Altan Nar Gold-Polymetallic Project

Bayankhongor Aimag, Southwest Mongolia

National Instrument 43-101 Technical Report

Erdene Resource Development Corporation

List of Qualified Persons:

- Michael MacDonald, P.Geo.
- Jeremy Clark, MAIG
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Effective Date: December 31, 2020

Release Date: March 29, 2021

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1. Summary

1.1. Introduction

Erdene Resource Development Corporation ("Erdene", or the "Company") has prepared a National Instrument 43-101 (NI 43-101) Technical Report ("Technical Report") for their 100% owned Altan Nar gold-polymetallic project (the "Project") located in the Bayankhongor Aimag, or province, of southwestern Mongolia. The Technical Report includes an update of the current state of the Project and a restated Altan Nar Mineral Resource statement prepared by RPM Global Ltd. with effective date of May 7, 2018. The Technical Report is prepared in support of the Company's 2020 Annual Information Form.

Erdene is a Canadian-based resource company focused on the acquisition, exploration, and development of precious and base metals in underexplored and highly prospective Mongolia. Erdene's deposits are located in southwestern Mongolia's Edren Terrane, within the Central Asian Orogenic Belt, host to some of the world's largest gold and copper-gold deposits. The Company has been the leader in exploration in the region since 2005 and is responsible for the discovery of the Khundii Gold District with interests in three mining licenses and two exploration licenses hosting multiple high-grade gold and gold/base metal prospects, including the 100%-owned Bayan Khundii and Altan Nar gold deposits. Erdene Resource Development Corp. is listed on the Toronto and the Mongolian stock exchanges.

The Technical Report is prepared by following Qualified Persons ("QPs"); Mike MacDonald, PGeo (NS) ("Report Author"), is responsible for all sections except those related to the Mineral Resource estimate which were prepared by Jeremy Clark, MAIG, consulting geologist for RPM Global Asia Limited ("RPM") and the metallurgical section which was prepared by Andrew Kelly, P.Eng., Senior Metallurgist with Blue Coast Research. Mr. MacDonald is not independent of the Company while Messrs. Clark and Kelly are independent of the Company.

In December 2019, the Company released a report "Khundii Gold Project NI 43-101 Technical Report" prepared by Tetra Tech which included a prefeasibility study for the Company's Bayan Khundii gold project and a Preliminary Economic Assessment for the Altan Nar project. The two projects are located ~20 km apart. In that report, it was envisioned that the two projects would use the same infrastructure for processing ore from each deposit. Since that report was released, a feasibility study has been completed for the Bayan Khundii gold deposit. The current base case for Altan Nar is that additional work is required to determine the optimal recovery of metals from the deposit, which may mean that Altan Nar ore will be mined and processed separately from Bayan Khundii, based mostly on the fact that the ore mineralogy of the two deposits is very different, Bayan Khundii being a simple gold-silver ore while Altan Nar is a more complex gold-polymetallic ore (with silver, lead and zinc sulphides). While portions of the Altan Nar deposit are suitable for processing at Bayan Khundii, the Bayan Khundii processing facility would only recover a portion of the gold and silver from the Altan Nar deposit and none of the base metals. To maximize the value of the Altan Nar resource, it has been decided that additional resource delineation drilling is required at Altan Nar to maximize the size of the mineral resource and to undertake additional metallurgical testing designed to optimize the metal recovery from the Altan Nar deposit. While the Company is currently focused on the development of the Bayan Khundii gold deposit, it is anticipated that additional resource delineation drilling and metallurgical test work will be carried out at Altan Nar in 2021.

1.2. Property Description and Location

The Project is in southwestern Mongolia and located on the Altan Nar Mining License which is 100% held by Erdene Mongol LLC, a wholly owned subsidiary of Erdene. The Project is located approximately 980 km southwest of the Mongolian capital Ulaanbaatar (population 1,372,000) and 300 km south of the provincial capital, Bayankhongor City (population 30,900) (**Error! Reference source not found.**). The

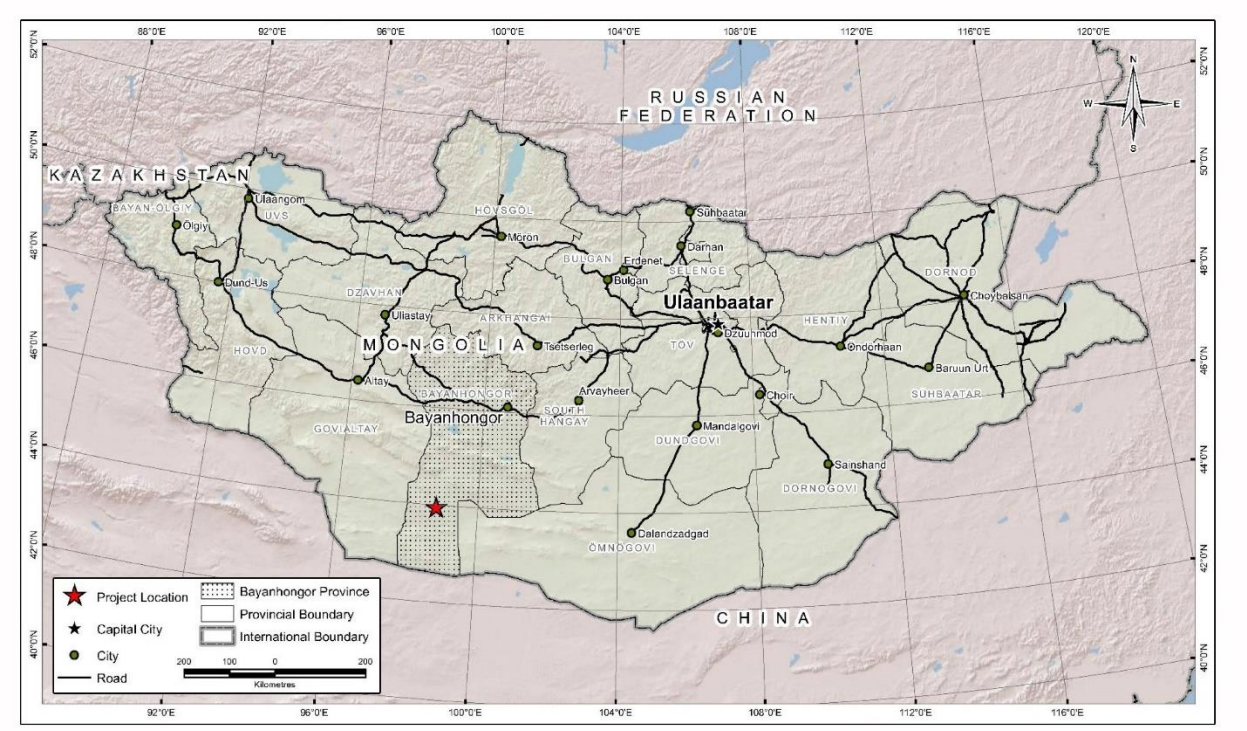
nearest towns (soum centres) are Shinejinst and Bayan Undur, located 70 km northeast and 80 km north, respectively. The Project area is sparsely populated with nomadic pastoral activity being the main industry.

The Altan Nar deposit, located on the Altan Nar mining licence, is located 20 km (via unsealed road) from the Company's Bayan Khundii Gold Project, located on the Khundii Mining Licence. Field work is currently carried out from an exploration camp located at the Bayan Khundii site.

The Altan Nar mining license was first acquired as an exploration license in December of 2009 and in 2020 was converted to a mining license. Mining licenses in Mongolia are issued for an initial term of 30 years with an option to renew for two 20-year terms, for a maximum of 70 years.

The Altan Nar mining license is subject to a 1% Net Smelter Return royalty agreement with Sandstorm Gold Ltd. The Report Author is not aware of any environmental liabilities to which the property is subject.

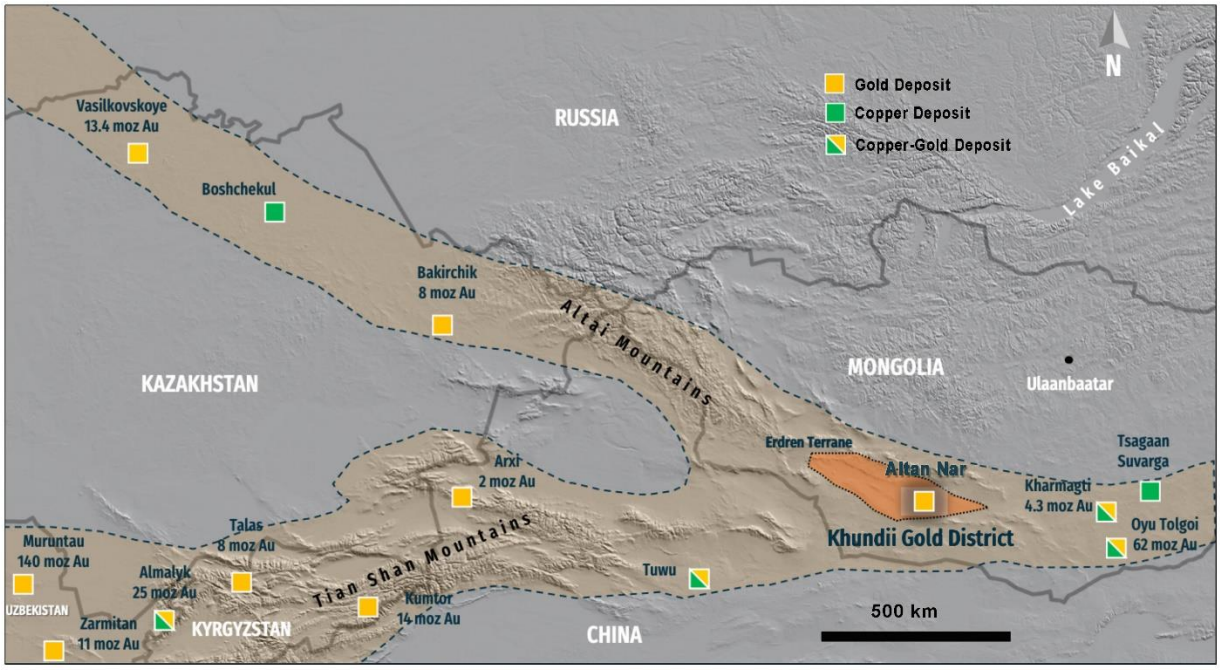
Figure 1-1 Altan Nar Project Location Map



1.3. Geology

The Project is located within the Edren island arc terrane which is part of the larger composite Trans Altai Terrane ("TAT"). The TAT forms part of the western end of the large, composite, arcuate-shaped Paleozoic New Kazakh-Mongol Arc terrane ("NKMA"). The NKMA is part of the Central Asian Orogenic Belt and extends along the southern margin of Mongolia, including the border region with China, and is host to some of the world's largest gold and copper-gold deposits including the Oyu Tolgoi copper-gold porphyry mine in south central Mongolia approximately 670 km to the east (Figure 1-2).

Figure 1-2 Gold Deposits of the Eastern Portion of the Central Asian Orogenic Belt



The geology of the Altan Nar license consists of a package of predominantly andesite-basalt flows (referred to as 'Sequence A' - Aguit Formation, lower member) dominate the eastern part of the license area. These volcanic rocks have pronounced NW-SE trending linear features that are evident on satellite images. These rocks are interpreted to be a steeply dipping volcanic sequence that was intruded by Sumankhairkhan intrusive massive, and was also intruded by sub-parallel, NW-trending alkali granite porphyry and fine-grained granite intrusions interpreted to be dykes, or sills. Widespread development of hornfels textures was noted in the andesite-basalt rocks, presumably resulting from contact metamorphism related to the first phase monzodiorite of the Sumankhairkhan Intrusive complex.

The geology of the central and western portion of the Altan Nar license area consists mostly of a sequence of volcanic flows and tuffaceous rocks of andesite composition (referred to as 'Sequence B'), with subordinate rhyolite, rhyodacite, andesite tuff, and green-coloured andesite (upper member of Ulziitkhar Formation). Bedding orientations for the Sequence B volcanic rocks, obtained from 2017 oriented core drilling, indicate these volcanic units strike to the northwest and dip at approximately 20-30 degrees to the northeast.

The Altan Nar deposit is hosted in the Sequence B volcanic units (upper member of Ulziitkhar Formation) and consists of gold, silver, zinc, and lead within sub-vertical epithermal quartz veins. The Altan Nar deposit consists of eighteen separate deposits and prospects including the main Discovery Zone ("DZ") deposit and smaller Union North ("UN") deposit located 1.3 km northwest of the DZ.

1.4. Mineralization

Within the Discovery Zone, gold mineralization appears to be structurally controlled within NNE to NE trending sub-parallel fault/breccia zones that are steeply dipping to sub-vertical. Gold-bearing zones are associated with multi-phase gold-silver-lead-zinc mineralization related to epithermal quartz and quartz-chalcedony veins and breccias in a northeast-southwest trending, steeply northwest dipping, fault / breccia

zone. Preliminary evidence suggests that andesite units, particularly near the contact with more competent silicified volcanic breccia units, act as a favourable host for mineralization.

There are multiple phases of quartz veins / breccia (+/- mineralization) within the structurally-controlled mineralized zones at Altan Nar. Only preliminary work has been completed to date regarding the paragenetic sequence for these phases. Accordingly, no definitive sequence is provided for the following mineralizing phases, based on petrographic observations, coupled with other field and mineralogical data, the following preliminary paragenetic sequence is proposed for Altan Nar:

- Early-stage massive quartz veining and brecciation.
- Brecciation, silicification and comb quartz veining and associated white mica alteration (sericite-pyrite-quartz) and deposition of galena-sphalerite-chalcopyrite-gold ±arsenopyrite (low-arsenopyrite gold mineralization).
- Localized arsenopyrite-pyrite-gold overprint on above sequences, with some associated chalcedony veining and silicification (high-arsenopyrite gold mineralization).
- Mn-Ca carbonate veining (rhodochrosite, calcite, etc.) – late hypogene
- Late-stage (supergene) oxidation – limonite, Mn oxides, malachite.

Zones of high-arsenic gold mineralization were initially reported and tested. However, additional drilling and trenching across the Altan Nar property has shown that this type of mineralization is localized when compared to the dominant low-arsenic style gold-silver-lead-zinc mineralization.

1.5. Deposit Type

Altan Nar is an intermediate-sulphidation (IS) epithermal deposit. IS deposits result from a combination of magmatic and meteoric fluid influence and form at depths ranging from 0.3 to 1.0 km beneath the surface, at temperatures which also vary between 150°C and 300°C.

Intermediate sulphidation deposits typically contain manganese-, calcium- and iron-carbonate gangue minerals along with sulphide minerals including pyrite, chalcopyrite, sphalerite, galena, tetrahedrite, and tenantite. Based on this minerology, IS deposits represent important targets and sources for gold, silver, lead, and zinc mineralization.

This style of gold mineralization represents the most prolific style of gold mineralization in the southeast Asia region and includes Kelian, Porgera and Anatok, and elsewhere in the world, Fruta del Norte, Cripple Creek & Montana Tunnels and Rosia Montana and in Mexico five of the world's top silver producers including Penasquito. They are commonly associated with breccia pipes (diatremes) and can extend vertically for greater than 1 kilometre. The Kelian open pit, for example, is 500 metres deep.

1.6. Exploration

Erdene has carried out phased, progressively more detailed, exploration across the Altan Nar mining license since acquiring the license in 2010. This exploration work has consisted of geological mapping, geochemical sampling (rock and soil), geophysical surveys (ground magnetics, induced polarization surveys, including dipole-dipole lines and a gradient array grid, and a ground gravity survey), trenching and drilling.

To date exploration has focused on the Altan Nar target area, a 5.6 by 1.5 km area in the central portion of the Altan Nar mining license, specifically the Discovery Zone and Union North, the two prospects with defined Indicated and Inferred resources. An additional 16 prospects have been identified by the combination of geology, geochemistry and geophysical anomalies across the Altan Nar target area. These additional prospects have had limited or no exploration and scout drilling to date. Inferred resource have been defined for seven of these prospects, though based on limited drill data.

Two other prospects have been identified outside of the Altan Nar target area, Nomin Tal to the east and Oyut Khundii to the west. Both prospects have had limited exploration work carried out to date and require follow-up exploration to be carried out.

Geochemistry

The soil sampling program on the Altan Nar mining license has proven to be an effective exploration tool and has resulted in the identification of numerous mineralized zones. Positive IP gradient array chargeability anomalies frequently correlate with soil geochemical anomalies. Data from rock chip samples indicate similar results to soil geochemistry. Mineralization associated with each of the three projects identified to date on the mining license, including Altan Nar, Nomin Tal and Oyut Khundii, each have unique geochemical signatures. For example, Nomin Tal has high Cu-Ag-Au values while Altan Nar has high Au-Ag-Pb-Zn (±As-Mo) but low Cu and Oyut Khundii has high Cu and As values. These differences are likely related to either different mineralization styles, or perhaps different modes of emplacement of the mineralization, and may represent metal zonation within a large overall mineralized system.

Geophysics

A regional magnetic survey (100 m line spacing) was completed over a 41 km^2 area covering most of the Altan Nar mining license (2010-2012). In addition, two areas have been surveyed in more detail at closer line spacing. Nomin Tal (1.4 km2 area) and Altan Nar (14.5 km2 area) prospects was surveyed at 25m line spacing in 2011. In 2017, the high-resolution ground magnetic survey was carried out over Altan Nar area, using 10 metre line spacing, with a total of 1,000 survey line kilometres.

Both IP dipole-dipole ("Dp-Dp") and IP gradient array surveys have been completed on the Altan Nar property over, and in the vicinity of, the Nomin Tal and Altan Nar areas and in 2018 an IP dipole-dipole survey was carried out over the Oyut Khundii area.

At Altan Nar, high chargeability anomalism has been an important guide, in conjunction with rock and soil geochemical anomalies and magnetic data to identify drill targets.

In 2018 a ground gravity survey was completed over the Altan Nar mining license using a 200 m x 200m grid spacing for data points. Interpretation of gravity data indicates several potential granitoid (porphyry?) intrusions throughout the license area.

Trenching

Erdene has completed a series of trenching programs across the Altan Nar Project area that included 42 trenches, totalling 3,151 m and ranging in length from 14 m to 202 m. The principal objectives of the trenching programs were to further define the near-surface mineralization identified to date, improve the understanding of the gold mineralized system, and prioritize areas for the next phase of delineation drilling.

1.7. Drilling

A staged exploration and resource delineation drilling program was carried out across the Altan Nar prospect between 2011 and 2019. Drilling at Altan Nar has average hole length of 155 m (average vertical depth 116 m) and extends in a couple of holes to a maximum vertical depth of approximately 390 m. Drill hole spacing over the Discovery Zone and Union North deposit areas is on an approximate 50 m by 50 m grid with closer spaced drilling in select areas (~25 m by ~25 m spaced holes).

Since the discovery of mineralized epithermal quartz veins on surface and widespread soil geochemical anomalism across the Altan Nar Area in August 2011, there have been seven rounds of drilling over a nine-year period for a total of 20,158 m. Resource delineation drilling has taken place over the Discovery Zone and Union North deposits while exploration and scout drilling has taken place across 12 of the 16 other

identified prospects. Inferred resources have been calculated for seven of these prospects, namely, Central Valley, Maggie, Riverside, UN East, Union South, True North and Northfield. Additional drilling is required to further the define and delineate the mineralization in these prospects.

In late Q4-2019, post the release of the May 2018 Altan Nar resource estimate, the Company drilled five holes (TND-134 to TND-138) totaling 667 metres in the Discovery Zone ("DZ"). The Q4-2019 program successfully tested a concept of a preferred high-grade gold-mineralized horizon believed to potentially represent an epithermal boiling zone. Four holes tested the high-grade core area of the Discovery Zone, over a 130-metre strike length, 70 metres of which remains untested by drilling ("Gap Zone"). The fifth hole tested the southern extension of the DZ deposit. Follow-up drilling is required to further delineate the high-grade boiling zone model.

1.8. Mineral Processing and Metallurgical Testing

Metallurgical testwork for the Altan Nar study is based on six test programs conducted between 2012 and 2019 at ALS Ammetc (Perth, Western Australia), Actlabs Asia LLC. (Mongolia), and Blue Coast Research Ltd. (Parksville, BC) and SGS Canada Inc. (Burnaby, BC). Metallurgical tests to date include:

- Gold deportment study conducted in 2012 by ALS Ammtec on one sample from Discovery Zone South.
- Cyanidation tests conducted in 2013 and 2015 by Actlabs Asia LLC. on samples from Discovery Zone North, Discovery Zone South and Union North areas of the deposit. This study found higher gold recoveries in samples with lower arsenic content with maximum gold recovery achieved after 24 hours.
- Heavy liquid separation, gravity testwork, cyanidation, flotation and grindability tests conducted by Blue Coast Research Ltd. In 2015 and 2018. This work focussed on the impact of finer grind sizes and higher cyanide concentrations on overall recovery and found that finer primary grinds resulted in limited improvement to overall gold recovery, with flotation and/or oxidative pre-treatment likely necessary to optimize gold recovery from areas of the deposit with higher arsenic content. Gravity testwork concluded that a portion of the gold at Altan Nar is amenable to recovery by gravity methods. The results of the heavy liquid separation testwork found pre-concentration of Discovery Zone North material suffered from high losses in base and precious metals during the process. Flotation from Discovery Zone North produced generally acceptable lead and zinc concentrate grades. However, the flotation response from Discovery Zone South and Union North was suboptimal in testwork to date.
- Grindability testwork completed in 2015 and 2019 by SGS Canada Inc. The results suggested that material from the Altan Nar deposit is moderately hard to hard. In addition, it was found that material from the Discovery Zone was abrasive, while material from Union North was moderately abrasive.

Gold recovery projections are based on a whole ore cyanidation process, with a relationship between arsenic quantity and recovery expected. As arsenic content increases, overall gold recovery decreases. It was found that the high arsenic zone present in the Altan Nar deposit constitutes 11% of the total mineralized material in the orebody. Selective mining to exclude the high arsenic zone is proposed to reduce the arsenic content of processed ore, with gold recovery of material with an arsenic content of less than 0.16% averaging 88%.

1.9. Mineral Resource Estimate

The Mineral Resource Estimate for the Altan Nar deposit was stated in 2018 by RPM with an effective date of May 7, 2018 and documented in the report titled "NI 43-101 Technical Report for the Preliminary Economic Assessment of the Khundii Gold Project" dated February 4, 2019 and available on SEDAR under the Company's profile. Since the effective date six holes have been drilled on the deposit, however, as further detailed in Section 14 these holes are not considered by the Qualified Person to be material to the

resource estimate, as such the Qualified Person considers the resource estimate to be current based on the available information.

The results of the Mineral Resource Estimate for the Altan Nar deposit are presented in Table 1-5. RPM has reported the Mineral Resources using a 0.7 g/t AuEq above pit and 1.4 g/t AuEq below the pit shell as a reporting cut-off based on a mining / process and cost parameters for the Project.

Table 1-1 Altan Nar Deposit Mineral Resource Estimate, May 2018

Indicated Mineral Resource												
Type		**Quantity**	**Au**	**Ag**	**Zn**	**Pb**	**AuEq**	**Au**	**Ag**	**Zn**	**Pb**	**AuEq**
		Mt	g/t	g/t	%	%	g/t	Koz	Koz	Kt	Kt	Koz
Oxide		0.6	2.0	12.7	0.6	1.0	3.1	39.3	244.3	3.8	6.3	59.6
Fresh		4.4	2.0	15.0	0.6	0.5	2.8	278.4	2,105.4	27.8	22.7	393.4
Total		**5.0**	**2.0**	**14.8**	**0.6**	**0.6**	**2.8**	**317.7**	**2,349.7**	**31.6**	**29.0**	**453.0**

Inferred Mineral Resource												
Type		**Quantity**	**Au**	**Ag**	**Zn**	**Pb**	**AuEq**	**Au**	**Ag**	**Zn**	**Pb**	**AuEq**
		Mt	g/t	g/t	%	%	g/t	Koz	Koz	Kt	Kt	Koz
Oxide		0.8	1.8	7.5	0.6	0.9	2.6	43.3	183.7	4.3	6.5	64.2
Fresh		2.7	1.7	8.0	0.7	0.6	2.5	142.4	682.1	19.4	15.8	212.8
Total		**3.4**	**1.7**	**7.9**	**0.7**	**0.7**	**2.5**	**185.7**	**865.8**	**23.7**	**22.3**	**277.1**

Note:

1. *The Statement of Estimates of Mineral Resources has been compiled under the supervision of Mr. Jeremy Clark who is a sub-consultant of RPM and a Member of the Australian Institute of Geoscientists. Mr. Clark has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity that he has undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.*
2. *All Mineral Resources figures reported in the table above represent estimates based on drilling completed up to 7th May 2018. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
3. **Au Equivalent (AuEq) calculated using long term 2023 - 2027 "Energy & Metals Concensus Forecasts" March 19, 2018 average of US$1310/oz for Au, US$17.91/oz for Ag, US$1.07/pound for Pb and US$1.42/pound for Zn. Adjustment has been made for metallurgical recovery and is based company's preliminary testwork results which used flotation to separate concentrates including a pyrite concentrate with credits only for Au and Ag. Based on grades and contained metal for Au, Ag, Pb and Zn, it is assumed that all commodities have reasonable potential to be economically extractable.*
   a. *The formula used for Au equivalent grade is: AuEq g/t = Au g/t + Ag g/t*0.0124+Pb%*0.509+Zn%*0.578 with metallurgical recovery of 88.8% Au, 80.6% Ag, 80.4% Pb and 69.1% Zn.*
   b. *Au equivalent ounces are calculated by multiplying Mineral Resource tonnage by Au equivalent grade and converting for ounces. The formula used for Au equivalent ounces is: AuEq Oz = [Tonnage x AuEq grade (g/t)]/31.1035.*
4. *Mineral Resources are reported on a dry in-situ basis.*
5. *Reported at a 0.7 g/t AuEq cut-off above pit shelland 1.4g/t AuEq below the pit shell. Cut-off parameters were selected based on an RPM internal cut-off calculator, which indicated that a break-even cut-off grade of 0.7g/t Au Equivalent above pit and 1.4g/t AuEq below pit, assuming a gold price of US$1310 per ounce, an open mining cost of US$6 per tonne and a processing cost of US$20 per tonne milled and processing recovery of 88.8% Au, 80.6% Ag, 80.4% Pb and 69.1% Zn.*
6. *Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not been demonstrated to have actual economic viability*

1.10. Interpretation and Conclusions

The following interpretations and conclusions have been made on the Altan Nar Gold Project from the findings of the Technical Report:

- The Project represents a promising intermediate sulphidation epithermal gold-silver-polymetallic project and has resources of sufficient quality to warrant additional investigation. No Measured Resources have been classified, however, Indicated Resource of 453,00 ounces ("oz") gold equivalent ("AuEq") averaging 2.0 g/t Au and 2.8 g/t AuEq and Inferred Resource of 277,100 oz AuEq averaging 1.7 g/t Au and 2.5 g/t AuEq, at a 0.7 g/t AuEq cut-off grade, within a total resource of 5.0 million tonnes ("Mt") Indicated and 3.4 Mt Inferred;
- Indicated Resource includes 317,700 oz gold, 31,600 tonnes ("t") zinc, 29,000 t lead, and 2.35 million oz silver, while the Inferred Resource contains 185,700 oz gold, 23,700 t zinc, 22,300 t lead, and 865,900 oz silver;
- Approximately 63% of the Mineral Resource is classified as Indicated and 37% classified as Inferred;
- Approximately 90% of the Mineral Resources are within 150 metres of surface with all zones open along strike and at depth;
- Multiple undrilled and scout-drilled prospects along the 5.6-kilometre Altan Nar trend have the potential for hosting additional gold-polymetallic resources;
- Potential for increasing the Mineral Resources are good, with the DZ and UN areas along strike and down dip, which requires further drilling to investigate potential. In addition, previously undrilled and scout drilled areas have potential which will need drill investigation;
- Metallurgical testwork is at an early stage but samples tested to date have generally shown a good response to leaching with average gold recoveries of 80% for the low arsenic material. Higher arsenic samples, which appear to make up only a relatively small part of the deposit (11%), would require a more intensive, though nonetheless proven, processing method with potentially high gold recoveries;
- Additional metallurgical testwork should be undertaken to maximize the metal recovery potential for the Altan Nar deposit; and
- The proposed processing circuit has not yet been defined for the Project. This will be completed based on ongoing metallurgical studies.

1.11. Recommendations

1.11.1. Drilling and Mineral Resources

In 2020, Wave Geophysics Ltd, based in Colorado, USA, was contracted to complete a review and completion of all geophysical data collected between 2011 and 2018. A series of maps and 3D models were produced for the following data; ground magnetics, induced polarization and gravity. In conjunction with the geological mapping and geochemical data sets, the newly compiled geophysical data should be used to identify high-priority drill targets across the Altan Nar license area.

