

## BAYAN KHUNDII GOLD PROJECT Bayankhongor Aimag, Southwest Mongolia

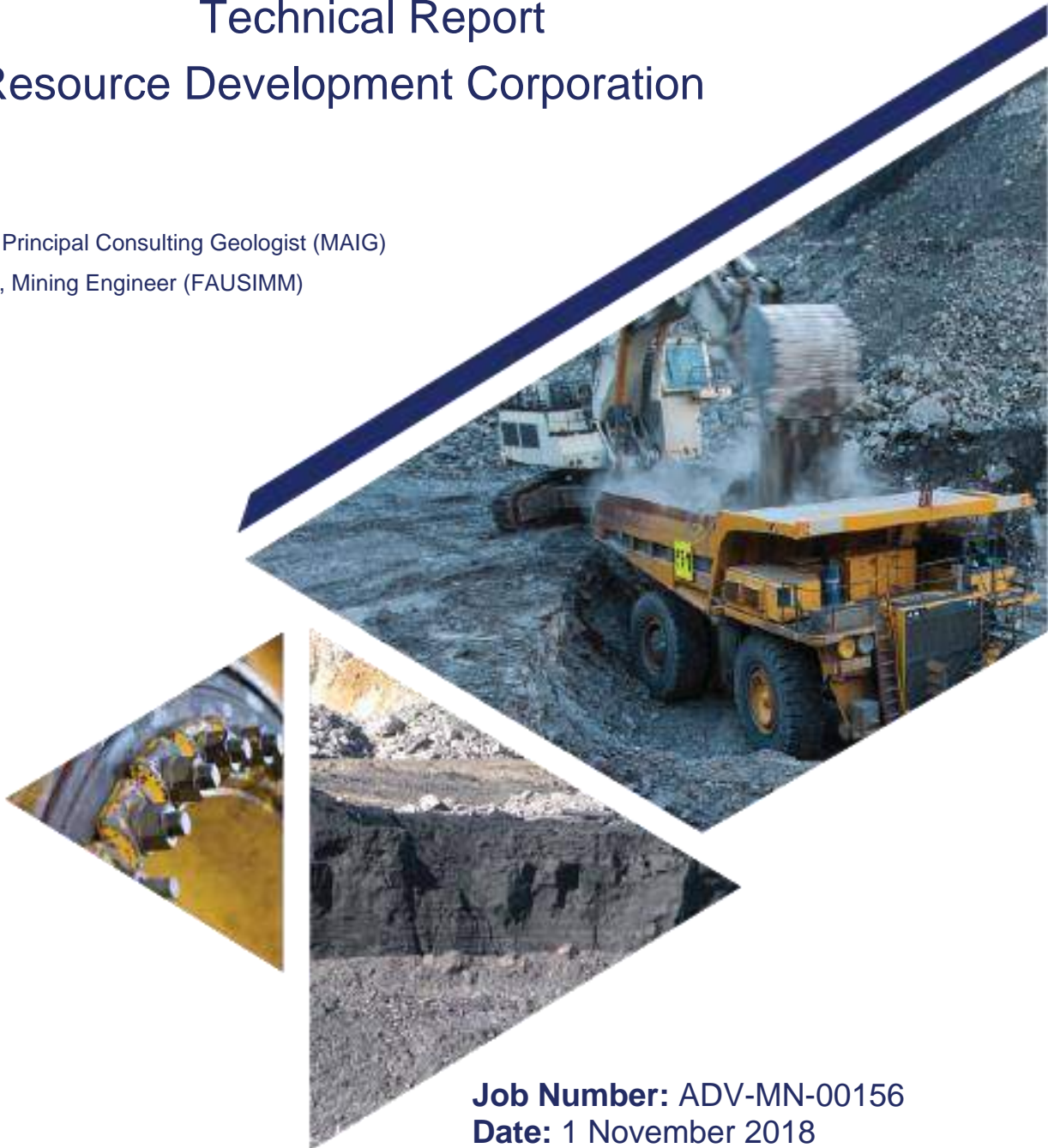
National Instrument 43-101 Mineral Resource  
Technical Report

Erdene Resource Development Corporation

Qualified Persons:

Mr. Jeremy Clark, Principal Consulting Geologist (MAIG)

Mr Tony Cameron, Mining Engineer (FAUSIMM)



**Job Number:** ADV-MN-00156

**Date:** 1 November 2018

## IMPORTANT INFORMATION ABOUT THIS DOCUMENT

### 1. Our Client

This report has been produced by or on behalf of RPMGlobal Asia Ltd (“RPM”) solely for Erdene Resource Development Corporation (the “Client”).

### 2. Client Use

The Client’s use and disclosure of this report is subject to the terms and conditions under which RPM prepared the report.

### 3. Notice to Third Parties

RPM prepared this report for the Client only. If you are not the Client:

- RPM has prepared this report having regard to the particular needs and interests of the Client, and in accordance with the Client’s instructions. It did not draft this report having regard to any other person’s particular needs or interests. Your needs and interests may be distinctly different to the Client’s needs and interests, and the report may not be sufficient, fit or appropriate for your purposes.
- RPM does not make and expressly disclaims from making any representation or warranty to you – express or implied – regarding this report or the conclusions or opinions set out in this report (including without limitation any representation or warranty regarding the standard of care used in preparing this report, or that any forward-looking statements, forecasts, opinions or projections contained in the report will be achieved, will prove to be correct or are based on reasonable assumptions).
- RPM expressly disclaims any liability to you and any duty of care to you.
- RPM does not authorise you to rely on this report. If you choose to use or rely on all or part of this report, then any loss or damage you may suffer in so doing is at your sole and exclusive risk.

### 4. Inputs, subsequent changes and no duty to update

RPM has created this report using data and information provided by or on behalf of the Client [and Client’s agents and contractors]. Unless specifically stated otherwise, RPM has not independently verified that data and information. RPM accepts no liability for the accuracy or completeness of that data and information, even if that data and information has been incorporated into or relied upon in creating this report (or parts of it).

The conclusions and opinions contained in this report apply as at the date of the report. Events (including changes to any of the data and information that RPM used in preparing the report) may have occurred since that date which may impact on those conclusions and opinions and make them unreliable. RPM is under no duty to update the report upon the occurrence of any such event, though it reserves the right to do so.

### 5. Mining Unknown Factors

The ability of any person to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond RPM’s control and that RPM cannot anticipate. These factors include, however are not limited to, site-specific mining and geological conditions, management and personnel capabilities, availability of funding to properly operate and capitalize the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, unforeseen changes in legislation and new industry developments. Any of these factors may substantially alter the performance of any mining operation.

**Jeremy Lee Clark**

Suites 2-4, 3/F, Sino Plaza,  
255-257 Gloucester Road,  
Causeway Bay, Hong Kong  
Phone: +852 9858 3883  
[jclark@rpmglobal.com](mailto:jclark@rpmglobal.com)

I, Jeremy Lee Clark, am working as a Principal Geologist for RPMGlobal Asia Limited, Level 13, 68 Yee Woo Street, Hong Kong. This certificate applies to the Technical Report on the Bayan Khundii Gold Project, Bayankhongor Aimag, Southwest Mongolia, prepared for Erdene Resource Development Company, dated 1<sup>st</sup> November, 2018 (the "Technical Report"), do hereby certify that:

1. I am a registered member of the Australian Institute of Geoscientists ("AIG").
2. I am a graduate of the Queensland University of Technology and hold a B App Sc in Geology, which was awarded in 2001. In addition, I am a graduate of Edith Cowan University in Australia and hold a Graduate Certificate in Geostatistics, which was awarded in 2006.
3. I have been continuously and actively engaged in the assessment, development, and operation of mineral Projects since my graduation from university in 2001.
4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101").
6. I am responsible for the preparation or the responsible for reviewing, coordinating and final editing of all portions of the Technical Report.
7. I have had no prior involvement with the properties that are the subject of the Technical Report.
8. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading as of the effective date of the report, September 12, 2018.
9. I am independent of Erdene Resource Development Company in accordance with the application of Section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated in Beijing, China, 1 November 2018



"Jeremy Lee Clark" (QP)

**Tony Cameron**

RPMGlobal  
Room 501, Building A,  
Borui Plaza, 26 North Road of East 3rd Ring,  
Chaoyang District, Beijing, 100026, China  
Phone: +86 10 6410 4800  
[TCameron@rpmglobal.com](mailto:TCameron@rpmglobal.com)

I, Anthony Cameron am working as a Consultant for RPMGlobal, Room 501, Building A, Borui Plaza, 26 North Road of East 3rd Ring, Chaoyang District, Beijing, 100026, China

This certificate applies to the Technical Report on the Bayan Khundii Gold Project, Bayankhongor Aimag, Southwest Mongolia, prepared for Erdene Resource Development Company, dated 1<sup>st</sup> November, 2018 (the "Technical Report"), do hereby certify that:

1. I am a professional mining engineer having graduated with an undergraduate degree of Bachelor of Engineering (Mining) from the University of Queensland in 1988. In addition, I have obtained a First Class Mine Manager's Certificate (No. 509) in Western Australia, a Graduate Diploma in Business from Curtin University (Western Australia) in 2000, and a Masters of Commercial Law from Melbourne University in 2004.
2. I am a Fellow of the Australasian Institute of Mining and Metallurgy (108264).
3. I have worked as a mining engineer for a period in excess of thirty years since my graduation from university. Over the last eighteen years I have worked as a consulting mining engineer on mine planning and evaluations for Au operations and development projects worldwide.
4. I am a Qualified Person for the purposes of the National Instrument 43-101 of the Canadian Securities Administrators ("NI 43-101").
5. I personally inspected the Bayan Khundii Project in May, 2018.
6. I am responsible for the preparation of Sections 1.2, 2.4, 4, and 5 of the Technical Report.
7. I have had no prior involvement with the properties that are the subject of the Technical Report.
8. To the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading as of the effective date of the report, September 12, 2018.
9. I am independent of Erdene Resource Development Company in accordance with the application of Section 1.5 of NI 43-101.
10. I have read NI 43-101 and Form 43-101F1 and Sections 1.2, 2.4 and 11 of the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange or any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their website and accessible by the public, of the Technical Report.

Dated in Beijing, China, 1<sup>st</sup> November, 2018



"Tony Cameron" (QP)

## TABLE OF CONTENTS

<b>1</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
1.1	INTRODUCTION .....	1
1.2	SCOPE AND TERMS OF REFERENCE.....	1
1.3	PROJECT SUMMARY .....	2
1.4	STATEMENT OF MINERAL RESOURCES.....	3
1.5	RECOMMENDATIONS.....	4
1.6	OPPORTUNITIES AND RISKS .....	4
<b>2</b>	<b>INTRODUCTION AND TERMS OF REFERENCE .....</b>	<b>7</b>
2.1	BACKGROUND .....	7
2.2	TERMS OF REFERENCE .....	7
2.3	SOURCE OF INFORMATION.....	7
2.4	PARTICIPANTS .....	8
2.5	LIMITATIONS AND EXCLUSIONS .....	9
2.6	CAPABILITY AND INDEPENDENCE .....	9
<b>3</b>	<b>RELIANCE ON OTHER EXPERTS .....</b>	<b>10</b>
<b>4</b>	<b>PROPERTY DESCRIPTION AND LOCATION .....</b>	<b>11</b>
4.1	PROPERTY OWNERSHIP .....	11
<b>5</b>	<b>ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY .....</b>	<b>15</b>
5.1	ACCESSIBILITY AND INFRASTRUCTURE .....	15
5.2	WATER AND POWER .....	15
5.3	CLIMATE AND PHYSIOGRAPHY .....	17
<b>6</b>	<b>HISTORY.....</b>	<b>18</b>
6.1	PREVIOUS MINERAL RESOURCES .....	20
6.2	HISTORICAL PRODUCTION.....	20
<b>7</b>	<b>GEOLOGICAL SETTING AND MINERALIZATION.....</b>	<b>21</b>
7.1	REGIONAL GEOLOGY AND TECTONIC SETTING .....	21
7.2	GENERAL GEOLOGY OF EASTERN TRANS ALTAI TERRAIN .....	23
7.3	GEOLOGY OF KHUNDII EXPLORATION LICENSE .....	23
7.4	BAYAN KHUNDII PROJECT GEOLOGY .....	26
7.5	MINERALIZATION STYLE .....	32
<b>8</b>	<b>DEPOSIT TYPES.....</b>	<b>41</b>
<b>9</b>	<b>EXPLORATION.....</b>	<b>42</b>
9.1	GEOLOGICAL MAPPING .....	42
9.2	GEOCHEMICAL SURVEYS .....	42
9.3	GEOPHYSICAL SURVEYS .....	47
9.4	TRENCHING PROGRAM.....	55
<b>10</b>	<b>DRILLING.....</b>	<b>58</b>
10.1	BAYAN KHUNDII DRILLING .....	59
<b>11</b>	<b>SAMPLE PREPARATION, ANALYSES AND SECURITY .....</b>	<b>64</b>
11.1	PRIMARY SAMPLING PROTOCOLS .....	64
11.2	SAMPLE HANDLING PROTOCOLS AND SECURITY.....	64
11.3	ASSAY LABORATORY SAMPLE PREPARATION AND ANALYSIS PROTOCOLS .....	65
11.4	SAMPLE AND ASSAYING METHODS .....	66
11.5	QUALITY CONTROL DATA .....	66
<b>12</b>	<b>DATA VERIFICATION.....</b>	<b>76</b>

12.1	DATABASE VALIDATION.....	78
12.2	ASSESSMENT OF DATABASE.....	78
<b>13</b>	<b>MINERAL PROCESSING AND METALLURGICAL TESTING .....</b>	<b>79</b>
13.1	2016 METALLURGICAL TEST WORK.....	79
13.2	2017 METALLURGICAL TEST WORK.....	80
13.3	RECOMMENDATIONS FOR FURTHER WORK .....	83
<b>14</b>	<b>MINERAL RESOURCE ESTIMATES .....</b>	<b>84</b>
14.1	DATA .....	84
14.2	GEOLOGY AND RESOURCE INTERPRETATION.....	86
14.3	PREPARATION OF WIREFRAMES .....	87
14.4	COMPOSITING AND STATISTICS .....	97
14.5	GEOSPATIAL ANALYSIS .....	120
14.6	MINERAL RESOURCE ESTIMATION.....	128
14.7	MODEL VALIDATION.....	132
14.8	MINERAL RESOURCE CLASSIFICATION .....	141
14.9	MINERAL RESOURCE STATEMENT .....	143
14.10	RISK AND OPPORTUNITIES .....	144
<b>15</b>	<b>MINERAL RESERVE ESTIMATES .....</b>	<b>146</b>
<b>16</b>	<b>MINING METHODS .....</b>	<b>146</b>
<b>17</b>	<b>RECOVERY METHODS .....</b>	<b>146</b>
<b>18</b>	<b>PROJECT INFRASTRUCTURE .....</b>	<b>146</b>
<b>19</b>	<b>MARKET STUDIES AND CONTRACTS.....</b>	<b>146</b>
<b>20</b>	<b>ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL AND COMMUNITY IMPACT .....</b>	<b>146</b>
<b>21</b>	<b>CAPITAL AND OPERATING COSTS .....</b>	<b>146</b>
<b>22</b>	<b>ECONOMIC ANALYSIS .....</b>	<b>146</b>
<b>23</b>	<b>ADJACENT PROPERTIES.....</b>	<b>147</b>
<b>24</b>	<b>OTHER RELEVANT DATA AND INFORMATION .....</b>	<b>148</b>
24.1	PROJECT DEVELOPMENT .....	148
24.2	DEVELOPMENT PROGRAMS.....	148
<b>25</b>	<b>INTERPRETATION AND CONCLUSIONS .....</b>	<b>149</b>
<b>26</b>	<b>RECOMMENDATIONS.....</b>	<b>151</b>
<b>27</b>	<b>REFERENCES.....</b>	<b>152</b>

## LIST OF TABLES

TABLE 1-1 BAYAN KHUNDII DEPOSIT AS OF SEPTEMBER 12, 2018 MINERAL RESOURCE ESTIMATE (0.6G/T AU CUT-OFF) .....	3
TABLE 4-1 BAYAN KHUNDII PROJECT – EXPLORATION LICENCE DETAILS .....	11
TABLE 7-1 DRILLING INTERSECTION HIGHLIGHTS FROM 2017 .....	36
TABLE 9-1 ROCK CHIP AND GRAB SAMPLE AU AND SILVER ASSAY RESULTS GREATER THAN 3.0 G/T AU .....	42
TABLE 9-2 BAYAN KHUNDII TRENCH RESULTS .....	55
TABLE 10-1 BAYAN KHUNDII DRILLING SUMMARY.....	58
TABLE 10-2 EXTENDED HOLES SUMMARY .....	59
TABLE 11-1 SGS ANALYTICAL METHODS AND DETECTION LIMITS .....	66
TABLE 11-2 CERTIFIED STANDARD SUMMARY FOR 2014-2017 DRILLING .....	67
TABLE 11-3 SUMMARY STATISTICS FOR FIELD DUPLICATES.....	70
TABLE 11-4 SUMMARY STATISTICS FOR LABORATORY DUPLICATES .....	71
TABLE 11-5 SUMMARY STATISTICS FOR EXTERNAL CHECK.....	72
TABLE 11-6 SUMMARY STATISTICS FOR SCREEN METALLIC ASSAY RESULTS.....	73
TABLE 12-1 COLLAR COMPARISON BETWEEN DIGITAL DATABASE AND HANDHELD GPS .....	77
TABLE 13-1 GRAVITY RECOVERABLE GOLD.....	80
TABLE 13-2 BOTTLE ROLL RECOVERY FOR GOLD .....	80
TABLE 13-3 OVERALL RECOVERY FOR A GRAVITY PLUS CYANIDATION FLOWSHEET .....	80
TABLE 13-4 OVERALL CIRCUIT RECOVERIES FOR THE TWO MASTER COMPOSITES, 48 HR. LEACH .....	81
TABLE 14-1 SUMMARY OF DATA USED IN RESOURCE ESTIMATE .....	84
TABLE 14-2 BULK DENSITY SUMMARY .....	85
TABLE 14-3 CORRELATION COEFFICIENT TABLE .....	86
TABLE 14-4 BULK DENSITIES ASSIGNED IN THE BLOCK MODEL .....	86
TABLE 14-5 SUMMARY STATISTICS COMPOSITES –AU GRADE DOMAINS.....	100
TABLE 14-6 SUMMARY STATISTICS COMPOSITES – FE GRADE DOMAINS (ALL).....	100
TABLE 14-7 SUMMARY STATISTICS COMPOSITES – S GRADE DOMAINS (ALL) .....	101
TABLE 14-8 METALS CORRELATION MATRIX ALL MINERALIZATION .....	110
TABLE 14-9 HIGH GRADE CUTS APPLIED TO DOMAINS (AU G/T) .....	113
TABLE 14-10 HIGH GRADE CUTS APPLIED TO DOMAINS (S %).....	115
TABLE 14-11 BAYAN KHUNDII PROJECT – INTERPRETED VARIOGRAM ANALYSIS.....	120
TABLE 14-12 BLOCK MODEL PARAMETERS .....	128
TABLE 14-13 BLOCK MODEL CODING - TYPE.....	129
TABLE 14-14 BLOCK MODEL CODING - DOMAIN .....	129
TABLE 14-15 BLOCK SIZES ASSESSMENT.....	129
TABLE 14-16 SEARCH RADII ASSESSED .....	130
TABLE 14-17 MAXIMUM NUMBER OF SAMPLES ASSESSED .....	131
TABLE 14-18 OK ESTIMATION PARAMETERS .....	132
TABLE 14-19 AVERAGE COMPOSITE INPUT V BLOCK MODEL OUTPUT (ORINARY KRIGING (OK) AND INVERSE DISTANCE SQUARED (IDW)) – HG DOMAIN .....	133
TABLE 14-20 AVERAGE COMPOSITE INPUT V BLOCK MODEL OUTPUT – MEDIUM GRADE DOMAIN.....	135
TABLE 14-21 AVERAGE COMPOSITE INPUT V BLOCK MODEL OUTPUT – LOW GRADE DOMAIN .....	135
TABLE 14-22 BAYAN KHUNDII DEPOSIT AS OF SEPTEMBER 12, 2018 MINERAL RESOURCE ESTIMATE.....	143

## LIST OF FIGURES

FIGURE 4-1 GENERAL LOCATION PLAN .....	13
FIGURE 4-2 DETAILED LOCATION PLAN .....	14
FIGURE 5-1 ERD PROJECTS AND INFRASTRUCTURE .....	16
FIGURE 6-1 KHUNDII LICENSE AND MAIN PROSPECTS .....	19
FIGURE 7-1 TECTONIC-STRATIGRAPHIC TERRANE MAP FOR MONGOLIA (BADARCH ET AL 2002) WITH LOCATION OF TRANS ALTAI TERRAIN .....	22
FIGURE 7-3 KHUNDII LICENSE GEOLOGY MAP .....	25
FIGURE 7-4 BAYAN KHUNDII PROJECT GEOLOGY MAP .....	27
FIGURE 7-5 PANORAMA OF BAYAN KHUNDII PROJECT AREA (LOOKING NORTHEAST FROM WEST RIDGE) .....	28
FIGURE 7-6 PHOTOGRAPHS OF PYROCLASTIC ROCKS .....	29
FIGURE 7-7 PROPOSED MODEL FOR EXPLAINING THE NNE TREND OF THE HIGH-GRADE STRIKER-MIDFIELD MINERALIZED ZONE .....	32
FIGURE 7-8 PHOTOGRAPHS OF GOLD-BEARING VEINS AND BRECCIAS .....	34
FIGURE 7-9 NE-SW TRENDING CROSS SECTION THROUGH THE STRIKER AND MIDFIELD ZONES AT BAYAN KHUNDII SHOWING THE RESULTS FROM 2015, 2016 AND 2017 DRILLING .....	35
FIGURE 7-10 MAP OF THE SOUTHWEST PROSPECT AREA SHOWING THE DISTRIBUTION OF ALTERATION ZONES, AS DEFINED BY SHORT-WAVE INFRARED (SWIR) ANALYSIS .....	38
FIGURE 9-1 SOUTHWEST PROSPECT AREA GEOLOGY MAP WITH LOCATION OF 78 ROCK CHIP AND ROCK GRAB SAMPLES, WITH LABELS FOR AU ASSAY VALUES >10 G/T AU .....	43
FIGURE 9-2 GOLD VALUES (PPB) FOR ROCK CHIP AND ROCK GRAB SAMPLES FROM THE NORTHEAST AND NE EXTENSION PROSPECT AREAS WITH LABELS FOR AU ASSAY VALUES >200 PPB .....	45
FIGURE 9-3 SOIL GEOCHEMISTRY RESULTS FOR GOLD .....	46
FIGURE 9-4 REDUCED TO POLE (RTP-UC 10) MAGNETIC RESPONSE FOR THE BAYAN KHUNDII PROJECT AREA .....	48
FIGURE 9-5 IP GRADIENT ARRAY RESISTIVITY PLOT FOR THE BAYAN KHUNDII PROJECT .....	50
FIGURE 9-6 IP GRADIENT ARRAY CHARGEABILITY PLOT FOR THE BAYAN KHUNDII PROJECT .....	51
FIGURE 9-7 STACKED IP DP-DP CHARGEABILITY INVERSION SECTIONS (LOOKING NORTH WITH WESTERLY MOST LINE ON THE LEFT), BAYAN KHUNDII PROJECT .....	53
FIGURE 9-8 STACKED IP DP-DP CHARGEABILITY INVERSION SECTIONS (LOOKING NORTH WITH WESTERLY MOST LINE ON THE LEFT), BAYAN KHUNDII PROJECT. ....	54
FIGURE 9-9 TRENCH LOCATION MAP AND INTERPRETED MINERALIZATION WIREFRAMES .....	57
FIGURE 10-1 DRILL HOLES AND INTERPRETED MINERALIZATION WIREFRAMES .....	60
FIGURE 10-2 BAYAN KHUNDII CROSS SECTION 2017 WITH SELECTIVE RESULTS HIGHLIGHTED .....	61
FIGURE 11-1 STANDARD GRAPHS FOR 2015 DRILLING PROGRAM .....	67
FIGURE 11-2 STANDARD GRAPHS FOR 2016 DRILLING PROGRAM .....	68
FIGURE 11-3 STANDARD GRAPHS FOR 2017 DRILLING PROGRAM .....	69
FIGURE 11-4 STANDARD GRAPHS FOR 2018 DRILLING PROGRAM .....	69
FIGURE 11-5 SCATTERPLOTS (QQ) OF FIELD DUPLICATE RESULTS FOR 2017 AND 2018 .....	70
FIGURE 11-6 SCATTERPLOTS (QQ) OF LABORATORY DUPLICATE RESULTS FOR 2017 AND 2018 .....	71
FIGURE 11-7 SCATTERPLOTS OF EXTERNAL LABORATORY CHECK .....	72
FIGURE 11-8 SCREEN METALLIC ASSAYING RESULTS - SCATTER AND QQ PLOTS .....	74
FIGURE 12-1 HEMATITE ALTERED INTENSE SUGARY QUARTZ VEIN ZONE (ASSAYED 22.0 G/T AU) .....	76
FIGURE 12-2 COLLAR PRESERVATION .....	78
FIGURE 13-1 BAYAN KHUNDII METALLURGICAL SAMPLE GRAVITY-AU-RECOVERY SIZE FRACTION RECOVERY GRAPH .....	79
FIGURE 14-1 BAYAN KHUNDII PROJECT - DENSITY APPARATUS .....	85
FIGURE 14-2 LINEAR REGRESSION FOR DENSITY AND FE GRADE FOR MINERALIZATION .....	86
FIGURE 14-3 LOG HISTOGRAM AND LOG PROBABILITY PLOT FOR ALL ASSAYS .....	87
FIGURE 14-4 MINERALIZED LOW-GRADE DOMAINS AND DRILLING – PLAN VIEW .....	89
FIGURE 14-5 MINERALIZED LOW-GRADE DOMAINS AND DRILLING – LONG SECTION VIEW .....	90



FIGURE 14-6 MINERALIZED MEDIUM-GRADE DOMAINS AND DRILLING – PLAN VIEW .....	91
FIGURE 14-7 MINERALIZED MEDIUM-GRADE DOMAINS AND DRILLING – LONG SECTION VIEW .....	92
FIGURE 14-8 MINERALIZED HIGH-GRADE DOMAINS AND DRILLING – PLAN VIEW .....	93
FIGURE 14-9 MINERALIZED HIGH-GRADE DOMAINS AND DRILLING – LONG SECTION VIEW .....	94
FIGURE 14-10 TYPICAL CROSS SECTION A .....	95
FIGURE 14-11 TYPICAL CROSS SECTION B .....	96
FIGURE 14-12 SAMPLE LENGTHS INSIDE WIREFRAMES .....	97
FIGURE 14-13 OXIDE VERSUS FRESH AU GRADE ANALYSIS QQ PLOT FOR AU .....	99
FIGURE 14-14 LOG HISTOGRAMS AND LOG PROBABILITY PLOTS AU (ALL HG OBJECTS 1 TO 71, LG OBJECT 101 AND 102) .....	102
FIGURE 14-15 LOG HISTOGRAMS AND LOG PROBABILITY PLOTS AU (LG OBJECT 103, 104 AND 105).....	103
FIGURE 14-16 LOG HISTOGRAMS AND LOG PROBABILITY PLOTS AU (MG OBJECTS 201, 202 AND 203).....	104
FIGURE 14-17 LOG HISTOGRAMS AND LOG PROBABILITY PLOTS FE (LG OBJECTS 101, 102 AND 103) .....	105
FIGURE 14-18 LOG HISTOGRAMS AND LOG PROBABILITY PLOTS FE (LG OBJECTS 104 AND 105).....	106
FIGURE 14-19 LOG HISTOGRAMS AND LOG PROBABILITY PLOTS S (ALL HG OBJECTS 1 TO 71, LG OBJECT 101 AND 102) .....	107
FIGURE 14-20 LOG HISTOGRAMS AND LOG PROBABILITY PLOTS S (LG OBJECT 103, 104 AND 105).....	108
FIGURE 14-21 LOG HISTOGRAMS AND LOG PROBABILITY PLOTS S (MG OBJECTS 201, 202 AND 203).....	109
FIGURE 14-22 CONTACT ANALYSIS OF HIGH, MEDIUM AND LOW GRADE DOMAINS .....	110
FIGURE 14-23 FE GRADE ANALYSIS FOR GRADE DOMAINS QQ PLOT.....	111
FIGURE 14-24 S GRADE ANALYSIS FOR GRADE DOMAINS QQ PLOT .....	111
FIGURE 14-25 HISTOGRAM AND PROBABILITY PLOT FOR MEDIUM GRADE DOMAINS - AU .....	117
FIGURE 14-26 HISTOGRAM AND PROBABILITY PLOT FOR LOW GRADE DOMAINS (OBJECT 101 TO 103) - AU .....	118
FIGURE 14-27 HISTOGRAM AND PROBABILITY PLOT FOR LOW GRADE DOMAINS (OBJECT 104 AND 105) - AU .....	119
FIGURE 14-28 VARIOGRAMS – HIGH GRADE DOMAIN, OBJECT 7 (AU) .....	121
FIGURE 14-29 VARIOGRAMS – HIGH GRADE DOMAIN, OBJECT 7 (S) .....	122
FIGURE 14-30 VARIOGRAMS – MEDIUM GRADE DOMAIN, OBJECT 202 (AU) .....	123
FIGURE 14-31 VARIOGRAMS – MEDIUM GRADE DOMAIN, OBJECT 202 (S) .....	124
FIGURE 14-32 VARIOGRAMS – LOW GRADE DOMAIN, OBJECT 103 (AU) .....	125
FIGURE 14-33 VARIOGRAMS – LOW GRADE DOMAIN, OBJECT 103 (FE) .....	126
FIGURE 14-34 VARIOGRAMS – LOW GRADE DOMAIN, OBJECT 103 (S) .....	127
FIGURE 14-35 BLOCK SIZE ANALYSIS CHART .....	130
FIGURE 14-36 SEARCH RADII ANALYSIS CHART.....	130
FIGURE 14-37 MAXIMUM NUMBER OF SAMPLES ANALYSIS CHART .....	131
FIGURE 14-38 BLOCK MODEL VALIDATION BY PANELS AND ELEVATION - HIGH GRADE DOMAIN (OBJECT7) .....	137
FIGURE 14-39 BLOCK MODEL VALIDATION BY PANELS AND ELEVATION - MEDIUM GRADE DOMAIN (OBJECT 201 AND 203) .....	137
FIGURE 14-40 BLOCK MODEL VALIDATION BY PANELS AND ELEVATION – LOW GRADE DOMAIN (OBJECT 101 AND 103).....	138
FIGURE 14-41 AU BLOCK GRADES – SECTIONAL VALIDATION .....	140
FIGURE 14-42 MINERAL RESOURCE CLASSIFICATION - PLAN VIEW (GREEN-MEASURED, BLUE-INDICATED, RED-INFERRED) .....	142
FIGURE 14-43 BENCH TONNAGE GRAPH.....	144

## LIST OF APPENDICES

- APPENDIX A. GLOSSARY
- APPENDIX B. PARTICIPANT S' RELEVANT EXPERIENCE

# 1 Executive Summary

## 1.1 Introduction

RPMGlobal Asia Limited (“RPM”), was requested by Erdene Resource Development Corporation (“ERD”, “Erdene”, the “Company” or the “Client”) to complete a Mineral Resource Technical Report (the “Report”) of the Bayan Khundii Gold Project (“Project” or “Relevant Asset”) for the purpose of the Report’s filing on SEDAR in accordance with the requirements of ‘Canadian National Instrument 43-101’ (“NI 43-101”) of the Canadian Securities Administrators and the Company’s reporting obligations as a Reporting Issuer in Canada. This is a Maiden Mineral Resource Estimate Report for Bayan Khundii.

The Bayan Khundii Project is contained within the Khundii exploration license (XV-015569) located in Bayankhongor Aimag, Southwest Mongolia. The license is subject to a 2% net smelter return royalty to Sandstorm Gold Ltd. Erdene has the option to reduce the royalty to 1% by paying Cdn\$1.2 million to Sandstorm on or before April 14, 2019.

ERD is a Canadian based resource company with over 18 years’ experience in precious and base metal exploration in Mongolia.

## 1.2 Scope and Terms of Reference

This Report includes an independent Mineral Resource estimate for the Project completed by RPM. RPM considers that the high-grade nature of the mineralization and the thickness and geometry of the deposit indicates that the Project has potential for eventual economic extraction using open pit mining techniques, employing conventional mineral processing methods to recover the Au. RPM understands that ERD will undertake a Preliminary Economic Assessment to review the economic potential based on the Maiden Mineral Resource stated in this NI 43-101 Technical Report.

RPM’s technical team (“the Team”) consisted of international and Mongolian National geologists as well as international mining and process engineers. ERD has undertaken substantial infill and extensional drilling (total 255 diamond holes) from 2015 to 2018. This drilling forms the basis of the Maiden Mineral Resource estimate stated in this Report. As a part of this work, a site visit was carried out by Mr Tony Cameron (mining engineer) and Mr Oyunbat Bat-Ochir (Resource geologist) in May 2018 both whom are employees of RPM. This visit was undertaken to verify technical aspects of exploration conducted on the Property. RPM found the ERD personnel to be cooperative and open in facilitating RPM’s work.

In addition to the work undertaken to generate an estimate of Mineral Resources, this Report relies on information provided by the Company, directly from the site and other offices, or from reports by other organisations whose work is the property of the Company. The data relied upon for the Mineral Resource estimate completed by RPM and contained in this Report has been compiled primarily by the Company and validated where possible by the Qualified Person. The Report specifically excludes all aspects of legal issues, marketing, commercial and financing matters, insurance, land titles and usage agreements, and any other agreements/contracts that the Company may have entered into except to the extent required pursuant to NI 43-101.

In RPM’s opinion, the information provided by ERD was reasonable and nothing was discovered during the preparation of the Report that indicated there was any significant error or misrepresentation in respect of that information. RPM does not however warrant the completeness or accuracy of the information provided to it and which has been used in the preparation of this Report.

RPM has independently assessed the Relevant Asset by reviewing historical technical reports, drill hole databases, original sampling data, sampling methodology, development potential and metallurgical test work resulting in a Mineral Resource estimate. All opinions, findings and conclusions expressed in the report are those of the Qualified Persons named herein.

### 1.3 Project Summary

- The Bayan Khundii Gold Project is contained within the Khundii exploration license in Bayankhongor Aimag in south-western Mongolia, approximately 980 km south-west of Ulaanbaatar and 300 km south of the Aimag capital, Bayankhongor City. The nearest towns (soum centres) are Shinejinst, located 70 km to the northeast and Bayan Undur, located 80 km to the north. The property is also located 40 km west of Erdene's Zuun Mod molybdenum-copper deposit and 20km south of its Altan Nar Gold Deposit.
- The Khundii exploration license was first acquired in April of 2010 and is currently in its 8<sup>th</sup> year of issue. Exploration licenses in Mongolia may be 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 as set out in 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 Au discoveries highlighted by Erdene's Altan Nar Au deposit located 20 km north, in addition to nearby Nomin Tal and Altan Arrow prospects, and now Bayan Khundii. In addition, the recently-acquired Ulaan license, located immediately west of the Khundii license, is considered to be prospective for both epithermal and porphyry-style mineralization, the latter of which is the style observed at Zuun Mod molybdenum-copper deposit located 40 km to the east of Bayan Khundii.
- Bayan Khundii was discovered in the 2<sup>nd</sup> quarter of 2015 when surface rock-chip samples of Au-bearing quartz veins were first collected 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 the second half of 2015. Following this work in late 2015 and early 2016, a metallurgical testing program and a screen metallic analysis program were completed. The 2016 drilling program, which included 81 drill holes for a total of 10,645 m, confirmed strike and down-dip extensions of mineralized zones at the Striker and Gold Hill zones. In addition, drilling beneath the Jurassic aged cover rocks resulted in the discovery of the Midfield Zone, approximately 170 m northeast of Striker. Drilling has concentrated on these primary locations within a zone approximately 1.6 km x 1.3 km.
- Up to the drilling cut-off date (27<sup>th</sup> June, 2018) ERD completed a total of 255 drill holes including 12 extended re-drills for 42,670 m of drilling and 22 trenches for a total of 1,060 m.
- Gold mineralization is associated with: comb-textured quartz veins; multi-stage quartz-chalcedony-adularia-hematite/specularite veins; quartz-hematite/specularite breccias; angular hematite/specularite veinlets; disseminations (commonly associated with hematite/specularite) and fracture fillings that are hosted by an intensely altered (quartz-illite) sequence of pyroclastic 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 Au mineralizing event. Gold mineralization is present in numerous sub-parallel, NW-SE trending, SW-dipping zones that have been traced up to 200 m along strike. These zones include very high grade veins and breccias over a centimeter to meter scale with Au grades locally exceeding 15 g/t, and up to 2,200 g/t, over 1 m intervals. Enveloping these higher grade zones are zones of lower grade mineralization typically in the 0.1 to 2 g/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 m 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 intense alteration zones, and presumably mineralization, under Jurassic 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 Jurassic cover yet to be determined by drilling.
- RPM reviewed documentation for the sampling procedures, preparation, analysis, and security during the site visit as well as the literature and documentation on the Project. RPM finds the procedures to be acceptable and resulted in suitable datasets for resource estimation.
- Metallurgical work, completed in 2016 on representative composite samples from the initial 15 holes, drilled in the upper 50 m of the Striker Zone indicates the mineralization is very amenable to a flow sheet involving a combination of gravity and cyanide leach of gravity tails, with Au recovery of 99% for a high-grade (24.9

g/t Au) composite sample and 92% for a low grade (0.7 g/t Au) composite. Metallurgical work completed in 2017 included:

- **Master Composites:** Work completed provided recovery data on two moderately high-grade master composites (approx. 4.4 g/t Au) and one moderate-grade (1.9 g/t Au) master composite. Analysis of master composites was designed to provide guidance for future processing, including optimization of grind size, residence time, sodium cyanide dosage (i.e. consumption), as well as assessment of the impact on overall recoveries when initial gravity recovery was applied. Recoveries for the two high grade composites using a 48-hour cyanide leach were 95% and 96%, where as a combination of gravity and leach on tails for the moderate-grade composite was 92%;
- **Variability Testing:** Work was also completed to assess the potential impact on Au recoveries with increasing depth and variation in character of the low-grade mineralized material. The work included 16 primarily low-grade composite samples that ranged in head grade from 0.37 g/t Au to 2.29 g/t Au, with an average grade of 0.75 g/t Au. Applying standard leach parameters, Au recovery of these low-grade samples averaged 85% after 48-hour leach. Two samples of Striker Zone mineralization, without any vertical constraint and with head grades of 2.30 g/t Au and 1.18 g/t Au, returned recoveries of 93% and 91% respectively.
- **Comminution Testing:** Standard comminution tests were used to evaluate the energy requirement to grind material from a pre-defined feed size to a final product size. The Bond Rod Mill Work Index was recorded at 17.8 kWh/tonne and the Bond Ball Mill Work Index at 16.1 kWh/tonne. The comminution tests indicate that Bayan Khundii is moderately hard to hard.
- **Heap-Leach Amenability:** A series of coarse bottle roll tests were conducted on a composite of Striker Zone material with an average grade of 0.67 g/t Au to evaluate if the low grade material would be amenable to heap leaching. These tests were not designed to predict ultimate heap leach recovery, however, the tests were designed as screening tests whereby similar recoveries across all particle sizes would suggest the material may be amenable to heap leaching techniques, while poor recovery in the coarser tests would suggest that conventional tank leaching would be preferred. Gold recoveries were 57% on the 3.35 mm material, 63% on the 1.7 mm material and 83% on the 69 micron grind size. The higher recovery associated with the finer grind size suggests that conventional tank leaching would yield higher overall recoveries.

## 1.4 Statement of Mineral Resources

RPM has independently estimated the Mineral Resources contained within the Project, based on the data collected by ERD as at 27<sup>th</sup> June, 2018. The Mineral Resource estimate and underlying data complies with the guidelines provided in the CIM Definition Standards under NI 43-101. Therefore RPM considers it is suitable for public reporting. The Mineral Resources were completed by Mr. David Princep under the supervision of Mr. Jeremy Clark (Qualified Person).

The Statement of Mineral Resources has been constrained by the topography, Jurassic overburden surface, exploration license boundary XV-015569, and reported at a cut-off grade of 0.6 g/t Au.

The results of the Mineral Resource estimate for the Bayan Khundii deposit are presented in **Table 1-1** and RPM has reported the resource at different Au cut-off grades in **Table 14-22**. RPM suggests using a 0.6 g/t as a reporting cut-off based on a mining / process cost parameters for the Project. A variety of cut-off grades is provided in **Section 14** for reference as well as a breakdown by oxidation state.

**Table 1-1 Bayan Khundii Deposit as of September 12, 2018 Mineral Resource Estimate (0.6g/t Au Cut-off)**

Type	Measured			Indicated			Inferred		
	Tonnes t	Au g/t	Au Ounces	Tonnes t	Au g/t	Au Ounces	Tonnes t	Au g/t	Au Ounces
<b>Oxide</b>	1,101,000	3.6	127,900	2,343,000	2.2	167,400	348,000	1.5	16,400
<b>Fresh</b>	298,000	3.5	33,200	1,371,000	2.4	104,400	1,407,000	2.0	88,400
<b>Total</b>	<b>1,399,000</b>	<b>3.6</b>	<b>161,100</b>	<b>3,714,000</b>	<b>2.3</b>	<b>271,800</b>	<b>1,755,000</b>	<b>1.9</b>	<b>104,900</b>

Note:

1. The Statement of Estimates of Mineral Resources has been compiled under the supervision of Mr. Jeremy Clark who is a full-time employee of RPM and a Member of the Australian Institute of Geoscientists. Mr. Clark has sufficient experience that is relevant to the

style of mineralization and type of deposit under consideration and to the activity that he has undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.

2. All Mineral Resources figures reported in the table above represent estimates based on drilling completed up to 27<sup>th</sup> June, 2018. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.
3. Mineral Resources are reported on a dry in-situ basis.
4. The Mineral Resources is reported at a 0.6 g/t Au cut-off. Cut-off parameters were selected based on an RPM internal cut-off calculator, which indicated that a break-even cut-off grade of 0.6 g/t Au, assuming an open cut mining method, a Au price of US \$1500 per ounce, an open mining cost of US \$6 per tonne and a processing cost of US \$20 per tonne milled and processing recovery of 95% Au.
5. Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not been demonstrated to have actual economic viability

While a detailed schedule and option analysis has not been completed to confirm the optimal mining method, given the moderately dipping semi-continuous style of mineralization within disseminated broader mineralization halo, open pit mining is likely to be appropriate. Additional mining design and more detailed and accurate cost estimate mining studies and testwork are required to confirm viability of extraction. Given the relatively shallow nature of the defined resource, no pit optimisation was undertaken as all resources were determined to be potentially extractable via an open cut mining method.

No dilution or Ore loss factors have been applied.

## 1.5 Recommendations

The recommendations provided are based on observations made during the site visit and subsequent geological and metallurgical reviews and Mineral Resource estimate detailed in **Sections 13, and 14**.

- **QAQC:** Further monitoring of the slight bias and underestimation observed in high-grade assays at the SGS Laboratory is recommended.
- **Bulk Density:** RPM recommends that ERD continue recording density measurements, ensuring that measurements cover a variety of Fe grades to further refine the regression equation. RPM hasn't excluded any data from the bulk density data, however, RPM observed extreme outliers in data that should be re-checked for future use. No cost would be incurred.
- **Metallurgical Testwork:** This testwork will focus on confirming the flowsheet. RPM estimates that the cost of this testwork and associated works would be approximately USD 300,000 and would include:
  - Additional cyanidation process development work on lower grade composites that reflect the average grade of the Bayan Khundii deposit;
  - Further variability testing, including optimal grid size analysis, incorporating composites that represent the full range of head grades and depths within Bayan Khundii;
  - An extended gravity recoverable Au (E-GRG) test on a sample representing the average grade of the deposit.
- **Mining Study:** In order to guide additional infill drilling, define pit limits and expansion drilling, as well as highlight the economic potential, RPM understands a preliminary economic assessment ("PEA") which will consider the various opportunities with the Project's development, including a combined option with Altan Nar is underway. Approximate costs for PEA USD 180,000.

## 1.6 Opportunities and Risks

The key opportunities for the Project include:

- **Resource Expansion:**
  - RPM considers there is good potential to expand the currently defined resource with further drilling. Mineralization is open north-east, north-west and east of the currently defined Mineral Resource, where several medium to high-grade intersections require follow up exploration works. RPM recommends targeting near surface medium to high-grade mineralization, which if successfully delineated, will potentially have a positive impact on any mining study undertaken on the Project.

- There are large areas of low grade (0.1~0.2 g/t Au) mineralization halos recorded outside the currently defined mineralization wireframes. This material is currently excluded from the reported resource due to the low grade, however, changing modelling cut-off grade should substantially increase global mineralization volume.

The key risks to the Project include:

- **Interpretation Complexity:** The Project exhibits a moderate to high degree of structural complexity. The high-grade mineralised zones were defined by drilling on a 20 m by 20 m drill spacing in some areas, however, the majority was based on 40 m by 40 m drill spacing and on 80 m by 80 m drill spacing in extensional areas. Therefore there is potential for tonnage and overall geometry variations between modelled and actual mineralization. RPM does not envisage any material variations in the closer spaced drilling areas, however this could potentially occur in the areas of greater than 40 m spacing. As a result these areas are classified as Inferred.
- **QAQC:** Sampling and assaying methodology and procedures were satisfactory for the ERD drilling. QAQC protocols were adequate and review of the data did not show any consistent bias or reasons to doubt the assay data. Slight underestimation of higher grades Au (8.0 g/t) has been observed in the OREAS62c standard for the 2015 and 2016 drilling, and slight underestimation of Au (9.2 g/t) grade was also observed in OREAS62e for 2016 and 2017 drilling. RPM does however note that any variation will not be material to the resources quoted and highlights these did not vary beyond acceptable limits.
- **High Grade Variability:** Geostatistical analysis generated models of spatial grade continuity that reflected the geological understanding of the deposit. The modelled nugget is low to moderate however this is due to the domaining which has been applied to the deposit. A significant proportion of the variance occurs within the scale of the block dimensions resulting in a moderate degree of smoothing as is considered appropriate. RPM notes that there are some high-grade zones with a low number of samples which potentially results in an overestimate of the metal content relative to those zones with higher sample counts. As such there is a moderate degree of uncertainty in the grades associated with objects with lower sample counts, as such these areas are classified as inferred.
- **Lithological Surfaces:** RPM interpreted weathering, Jurassic overburden and upper syenite surfaces. The overburden layers are un-mineralized while all indications are that the syenite truncated mineralisation at depth. While suitable drilling and logging is available to define the overburden surface, due to the depth, the upper surface of the syenite body is lesser defined. This is reflected in the classification applied in these areas. RPM further notes that some mineralisation is observed below this surface, however, the extent of this is not known nor the relationship to the reported resource.

The illustrations supporting the various sections of the report are located within the relevant sections immediately following the references to the illustrations. For ease of reference, an index of tables and illustrations is provided at the beginning of the Report.

The opinions and conclusions presented in this report are based largely on the data provided to RPM during the site visit, during meetings with the Company, and in reports supplied by ERD. RPM considers that the information and estimates contained herein are reliable under these conditions, and subject to the qualifications set forth.

RPM operates as an independent technical consultant providing resource evaluation, mining engineering and mine valuation services to the resources and financial services industries. This Report was prepared on behalf of RPM by technical specialists, details of whose qualifications and experience are set out in **Appendix B**.

RPM has been paid, and has agreed to be paid, professional fees for its preparation of this report. However, none of RPM staff or sub-consultants who contributed to this Report has any interest in:

- the Company, securities of the Company or companies associated with the Company; or
- the Relevant Asset;

Drafts of the Report were provided to the Company, for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in the report. This Report is mainly based on information provided by ERD, either directly from the Project site and other associated offices or from reports by other organisations whose work is the property of the Company. The Report is based on information made available to RPM before September 12, 2018.

The title of this report does not pass onto the client until all consideration has been paid in full.



## 2 Introduction and Terms of Reference

### 2.1 Background

RPMGlobal Asia Limited (“RPM”), was requested by Erdene Resource Development Corporation (“ERD”, “Erdene”, the “Company” or the “Client”) to complete a maiden Mineral Resource Technical Report (“MRTR or the “Report”) of the Bayan Khundii Project (“Project” or “Relevant Asset”) for the purpose of the Report’s filing on SEDAR in accordance with the requirements of ‘Canadian National Instrument 43-101’ (“NI 43-101”) of the Canadian Securities Administrators and the Company’s reporting obligations as a Reporting Issuer in Canada.

The Project is contained within the Exploration license Khundii (XV-015569) located in Bayankhongor Aimag, Southwest Mongolia. The license is subject to a 2% Net Smelter Return royalty in favour of Sandstorm Gold Ltd. Erdene has the option to reduce the royalty to 1% by paying C\$1.2 million to Sandstorm on or before April 14, 2019.

ERD is a Canadian based resource company with over 18 years’ experience in precious and base metal exploration in Mongolia.

### 2.2 Terms of Reference

The following terms of reference are used in the Technical Report:

- ERD, the Company and the Client refer to Erdene Resource Development Corporation,
- RPM refers to RPMGlobal Asia Limited and its representatives.
- Project refers to the Bayan Khundii deposit located in south-western Mongolia.
- Gold is described in terms of grams per dry metric tonne (g/t) with tonnage stated in dry metric tonnes.
- Resource definitions are as set forth in the “Canadian Institute of Mining, Metallurgy and Petroleum, CIM Standards on Mineral Resource and Mineral Reserves – Definitions and Guidelines” adopted by CIM Counsel on 30<sup>th</sup> June, 2011

### 2.3 Source of Information

The primary source documents for this report were:

- Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI 43-101 Technical Report prepared by Erdene Resource Development Corp, MacDonald, M.A., March, 2018.
- Applied Petrologic Services & Research (APSAR), 2017. Petrologic Studies of Drill Core from the Bayan Khundii Gold project, Bayankhongor Aimag, Southwest Mongolia. Independent report prepared for Erdene Resource Development Corp., 40 p.
- Badarch, G., Cunningham, W.D., and Windley, B.F., 2002. A new terrane subdivision for Mongolia: implications for the Phanerozoic crustal growth of Central Asia. *Journal of Asian Earth Sciences* 21. Pp. 87-110.
- Buchanan, L.J. (1981): Precious Metal Deposits associated with Volcanic Environments in the Southwest; in Relations of Tectonics to Ore Deposits in the Southern Cordillera; *Arizona Geological Society Digest*, Volume 14, pages 237-262.
- Fossen, H. and Rotevatn, A., 2016. Fault Linkage and relay structures in extensional settings – A review. *Earth Science Reviews*. No. 154. Pp 14-28.
- Kloppenberg, A., 2017. Structural framework analysis, Bayan Khundii and Altan Nar assets, Mongolia. Independent project report 1268 prepared for Erdene Resource Development Corp., 110 p.
- MacDonald, M.A., 2017 Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, National Instrument 43-101 Technical Report. Internal report Erdene resource Development Corp., 67 p.

- Mineral Resource Authority of Mongolia 1:200,000 scale geology maps of Mongolia; include L-47-XXXII, L-47-XXXIII, L-47-XXXIV, K-47-II, K-47-III, and K-47-IV.
- RungePincockMinarco, 2015. Altan Nar and Bayan Khundii Site Visit. Independent report prepared for Erdene resource Development Corp. 21 pp.
- Windley, B.F., Alexeiev, D., Xiao, W., Kröner, A. and Badarch, G. (2007). Tectonic models for accretion of the Central Asian Orogenic Belt. Journal of the Geological Society. No. 164 (1), pp. 31-47.
- Yakubchuk, A. 2002. Geodynamic reconstructions of Mongolia and Central Asia. Internal report for Gallant Minerals.

The key files supplied to RPM included:

- Drilling database – supplied in multiple spreadsheets:
- BKD\_AssayDB\_to\_255\_vFinal.xlsx
- BKD\_Collar\_to\_255\_DGPSv2.xls
- BKD\_Flexit\_Survey\_Combined\_to\_255\_v3.xls
- BKD\_Specific\_Gravity\_v2018-July\_Check.xlsx
- BKD\_Struc Log\_Combined\_To255.xlsx
- BKD-01 to BKD-255\_MagSus.xls
- BKD01-255\_Lithology\_v2.xls
- BKD-VienLog\_BKD-255\_all.xlsx
- ScrMet Assay List\_BKD01-234\_Final.xlsx
- BK\_base\_of\_oxidation.xlsx
- Detailed topographic data were provided by ERD and surveyed by DGPS total station in UTM WGS84 Datum, Zone N47 in end of 2017.

## 2.4 Participants

The Project site was first visited by Executive Consultant Bob Dennis and Resource Geologist Oyunbat Bat-Ochir of RPM, from 18<sup>th</sup> to 19<sup>th</sup> November, 2015. The most recent site visit was carried out by RPM in May 2018 by Tony Cameron and Oyunbat Bat-Ochir. Mr. Jeremy Clark prepared or supervised the preparation of the Resource estimate reported in this Report and is a Qualified Person under National Instrument 43-101 for the Resource estimate. Mr. Clark supervised the work of RPM staff and edited or reviewed all portions of the final report.

Other Project participants included:

- Robert Dennis, Executive Consultant, Geology and Mining, (Brisbane),
- David Princep, Principal Resource Consultant, Geology and Mining, (Perth),
- Oyunbat Bat-Ochir, Resource Geologist, (Ulaanbaatar),
- David Allmark, Senior Consultant Geologist, (Perth),
- Huang Song, Senior Consultant Geologist, (Beijing),
- Andrew Newell, Executive Consultant, Processing, Brisbane; and
- Tony Cameron Executive Mining Consultant, (Beijing).

Details of the key participants' relevant experience are outlined in **Appendix B**.

RPM notes that the Mineral Resource Qualified Person (Mr. Jeremy Clark) has not visited the site, however, as per the requirements of NI 43-101, a Qualified Person (Mr Tony Cameron) has visited the site and assumes responsibility for **Section 4 and 5** of this Report.

## 2.5 Limitations and Exclusions

The review was based on various reports, plans and tabulations provided by the Client either directly from the mine sites and other offices, or from reports by other organisations whose work is the property of the Client. The Client has not advised RPM of any material change, or event likely to cause material change, to the operations or forecasts since the date of asset inspections.

The work undertaken for this report is that required for a technical review of the information, coupled with such inspections as the Team considered appropriate to prepare this report.

RPM has specifically excluded making any comments on the competitive position of the Relevant Asset compared with other similar and competing Au producers around the world. RPM strongly advises that any potential investors make their own comprehensive assessment of both the competitive position of the Relevant Asset in the market, and the fundamentals of the Au market at large.

## 2.6 Capability and Independence

RPM provides advisory services to the mining and finance sectors. Within its core expertise it provides independent technical reviews, resource evaluation, mining engineering and mine valuation services to the resources and financial services industries.

All opinions, findings and conclusions expressed in this Technical Report are those of RPM and its specialist advisors as outlined in **Section 2.4**. Drafts of this report were provided to ERD, however only for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in this Technical Report.

RPM has been paid, and has agreed to be paid, professional fees based on a fixed fee estimate for its preparation of this Report.

This Technical Report was prepared on behalf of RPM by the signatory to this Technical Report whose experiences are set out in **Appendix B** to this Technical Report. The specialists who contributed to the findings within this Report have each consented to the matters based on their information in the form and context in which it appears.

## 3 Reliance on Other Experts

All Sections of this Report, with the exception of **Item 3** were prepared using information provided by ERD or other third parties and verified by RPM, where applicable, or based on observations made by RPM. A list of the reports is provided in **Item 27**.

RPM has specifically excluded all aspects of legal, political, environmental and tax issues, commercial and financing matters, land titles and agreements, excepting such aspects as may directly influence technical, operational or cost issues. RPM has not conducted land status evaluations.

## 4 Property Description and Location

The Project is located approximately 980 km south-west of Ulaanbaatar and 300 km south of the Aimag capital, Bayankhongor City. The nearest towns (soum centres) are Shinejinst and Bayan Undur, located 70 km northeast and 80 km to the north, respectively. The property is also located 40 km west of Erdene’s Zuun Mod molybdenum-copper deposit. An exploration camp was located on the Tsenkher Nomin license from 2013 to 2015. Since 2016, field work has been carried out from ERD’s Bayan Khundii exploration camp on site. Access to the property is primarily by 4WD on sealed road from Ulaanbaatar to Bayankhongor (8 hours). It typically takes 5 hours on regional Mongolian roads from Bayankhongor to Shiinjinst and then another 2 hours to site. The area is sparsely populated with nomadic pastoral activity being the main industry.

The Project is located within a single exploration license in Bayankhongor Aimag in south-western Mongolia. The UTM license centre coordinates are:

- Easting: 484,012 m, and
- Northing: 4,866,207 m (Zone 47N, WGS84).

The general location of the Project is shown in **Figure 4-1**.

### 4.1 Property Ownership

RPM provides this information for reference only and recommends that land titles and ownership rights be reviewed by legal experts.

The Khundii exploration license was first acquired in April of 2010 and is currently in its ninth year of issue (see **Table 4-1**). 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.

The Khundii exploration license is 100% owned by Erdene and is subject to a 2% Net Smelter Return royalty agreement with Sandstorm Gold Ltd. The transaction provides Erdene with a 3-year option (to April 2019) to buy-back 50% of the NSR Royalty for C\$1.2 million, and reduce the Sandstorm NSR Royalty to 1.0%. There are no known environmental liabilities to which the property is subject.

A summary of the license status is provided in **Table 4-1** and the location of the license and Project are shown in **Figure 4-2**.

**Table 4-1 Bayan Khundii Project – Exploration Licence Details**

Property Name	License Number	Province	Date of Issue dd/mm/yy	Hectares	2018 Renewal Fees	Minimum 2018 Work Requirement
Khundii	XV-015569	Bayankhongor	14/04/10	4,514.33	USD 6,771.50	USD 6,771.50

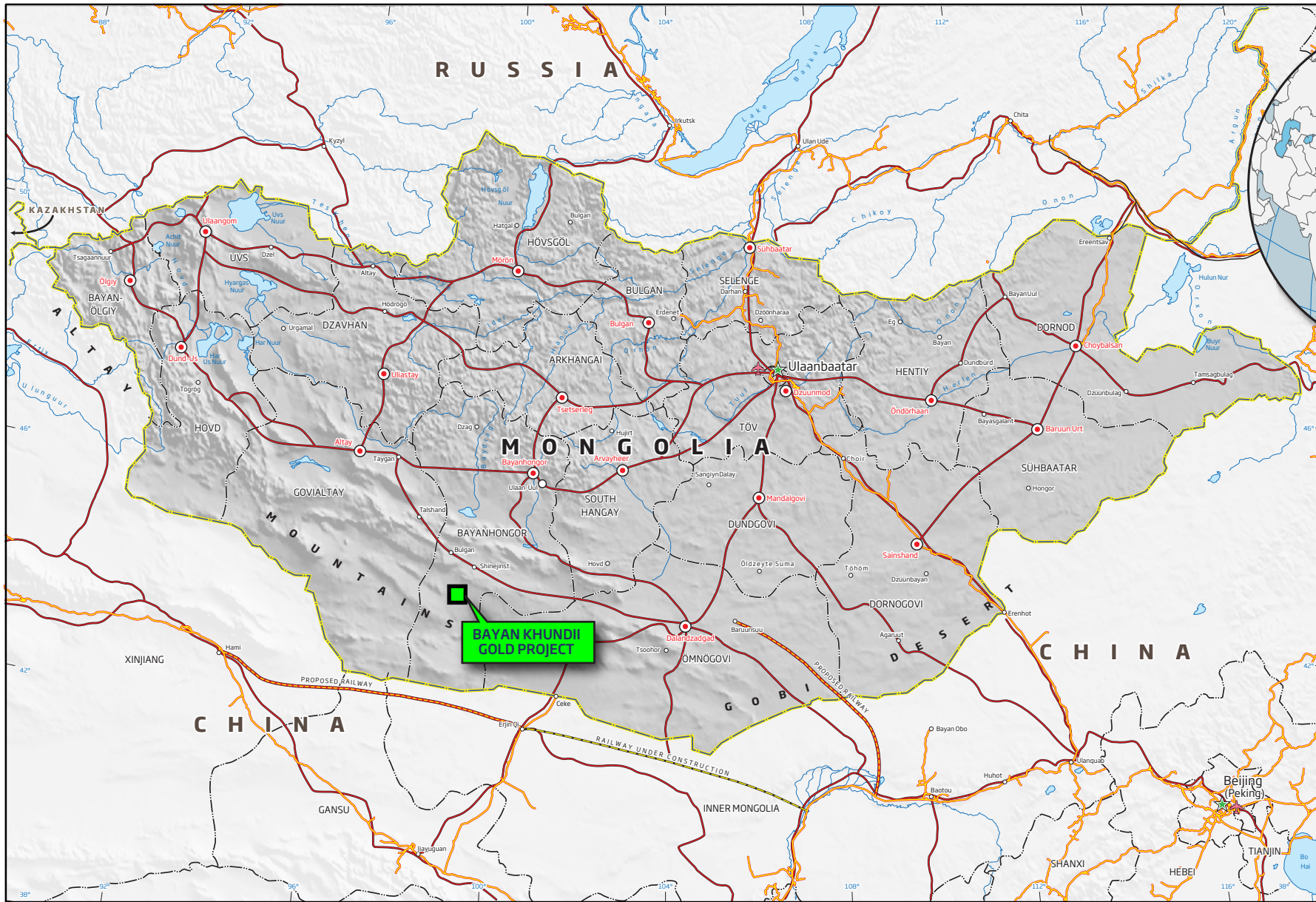
Source: Annual License Document, MRAM, Mongolia

#### 4.1.1 Review of Ownership Documents

RPM was supplied with the MRAM Annual Licence Document which indicates ERD’s ownership of the exploration licence for the Project. RPM reviewed these license details against MRAM data which appears to be currently valid. RPM checked the described license corner points and were found to correspond to the position on the maps provided by ERD. To the best of RPM’s knowledge, the applicable agreements are in good standing, and the representations and warranties given by the parties in each of them remain in effect and are still valid.

