Bayan Khundii Gold Project
(Khundii Exploration License)

Bayankhongor Aimag, Southwest Mongolia

National Instrument 43-101 Technical Report

Erdene Resource Development Corporation

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1.0 Summary

The Bayan Khundii project is located on Erdene's 100% owned Khundii exploration license in Bayankhongor Aimag in south-western Mongolia, approximately 980 km southwest of Ulaanbaatar, Mongolia's capital, and 300 km south of the aimag capital, Bayankhongor City. The license is subject to a 2% Net Smelter Returns royalty in favor of Sandstorm Gold Ltd. Erdene has the option to reduce the royalty to 1% by paying $1.2 million to Sandstorm on or before April 14, 2019.

The Khundii exploration license was first acquired in December of 2010 and is currently in its seventh year of a maximum 12-year term. The license can be converted to a mining license at any time prior to the end of the twelfth year by meeting the requirements prescribed under the Minerals Law of Mongolia.

The area had been identified by Erdene as highly prospective for mineralized epithermal and porphyry systems following several years of regional prospecting in the larger Trans Altai Terrane. That extensive regional program has led to multiple gold discoveries highlighted by Erdene's Altan Nar gold deposit located 16 km north, in addition to nearby Nomin Tal and Altan Arrow prospects, and now Bayan Khundii. In addition, Erdene's Zuun Mod molybdenum-copper deposit is located 40 km to the east.

Bayan Khundii was discovered in Q2, 2015 when gold-bearing quartz veins were first sampled at what are now known as the Striker and Gold Hill zones. Initial assays returned very high grades, up to 4,380 g/t Au (141 oz./t) in chip samples from exposed veins and indicated that the majority of outcropping veins were highly auriferous. The initial sampling results were followed by geological, geochemical, geophysical, and trenching work and a 15-hole (695 m) maiden drilling program in Q3-Q4 2015. Following this work, a metallurgical testing program and a screen metallic analysis program were completed in Q4/2015 and Q1/2016 on gold mineralized samples from BK.

Gold mineralization is associated with comb-textured quartz veins, multi-stage quartz-chalcedony-adularia-hematite/specularite veins, quartz-hematite/specularite breccias, and angular hematite/specularite veinlets, disseminations (commonly associated with hematite/specularite), and fracture fillings that are hosted by an intensely altered (quartz-illite) sequence of volcaniclastic rocks. With the exception of very minor, finely-disseminated pyrite in a few drill holes, Bayan Khundii is devoid of sulphide minerals. The presence of disseminated hematite/specularite with rare remnant pyrite and hematite/specularite veins and veinlets are interpreted as hypogene in origin, having formed as part of the widespread quartz-illite alteration and gold mineralizing event.

The 2016 drilling program, which included 81 drill holes for a total of 10,645 m, has confirmed strike and down-dip extensions of mineralized zones at the Striker and Gold Hill zones, as defined by the initial 2015 exploration program. In addition, drilling beneath the Cretaceous cover rocks resulted in the discovery of the Midfield Zone, approximately 170 m northeast of Striker. Gold mineralization is present in numerous sub-parallel, NW-SE trending, SW-dipping zones that have been traced up to 200 m along strike, remaining open in all directions. These zones include very high grade veins and breccias over cm to m scale with gold grades locally exceeding 15g/t, and up to 306g/t, over 1m intervals. Enveloping these higher grade zones, are zones of lower grade mineralization typically in the 0.1 to 2g/t Au range that can extend for significant widths. The widest interval intersected in drilling to date was in the Midfield Zone where a 149-metre interval averaged 2.1 g/t Au.

Geophysical data from ground magnetics, and induced polarization (IP) gradient array and dipole-dipole surveys support the extension of the zones of intense alteration, and presumably mineralization, under Cretaceous sedimentary and basaltic rocks to the northwest, north and west of the Striker, Gold Hill and Midfield zones and to the north and east of the Northeast Zone. The three outcropping prospect areas (Striker, Gold Hill and Northeast zones) are interpreted as erosional 'windows', with the full extent of the mineralized zone under Cretaceous cover yet to be determined by drilling. Geophysical and geochemical data and geologic mapping indicate the total target area at Bayan Khundii, including areas beneath Cretaceous cover rocks, is approximately 1.8 km by 1 km.

Metallurgical work, completed on representative composite samples from the initial 15 holes, drilled in the upper 50 metres of the Striker Zone indicates the Bayan Khundii mineralization is very amenable to a flow sheet involving a combination of gravity and cyanide leach of gravity tails, with gold recovery of 99% for a high-grade (24.9g/t gold) composite sample and 92% for a low grade (0.7g/t gold) composite.

This region hosting the Bayan Khundii and Altan Nar gold projects is one of the least densely populated areas globally, however, infrastructure to access south-western Mongolia's natural resources from China is developing rapidly. The Corporation's metal projects are approximately 200 kilometres northwest of the Nariin Sukhait mining complex (Ovoot Tolgoi) in Mongolia. South Gobi Resources (TSX:SGS), TerraCom Limited (ASX:TER) and MAK all produce coal in this region of south-western Mongolia and transport that product through the Ceke (PRC) / Shivee Khuren (Mongolia) border point which includes a paved eight-lane highway border crossing and a major automated railcar coal loading facility with three railway terminals at Ceke where coal trucked in from Mongolia can be loaded on train and shipped out over the Jiayuguan–Ceke Railway, Ejin–Hami Railway or Linhe–Ceke Railway. Plans are underway to extend the standard gauge rail into Mongolia's coal mining districts.

Regarding future sources of water for mine and process usage, the location of the projects in the north-western corner of the Gobi desert and the south-western extent of several large basins draining the Altai mountain system, provides potential for deep aquifers. A water resource capable of supporting a >50,000 tonne per day flotation processing operation was identified approximately 70 km to the northeast of Bayan Khundii for the Zuun Mod Mo-Cu project located approximately 40 km east of Bayan Khundii. This aquifer could provide a source of process water for the project, however, the company has implemented studies to identify a source more proximal to site. Preliminary geophysical work has been completed as part of a hydrogeological study to identify water resources within basins within 30 km of the site with drilling as well as volume and quality testing planned for 2017.

In regards to electrical power sources, the Mongolian state grid has recently connected the local sub-province centre (Shinejinst) with a 35 kV line which could be extended to the project site. In addition, the Gobi region has conditions supportive of solar and wind generated power. Investigations into possible power sources will commence in 2017.

The Bayan Khundii project requires an extensive drilling program to determine the continuity, characteristics and limits of mineralization. The recommended exploration program for 2017 is outlined below.

- Drilling: A 20,000-metre drill program is recommended for 2017 and will focus on several objectives, including:
    - Step-out & delineation drilling to define the continuity and trace the extent of previously-discovered gold mineralized zones;
    - Exploration drilling to test:
        a. Deep extensions of known mineralized zones (e.g. Striker);
        b. The Northeast Zone to test targets as defined by IP and geochemical sampling, and areas with encouraging results from initial drilling;
        c. Targets beneath Cretaceous cover rocks that have been identified mostly using IP dipole-dipole survey data and locally geochemical anomalism. These targets are located:
            i. Between Midfield and Northeast zones;
            ii. Northwest of the Striker and Midfield zones;
            iii. North and east of the Northeast zone (including the Northeast Extension zone where a rock grab sample returned 7 g/t Au);
            iv. The area to the east of the Striker and Midfield zones to test a combined geochemical and structural target.

- Geophysics: Sufficiently detailed magnetic data now exists over the license area and over the Bayan Khundii Project area. Induced Polarization (IP) surveys, especially resistivity data, have proven very helpful in identifying zones of highly resistive, quartz-rich altered Devonian tuffs. The Bayan Khundii project area has been covered by IP gradient array and mostly covered by IP dipole-dipole surveys. A program of 10 line km of IP dipole-dipole is planned for 2017 to in-fill several gaps in previous survey coverage. Quality control and interpretation will be completed by Chet Lide of Zonge International.

- Short-Wave Infrared (SWIR) Analysis: A suite of drill holes from the 2016 and early 2017 drill program will be analysed using SWIR analyser to identify alteration mineral assemblages to augment the data collected in 2016 and to assist in interpretation of the overall deposit geometry and in drill targeting;

- Petrography: A suite of samples will be submitted for petrographic analysis to identify any mineralogical differences between the Striker and Midfield zones, and any new mineralized zones identified during the 2017 drill program. Samples from representative monzonite, syenite and granite intrusions will also be submitted for analysis.

- Deposit Type and Genesis Study: A follow-up study of the characteristics of the mineralization and alteration at Bayan Khundii will be completed by J. Hedenquist Consulting in 2017. The results from this work will be used for future geological interpretations and will assist in future drill targeting;

- Structural Analysis: A large database of structural information was collected from oriented drill core in 2016 and this data will be assessed by a structural geologist to interpret the structural controls on vein and breccia formation to assess if this information can be helpful for drill targeting and interpreting structural controls on gold mineralization;

- 3-D Model: All geological, geochemical, and geophysical information from 2015 and 2016 will be incorporated into a 3-D model that will be used for detailed drill targeting and interpretation of the geology and petrogenesis of Bayan Khundii;

- Technical Studies: In support of future scoping through to feasibility studies and a mining license application, geotechnical, hydrogeological and environmental base line studies will be completed in 2017.

Results to date from the Khundii license area support a more detailed license-wide surface exploration program to define additional target areas and a license-wide detailed mapping program is planned for 2017. Encouraging results from the Altan Arrow prospect in 2016 will be followed up by additional geological, geophysical and drilling in 2017.

The following table provides a summary of the budget for the recommended 2017 exploration program for the Bayan Khundii project.

Geology and Geochemical Surveys	$ 455,000
Geophysics	58,000
Drilling	3,000,000
Technical Studies	939,000
Field Support	1,400,000
Subtotal	**$ 5,852,000**
Contingency (10%)	585,200
TOTAL	**$ 6,437,200**

2.0 Introduction

This report has been prepared for Erdene Resource Development Corporation (“Erdene” or “Corporation”) in support of the filing of the Annual Information Form (“AIF”) for the fiscal year ended December 31, 2016 and includes technical information for the Bayan Khundii (Rich Valley) project, a property material to Erdene. This report documents and provides a summary of the work completed on the Bayan Khundii project by Erdene.

The Bayan Khundii project is a greenfield discovery made in Q2 2015 and is one of two gold projects within the Corporation’s Khundii exploration license located in south western Mongolia. The other project is referred to as Altan Arrow (Figure 2). No resource estimation is included in this report as the project has not yet advanced to the stage where sufficient information is available to calculate a resource estimate. However, it is anticipated that the project will progress to a stage in 2017 where the reporting of an initial resource estimate may be appropriate.

Michael A. MacDonald MSc, P.Geo. (“Report Author”) is the Vice President of Exploration for the Corporation and is therefore not independent of Erdene. The Report Author has visited the property on several occasions over the last year with the most recent personal inspection carried out between October 16 and November 10, 2016. The Report Author is a qualified person as defined by National Instrument 43-101.

3.0 Reliance on Other Experts

In the preparation of this 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.

4.0 Property Description and Location

The Bayan Khundii project is located on the Khundii exploration license in Bayankhongor Aimag in southwestern Mongolia, approximately 980 km south-west of Ulaanbaatar, Mongolia’s capital, and 300 km south of the aimag capital, Bayankhongor City. The nearest towns (soum centres) are Shinejinst, located 80 km to the northeast and Bayan Undur, located 100 km to the north (Figure 1). The project is also located 20 km southeast of Erdene’s Altan Nar gold-polymetallic.

The Khundii exploration license was first acquired in April of 2010 and is currently in its seventh year of issue (see Table 1). Exploration licenses in Mongolia are renewed annually with a maximum tenure of 12 years. At any time during the 12 year tenure, an exploration license can be converted into a mining license by meeting the requirements of the Minerals Law of Mongolia.

Figure 1 - Project Location Map

Table 1 - Exploration License Status

License Name	License Number	Province	Date of Issue dd/mm/yy	Hectares	2017 renewal fees	Minimum 2017 work requirement
Khundii	XV-015569	Bayankhongor	14/04/10	4,514.33	$6,771.50	$6,771.50

The center point of the Khundii license is located as follows:

License	Northing	Easting	UTM Zone	Long (DD)	Lat (DD)
Khundii	4,866,207	484,012	WGS 84, 47N	98.8000°	43.9488°

The Khundii exploration license is 100% owned by Erdene and is subject to a royalty agreement with Sandstorm Gold Ltd. Sandstorm has been granted a 2% net smelter returns royalty ("NSR Royalty") on the Bayan Khundii gold project. The transaction provides Erdene with a 3-year option to buy-back 50% of the NSR Royalty for $1.2 million, to reduce the Sandstorm NSR Royalty to 1.0%. There are no known environmental liabilities to which the property is subject. Permits required to carry out planned exploration work on the Khundii exploration licenses include annual environmental bonds 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 2017 exploration season.

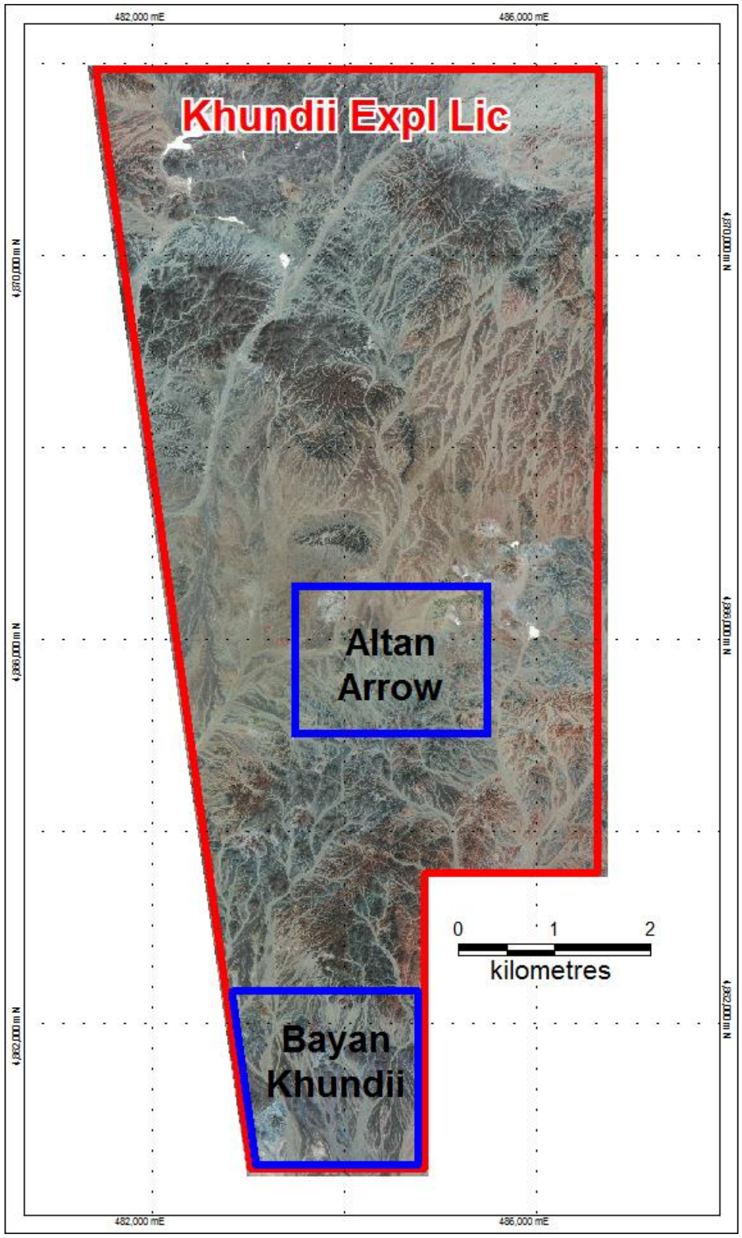

Figure 2 - Khundii License and Project Location Map (projection - UTM Zone 47N, WGS 83)

5.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Khundii property can be accessed from Bayankhongor City (the provincial capital) by vehicle, 300 km to the south over unmade dirt roads. In 2012-16, a temporary landing strip located 20 km to the northwest (on the Corporation's Tsenkher Nomin exploration license, Altan Nar Project) 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 in the north part of the western boundary of the Tsenkher Nomin license on a dry lakebed. A private flying service is available from Ulaanbaatar and a one-way trip to Tsenkher Nomin takes approximately 3 hours. The Bayan Khundii project is located 16 km southeast of the Corporation's Tsenkher Nomin (Altan Nar) exploration license and approximately 80 km south of the soum center, Shinejinst.

This region hosting the Bayan Khundii and Altan Nar gold projects is one of the least densely populated areas globally, however, infrastructure to access south-western Mongolia's natural resources from China is developing rapidly. Erdene's metal projects are located approximately 200 kilometres northwest of the Nariin Sukhait mining complex (Ovoot Tolgoi) (Figure 1). South Gobi Resources(TSX:SGS), TerraCom Limited (ASX:TER) and MAK all produce coal in this region of south-western Mongolia and transport that product through the Ceke (PRC) / Shivee Khuren (Mongolia) border point which includes a paved eight-lane highway border crossing and a major automated railcar coal loading facility with three railway terminals at Ceke where coal trucked in from Mongolia can be loaded on train and shipped out over the Jiayuguan–Ceke Railway, Ejin–Hami Railway or Linhe–Ceke Railway. Plans are underway to extend the standard gauge rail into Mongolia's coal mining districts.

Regarding future sources and water for mine and process usage, the location of the projects in the north-western corner of the Gobi desert and the south-western extent of several large basins draining the Altai mountain system, provides potential for deep aquifers. A water resource capable of supporting a >50,000 tonne per day flotation processing operation was identified approximately 60 km to the northeast of Bayan Khundii for the Zuun Mod Mo-Cu project located approximately 40 km east of Bayan Khundii. This aquifer could provide a source of process-water for the project, however, the company has implemented studies to identify a source more proximal to site. Preliminary geophysical work has been completed as part of a hydrogeological study to identify water resources within basins within 30 km of the site with drilling as well as volume and quality testing planned for 2017.

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 2017. In regards to potential future electrical power sources, the Mongolian state grid has recently connected the local sub-province centre (Shinejinst) with a 35 kV line which could be extended to the project site. In addition, the Gobi region has conditions supportive of solar and wind generated power. Investigations into possible power sources will commence in 2017.

The topography of the Bayan Khundii project area is characterized by low hills of exposed rock and lower plains of unconsolidated and alluvial sediments. There is very little to no soil profile developed, with fresh rock generally occurring from or very near to surface, except in areas covered by Quaternary sediments where depth to bedrock is uncertain. The elevation of the landscape ranges from 1,200 m to 1,250 m above sea level. Vegetation is sparse and restricted to grasses, saxaul bushes and shrubs.

The Mongolian climate is characterized by extreme seasonal variations in temperature (-40°C to +40°C) and has an average of 250 sunny days a year. The country is subject to high wind conditions that alleviate the effects of the summer's heat but can result in extreme wind chill during the winter. Average annual precipitation is less than 100 mm, and most rain falls during the summer months of July and August, producing localized flash flooding. Exploration and mining activities can be conducted all year round, only requiring proper preparation with respect to working in a remote location during extreme cold and hot weather.

6.0 History

The Bayan Khundii project is a greenfield project. With the exception of regional geological mapping carried out at a scale of 1:200,000 under the direction of the Mongolian government, no recorded exploration work is known to have taken place on the property.

The Khundii license was acquired in 2010 through the exploration license application process of the Government of Mongolia. The property was covered by Erdene's regional porphyry evaluation program which included a stream sediment survey and limited prospecting in the area of the Khundii exploration license. The regional stream sediment results identified an area of anomalous base metal and gold in the general area of the Khundii exploration license. The Company's extensive regional exploration program has led to multiple gold discoveries highlighted by Erdene's Altan Nar gold deposit 20 km north, Nomin Tal, Altan Arrow and now Bayan Khundii. In addition, Erdene's Zuun Mod molybdenum-copper deposit is located 40 km to the northeast.

Between 2010 and 2014, exploration on the Khundii license included property-wide geological mapping, soil sampling and a magnetic survey while more detailed exploration, including detailed geological mapping, rock chip sampling and trenching was focused on the central part of the license on a project referred to as Altan Arrow (Figure 2).

The rock chip sampling program for the Khundii license identified a number of significant anomalies for Au and Ag, with lesser base metal anomalism. Generally, the anomalous rock chip samples were from two distinct and adjacent quartz vein systems located at Altan Arrow in the central part of the Khundii license.

1. The first is a structurally controlled (fault) northeast-trending zone, in-filled with low temperature quartz veins and breccia referred to as the Main Zone. A number of rock chip samples from this zone returned gold values ranging from 0.5 g/t to 2 g/t. Highly

anomalous Pb (up to 0.5%) and Mo (up to 745 ppm) were associated with the high Ag values in rock chips.

2. The second quartz vein system is located south-east of the Main Zone and consists of widespread quartz veins and floats generally trending N-NE. Assay results show locally highly anomalous Au values including 56.6 g/t and 9.5 g/t Au. Quartz veins have epithermal features including crustiform-colloform (CC) and comb quartz textures.

The mineralized quartz vein systems were trenched in late 2013 and drilled in 2016. Four trenches and four drill holes tested the mineralized Main Zone and one trench and two drill holes tested an area hosting high-grade gold mineralization within epithermal quartz veins.

Results indicate the Main Zone consists of a 1 m to 21 m wide quartz breccia zone. This breccia is multi-stage and has milled hydrothermal-epithermal characteristics with anomalous but somewhat low gold concentrations (e.g. 28 m[1] @ 0.45 g/t AuEq) and positive Ag-As-Sb inter-element geochemical correlations. The higher grade veins observed both cross-cutting the main structure and in adjacent structures returned intersections up to 4.5 g/t Au over 6 m in trenches and up to 2 m of 23.5 g/t Au and up to 2 m of 171 g/t Ag in drilling.

The Main Zone fault-related hydrothermal breccia zone divided the project area into two blocks. The NW block is pervasively and strongly altered to an assemblage of kaolinite, montmorillonite, dickite, pyrophyllite and quartz. The SE block is dominated by less altered andesite which is cut by tourmaline veins and breccias, and by quartz veins with epithermal features (CC and comb quartz textures). Rock chip and trench sampling confirmed the presence of high gold values in the quartz veins within the SE block.

While the exploration results at Altan Arrow were encouraging, most of the exploration efforts were focused on the Company's Altan Nar project. The identification of high-grade gold mineralization associated with epithermal style quartz veins, however, prompted additional prospecting and mapping in the southern portion on the Khundii exploration license. In early 2015, Erdene geologists identified, through rock chip sampling, new high-grade gold mineralization associated with a zone of intensely altered (quartz-illite) volcaniclastic lithologies located ~3.5 km south of Altan Arrow. This area, referred to as the Bayan Khundii (Rich Valley) Project (Figure 2), was the focus of a detailed exploration program carried out in 2015 and 2016 that is summarized in the subsequent sections of this report.

7.0 Geological Setting and Mineralization

7.1 Regional Geology and Tectonic Setting

The Khundii exploration license 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"). The TAT forms part of the western end of the large, composite, arcuate-shaped Paleozoic New Kazakh-

[1] True width of zone approximately 19 m.

Mongol Arc terrane ("NKMA") as described by Yakubchuk (2002). The NKMA is part of the Tian Shan orogenic belt 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 (Figs. 3 and 4).

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. The TAT consists mostly of Middle Paleozoic volcanic, sedimentary and meta-sedimentary rocks that were intruded by Middle Paleozoic calc-alkaline and alkaline plutons. The TAT is comprised of three tectono-stratigraphic terranes (Figure 4) as defined by Badarch et. al. (2002). These include:

Zoolen Accretionary Wedge, consisting of a lowermost ophiolite sequence of mafic and ultramafic intrusive rocks that are overlain by a sequence of greenschist metamorphosed rocks including 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, is dominated by a lower sequence of intermediate volcanic and volcaniclastic rocks with interbedded shallow marine sedimentary rocks. The upper portion of the Baraan terrane consists of non-marine sedimentary rocks.