The results of the drill program carried out in 2019 in the Discovery Zone successfully tested a concept of a preferred high-grade gold-mineralized horizon believed to potentially represent an epithermal boiling zone. However, an untested area of central Discovery Zone (referred to as the "Gap Zone" remains open

for 70 metres between TND-138 in the north and TND-134 to the south. This area should be drilled to confirm continuity of the mineralization in the Gap Zone.

Approximately 37% of the Altan Nar Project has been classified as Inferred Mineral Resource. It is recommended that additional drilling occur to increase confidence in the existing Inferred Mineral Resource, focusing on the highest-grade portions as well as additional extensional exploration drilling in the Discovery Zone and Union North areas of the deposit.

It is recommended that Erdene continue recording bulk density measurements, ensuring that measurements cover a variety of Fe grades to further refine the regression equation. Erdene should undertake a bulk density program using the remaining Altan Nar core. This should include up to 200 samples focusing on a range of grades (low to high) with each sample having a density determination as well as assays for Au, Pb, Zn and S.

1.11.2. Metallurgical Testwork

The following testwork is recommended to be included as part of a prefeasibility study program:

- Additional grindability testing to ensure that future processing of Altan Nar ore is well understood and including the following:
  - JK Drop Weight Test
  - SMC Tests
  - Abrasion Index Tests
  - Variability Bond Ball Work Index Tests
- Optimization of cyanidation conditions for high arsenic zones and lower arsenic zones
- Variability cyanidation tests from samples that include a range of arsenic contents and gold grades
- Further refinement of flotation conditions from high arsenic and low arsenic zones to determine if a flotation process could be implemented to add value through improved metal recovery and generation of additional by- products.
- Evaluation of pre-oxidation processes such as biological oxidation (BIOX), pressure oxidation (POX) or atmospheric oxidation (e.g., Albion Process) as a method to improve gold recovery from refractory zones.

1.11.3. Recommended Further Study

Table 1-2 Estimated Budget for Recommended Further Study for Altan Nar

Task	Cost (CAD)
Data Compilation and Targeting	$30,000
Drilling: In-fill, Exploration – 5,000m	$1,200,000
Bulk Density Analysis	$10,000
Update of Geological and Resource Model	$50,000
AN Metallurgical Testing	$100,000

2. Introduction

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The primary source documents supporting this Technical Report were:

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- Khundii Gold Project, Bayankhongor Aimag, Southwest Mongolia, NI43-101 Mineral Resource Technical Report prepared by RPM Global Asia Limited, 1 November 2018.
- ActLabs Asia Metallurgical Test work Spreadsheets

- Blue Coast Research, September 24, 2015. Altan Nar Preliminary Metallurgical Test Work Report
- Blue Coast Research, November 9, 2015. Altan Nar Preliminary Metallurgical Test Work Report – Phase 2
- Blue Coast Research, October 17, 2018. PJ5253 Altan Nar Discovery Zone South Preliminary Metallurgical Test Work Report
- Tetra Tech Canada Inc. (2019). Khundii Gold Project NI 43-101 Technical Report.

The Report Author was previously employed as the VP Exploration at Erdene and is intimately familiar with the Altan Nar project having visited the property on numerous occasions since its discovery in Q3 2011, with his most recent visit taking place in Q3 2019. Messrs. Clark and Kelly have not visited the property. As part of the resource estimate work carried out by RPM, personnel from RPM did visit the property at the time the resource estimate was carried out, namely May 2018. Mr. Kelly is based in Canada and his expertise is in the field of metallurgy and an onsite visit is not deemed necessary for him to carry out his work.

Unless otherwise stated all references to currency in this Technical Report are to United States Dollars (USD). All units of measurement used in this Technical Report are metric unless otherwise stated. Tonnages are reported as metric tonnes ("t" or "mt"). Within this text, "kt" means 1,000 metric tonnes and "Mt" means 1,000,000 metric tonnes. Precious metal grade values are in grams per tonne ("g/t") or troy ounces per tonne (oz/t.). A conversion of 31.1035 grams per troy ounce is applied to covert between precious metal units.

3. Reliance on Other Experts

In the preparation of this Technical Report, the Report Author has not relied on a report, opinion, or statement of another expert, who is not a qualified person, concerning legal, political, environmental, or tax matters relevant to the Technical Report.

4. Property Description and Location

The Project is located in southwestern Mongolia on the Altan Nar Mining License which is 100% held by Erdene Mongol LLC, a wholly owned subsidiary of Erdene. The Project falls within the 115,978 km^2 Bayankhongor province which contains a population of approximately 87,200 people, and an overall population density of 0.75 people per square kilometre. The Project is located approximately 980 km southwest of the Mongolian capital Ulaanbaatar (population 1,372,000) and 300 km south of the provincial capital, Bayankhongor City (population 30,900) (**Error! Reference source not found.**). The nearest towns (soum centres) are Shinejinst and Bayan Undur, located 70 km northeast and 80 km to the north, respectively. The Project area is sparsely populated with nomadic pastoral activity being the main industry.

The Altan Nar deposit, located on the Altan Nar mining licence, is located ~20 km (via unsealed road) from the Company's Bayan Khundii Gold Project, located on the Khundii Mining Licence. Field work is currently carried out from an exploration camp located at the Bayan Khundii site.

The Altan Nar mining license was first acquired as an exploration license in December of 2009 and in 2020 was converted to a mining license. The mining license is 100% held by Erdene Mongol LLC, a wholly

owned subsidiary of Erdene. Mining licenses in Mongolia are issued for an initial term of 30 years with an option to renew for two 20-year terms, for a maximum of 70 years.

The Altan Nar mining license is subject to a 1% Net Smelter Return royalty agreement with Sandstorm Gold Ltd. The Report Author is not aware of any environmental liabilities to which the property is subject.

A summary of the license status is provided in Table 4-1 and the license location is shown in **Error! Reference source not found.**.

Table 4-1a Altan Nar - Mining Licence Details

Property Name	License Number	Province	Date of Issue dd/mm/yyyy	Hectares	2021 Renewal Fees*
Altan Nar	MV-021547	Bayankhongor	04/03/2020	4,669	CAD$ 45,536

*renewal fees are based in Mongolian Tugrig (MNT) and the amount stated is based on an exchange rate of 2280 MNT to CAD $1 (Mar 2021).

Table 4-1b Centre point of the Altan Nar mining license is located as follows:

Property Name	Northing	Easting	UTM Zone	Long (DD)	Lat (DD)
Altan Nar	4,878,958.2	475,716.5	WGS 84, 47N	98.6968°	44.0634°

Permits required to carry out planned exploration work on the Altan Nar property include annual environmental and water use permits. Similar permits have been obtained in previous years and the Corporation does not anticipate any issues with obtaining these permits for the 2021 exploration season.

The Report Author is not aware of any other issues or liabilities (including surface rights or access) which could impact the future operations. It is noted that Erdene will need to obtain additional and separate permissions for land and water use to support any future mining operation.

Through its Mongolian-certified contractor, Erdene has completed baseline environmental studies for the Project in accordance with applicable Mongolian standards as part of the Company's mining licence application for the Project.

Figure 4-1 Altan Nar Property Location Map

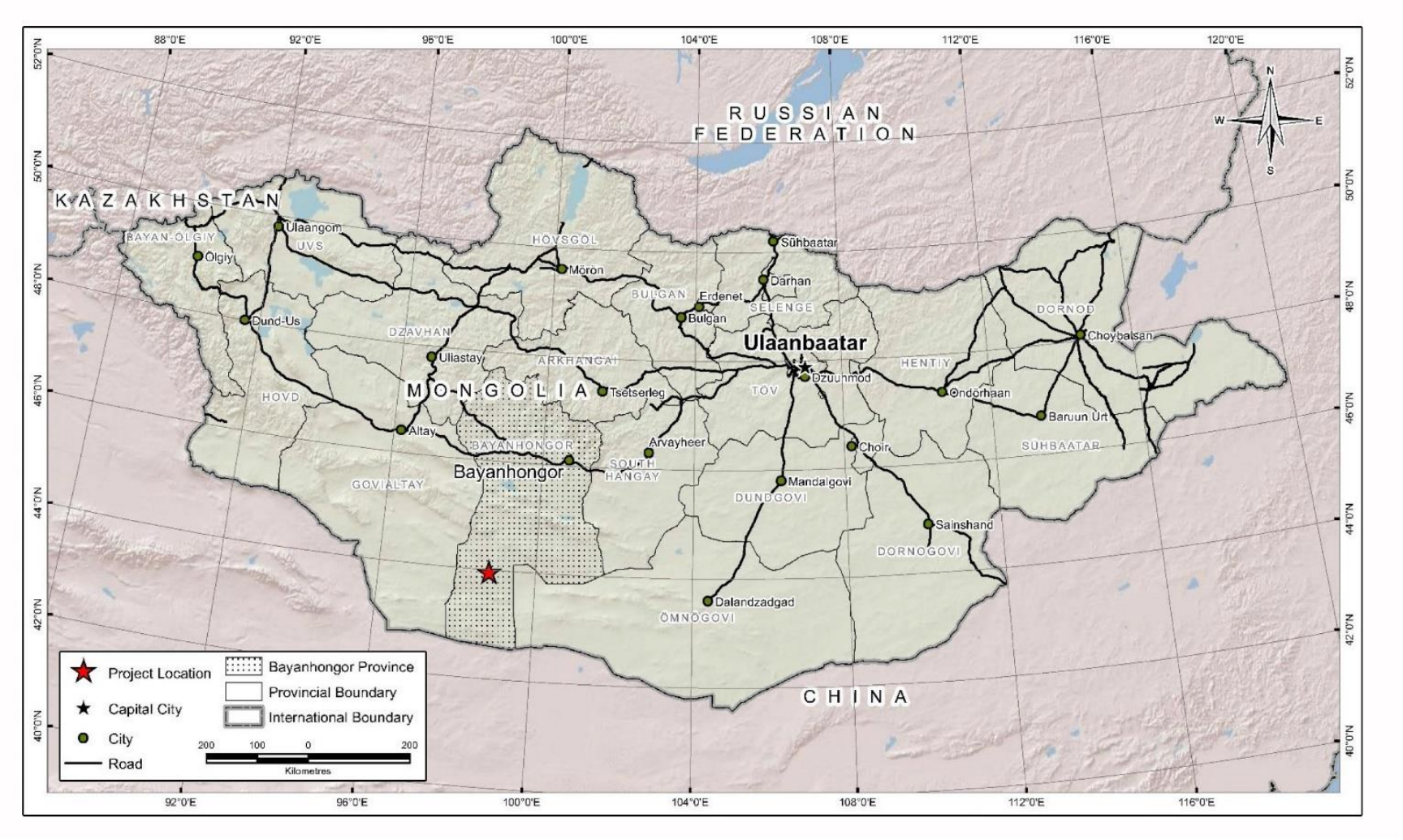
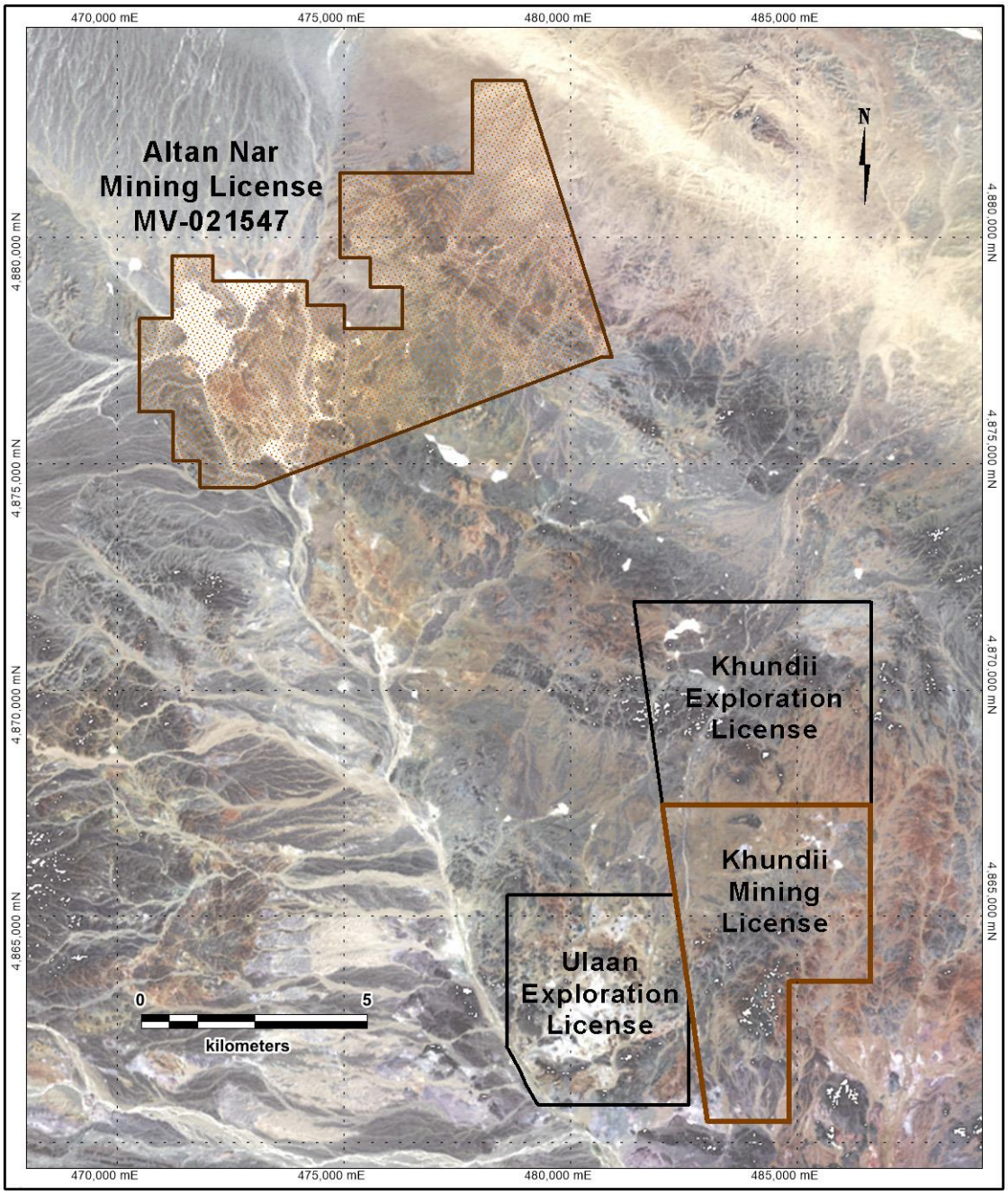


Figure 4-2 Altan Nar Mining License Location Map



5. Accessibility, Infrastructure, Local Resources, Climate and Physiography

5.1. Accessibility and Infrastructure

The Project is accessible on sealed roads from Ulaanbaatar to Bayanhongor (8 hours), followed by unsealed regional gravel roads from Bayankhongor to Shiinjinst (5 hours), then another 2 hours on to site. The Project is located approximately 160 km from the Chinese / Mongolian border. The Altan Nar deposit is located ~ 20 km from the Company's Bayan Khundii Gold Project and approximately 80 km (straight line) southwest of the soum centre, Shinejinst.

Each year between 2012 and 2018 a temporary landing strip, located 20 km to the northwest of the Bayan Khundii exploration camp and located on the Altan Nar mining license, was approved by the Mongolian Aviation Authority for light aircraft. Annual approval is required to use the temporary landing strip. The landing strip is located on a dry lakebed. A private flying service is available from Ulaanbaatar and a one-way trip takes approximately 3 hours.

5.2. Local Resources

The region hosting the Project is one of the least densely populated global areas, however, infrastructure to access south-western Mongolia's natural resources from China is developing rapidly. The Project is located approximately 200 km northwest of the Nariin Sukhait mining complex (Ovoot Tolgoi) from which South Gobi Resources (TSX:SGQ), TerraCom Limited (ASX:TER) and MAK Corporation all produce (or have in the past) coal and transport product through the Ceke (PRC) / Shivee Khuren (Mongolia) border point. This border crossing includes a paved eight-lane highway and a major automated railcar coal loading facility with three railway terminals where coal trucked in can be loaded on train and shipped out over the Jiayuguan–Ceke Railway, Ejin–Hami Railway or Linhe–Ceke Railway. Planning is underway to extend the standard gauge rail into Mongolia's coal mining districts refer to **Error! Reference source not found.**. Having noted this, any mining operation at Altan Nar would produce only high-value doré and/or base metal concentrate which could be trucked to the border.

Due to the early stage of the Project, there is limited infrastructure on site, however, an exploration camp has been established to provide exploration support. To date, power has been generated locally and water has been sourced from local wells. These sources are sufficient to carry out planned exploration work in 2021.

5.3. Climate and Physiography

The area surrounding the Project is characterized by low hills of exposed rock and lower plains of unconsolidated sediments. There is very little to no soil profile developed, with fresh rock generally occurring from or very near to surface. The elevation of the undulating low hills ranges from 1,300 m to 1,350 m above sea level. Vegetation is sparse and restricted to grasses, saxaul bushes (Haloxylon ammodendron - a local low shrub to small tree) and shrubs.

The Project area is subject to the extreme climate of the continental Gobi Desert region, with four seasons much like the other territories of Mongolia. Orographic conditions and local micro wind affect the air current formation and creates a dry and drier micro region where precipitation and humidity are relatively low, with hot summers and cold winters. Cloudiness, precipitation and snow cover are generally low. Absolute low temperature reaches -37.4°C and absolute high temperature reaches 44.9°C. Annual mean temperature is around 0.7°C. The region has mean annual precipitation of 105 mm. Although relatively little precipitation falls in this region, there is a one in 50-year chance that the maximum amount of 50 to 60 mm precipitation may fall within a single day. In summer, rain falls on an average of 15 to 20 days.

Figure 5-1 Southern Mongolia Infrastructure Map

6. History

Apart from regional geological mapping and prospecting carried out at a scale of 1:200,000, and more recently at a scale of 1:50,000, under the direction of the Mongolian government, no recorded exploration, development or mineral resource work is known to have taken place on the Property other than that completed by Erdene since acquisition in 2009. Prior to Erdene, the Property ownership was held by the government. No historic mining has been completed on the Project area.

7. Geological Setting and Mineralization

Most of the regional geology information presented below has been summarized from Erdene's internal and disclosed technical reports on the Altan Nar and Bayan Khundii gold projects (Khundii Gold District).

7.1. Regional Geology

The Project is located within the Edren island arc terrane, as described by Badarch et al. (2002), which is part of the larger composite Trans Altai Terrane ("TAT") comprised by island arc terranes, back-arc and fore-arc basins, ophiolite, accretionary wedges, and metamorphic terranes. The TAT forms part of the western end of the large, composite, arcuate-shaped Paleozoic New Kazakh-Mongol Arc terrane ("NKMA") as described by Yakubchuk (2002). The NKMA is part of the Central Asian Orogenic Belt ("CAOB"; Windley et al., 2007) and extends along the southern margin of Mongolia, including the border region with China, and is host to the Oyu Tolgoi copper-gold porphyry mine to the east (Figure 7-).

The TAT is located immediately south of the Main Mongolian Lineament (Badarch et al., 2002) that separates the dominantly Precambrian and Lower Paleozoic terranes to the north from the dominantly Upper Paleozoic terranes to the south.

7.2. Regional Tectonics and Structure

The TAT consists mostly of Middle Paleozoic volcanic, sedimentary and metasedimentary rocks that were intruded by Middle Paleozoic calc-alkaline and alkaline plutons. The TAT in the region near Erdene's license areas is comprised of three tectono-stratigraphic terranes (Figure 7-) as defined by Badarch et al. (2002). These include:

- Zoolen Accretionary Wedge, located south of Edren Terrane, consisting of a lowermost ophiolite sequence of mafic and ultramafic intrusive rocks that are overlain by a sequence of greenschist rocks, pillow lavas, intermediate volcanic and shallow marine sedimentary rocks. The middle stratigraphic portion of the Zoolen Wedge is dominated by intermediate volcanic rocks and rhyolite flows which are overlain by the uppermost sequence of non-marine sedimentary rocks.
- Baraan Back-arc/Fore-arc Terrane, located southwest of Edren terrane, is dominated by a lower sequence of intermediate volcanic and pyroclastic rocks with interbedded shallow marine sedimentary rocks. The upper portion of the Baraan terrane consists of non-marine sedimentary rocks.
- Edren Island Arc Terrane, which hosts the Project, consists of a lowermost minor sequence of mafic volcanic rocks that are overlain by an interbedded sequence of intermediate volcanic and pyroclastic rocks, shallow marine clastic deposits, and minor turbidite sedimentary rocks. This sequence is overlain by rhyolite and alkaline volcanic and pyroclastic rocks. The uppermost portion of the Edren terrane is dominated by non-marine sedimentary deposits.

All three tectono-stratigraphic terrains were intruded by Middle Paleozoic calc-alkaline and alkaline intrusions and were overlain by Late Paleozoic, Mesozoic and Cenozoic sedimentary rocks within a series of NW trending sedimentary basins. The geological setting of the TAT, especially the presence of Middle Paleozoic (Silurian-Devonian) island arc rocks intruded by calc-alkaline intrusions, is very similar to the geological setting for the Oyu Tolgoi mine, located approximately 670 km east of the Project and Erdene's Zuun Mod porphyry Mo-Cu deposit.

Figure 7-1 Gold Deposits of the Eastern Portion of the Central Asian Orogenic Belt

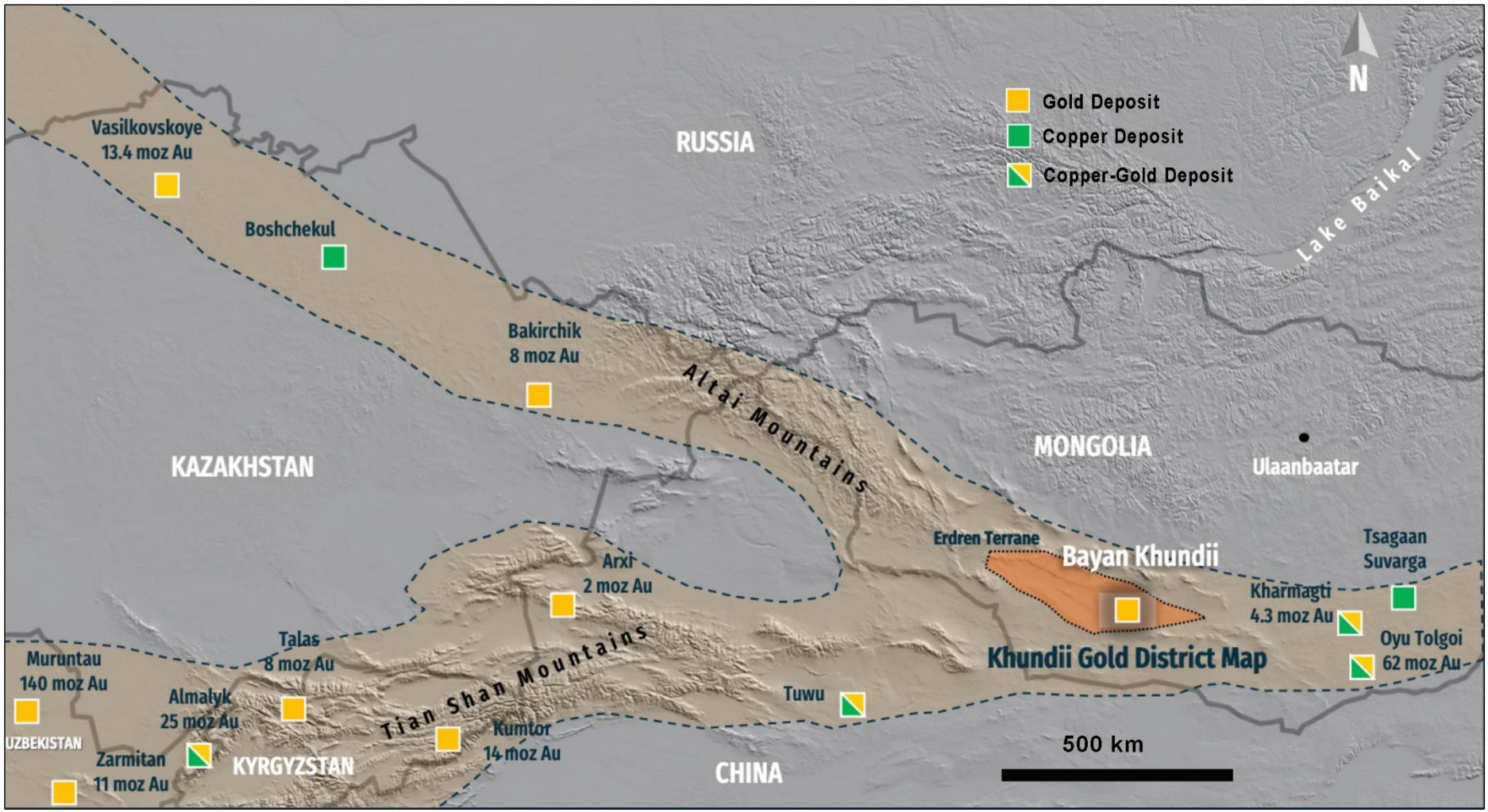
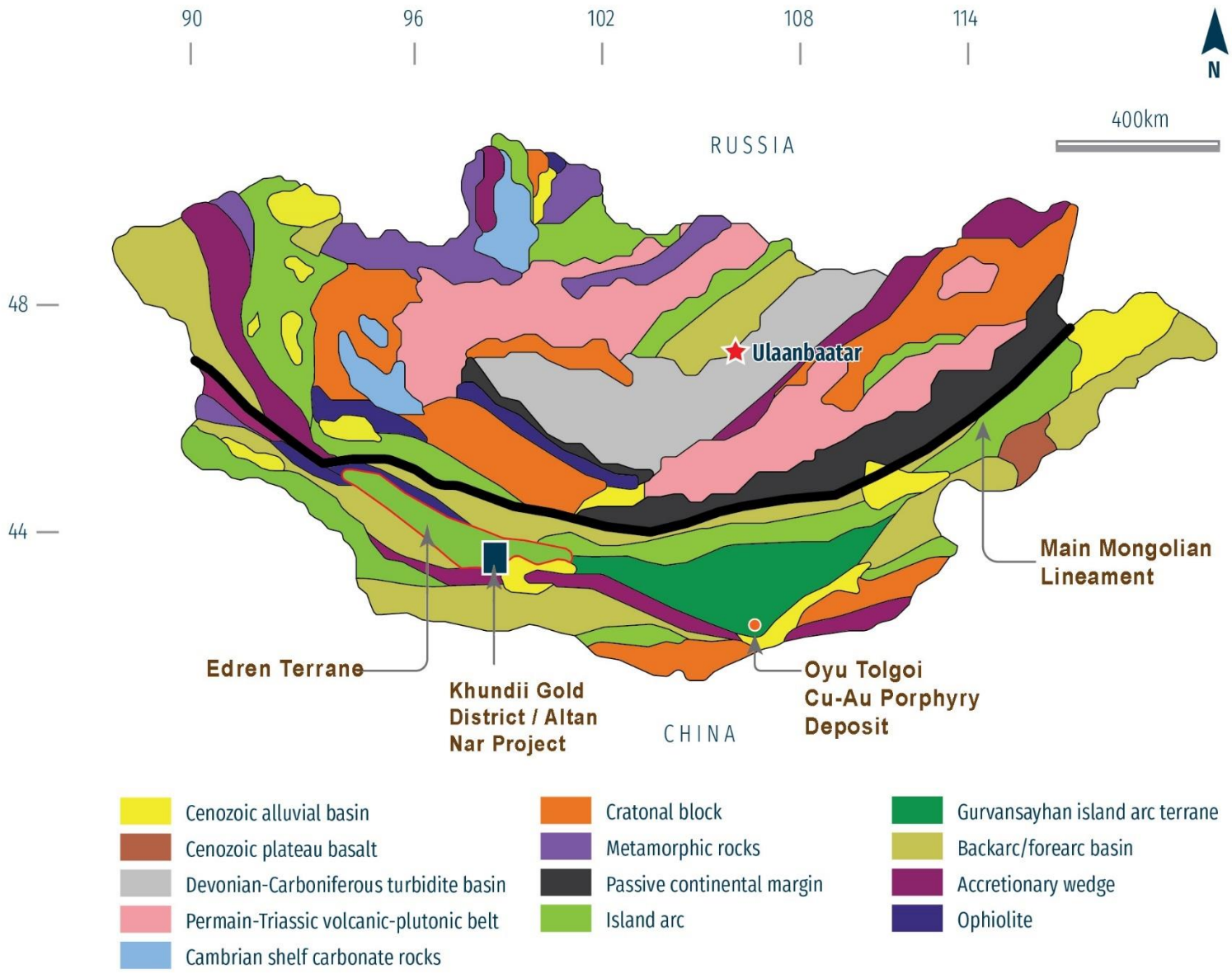


Figure 7-2 Tectonic Terranes of Mongolia with location of Edren Terrain and Altan Nar Project



7.3. General Geology of Eastern Trans Altai Terrain

The regional geology of the Project is outlined in a series of 1:200,000 scale geology maps available through the Mineral Resource and Petroleum Authority of Mongolia ("MRPAM"). The specific maps for the eastern TAT include L-47XXXII, L-47-XXXIII, L-47-XXXIV, K-47-II, K-47-III, and K-47-IV.