Permits required to carry out planned exploration work on the Khundii exploration license include annual environmental bonds and water use permits. These permits were obtained for the 2018 exploration season and in previous years and no issues are envisaged with obtaining these for future exploration. . In advance of the Mining License Application, ERD has commenced baseline environmental studies, however, these studies have not been finalized.

In addition, RPM is not aware of any other issues or liabilities (including surface rights or access) which could impact the future mining operations. RPM notes that ERD will need to obtain additional and separate licenses for water use to support any future mining operation.



LEGEND			
	National Capital		Main Road
	Provincial Capital		International Boundary
	Town, Village		Provincial Boundary
			Major Airport
			Railroad

0 500 1000  
kilometres

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

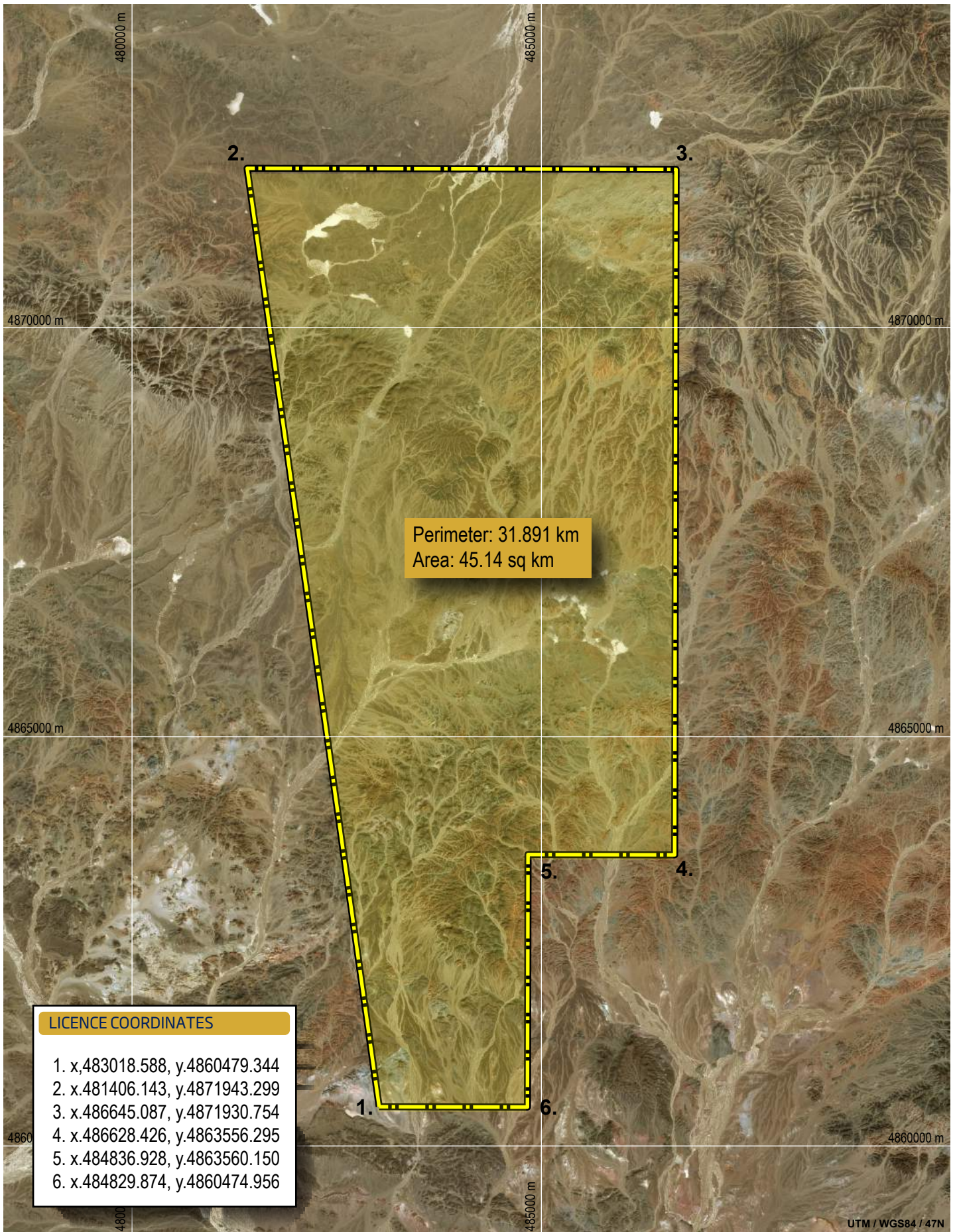
CLIENT

PROJECT

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING **PROJECT GENERAL LOCATION PLAN**

FIGURE No. 4-1	PROJECT No. ADV-MN-00156	Date September 2018
----------------	--------------------------	---------------------



**RPM**GLOBAL



CLIENT



PROJECT

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING **PROJECT LICENCE LOCATION PLAN**

FIGURE No. 4-2	PROJECT No. ADV-MN-00156	Date September 2018
-------------------	-----------------------------	------------------------





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

### 5.1 Accessibility and Infrastructure

The Project is accessible on sealed roads from Ulaanbaatar to Bayanhongor (8 hours), followed by 300 km of unsealed regional gravel roads from Bayankhongor to Shiinjinst (5 hours), then another 2 hours on to site. The Project is located approximately 160 km from the Chinese-Mongolian border. The Project is located 20 km southeast of the Tsenkher Nomin (Altan Nar) exploration license and approximately 80 km southwest of the soum center, Shinejinst.

In 2012-18, a temporary landing strip located 20 km to the northwest (on the 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.

Bayankhongor is the Provincial capital of the Bayankhongor Aimag. Bayankhongor city has a population of approximately 30,000, while the Aimag has a population of approximately 84,000 over an area of 116,000 sq.km.

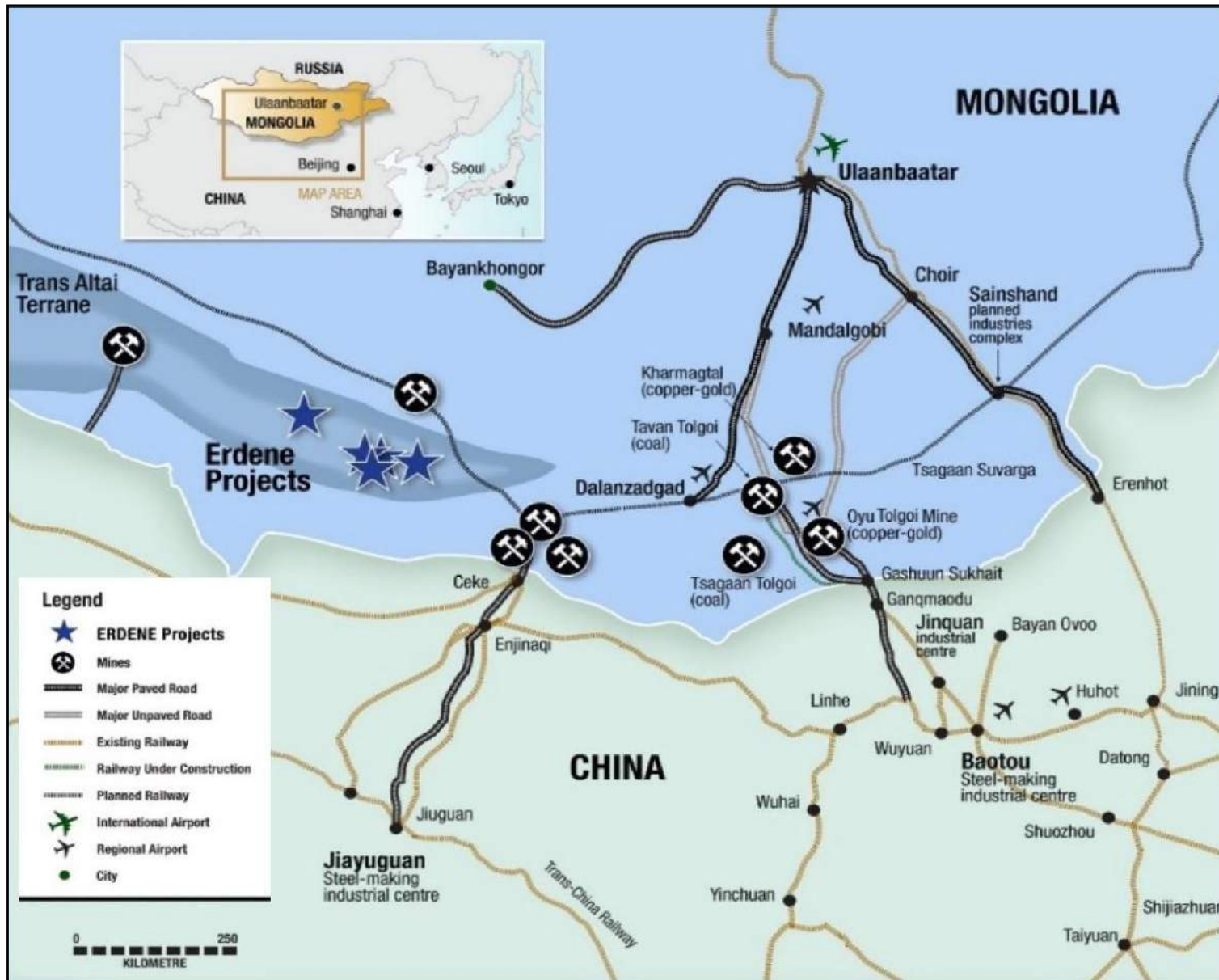
The region hosting the Bayan Khundii and Altan Nar Au projects is one of the least densely populated areas in Mongolia, however, infrastructure to access south-western Mongolia's natural resources from China is developing rapidly. The Project is located approximately 200 km northwest of the Nariin Sukhait mining complex (Ovoot Tolgoi) from which South Gobi Resources (TSX:SGS), TerraCom Limited (ASX:TER) and MAK produce (or have in the past) coal and transport product through the Ceke (PRC) / Shivee Khuren (Mongolia) border point. This border crossing includes a paved eight-lane highway and a major automated railcar coal loading facility with three railway terminals where coal trucked in can be loaded on train and shipped out over the Jiayuguan–Ceke Railway, Ejin–Hami Railway or Linhe–Ceke Railway. Planning is underway to extend the standard gauge rail into Mongolia's coal mining districts refer to **Figure 5-1**.

Having noted that any mining operation would produce only high valued doré' and concentrate which could be trucked and not railed to the border.

### 5.2 Water and Power

In 2017 a Mongolian hydrogeological consulting company on behalf of Erdene carried out a water exploration program in two basins in the vicinity of the Project. This work included the collection of geophysical data (VES and TEM) used to identify possible exploration targets as well as a series of widely spaced drill holes. This study was successful in identifying a preliminary (or inferred) water resource within the Dooloony Tsenkher Basin, a large valley that is 18 km wide and extends to the NW from the Altan Nar Project for approximately 108 km. A potential groundwater source with a 57 litres/second supply potential (P category) was approved by the Ministry of Environment and Tourism in late December, 2017. This newly identified water resource is located approximately 15 km from Altan Nar and 32 km from Bayan Khundii. Additional work will be required to confirm the suitability of the water resource prior to when extraction approval is granted from the Ministry of Environment and Tourism.

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 the near term. Potential future electrical power sources include the recent connection of the Mongolian State Grid with the local sub-province centre (Shinejinst) via a 35 kV line which could be extended. In addition, the Gobi region has conditions supportive of renewable solar and wind generated power. Through an initiative of the International Finance Company, a study of renewable energy supply options at the Bayan Khundii and Altan Nar projects has been completed. The renewable energy study provided a preliminary, site-specific business case for renewable energy as well as the potential co-benefits of integrating renewables into a future mine in terms of supporting Mongolia's pledges towards the Sustainable Development Goals. The viability of these options needs to be studied in detail in future studies.



CLIENT



PROJECT

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING **ERD PROJECTS AND INFRASTRUCTURE**

FIGURE No. 5-1

PROJECT No. ADV-MN-00156

Date September 2018

### 5.3 Climate and Physiography

The topography of the 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 regional 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 Project area, much like all of Mongolia, is subject to high wind conditions and 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 History

The Bayan Khundii Project is a greenfield discovery first discovered in 2015. 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 prior to Erdene's involvement.

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 Au in the general area. The Company's extensive regional exploration program led to multiple Au discoveries highlighted by Erdene's Altan Nar Au deposit 20 km north, Nomin Tal, Altan Arrow and Bayan Khundii.

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 6-1**).

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 which were as follows.

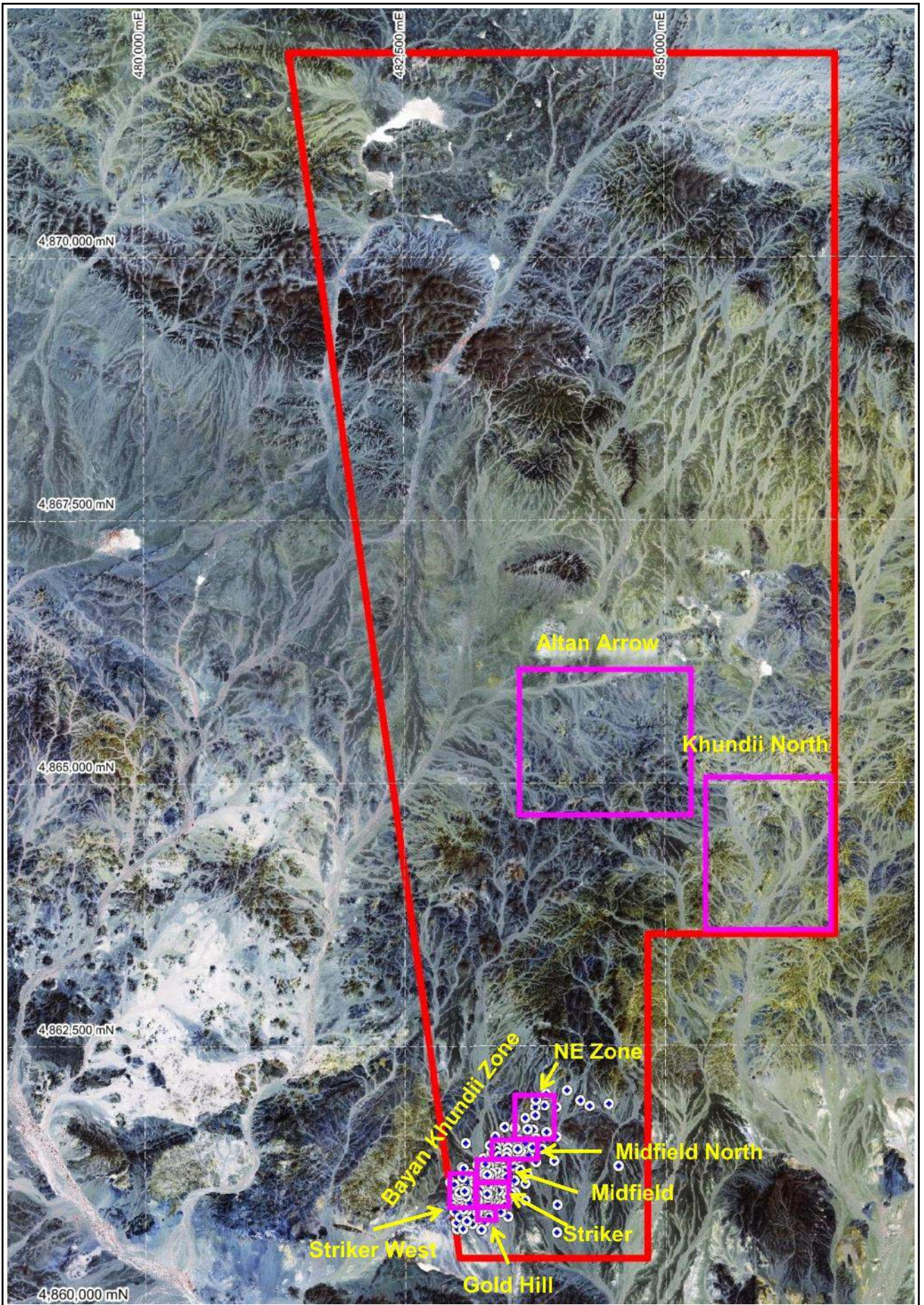
- The first is a structurally controlled (fault) northeast-trending zone, in-filled with low temperature quartz veins and breccia referred to as the Main Zone. A number of rock chip samples from this zone returned Au values ranging from 0.5 g/t to 2 g/t. Highly anomalous Pb (up to 0.5%) and Mo (up to 745 ppm) were associated with the high Ag values in rock chips.
- 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 Au 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. Four trenches were excavated across the mineralized Main Zone and one trench was excavated across an area hosting high-grade Au mineralization within epithermal quartz veins.

Results indicate the Main Zone consists of a 1 m to 11 m wide quartz breccia zone. This breccia is multi-stage and has hydrothermal-epithermal characteristics with anomalous however somewhat low Au concentrations (7m @ 0.29 g/t Au) and positive Ag-As-Sb inter-element geochemical correlations.

- 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 Au values, including 56.6 g/t Au and 9.5 g/t Au, in the quartz veins within the SE block.

While the exploration results at Altan Arrow were encouraging, most of the exploration efforts through mid-2015 were focused on the Company's Altan Nar project on the nearby Tsenkher Nomin license. The identification of high-grade Au 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 Au mineralization associated with a zone of intensely altered (quartz-illite) pyroclastic lithologies located ~5 km south of Altan Arrow. This area, referred to as the Bayan Khundii (Rich Valley) Project refer to **Figure 6-1**, was the focus of a detailed exploration program carried out in 2015 - 2017 which is summarized in the subsequent sections of this Report, and underpins the Mineral Resources reported in this Report.



# RPMGLOBAL

LEGEND	
	Drillhole
	Khundii License
	Main Prospects

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

ERDENE  
RESOURCE DEVELOPMENT

PROJECT		
NAME	Bayan Khundii Resource Estimate Technical Report	
DRAWING	Khundii License and Main Prospects	
FIGURE No.	PROJECT No.	Date
6-1	ADV-MN-00156	September 2018

## 6.1 Previous Mineral Resources

No previous Mineral Resource Estimates for Bayan Khundii Gold Project have been published that RPM is aware of.

## 6.2 Historical Production

No historic mining has been completed on the Project area.

## 7 Geological Setting and Mineralization

The majority of the regional geology information presented below has been summarised from the Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

### 7.1 Regional Geology and Tectonic Setting

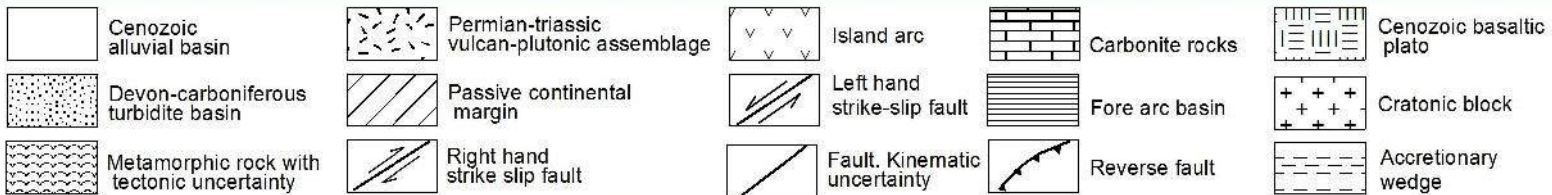
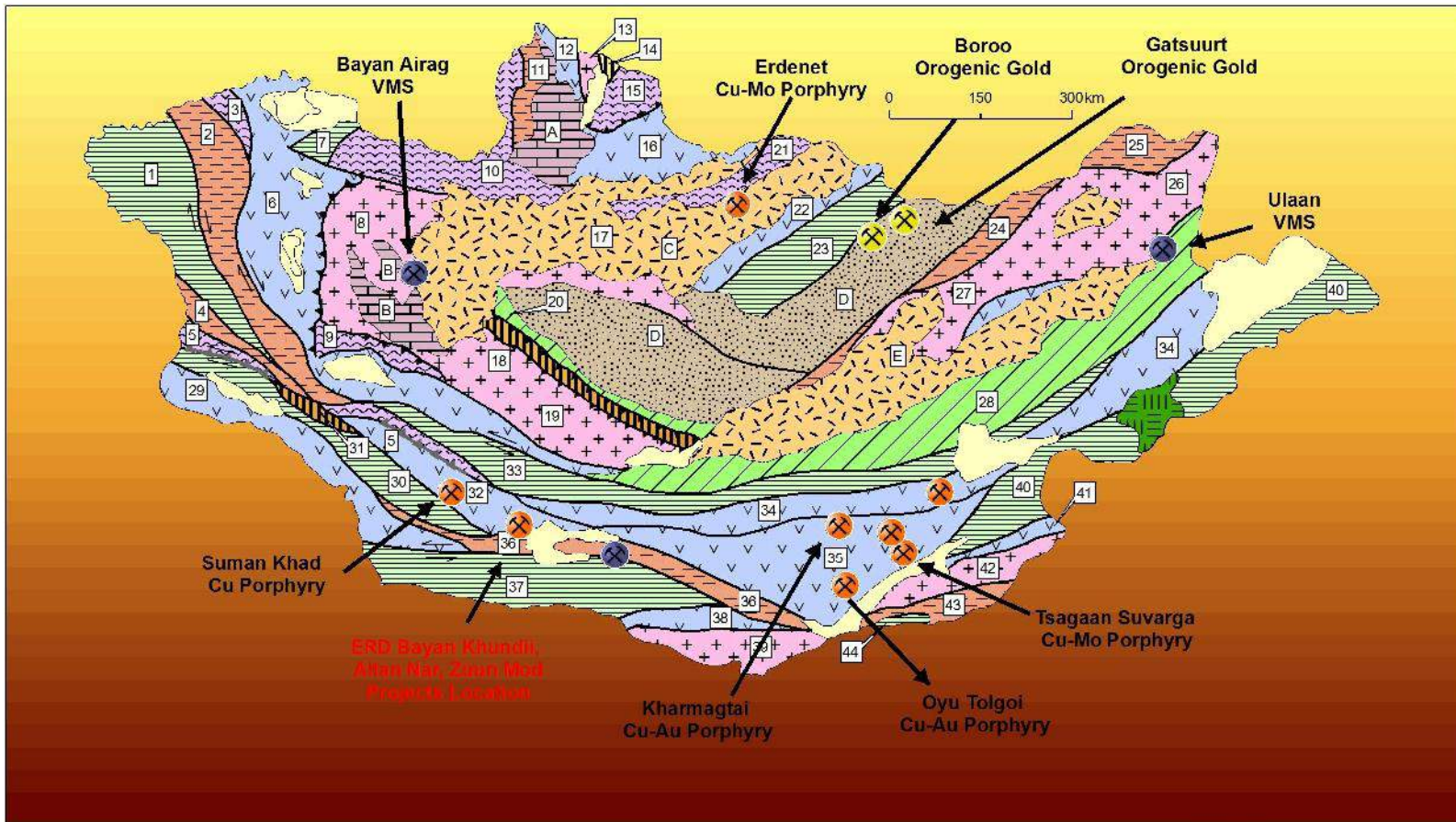
The Khundii exploration license is located within the Edren island arc terrane, as described by Badarch et al. (2002), which is part of the larger composite Trans Altai Terrane ("TAT") and is comprised by island arc terranes, back-arc and fore-arc basins, and ophiolite, accretionary wedges and metamorphic terranes. The TAT forms part of the western end of the large, composite, arcuate-shaped Paleozoic New Kazakh-Mongol Arc terrane ("NKMA") as described by Yakubchuk (2002). The NKMA is part of the Central Asian Orogenic Belt (CAOB; Windley et al., 2007) and extends along the southern margin of Mongolia, including the border region with China, and is host to the Oyu Tolgoi copper-gold porphyry mine to the east (**Figure 7-1**) and the Tian Shan Gold Belt to the west.

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 in the region near Erdene's license areas is comprised of three tectono-stratigraphic terranes (**Figure 7-1**) 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 pyroclastic rocks with interbedded shallow marine sedimentary rocks. The upper portion of the Baraan terrane consists of non-marine sedimentary rocks.
- **Edren Island Arc Terrane**, consists of a lowermost minor sequence of mafic volcanic rocks that are overlain by an interbedded sequence of intermediate volcanic and pyroclastic rocks, shallow marine clastic deposits, and minor turbidite sedimentary rocks. This sequence is overlain by rhyolite and alkaline volcanic and pyroclastic rocks. The uppermost portion of the Edren terrane is dominated by non-marine sedimentary deposits.

All three tectono-stratigraphic 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 (**Figure 7-1**).

In addition to the three main tectono-stratigraphic terranes noted above, the TAT also includes the Baytag island arc terrane, the Bidz ophiolite complex, the Tseel metamorphic terrane, and the Hovd and Turgen accretionary wedge terranes.



A-Khuvsgul basin, B-Tsagaanolom basin, C-Selenge zone, D-Khangay-Khenti basin, E-Dundgobi zone.

Terrane name: 1-Altay, 2-Khvod, 3-Tsagaanshuvuut, 4-Turgen, 5-Tseel, 6-Nuur, 7-Agardag, 8-Zavkhan, 9-Dariv, 10-Sangilin, 11-Khug, 12-Darkhad, 13-Gargan, 14-Ilchir, 15-Khamardavaa, 16-Jid, 17-Tarvagatay, 18-Baidrag, 19-Bayankhongor, 20-Zag, 21-Buteel, 22-Bayangol, 23-Kharaa, 24-Adaatsag, 25-Duchgol, 26-Ereendavaa, 27-Kherlen, 28-Idermeg, 29-Baytag, 30-Baaran, 31-Bij, 32-Edren, 33-Gobialtay, 34-Mandalovoo, 35-Gurvansaikhon, 36-Zoolon, 37-Atasbogd, 38-Khashaat, 39-Tsagaanuuul, 40-Nukhtdavaa, 41-Yenshoo, 42-Khutaguul, 43-Sulinkheer, 44-Duulgant.



## 7.2 General Geology of Eastern Trans Altai Terrain

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 pyroclastic rocks, minor felsic (rhyolite) volcanic and pyroclastic 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 sq.km) 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 Jurassic 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 extensional tectonics resulting in large graben structures during the 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 Jurassic to Quaternary sedimentary rocks that thickens toward the northern basin margins, to at least 450 m depth, and interpreted as half-graben extensional structures. Based on observations elsewhere in the eastern TAT, basin thicknesses may range from 200 m to as much as 1,500 m.

## 7.3 Geology of Khundii Exploration License

The bedrock geology of the Khundii license area (**Figure 7-2**) is dominated by a sequence of Devonian and/or Carboniferous volcanic (andesite, andesite porphyry) and pyroclastic rocks (ash, lapilli, and block and ash tuffs). These were intruded by Carboniferous intrusions, with these rocks unconformably overlain by Jurassic volcanic and sedimentary units. All rocks in the region are overlain by unconsolidated sediments of Quaternary or Recent age. Geochronological constraints are based on the 1:200,000 scale regional mapping completed by the Mineral and Petroleum Authority of Mongolia (MPRAM). No detailed geochronological work has been undertaken to determine the ages of either host rocks or mineralized material at Bayan Khundii.

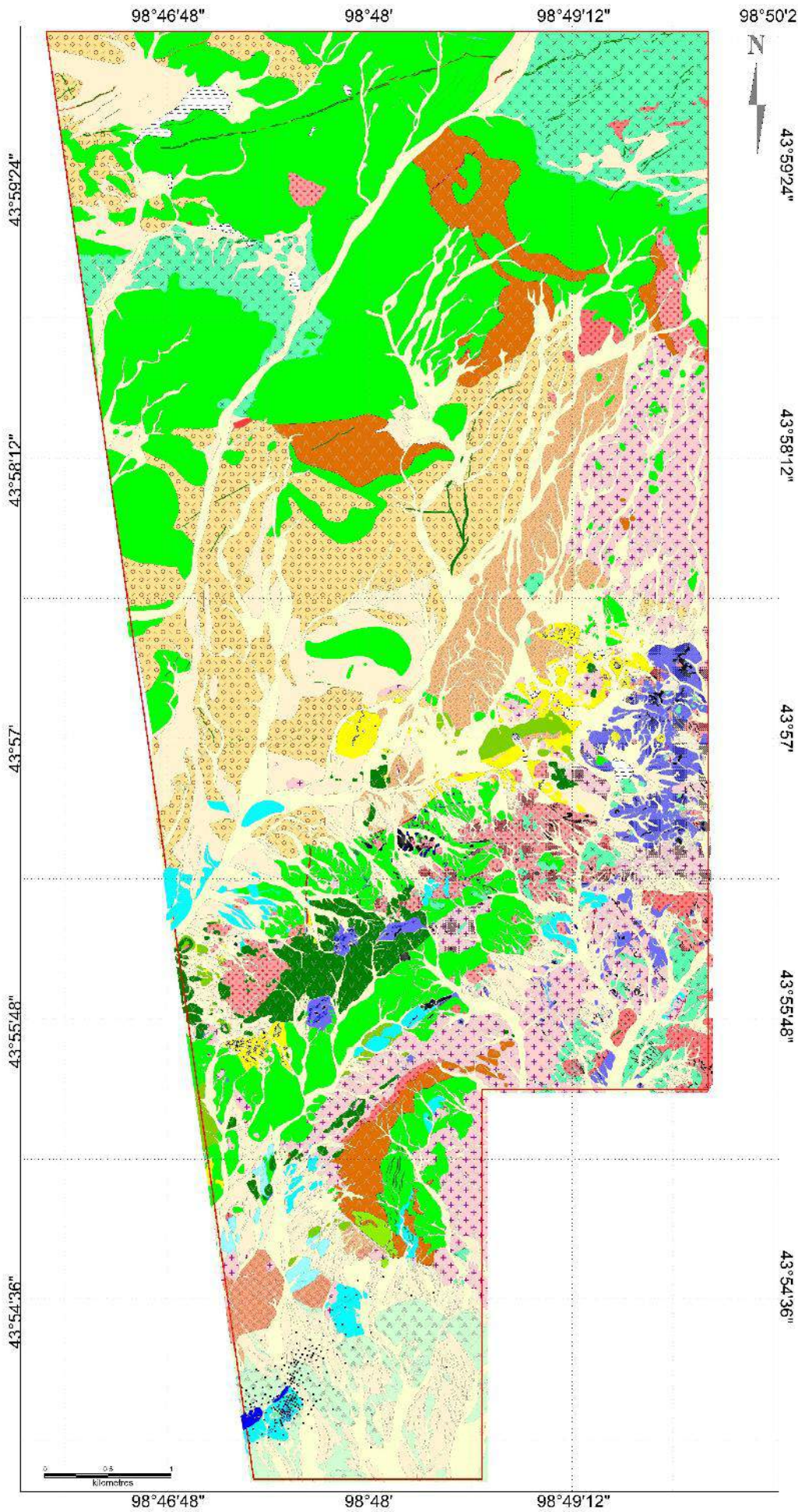
Carboniferous volcanic rocks are present throughout the license area and include several texturally-distinct units of intermediate composition including andesite, porphyritic andesite and basalt. A unit of block and ash tuff is the dominant lithology in the west-central part of the license area. Pyroclastic 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. Pyroclastic rocks include lapilli and ash tuff, and welded tuff with very minor block and ash units. Fine grained Devonian andesite to the northeast of Bayan Khundii was intruded by a series of dacite porphyry plugs which are also interpreted as Devonian.

Carboniferous granitoid rocks intrude both the Devonian and Carboniferous volcanic and pyroclastic 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, syenite and quartz syenite.

Most Jurassic volcanic rocks are present in the southern part of the license area and consist mostly of basalt (commonly amygdaloidal) units. In addition, a Jurassic 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 disconformably underlies the Jurassic volcanic rocks. Jurassic lithologies have been observed to unconformably overlie the older Devonian and Carboniferous lithologies.

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, Jurassic 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-, northwest- and east-west trending faults were inferred in the license area and these 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 Jurassic lithologies. A detailed structural study at Bayan Khundii and surrounding areas puts these faults into a regional context and are interpreted to represent arc-parallel and arc-normal faults, including northeast-trending extensional faults interpreted as associated with the low sulphidation Au mineralization (see **Section 7.4.4 Structure** for additional details).



LEGEND	
<b>Devonian</b>	
	Medium grained Andesite Porphyry
	Dark green Andesite
	Andesite
	Dacite Porphyry
	Fine grained Ash Tuff
	Lapilli Tuff
	Block Lapilli Tuff
<b>Jurassic</b>	
	Sand stone, Tuff, Siltstone, Conglomerate
	Basalt
<b>Quaternary</b>	
	QIII-IV Sediment
	QIV Sediment
	QIV Sediment
<b>Intrusion</b>	
	Quartz Monzonite, Monzodiorite, Granodiorite
	Syenite
	Quartz Syenite Porphyry
	Fine grained alkaline Granite
<b>Alteration</b>	
	Quartz-Muscovite-Tourmaline
	Quartz-Tourmaline Metasomatite
	Tourmaline
	Secondary Quartz
	Strong silicified
	Quartz illite altered Tuff
	Smegite-illite altered Tuff
	Advanced Argillic

0 0.5 kilometres

0 250m 500m

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

PROJECT

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING **Khundii License Geology Map**

FIGURE No. 7-2	PROJECT No. ADV-MN-00156	Date September 2018
-------------------	-----------------------------	------------------------

## 7.4 Bayan Khundii Project Geology

The Bayan Khundii project and surrounding areas were mapped in detail during the 2015, 2016 and 2017 field seasons, with field data collected along foot-traverse lines. The geology map for the Bayan Khundii project area is shown in **Figure 7-3**. 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 Pyroclastic Rocks

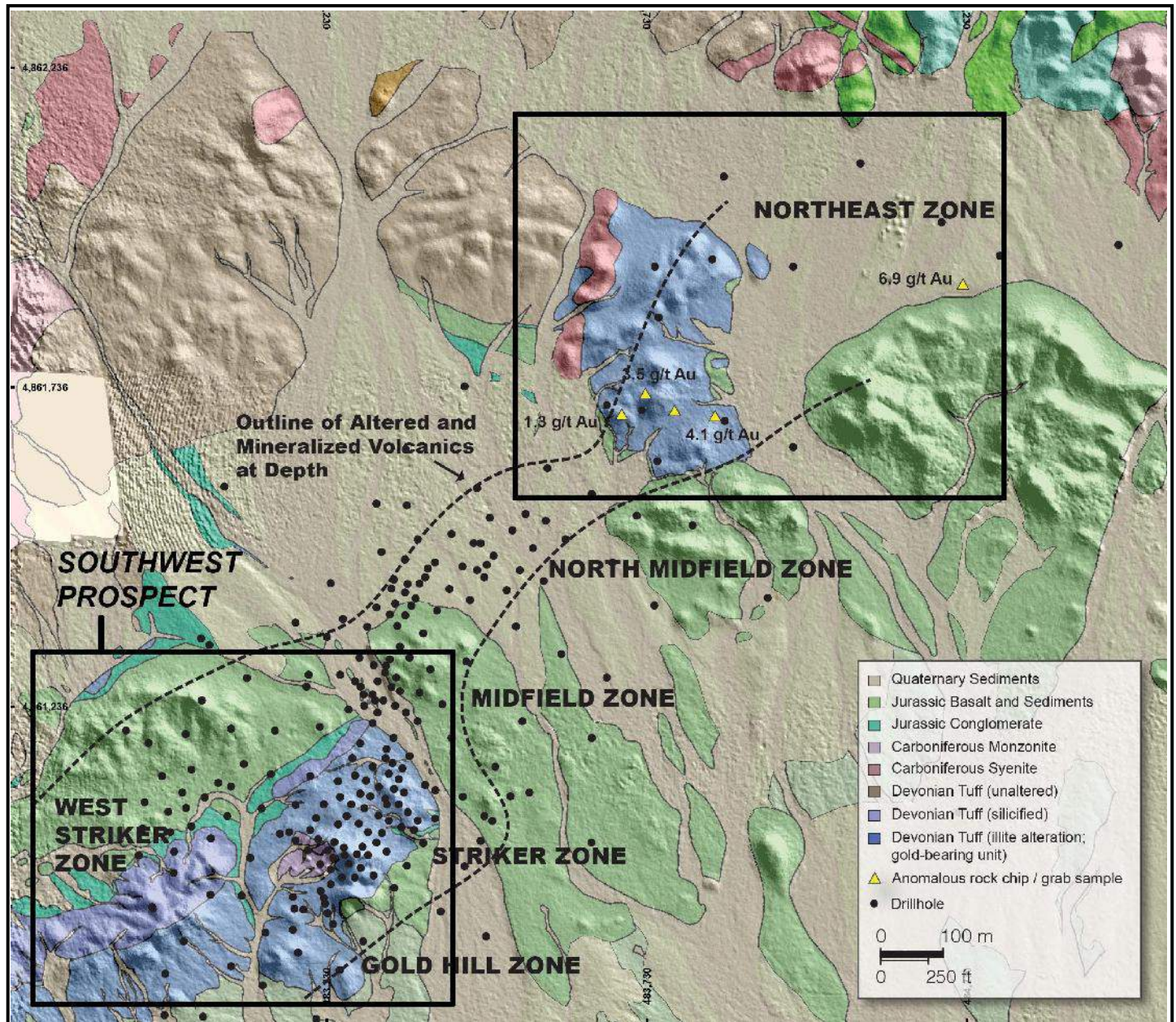
The oldest rocks at Bayan Khundii, and the host rocks for Au mineralization, include a sequence of intensely silicified and illite-altered pyroclastic rocks. Pyroclastic lithologies include fine- and coarse-grained lapilli tuffs (i.e. containing lithic fragments <2cm and >2-6cm respectively), ash tuffs (fragments < 2mm; 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 and 2017 indicates these altered rocks extend beneath adjacent Jurassic cover over an approximately 1.5 by 0.4 kilometre area (**Figure 7-9**).

The 1:200K scale government geological map that covers the Khundii license (MPRAM 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, pyroclastic sandstone and conglomerate, and granitoid intrusions. Erdene geologists interpreted the tuffaceous rocks at Bayan Khundii to be part of the Devonian Baruuunhurai Formation.

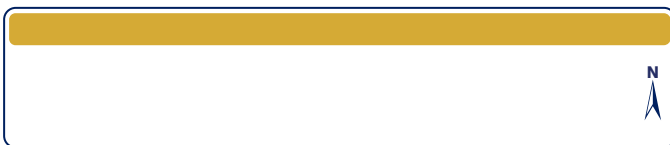
Intense quartz-illite hydrothermal alteration has replaced most primary minerals in these tuffaceous rocks, giving the lithologies a pervasive medium grey colour in outcrop, and making identification of the protoliths difficult, even in fresh drill core. Observations from outcrop and surface trenches 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 dominant northeast-southwest strike trend and dip at approximately 40° to 45° to the northwest. Recent structural analysis of oriented drill core from parts of the Midfield Zone, coupled with field observation in the Northeast Prospect area, indicate that lithologies may also have northwest and east-west strikes with variable dips.

The rocks underlying the Striker and Gold Hill Zones (**Figure 7-9**) are mostly fine and coarse-grained lapilli tuffs with fine grained matrix comprised of lithic and crystal fragments. Coarse grained lapilli tuffs have common coarse (mo 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 (**Figure 7-5** and **Figure 7-9**) lapilli tuffs have minor interbedded massive to finely-laminated ash tuff layers (**Figure 7-3**). 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 (i.e. in-filled gas bubbles).

Several siliceous zones were observed (**Figure 7-3**), including a zone at Gold Hill (~75m x 125m), where they form prominent topographic high features (**Figure 7-4**). Smaller and less intense silicified zones (~10m x 50m) 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 7.5.3**). 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.



**RPM**GLOBAL



DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT



PROJECT

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING **BAYAN KHUNDII PROJECT GEOLOGY MAP**

FIGURE No. 7-3

PROJECT No. ADV-MN-00156

Date September 2018

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 m 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 (**Figure 7-4**). 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 indicating a complex relationship between tourmaline alteration and veins, and quartz vein formation.

**Figure 7-4 Panorama of Bayan Khundii Project Area (Looking Northeast from West ridge)**

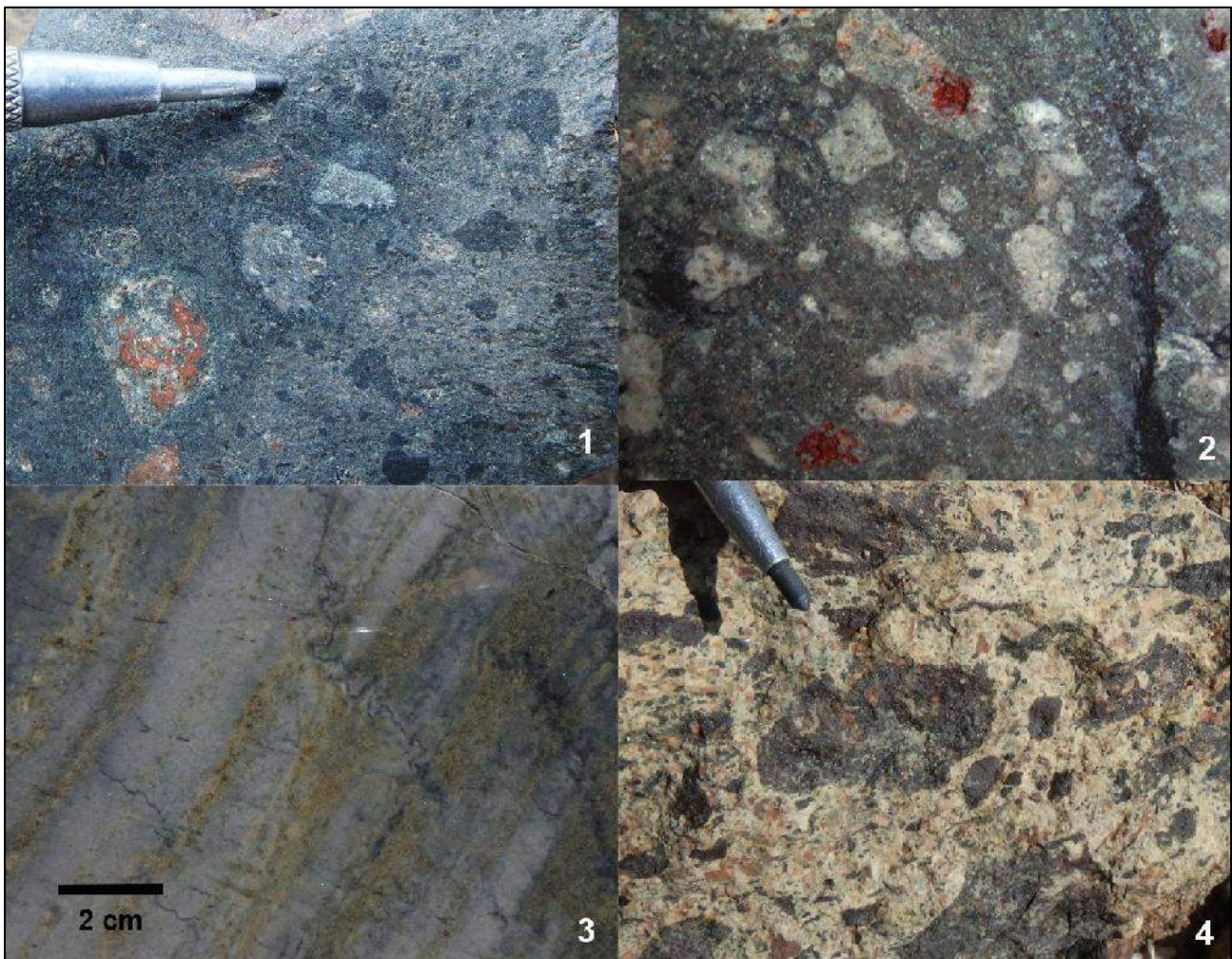


Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

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'.

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.

Figure 7-5 Photographs of Pyroclastic Rocks



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

Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

#### 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, to the west of Gold Hill (**Figure 7-4**). This monzonite was intersected in the top of several drillholes 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 m, in drillhole 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-m wide contact zone. Tourmaline alteration of monzonite was observed in a three m wide zones 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 m of drillhole BKD-38, located approximately 250 m 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 post-dated the Au mineralization event.

Most drillholes in 2016 and 2017 intersected fine- and medium-coarse-grained syenite beneath the Bayan Khundii mineralized zones (**Figure 7-8**), which is interpreted as a widespread post-mineralization intrusion. The NE-trending syenite intrusion that cross-cuts the Northeast Zone (**Figure 7-3**) is interpreted as a surface exposure of this underlying intrusion. Drillhole BKD-96 which was drilled in 2016 and intersected several metres of syenite at the bottom, was extended for approximately 100 m in 2017 with the extension intersecting syenite to the bottom of the hole. Accordingly, the syenite intersected in drilling to date is interpreted as the top of a large intrusion, although the possibility of it being a thick sill cannot be ruled out. 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. Zones of magnetite alteration were observed to straddle the syenite-tuff contact in several holes, with alteration extending for several metres either within the syenite or host tuffs. This alteration is not associated with an increase in Au grades and is interpreted as a post-mineral contact metamorphic effect (i.e. skarn).

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 drillhole BKD-41 in the Northeast Zone and several dykes in the Midfield Zone, ranging in thickness from 1 to 12 metres wide, (drill holes BKD-60, 95, 98, 99) and two separate narrow aplite dykes in holes located several hundred m east and west of the Striker Zone (BKD-38 and -39 respectively). The granitic dykes in BKD-98 and 99 are proximal to large quartz-adularia veins with abundant visible Au and were observed to be moderately altered. Similarly, the large dyke in BKD-60 was noted to be altered and had Au mineralization, suggesting that these dykes may have been either pre- or syn-mineral in origin. Some of the aplite, quartz syenite and granite porphyries may be late differentiates from the underlying syenite intrusion at depth. The syenite intrusion that underlies the mineralized tuffs is interpreted as post-mineral and possibly of Carboniferous age, whereas the age of the altered dykes is unclear although the presence of Au mineralization the dyke in in BKD-60 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 Jurassic Rocks

Jurassic 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° strike and shallow dips to the south (from 10-25°, avg. ~ 18°). 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 Jurassic Bayanshiree Formation, according to the Mongolian Stratigraphic classification. Several drillholes 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 2018.

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

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 NW-SE, N-S and E-W trending linear valleys may reflect contact zones or structures, possibly faults.

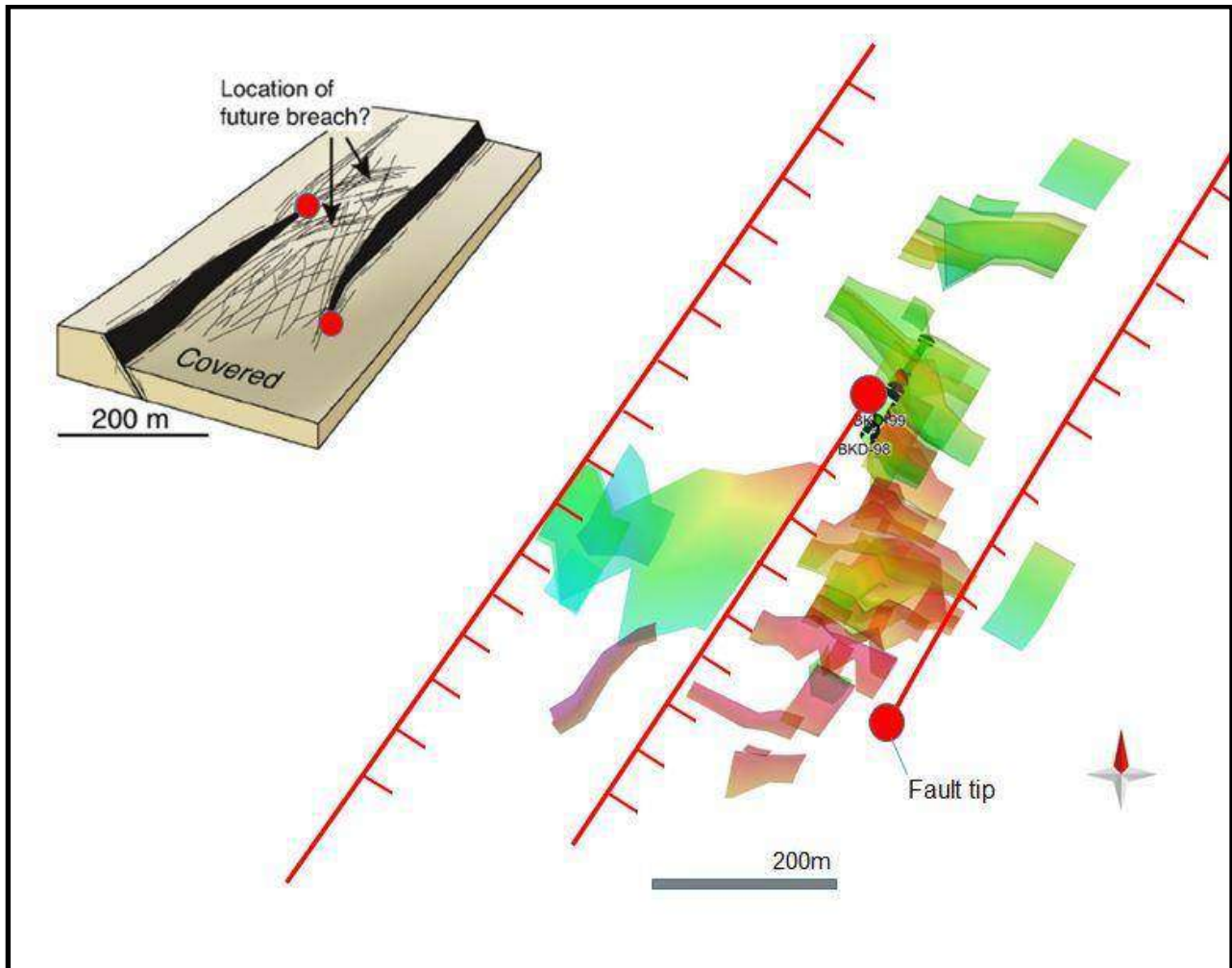
### 7.4.4 Structure

In Q3-Q4 2017 Dr. Armelle Kloppenberg, 4DGeo, was engaged to complete a comprehensive structural analysis of Bayan Khundii and the surrounding region including the area around Erdene's Tsenkher Nomin license which hosts the Company's Altan Nar deposit. The following are highlights from this structural analysis:



- **Overall Structural Model:** Consists of a series of tilted, extensional, domino-style fault blocks with NE-trending, SE-verging extensional faults:
  - The main NNE-trending mineralized Striker-Midfield-North Midfield zone is interpreted as a 'relay ramp' (Fossen and Rotevatn, 2016) whereby stress is transferred from the ends ('tip points') of adjacent NE-trending, SE-verging extensional faults via a series of parallel structures (Figure 7-6);
  - The formation of the parallel structures within the relay ramp is thought to explain the SSE-trending, SW dipping 'stacked vein zones' at Bayan Khundii;
  - The limited post-Jurassic tilting observed in the volcanic and sedimentary units (~10-25° SW) also modified the dip of the epithermal veins, currently ~45°;
  - The proposed model of NE-trending / SE-dipping extensional faults and 'domino-style' fault blocks at the Project can be used to explain the abrupt changes in alteration and geochemistry observed between Striker West and Striker-Midfield zones (e.g. white mica/illite alteration intensity, K<sub>2</sub>O concentration), with successive blocks to the southeast representing down-faulted blocks;
- **NW-trending Structure between Striker and Midfield zones:** A major NW-trending fault through the NE end of the Striker Zone is interpreted to have formed over a basement structure with individual N-trending en-echelon faults at surface that are interpreted to coalesce at depth. The structural report proposes that the Midfield block was down-faulted with respect to the Striker Zone along this fault.
- **Fault Timing:** Many of the faults at the Project are thought to have been active in Devonian and were re-activated such that they displaced Jurassic sedimentary and volcanic units. The report suggests that the NE-trending faults were the earliest faults and NW-trending faults are younger and have off-set the earlier NE faults. The report also suggests that Jurassic units may have in-filled fault-bounded paleo-valleys.
- **Under-represented Veins:** The report notes that there is a NE-trending/SE-dipping vein set (dip= Az. 120°/50°; strike =030°) that is sub-parallel to the predominant azimuth of Erdene's drilling to date and is therefore an under-represented vein set. Erdene drilled several holes in the 2018 drill program to test the abundance of these veins. Results from this work indicated only a few NE-trending veins, thus indicating that these veins orientations were not under-represented in previous drilling.
- **NE Extensional Faults:** The report suggested that the NE-trending, SE-verging extensional faults that bound the Striker-Midfield zones may have been active during the mineralizing event and may host auriferous veins. A hole was drilled during the Q4 2017 program to test this hypothesis, although no evidence for mineralized veins in NE faults were observed.
- **Metre-scale Veins in Midfield:** The multiple metre-scale veins in Midfield (e.g. in drillholes BKD-98, BKD-99) are interpreted as forming at the intersection of the NE-trending/SE-verging and NW-trending/NE-verging extensional faults and are thought to represent zones of dilatancy, possibly representing 'feeder zones'. As noted above, drilling in Q2 2018 was successful in testing of the feeder zone concept at the intersection of a deep-seated northwest-trending fault and the interpreted relay ramp structure in the Midfield Zone, and returned an average of 34.4 g/t Au over 7 m (BKD-244) from the widest zone of Au-bearing quartz-adularia veins intersected to date at Bayan Khundii.
- **Bedding Orientation:** Data from outcrop and oriented core measurements indicate that bedding in Striker and peripheral areas of the Project have NE strike and NW dips whereas the lithologies in the NE and Midfield zones have NW-trending/SW-dipping orientations. The report suggests that these SW dips may reflect deposition in active (re-activated) half grabens and do not represent a widespread (i.e. terrane-wide) tilting event.
- **Jurassic:** Flood basalt flows were interpreted as being deposited in fault-bounded paleo-valleys. The NW-trending valley fill shows tilting of the basalts, indicating reactivation of extensional faults (i.e. to form half-grabens). These Jurassic faults have offset the Bayan Khundii mineralized system.

**Figure 7-6 Proposed model for Explaining the NNE Trend of the High-Grade Striker-Midfield Mineralized Zone**



Cartoon in upper left is from Fossen and Rotevatn (2016). The model consists of a 'relay ramp' where stress is transferred between the fault tips on 2 adjoining extensional faults. Extensional faults are not likely to be straight, and probably consist of a series of structures within a fault zone, rather than one single discrete fault plane. This proposed model explains the limited lateral extent of SSE-trending, SW-dipping mineralized zones.

Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

## 7.5 Mineralization Style

Mineralization at Bayan Khundii consists of Au ± Ag in massive-saccharoidal, laminar and comb-textured quartz ± hematite veins, multi-stage quartz-adularia-chalcedony ± hematite veins, quartz-hematite breccias, along late fractures (±hematite/ specularite), and as disseminations within intensely illite-quartz altered pyroclastic rocks, where it is commonly associated with hematite that partially or completely replaced pyrite grains. No Au ± Ag mineralized veins or breccias have been noted in the unconformably overlying Jurassic sedimentary rocks or basalt, indicating these rocks represent 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. A strongly mineralized 1-m interval (51.2 g/t Au) of basal conglomerate was intersected directly above altered and mineralized tuff in the Midfield Zone (BKD-95). Petrographic analysis by New Zealand-based petrographic consultants, APSAR, identified several Au grains associated with acicular tourmaline within iron-magnesian-calcium carbonate facies that have replaced the matrix of the basal conglomerate. The origin of this Au mineralization is unclear, however, the petrographic evidence suggests the

Au mineralization is 'paragenetically associated with tectonic and hydrothermal overprinting of the thermally metamorphosed and metasomatized sedimentary rock' (APSAR, 2017). The Au mineralization and associated carbonate-tourmaline alteration is restricted to the Devonian-Jurassic contact zone and may reflect post Jurassic hydrothermal activity along the contact.

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 Northeast 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 Gold Hill, Striker, Midfield and Midfield North zones and the results from recent drilling in these zones is presented below in **Section 10.0**. 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 Au), and two rock chip samples collected from the NE Extension area returned Au assay values of 6.9 and 0.4 g/t Au (**Figure 7-3**). Seven holes were drilled in and around the Northeast Zone in 2017 with some encouraging results. For example drillhole BKD-122 contained a 2 m wide zone that averaged 4.43 g/t Au within a 14 m interval averaging 0.75 g/t Au and a separate 21 m wide zone that averaged 0.72 g/t Au. Similarly, drillholes BKD-121, -123 and -186 returned anomalous Au values with numerous 1 and 2 m-wide zones returning low Au concentrations (e.g. 0.1 to 0.3 g/t Au). The Northeast, and Northeast Extension Prospect areas will be investigated further during the 2018 exploration program. The remainder of observations in this section are based on mapping, trenching and drilling within the Gold Hill, Striker, Midfield and Midfield North zones.

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 Au was observed in numerous drill holes, with no significant sulphide material present except for very minor, finely disseminated pyrite encountered in a few drillholes.

A total of 138 new drill holes and 11 extensions of previously holes were drilled in 2017 for a total of 26,732 m. Details of the drill program are given in **Section 10** of this report. Results from the 2017 drill program: 1) confirmed the orientation, grade and continuity of mineralization between the Striker and Midfield zones; 2) extended Au mineralization down-dip to the south within the Midfield and North midfield zones; 3) discovered a new zone to the east of Midfield Zone beneath Jurassic cover rocks; and 4) established continuity of grade within the West Striker Zone.

Gold mineralization is mostly hosted in parallel NW-SE trending, moderately-dipping (~45°) zones that range in width from 4 to 149 m (**Figure 7-8**). Drilling in 2015, 2016, 2017 and 2018 has confirmed that Au mineralization in Bayan Khundii consists of a series of high-grade mineralized zones with good continuity that occur within broad low-grade halos as shown in **Figure 7-8** and outlined in **Table 7-1**. Several wide mineralized zones were encountered in the 2017 drilling, including: 131.5 m averaging 3.86 g/t Au in BKD-98; 105.4 m averaging 3.55 g/t Au in BKD-99; 108.3 m averaging 2.82 g/t Au in BKD-110; and 75 m averaging 2.20 g/t Au in BKD-222. Drilling in Q2 2018 intersected multiple very high Au grade intervals, including: 18 m of 21.6 g/t Au, including 2 m of 169 g/t Au (BKD-238); 37 m of 4.4 g/t Au, including 2 m of 50.5 g/t Au (BKD-241); 10 m of 16.9 g/t Au, including 2 m of 17.5 g/t Au and 2 m of 56.8 g/t Au (BKD-242); 12 m of 11 g/t Au, including 3 m of 35.6 g/t Au (BKD-245); and 81 m of 2.6 g/t Au, including 17 m of 9.2 g/t Au (BKD-254).

