛОГИ, УУЛГУРХАЙН КАДАСТРЫН АЛБАНЫ  
ДҮРГЭ  
Т. ЗАНАШИР

Улаанбаатар хот




Улаанбаатар хот



**ТУСГАЙ ЗӨВШӨӨРЛИЙН ГЭРЧИЛГЭЭНИЙ  
1 ДҮГЭЭР ХАВСРАЛТ**

**XV-008573**

Тусгай зөвшөөрлийн гэрчилгээгүй бол хүчингүй.


Хөдөлгөөний код	Хөдөлгөөний тайлбар	Гарын үсэг, огноо, тамга
000-CI	<ul style="list-style-type: none"><li>Бүртгэв: Ашигт малтмалын газрын даргын 2010 оны 127 тоот тушаалын дагуу ашигт малтмалын тусгай зөвшөөрлийн талбайн солбицлыг WGS-84 тогтолцоонд албан ёсоор хөрвүүлж талбайн хэмжээг дахин тооцсон.</li></ul>	
009-TF	<ul style="list-style-type: none"><li>Бүртгэв: Тусгай зөвшөөрлийг 9011232015 тоот улсын бүртгэлийн дугаартай Новаметалл ресурс ХХК-д шилжүүлэх</li><li>ГУУКХ-ийн даргын 2010.05.21-ний 568 тоот шийдвэр</li></ul>	
010-NX	<ul style="list-style-type: none"><li>Бүртгэв: Тусгай зөвшөөрлийг 2013.10.13 хүртэл сунгав</li><li>ГУУКХ-ийн даргын 2010.09.21-ний 987 тоот шийдвэр</li></ul>	2010-09-21 



## ТУСГАЙ ЗӨВШӨӨРЛИЙН ГЭРЧИЛГЭЭНИЙ 2 ДУГААР ХАВСРАЛТ

**XV-008573**

Тусгай зөвшөөрлийн гэрчилгээгүй бол хүчингүй.

Хөдөлгөөний код	Хөдөлгөөний тайлбар	Хүчин төгөлдөр талбайн хэмжээ /га/	Хасагдах талбайн хэмжээ /га/	Тусгай зөвшөөрлийн талбайн солбицлууд, гарын үсэг, огноо, тамга
000-C1	<ul style="list-style-type: none"><li>Ашигт малтмалын газрын даргын 2010 оны 127 тоот тушаалын дагуу ашигт малтмалын тусгай зөвшөөрлийн талбайн солбицлыг WGS-84 тогтолцоонд албан ёсоор хөрвүүлж талбайн хэмжээг дахин тооцсон.</li></ul>	9619.26 Га	0 Га	1 108° 10' 1.59" 43° 7' 21.45" 2 108° 10' 1.59" 43° 6' 1.44" 3 108° 12' 11.59" 43° 6' 1.44" 4 108° 12' 11.59" 43° 7' 1.44" 5 108° 13' 31.59" 43° 7' 1.44" 6 108° 13' 31.58" 43° 3' 51.43" 7 108° 19' 11.58" 43° 3' 51.45" 8 108° 19' 11.58" 43° 1' 51.45" 9 108° 8' 1.58" 43° 1' 51.44" 10 108° 8' 1.59" 43° 7' 21.44"  2010-04-01  Э. Заяабат
009-TF	<ul style="list-style-type: none"><li>Тусгай зөвшөөрлийг 9011232015 тоот улсын бүртгэлийн дугаартай Новаметалл ресурс ХХК-д шилжүүлэх Шийдвэрийн огноо: 2010.05.21</li></ul>	9619.26 Га	0 Га	1 108° 10' 1.59" 43° 7' 21.45" 2 108° 10' 1.59" 43° 6' 1.44" 3 108° 12' 11.59" 43° 6' 1.44" 4 108° 12' 11.59" 43° 7' 1.44" 5 108° 13' 31.59" 43° 7' 1.44" 6 108° 13' 31.58" 43° 3' 51.43" 7 108° 19' 11.58" 43° 3' 51.45" 8 108° 19' 11.58" 43° 1' 51.45" 9 108° 8' 1.58" 43° 1' 51.44" 10 108° 8' 1.59" 43° 7' 21.44"  2010-05-21  Э. Заяабат

## **APPENDIX 2**

### **ROCK CHIP SAMPLING RESULTS FROM MONRESCUR LLC**

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**АКТЛАБС ЭЙШИА ХХК**  
 ӨНДӨРХАЛ, ХӨНӨНӨВӨРН ҮНДЭГЭЙД ТӨӨРӨӨ НЭГЭМЖЛӨГДӨН БАГУУЛГА 10-010  
**ACTLABS ASIA LLC**



*Quality Analysis...  
 Innovative Technologies*

**Nova Metal Resources**  
 Suite-203, The National Circus Building, Uany Stre  
 3rd Khoroo, Sukhbaatar District  
 Ulaanbaatar  
 Mongolia

**ATTN:** Consultant Geologist Batpurev Tsend-Ayush  
 TOTAL PAGES: 8 (including this one).

**Date Submitted:** 19-Aug-10  
**Invoice No.:** U10-1729  
**Invoice Date:** 27-Aug-10  
**Your Reference:**  
**Project:** Au & BM-a

**CERTIFICATE OF ANALYSIS**

46 Rock samples were submitted for analysis.

The following analytical packages were requested: Code 1A2-30 - Au - Fire Assay AA 30g  
 Code 1A3-30 - Au - Fire Assay Gravimetric 30g  
 Code H M - Aqua Regia AAS  
 Code B-BM(2) - Aqua regia assay

**REPORT U10-1729**

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

**Notes:**

1A2-30: If value exceeds upper limit we recommend re-assay by fire assay gravimetric Code 1A3  
 H M: Values which exceed the upper limit should be assayed for accurate numbers.