The oldest rocks in the eastern TAT include a series of Upper Devonian-Early Carboniferous intermediate volcanic and volcaniclastic rocks, minor felsic (rhyolite) volcanic and volcaniclastic rocks, and sedimentary units including sandstone, conglomerate and minor limestone. Bedding orientations in sedimentary and volcanic map units are predominantly northwest trending throughout the eastern TAT, thus paralleling the overall regional scale faults and structural trends. Primary bedding orientations on MRPAM maps were interpreted from lineaments derived from air photograph interpretation, and from regional mapping.

The volcanic and sedimentary rocks were intruded by a series of Carboniferous to Permian calc-alkaline to alkaline, granitoid plutons that range in composition from granodiorite and granite, to plagiogranite and syenite, and range in texture from fine- to coarse-grained seriate to equigranular and minor pegmatite. A few small (<5 km^2) Carboniferous age gabbro intrusions in the study area and are thought to represent the most mafic endmembers of intrusive suites. Late-stage and mostly post-mineralization dykes cross-cut both granitic intrusions and volcanic-sedimentary country rocks and range in composition from microdiorite to granite, syenite and lamprophyre. Dyke orientations may be quite variable on a local scale, however, most dykes are oriented NE-SW, especially within and near larger granite intrusions, with some dykes also having north-south or east-west orientations.

There are several NW-SE trending sedimentary basins throughout the eastern TAT and elsewhere in the western NKMA. These basins were in-filled by Late Paleozoic, Mesozoic and Cenozoic aged sedimentary sequences, including Carboniferous, Permian and Jurassic aged coal bearing strata and overlying, unconsolidated, Quaternary age sediments. The origin of these sedimentary basins is generally thought to be associated with widespread extensional tectonics resulting in large graben structures during the Mesozoic Era. Basin margins cut across all Carboniferous-Permian rocks including both volcanic-sedimentary map units and granite intrusions. Previous work by Erdene in the Zarman Basin to the north of the Project, including limited drilling, geological mapping, magnetic and seismic surveys indicated the basin consists of an asymmetric wedge of Jurassic to Quaternary sedimentary rocks that thickens toward the northern basin margins, to at least 450 m depth, and interpreted as half-graben extensional structures. Based on observations elsewhere in the eastern TAT, basin thicknesses may range from 200 m to as much as 1,500 m.

7.4. Geology of the Khundii Gold District

In 2019, the Government of Mongolia published three reports for 1:50,000 scale mapping projects covering a portion of in the eastern TAT, including the area of the Khundii Gold District ("KGD") (Lhundev et al, 2019). The following provides detail of the main geological units within the KGD.

Upper Devonian-Lower Carboniferous Aguit Formation

Th Upper Devonian-Lower Carboniferous Aguit Formation is a newly distinguished Formation and is located in the NE part of Altan Nar license area. This Formation is composed by two members: lower member - basalt, andesite-basalt, minor dacite and rhyolite, with layers of tuffaceous conglomerate and sandstone, and upper member – rhyolite, rhyodacite, their tuffs and minor basalt. Thickness of lower member is 950m, upper member is 1800m. This formation is unconformably covered by Khuviinkhar formation and intruded by lower Carboniferous Ulaankhyar and Upper Carboniferous Sumankhairkhan Intrusive complexes.

Lower Carboniferous Ulziithar Formation

The KGD is mainly composed by newly distinguished Lower Carboniferous Ulziithar Formation. This formation is subdivided into 3 members: lower member - terrigenic tuffogenic (1,200 m thick), middle member – basalt-andesite (800 m thick) and upper member – andesite-dacite (1,150 m thick). The contact between members is conformable.

The Bayan Khundii gold deposit is hosted in the lower member of Ulziithar Formation; the Altan Arrow – Khar Mori prospect area is hosted in the middle member of Ulziithar Formation and in Lower Carboniferous Bayan-Airag intrusive complex: and the Altan Nar gold-base metal deposit is hosted in the upper member of Ulziithar Formation.

The Ulziithar Formation has been unconformably covered by the Lower Carboniferous Khatankhairkhan Formation, and intruded by Lower Carboniferous (344 Ma) Bayan-Airag intrusive complex. In the Huvt huren area (9.6 km to the east of the Khundii area) geochronological age of andesite from the middle member was dated as 337±7 Ma (U/Pb, Cha-Uul-50). Abundant fauna and flora have been found from the lower member of the Ulziithar Formation 39 km to the northwest of the Khundii area and have been confirmed the Lower Carbonifeous age of this member (Cha-Uul-50).

Jurassic Ovoot Ulaan Formation

Sediments of the Ovoot Ulaan Formation unconformably covered Lower Carboniferous Ulziithar Formation and granitoids of Lower Carboniferous Bayan-Airag intrusive complex. The Ovoot Ulaan Formation is composed of conglomerate, conglomerate-breccia, sandstone, siltstone, sooty coal bearing siltstone, tuff gravelite, trachy-basalt, andesite, rhyolite, acidic tuff and tuffite. This formation has been subdivided into two members. Lower member (306m thick) is composed by volcanogenic-tuffogenic sediments, upper member (259m thick) is composed by terrigenic-tuffogenic sediments. Due to a lack of conclusive data, the age of Ovoot Ulaan Formation remains questionable (Lower Permian or Jurassic) and for the purposes of this Technical Report the age has been assumed to be Jurassic.

Erdene drilling at Bayan Khundii shows that, in the area of the BK deposit, this formation is composed by lower terrigenic-tuffogenic sediments, including a basaltic sill, unconformably covered by flow basalt and upper terrigenic sediments.

The upper flow basalt unit has been age dated. The age of this basalt is 191.2±3 Ma or Early Jurrasic (Lhundev et al., 2019). The age of the basaltic sills which intruded the lower terrigenic-tuffogenic sediments is 176±28 Ma or also Early Jurrasic (Erdene, internal report 2019). Notably, it has been confirmed that the Ovoot Ulaan formation was formed later than BK gold mineralization, and unconformably covers the latter.

Lower-Upper Carboniferous Bayan-Airag Intrusive Complex

According to the 1:50,000 state mapping (Lhundev et al., 2019) the Lower to Upper Carboniferous Bayan-Airag Intrusive complex is composed of five different phases within the KGD:

- Phase I: medium grained biotite-hornblende monzonite, quartz monzonite, quartz monzodiorite (Ovoot Ulaan massif U-Pb 335.3±3.9 Ma (Lhundev et al., 2019), located 6.2 km to the NE from BK).
- Phase II: mottled, light yellowish, coarse grained biotite-amphibole granodiorite, biotite granite (east body of Khul morit massif U-Pb 344.0±1.2 Ma (Tumurkhuu et al, 2013), located approximately 27 km to NW from BK).
- Phase III: equigranular, medium grained, alkali granite (locally, within the margin of the intrusive unit, it is quartz syenite). (Khul morit, Aryn usny khar massif U-Pb 330±12 Ma (Hanzl et al, 2008), located ~35 km to NW from BK).
- Phase IV: medium grained, quartz syenite, quartz syenite porphyry. (BK quartz syenite porphyry U-Pb 310±27 Ma (Erdene, 2018)).

- Phase V: brown fine grained, alkali leucogranite. (this alkali granite is similar with 303.4±4.8 Ma age dated Bayanzurkh massif, located in the NE part of Altan Nar license area).

In addition, there are numerous dykes (diorite porphyry, basalt, syenite porphyry, leucogranite) and veins (quartz, quartz-tourmaline veins) and quartz-tourmaline breccia pipes.

Upper Carboniferous Sumahkhairkhan Intrusive complex

According to the 1:50,000 state mapping (Lhundev et al., 2019, Togtokh et al., 2019) the Upper Carboniferous Sumankhairkhan Intrusive complex is composed of 3 phases:

- Phase I: coarse grained monzonite, monzodiorite, hornblende alkalic diorite. (Sumankhairkhan massive U-Pb 306.6±4.0 Ma (Togtokh et al, 2019), located ~95km to NW from Altan Nar.
- Phase II (main phase): pinkish gray medium grained grano-syenite, pink alkali amphibole alkali leucogranite, granite (Dund Nuruu massive U-Pb 299.3±4.1 Ma (Lhundev et al., 2019), located ~36km to NW from Altan Nar, and alkali feldspar alkali biotite leucogranite, minor medium, fine grained leucogranite (Sumankhairkhan massive U-Pb 305.4±1.8 Ma, located ~65km to NW from Altan Nar, and Bayanzurh massive U-Pb 303.4±4.8 Ma (Tomurkhuu et al, 2013), located east side of Altan Nar).
- Phase III: pinkish brown, equigranular fine grained leucogranite.
- Dykes: diorite porphyry, micro diorite, minor rhyolitr porphyry.

7.5. Age of Mineralization in the Khundii Gold District

Erdene undertook a geochronological study of lithologies and mineralization for the Khundii Gold District including samples from Bayan Khundii (tuff, syenite, adularia), Altan Nar (andesite and adularia), Altan Arrow (adularia), and Ulaan (adularia). The Ar/Ar dating was carried out at Curtin University in Australia. The flowing table summarizes the results of the study.

Table 7-1 Geochronology Data Khundii Gold District

Sample	Method	Age (Ma)	Comment
Bayan Khundii			
BK Tuff	U/Pb	334.2±6.1	Fair result (range- 328-340 Ma)
BK Adularia	Ar/Ar	336.82±0.50	Very precise age
BK Syenite	U/Pb	310±27	Poor precision (range – 283-337 ma)
Altan Nar			
AN Andesite	U/Pb	330±10	Poor-fair result (range – 320-340 Ma)
AN Adularia	Ar/Ar	309.70±0.47	Very precise age
Altan Arrow			
AA Adularia	Ar/Ar	325.44±0.34	Not reliable due to lack of age plateau
Ulaan			
UDH Adularia	Ar/Ar	332.6±0.52	Not reliable due to lack of age plateau

Sample	Method	Age (Ma)	Comment
Regional Data			
Basalt	U/Pb	191.2±3	Early Jurassic – cover rocks at BK
Edren Granitoids*	U/Pb	273.8±4.2	Youngest age – most intrusions are Early Permian or Late Carboniferous
Edren Granitoids*	U/Pb	332.9±4.9 344.0±1.2	Oldest ages – only a couple samples from study plot in Early Carboniferous

**Data from report by Togtokh, 2013*

The Ar/Ar results for BK and AN adularia are extremely precise, with '±' values of <1 Ma. These high-quality data provide very accurate ages and relative timing for the Bayan Khundii (336.82±0.50 Ma) and Altan Nar (309.70±0.47 Ma) deposits respectively. The strongly fractured nature of the host rocks at Altan Arrow suggests protracted deformation and movement along the main Altan Arrow Fault. Argon age dating is notoriously susceptible to re-setting by structural deformation processes which may have contributed to the poor-quality analytical results.

The following are key points from the U/Pb and Ar/Ar geochronological studies:

Bayan Khundii

- Ar/Ar data for adularia provide very precise ages and the Ar/Ar age for the BK adularia (336.82±0.5 Ma) is presumed to reflect mineralization age at BK and overlaps the less precise magmatic age for the tuffs (334.2±6.1 Ma). Since it is impossible for the adularia age to predate the age of its host rocks, it is assumed that the adularia was deposited shortly after the deposition of the tuffs.
- One of the important questions regarding the geology of the Bayan Khundii deposit is whether the syenite intrusion, which intruded the host tuffs at depth, is pre- or post-mineral. As noted in **Error! Reference source not found.** the adularia 'mineralizing' age (336.82±0.50 Ma) is more than 25 My older than the magmatic age of the syenite (310±27 Ma), therefore the syenite is considered post-mineral.

Altan Nar

- Recent geochronological data indicate a U/Pb magmatic age for the host andesites at Altan Nar of 330±10 Ma and an Ar/Ar mineralization age of 309.7±0.47 Ma for the intermediate sulphidation deposit. This circa 20 My gap indicates that mineralization at AN was not related to the magmatic event that deposited the andesites, as it is unreasonable to maintain a shallow magmatic source for 20 My.
- Accordingly, it is likely that there is a circa 310 Ma intrusion at Altan Nar which was the source of the intermediate sulphidation mineralization. This postulated intrusion may be situated at depth, below the current level of erosion, as suggested in the gravity data.

Regional

- Magmatic and mineralizing ages for the KGD are consistent with magmatic and mineralizing ages within the prolific Tien Shan belt to the west, and some deposits within the Gurvansaikhan island arc terrane to the east (e.g. Kharmagtai, 324±4 Ma);

7.6. Altan Nar Geology

A package of predominantly andesite-basalt flows (referred to as 'Sequence A' - Aguit Formation, lower member) dominate the eastern part of the license area. These rocks are interpreted to be a steeply dipping volcanic sequence that was intruded by Sumankhairkhan intrusive massive, and intruded by sub-parallel, NW-trending alkali granite porphyry and fine-grained granite intrusions interpreted to be dykes, or sills. Series of dyke complexes are up to 250 m in width with maximum length of 6 km. Several narrow, NW-trending granitic dykes (<100 m in width) that are similar in composition to the large granite intrusion (Upper Carboniferous Bayanzurkh massif) along the

eastern margin of the license, intrude the andesite rocks near the Altan Nar area. A few isolated, narrow (10-100 m wide), NW-SE and NE-SW trending trachy-textured dykes intrude the andesite rocks. Widespread development of hornfels textures was noted in the andesite-basalt rocks, presumably resulting from contact metamorphism related to the first phase monzodiorite of the Sumankhairkhan Intrusive complex. The wedge-shaped package of extrusive-intrusive rocks has a pronounced NW-trending series of linear topographical features that are clearly visible on satellite images. A ground magnetic survey was completed over most of the license in 2011. The wedge-shaped Sequence A volcanic rocks (Aguit Formation) and associated monzodiorite intrusions were noted to have a much higher magnetic response than the Sequence B volcanic rocks (Ulziithar Formation) to the west and the granite intrusion situated along the eastern margin (Bayanzurkh massif of the Upper Carboniferous Sumankhairkhan Intrusive complex) of the Altan Nar license. Areas of low magnetic response within the wedge-shaped sequence correspond to granite sills.

The geology of the central and western portion of the Altan Nar license area is dominated by the upper member of the Ulziitkhar Formation, consisting mostly of a sequence of volcanic flows and tuffaceous rocks of andesite composition (referred to as 'Sequence B'), with subordinate rhyolite, rhyodacite, andesite tuff, and green-coloured andesite. Satellite images for this portion of the license indicate Sequence B volcanic rocks lack the well-developed lineaments and topographical features noted above for the Sequence A rocks. Bedding orientations for the Sequence B volcanic rocks, obtained from 2017 oriented core drilling, indicate these volcanic units strike to the northwest and dip at approximately 20-30 degrees to the northeast. Intrusive rocks are much less abundant in the west and central parts of the license and include a small granodiorite plug (approximately 200 by 300 m) near the southern license boundary, and several variablyoriented trachy-andesite and rhyolite dykes (generally < 50 m wide and up to 1 km in length). The magnetic response of Sequence B volcanic rocks is generally lower than for Sequence A and lacks linear orientations, which supports the shallow-dip interpretation for these rocks.

The Altan Nar deposit is hosted in the Sequence B volcanic units (upper member of Ulziitkhar Formation) and consists of gold, silver, zinc, and lead mineralization within sub-vertically dipping epithermal quartz veins.

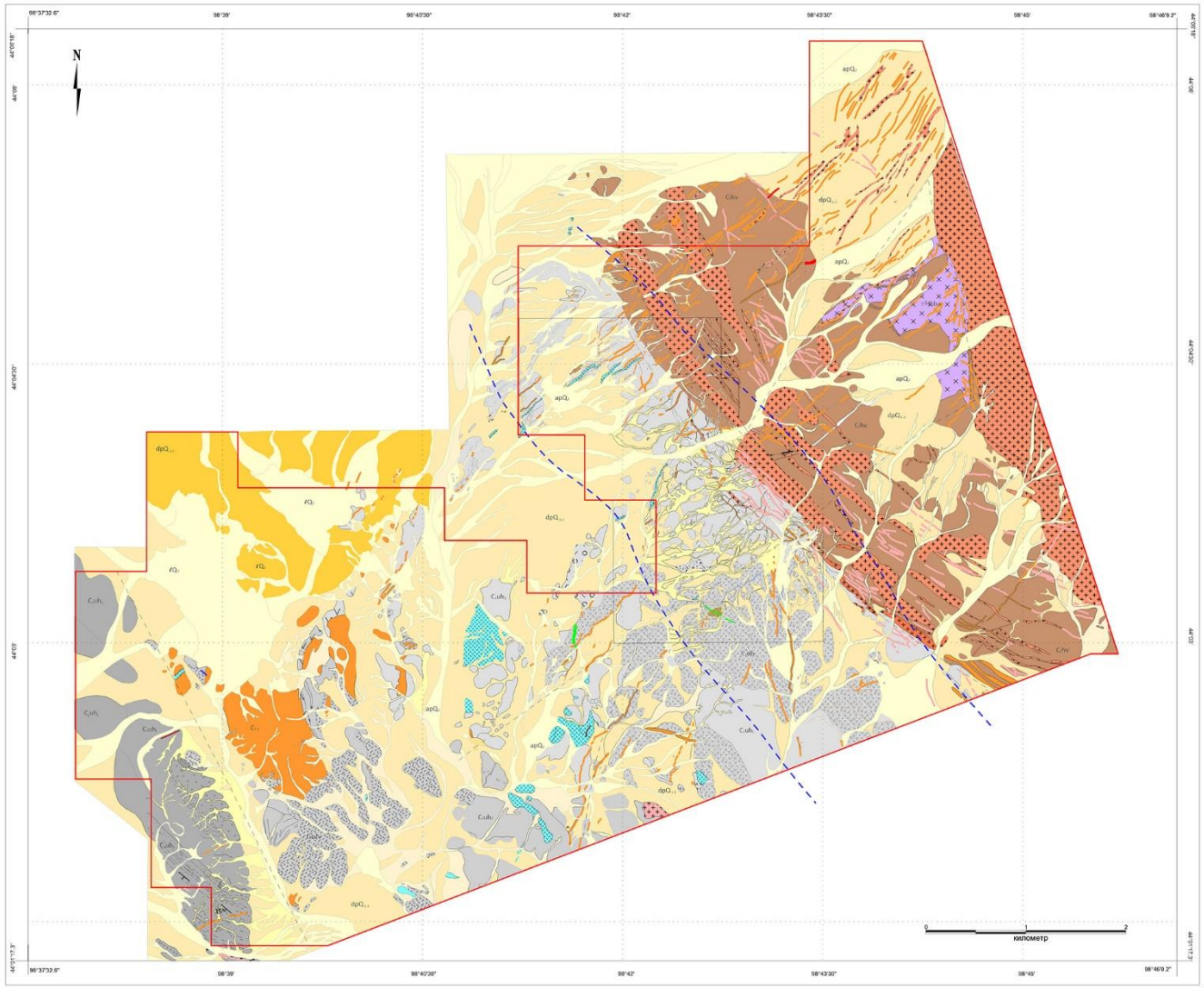
Topographic low areas throughout the Altan Nar license area are underlain by unconsolidated Quaternary sediments. The pattern and distribution of various facies of Quaternary deposits reflects paleo-drainage systems that were developed along bedrock features including faults and lineament ridges. The abundance and patterns of distribution of Quaternary sediments differs significantly over the Sequence A and B volcanic rocks.

Sequence A andesite (lower member of Aguit Formation) and granite rocks are cross-cut by a series of narrow (generally 50 to 200 m wide) regularly spaced (approximately 0.5 to 1.0 km) paleo-drainage valleys, now infilled by unconsolidated Quaternary sediments, which are interpreted to reflect sub-parallel, NE-trending faults.

Minor north-south and east-west oriented Quaternary valleys may reflect localized structural offsets along some NE faults. Several NE- and ENE-trending faults were mapped in bedrock in the eastern portion of the license. These faults were noted to offset both andesite and later granite dykes and sills, suggesting these structures were developed late in the geological history of this area.

Quaternary deposits and paleo-drainage patterns over Sequence B rocks (upper member of Ulziitkhar Formation) in the western and central parts of the license are much more abundant than over Sequence A rocks (lower member of Aguit Formation) and have more randomly oriented drainage systems. A few narrow NE-SW and N-S oriented Quaternary deposits in the east-central part of the Altan Nar license may reflect extensions of bedrock structures developed over Sequence A rocks.

Figure 7-3 Altan Nar Geology Map



Legend

Quaternary

- apQ_2 Holocene: alluvium-proluvium (ap), lake (ℓ)
- dpQ_{1-2} Pleistocene-Holocene sediment: deluvium, proluvium
- E_3sg Oligocene, Shandgol Formation: Reddish gravellite, sand, conglomerate

Ulziithar formation (C_1 uh)

Upper member
- C_1uh_3 Andesite-basalt, andesite-dacite
- Tuff, tuffite, tuffaceous sandstone, volcanic breccia

Middle member
- Rhyolite, rhyodacite
- C_1uh_2 Basalt-andesite. 337±7 Ma (U/Pb, Cha-Uul-50)

Lower member
- Basalt-andesite
- C_1uh_1 Terrigenic-tuffogenic sequence with fauna

Aguit formation (D_3 -C_1 ag)

- Basalt, andesite-basalt, minor dacite and rhyolite.

Bayan-Airag Intrusive Complex

- Syenite, quartz syenite porphyry small intrusions
- Rhyodacite subvulcanic dome

Sumankhairkhan Intrusive Complex

- Phase I. Medium-Coarse grained Monzodiorite, quartz-diorite, granodiorite
- Phase II. Medium grained alkali amfibole bearing alkali leucogranite, granite porphyry. Age: 303.4+4.8 Ma.

- License boundary
- Mineralized corridor

7.7. Mineralization Style

Within the Discovery Zone, gold mineralization appears to be structurally controlled within NNE to NE trending sub-parallel shear zones that are steeply dipping to sub-vertical. Gold-bearing zones are associated with multi-phase gold-silver-lead-zinc mineralization related to epithermal quartz and quartz-chalcedony veins and breccias in a northeast-southwest trending, steeply northwest dipping, fault / breccia zone. Preliminary evidence suggests that andesite units, particularly near the contact with more competent silicified volcanic breccia units, act as a favourable host for mineralization.

There are multiple phases of quartz veins / breccia (+/- mineralization) within the structurally controlled mineralized zones at Altan Nar. Only preliminary work has been completed to date regarding the paragenetic sequence for these phases. Accordingly, no definitive sequence is provided for the following mineralizing phases, based on petrographic observations, coupled with other field and mineralogical data, the following preliminary paragenetic sequence is proposed for Altan Nar:

- Early-stage massive quartz veining and brecciation.
- Brecciation, silicification and comb quartz veining and associated white mica alteration (sericite-pyrite-quartz) and deposition of galena-sphalerite-chalcopyrite-gold ±arsenopyrite (low-arsenopyrite gold mineralization).
- Localized arsenopyrite-pyrite-gold overprint on above sequences, with some associated chalcedony veining and silicification (high-arsenopyrite gold mineralization).
- Mn-Ca carbonate veining (rhodochrosite, calcite, etc.) – late hypogene
- Late-stage (supergene) oxidation – limonite, Mn oxides, malachite.

Zones of high-arsenic gold mineralization were initially reported and tested. However, additional drilling and trenching across the Altan Nar property has shown that this type of mineralization comprises approximately 11% of the deposit and is localized when compared to the dominant low-arsenic style gold-silver-lead-zinc mineralization.

Six low-arsenic samples (averaging 6.3 g/t Au, 18.7 g/t Ag, 1.8% Pb, 1.2% Zn, 0.2% As) were submitted for both transmitted and reflected light petrographic analysis. Visible gold was observed in three of the six samples, in contrast to previous analysis of high-arsenic samples where very fine-grained gold was only noted in two of 20 mineralized samples. In addition, arsenopyrite was absent in four of the six low-arsenic samples, and only present in trace amounts in the other two samples. This contrasts with previous petrographic work on high-arsenic samples where arsenopyrite was observed, in varying amounts, in all samples and constituted up to 1% of the mode.

A Maiden Mineral Resource estimate dated 24th March 2015, was only carried out for Discovery and Union North zones while the May 2018 estimate presented in this Technical Report was based on nine prospects: Discovery, Union North, True North, Central Valley, Union South, Riverside, Maggie, Union East and Northfield zones. Each is briefly discussed below for completeness. All nine prospects have zones of Au-Ag-Pb-Zn mineralization with broadly similar epithermal style of mineralization which is consistent with intermediate sulphidation (IS) deposits.

7.7.1. Discovery Zone

Drilling to date at the Discovery Zone (“DZ”) has identified a minimum strike length of 650 m and has demonstrated both vertical and lateral continuity of gold, silver, lead and zinc mineralization. Exploration work has identified north-northeast trending, sub-vertical zones of gold and silver mineralization over variable widths (up to 50 m apparent width) averaging more than 1 g/t gold, including drill intervals up to 29 m averaging 4.3 g/t gold and 24.1 g/t silver in DZ South.

Within the DZ, gold mineralization is structurally controlled and is associated multi-stage epithermal comb-quartz and quartz-chalcedony veins with variable brecciation and minor ‘boiling textures’ including bladed

calcite (replaced by silica) and adularia, along with common hydrothermal breccia zones, with mineralized zones being steeply dipping to sub-vertical. The DZ remains open along strike to the north and at depth. Drilling has tested the mineralization to a vertical depth of 397 m (DZ South) to 390 m (DZ North).

The longest holes at the DZ are ~450m (~390m-397m vertical depth) (TND-31 and TND-129). TND-31 intersected 2m of 9.57 g/t Au, 7g/t Ag, 0.22% combined Zn and Pb at 369-371m depth.

In the DZ, trench results confirmed that mineralization begins within 1 to 2 metre of surface, is structurally controlled, and is associated with quartz veins and breccias within zones of intense white mica alteration.

Most of the Mineral Resources reported in this Technical Report are from the DZ.

7.7.2. Union North

Union North is located 1.3 km northwest of the DZ. A series of seven trenches and 24 diamond core holes drilled at an approximate 50 m by 50 m grid spacing, with some closer spaced holes (15-20m), have identified zones of mineralization associated with a structural dilation zone. This zone is located on a large northeast-southwest trending structure that hosts wide, parallel zones of intensely altered and mineralized breccias. Drilling in 2012 included a single hole (TND-46) at Union North which intersected 47 m of 1.3 g/t gold, including 9 m of 4.3 g/t gold, 12 g/t silver, and 1.7% combined lead-zinc. Drilling in Q2 2014 returned the widest zone of higher-grade mineralization to date and an indication of intensifying grades at depth, including 22 m of 2.1 g/t (TND-60) and 25 m vertically below expanding to 24 m of similar grade with a high-grade core of 12 m of 4 g/t gold, 10 g/t silver and 2.5% combined lead and zinc (TND-61).

A step-out drill hole drilled at NE end of the Union North mineralized trend came up barren and potential for additional mineralization at northern extension is considered low, whereas the south western end remains open and there is potential for additional mineralization in this area. In contrast to the DZ, which is mostly devoid of granitoid dykes, Union North has several granitoid dykes that have both NE and E-W orientations and follow the overall trend of mineralized vein and breccia zones. The dykes are unmineralized and mostly considered to be post-mineral; however, some dykes may be pre-mineral.

Outside of the DZ and Union North, scout drilling (2011-2012), trenching (2013, Q3 2014) and target drilling (Q2 and Q4 2014, 2015-2018) have been carried out over a 5.0 km portion of the Altan Nar property to test high priority targets. The following prospects have Inferred Resources defined as part of the overall Altan Nar resources included in this Technical Report.

7.7.3. Maggie Prospect

Located 700 m north of the DZ and 700 m east of the Union North Prospect, the Maggie Prospect area is a 500 m x 400 m triangular shaped area along a major NE structure and bounded to the east by a large granite sill/stock. This target is characterized by a 10 to 40 m wide linear white-mica alteration zone with gold, silver, lead and zinc mineralization traced for over 300 m strike length on a NE trend through the centre of the target. At the NE end of this structure is a 90m by 130m magnetic low feature with a coincident low-level IP chargeability anomaly (11 mSec).

A series of trenches and drill holes have been completed over the Maggie Prospect including an initial trench that uncovered a well mineralized zone, 38 m wide and hosted by an altered andesite cut by two barren post-mineralization dykes (7 m and 2 m wide respectively). Excluding the 9 m of post mineralization dyke material, the central mineralized zone in trench ANT-25 returned 17 m of 3.4 g/t gold, 4.9 g/t silver and 1.41% combined lead-zinc. Drilling in 2017 included two diamond holes (TND-123 and TND-133) collared as drill fans and both holes intersected high grade gold and base metal mineralization. TND-123 intersected 16m of 3.8g/t Au, 9.4g/t Ag, 0.8% combined Pb and Zn from 28m however mineralization was cut by 8.8m thick barren post mineralization dykes. TND-133 intersected a 4-metre-wide interval that averaged 2.2g/t Au, 7.5g/t Ag, 1.04% combined Pb and Zn from 32m.