### 7.5.1 Visible Gold

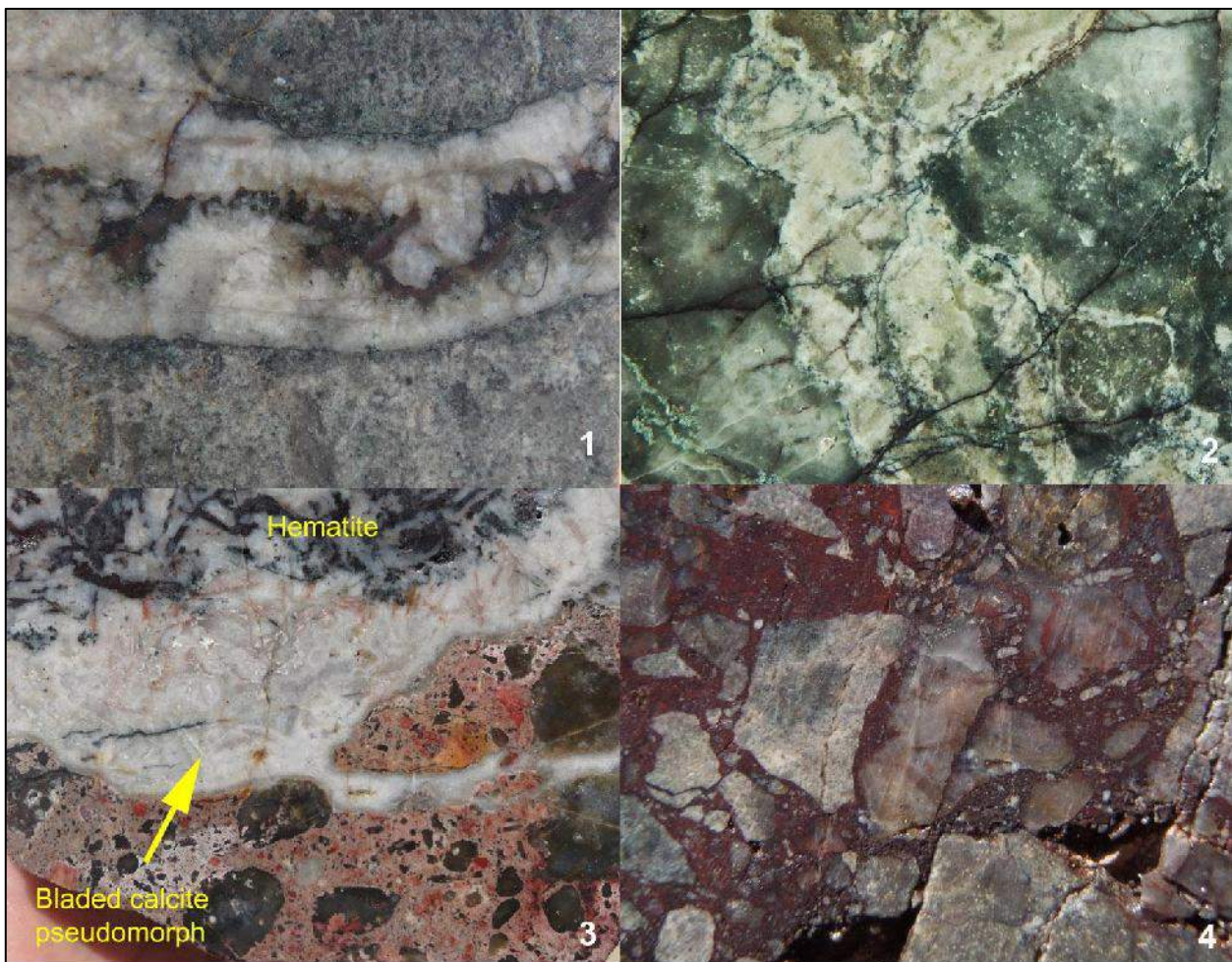
Visible Au (VG) was noted in 31% of the holes drilled from 2015 to 2017 at Bayan Khundii (N=73). It should be noted that visible Au is not always a good indicator of Au grade as numerous samples have returned moderate to high Au values for samples where no visible Au was noted during logging. Visible Au was observed in several modes of occurrence (**Figure 7-7**), including:

- In quartz veins with a range of textures including:
- Whitish-grey comb-textured quartz veins (mostly <1 – 2 cm wide), commonly with hematite ± specularite and/or open space in vein centres. Within these veins Au 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 (**Figure 7-7**);
- 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 Au, commonly rimmed by euhedral adularia crystals (**Figure 7-7**);

- 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 (**Figure 7-7**);
- Large composite veins (up to  $\geq 1$  m wide) composed of a, b and c veins described above and commonly with evidence of brecciation with hematite matrix;
- In quartz-hematite breccias (from  $\sim 5$  to 40 cm wide) that contain sub-angular to sub-rounded fragments of quartz or tuffaceous rocks in a hematite  $\pm$  specularite matrix (**Figure 7-7**).
- Along late angular fractures, micro-fractures and joints, commonly associated with hypogene hematite and/or specularite.
- As very fine grained disseminations in host tuffaceous rocks, frequently associated with hematite partially or totally replacing early-stage pyrite.

**Figure 7-7 Photographs of Gold-Bearing Veins and Breccias**



- 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.

Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

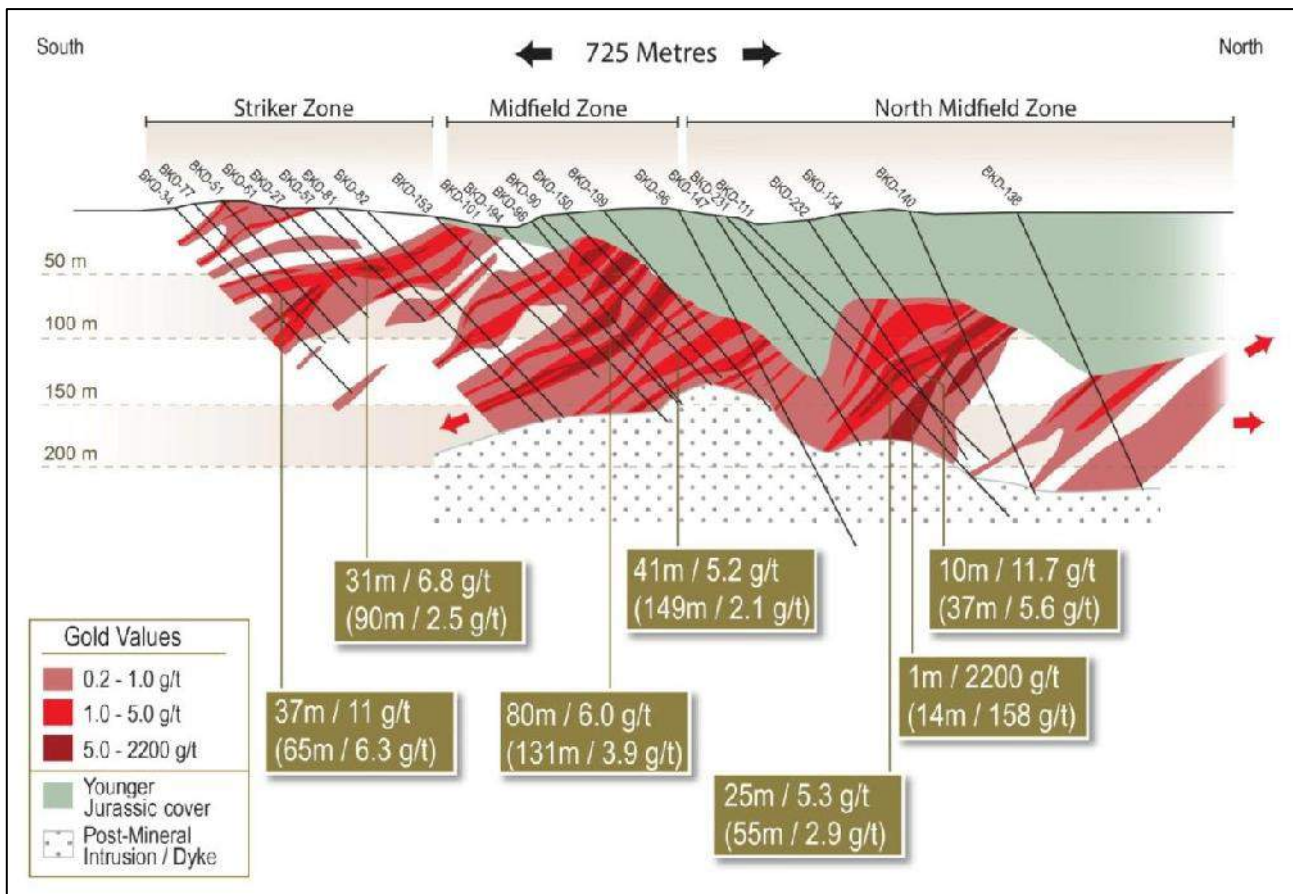
## 7.5.2 Quartz Veins and Breccia Zones

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 structurally-controlled void spaces within a main relay ramp extensional structure as noted in **Section 7.4.4** above.

Several large composite quartz veins ( $\leq 2$  m wide) were noted to include comb-textured quartz  $\pm$  adularia, brecciated and mottled-textured massive quartz, and minor chalcedony with hematite  $\pm$  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. The two largest multi-stage auriferous quartz-adularia-chalcedony veins were intersected in drillholes BKD-98 and BKD-99 (2.0 and 1.7 m wide respectively). These two drillholes were drilled near the intersection of a major NW-trending fault and the NE-trending faults interpreted as forming extensional structures within a relay ramp as described in **Section 7.4.4** above.

**Figure 7-8 NE-SW Trending Cross Section through the Striker and Midfield zones at Bayan Khundii Showing the results from 2015, 2016 and 2017 drilling**



Note the consistent moderate SW dip to the parallel mineralized zones. Overlying Jurassic cover rocks are indicated in green colour and post-mineralization syenite intrusion is indicated by stippled pattern.

Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

An irregular-shaped, sinuous, SE-trending hydrothermal quartz breccia was mapped for approximately 125 m through the Striker Zone (**Figure 7-8**). Other quartz-breccia zones throughout the Southwest Prospect area, are interpreted to be linear-shaped, however, surface exposure is somewhat limited and these breccia zones may prove to be irregular-shaped as more mapping and drilling information is acquired.

Some quartz veins have narrow (<1-2 mm wide) illite-quartz 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. The relationship between Au 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.

**Table 7-1 Drilling Intersection Highlights from 2017**

Drill Hole	From (m)	To (m)	Interval (m) (1)	Gold (g/t)
<b>BKD-98</b>	39	170.5	131.5	3.86
incl	42	122	80	6.03
incl	112	114	2	192
<b>BKD-99</b>	53	158.4	105.4	3.55
incl	56	112	56	6.13
incl	87	91	4	69
<b>BKD-101</b>	54	200.4	146.4	0.84
incl	134	144.1	10.1	4.84
<b>BKD-110</b>	97.7	206	108.3	2.82
incl	97.7	153	55.3	2.83
incl	144	145	1	115
incl	177	178	1	108
<b>BKD-111</b>	130.6	186	55.4	2.86
incl	150	175	25	5.29
incl	150	151	1	44
incl	162	163	1	33.1
<b>BKD-118</b>	106	116	10	12.8
incl	113	114	1	121
<b>BKD-128</b>	0	14	14	2.81
incl	0	8	8	4.45
<b>BKD-129</b>	90	110	20	2.57
incl	98	106	8	5.69
incl	104	105	1	18.8
<b>BKD-150</b>	21.5	152.9	131.4	1.77
incl	26	41	15	2.1
incl	96	98	2	53.6
<b>BKD-179</b>	106	146	40	3.26
incl	106	115	9	12.5
incl	111	112	1	89.6
<b>BKD-182</b>	70	109	39	2.12
incl	88	97	9	8.17
incl	90	91	1	65.5
<b>BKD-188</b>	110	230	120	1.14
incl	176	179	3	33.1
<b>BKD-194</b>	49	177.3	128.3	1.14
incl	88	89	1	11.9
incl	115	137	22	3.33
incl	123.9	125	1.1	43.5
<b>BKD-196</b>	112	134	22	2.36
incl	118	119	1	43.1
<b>BKD-197</b>	130	136	6	2.69
<b>BKD-198</b>	144	169	25	1.37
incl	145	148	3	7.81

Drill Hole	From (m)	To (m)	Interval (m) (1)	Gold (g/t)
incl	147	148	1	16
<b>BKD-199</b>	74	162.3	88.3	1.08
incl	148	149	1	15.2
and	153	154	1	16.6
<b>BKD-210</b>	89	131.8	42.8	1.75
incl	105	118	13	4.89
incl	106	107	1	44.8
<b>BKD-211</b>	100	163	63	1.09
incl	101	114	13	3.99
incl	101	102	1	17.9
and	106	107	1	12.2
<b>BKD-216</b>	153	173	20	2.83
incl	153	163	10	5.52
incl	156	157	1	50.5
<b>BKD-220</b>	130	165	35	4.08
incl	130	148	18	7.72
incl	139	142	3	44
incl	141	142	1	116
<b>BKD-222</b>	29	104	75	2.2
incl	41	64	23	6.68
incl	42	43	1	139
<b>BKD-227</b>	54	115	61	4.22
incl	54	56	2	19.6
incl	67	75	8	14.9
incl	68	69	1	111
<b>BKD-228</b>	93.2	186	92.8	1.51
incl	94	142	48	2.36
incl	94	95	1	15.6
<b>BKD-230</b>	31	158.5	127.5	1.8
incl	73	98	25	5.84
incl	95	98	3	36.8
<b>BKD-231</b>	193	207	14	158.3
incl	193	194	1	2200

Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

### 7.5.3 Alteration

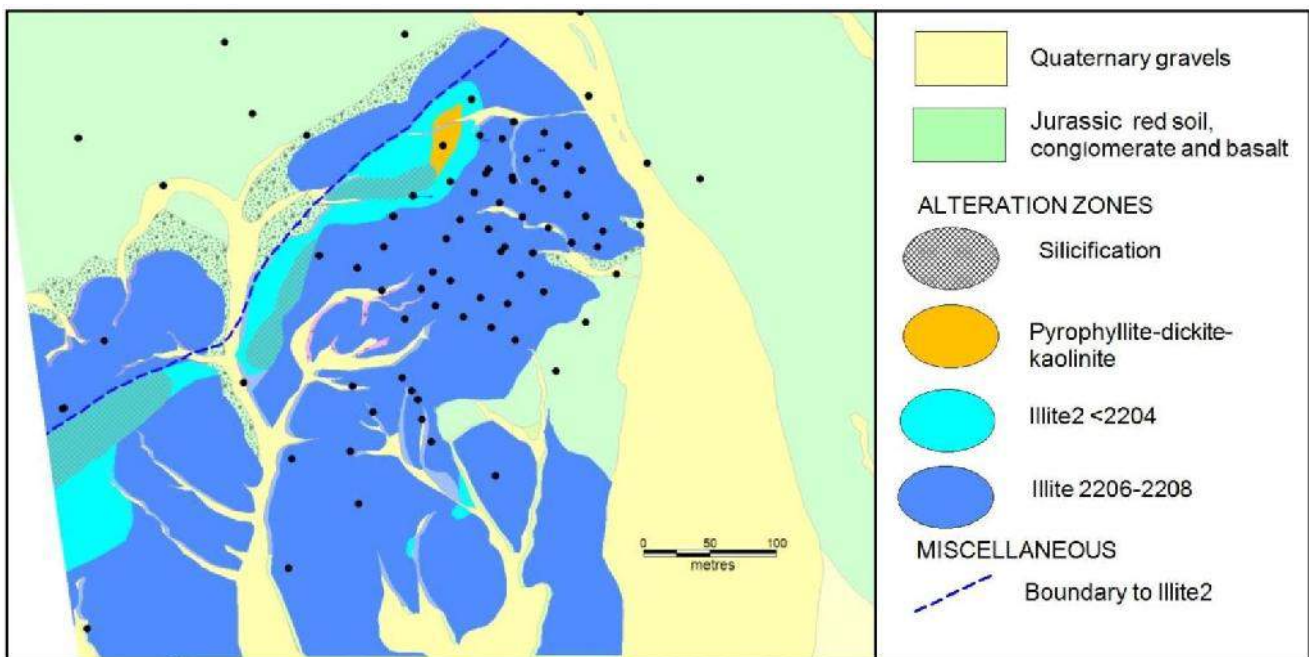
Perhaps one of the most striking features of Bayan Khundii is the intense alteration that overprints all Devonian tuffaceous rocks at Bayan Khundii, including the outcropping Southwest and Northeast Prospects that is evident on high resolution satellite images (e.g. GeoEye). This alteration is in sharp contrast to the relatively unaltered unconformably overlying Jurassic 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.

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 (**Figure 7-9**), including:

- Widespread and intense illite alteration with Al-OH absorption values of 2206-2208 nanometers that is present throughout the Gold Hill and Striker zones. SWIR analysis of patchy (i.e. '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 illite alteration represents a late overprinting alteration event that is interpreted to be associated with the low-sulphidation Au mineralizing event.

- 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 than the widespread illite alteration. This alteration type is referred to as illite2<2204 in **Figure 7-9**. 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.
- 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 (**Figure 7-9**). As with the gusano replacement 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 widespread illite alteration event.
- Several quartz-rich alteration zones are present within the Southwest Prospect area, as observed at Gold Hill, and form prominent topographic high features. Several 'siliceous' alteration zones were observed within the illite2 alteration zone (**Figure 7-9**). 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.
- 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.

**Figure 7-9 Map of the Southwest Prospect area showing the distribution of alteration zones, as defined by Short-Wave Infrared (SWIR) Analysis**



Note: the gentle NW dip to the mineralized zones. Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

Chlorite ±pyrite ±magnetite ±K-feldspar ±biotite alteration was observed in deeper parts of several drillholes below or adjacent to the pervasive illite alteration. As for the replacement (i.e. gusano), advanced argillic and siliceous alteration, this alteration assemblage is thought to have formed during an early high temperature alteration event, presumably above a shallow (i.e. 'porphyry') intrusion. Alteration at Bayan Khundii can be grouped into two main events, based on observed textures and mineralogical studies. These include:

- 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;

- A later, lower temperature pervasive illite-quartz 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, or magnetite, or obvious K-feldspar, within the illite alteration zone, although there is some 'retrograded' alkali feldspar that was identified in this section.

The chlorite  $\pm$ pyrite  $\pm$ magnetite  $\pm$ K-feldspar  $\pm$ biotite alteration assemblage that surrounds the mineralized and illite altered zones at Bayan Khundii are thought to represent a widespread propylitic alteration that may have formed either during the early intrusion-related alteration, or perhaps as a distal alteration assemblage related to the deposition of the low sulphidation Au mineralization and associated illite alteration.

#### 7.5.4 Sulphide Minerals

The majority of the Southwest Prospect area at Bayan Khundii is either devoid or contains only trace modal amounts of sulphide minerals, including pyrite, sphalerite, galena and chalcopyrite. This is reflected in the geochemistry of the deposit where relatively low concentrations of Pb (16 ppm avg.; <2-249 ppm range), Zn (77 ppm avg.; <2-2,749 ppm range; only 3 samples > 1,000 ppm) and Cu (20 ppm avg.; <1-3,107 ppm range; only 2 samples > 1,000 ppm) were encountered in the 20,739 samples of drill core analyzed in 2015, 2016 and 2017. Despite these generally low elemental concentrations, locally-elevated levels of Mo, S and As were noted in the large dataset (N=20,739). For example, the average concentration of Mo in the entire dataset is 3 ppm, with many samples containing less than detection limit of 1 ppm. Anomalous concentrations of molybdenum (Mo), presumably reflecting the presence of molybdenite, were noted in some samples with a maximum concentration of 551 ppm and 11 samples containing more than 100 ppm Mo. Similarly, the average concentration of arsenic (As) is generally low (70 ppm) with many samples containing less than detection limit of 3 ppm, although the maximum value was 10,800 ppm As with 45 samples returning more than 1,000 ppm, presumably reflecting the presence of either arsenopyrite or perhaps arsenian-pyrite. The average concentration for sulfur (S) is generally low, with an average concentration of 0.12% and many samples containing less than the detection limit of 0.01%. Despite these low average results the maximum S concentration for the entire dataset is 5.00%, with 414 samples (2% of samples) containing more than 1.0% S and 1,368 samples (6.6% of samples) containing more than 0.5% S. Clearly, based on geochemistry, there are sulphide-bearing zones at Bayan Khundii that presumably contain As-, Mo-, Cu-, Zn- and to a lesser extent P-bearing mineral species.

Most drillholes at Bayan Khundii, especially within the intensely illite-altered areas within the Gold Hill-Striker-Midfield-North Midfield zones, contain only trace to minor amounts of disseminated pyrite. Some zones were noted to contain 1-2% pyrite, as noted in BKD-32 located to the northwest of Striker Zone where disseminated and/or vein type pyrite was identified in 48 of 107 sample intervals. Most pyrite-bearing zones have low Au concentrations and a general antithetic relationship between pyrite and Au concentration was noted in the first 234 holes drilled. This relationship is interpreted as reflecting the replacement of pyrite by hematite as part of the low-sulphidation Au mineralizing event.

Petrographic work has identified relict disseminated pyrite that has been mostly replaced by hypogene hematite/specularite and has associated Au, visible in thin sections. This relict pyrite may have been associated with the early high-temperature alteration or perhaps it may have formed during an early stage of the low sulphidation Au event that was then overprinted and replaced by Fe-oxides during late stages of 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:

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

In drillhole BKD-01 there are several narrow specularite veinlets (<1-2 mm wide) with wide medium grey alteration selvages ( $\leq 2$  cm) consisting of intense silicification and illite alteration. The lack of hematite alteration selvages surrounding quartz-hematite veins at Bayan Khundii, where hematite may reside in the central parts of comb-textured veins, or as vein-parallel bands near vein margins, supports a hypogene versus supergene origin for the iron-oxide minerals at Bayan Khundii. The presence of visible Au in some hematite veinlets establishes a genetic relationship between the Au and hematite-forming fluids. Accordingly, hematite is considered to be associated with the intense silica-illite alteration and deposition of low-sulphidation Au mineralization. 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 Deposit Types

Several features support a low sulphidation model for the Bayan Khundii mineralization, including: the presence of quartz-adularia-sericite (illite) veins and adularia alteration zones in Au mineralized zones; the low Ag : Au values (0.1->5, avg. ~1); local colloform bands of chalcedony (often with finely disseminated Au); bladed calcite (now pseudomorphed by quartz) textures that indicate boiling; the generally 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 >1 km, was uplifted, eroded and potentially tilted prior to initiation of the subsequent low-sulphidation epithermal system, including the formation of low-temperature illite-quartz alteration and deposition of quartz cement in brecciated structures along with adularia and Au (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 Au± Ag mineralization is considered to be a low sulphidation epithermal type Au deposit.

## 9 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** History for further details). In mid-2015, Erdene geologists identified, through rock chip sampling, new high-grade Au mineralization associated with a zone of intensely altered (silica and sericite) volcanic lithologies located ~3.5 km south of Altan Arrow. This area, referred to as the Bayan Khundii (rich valley) project has been the focus of the 2015 to 2018 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. A detailed description of the geology at Bayan Khundii is provided in **Section 7.4 – Bayan Khundii Project Geology**. In addition, more detailed mapping of the entire Khundii license was carried out in 2017 resulting in the greater understanding of the distribution of lithological units and zone of alteration across the Khundii license. See **Figure 7-2**.

### 9.2 Geochemical Surveys

ERD carried out a series of geochemical surveys including rock and soil surveys which are detailed below.

#### 9.2.1 Rock Geochemical Survey

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.

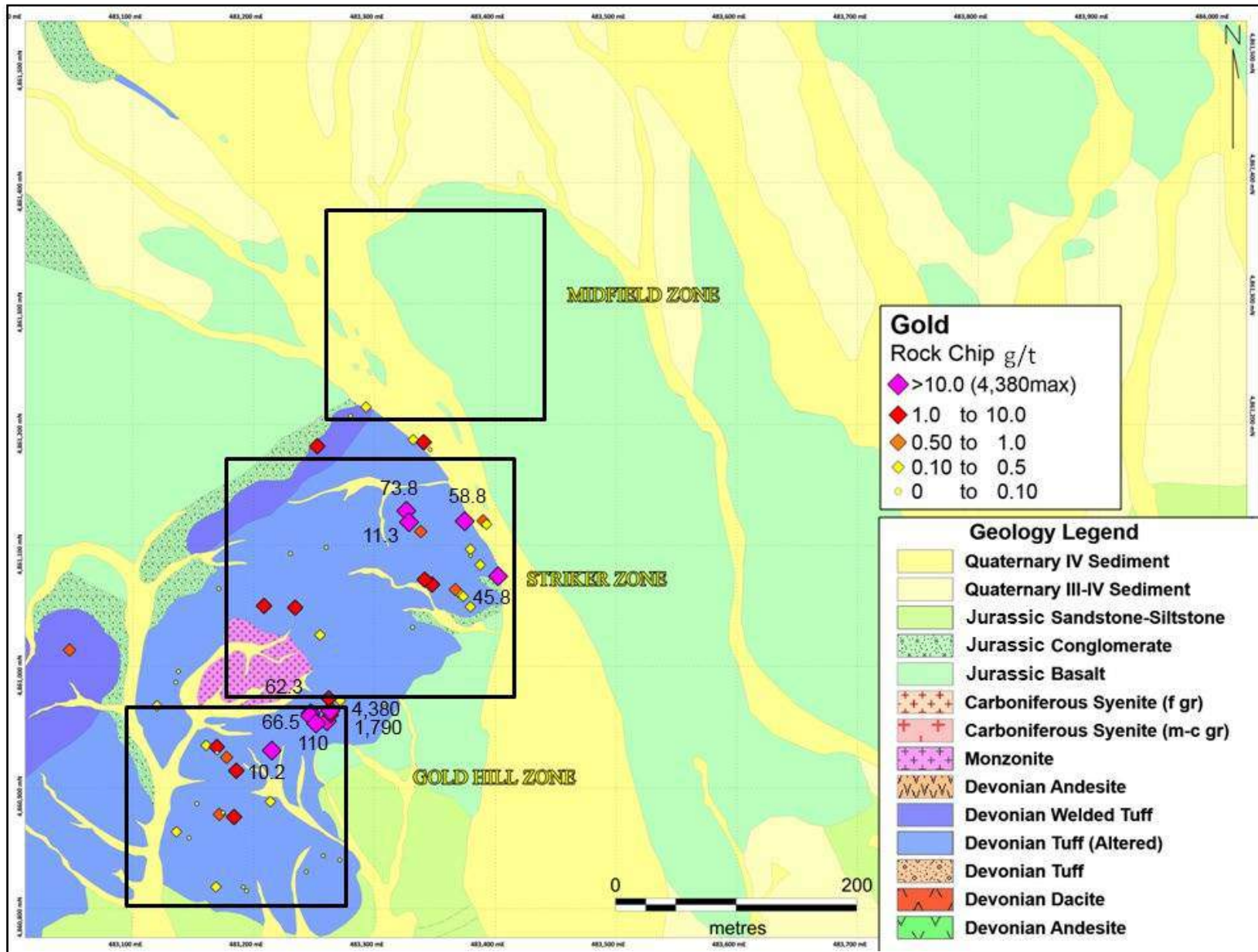
All rock sample locations were determined by hand-held GPS units with approximately 3 m location accuracy. All samples were sent to SGS Laboratory in Ulaanbaatar for analysis via fire assay along with a 32 element suite (ICP). See “**Section 11.0 - Sample Preparation, Analyses and Security**” for more details.

#### 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 Au (**Table 9-1**). A map showing the sample locations has been included for reference (**Figure 9-1**)

**Table 9-1 Rock chip and grab sample Au and silver assay results greater than 3.0 g/t Au**

Sample Number	Au g/t	Ag g/t	Sample Number	Au g/t	Ag g/t
26881	4,380	570	26890	7.13	2
26861	1,790	230	26875	6.28	0
26864	110	26	27272	6.26	0
26867	73.80	120	26859	5.4	3
26863	66.50	11	26878	4.75	0
26862	62.30	12	26898	4.35	0
26854	58.80	24	27260	4.08	0
26852	45.80	20	26892	4.07	5
26888	10.20	0	27287	4.06	2
26885	9.81	2	26874	3.03	3



[Redacted]

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

PROJECT

NAME: Bayan Khundii Resource Estimate Technical Report

DRAWING: Southwest Prospect area geology map with location of 78 rock chip and rock grab samples, with labels for gold assay values 10 gt Au

FIGURE No. 9-1	PROJECT No. ADV-MN-00156	Date September 2018
----------------	--------------------------	---------------------

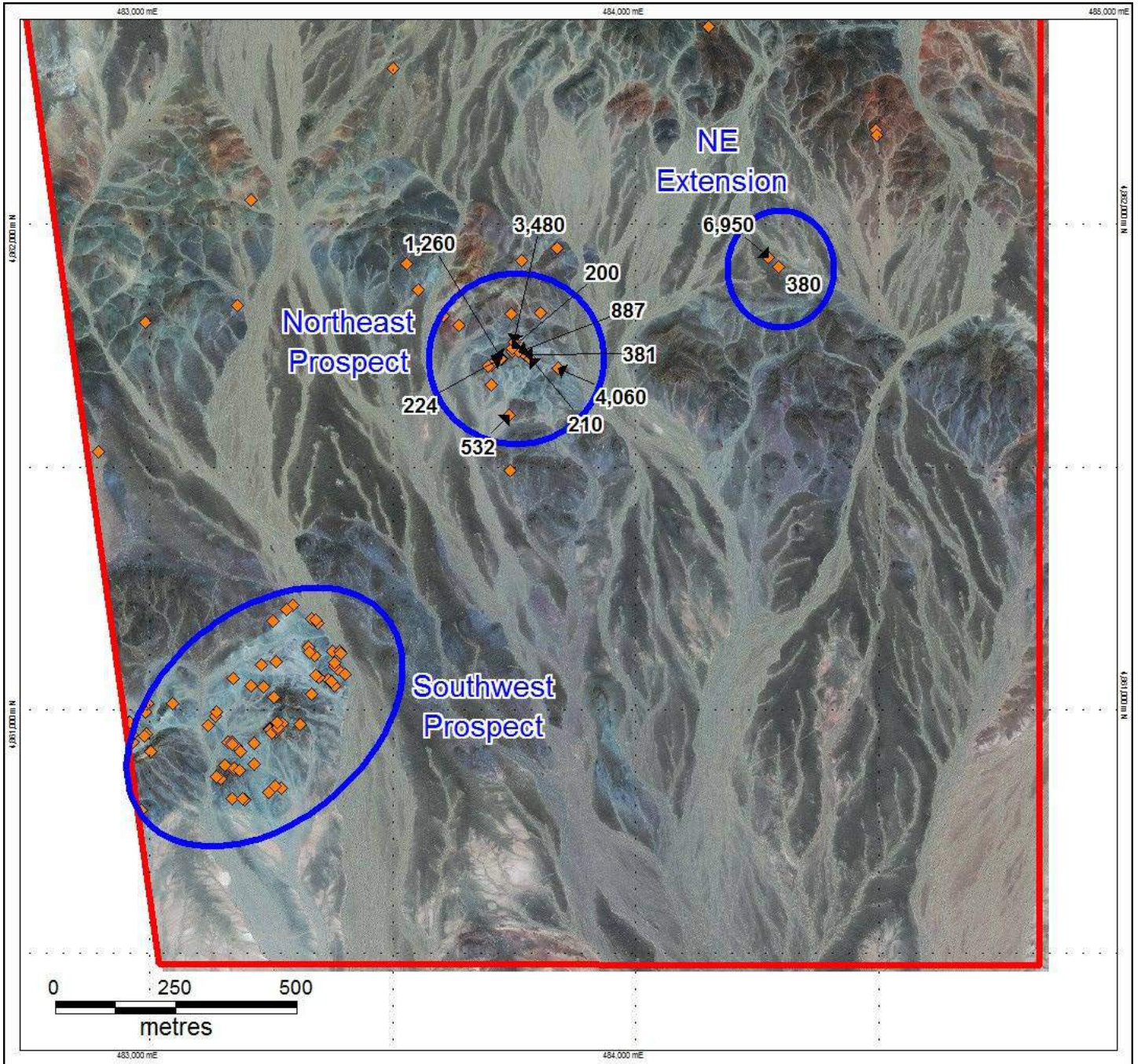
## Northeast Prospect

While the highest grade Au 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 Au 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 (refer to **Figure 9-2**). These areas will be investigated in future exploration works (see **Section 26 Recommendations**).

### 9.2.2 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). The Bayan Khundii project area (approximately 2 km x 2 km) was covered by a 100 m grid and areas of altered pyroclastic 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 9-3** shows the distribution of the anomalous soil geochemical results, which are mainly focused in and around the two areas of exposed, altered, Devonian pyroclastic rocks at the Southwest and Northeast prospects.

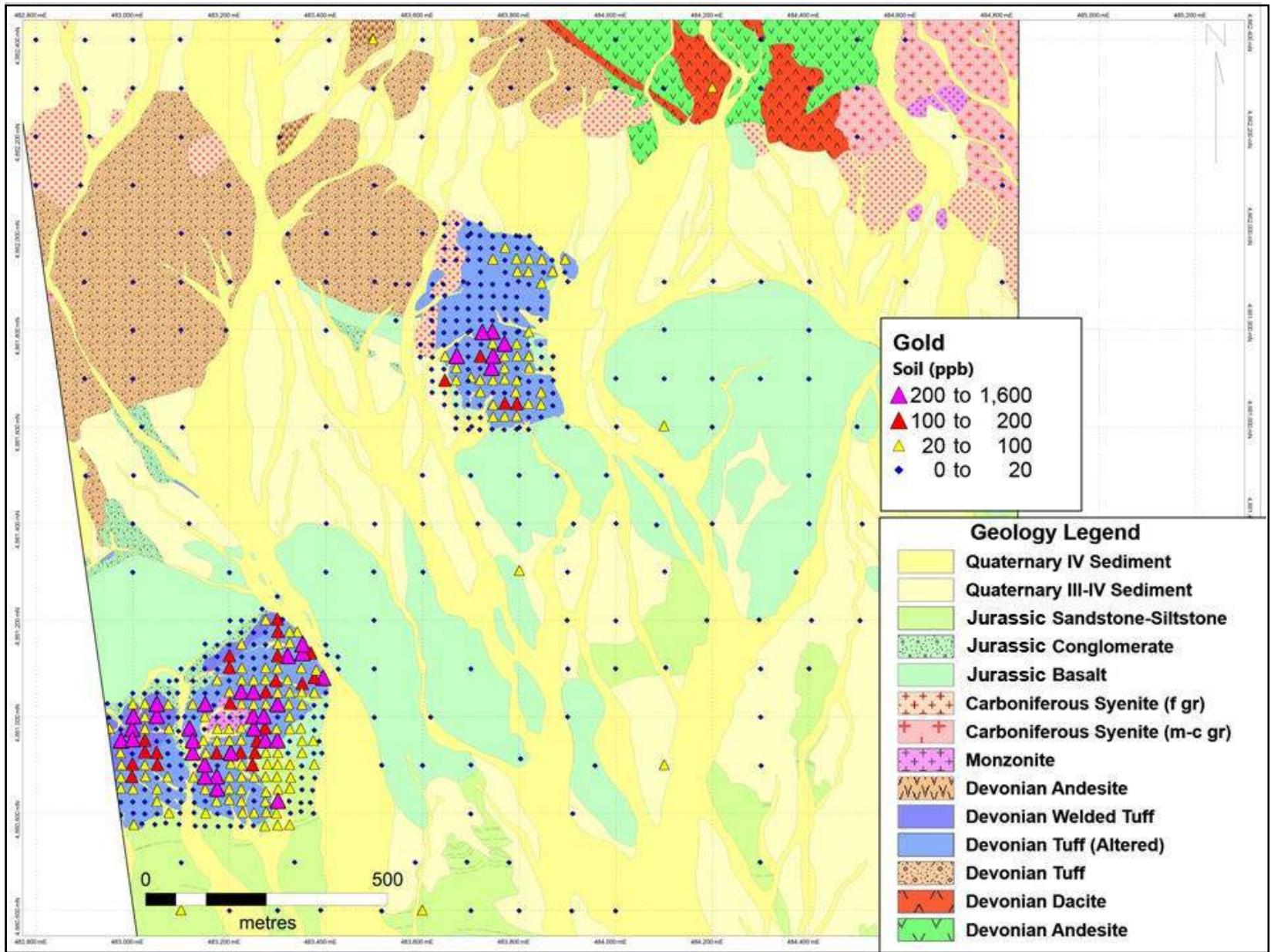


**RPM**GLOBAL



DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT		PROJECT	
		<b>NAME</b> Bayan Khundii Resource Estimate Technical Report	
		<small>DRAWING</small> 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	
<small>FIGURE No.</small> 9-2	<small>PROJECT No.</small> ADV-MN-00156	<small>Date</small> September 2018	



CLIENT



PROJECT

NAME Bayan Khundii Resource Estimate  
Technical Report

DRAWING Soil Geochemistry Results for Gold

FIGURE No.  
9-3

PROJECT No.  
ADV-MN-00156

Date  
September 2018



## 9.3 Geophysical Surveys

### 9.3.1 Magnetic Survey

In 2012, a license wide magnetic survey (100 m line spacing) was completed over a 28 sq.km area covering most of the Khundii exploration license. In October 2015, a detailed (25 m line spacing), magnetic survey was carried out over the Bayan Khundii project area (1.7 km by 1.8 km). In June 2017, the area of the magnetic survey at Bayan Khundii was extended 350 m to the east to now cover an area of 2.05 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.

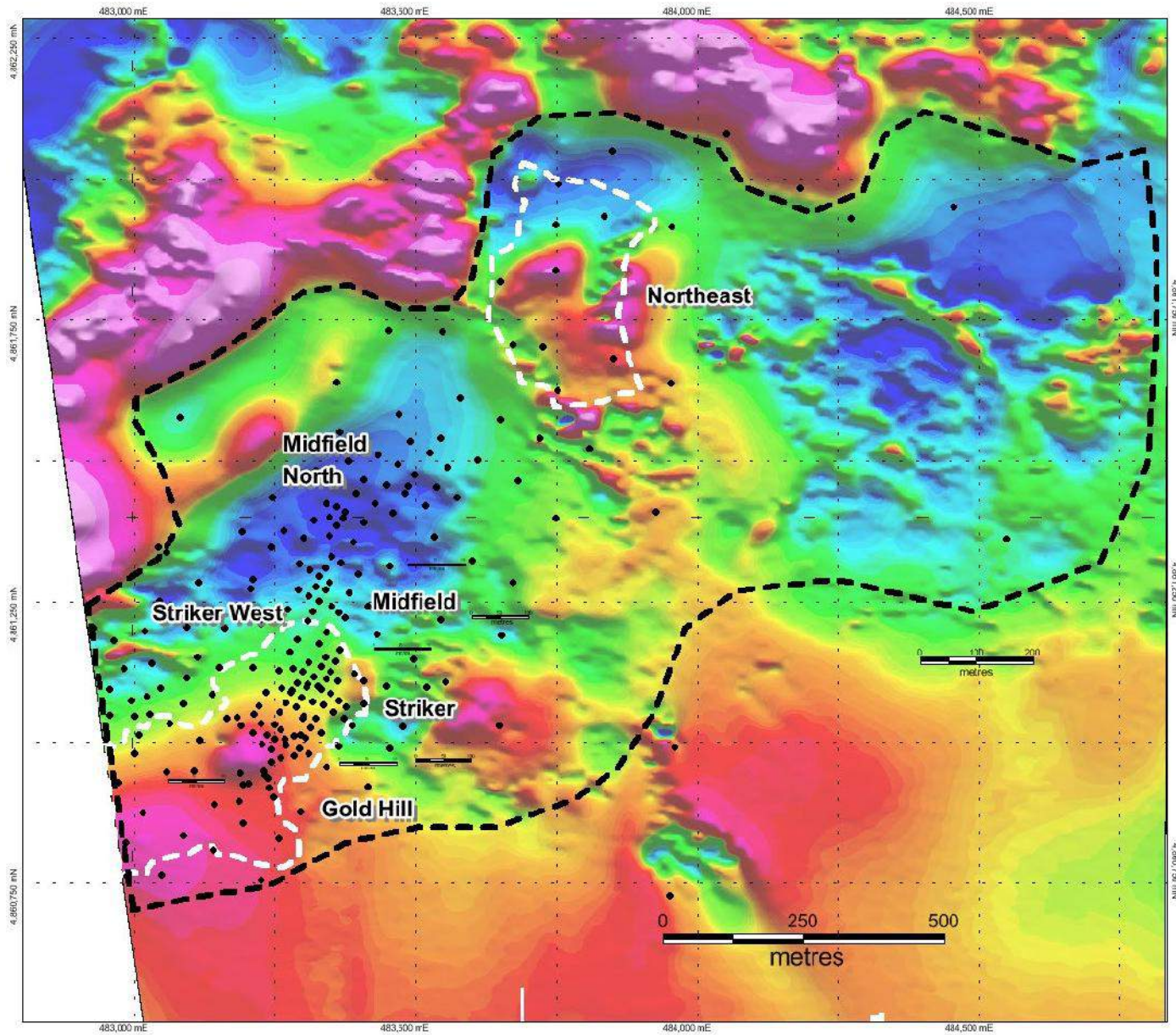
Data from the detailed 2015 and 2017 surveys were processed, including quality control analysis, by geophysicist Chet Lide of Zonge International Inc. of Reno NV, USA. Mr. Lide compiled all magnetic datasets and produced the following products for the Bayan Khundii map area: 1) Total Magnetic Intensity, 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 Pseudogravity.

The analytical signal of the total magnetic field provides the magnetic response for near-surface rock units and outlines the distribution of the Jurassic 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.

Gold mineralization at Bayan Khundii is associated with intensely altered (silica-illite) Devonian pyroclastic 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 pyroclastic 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 9-4** 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, North Midfield, West Striker and Northeast prospects. A broad zone of low magnetic response is outlined (black dashed line) in **Figure 9-4**, 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 pyroclastic units, as defined by surface mapping, is shown with white dashed lines.

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 Jurassic volcanic (basalt) unit, located south-southeast of the Northeast prospect, that unconformably overly the Devonian lithologies (possibly masking underlying altered Devonian lithologies) (see **Figure 9-4**).



**LEGEND**



DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

**CLIENT**



**PROJECT**

NAME **Bayan Khundii Resource Estimate  
Technical Report**

DRAWING **Magnetic Map for Bayan Khundii Project Area**

FIGURE No.  
**9-4**

PROJECT No.  
**ADV-MN-00156**

Date  
**September 2018**

### 9.3.2 Induced Polarization (IP) Surveys

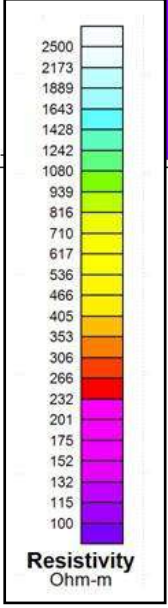
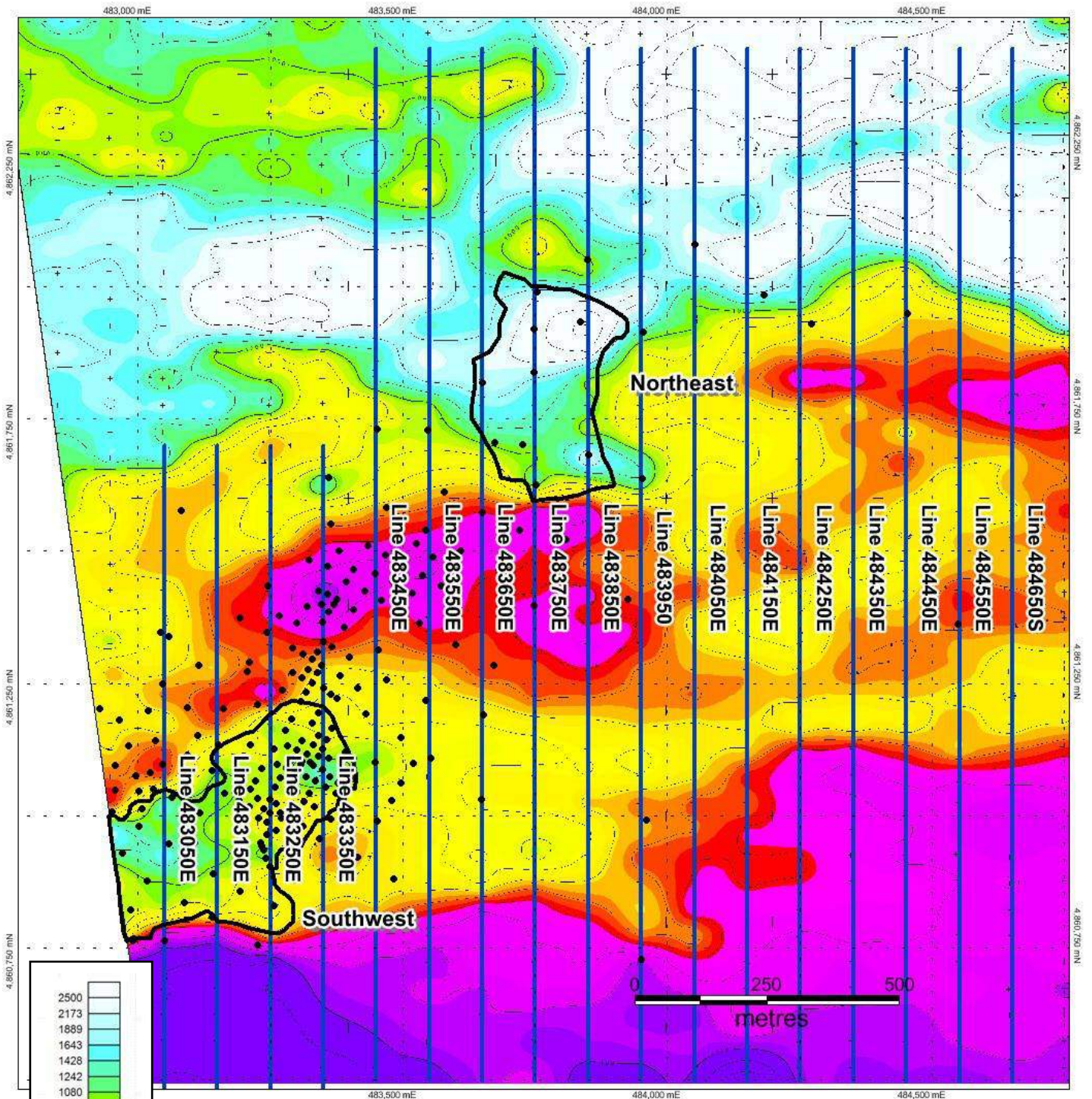
To date, both IP gradient array and IP dipole-dipole (“Dp-Dp”) surveys have been completed on the Bayan Khundii Project. All of the IP surveys were carried out by Erdenyn Erel LLC, a Mongolian geophysical contractor based in Ulaanbaatar. The work was performed using Zonge Universal IP/R equipment and 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.

#### 9.3.2.1 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 (resistivity) and 21 (chargeability).

Gradient array induced polarization (IP) data (**Figure 9-2** show a correlation between the intense alteration zone at the Southwest and Northeast prospects (outlined on **Figure 9-5**) and a 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 Jurassic volcanic and sedimentary units that unconformably overlie the strongly altered (quartz-illite) Devonian pyroclastic 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 9-6**. There is a moderate intensity, positive chargeability anomaly ( $\leq 9$  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, however 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 be reflective of an increase in sulphide content (pyrite) observed in limited drilling in this area.



**RPM**GLOBAL

 IP Gradient Array Resistivity plot for the Bayan Khundii project area showing the locations of outcropping, altered Devonian pyroclastic units (black outline).  
 N-S oriented Dipole-Dipole survey lines show the location of the inversion sections



DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT

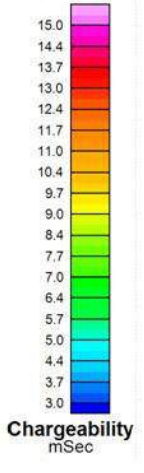
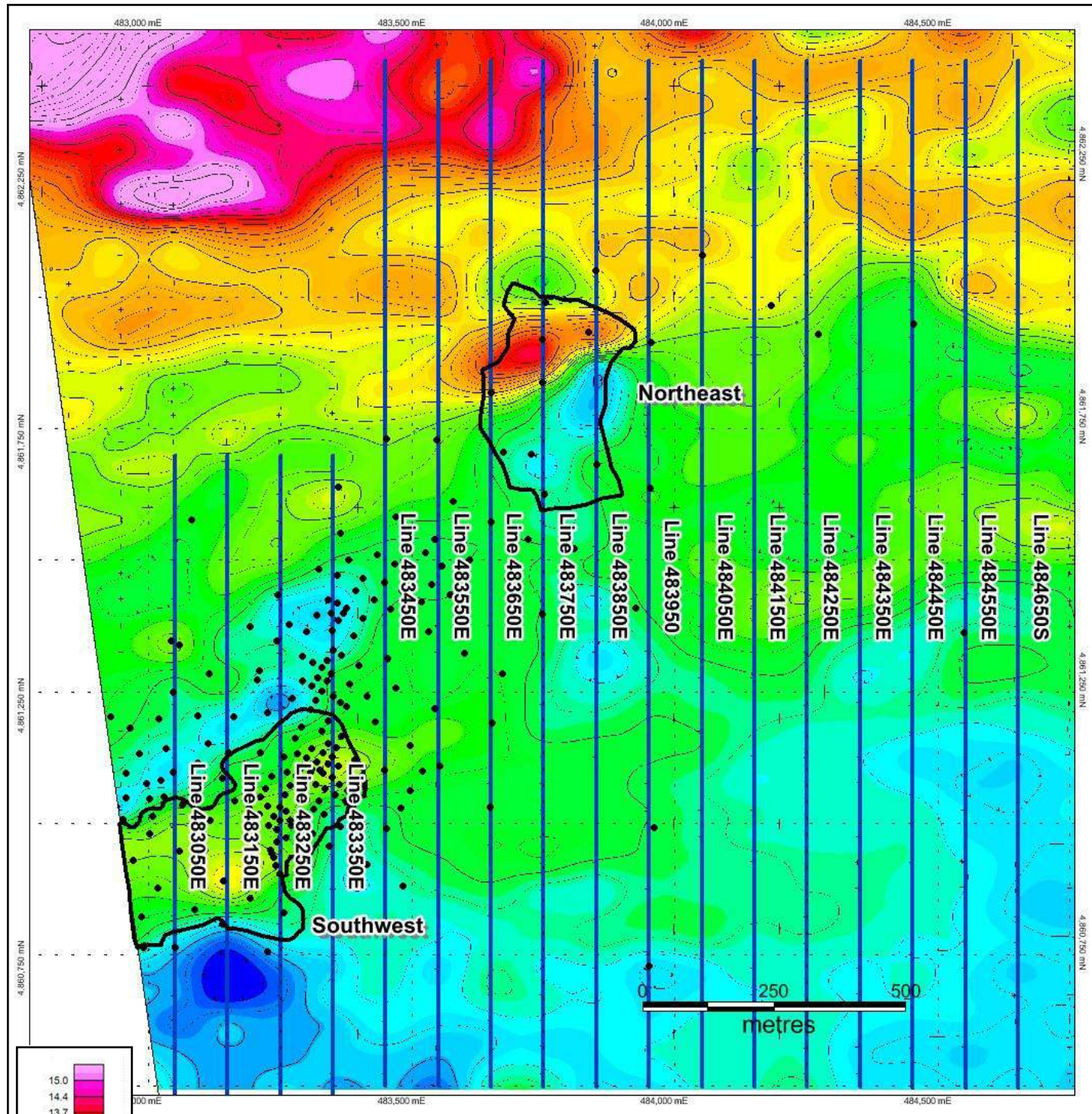


PROJECT

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING **Gradient Array Resistivity plot for the Bayan Khundii project**

FIGURE No. 9-5	PROJECT No. ADV-MN-00156	Date September 2018
-------------------	-----------------------------	------------------------



**RPM**GLOBAL

— Area showing the locations of outcropping, altered, Devonian pyroclastic units

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT



PROJECT

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING IP Gradient Array Chargeability plot for the Bayan Khundii project

FIGURE No. 9-6	PROJECT No. ADV-MN-00156	Date September 2018
-------------------	-----------------------------	------------------------

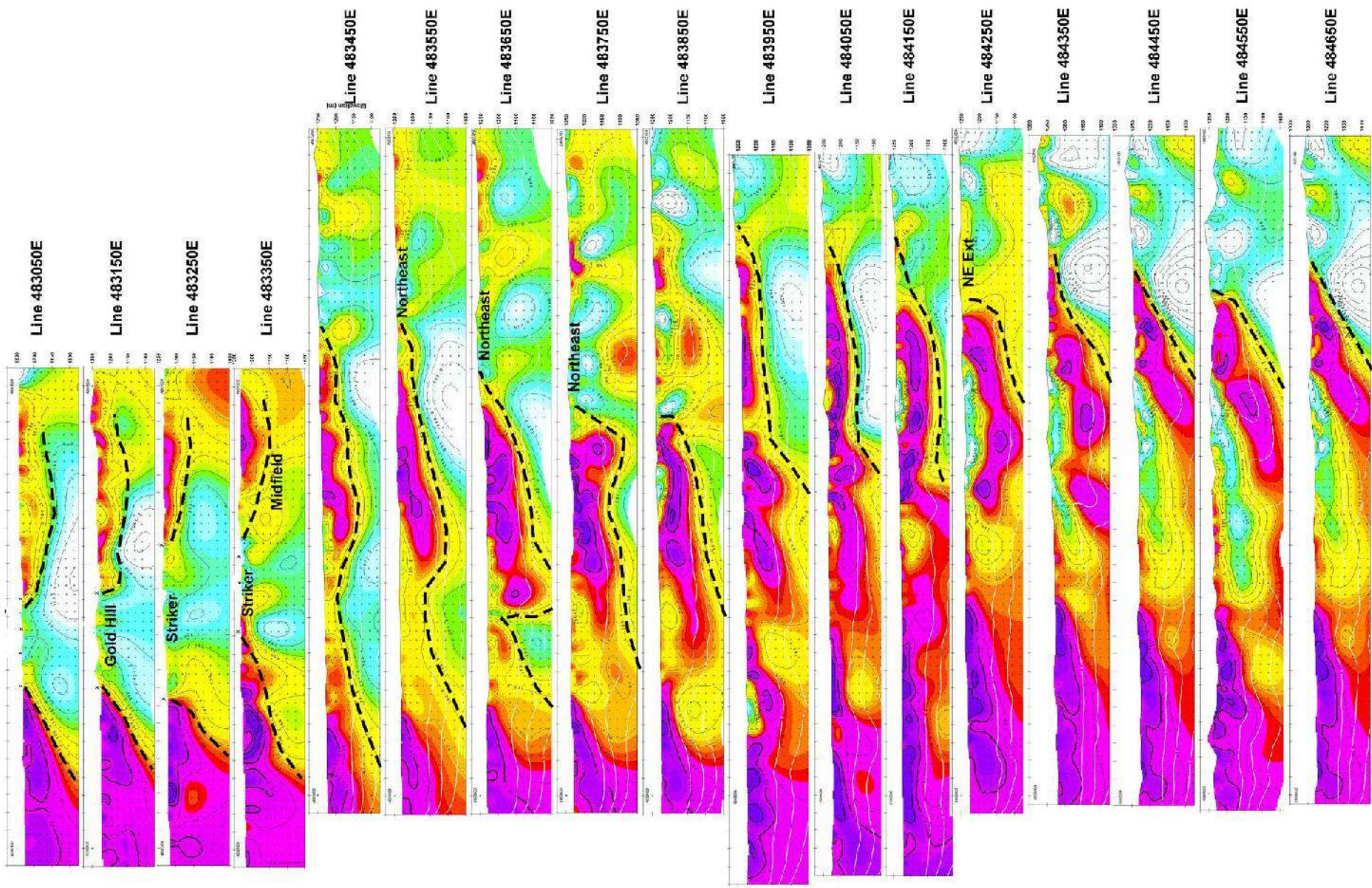
### 9.3.3 Dipole-Dipole Survey

The dipole-dipole survey consisted of a series of 17, north-south oriented lines, spaced 100 m apart, with 50 m spacing of dipoles along the survey lines with a total of 31 line-km surveyed. The location of the IP Dp-Dp survey lines are included on the plan maps of the gradient array IP survey (**Figure 9-5** and **Figure 9-6**). Stacked inverted sections for the 17 IP Dp-Dp survey lines completed over the Bayan Khundii prospect area are provided in **Figure 9-7** and **Figure 9-8** (chargeability). A dashed black line representing the unconformity surface between the Jurassic 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 DpDp 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 9-7**) 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 Jurassic volcanic (basalt) and sedimentary rocks, to moderate to high resistivity rocks (green-blue white) interpreted as intensely quartz-illite altered Devonian pyroclastic lithologies, that outcrop on surface and host the Au mineralization at Bayan Khundii. These data, together with results from drill holes, confirm the extension of the quartz-illite alteration zone beneath the Jurassic lithologies. The shallow dip of the unconformity, towards the north, beneath the Jurassic rocks, as seen on a number of lines and is similar to the 10° to 25° dips for Jurassic sedimentary strata observed during geological mapping. In some area the unconformity contact appears to be more irregular, likely reflecting undulations in the pre-Jurassic paleo-surface.

Based on the Dp-Dp resistivity data and drilling data to date, the quartz-illite altered Devonian units, outcropping at the Southwest Prospect, extend to the north beneath Jurassic lithologies up to and 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 Jurassic lithologies in this area, which is interpreted to be approximately 40 - 75 m.

As can be seen in **Figure 9-8**, 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.



**LEGEND**

--- possible location of unconformity surface between altered Devonian lithologies at depth and Jurassic lithologies at surface.