**CERTIFIED BY:**



**C. Douglas Read**  
 Executive Director

Analyte Symbol	Au	Au	Ag	As	Cd	Cr	Ni	Co	Cu	Mg
Unit Symbol	ppm	g/tone	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.2	1	0.1	1	1	1	1	1
Analysis Method	FA-AAS	FA-GRA	AR-AAS-Ag	AR-AAS-As	AR-AAS-Cd	AR-AAS-Cr	AR-AAS-Ni	AR-AAS-Co	AR-AAS-Cu	AR-AAS-Mg
NR_0006	< 0.01		7.7	28	0.9	16	4	2	16	6
NR_0006	< 0.01		12.4	21	0.5	12	5	2	37	8
NR_0025 A	< 0.01		1.0	16	0.1	16	7	15	92	8
NR_0029 B	0.03		4.6	45	0.2	18	7	30	37	6
NR_0028	< 0.01		5.3	20	0.7	12	1	1	51	2
NR_0029	< 0.01		44.0	24	1.6	10	2	8	425	11
NR_0030	0.06		105.0	15	0.3	15	5	2	115	10
NR_0031	< 0.01		0.8	2	0.2	13	4	3	27	4
NR_0034	< 0.01		12.4	12	2.6	15	4	< 1	1020	14
NR_0038	0.04		15.2	33	97.9	18	5	2	2021	20
NR_0039	0.03		3.0	30	1.5	19	10	4	265	10
NR_0040	0.05		0.7	40	8.2	10	2	3	1100	5
NR_0042	0.10		1.0	24	0.5	11	3	1	17	2
NR_0043	0.01		1.0	26	0.8	16	3	2	29	6
NR_0044	< 0.01		0.5	35	0.4	35	5	2	102	53
NR_0045	< 0.01		0.4	24	0.5	16	2	1	5	8
NR_0054	< 0.01		< 0.2	46	< 0.1	13	3	2	< 1	6
NR_0050	< 0.01		0.5	25	0.4	10	4	2	2	4
NR_0051	< 0.01		2.1	13	0.2	14	2	< 1	61	1
NR_0057	< 0.01		< 0.2	19	< 0.1	12	2	2	7	3
NR_0071	< 0.01		3.4	75	0.3	13	4	11	63	5
NR_0087	< 0.01		< 0.2	12	0.2	13	3	2	2	8
NR_0088	< 0.01		< 0.2	17	0.2	16	5	2	17	6
NR_0091	< 0.01		2.6	40	0.2	14	5	4	55	6
NR_0094	0.55		0.3	77	0.4	11	5	1	17	2
NR_0095	< 0.01		0.3	23	0.4	12	3	2	3	2
NR_0098	< 0.01		0.0	13	1.5	16	3	< 1	16	8
NR_0097	< 0.01		12.6	85	0.6	17	2	4	156	35
NR_0098	< 0.01		0.5	16	< 0.1	13	2	2	5	5
NR_0099	< 0.01		48.7	25	3.3	14	5	3	837	10
NR_0100	0.01		3.0	22	1.0	19	4	2	19	3
NR_0103	< 0.01		2.9	21	0.4	14	3	2	33	6
NR_0104	< 0.01		< 0.2	30	0.1	6	2	1	10	3
NR_0105	0.02		< 0.2	24	0.3	12	4	2	13	5
NR_0117	< 0.01		1.0	18	0.6	10	2	1	50	5
NR_0118	0.05		13.6	23	101.8	21	2	3	50	8
NR_0119	< 0.01		4.6	38	148.8	14	2	1	1132	16
NR_0120	< 0.01		< 0.2	28	0.3	17	4	2	15	3
NR_0121	< 0.01		0.3	50	0.6	15	5	3	42	7
NR_0122	< 0.01		0.6	35	0.2	15	4	2	12	4
NR_0123	< 0.01		< 0.2	53	0.5	16	3	3	7	3
NR_0124	< 0.01		< 0.2	21	0.4	18	3	1	18	5
NR_0127	> 5.00	73.03	17.7	42	0.5	14	4	3	7	5
NR_0128	< 0.01		0.3	35	0.3	16	2	3	52	3
NR_0129	0.01		< 0.2	29	0.3	15	3	2	8	2
NR_0130	< 0.01		< 0.2	17	0.4	23	3	3	6	5

Analyte Symbol	Fe	Mn	Pb	Pb	Zn	V
Unit Symbol	%	ppm	ppm	%	ppm	ppm
Detection Limit	0.01	1	1	0.01	1	5
Analysis Method	AR-AAS-Fe	AR-AAS-Mn	AR-AAS-Pb1-ASSAY-AAS	AR-AAS-Zn	AR-AAS-V	
NR_0005	0.65	122	1691		1089	22
NR_0006	0.65	74	2058		704	10
NR_0025 A	2.04	296	288		109	19
NR_0026 B	5.26	121	478		313	128
NR_0028	0.54	82	2418		317	16
NR_0029	0.91	179	3870		2570	17
NR_0030	1.05	102	3118		107	61
NR_0031	1.78	918	64		114	17
NR_0034	0.60	50	302		585	23
NR_0038	0.97	80	5106		4224	54
NR_0039	1.41	265	374		306	22
NR_0040	1.58	228	590		2961	141
NR_0042	1.13	139	39		186	42
NR_0043	0.96	116	220		186	57
NR_0044	1.79	268	1378		268	58
NR_0045	1.02	68	74		24	18
NR_0054	0.97	68	17		5	62
NR_0060	0.71	49	8		13	7
NR_0061	0.60	66	109		8	50
NR_0067	0.83	42	7		8	24
NR_0071	1.78	75	120		34	13
NR_0087	0.81	68	8		3	7
NR_0088	0.83	49	8		6	62
NR_0091	1.78	62	88		12	13
NR_0094	1.97	32	140		33	9
NR_0095	1.09	64	35		5	43
NR_0098	0.57	128	2762		311	< 5
NR_0097	4.48	134	392		170	63
NR_0098	0.77	57	51		3	20
NR_0099	1.06	207	330		708	30
NR_0100	1.09	150	394		664	19
NR_0103	0.66	60	299		47	45
NR_0104	0.66	77	32		26	37
NR_0105	0.76	41	< 1		3	80
NR_0117	0.64	43	343		241	79
NR_0118	0.98	205	801		4244	147
NR_0119	0.80	113	> 8000	1.11	4236	44
NR_0120	0.91	35	19		15	98
NR_0121	2.35	53	68		23	77
NR_0122	1.11	40	93		3	23
NR_0123	1.36	61	27		20	95
NR_0124	0.98	66	17		2	70
NR_0127	1.39	124	361		10	100
NR_0128	0.90	63	21		16	67
NR_0129	0.90	79	27		16	105
NR_0130	0.44	1642	9		4	95