Edren Island Arc Terrane, consists of a lowermost minor sequence of mafic volcanic rocks that are overlain by an interbedded sequence of intermediate volcanic and volcaniclastic rocks, shallow marine clastic deposits, and minor turbidite sedimentary rocks. This sequence is overlain by rhyolite and alkaline volcanic and volcaniclastic rocks. The uppermost portion of the Edren terrane is dominated by non-marine sedimentary deposits.

All three tectono-stratigraphic terranes were intruded by Middle Paleozoic intrusions that are predominantly calc-alkaline and alkaline in composition, although some peraluminous and alkaline granitic intrusions have recently been identified by Erdene geologists. All three terranes are 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 Bayan Khundii (Fig. 4).

7.2 General Geology of Eastern Trans Altai Terrane

The general geology of the eastern TAT is outlined in a series of 1:200,000 scale geology maps available through the Mineral Resource Authority of Mongolia (MRAM). The specific maps for the eastern TAT include L-47-XXXII, 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 Devonian to 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 MRAM 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 Devonian and Carboniferous 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 eastern TAT are thought to represent the most mafic end-members of intrusive suites. Late-stage 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, as noted in the nearby Altan Nar prospect area. Devonian and Carboniferous volcanic, sedimentary and igneous rock units are locally overlain by Cretaceous sedimentary rocks including mudstone, siltstone, sandstone and conglomerate, with local amphibian and mammal fossils, or by unsorted Neogene or Quaternary age sediments including boulder, gravel, sand and talus deposits.

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 extension tectonics resulting in large graben structures during Mesozoic Era. Basin margins cut across all Devonian and Carboniferous rocks including both volcanic-sedimentary map units and granite intrusions. Previous work by Erdene in the Zarman Basin to the north of Bayan Khundii, including limited drilling, geological mapping, magnetic and seismic surveys indicated the basin consists of an asymmetric wedge of Cretaceous to Quaternary sedimentary rocks that thickens towards the northern basin margins to at least 450 m depth. Based on observations elsewhere in the eastern TAT, basin thicknesses may range from 200 m to as much as 1,500 m.

Paleozoic Arcs in Mongolia

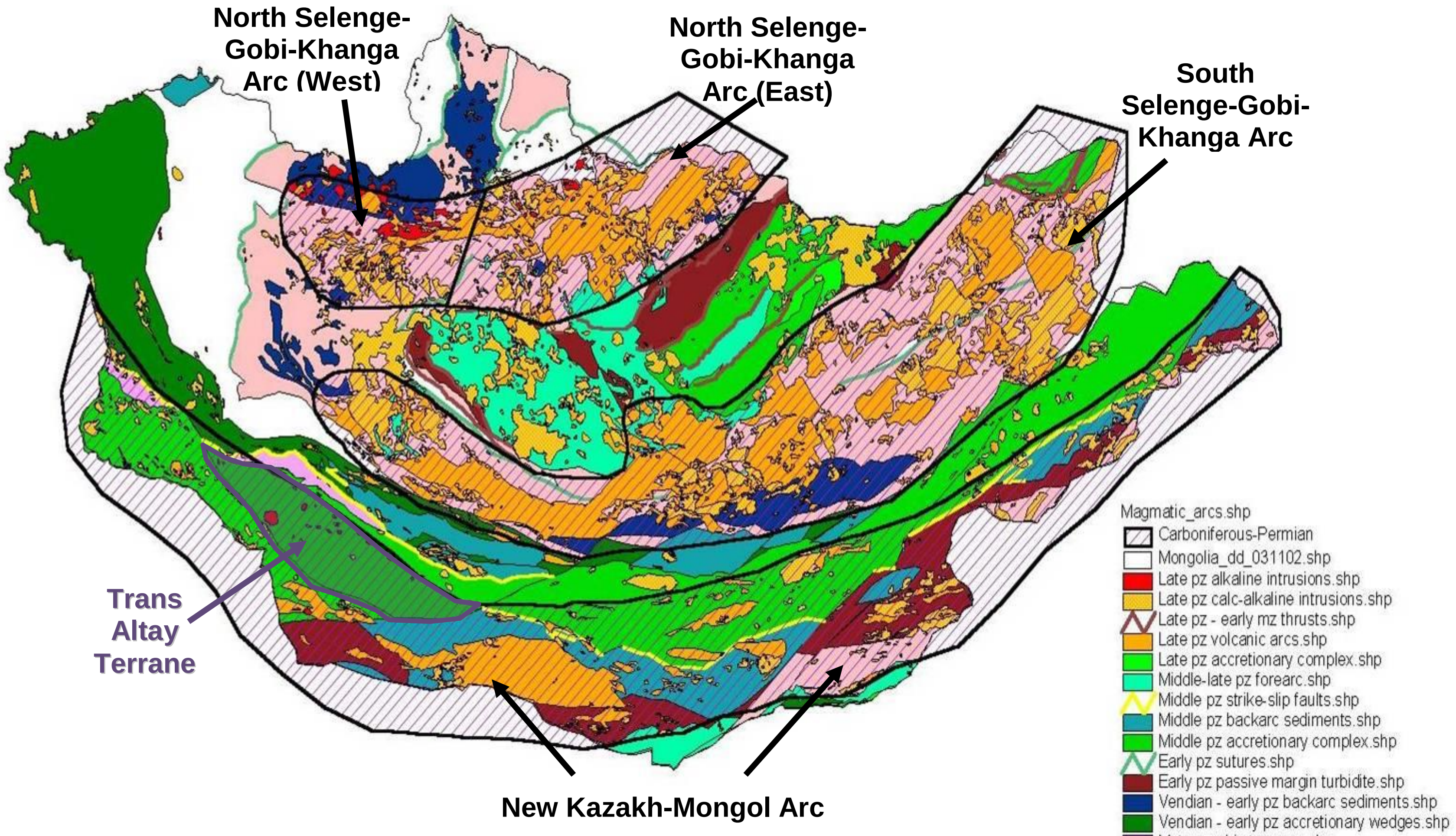

Figure 3 - Paleozoic Arcs of Mongolia showing the location of the Trans Altai Terrane (TAT)

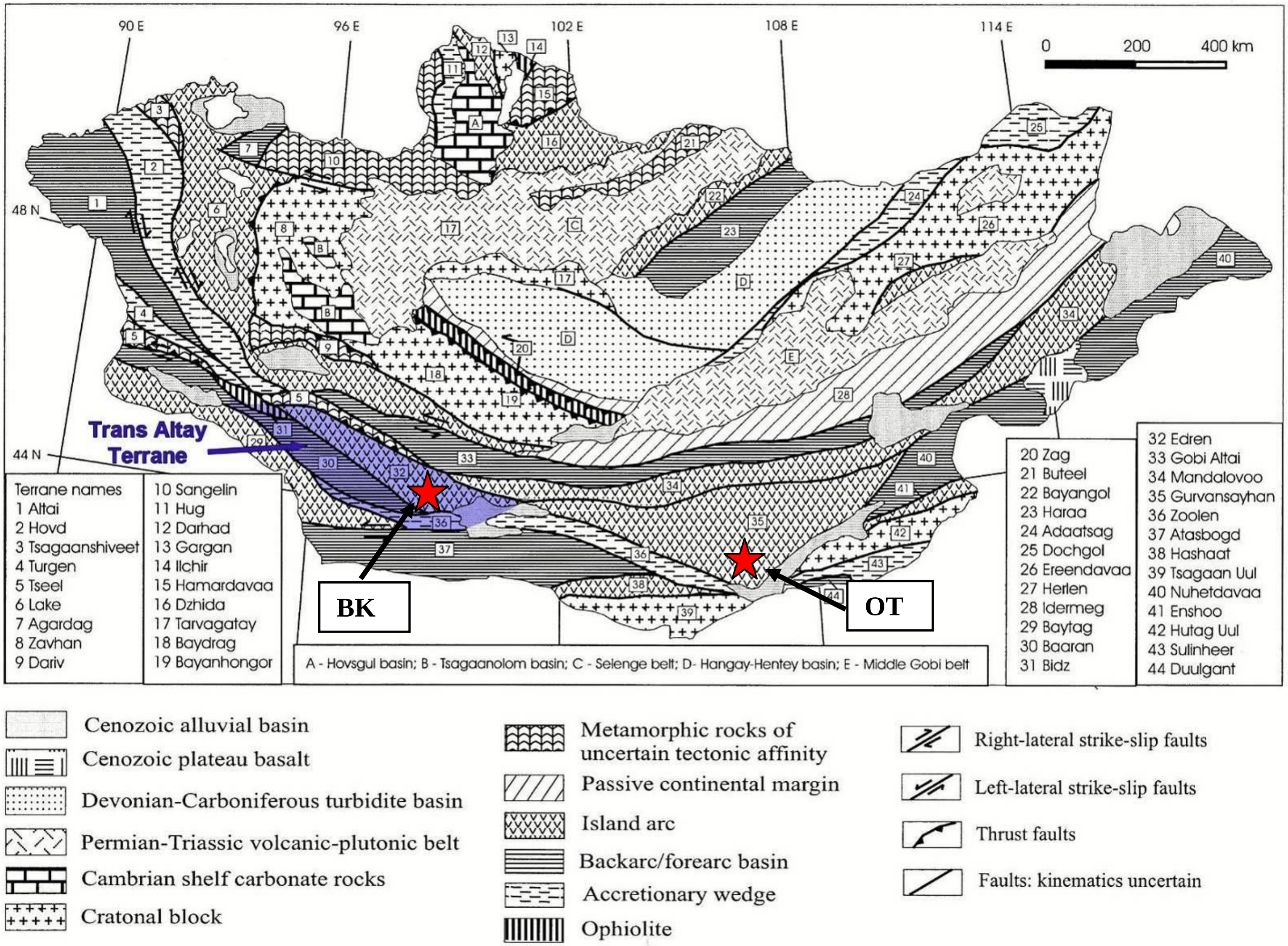

Figure 4 - Tectono-stratigraphic terrane map for Mongolia (Badarch et al 2002) with location of Trans Altai Terrane. The locations of the Bayan Khundii (BK) and Oyu Tolgoi (OT) are indicated with red stars

7.3 Geology of Khundii Exploration License

The bedrock geology of the Khundii license area (Figure 5) is dominated by a sequence of Devonian volcaniclastic rocks (tuffs) that were intruded by Carboniferous intrusions, with these rocks unconformably overlain by Cretaceous volcanic and sedimentary units, with all rock units overlain by unconsolidated sediments of Quaternary or Recent age.

Carboniferous volcanic rocks are present throughout the license area and include several texturally-distinct units of intermediate composition including andesite, basalt and dacite. Minor Carboniferous felsic units, including rhyodacite and rhyolite, are mostly present in the northern part of the license area. Volcaniclastic rocks, that are host to and restricted to the immediate area surrounding the Bayan Khundii mineralization, are interpreted to be Middle-Upper Devonian in age, possibly belonging to the Baruunhuurai Formation that is part of a large area of undifferentiated Devonian units to the South and West of the license area. Volcaniclastic rocks include lapilli and ash tuff, and welded tuff with very minor block and ash units.

Carboniferous granitoid rocks intrude both the Devonian and Carboniferous volcanic units and have a wide range in composition from least-evolved medium and coarse grained diorite, monzodiorite, monzonite and granodiorite, to the most evolved phases of fine grained granite, granite porphyry and syenite.

Most Cretaceous volcanic rocks are present in the southern part of the license area and consist of mostly of basalt (commonly amygdaloidal) units. In addition, a Cretaceous sedimentary unit, consisting of a basal conglomerate and overlying red to red and white mottled sandstone and siltstone, has been mapped in the southern part of the license area where it underlies the Cretaceous volcanic rocks. Cretaceous lithologies have been observed to unconformably overly the older Devonian and Carboniferous lithologies.

A series of quartz-rich (i.e. ‘secondary quartzite’) alteration zones have been mapped across central part of the license area, including over the Altan Arrow prospect (Fig. 5). Recent work by Erdene geologists indicates these zones can be subdivided into several types including quartz-sericite, residual ‘vuggy’ quartz, advanced argillic (with dickite, pyrophyllite, alunite, kaolinite) and quartz-tourmaline zones. Some zones are thought to be lithocaps, possibly associated with granitoid intrusions at depth.

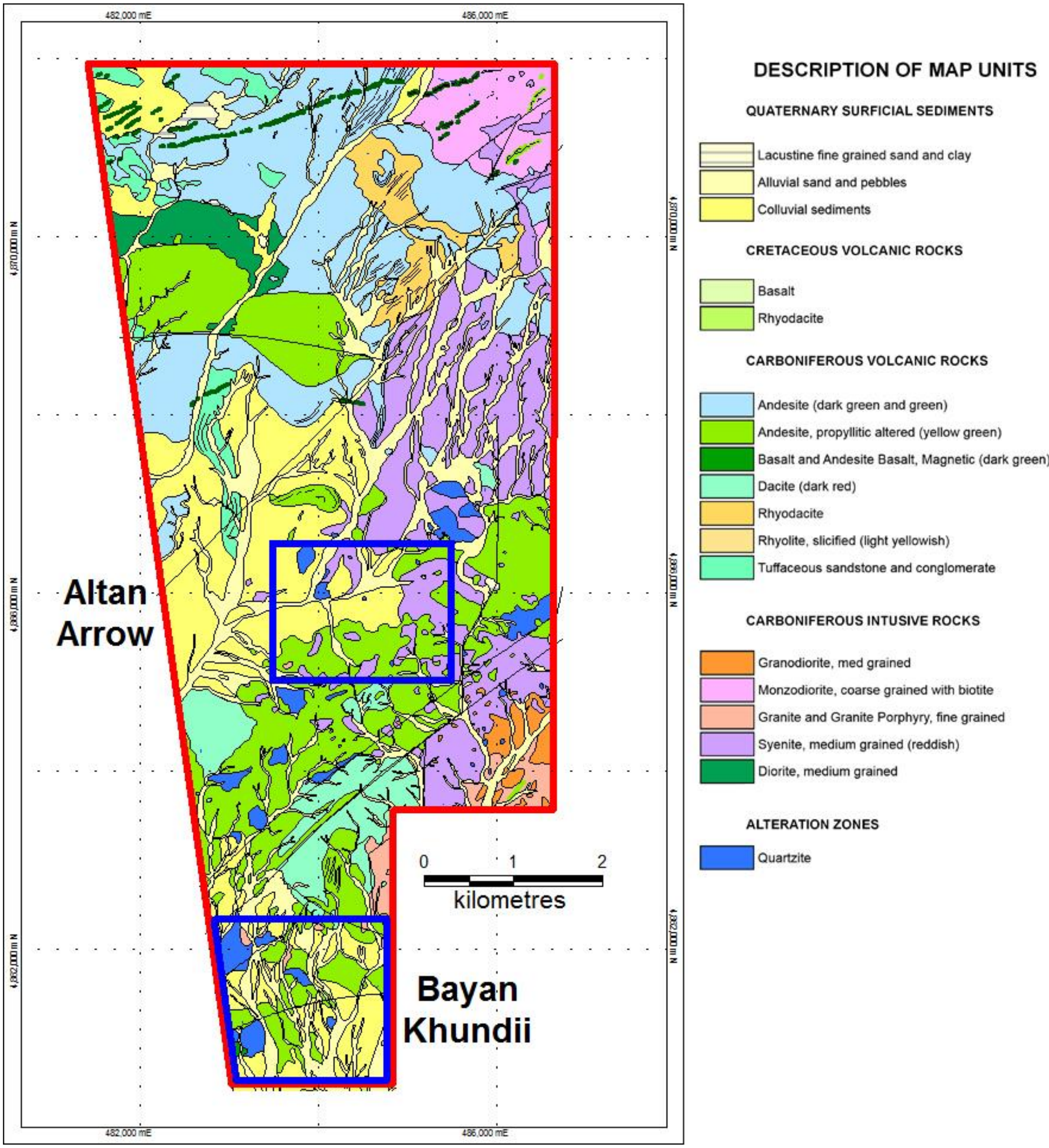

Figure 5 - Geology Map of the Khundii Exploration License

Unconsolidated Quaternary to Recent sediments are present throughout the license area with a large area of colluvial-dominated sediments in the central part of the license north of the Bayan Khundii project area. Alluvial sediment-filled stream channels are present throughout the license area and overlie all aforementioned Devonian, Carboniferous, Cretaceous and Quaternary rocks and sediments. These 'stream' channels are mostly dry, however, flash flooding associated with episodic storm events have recently been observed to deposit additional alluvial sediments.

Several northeast- and east-west trending faults were inferred in the license area and cross-cut, or form contacts of, Carboniferous intrusive and volcanic map units. Faults do not appear to off-set Quaternary or Recent sediment deposits; however, some inferred faults form the contacts with older Devonian, Carboniferous or Cretaceous lithologies. A detailed structural study at Bayan Khundii indicated four distinct sets of late faults (see *Section 7.4.5 Structure* for additional details).

7.4 Bayan Khundii Project Geology

The Bayan Khundii project area was mapped in detail during the 2015 field season, with field data collected along foot-traverse lines. The geology map for the Bayan Khundii project area is shown in Figure 6. The following descriptions of the main geological units at Bayan Khundii are described in an interpreted sequence from oldest to youngest.

7.4.1 Devonian Altered Volcaniclastic Rocks

The oldest rocks at Bayan Khundii, and the host rocks for gold mineralization, include a sequence of intensely quartz-illite altered volcaniclastic rocks. Volcaniclastic lithologies include fine- and coarse-grained lapilli tuffs (i.e. ±lithic fragments >2cm), ash tuffs (some finely laminated), welded tuffs (with fiamme) and rare block and ash tuffs (with blocks >6 cm). These rocks are exposed over limited areas within the Southwest and Northeast prospect areas, however, geophysical data and drilling in 2016 indicates these altered rocks extend beneath adjacent Cretaceous cover.

The 1:200K scale government geology map that covers the Khundii license (MRAM map L-47-XXXIII) outlines a large area of undifferentiated Middle-Upper Devonian units to the south and west of the Khundii license that includes slate, volcaniclastic sandstone and conglomerate, and granitoid intrusions. Erdene geologists interpreted the tuffaceous rocks at Bayan Khundii to be part of the Devonian Baruunhuurai Formation.

Intense quartz-illite hydrothermal alteration has replaced most primary minerals in these tuffaceous rocks, giving the lithologies a pervasive medium grey colour in outcrop, and making identification of the protoliths difficult, even in fresh drill core. Observations from outcrop and surface trenches in the Southwest Prospect area, coupled with mapping of weakly altered tuffaceous units to the north and west of the Northeast Prospect area, indicate these rocks have a consistent northeast-southwest strike trend and dip at approximately 40 to 45 degrees to the northwest.

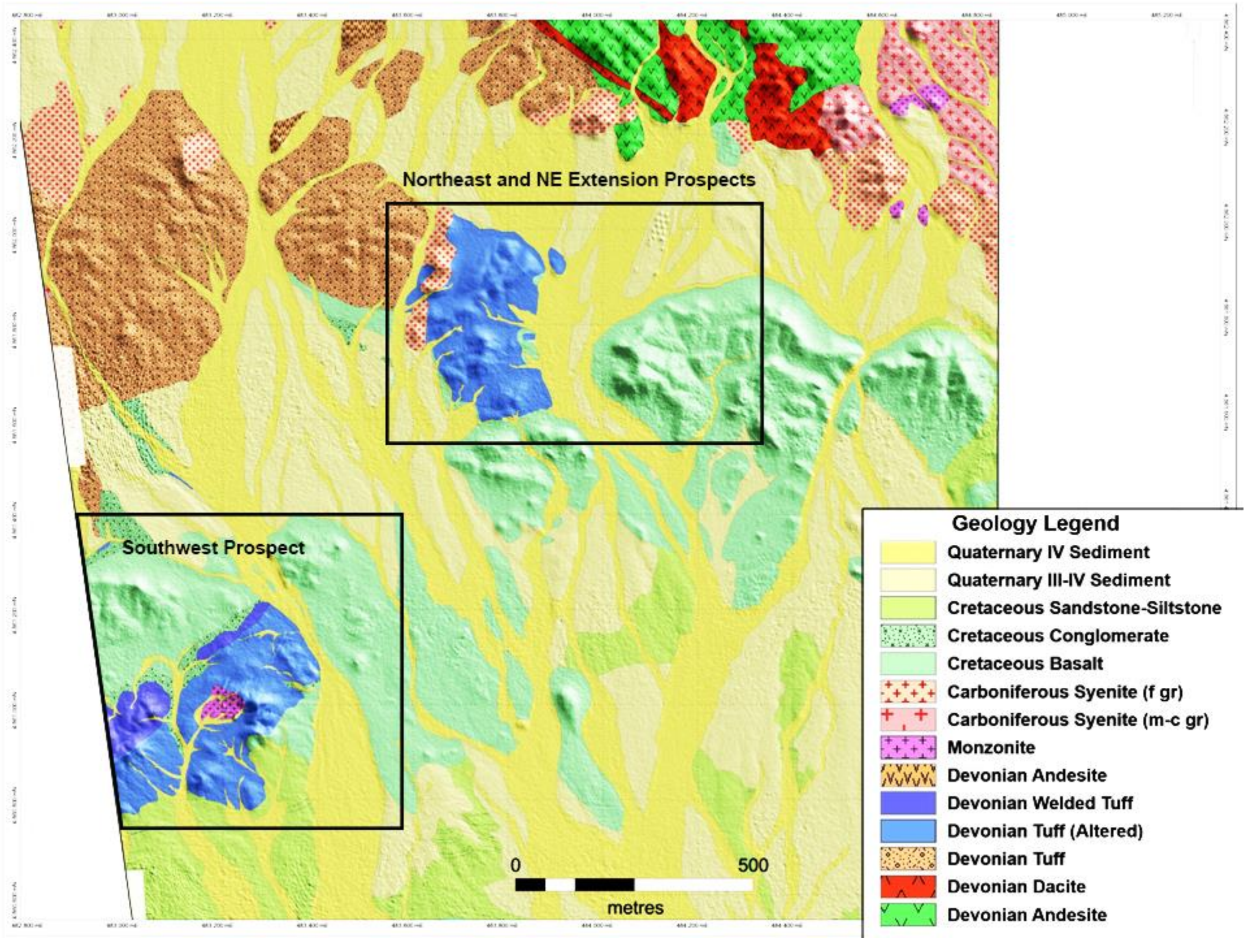

Figure 6 - Geology Map of the Bayan Khundii Project Area (on shaded relief) showing the locations of the Southwest Prospect area (1) and the Northeast and NE Extension Prospect areas (2)

The rocks underlying the Striker and Gold Hill Zones (Figure 7) are mostly fine and coarse-grained lapilli tuffs with a fine grained matrix comprised of lithic and crystal fragments. Coarse grained lapilli tuffs have common large (≥2 cm), round to sub-angular lithic fragments of pyroclastic rock with variable composition, and may have angular to sub-rounded quartz fragments to 1 cm (Fig. 9-1, 9-2). Lapilli tuffs have minor interbedded massive to finely-laminated ash tuff layers (Fig. 9-3). Lapilli tuffs are very poorly sorted whereas some laminated ash tuffs are well-sorted with fine laminae (1-2 mm wide). The lapilli and ash tuff units are overlain by a fine to coarse grained welded tuff unit that contains abundant angular quartz fragments, thin fiamme with >10:1 aspect ratio, medium to coarse lithic fragments, and ovoid to irregular-shaped lithophysae (e.g. in-filled gas bubbles).