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

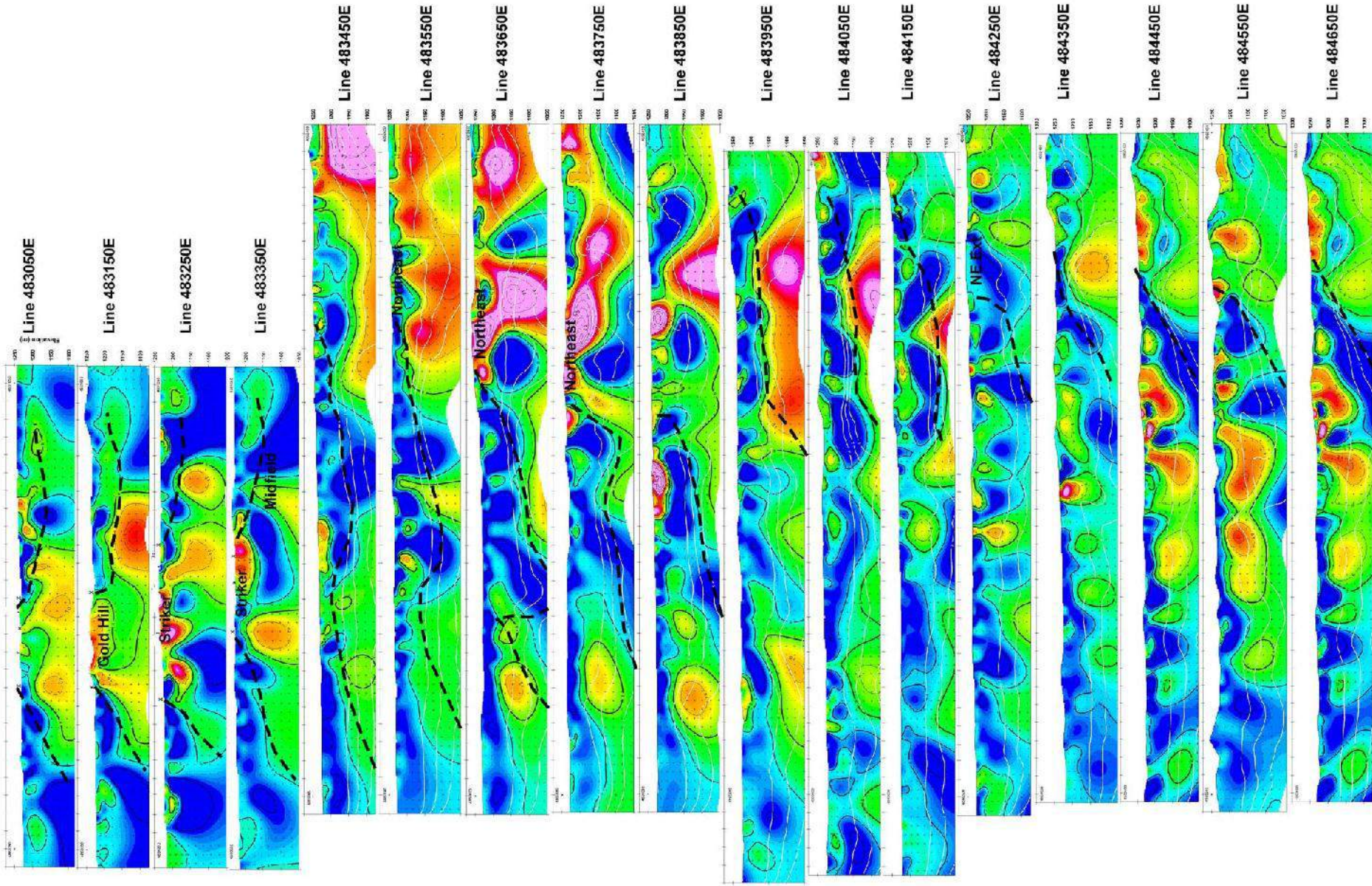
**CLIENT**

**PROJECT**

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING Stacked IP Dp-Dp Resistivity Inversion sections (looking north with westerly most line on the left)

FIGURE No. 9-7	PROJECT No. ADV-MN-00156	Date September 2018
----------------	--------------------------	---------------------



**LEGEND**

--- possible location of unconformity surface between altered Devonian lithologies at depth and Jurassic lithologies at surface.

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

**CLIENT**

**PROJECT**

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING **Stacked IP Dp-Dp Chargeability Inversion sections (looking north with westerly most line on the left)**

FIGURE No. 9-8	PROJECT No. ADV-MN-00156	Date September 2018
-------------------	-----------------------------	------------------------



## 9.4 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, totalling 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 Au 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 2 m. 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 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 analysed for Au (fire assay) and a suite of 32 elements using 4 acid digestions 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 Au mineralization was restricted to the quartz veins or if the host rock was also carrying Au mineralization. **Table 9-2** below summarizes significant mineralized zones (see **Figure 9-9** for trench locations).

**Table 9-2 Bayan Khundii Trench Results**

Trench	From (m)	To (m)	Interval (m)*	Gold (g/t)
<b>BKT-01</b>	6	8	2	2.98
and	36	66	30	2.7
incl	40	46	6	5.74
incl	42	46	4	7.36
incl	56	64	8	4.52
incl	62	64	2	11.2
<b>BKT-02</b>	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	10.1
<b>BKT-03</b>	10	24	14	2.29
incl	16	22	6	5.04
incl	17	19	2	9.42
<b>BKT-06</b>	2	28	26	2.47
incl	10	13	3	19.93
incl	12	13	1	55.6
<b>BKT-08</b>	2	8	6	1.56
incl	5	7	2	3.77
<b>BKT-13</b>	12	31	19	0.56
incl	28	31	3	2.01

Trench	From (m)	To (m)	Interval (m)*	Gold (g/t)
And	59	64	5	3.36
incl	60	62	2	8.26
<b>BKT-16</b>	4	29	25	0.57
incl	15	24	9	0.98
<b>BKT-17</b>	7	44	37	2.12
incl	24	31	7	8.68
<b>BKT-21</b>	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.

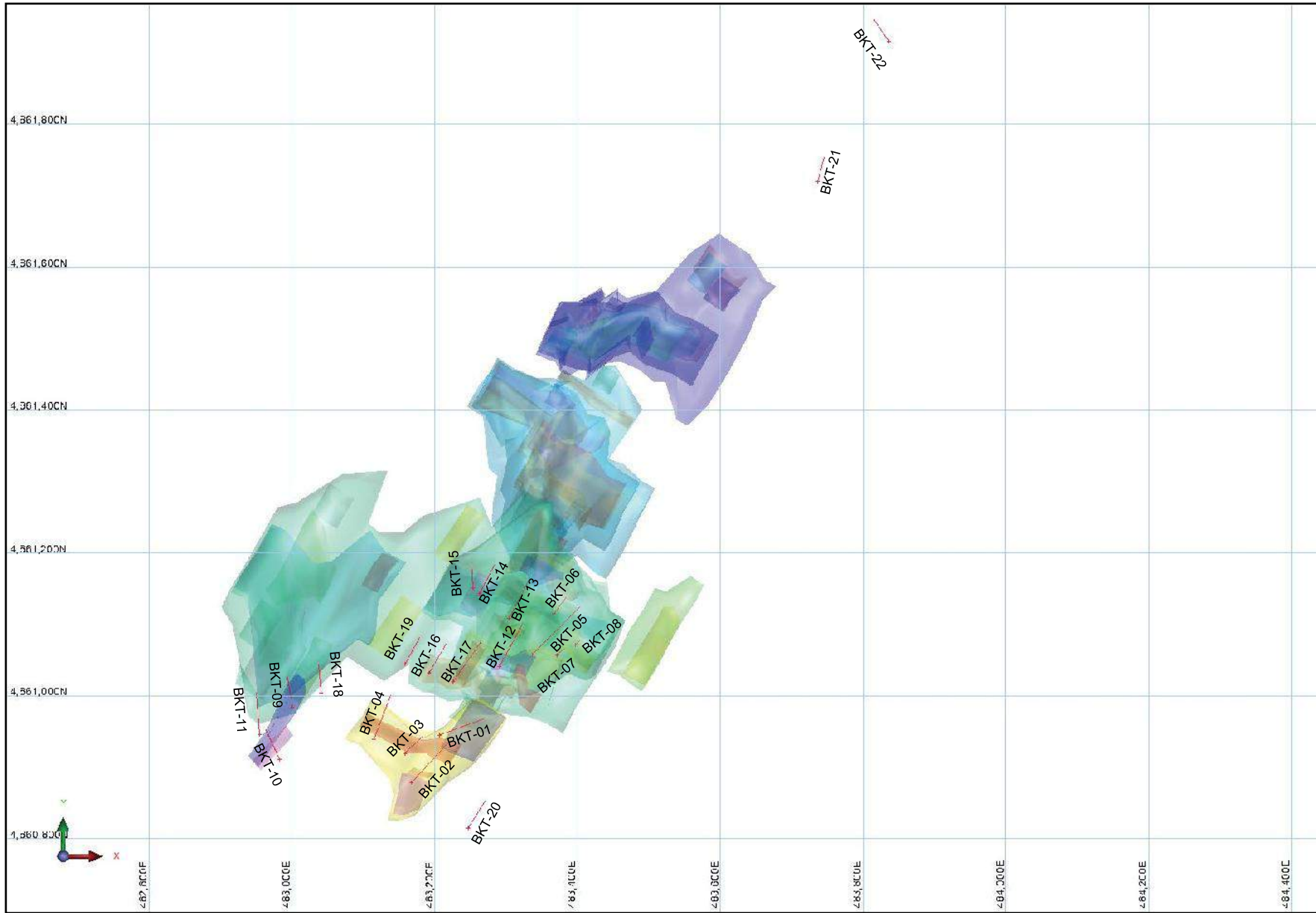
Note: the gentle NW dip to the mineralized zones. Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical report dated March 2018.

### 9.4.1 Discussion of Trench Results

Most of the trenches were dug on surface exposure area of Devonian pyroclastic volcanic rocks and the program was successful in demonstrating wide zones of lower grade Au 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 BKT-17, returned 37 m of 2.12 g/t Au and included a 7 m interval of 8.68 g/t Au.

As a result, the extent of alteration and mineralization observed in the trenches commonly exceeded that indicated by surface expression. A combination of mapping, rock geochemical survey, trenching along with artisanal mining of high grade veins and their mined directions has been successful in guiding exploration to date.

The trench results, in conjunction with previous drill results, confirm the potential for a series of Au mineralized systems at Bayan Khundii.



[Redacted Title Area]

DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

CLIENT



PROJECT		
NAME	Bayan Khundii Resource Estimate Technical Report	
DRAWING	Trench Location Map and Interpreted Mineralization Wireframes	
FIGURE No.	PROJECT No.	Date
9-9	ADV-MN-00156	September 2018

## 10 Drilling

The drill program at Bayan Khundii was initiated on November 8, 2015 (15 holes) followed in 2016 with the number of holes expanded to 96 (81 additional holes). In 2017, the drilling program was further expanded with 138 new and 11 extended drill holes (**Table 10-2**). In 2018, additional drilling included 21 holes totaling 4,584 m. To date, a total of 255 diamond drill holes totaling 42,670 m have been completed with a depth ranging from 31 m to 359 m (average 167 m). See **Table 10-1**. The large majority of holes were drilled at an azimuth of 030 degrees, perpendicular to the orientation of the main mineralized veins and at a dip angle of -45 to -85 degrees.

The drilling program was carried out by an 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 to BKD-234, down-hole readings were also taken at approximately 12 m depth to confirm orientation of drill rig set-up. Down-hole readings included both dip and azimuth of the hole at the recorded depths. RPM observes that there is little dip movement and minor amounts of azimuth movement in the surveyed holes..

**Table 10-1 Bayan Khundii Drilling Summary**

In Project					
Company	Period	Drilling Method	Number of Holes	Metres	
ERD	2015	DD	15	696	
		TR	11	535	
	2016	DD	81	11,809	
		TR	11	525	
	2017	DD	138	25,638.	
		DD	21	4,527	
	<b>Drilling Total</b>			255	42,670
	<b>Trenching Total</b>			22	1,060
<b>Total</b>			<b>277</b>	<b>43,730</b>	

Nominal drill hole spacing over the deposit area is approximately 80 m by 80 m with closer spaced drilling in most areas (40 m by 40 m spaced holes) with additional more detailed drilling (20 m by 20 m spacing) in select areas of Striker and Midfield.

253 hole collars out of 255 drill holes were DGPS surveyed while remaining two holes (BKD-79 and BKD-195; located outside of the resource area) were surveyed with handheld GPS. RPM is aware that the first 11 out of 22 trenches were surveyed using handheld GPS units, while the remaining trenches were DGPS surveyed.

Drill core was collected, logged, photographed and sampled at the property by ERD geologists. The orientation of the mineralization is now relatively well understood and the relationship of azimuth and dip of drill holes to the true thickness of mineralization is known. Core recoveries are greater than 95% throughout the mineralized zones. No relationship exists between sample recovery and grade.

Standard sampling protocol involved the halving of all drill core from Devonian lithologies using a core saw and sampling over either 1 m intervals (in clearly mineralized sections) or 2 m intervals (elsewhere mostly in for channel samples from trenches). Half of the core was placed in a sealed sample bag and dispatched to SGS's Ulaanbaatar laboratory for analysis and the other half remains on site in core boxes. Some selective Jurassic units (basal conglomerate) and basement Syenite units were sampled but not in every hole as these units were shown to be un-mineralized.

All drill-core was delivered to Erdene's exploration camp where it was logged, photographed and sampled by Erdene's technical staff who supervised all drilling activities. 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.

**Table 10-2 Extended Holes Summary**

Hole ID	Initial drill depths	First Extension to (m)	Second Extension to (m)	Comment
BDK-18	200	265		Extended in 2017
BKD-27	85	134	237	Extended in 2016 and 2017
BKD-29	50	202		Extended in 2017
BKD-30	85	163		Extended in 2017
BKD-68	50	169		Extended in 2017
BKD-69	70	220		Extended in 2017
BKD-81	100	231		Extended in 2017
BKD-82	80	226		Extended in 2017
BKD-85	130	223		Extended in 2017
BKD-176	320	359		Extended in 2017
BKD-145	201	272		Extended in 2018
BKD-253	151	190		Extended in 2018

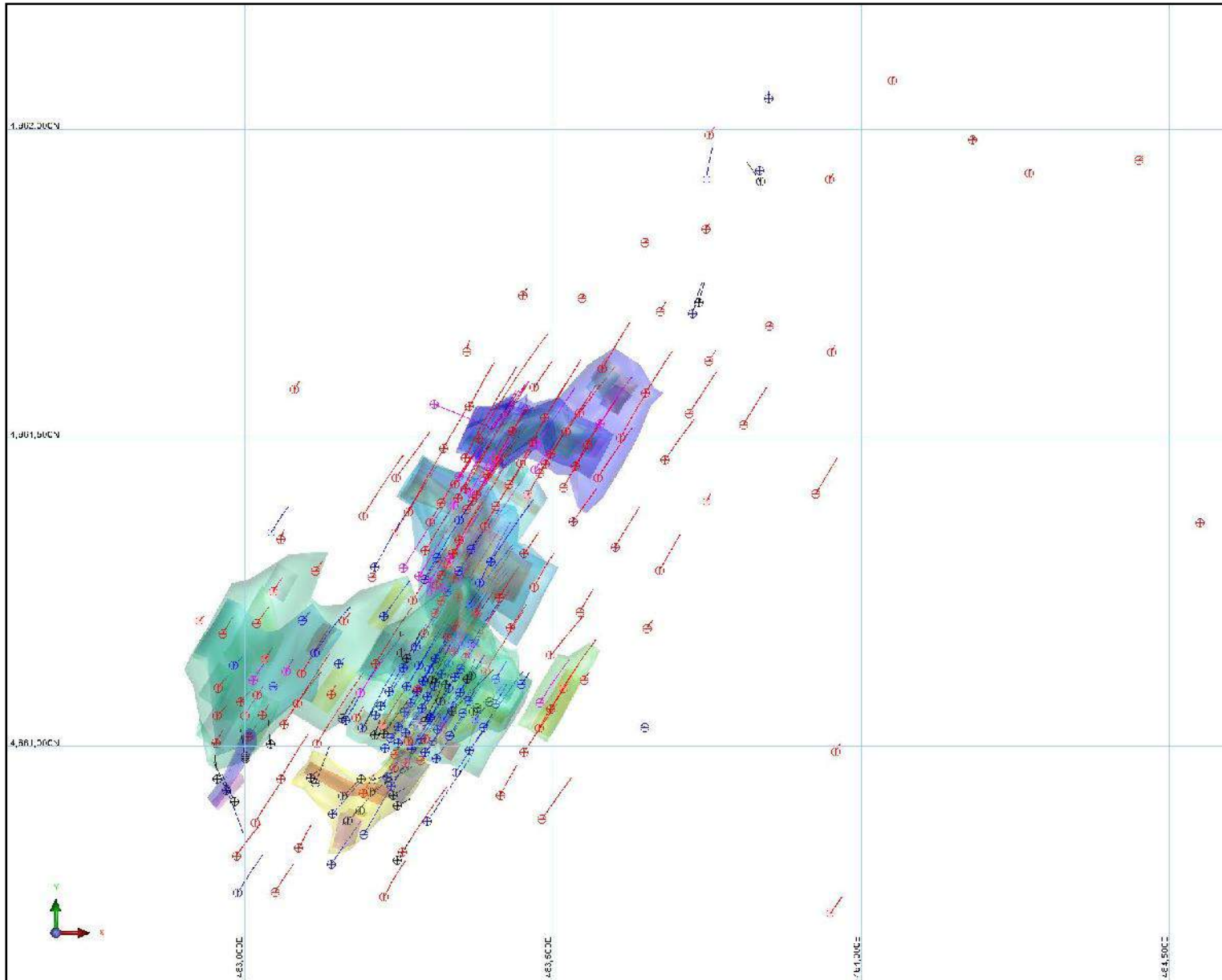
## 10.1 Bayan Khundii Drilling

Four phases of drilling were conducted on the Khundii property. All phases of drilling and Interpreted Mineralization wireframes are shown in **Figure 10-1**. Initially 15 shallow scout holes were drilled (2015) totaling 696m to test surface high-grade zones identified from rock geochemical surveys, geological mapping, ground magnetic and dipole-dipole geophysic surveys. Those holes demonstrated continuity of high-grade mineralization within broader low-grade mineralization at Bayan Khundii. The second phase (2016) of drilling comprises 81 diamond drill holes spaced nominally 40m apart, totaling 11,808.9m, concentrated on Gold hills and Striker Zones. The third phase (2017) of drilling comprises 138 drill holes totaling 25,638.35m testing extension of previously defined high and low grade zones as well other prospective targets on the property. The latest and fourth phase (2018) of drilling comprises 21 drill holes totaling 4,527.3m mostly concentrated on Midfield and North Midfield zones. A breakdown of holes per prospect is shown in the below sections and by year in **Figure 10-1**.

### 10.1.1 Striker Zone

Since the first hole at Bayan Khundii in Q4 2015 (BKD-01: 7 m of 27.5 g/t Au at 14 m depth; northern Striker Zone), more than 60 drill holes have been completed in the prospect, with approximately 70% intersecting intervals of greater than 10 g/t Au, indicative of the high-grade nature of the Bayan Khundii mineralization. The Company has identified very good continuity of multiple, near-surface, high-grade Au zones, including both very high concentrations of Au (e.g. 306 g/t Au over 1 m; hole BKD-77), wide intervals of high-grade Au (e.g. 5.3 g/t Au over 63 m; hole BKD-17), and broad, lower grade intervals surrounding the high-grade mineralization (ex. 1.2 g/t Au over 112 m; hole BKD-51).

In 2017, the Company completed several holes at 40-m centres along the northern end of Striker to test between the very high-grade Striker and Midfield Zones. The holes were completed over a 180 by 100 m area between Striker and Midfield and all intersected broad zones of lower-grade Au mineralization beginning at shallow depths. Additional holes drilled in Q3-Q4 2017, including the extension of several previous holes, confirmed the continuity of mineralization between Striker and Midfield zones, including a 128 m wide zone of mineralization in BKD-194 that averaged 1.1 g/t Au, including a 22 m wide interval that averaged 3.3 g/t Au.



**LEGEND**

- Year 2015
- Year 2016
- Year 2017
- Year 2018



DO NOT SCALE THIS DRAWING - USE FIGURED DIMENSIONS ONLY. VERIFY ALL DIMENSIONS ON SITE

**CLIENT**



**PROJECT**

NAME **Bayan Khundii Resource Estimate Technical Report**

DRAWING **Drill Location Map and Interpreted Mineralization Wireframes**

FIGURE No. 10-1

PROJECT No. ADV-MN-00156

Date September 2018

## 10.1.2 Striker-Midfield Connection

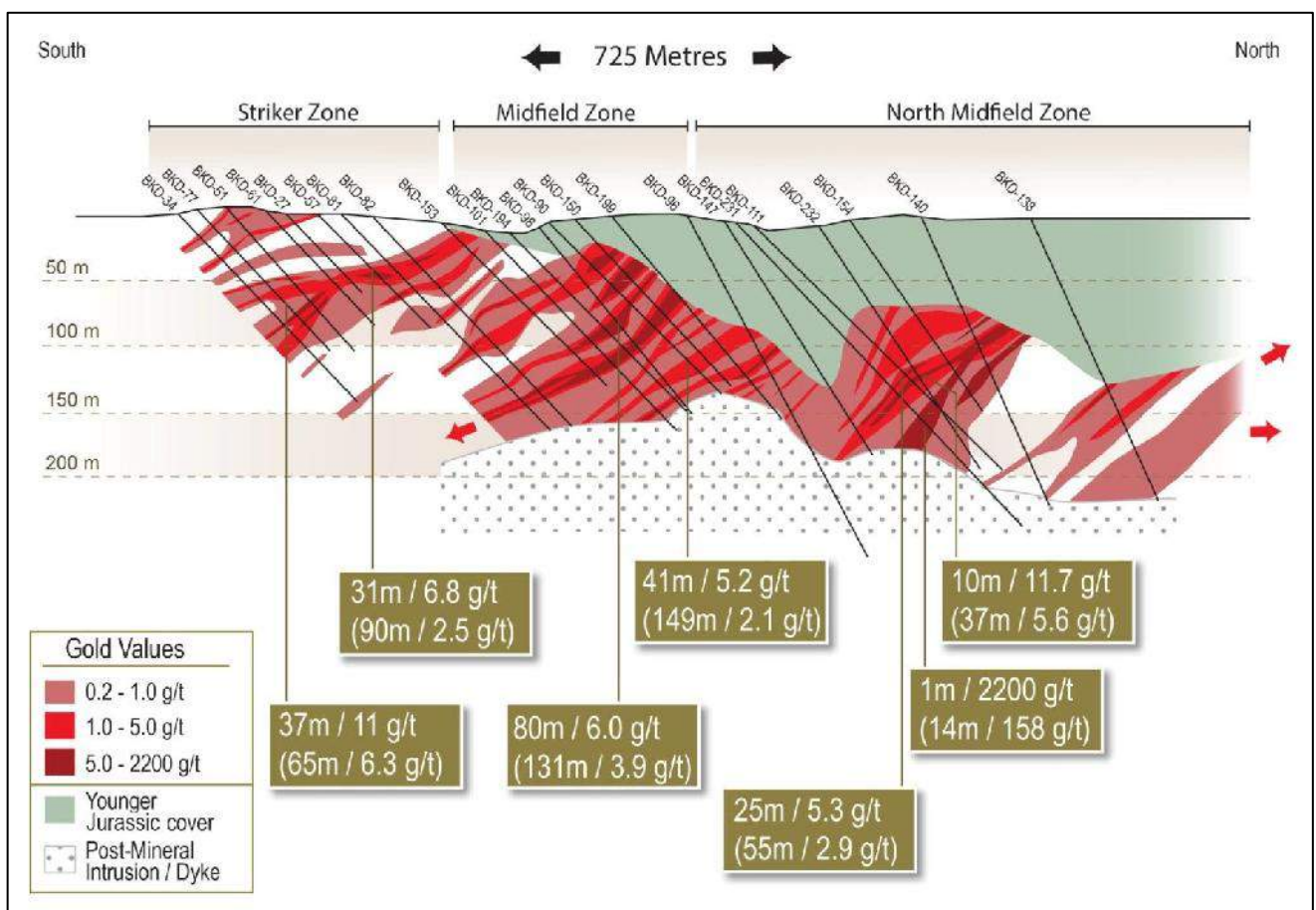
In Q2 2017, the Company completed several holes at 40 m centers along the northern end of Striker to test between the very high-grade Striker and Midfield Zones. Additional drilling in Q3/Q4 2017, including the extension of several previous holes, confirmed the continuity of mineralization between Striker and Midfield zones, including a 128 m wide zone of mineralization in BKD-194 that averaged 1.1 g/t Au, including a 22 m wide interval that averaged 3.3 g/t Au. This drilling has defined a near-surface, high-grade zone between Striker and Midfield. Hole BKD-222, announced in Q4 2017, intersected 23 m at 6.7 g/t Au with individual 1 m samples up to 139 g/t Au within 50 m of the surface. Two earlier holes, north and south of this intersection (BKD-153 and BKD-86), returned individual samples of 94.8 g/t Au and 31.4 g/t Au, respectively, within wider mineralized intervals, again within 50 m of surface. Prior to the 2017 exploration season, limited drilling had taken place in a 200 m wide zone separating Striker from Midfield.

## 10.1.3 Midfield and North Midfield Zones

As drilling results continued to be received and interpreted throughout 2017, and in conjunction with independent technical experts, a greater understanding of the controls on mineralization at Bayan Khundii was conceived. As a result, high priority drill targets were identified in Q4 2017. These included:

- Testing the recently discovered North Midfield Zone with more detailed, closer-spaced drilling and testing structural concepts and extensions at depth;
- Testing the Midfield area for the presence of shallower zones of mineralization; and testing the continuity of broad mineralized zones in the central portion of the North Midfield target area (**Figure 10-2**).

**Figure 10-2 Bayan Khundii Cross Section 2017 with Selective Results Highlighted**



Drilling within the Midfield and North Midfield Zones in 2017 and 2018 extended the area of Au mineralization down dip to the south and strengthened the continuity of the high Au grades reported previously in the central

Midfield area. Results included the intersection of the highest grade Au interval to date in hole BKD-231 which intersected one meter of 2,200 g/t Au and 948 g/t silver within a 14 m interval of 158 g/t Au at 193 m depth (140 m vertical depth). These results support the observation that this area contains the most intense hydrothermal activity and the most pervasive Au mineralization at Bayan Khundii. Several holes confirmed the continuity within the Midfield and North Midfield Zones. BKD-179 returning 40 m of 3.3 g/t Au, including 9 m of 12.5 g/t Au, which was drilled in the North Midfield Zone, 165 m to the northeast of the main Midfield Zone. Hole BKD-178, drilled 80 m north of the main Midfield Zone, returned 71.6 m of 1.6 g/t Au, including 19 m of 4.6 g/t Au, and hole BKD-182, drilled 200 m north of Midfield returned 39 m of 2.1 g/t Au, including 9 m of 8.2 g/t Au.

In Q4 2017, the Company intersected a new extension to the east of Midfield. While most of the drilling in the Midfield area has focused on pushing the northern limits of the Au mineralized zone towards the Northeast Zone, hole BKD-210, located 80 m east of Midfield's eastern boundary, returned 43 m of 1.8 g/t Au and included Au values up to 44.8 g/t, establishing a new eastern extension to the Midfield Zone that justifies further follow-up drilling.

Six holes (BKD-229 to BKD-234), totaling 1,192 m, were completed at Bayan Khundii in November 2017. The mineralization was hosted by multi-phase quartz-adularia-specularite veins and hematite breccia, with abundant fine-grained visible Au. This high-grade intersection confirms strong continuity down-dip from earlier holes, including BKD-110, 30 m north, which intersected one meter of 115 g/t Au and one meter of 108 g/t Au, and BKD-111, 30 m northwest, which intersected one meter of 44 g/t Au and one meter of 33 g/t Au. The discovery of this high-grade vein represents an important new target area that will require additional, closer-spaced drilling in 2018.

Hole BKD-232 was completed approximately 65 m north of BKD-231 and 100 m north of the Midfield Zone, within an area that previously had 80-m hole spacing and relatively lower grade results. This hole returned 22 m of 8.3 g/t Au, and included multiple zones grading over 10 g/t Au. The top of the mineralized interval was intersected at 91 m depth (74 m vertical depth).

In Q4 2017, three holes were completed along the south and southeast end of the Midfield Zone (BKD-229, 230 and 233). Hole BKD-230, completed near the center of Midfield, intersected a continuously mineralized 127 m interval starting at 31 m depth (24 m vertical) that averaged 1.8 g/t Au, and included a 25 m wide interval that averaged 5.8 g/t Au. Two additional holes (BKD-229 and BKD-233) successfully intersected high-grade Au mineralization, and in the case of BKD-233, although lower grade, expanded the southeast boundary of the Midfield Zone which remains open to the east while BKD-229 intersected Au mineralization at the shallowest levels to date.

On May 8, 2018 the Company announced initial results from its Q2-2018 drill program, which commenced on April 11, 2018. The results were for the first six holes (BKD-235 to BKD-240), totaling 1,423 m, which were completed at the North Midfield Zone and were designed to test high-priority structural targets and to test continuity and potential extensions of the high-grade mineralization in this area. Hole BKD-236 was also drilled to test the interpreted controlling structure on the western boundary of the Au mineralization and a sub-set of Au-bearing, north-south trending veins, approximately perpendicular to the main trend of mineralization (azimuth of 108 degrees). Holes BKD-239 and BKD-240 were step-out holes, located near previously completed hole BKD-232 (Q1-2018) that returned 36.6 m of 5.6 g/t Au.

The results from this initial drilling confirmed strong continuity within the North Midfield high-grade zone, with all six holes intersecting visible Au mineralization and assays ranging from 22 to 169 g/t Au. Very high grade assay results were encountered in the core of the North Midfield Zone, with hole BKD-238 returning 18 m of 21.6 g/t Au, including 2 m of 169 g/t Au.

All holes intersected broad Au mineralized zones enveloping the high-grade cores, ranging from 16 m to 102 m of greater than 1 g/t Au. In addition, drilling provided evidence of Au-bearing feeder zones, with multi-stage quartz-chalcedony veins and breccias being intersected in holes BKD-236 and BKD-237.

#### 10.1.4 West Striker Zone

Erdene has completed a total of 27 holes in the area west of the Striker Zone at 20 to 80 m spacing, over a 375 by 250 m area. The depth of drilling has ranged from 97 to 340 m vertical depth, with an average of 223 m. Of the 27 holes, 26 have intersected anomalous Au mineralization, with 13 returning high-grade intervals of greater



than 10 g/t Au. In Q4 2017, the Company reported results for three holes (BKD-219 to 221) including the highest-grade intersection to date within this zone, 116 g/t Au over one meter within 15 m averaging 9.2 g/t Au in hole BKD-220, 250 m west of the Striker zone, further establishing the potential that exists at West Striker to identify additional significant high-grade zones.

Results to date from the drill program have:

- Confirmed the orientation, grade and continuity of mineralization initially identified through mapping and trenching;
- Extended the area of known Au mineralization to include the Midfield and Midfield North Zones beneath Jurassic cover rocks;
- Discovered significant additional Au mineralization west of Striker, also under Jurassic cover rocks; and
- Identified Au mineralization in ash and welded tuff host rocks up to 1.3 km northeast of the Striker Zone.

Gold mineralization is mostly hosted in parallel NW-SE, moderately-dipping (~45°) zones that range in width from 4 to 174 m (see **Figure 10-2**). Drilling results indicate that individual higher-grade mineralized zones can be correlated between drill holes as shown in **Figure 10-2**. Higher-grade Au± Ag intersections are located within widespread lower-grade envelopes, for example hole BKD-90 has several high-grade intervals including a 41 m wide high grade zone (41 m at 5.2 g/t Au) within a 149 m wide mineralized envelope that averages 2.1 g/t Au (**Figure 10-2**).

### 10.1.5 Northeast Zone

The Company has completed eight holes in the Northeast Zone over a 600 m by 400 m area. Hole BKD-122, on the southern boundary of the Northeast Zone (500 m northeast of Midfield), returned 14 m of 0.75 g/t Au from surface, including 2 m of 4.4 g/t Au, and 21 m of 0.72 g/t Au at 65 m depth. Two rock chip samples collected 600 m northeast of hole BKD-122 returned Au assay values of 6.9 g/t and 0.4 g/t Au.

## 11 Sample Preparation, Analyses and Security

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

### 11.1 Primary Sampling Protocols

Rock chip and rock grab samples were taken from outcrop / sub-crop, respectively, by Erdene's geologists with locations determined by hand-held GPS devices (with  $\pm 3$  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 20-30 cm deep sample pits. Sample material was dry sieved using a steel 20 mesh (0.85 mm) screen. Collected 20 mesh sample material had a mass of ~300-400 g. 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: one standard (OREAS 65a), one blank (coarse silica sand) and one field duplicate.

All trenches were excavated to bedrock. Trench samples were collected at one or two meter 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.

It is RPM's opinion that the samples assayed are representative and that it is unlikely there has been sampling bias.

### 11.2 Sample Handling Protocols and Security

Erdene's sampling protocol for drill core primarily from Devonian lithologies consisted of routine collection of samples at one or two meter intervals (depending on the lithology and style of mineralization) over the entire length of the drill hole. Some selective Jurassic units (basal conglomerate) and basement Syenite units were sampled but not in every hole as these units were shown to be unmineralized. All sample intervals were based on meterage, not geological controls (with the exception of the unconformable Jurassic-Devonian contact and Jurassic-basement-syenite contact) or mineralization. For example, all mineralized and strongly altered zones were sampled at one meter intervals while un-mineralized material was sampled at two meter 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 Company'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 susceptibility readings were taken for each sample interval. The remaining half-core is securely stored at the Company's Bayan Khundii exploration camp.

All rock, trench and 2015-2016 drill core samples were organized into batches of 20, while all soil sample and 2017 drill core samples were organized into batches of 30. All sample batches included two commercially-prepared certified reference material (CRMs) standards, including a Au standard (generally alternating between a high-level Au-bearing standard and low-level Au bearing standard) and a 'blank' consisting of either 'basalt blank chip' (2015) with very low Au concentration ( $<1$  ppb Au) or coarse silica sand (OREAS 24p, 2016-17). Both of these samples were used as an analytical blank for Au. Batches with 30 samples (all soil and 2107, 2018 drill core) included duplicate samples. For soil samples, this included duplicate samples taken from the same location. For drill core batches in 2017 and 2018, duplicate samples alternated between a field duplicate, consisting of two  $\frac{1}{4}$  core samples from the same interval, or a laboratory duplicate, consisting of duplicate pulps created from the same coarse grind material. Each batch was stored in the field camp in sealed bags. Sample

batches were periodically shipped directly to SGS in Ulaanbaatar via Erdene's logistical contractor, Monrud Co. Ltd.

## 11.3 Assay Laboratory Sample Preparation and Analysis Protocols

Samples from all drilling programs have been prepared and assayed at the Ulaanbaatar laboratory of SGS Mongolia LLC ("SGS"). The laboratory is one of largest commercial laboratories in Mongolia and operated to ISO17025 specifications. Analytic methods are summarised in Table 11-1. At SGS, all rock samples (drill core, chip and grab) are handled as follows:

- Samples as received are initially sorted and verified against the client Sample Submission Form.
- Samples are air dried at 90°C.
- All samples are crushed to 3.35 mm using a jaw crusher and Boyd crusher in a two-stage process.
- 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 11-1** 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 11-1** for details).

**Table 11-1** 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 difference between Au assay values and Au certificate values for the Bayan Khundii drilling program was -2.9 %. 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.

RPM 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.

In late 2017, a series of 500 samples were selected for analysis by ALS Chemex Laboratory ("ALS") in Ulaanbaatar, Mongolia. The samples selected were duplicate pulps prepared by SGS as part of the regular sample preparation process, where SGS has been instructed to prepare duplicate pulps for all samples ending in the number eight (8) and then place them in secure storage for future use, including third party analysis. The ALS facility in Ulaanbaatar is ISO certified. All samples were analyzed for Au from pulp material using the same methodology as the original assays at SGS, i.e. 30 g fire assay with AAS finish.

**Table 11-1 SGS Analytical Methods and Detection Limits**

SGS Code	Description	Element	LDL	UDL
FAE303	Fire Assay, Solvent Extraction, AAS <sup>1</sup> finish, 30g sample	Au	1 ppb	10000 ppb
FAA303	Fire Assay, AAS <sup>1</sup> finish, 30g sample	Au	0.01 ppm	1000 ppm
FAG303	Fire Assay, gravimetric, 30g sample	Au	0.03 ppm	100,000 ppm
SGS Code	Description	Element: LDL-UDL;		
ICP40B	4 acid digestion <sup>2</sup> with ICP OES <sup>3</sup> finish	<b>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%</b>		

<sup>1</sup> AAS: Atomic Absorption Spectrophotometer

<sup>2</sup> 3-Acid Digest: Perchloric (HClO<sub>4</sub>), Hydrochloric (HCl) and Nitric (HNO<sub>3</sub>)

<sup>3</sup> 4-Acid Digest: Same as 3-acid plus Hydrofluoric (HF)

<sup>4</sup> ICP OES: Inductively Coupled Plasma Optical Emission Spectrometry

LDL Lower Detection Limit

UDL Upper Detection Limit

Source: Bayan Khundii 43-101 Report, Bayan (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, National Instrument 43-101 Technical Report, Erdene Resource Development Company, M. A. (MacDonald), MSc, P.Geo., March 1, 2018

## 11.4 Sample and Assaying Methods

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

## 11.5 Quality Control Data

All samples were submitted to the SGS laboratory in Ulaanbaatar. The sample analytical QA/QC program consisted of internal laboratory repeats, field duplicates, external standards, blanks and external laboratory checks. Every 10 samples have at least one quality control data.

### 11.5.1 Standards and Blanks

The commercial standards were used during the 2015-2018 drill programs and were obtained and certified by OREAS Pty Ltd. The 2015-2018 drilling used five certified standards (Oreas, 62c, 66a, 62e, 67a and 60c) and were inserted at rate of approximately 1:30. Standard sample results are shown in **Table 11-2** while sample graphs are shown in **Figure 11-1** to **Figure 11-4**.

Three certified blanks were used, Oreas26a, Oreas24p, Silica coarse sand (all <1ppb Au). Blanks were inserted at rate of 1:30. All Blanks returned below 0.01/gt Au.

**Table 11-2 Certified Standard Summary for 2014-2017 Drilling**

Year	Std_ID	Au ppm	Count	Min Assay	Max Assay	Average Assay	Std Min	Std Max	Std Value
2015	Oreas26a		35	<0.001	<0.001	<0.001	-	-	<0.001
	Oreas62c	Au	22	8.41	8.58	8.50	8.58	9.00	8.79
	Oreas66a		17	1.19	1.25	1.23	1.18	1.29	1.24
2016	Oreas62e		162	8.39	8.66	8.53	8.72	9.54	9.13
	Oreas66a		77	1.20	1.26	1.23	1.18	1.29	1.24
	Oreas67a		104	1.98	2.36	2.25	2.14	2.33	2.24
	Oreas62c	Au	68	8.4	8.64	8.47	8.58	9.00	8.79
	Oreas24p		25	<0.001	<0.001	<0.001	-	-	<0.001
	Oreas26a		99	<0.001	<0.001	<0.001	-	-	<0.001
2017	Silica Sand		241	<0.001	<0.001	<0.001	-	-	<0.001
	Oreas60c		230	2.30	2.66	2.48	2.39	2.55	2.47
	Oreas62e	Au	309	8.27	9.26	8.72	8.72	9.54	9.13
2018	Silica Sand		532	<0.001	<0.001	<0.001	-	-	<0.001
	Oreas60c		39	2.38	2.62	2.49	2.39	2.55	2.47
	Oreas62e	Au	50	8.41	9.3	8.98	8.72	9.54	9.13
2018	Silica Sand		84	<0.001	<0.001	<0.001	-	-	<0.001

**Figure 11-1 Standard Graphs for 2015 Drilling Program**

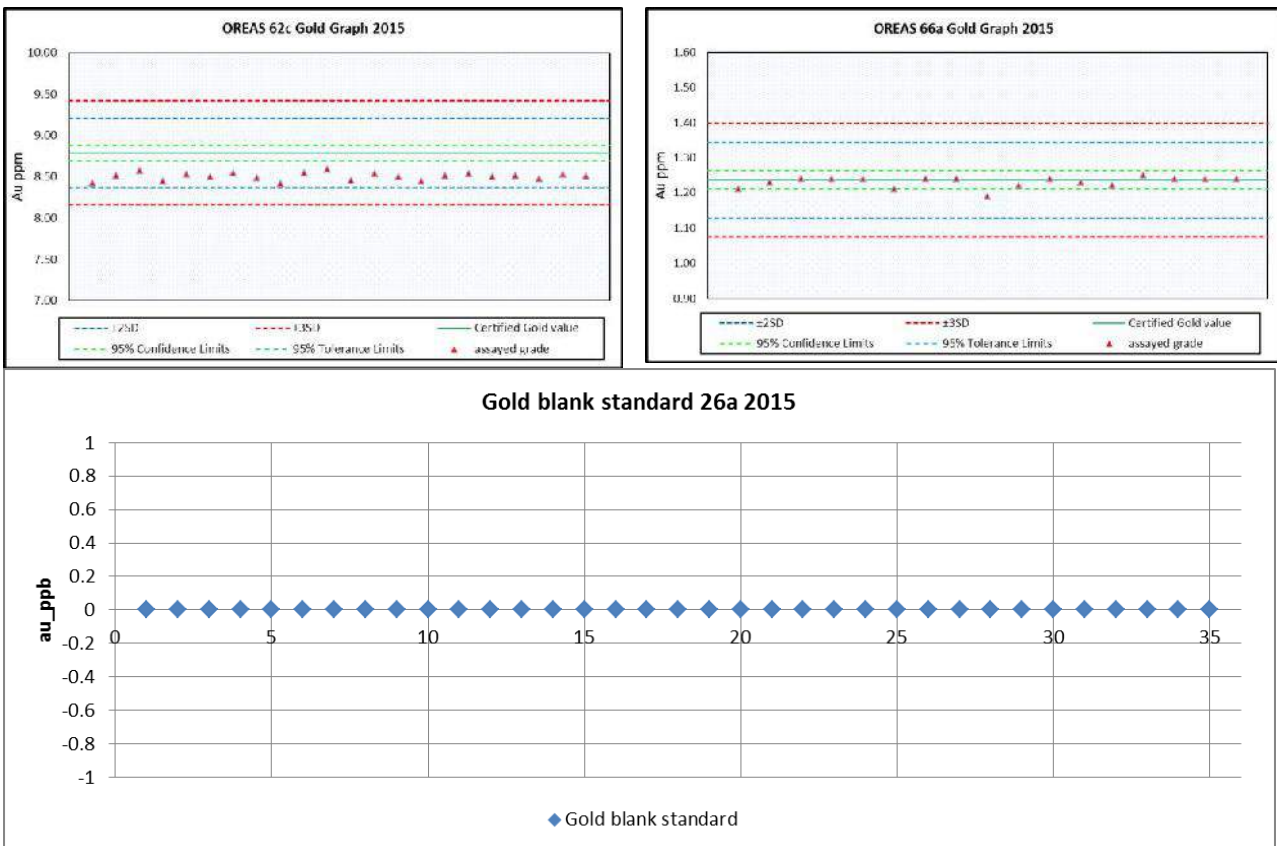


Figure 11-2 Standard Graphs for 2016 Drilling Program

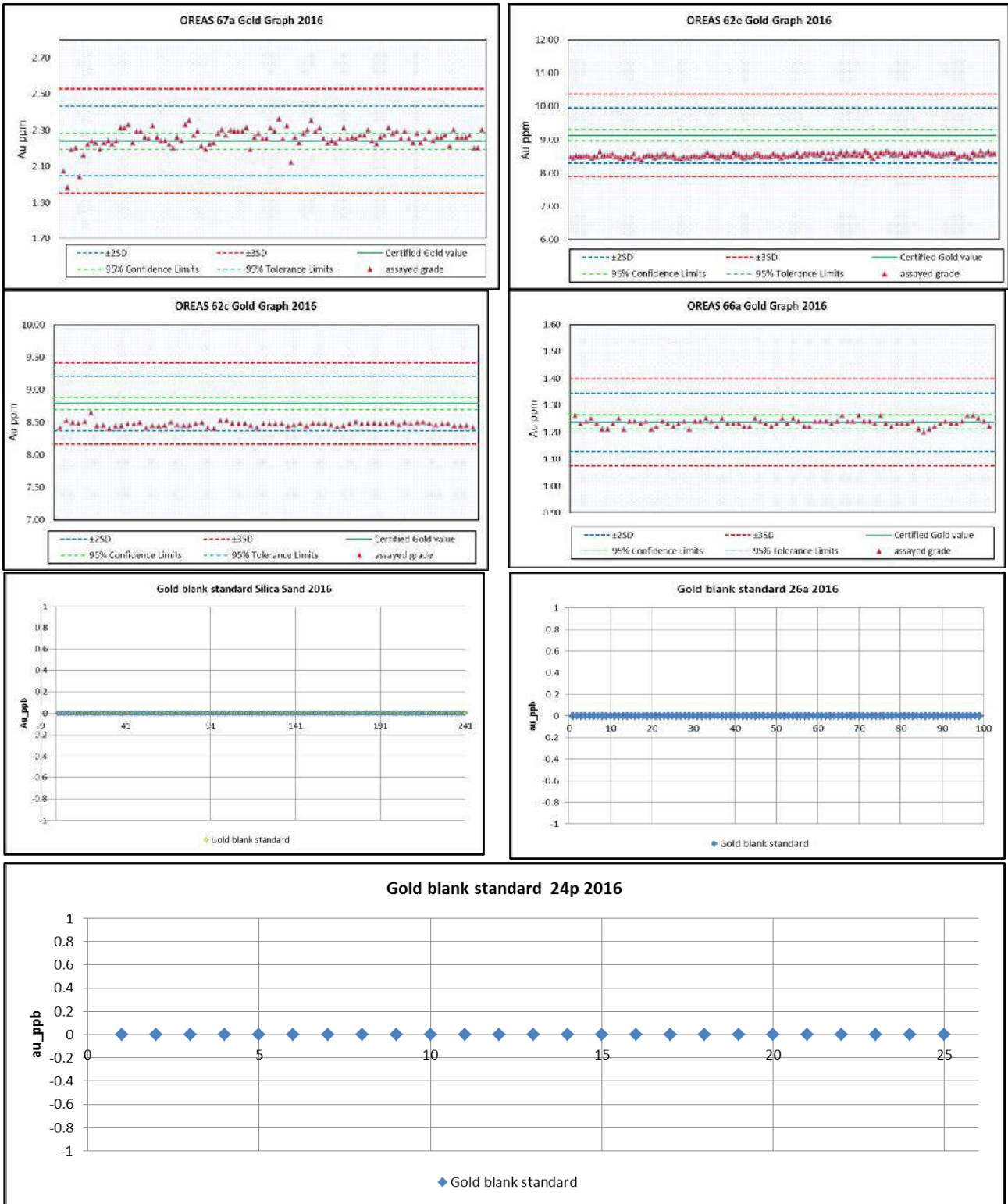


Figure 11-3 Standard Graphs for 2017 Drilling Program

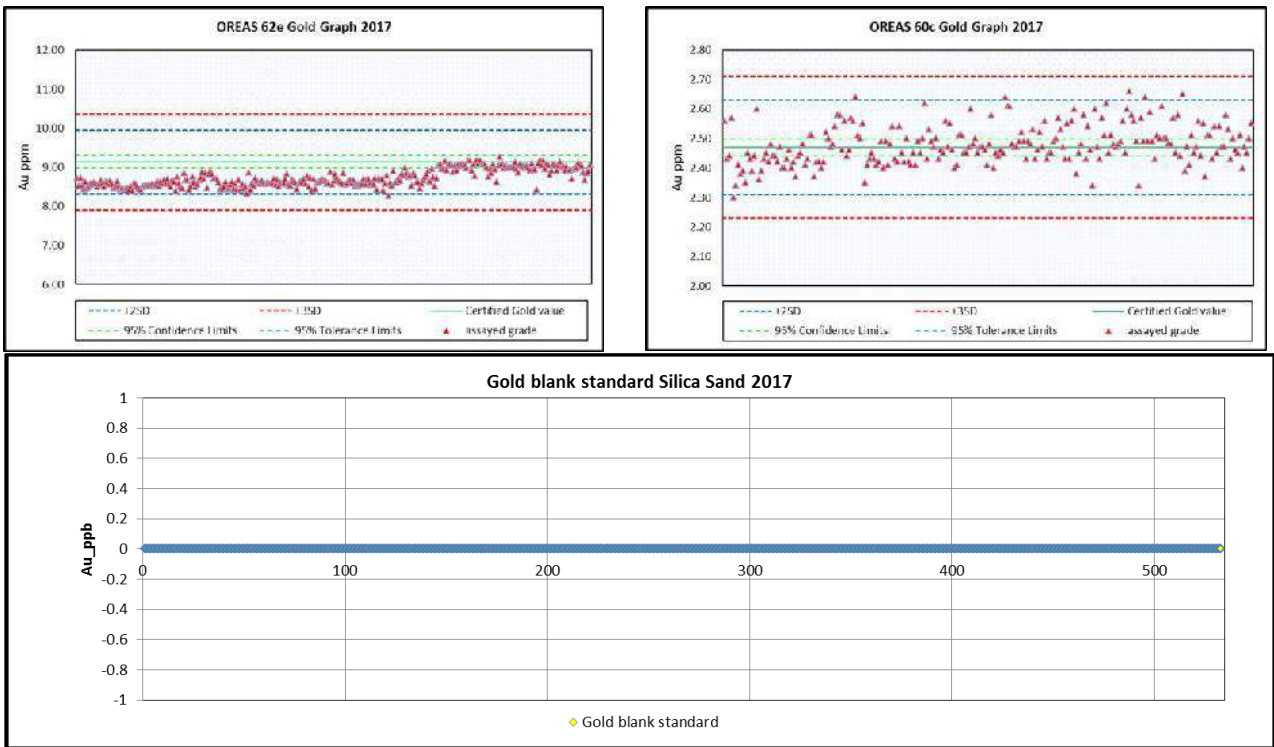
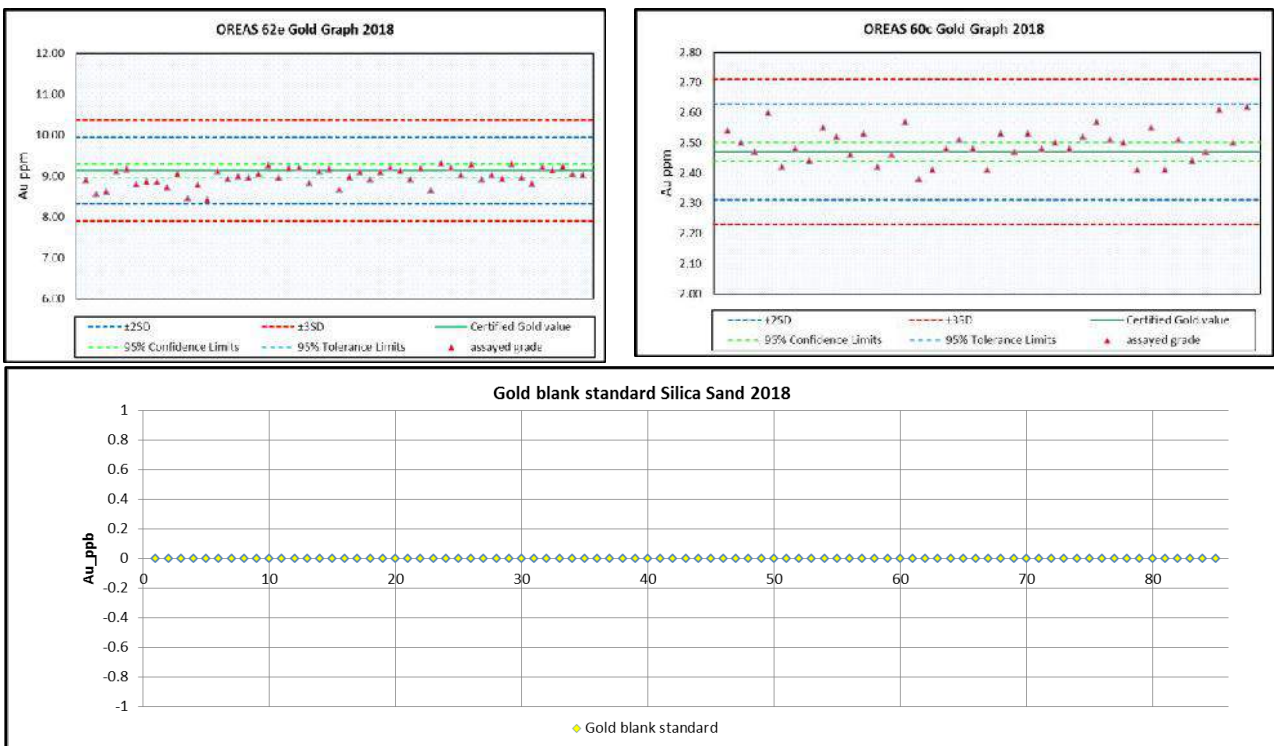


Figure 11-4 Standard Graphs for 2018 Drilling Program



Slight underestimation of higher grades Au (8.0g/t) and Ag (10 g/t) has been observed in the OREAS62c standard for the 2015 and 2016 drilling, as well as slight underestimation of Au (9.2 g/t) grade was also observed in OREAS62e for 2016 and 2017 drilling.

Close monitoring of the Oreas 62e and 62c are recommended by RPM, however, the remainder of the standards performed very well with majority of the results fall within 2SD line.

## 11.5.2 Field Duplicates

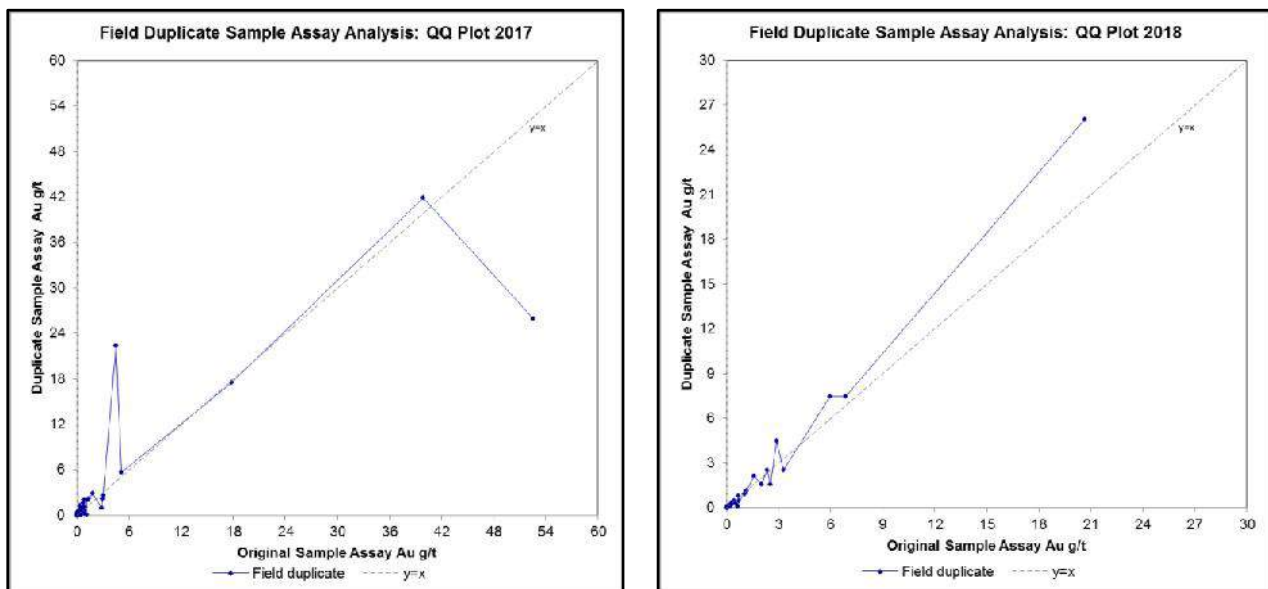
Field duplicates and laboratory repeats were analysed for 2017 and 2018 drilling programs and a total of 304 field duplicates including 258 readings for 2017 drilling and 46 readings for 2018 drilling.

Field duplicates were prepared from ¼ core samples and inserted at rate of 1:60. Summary statistics for field duplicates are shown **Table 11-3**. Results are shown graphically in **Figure 11-5**.

**Table 11-3 Summary Statistics for Field Duplicates**

Parameter	2017 Field duplicates		2018 Field duplicates	
	Original Assay	Duplicate Assay	Original Assay	Duplicate Assay
<b>Count</b>	258	258	46	46
<b>Minimum</b>	0.00	0.00	0.00	0.00
<b>Average</b>	0.68	0.66	1.23	1.38
<b>Median</b>	0.09	0.09	0.16	0.15
<b>Maximum</b>	52.60	41.90	20.64	26.08
<b>Standard Deviation</b>	4.25	3.53	3.23	4.04
<b>Precision Count</b>				
<b>&lt;1% Precision</b>	27	10.5%	8	17%
<b>1%&lt;Precision&lt;10%</b>	114	44.2%	23	50%
<b>10%&lt;Precision&lt;20%</b>	56	21.7%	8	17%
<b>20%&lt;Precision&lt;50%</b>	46	17.8%	6	13%
<b>&gt;50%Precision</b>	15	5.8%	1	2%

**Figure 11-5 Scatterplots (QQ) of Field Duplicate results for 2017 and 2018**



The analysis of the plots indicates there is a degree of scatter for Au grade. This indicates a moderate natural variability or “nugget effect” for Au grades. RPM considers this natural variability is an inherent feature of the mineralization can be observed within the deposit on a local scale and is expected in this style of deposit.



## 11.5.3 Laboratory Duplicates

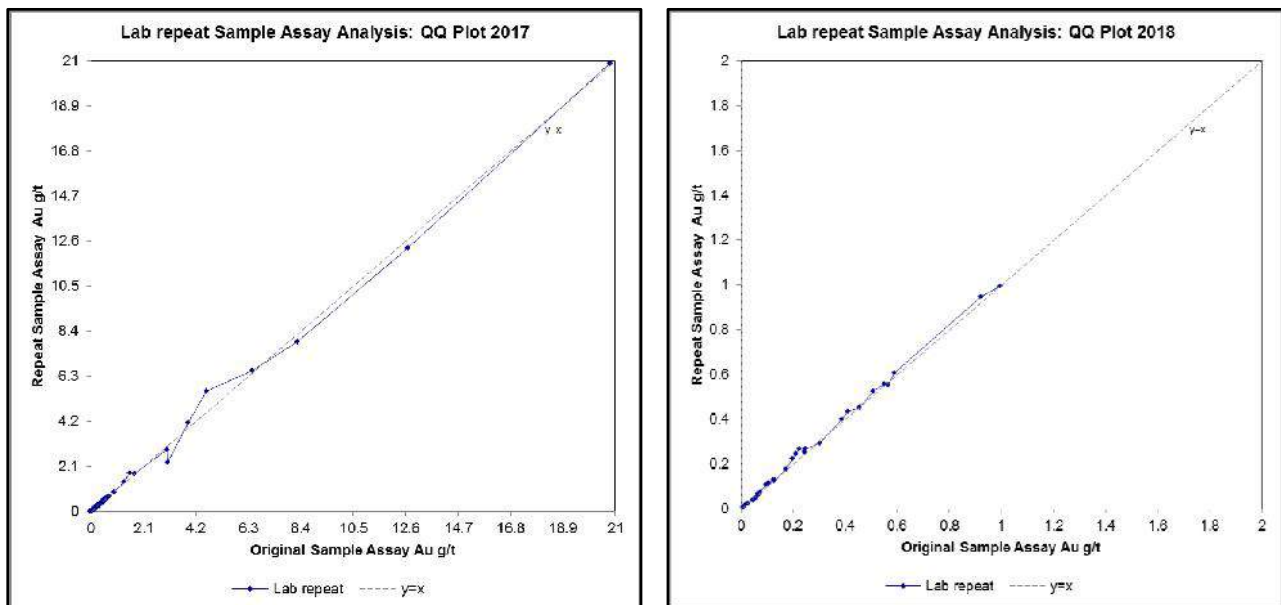
Laboratory duplicates were analysed for 2017 and 2018 drilling programs and a total of 225 laboratory duplicates including 194 readings for 2017 drilling and 31 readings for 2018 drilling.

Laboratory duplicates were prepared from pulp core samples and inserted at rate of 1:60. Summary statistics for laboratory duplicates are shown **Table 11-4**. Results are shown graphically in **Figure 11-6**.

**Table 11-4 Summary Statistics for Laboratory Duplicates**

Parameter	2017 Lab duplicate		2018 Lab duplicate	
	Original Assay	Repeat Assay	Original Assay	Repeat Assay
<b>Count</b>	194	194	31	31
<b>Minimum</b>	0.00	0.00	0.01	0.01
<b>Average</b>	0.49	0.49	0.26	0.26
<b>Median</b>	0.09	0.09	0.17	0.18
<b>Maximum</b>	20.80	20.90	1.00	1.00
<b>Standard Deviation</b>	1.94	1.94	0.26	0.26
<b>Precision Count</b>				
<b>&lt;1% Precision</b>	39	20%	7	23%
<b>1%&lt;Precision&lt;10%</b>	122	63%	24	77%
<b>10%&lt;Precision&lt;20%</b>	21	11%	0	0%
<b>20%&lt;Precision&lt;50%</b>	11	6%	0	0%
<b>&gt;50%Precision</b>	1	1%	0	0%

**Figure 11-6 Scatterplots (QQ) of Laboratory Duplicate results for 2017 and 2018**



Analysis of these plots indicates that the almost all of the results are aligned on  $x=y$  line. This indicates good repeatability of primary pulverized samples and that the pulps appear to be homogenous and no assay bias can be observed in the data highlighting the precision of the sample preparation and analysis by SGS laboratory.