Quality Control

Analyte Symbol	Fe	Mn	Pb	Pb	Zn	V
Unit Symbol	%	ppm	ppm	%	ppm	ppm
Detection Limit	0.01	1	1	0.01	1	5
Analysis Method	AR-AAS-Fe	AR-AAS-Mn	AR-AAS-Pb1-ASSAY-AAS	AR-AAS-Pb2-ASSAY-AAS	AR-AAS-Zn	AR-AAS-V
GR4 Control Mean	3.00	102	43		72	78
GR4 Control Cert	3.09	105	52.0		73.0	87.0
GR4 Control Mean	5.29	821	103		127	188
GR4 Control Cert	5.58	1090	101		118	188
CONFCU-1 Mean				0.54		
CONFCU-1 Cert				0.510		
CONGS-10 Mean						
CONGS-10 Cert						
CONCGS-6 Mean						
CONCGS-6 Cert						
CONCGS-6 Mean						
CONCGS-6 Cert						
NR_0038 Orig	0.97	81	5091		4150	62
NR_0038 Pulp Dup	0.97	83	5121		4289	55
NR_0087 Orig						
NR_0087 Pulp Dup						
NR_0099 Orig						
NR_0099 Pulp Dup						
NR_0103 Orig	0.66	59	259		45	46
NR_0103 Pulp Dup	0.65	60	258		45	45
NR_0119 Orig				1.11		
NR_0119 Pulp Dup				1.10		
NR_0122 Orig						
NR_0122 Pulp Dup						
NR_0127 Orig						
NR_0127 Pulp Dup						
Method Blank						
Method Blank						
Method Blank						
Method Blank	< 0.01	< 1	< 1		< 1	
Method Blank				< 0.01		
Method Blank						< 5

## Quality Control

Analyte Symbol	Fe	Mn	Pb	Pk	Zn	V
Unit Symbol	%	ppm	ppm	%	ppm	ppm
Detection Limit	0.01	1	1	0.01	1	5
Analysis Method	AR-AA5-Fe	AR-AA5-Mn	AR-AA5-Pb-AS5/PY-AA5	AR-AA5-Pk	AR-AA5-Zn	AR-AA5-V
GXR-4 Control Mass	3.00	102	43		72	78
GXR-4 Control Cert	3.00	155	52.0		73.0	87.0
GXR-4 Control Mass	5.20	821	133		127	188
GXR-4 Control Cert	5.58	1010	101		118	168
CDI-FCV-1 Mass				0.54		
CDI-FCV-1 Cert				0.510		
CDI-C5-30 Mass						
CDI-C5-30 Cert						
CDI-C65-6 Mass						
CDI-C65-6 Cert						
CDI-C65-6 Mass						
CDI-C65-6 Cert						
NR_008 Orig	0.97	81	5001		4160	52
NR_008 Pkg dup	0.97	88	5121		4289	55
NR_007 Orig						
NR_007 Pkg dup						
NR_009 Orig						
NR_009 Pkg dup						
NR_010 Orig	0.68	59	260		46	48
NR_010 Pkg dup	0.65	60	258		48	45
NR_011 Orig				1.11		
NR_011 Pkg dup				1.10		
NR_012 Orig						
NR_012 Pkg dup						
NR_017 Orig						
NR_017 Pkg dup						
Method Blank						
Method Blank						
Method Blank						
Method Blank	< 0.01	< 1	< 1		< 1	
Method Blank				< 0.01		
Method Blank						< 5

Number	Easting	Northing	Au ppm	Au g/t	Ag ppm	As ppm	Cd ppm	Cr ppm	Ni ppm	Co ppm	Cu ppm	Mo ppm	Fe %	Mn ppm	Pb ppm	Pb %	Zn ppm	V ppm	Description
NR_0005	277853	4770007	0.01		7.70	26.00	0.30	16.00	4.00	2.00	16.00	6.00	0.65	122.00	1591.00		1089.00	22.00	Quartz vein. it is continuously from pervious observation point. Dipping angle is 50-60°. containing galena, molybdenite disseminations and less fluorite. Galena dissemination's size is upto 0.5sm and fluorite crystal size is 1-2sm.
NR_0006	277859	4770070	0.01		12.40	21.00	0.50	12.00	5.00	2.00	37.00	8.00	0.68	74.00	2058.00		764.00	10.00	Point continous from same quartz vein. Quartz is altered by galena, and in the granite and diorite. The stockwork body is several meter from this observation point. Length is 100-150M
NR_0025A	277996	4769604	0.01		1.00	16.00	0.10	16.00	7.00	15.00	92.00	8.00	2.04	296.00	288.00		169.00	19.00	Lightly white colored quartzite. Dip direction is 320°, dipping angle is 70°. Around 150m length. Hematite occurs by the patchy and vein. Even limonite dessimnations. Host rock is quartzite sandstone.
NR_0026A	277996	4769604	0.03		4.60	45.00	0.20	18.00	7.00	30.00	37.00	6.00	5.26	121.00	478.00		313.00	128.00	Lightly white colored quartzite. Dip direction is 320°, dipping angle is 70°. Around 150m length. Hematite occurs by the patchy and vein. Even limonite dessimnations. Host rock is quartzite sandstone.
NR_0028	277602	4769423	0.01		5.30	20.00	0.70	12.00	1.00	1.00	51.00	2.00	0.54	82.00	2418.00		317.00	18.00	Quartz vein locates near the creek on the south of mountain. Colour is lightly white to light grey. Dip angle is 29°. dip direction is 50-55°. length is 15m, wide is 0.4m. Galena dessimnation size is 2-3MM, less occuring. Host rock is diorite.
NR_0029	277602	4769423	0.01		44.00	24.00	1.50	10.00	2.00	8.00	425.00	11.00	0.91	179.00	3870.00		2570.00	17.00	Quartz vein on the south slope of mountain. White to light grey colored. vein is almost vertical and vein direction is to NW/340°, length is around 30m, width is 0.3-0.4m. Quarzt vein occurs much more galena and malachite dessimnations, mal chite dessimnation size is 1-2mm, galena dessimnation size is 0.5sm. Host rock is diorite.
NR_0030	277607	4769542	0.06		105.00	15.00	0.30	15.00	5.00	2.00	115.00	19.00	1.05	192.00	3118.00		107.00	61.00	Quartz vein. This point is the west of pervious observation point. Width is around 40sm. Strongly altered by galena and host rock is diorite.