Mineralization at the Maggie Project is open along strike (NE-SW) and down-dip and the mineralization looks to be wider in the NE direction. Resource modelling has been carried out for the Maggie Prospect.

7.7.4. Union South Prospect

This prospect is largely a linear N-S feature which continues over 700 m south from the Union North Prospect. Underlying the main trend there are zones of intense dipole chargeability highs extending to surface that are most pronounced in the northern portion of the target area (near the south end of the Union North Prospect) where there is evidence of a structural offset. Drilling has included the identification of two parallel, 10 m wide zones, with 1.7 g/t and 2.3 g/t gold equivalent (TND-29). High grade mineralization was also discovered in trenching (ANT-24) in the southern area with 10 m of 4.46 g/t gold, 8.9 g/t silver and 2.2% lead. However, continuity has not been well established albeit with limited drilling (four holes in south portion of the trend and one in north).

Resource modelling was carried out in this area and mineralization remains open along NE/SW and down-dip directions.

7.7.5. Riverside Prospect

This prospect is located approximately 200 m south and west of Union North and is characterized by an 800 m long gradient array IP chargeability anomaly and accompanying geochemical anomaly that follows a trend of white mica alteration, quartz/breccia rubble fields and porphyry dykes, all of which follow the same structural pathway, although much of the prospect area is covered by recent sediments. Trenching on the prospect returned 6 m of 3 g/t gold. Induced polarization studies completed in 2014 and 2016 indicate moderate chargeability at depth although increasing in the northern portion of the target area and a high-resolution magnetic survey completed in 2016 revealed a NNE-trending intense magnetic low feature in the northern target area, trending into the Union North target. A series of five holes have been drilled in the target, several of which intersected some notable mineralization. TND-88 intersected 16m at 0.5g/t Au, 0.5% combined Pb and Zn from 45m including 1m at 3.8g/t Au. This hole also intersected 2m of 1.2g/t Au from 32m and 2m of 1.6g/t from 20m. TND-128 intersected 38m at 0.21g/t Au, 0.56% combined Pb and Zn from 62m.

Resource modelling was carried out on the Riverside Prospect and mineralization is still open in each direction.

7.7.6. Union North East Prospect

This prospect is located on the east side of the Union North Prospect and extends eastward for approximately 350m. These prospects are potentially connected. Two trenches (ANT-40 and ANT-41) tested surface geochemical anomalies, with ANT-41 returning 27.5m averaging 1.98g/t Au, 4.4 g/t Ag, 0.57% combined Pb and Zn, including 2m at 8.4g/t Au, 10g/t Ag, and 1.9% combined Pb and Zn. Trench results indicate that grades increase toward the Union North Prospect. Five holes were drilled in this prospect and all holes intersected zones of gold-silver-lead-zinc mineralization with holes TND-97 and TND-120 returning the best intersections. TND-97 intersected an 11m interval which averaged 1.7 g/t Au, 5.8 g/t Ag, and 1.29% combined Pb and Zn starting at 44m depth, whereas drillhole TND-120 intersected a 5.1m interval which averaged 1.08g/t Au, 29.4 g/t Ag, 1.05% Pb and 2.25% Zn, starting at 37m depth.

Resource modelling has been carried out on this Prospect however mineralization is still open along strike to the east and down-dip direction.

7.7.7. Other Prospects

Of the remaining 14 prospects, five have had limited scout drilling and trenching, seven are at a low level of understanding and may improve in ranking as additional data is generated; however, all display evidence of gold-silver and base metal mineralisation at surface and two (Nomin Tal and Oyut Khundii) are outside

the main mineralized trend and are of different styles of mineralization, albeit with high grades of copper and gold mineralization over narrow widths.

8. Deposit Type

The interpretation of Altan Nar favours an intermediate-sulphidation epithermal deposit. Unlike high sulphidation (HS) deposits which form proximal to, and generally directly above, an intrusive body with mostly magmatic fluid interaction, or low sulphidation (LS) deposits (e.g. Bayan Khundii) which form more distal to an intrusive body from mostly meteoric fluid interaction, intermediate sulphidation (IS) deposits form between these two 'end member' conditions. IS deposits generally form from a combination of magmatic and meteoric fluids at depths ranging from 0.3 to 1.0 km beneath the paleo vadose surface, at temperatures which also vary between 150°C and 300°C. The source fluids generally have elevated salinity, commonly greater than 5 weight percent NaCl equivalent.

IS deposits typically contain manganese-, iron- and calcium carbonates such as rhodochrosite and Mangan calcite, manganese-silicates, along with sulphide minerals such as pyrite, chalcopyrite, sphalerite, galena, tetrahedrite, and tennantite. The presence of light brown coloured (i.e., 'honey') sphalerite, which reflects low iron content, is characteristic of IS deposits. IS deposits represent important global targets and sources for gold, silver, lead, and zinc mineralization.

This style of gold mineralization represents the most prolific style of gold mineralization in the southeast Asia region and includes Kelian, Porgera and Anatok, and elsewhere in the world, Fruta del Norte, Cripple Creek & Montana Tunnels and Rosia Montana and in Mexico five of the world's top silver producers including Penasquito. They are often associated with breccia pipes (diatremes) and can extend vertically for greater than 1 kilometre. The Kelian open pit, for example, is 500 metres deep.

9. Exploration

A summary of the activity, including methodologies and results, for the exploration work carried out between March 2010 and December 2020 on the Altan Nar mining license is outlined below.

9.1. Geological Mapping

Erdene has carried out progressively more detailed and extensive geological mapping on the Altan Nar mining license since discovery of the historic workings and associated copper-gold mineralization at Nomin Tal in the eastern portion of the license in 2010. This work has been principally carried out by Erdene geologists over an area of approximately 50 sq km.

9.2. Soil Geochemical Survey

All soil surveys were supervised and carried out by Erdene's field geologists in 2011, 2012 and 2014. Because the Project is located within the Gobi region and therefore virtually devoid of organic materials, no A (depleted), or B (enriched) soil horizons exist. Soil samples in the regions therefore consist, for the most part, of residual weathered bedrock along with Aeolian sediments. Samples were taken from shallow hand-dug pits (average depth 25 cm) to minimize Aeolian contamination. Samples were dry sieved in the field with the -2 mm size fraction bagged and sent for analysis. See "Section 12.0 – Sample Preparation, Analyses, and Security" for more details. All sample locations were determined by hand-held GPS devices with a location accuracy of approximately 3 m.

Analysis of samples was carried out at SGS Laboratories in Ulaanbaatar. All samples from 2011 were assayed for Au, Ag, Cu, Pb, Zn, As and Mo. Samples from 2012 were assayed for Au and a suite of 45 elements (SGS Code ICP40B). Samples from 2014 were analyzed for Au and a suite of 33 elements (SGS Code ICP40B-2014). See "Section 12.0 - Sample Preparation, Analyses and Security" for more details.

In 2011, soil sampling was carried out initially on a 400 m square grid with subsequent infill sampling carried out at 200 m and 100 m spacing along similarly spaced lines (i.e. square grid pattern). The initial 2011 soil sampling program identified a wide zone (2 km by 3 km) of anomalous base-metal-in-soil (Pb and Zn) mineralization with locallized gold-in-soil anomalism (Altan Nar Area).

In 2012, an approximately 9 square km area was selected for detailed soil sampling with samples taken at 25 m intervals along 100 m spaced E-W lines. Sample analysis included Au and 45 additional elements, including Cu, Pb, Zn, As, Mo and Mn. All of these elements have anomalous signatures coincident with zones of known epithermal mineralization identified through surface mapping and drilling. Maps showing the results for Au, As, Pb, Zn, Cu, Mo and Mn from the 2011-2012 soil geochemical survey over Altan Nar are included as **Error! Reference source not found.** – A through G. The geochemical signature shown on the Altan Nar soil geochemistry maps clearly show an extensive zone of base metal mineralization across the large (~ 1.5 km by 5 km) area of Altan Nar. A significant portion is also covered by coincident Au-Mn-As (and to a lesser extent Mo) anomalies. These soil results reflect the types of mineralization intersected in drilling.

In Q2 2014, samples were collected at 12.5 m intervals along 50 m spaced infill lines over select prospect areas at Altan Nar. The objective of this detailed soil program was to provide greater definition of gold, base-metal and associated alteration-element soil anomalies.

The soil sampling program on the Altan Nar mining license has proven to be an effective exploration tool and has resulted in the location of numerous mineralized zones. There is also a correlation between IP gradient array chargeability highs and soil geochemical anomalies. Geochemical, geophysical and geological data sets have been used to identify a large number of drill and trenching targets, many of which remain untested.

9.3. Rock Geochemical Survey

Rock-chip (outcrop) and rock-grab (float) samples were collected from across the Altan Nar mining license as part of the geological mapping and prospecting programs that have been carried out intermittently as work on the property and various prospects has advanced. No grid-based rock sampling programs have been carried out to date although detailed geological mapping has been completed. Results from all rock samples taken from 2009 to 2014 are included herein.

All rock sample locations were determined by hand-held GPS units with approximate 3 m location accuracy. All samples were sent to SGS Laboratory in Ulaanbaatar for analysis. All samples were assayed for Au, Ag, Cu, Pb, Zn, As and Mo. See “Section 12.0 - Sample Preparation, Analyses and Security” for more details.

Graduated bubble plots of each of Au, Ag, As, Mo, Cu, Pb and Zn are presented in **Error! Reference source not found.**. These plots indicate the rock data is similar to soil geochemistry, that is, the mineralization associated with each of the three projects identified to date, Nomin Tal, Altan Nar and Oyut Khundii each have unique geochemical signatures. For example, Nomin Tal has high Cu-Ag-Au values while Altan Nar has high Au-Ag-Pb-Zn (±As-Mo) but low Cu and Oyut Khundii has high Cu and As values. These differences are likely related to either different mineralization styles, or perhaps different modes of emplacement of the mineralization, and may represent metal zonation within a large overall mineralized system.

Figure 9-1 Altan Nar Prospect Soil Geochemistry

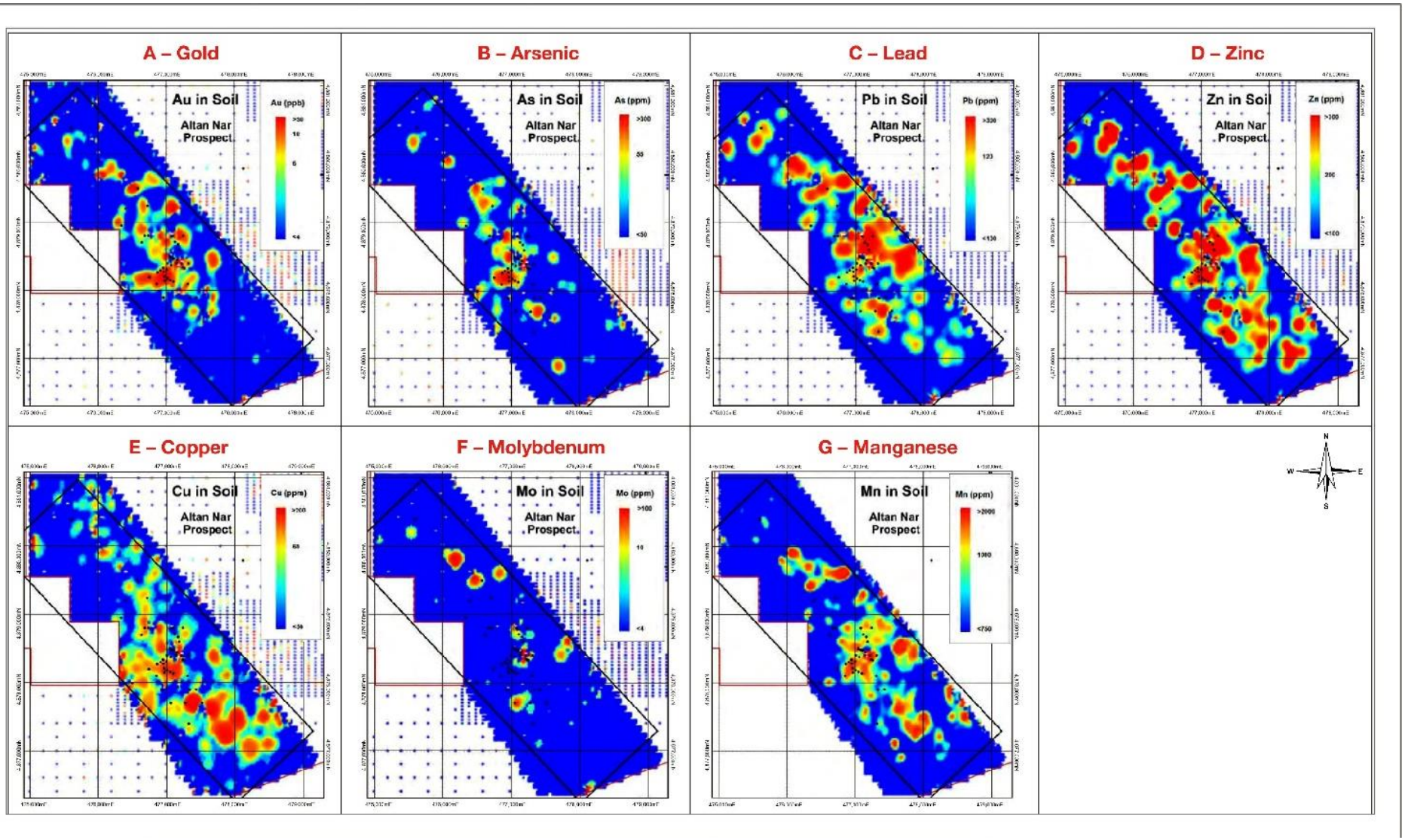
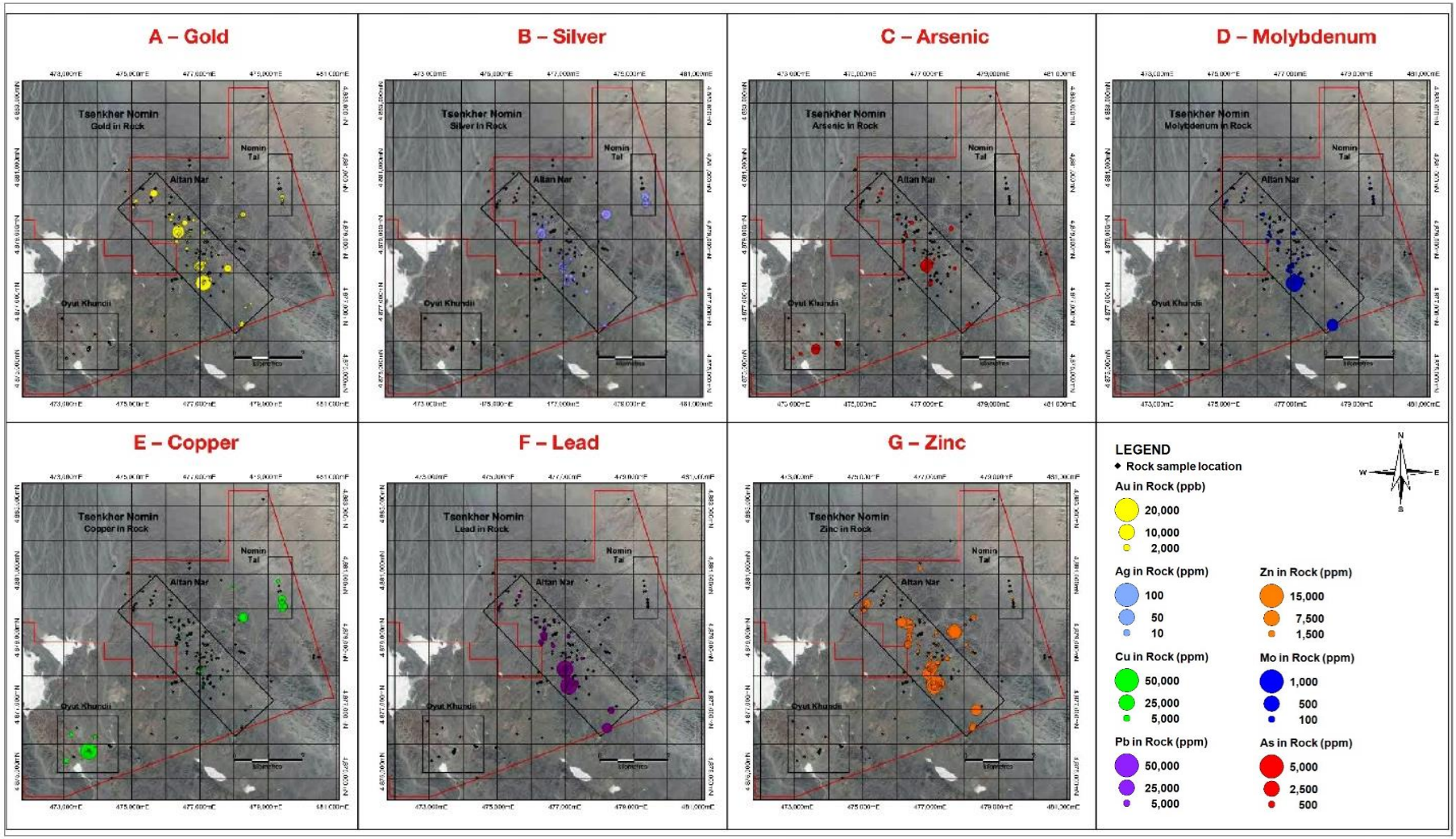


Figure 9-2 Altan Nar Mining License Rock Chip Geochemistry



9.4. Geophysical Surveys

A series of geophysical surveys have been carried out across the Altan Nar mining license since it was first acquired in 2010. These surveys included ground magnetics, induced polarization (IP), both dipole-dipole and gradient array, and gravity. All surveys were carried out by experience Mongolian geophysical contractors using high-quality international equipment.

Magnetic surveys were carried out on a regional scale (100m line spacing) as well as more detailed surveys (25m and 10m line spacing). IP dipole-dipole surveys were carried out over all prospect areas. A license wide gravity survey was carried out in 2018 on a 200 m grid.

In 2018 a ground gravity survey was completed over the Altan Nar mining license using a 200 m x 200m grid spacing for data points.

In 2020, Wave Geophysics Ltd, based in Colorado, USA, was contracted to complete a review and completion of all geophysical data collected between 2011 and 2018. A series of maps and 3D models were produced for the following data; ground magnetics, induced polarization and gravity.

9.4.1. Magnetic Survey

A regional magnetic survey (100 m line spacing) was completed over a 41 km^2 area covering most of the Altan Nar mining license (2010-2012). In addition, two areas have been surveyed in more detail, i.e closer line spacing. Nomin Tal (1.4 km2 area) and Altan Nar (14.5 km2 area) prospects were surveyed at 25m line spacing in 2011. In Q2 2017, the high-resolution ground magnetic survey was completed over the Altan Nar area, using 10 metre line spacing, with a total of 1,000 survey line kilometres. All the magnetic surveys have been conducted by Erdenyn Erel LLC, a Mongolian geophysical consulting firm based in Ulaanbaatar. All data was processed by Chet Lide of Zonge Geosciences Inc. of Sparks NV, USA. Mr. Lide compiled all magnetic datasets and produced a series of magnetic map products for each of the surveys, including: 1) Total Magnetic Field; 2) Calculated First Vertical Derivative; 3) Total Field, Reduced to Magnetic North Pole (RTP); 4) Analytical Signal of the Total Magnetic Field. For the regional scale magnetic survey Mr Lide also produced maps for; 5) Pseudo-Gravity of Total Magnetic Field; and 6) Pseudo-Gravity Horizontal Gradient Magnitude. **Error! Reference source not found.** show the RTP magnetic survey results for the Altan Nar license and shows the location of the various survey outlined above.

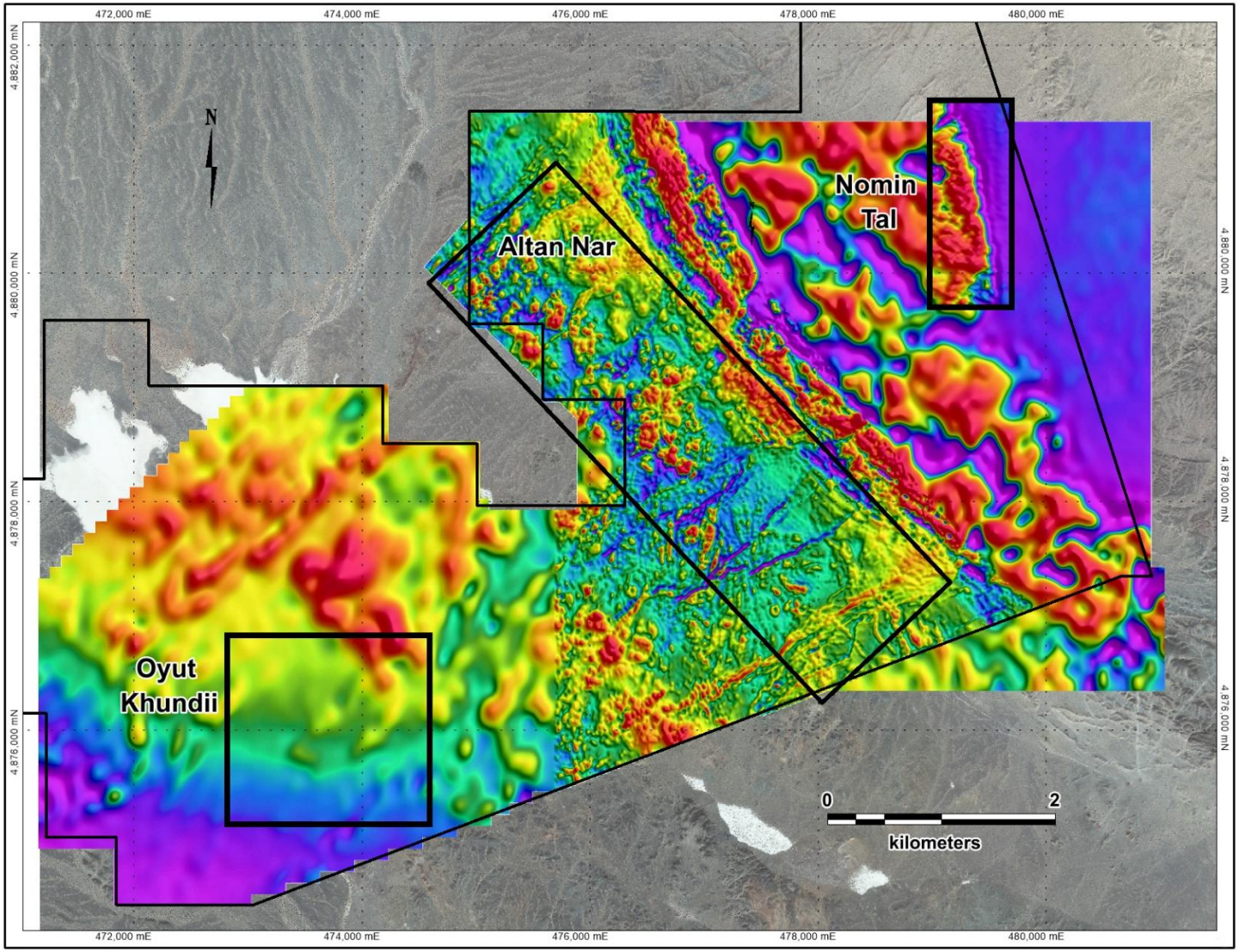
The results of the regional magnetic survey show distinct magnetic signatures for the main lithological units within the Altan Nar license area. The large granite pluton on the eastern edge of the license area has a low magnetic signature and shows the sharp, steeply dipping (fault?) contact with the higher magnetic response Sequence A volcanic unit to the west. The central portion of the magnetic survey area (Altan Nar) is underlain by Sequence B volcanic rocks which have a magnetic response that is generally lower than for Sequence A and lacks linear orientations, which supports the shallow-dip (i.e. 20-30^o) interpretation for these rocks. The western portion of the magnetic survey is underlain by trachy-andesite, pervasively white-mica altered rhyolite and sub-volcanic rhyodacite. The magnetic high located just north of the Oyut Khundii project may represent a buried intrusive and the magnetic signatures of the lithologies to the north of this feature appear to wrap-around the central magnetic high.

The 25m detailed magnetic survey carried out over the Altan Nar and Nomin Tal projects has been helpful in identifying possible structural features and lithologic contacts and has been incorporated into the dataset used to interpret and extrapolate the results from the drilling program. There appears to be a correlation between magnetic low features and zones of epithermal mineralization, which is supported by petrographic studies which show evidence of widespread magnetite destruction (‘martitization’) in the host lithologies. This feature is thought to reflect widespread alteration from epithermal fluids; however, this relationship needs to be investigated further.

The 2017 high-resolution ground magnetic survey successfully delineated the known mineralized zones and associated white-mica alteration zones (magnetic lows) in much greater detail than previously

available. For example, areas which were previously defined as containing broad magnetic low features were shown to contain multiple linear zones with low magnetic response, which reflect structurally-controlled zones of white mica alteration where primary magnetite in the host andesite rocks was altered ('martitized'), with intervening high magnetic zones of weakly to unaltered andesite. The increased detail in the high-resolution magnetic survey has been and will continue to be used, in conjunction with soil and rock chip geochemistry and IP chargeability data, to defined drill targets.

Figure 9-3 Altan Nar Mining License Magnetic Survey Coverage



9.4.2. Induced Polarization (IP) Surveys

Both IP dipole-dipole ("Dp-Dp") and IP gradient array surveys have been completed on the Altan Nar property over, and in the vicinity of, the Nomin Tal and Altan Nar areas and in 2018, over the Oyut Khundii area. All of the IP surveys were carried out by Erdenyn Erel LLC except for the 2018 survey which was carried out by Monrock LLC. Both companies are Mongolian geophysical contractor based in Ulaanbaatar. All IP surveys were also conducted under the direction of geophysicist Chet Lide of Zonge Geosciences Inc. of Sparks NV, USA, who also completed the post-acquisition data processing, quality control and interpretation.

9.4.2.1. Dipole-Dipole Surveys

A series of 31, east-west oriented, IP Dp-Dp line, spaced from 100 m to 400 m apart, have been completed with a 50m dipole spacing for a total of 55 line-km. These lines were run at four different times, October 2010, August 2011, October 2011 and April 2014. In addition, in Q2 2017 a six-line induced polarization (IP) dipole-dipole survey was completed with 150-metre dipole spacing. The survey lines were oriented at 135 degrees and were centred over the DZ, and were 2,850 metre in length, for a total of 17.1 line-km. The objective of the IP surveys was to identify any significant chargeability anomalies that could represent sulphide mineralization. **Error! Reference source not found.** shows the location, spacing and extent of the various IP Dp-Dp surveys completed to date.

Strong positive chargeability anomalism has been an important guide, in conjunction with rock and soil geochemical anomalies and magnetic data, to identify drill targets. The 2011 IP gradient-array survey (see below) identified a series of high chargeability anomalies, up to 190 m wide that are interpreted as representing broad zones of sulphide mineralization. The IP Dp-Dp survey results show the presence of multiple, locally intense, chargeability high anomalies, extending from near-surface to depth, often continuing below the IP survey detection limit of approximately 150 m.

The 2017 IP survey used 150-metre dipole spacing and therefore provided data to approximately 450 metre depth (i.e. 3 x dipole spacing) which was considerably deeper than the 150-metre depth for data from previous surveys which used a 50-metre dipole spacing. The purpose of this survey was to provide information for possible zones of disseminated sulphide at depths greater than 150 metres. This survey clearly defined a major structural/lithological break at the Discovery Zone where tuffaceous rocks to the south of the DZ have a much higher IP resistivity response than the andesite flows north of the DZ. A broad zone (1-2 km wide) of moderate coincident IP chargeability and high IP resistivity response is evident in the southern part of the survey, to the southeast of the DZ. In addition, several smaller (100-200 m wide) coincident IP resistivity and chargeability anomalies were noted in the north-western part of the survey near the Southbow target and between the Riverside and Union South target areas. Several of these anomalies remain untested by drilling.

In 2018, a separate IP survey was carried out in the western portion of the Altan Nar mining license over the Oyut Khundii prospect. This survey consisted of 13 lines, oriented E-W and spaced 200m apart. Dipole spacing for this area was 150m and therefore provided data to approximately 450 metre depth (i.e. 3 x dipole spacing). The Oyut Khundii prospect is an area of widespread silica and white-mica alteration with associated anomalous copper mineralization identified in surface samples. This is an early-stage prospect on the Altan Nar mining license and merits additional follow-up exploration.