## 11.5.4 External Check

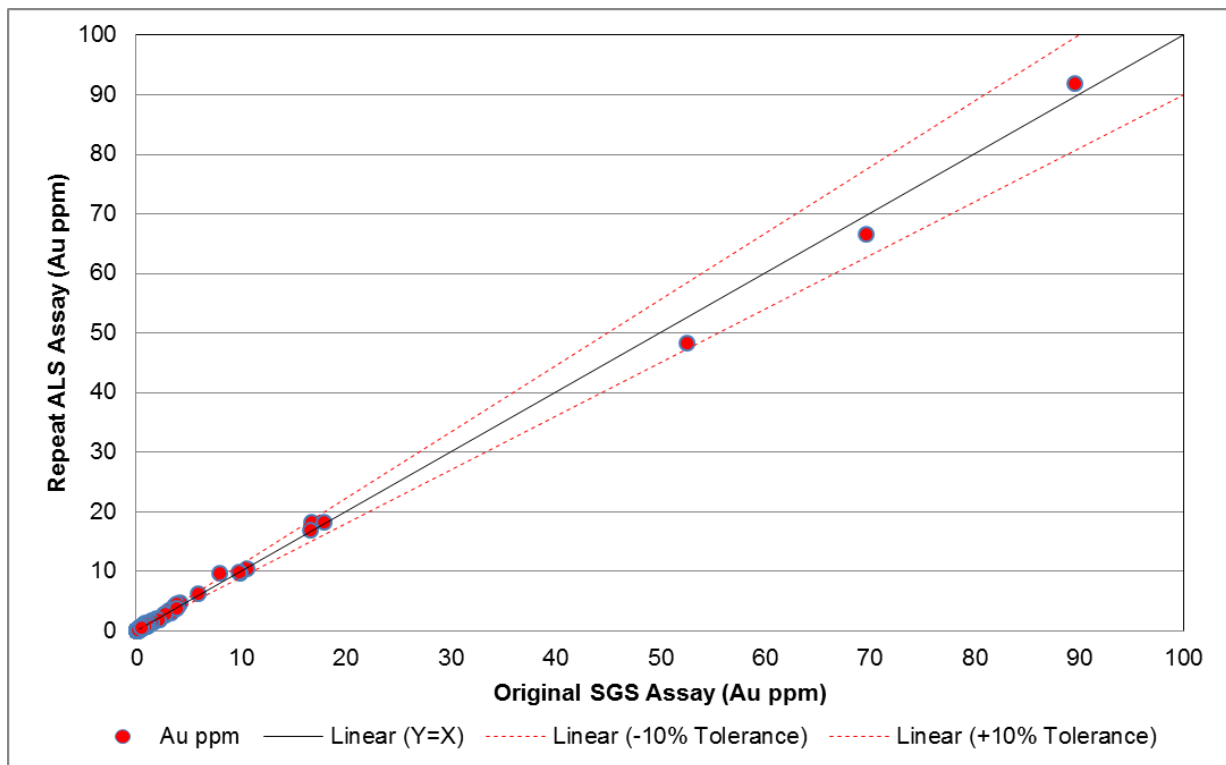
In late 2017, a series of 500 samples were selected for analysis by ALS Chemex Laboratory (“ALS”) in Ulaanbaatar, Mongolia. The samples selected were duplicate pulps prepared by SGS as part of the regular

sample preparation process, where SGS has been instructed to prepare duplicate pulps for all samples ending in the number eight (8) and then place them in secure storage for future use, including third party analysis. The ALS facility in Ulaanbaatar is ISO certified. All samples were analyzed for Au from pulp material using the same methodology as the original assays at SGS, i.e. 30 g fire assay with AAS finish. Summary statistics for External checks results are shown **Table 11-5** and graphically shown in **Figure 11-7**.

**Table 11-5 Summary Statistics for External Check**

Parameter	External Check Results	
	Original Assay	Repeat Assay
Count	500	500
Minimum	0.05	0.00
Average	1.02	1.04
Median	0.23	0.24
Maximum	89.60	91.90
Standard Deviation	5.77	5.71
<b>Precision Count</b>		
<1% Precision	70	14%
1%<Precision<10%	374	75%
10%<Precision<20%	41	8%
20%<Precision<50%	13	3%
>50%Precision	2	0%

**Figure 11-7 Scatterplots of External Laboratory Check**



The results show a high degree of precision between the two data sets with 88.8% having a precision difference of <10% while 97% has a precision difference of <20%.

## 11.5.5 Screen Metallic Fire Assay Checks

In the early stages of the exploration program a screen metallic analysis program was undertaken. Due to some very high-grade Au values and abundant visible Au 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 Au in higher grade samples and to determine if there was a 'nugget effect', that is, anomalously high Au grades due to non-uniform distribution of high-grade Au 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 Au, however 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 Au, was then analyzed by fire assay (FA). For the -75um fraction, three individual subsamples (30 g) were analyzed by FA methods. The total Au content for the sample was calculated by using the weighted average of the +75um fraction results and the mean of the three -75um results.

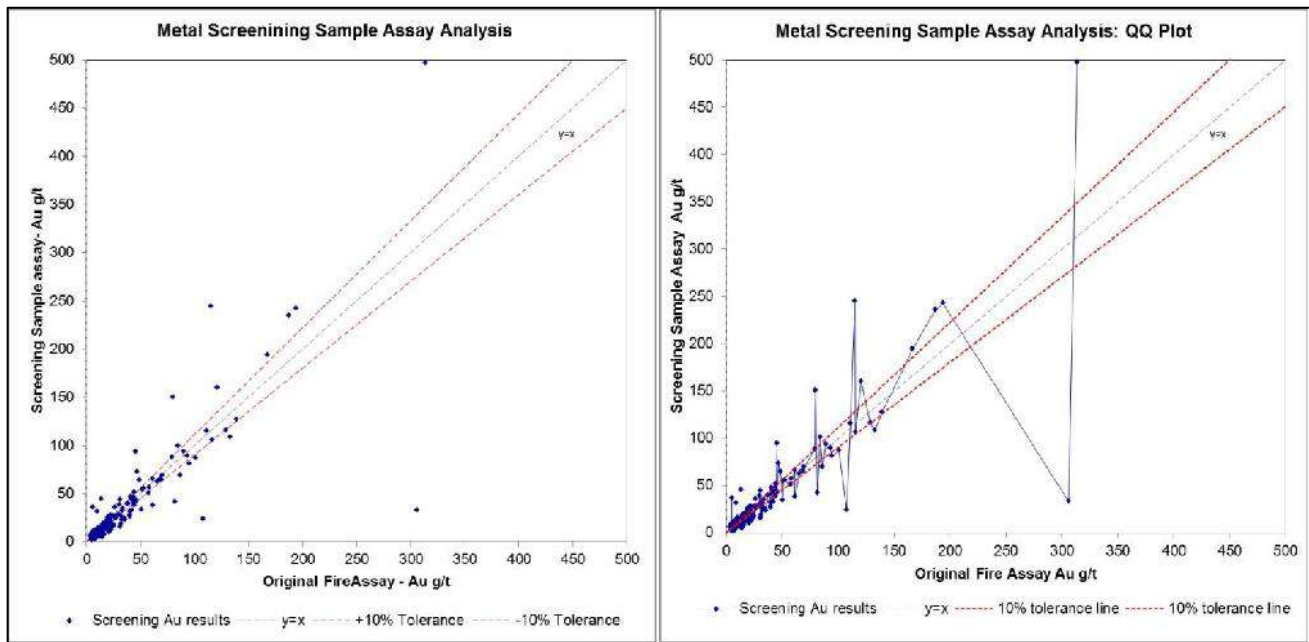
For the 30 high-grade samples, the difference in the overall average grade from the original assays to the screen metallic assays was -2%. So, on average, the screen metallic assays were the same as the original assays. For all 42 samples, the difference in the overall average grade from the original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

Later in 2018, ERD re-assayed all samples (293) above 5g/t Au and inclusive of some lower grade samples with visible gold with screen metallic fire assay method and results are provided in **Table 11-6** and Scatter and QQ plots for fire assay and screen metallic results are provided in .

**Table 11-6 Summary Statistics for Screen Metallic Assay Results**

Parameter	Original Assay	Screen Metallic
Count	293	293
Minimum	3.54	1.59
Average	24.45	24.57
Median	10.8	10.47
Maximum	314.00	496.67
Standard Deviation	38.06	44.31
<b>Precision Count</b>		
<1% Precision	24	8.2%
1%<Precision<10%	170	58.0%
10%<Precision<20%	50	17.1%
20%<Precision<50%	41	14.0%
>50%Precision	8	2.7%

Figure 11-8 Screen Metallic Assaying Results - Scatter and QQ plots



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 Au at Bayan Khundii was coarse and ‘nuggety’, the variability would be much higher.

In order to accurately represent Au assay data for Bayan Khundii Project, RPM used screen metallic results for those analyzed for fire assay while RPM used original fire assay results for the remaining assay data.

In addition, the metallurgical results from 2016 indicate that a large portion of the gravity recoverable Au is present in the finer size fractions (See **Section 13**). This conclusion is also supported by the SM results which showed that, on average, the -75um fraction contained 81% of the Au while representing 91% of the sample material. While there is still a disproportionate amount of Au in the +75um fraction (19% of the Au in 9% of the sample) this does not represent a nugget effect.

### 11.5.6 QA/QC Summary

ERD has carried out a program of QA/QC for drilling since 2015 at the Bayan Khundii Project. Certified Reference Material standards were inserted at regular intervals and results have accurately reflected the original assays and expected values. Certified blanks have all reported below 0.001g/t Au.

Slight underestimation of higher grades Au (8.0g/t) and Ag (10 g/t) has been observed in the OREAS62c standard for the 2015 and 2016 drilling, as well as slight underestimation of Au (9.2 g/t) grade was also observed in OREAS62e for 2016 and 2017 drilling. Close monitoring of the Oreas 62e and 62c are recommended by RPM.

The field duplicate analysis indicates there is a degree of scatter for Au grade, however, overall grade distributions were identical. This indicates a moderate natural variability or “nugget effect” for Au grades. RPM considers this natural variability is an inherent feature of the mineralization can be observed within the deposit on a local scale and is expected in this style of deposit.

Analysis of repeat plots indicates that almost all of the results are aligned on x=y line. This indicates good repeatability of primary pulverized samples and that the pulps appear to be homogenous and no assay bias can be observed in the data highlighting the precision of the sample preparation and analysis by SGS laboratory.

Screen metallic results show that the +75um fraction, on average, contains a disproportionately higher percentage of the Au, caution should be exercised. Results from the duplicate-sample testing program initiated

in 2017 does show that there is some variability between duplicate samples, particularly for field duplicate (1/4 core) samples. For pulp duplicate samples greater than 200 ppb Au, the average difference between duplicates is 5.8% (n=61 pairs) while for field duplicated >200 ppb the average difference is 47.5% (n=79 pairs). Additional work is required to better understand the reasons for the observed differences in field duplicates, including possible re-testing using screen metallic assays.

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

## 12 Data Verification

RPM conducted a review of the geological digital data supplied by ERD for the Bayan Khundii Project to ensure no material issues could be found and there was no cause to consider that the data was not accurate. RPM's review included an initial site visit undertaken from the 18<sup>th</sup> to 21<sup>st</sup> November 2014, however a recent site visit was conducted between May 15-19<sup>th</sup>, 2018 by Tony Cameron (QP) and Oyunbat Bat-Ochir whom both are employees of RPM.

During the most recent site visit, RPM visually checked detailed drill logs and assay results against five drill hole cores stored at the site. These checks were conducted on hole BKD-236, BKD-237, BKD-238, BKD-239 and BKD-240 were visually checked against assays results and drill logs. During this review it was noted that:

- Visible Au, is associated with comb-textured quartz± specularite veins;
- Multi-stage quartz-adularia± specularite veins (**Figure 12-1**);
- Quartz-hematite/specularite breccias, hematite veins and fracture fillings; and
- Un-mineralized syenite intrusion base is also checked during site visit and those intervals from drill core are not assayed by the client in most cases.

**Figure 12-1 Hematite altered Intense Sugary Quartz Vein Zone (Assayed 22.0 g/t Au)**



RPM verified collar location of drill holes with handheld GPS and difference between surveyed collar location and handheld located collars listed in **Table 12-1**. The variations are within the accuracy of the handheld GPS.

**Table 12-1 Collar comparison between digital database and handheld GPS**

hole_id	in Database			Differences from site visit check		
	X	Y	Z	X	Y	Z
BKD-102	483,341	4,861,195	1,234.98	-2	2	4
BKD-111	483,375	4,861,409	1,238.08	-3	2	2
BKD-128	483,260	4,860,973	1,243.26	-2	-1	1
BKD-129	483,285	4,860,976	1,241.51	-2	-1	5
BKD-138	483,543	4,861,540	1,238.58	-4	2	0
BKD-140	483,497	4,861,475	1,238.19	-2	2	1
BKD-149	483,290	4,861,184	1,236.70	-4	0	3
BKD-150	483,339	4,861,271	1,237.31	-3	0	3
BKD-155	483,459	4,861,407	1,237.53	-3	2	3
BKD-169	483,414	4,860,921	1,231.71	-1	-1	5
BKD-170	483,482	4,860,881	1,231.52	-2	-1	2
BKD-179	483,479	4,861,443	1,237.94	-2	1	2
BKD-180	483,521	4,861,510	1,238.28	-5	-1	1
BKD-200	483,348	4,861,334	1,239.90	-3	2	2
BKD-22	483,311	4,860,980	1,238.47	-3	-1	4
BKD-228	483,487	4,861,458	1,238.19	-2	1	1
BKD-229	483,345	4,861,241	1,235.69	-2	2	4
BKD-233	483,374	4,861,216	1,235.38	-1	2	4
BKD-25	483,342	4,860,957	1,235.07	-2	-1	4
BKD-251	483,347	4,861,266	1,236.14	-2	-1	3
BKD-254	483,471	4,861,448	1,238.01	-2	1	3
BKD-27	483,269	4,861,071	1,237.98	-3	0	3
BKD-28	483,249	4,861,032	1,245.25	-7	-2	2
BKD-45	483,366	4,861,165	1,234.24	-2	2	3
BKD-58	483,277	4,861,161	1,236.63	-1	0	4
BKD-61	483,259	4,861,055	1,240.40	-2	-2	1
BKD-63	483,299	4,861,125	1,236.50	-4	-3	3
BKD-64	483,287	4,861,062	1,237.88	-2	1	3
BKD-65	483,349.3	4,861,126	1,237.672	-2	-1	4
BKD-69	483,309.7	4,861,143	1,235.709	-3	0	3
BKD-76	483,296.3	4,861,081	1,236.715	-2	0	5
BKD-80	483,307	4,861,097	1,236.619	-3	0	4
BKD-81	483,289.1	4,861,106	1,237.537	-3	0	5
BKD-83	483,340.7	4,861,113	1,238.813	-1	0	4
BKD-86	483,331.1	4,861,135	1,237.461	-3	0	3
BKD-90	483,328.7	4,861,252	1,235.664	-2	2	4
BKD-92	483,291.4	4,861,271	1,236.186	-1	2	3
BKD-94	483,366.6	4,861,320	1,242.797	1	1	3
BKD-95	483,363.4	4,861,230	1,235.285	-2	1	4
BKD-96	483,347.6	4,861,366	1,238.546	1	2	4
BKD-98	483,310	4,861,261	1,235.99	-2	0	2
BKD-222	483,338.5	4,861,154	1,235.82	-2	0	4
BKD-234	483,292.6	4,861,012	1,244.513	-1	-3	4
BKD-252	483,329.7	4,861,159	1,236.064	-3	1	4

Collars were cased with rods and covered with cement blocks after drilling was finished. Collars were well preserved as shown in **Figure 12-2**.

ERD supplied RPM with Excel spreadsheets with collar, survey, general lithology, RQD and sampling data. Primary data was collected into an Excel spreadsheet and then imported into an Access database. In addition, PDF files of original assay certificates from the SGS Laboratory were supplied along with cross sections of the drilling plotted with assay grades and interpretations. RPM checked all grades and orientation of drilling against the original assay certificates and cross sections. During this review RPM noted only minor inconsistencies in the provided data which were subsequently corrected in the digital database. Hard copy logs were not supplied to RPM.

Figure 12-2 Collar Preservation



RPM reviewed all QA/QC procedures carried out by ERD 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. RPM is satisfied that QA/QC procedures carried out by ERD conform to generally accepted industry standards and that the data used in this report has been verified by these procedures and is reliable.

Significant intersections were visually field verified by Company geologists and by Tony Cameron (QP) and Oyunbat Bat-Ochir of RPM during the 2018 site visit. No twin holes were drilled, however, infill drilling by ERD has confirmed mineralization thickness and tenor.

RPM did not identify any inconsistencies in the data or lack of continuity in infill holes and found no cause to doubt the data. The reviewed drilling database formed the underlying data for the independent NI 43-101 Statement of Mineral Resources completed by RPM.

### 12.1 Database validation

RPM conducted a review of the geological digital data supplied by ERD for the Project to ensure no material issues could be found and there was no cause to consider that the data was not accurate. RPM completed systematic data validation steps after receiving the database. Checks completed by RPM included:

- Down hole survey depths did not exceed the hole depth as reported in the collar table.
- Hole dips were within the range of 0° and -90°.
- Assay values did not extend beyond the hole depth quoted in the collar table.
- Assay and survey information was checked for duplicate records.

No errors were noted by RPM.

### 12.2 Assessment of Database

The database review conducted by RPM shows that ERD has supplied a digital database that is largely supported by verified certified assay certificates, original interpreted sections, and sample books.

Based on the data supplied, RPM considers that the analytical data has sufficient accuracy to enable a Mineral Resource estimate for the Bayan Khundii Project.



## 13 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. Initial testwork was carried out in 2016 on coarse reject material from drill core samples and consisted of a high-grade and a low-grade sample that underwent a combination of gravity and cyanidation analysis. A second round of metallurgical testing was carried out in 2017 and included both ¼ core and coarse reject material composites. A series of tests were carried out including variability testing of grid size, cyanide dosage, cyanide retention time, sample depth, sample location, amenability for heap leach and grindability.

### 13.1 2016 Metallurgical Test Work

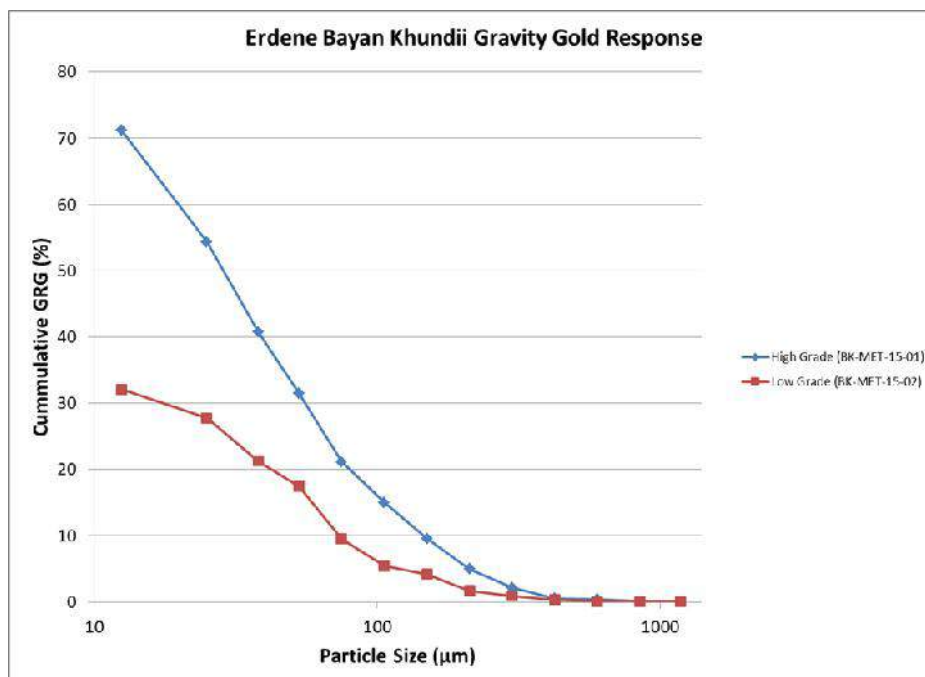
In 2016, as an initial approach to metallurgical testing, two 75 kg composite samples were prepared from coarse reject material from individual one meter drill core samples. The composites are representative of high and low grade mineralization within the main mineralized zones over the entire 550 m by 300 m 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 meter 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 meter 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.

#### 13.1.1 Gravity Recovery

Extended Gravity Recoverable Gold tests (E-GRG) were conducted on both composites. The E-GRG test determines the gravity recoverable Au 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 was 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 Au assays were analyzed for each screen fraction.

**Figure 13-1 Bayan Khundii metallurgical sample gravity-Au-recovery size fraction recovery graph**



The high-grade composite had a high response to gravity separation, with recoveries of 71% for Au and 27% for silver, as presented in **Table 13-1** below. This type of response is typical of a material considered to have good gravity amenability. The gravity Au response curve indicates a large portion of the gravity-recoverable Au is present in the finer size fractions **Figure 13-1**. The high-grade gravity concentrate represents 1.2% of the original sample mass and contains 1381 g/t Au and 200 g/t silver.

**Table 13-1 Gravity Recoverable Gold**

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

Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia.

The low-grade gravity concentrate represents 1.1% of the original sample mass and contains 21.2 g/t Au and 11.9 g/t silver. The lower grade composite (BK-MET-15-02) displayed a low to average gravity response for both Au and silver (**Table 13-1**).

### 13.1.2 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 Au. 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 Au.

Results are very encouraging with very high Au recoveries noted in both the high-grade and low-grade composites. Leach extractions of the gravity tails are summarized in **Table 13-2** below.

**Table 13-2 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

Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia.

A flowsheet employing both gravity concentration and cyanidation of the gravity tails yields very good overall Au recoveries for both the high-grade and low-grade composites. This suggests that Au from Bayan Khundii is free milling and amenable to conventional processing techniques. Overall circuit recoveries are summarized in **Table 13-3** below.

**Table 13-3 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

Source: Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia.

## 13.2 2017 Metallurgical Test Work

The 2017 metallurgical program provided:

- Recovery data on two moderately high-grade master composites (approx. 4.4 g/t Au) and one moderate-grade (1.9 g/t Au) master composite;
- Assessment of recovery variability of the low-grade material to assist in determining optimal cut-off grades;
- Comminution data; and

- An initial assessment on the amenability of the low-grade material to heap leach processes.

## 13.2.1 Master Composite Testing

Three master composite samples were collected from throughout the Striker Zone down to a vertical depth of 100 m. Individual samples were collected from split drill core from more than 20 different drill holes in each sample with a total combined sample weight of 41 kilograms per composite. The head grades for the composite samples were 4.30 g/t Au (BK-16-03), 4.47 g/t Au (BK-16-04) and 1.88 g/t Au (BK-16-01).

Analysis of master composite sample BK-16-04 was carried out first and this composite received full optimization testwork, including variation on grind size, residence time, and sodium cyanide dosage (consumption) as well as assessment of the impact on overall recoveries when initial gravity recovery was applied. The optimization testwork for master composite sample BK-16-01 included variation on grind size, sodium cyanide dosage (consumption) as well as cyanidation retention time. Master composite BK-16-03 received only cyanidation testing, including retention time analysis **Table 13-4**.

**Table 13-4 Overall Circuit Recoveries for the two Master Composites, 48 hr. leach**

Master Composite	Head Grade	Gravity	48 hr. Leach	Combined
BK-16-01	1.88	-	95%	95%
BK-16-03	4.3	-	96%	96%
BK-16-04	4.47	41%	88%*	92%

\* % of the Au remaining in the gravity tails

### Sample BK-16-04

#### Primary Grind Size

As expected, the highest recovery is associated with the finest grind. An additional 4% in recovery is gained from decreasing the particle size from 160 micron to 60 micron. Gold recovery with a primary grind size of 80% passing 161 micron was 87%. A primary grind of 80% passing 60 micron resulted in an average Au recovery of 91%. Further evaluation of the primary grind size should be conducted on a lower grade composite.

#### Effect of Cyanide Dosage

A series of tests were conducted at variable cyanide (NaCN) dosages (0.5 g/l, 1.0 g/l, 2.0 g/l and 4.0 g/l) at a target grind size of 80% passing 60 microns with a 48 hour retention time. There was no significant increase in recovery with increased cyanide dosage. A dosage of 1.0 g/l was determined to be sufficient for all subsequent testwork.

#### Extended Cyanidation Residence Time

A single test was conducted for a total leach time of 96-hours. The material was ground to 80% passing 60 micron prior to the bottle roll. The standard cyanidation conditions used 40% solids, 1.0 g/L NaCN. Gold recovery after 48-hours was 93.4%, with overall Au recovery of 95% after 96-hours, indicating a 48-hour period will recover most of the available Au, as was noted for sample BK-16-03 (see below).

#### Gravity and Cyanidation Test

A combined gravity and cyanidation test was conducted to determine if the addition of gravity ahead of cyanidation would yield any additional recovery. For this work a 10-kilogram test charge was ground in a laboratory rod mill to 80% passing 60 micron. The ground charge was processed through a laboratory-scale Knelson centrifugal concentrator (MD-3). 41% of the Au reported to the gravity concentrate at a grade of 205 g/t. A subsample of the gravity tails was then leached in a standard bottle roll for 48-hours (40% solids; 1.0 g/L NaCN). Gold recovery through cyanidation was 88%. Combining the results of both tests resulted in an overall Au recovery of 92%. This is in line with the baseline cyanidation results and suggests that initial gravity separation will not increase the overall Au recovery, however, could be incorporated into the Bayan Khundii flowsheet to ensure the coarsest Au is removed early in the process and minimize the amount of Au that could be caught in Au traps throughout the plant.

### Sample BK-16-01

#### Primary Grind Size

Unlike the higher grade composite BK-16-04, composite sample BK-16-01 appears relatively insensitive to grind size. No significant differences in recoveries were noted by decreasing the particle size from 80% passing 164 microns (91.7% recovery) to 80% passing 56 microns (90.4% recovery). These results suggest that a coarser grind size is acceptable for this composite and may be acceptable for the overall metal recovery process. Further testing (leach tests) carried out on BK-16-01 were carried out at a targeted test size of 80% passing 170 microns. Further evaluation of the primary grind size should be conducted on additional composites.

### **Effect of Cyanide Dosage**

A series of tests was conducted at variable cyanide (NaCN) dosages (0.5 g/l, 1.0 g/l, 2.0 g/l and 4.0 g/l) at a target grind size of 80% passing 170 microns with a 48 hour retention time. There was no significant increase in recovery with increased cyanide dosage. A dosage of 1.0 g/l was determined to be sufficient for all subsequent testwork.

### **Cyanidation Test**

A single cyanidation test was completed on sample BK-16-01 as a 96-hour leach test with a grind size of 80% passing 170 micron, 40% solids and 1.0 g/L NaCN. Gold recovery after 48-hours was 94% whereas the 96-hour Au recovery was 95%, indicating a 48-hour period will recover most of the available Au. It is notable that this test was done at a coarser grind size than master composite BK-16-03 however had comparable Au recovery.

### **Sample BK-16-03**

#### **Cyanidation Testwork**

Following the variability testwork completed on BK-16-04, a single test was completed on sample BK-16-03, as a single 96-hour leach test with a grind size of 80% passing 60 micron, 40% solids and 1.0 g/L NaCN. Gold recovery after 48-hours was 96% whereas the 96-hour Au recovery was 97%, indicating a 48-hour period will recover most of the available Au.

## **13.2.2 Variability Testing of Low-Grade Material**

The 2017 metallurgical program included a study assessing the potential impact on Au recoveries with increasing depth and variation in character of the low-grade mineralized material. The work included 16 primarily low-grade composite samples that ranged in head grade from 0.37 g/t Au to 2.29 g/t Au, with an average grade of 0.75 g/t Au.

Applying standard leach parameters, Au recovery of these low-grade samples averaged 85% after 48-hour leach. Two samples of Striker Zone mineralization, without any vertical constraint and with head grades of 2.30 g/t Au and 1.18 g/t Au, returned recoveries of 93% and 91% respectively. These tests targeted primary grind sizes of 80% passing 60 micron.

Very low-grade material from eight composite samples with an average head grade of 0.55 g/t Au returned a recovery of 84% after 48-hour bottle roll tests at a particle size of 58.4 micron. There was some indication that the areas under younger, post-mineralization cover to the north of the Striker Zone may be slightly harder than the Striker Zone area (as evidenced by coarser grind sizes), however, recoveries remained consistent, supporting recommended additional study on optimizing the primary grind size.

Results from the master composite samples, and from lower grade Striker Zone material unconstrained vertically, indicate that good recoveries can be gained from sample material collected from throughout the vertical sequence, however, in the very low-grade material there does appear to be a decrease at greater vertical depth which will need further study once expected head grades are established.

## **13.2.3 Heap Leach Amenity Testing**

A series of coarse bottle roll tests were conducted on a composite of low grade material (average 0.67 g/t Au) from the Striker Zone to evaluate if the material would be amenable to heap leaching. These tests were not designed to predict ultimate heap leach recovery. They were designed as screening tests whereby similar recoveries across all particle sizes would suggest the material may be amenable to heap leaching techniques, while poor recovery in the coarser tests would suggest that conventional tank leaching would be preferred.

These tests were conducted as 72-hour bottle rolls with sodium cyanide addition of 2.0 g/L. The material for the three tests was prepared as 100% passing 6 mesh (3.35 mm), 100% passing 10 mesh (1.7 mm) and 80% passing 69 micron. Gold recoveries were 57% on the 3.35 mm material, 63% on the 1.7 mm material and 83%

on the 69 micron grind size. The higher recovery associated with the finer grind size suggests that conventional tank leaching would likely yield higher overall recoveries.

### 13.2.4 Comminution Testing

Standard comminution tests were used to evaluate the energy requirement to grind material from a pre-defined feed size to a final product size. The Bond Rod Mill Work Index was recorded at 17.8 kWh/tonne and the Bond Ball Mill Work Index at 16.1 kWh/tonne. The comminution tests indicate that Bayan Khundii is moderately hard to hard.

### 13.3 Recommendations for Further Work

Based on the success of the 2017 metallurgical testing program, it has been recommended that additional tests be carried out to better study the metallurgical characteristics of Bayan Khundii mineralisation and further optimize recoveries. It is anticipated that the following studies will be initiated in 2018:

- Additional cyanidation process development work on lower grade composites that reflect the average grade of the Bayan Khundii deposit;
- Further variability testing, including optimal grid size analysis, incorporating composites that represent the full range of head grades and depths within Bayan Khundii; and
- An extended gravity recoverable Au (E-GRG) test on a sample representing the average grade of the deposit.

## 14 Mineral Resource Estimates

A Mineral Resource estimate has been independently completed by RPM in accordance with the CIM Definition Standards and the CIM Best Practice Guidelines. Information contained in this Report is based on information provided to RPM by ERD and verified where possible by RPM. All statistical analysis and mineral resource estimations were carried out by RPM. RPM developed three dimensional digital estimates for the concentrations of the Au metal and developed the mineral resource model based on the statistical analysis of the data provided. RPM considers the Mineral Resource estimate meets general guidelines for CIM Definition Standards compliant resources for the Measured, Indicated and Inferred confidence levels.

### 14.1 Data

The key files supplied to RPM are outlined in **Section 2.3**.

#### 14.1.1 Sample Data

The supplied drilling data spreadsheets were compiled by RPM into an Access database 'bk\_dhdb\_20180629.mdb' and contained drilling data up to hole BKD-255 and included tabulated information for collar, assay, survey, bulk density, lithology and vein logging. The data was then loaded into Surpac software. All Mineral Resource estimation work conducted by RPM was based on drillhole data received as at 29 June, 2018, up to and including drill hole BKD-255.

The database contains the records for 255 drill holes (243 unique holes, twelve partial re-drills or extended holes) for 42,670.17m of drilling and 22 trenches for 1059.6m. The Mineral Resource estimate included 185 diamond holes (DD) for a total of 31,723.52m and 16 trenches (TR) for total of 803.6m within the wireframes. No data was excluded from the model.

A summary of the drill hole database is shown in **Table 14-1**.

**Table 14-1 Summary of Data Used in Resource Estimate**

In Project					In Mineral Resource					
Company	Period	Drilling Method	Number	Metres	Drill holes		Intersection			
					Number	Metres	HG Metres	MG Metres	LG Metres	
ERD	2015	DD	15	696	14	664.52	59	163.6	227.67	
		TR	11	535	10	476.69	51	88.85	212.84	
	2016	DD	81	11,809	71	10434.3	781.83	3985.65	2746.77	
		TR	11	525	6	327.00	23	76.00	136.87	
	2017	DD	138	25,638	79	16,097.40	813.85	3,063.31	4806.14	
	2018	DD	21	4,527	21	4,527.30	339.78	1258.52	939.49	
	<b>Drilling Total</b>			255	42,670	185	31,723.52	1,994.46	8,471.08	8,720.07
	<b>Trenching Total</b>			22	1,060	16	803.6	74	164.85	349.71
<b>Total</b>			<b>277</b>	<b>43,730</b>	<b>201</b>	<b>32,527.12</b>	<b>2,068.46</b>	<b>8,635.93</b>	<b>9,069.78</b>	

Note: LG-Low grade (>0.2 g/t Au) mineralization wireframe, MG- Medium grade (>0.5g/t Au), HG-High grade (>1.5g/t Au) mineralization wireframe.

No data was excluded from the model, however, a number of intervals were identified as being un-sampled during sample processing. Those intervals generally related to un-mineralized Jurassic volcanic-sedimentary units that overlie mineralization particularly at Midfield and North Midfield zones. As such these were not included in the estimate

#### 14.1.2 Bulk Density Data

ERD collected 1,043 bulk density measurements from 135 drill holes using the water immersion technique. 537 bulk density measurements were from fresh rock, while the remaining 506 determinations were from weathered rock.

RPM considers these procedures would result in determinations which are representative of the underlying geology and, as a result, are representative of the deposit. The density measuring apparatus is shown below in **Figure 14-1**.

**Figure 14-1 Bayan Khundii Project - Density Apparatus**



RPM extracted the density measurements from the database and subdivided the measurements into mineralized (inside wireframes) and non-mineralized (outside wireframes). Results are tabulated in **Table 14-2**. The bulk density values range from 1.78 to 5.47 t/cu.m and are normally distributed about a mean of 2.65 t/cu.m. High density values were mostly attributed iron content as specular and hematite alterations overprinting the mineralization.

**Table 14-2 Bulk Density Summary**

Domain	Mineralization			All			
Type	Min			Waste			
	Oxide	Fresh	Total	Overburden	Volcanic	Syenite	Total
<b>Number</b>	301	261	562	46	329	106	481
<b>Minimum</b>	1.80	1.96	1.80	2.32	2.34	1.78	1.78
<b>Maximum</b>	5.47	3.74	5.47	2.79	3.12	2.77	3.12
<b>Mean</b>	2.63	2.65	2.64	2.57	2.68	2.60	2.65

ERD interpreted six main rock units within the deposit based on rock structure and style of mineralization. RPM grouped these into 3 main rock units: overburden-Jurassic volcanic-sedimentary rocks, Volcanic-Devonian altered Pyroclastic rocks (Mineralization host rock) and Syenite-post mineralization intrusion. The bulk density value assigned to waste material was derived from **Table 14-2**.

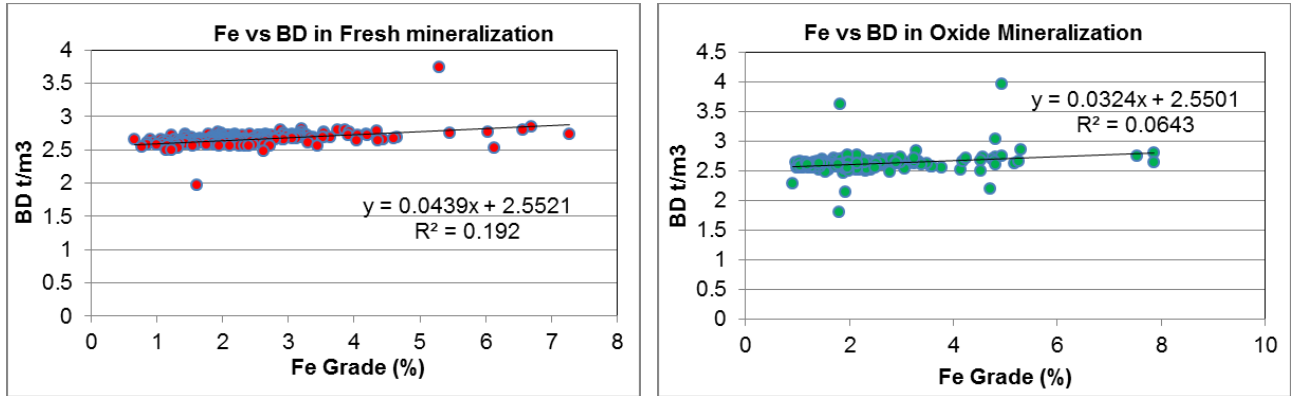
A linear regression analysis completed between density and Au, Fe and S grades for the 275 density measurements within the wireframes for oxide material and for the 240 density measurements within the wireframes for fresh material within the host rock. The correlation coefficient between elements and density is shown in **Table 14-3**. This analysis indicated bulk density and Fe grade showed the highest correlation for the elements with coefficient of 0.44 for fresh mineralization and 0.25 for oxide mineralization. Poor correlation is observed between fresh Sulphur and bulk density as well as oxide Au and bulk.

The Linear regression for density and Fe for oxide and fresh is shown in **Figure 14-2**.

**Table 14-3 Correlation Coefficient Table**

Correlation	Au	Fe	S
Oxide BD	0.15	0.25	0.05
Fresh BD	-0.05	0.44	0.28

**Figure 14-2 Linear Regression for Density and Fe Grade for Mineralization**



Although the correlation coefficients were low, RPM recognized that the density of the deposit is likely to be variable due to, most likely, the iron mineral content. Many specular or other hematite types were logged in the drill holes which is consistent with the observed trends in the data. As a result, RPM utilized the Fe regression to estimate the density rather than the average values in mineralized areas.

The regression equations from **Figure 14-2** above were applied to all mineralization separated by weathering type (pod>0) in the block model. The assigned bulk densities within the block model are tabulated in **Table 14-4**.

**Table 14-4 Bulk Densities Assigned in the Block Model**

Type	Weathering	Mineralized or Waste	Bulk Density (t/cu.m)
Mineralization	Oxide	Mineralized (pod > 0, type=oxide)	equation: (Fe% grade x 0.0324) + 2.55
	Fresh	Mineralized (pod > 0, type=fresh)	equation: (Fe% grade x 0.0439) + 2.55
Waste	Overburden -Jurassic	Waste (pod = 0, rock=1)	2.57
	Volcanic	Waste (pod = 0, rock=2)	2.68
	Syenite	Waste (pod = 0, rock=3)	2.60

To determine the global suitability of the equations, RPM compared the average density values against the regression formula. The average is a value of 2.64 t/cu.m while the regression calculated a global average of 2.64 t/cu.m. Globally there is not any material difference for each methodology while most variation will occur locally. Therefore RPM considered it appropriate to utilize the linear regression between Fe and density to estimate density values within the block model.

While RPM notes that the R<sup>2</sup> coefficient is low this is likely due to the limited number of close spaced samples and close mineralogical association. RPM considers the data spacing to be sufficient to ensure no material issues would result with additional data on a local scale, and as such considers the classification applied suitable. RPM however recommends that ERD continue recording density measurements, ensuring that measurements should cover a variety of both Au and Fe grades to further refine the regression equation.

## 14.2 Geology and Resource Interpretation

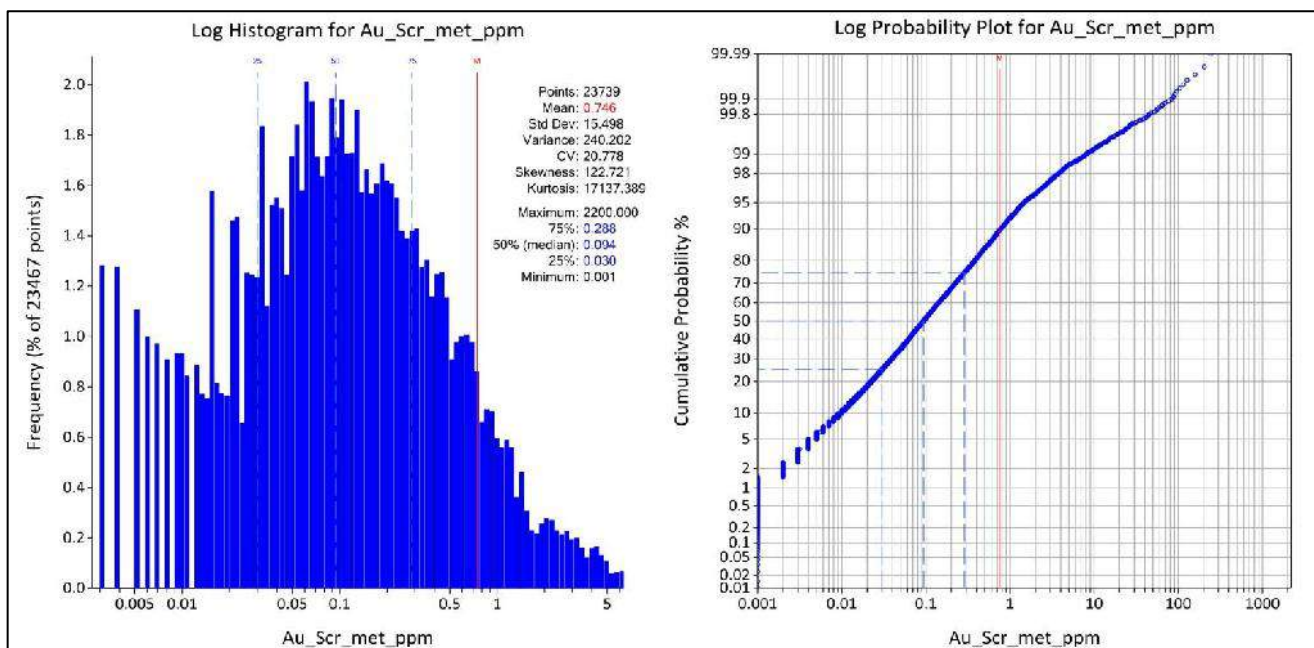
Gold mineralization is hosted by an intensely quartz-illite altered sequence of Devonian age pyroclastic rocks (lapilli tuffs, massive and layered ash tuffs, welded tuffs). Mineralization has been identified to date in separate zones over a 1.7 km strike length, termed the Gold Hill, Striker, Midfield, North Midfield, Striker West and Northeast zones. Most of the exploration work completed to date has focused on and near the first four of these zones with limited drilling to these zones and in the Northeast Zone.



Mineralization interpretations were prepared by RPM using an approximately 0.2 g/t Au cut-off grade for lower grade (LG) material, 0.5 g/t Au for medium grade material (MG) and nominal 1.5 g/t Au for high grade material (HG) (refer **Figure 14-3**). Some variations was observed in the LG and MG domains to maintain continuity of LG and MG domains resulting in the inclusions of internal lower grade waste material. The grade cut-offs were based on interrogation of log histograms and probability plots of the raw assay data. Typically with log normal distributions, statistical grade cut-offs are reasonably well defined, however, visual inspection of mineralization on section was utilised to confirm that the cut-offs chosen were appropriate. RPM notes the following in relation to the domains selected:

- The medium grade wireframes were interpreted to encompass mineralization outside the high-grade wireframes however within a nominal 0.5 g/t cut-off.
- The low-grade wireframe cut off was based on the statistical analysis however it was noted that medium and high grade values which did not fall into the existing higher grade wireframes where included in this domain. The wireframe cut-off value of 0.2 g/t is based on a subtle inflection point in the total data distribution and also approximately represents the median value of the total dataset.

**Figure 14-3 Log Histogram and Log Probability Plot for All Assays**



## 14.3 Preparation of Wireframes

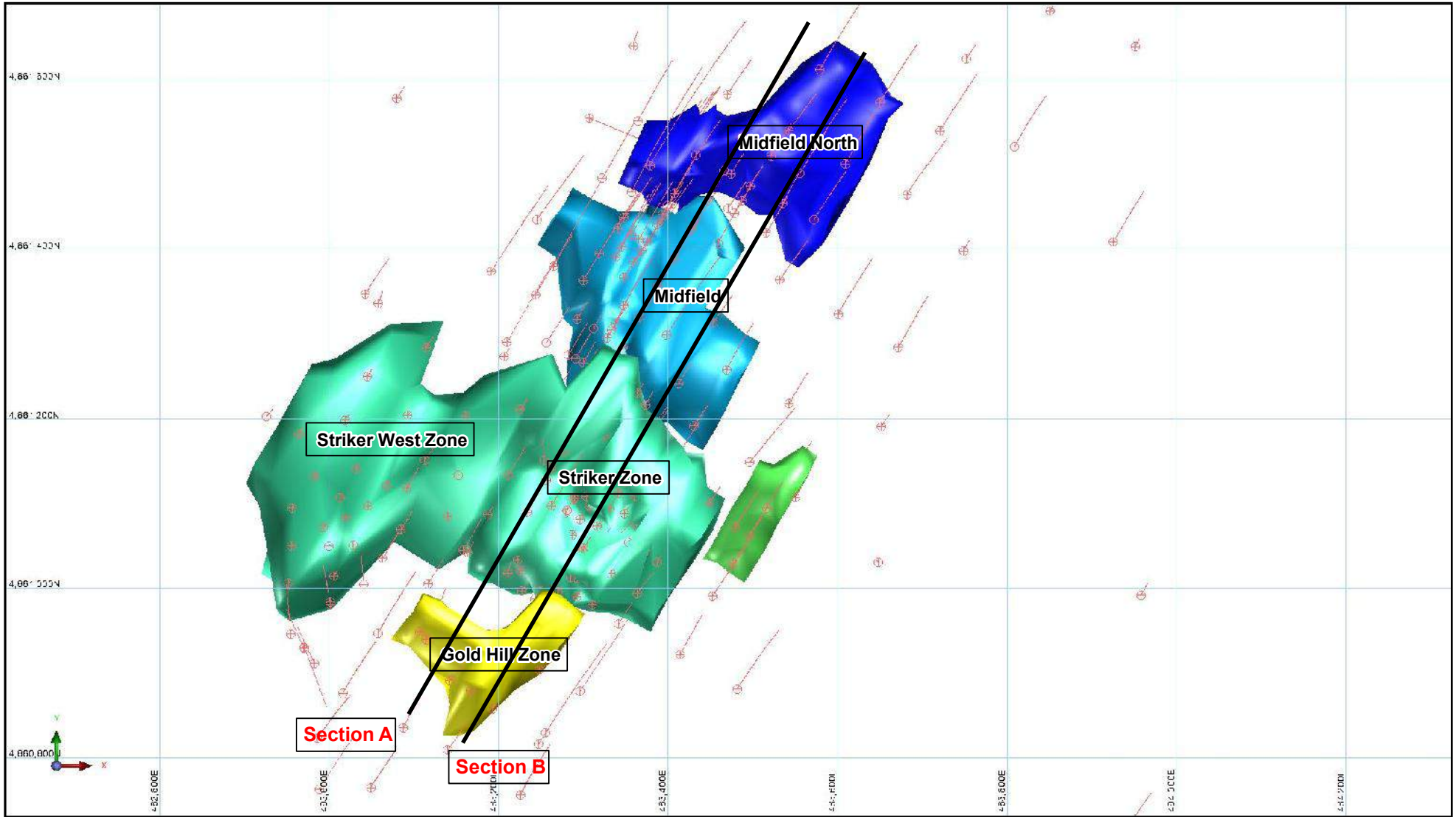
### 14.3.1 Resource Wireframes


The interpreted sectional outlines were manually triangulated to form wireframes. The end section strings were copied to a position midway to the next section or to 20-30 m from the nearest hole on the edges of the mineralization or where no un-mineralized drill holes were available to constrain the interpretation. Wireframes adjusted to match the dip, strike and plunge of the zone. The wireframed objects were validated using Surpac software and set as solids.

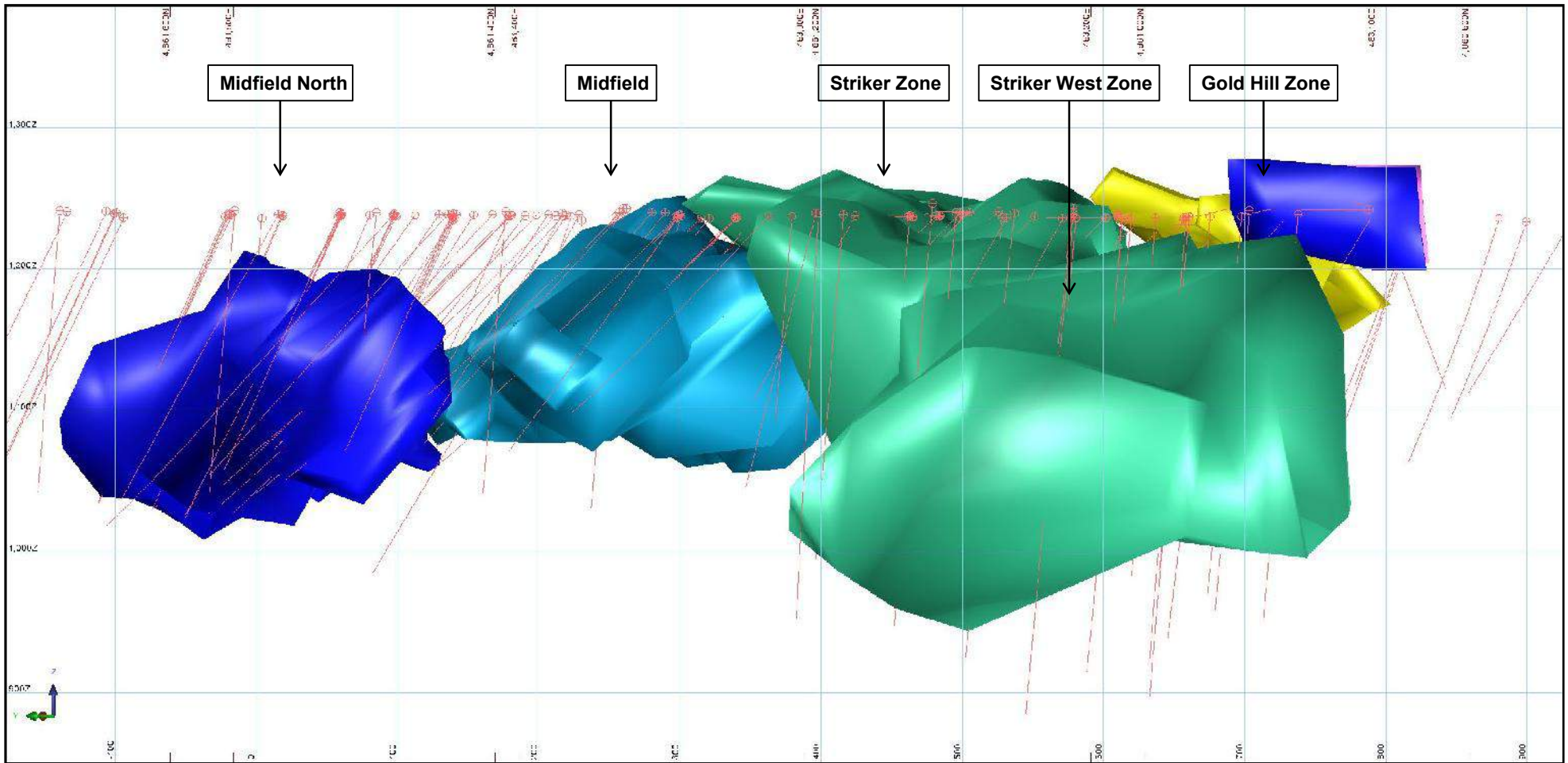
A total of 79 resource wireframes including 71 resource wireframes ('wf\_bk\_au\_hg\_20180901\_15.dtm') within the high grade zones (object 1 to 71), 3 resource wireframes ('wf\_bk\_au\_lg\_20180906\_05\_shell.dtm') within the medium grade zones (object 201 to 203) and 5 resource wireframes ('wf\_bk\_au\_lg\_20180907\_02\_shell.dtm') within the low grade zones (object 101 to 105) were created and used to select the sample data to be used for grade estimation, and to constrain the block model for estimation purposes.


The extent of the interpreted domains, and drilling are shown in **Figure 14-4** to **Figure 14-9**. The mineralized lodes have been depicted in different colours to distinguish individual lodes. The colouring has no other

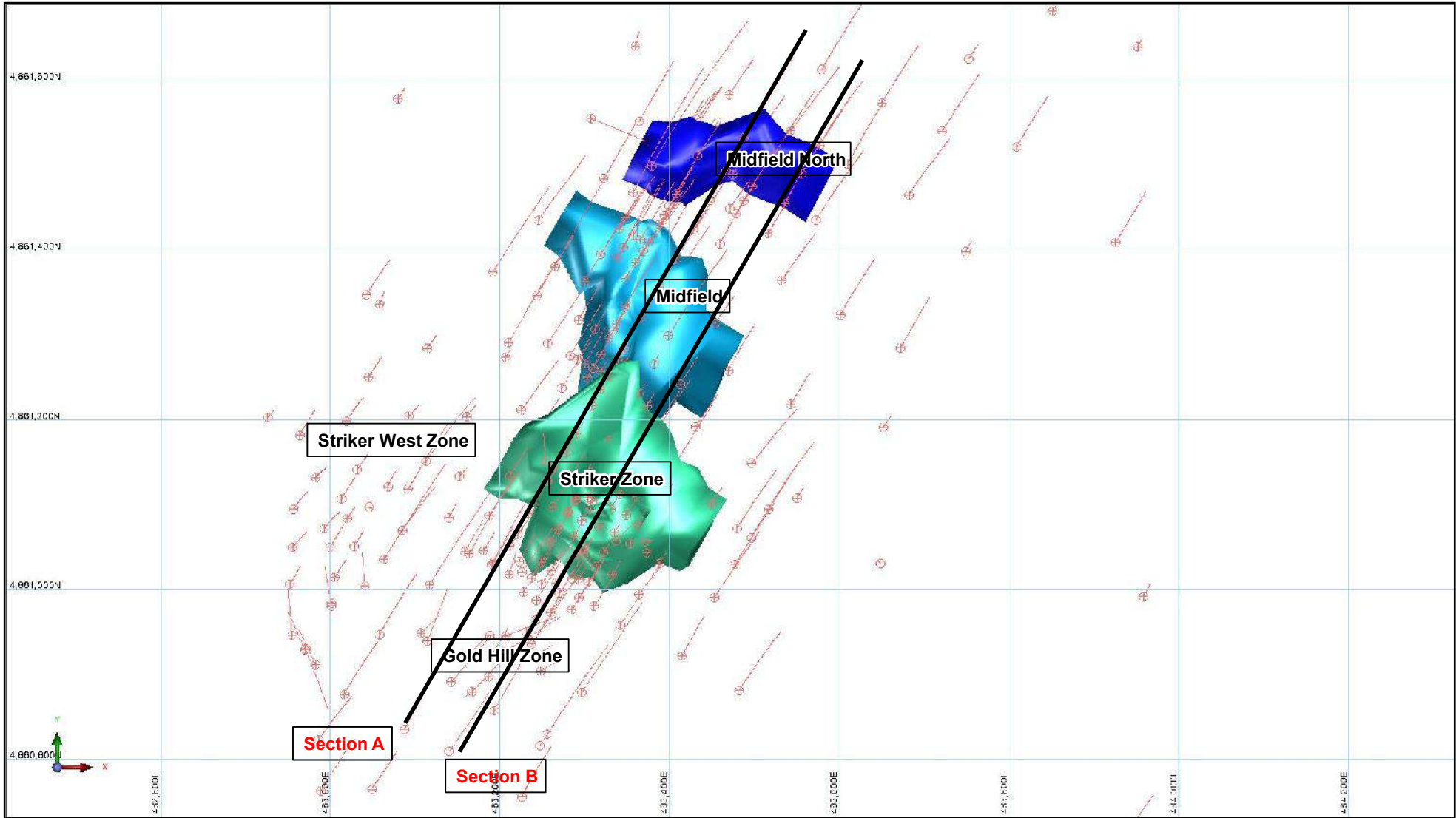
significance and is a reflection of the software utilised (Surpac). Representative sections of deposits are shown in **Figure 14-10** and **Figure 14-11**.