Number	Easting	Northing	Au ppm	Au g/t	Ag ppm	As ppm	Cd ppm	Cr ppm	Ni ppm	Co ppm	Cu ppm	Mo ppm	Fe %	Mn ppm	Pb ppm	Pb %	Zn ppm	V ppm	Description
NR_0031	277532	4769524	0.01		0.80	2.00	0.20	13.00	4.00	3.00	27.00	4.00	1.78	918.00	64.00		114.00	17.00	Stockwork zone is near the hill. dipping to 360°. some of veins with 50-60sm width. brecciated. length is 150m and some of them with 5-7sm. int he some vein with sphalerite and fluorite dessimnations. Host rock is scarn. the west part of width is 10-15m, other part with 5-6m wide. Mineralization isepidote.
NR_0034	277040	4769540	0.01		12.40	12.00	2.60	15.00	4.00	1.00	1020.00	14.00	0.60	50.00	302.00		585.00	23.00	Quartz vein with malachite small dessimnations. Vein width is 20-25sm, length is up to 200m, dip direction is 250°, dipping angle is 45-50°, host rock is quartzite sandstone, cut by diorite. Malachite dessimnation size i 1-2mm, and with hematite, limonite.
NR_0038	276745	4768719	0.04		15.20	33.00	97.90	18.00	5.00	2.00	2021.00	20.00	0.97	80.00	5106.00		4224.00	54.00	Quartz stockwork veins on the south slope of the Tumen-Ulzii mountain. length direction is 240°. Total wide is around 10m. may some part could be silicified breccia. Main minerals are malachite, chalcopyrite, bornite and minor mineral is galena and less azurite. Vein may will continue to north west.
NR_0039	276692	4768674	0.03		3.00	30.00	1.50	19.00	10.00	4.00	255.00	10.00	1.41	265.00	374.00		306.00	22.00	The west end of previous occurred vein. Hosting in the schist. Main minerals are hematite, limonite, Observed hematite, limonite and rarely pyrite. Non observed Cu mineralization.
NR_0040	276658	4768647	0.05		9.70	40.00	8.20	19.00	2.00	3.00	1190.00	5.00	1.58	228.00	590.00		2961.00	141.00	The quartz vein. At some parts are up to 1m.
NR_0042	276535	4768621	0.10		1.90	24.00	0.50	11.00	3.00	1.00	17.00	2.00	1.13	139.00	39.00		186.00	42.00	The continuation quartz vein. Observed hematite mineralization and hosting in the sandstone. The dip direction is 260 degrees, thickness up to 20-30cm.
NR_0043	276453	4768556	0.01		1.00	26.00	0.80	16.00	3.00	2.00	29.00	6.00	0.96	116.00	220.00		166.00	57.00	The continuation of quartz vein zone. The strike is 50degrees and vertical. Also observed galena and malachite mineralization.
NR_0044	276399	4768511	0.01		0.50	35.00	0.40	35.00	5.00	2.00	102.00	53.00	1.79	268.00	1378.00		268.00	58.00	Dark grey to light grey colored quartz vein
NR_0045	276319	4768485	0.01		0.40	24.00	0.50	16.00	2.00	1.00	6.00	9.00	1.02	68.00	74.00		24.00	18.00	The west continuously point of silicified breccia. Visible less pyrite dessimnations.

Number	Easting	Northing	Au ppm	Au g/t	Ag ppm	As ppm	Cd ppm	Cr ppm	Ni ppm	Co ppm	Cu ppm	Mo ppm	Fe %	Mn ppm	Pb ppm	Pb %	Zn ppm	V ppm	Description
NR_0054	273671	4768397	0.01		0.20	46.00	0.10	13.00	3.00	2.00	1.00	6.00	0.97	68.00	17.00		5.00	52.00	Quartz stockwork zone. Wide is 20m, length direction is to NE25°. The bigger vein is around 10sm wide. Quartz vein with gecsaedre, cube crystals of the pyrite.
NR_0060	273585	4768382	0.01		0.50	25.00	0.40	10.00	4.00	2.00	2.00	4.00	0.71	49.00	8.00		13.00	7.00	Quartz vein in the quartzite zone
NR_0061	273520	4768324	0.01		2.10	13.00	0.20	14.00	2.00	1.00	61.00	1.00	0.60	68.00	109.00		5.00	50.00	The west end of silisified zone with malachite dessimnation.
NR_0067	272922	4768257	0.01		0.20	19.00	0.10	12.00	2.00	2.00	7.00	3.00	0.83	42.00	7.00		9.00	24.00	Quartz vein. Dip direction is 350°. Length is 10-15m, width is 3 m. Strongly pyrited.
NR_0071	272251	4768261	0.01		3.40	78.00	0.30	13.00	4.00	11.00	63.00	5.00	1.78	75.00	126.00		34.00	13.00	The hematited quartz vein. Dip direction is 5 degrees and dip is 40 degrees. The thickness up to 15-20m. Length is 250m. Pyrited.
NR_0087	269662	4768149	0.01		0.20	12.00	0.20	13.00	3.00	2.00	2.00	8.00	0.61	68.00	6.00		3.00	7.00	Quartz vein
NR_0088	269645	4768160	0.01		0.20	17.00	0.20	15.00	6.00	2.00	17.00	6.00	0.83	49.00	6.00		6.00	52.00	Quartz vein
NR_0091	269626	4768106	0.01		2.80	46.00	0.20	14.00	5.00	4.00	55.00	6.00	1.78	62.00	86.00		12.00	13.00	Quartz vein dipping to the northeast
NR_0094	269449	4768237	0.55		0.30	77.00	0.40	11.00	5.00	1.00	17.00	2.00	1.97	32.00	140.00		33.00	9.00	The quartz stockwork body. Observed previous hole. The hole parameter is 4x5m.
NR_0095	277817	4769726	0.01		0.30	23.00	0.40	12.00	3.00	2.00	3.00	2.00	1.09	64.00	35.00		5.00	43.00	The quartz vein. Dark grey colored. With galena mineralization. Discontinuously observed about 200m and strike is 15 degrees. Dip direction is 300, dip is 55 degrees. Texture is bucky. Thickness up to 1m. Along the fractures are observed hematited.
NR_0096	277840	4769768	0.01		9.00	13.00	1.50	16.00	3.00	1.00	16.00	8.00	0.57	128.00	2752.00		311.00	5.00	The zone of quartzite. Observed galena dissemination and dissemination size is 0.3cm.
NR_0097	277752	4769242	0.01		12.60	85.00	0.60	17.00	2.00	4.00	136.00	36.00	4.48	134.00	392.00		170.00	63.00	The quartz vein. Dip direction is 330 degrees and dip is 55 degrees. Thickness is 2m. Along the fractures are hematited
NR_0098	277723	4769222	0.01		0.60	16.00	0.10	13.00	2.00	2.00	8.00	8.00	0.77	57.00	51.00		3.00	20.00	The south west part of last quartz vein.
NR_0099	277698	4769211	0.01		48.70	25.00	3.30	14.00	8.00	3.00	837.00	10.00	1.06	207.00	330.00		708.00	30.00	The west continuation of quartz vein. White to grey colored and observed malachite. Thickness is 10cm, it is almost stockwork body. Observed nesty mineralization of pyrite, chalcopyrite, azurite, fluorite. Very strongly leached.