9.4.2.2. Gradient Array Survey

In addition to the IP Dp-Dp surveys, an IP gradient array survey was completed in 2011 over both the Nomin Tal and Altan Nar prospects for a total coverage area of 6.83 km2. In 2012, the gradient array survey at Altan Nar was expanded, for a total area of coverage at Altan Nar of 16 km2. Line spacing for the gradient array surveys was 100m. Figure 9-4 shows the extent of the gradient array coverage. The results of the IP gradient array survey for Altan Nar are shown in **Error! Reference source not found.** (chargeability) and **Error! Reference source not found.** (resistivity).

The IP gradient-array survey corresponds to an area of anomalous soil geochemistry at Altan Nar. Results from the IP gradient-array survey identified a series of high chargeability anomalies, up to 190 m wide that are interpreted as representing broad zones of sulphide mineralization. The morphology of these IP anomalies, coupled with the geometry of the lineaments evident on satellite imagery, suggests the sulphide mineralization may intensify within dilation zones along a NNW trending dextral fault system over a distance of approximately 5 km. A review of drill and trenching data to date shows a strong, positive correlation between mineralized intersections and IP gradient array chargeability highs.

Figure 9-4 Altan Nar License - Prospect Location Map and IP Coverage

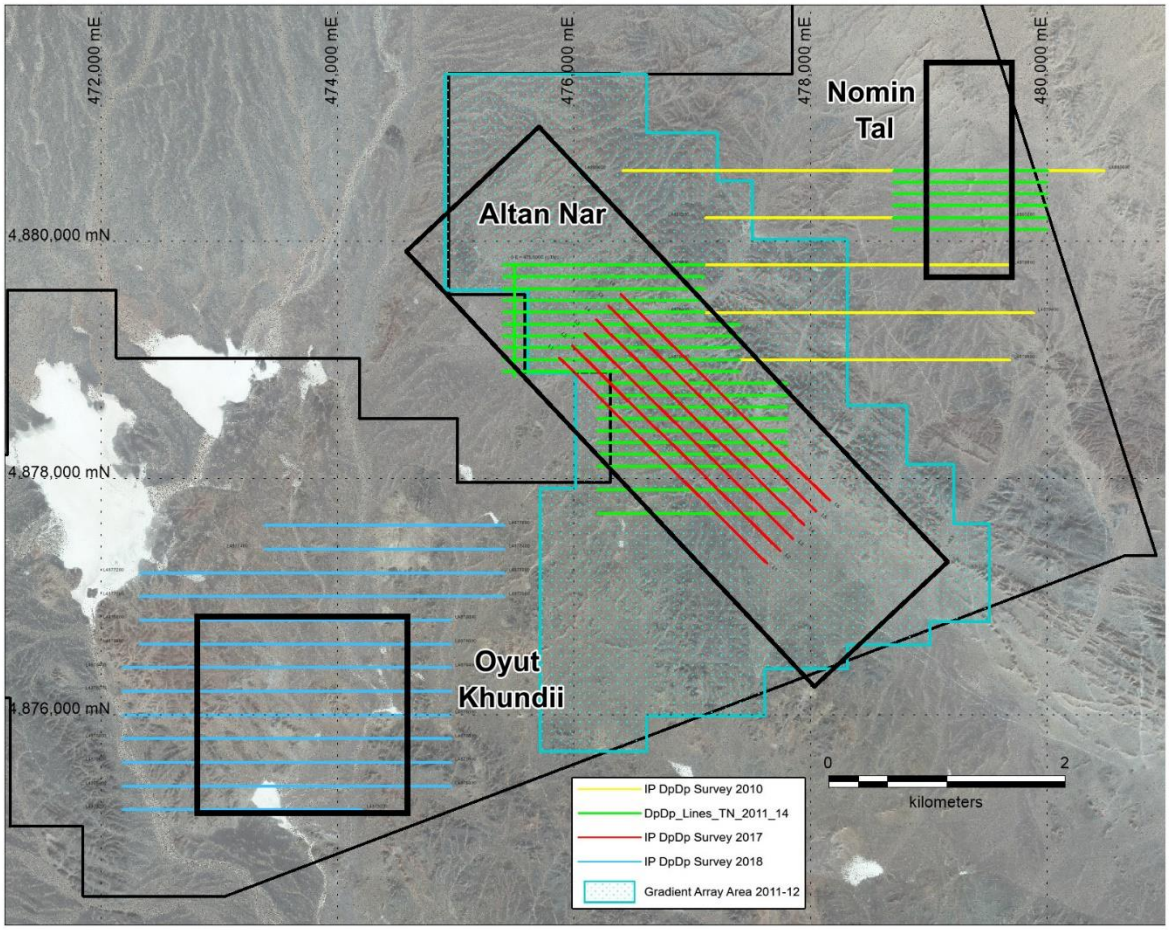


Figure 9-5 Gradient Array Chargeability Map

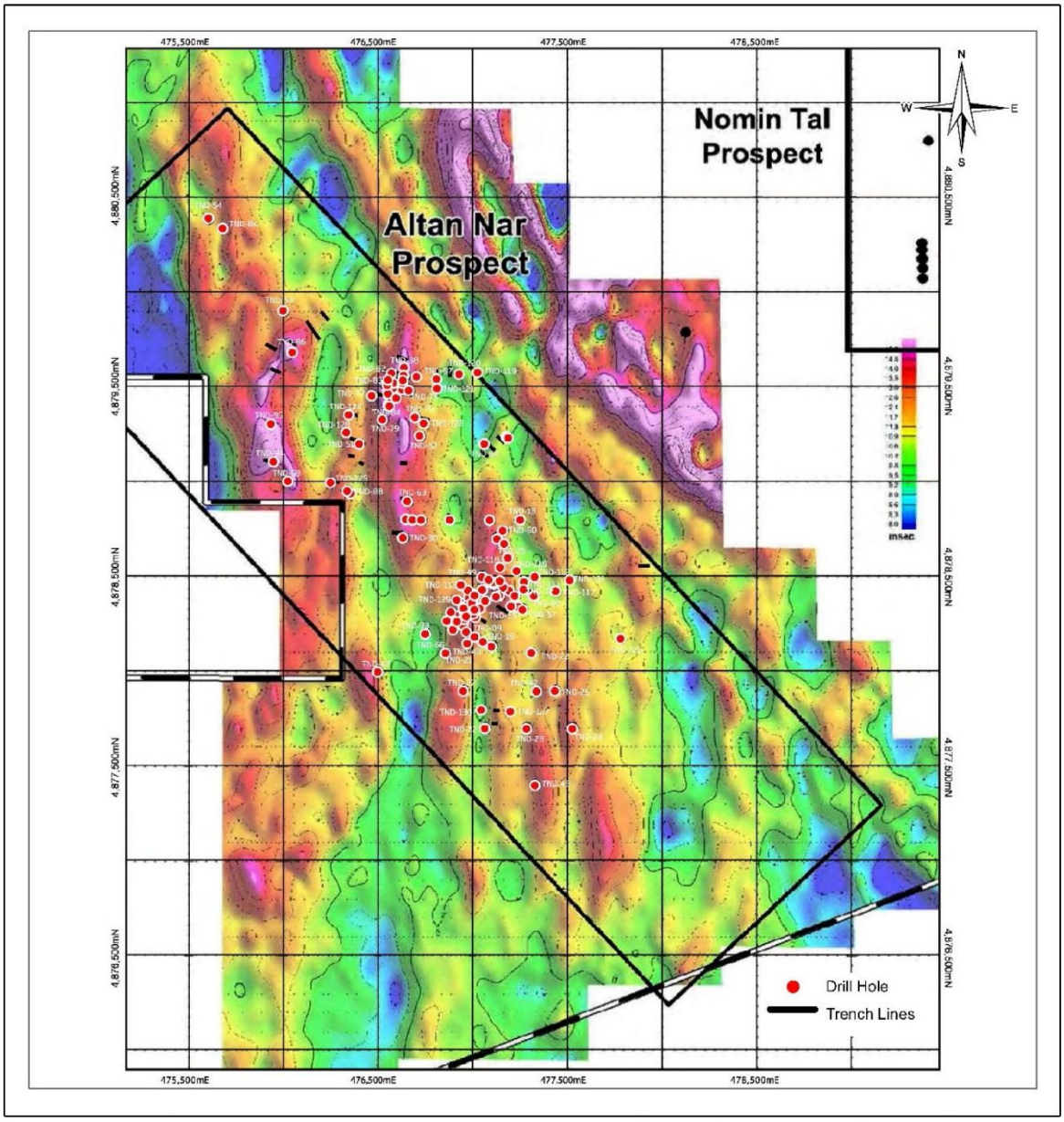
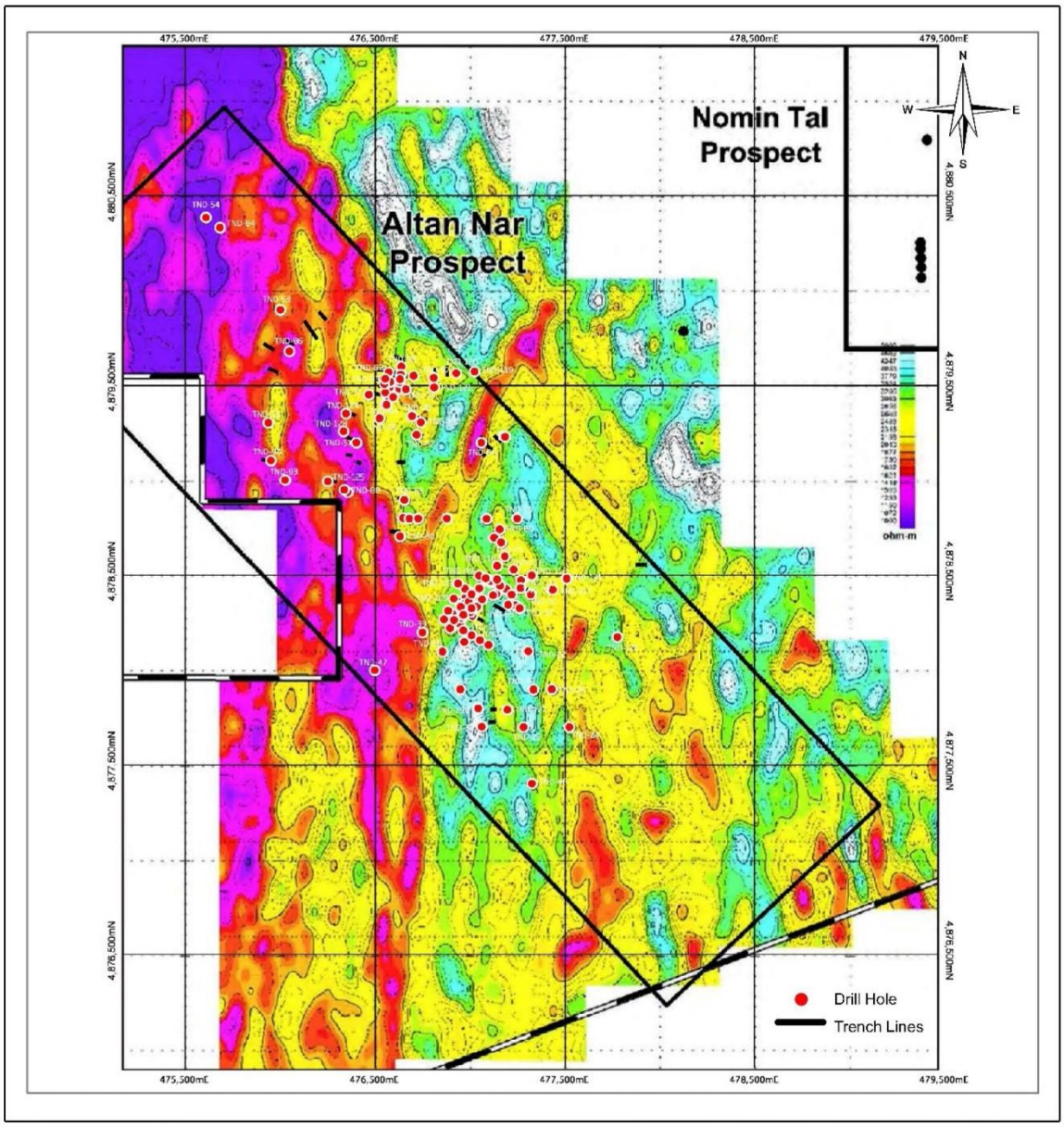


Figure 9-6 Gradient Array Resistivity Map

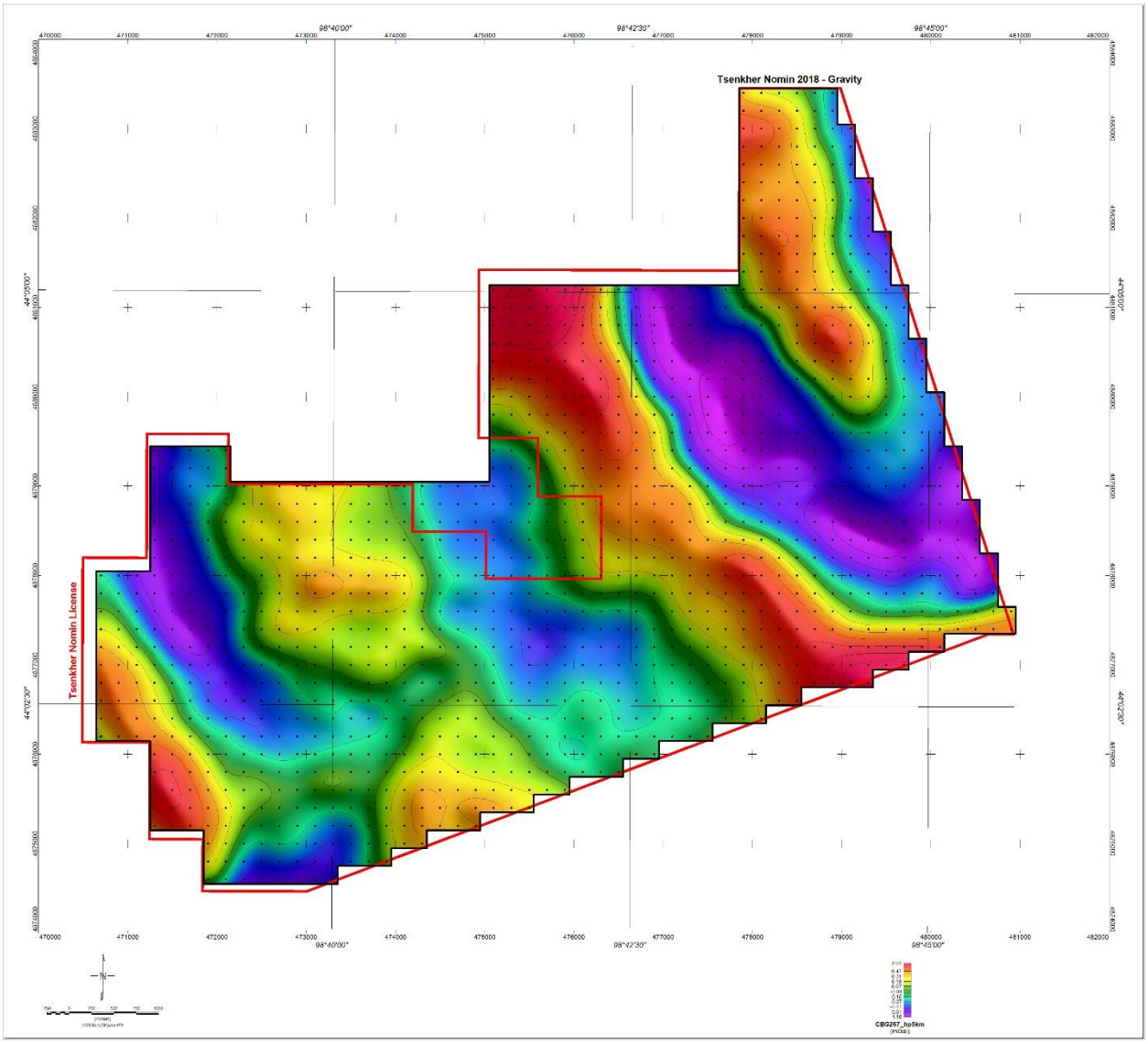


9.4.3. Gravity Survey

In May 2018, a ground gravity survey was carried out over the area of the Altan Nar mining license. The Survey was conducted by EBSHP LLC, an experienced Mongolian geophysics contractor based in Ulaanbaatar. The gravity survey was carried out with Lacoste Romberg D56 gravimeter and 2 channel differential CHC X90 GPS system over a 200 m by 200 m grid size, covering a 46,69 square kilometer area with 1218 data points. The gravity data was processed by Wave Geophysics of Colorado, USA, and Figure 9-7 displays the complete Bouguer Gravity data computed by applying a Butterworth high-pass filter with a cut-off wavelength of 5km.

Interpretation of gravity data indicates several potential granitoid (porphyry?) intrusions across the license area.

Figure 9-7 Altan Nar Mining License Gravity Map (with high-pass 5km filter)



9.5. Trenching Program

Erdene has carried out a series of trenching programs across the Altan Nar Area (Oct. 2013, Sept.2014 and Aug 2015) that included 42 trenches, totalling 3,151 m and ranging in length from 14 m to 202 m. The principal objectives of the trenching programs were to further define the near-surface mineralization identified to date, improve the understanding of the gold mineralized system and prioritize areas for the next phase of delineation drilling (refer to Figure 9-8).

Trenching was carried using an excavator (Hyundai 290) supplied and operated by Falcon Drilling. Trench locations were selected by Erdene's exploration team, oriented normal to the projected trend of mineralization. Trenches were excavated to a depth of between 1 and 3m. Trench samples were collected at 1m or 2m intervals, as determined by the senior project geologist, based on the lithology and mineralization. Samples were chipped from the bottom of the trenches and care was taken to ensure each sample was representative of the entire interval being sampled. Representative hand samples for each interval were also collected for reference.

All trench samples were organized into batches of 30 and included a commercially prepared certified reference standard and an analytical blank. Each batch was stored in the field camp in sealed bags. Sample batches were periodically shipped directly to SGS in Ulaanbaatar via Erdene's logistical contractor, Monrud Co. Ltd.

All trench samples from 2013 and select samples from 2014 and 2015 were analysed for gold (fire assay) and a multi-element suite (45 elements in 2013, 33 elements in 2014 and 2015) using 4 acid digestions with ICP-OES finish (SGS analytical code ICP40B). For details of analytical protocols and detection limits please refer to "Section 12 – Sample Preparation, Analysis and Security".

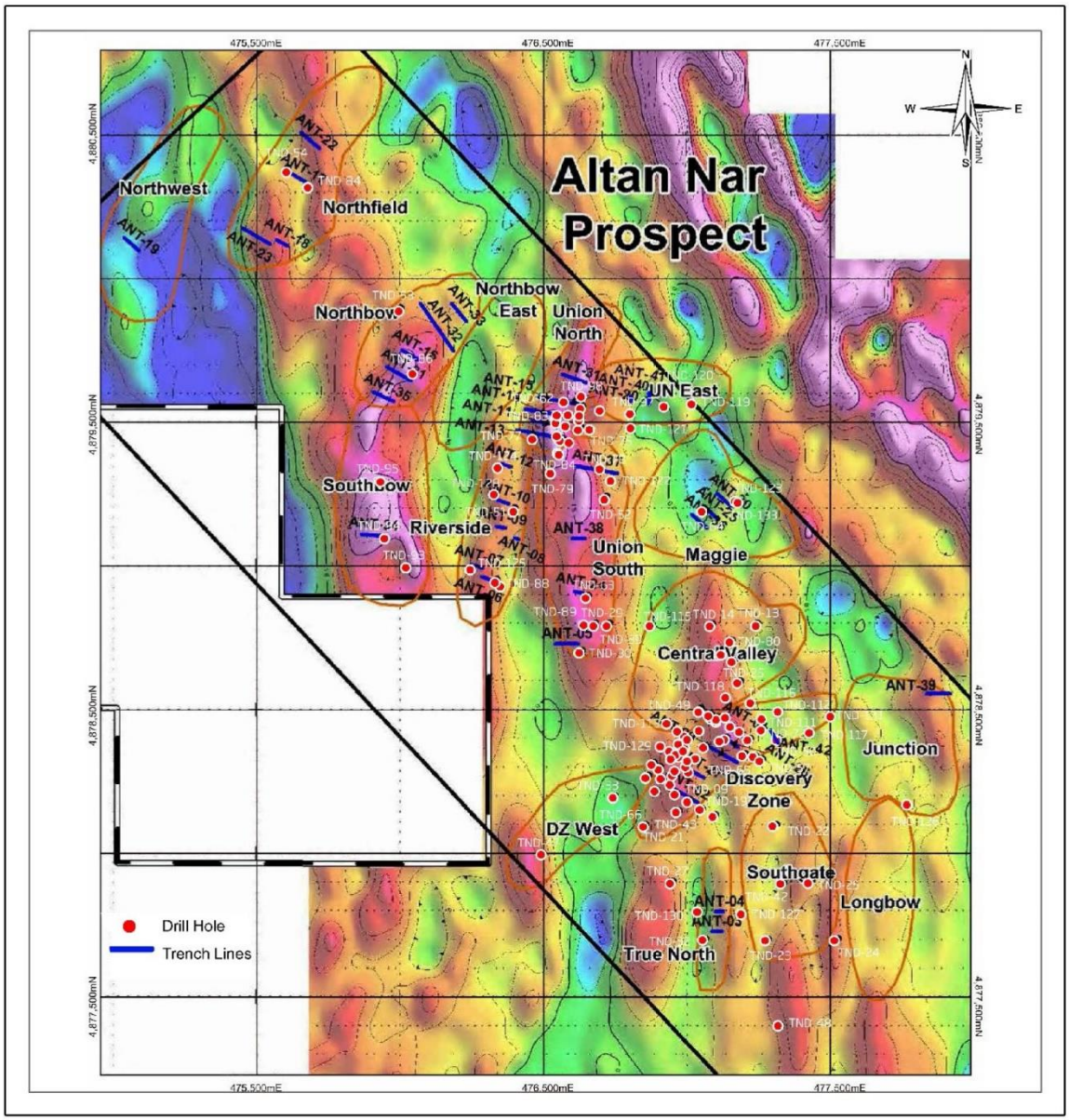
The trenching programs include six trenches within the DZ and six trenches at Union North. Also, an additional 30 trenches were excavated to test eleven targets across a 5.6 km length of the Altan Nar Area (refer to Figure 9-8).

The trenching program met the planned objectives, to further define the near-surface mineralization identified to date, improve the understanding of the gold mineralized system and prioritize new areas for the next phase of exploration.

The surface expression of the Altan Nar area is one of low relief with thin Quaternary cover over much of the area, interspersed with low rolling hills which are dominated by weakly altered andesite. The intense weathering of the altered, sulphide-rich, stockwork breccia zones leaves little surface expression of the targets and little indication of their size other than the presence of pebble-sized remnant quartz rubble. As a result, the extent of alteration and mineralization observed in the trenches commonly exceeded that indicated by surface expression. A combination of mapping, geochemical and geophysical surveys has been successful in guiding exploration to date; however, results from the trenching program would suggest that even the subtlest of anomalies may indicate significant mineralization under shallow cover.

The trench results, in conjunction with previous drill results, confirm the potential for a series of gold-silver-lead-zinc mineralized systems at Altan Nar outside of the DZ and Union North deposit areas.

Figure 9-8: Altan Nar Trench Location Map on IP Gradient Chargeability and Target Locations



10. Drilling

The drilling program at Altan Nar was designed and carried out under the direction of Erdene's senior technical staff. In the field, the drilling program was under the supervision of Erdene geologists who were responsible for communicating and supporting the program's technical details with the drilling contractor as well as logging and sampling the drill core.

After holes were completed collars were DGPS surveyed. Down-hole orientation surveys were carried out at 50-100 m intervals and/or at the bottom of each hole. Down-hole readings included both dip and azimuth of the hole at the recorded depths. There is little dip variation and minor amounts of azimuth variation in the surveyed holes at both locations.

During drilling, core was placed in core boxes and a marker showing the depth in the hole was placed in the core box at the end of each drill run. All drill cores were photographed and logged by Erdene geologists prior to sampling. Standard sampling protocol involved the halving of all drill core using a core saw and sampling over either 1 m intervals (in clearly mineralized sections) or 2 m intervals (elsewhere). Half of the core was placed in sealed sample bags and dispatched to SGS's Ulaanbaatar laboratory for analysis and the other half remained on-site in core boxes. Core recoveries were between 90-100% throughout the mineralized zones. No relationship exists between sample recovery and grade. At Altan Nar mineralization is generally sub-vertical.

A staged exploration and resource delineation drilling program was carried out across the Altan Nar prospect between 2011 and 2019 (Figure 10-3). Table 10-1 provides a breakdown of the number of holes and metres drilled over this time period. All drilling on the Altan Nar license was carried out by the independent drilling contractor, Falcon Drilling Limited. All holes were diamond drilled using a truck mounted Longyear 44 wireline drilling rig with all core HQ sized. First drilling at the project started in 2011 at the Nomin Tal prospect (8 holes) and all remaining holes (130) were drilled on the Altan Nar prospect.

Table 10-1 Altan Nar Drilling Summary

Period	Drilling Method	Number of Holes	Metres
2011	Diamond Drilling	24	4,043
2012		26	4,611
2014		22	2,604
2015		13	1,058
2016		9	1,380
2017		31	5,794
2019*		5	667
Drilling Total		**130**	**20,158**
	Trenching	**42**	**3,151**
Total		**292**	**23,309**

*Drill holes from 2019 are not included in the resource estimate reported herein. All five holes were drilled in the Discovery Zone.

Drilling across the Project area had an average hole length of 155 m (average vertical depth 116 m) and extends in a couple of holes to a maximum vertical depth of approximately 390 m. Drill hole spacing over the Discovery Zone and Union North deposit areas is on an approximate 50 m by 50 m grid with closer spaced drilling in select areas (~25 m by ~25 m spaced holes).

Since the discovery of mineralized epithermal quartz veins on surface and widespread soil geochemical anomalism across the Altan Nar Area in August 2011, there have been seven rounds of drilling over a nine-year period (see Table 10-1). Resource delineation drilling has taken place over the Discovery Zone and Union North deposits while exploration and scout drilling has taken place across 12 of the 16 other identified prospects. A drilling exploration summary by prospect is provided in Table 10-2.

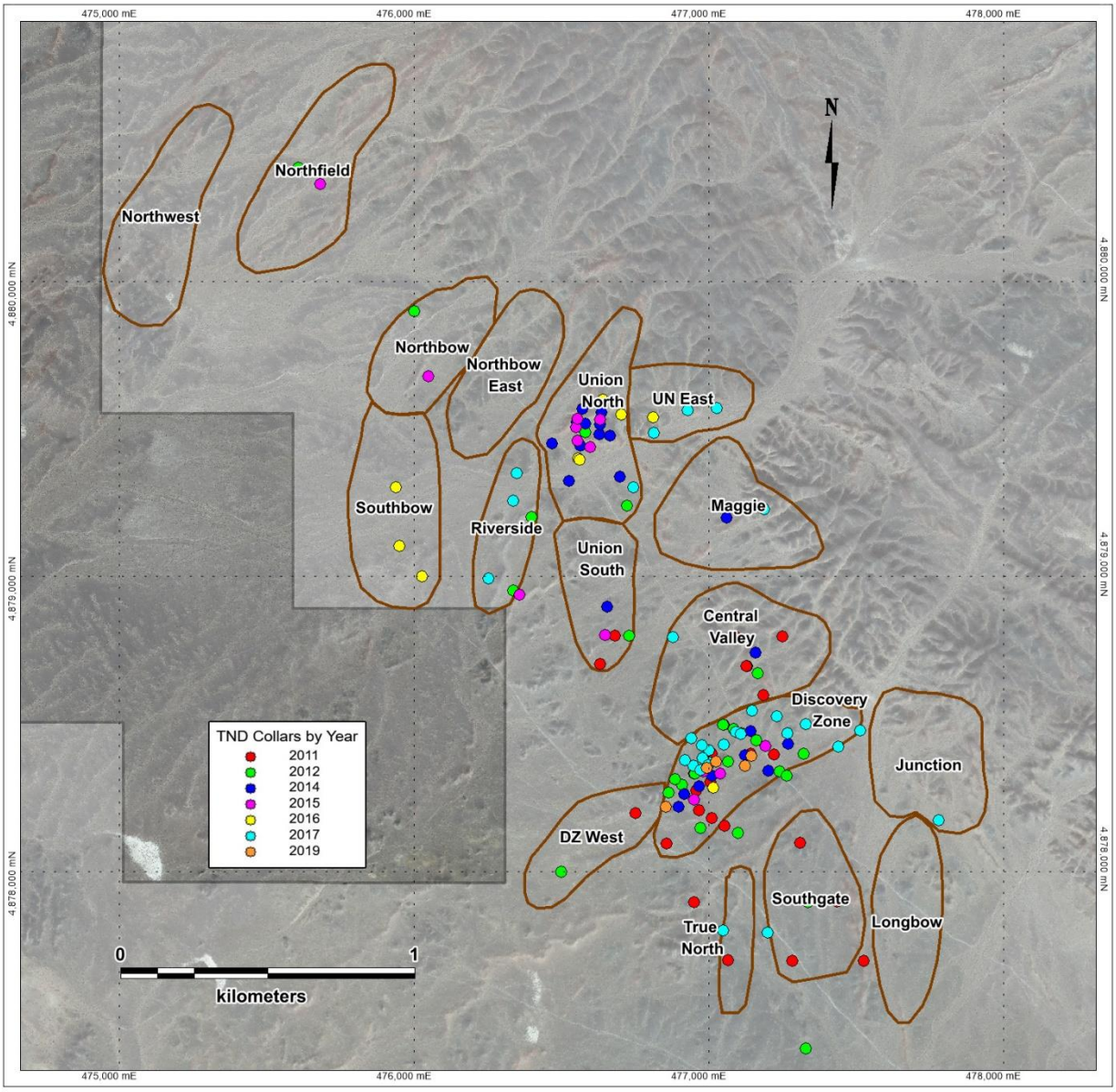
Table 10-2 Drilling Summary by Project

Prospects	Number of Holes	Metres
Discovery Zone	61	11,224
Union North	24	2,449
Central Valley	8	1,276
Discovery Zone West	2	250
Junction	1	200
Maggie	3	446
Northbow	2	173
Northfield	2	197
Riverside	6	806
Southbow	3	539
Southgate	6	897
True North	2	320
UN East	3	400
Union South	5	782
Others	2	200
Total	**130**	**20,158**

In the following descriptions of Altan Nar prospect drilling results it should be noted that all drill holes were drilled at a dip between -70 to -45 degrees and intersected zones are interpreted to be steeply-dipping to vertical. Additional information is required to determine true widths. Also, gold equivalent (AuEq.) has been used to express the combined value of gold, silver, lead and zinc as a percentage of gold, and is provided for illustrative purposes only. No allowances have been made for recovery losses that may occur should mining eventually result. Calculations use US$ metal prices of $1200/oz gold, $18/oz silver, and $0.90/lb for lead and zinc.