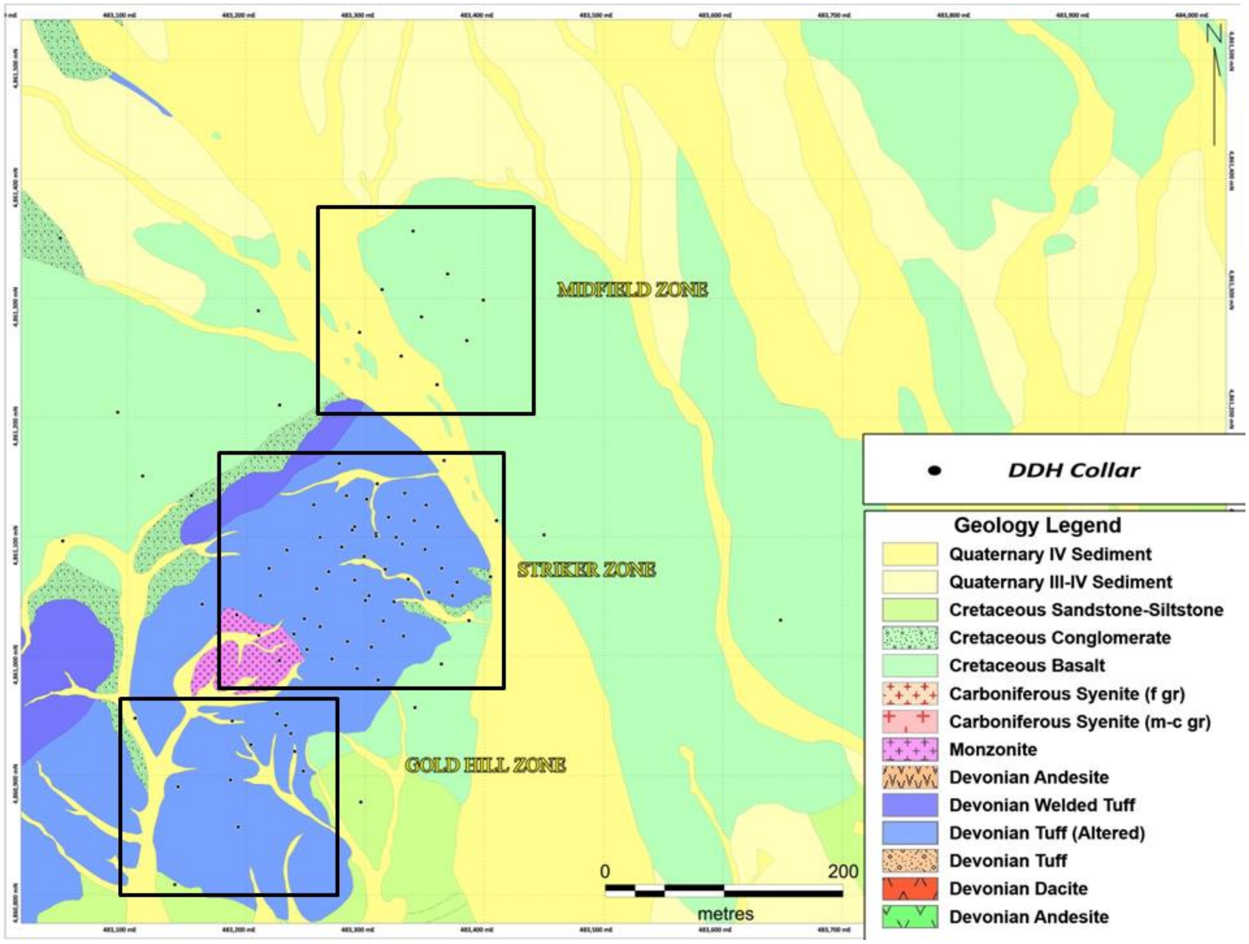

Figure 7 - Geology map for the Southwest Prospect area and adjoining areas of Cretaceous and Quaternary cover. Most of the mineralized gold-bearing zones at surface are restricted to the Devonian altered (quartz-illite) volcaniclastic rocks (lapilli and ash tuffs) in the Striker and Gold Hill zones and in the same rocks under Cretaceous cover in the Midfield Zone.

Several siliceous zones were observed, including a zone at Gold Hill (~75m x 125m), where they form prominent topographic high features (Fig. 8). Smaller and less intense silicified zones (~10m x 50 m) were also observed in Striker Zone. Despite a general lack of 'vuggy' texture, these siliceous zones are interpreted as representing residual quartz alteration zones (see discussion of alteration below in *Section 5.7.3 Alteration*).

The area to the southwest of Gold Hill is dominated by medium grey massive lapilli tuff with minor inter-layered ash tuff beds. There are several intensely silicified zones between Gold Hill and Striker zones that form prominent topographic highs similar to Gold Hill.

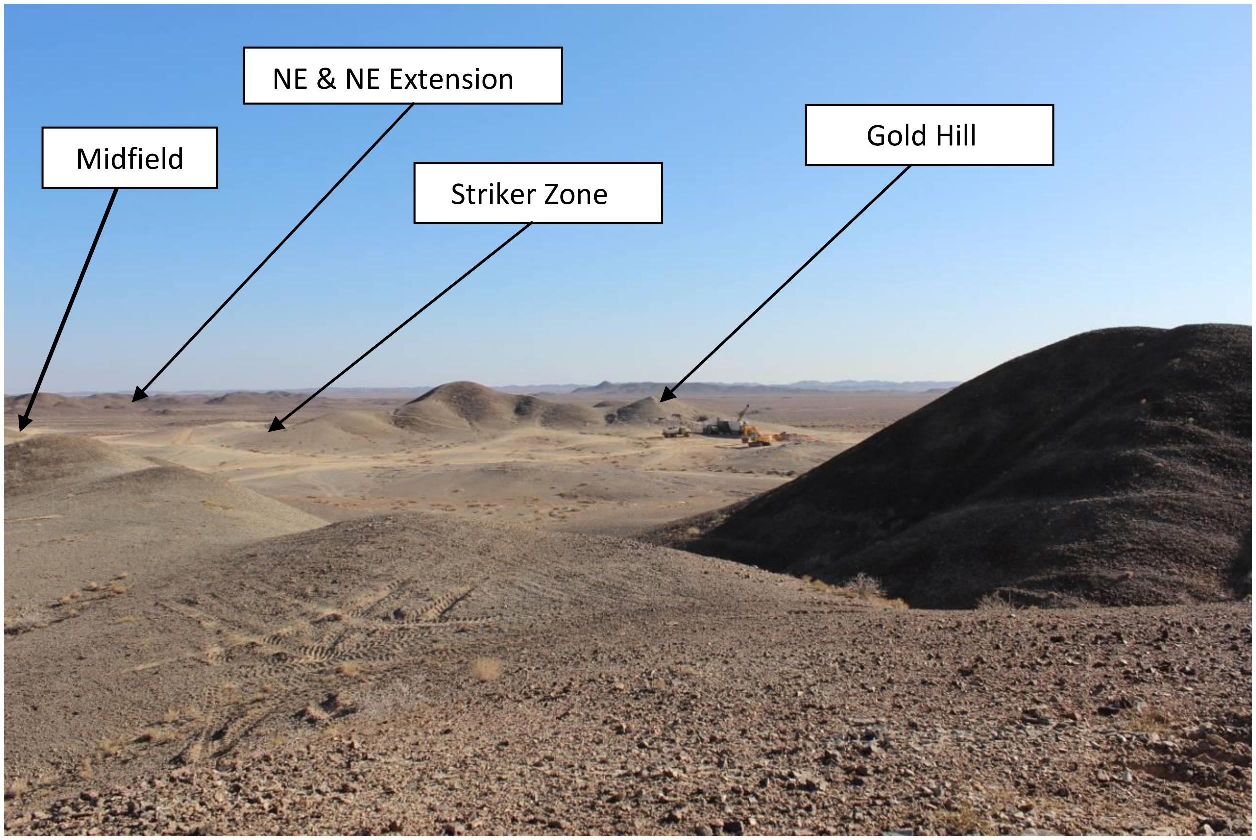

Figure 8 - Photo of Bayan Khundii Project area looking northeast from western ridge showing the location of the Gold Hill, Striker and Midfield zones and the Northeast Prospect in the background. Several silicified zones form prominent hills within the Southwest Prospect area, including the area between Striker and Gold Hill zones.

There is a northeast-trending unit of welded tuff along the northwest margin of the Southwest Prospect area that varies from approximately 20 to 75 metres in width. Rocks are light buff to grey in colour and commonly have a pervasive fabric, as defined by parallel aligned and stretched fiamme, consisting mostly of medium to dark grey quartz-rich fragments, in a light grey tuffaceous matrix. A northeast-trending intensely silicified zone (~150 m by 30m) that forms a prominent topographic high, is present along the southern margin of the welded tuff (Fig. 9-4). A zone of tourmaline alteration was noted adjacent to the silicified zone, extending over much of the welded tuff unit. Tourmaline is present both as narrow veins (<0.5 cm wide) and as widespread alteration 'spots' (<1 cm). One wide tourmaline vein was noted to contain angular fragments of quartz vein material and also displayed comb-textured overgrowths on tourmalinized wall-rock fragments (Figure 9) indicating a complex relationship between tourmaline alteration and veins and quartz vein formation.

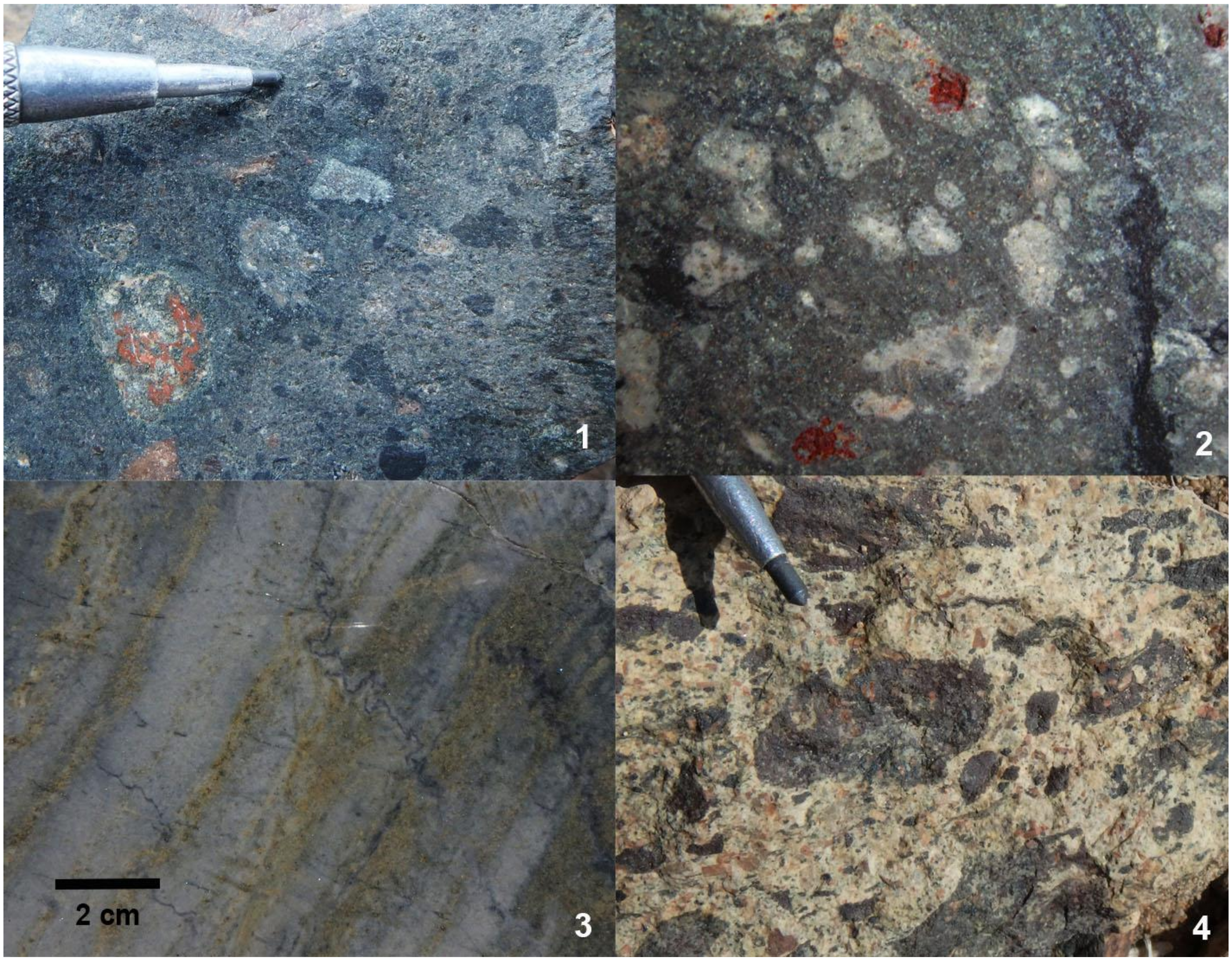

Figure 9 – Photographs of lithologies including: 1) weakly altered (chloritized) coarse-grained lapilli tuff from an outcrop 500 m north of the Northeast Zone; 2) strongly altered (quartz-illite) coarse-grained lapilli tuff from drill hole BKD-10 in the Striker Zone; 3) Finely laminated and variably altered ash tuff interbedded with welded tuff to the northwest of Striker Zone in drill hole BKD-40; 4) Welded tuff with angular quartz fragments and coarse lithic and chalcedony fragments from an outcrop approximately 400 metres north of the Northeast Zone.

The zones of intense silicification at Bayan Khundii have replaced most of the pre-existing rock (e.g. fine- and coarse-grained lapilli tuff, ash tuff, welded tuff) resulting in massive, light grey coloured, very fine grained to slightly saccharoidal textured quartz rich zones that are provisionally interpreted as 'lithocap zones' (Fig. 8).

The coarse size of lithic rock fragments (up to >6 cm) in some Devonian tuffs suggests possible proximity to a volcanic vent; however, there are no obvious vectors based on observations to date. Additional work is required to test this hypothesis.

7.4.2 Intrusive Rocks

A small intrusion of medium grained equigranular hornblende monzonite (<100 m diameter) outcrops in the centre of the Southwest Prospect area, west of Gold Hill. This monzonite was intersected in the top of several drill holes including BKD-12, -34, -46 and -55 where sharp intrusive contacts were observed with lapilli tuff. There were three monzonite porphyry dikes, ranging in thickness from 2 to 27 metres, in drill hole BKD-67 located near the southern contact of, and presumably originating from, the monzonite intrusion. The monzonite is fine to medium grained and has hornblende and two feldspars in a very fine grained matrix, with minor euhedral feldspar phenocrysts. A fine grained chilled margin was noted adjacent to the host pyroclastic rocks indicating the monzonite is younger than the pyroclastic rocks. The monzonite has several brick-red coloured zones of hematization, including a 2-metre wide contact zone. Tourmaline alteration of monzonite was observed in a three metre wide zone at the contact zone, with tourmaline present both as narrow veins (<0.5 cm wide) and as alteration 'spots' (<1 cm). Similar monzonite was encountered in the bottom 15 metres of drill hole BKD-38, located approximately 250 metres east of the Striker Zone. Based on drilling results to date, these monzonite intrusions are interpreted to be narrow separate plugs with steep contacts and limited lateral extent. Both monzonite intrusions have positive magnetic signatures as determined by a previous ground magnetic survey. Monzonite is interpreted to be Carboniferous and have post-dated the gold mineralization event.

Several fine- and medium-coarse-grained syenite intrusions have been mapped near Bayan Khundii, including a fine grained syenite intrusion that intruded the Northeast Zone (Fig. 6). Similar fine grained syenite has been intersected at the bottom of several drill holes in the Striker Zone (e.g. BKD-19, -46, -47 and -55) and as a narrow dyke in BKD-48, suggesting a syenite porphyry intrusion at depth below these holes. Similarly, syenite porphyry was intersected at the bottom of several drill holes (BKD-60, -87, -95 and -96) in the Midfield Zone, although drilling only intersected narrow intervals of syenite (e.g. 1.5 to 8 m wide). Accordingly, it is unclear whether there is a large syenite intrusion beneath the Midfield Zone or whether the syenite intersected to date may be part of a shallow-dipping dyke or sill. Planned drilling in 2017 will further evaluate the distribution of syenite in the Midfield Zone. Syenite rocks generally have a low magnetic susceptibility response (e.g. < 0.2); although some syenite may have high readings (up to 23.0), and generally do not have a positive response in the ground magnetic survey. Syenite is interpreted to be Carboniferous and to have post-dated the gold mineralization event.

Several fine grained aplite and porphyritic granite dykes were intersected throughout the Bayan Khundii area including two granite porphyry dykes (0.8 and 17m wide) and an 8 metre interval at the bottom of drill hole BKD-41 in the Northeast Zone and two dykes in the Midfield Zone (12 and 1 m wide, (drill holes BKD-60 and -95 respectively) and two separate narrow aplite dykes in holes located several hundred metres east and west of the Striker Zone (BKD-38 and -39 respectively). None of these aplite and granite porphyries are thought to be associated with large intrusions at depth; however, the large dyke in BKD-60 was altered and had gold mineralization. The exact age of these rocks is unclear; however, the presence of gold mineralization suggests a Devonian age.

Numerous andesite porphyry dikes have been logged throughout the Bayan Khundii prospect. These are thought to be Devonian in age, and have formed along with the deposition of the tuffaceous units.

7.4.3 Cretaceous Rocks

7.4.3.1 Sedimentary Rocks

Cretaceous red-bed sedimentary rocks unconformably overlie the altered Devonian tuffaceous rocks at Bayan Khundii. Lithologies include coarse-grained, poorly sorted hematitic sandstone and mudstone with a very coarse-grained basal conglomerate commonly developed at the unconformity with the Devonian tuffs. Individual strata are very well indurated and have well-developed primary bedding that has an average 108^{o} strike and shallow dips to the south (from 10-25^{o}, avg. ~ 18^{o}). Most sedimentary rocks are red coloured, presumably reflecting the presence of hematite in the matrix, however, in more widespread areas, such as along the south side of the Southwest Prospect, the rocks vary from red to whitish or light grey and have a mottled appearance. These sedimentary lithologies are interpreted as part of the Upper Cretaceous Bayanshiree Formation, according to the Mongolian Stratigraphic classification. Several drill holes intersected very coarse grained conglomerate with angular clasts of altered Devonian tuff (to 2-5 cm), with several intervals containing anomalous Au values (>1 g/t Au) although it is unclear whether the Au is within the altered clasts or in the sedimentary matrix. This will be further evaluated in 2017.

7.4.3.2 Basalt

The Cretaceous sedimentary sequence is unconformably overlain by unaltered massive and amygdaloidal basalt. The primary S_o orientation in the basalt flows differs from the underlying red-beds, having an average NE-SW strike (051^{o}) and an average dip of 14^{o} to the SE. Accordingly, the contact between the basalt units and the underlying red-beds is interpreted as an angular unconformity.

7.4.4 Quaternary Unconsolidated Sediments

Topographic low areas at Bayan Khundii are underlain by unconsolidated Quaternary and Recent sediments. The pattern and distribution of various facies of Quaternary deposits reflects modern and paleo-drainage systems. There is a prominent southeast orientation to many of the small Quaternary sediment-filled valleys at Bayan Khundii that are sub-parallel to the main auriferous quartz vein orientation. Larger N-S and E-W trending linear valleys may reflect contact zones or structures, possibly faults. The potential for placer gold deposits within these sediments will be investigated in future exploration work (see *Section 18.0 Recommendations*).

7.4.5 Structure

Deformation of all Devonian, Carboniferous and Cretaceous rocks at Bayan Khundii consists of brittle faulting and cataclastic deformation that is characteristic of shallow upper-crustal conditions (e.g. <1 km depth). This is consistent with the proposed low-sulphidation epithermal deposit model noted below in Section 8.

Deformation can be subdivided into three separate temporal events that correspond to regional tectonic events, including:

1. D1 Deformation - Local tilting of the Devonian tuffs, resulting in a NE-SW strike and approximately 45^{o} NW dip, is interpreted as a result of block faulting. This is supported by the lack of evidence for mesoscopic folding or fabric development. D1 deformation is attributed to Paleozoic terrane accretion and orogenesis, possibly related to the docking of the Edren Terrane. This tilting is thought to have formed either above a listric block fault or above a blind regional back-thrust;
2. D2 Deformation – The presence of Cretaceous red-bed sedimentary rocks and shallow-dipping flood basalts is attributed to an episode of Mesozoic extension that led to the development of large basins and partial grabens throughout the Edren terrane;
3. D3 Deformation – The presence of four distinct sets of late, brittle, strike-slip faults is interpreted to be post-Cretaceous and presumably related to the distal effects of Cenozoic, Himalayan tectonics. Fault sets include: a) Set 1 – NW-SE (sinistral); b) Set 2 – NE-SW (dextral); c) Set 3 – E-W (sinistral); and d) Set 4 – N-S (dextral). Displacement along these faults is interpreted to be minor with predicted movements of several metres to a maximum of approximately 60-70 m, based mostly on the observed length of the mapped faults.

The relative timing of gold mineralization at Bayan Khundii is considered to be either syn- or post-D1 deformation, but pre-D2 deformation.

Much of the gold mineralization at Bayan Khundii is associated with epithermal quartz veins that can be classified as: 1) comb-textured crystalline quartz± hematite veins; and 2) composite multiphase quartz-adularia± hematite veins with both chalcedony and crystalline quartz. Most veins appear to have limited lateral extent (generally <10m), however, individual veins are commonly within high- and low-grade mineralized zones that can be traced for hundreds of metres both along strike and down-dip. All vein types fall within three main orientations, including:

1. Set 1 is the dominant vein set and has a NW-SE strike and moderate SW dip. The orientation of this vein set mirrors the orientation of the gold mineralized zones as shown in Figure 11;
2. Set 2 veins are a conjugate and subordinate set to Set 1 and have a NE-SW strike and a moderate SE dip;
3. Set 3 veins are relatively rare and strike N-S, and are steeply-dipping to vertical.

7.5 Mineralization

Mineralization at Bayan Khundii consists of gold (Au) ± silver (Ag) in quartz± hematite and quartz-adularia± hematite veins, quartz-hematite breccias, along late fractures (±hematite/ specularite), and as disseminations within intensely quartz-illite altered volcaniclastic rocks including fine- and coarse-grained lapilli tuffs, ash tuffs and welded tuffs. No Au± Ag mineralized veins or breccias have been noted in the unconformably overlying Cretaceous sedimentary rocks or basalt, indicating these rocks are an unmineralized cover sequence. Some Au± Ag enrichment has been noted in basal conglomerate containing angular, altered, and possibly mineralized Devonian tuff clasts, near the unconformity. This mineralization may represent the incorporation of mineralized material from nearby Devonian tuffs, although it is possible that it may represent paleo-placer Au in the conglomerate matrix. This will be evaluated further in 2017.

Gold mineralization at surface is present in three separate areas over a 1.7 km northeast trend. These include the Southwest Prospect area (550m x 300m), the Northeastern Prospect area (300 m x 300 m), located approximately 0.7 km to the northeast, and the NE Extension located an additional 500 m to the northeast. Most of the exploration work to date has focussed on the Southwest Prospect area, however, encouraging assays were also received for mineralized rock chip samples from the Northeast Prospect (e.g. 3 samples returned from 1.3 to 4.1 g/t gold), and two rock chip samples collected from the NE Extension area returned Au assay values of 7.1 and 0.4 g/t Au (Figure 15). Four holes were drilled in the Northeast Zone in 2016 with some encouraging results. For example hole BKD-72 contained a 2 m wide zone that averaged 2.33 g/t Au and a 9 m wide zone that averaged 0.14 g/t Au. Similarily, holes BKD-41 and -42 returned anomalous Au values including 6 metres averaging 0.28 g/t Au and 4 metres averaging 0.57 g/t Au respectively. The Northeast, and Northeast Extension Prospect areas will be investigated further during the 2017 exploration program. The remainder of observations in this section are based on mapping, trenching and drilling within the Southwest Prospect area.