Number	Easting	Northing	Au ppm	Au g/t	Ag ppm	As ppm	Cd ppm	Cr ppm	Ni ppm	Co ppm	Cu ppm	Mo ppm	Fe %	Mn ppm	Pb ppm	Pb %	Zn ppm	V ppm	Description
NR_0100	276392	4768593	0.01		3.00	22.00	1.00	19.00	4.00	2.00	19.00	3.00	1.09	150.00	394.00		664.00	10.00	Quartz vein
NR_0103	276135	4768945	0.01		2.90	21.00	0.40	14.00	3.00	2.00	33.00	6.00	0.66	60.00	259.00		47.00	45.00	The west part of quartz vein. The strike is 40 degrees. Length is 200-300m, thickness up to 40-50cm. White grey colored and with massive texture. The galena dissemination observed in the that part.
NR_0104	275997	4768903	0.01		0.20	30.00	0.10	9.00	2.00	1.00	10.00	3.00	0.66	77.00	32.00		28.00	37.00	Quartz vein. Strike is 60 degrees and about 100 meter long, 40-50cm wide zone. White to grey colored. Also observed sericite and pyrite.\
NR_0105	275915	4768973	0.02		0.20	24.00	0.30	12.00	4.00	2.00	13.00	5.00	0.76	41.00	1.00		3.00	80.00	Quartz vein. 40-50m long, 1meter wide. Observed hematite traces.
NR_0117	273771	4769193	0.01		1.00	16.00	0.90	10.00	2.00	1.00	60.00	5.00	0.64	43.00	343.00		241.00	70.00	The quartz vein. Thickness is 30cm. Rarely observed pyrite and hematization,
NR_0118	273738	4769014	0.05		13.60	23.00	101.80	21.00	2.00	3.00	60.00	8.00	0.98	205.00	861.00		4244.00	147.00	The south west continuation of quartz vein. Stongly leached. 30-40cm wide, 50m long.
NR_0119	273664	4768659	0.01		4.60	38.00	146.80	14.00	2.00	1.00	1132.00	16.00	0.80	113.00	8000.00	1.11	4236.00	44.00	The quartz vein. White to grey colored. Strike is 65 degrees. About 100m long, Alson observed nesty mineralization of limonite, malachite and pyrite. Dip is 55-60 degrees. Hosting in the diorite body.
NR_0120	273556	4768702	0.01		0.20	28.00	0.30	17.00	4.00	2.00	18.00	3.00	0.91	35.00	15.00		15.00	98.00	Quartz zone with 1m width
NR_0121	273535	4768675	0.01		0.30	59.00	0.60	15.00	6.00	3.00	42.00	7.00	2.35	53.00	58.00		23.00	77.00	Quartz vein
NR_0122	273372	4768454	0.01		0.60	35.00	0.20	15.00	4.00	2.00	12.00	4.00	1.11	40.00	93.00		3.00	23.00	Quartz vein altered by hematite
NR_0123	273325	4768441	0.01		0.20	33.00	0.50	16.00	3.00	3.00	7.00	3.00	1.36	61.00	27.00		20.00	98.00	Quartz vein altered by weakly hematite
NR_0124	273256	4768479	0.01		0.20	21.00	0.40	18.00	3.00	1.00	18.00	5.00	0.98	66.00	17.00		2.00	76.00	Stockwork zone altered by weakly hematite. With pyrite dessimnations. Host rock is clayey diorite.
NR_0127	270224	4768096	5.00	73.03	17.70	42.00	0.50	14.00	4.00	3.00	7.00	5.00	1.39	124.00	381.00		10.00	100.00	Stockwork zone
NR_0128	269626	4768101	0.01		0.30	35.00	0.30	15.00	2.00	3.00	62.00	3.00	0.99	63.00	21.00		16.00	67.00	Quartz vein
NR_0129	269507	4768121	0.01		0.20	29.00	0.30	15.00	3.00	2.00	8.00	2.00	0.96	79.00	27.00		15.00	165.00	Quartz vein
NR_0130	269678	4769542	0.01		0.20	17.00	0.40	23.00	3.00	3.00	6.00	5.00	0.44	1542.00	6.00		4.00	95.00	The zone of silicified and manganized