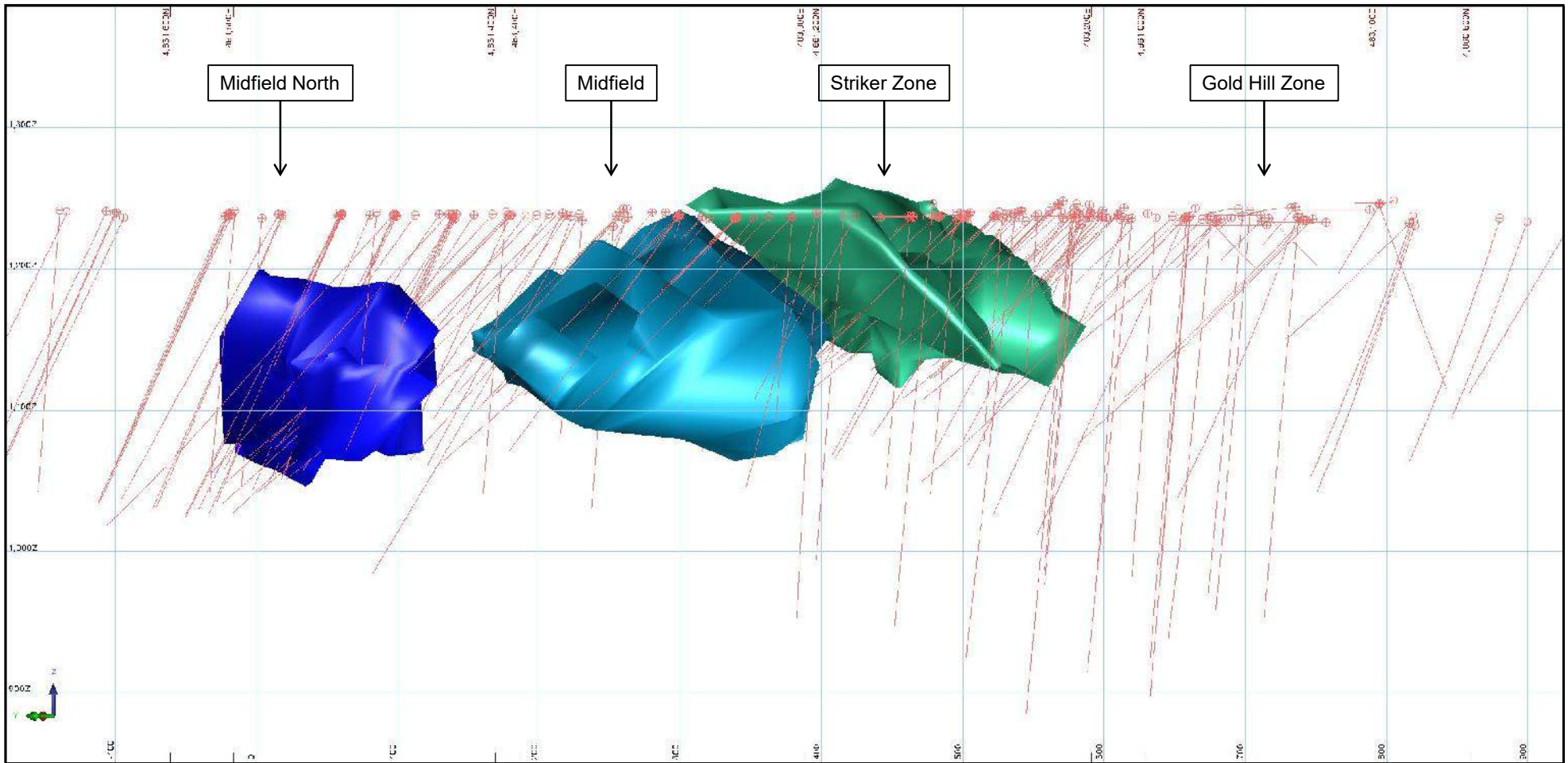
CLIENT		PROJECT	
		NAME	<b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>
		DRAWING	MINERALIZED LOW GRADE DOMAINS AND DRILLING - PLAN VIEW
FIGURE No.	PROJECT No.	Date	
14-4	ADV-MN-00156	October 2018	




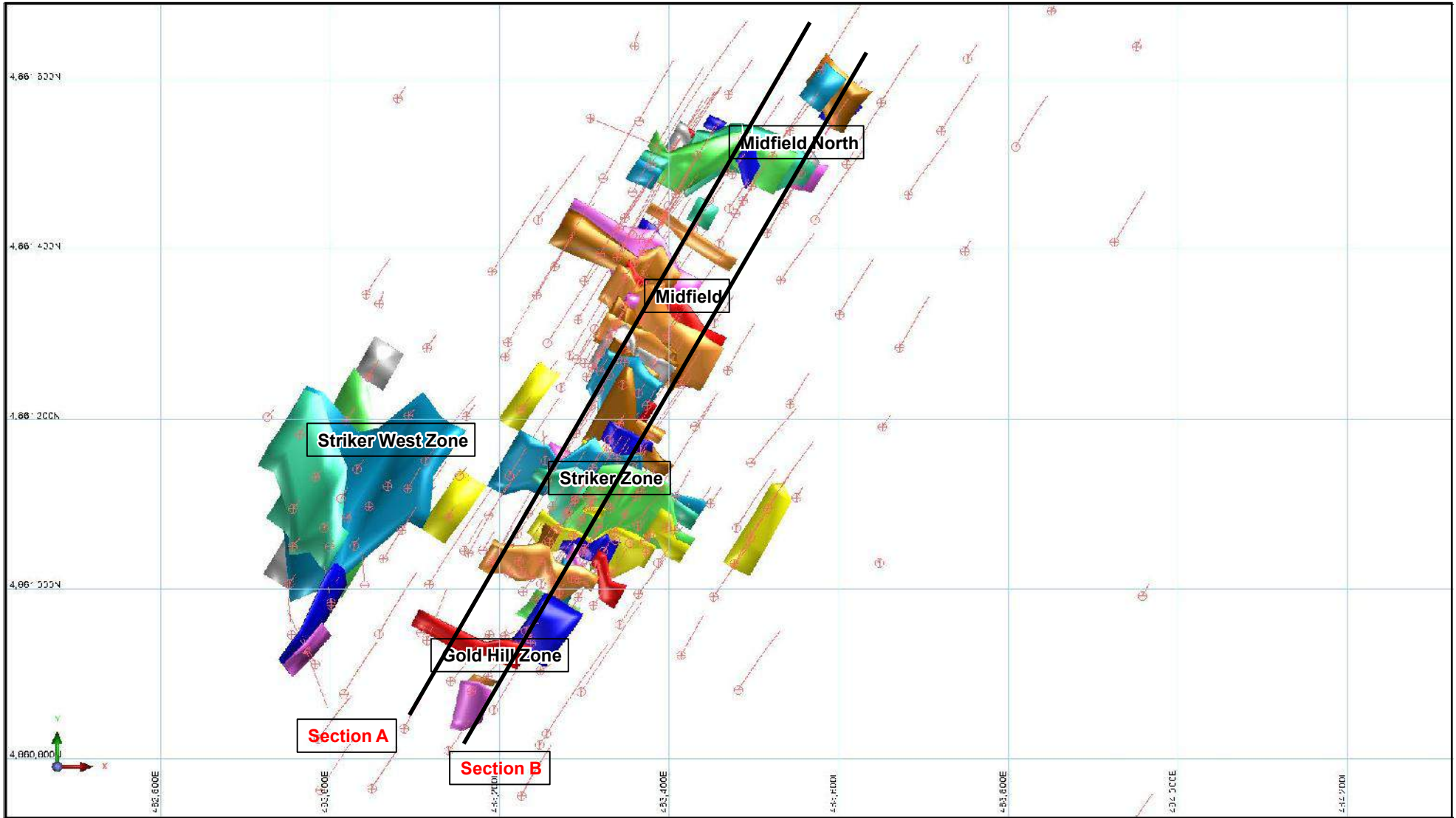
CLIENT		PROJECT	
		NAME	<b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>
		DRAWING	MINERALIZED LOW GRADE DOMAINS AND DRILLING - LONG SECTION VIEW
FIGURE No.	PROJECT No.	Date	
14-5	ADV-MN-00156	October 2018	




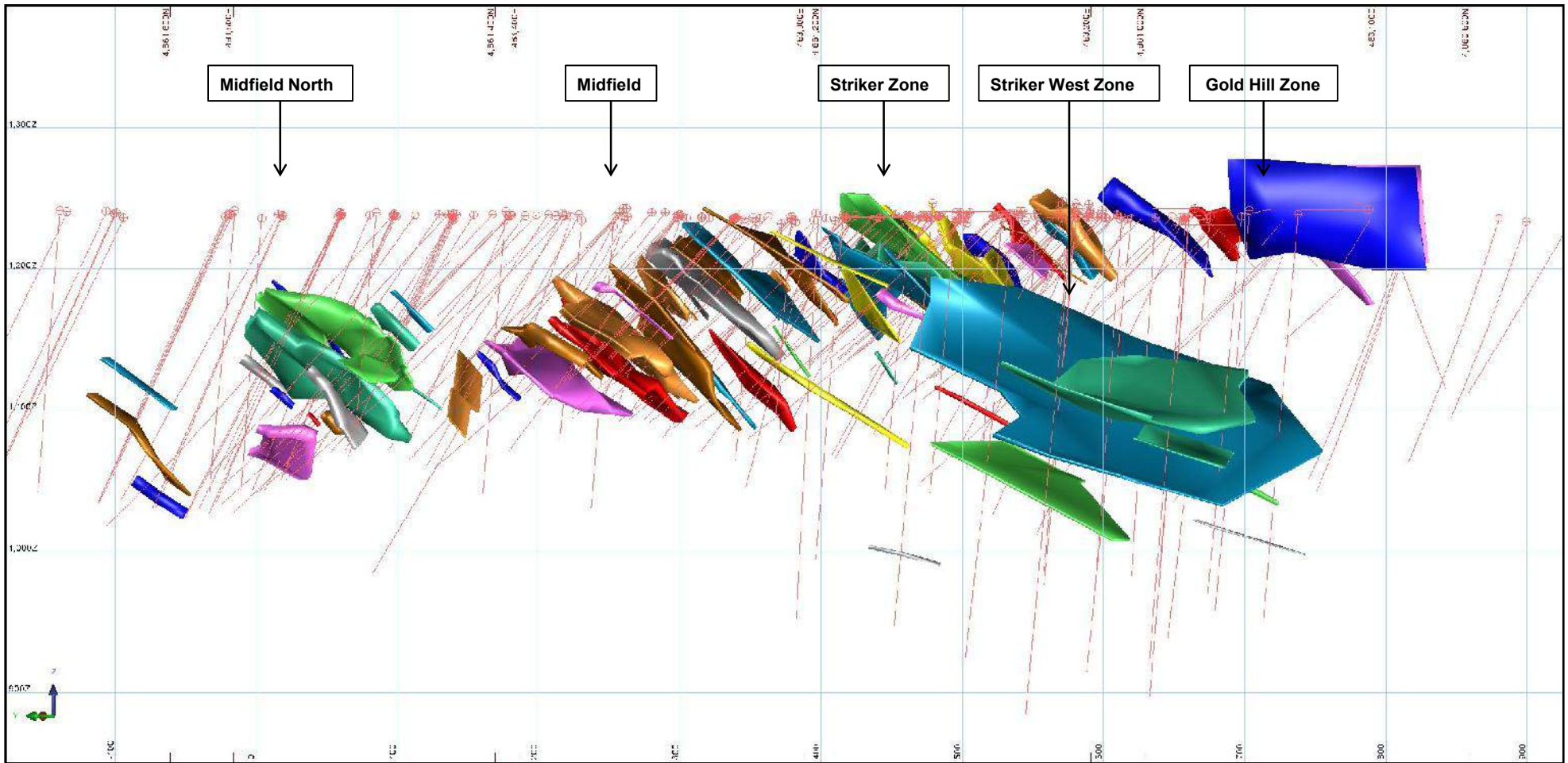
CLIENT		PROJECT	
		NAME	<b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>
		DRAWING	MINERALIZED MEDIUM GRADE DOMAINS AND DRILLING - PLAN VIEW
FIGURE No.	PROJECT No.	Date	
14-6	ADV-MN-00156	October 2018	




CLIENT		PROJECT	
		NAME	<b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>
		DRAWING	MINERALIZED MEDIUM GRADE DOMAINS AND DRILLING - LONG SECTION VIEW
FIGURE No.	PROJECT No.	Date	
14-7	ADV-MN-00156	October 2018	

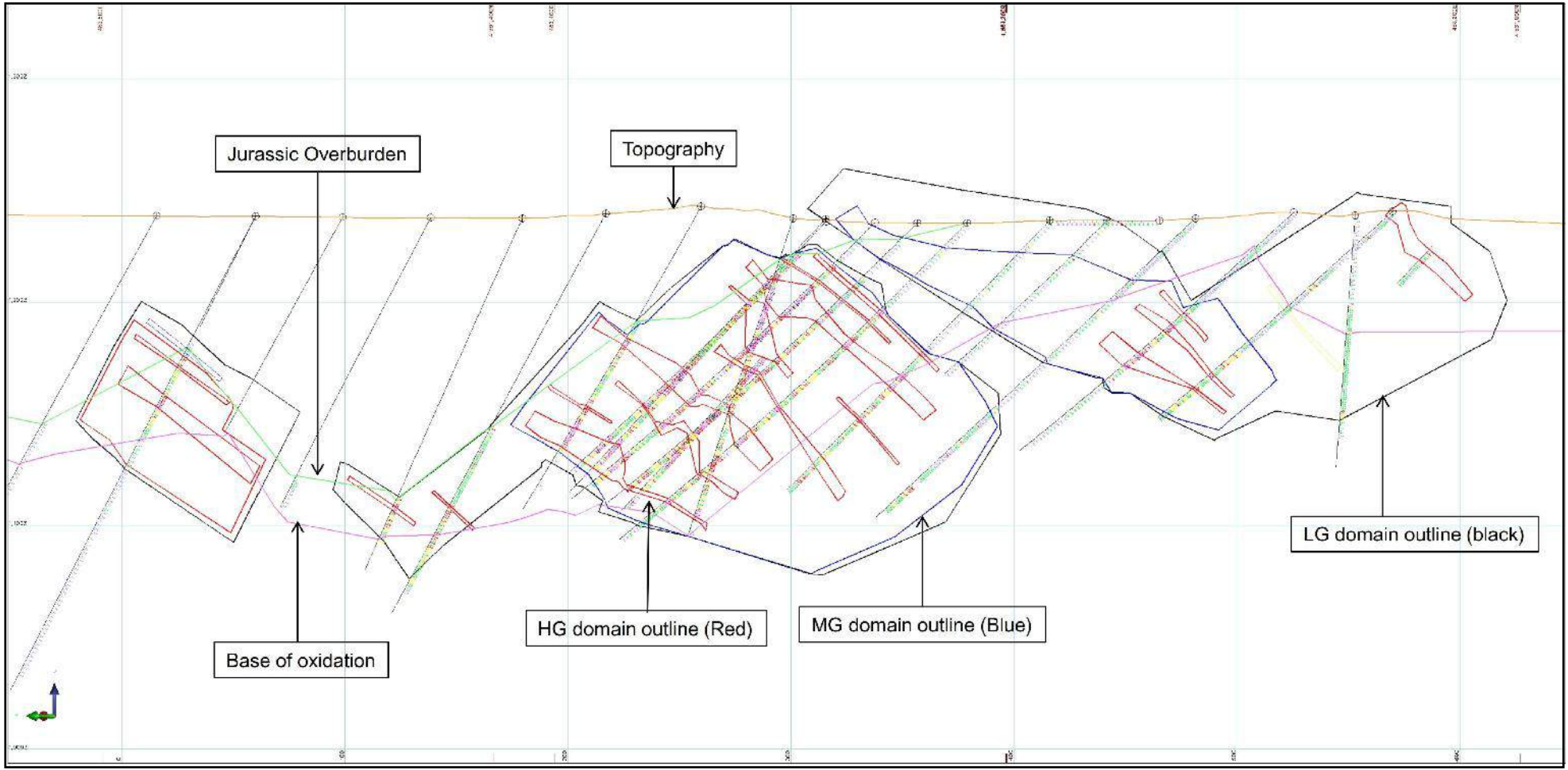


CLIENT		PROJECT	
		NAME	
		BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT	
		DRAWING	
		MINERALIZED HIGH GRADE DOMAINS AND DRILLING - PLAN VIEW	
FIGURE No.	PROJECT No.	Date	
14-8	ADV-MN-00156	October 2018	



CLIENT		PROJECT	
		NAME	<b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>
		DRAWING	MINERALIZED HIGH GRADE DOMAINS AND DRILLING - LONG SECTION VIEW
FIGURE No.	PROJECT No.	Date	
14-9	ADV-MN-00156	October 2018	



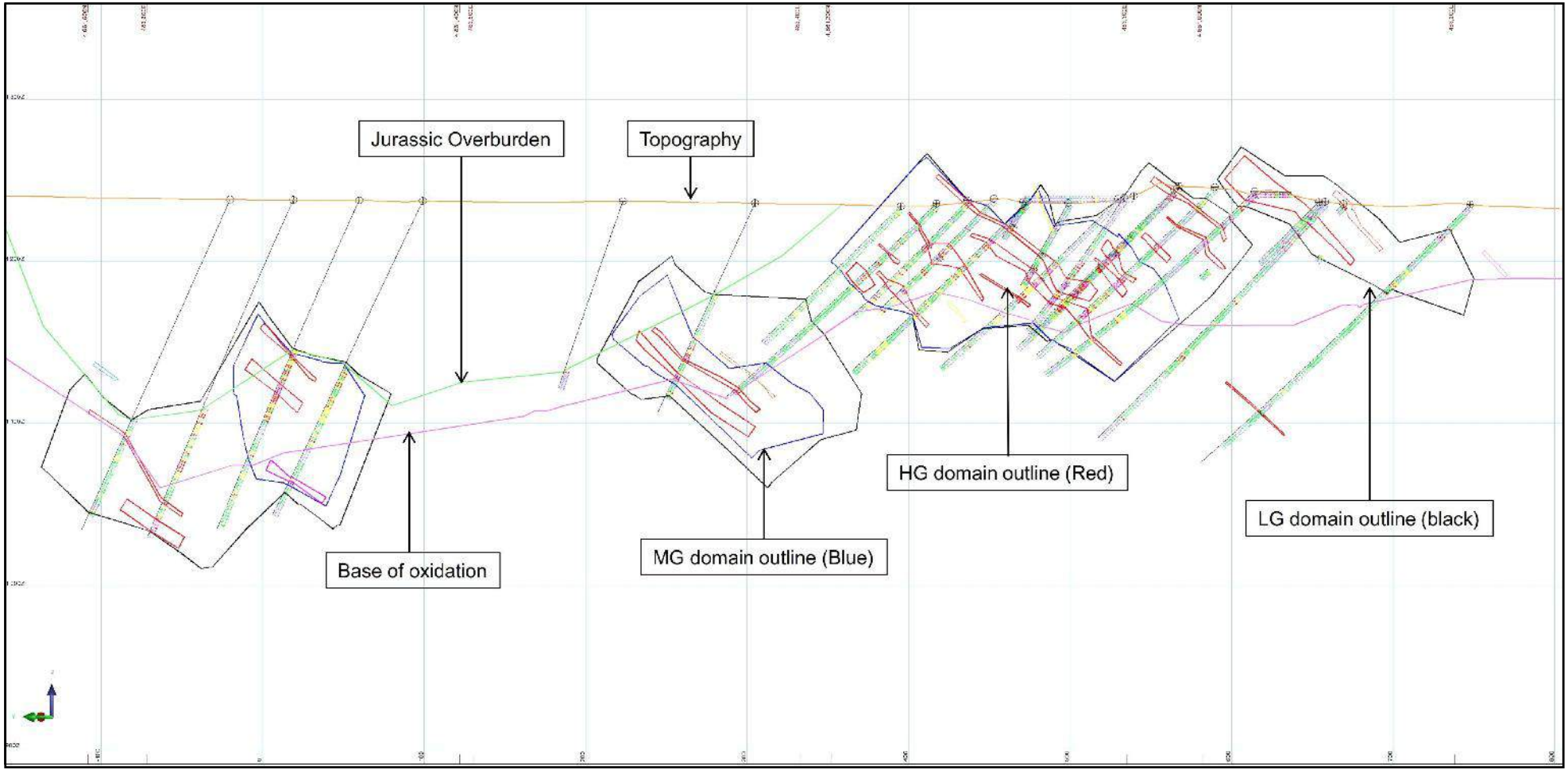


LEGEND - Au (ppm)		
0 - 0.1	0.5 - 1	10 - 2300
0.1 - 0.3	1 - 3	
0.3 - 0.5	3 - 10	

CLIENT

**ERDENE**  
RESOURCE DEVELOPMENT

PROJECT		
NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>		
DRAWING MINERALIZED HIGH GRADE DOMAINS AND DRILLING - CROSS SECTION A		
FIGURE No. 14-10	PROJECT No. ADV-MN-00156	Date October 2018



LEGEND - Au (ppm)		
0 - 0.1	0.5 - 1	10 - 2300
0.1 - 0.3	1 - 3	
0.3 - 0.5	3 - 10	

CLIENT



ERDENE  
RESOURCE DEVELOPMENT

PROJECT		
NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>		
DRAWING MINERALIZED HIGH GRADE DOMAINS AND DRILLING - CROSS SECTION B		
FIGURE No. 14-11	PROJECT No. ADV-MN-00156	Date October 2018

### 14.3.2 Geology Wireframes

Drill logs were used to define the base of Jurassic overburden surface ('jurassic\_20180726.dtm'). The surface was extended beyond the block model extents as shown in on the sections in **Figure 14-10** and **Figure 14-11**.

Most drillholes intersected the fine and medium-coarse-grained syenite beneath the mineralized zones. This body is interpreted to be a widespread post-mineralization intrusion which potentially truncated the mineralisation. Accordingly, drill hole intersections were utilised to create a surface representing the top of the intrusion. Zones of magnetite alteration were observed to straddle the syenite-tuff contact in several holes, with alteration extending for several metres either within the syenite or host tuffs. This alteration is not associated with an increase in Au grades and is interpreted as a post-mineral contact metamorphism.

### 14.3.3 Oxidation State Wireframes

Much of the hematite and specularite is interpreted as hypogene in origin, although supergene hematite was observed in numerous holes, extending up to approximately 100 m depth. RPM interprets this is a result of typical oxidation profile in the region. It is noted that minimal further oxidation of the rocks has occurred as such RPM created the weathering surface ('weathering\_20180726.dtm') based on client's visual observation of drill cores accompanied with sulphur assay data. This surface separates that is determined to the oxidized.

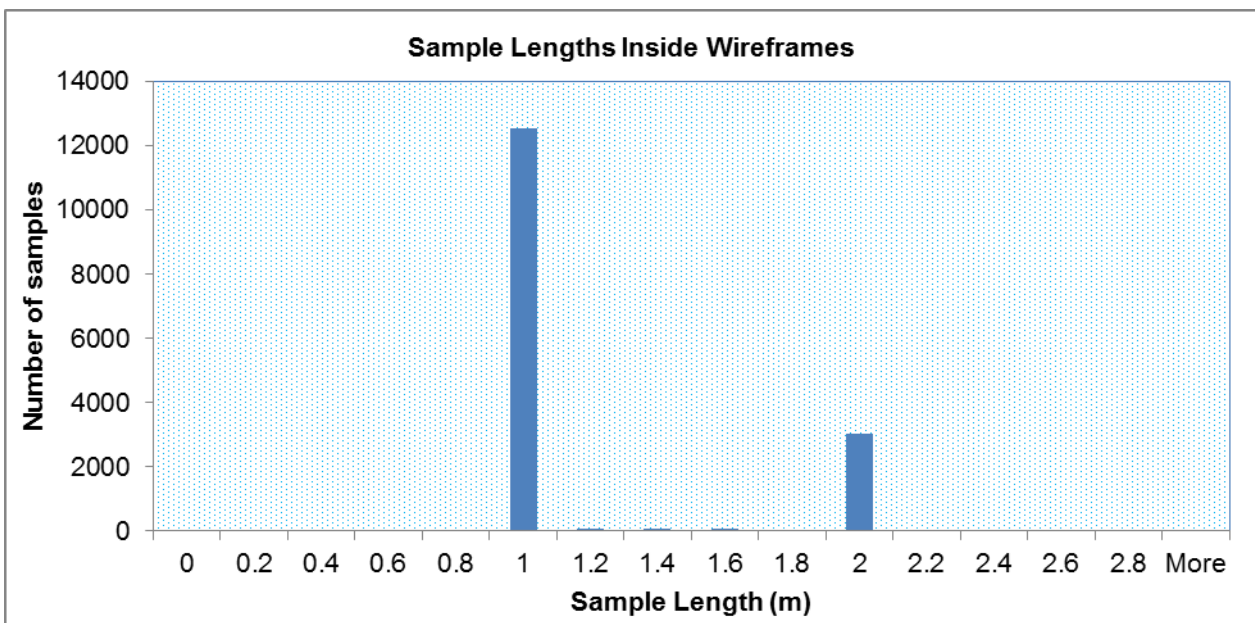
### 14.3.4 Topographic Surface

DGPS surveyed one meter contour data supplied to RPM by ERD ('topo\_bk2017.dtm'). RPM merged DGPS surveyed drill hole points into topographic contour data. RPM also added some additional points to contour data to fully encompass the extent of the mineralization wireframes.

## 14.4 Compositing and Statistics

The wireframes of the mineralized zones were used to define the Mineral Resource intersections. These were coded into the 'res\_zone\_all' table within the database. Separate intersection files were generated for each resource envelope. A review of sample length within these files was carried out to determine the optimal composite length. This review determined that a variety of sample lengths were used during the original sampling, these lengths ranged from less than 0.4 to 2.9 m. The majority of sample lengths within the mineralization were one meter lengths (refer to **Figure 14-12**) as such one meter was utilized.

**Figure 14-12 Sample Lengths Inside Wireframes**



Surpac software was then used to extract 'best fit' one meter down-hole composites within the intervals coded as 'domain' intersections. This method adjusts the composite length within intersections to eliminate "rejected"

samples that can occur when fixed length compositing is used. A minimum length of 50% was used due to the numerous very narrow intersections. This allowed a composite to be generated for intersections as narrow as 0.5 m.

The composites were checked for spatial correlation with the wireframe objects, the location of the rejected composites and zero composite values. Individual composite files were created for each of the domains in the wireframe models and contained Au, Fe and S assay data.

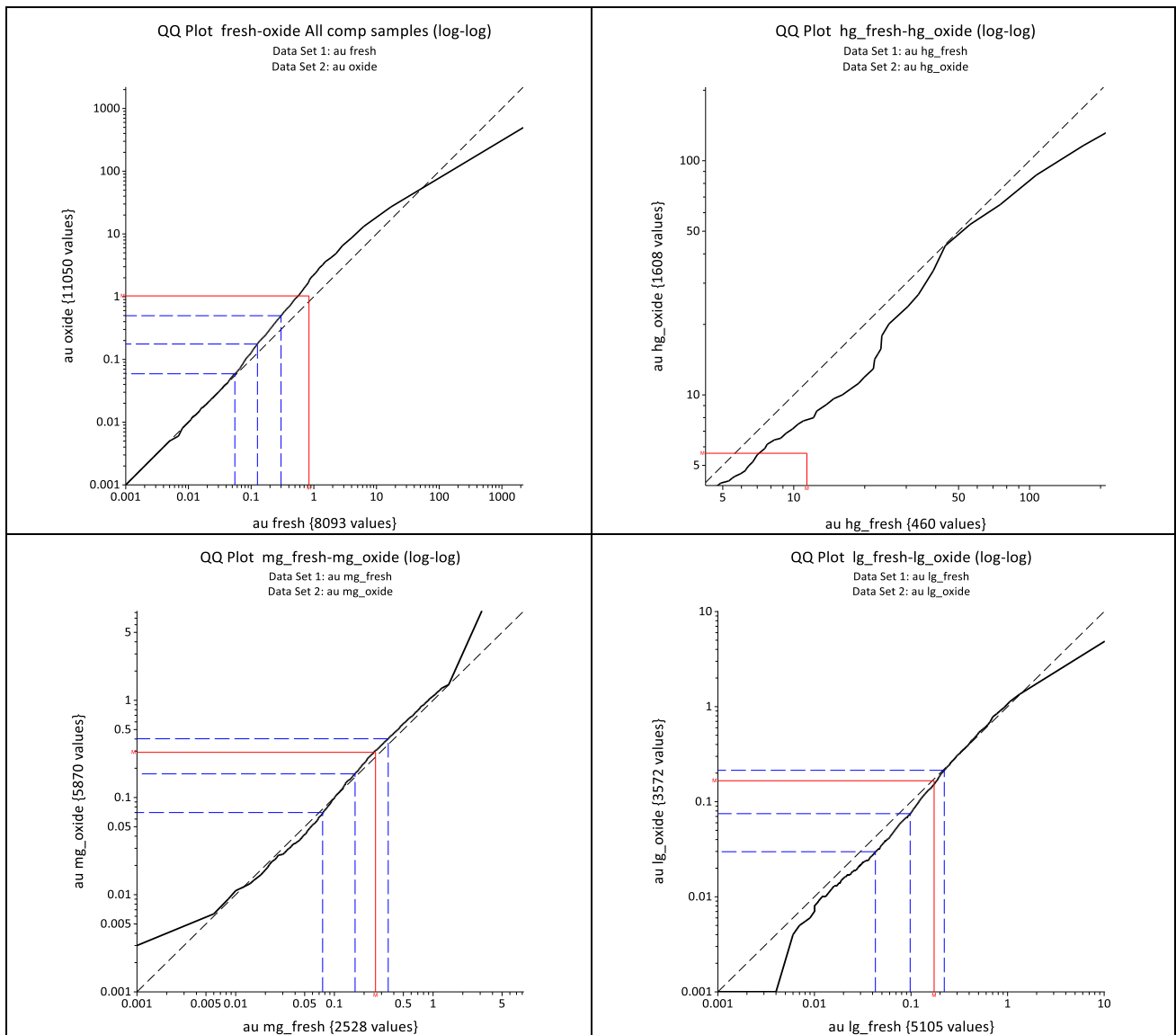
While Au is the only element that is currently defined as of economic interest, as noted in **Section 14.1.2**, RPM observed that Fe and S show a reasonable correlation with bulk density resulting in the Fe grades forming a regression analysis to estimate the density. Furthermore S is likely form a key indicator for metallurgy, as such both Fe and S were estimated along with Au.

#### 14.4.1 Oxidation State Analysis

The composite data was subsequently separated by the weathering surface for each grade domain and analysed if separate compositing was required to be utilised for fresh and oxide mineralization. QQ plots were created to analyse the distribution of the two datasets and results are shown in **Figure 14-13**.

Results of the QQ plots within the HG, MG and LG Au grade domains indicates that the datasets show a large difference in terms of average grade, however, appear to be of the same statistical population. As a result the populations above and below the oxide/fresh surfaces can be combined for the Au grade estimate with the stationarity maintained.

**Figure 14-13 Oxide versus Fresh Au Grade Analysis QQ plot for Au**



Note: HG-High grade, MG-Medium grade, LG-Low grade domains

## 14.4.2 Composite Statistics

The composite data was imported into Supervisor software for statistical analysis for each domain. Combined domain statistics are provided in **Table 14-5** while domain stats for Fe and S are provided in **Table 14-6** and **Table 14-7** respectively.

**Table 14-5 Summary Statistics Composites –Au Grade Domains**

Domain	All HG Zones	MG Domain inclusive of HG			LG Domain inclusive of MG and HG				
Object	1 to 71	201	202	203	101	102	103	104	105
Element	Au g/t								
<b>Samples</b>	2,068	1,713	3,887	4,520	2,698	4,804	10,876	136	620
<b>Minimum</b>	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Maximum</b>	2,200.00	2,200.00	496.67	235.00	2,200.00	496.67	235.00	159.61	22.31
<b>Mean</b>	6.91	3.03	1.36	1.02	2.03	1.14	0.60	1.45	0.67
<b>Std Dev</b>	52.26	54.02	10.45	7.37	43.06	9.41	4.97	13.68	1.96
<b>Coeff Var</b>	7.56	17.82	7.70	7.20	21.20	8.27	8.29	9.41	2.91
<b>Variance</b>	2730.66	2,917.67	109.14	54.34	1854.12	88.53	24.72	187.17	3.84
Percentiles									
<b>10.0%</b>	0.45	0.05	0.06	0.03	0.04	0.04	0.02	0.01	0.02
<b>20.0%</b>	0.70	0.11	0.10	0.05	0.08	0.08	0.03	0.02	0.03
<b>30.0%</b>	1.01	0.18	0.15	0.07	0.12	0.12	0.05	0.03	0.05
<b>40.0%</b>	1.33	0.25	0.22	0.11	0.19	0.18	0.08	0.05	0.07
<b>50.0%</b>	1.74	0.36	0.31	0.15	0.25	0.26	0.11	0.07	0.11
<b>60.0%</b>	2.25	0.50	0.43	0.21	0.34	0.36	0.15	0.10	0.18
<b>70.0%</b>	2.98	0.67	0.60	0.32	0.49	0.50	0.22	0.17	0.25
<b>80.0%</b>	4.43	1.02	0.86	0.56	0.70	0.73	0.35	0.26	0.49
<b>90.0%</b>	9.83	2.20	1.54	1.11	1.42	1.28	0.69	0.55	1.37
<b>95.0%</b>	21.12	4.64	2.97	2.41	2.88	2.58	1.32	1.51	3.36
<b>97.5%</b>	43.95	11.05	6.47	4.48	6.55	4.67	2.92	2.89	6.63
<b>99.0%</b>	89.77	25.42	18.60	15.01	19.53	14.16	6.86	4.77	10.05

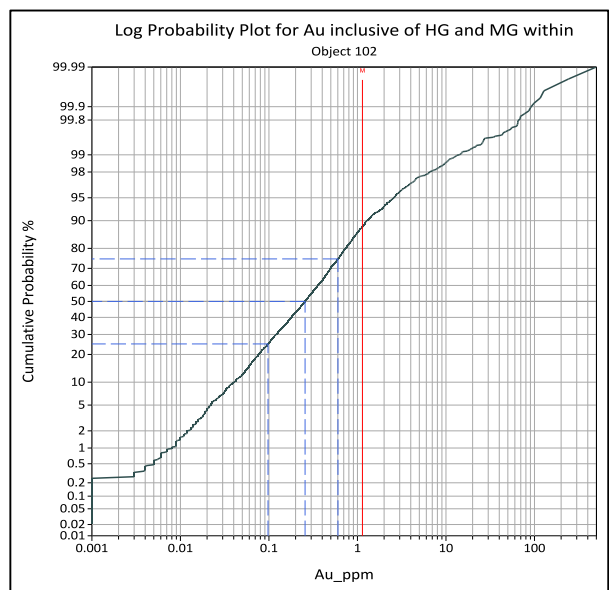
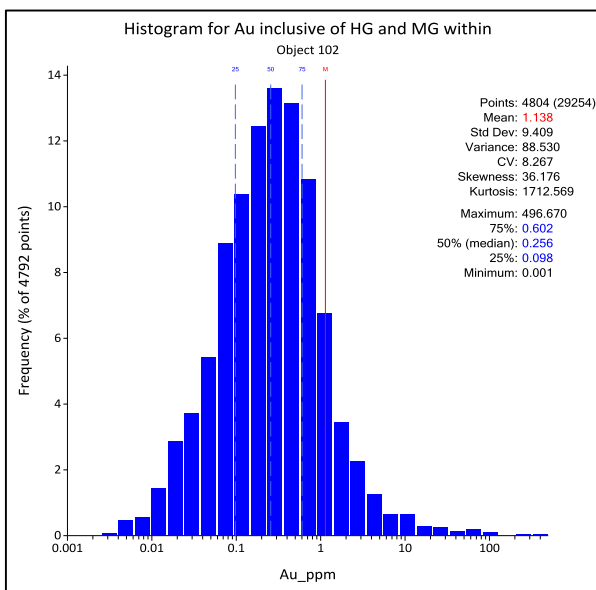
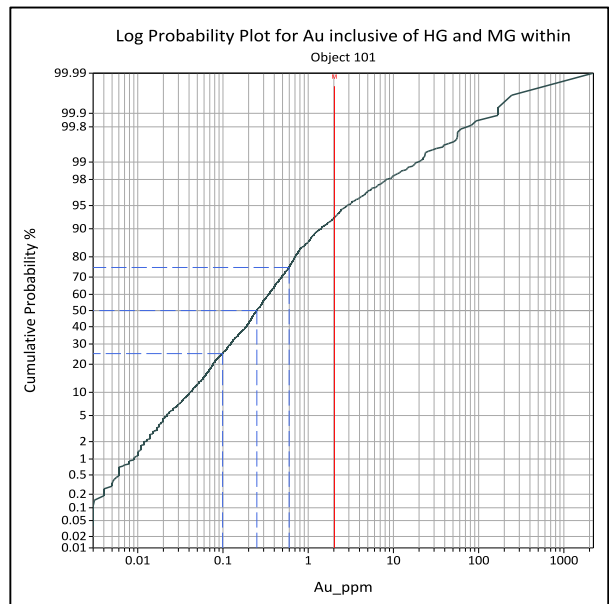
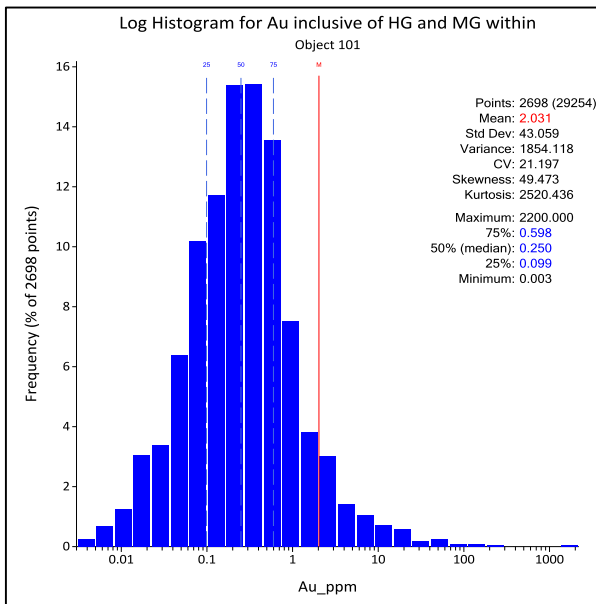
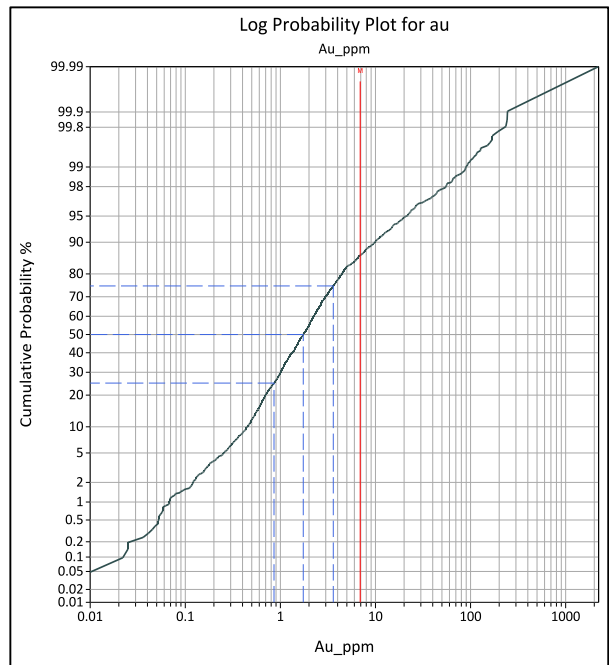
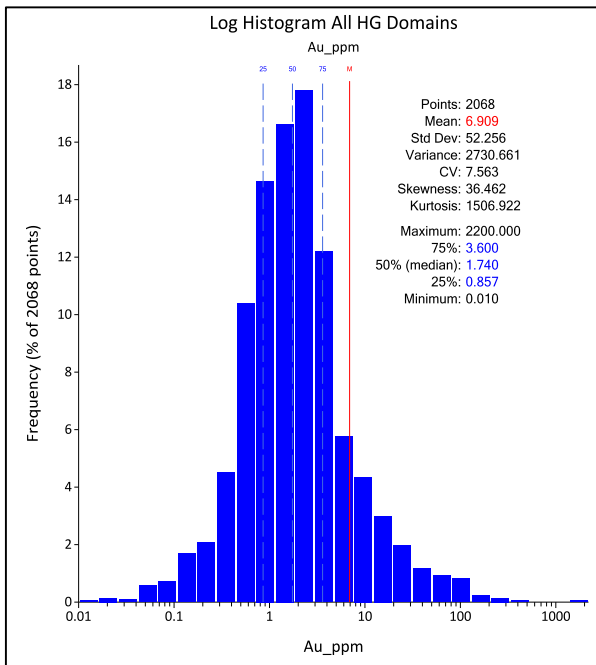
**Table 14-6 Summary Statistics Composites – Fe Grade Domains (All)**

Domain	All Domains Combined				
Object	101	102	103	104	105
Element	Fe%				
<b>Samples</b>	2698	4804	10876	136	620
<b>Minimum</b>	0.72	0.69	0.05	1.88	0.89
<b>Maximum</b>	6.93	7.91	18.04	4.66	4.87
<b>Mean</b>	2.18	2.20	2.38	2.82	2.45
<b>Std Dev</b>	0.86	0.74	0.90	0.52	0.67
<b>Coeff Var</b>	0.39	0.34	0.38	0.19	0.28
<b>Variance</b>	0.74	0.55	0.81	0.27	0.45
Percentiles					
<b>10.0%</b>	1.31	1.35	1.45	2.10	1.63
<b>20.0%</b>	1.53	1.58	1.71	2.39	1.86
<b>30.0%</b>	1.73	1.76	1.92	2.51	2.07
<b>40.0%</b>	1.90	1.93	2.09	2.65	2.23
<b>50.0%</b>	2.03	2.09	2.26	2.78	2.39
<b>60.0%</b>	2.18	2.27	2.46	2.93	2.54
<b>70.0%</b>	2.35	2.48	2.65	3.10	2.73
<b>80.0%</b>	2.56	2.73	2.93	3.21	3.00
<b>90.0%</b>	3.08	3.14	3.38	3.36	3.32
<b>95.0%</b>	4.19	3.55	3.86	3.57	3.64
<b>97.5%</b>	4.67	3.96	4.44	3.92	3.92
<b>99.0%</b>	5.04	4.41	5.24	4.41	4.33

**Table 14-7 Summary Statistics Composites – S Grade Domains (All)**

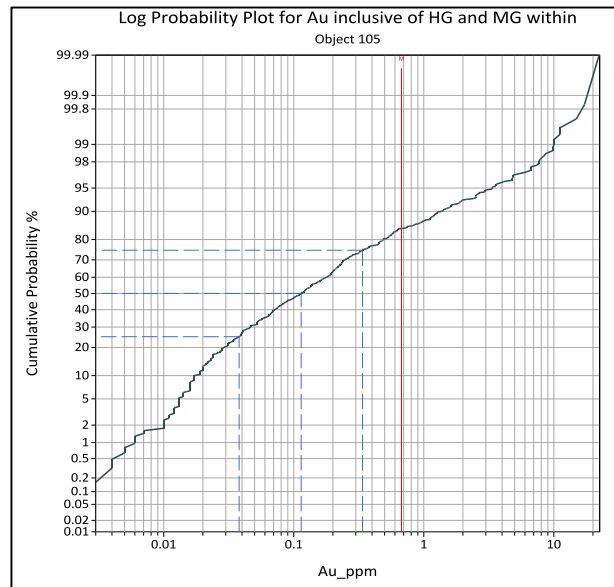
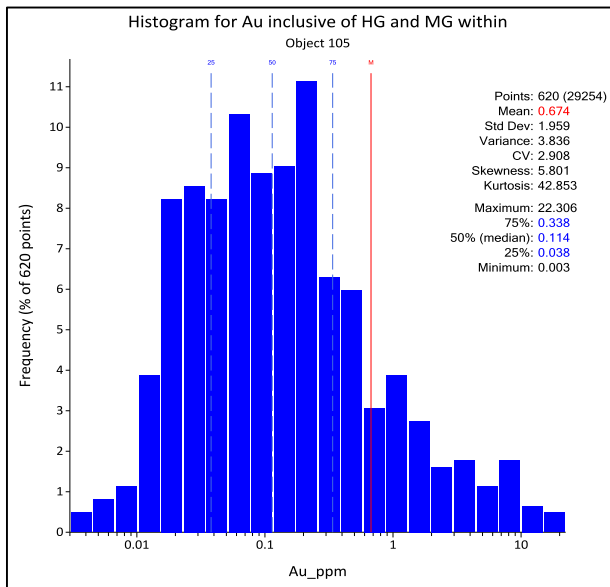
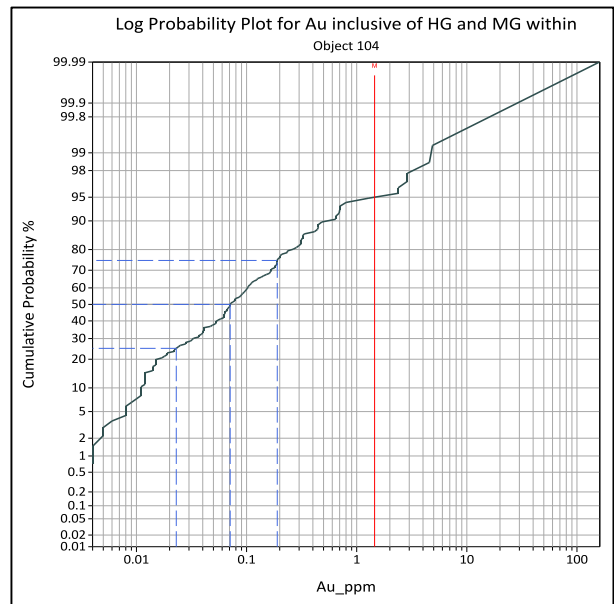
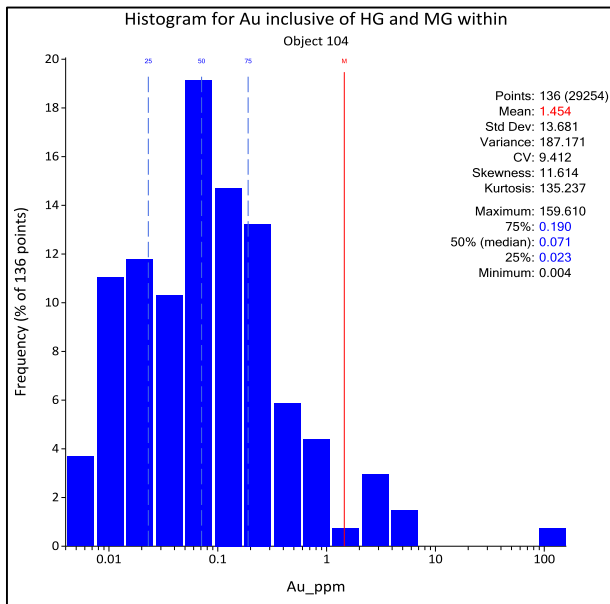
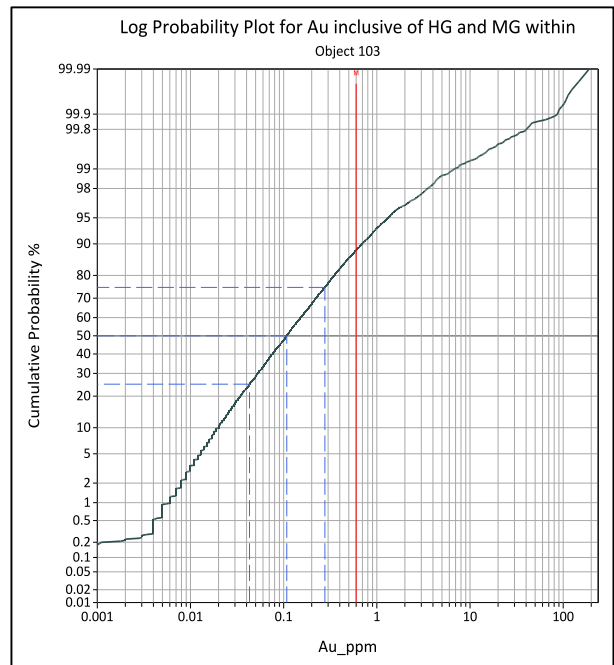
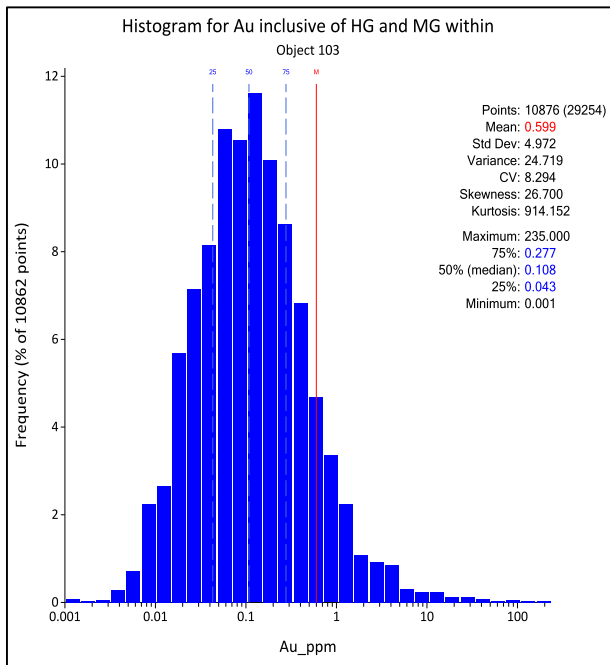
Domain	Individual Objects								
Object	All HG	101	102	103	104	105	201	202	203
Element	S%								
<b>Samples</b>	2068	965	903	6161	123	525	1,280	3,166	3,952
<b>Minimum</b>	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>Maximum</b>	3.82	1.39	1.62	3.59	0.86	1.42	1.64	2.19	2.44
<b>Mean</b>	0.05	0.11	0.08	0.20	0.05	0.09	0.09	0.04	0.09
<b>Std Dev</b>	0.14	0.19	0.18	0.36	0.15	0.16	0.14	0.10	0.23
<b>Coeff Var</b>	2.99	1.75	2.18	1.79	2.76	1.66	1.62	2.48	2.58
<b>Variance</b>	0.02	0.04	0.03	0.13	0.02	0.02	0.02	0.01	0.05
Percentiles									
<b>10.0%</b>	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>20.0%</b>	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>30.0%</b>	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
<b>40.0%</b>	0.01	0.02	0.01	0.02	0.01	0.01	0.02	0.01	0.01
<b>50.0%</b>	0.01	0.03	0.01	0.04	0.01	0.02	0.03	0.01	0.01
<b>60.0%</b>	0.01	0.05	0.02	0.08	0.01	0.03	0.05	0.02	0.01
<b>70.0%</b>	0.02	0.08	0.04	0.16	0.02	0.09	0.08	0.02	0.02
<b>80.0%</b>	0.04	0.15	0.10	0.32	0.04	0.17	0.14	0.03	0.08
<b>90.0%</b>	0.11	0.32	0.25	0.62	0.09	0.30	0.24	0.09	0.25
<b>95.0%</b>	0.22	0.50	0.45	0.93	0.24	0.41	0.34	0.18	0.50
<b>97.5%</b>	0.34	0.67	0.61	1.32	0.65	0.48	0.48	0.29	0.88
<b>99.0%</b>	0.49	0.93	0.78	1.67	0.79	0.69	0.62	0.45	1.23

Analysis of the descriptive statistics indicates that the Au appears to have a log normal distribution with moderate to high variability, a large range, coefficient of variation and variance. This interpretation is further supported when the log probability plots and histograms (**Figure 14-14 through Figure 14-21**) are analysed resulting in the interpretation that Au has a relatively lognormal distribution and a highly positively skewed distribution as would be expected with the style of mineralization observed within the deposit.

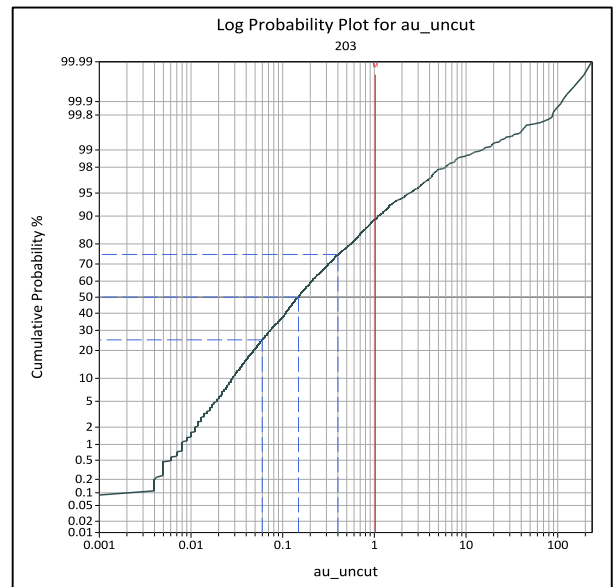
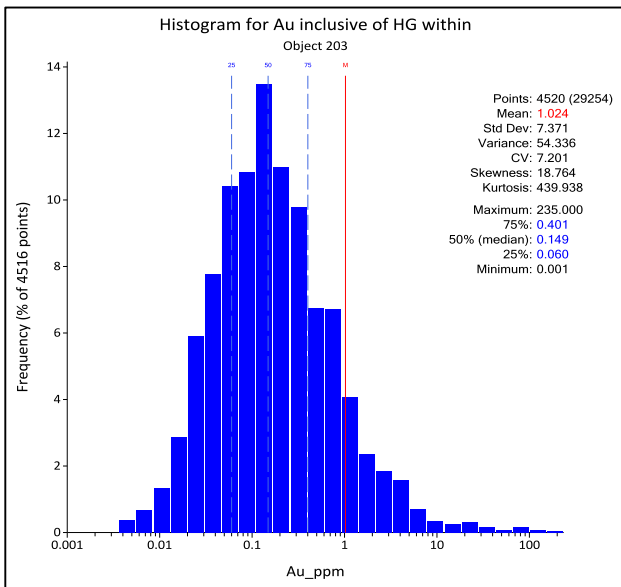
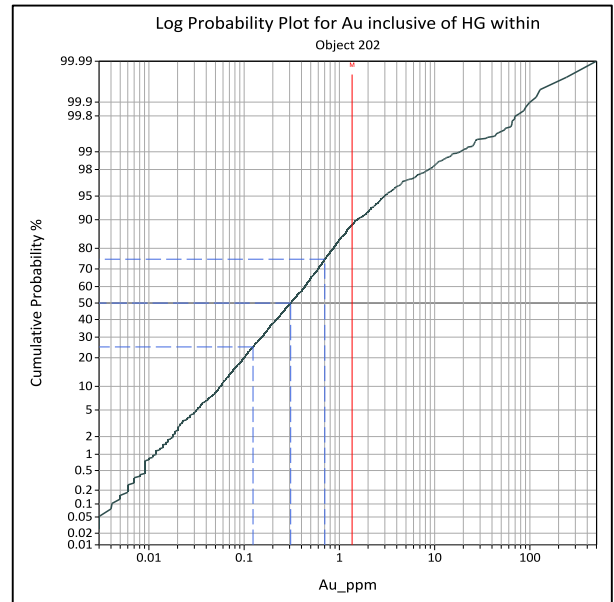
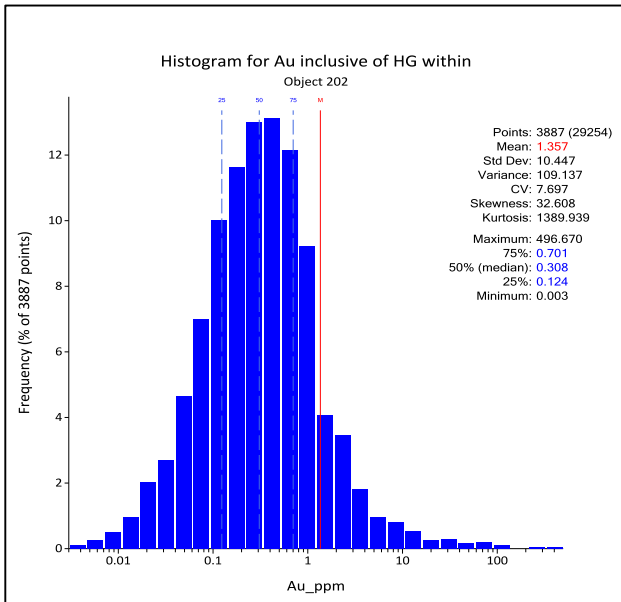
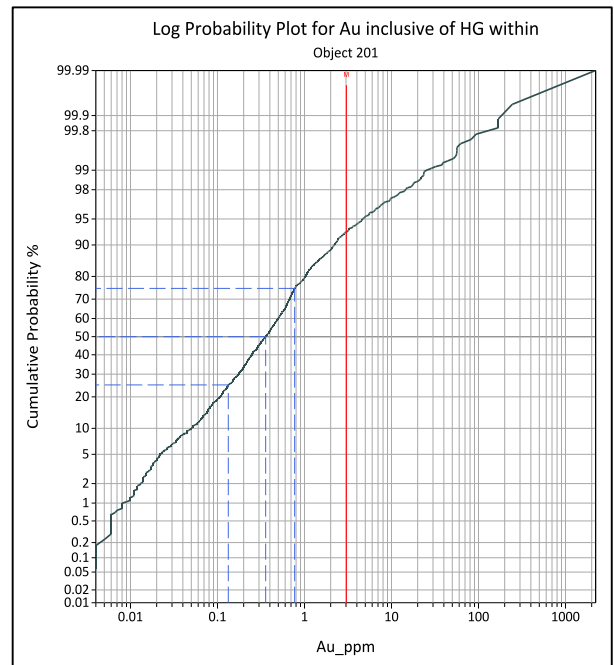
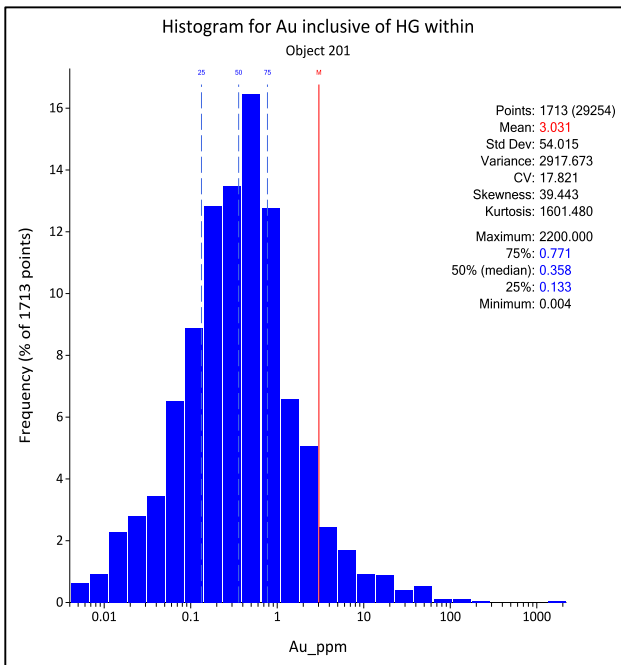



<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING STATISTICAL PLOTS - LOG HISTOGRAMS AND LOG PROBABILITY PLOTS Au (ALL HG OBJECT 1 TO 71, LG OBJECT 101 AND 102)	
FIGURE No. 14-14	PROJECT No. ADV-MN-00156	Date October 2018	

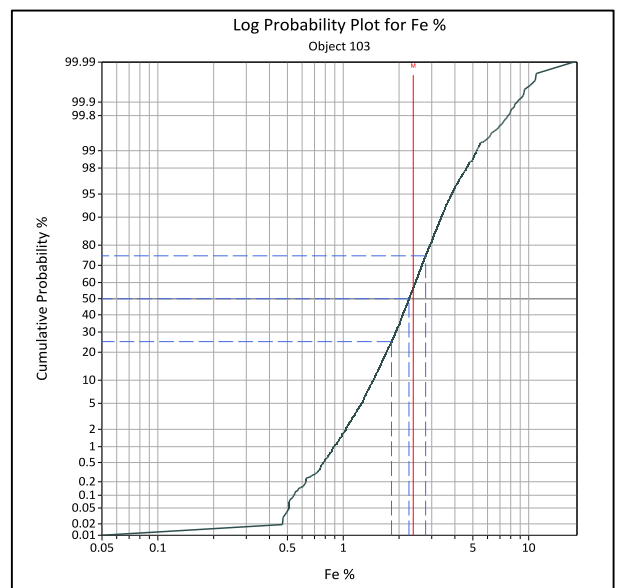
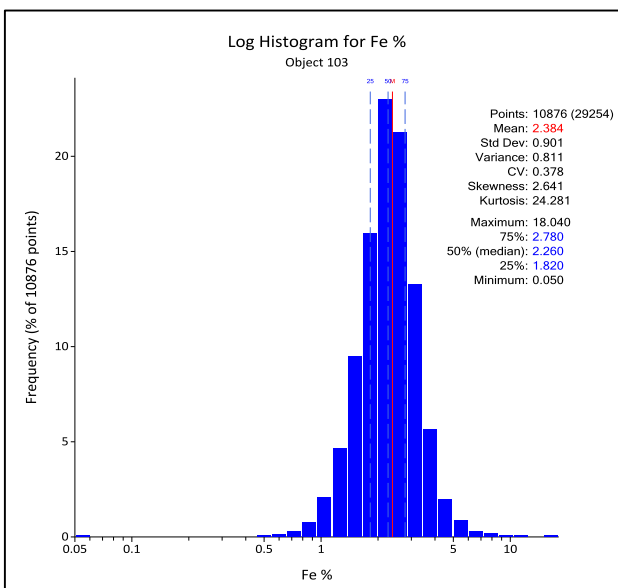
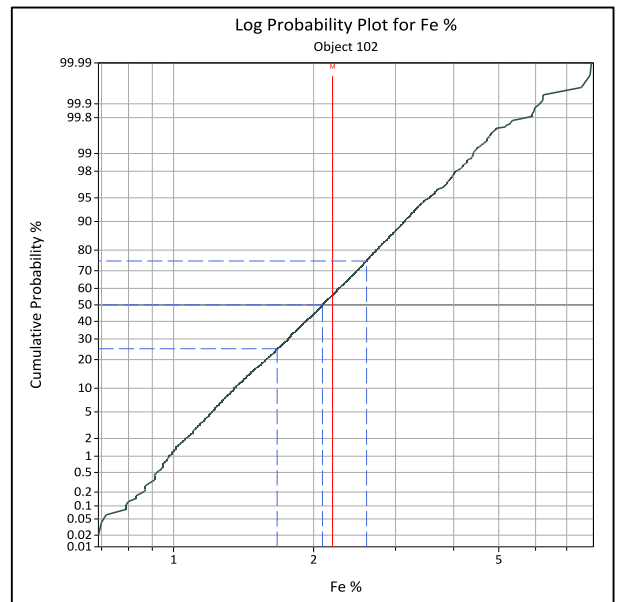
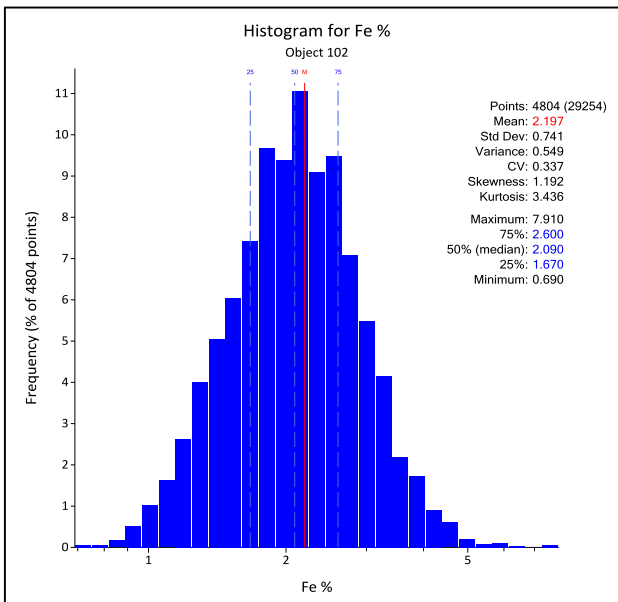
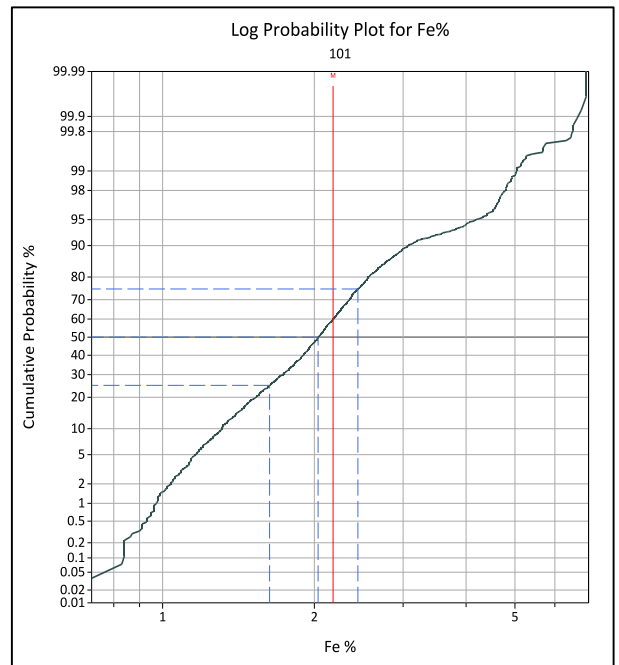
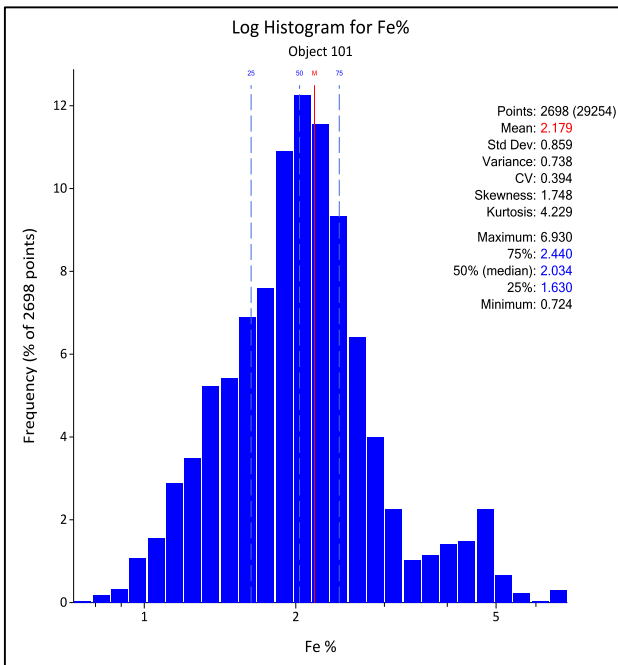