The following sections summarize the drilling carried out to the end of 2019 on the main prospects which have Indicated Resources, Discovery Zone (“DZ”) and Union North (“UN”), followed by those prospects that have had scout drilling and have Inferred Resources, namely, Central Valley, Maggie, Riverside, UN East, Union South, True North, and Northfield.

Figure 10-1 AN Drill Hole Location by Year



10.1. Discovery Zone

The DZ is located in the central part of the Altan Nar Area. Drilling to date at the DZ has identified a minimum strike length of 650 m. Fifty-six, mostly shallow (<150 m vertical extent) drill holes with hole length ranges from 57.3 m (TND-93) to 450 m (TND-31 and TND-129) have been drilled at the DZ at approximately at 50 m by 50 m grid spacing. Some areas were infill drilled at 25 m spacing. Along with seven trenches across zones of surface mineralization, the drill holes have demonstrated vertical and lateral continuity of gold, silver, lead and zinc mineralization (see Figure 10-4).

Within the DZ, gold mineralization appears to be structurally controlled within NNE to NE trending sub-parallel shear zones that are steeply dipping to sub-vertical. Gold-bearing zones are associated with epithermal quartz veins and breccias in a northeast-southwest trending fault/breccia zone. Preliminary evidence suggests that andesite units, particularly near the contact with more competent silicified volcanic breccia units, act as a favourable host for mineralization.

Drilling results to date at the DZ have culminated in the modelling of a series of near vertical and sub-parallel mineralized lodes as displayed in Figure 10-4 (cross section A). The mineralized lodes have been coloured only to help distinguish the individual lodes.

Hole TND-58, one of the deepest holes drilled to date (~230 vertical metres) within the DZ, terminated in 6 m averaging 4.7 g/t Au, 8.5 g/t Ag and 1.3% combined Pb-Zn from 266-272 m. This intersection demonstrates that additional potential remains to intersect high-grade mineralization at depth and that the true vertical extent of the mineralization within the DZ is yet to be determined.

Hole TND-101 was an exploratory hole drilled at a 45-degree dip to a depth of 300 m perpendicular to an interpreted cross-cutting feature observed in geophysical surveys but at a low oblique angle to the mineralized DZ trend and to the main lithologic boundary. The hole was oriented to test the intersection of these three structures, and to test possible extensions of mineralization at depth under DZ North.

Hole TND-101 intersected 110 m at 10.5 g/t AuEq (9.3 g/t Au, 32.0 g/t Ag, and 1.42% combined Pb-Zn) from 32-142 m. This intersection included 14 m at 60.4 g/t AuEq (55.6 g/t Au, 131.1 g/t Ag, and 5.65% combined Pb-Zn) from 96-110 m. This hole was consistently mineralized from surface to 170 m with high gold grades not previously observed at Altan Nar. Due to the hole orientation the wide intervals reported do not represent the true width of the intersected zone, however, adjacent holes reported in 2015 immediately south of TND-101 (TND-69 and 90), returned some of the most continuous zones of mineralization at the DZ, including 51 m of 2.5 g/t AuEq from 47-98 m and 53 m of 2.0 g/t AuEq from 78-131 m, respectively. These holes were drilled at a 45-degree dip, perpendicular to the interpreted vertical structure, implying a true width to the NE trending mineralized zone in the range of approximately 25 to 35 m.

Of particular note, 10 samples from the high-grade portion of hole TND-101 contained more than 31.1 g/t Au (i.e., 1 ounce of gold per tonne), whereas only two samples from the more than 9,000 previously assayed drill core samples from Altan Nar drilling between 2011 and 2015 exceeded this grade-threshold. In addition to the high base metal gold zones intersected in TND-101, a distinct zone of high copper-gold mineralization was intersected that may reflect a separate mineralized phase at the DZ. Copper levels assayed up to 2.43%. The host rocks include lapilli tuffs and andesites that have been moderately to intensely altered (quartz, mica, pyrite), mineralized (precious metals and carbonate base metal suite), and cut by comb quartz veins, breccias and chalcedony veins.

Drilling to date has supported lateral and vertical continuity of gold-silver mineralization within the Discovery Zone. The DZ remains open along strike to the north and additional drilling will be required to determine

the true vertical extent of the gold mineralization. Drilling to date has tested to a vertical depth of 175 m (south) to 230 m (north). Figure 10-4 shows schematic sections across the DZ (Section A) and Union North East (Section B) that display the extent of gold mineralization intersected by the drilling program.

10.1.1. Discovery Zone 2019 Drilling

In late Q4-2019, following the release of the May 2018 Altan Nar resource estimate, the Company drilled five holes (TND-134 to TND-138) totaling 667 metres in the Discovery Zone ("DZ"). The Q4-2019 program successfully tested a concept of a preferred high-grade gold-mineralized horizon believed to potentially represent an epithermal boiling zone. Four holes tested the high-grade core area of the Discovery Zone, over a 130-metre strike length, 70 metres of which remains untested by drilling ("Gap Zone"). The fifth hole tested the southern extension of the DZ deposit.

The following is a brief description of the results of the 2019 drilling program:

Hole TND-134 targeted the northeast strike extension of the DZ core along a newly identified high-grade ore horizon. TND-134 intersected 10 metres grading 12.2 g/t gold, 21.0 g/t silver, 0.55% lead and 1.18% Zinc hosted within a sulphide rich, chalcedonic quartz epithermal breccia. TND-134 has provided a 20-metre extension along strike of the DZ high-grade core indicating consistency in high-grade mineralization within the identified ore horizon opening the way for further expansion along strike to the north.

Hole TND-135 targeted a previously untested area of the DZ high-grade core. TND-135 intersected 23 metres of 17 g/t gold, 44.7 g/t silver, 0.75 % lead and 1.47 % zinc within a black, sulphide rich epithermal breccia. Drill results from TND-135 demonstrate continuity in size and grade within the high-grade DZ core, providing confidence in future expansion of the DZ high-grade core.

Hole TND-136 targeted the southwest strike extension to the DZ deposit. TND-136 intersected multiple anomalous intervals including 2 metres of 0.99 g/t gold and 16 metres of 0.37 g/t gold. These intersections provide the strongest indications to date of the southwest extension of the Discovery Zone, suggesting the potential to expand resources along the southwest structural trend.

Hole TND-137 was designed to test a projected zone of near surface, high-grade mineralization which would extend the DZ North mineralization along strike to the southwest. TND-137 intersected 7 metres of 2.64 g/t gold, 11.1 g/t silver, 0.66% lead and 0.43% zinc beginning 5 metres from surface. Strongly anomalous intersections up to 1.76 g/t gold over 4 metres located deeper in TND-137 once again confirmed the multiple zones of mineralized epithermal breccia hosted within the DZ deposit.

Hole TND-138 was designed to establish continuity of gold mineralization and grade within the northern portion of the DZ by drilling a previously untested portion of the zone. The drill hole intersected three separate intervals of gold mineralization highlighted by 10 metres grading 4.68 g/t gold, 50.8 g/t silver, 0.31% lead and 0.73% zinc hosted within a quartz vein stockwork and epithermal breccia. TND-138 has further established the continuity of high-grade mineralization within the northern portion of the DZ. Furthermore, it confirms the continuity of high grades on the northern side of the "Gap Zone", an untested area of central Discovery Zone open for 70 metres to the south where it meets TND-134 and TND-101.

The 2019 drill holes are not included in the May 2018 Resource Estimate reported in this Technical Report. The QP for the resource estimate, Jeremy Clark, has reviewed the results and they are not considered to be material to the resource estimate and within the accuracy limits of the Classification applied. A visual comparison of the six holes against the 2018 block model indicated that while some variations could be observed at a local scale, these were not material in terms of geology and grade distribution and are considered in line with variations expected with the style of mineralisation. As such, the 2018 block model is consistent with the recent drilling and the 2018 Mineral Resource Statement remains current.

10.2. Union North Prospect

Union North ("UN") is located 1.3 km northwest of the Discovery Zone. During 2014 infilling drilling of this zone was undertaken to better understand the nature of the mineralization. The prospect has been tested by 24 holes to date (2018). These results at UN have culminated in the modelling of a series of steeply dipping and sub-parallel mineralized lodes as displayed in Figure 10-4. Stronger co-incidence of gold and base metal mineralization compared to the Discovery Zone was noted. Strong development of porphyritic dyke development is also a characteristic of this area.

10.3. Altan Nar – Scout Drilling

To date, exploration programs at Altan Nar have included close-spaced soil and rock geochemical sampling as well as detailed IP gradient array and magnetic geophysical surveys. This work has resulted in the identification of numerous exploration drill targets along the 5.6 km strike length of the Altan Nar Area, outside the area of the DZ and UN. This work expanded the identified gold-bearing epithermal mineralization on the Altan Nar property. To date, 45 scout holes have been drilled across the Altan Nar area outside of the DZ and Union North Zones (see Figure 10-3).

The following sections summarize the drilling carried out on the prospects that have had exploration drilling and Inferred Resources identified, namely, Central Valley, Maggie, Riverside, UN East, Union South, True North and Northfield.

10.3.1. Union South Prospect

Union South is located directly south of Union North and represents the possible continuation of the Union North mineralization, slightly offset to the east as suggested by the IP gradient positive chargeability anomaly in the area. A series of widely spaced drill holes (100m spacing) returned from up to 3.4 g/t AuE, along with trech samples which returned up to 4.46 g/t Au. The results from this preliminary work suggest future work is warranted to follow up on the initial intersections of mineralization.

10.3.2. Riverside Prospect

Riverside is located 300 m to the west and is sub-parallel to Union South and at the northern end it appears to merge with Union North. This prospect is characterized by an 800 m long positive gradient IP chargeability and coincident geochemical anomaly that follows the trend of white mica alteration and quartz/breccia rubble fields. Four of six widely spaced drill holes returned anomalous results. TND-45 returned 18 m of 1.0 g/t AuEq from 20-38 m, THD-51 returned 6 m of 0.84 g/t AuEq from 10-16 m, and TND-128 returned 8 m of 0.9 g/t AuEq from 92-100 m.

10.3.3. Maggie Prospect

Located 1 km north of the DZ and 700 m east of the Union North Prospect, the Maggie Prospect covers a 500 m x 400 m triangular shaped area. This target is characterized by a 10 to 40 m wide linear white mica alteration zone with gold, silver, lead and zinc mineralization traced over 300 m on a NE trend through the centre of the target. A single drill hole, TND-64, returned two narrower zones with mineralization apparently displaced by a post-mineral porphyry dyke. These two zones, 3 m and 5.35 m wide returned average values of 2.6 g/t Au Eq from 40-43 m and 1.8 g/t AuEq from 62.65-68 m, respectively. Trenching completed to test soil and IP anomalism northeast and southwest of the drill established a 120 m strike length that remains open.

In 2017 two diamond holes, TND-123 and TND-133 were drilled at -45 and -60 respectively from the same collar location at the Maggie Prospect and both holes intersected high-grade gold and base metal mineralization. TND-123 intersected 16m at 4.3 g/t AuEq (3.75g/t Au, 9.3g/t Ag, 0.8% combined Pb and Zn) from 28m. TND-133 intersected 4 m of 2.89g/t AuEq (2.24g/t Au, 7.5g/t Ag, 1.04% combined Pb and Zn from 32m. This hole also intersected the same barren andesitic dykes previously encountered in TND-123.

Mineralization at Maggie Prospect is open along strike (NE-SW) and down-dip directions and mineralization appear to get wider towards the northeast.

10.3.4. Central Valley Prospect

Two holes in this prospect, TND-14 and TND-44 returned broad zone of anomalous lead-zinc mineralization including 47 m of 0.08g/t Au, 2.5g/t Ag and 0.53% combined Pb and Zn from 41-88 m depth and 50m of 0.08g/t Au, 1.5g/t Ag and 0.61% combined Pb and Zn from 47 m-97, respectively.

Two additional holes were drilled in the Central Valley Prospect, TND-80 and TND-115. TND-80 was collared halfway between TND-14 and TND-15 and intersected broad zones of low-grade mineralization. TND-115 did not encounter any significant gold mineralization however it intersected 12 m at 0.71g/t AuEq (4.2g/t Ag, and 1.19% combined Pb and Zn) from 179-191 m. Drill intercepts at the Central Valley Prospect are summarized in **Error! Reference source not found.**.

10.3.5. True North Prospect

The True North Prospect, located 200 m south of the DZ, intersected mineralization from a single drill hole, TND-32, which returned 3 m at 1.42 g/t Au and a combined Pb and Zn value of 6.9% from 51-54 m. This result was reflected at surface by a subsequent trench that returned a 4 m zone at 1.3 g/t Au and a high combined Pb-Zn content of 3.8%.

An additional single hole (TND-130) drilled in 2017 collared 100 m north of TND-32 and intersected 2m of 0.32g/t Au, 0.4% combined Pb and Zn from 110 m. Mineralization appears to increase to the south.

10.3.6. Northfield Prospect

A total of four trenches and two scissor holes were drilled at Northfield. The best results to date are trench ANT-17 with a 28 m intersection of 0.41 g/t Au, 10g/t Ag, and 0.4% combined Pb and Zn. Two scissor holes (TND-54 and TND-87) were drilled near trench ANT-17 and hole TND-54 intersected 2 m at 1.16g/t Au from 54-56 m depth while TND-87 did not intersect any significant gold mineralization.

10.3.7. Union North East Prospect

This prospect is located 250 m east of the Union North Zone and both zones are potentially connected to each other. Two trenches (ANT-40 and ANT-41) tested a surface geochemical anomaly and ANT-41 returned 27.5 m at 1.95g/t Au, 4.4 g/t Ag, 1.16% combined Pb and Zn and includes 2m at 8.4g/t Au, 10g/t Ag, 3.82% combined Pb and Zn. Trench and drill hole results indicate that grades are increasing toward the Union North Prospect. Initial scout hole TND-97 intersected 22 m at 1.1g/t Au, 5g/t Ag, 0.8% combined Pb and Zn from 34-56 m.

In 2017, three diamond holes (TND-119 to TND-121) were drilled in this prospect. TND-121 was collared as a 50 m step back to the south of TND-97 and intersected 14.5m at 0.93g/t Au, 6.8g/t Ag, 0.89% combined Pb and Zn from 89.5-104 m. TND-120 was collared 120m east of TND-97 and intersected 5 m at 1.1g/t Au,

29.4g/t Ag, 3.3% combined Pb and Zn from 36.9-41.9 m. Mineralization looks to have been wider at one stage but has been subsequently cut by barren granitoid dykes.

The prospects described above in Section 10.2.3 all have identified Inferred Resources, and along with several un-drilled high priority prospects with strong geochemical and geophysical anomalies, require additional exploration, including trenching and drilling, to determine their full mineral potential. Resource modelling has been carried out on 9 prospects out of 20 and the remaining prospects have been tested by very limited (shallow) drilling (Discovery Zone West, Junction, Southbow, Southgate, and Others) or remain undrilled.

11. Sample Preparation, Analysis and Security

The details of the sample preparation, analytical methodology and sample security protocols in place for soil, rock, trench and drill-core samples from the exploration programs carried out to date on the Altan Nar mining license are included in this section.

11.1. Primary Sample Protocols

Soil samples were taken at regular intervals on a grid varying between 400 m intervals on 400 m spaced lines to down 12.5 m intervals along 50 m spaced lines. Sample locations were determined by hand-held GPS devices with a precision of approximately 3 m in lateral directions. All samples were taken using a consistent sampling methodology which included digging shallow holes (avg. 25 cm) and dry sieving to -2 mm.

Rock chip and rock grab samples were taken from outcrop / sub-crop, respectively, by Erdene's geologists with locations determined by hand-held GPS devices (also ±3 m lateral precision). Samples were taken from mineralized and un-mineralized surface rocks that are, as much as possible, representative of the lithological unit identified while in the field. No grid-based rock chip sampling was carried out over the prospect areas.

All trenches were excavated to bedrock, although zones of intense alteration and deep weathering were encountered and therefore the term 'bedrock' is used loosely. Trench samples were collected at 1 m or 2 m intervals, as determined by the senior project geologist, based on the lithology and mineralization. Samples were chipped from the bottom of the trenches and care was taken to ensure each sample was representative of the entire interval being sampled. Representative hand samples for each interval were also collected for reference.

Erdene's sampling protocol for drill core consisted of routine collection of samples at 1 m, 2 m or 3 m intervals (depending on the lithology and style of mineralization) over the entire length of the drill hole, with the exception for more recent drilling where late-stage dykes were not sampled. Sample intervals were generally based on meterage, not geological controls or mineralization. However, in the case of early stage or scout drilling programs, samples were sometimes selected based on geological controls to get a better understanding of the distribution of mineralization. At Altan Nar, some of the mineralized zones were selectively sampled in the initial drill holes (TND-09 to 12). However, subsequent drill holes (TND-13 to 133) were all sampled at 1 m, 2 m or 3 m intervals, depending on the lithology and intensity of mineralization. For example, all clearly mineralized zones were sampled at 1 m intervals while late-stage, un-mineralized dykes were sampled at 3 m intervals, or not at all. All other drill-hole sections were sampled at 2 m intervals. Drill core recovery was excellent and did not impact the accuracy and reliability of the assay results. All drill-core was sawn in half using a rock saw and it is Report Author's opinion that the samples assayed are representative and that it is unlikely there has been sampling bias.

11.2. Sample Handling Protocols and Security

Erdene's sampling protocol for drill core consisted of routine collection of samples at one or two metre intervals (depending on the lithology and style of mineralization) over the entire length of the drill hole. All sample intervals were based on meterage, not geological controls or mineralization. For example, all mineralized and strongly altered zones were sampled at one metre intervals while un-mineralized material was sampled at two metre intervals. Drill core recovery was excellent and did not impact the accuracy and reliability of the assay results.

Drill core was delivered directly from the drill site to the Company's exploration camp at the end of every shift. All logging and sampling were done in camp by Erdene geologists. Drill core was logged for geology and RQD, and sample intervals were marked. Core was then photographed before being sawn in half with a core saw after which half-core samples for assay were bagged. Magnetic susceptibly readings were taken for each sample interval. For Altan Nar, the remaining half-core prior to and including 2014 drilling (up to TND-80) is securely stored at the Company's Zuun Mod exploration camp while post 2014 drilling half core samples were stored at Bayan Khundii camp site (TND-81 to TND-138).

For Altan Nar, samples (soil, rock, trench and drill core) were organized into batches of 20 or 30 samples and included a commercially prepared certified reference standard and an analytical blank. For batches of drill core samples either a field duplicate, consisting of two quarter-core intervals, or a laboratory duplicate is also included. Each batch was stored in the field camp in sealed bags. Sample batches were periodically shipped directly to SGS in Ulaanbaatar via Erdene's logistical contractor, Monrud Co. Ltd.

11.3. Assay Laboratory Sample Preparation and Analysis Protocols

All first assay samples have been prepared and assayed at the Ulaanbaatar laboratory of SGS Mongolia LLC ("SGS"). The laboratory is one of largest commercial laboratories in Mongolia and operated to ISO17025 specifications.

Analytic methods are summarised in Table 11-1.

At SGS, all rock samples (drill core, chip and grab) are handled as follows:

- Samples as received are initially sorted and verified against the client Sample Submission Form.
- Samples are air dried at 90°C.
- All samples are crushed to 3.35 mm using a jaw crusher and Boyd crusher in a two-stage process.
- Sample split by rotary sample divider to 600-700 g, with reject retained.
- Whole sample is pulverised to 90% <75 µm
- The pulverised sample is mixed and divided manually, with approximately 200 g retained for the client and 300 g retained for laboratory analysis
- Gold by fire assay 30 g, other metals by AAS21R 300 mg
- If any metals are over range on the AAS21R analysis (eg. Cu>10,000 ppm) then they are rerun using either AAS22S (e.g., Cu range 0.01-5%) or AAS43B (e.g., Cu range 0.01-40%) using the laboratory split (AAS22S – 400 mg, AAS43B – 250 mg used)

At SGS, all soil samples taken in 2011 were handled as follows:

- Samples are air dried at 110°C
- Sample is sieved to 180 µm to yield a +180 and -180 fraction
- The -180 µm fraction is then pulverised to 90% <75 µm

- The pulverised sample is mixed and divided manually, with approximately 200 g retained for the client and 300 g retained for laboratory analysis
- Fire Assay 30 g, base metals by AAS21R 300mg
- Soil sample taken in 2012 and 2014 were handled in a similar manner to the 2011 samples with the following exceptions:
- Sample were not sieved to 180 µm, a portion of the whole sample was pulverized to 90% <75 µm
- 2012 analysis included Fire Assay 30 g, 45-element analysis by ICP40B 300 mg
- 2014 analysis included Fire Assay 30 g, 33-element analysis by ICP40B 300 mg

Prior to 2013, rock samples (rock-chip/grab, trench, drill core) were assayed for Au, Ag, Cu, Pb, Zn, As and Mo. Samples from TND-09 to 12 were also analysed for Bi and Sb. In 2013, rock samples were analysed for Au and a suite of 45 elements using a four-acid digest and ICO-OES finish with 'ore-grade' analysis completed on over detection limit samples. Since 2014, the standard suite of elements analysed by SGS has been reduced from 45 to 33 (see Table 11-1 for details).

All soil samples from 2011 were assayed for Au, Ag, Cu, Pb, Zn, As and Mo, however, soil samples from 2012 were assayed for Au and a suite of 45 elements and samples from 2014 were assayed for Au and a suite of 33 elements. Table 11-1 provides a summary of the analytical methods used by SGS to analyse the samples. All drill core sample rejects are saved and stored at a secure facility and are available to carry out check-analyses as necessary.

Standard and blank analyses were monitored by Erdene and if SGS analysis varied from the determined assay value by more than 15% then Erdene's protocol is to request that the entire batch be re-analysed. No re-analysis has been required to date.

At SGS, all client-submitted material is retained under cover in the secure Ulaanbaatar facility where 24-hour security is maintained. Sample integrity is maintained during the analysis process by laboratory LIMS generated sample labelling throughout the analytical process. SGS's QA/QC protocols included a 10% internal QC run on analysis; so that each 50-sample batch consists of 45 samples, two duplicates, two standards and one blank.

The Report Author is of the opinion that adequate procedures for sample preparation, security and analysis are in place, and were used, to ensure accuracy of analytical results.

Table 11-1 SGS Analytical Methods and Detection Limits – Altan Nar

Gold Analysis			Detection Limits	
SGS Code	**Description**	**Element**	**LDL**	**UDL**
FAE303	Fire Assay, Solvent Extraction, AAS[1] finish, 30g sample	Au	1 ppb	10000 ppb
FAA303	Fire Assay, AAS[1] finish, 30g sample	Au	0.01 ppm	100 ppm
Multi-Element Analysis				
SGS Code	**Description**	**Element**	**LDL**	**UDL**
AAS21R	DIG21R (3 acid digest[2]) with AAS[1] finish	Cu Ag Pb Zn As Mo	2 ppm 1 ppm 3 ppm 2 ppm 50 ppm 5 ppm	10000 ppm 100 ppm 5000 ppm 10000 ppm 5000 ppm 10000 ppm

Multi-Element Ore-Grade Analysis				
SGS Code	**Description**	**Element**	**LDL**	**UDL**
AAS22S	DIG22S (3 acid digest[2]) with AAS[1] finish	Cu	10 ppm	5000 ppm
		Ag	5 ppm	500 ppm
		Pb	10 ppm	2%
		Zn	10 ppm	2%
		As	0.01%	2.50%
		Mo	20 ppm	5%
Multi-Element Ore-Grade Analysis - Higher Detection Limits				
SGS Code	**Description**	**Element**	**LDL**	**UDL**
AAS43B	DIG43B (4 acid digest[3]) with AAS[1] finish	Ag	500 ppm	2%
		Pb	0.01%	20%
		Zn	0.01%	40%
		As	0.02%	40%
		Mo	0.02%	40%

45-Element Analysis		
SGS Code	**Description**	**Element: LDL-UDL;**
ICP40B	4 acid digestion[3] with ICP OES[4] finish	Ag: 2 ppm – 10 ppm; Al: 0.01% - 15%; As: 3 ppm - 1%; Ba: 1 ppm - 1%; Be: 0.5 ppm - 0.25%; Bi: 5ppm - 1%; Ca: 0.01% - 15%; Cd: 1 ppm - 1%; Ce: 0.05 ppm-1000 ppm, Co: 1 ppm - 1%; Cr: 1 ppm - 1%; Cu: 0.5 ppm - 1%; Eu: 0.05 ppm -1000 ppm, Ga: 0.05 ppm – 500 ppm, Ho: 0.05 ppm – 1000 ppm, Fe: 0.01% - 15%; K: 0.01% - 15%; K2O: 0.01% - 35%; La: 0.5 ppm - 1%; Li: 1 ppm - 1%; Mg: 0.01% - 15%; Mn: 2 ppm - 1%; Mo: 1 ppm - 1%; Na: 0.01% - 15%; Na2O: 0.01% - 35%; Nb: 3 ppm – 1%; Nd: 0.05 ppm to 1%; Ni: 1 ppm - 1%; P: 0.01% - 15%; P2O5: 0.01% - 35%; Pb: 2 ppm - 1%; S: 0.01% - 5%; Sb: 5 ppm - 1%; Sc: 0.5 ppm - 1%; Se: 2 ppm to 1000 ppm; Sn: 10 ppm - 1%; Sr: 0.5 ppm - 1%; Ta: 0.05 ppm to 1%; Te: 0.05 ppm – 500 ppm; Th: 2 ppm to 1%; Ti: 0.01% - 15%; U: 3 ppm to 1%; V: 2 ppm - 1%; W: 10 ppm - 1%; Y: 0.5 ppm - 1%; Yb: 0.5 ppm to 1000 ppm; Zn: 1 ppm - 1%; Zr: 0.5 ppm - 1%

33-Element Analysis		
SGS Code	**Description**	**Element: LDL-UDL;**
ICP40B (2014)	4 acid digestion[3] with ICP OES[4] finish	Ag: 2 ppm – 50 ppm; Al: 0.03% - 15%; As: 5 ppm - 1%; Ba: 5 ppm - 1%; Be: 0.5 ppm - 0.25%; Bi: 5ppm - 1%; Ca: 0.01% - 15%; Cd: 1 ppm - 1%; Co: 1 ppm - 1%; Cr: 10 ppm - 1%; Cu: 2 ppm - 1%; Fe: 0.1% - 15%; K: 0.01% - 15%; La: 1 ppm - 1%; Li: 1 ppm - 1%; Mg: 0.02% - 15%; Mn: 5 ppm - 1%; Mo: 2 ppm - 1%; Na: 0.01% - 15%; Ni: 2 ppm - 1%; P: 0.01% - 15%; Pb: 2 ppm - 1%; S: 0.01% - 5%; Sb: 5 ppm - 1%; Sc: 0.5 ppm - 1%; Sn: 10 ppm - 1%; Sr: 5 ppm - 1%; Ti: 0.01% - 15%; V: 2 ppm - 1%; W: 10 ppm - 1%; Y: 1 ppm - 1%; Yb: 0.5 ppm to 1000 ppm; Zn: 5 ppm - 1%; Zr: 3 ppm - 1%

1. AAS: Atomic Absorption Spectrophotometer
2. 3-Acid Digest: Perchloric (HClO4), Hydrochloric (HCl) and Nitric (HNO3)
3. 4-Acid Digest: Same as 3-acid plus Hydrofluoric (HF)
4. ICP OES: Inductively Coupled Plasma Optical Emission Spectrometry
LDL Lower Detection Limit
UDL Upper Detection Limit
Source: Altan Nar Gold Project (Altan Nar mining License), Bayankhongor Aimag, Southwest Mongolia, National Instrument 43-101 Technical Report, Erdene Resource Development Corporation, J. C. (Chris) Cowan, MSc, PEng, March 10, 2014

11.4. Altan Nar Petrographic Work

A suite of 34 representative samples from the Altan Nar epithermal gold-silver deposit, including volcanic and volcaniclastic host rocks, nearby granite and granodiorite intrusive rocks and a suite of late-stage intrusive dykes were submitted to the Mongolian University of Science and Technology ("MUST") for petrographic analysis. In addition, eight samples of high-arsenic ("high-As") and six samples of low-arsenic ("low-As") 'ore-grade' drill core were submitted to MUST. Polished thin sections and standard thin sections were prepared for each of the 48 samples and submitted for reflected light and transmitted light petrographic analysis. The eight high-As samples submitted to MUST, which represented mineralized samples from the south end of the DZ (TND-09, -12, -19), were also submitted to SGS Lakefield laboratory for a comprehensive QEMSCAN analysis, coupled with X-ray Diffraction and electron microscope analysis to determine gangue and plant feed mineralogy.