## **APPENDIX 3**

### **ROCKCHIP SAMPLING MICROMINE**

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## ROCK CHIP SAMPLING RESULTS FROM MICROMINE PTY LTD SAMPLING

Sample ID	Wp # (way-point#)	Field Sample Description
UT-01	Wp-27	Quartz vein (2 m wide), Sugary texture with secondary quartz veins, including some galena (?), pyrite and leached pyrite, epidote. Weakly hematitic and limonitic.
UT-02	Wp-29	Quartz vein (1,2 m wide, including secondary quartz veins, sugary texture, oxidized at fractures, with some very fine base metal (?). Hematitic and limonitic.
UT-03	Wp-31	Quartz vein about 50 cm wide, including altered mica and some leached pyrite spaces, some quartz veins cross-cutting main vein. Main vein including pink to purple amethyst
UT-04	Wp-13	Granite (presumed non-mineralised)
UT-05	Wp-32	Quartz vein (15 cm wide and about 100 m long), comb texture with hematite hallows in the vein.
UT-06	Wp-33	Re-sample of previous companies location (NR: 0008), Quartz vein (15 - 20 cm wide and about 10 m long), weakly hematitic, with leached pyrite spaces, some sphalerite (?). Sample was taken along the vein.
UT-07	Wp-34	Re-sample of previous companies location. 4 m wide silica - quartz vein (20 m long) with stwk veinlets about 40 - 50 veinlets per meter. Locally gossanized, hematitic and limonitic.
UT-08	Wp-40	Foliated intensely silicified shale, weakly oxide. No mineralization seen.
UT-09	Wp-41	Mainly sediment unit (possible shale) Metamorphosed - pervasively silicified with hematite and FeO <sub>x</sub> and MnO <sub>2</sub> at fracture surfaces. Unite includes leached pyrite spaces including locally limonitic and gossanized sections. Outcrop about 100 long and about 5 meter wide.
UT-10	Wp-42	Same unite as UT-09, including slicken sides (evidence of a major fault).
UT-11	Wp-43	Same unite as UT-09
UT-12	Wp-46	Green colour shale, locally intensely silicified with carbonate intersections. Some calcite veins parallel to structures.
UT-13	Wp-35	Granite (presumed non-mineralised)

UT-14	Wp-49	Silica ridge (possible shale). Rich in MnO <sub>2</sub> , intensely silicified and fractured (usually vertical dipping) with no Quartz veins, at southern slope of main ridge some malachite staining in floats. This silica unite continues several hundred meters striking 250 N
UT-15	Wp-52	Silica ridge (possible shale same ridge as UT-14). Rich in MnO <sub>2</sub> , intensely silicified and fractured (60N / 30 NW) with no Quartz veins, with malachite staining and some galena. Sample is located few meters from about 3 meter wide 322 N striking fault.
UT-16	Wp-37	Green colored dioritic rock, with milky white quartz veins striking n - S. No mineralization, including some epidote.
UT-17	Wp-37a	Green colored dioritic rock with cross cutting quartz veins, locally oxidized and some sulphides like pyrite, Pb (?) and MnO <sub>2</sub> at fracture surface.
UT-18	Wp-58	Silica - quartz vein in contact with shale both sites. Intensely fractured, weakly limonitic and hematitic, some goethite at fracture surface.
UT-19	Wp-59	Silica - quartz vein in contact with shale both sites. Intensely fractured, weakly limonitic and hematitic, some goethite at fracture surface.
UT-20	Wp-60	Silica - quartz vein
UT-21	Wp-61a	Grab sample taken from east wall of pit including two quartz veins and whole rock.
UT-22	Wp-61b	Quartz vein from west wall. Massive quartz vein with some hematitic-oxidized alteration to the south of vein (sampled separately). Quartz vein itself includes coarse grained but leached pyrite spaces with hematite at fractures. Locally limonitic.
UT-23	Wp-61c	Altered zone at south site of main quartz vein. Strongly foliated with hematite and locally goethite along fracturing. Host rock seems to be dioritic rock.
UT-24	Wp-67	3 meter wide silica - quartz vein zone with some disseminated pyrite (1 - 2 %) and leached pyrite spaces, some quartz veins in silica zone with MnO <sub>2</sub> at fracture surfaces.
UT-25	Wp-35	<b>Granite (presumed non-mineralised)</b>
UT-26	Wp-68	Seems to be same silica zone as UT-24, silica zone about 6 m wide, zone includes coarse grained pyrite spaces and some layered pyrite, with some poss. Pb minerals, oxidized at fracture surfaces.
UT-27	Wp-75	Possible same silica - quartz zone as at UT-24 and UT-26,
UT-28		Control Reference Material OREAS 151A

**STEWART  
MONGOLIA  
LLC**

West Wing, Building of Armono  
Corporation,  
Chinggis Avenue, Khan-Uul  
District  
Ulaanbaatar-  
17042,  
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Tel +976 11  
343882



**StewartGroup**  
Geochemical & Assay

**CERTIFICATE OF ANALYSIS**

**11B02**

**CLIENT:** Micromine  
Consulting Services  
LLC

**ADDRESS:** San Business Centre,  
Minister Amar Street,  
Sukhbaatar  
district  
Ulaanbaatar,  
Mongolia

**ATTN:** Mr. Warren  
Woodhouse

**YOUR  
REFERENCE:** XXX

**LAB. BATCH  
NO.:** 11B02

**NO. SAMPLES:** 28

**SAMPLE  
TYPE:** Rock

**SAMPLES  
RECEIVED:** 7-  
Feb-  
11  
**ANALYSIS  
INSTRUCTIONS  
RECEIVED:** 7-  
Feb-  
11  
**DATE OF  
REPORT:** 12-  
Feb-  
11  
**STATUS OF  
REPORT:** FINA  
L  
**ANALYSIS  
COMPLETE:** 10-  
Feb-  
11  
**PREPARATION  
CODE:** P6  
**ANALYSIS CODE:** MA/E  
S,  
Au3

**APPRO  
VED  
BY:** Odbileg. Sh, Laboratory Director

**Notes/Comments:**

*These test results are representative only of  
the sample received in the laboratory.*