An initial program of surface mapping, prospecting and rock chip sampling in Q2 2015 returned assays of up to 4,380 g/t Au (141 oz/t), and a subsequent trenching program in Q3 2015 outlined several mineralized zones, including a 30 m wide trench interval that averaged 2.7 g/t Au (including 2 m @ 11.2 g/t Au). An initial 15-hole drill program, completed in Q4 2015, identified multiple, high-grade intersections over a 475 m by 300 m area. Visible gold was observed in numerous drill holes, with no significant sulphide material present except for very minor, finely disseminated pyrite encountered in a few drill holes.

A total of 81 holes were drilled at the Bayan Khundii project in 2016. Details of the drill program are given in Section 10 of this report. Results from the 2016 drill program: 1) confirmed the orientation, grade and continuity of mineralization within the Striker and Gold Hill zones; 2) discovered the Midfield Zone beneath Cretaceous cover rocks; and 3) identified Au mineralization in ash and welded tuff host rocks to the northwest of the Striker and Midfield zones.

Gold mineralization is mostly hosted in parallel NW-SE, moderately-dipping (~45^{o}) zones that range in width from 4 to 149 metres (Figure 11). Results from initial drilling indicate that individual mineralized zones can be correlated between drill holes as shown in Figure 11. Many high-grade Au± Ag intersections were noted to be within widespread lower-grade envelopes, for example hole BKD-90 has several high-grade intervals including a 41 metre wide high grade zone (41 m @ 5.2 g/t Au) within a 149 metre wide mineralized envelope that averages 2.1 g/t Au (Fig. 11). Several very high grade intersections were encountered in the 2016 drill program, including a 3 metre wide interval in BKD--17 that returned an average assay value of 49.4 g/t Au (Figure 11; Table 2).

The widest mineralized zone encountered in the 2016 drilling was encountered in BKD-90 where a 148.8 metre wide mineralized interval was intersected from 23 metres depth to the contact with a late syenite intrusion at 172 metres depth averaged 2.11 g/t Au. This hole was drilled to test continuity of a broad mineralized zone previously encountered in BKD-60 (Table 2). The lateral and down-dip extensions of the Midfield and Striker zones will be drill-tested in 2017.

7.5.1 Visible Gold

Visible gold (VG) was noted in 54 of the 96 holes drilled to date at Bayan Khundii. It should be noted that visible gold is not always a good indicator of gold grade as numerous samples have returned moderate to high gold values for samples where no visible gold was noted during logging. Visible gold was observed in several modes of occurrence (Fig. 10), including:

1. In quartz veins with a range of textures including:
    a. Whitish-grey comb-textured quartz veins (mostly <1 – 2 cm wide), commonly with hematite ±specularite and/or open space in centres of vein. Within these veins gold is present: 1) along prismatic quartz grain boundaries; 2) within the vein centres ±hematite/specularite; and 3) along vein margins at contact with host tuffs (Fig. 10-1);
    b. Multi-stage composite quartz-chalcedony-adularia± hematite veins, commonly with a mottled-texture (mostly <1 -10 cm wide) with sub-round 'clasts' or fragments of milky light grey-buff quartz-adularia or dark-coloured chalcedony, some having very abundant disseminated gold, commonly rimmed by euhedral adularia crystals (Fig. 10-2);
    c. Multi-stage quartz-adularia-chalcedony veins with bladed calcite, now pseudomorphed by quartz (i.e. boiling textures) and medium-dark grey Au-rich vein margins (Fig. 10-3);
    d. Large composite veins (up to ≥1 m wide) composed of a, b and c veins described above and commonly with evidence of brecciation with hematite matrix;
2. In quartz-hematite breccias (from ~5 to 40 cm wide) that contain sub-angular to sub-rounded fragments of quartz or tuffaceous rocks in a hematite± specularite matrix (Figure 10-4).

3. Along late angular fractures, micro-fractures and joints, commonly associated with hypogene hematite and/or specularite; and
4. As very fine grained disseminations within the host tuffaceous rocks.

7.5.2 Quartz veins and Breccia Zones

Quartz veins and hematite and/or quartz breccias were observed to have variable orientations and commonly form irregular networks of quartz and hematite veins and breccias within SE-NW and E-W trending, SW-dipping, structures. Individual quartz veins, commonly with comb-textures, were observed to vary in width from <1 mm to 2-3 cm over 10 to 30 cm along individual veins. Some quartz veins were noted to form bifurcating veins sets, whereas other veins were noted to form along parallel fractures with common 'jump over' structures. The vein orientations are thought to reflect the orientation of pre-existing fractures, with comb-textured veins possibly representing open-space infillings of structuraly-controlled void spaces.

Several large composite quartz veins (≤1 m wide) were noted to include comb-textured quartz±adularia, brecciated and mottled-textured massive quartz, and minor chalcedony with hematite ±specularite veins and veinlets and, in a few veins, hematite breccias. These large composite veins are interpreted as forming from multiple pulses of silica and Fe-oxide rich auriferous fluids.

An irregular-shaped, sinuous, SE-trending hydrothermal quartz breccia was mapped for approximately 125 m through the Striker Zone (Figure 7). Other quartz-breccia zones throughout the Southwest Prospect area, are interpreted to be linear-shaped, however, surface exposure is somewhat limited and these breccia may be irregular-shaped as more mapping and drilling information is acquired.

Some quartz veins have narrow (<1-2 mm wide) quartz-illite alteration selvages; however, most quartz veins at Bayan Khundii do not have alteration selvages.

Some tourmaline breccias and tourmaline alteration zones to the west of the Striker Zone contain brecciated fragments of quartz veins and also comb-textured quartz overgrowths on tourmalinized fragments, suggesting a complex inter-relationship between quartz veining and tourmaline alteration events (Figure 9). The relationship between gold mineralization and tourmaline is unclear, however, most tourmaline was observed to the west of the Striker Zone where limited Au mineralization has been encountered to date and there is only rare to trace tourmaline in the Striker and Midfield zones, suggesting these features may be from separate events.

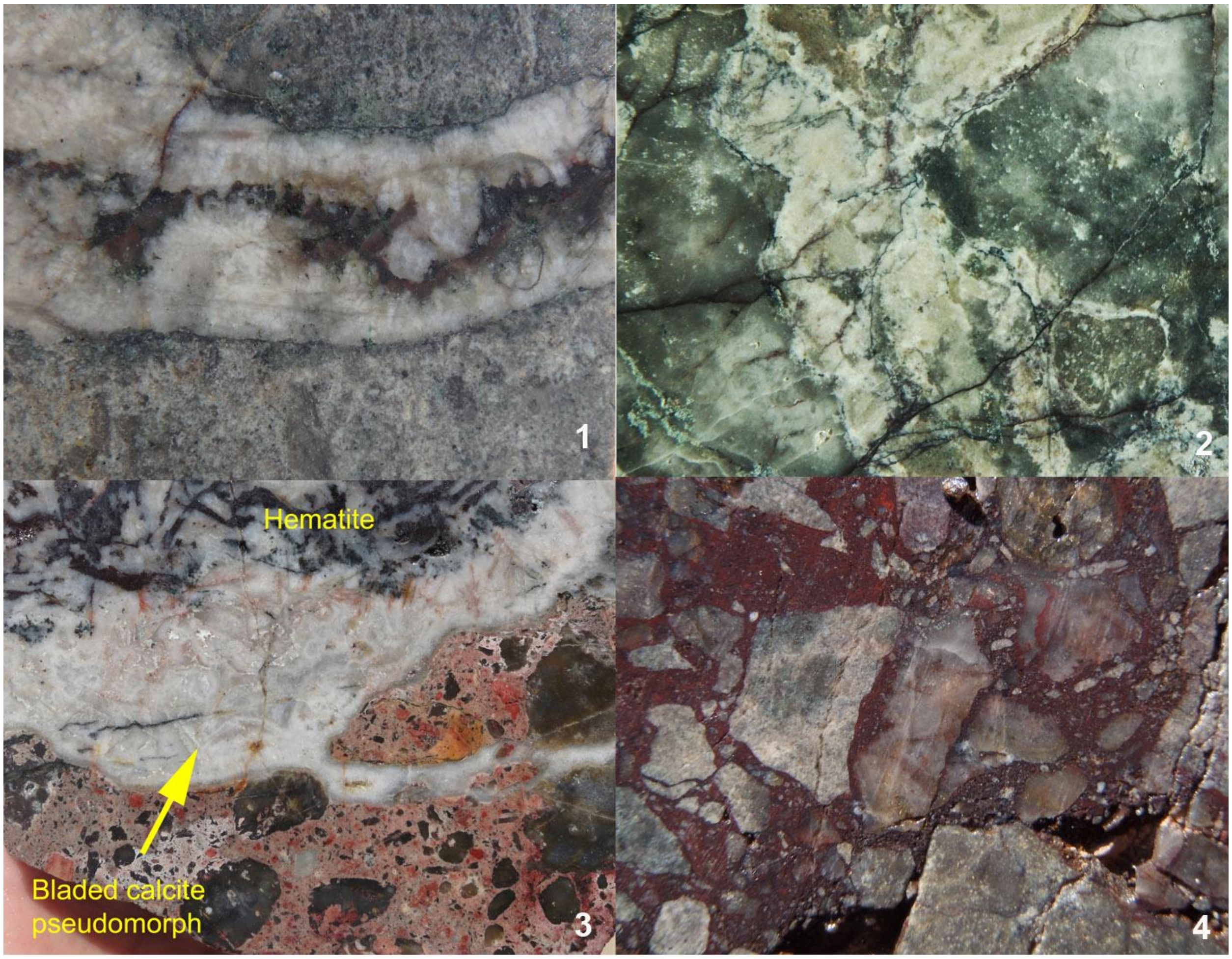

Figure 10 – Photographs of gold-bearing veins and breccias, including: 1) Comb-textured quartz-hematite/specularite vein from BKD-02; 2) Composite multi-stage quartz-chalcedony-adularia vein from BKD-01; 3) Composite quartz-adularia-chalcedony vein from outcrop with bladed calcite (i.e. 'boiling') textures, now pseudomorphed by quartz; and 4) Hematite-specularite-quartz breccia from BKD-60.

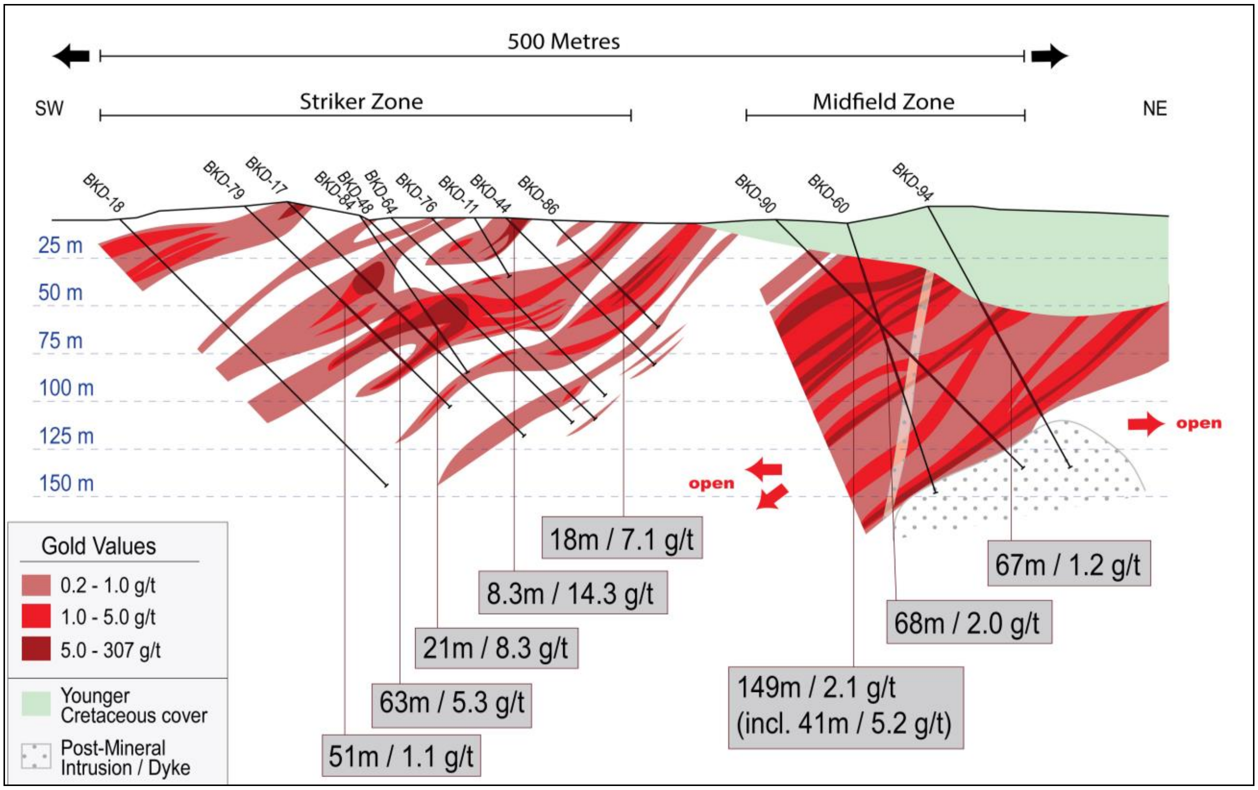

Figure 11 - NE-SW trending cross section through the Striker and Midfield zones at Bayan Khundii showing the results from 2015 and 2016 drilling. Note the consistent moderate SW dip to the parallel mineralized zones.

Table 2 – Drilling Intersection Highlights from Striker and Midfield zones

Drill Hole	From (m)	To (m)	Interval (m)*	Gold (g/t)
BKD-17	50	113	63	5.31
incl.	54	69	15	11.5
incl.	55	58	3	49.4
incl.	90	95	5	26.8
BKD-48	54	89	35	1.88
incl.	56	75	19	2.84
incl.	67	73	6	15.88
BKD-60	20	143	123	1.32
incl.	29	59	30	2.98
incl.	58	59	1	19.0
BKD-90	23	171.8	148.8	2.11
incl.	40	81	41	5.17
incl.	66	81	15	6.51
BKD-92	108	180.3	72.3	3.96
BKD-95	19	35	16	3.93

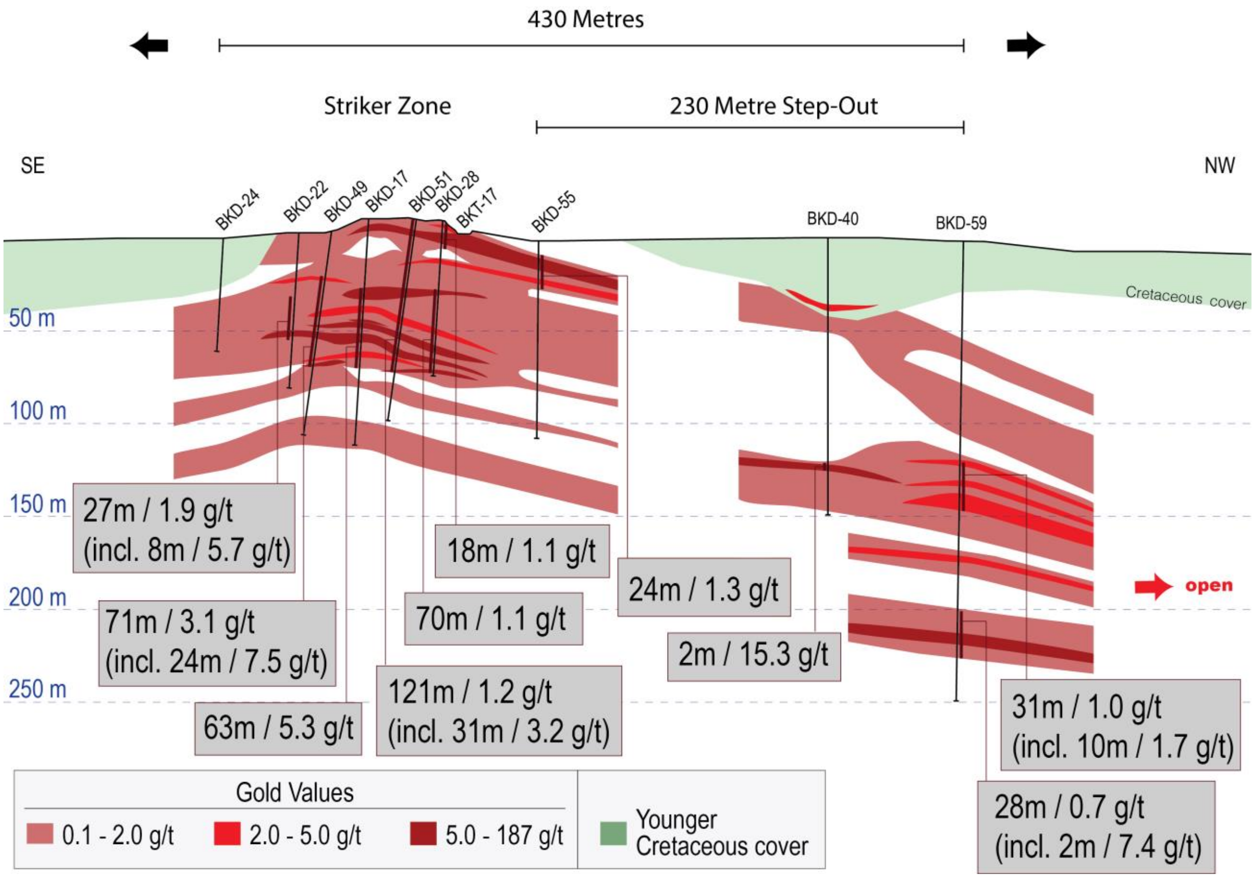

Figure 12 - NW-SE longitudinal-section (looking southwest) through the Striker Zone showing results from 2016 drilling. Note the gentle NW dip to the mineralized zones.

7.5.3 Alteration

Perhaps one of the most striking features of Bayan Khundii is the intense alteration that overprints all Devonian tuffaceous rocks at Bayan Khundii, including the outcropping Southwest and Northeast Prospects that is evident on high resolution satellite images (e.g. GeoEye). This alteration is in sharp contrast to the relatively unaltered unconformably overlying Cretaceous sedimentary rocks and basalt. In many locations at Bayan Khundii it is difficult to identify the protolith, as virtually all primary minerals have been variably replaced by quartz and illite.

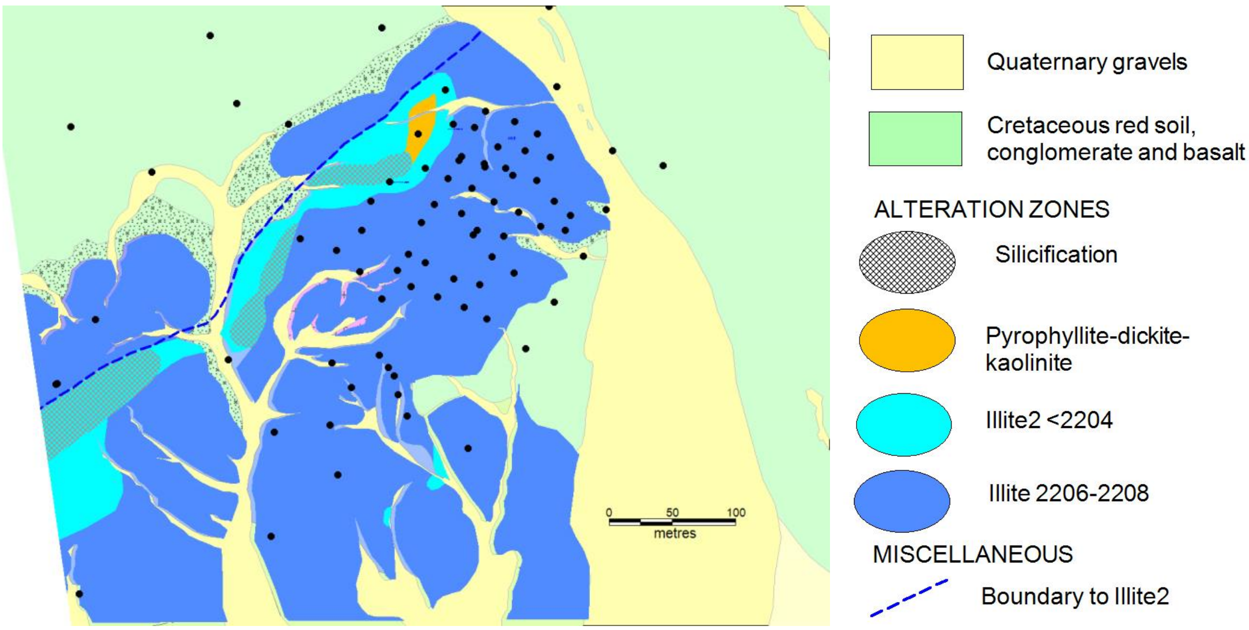

Figure 13 - Map of the Southwest Prospect area showing the distribution of alteration zones, as defined by Short-Wave Infrared (SWIR) analysis

Based on the results from a Short-Wave Infra-red (SWIR) analysis of select surface outcrop and drill holes the Southwest Prospect is pervasively altered and has several discrete alteration zones (Fig. 13), including:

1. Widespread and intense illite ('green') alteration with Al-OH absorption values of 2206-2208 nanometers that is present throughout the Striker Zone. SWIR analysis of 'gusano' style replacement textures, interpreted as forming during an earlier alteration event, indicates a pervasive illite alteration both within dark replacement spots and in the matrix. This suggests the pervasive green illite alteration represents a late overprinting alteration event that is interpreted to be associated with the low-sulphidation gold mineralizing event.;
2. A discrete, NE-trending zone of white-mica alteration with Al-OH absorption values ranging from 2196-2204 is developed along the margin of the Striker Zone and is interpreted to be of lower temperature epithermal origin that the green illite alteration. This alteration type is referred to as illite2<2204 in Figure 13. This zone is parallel to the strike of the tuffaceous lithologies in the Southwest Prospect area and may represent preferential alteration of a specific lithology.
3. A small zone of advanced argillic alteration (i.e. pyrophyllite-dickite-kaolinite) is situated within the illite2 alteration on the NW edge of the Striker Zone (Fig. 13). As with the gusano style alteration noted above, the advanced argillic alteration is interpreted as forming from an earlier high-temperature alteration event, however, here it was preserved and not overprinted by the later green illite alteration event.

4. Several quartz-rich alteration zones are present within the Southwest Prospect area, as observed at Gold Hill, and other prominent topographic high features. Several 'siliceous' alteration zones were observed within the illite2 alteration zone (Fig. 13). These siliceous alteration zones have well-developed saccharoidal (i.e. sugary') textures, and very poorly-developed 'vuggy' texture in part, and are provisionally interpreted as representing lithocaps that were presumably developed during the early high-temperature alteration event that also formed the gusano and advanced argillic alteration.;
5. Tourmaline alteration as replacement spots and also as fracture fillings. The most intense tourmaline alteration was noted in the western part of the Southwest Prospect area where it is mostly restricted to welded tuff lithologies. Some tourmaline zones were noted to contain angular xenoliths of quartz veins and in the same sample fragments of tourmaline-rich rock displayed comb-textured quartz overgrowths. This suggests a complex history of tourmalinization, brecciation and quartz vein emplacement;

Chlorite± pyrite± magnetite± K-feldspar± biotite alteration was observed in deeper part of several drill holes (e.g. BKD-43) below or adjacent to the pervasive green illite alteration. As for the gusano, advanced argillic and siliceous alteration, this alteration assemblage is thought to have formed during an early high temperature alteration event. Alteration at Bayan Khundii can be grouped into two main events, based on observed textures and mineralogical studies. These include:

1. An early high-temperature alteration event that formed poorly-developed vuggy quartz lithocaps and underlying well-developed gusano (i.e. 'wormy')replacement textures and small isolated zones of advanced argillic alteration (pyrophyllite-dickite-kaolinite) in the vicinity of the Striker Zone. Widespread chlorite-pyrite-magnetite-K-feldspar-biotite alteration that is easily recognized outside the illite alteration zone is considered to have formed during this early alteration event. Fluid inclusion results have identified a hypersaline population of inclusions that may be associated with this early alteration event, possibly associated with a porphyry intrusion at depth;

2. A later, lower temperature pervasive quartz-illite alteration event that is interpreted as part of the low-sulphidation epithermal mineralization at Bayan Khundii. There is a second population of lower-temperature aqueous fluid inclusions that are interpreted as forming during this alteration/mineralizing event. There is no chlorite, pyrite, magnetite, or obvious K-feldspar within the illite alteration zone, although there is some 'retrograded' alkali feldspar that was identified in thin section.