While zones of high-As gold mineralization were initially reported and tested, additional drilling and trenching across the Altan Nar property has shown that this type of mineralization is a localized (e.g., approximately 75% of DZ south), compared to the more volumetrically extensive low-As gold mineralization in the DZ, and comprises approximately 11% of the deposit.

The results from the MUST and SGS studies yield several important insights into the Altan Nar gold-silver-base metal deposit, including:

- Free gold grains were detected in the reflected light examination at MUST in three of the six samples of low-As samples and in two of the eight polished high-As samples from the Discovery Zone. In addition, arsenopyrite was absent in four of the six low-As samples, and only present in trace amounts in the other two samples. This contrasts with the high-As samples where arsenopyrite was observed in varying amounts in all samples.
- Ore minerals at Altan Nar, as defined by SGS QEMSCAN analysis, include: arsenopyrite, galena, sphalerite, chalcopyrite, pyrite, pyrrhotite, tetrahedrite and a silver-antimony sulphosalt (pyrargyrite?), a silver-copper sulphosalt (polybasite? or pearceite?). In addition to gold, reflected light petrography indicated the presence of additional copper minerals in the Altan Nar mineralized zones, including: chalcocite, covellite, bornite and malachite.
- Iron (Fe) content in sphalerite ranges from 1.5 – 4.9% and is consistent with the 'honey sphalerite' observed in drill core. This may reflect a low Fe fugacity in the mineralizing fluids.
- Manganese (Mn) content in sphalerite is relatively low, ranging from 0.1 – 0.7%, and is somewhat surprising considering the high Mn concentrations encountered in geochemical analysis of some mineralized samples (up to >20 weight % Mn). One possible explanation is that sphalerite may have crystallized separately from Mn-rich gold-silver mineralization.
- Silver as Ag-Sb and Ag-Cu sulfosalts were detected with QEMSCAN analysis (SGS Lakefield) and is tentatively identified as pyrargyrite (Ag3SbS3). A Ag-Cu sulfosalt was identified also identified by SGS and is tentatively identified as polybasite or pearceite (Ag-Cu-Sb-As sulfosalt).
- Gangue minerals at Altan Nar include: quartz, mica, calcite, kutnohrite (Ca-Mn carbonate), an un-named Mn-Cr oxide, pyroxmangite, rhodochrosite (Mn-carbonate), jacobsite (Mn-Fe oxide), ankerite (Fe carbonate), chlorite, K-feldspar, amphibole, Mn-silicates, phosphate minerals, titanite, and Fe oxides.
- K-feldspar is pseudomorphed by sericite/muscovite and therefore it was not possible, using X-ray Diffraction techniques (XRD), to determine if adularia was present in examined samples. Visual examination of drill core, however, has revealed the presence of adularia, with characteristic 'chisel-pointed' pseudo-orthorhombic crystal shapes, in some quartz veins.
- Manganese in mineralized zones at Altan Nar – Altan Nar mineralization in the DZ south contains a complex mineral assemblage including manganese carbonate, manganese oxides and manganese silicates. Identified Mn-bearing minerals include rhodochrosite (Mn-carbonate),

jacobsite (Mn-Fe-oxide), manganite (Mn-oxide-hydroxide), kutnohorite (Ca-Mn-carbonate), pyroxmanganite (Mn-silicate) and an unidentified Mn-Cr-oxides mineral.

Based on petrographic observations, coupled with other field and mineralogical data, the following provisional paragenetic sequence is proposed for Altan Nar:

- Early stage massive quartz veining and brecciation.
- Brecciation, silicification and comb quartz veining and associated white mica alteration (sericite-pyrite-quartz) and deposition of galena-sphalerite-chalcopyrite-arsenopyrite (Au?). Note: some replacement of chalcopyrite by covellite and chalcocite may be later, but part of this mineralizing phase.
- Arsenopyrite-pyrite (+Au?) overprint on above sequences, with some associated (?) chalcedony veining and silicification.
- Mn-Ca carbonate veining (rhodochrosite, calcite, etc.) – late hypogene
- Late-stage (supergene) oxidation – limonite, Mn oxides, malachite.

With respect to depth of formation, several mineralogical features at Altan Nar are consistent with intermediate sulphidation (IS) of epithermal deposits, including the presence of quartz veins with colloform and crustiform textures, chalcedony veins and geopetal structures in multi-stage veins, and adularia and bladed calcite textures which are evidence of boiling.

In general, mineralogical and geological features of Altan Nar are consistent with intermediate sulphidation and carbonate-base metal deposits, including:

- mineralization occurs mostly in veins and breccias (with evidence of multiple brecciation events);
- adularia and bladed calcite textures in quartz veins represent boiling features;
- multi-stage quartz veins with late-stage geopetal structures in chalcedony;
- veins with quartz and Ca-Fe-Mn-Mg carbonates host the Au mineralization;
- Au is present as native metal with a variety of base metal sulfides and sulfosalts (e.g. Pb- and Sb sulphosalts identified by SGS);
- low-Fe sphalerite, tetrahedrite-tennantite (tentatively identified optically at MUST) and galena often dominate in base metal assemblages;
- Au-bearing veins can show classical banded crustiform-colloform textures; and
- white-mica alteration associated with mineralized zones, consisting of quartz-sericite (i.e. illite)-pyrite.

Additionally, a few features are consistent with high-sulphidation affinities, including ubiquitous presence, albeit in low modal concentrations, of Cu-sulphide minerals and high concentrations of Mo in a few samples. Tennantite-tetrahedrite are also diagnostic of high-sulphidation epithermal deposits and were identified in the MUST study, however, the identification of only Ag-Sb and Ag-Cu sulphide minerals by SGS places uncertainty on the optical mineralogy observations.

Widespread evidence for magnetite destruction (‘martitization’) was documented in volcanic and volcaniclastic rock samples. In these samples, magnetite is replaced by non-magnetic Fe oxide minerals and this feature is thought to reflect widespread epithermal fluid alteration, and deposition of gold-silver mineralization. Fresh magnetite, along with altered magnetite, was observed in the andesite sample from the high magnetite response area, as predicted. The most intense martitization was developed in the white-mica alteration zones immediately adjacent to strongly mineralized zones in DZ, where no fresh magnetite was observed. These zones have low magnetic response, as noted above in the geophysical sections.

Petrographic data provides insight into geology of the volcanic and volcaniclastic host rocks at Altan Nar, including:

- These rocks are pervasively altered (propylitic alteration with chlorite, epidote, carbonate), however, based on a consistent plagioclase composition and mafic mineral assemblage of biotite and amphibole most samples are interpreted to be of andesite composition.
- Some volcaniclastic samples contain felsic rock fragments including rhyodacite and rhyolite, suggesting minor bi-modal (i.e., intermediate-felsic) volcanism at Altan Nar, or possibly pyroclastic origin.
- Most volcanic rocks are pervasively altered and contain complex intergrowths of copper minerals (chalcopyrite, covellite, chalcocite and malachite) +/- sphalerite and galena indicating widespread metasomatism by metal-bearing fluids at Altan Nar.

The presence of Cu-Pb-Zn sulphides and Ag-bearing minerals throughout the volcanic rocks at Altan Nar demonstrates widespread alteration of the volcanic pile by metal-rich epithermal fluids.

Petrographic analysis of a single high-grade gold sample from drill hole TND-101 was completed in 2017 at Applied Petrologic Services and Research (APSAR) in New Zealand. This sample was collected from the164-165m interval that returned assays of 17.3 g/t Au, 21 g/t Ag, 1.19% As, 0.65% Mn, 0.14 % Pb, and 0.22% Zn. Results from this work indicated that:

1. Hydrothermal breccia cement comprises early, very fine-grained mosaic quartz and adularia, and later, less voluminous mosaic-drusy quartz interposed with interstitial sericite/illite and overgrown by Fe/Mg/Ca-carbonate. Fe/Mg/Ca-carbonate is also contained along late-stage fracturing and cavities along multiple shears and micro-fractures. Kaolin clay and hydrated Fe-oxides fill residual cavities and late fracturing.

2. A general paragenetic sequence of fracture/cement infilling was established, including:

    - Mosaic quartz, adularia (i.e. indicating boiling conditions; altered to illite/kaolin), pyrite, arsenopyrite;
    - Mosaic-drusy quartz, pyrite, arsenopyrite, sphalerite, galena, gold/electrum, chalcopyrite, argentite; sericite/illite; Fe/Mg/Ca-carbonate; and
    - Fe/Mg/Ca-carbonate, chalcopyrite; kaolin, hydrated Fe-oxides;

3. Relict secondary K-feldspar/adularia after groundmass of porphyritic andesite wallrock is impregnated with ultra-fine-grained supergene hematite;

4. Very fine-grained galena is locally abundant, both filling cavities and occurring as inclusions within pyrite.

5. Gold/Native Electrum: occurs as:

    - Intergrowths with galena and some amounts of argentite, filling cavities within and overgrowing pyrite. Gold grains (~15µm) were observed to be intergrown with galena, and contained as inclusions in pyrite (3-35 µm);
    - Interstitial grains to, and as inclusions within, quartz;
    - In-filling along micro-fractures within pyrite;

6. Very fine to fine grained acicular to prismatic arsenopyrite is concentrated in relation to earliest mosaic quartz and adularia of hydrothermal breccia cement;

7. Coarser grained arsenopyrite, together with pyrite, is mutually interlocking with fine grained mosaic to drusy quartz of later stage silica cement;

8. Subhedral to anhedral galena, chalcopyrite and sphalerite are intergrown with, but are mostly interstitial to, quartz and overgrowing pyrite and arsenopyrite;

11.5. Sample and Assaying Methods

The Report Author accepts that the sampling and assaying methods and approach are reasonable for this style of mineralization. The samples are representative and there appears to be no sample biases introduced during sampling. SGS laboratory is independent from Erdene and any relationship is commercial in nature and SGS laboratory is accredited/certified to ISO 9001.

11.6. Data Quality Control for Altan Nar

The following information on the Data Quality Control for Altan Nar is a summary of previously reported information. The reader is directed to the report titled "NI 43-101 Technical Report for the Preliminary Economic Assessment of the Khundii Gold Project" dated February 4, 2019 for full details of the data quality control review and reporting. The report is available on the Company's SEDAR profile. The QP for this section was Jeremy Clark, Principal Geologist for RPM Global Asia Limited.

Due to the reporting of a maiden resource estimate for the Altan Nar Area in 2015 and follow-up updated resource estimate in 2018, the QAQC is presented pre and post the data included in the resource. Furthermore, as this post 2018 drilling is not included in the resource estimate, this information is not included in this Technical Report.

11.6.1. Pre-2015 Estimate

The Quality Assurance and Quality Control (QA/QC) data provided to RPM consist of 14 types of commercial standards, laboratory internal standards as well as internal repeats. In addition, RPM arranged for 53 independent coarse reject samples from all phase of drilling program to be re-submitted these samples for check analysis to ALS Lab in Ulaanbaatar, Mongolia.

Erdene has carried out a program of QAQC for all phases of the drill program at the Altan Nar deposit. Industry CRMs were inserted at regular intervals and the results have, in the main, accurately reflected the original assays and expected values. Blank standards were sourced from silica sand and have all reported below 0.018g/t Au.

RPM's analysis of the internal repeat results for Au, Zn, Pb and Ag, show an acceptable correlation (most results within the 10 % error limits) with the original sample results. This indicates the sample pulps were reasonably homogenous after sample preparation resulting in high precision and repeatable sample assays. The results for the internal standards for Au, Zn, Pb and Ag were acceptable, as were the CRM results for Au, Zn, Pb and Ag. A recognised laboratory has been used for analysis of samples.

External checks by the company haven't been carried out routinely however RPM independently selected 53 samples from all phases of drilling and the results show scatter in gold but less scatter for base metals. Given the style of mineralization and type of coarse reject sample taken RPM considers the result to within the acceptable range. As such RPM considers that the QAQC data indicates that primary laboratory and External lab showed no evidence of systematic bias and the samples are representative.

Overall, the QAQC data does not indicate any bias and supports the assay data used in the Mineral Resource estimate.

11.6.2. Post 2015 Estimate

Commercial standards were used during 2015-2017 drilling programs and were obtained and certified by OREAS Pty Ltd. 2015-2017 drilling used five certified standards (all Au and Ag standards with trace level Zn and Pb values) and were inserted at a rate of approximately 1:20. Two certified blanks were used,

Coarse silica sand and Oreas26a (barren basalt). Blanks were inserted at a rate of 1:20 throughout the 2015-2016 drilling programs and 1:30 in 2017. A total of 69 field duplicates as well 53 pulp repeats were available only for 2017 drilling campaign.

Certified Reference Material standards were inserted at regular intervals and results have accurately reflected the original assays and expected values. Certified blanks have all reported below 0.001g/t Au.

Slight underestimation of Au (8.0g/t) and Ag (10 g/t) grade was observed from the OREAS62c standards inserted in 2015 drilling campaign; however, most of the results were within 2SD.

A large degree of scatter was observed in Zn (105ppm) and Pb (3ppm) for the low grade OREAS 26a standard. But these levels are far below plant feed grade as they are primarily Au / Ag standards.

Slight underestimation of Au (9.2g/t) grade was also observed from OREAS 62E for 2016 drilling while Ag performed well. For 2017 the OREAS 62E Au standard performed very well with majority of the results falling within 2SD; however, Ag standards showed poor performance as most of the results fall outside 2SD. It is suggested that a move to a routine ppm level Au analysis be made.

The majority of the field duplicate samples were at low Au values, while the few higher duplicates are widely scattered, suggesting but not proving the possibility of coarse gold. At some point in the future this needs to be confirmed using screen fire assay analysis. Zn and Pb field duplicates are also at low but more “in range” values than Au and Ag. They show significant scatter at economically significant grades. Given the spread of duplicate values in general it is suggested that sample splitting protocols be reviewed.

RPM recommends duplicate pulp testing of plant feed grade base metal samples prior to the next re-estimation of the Resource to confirm laboratory performance. This will require inclusion of sufficient base metal CRM to form a statistically valid population.

Instead of two Au CRM’s, RPM recommends the use of separate Au and plant feed grade base metals standards in appropriate ranges to confirm Au and base metals values in future programs.

RPM recommends selection of pulp duplicates from economically significant grade ranges.

Generally, QAQC data suggests slight negative bias for high Au standards potentially as a result of approaching the method over-range limit. The results for Au grades >9ppm are likely to be understated, this is not considered a material issue and supports the assay data used in the Mineral Resource estimate.

12. Data Verification

The following information on the Data Verification work for Altan Nar is a summary of previously reported information. The reader is directed to the report titled “NI 43-101 Technical Report for the Preliminary Economic Assessment of the Khundii Gold Project” dated February 4, 2019 for full details of the data quality control review and reporting. The report is available on the Company’s SEDAR profile. The QP for this section was Jeremy Clark, Principal Geologist for RPM Global Asia Limited.

RPM conducted a review of the geological digital data supplied by Erdene to ensure no material issues could be found and there was no cause to consider that the data was not accurate.

RPM reviewed drilling, logging, sampling, bulk density measurement procedures during the site visit to Project. Erdene supplied RPM with digital Excel files with collar, survey, general lithology, RQD and sampling data. In addition, PDF files of original assay certificates from SGS were supplied along with cross sections of the drilling plotted with assay grades and interpretations. RPM checked all grades and orientation of the drilling against the original assay certificates and cross sections and found no inconsistencies. Hard copy logs were not supplied to RPM.

During this review RPM noted only minor inconsistencies in the provided data which were subsequently corrected in the digital database. The inconsistencies included mislabelled intervals of QA/QC data as well as lithology intervals.

RPM reviewed all QA/QC procedures carried out by Erdene including a review of logging, sampling and sample preparation procedures; reviewed all technical data including geophysical and geochemical data; carried out an analysis of the assay QA/QC results; and compared data sets with observations made in the field. RPM is satisfied that QA/QC procedures carried out by Erdene conform to generally accepted industry standards and that the data used in this Technical Report is reliable.

RPM independently imported all original lab reports and cross checked against the Company supplied data 1,134 assay samples (23% of all samples) were checked out of 4,980 samples (post 2014 data) which underpins the updated Mineral Resource Estimate for Altan Nar Area, and no errors noted.

The reviewed drilling database formed the underlying data for the independent NI43-101 Statement of Mineral Resources completed by RPM.

13. Mineral Processing and Metallurgical Testing

Metallurgical test work results were based on a number of test programs conducted between 2012 and 2018 at ALS Ammetc (Perth, Western Australia), Actlabs Asia LLC. (Mongolia), and Blue Coast Research Ltd. (Parksville, BC). These test work programs were:

- ALS Ammtec conducted a gold deportment study in 2012 on a single sample from hole TND-19 collected from Discovery Zone South. The sample contained high concentrations of gold (17.9 g/t) and arsenic (8.7%) and today is not considered representative on the overall mineralization at Altan Nar;
- Actlabs Asia LLC. conducted a number of cyanidation tests on drill core samples from Discovery Zone North, Discovery Zone South, Union North, Union South and Riverside in 2013;
- Actlabs Asia LLC. conducted additional cyanidation tests on coarse assay rejects on samples from Discovery Zone North, Discovery Zone South and the Union North in 2015;
- Blue Coast Research Ltd. (BCR) conducted heavy liquid separation tests, gravity testwork, cyanidation, flotation and grindability testwork on larger composite samples from Discovery Zone North and Union North in 2015; and
- Blue Coast Research Ltd. conducted cyanidation and flotation testwork on a larger composite sample from Discovery Zone South in 2018.
- SGS Canada Inc. conducted additional grindability testwork on composites from Altan Nar in 2019.

13.1. Gold Deportment Study

A gold deportment study was conducted in 2012 by ALS Ammtec in Perth, Western Australia. A single sample from hole TND-19 was used for this study. The sample contained high concentrations of gold (17.9 g/t) and arsenic (8.7%). Based on the current understanding of the deposit, this sample would not be considered representative of the overall mineralization at Altan Nar. The sample was subjected to five separate leaching and acid treatment procedures designed to characterize the various gold hosts.

Very little free, cyanide soluble gold was noted (3.7%) in this sample. The vast majority of the gold was associated with arsenopyrite (91.7%). Lesser amounts were associated with carbonates (1.7%), pyrite (1.2%) and silicates (1.8%). Gold recovery from this type of mineralization is expected to be low unless some form of oxidative pre-treatment (Pressure Oxidation or Biological Oxidation for example) is first applied to expose the gold associated with arsenopyrite.

13.2. Grindability Testing

Two rounds of grindability testing were conducted on Altan Nar material. The initial round of testing was completed in 2015 and consisted of a single Bond Rod Mill Work Index Test and a single Bond Ball Mill Work Index Test conducted on a blend of 50% Discovery Zone North (DZN) and 50% Union North (UN) material collected as part of the 2015 BCR test program. This work suggests that the Altan Nar material is hard. No grindability testing has been performed on samples from Discovery Zone South (DZS) to date..

Table 13-1 Bond Rod Mill and Bond Ball Mill Work Index Test results on a 50:50 sample from Discovery Zone North and Union North

Test	Bond Work Index (kWh/tonne)
Bond Rod Mill Work Index Test	18.5
Bond Ball Mill Work Index Test	18.4

Additional grindability testwork was conducted in 2019 on two composites. AN-18-01 was collected from the Discovery Zone and AN-18-02 was made up of core from Union North. Both composites were comprised of ¼ HQ core. These composites were subjected to SMC tests and Abrasion index testing. Results are presented in the table below. These results suggest the Altan Nar material is moderately hard to hard. The Discovery Zone material was abrasive, while the Union North material was only moderately abrasive. Results are presented in Table 13-2.

Table 13-2 SMC and Abrasion Index Test Results from Discovery Zone and Union North

Composite	Location	SMC (Axb)	Abrasion Index (Ai, g)
AN-18-01	Discovery Zone	42.0	0.495
AN-18-02	Union North	49.0	0.285

13.3. Cyanidation Testwork

Programs conducted at Actlabs Asia in 2013 and 2015 tested a number of core samples and coarse assays rejects and subjected them to cyanidation leach tests. Additionally, Blue Coast Research conducted a limited number of bottle roll tests on larger composites during the 2015 and 2018 programs. The composites used in the BCR programs were selected by Erdene personnel and are considered to be more representative of the Discovery Zone North, Discovery Zone South and Union North zones of the deposit.

13.3.1. Actlabs Asia 2013 Testwork

Fourteen cyanidation tests were conducted on various samples that ranged in grade from 0.72 g/t to 11.2 g/t Au. Arsenic content of these composites ranged from a low of 62.5 ppm to a high of 6.5%. Samples were submitted as core and subsequently crushed to minus 2 mm before being ground to 95% passing 74µm. The ground material was leached with cyanide for 48 hours, with kinetic samples being extracted after 24, 36 and 48 hours. Results are presented in Table 13-3.

Table 13-3 Actlabs Asia - 2013 Cyanidation Results

Location	Composite/Hold ID	Au Grade (g/t)	As (ppm)	24-hour Au Recovery (%)
Discovery Zone South	Comp-TND09-01	2.79	13,125	28%
Discovery Zone South	Comp-TND09-02	8.90	65,000	10%
Union South	Comp-TND29-03	6.97	135	97%
Discovery Zone South	Comp-TND35-04	2.47	17,000	40%
Discovery Zone North	Comp-TND38-05	11.19	4,370	43%
Discovery Zone North	Comp-TND40-06	8.94	1,360	91%
Discovery Zone North	Comp-TND40-07	1.21	4,363	79%
Discovery Zone South	Comp-TND41-08	2.07	1,163	89%
Riverside	Comp-TND45-09	0.72	133	100%
Union North	Comp-TND46-10	5.43	2,025	86%
Union North	Comp-TND46-11	2.18	715	75%
Discovery Zone North	Comp-TND50-12	2.24	63	100%
Discovery Zone North	Comp-TND50-13	2.95	80	85%
Discovery Zone North	Comp-TND58-14	4.59	185	89%
Average (As<1%)				**85%**
Average (As>1%)				**26%**

The results indicate that leach kinetics were reasonably quick with maximum gold recovery achieved after 24 hours in most cases. Higher gold recoveries were noted from samples with lower arsenic contents, suggesting that some of the gold in the arsenic enriched zones, primarily centred on Discovery Zone South, may be present as solid solution within the arsenopyrite crystal lattice.

13.3.2. Actlabs Asia 2015 Testwork

Twenty-one individual composites were collected from coarse assay rejects and submitted for bottle roll cyanidation tests. During each test approximately 400 grams of solids were added to a bottle at 50% solids. The material was subsequently leached with cyanide. Results are presented in Table 13-4.

These results suggest that gold recovery is again broadly influenced by arsenic content, with higher arsenic grades generally resulting in lower overall recoveries.

Table 13-4 Actlabs Asia – 2015 Cyanidation Results

Location	Composite/Hole ID	Au Grade (g/t)	As (ppm)	Au Recovery (%)
Discovery Zone North	DZN Comp 15-01	2.65	201	89
Discovery Zone North	DZN Comp 15-02	2.70	1,792	68
Discovery Zone North	DZN Comp 15-03	1.73	4,480	37
Discovery Zone North	DZN Comp 15-04	2.69	7,505	51
Discovery Zone North	DZN Comp 15-05	3.58	3,445	42
Discovery Zone North	DZN Comp 15-06	3.73	233	81
Discovery Zone North	DZN Comp 15-07	5.72	316	18
Discovery Zone North	DZN Comp 15-08	8.60	2,920	37
Discovery Zone South	DZS Comp 15-09	2.14	598	18
Discovery Zone South	DZS Comp 15-10	2.58	3,251	10
Discovery Zone South	DZS Comp 15-11	2.04	7,875	15
Discovery Zone South	DZS Comp 15-12	2.23	12,323	44
Discovery Zone South	DZS Comp 15-13	1.61	13,020	19
Discovery Zone South	DZS Comp 15-14	3.43	24,850	26
Discovery Zone South	DZS Comp 15-15	4.69	23,730	33
Union North	UN Comp 15-16	4.09	328	75
Union North	UN Comp 15-17	3.50	468	77
Union North	UN Comp 15-18	4.41	1,737	49
Union North	UN Comp 15-19	3.74	2,128	50
Union North	UN Comp 15-20	1.91	4,585	33
Union North	UN Comp 15-21	2.90	11,170	22

13.3.3. Blue Coast Research Testwork (2015 and 2018)

Bottle roll cyanidation tests were conducted on master composites prepared during the BCR testwork in both 2015 and 2018 (refer to Table 13-5). The master composites were selected by Erdene personal and are considered representative of the Discovery Zone North, Discovery Zone South and Union North areas of the deposit. The DZN and UN composites were subjected to a single cyanidation test. Each test was conducted as a 48-hour bottle roll. Sodium cyanide concentration was maintained at 1.0 g/L throughout the test and pH was maintained with lime between 10.5 and 11.0. Prior to each test the material was ground to a particle size of 80% passing 74 microns.

Table 13-5 Cyanidation Results (BCR Master Composites; 2015 Test Program)

Location	Composite ID	Au Grade (g/t)	As (ppm)	Au Recovery (%)
Discovery Zone North	DZN Comp	2.88	1,500	88
Union North	UN Comp	3.56	3,000	68

Leach testwork was conducted on a Discovery Zone South composite with a gold grade of 2.25 g/t and an arsenic content of 1.16%. This work evaluated the impact that finer grind sizes and higher cyanide concentrations had on overall gold recovery. Baseline conditions for each test were 40% solids and 48 hours of retention time. Grind size and cyanide concentration are noted in Table 13-6 below.

As indicated in Table 13-6, finer primary grinds had little impact on overall gold recovery, with gold extraction ranging between 38% and 43%. Higher cyanide consumption was observed in the initial fine grind test (p80 <20µm), which raised concerns that leach performance may have been impacted by reduced cyanide availability. The test was repeated with an increased cyanide dosage (7.5 g/L), and increased retention time (72h). This test resulted in slightly higher gold recovery (48%) but significantly higher overall cyanide consumption (23.8kg/t). The excessive cyanide consumption coupled with the fine grind makes this a sub-optimal route to increase gold extraction.

Table 13-6 Whole Plant Feed Leach Cyanidation Results (BCR Master Composites; 2018 Test Program)

Location	Composite ID	Primary Grind (P80, µm)	NaCN Concentration (g/L)	NaCN Consumption (kg/t)	Au Recovery (%)
Discovery Zone South	DZS Comp	74	1.00	2.25	38
Discovery Zone South	DZS Comp	60	1.00	2.63	40
Discovery Zone South	DZS Comp	36	1.00	2.55	40
Discovery Zone South	DZS Comp	<20	1.00	4.43	43
Discovery Zone South	DZS Comp	<20	7.50	23.8	48

The Discovery Zone South testwork indicates that gold recovery from higher arsenic areas in the deposit likely contains a refractory gold component, limiting recovery by conventional cyanidation alone. Additional variability work would be required to further delineate the extent of this refractory component. Flotation and/or oxidative pre-treatment may provide an additional route to optimizing gold recovery from high arsenic areas of the deposit and should this be considered during future testwork.

13.4. Gravity Testwork

A single gravity amenability test was conducted at Blue Coast Research on the Discovery Zone North composite. 2.0 kg of the DZN composite was ground in a laboratory rod mill at 60% solids to a nominal p80 of 75 µm prior to being fed to a laboratory scale Knelson concentrator. The resulting Knelson concentrate was then further upgraded over a shaking table (MAT). Results are presented in Table 13-7. Gold recovery to Knelson concentrate was moderate at 45% at a gold grade of 36.5 g/t. This was further upgraded over a shaking table to 398.8 g/t Au, albeit at a much lower gold recovery (5.8%). This result is unoptimized, however, it does highlight that a portion of the gold is recoverable through gravity techniques.