LAB NO.	SAMPLE NO.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cu	Fe	
		PPB	PPM	%	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	%
		2	0.5	0.01	5	2	1	5	0.01	1	1	1	1	1	1	0.01
		5000	200.0	10.00	10000	2000	5000	2000	10.00	2000	2000	10000	10000	10000	10000	10.00
1	UT-01	<2	<0.5	0.84	<5	78	<1	<5	0.31	<1	5	<1	31	3	0.51	
2	UT-02	<2	<0.5	0.50	<5	66	<1	<5	0.10	<1	3	<1	32	7	0.60	
3	UT-03	2	0.7	0.82	<5	36	1	<5	0.83	<1	4	<1	29	1	0.61	
4	UT-04	<2	<0.5	8.01	10	911	8	<5	1.02	<1	59	<1	10	6	1.45	
-	UT-04 DUP	-	<0.5	8.01	10	952	8	<5	1.05	<1	63	<1	11	8	1.43	
5	UT-05	<2	3.8	1.27	<5	23	4	<5	0.10	<1	2	2	32	37	1.09	
6	UT-06	<2	7.7	0.24	<5	12	<1	25	0.15	1	<1	2	33	8	0.74	
7	UT-07	<2	4.3	0.07	15	26	<1	124	0.44	<1	1	<1	45	32	1.58	
8	UT-08	<2	<0.5	0.36	8	541	<1	<5	>10.00	3	<1	<1	5	4	0.26	
9	UT-09	<2	<0.5	4.56	196	763	8	<5	0.78	<1	43	18	34	37	5.71	
10	UT-10	<2	<0.5	3.56	376	456	5	<5	0.69	<1	35	3	29	14	2.59	
11	UT-11	<2	<0.5	3.04	337	428	9	<5	0.56	<1	24	7	30	21	5.78	
12	UT-12	3	<0.5	0.51	47	480	2	<5	>10.00	<1	<1	4	9	17	0.54	
13	UT-13	<2	<0.5	7.62	11	702	5	<5	1.22	<1	133	<1	8	7	2.10	
14	UT-14	<2	3.5	0.33	<5	282	<1	13	0.08	<1	7	<1	35	13	0.50	
-	UT-14 DUP	-	3.7	0.33	<5	289	<1	13	0.08	<1	8	<1	32	14	0.50	
15	UT-15	<2	<0.5	0.30	<5	476	<1	<5	0.06	<1	13	<1	37	33	0.54	
16	UT-16	<2	<0.5	1.78	<5	75	2	<5	0.11	<1	13	<1	27	5	0.58	
17	UT-17	<2	<0.5	1.83	<5	84	2	<5	0.10	<1	13	<1	32	10	0.92	
18	UT-18	<2	<0.5	1.26	48	93	1	<5	0.37	<1	29	9	32	17	2.05	
19	UT-19	<2	<0.5	1.69	17	145	<1	<5	0.24	<1	25	7	31	11	2.59	
20	UT-20	<2	<0.5	0.21	<5	20	<1	<5	0.29	<1	<1	2	36	8	0.91	
21	UT-21	25	<0.5	2.00	6	115	2	<5	0.29	<1	20	<1	25	9	0.72	
22	UT-22	9	0.9	0.16	<5	9	<1	36	0.17	<1	2	<1	30	2	0.60	





SAMPLE NO.	Ga	Hg	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	S	Sb
	PPM	PPM	%	PPM	PPM	%	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	%	PPM
	2	2	0.01	1	1	0.01	1	1	0.01	1	1	10	2	50	0.01	5
	2000	500	10.00	5000	10000	10.00	10000	5000	5.00	2000	10000	5000	10000	2000	10.00	2000
UT-01	4	<2	0.25	3	25	0.06	82	<1	0.24	<1	2	71	<2	<50	0.11	<5
UT-02	5	8	0.24	2	5	0.04	133	<1	0.02	<1	1	186	16	<50	0.10	<5
UT-03	<2	<2	0.52	2	5	0.04	142	<1	0.16	<1	1	141	114	61	0.14	<5
UT-04	19	2	3.51	35	39	0.43	203	4	2.60	5	2	650	88	234	0.08	<5
UT-04 DUP	19	<2	3.48	34	42	0.44	207	4	2.68	5	2	654	91	230	0.11	<5
UT-05	4	<2	0.68	<1	5	0.05	241	1	0.47	3	3	77	378	94	0.09	<5
UT-06	<2	<2	0.10	<1	4	0.03	209	2	0.02	<1	1	42	424	<50	0.10	<5
UT-07	<2	<2	0.02	<1	8	0.02	86	3	0.02	<1	3	37	130	<50	0.17	<5
UT-08	<2	2	0.15	6	5	0.17	926	<1	0.03	<1	4	219	4	<50	0.08	8
UT-09	11	<2	1.91	23	52	0.28	225	9	0.13	3	34	1138	56	199	0.17	37
UT-10	9	<2	1.55	22	57	0.30	187	4	0.10	2	6	386	10	126	0.36	58
UT-11	7	<2	1.12	16	52	0.14	189	8	0.08	2	28	347	12	133	0.27	38
UT-12	<2	<2	0.18	4	21	0.29	624	2	0.04	<1	9	280	<2	<50	0.12	25
UT-13	17	<2	4.15	70	35	0.33	468	4	2.78	10	2	447	93	244	0.20	<5
UT-14	3	<2	0.15	4	5	0.02	104	<1	0.01	<1	2	50	56	<50	0.17	<5
UT-14 DUP	3	2	0.16	4	6	0.02	103	<1	0.02	<1	1	49	58	<50	0.13	<5
UT-15	4	<2	0.12	8	3	0.01	88	<1	0.01	<1	<1	55	13	<50	0.12	<5
UT-16	10	<2	1.12	9	73	0.04	108	1	0.02	2	2	70	5	138	0.17	<5
UT-17	7	2	1.19	8	71	0.04	146	<1	0.02	1	3	81	6	143	0.16	<5
UT-18	3	<2	0.34	18	11	0.14	229	2	0.02	1	14	737	11	<50	0.20	<5
UT-19	4	<2	0.32	15	21	0.32	256	1	0.02	2	19	567	12	<50	0.15	<5
UT-20	<2	<2	0.07	<1	9	0.05	232	1	0.02	<1	3	60	40	<50	0.12	<5
UT-21	8	<2	1.25	13	9	0.07	74	2	0.19	<1	2	94	34	108	0.13	<5
UT-22	4	<2	0.08	<1	3	<0.01	100	2	0.02	<1	<1	14	32	<50	0.11	<5
UT-23	21	<2	4.19	46	31	0.51	210	4	1.49	4	10	499	135	263	0.12	6