7.5.4 Sulphide Minerals

The majority of the Southwest Prospect area at Bayan Khundii is devoid of sulphide minerals, including sphalerite, galena and chalcopyrite. This is reflected in the geochemistry of the deposit where relatively low concentrations of Pb (16 ppm avg.; 4-57 ppm range), Zn (78 ppm avg.; 7-355 ppm range) and Cu (22 ppm avg.; 2-123 ppm range) were encountered in the 635 samples of drill core analyzed in Q4 2015. Despite these generally low elemental concentrations, slightly elevated levels of Mo, S and Pb were noted in a subset of samples with greater than 200 ppb Au when compared with samples with less than 200 ppb Au. For example, Mo, S and Pb averaged 4.5 ppm, 0.09% and 17.6 ppm respectively in the high grade samples versus 2.4 ppm, 0.06% and 15.6 ppm in the low grade samples, representing increases of 85%, 32% and 13% respectively in high grade samples.

Trace to minor amounts of disseminated pyrite in altered volcanic and pyroclastic lithologies were observed in 29 of the 46 drill holes from the Q3-Q4 2017 drill program. The most significant pyrite occurrences are in the Gold Hill Zone, in drill hole BKD-08, where pyrite is present over a 12 metre interval mostly as fine disseminations, and in BKD-32 to the northwest of Striker Zone where disseminated and/or vein type pyrite was identified in 48 of 107 sample intervals. In addition, trace to minor amounts of pyrite, mostly in isolated drill core intervals, were noted in several drill holes from the Striker Zone where pyrite was present as fine disseminations, with very minor pyrite along sericitized fractures.

As noted above, sulphur concentrations at Bayan Khundii are generally very low with wide intervals in many drill holes having less than detection limits of 0.01% S. A sulphur-enriched zone in BKD-13 with S concentrations up to 0.87% was devoid of obvious sulphide minerals including pyrite, but correlated to a discrete tuff unit. Sulphur concentrations in drill hole BKD-32 that has common pyrite, ranged from 0.01% to a maximum of 1.47% in a sulphide-rich zone. The low overall S concentrations are in accord with the general paucity of sulphide minerals.

Petrographic work has identified relict disseminated pyrite that has been mostly replaced by hypogene hematite/specularite and has associated visible gold. This relict pyrite may have been associated with the early high-temperature alteration, or perhaps it may have formed during the later illite alteration, and was then overprinted and replaced by Fe-oxides during the low-sulphidation alteration/mineralization event.

As noted in *Section 9.3.2 Induced Polarization (IP) Surveys*, there are several induced polarization (IP) chargeability anomalies at Bayan Khundii that may reflect the presence of disseminated specularite, as noted in some zones intersected in drilling to date, or conversely could be caused by sulphide rich rocks below the current erosional level at Bayan Khundii.

7.5.5 Fe-Oxide Minerals

Hematite, often with associated specularite, is a ubiquitous feature at Bayan Khundii, and was observed in surface outcrop, trenches and in drill core, where it is present as:

1) Fracture/vein infilling, commonly within very sharp-sided angular fractures or veins that may contain wallrock fragments;
2) as central vein infilling and vein margins in comb-textured quartz veins;
3) as matrix in quartz-hematite breccias, commonly with angular fragments of quartz-illite altered wall-rock;
4) as rare round disseminations that are interpreted as pseudomorphic replacement of early sulphides; and
5) alteration selvages along the margins of fine grained dark grey quartz or chalcedony veins.

In drill hole BKD-01 there are several narrow specularite veinlets (<1-2 mm wide) with wide medium grey alteration selvages (≤2 cm) consisting of intense silicification and sericitization. This indicates that hematite veins were formed at the same time as the intense silicification and sericitization.

Visible gold was noted in some hematite veinlets, thus establishing a genetic relationship between the gold and hematite-forming fluids. The presence of hematite (and minor specularite) indicates oxidizing conditions and suggests the mineralizing fluids at Bayan Khundii may have interacted with oxygenated surface (i.e. meteoric) waters.

8.0 Deposit Type

Several features support a low sulphidation model for the Bayan Knundii mineralization, including: the presence of quartz-adularia-sericite (illite) veins and adularia alteration zones in gold mineralized zones; the low Ag : Au ratios (mostly <1), at least for the highest grade Au mineralization; local colloform bands of quartz, bladed calcite (now pseudomorphed by quartz) textures that indicate boiling; the very low concentrations of base metals, widespread intense illite-quartz alteration zones; the ubiquitous presence of hypogene hematite as fractures, veins and breccias; and the presence of comb-textured quartz veins and chalcedony, albeit minor in abundance.

Pre-epithermal alteration is present, including chlorite, K-feldspar, biotite and granular quartz with hypersaline inclusions. This alteration assemblage was followed by tourmaline and magnetite along with a muscovite alteration overprint and structurally-controlled advanced argillic alteration and residual quartz alteration. This high-temperature alteration, characteristic of intrusion-centred systems at depths >1km, was uplifted, eroded and potentially tilted prior to initiation of the subsequent low-sulphidation epithermal system, including the formation of low-temperature quartz-illite alteration and deposition of quartz cement in brecciated structures along with adularia and gold (electrum). The general absence of smectite at Bayan Khundii suggests erosion to at least 150 m depth below the paleo-groundwater table.

Based on the features and discussion above, Bayan Khundii gold±silver mineralization is considered to be a low sulphidation epithermal type gold deposit.

9.0 Exploration

While Erdene has held the Khundii exploration license since 2010, and has carried out license wide geological mapping, soil geochemical sampling and magnetic surveys, detailed work between 2010 and 2014 was focused on the Altan Arrow property in the north central portion of the property (see section *6.0 History* for further details). In early 2015, Erdene geologists identified, through rock chip sampling, new high-grade gold mineralization associated with a zone of intensely altered (quartz-illite) volcanic lithologies located ~5 km south of Altan Arrow. This area, referred to as the Bayan Khundii (rich valley) project has been the focus of the 2015 and 2016 exploration programs. The following sections provide a summary of the activity, including methodologies and results, for the exploration work carried out on the Bayan Khundii project to date.

9.1 Geological Mapping

A detailed geological mapping program was initiated in June 2015 over the Bayan Khundii project area with additional mapping taking place in July – August 2017. This work has been principally carried out by G. Bat-Erdene, one of Erdene's senior exploration geologists. Bat-Erdene, with the assistance of other Erdene geologists, has carried out systematic geological mapping over a 2 km by 2km area as shown in Figure 6. A detailed description of the geology at Bayan Khundii is provided in *Section 7.4 – Bayan Khundii Project Geology*.

9.2 Rock Geochemical Surveys

In 2015, rock-chip (outcrop) and rock-grab (float) samples were collected from across the Bayan Khundii project area as part of the geological mapping and prospecting programs. No grid-based rock sampling programs have been carried out to date. Results from all rock samples taken from 2010 to the date of this report are included herein.

All rock sample locations were determined by hand-held GPS units with approximately 3 m location accuracy. All samples were sent to SGS Laboratory in Ulaanbaatar for analysis. All samples were assayed for Au (fire assay) and a 32 element suite (ICP). See *"Section 10.0 - Sample Preparation, Analyses and Security"* for more details.

9.2.1 Southwest Prospect Area

A total of 78 rock chip and grab samples from surface outcrop and sub-crop, and channel samples from trenches were collected, principally from quartz veins within multiple mineralized areas across the Southwest Prospect, a 550 m by 300 m area, with the majority returning highly anomalous values, and over 20% of the samples returning values in excess of 3.0 g/t gold (Table 3). A map showing the sample locations has been included for reference (Figure 14).

Table 3 - Rock chip and grab sample gold and silver assay results greater than 3.0 g/t gold

Sample Number	Au g/t	Ag g/t
26881	4,380	570
26861	1,790	230
26864	110.0	26
26867	73.8	120
26863	66.5	11
26862	62.3	12
26854	58.8	24
26852	45.8	20
26888	10.2	0
26885	9.81	2

Sample Number	Au g/t	Ag g/t
26890	7.13	2
26875	6.28	0
27272	6.26	0
26859	5.40	3
26878	4.75	0
26898	4.35	0
27260	4.08	0
26892	4.07	5
27287	4.06	2
26874	3.03	3

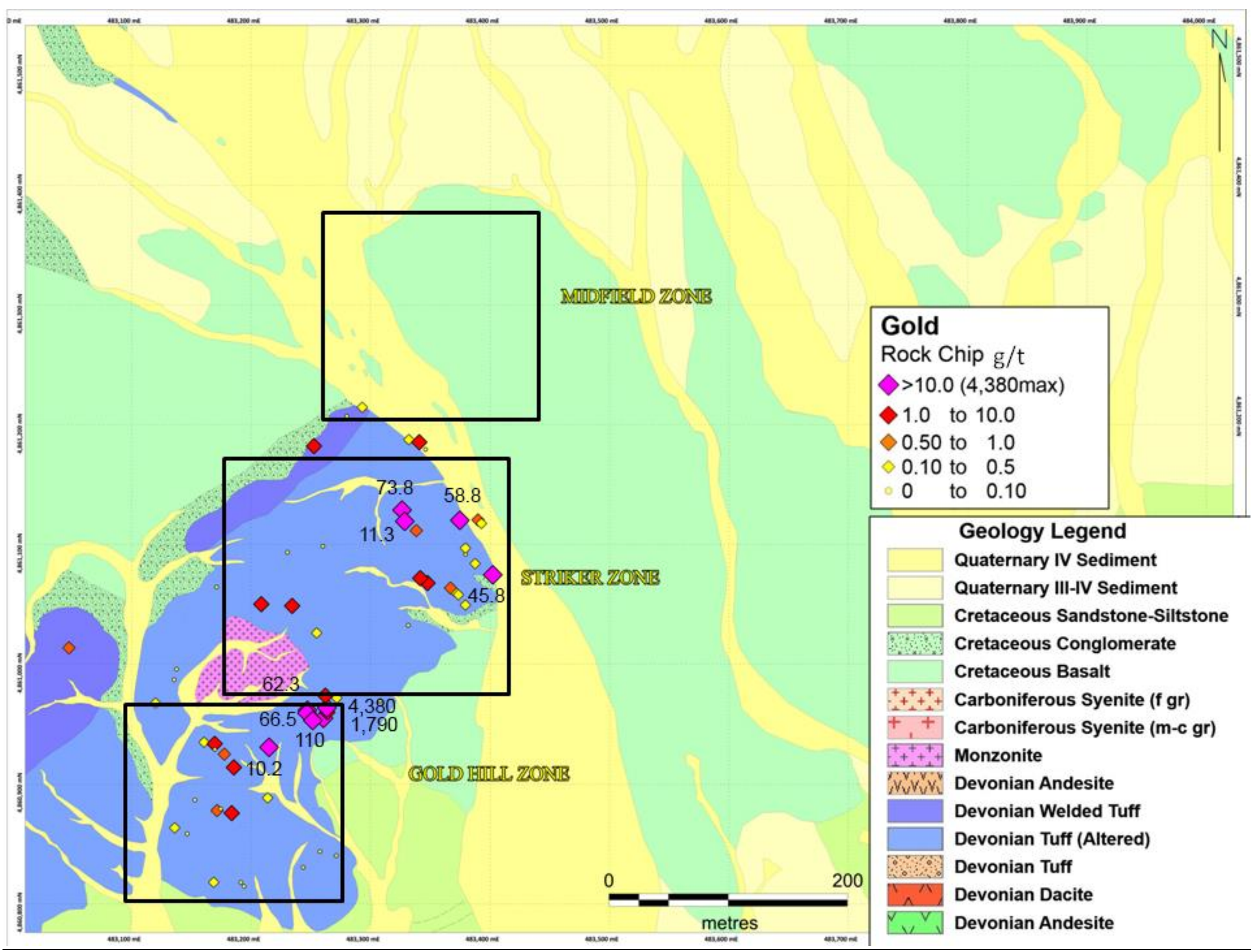

Figure 14 – Southwest Prospect area geology map with location of 78 rock chip and rock grab samples, with labels for gold assay values >10 g/t Au

9.2.2 Northeast Prospect

While highest grade gold mineralization identified to date is located within the Southwest Prospect, an area located approximately 700 m to the northeast, and aptly named the Northeast Prospect (300 m x 300 m), returned numerous anomalous gold assays (>200 ppb) from mineralized rock chip samples (up to 4.1 g/t Au), and two rock grab samples (from float material) collected a further 500 m to the northeast (NE Extension) returned Au assay values of 7.0 g/t and 0.4 g/t Au (Figure 15). These areas will be investigated in future (see recommendations).

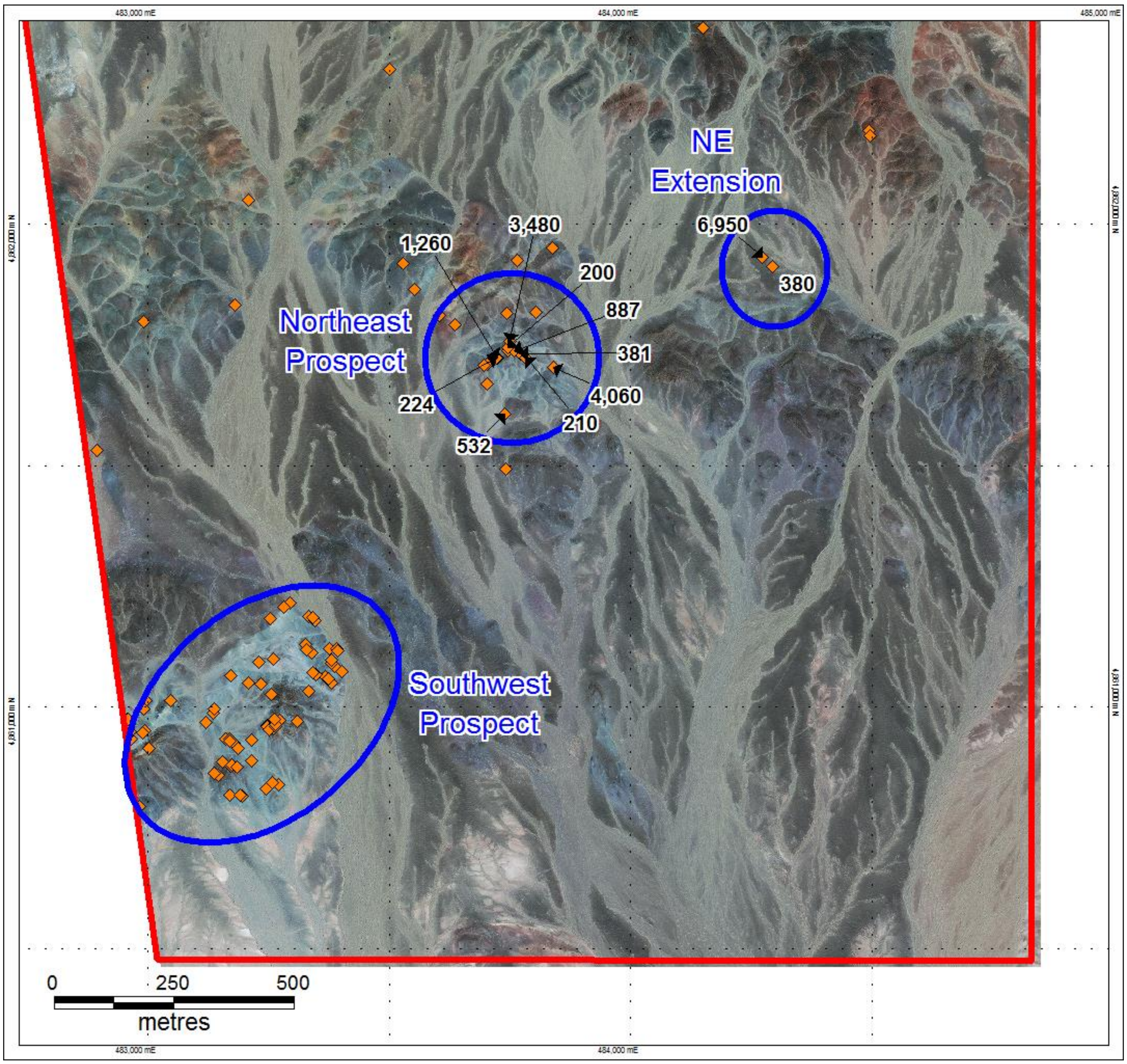

Figure 15 - Gold values (ppb) for rock chip and rock grab samples from the Northeast and NE Extension Prospect areas with labels for gold assay values >200 ppb

9.3 Soil Geochemical Sampling

A grid based soil sampling program was carried out in April and May 2016. The entire area on the Khundii license, from Bayan Khundii to Altan Arrow (an area approximately 4 km by 6 km) was sampled at a 200 m spacing (infilling from a previous 400 m spaced soil sampling grid) with the 2 km x 2 km Bayan Khundii project area covered by a 100 m grid and areas of altered volcaniclastic rocks exposed on surface, namely the Southwest and Northeast prospect areas, covered by 25 m spaced grid sampling.

A total of 1,088 samples were collected. All samples were sent to SGS Laboratory in Ulaanbaatar for analysis. All samples were assayed for Au (fire assay) and a 32 element suite (ICP). See *"Section 10.0 - Sample Preparation, Analyses and Security"* for more details. Gold assay results ranged from below detection limit (1 ppb Au) to a high of 1,570 ppb Au (1.6 g/t). Figure 16 shows the distribution of the anomalous soil geochemical results, which are mainly focused in and around the two areas of exposed, altered, Devonian volcaniclastic rocks at the Southwest and Northeast prospects.

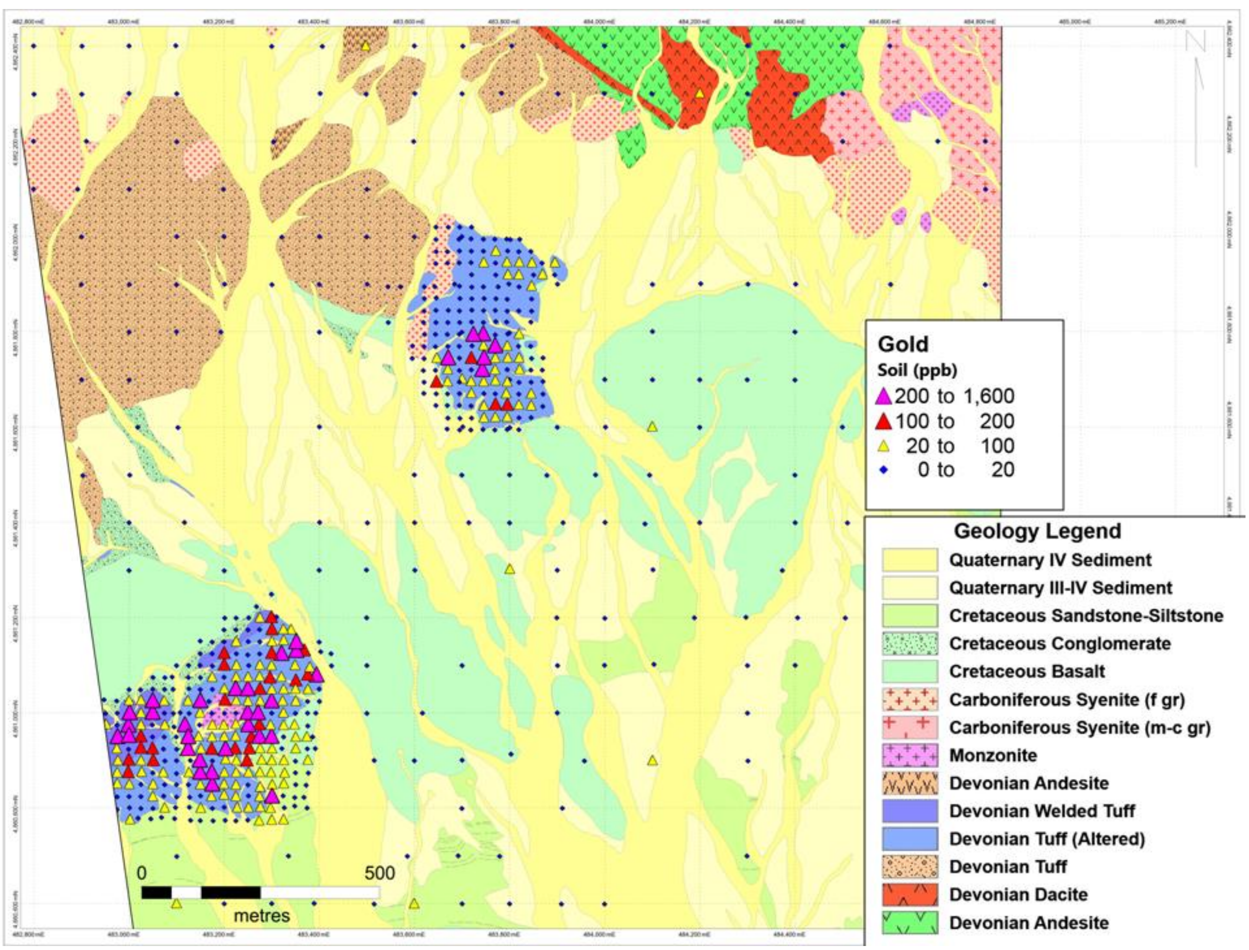

Figure 16 – Soil geochemistry results for gold

9.4 Geophysical Surveys

9.4.1 Magnetic Survey

In 2012, a license wide magnetic survey (100 m line spacing) was completed over a 28 km^2 area covering most of the Khundii exploration license. In October 2015, a detailed (20 m line spacing), magnetic survey was carried out over the Bayan Khundii project area (1.7 km by 1.8 km). All of the magnetic surveys have been conducted by Erdenyn Erel LLC, a Mongolian geophysical consulting firm based in Ulaanbaatar. In 2015, Erdenyn Erel used a team of geophysicists and assistants who operated the following equipment:

Mobile magnetometer (4): GEM GSM-19 / SCINTREX, ENVI magnetometer
Base station magnetometer: GEM GSM-19 / SCINTREX, ENVI magnetometer

The daily magnetic control measurements were conducted using the base station and measuring points were located by DGPS. Magnetic field measurements were taken on a continuous basis with a two-second cycle time whereas daily magnetic variation (Base Station) was measured at a three-second cycle time. All instruments were synchronized as per manufacturer's specifications. All magnetic data was processed, or corrected, for diurnal variation.

Data from the detailed 2015 survey was processed, including quality control analysis, by geophysicist Chet Lide of Zonge International Inc. of Reno NV, USA. Mr. Lide compiled all magnetic datasets and produced the following magnetic map products for the Bayan Khundii map area: 1) Total Magnetic Intensity, Reduced to North Magnetic Pole (RTP), (UC2 and UC10); 2) Calculated First Vertical Derivative of the RTP-TMI (UC10 and UC20); 3) Tilt Derivative of the RTP TMI (UC3); 4) Analytical Signal of the Total Magnetic Field (UC2); 5) Pseudogravity Transform of the Total Magnetic Intensity; and 6) Horizontal Gradient Magnitude of the Pseudo-gravity.