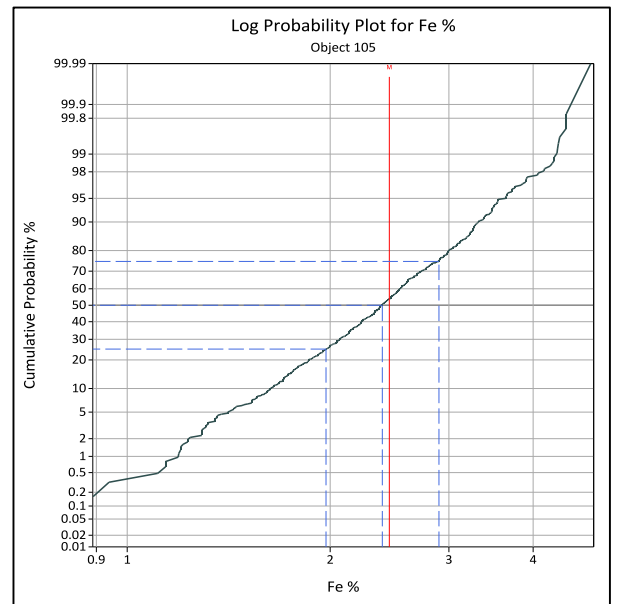
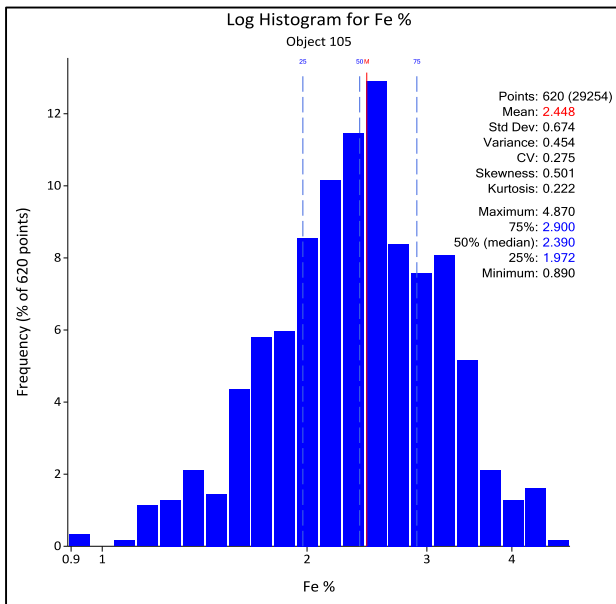
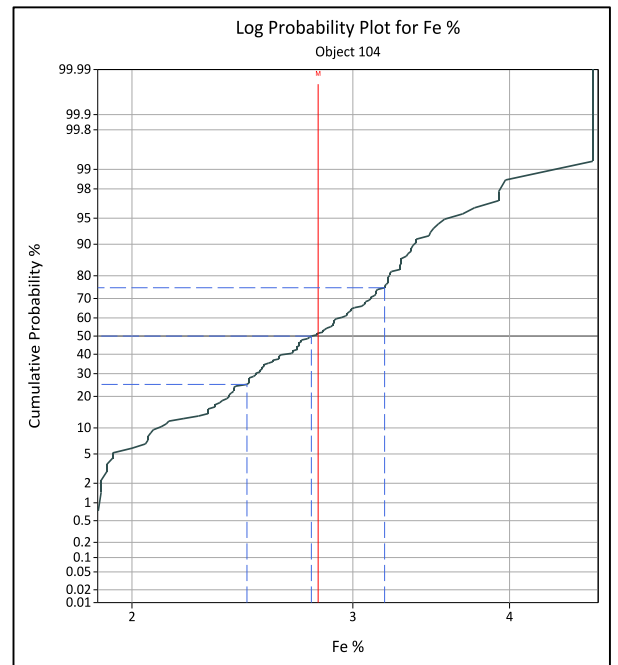
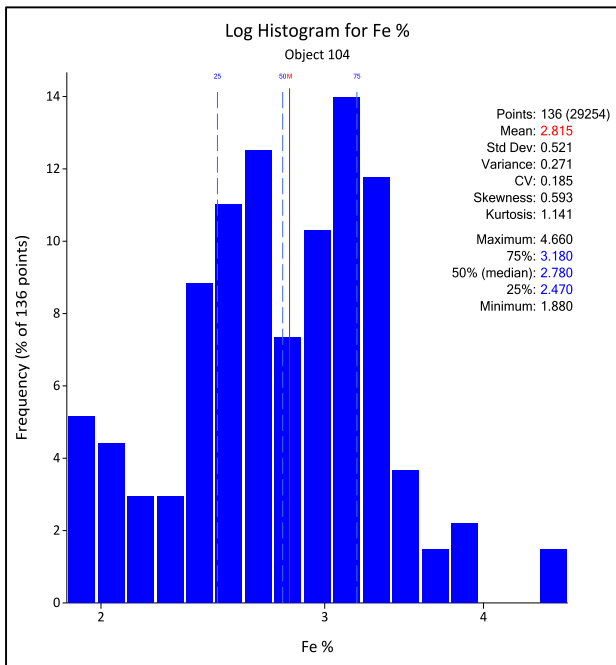
<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING STATISTICAL PLOTS - LOG HISTOGRAMS AND LOG PROBABILITY PLOTS Au (LG OBJECT 103, 104 AND 105)	
FIGURE No. 14-15	PROJECT No. ADV-MN-00156	Date October 2018	

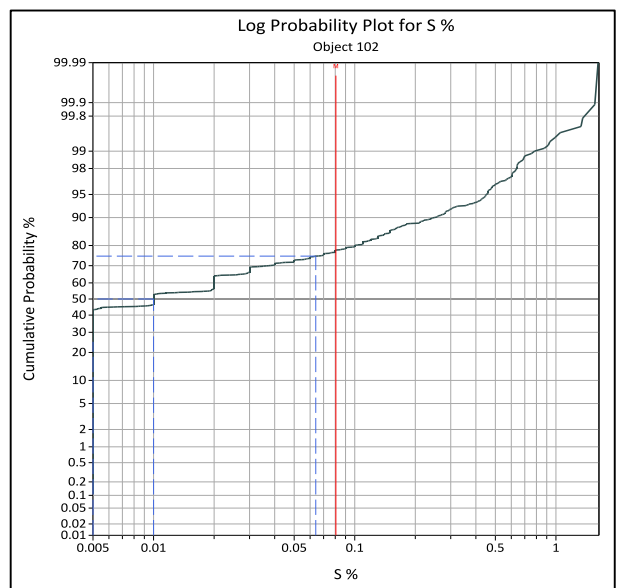
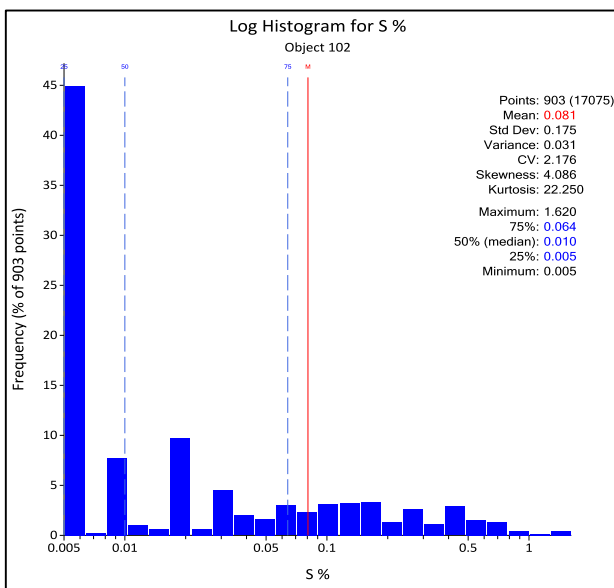
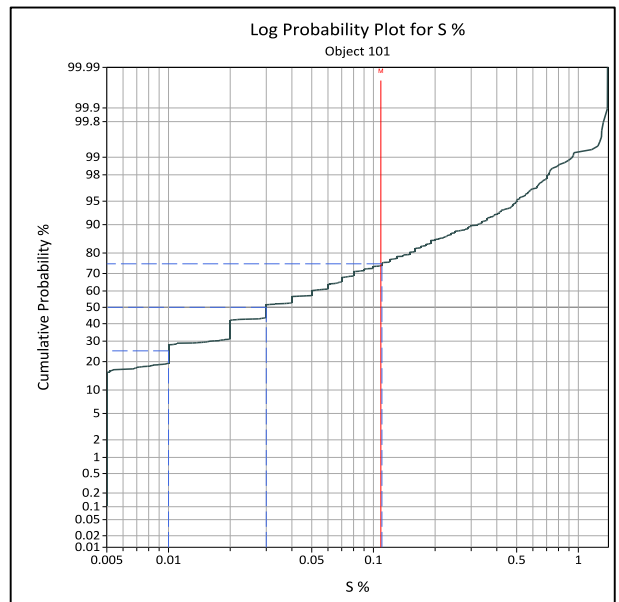
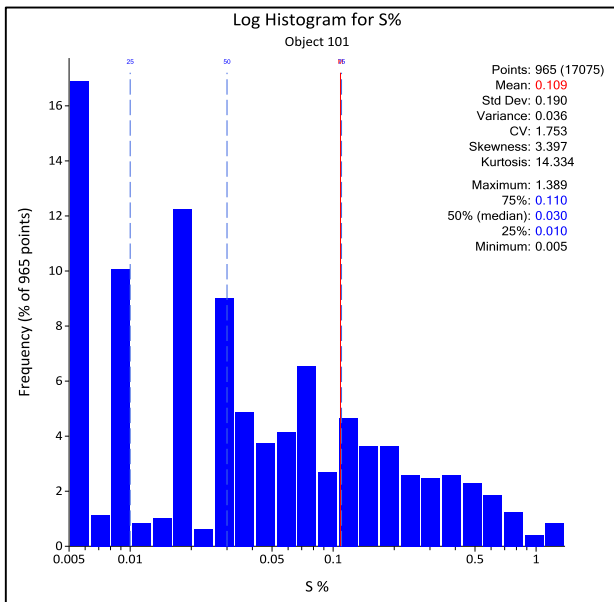
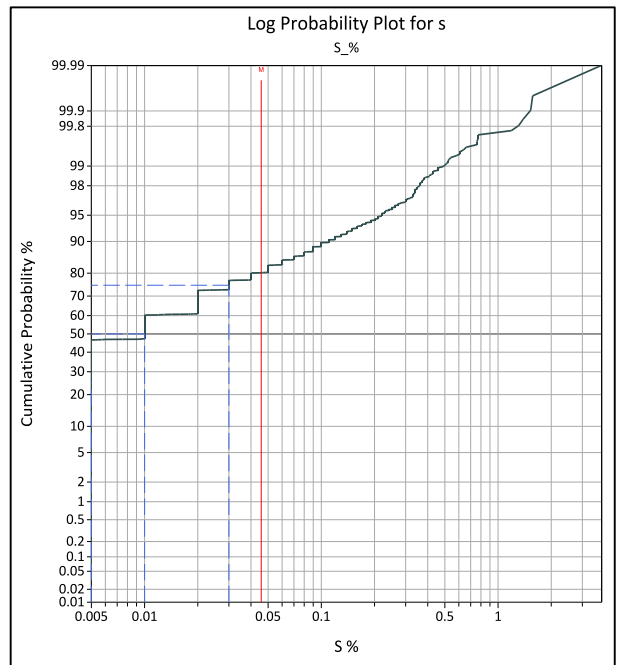
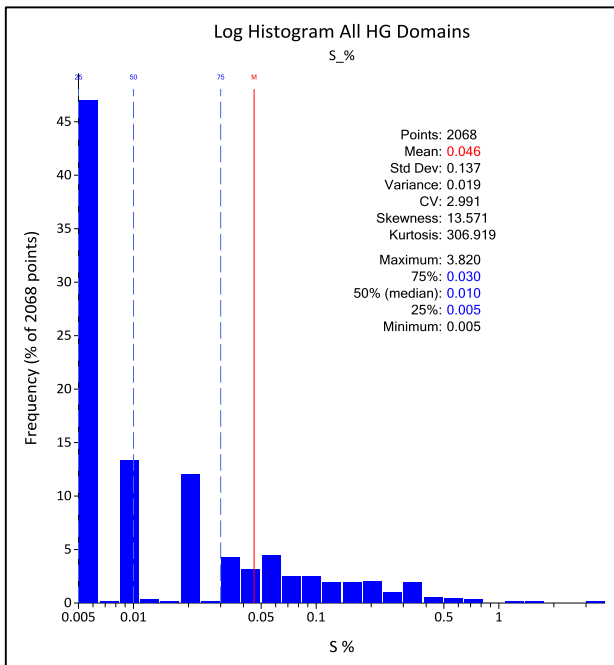


<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING STATISTICAL PLOTS - LOG HISTOGRAMS AND LOG PROBABILITY PLOTS Au (MG OBJECT 201, 202 AND 203)	
FIGURE No. 14-16	PROJECT No. ADV-MN-00156	Date October 2018	

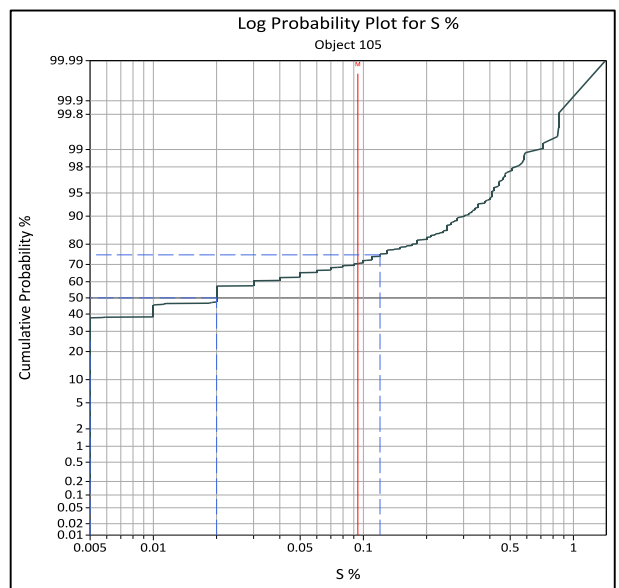
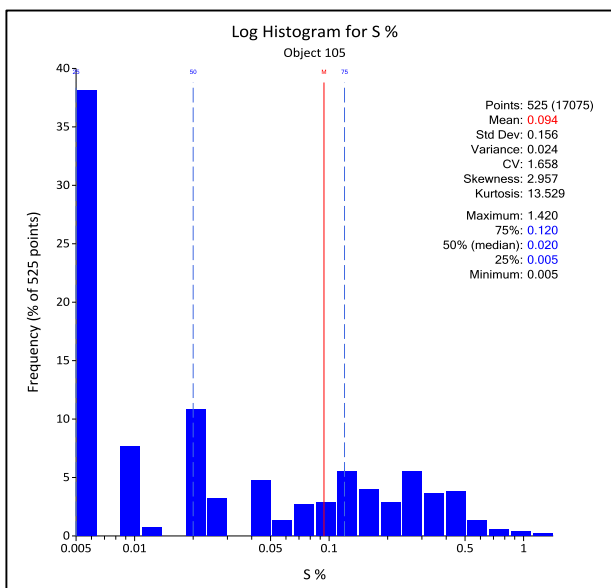
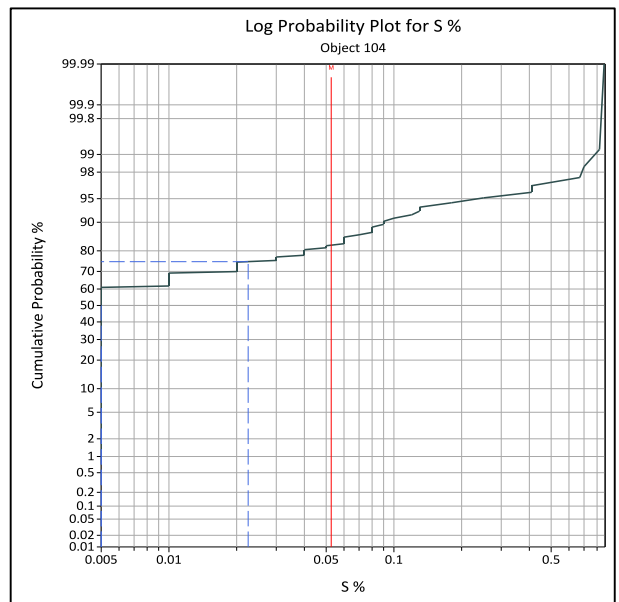
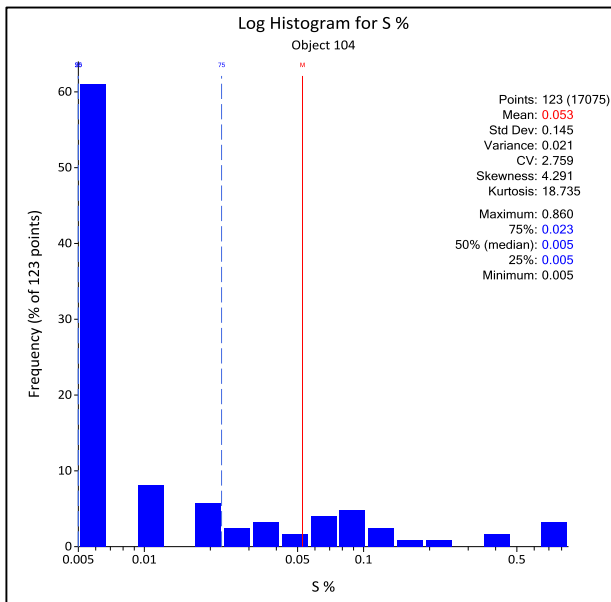
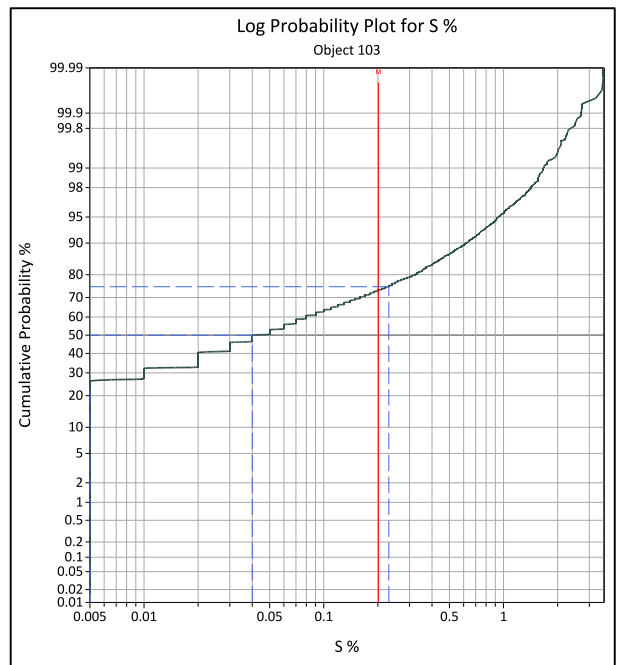
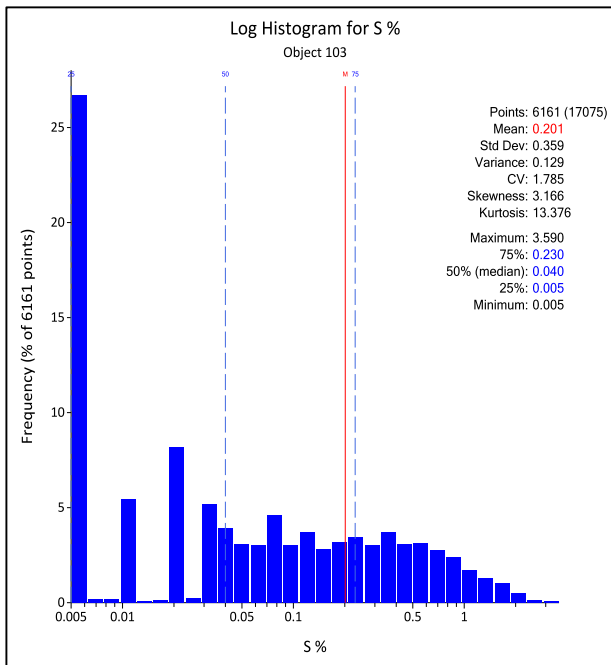


<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING STATISTICAL PLOTS - LOG HISTOGRAMS AND LOG PROBABILITY PLOTS Fe (LG OBJECT 101, 102 AND 103)	
FIGURE No. 14-17	PROJECT No. ADV-MN-00156	Date October 2018	

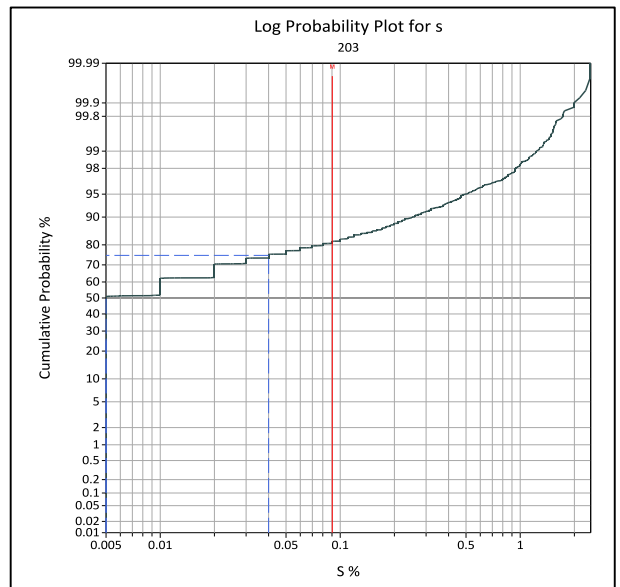
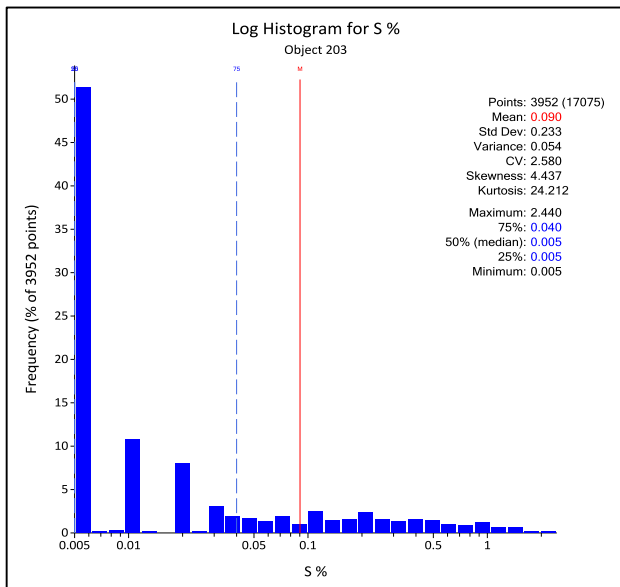
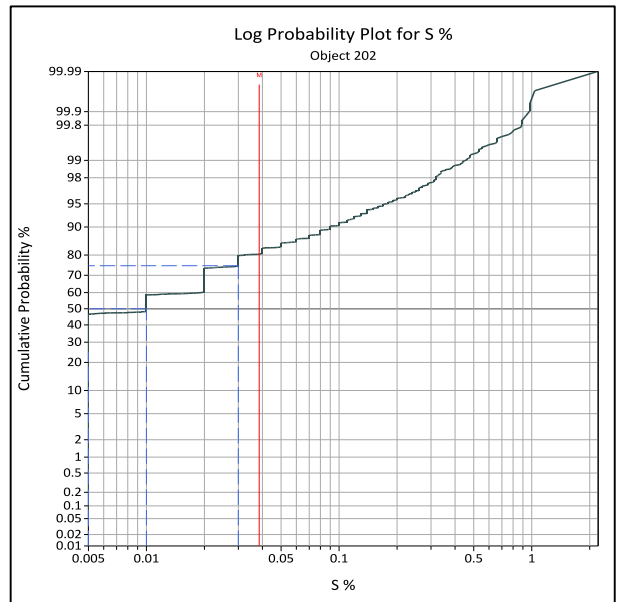
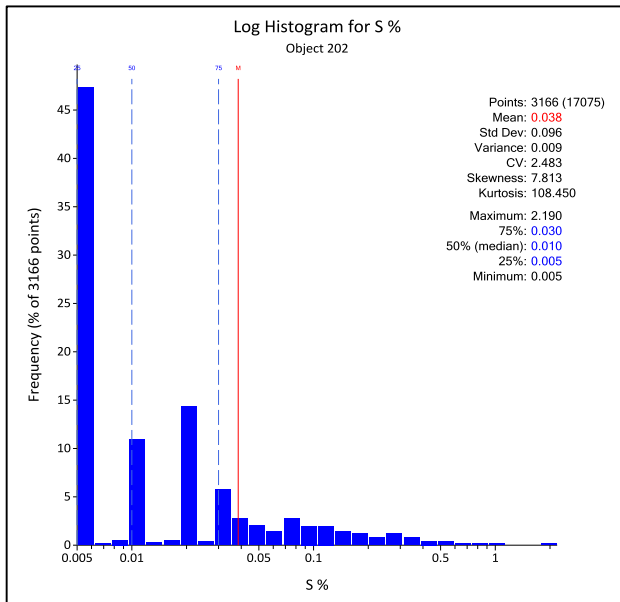
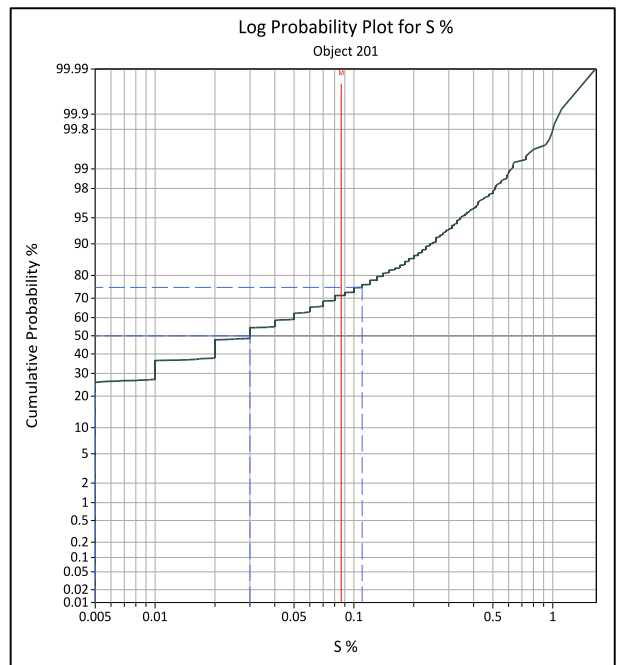
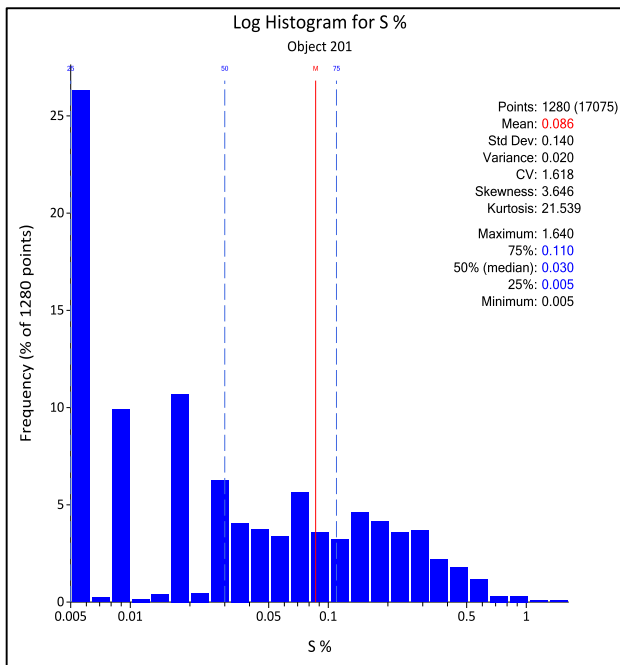




<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING STATISTICAL PLOTS - LOG HISTOGRAMS AND LOG PROBABILITY PLOTS S (ALL HG OBJECTS 1 TO 71, LG OBJECT 101 AND 102)	
FIGURE No. 14-19	PROJECT No. ADV-MN-00156	Date October 2018	



<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING STATISTICAL PLOTS - LOG HISTOGRAMS AND LOG PROBABILITY PLOTS S (LG OBJECT 103, 104 AND 105)	
FIGURE No. 14-20	PROJECT No. ADV-MN-00156	Date October 2018	



<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING STATISTICAL PLOTS - LOG HISTOGRAMS AND LOG PROBABILITY PLOTS S (MG OBJECT 201, 202 AND 203)	
FIGURE No. 14-21	PROJECT No. ADV-MN-00156	Date October 2018	

## 14.4.3 Correlation Analysis

Gold is the only element of economic interest currently defined and Fe and S are un-correlated with Au. Correlation matrices for all combined mineralization are shown in **Table 14-8**.

**Table 14-8 Metals Correlation Matrix All Mineralization**

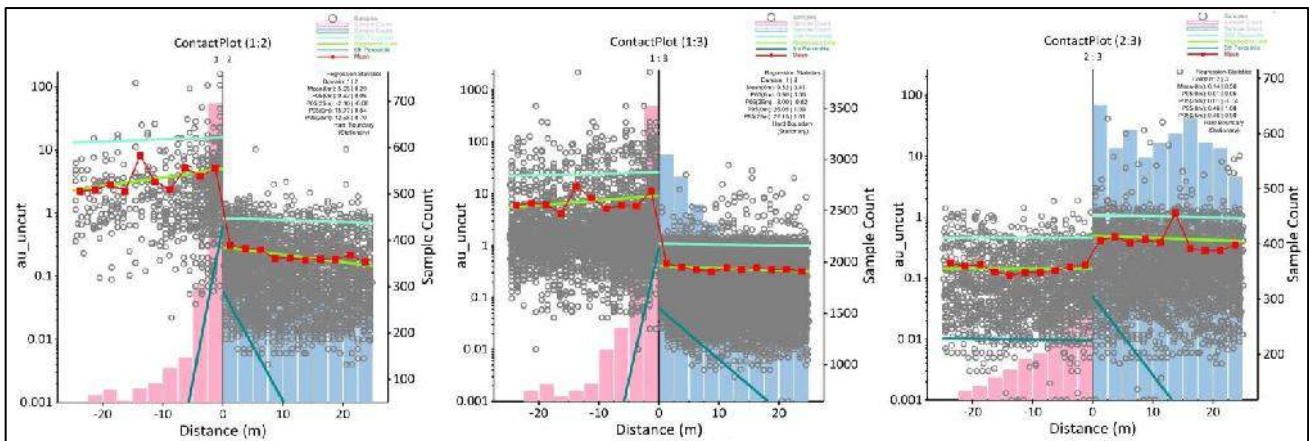
	Au g/t	Fe %	S %
Au g/t	1.00		
Fe %	0.02	1.00	
S %	-0.01	0.27	1.00

## 14.4.4 Contact Analysis

A contact analysis was performed utilising Supervisor software in order to determine whether the internal boundaries with the wireframes should be considered hard or soft. The results of this analysis are shown in **Figure 14-22** *Error! Reference source not found.*

RPM notes that Supervisor analyses the transition across domain boundaries within both drill holes and spatially adjacent samples and compares samples at various distances across any rock type and domain to a distance of 25 m from the boundary.

**Figure 14-22 Contact Analysis of High, Medium and Low grade domains**



Note: domain 1 represents the HG wireframes, domain 2 the MG wireframes and domain 3 the LG wireframes.

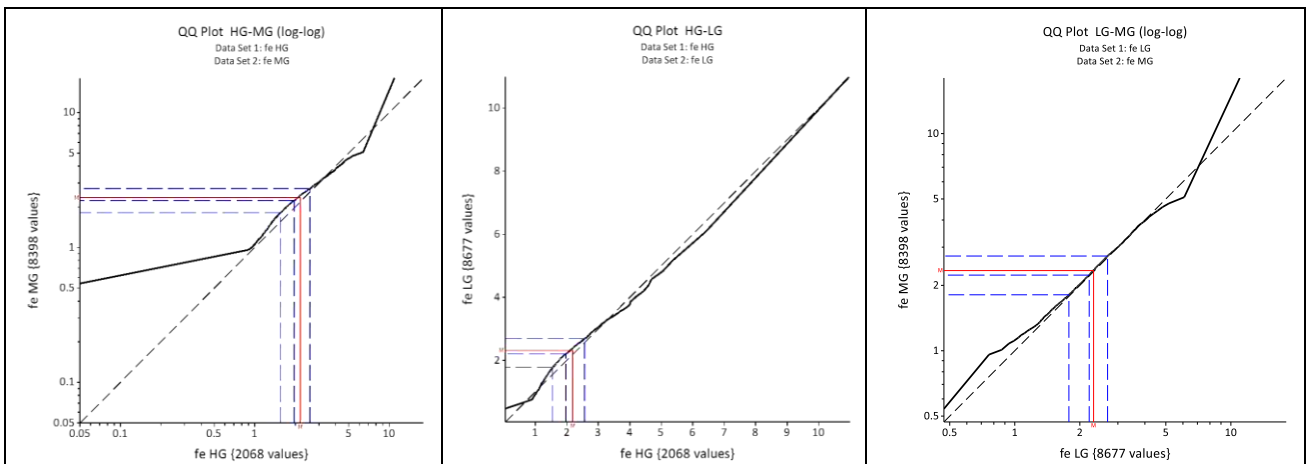
As can be seen in **Figure 14-22** a distinct variation in grade (red line) occurs at the boundary. As such, all the boundary transitions for Au (HG - MG, HG – LG and MG – LG) were considered to be hard and Insitu with the exception of the medium and low grade domains, which show a somewhat gradation boundary. This analysis is consistent with the reasoning behind the wireframing strategy.

RPM also completed a QQ analysis for Fe and S grades for the different grade domains to determine whether estimation of Fe and S grades was required to be constrained on grade domain basis. Fe plots are shown in **Figure 14-23** while QQ plots for S are shown **Figure 14-24**.

Analysis of the QQ plots indicates that Fe grades for different grade domains don't have any significant differences dependent on the grade domains. As such the compositing only carried low grade objects inclusive of high grade and medium grade domain contained within each low grade domains data to maintain soft boundary estimation technique. However, as would be expected, two quite distinct populations are observed in the S content. As such, compositing carried out for each individual object for each grade domain to maintain hard boundary status

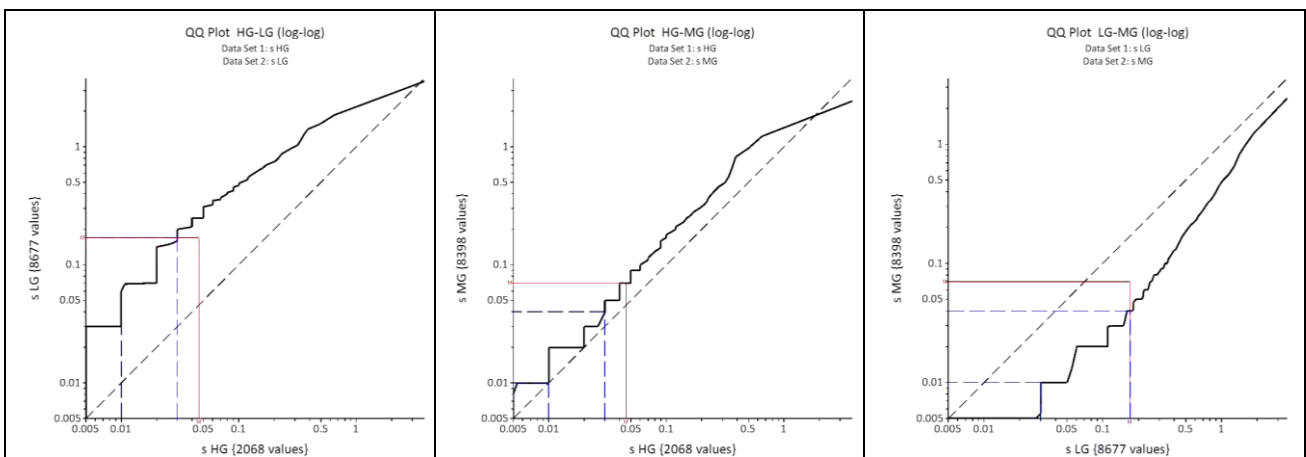


**Figure 14-23 Fe Grade Analysis for Grade domains QQ plot**



Note: HG-High grade, MG-Medium grade, LG-Low grade domains

**Figure 14-24 S Grade Analysis for Grade domains QQ plot**



Note: HG-High grade, MG-Medium grade, LG-Low grade domains

While hard boundaries were observed, RPM considers it suitable to utilise the data for all domains. The mineralization wireframes were treated as hard boundaries for high grade zones. That is, only assays from within each high grade wireframes were used to estimate blocks within that high grade wireframe. The outside of the high-grade wireframes were also treated as hard boundaries, however, due to the interpreted gradational mineralization between the high, medium and low grades those high grade zones falling within each medium and low grade shell were used as soft boundaries during the estimate i.e. medium and low grade domains were estimated including the high grade population as discussed in contact analysis. To avoid inappropriate smearing of grade the high-grade samples had additional high grade cuts applied as outlined in **Section 14.4.5**.

### 14.4.5 High Grade Cuts

Due to the use of a linear estimation technique (OK) for the Mineral Resource estimate it is important to appropriately address the issue of high grade (relative to the domain being estimated) outliers within the dataset. This is required to ensure that the resulting estimate appropriately honours the transition from point to block sized sample support. The intent of any grade capping is twofold, to reduce the coefficient of variation (CV) within the sample dataset to a level that is appropriate to a linear estimation technique (generally below 2) and reasonably deal with outliers within the sample population. It should be noted, particularly within some of the estimation domains that comprise the Bayan Khundii deposit, that while the CV can be low (below 2) the domain sample datasets can contain outlier values that do not appear to form part of the main sample population. It is these outlier values that then need to be cut rather than addressing any concerns regarding the sample dataset CV only.

Analysis of the grade distributions within drill holes indicates that the high-grade Au mineralization occurs as semi-parallel, moderately dipping vein within a small broader disseminated low grade mineralization lodes. Contact analysis discussed in **Section 14.2** concluded that all the boundary transitions for Au (HG - MG, HG – LG and MG – LG) are considered to be hard, however, all data was utilised with differing cuts in each domain based to ensure limited smoothing for a more consistent gradational model, as observed in the drill holes.

Analysis of the statistics indicates that the composite data is positively skewed with a high coefficient of variation for individual lodes. The application of top cuts was considered necessary prior to using the data for linear grade interpolation.

To assist in the selection of appropriate high grade cuts, the composite data was imported into Supervisor software, where population histograms, log probability plots and the coefficient of variation statistics were generated per objects within each grade domains. The log histogram and log probability plots are shown in **Figure 14-25** to **Figure 14-27**.

High grade cuts were determined for all high, medium and low grade domains using the shape of the log probability plots (inflections in the grade distribution) and the cumulative histogram (to determine samples that would be considered to be outliers in the grade distribution). Once this analysis was completed the spatial location of the samples subject to high-grade cuts was also examined in order to understand the likely local effects of the cuts and whether the cut samples would have formed a specific outlier population.

The values used for the LG and MG cuts are based on identification of outliers within the population distributions in the below histograms and probability plots. These changes would normally be expected to reduce the nominal cuts as the higher grade material contained within the lower grade domains has been removed and remaining outliers are likely to be more defined. All domains except LG domain object105 are cut at values above the 99th percentile value, object105 is cut at slightly below this value as the population distribution breaks up substantially at about 1.4 g/t.

The high grade cuts applied to the medium grade domains were based on the distribution of grades within the medium grade domains exclusive of the high grade data contained within the wholly surrounded high grade domains while the high grade cuts applied to the low grade domains were based on the distribution of grades within the low grade domains exclusive of high and medium grade domain data. These high-grade top cuts were then applied to the combined high and medium grade domain dataset for use in estimating the medium grade domains while top cuts selected from low grade domains were applied to the combined high and medium grade domain dataset for use in estimating low grade domains, this ensured appropriate treatment of the grade distribution within each grade domain.

High grade cuts were applied to Au and S while not considered required for Fe. No Au cuts were applied to the remaining lodes.

High grade cuts for Au grade applied to each grade domain are summarized in **Table 14-9** and **Table 14-10** for S. It should be noted that the values for the number of samples cut for the low and medium grade domains (domains 101-105 and 201 – 203) includes those high and medium grade samples which may be contained within the lower grade envelope.

**Table 14-9 High Grade Cuts Applied to Domains (Au g/t)**

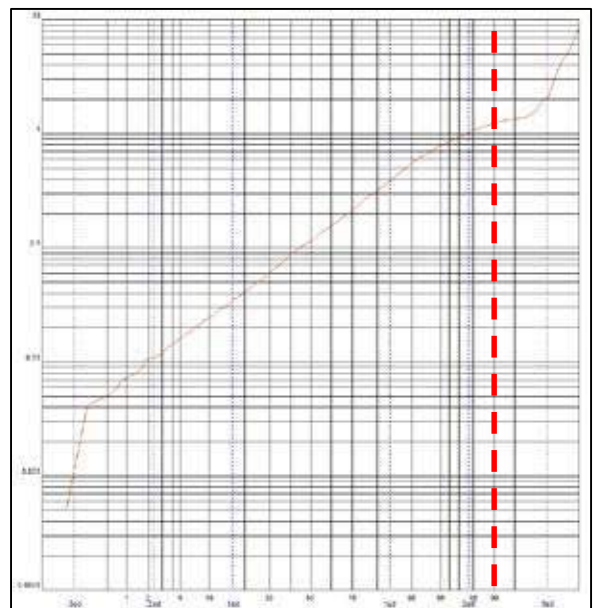
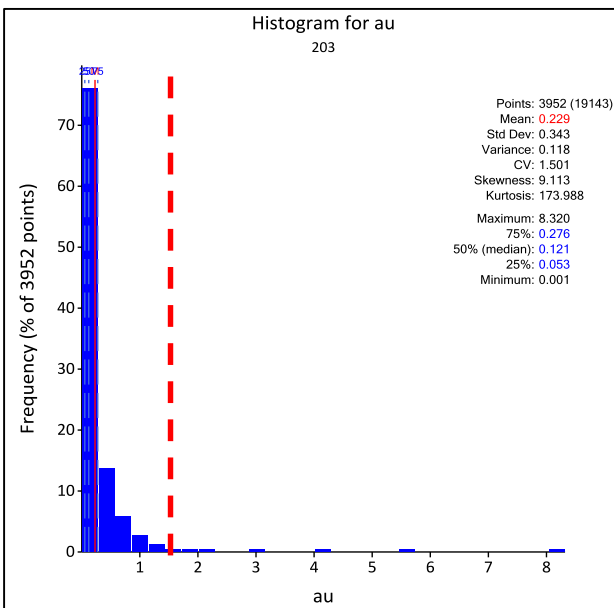
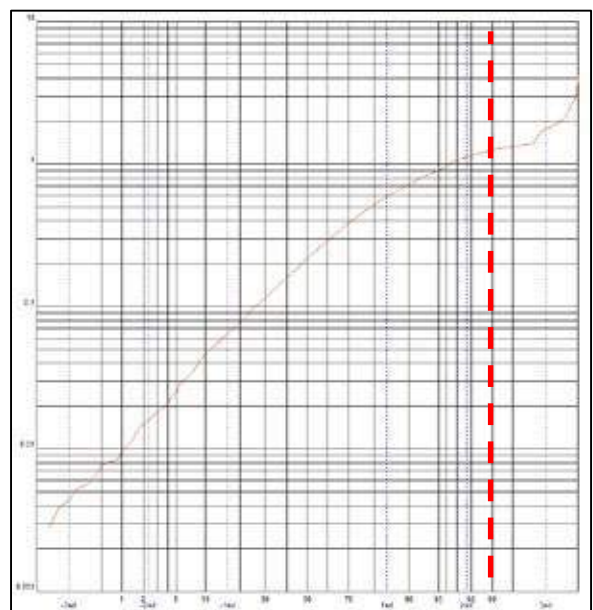
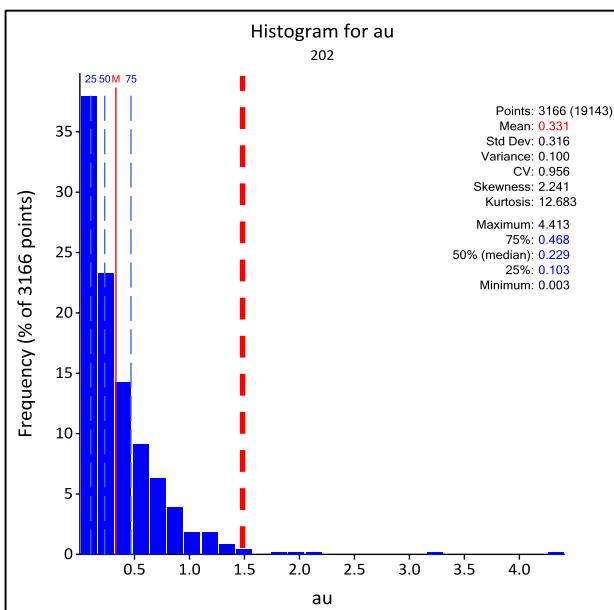
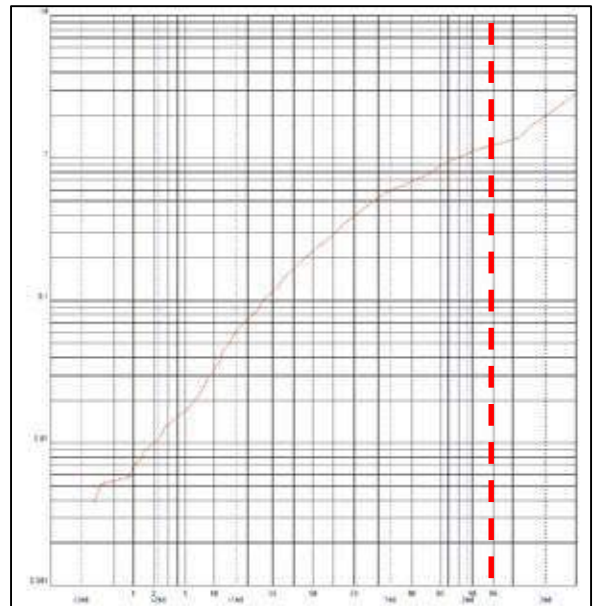
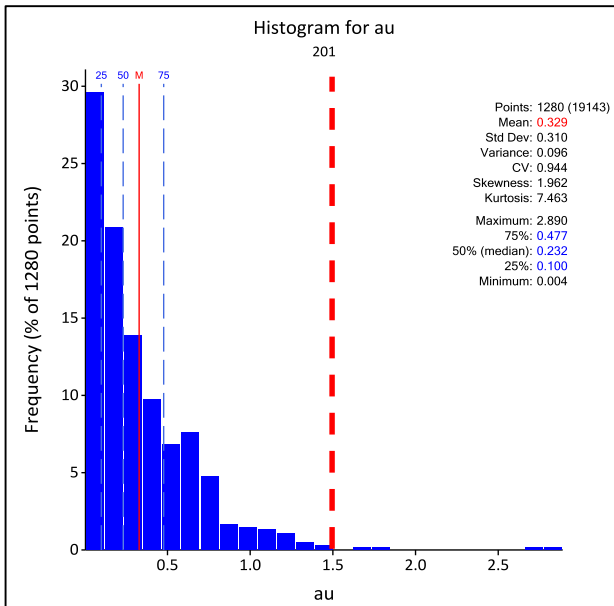
<b>Lode</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
Samples	25	24	66	122	155	80	173	87	149	56	59
Minimum	0.36	0.20	0.14	0.12	0.03	0.01	0.17	0.15	0.13	0.08	0.07
Maximum	27.08	127.17	93.85	108.52	235.00	32.74	496.67	25.91	18.77	24.87	22.31
Mean	3.18	10.80	4.92	5.86	7.41	2.65	15.54	2.43	2.15	3.32	3.49
Coeff Var	1.63	2.75	2.48	2.56	3.13	1.85	3.00	1.59	1.16	1.24	1.25
<b>Top Cut</b>	<b>8</b>	<b>90</b>	<b>28</b>	<b>100</b>	<b>90</b>	<b>25</b>	<b>250</b>	<b>20</b>	<b>-</b>	<b>16</b>	<b>18</b>
Number Cut	1	1	1	1	1	1	1	1	-	1	1
Cut Mean	2.41	9.25	3.92	5.79	6.47	2.56	14.11	2.36	2.15	3.16	3.42
Cut CV	0.76	2.56	1.50	2.51	2.41	1.71	2.39	1.48	1.16	1.06	1.19
<b>Lode</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>
Samples	29	194	131	15	66	30	4	90	30	8	4
Minimum	0.27	0.05	0.06	0.05	0.02	0.04	1.89	0.05	0.42	1.09	1.25
Maximum	54.27	169.17	93.60	194.00	47.28	14.90	3.59	35.98	7.77	4.78	25.07
Mean	4.15	5.63	5.70	15.51	3.71	2.98	3.11	3.07	1.94	2.90	12.48
Coeff Var	2.36	3.33	2.28	3.19	2.06	1.21	0.26	1.73	0.96	0.59	1.03
<b>Top Cut</b>	<b>11</b>	<b>75</b>	<b>80</b>	<b>30</b>	<b>30</b>	<b>11</b>	<b>-</b>	<b>23</b>	<b>-</b>	<b>-</b>	<b>-</b>
Number Cut	1	2	2	1	2	1	-	1	-	-	-
Cut Mean	2.66	4.66	5.57	4.58	3.44	2.85	3.11	2.93	1.94	2.90	12.48
Cut CV	0.88	2.38	2.19	1.61	1.83	1.13	0.26	1.55	0.96	0.59	1.03
<b>Lode</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>
Samples	2	3	17	13	8	12	4	1	4	35	41
Minimum	1.53	1.28	0.38	1.08	1.77	0.21	0.87	26.08	2.30	0.40	0.42
Maximum	42.96	5.40	72.84	20.13	6.49	10.24	2.01	26.08	5.34	33.97	105.90
Mean	22.25	2.88	9.60	5.85	3.58	2.19	1.30	26.08	3.16	5.31	5.32
Coeff Var	1.32	0.77	1.97	1.07	0.43	1.23	0.38	0.00	0.46	1.29	3.11
<b>Top Cut</b>	<b>-</b>	<b>-</b>	<b>45</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>23</b>	<b>25</b>
Number Cut	-	-	1.00	-	-	-	-	-	-	1.00	1.00
Cut Mean	22.25	2.88	7.96	5.85	3.58	2.19	1.30	26.08	3.16	4.99	3.35
Cut CV	1.32	0.77	1.70	1.07	0.43	1.23	0.38	0.00	0.46	1.13	1.54
<b>Lode</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>
Samples	4	13	4	13	4	2	9	23	9	1	1
Minimum	4.81	0.31	0.97	0.54	1.94	2.05	0.26	0.12	0.09	13.91	35.88
Maximum	22.54	159.61	2.72	4.13	2.00	12.72	7.18	150.22	3.43	13.91	35.88
Mean	11.10	13.75	1.93	1.45	1.97	7.39	2.28	17.51	1.91	13.91	35.88
Coeff Var	0.76	3.19	0.38	0.68	0.02	1.02	0.92	2.25	0.54	0.00	0.00
<b>Top Cut</b>	<b>-</b>	<b>20.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>120</b>	<b>-</b>	<b>-</b>	<b>-</b>
Number Cut	-	1.00	-	-	-	-	-	1.00	-	-	-
Cut Mean	11.10	3.01	1.93	1.45	1.97	7.39	2.28	16.19	1.91	13.91	35.88
Cut CV	0.76	1.75	0.38	0.68	0.02	1.02	0.92	2.16	0.54	0.00	0.00
<b>Lode</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>
Samples	3	2	3	10	35	7	5	5	17	10	2
Minimum	2.77	6.63	2.96	0.43	0.42	0.49	0.06	0.44	0.85	0.14	0.07

Maximum	10.46	6.63	14.77	23.64	2200.00	2.14	10.37	3.09	6.99	15.29	1.63
Mean	5.38	6.63	7.40	4.03	72.67	1.39	4.31	1.30	2.82	3.80	0.85
Coeff Var	0.82	0.00	0.87	1.76	5.10	0.41	1.09	0.84	0.70	1.20	1.30
<b>Top Cut</b>	-	-	-	<b>9</b>	<b>100</b>	-	-	-	-	-	-
Number Cut	-	-	-	1	1	-	-	-	-	-	-
Cut Mean	5.38	6.63	7.40	2.57	12.67	1.39	4.31	1.30	2.82	3.80	0.85
Cut CV	0.82	0.00	0.87	1.08	1.64	0.41	1.09	0.84	0.70	1.20	1.30
<b>Lode</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>	<b>66</b>
Samples	13	2	25	6	6	8	1	2	8	3	59
Minimum	0.09	2.10	0.51	0.72	1.01	0.60	22.91	1.04	0.73	1.71	0.18
Maximum	4.11	2.45	4.63	4.17	4.86	4.00	22.91	1.96	244.62	2.99	27.92
Mean	1.37	2.28	1.71	1.92	2.59	1.84	22.91	1.50	32.22	2.56	3.54
Coeff Var	0.96	0.11	0.64	0.70	0.70	0.69	0.00	0.43	2.66	0.29	1.28
<b>Top Cut</b>	-	-	-	-	-	-	-	-	<b>35</b>	-	-
Number Cut	-	-	-	-	-	-	-	-	1.00	-	-
Cut Mean	1.37	2.28	1.71	1.92	2.59	1.84	22.91	1.50	6.02	2.56	3.54
Cut CV	0.96	0.11	0.64	0.70	0.70	0.69	0.00	0.43	1.97	0.29	1.28
<b>Lode</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>	<b>71</b>	<b>101</b>	<b>102</b>	<b>103</b>	<b>104</b>	<b>105</b>	<b>201</b>
Samples	2	6	2	3	3	2698	4804	10876	136	620	1713
Minimum	1.27	0.69	2.73	3.85	1.01	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	2.43	13.54	3.00	11.77	5.05	2200.00	496.67	235.00	159.61	22.31	2200.00
Mean	1.85	5.07	2.87	6.80	3.10	2.03	1.14	0.60	1.45	0.67	3.03
Coeff Var	0.44	1.30	0.07	0.64	0.65	21.20	8.27	8.29	9.41	2.91	17.82
<b>Top Cut</b>	-	-	-	-	-	<b>1.5</b>	<b>1.2</b>	<b>1.5</b>	<b>1.0</b>	<b>1.4</b>	<b>1.5</b>
Number Cut	-	-	-	-	-	252.00	505.00	466.00	8.00	62.00	239.00
Cut Mean	1.85	5.07	2.87	6.80	3.10	0.43	0.41	0.25	0.18	0.32	0.54
Cut CV	0.44	1.30	0.07	0.64	0.65	1.05	0.96	1.43	1.43	1.39	0.92
<b>Lode</b>	<b>202</b>	<b>203</b>									
Samples	3887	4520									
Minimum	0.00	0.00									
Maximum	496.67	235.00									
Mean	1.36	1.02									
Coeff Var	7.70	7.20									
<b>Top Cut</b>	<b>1.5</b>	<b>1.5</b>									
Number Cut	394.00	327.00									
Cut Mean	0.49	0.34									
Cut CV	0.96	1.27									