	5	10	20	1	10	10	10	0.01	5	10	1	20	1	1	1
	2000	2000	2000	2000	1000	2000	10000	5.00	1000	10000	10000	2000	2000	10000	5000
UT-01	<5	<10	<20	27	<10	<10	<10	0.01	<5	<10	4	<20	1	6	5
UT-02	<5	<10	<20	9	<10	<10	<10	<0.01	<5	<10	6	<20	1	6	3
UT-03	<5	<10	<20	11	<10	<10	<10	<0.01	<5	<10	5	<20	4	55	6
UT-04	5	<10	<20	402	<10	<10	31	0.19	<5	<10	21	<20	10	42	72
UT-04 DUP	5	<10	<20	407	<10	<10	32	0.19	<5	<10	20	<20	11	43	72
UT-05	<5	<10	<20	9	<10	<10	11	<0.01	<5	<10	9	<20	13	302	11
UT-06	<5	<10	<20	5	<10	<10	<10	<0.01	<5	<10	11	<20	8	269	3
UT-07	<5	<10	<20	12	<10	<10	<10	<0.01	<5	<10	8	<20	1	34	<1
UT-08	<5	<10	<20	959	<10	<10	<10	0.02	<5	<10	20	<20	11	15	3
UT-09	12	<10	<20	70	<10	<10	23	0.14	<5	<10	78	<20	18	232	68
UT-10	10	<10	<20	284	<10	<10	18	0.09	<5	<10	63	<20	19	22	59
UT-11	8	<10	<20	103	<10	<10	17	0.09	<5	<10	70	<20	10	126	50
UT-12	<5	<10	<20	387	<10	<10	<10	0.03	<5	<10	23	<20	5	35	4
UT-13	11	<10	<20	177	<10	<10	39	0.21	<5	<10	18	<20	40	54	70
UT-14	<5	<10	<20	13	<10	<10	<10	0.01	<5	<10	7	<20	2	7	10
UT-14 DUP	<5	<10	<20	13	<10	<10	<10	0.01	<5	<10	7	<20	2	9	10
UT-15	<5	<10	<20	15	<10	<10	<10	<0.01	<5	<10	4	<20	1	<1	12
UT-16	<5	<10	<20	9	<10	<10	11	0.02	<5	<10	6	<20	6	9	15
UT-17	<5	<10	<20	10	<10	<10	11	0.02	<5	<10	6	<20	4	11	16
UT-18	<5	<10	<20	67	<10	<10	<10	0.07	<5	<10	27	<20	13	55	36
UT-19	<5	<10	<20	47	<10	<10	10	0.10	<5	<10	26	<20	10	75	42
UT-20	<5	<10	<20	7	<10	<10	<10	<0.01	<5	<10	4	<20	<1	45	<1
UT-21	<5	<10	<20	30	<10	<10	14	0.02	<5	<10	14	<20	2	318	23
UT-22	<5	<10	<20	5	<10	<10	<10	<0.01	<5	<10	2	<20	<1	3	2
UT-23	8	<10	<20	129	<10	<10	42	0.18	<5	<10	40	<20	14	83	89
UT-24	<5	<10	<20	8	<10	<10	10	0.07	<5	<10	17	<20	3	6	34
UT-24 DUP	<5	<10	<20	8	<10	<10	11	0.06	<5	<10	17	<20	3	5	34
UT-25	11	<10	<20	176	<10	<10	41	0.21	<5	<10	18	<20	40	120	64

SAMPLE NO.	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	PPM	PPM	PPM	PPM
	5	10	20	1	10	10	10	0.01	5	10	1	20	1	1	1
	2000	2000	2000	2000	1000	2000	10000	5.00	1000	10000	10000	2000	2000	10000	5000
UT-26	<5	<10	<20	4	<10	<10	<10	<0.01	<5	<10	5	<20	1	1	14
UT-27	<5	<10	<20	5	<10	<10	<10	<0.01	<5	<10	1	<20	<1	1	31
UT-28	27	<10	<20	126	<10	<10	12	0.23	<5	<10	303	<20	10	68	6
UT-28 DUP	27	<10	<20	126	<10	<10	12	0.23	<5	<10	304	<20	10	66	5

QA/QC DATA	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
STD-USZ-26-99	-	-	160	78 (20)	-	-	-	-	-	-	-	3251 (237)	-	170 (30)	170 (10)
STD - GBM- 996-5	5 - 1	<10	<20	224 - 18	<10	<10		<0.01	10 - 3		25 - 1	<20	23 - 1	2569 (188)	126 - 14
BLANK	<5	<10	<20	<1	<10	<10	<10	<0.01	<5	<10	<1	<20	<1	<1	<1
BLANK	<5	<10	<20	<1	<10	<10	<10	<0.01	<5	<10	<1	<20	<1	<1	<1
STD-USZ-26-99	15.8	18	158	94	<10	<10	12.6	0.37	6	<10	92	>2000	30	192	173
SDT-USZ-26-99	23	17	49	94	<10	<10	35	0.35	6	<10	98	2084.364	28	168	114
SDT-USZ-26-99	23	19	52	95	<10	<10	38	0.37	<5	<10	96	2414.374	29	177	126
SDT-GBM-996-5	7	<10	<20	239	<10	<10	32	0.13	<5	<10	24	<20	23	2389	122
SDT-GBM-996-5	7	<10	<20	240	<10	<10	32	0.13	<5	<10	24	<20	22	2386	132
SDT-GBM-996-5	6	<10	<20	234	<10	<10	28	0.14	<5	<10	24	<20	21	2386	116