Table 13-7 DZN Composite Gravity Test Results

Product	Mass (%)	Au Grade (g/t)	Au Recovery (%)
MAT Concentrate	0.04	398.8	5.79
MAT Tails	3.49	32.2	39.37
Knelson Tails	96.47	1.63	54.85
Total	**100.00**	**2.86**	**100.00**
MAT Concentrate	0.04	398.8	5.79
Knelson Concentrate	3.53	36.5	45.15

13.5. Heavy Liquid Separation

A single amenability test was conducted to determine if a pre-concentration process could be employed to reject clean liberated gangue while maintaining metal values in a concentrated mass. A 2.1 kg subsample of minus ½ inch Discovery Zone North material was prepared as feed for the heavy liquid test. The sample was pre-screened at 850 µm to remove fines from the heavy liquid feed. A sample of sodium heteropolytungstate was prepared as the heavy liquid medium with a specific gravity of 2.85. Particles with a density greater than this will report to the sink fraction, while particles with a lighter density will report to the float fraction. Screen oversize (+850 µm) was added to the heavy liquid, mixed and allowed to settle for fifteen (15) minutes. The float and sink fractions were then recovered, filtered and washed and the process was repeated until the entire 2.1 kg was processed.

Floats, sinks and fines were then assayed for lead, zinc, gold and silver and a metallurgical balance was generated. Results are presented in Table 13-8. Results of the test were subpar with significant amounts of lead (25.5%), zinc (45.7%), gold (69.1%) and silver (47.5%) reporting to the float fraction. The large amount of base and especially precious metals lost to the floats would suggest that pre-concentration of the DZN material is not an appropriate process.

Table 13-8 Heavy Liquid Separation Test Results; Discovery Zone North Composite

Product	Mass	Grade				Recovery (%)			
	%	Pb (%)	Zn (%)	Au (g/t)	Ag (g/t)	Pb	Zn	Au	Ag
HLS Float	79.1	0.27	0.41	2.44	9	25.5	45.7	69.1	47.5
HLS Sink	8.7	4.59	2.78	7.40	55	48.4	34.5	23.1	33.3
Screen Undersize (Fines)	12.3	1.76	1.14	1.76	22	26.1	19.8	7.8	19.2
Calculated Head	100.0	0.82	0.70	2.79	14	100	100	100	100

13.6. Flotation Testwork

Blue Coast Research conducted flotation test programs on both Discovery Zone North and Discovery Zone South material. A limited flotation test program was conducted a composite from Union North, using the flowsheet developed for Discovery Zone North (DZN). Flotation conditions aimed to make separate lead and zinc concentrates. A bulk sulphide concentrate was floated after the zinc rougher to evaluate if the remaining pyrite and arsenopyrite could be recovered into a bulk concentrate of sufficient grade.

Flotation of the DZN composite was successful in that it produced separate lead and zinc concentrates of acceptable grades. A significant portion of the gold and silver reported to the lead concentrate (refer to Table 13-9).

Table 13-9 Discovery Zone North Cleaner Flotation Results (BCR Test F-8; 2015 Study)

Product	Weight	Assays, % or g/t					% Distribution				
	%	Pb	Zn	As	Au	Ag	Pb	Zn	As	Au	Ag
Lead Cleaner 3 Concentrate	0.97	61.87	5.53	0.88	229.09	1,028	74.39	7.79	5.58	74.67	64.01
Zinc Cleaner 3 Concentrate	0.84	5.78	50.28	0.13	20.18	242	6.02	61.33	0.69	5.7	13.08
Sulphide Rougher Concentrate	4.01	0.82	0.52	2.61	6.18	14	4.06	3.06	68.94	8.35	3.48

Union North and Discovery Zone South composites did not respond as favourably to a similar flowsheet. Only a single cleaner test was conducted on the Union North composite. Results from this test, presented in Table 13-1010, show that lead and zinc concentrate grade and recovery were low, and additional optimization is required to improve the performance from this composite. A similar observation was noted from the Discovery Zone South composite (results presented in Table 13-3) with low lead and zinc recovery being noted to the final concentrates.

Table 13-10 Union North Cleaner Flotation Results (BCR Test F-12; 2015 Study)

Product	Weight	Assays, % or g/t					% Distribution				
	%	Pb	Zn	As	Au	Ag	Pb	Zn	As	Au	Ag
Lead Cleaner 3 Concentrate	1.64	47.65	3.76	2.1	93.98	335	53.92	5.22	11.86	44.89	40.26
Zinc Cleaner 3 Concentrate	1.35	4.32	48.34	0.37	11.96	155	4.02	55.22	1.7	4.7	15.28
Sulphide Rougher Concentrate	7.26	0.79	0.38	2.17	11.36	22	3.98	2.37	54.43	24.11	11.48

Table 13-3 Discovery Zone South Cleaner Flotation Results (BCR Test F-10; 2018 Study)

Product	Weight	Assays, % or g/t						% Distribution					
	%	Pb	Zn	Fe	As	Au	Ag	Pb	Zn	Fe	As	Au	Ag
Lead Cleaner 3 Concentrate	0.51	43.57	9.15	10.94	4.95	82.04	3,096.8	46.05	4.72	1.06	2.6	18.8	36.74
Zinc Cleaner 3 Concentrate	0.92	5.35	50.65	5.92	1.32	14.39	731	10.15	46.83	1.03	1.24	5.91	15.56
Sulphide Rougher Concentrate	8.08	0.69	2.58	23	7.75	11.94	101.5	11.41	20.87	35.11	63.84	42.96	18.9

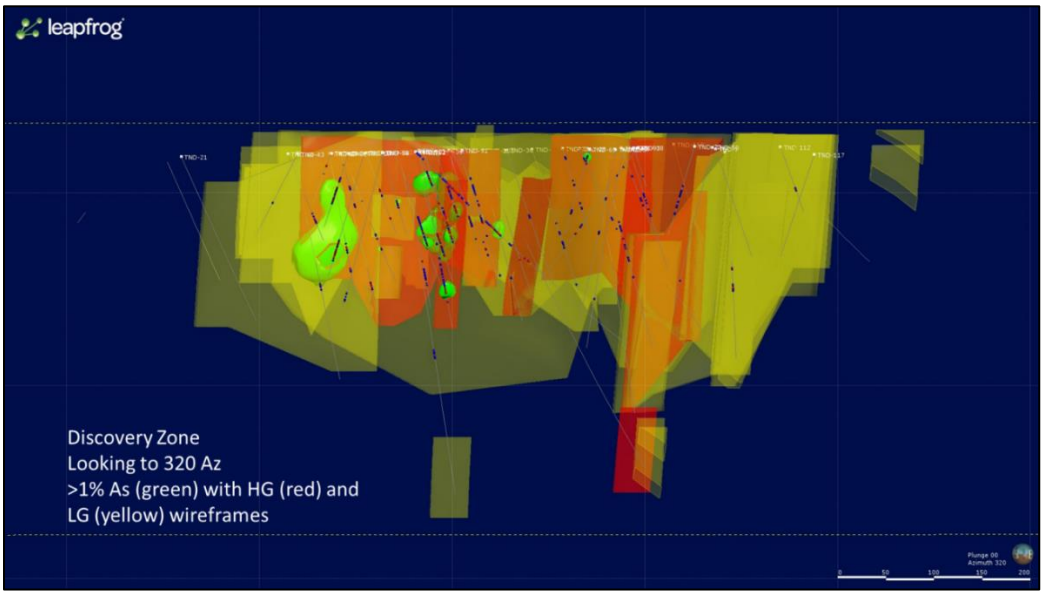
The flotation response to date from Discovery Zone South and Union North composites has been suboptimal. Future studies should continue to evaluate flotation options for Altan Nar as a potential method to improve the overall metallurgical performance from the deposit.

13.7. Projected Gold Recovery

Gold recovery projections noted here are made based on the assumption of a whole ore cyanidation process. Cyanidation recovery data from the Actlabs and BCR test programs has been included in this analysis.

Gold extraction from Altan Nar samples has been variable. A general relationship has been observed between the quantity of arsenic and the overall gold recovery. The lower recovery observed with higher arsenic content suggests that there is a portion of gold locked in solid solution within the arsenopyrite crystal lattice. Erdene has modelled the presence of arsenic within Altan Nar and has shown that the majority of the arsenic is contained in zones with an arsenic content in excess of 1%, centred in the Discovery Zone South area. These zones are highlighted as green areas within the Figure 13-1.

Figure 13-1 Altan Nar Discovery Zone Wireframes: >1% As (green); High Grade (red); Low Grade (yellow)



As the arsenic content increases, there is a general trend of decreasing gold recovery. This relationship is highlighted in Figure 13-2. Geological modelling conducted by Erdene has shown that the high arsenic zone (defined as blocks with an arsenic content greater than 1%) is distinct and represents a total of 11% of the tonnage at Altan Nar. Given the low recovery associated with higher arsenic material it is proposed to selectively mine around these areas and exclude them from processing. Excluding this high arsenic material will reduce the average arsenic content of the remaining material to 0.16%.

Figure 13-2 Altan Nar Gold Recovery as a function of Arsenic Content

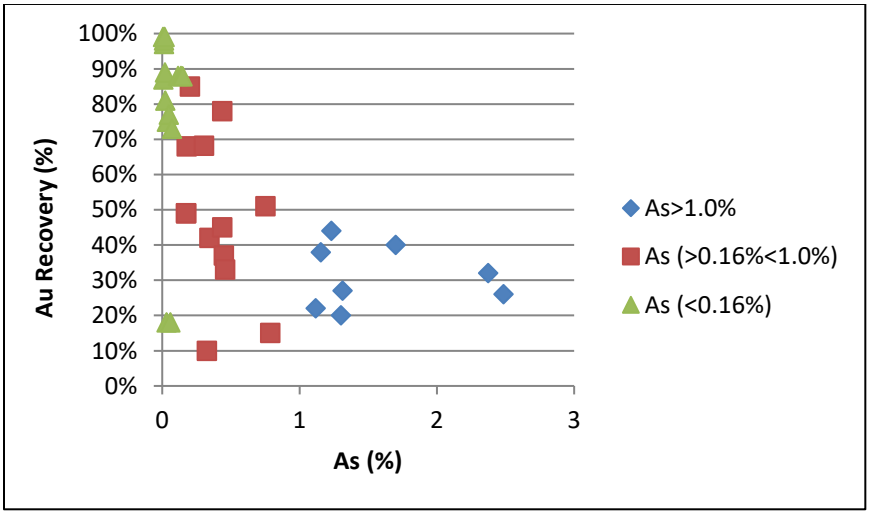


Table 13-4 summarizes the average gold recovery based on the arsenic content of the material from Altan Nar. All the cyanide leach data form the Actlabs and BCR test programs have been included in these calculations with the following exceptions:

- DZN Comp 15-07 (Actlabs 2015 Work)
- DZS Comp 15-09 (Actlabs 2015 Work)

These two composites both had arsenic concentrations of less than 0.16% but low gold recovery. DZN Comp 15-07 had higher copper grade (1,972 ppm) and a low final bottle roll pH of 9.89, suggesting that the test may have been cyanide starved, in turn causing the poor recovery. DZS Comp 15-09 also had higher than average copper grades (1403 ppm) which may have been a factor in the lower recovery.

Table 13-4 Average Altan Nar Gold Recovery based on Arsenic Content

Arsenic Grade (%)	Gold Recovery (%)
<0.16%	88%
>0.16%; <1%	48%
>1%	29%

Gold recovery of Altan Nar material with an arsenic content of less than 0.16% averages 88%, however it should be noted that lower recovery is expected as the arsenic content increases above 0.16%. Additional cyanidation testwork should be conducted during future studies to understand and potentially optimize this performance. A substantial geometallurgical test program should be included to gain additional confidence in gold recovery from samples with varying arsenic contents and geographic locations (i.e., Discovery Zone North and Discovery Zone South).

14. Mineral Resource Estimate

The Mineral Resource Estimate for the Altan Nar deposit was developed in 2018 by RPM with an effective date of May 7, 2018 and documented in the report titled “NI 43-101 Technical Report for the Preliminary Economic Assessment of the Khundii Gold Project” dated February 4, 2019. The QP for the Altan Nar Mineral Resource Estimate is Jeremy Clark, Principal Geologist for RPM Global Asia Limited. Extracts relevant to the Mineral Resource Estimate are included in this section, however for a detailed review of the Altan Nar mineral resource estimate parameters and procedures, the reader is directed to the aforementioned technical report.

While the Company completed a six-hole, 667m drilling program in the area of the Discovery Zone in late 2019, these results were reviewed by Mr. Clark and are not considered to be material to the resource and within the accuracy limits of the Classification applied. A visual comparison of the 6 holes against the 2018 block model indicated that while some variations could be observed at a local scale, these were not material in terms of geology and grade distribution and are considered in line with variations expected with the style of mineralisation. As such, the 2018 block model is consistent with the recent drilling and the 2018 Mineral Resource Statement remains current.

14.1. Mineral Resource Statement

RPM has independently estimated the Mineral Resources contained within the Project, based on the data collected by Erdene as of 1st February 2018. The Mineral Resource estimate and underlying data complies with the guidelines provided in the CIM Definition Standards under NI 43-101 and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines. Therefore, RPM considers it is suitable for public reporting. The Mineral Resources were completed by Mr. David Princep of RPM and under the supervision of Mr. Jeremy Clark of RPM.

The Statement of Mineral Resources has been constrained by the topography, and a cut off 0.7 g/t AuEq above a nominal pit shell and 1.4 g/t AuEq below the same pit shell.

The results of the Mineral Resource estimate for the Altan Nar deposit are presented in Table 14-12. RPM suggests using a 0.7 g/t AuEq above pit and 1.4g/t AuEq below the pit shell as a reporting cut-off based on a mining / process and cost parameters for the Project.

Further details are included in the report titled “NI 43-101 Technical Report for the Preliminary Economic Assessment of the Khundii Gold Project” dated February 4, 2019.

Table 14-1 Altan Nar Deposit Mineral Resource Estimate, May 2018

Type	Indicated Mineral Resource										
	Quantity	Au	Ag	Zn	Pb	AuEq	Au	Ag	Zn	Pb	AuEq
	Mt	g/t	g/t	%	%	g/t	Koz	Koz	Kt	Kt	Koz
Oxide	0.6	2.0	12.7	0.6	1.0	3.1	39.3	244.3	3.8	6.3	59.6
Fresh	4.4	2.0	15.0	0.6	0.5	2.8	278.4	2,105.4	27.8	22.7	393.4
Total	**5.0**	**2.0**	**14.8**	**0.6**	**0.6**	**2.8**	**317.7**	**2,349.7**	**31.6**	**29.0**	**453.0**

Type	Inferred Mineral Resource										
	Quantity	Au	Ag	Zn	Pb	AuEq	Au	Ag	Zn	Pb	AuEq
	Mt	g/t	g/t	%	%	g/t	Koz	Koz	Kt	Kt	Koz
Oxide	0.8	1.8	7.5	0.6	0.9	2.6	43.3	183.7	4.3	6.5	64.2
Fresh	2.7	1.7	8.0	0.7	0.6	2.5	142.4	682.1	19.4	15.8	212.8
Total	**3.4**	**1.7**	**7.9**	**0.7**	**0.7**	**2.5**	**185.7**	**865.8**	**23.7**	**22.3**	**277.1**

Note:

7. *The Statement of Estimates of Mineral Resources has been compiled under the supervision of Mr. Jeremy Clark who is a sub-consultant of RPM and a Member of the Australian Institute of Geoscientists. Mr. Clark has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity that he has undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.*
8. *All Mineral Resources figures reported in the table above represent estimates based on drilling completed up to 7th May 2018. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.*
9. **Au Equivalent (AuEq) calculated using long term 2023 - 2027 "Energy & Metals Concensus Forecasts" March 19, 2018 average of US$1310/oz for Au, US$17.91/oz for Ag, US$1.07/pound for Pb and US$1.42/pound for Zn. Adjustment has been made for metallurgical recovery and is based company's preliminary testwork results which used flotation to separate concentrates including a pyrite concentrate with credits only for Au and Ag. Based on grades and contained metal for Au, Ag, Pb and Zn, it is assumed that all commodities have reasonable potential to be economically extractable.*
    c. *The formula used for Au equivalent grade is: AuEq g/t = Au g/t + Ag g/t*0.0124+Pb%*0.509+Zn%*0.578 with metallurgical recovery of 88.8% Au, 80.6% Ag, 80.4% Pb and 69.1% Zn.*
    d. *Au equivalent ounces are calculated by multiplying Mineral Resource tonnage by Au equivalent grade and converting for ounces. The formula used for Au equivalent ounces is: AuEq Oz = [Tonnage x AuEq grade (g/t)]/31.1035.*
10. *Mineral Resources are reported on a dry in-situ basis.*
11. *Reported at a 0.7 g/t AuEq cut-off above pit shelland 1.4g/t AuEq below the pit shell. Cut-off parameters were selected based on an RPM internal cut-off calculator, which indicated that a break-even cut-off grade of 0.7g/t Au Equivalent above pit and 1.4g/t AuEq below pit, assuming a gold price of US$1310 per ounce, an open mining cost of US$6 per tonne and a processing cost of US$20 per tonne milled and processing recovery of 88.8% Au, 80.6% Ag, 80.4% Pb and 69.1% Zn.*
12. *Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not been demonstrated to have actual economic viability*

15. Adjacent Properties

The Khundii Gold District includes both the Altan Nar gold-polymetallic deposit and the Bayan Khundii gold deposit which are located ~20 km apart and both are fully owned by Erdene. The Khundii Gold District is situated in a well mineralized belt including the Erdene-owned Zuun Mod porphyry molybdenum / copper deposit situated 40 km to the east.

There are no adjacent properties with similar publicly well-known mineralization to provide comparative mineralization characteristics. Erdene has commenced exploration on a recently acquired exploration property contiguous to the Khundii license where a significant white mica altered porphyry target has been identified. Erdene suggests there is potential for additional deposits to be found in this apparently well mineralized belt which has previously not been well explored.

16. Other Relevant Data and Information

No other relevant / material data is known to have been excluded from the Technical Report.

17. Interpretation and Conclusions

The following interpretations and conclusions have been made on the Altan Nar Gold Project from the findings of the Technical Report:

- The Project represents a promising intermediate sulphidation epithermal gold-silver-polymetallic project and has resources of sufficient quality to warrant additional investigation. No Measured Resources have been classified, however, Indicated Resource of 453,00 ounces (“oz”) gold equivalent (“AuEq”) averaging 2.0 g/t Au and 2.8 g/t AuEq and Inferred Resource of 277,100 oz AuEq averaging 1.7 g/t Au and 2.5 g/t AuEq, at a 0.7 g/t AuEq cut-off grade, within a total resource of 5.0 million tonnes (“Mt”) Indicated and 3.4 Mt Inferred;
- Indicated Resource includes 317,700 oz gold, 31,600 tonnes (“t”) zinc, 29,000 t lead, and 2.35 million oz silver, while the Inferred Resource contains 185,700 oz gold, 23,700 t zinc, 22,300 t lead, and 865,900 oz silver;
- Approximately 63% of the Mineral Resource is classified as Indicated and 37% classified as Inferred;
- Approximately 90% of the Mineral Resources are within 150 metres of surface with all zones open along strike and at depth;
- Multiple undrilled and scout-drilled prospects along the 5.6 kilometre Altan Nar trend have the potential for hosting additional gold-polymetallic resources;
- Potential for increasing the Mineral Resources are good, with the DZ and UN areas along strike and down dip, which requires further drilling to investigate potential. In addition, previously undrilled and scout drilled areas have potential which will need drill investigation;
- Metallurgical testwork is at an early stage but samples tested to date have generally shown a good response to leaching with average gold recoveries of 80% for the low arsenic material. Higher arsenic samples, which appear to make up only a relatively small part of the deposit (11%), would require a more intensive, though nonetheless proven, processing method with potentially high gold recoveries;
- Additional metallurgical testwork should be undertaken to maximize the metal recovery potential for the Altan Nar deposit; and
- The proposed processing circuit has not yet been defined for the Project. This will be completed based on ongoing metallurgical studies.

18. Recommendations

18.1.1. Drilling and Mineral Resources

In 2020, Wave Geophysics Ltd, based in Colorado, USA, was contracted to complete a review and completion of all geophysical data collected between 2011 and 2018. A series of maps and 3D models were produced for the following data; ground magnetics, induced polarization and gravity. In conjunction with the geological mapping and geochemical data sets, the newly compiled geophysical data should be used to identify high-priority drill targets across the Altan Nar license area.

The results of the drill program carried out in 2019 in the Discovery Zone successfully tested a concept of a preferred high-grade gold-mineralized horizon believed to potentially represent an epithermal boiling zone. However, an untested area of central Discovery Zone (referred to as the “Gap Zone” remains open for 70 metres between TND-138 in the north and TND-134 to the south. This area should be drilled to confirm continuity of the mineralization in the Gap Zone.

Approximately 37% of the Altan Nar Project has been classified as Inferred Mineral Resource. It is recommended that additional drilling occur to increase confidence in the existing Inferred Mineral Resource, focusing on the highest-grade portions as well as additional extensional exploration drilling in the Discovery Zone and Union North areas of the deposit.

18.1.2. Metallurgical Testwork

The following testwork is recommended:

- Additional grindability testing to ensure that future processing of Altan Nar ore is well understood and including the following:
  - JK Drop Weight Test
  - SMC Tests
  - Abrasion Index Tests
  - Variability Bond Ball Work Index Tests
- Optimization of cyanidation conditions for high arsenic zones and lower arsenic zones.
- Variability cyanidation tests from samples that include a range of arsenic contents and gold grades.
- Further refinement of flotation conditions from high arsenic and low arsenic zones to determine if a flotation process could be implemented to add value through improved metal recovery and generation of additional by- products.
- Evaluation of pre-oxidation processes such as biological oxidation (BIOX), pressure oxidation (POX) or atmospheric oxidation (e.g., Albion Process) as a method to improve gold recovery from refractory zones.

18.1.3. Recommended Further Study

Table 18-1 Estimated Budget for Recommended Further Study for Altan Nar

Task	Cost (CAD)
Data Compilation and Targeting	$30,000
Drilling: In-fill, Exploration – 5,000m	$1,200,000
Bulk Density Analysis	$10,000
Update of Geological and Resource Model	$50,000
AN Metallurgical Testing	$100,000

19. Qualified Persons' Certificate of Qualifications

Certificate of Qualification

I, Michael A. MacDonald, do hereby certify that:

1. I was formerly Vice President Exploration for Erdene Resource Development Corporation and currently have a consultancy agreement to provide geological services for the Corporation and I reside at 15 Stephen Street, Dartmouth, Nova Scotia.

2. This certificate applies to the Report entitled "Altan Nar Gold-Polymetallic Project, Bayankhongor Aimag, Southwest Mongolia, National Instrument 43-101 Technical Report ("Technical Report")", with an effective date of December 31, 2020.

3. I am a member of the Association of Professional Geoscientists of Nova Scotia. I graduated with a Bachelor of Science Degree from St. Francis Xavier University in 1977 and a Master of Science Degree in Geology from Dalhousie University in 1981. I have worked as a geoscientist for a total of 40 years since my graduation from university. My relevant experience is as follows:

    - 1997 to 1998 – Regional Exploration Manager, based in Mongolia and Indonesia. Provide geological consulting services to International Pursuit Corporation and Java Gold Corporation on gold and copper exploration.
    - 1998 to 2009 – Manager Geological Mapping Section, and Director Geological Services Division, Nova Scotia Department of Natural Resources. Responsible for managing geological mapping and geoscience research projects for Nova Scotia.
    - 2009 to 2011 – Executive Director, Minerals Branch, Nova Scotia Department of Natural Resources. Responsible for mining and mineral exploration policy, and geoscience research, for the Nova Scotia government.
    - 2011 to 2019 – Director of Exploration, Mongolia, and Vice President Exploration for Erdene Resource Development Corporation. Provide guidance for gold and base metal mineral exploration activities in Mongolia.
    - 2019 to present – Geological Consultant, including a consultancy agreement with Erdene Resource Development Corporation.

4. I am a Qualified Person for the purposes of National Instrument 43-101.

5. I have visited the Khundii property on several occasions, most recently between September 6 and 16, 2018.

6. I am responsible for the preparation or the supervision and final editing of all portions of the Technical Report except those related to the Mineral Resource estimate and the metallurgical section which were prepared by Jeremy Clark, MAIG, principal geologist with RPM Global and Andrew Kelly, P.Eng., Senior Metallurgist with Blue Coast Research, respectively.

7. I am not independent of Erdene Resource Development Corporation.

8. I have read National Instrument 43-101 and Form 43-101F1, and hereby certify that the Technical Report has been prepared in compliance with the requirements thereof.

9. As of the effective date of the Technical Report and to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Respectfully submitted,

Michael A. MacDonald, MSc, P.Geo. (Nova Scotia)

March 29, 2021

THE ASSOCIATION OF PROFESSIONAL GEOSCIENTISTS OF NOVA SCOTIA est. 1997 0148

Jeremy Lee Clark

Suite 2-4, 3/F, Sino Plaza, 255-257 Gloucester Road,
Causeway Bay, Hong Kong
Phone: +61 427931195
jclark@rpmglobal.com

I, Jeremy Lee Clark, am working as a sub-consultant for RPMGlobal Asia Limited, Suite 2-4, 3/F, Sino Plaza, 255-257 Gloucester Road, Causeway Bay, Hong Kong. This certificate applies to the Technical Report on the Altan Nar Gold Project, Bayankhongor Aimag, Southwest Mongolia, prepared for Erdene Resource Development Corporation, dated 29th March, 2021 (the "Technical Report"), do hereby certify that:

1. I am a registered member of the Australian Institute of Geoscientists ("AIG") (No. 3567).

2. I am a graduate of the Queensland University of Technology and hold a B App Sc in Geology, which was awarded in 2001. In addition, I am a graduate of Edith Cowan University in Australia and hold a Graduate Certificate in Geostatistics, which was awarded in 2006.

3. I have been continuously and actively engaged in the assessment, development, and operation of mineral Projects since my graduation from university in 2001.

4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101").

6. I am responsible for the preparation or the responsible for reviewing, coordinating and final editing of portions of the Technical Report relating to the Mineral Resource estimate only, including Section 14.

7. I have had no prior involvement with the properties that are the subject of the Technical Report.

8. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading as of the effective date of the report 31st December, 2020.

9. I am independent of Erdene Resource Development Corporation in accordance with the application of Section 1.5 of NI 43-101.

10. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated at Hong Kong, 29th March, 2021

"Jeremy Lee Clark" (QP)

Certificate of Qualified Person

I, Andrew Kelly, P.Eng., am employed as the President and Senior Metallurgist with Blue Coast Research Ltd., 2-1020 Herring Gull Way, Parksville, BC, Canada, V9P 1R2. This certificate applies to the Altan Nar Gold-Polymetallic Project, Bayankhongor Aimag, Southwest Mongolia, National Instrument 43-101 Technical Report (the "Technical Report") dated March 29, 2021, with an effective date of December 31, 2020. I do hereby certify that:

1. I am a licensed Professional Engineer with the Association of Professional Engineers and Geoscientists of British Columbia (License No. 39900) and with the Association of Professional Engineers of Ontario (License No. 100073664)

2. I am a graduate of the University of New Brunswick and obtained a Bachelor of Science in Engineering (Chemical) degree in 2003.

3. I have worked as metallurgist for a total of 17 years. My experience includes both plant operations and laboratory settings and covers base and precious metals.

5. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101").

6. I am responsible for the preparation and final editing of Sections 1.8, 1.11.2, 13, 18.1.2, as well as portions of Section 1.10 and Section 17 of the Technical Report

7. I have not visited the property.

8. I have had prior involvement in the property that is the subject of the Technical Report. I have been involved in the management and supervision of various metallurgical testwork programs for Altan Nar between 2015 and the date of the report.

9. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading as of the effective date of the report.

10. I am independent of Erdene Resource Development Company in accordance with the application of Section 1.5 of NI 43-101.

11. I have read NI 43-101 and Form 43-101F1 and Sections 1.8, 1.10, 1.11.2, 13, 17 and 18.1.2 of the Technical Report have been prepared in compliance with that instrument and form.

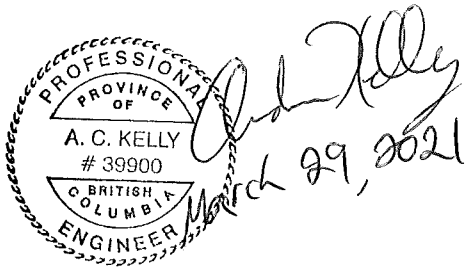
12. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Signed and Dated at Parksville, British Columbia, March 29, 2021.

Signature of Qualified Person

Andrew Kelly, P.Eng.

Print Name of Qualified Person



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