The various magnetic map products provide insight into the geology of Bayan Khundii. The analytical signal of the total magnetic field provides the magnetic response for near-surface rock units and outlines the distribution of the Cretaceous basalt. In contrast, other magnetic products including Reduced to Pole (RTP), 1^{st} Derivative RTP, and Pseudo-gravity provide magnetic response for at-depth rock units.

Gold mineralization at Bayan Khundii is associated with intensely altered (silica-illite) Devonian volcaniclastic lithologies. Magnetic susceptibility measurements from drill core have demonstrated that these units have a low magnetic response, interpreted as reflecting the destruction of primary magmatic magnetite present in unaltered volcaniclastic lithologies.

Low magnetic response, or 'quiet zones' in the Bayan Khundii project area are interpreted as reflecting areas of magnetite destruction from hydrothermal alteration. Figure 17 shows the RTP (UC10) magnetic response for the Bayan Khundii project area, and shows the locations of the known zone of mineralization, Gold Hill, Striker, Midfield and Northeast prospects. A broad zone of low magnetic response is outlined (black dashed line) in Fig 17, measures approximately 1.8 km by 1 km and reflects the extent of the exploration target area at Bayan Khundii. In addition, the outline of the intensely altered Devonian volcaniclastic units, as defined by surface mapping, is shown with blue dashed lines.

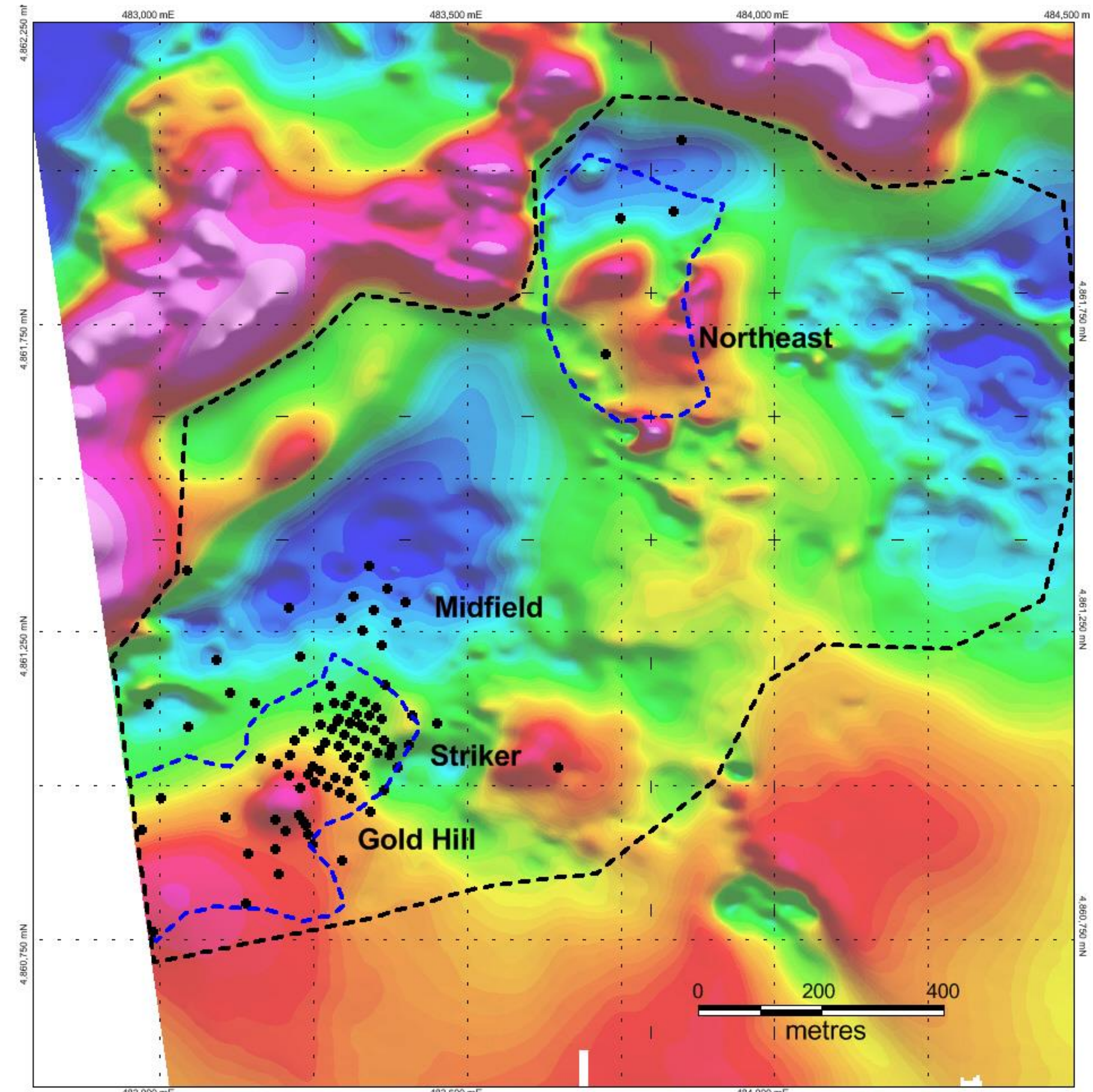

Figure 17 - Reduced to pole (RTP-UC 10) magnetic response for the Bayan Khundii Project area, showing the locations of the Gold Hill, Striker, Midfield and Northeast prospect areas at Bayan Khundii. Broad zone of magnetic low response (outlined by black dashed line) is interpreted as representing area of altered Devonian volcaniclastic units (outcropping within area of blue dashed line), mostly hidden under Cretaceous lithologies and Quaternary sediments

Several smaller areas of moderate to higher magnetic response are observed within the broader low-response area. These have been interpreted, based on results from drilling and geological mapping, as most likely related to post mineral intrusions (monzonite) near Gold Hill, east of Striker and in the southern part of Northeast prospect; and younger Cretaceous volcanic (basalt) unit, located south-southeast of the Northeast prospect, that unconformably overly the Devonian lithologies (possibly masking underlying altered Devonian lithologies) (see Figure 17)

9.4.2 Induced Polarization (IP) Surveys

To date, both IP gradient array and IP dipole-dipole ("Dp-Dp") surveys have been completed on the Bayan Khundii Project. All of the IP surveys were carried out by Erdenyn Erel LLC, a Mongolian geophysical contractor based in Ulaanbaatar. The work was performed using Zonge Universal IP/R equipment and supporting equipment (generator, cables, electrodes etc). The surveys were conducted under the direction of geophysicist Chet Lide of Zonge International Inc. of Reno NV, USA, who also completed all of the post-acquisition data processing, quality control and interpretation. The surveys were conducted in November 2015 and April-May 2016.

9.4.2.1 Gradient Array Survey

The IP gradient array survey was completed over a 2 km by 2 km area. The survey was carried out as four separate grids 1 km by 1km and then compiled into a single file. Survey lines were oriented N-S and spaced at 100 m intervals. Plots of the IP gradient array results for Bayan Khundii are shown in Figures 18 (resistivity) and 19 (chargeability).

Gradient array induced polarization (IP) data (Figure 18) show a strong correlation between the intense alteration zone at the Southwest and Northeast prospects (outlined on Figure 18) and a strong positive resistivity response that is interpreted as reflecting the intense silicification of host volcanic rocks. The transition from low to high IP resistivity response (red-pink-purple) along the southern margin of the Southwest prospect and between the Southwest and Northeast prospects reflects the mapped Cretaceous volcanic and sedimentary units that unconformably overlie the strongly altered (quartz-illite) Devonian volcaniclastic units mapped at surface. The high resistivity responses in the northern third of the survey area correspond to an area in and around the Northeast prospect where limited work has been carried out to date and much of this area has little or no outcrop. Additional work will be required to determine the reason for the high resistivity response in this area.

A plot of IP gradient array chargeability data for the Bayan Khundii project area is given in Figure 19. There is a moderate intensity, positive chargeability anomaly (≤ 9 mSec) that corresponds to the Southwest Prospect and has a similar size and orientation as the resistivity data described above. As noted in *Section 7.5 Mineralization*, there are very few sulphide minerals observed either at surface or in drill core. Specularite has been documented to be a weak charge source for IP chargeability surveys. Specularite commonly accompanies hematite in veins, but is also present as fine disseminations within altered host rocks, and is considered a possible source for the chargeability anomalies. Similarly, clay minerals that are present throughout the alteration zone may also provide a charge source at Bayan Khundii. The moderate chargeability responses over the mineralized and altered rocks in the Southwest Prospect are believed to be related to either specularite or possibly clay minerals. There is a stronger IP chargeability response associated with the Northeast Prospect. This is interpreted to reflective of an increase is sulphide content (pyrite) observed in limited drilling in this area.

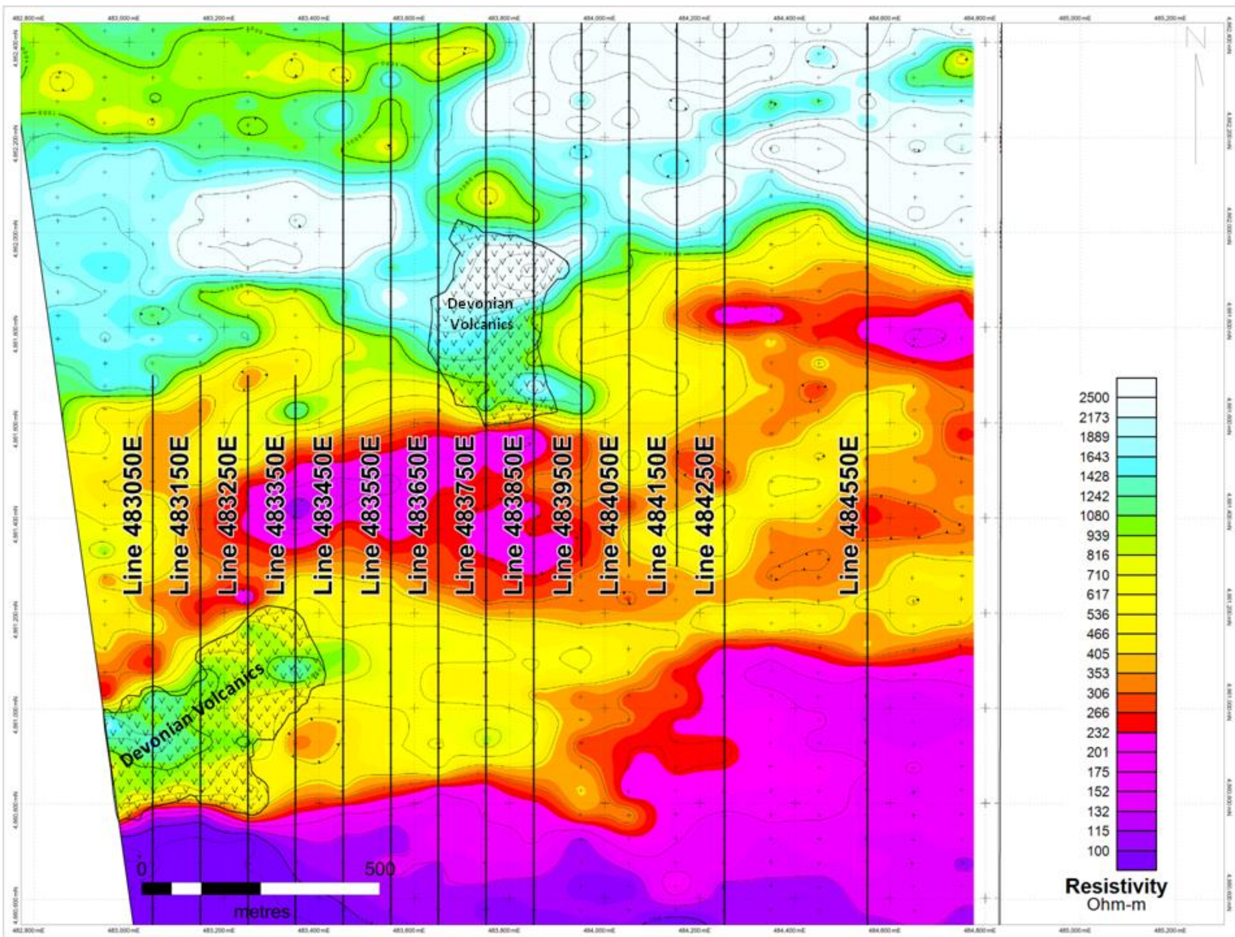

Figure 18 - IP Gradient Array Resistivity plot for the Bayan Khundii project area showing the locations of outcropping, altered Devonian volcaniclastic units. N-S oriented Dipole-Dipole survey lines show the location of the inversion sections in Figure 20

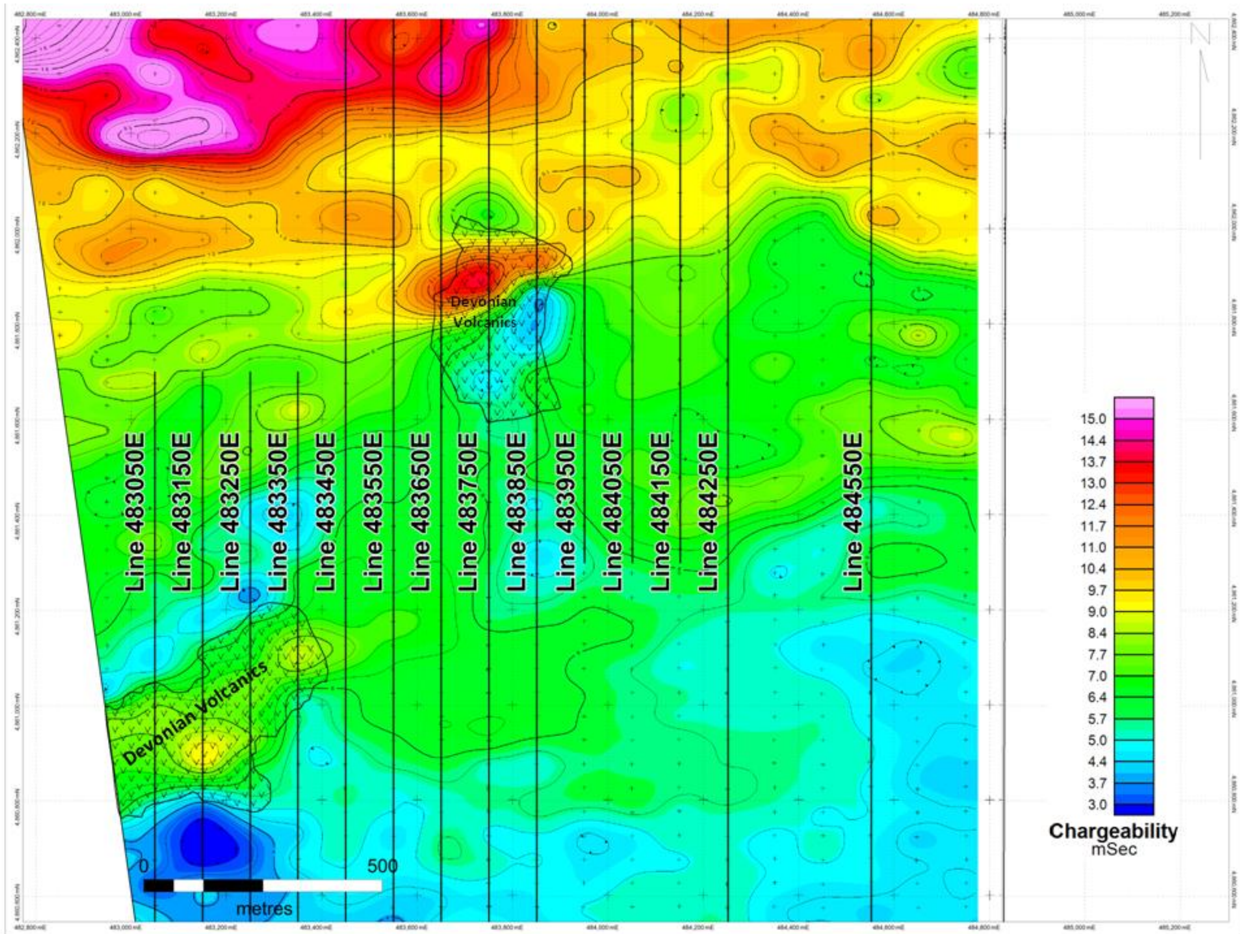

Figure 19 - IP Gradient Array Chargeability plot for the Bayan Khundii project area showing the locations of outcropping, altered, Devonian volcaniclastic units. N-S oriented Dipole-Dipole survey lines show the location of the inversion sections in Figure 21.

9.4.2.1 Dipole-Dipole Survey

The dipole-dipole survey consisted of a series of 14, north-south oriented lines, generally spaced 100 m apart, with 50m spacing of dipoles along the survey lines with a total of 22.7 line-km surveyed. The location of the IP Dp-Dp survey lines are included on the plan maps of the gradient array IP survey (Figures 18 and 19). Stacked inverted sections for the four IP Dp-Dp survey lines completed over the Southwest Prospect at Bayan Khundii are provided in Figures 20 (resistivity) and 21 (chargeability). A dashed black line representing the unconformity surface between the Cretaceous lithologies at surface (poorly resistive) and the quartz-illite altered Devonian tuffs at surface and below the unconformity (highly resistive) has been drawn on each of the Dp-Dp section based on the interpretation of the resistivity signature, drill hole data and surface mapping.

On the south side (south is to the bottom of Figure 20) of the Southwest prospect (Lines 483050 to 483350) resistivity data show a sharp transition from low resistivity material (red-pink-purple), which is interpreted as Cretaceous volcanic (basalt) and sedimentary rocks, to moderate to high resistivity rocks (green-blue white) interpreted as intensely quartz-illite altered Devonian volcaniclastic lithologies, that outcrop on surface and host the gold mineralization at Bayan Khundii. These data, together with results from drill holes, confirm the extension of the quartz-illite alteration zone beneath the Cretaceous lithologies. The shallow dip of the unconformity, towards the north, beneath the Cretaceous rocks, as seen on a number of lines and is similar to the 10^{o} to 25^{o} dips for Cretaceous sedimentary strata observed during geological mapping. In some areas the unconformity contact appears to be more irregular, possibly reflecting undulations in the pre-Cretaceous paleo-surface.

Based on the Dp-Dp resistivity data, the quartz-illite altered Devonian units, outcropping at the Southwest Prospect, are interpreted to extend to the north beneath Cretaceous lithologies up to and likely beyond the Northeast Prospect, a distance of approximately 1 km. Dp-Dp resistivity data can also be used to estimate the average vertical thickness of the overlying Cretaceous lithologies in this area, which is interpreted to be approximately 40 - 75 metres.

As can be seen in Figure 21, there is generally a higher chargeability response within the altered Devonian units that outcrop at surface in the Southwest and Northeast prospects and underlie the interpreted unconformity (dashed black line). Several low to moderate positive IP chargeability responses on the dipole-dipole stacked sections generally correlate to the resistivity high response anomalies above. Chargeability high responses, though sometimes small and shallow, generally correlate to the Striker, Gold Hill, and Midfield zones, despite the general lack of sulphide minerals, as noted above. At present, the observed chargeability responses are thought to reflect specularite-rich or clay-rich zones. Chargeability response in the Northeast Prospect is notably higher. This may be a reflection of an increase in sulphide (pyrite) content in this area as noted in limited drilling.

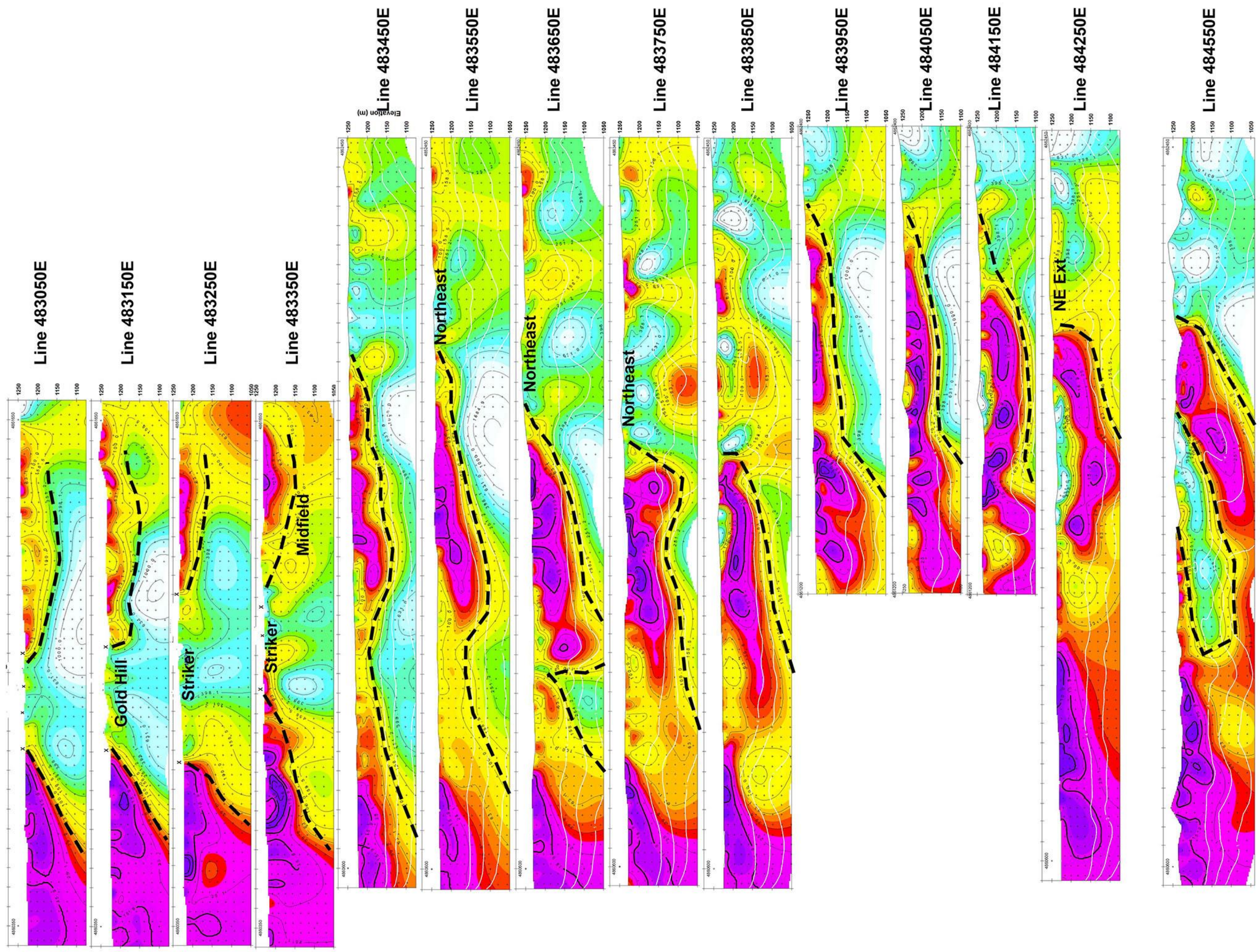

Figure 20 – Stacked IP Dp-Dp Resistivity Inversion sections (looking north with westerly most line on the left), Bayan Khundii Project. Black dashed line indicating possible location of unconformity surface between altered Devonian lithologies at depth and Cretaceous lithologies at surface.

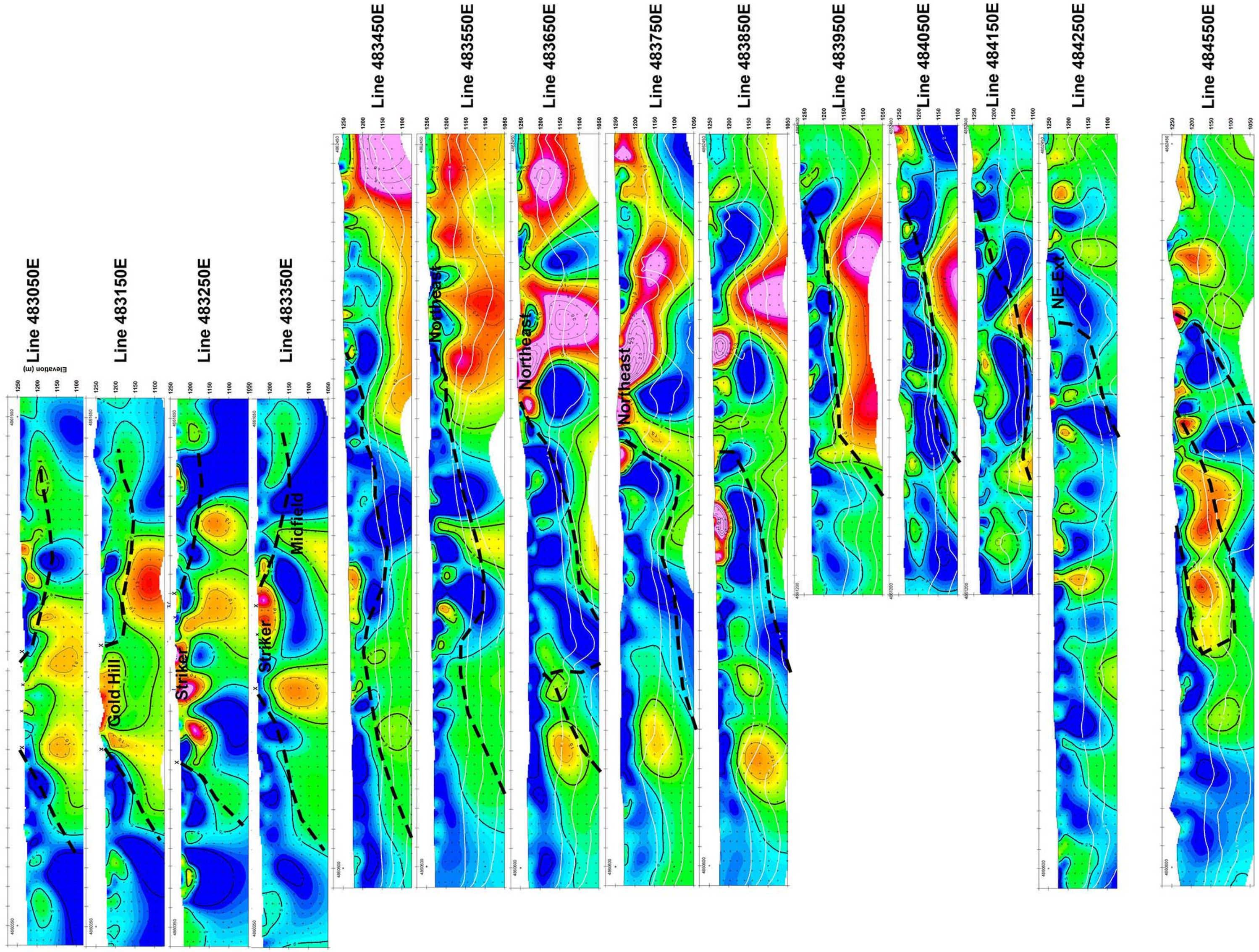

Figure 21 - Stacked IP Dp-Dp Chargeability Inversion sections (looking north with westerly most line on the left), Bayan Khundii Project. Black dashed line indicating possible location of unconformity surface between altered Devonian lithologies at depth and Cretaceous lithologies at surface.

9.5 Trenching Program

In August 2015 and May 2016, Erdene carried out a trenching program across the Southwest and Northeast Bayan Khundii prospects that included a series of 22 trenches, totaling 1060 m and ranging in length from 8 m to 94 m. The principal objectives of the trenching program were to further define the near-surface mineralization identified through rock chip sampling, improve the understanding of the gold mineralized system and prioritize areas for the planned maiden drilling program.

Trenching was carried out over a four day period in August 2015 and a six day period in May 2016, with Falcon Drilling supplying the excavator (Hyundai 290), operator and assistants. 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 2m. 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 base of the trench walls 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 20 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 are analyzed for gold (fire assay) and a suite of 32 elements using 4 acid digestion with ICP-OES finish (SGS analytical code ICP40B). For details of analytical protocols and detection limits please refer to "*Section 11 – Sample Preparation, Analysis and Security*".

One of the objectives of the trenching program was to determine if the gold mineralization was restricted to the quartz veins or if the host rock was also carrying gold mineralization. The program was successful in demonstrating wide zones of lower grade gold mineralization in the wall rock and confirming the intensity of mineralization in narrow, high-grade veins, as well as demonstrating continuity over a wide area. For example, trench BKD-17, returned 37 m of 2.12 g/t gold and included a 7 m interval of 8.68 g./t Au. Table 4 below summarizes significant mineralized zones (see Figure 22 for trench locations).

Table 4 – Bayan Khundii Trench Results

Trench	From (m)	To (m)	Interval (m)*	Gold (g/t)
BKT-01	6	8	2	2.98
and	36	66	30	2.70
incl	40	46	6	5.74
incl	42	46	4	7.36
incl	56	64	8	4.52
incl	62	64	2	11.20
BKT-02	0	11	11	0.77
incl	8	10	2	2.64
and	62	72	10	2.93
incl	66	72	6	4.72
incl	68	70	2	10.10
BKT-03	10	24	14	2.29
incl	16	22	6	5.04
incl	17	19	2	9.42
BKT-06	2	28	26	2.47
incl	10	13	3	19.93
incl	12	13	1	55.60
BKT-08	2	8	6	1.56
incl	5	7	2	3.77
BKT-13	12	31	19	0.56
incl	28	31	3	2.01
And	59	64	5	3.36
incl	60	62	2	8.26
BKT-16	4	29	25	0.57
incl	15	24	9	0.98
BKT-17	7	44	37	2.12
incl	24	31	7	8.68
BKT-21	0	34	34	0.37

* Reported intervals represent horizontal surface intersection within trenches. The orientation of the mineralized zones varies and therefore the true widths have not yet been determined.

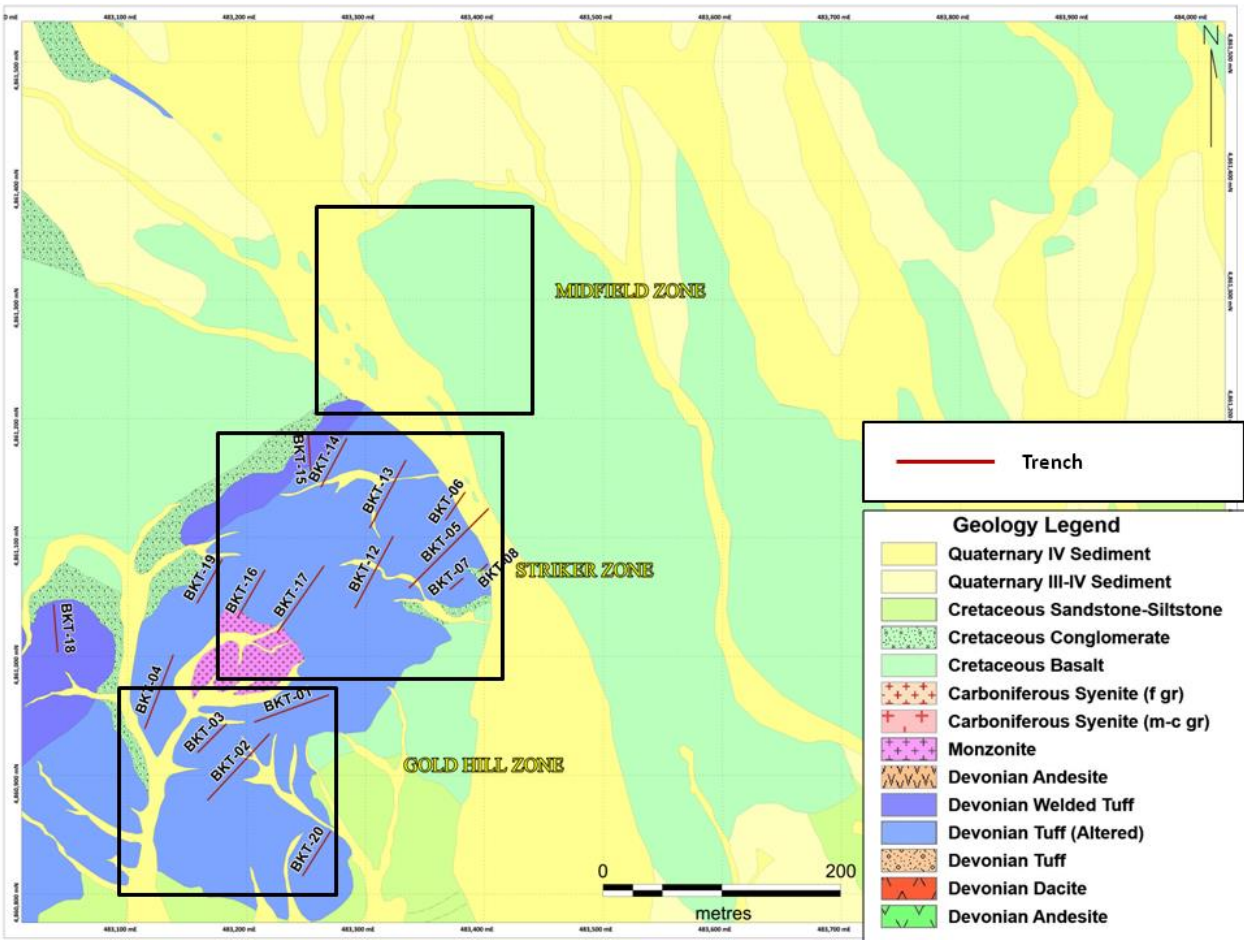

Figure 22 – Southwest Prospect trench location map on geology

10.0 Drilling

The drill program at Bayan Khundii was initiated on November 8, 2015 (15 holes) with additional, expanded drilling programs in April-May 2016 (30 holes) and September-December 2016 (51 holes). To date, a total of 96 diamond drill holes totaling 11,340 metres have been completed with a depth ranged from 31 m to 251 m (average 118 m). The majority of holes (n=73) were drilled at a 45 degree angle, normal to the orientation of the main mineralized veins. Remaining holes were drilled between an angle of 55 and 90 (vertical) degrees. The drilling program was carried out by the Corporation's independent drilling contractor, Falcon Drilling Ltd. All holes were diamond drilled using a truck mounted Longyear 44 wireline drilling rig. Core was PQ size for the first 15 holes with all remaining holes HQ size. Down-hole orientation surveys were carried out by Falcon at 50 m intervals and/or at the bottom of each hole. For holes BKD-46-96, down-hole readings were also taken at approximately 12m depth to confirm orientation of drill rig set-up. Down-hole readings included both dip and azimuth of the hole at the recorded depths. Core recovery averaged greater than 97%.

The drill program was designed and carried out under the direction of Erdene's senior technical staff, including the Report Author and Michael Gillis, Vice President Operations, Mongolia. In the field, the drilling program was under the supervision of the Report Author, Mr. Gillis and Erdene geologists G. Bat-Erdene and O. Erdenebaatar, who together were responsible for communicating and confirming the program's technical details with the drilling contractor.

All drill-core was delivered to Erdene's exploration camp where it was logged, photographed and sampled by Erdene's technical staff. Detailed logs identifying lithology, alteration and mineralization were completed. In addition, from September 2016 (BKD-46), the drilling program used an oriented core system (Reflex Act3 instrument) allowing geologist to measure and record true orientation of veins, bedding and structural features, including faults and joints. These data are being used to assist with interpretation of the mineralized system at Bayan Khundii and to guide additional, follow-up drilling programs.

The majority of the drilling was carried out in the Striker-Gold Hill prospect area (69 holes) at progressively closer spacing, initially a 40 m grid, followed locally by a 20 m grid (Figure 23). The closer-spaced holes were drilled to confirm continuity of mineralized zone along strike and down dip. In addition, step-out and exploration holes have been drilled outside these prospect areas testing a combination of geological, geochemical and geophysical targets. A majority of these holes intersected anomalous gold mineralization. Of note was step-out hole BKD-60 located 170 m north of the Striker Zone. BKD-60 intersected 123 m of 1.3 g/t gold, including 30 m of 3.0 g/t gold. Subsequently, a 40 m spaced grid drilling program was carried out around BKD-60 the results of which showed continuity of mineralization along strike and at depth. This area is referred to as Midfield (Figure 24).

Results to date from the drill program have: 1) confirmed the orientation, grade and continuity of mineralization intiially identified through mapping and trenching within the Striker and Gold Hill zones; 2) discovered the Midfield Zone beneath Cretaceous cover rocks; and 3) identified Au mineralization in ash and welded tuff host rocks to the northwest of the Striker and Midfield zones.

Gold mineralization is mostly hosted in parallel NW-SE, moderately-dipping (~45^{o}) zones that range in width from 4 to 149 metres (see Figure 11). Results from initial drilling indicate that individual mineralized zones can be correlated between drill holes as shown in Figure 11. Many high-grade Au± Ag intersections were noted to be within widespread lower-grade envelopes, for example hole BKD-90 has several high-grade intervals including a 41 metre wide high grade zone (41 m @ 5.2 g/t Au) within a 149 metre wide mineralized envelope that averages 2.1 g/t Au (Fig. 11). Several very high grade intersections were encountered in the 2016 drill program, including a 3 metre wide interval in BKD-17 that returned an average assay value of 49.4 g/t Au (Figure 11; Table 2).

See *Section 7.5 Mineralization* for a detailed description of the drilling results.

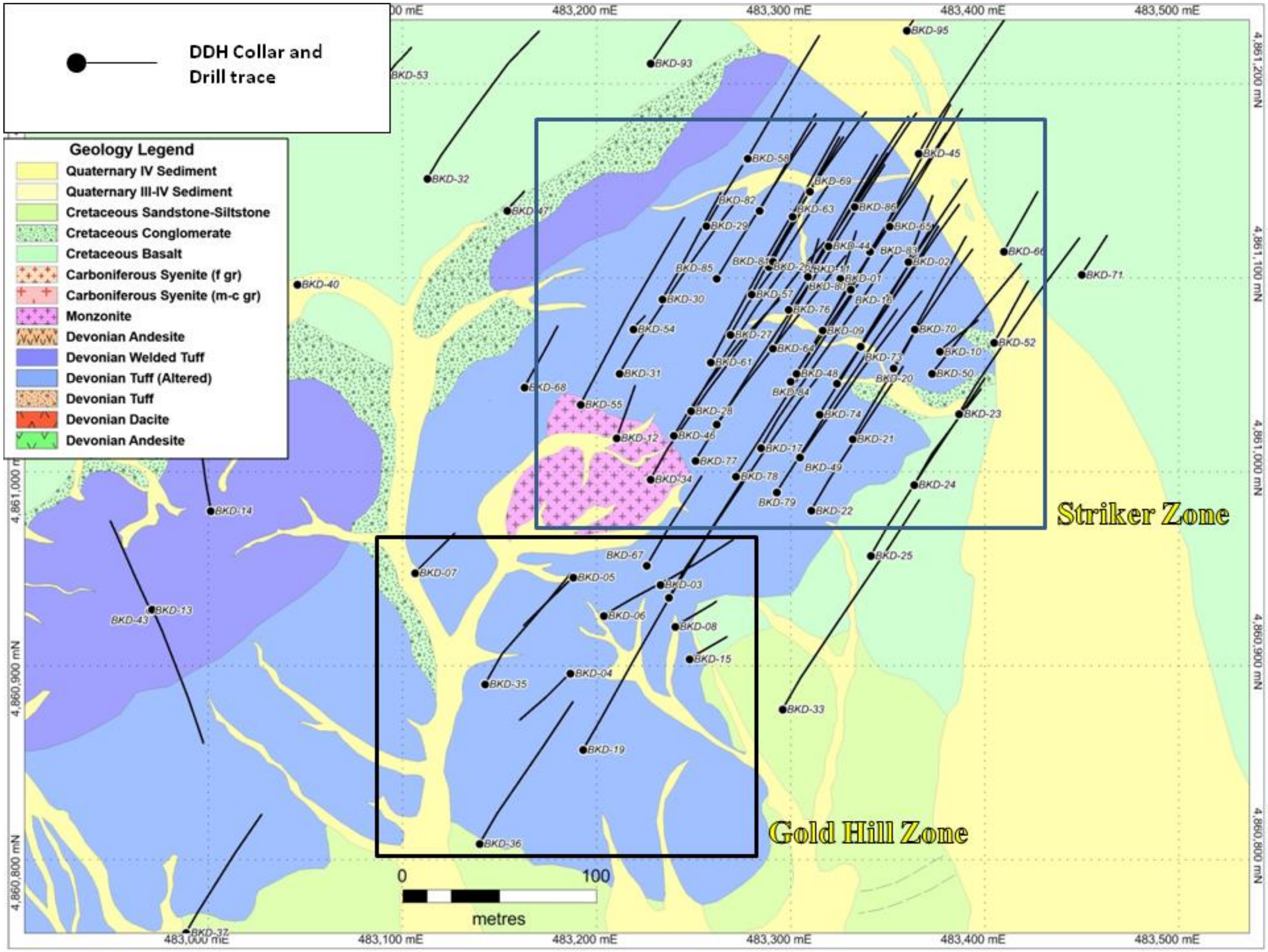

Figure 23 – Location of drill holes at Striker and Gold Hill prospects on geology map.

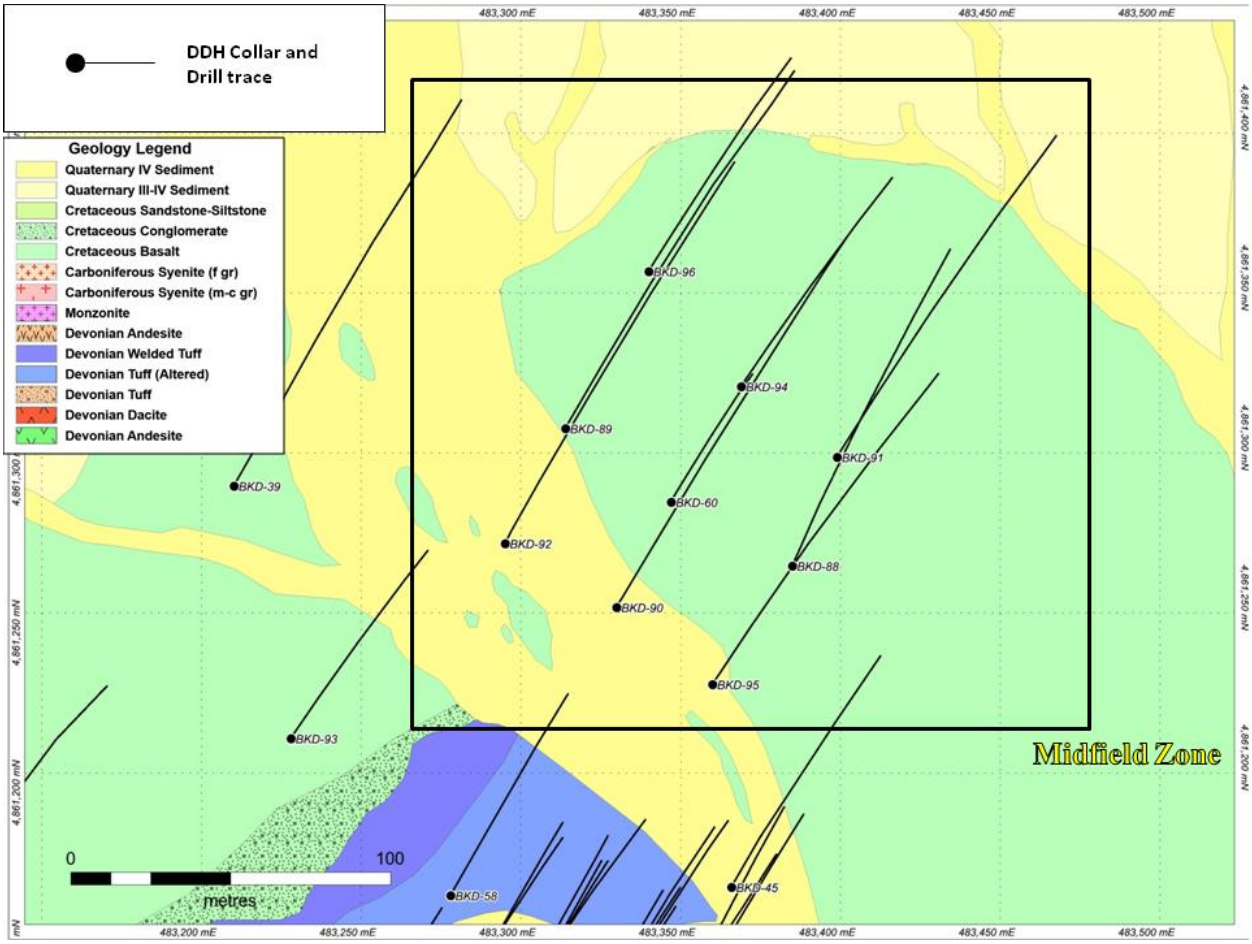

Figure 24 – Location of drill holes at Midfield prospect on geology map.

11.0 Sample Preparation, Analyses and Security

This section provides the relevant details of the sample preparation, analytical methodology and sample security protocols in place for rock, soil, trench and drill-core samples from the exploration programs carried out in 2015 on the Bayan Khundii prospect.

Rock chip and rock grab samples were taken from outcrop / sub-crop, respectively, by Erdene's geologist with locations determined by hand-held GPS devices (with ±3 m accuracy). 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.

Soil samples were collected at defined sample sites (based on 200m, 100m or 25m grids), crews used a metallic shovel to dig 20-30cm deep sample pits. Sample material was dry sieved using a steel 20 mesh (0.85mm) screen. Collected -20 mesh sample material had a mass of ~300-400g. Material for each sample was retained in a sealed paper envelope. Each sample was given a unique six digit number. Samples were organized sequentially into batches of 30 with each batch including: 1 standard (OREAS 65a), 1 blank (coarse silica sand) and 1 field duplicate.

All trenches were excavated to bedrock. 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 base of trench walls 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 or 2 m 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 1 m intervals while un-mineralized material was 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 the Report Author's opinion that the samples assayed are representative with no sampling bias.

Drill core was delivered directly from the drill site to the Corporation's exploration camp at the end of every shift. All logging and sampling was 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 using a core saw, after which, half-core samples were bagged. Magnetic susceptibly readings were taken for each sample interval. The remaining half-core is securely stored at the Corporation's Bayan Khundii exploration camp.

All rock, trench and drill core samples were organized into batches of 20, while soil sample are organized into batches of 30. All sample batches included two commercially-prepared certified reference material (CRMs) standards, including a gold standard (generally alternating between a high-level gold-bearing standard and low-level gold bearing standard) and a 'blank' consisting of either 'basalt blank chip' (2015) with very low gold concentration (<1 ppb Au) or coarse silica sand (OREAS 24p, 2016). Both of these samples were used as an analytical blank for gold. 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.

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.
- Samples were then split by rotary sample divider to 600-700 g, with reject retained.
- Whole samples are pulverised to 90% <75 µm.

- The pulverised samples are mixed and divided manually, with approximately 200 g retained for the client and 300 g retained for laboratory analysis.
- Gold analysed by fire assay 30 g.
- All other metals analysed by ICP40B, 4 acid digestion with ICP OES finish (see Table 5 for details).

At SGS, all soil samples 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.
- Whole samples are pulverised to 90% <75 µm.
- Gold analysed by fire assay 30 g.

All other metals analysed by ICP40B, 4 acid digestion with ICP OES finish (see Table 5 for details).

Table 6 provides a summary of the analytical methods used by SGS to analyze all of 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 analyses were monitored by Erdene and if SGS analysis varied from the determined assay value by more than 15% for one or more elements then Erdene's protocol is to request that the entire batch be re-analyzed. The average variance for the Bayan Khundii drilling program was -2.2 %. 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 labeling 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 SGS Ulaanbaatar laboratory is accredited to ISO17025.

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 5 - SGS Analytical Methods and Detection Limits

Gold Analysis

SGS Code	Description	Element	Detection Limits 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	1000 ppm
FAG303	Fire Assay, gravimetric, 30g sample	Au	0.03 ppm	100,000 ppm

Multi (33) Element Analysis

SGS Code	Description	Element: LDL-UDL;
ICP40B	4 acid digestion[2] with ICP OES[3] 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 4-Acid Digest: Same as 3-acid plus Hydrofluoric (HF)
3 ICP OES: Inductively Coupled Plasma Optical Emission Spectrometry
LDL Lower Detection Limit
UDL Upper Detection Limit

12.0 Data Verification

The Report Author 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 analytical QA/QC results; and compared data sets with observations made in the field. The Report Author did not carry out any third party verification of assay results. The Report Author is satisfied that QA/QC procedures carried out by Erdene conform to generally accepted industry standards and that the data used in this report is reliable.

12.1 Screen Metallic Analysis

While no third party verification analysis was carried out, a screen metallic analysis program was undertaken. Due to some very high-grade gold values and abundant visible gold in a number of drill core samples, it was decided that additional analysis should be carried out to determine if the standard fire assay analysis was accurately reflecting the amount of gold in higher grade samples and to determine if there was a 'nugget effect', that is, anomalously high gold grades due to non-uniform distribution of high-grade gold nuggets in the sample material. In order to assess the accuracy of the standard fire assay results, all samples (n=30) which returned an initial assay greater than 2 g/t were selected for screen metallic analysis. In addition, 12 samples that were logged as containing visible gold, but returned assay of less than 2 g/t, were also included in the screen metallic analysis.

Screen metallic (SM) analysis used 500 grams of minus 3.35 mm material that was crushed/pulverized to 90% <75um. The total sample was then screened to create a +75um and a -75um fraction, and each fraction was weighed. All of the +75 um fraction, that will contain all of the coarse gold, was then analyzed by fire assay (FA). For the -75um fraction, three individual subsamples (30 g) were analyzed by FA methods. The total gold content for the sample was calculated by using the weighted average of the +75um fraction results and the mean of the three -75um results.

For the 30 high-grade samples, the difference in the overall average grade from the original assays to the screen metallic assays was -2%. So, on average, the screen metallic assays were the same as the original assays. For all 42 samples, the difference in the overall average grade from the original assays to the screen metallic assays was only +8.4%.

These results suggest that there is no significant 'nugget effect' for the Bayan Khundii samples. While assay results for individual samples did vary by as much as +/-70%, if the gold at Bayan Khundii was coarse and 'nuggety', the variability would be much higher.

In addition, the metallurgical sample results indicate that a large portion of the gravity recoverable gold is present in the finer size fractions (See *Section 13.0 Mineral Processing and Metallurgy Testing*). This conclusion is also supported by the SM results which showed that, on average, the -75um fraction contained 81% of the gold while representing 91% of the sample material. While there is still a disproportionate amount of gold in the +75um fraction (19% of the gold in 9% of the sample) this does not represent a nugget effect. In addition, the composite head-grades determined during metallurgical analysis, were very similar to the average of the original individual sample assays (24.91 g/t Au vs 25.30 g/t and 0.71 g/t vs 0.70 g/t for the high and low grade composites respectively) thus confirming the accuracy and reliability of the original fire assay data.

However, because the SM results show that the +75um fraction, on average, contains a disproportionately higher percentage of the Au, caution should be exercised. One option would be to increase the fire assay sample size from 30g to 50g. This would increase the likelihood of including +75um gold in the fire assay subsample, arguably resulting in a more accurate assay result without the necessity of carrying out laborious SM analysis. In the Report Author's opinion, the added cost increase for fire assay analysis using 50g charges is not necessary in light of the excellent reproducibility of the assays for the 30 g sample size, coupled with the head grade results from the metallurgical testing (see next section).

13.0 Mineral Processing and Metallurgical Testing

A metallurgical testing program was carried out by Blue Coast Research Ltd. ("BCR") of Parksville, British Columbia, under the direction of Andrew Kelley, P.Eng., Vice President, Technical Services. The program was designed to provide an initial scoping level characterization of both gravity and cyanide recovery techniques.

As an initial approach to metallurgical testing, two 75 kg composite samples were prepared from coarse reject material from individual one-metre drill core samples. The composites are representative of high and low grade mineralization within the upper 50 metres of the main mineralized zones over the entire 550m by 300m area of the Bayan Khundii Southwest Prospect. The first sample, BK-Met-15-01, is a high-grade composite sample with a head grade of 24.9 g/t Au which was made from 25 one-metre intervals, with representation from 11 of the 15 holes. The second sample, BK-Met-15-02, is a low-grade composite with a head grade of 0.7 g/t Au and was made from 25 one-metre samples (ranging from 0.3 g/t to 1.5 g/t Au), with representation from all 15 holes.

Composite head-grades reported by BCR matched the average of the original individual sample assays very closely at 24.9 g/t Au and 0.7 g/t Au versus the average of the original assays which were 25.3 g/t Au and 0.7 g/t Au for the high and low grade samples, respectively.

13.1 Gravity Recovery

Extended Gravity Recoverable Gold tests (E-GRG) were conducted on both composites. The E-GRG test determines the gravity recoverable gold in a sample. The test is based on progressively finer size fractions using gravity recovery at each stage. Prior to starting the test, a grind calibration is conducted to determine grind times required to reach target grind sizes for each stage (850 µm, 250 µm and 75 µm). Gravity tests were conducted using a laboratory-scale Knelson MD-3 centrifugal concentrator. Concentrates and tails are collected and screened. Size-by-size gold assays are analyzed for each screen fraction.

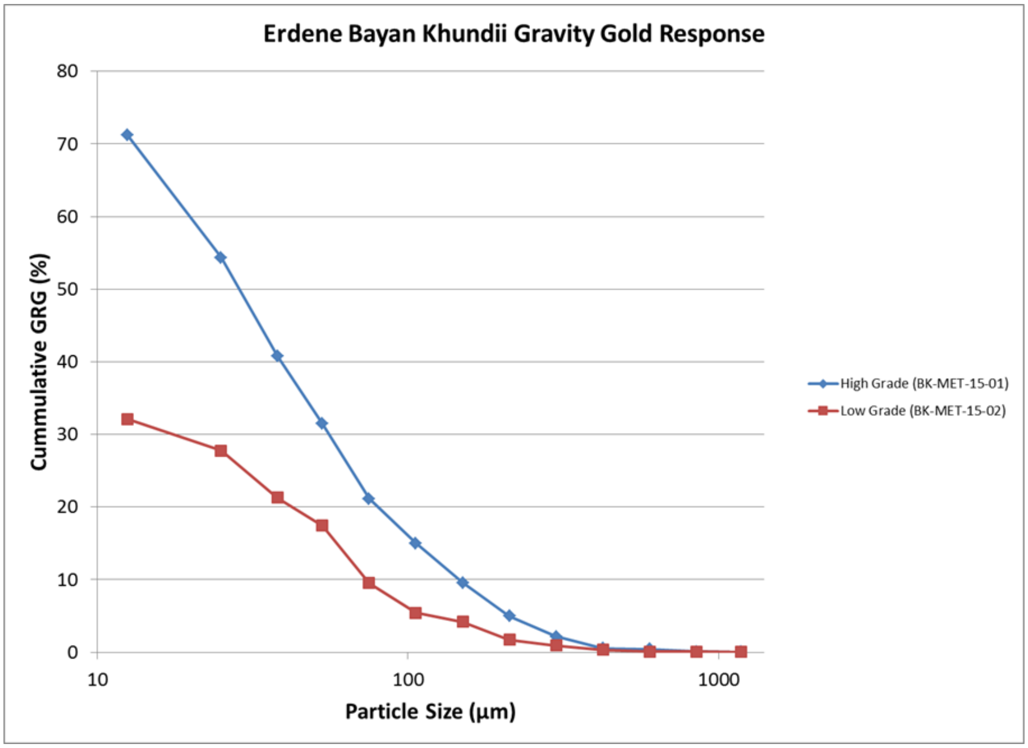

Figure 25 - Bayan Khundii metallurgical sample gravity-gold-recovery size fraction recovery graph

The high-grade composite had a high response to gravity separation, with recoveries of 71% for gold and 27% for silver, as presented in Table 6 below. This type of response is typical of a material considered to have good gravity amenability. The gravity gold response curve indicates a large portion of the gravity-recoverable gold is present in the finer size fractions (Figure 25). The high-grade gravity concentrate represents 1.2% of the original sample mass and contains 1380.9 g/t gold and 200 g/t silver.

Table 6 - Gravity recoverable gold

Composite	Au Recovery (%)	Ag Recovery (%)
High Grade (BK-MET-15-01)	71	27
Low Grade (BK-MET-15-02)	32	10

The low-grade gravity concentrate represents 1.1% of the original sample mass and contains 21.2 g/t gold and 11.9 g/t silver. The lower grade composite (BK-MET-15-02) displayed a low to average gravity response for both gold and silver (Table 6).

13.2 Bottle Roll Tests (Cyanidation)

Standard bottle roll tests were completed on the gravity tails of each composite. The high-grade composite (BK-MET-15-01) tails represent 98.8% of the original sample mass and had an average grade of 6.8 g/t gold. The low-grade composite (BK-MET-15-02) tails represent 98.9% of the original sample mass and had an average grade of 0.5 g/t gold.

Results are very encouraging with very high gold recoveries noted in both the high-grade and low-grade composites. Leach extractions of the gravity tails are summarized in Table 7 below.

Table 7 - Bottle roll recovery for gold

Test	Composite	Au Recovery (%)	Ag Recovery (%)
CN-1	High Grade (BK-MET-15-01)	95	44
CN-2	Low Grade (BK-Met-15-02)	86	40

13.3 Overall Recovery Measurement for a Gravity plus Cyanidation Flowsheet

A flowsheet employing both gravity concentration and cyanidation of the gravity tails yields very good overall gold recoveries for both the high-grade and low-grade composites. This suggests that gold from Bayan Khundii is free milling and amenable to conventional processing techniques. Overall circuit recoveries are summarized in Table 8 below.

Table 8 - Overall recovery for a gravity plus cyanidation flowsheet

Composite	Overall Au Recovery (%)	Overall Ag Recovery (%)
High Grade (BK-MET-15-01)	99	61
Low Grade (BK-MET-15-02)	92	20

Additional work will be required to investigate variability within the mineralized zone, optimize the mineral processing flowsheet and to carry out grindability testing on samples of whole core.

14.0 Mineral Resource Estimates

While results to date are very encouraging, the prospects located on the Khundii license (Bayan Khundii and Altan Arrow) are at an early stage of exploration and sufficient work to determine resource estimates has not yet been completed.

15.0 Adjacent Properties

There are no adjacent properties with similar mineralization to provide comparative mineralization characteristics.

16.0 Other Relevant Data and Information

In the opinion of the Report Author, all relevant data and information has been included in this report and no additional information is required to make the technical report understandable and not misleading.

17.0 Interpretation and Conclusions

Following the discovery of gold-bearing mineralized quartz veins in Q2 2015, Erdene has completed a comprehensive exploration program at Bayan Khundii that included: geological mapping, rock chip sampling, trenching, detailed ground magnetics, IP gradient array, IP dipole-dipole sections, and a 96-hole (11,340 m) maiden drilling program. In early 2016 a metallurgical testing program and a screen metallic analysis program were completed on gold mineralized samples from Bayan Khundii. In addition to the above work, detailed investigations were completed, including: petrographic and fluid inclusion studies, structural analysis, an alteration study using short-wave infra-red analysis, development of a 3-D geological model, and an assessment of the deposit type and geological parameters controlling mineralization.

Gold mineralization at Bayan Khundii is hosted by an intensely quartz-illite altered sequence of Devonian age volcaniclastic rocks (lapilli tuffs, massive and layered ash tuffs, welded tuffs). Mineralization has been identified to date in four zones over a 1.7 km strike length, termed the Striker, Midfield, Gold Hill and Northeast zones. Most of the exploration work completed to date has focused on and near the first three of these zones with limited work, including only 4 shallow drill holes in the Northeast Zone.

Gold mineralization, commonly as visible gold, is associated with comb-textured quartz± specularite veins, multi-stage quartz-adularia± specularite veins, quartz-hematite/specularite breccias, hematite veins and fracture fillings, and fine disseminations within a series of parallel, southwest-dipping zones that vary in apparent width from several metres to 150 m. Bayan Khundii is mostly devoid of sulphide minerals, with the exception of a few isolated zones in several drill holes that contained trace pyrite. An exception is drill hole BKD-32 that has vein and disseminated pyrite over a wide (110 m) interval. No base metal sulphide minerals have been observed in any of the surface work or drilling to date, which is supported by the generally low concentrations of Cu, Pb and Zn in rock chip and drill core analysis. A ubiquitous feature at Bayan Khundii is the presence of hematite and lesser specularite veins, veinlets, and breccias, including crackle breccias that commonly contain angular fragments of wall rock and/or quartz, with trace visible gold. Much of the hematite and specularite is interpreted as hypogene in origin, although supergene hematite was observed in numerous holes, extending up to approximately 100m depth.

A sequence of Cretaceous sedimentary and volcanic rocks unconformably overlies the altered and mineralized Devonian volcaniclastic rocks. The lower portion of the Cretaceous sequence consists of a basal conglomerate with overlying sandstone and siltstone. A series of amygdaloidal basalts overlies the sedimentary units, with a low-angle unconformity separating these rock sequences. Outcropping areas of altered and mineralized Devonian tuffs are interpreted as erosional ‘windows’ through the younger Cretaceous rocks.

A detailed ground magnetic survey (20 m spaced N-S lines) was completed over a 1.7 by 1.8 km area at Bayan Khundii. Several magnetic map products provide insight into the geology of Bayan Khundii. The analytical signal of the total magnetic field provides the magnetic response for near-surface rock units and outlines the distribution of the Cretaceous basalt. In contrast, other magnetic products including Reduced to Pole (RTP), 1st Derivative RTP, and Pseudo-gravity provide magnetic response for at-depth rock units. These map products indicate a large low magnetic response, or ‘quiet magnetic areas’, to the north of the Midfield Zone, and the east of the NE Extension Prospect areas. The broad magnetic low response area (1.8 x 1 km), which is partially masked by overlying moderate-response basalt, is interpreted as reflecting a large zone of alteration, where primary magnetite was destroyed by altering fluids. In addition, restricted areas with moderate magnetic high response in the Striker and Northeast zones are interpreted to reflect post-mineral monzonite intrusions.

Induced polarization (IP) surveys were completed at Bayan Khundii, including a 2 km by 2 km gradient array survey (100 m spaced N-S lines), and 14 N-S dipole-dipole (Dp-Dp) lines (1.1, 1.4 and 2.0 km long) over the project area. Strong positive resistivity anomalies (>1,000 ohm m) in the gradient array data correspond very closely to the exposed intensely altered (quartz-illite) tuffs in the SW and Northeast Prospect areas and are thought to reflect intense silicification. The Dp-Dp data provide additional insight into the probable extensions of the highly resistive alteration beneath the Cretaceous cover rocks throughout the project area. The general lack of sulphide minerals in the prospect mostly resulted in low IP chargeability response, both for gradient array and Dp-Dp surveys. There is also very poor correlation between the observed IP chargeability response and gold grades in the drilling to date. The low to moderate chargeability response over the Southwest Prospect area may reflect disseminated specularite.

A trenching program consisting of 22 trenches (1060 m) was completed over the SW and Northeast prospect areas in 2015 and 2016. The program was designed to further define the near-surface mineralization identified through rock chip sampling. The program was successful in demonstrating wide zones of lower grade gold mineralization at surface in the wall rock and confirming the intensity of mineralization in narrow, high-grade veins, as well as demonstrating continuity over a wide area.

A 96-hole (11,340 m) drill program was completed at Bayan Khundii in 2015 and 2016. The program was designed to test both the down-dip extensions of mineralized zones defined at surface by prospecting and trenching, and the extension of altered and mineralized tuffs beneath the Cretaceous cover. Drilling confirmed continuity of mineralization in the Striker and Gold Hill zones. In addition, drilling beneath the Cretaceous cover rocks resulted in the discovery of the Midfield Zone, approximately 170 m northeast of Striker. Gold mineralization is present in numerous sub-parallel, NW-SE trending, SW-dipping zones that have been traced up to 200m along strike, remaining open in all directions. These zones include very high grade veins and breccias over cm to m scale with gold grades locally exceeding 15g/t, and up to

306g/t, over 1m intervals. Enveloping these higher grade zones, are zones of lower grade mineralization typically in the 0.1 to 2g/t Au range that can extend for significant widths. The widest interval intersected in drilling to date was in the Midfield Zone where a 149 metre interval averaged 2.1 g/t Au.

A metallurgical testing program designed to provide an initial scoping level characterization of both gravity and cyanide leach recovery techniques was completed for two composite samples from the initial drill program at Bayan Khundii (high- and low-grade samples). The high-grade composite had a high response to gravity separation, with recoveries of 71% for gold and 27% for silver, which is considered to be good gravity amenability. The gravity gold response curve indicates a large portion of the gravity-recoverable gold is present in the finer size fractions. The high-grade gravity concentrate represents 1.2% of the original sample mass and contains 1380.9 g/t gold and 200 g/t silver. The low-grade gravity concentrate displayed a low to average gravity response for both gold and silver. Standard bottle roll tests were completed on the gravity tails of each composite, with very high gold recoveries noted in both the high-grade and low-grade composites (95% and 86% Au recoveries respectively). A flowsheet employing both gravity concentration and cyanidation of the gravity tails yields very good overall gold recoveries for both the high-grade (99%) and low-grade (92%) composites. This suggests that gold from Bayan Khundii is free milling and amenable to conventional processing techniques.

A 42-sample screen metallic (SM) program was conducted in light of the very high gold grades encountered in both rock chip sampling (4,380 g/t Au) and drilling (187 g/t Au over 1 metre), coupled with the abundance of visible gold. The SM results indicate there is no significant nugget effect at Bayan Khundii. In addition, the composite head-grades determined during metallurgical analysis, were very similar to the average of the original sample assays (24.91 g/t Au vs 25.30 g/t Au, and 0.71 g/t vs 0.70 g/t for the high and low grade composites respectively) thus confirming the accuracy and reliability of the original fire assay data.

The strong, pervasive quartz-illite alteration encountered to date at surface and in drilling, coupled with a large low-response ground magnetic anomaly stretching over a 1.8 by 1 km area, is believed to be indicative of a large, intense alteration system that has positive implications for the potential size of the Bayan Khundii system.

The recommended exploration program for 2017 is outlined in *Section 18.0 Recommendations*.

18.0 Recommendations

The Bayan Khundii project requires an extensive drilling program to determine the continuity, characteristics and limits of mineralization. The recommended exploration program for 2017 is outlined below.

- Drilling: A 20,000-metre drill program is recommended for 2017 and will focus on several objectives, including:
  - Step-out & delineation drilling to define the continuity and trace the extent of previously-discovered gold mineralized zones;
  - Exploration drilling to test:
    a. Deep extensions of known mineralized zones (e.g. Striker);
    b. The Northeast Zone to test targets as defined by IP and geochemical sampling, and areas with encouraging results from initial drilling;
    c. Targets beneath Cretaceous cover rocks that have been identified mostly using IP dipole-dipole survey data and locally geochemical anomalism. These targets are located:
       i. Between Midfield and Northeast zones;
       ii. Northwest of the Striker and Midfield zones;
       iii. North and east of the Northeast zone (including the Northeast Extension zone where a rock grab sample returned 7 g/t Au);
       iv. The area to the east of the Striker and Midfield zones to test a combined geochemical and structural target.

- Geophysics: Sufficiently detailed magnetic data now exists over the license area and over the Bayan Khundii Project area. Induced Polarization (IP) surveys, especially resistivity data, have proven very helpful in identifying zones of highly resistive, quartz-rich altered Devonian tuffs. The Bayan Khundii project area has been covered by IP gradient array and mostly covered by IP dipole-dipole surveys. A program of 10 line km of IP dipole-dipole is planned for 2017 to in-fill several gaps in previous survey coverage. Quality control and interpretation will be completed by Chet Lide of Zonge International

- Short-Wave Infrared (SWIR) Analysis: A suite of drill holes from the 2016 and early 2017 drill program will be analysed using SWIR analyser to identify alteration mineral assemblages to augment the data collected in 2016 and to assist in interpretation of the overall deposit geometry and in drill targeting;

- Petrography: A suite of samples will be submitted for petrographic analysis to identify any mineralogical differences between the Striker and Midfield zones, and any new mineralized zones identified during the 2017 drill program. Samples from representative monzonite, syenite and granite intrusions will also be submitted for analysis.

- Deposit Type and Genesis Study: A follow-up study of the characteristics of the mineralization and alteration at Bayan Khundii will be completed by J. Hedenquist Consulting in 2017. The results from this work will be used for future geological interpretations and will assist in future drill targeting;

- Structural Analysis: A large database of structural information was collected from oriented drill core in 2016 and this data will be assessed by a structural geologist to interpret the structural controls on vein and breccia formation to assess if this information can be helpful for drill targeting and interpreting structural controls on gold mineralization;

- 3-D Model: All geological, geochemical, and geophysical information from 2015 and 2016 will be incorporated into a 3-D model that will be used for detailed drill targeting and interpretation of the geology and petrogenesis of Bayan Khundii;

- Technical Studies: In support of future scoping through to feasibility studies and a mining license application, geotechnical, hydrogeological and environmental base line studies will be completed in 2017.

Results to date from the Khundii license area support a more detailed license-wide surface exploration program to define additional target areas and a license-wide detailed mapping program is planned for 2017. Encouraging results from the Altan Arrow prospect in 2016 will be followed up by additional geological, geophysical and drilling in 2017.

Table 9 provides a summary of the budget for the recommended 2017 exploration program for the Bayan Khundii project.

Table 9 – Bayan Khundii Exploration Program Budget 2017

Geology and Geochemical Surveys	$ 455,000
Geophysics	58,000
Drilling	3,000,000
Technical Studies	939,000
Field Support	1,400,000
Subtotal	**$ 5,852,000**
Contingency (10%)	585,200
TOTAL	**$ 6,437,200**

Certificate of Qualification

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

1. I am Vice President Exploration for Erdene Resource Development Corporation and I reside at 15 Stephen Street, Dartmouth, Nova Scotia.

2. This certificate applies to the Report entitled "Bayan Khundii Gold Project, (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, National Instrument 43-101 Technical Report ("Technical Report")", with an effective date of March 1, 2017.

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 36 years since my graduation from university. My relevant experience is as follows:

   a. 1981 to 1982 – Well-site geological consultant for Crowdis Oil Consultants, based in Alberta. Provide on-site consulting services for oil and gas exploration.
   - 1982 to 1985 – Consulting geochemist, Natural Resources Canada, based in Nova Scotia. Responsible for planning and implementing regional geochemical stream and lake sediments surveys.
   - 1985 to 1997 – Project Geologist, Industry Liaison Geologist, Nova Scotia Department of Natural Resources based in Nova Scotia.
   - 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 – Industry Liaison Geologist, 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 Present – Director of Exploration, Mongolia, and Vice President Exploration for Erdene Resource Development Corporation. Provide guidance for gold and copper mineral exploration activities in Mongolia.
   - 2012 to Present – Vice President, Morien Resources Corporation. Provide geological services for exploration and development of mineral projects in Nova Scotia and other global locations.

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

5. I have visited the Khundii property on a number of occasions, most recently most recently between October 16 and November 10, 2016.

6. I am responsible for the preparation or the supervision and final editing of all portions of the Technical Report.

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 23, 2017

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