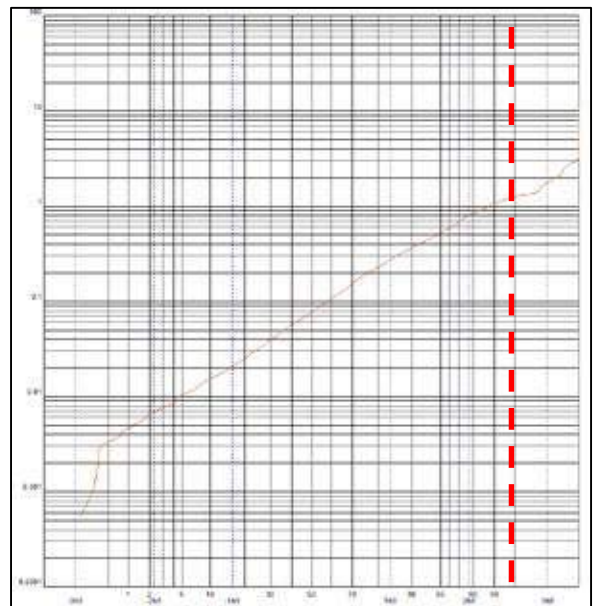
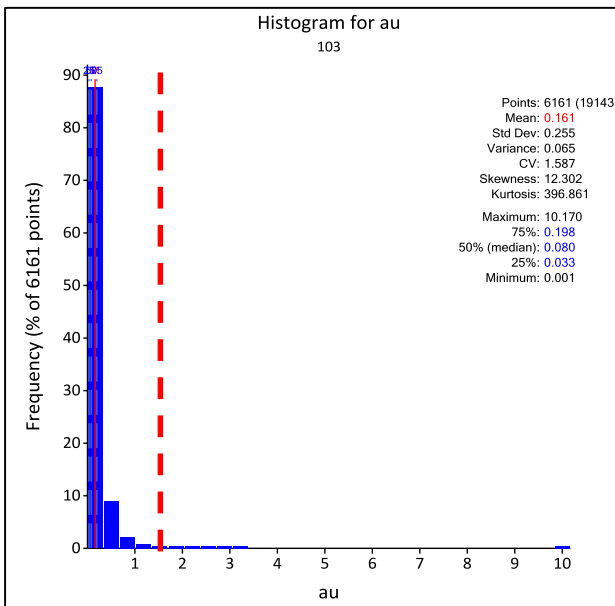
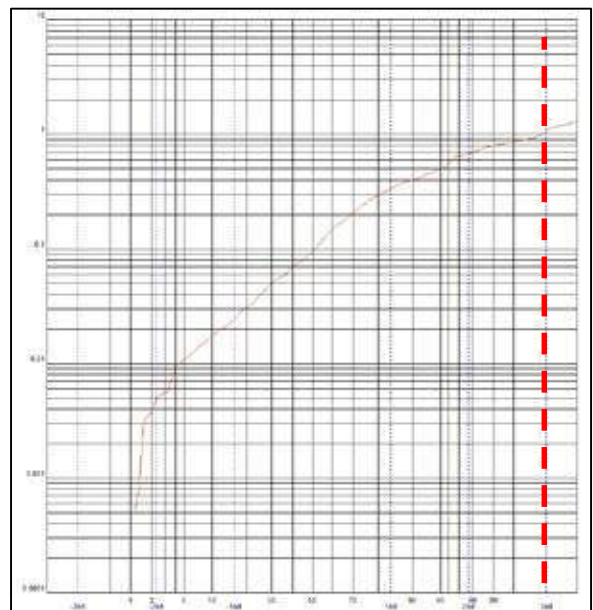
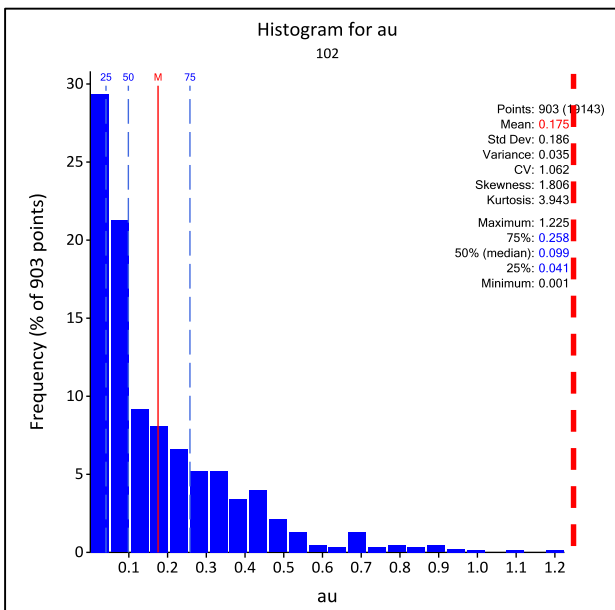
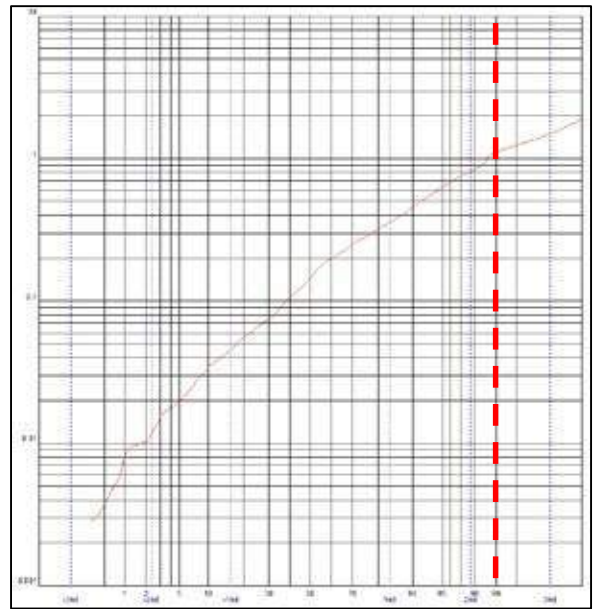
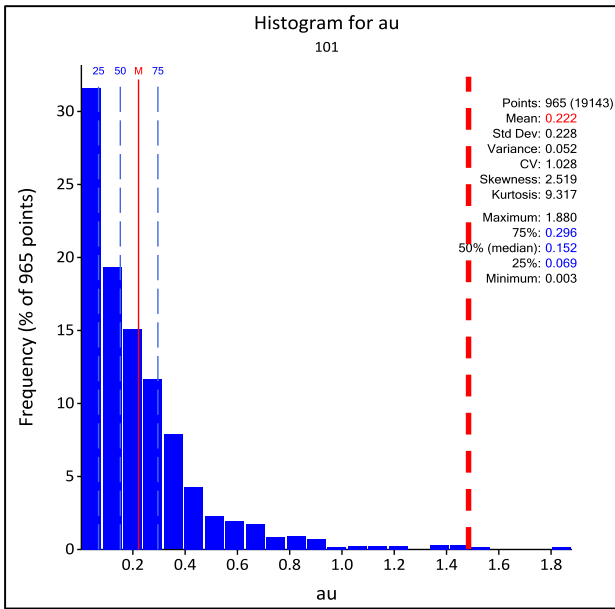
**Table 14-10 High Grade Cuts Applied to Domains (S %)**

<b>Lode</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
Samples	25	24	66	122	155	80	173	87	149	56	59
Minimum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum	0.23	0.46	1.53	3.82	1.19	0.15	0.26	0.42	0.16	0.17	0.41
Mean	0.04	0.03	0.09	0.09	0.03	0.02	0.02	0.02	0.02	0.02	0.07
Coeff Var	1.52	3.36	2.79	3.89	3.62	1.66	2.02	2.40	1.54	1.81	1.41
<b>Top Cut</b>	-	<b>0.1</b>	<b>0.8</b>	<b>1</b>	<b>0.4</b>	-	-	<b>0.1</b>	-	-	-
Number Cut	-	1	1	1	1	-	-	1	-	-	-
Cut Mean	0.04	0.01	0.08	0.07	0.02	0.02	0.02	0.02	0.02	0.02	0.07
Cut CV	1.52	1.57	2.46	2.18	2.30	1.66	2.02	1.03	1.54	1.81	1.41
<b>Lode</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>
Samples	29	194	131	15	66	30	4	90	30	8	4
Minimum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum	0.46	0.34	1.31	0.14	0.61	0.66	0.37	0.52	0.64	0.02	0.04
Mean	0.05	0.03	0.03	0.03	0.05	0.08	0.12	0.04	0.11	0.01	0.02
Coeff Var	2.42	1.89	3.71	1.13	2.19	1.63	1.44	2.23	1.50	0.64	0.95
<b>Top Cut</b>	<b>0.3</b>	-	<b>0.5</b>	-	<b>0.3</b>	-	-	<b>0.3</b>	-	-	-
Number Cut	2	-	1	-	3	-	-	4	-	-	-
Cut Mean	0.04	0.03	0.03	0.03	0.04	0.08	0.12	0.04	0.11	0.01	0.02
Cut CV	2.21	1.89	2.33	1.13	1.65	1.63	1.44	2.04	1.50	0.64	0.95
<b>Lode</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>
Samples	2	3	17	13	8	12	4	1	4	35	41
Minimum	0.07	0.04	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01
Maximum	0.15	0.15	1.57	0.43	0.01	0.04	0.03	0.02	0.10	0.38	0.54
Mean	0.11	0.10	0.24	0.11	0.01	0.02	0.02	0.02	0.04	0.10	0.07
Coeff Var	0.51	0.56	1.95	1.34	0.00	0.68	0.82	0.00	0.96	0.92	1.28
<b>Top Cut</b>	-	-	-	-	-	-	-	-	-	-	-
Number Cut	-	-	-	-	-	-	-	-	-	-	-
Cut Mean	0.11	0.10	0.24	0.11	0.01	0.02	0.02	0.02	0.04	0.10	0.07
Cut CV	0.51	0.56	1.95	1.34	0.00	0.68	0.82	0.00	0.96	0.92	1.28
<b>Lode</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>
Samples	4	13	4	13	4	2	9	23	9	1	1
Minimum	0.03	0.01	0.01	0.01	0.01	0.05	0.01	0.01	0.01	0.27	0.05
Maximum	0.09	0.22	0.21	0.25	0.05	0.14	0.02	0.05	0.02	0.27	0.05
Mean	0.07	0.05	0.06	0.09	0.03	0.10	0.01	0.01	0.01	0.27	0.05
Coeff Var	0.40	1.47	1.82	0.83	0.95	0.67	0.65	1.21	0.68	0.00	0.00
<b>Top Cut</b>	-	-	-	-	-	-	-	-	-	-	-
Number Cut	-	-	-	-	-	-	-	-	-	-	-
Cut Mean	0.07	0.05	0.06	0.09	0.03	0.10	0.01	0.01	0.01	0.27	0.05
Cut CV	0.40	1.47	1.82	0.83	0.95	0.67	0.65	1.21	0.68	0.00	0.00
<b>Lode</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>
Samples	3	2	3	10	35	7	5	5	17	10	2
Minimum	0.05	0.01	0.01	0.01	0.01	0.16	0.03	0.01	0.01	0.01	0.01

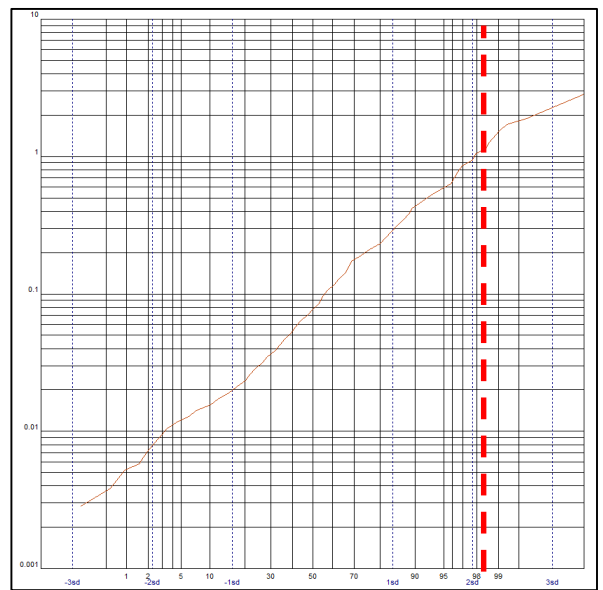
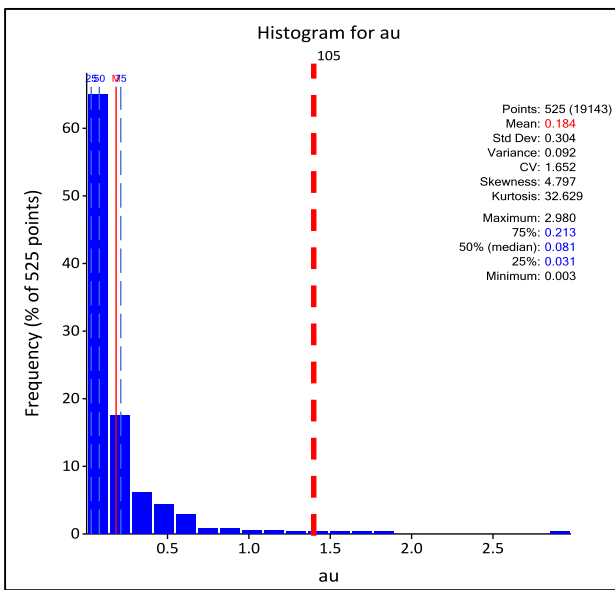
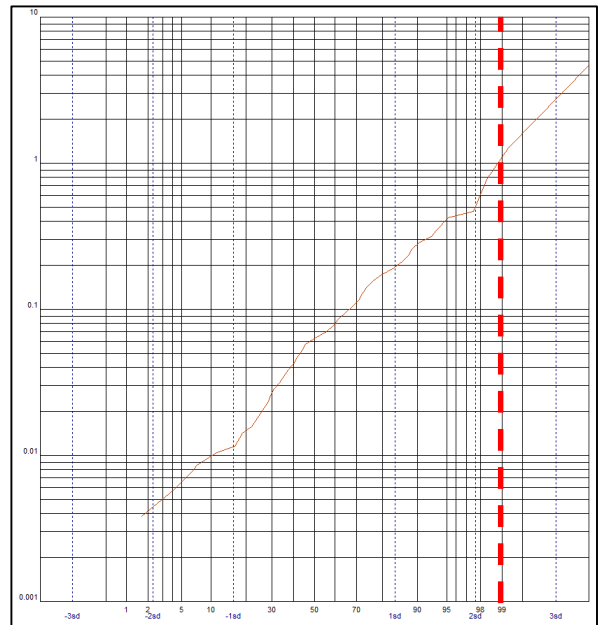
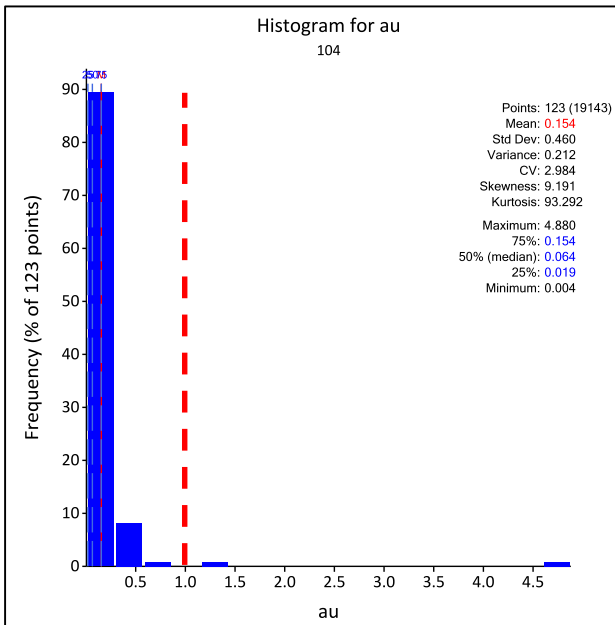
Maximum	0.13	0.01	0.01	0.02	0.58	0.46	0.21	0.08	0.08	0.09	0.01
Mean	0.08	0.01	0.01	0.01	0.18	0.32	0.09	0.04	0.02	0.06	0.01
Coeff Var	0.50	0.00	0.00	0.69	0.87	0.35	0.76	0.78	1.04	0.46	0.47
<b>Top Cut</b>	-	-	-	-	-	-	-	-	-	-	-
Number Cut	-	-	-	-	-	-	-	-	-	-	-
Cut Mean	0.08	0.01	0.01	0.01	0.18	0.32	0.09	0.04	0.02	0.06	0.01
Cut CV	0.50	0.00	0.00	0.69	0.87	0.35	0.76	0.78	1.04	0.46	0.47
<b>Lode</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>	<b>66</b>
Samples	13	2	25	6	6	8	1	2	8	3	59
Minimum	0.01	0.30	0.01	0.01	0.01	0.03	0.07	0.01	0.03	0.01	0.01
Maximum	0.02	0.33	0.17	0.01	0.14	0.36	0.07	0.02	0.28	0.16	0.12
Mean	0.01	0.32	0.03	0.01	0.06	0.14	0.07	0.01	0.09	0.06	0.01
Coeff Var	0.63	0.07	1.16	0.00	1.02	0.97	0.00	0.85	0.90	1.58	1.50
<b>Top Cut</b>	-	-	-	-	-	-	-	-	-	-	-
Number Cut	-	-	-	-	-	-	-	-	-	-	-
Cut Mean	0.01	0.32	0.03	0.01	0.06	0.14	0.07	0.01	0.09	0.06	0.01
Cut CV	0.63	0.07	1.16	0.00	1.02	0.97	0.00	0.85	0.90	1.58	1.50
<b>Lode</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>	<b>71</b>	<b>101</b>	<b>102</b>	<b>103</b>	<b>104</b>	<b>105</b>	<b>201</b>
Samples	2	6	2	3	3	965	903	6161	123	525	1280
Minimum	0.01	0.01	0.05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Maximum	0.01	0.01	0.09	0.01	0.01	1.39	1.62	3.59	0.86	1.42	1.64
Mean	0.01	0.01	0.07	0.01	0.01	0.11	0.08	0.20	0.05	0.09	0.09
Coeff Var	0.00	0.00	0.40	0.00	0.00	1.75	2.18	1.79	2.76	1.66	1.62
<b>Top Cut</b>	-	-	-	-	-	-	<b>1</b>	-	<b>0.6</b>	-	-
Number Cut	-	-	-	-	-	-	5	-	4	-	-
Cut Mean	0.01	0.01	0.07	0.01	0.01	0.11	0.08	0.20	0.05	0.09	0.09
Cut CV	0.00	0.00	0.40	0.00	0.00	1.75	2.05	1.79	2.51	1.66	1.62
<b>Lode</b>	<b>202</b>	<b>203</b>									
Samples	3166	3952									
Minimum	0.01	0.01									
Maximum	2.19	2.44									
Mean	0.04	0.09									
Coeff Var	2.48	2.58									
<b>Top Cut</b>	<b>1</b>	-									
Number Cut	2	-									
Cut Mean	0.04	0.09									
Cut CV	2.34	2.58									



<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING HISTOGRAM AND LOG PROBABILITY PLOT FOR MEDIUM GRADE DOMAINS - Au	
FIGURE No. 14-25	PROJECT No. ADV-MN-00156	Date October 2018	







<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING HISTOGRAM AND LOG PROBABILITY PLOT FOR LOW GRADE DOMAINS (OBJECT 104 AND 105) - Au	
FIGURE No. <b>14-27</b>	PROJECT No. <b>ADV-MN-00156</b>	Date <b>October 2018</b>	

14.5 Geospatial Analysis

14.5.1 Variography

Mineralization continuity was examined via variography. Variography examines the spatial relationship between composites and seeks to identify the directions of mineralization continuity and to quantify the ranges of grade continuity. Variography was also used to determine the random variability or ‘nugget effect’ of the deposit. The results provide the basis for determining appropriate kriging parameters for resource estimation.

RPM has interpreted experimental variograms of Au and S for High (Object7), Medium (Object202) and Low (Object103) grade domains while experimental variograms for Fe were interpreted for Low grade domain (Object103). All variography was completed using Supervisor software.

The one meter composite sample data was transformed into a normal distribution using a normal scores transformation to help identify the main directions of mineralization continuity from the skewed original data. The experimental variograms are normalised against the sample variance so that the sill value is one and the structures are viewed as ratios or proportions of the sill.

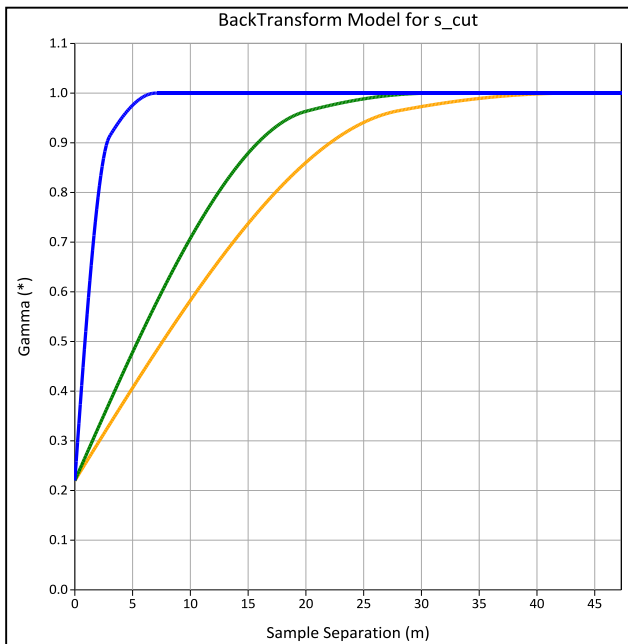
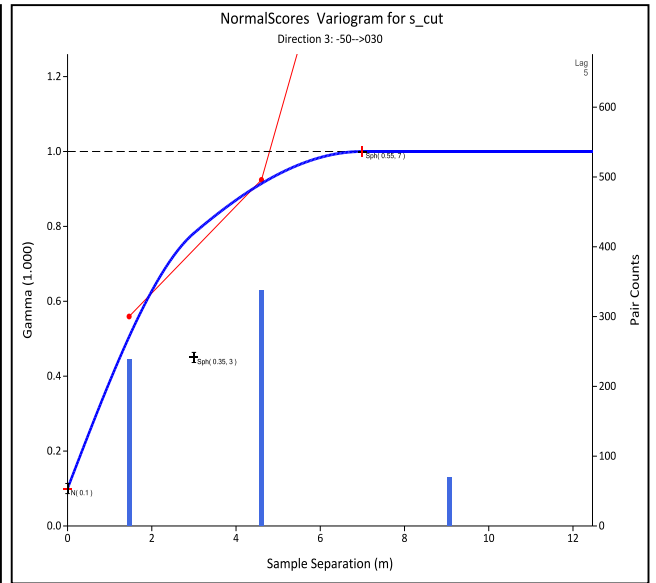
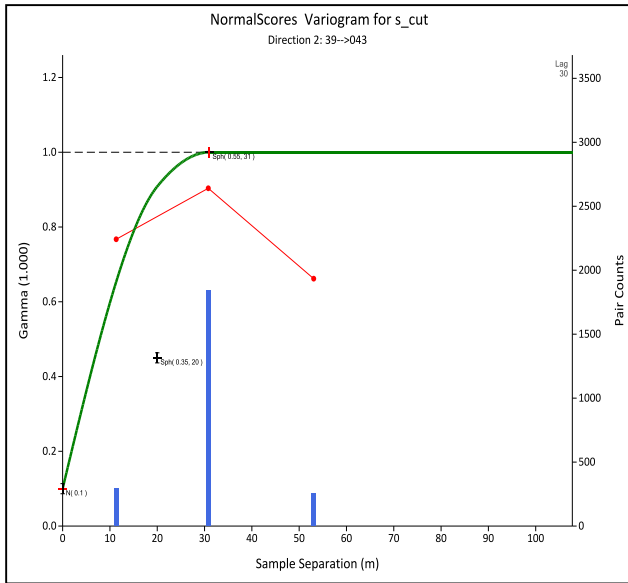
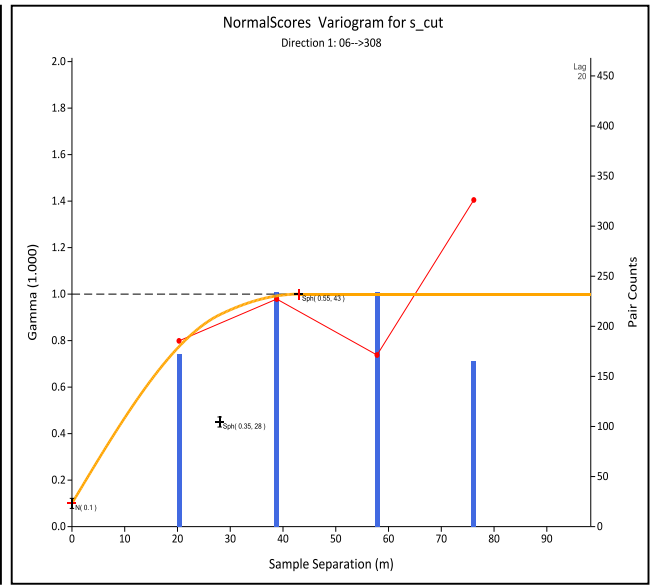
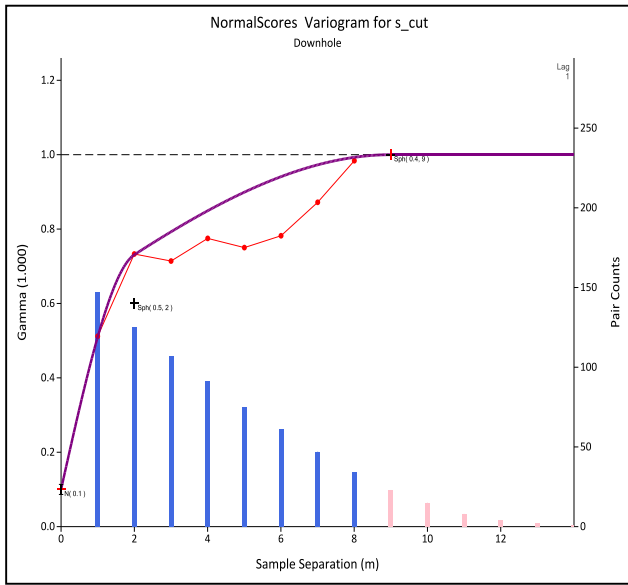
A two structured nested spherical model was found to model the experimental variogram reasonably well. The down-hole variogram provides the best estimate of the true nugget values which were 0.25 (Au), 0.22 (S) for the High-Grade domain (object 7), 0.12 (Au), 0.11 (S) for Medium-Grade domain (Object 202) while nugget values for Low-Grade Domain (Object103) were 0.16 (Au), 0.06 (S) and 0.06 (S) 0.26 (Fe). While the mineralisation is considered highly variable, the suitability of using three domains within the interpretation is clearly evident with the relatively low nugget observed within each domain.


The orientation of the plane of mineralization was aligned with the interpreted wireframe for the main objects. The experimental variograms were calculated with the first direction aligned along the main mineralization continuity while the second direction was aligned in the plane of mineralization at 90° to the first orientation. The third direction was orientated perpendicular to the mineralization plane, across the width of the mineralization.

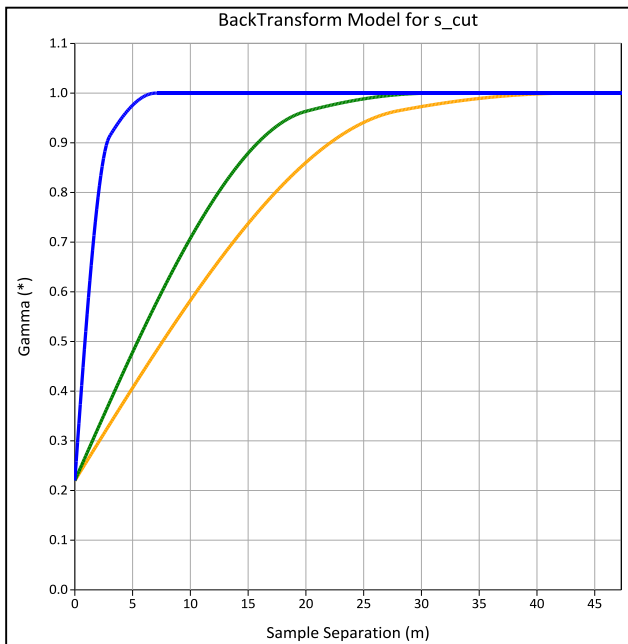
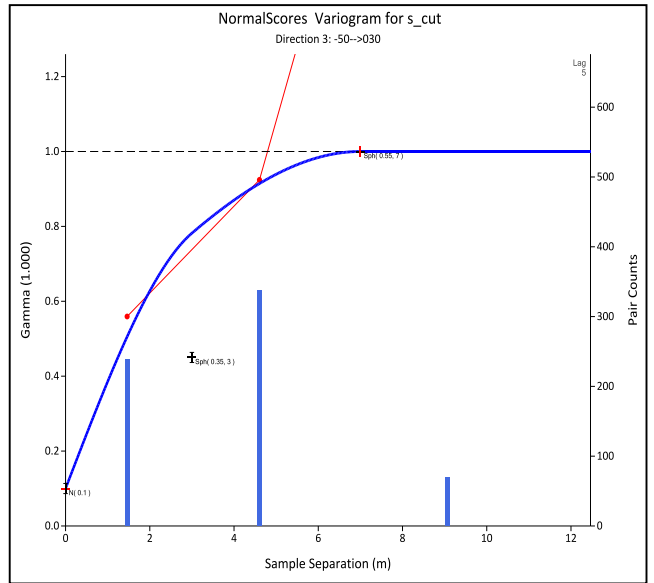
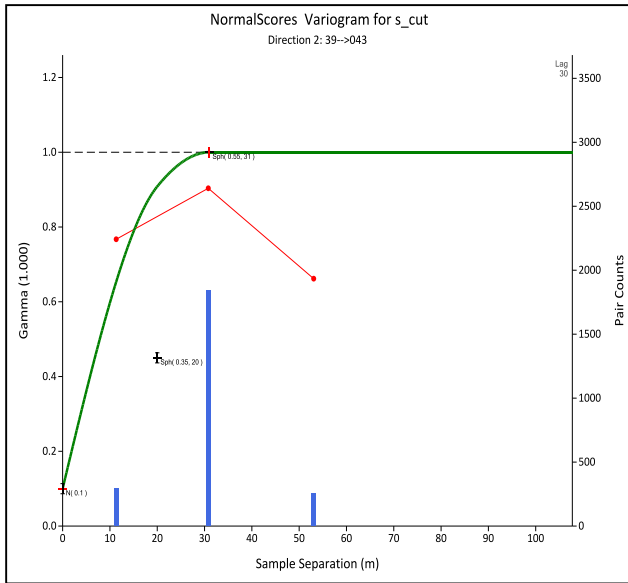
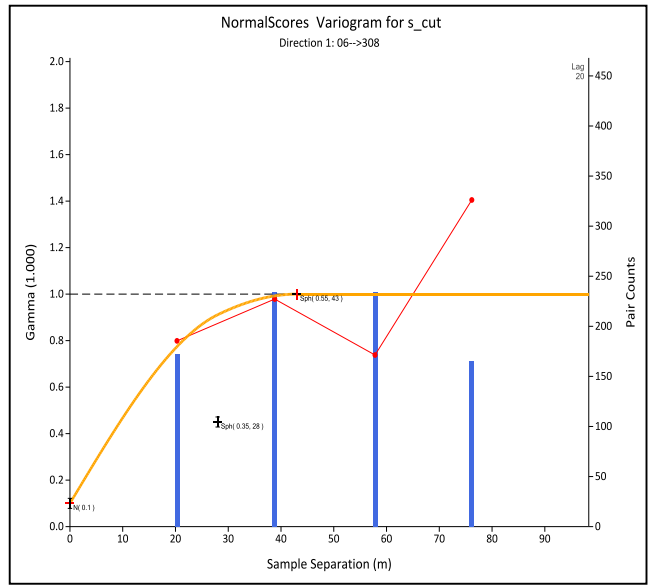
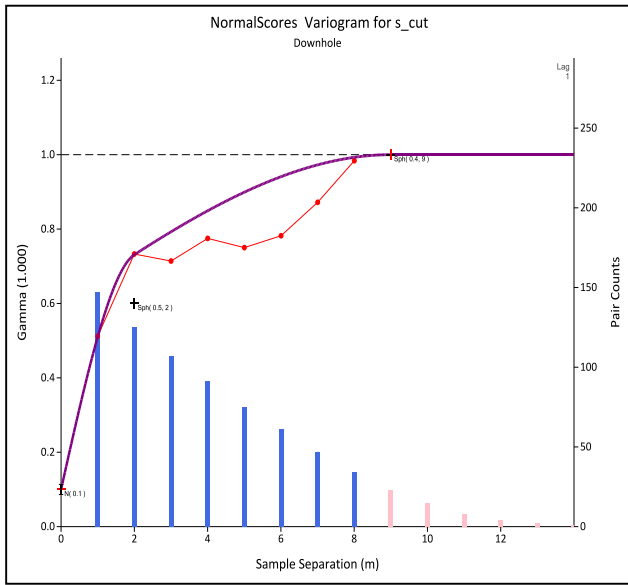
RPM modelled the down-hole and three orthogonal variograms of Au, Fe and S for the HG, MG and LG domains. Interpreted variogram parameters are shown in **Table 14-11**. Full details of the directional continuity analysis can be found in **Figure 14-28** to **Figure 14-34**.


**Table 14-11 Bayan Khundii Project – Interpreted Variogram Analysis**

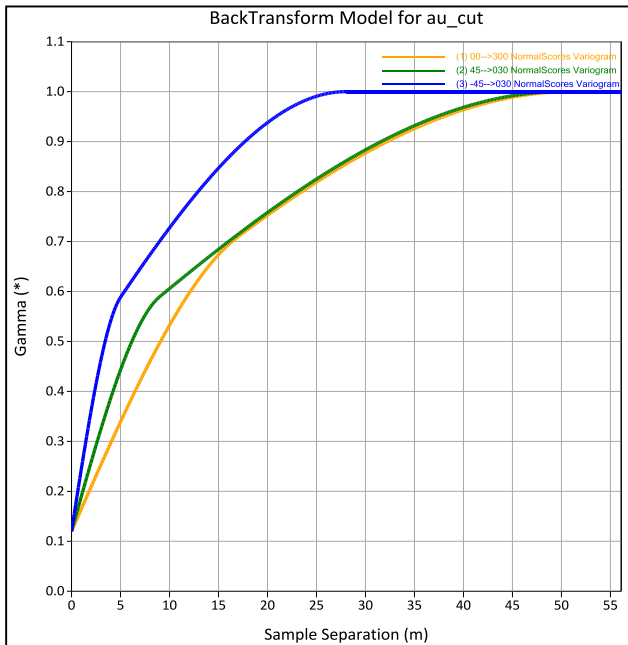
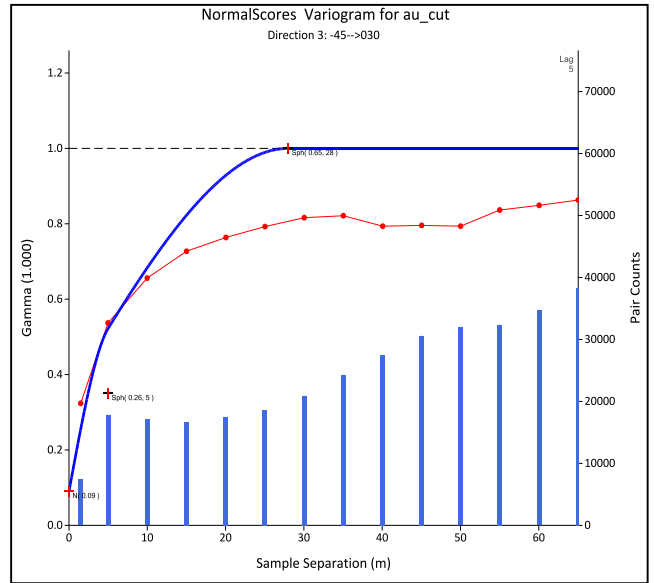
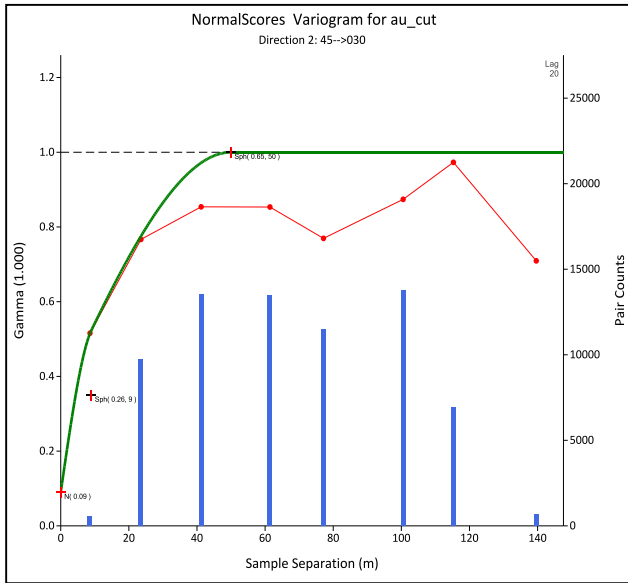
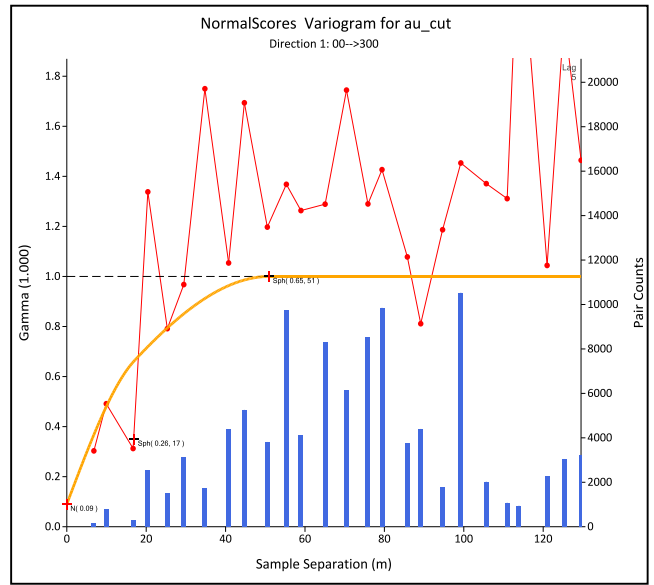
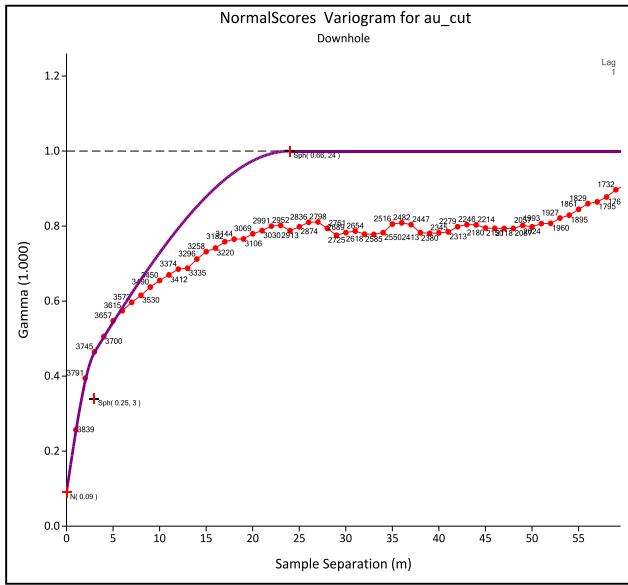
Domain	Object	Element	Major Direction	Co	Structure 1				Structure 2			
					C1	A1	Maj/semi	Maj/Minor	C1	A1	Maj/semi	Maj/Minor
HG	7	Au	6-->308	0.25	0.53	31	2.58	15.5	0.22	35	1.06	7.00
MG	202		0-->300	0.12	0.32	17	1.89	3.40	0.56	51	1.02	1.82
LG	103		0-->290	0.16	0.46	32	1.88	4.57	0.38	66	2.13	2.64
LG	103	Fe	0-->290	0.26	0.41	55	2.04	6.11	0.33	207	2.69	3.04
HG	7	S	6-->308	0.22	0.56	28	1.40	9.33	0.22	43	1.39	6.14
MG	202		0-->300	0.11	0.64	29	1.07	2.42	0.25	112	1.06	1.87
LG	103		0-->290	0.06	0.35	35	1.00	3.89	0.59	146	1.24	5.21



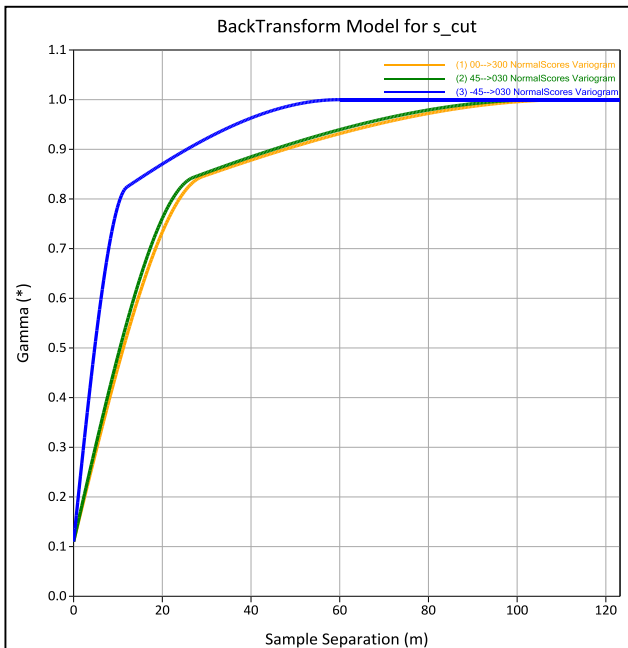
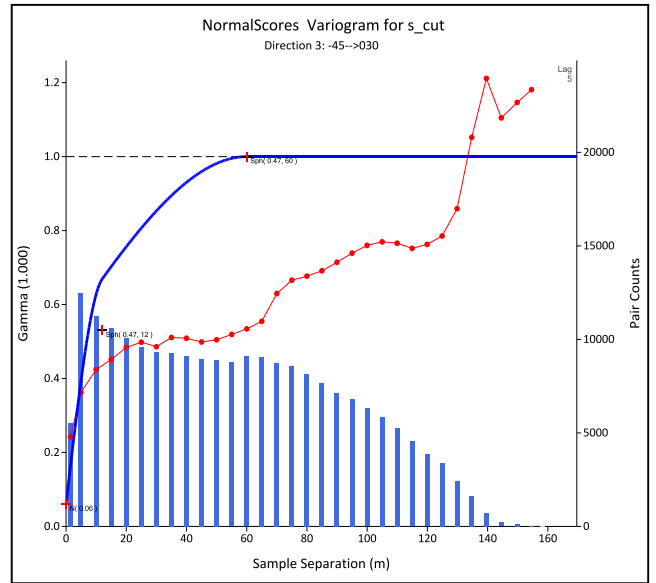
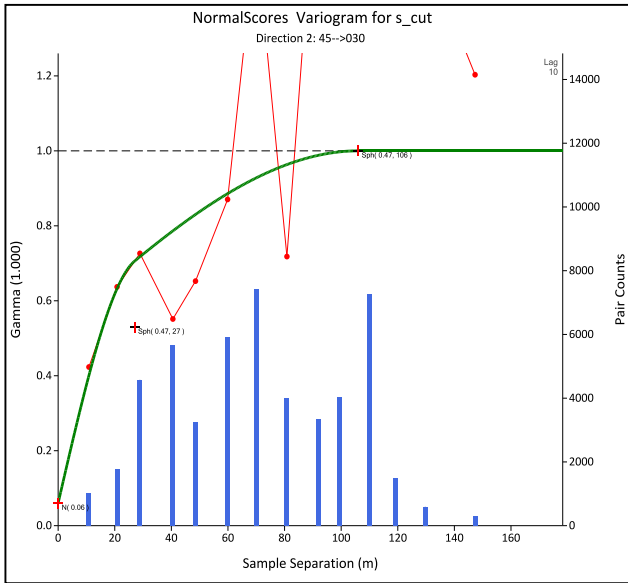
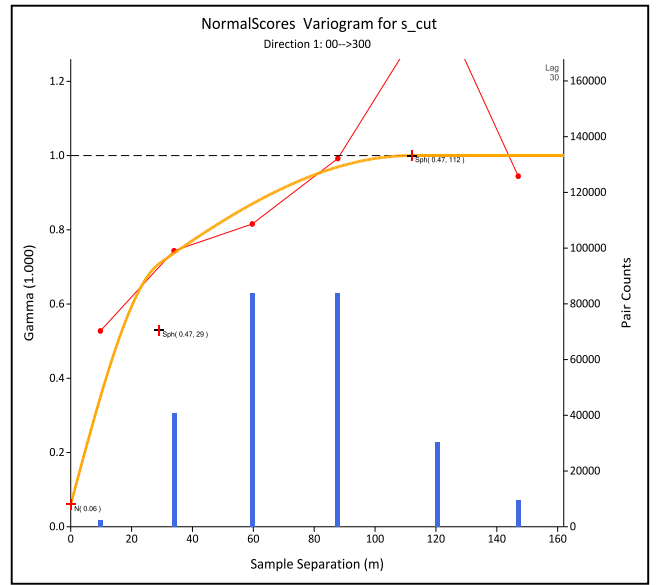
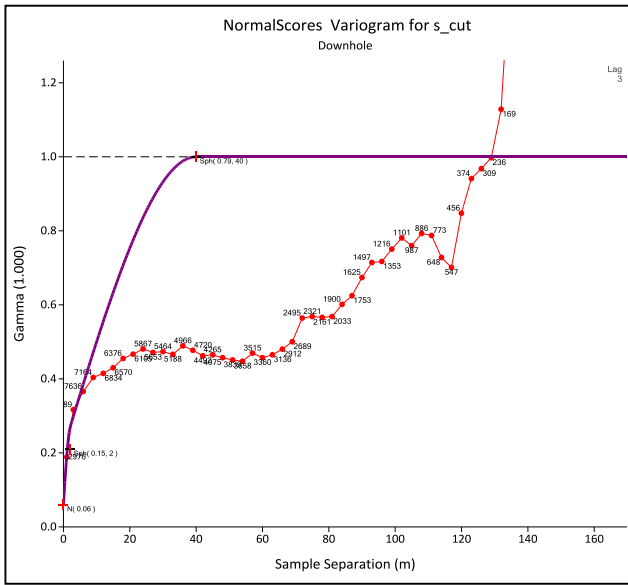
CLIENT		PROJECT	
		NAME <b>BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING VARIOGRAMS - HIGH GRADE DOMAIN, OBJECT 7 (Au)	
FIGURE No. 14-28	PROJECT No. ADV-MN-00156	Date October 2018	



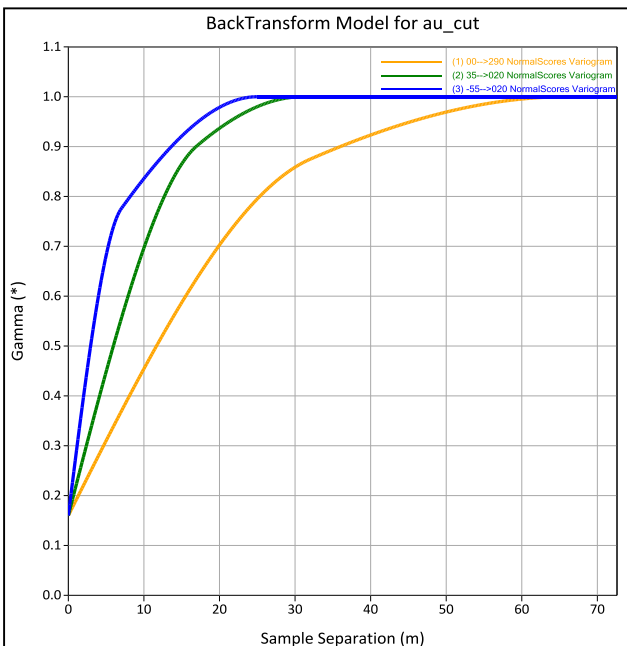
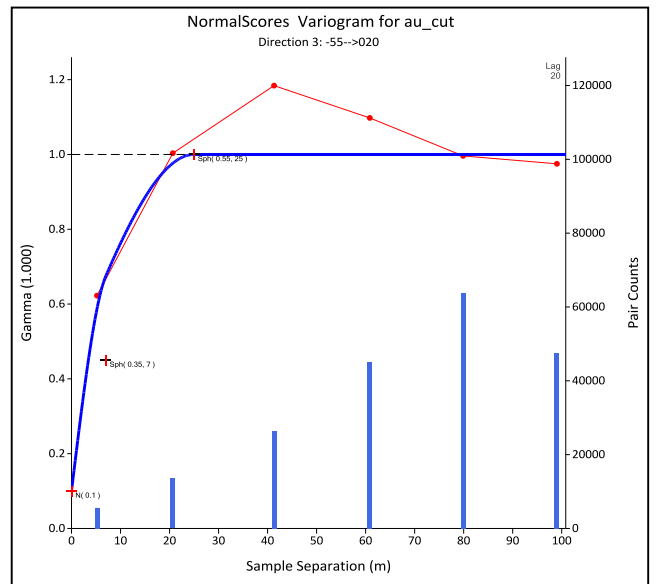
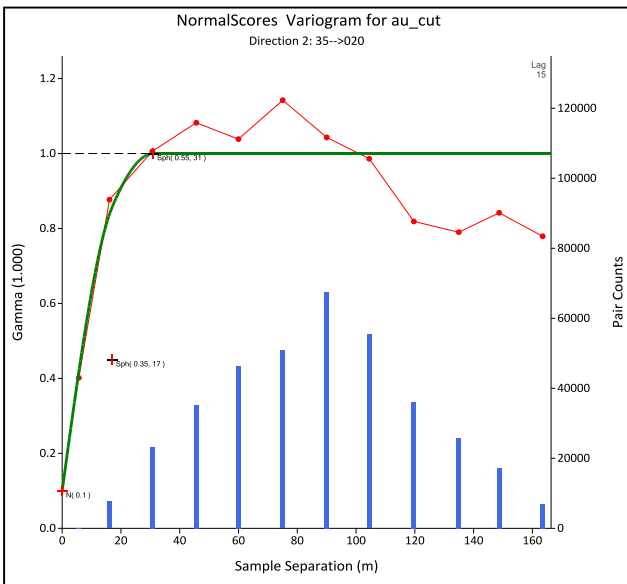
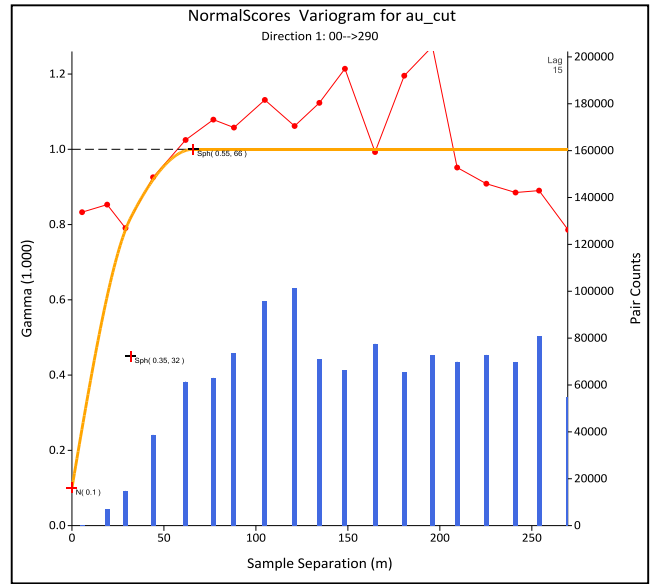
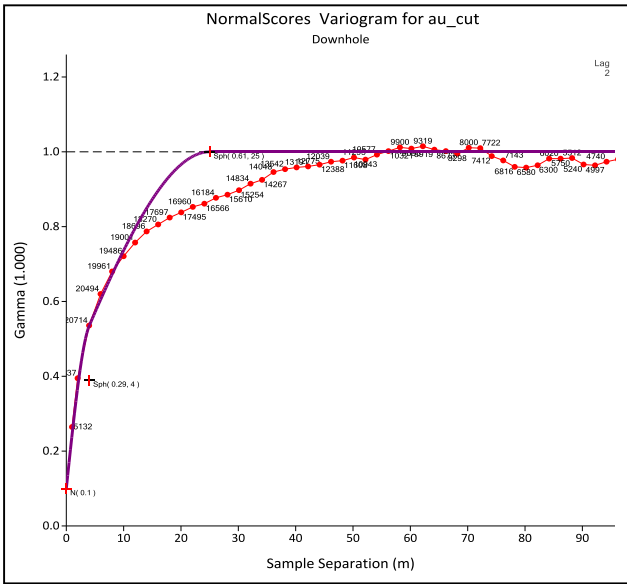
CLIENT		PROJECT	
		NAME <b>BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING VARIOGRAMS - HIGH GRADE DOMAIN, OBJECT 7 (S)	
FIGURE No. 14-29	PROJECT No. ADV-MN-00156	Date October 2018	



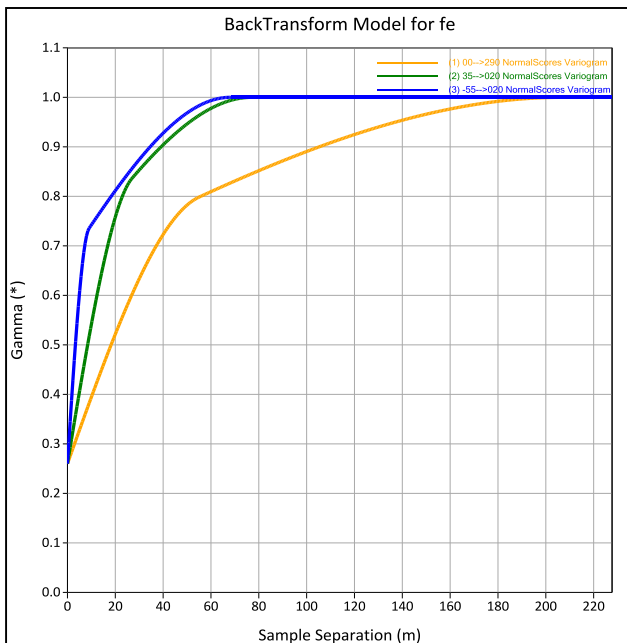
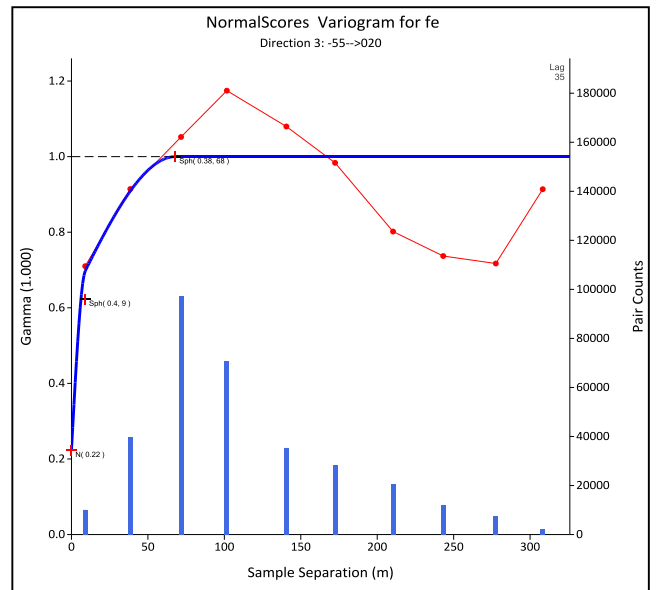
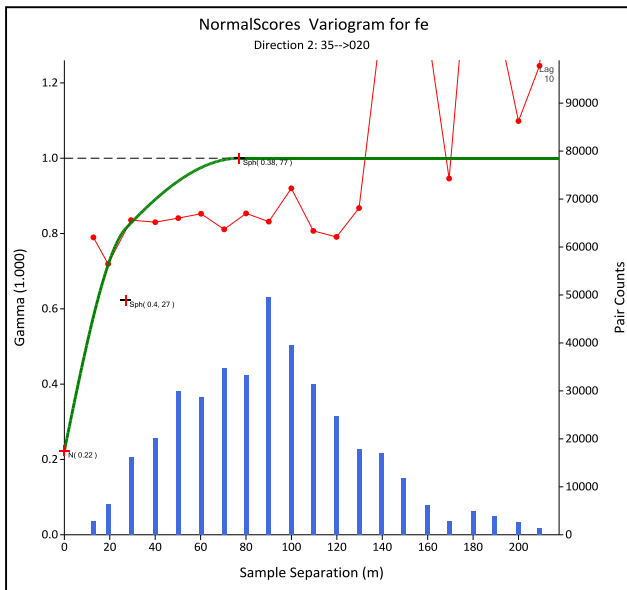
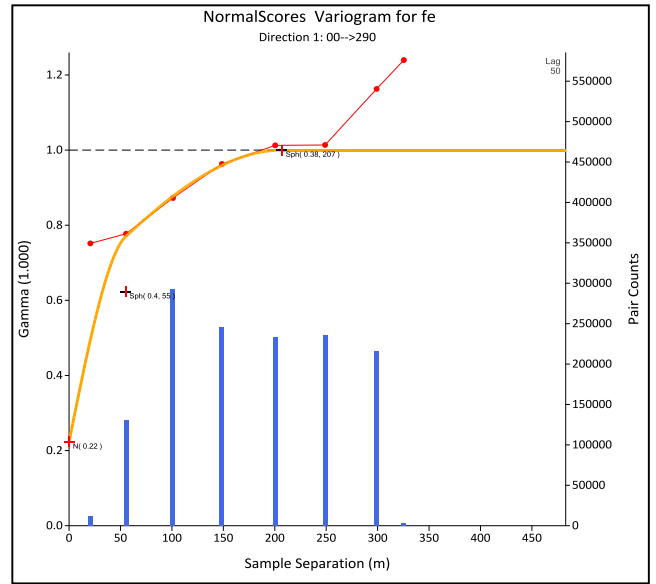
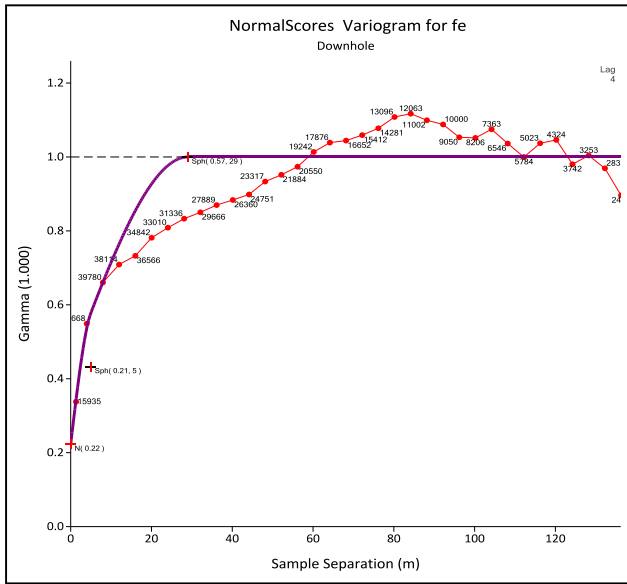
<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING VARIOGRAMS - MEDIUM GRADE DOMAIN, OBJECT 202 (Au)	
FIGURE No. 14-30	PROJECT No. ADV-MN-00156	Date October 2018	




CLIENT		PROJECT	
		NAME BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT	
		DRAWING VARIOGRAMS - MEDIUM GRADE DOMAIN, OBJECT 202 (S)	
FIGURE No. 14-31	PROJECT No. ADV-MN-00156	Date October 2018	

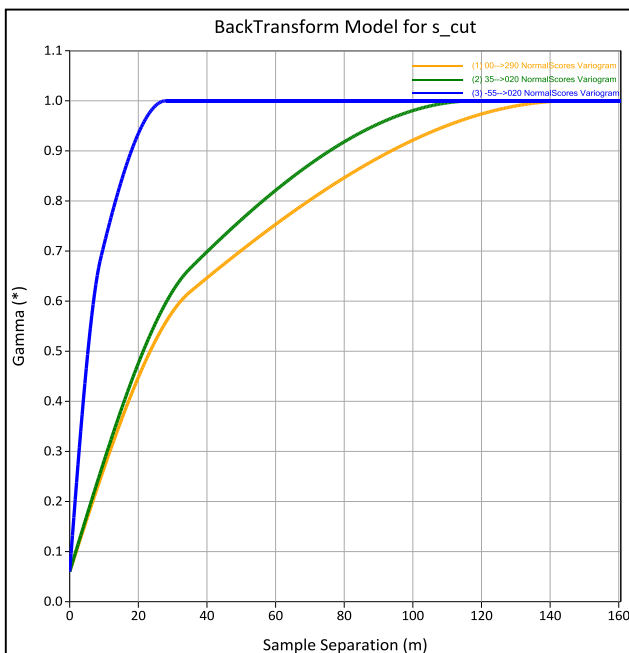
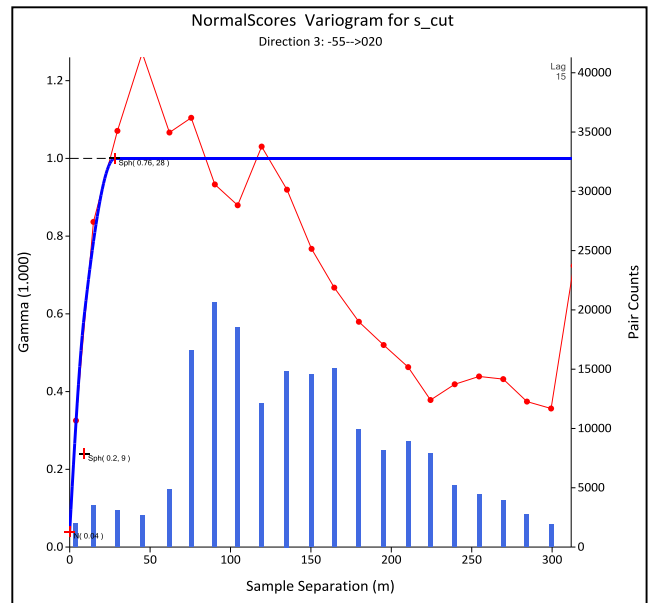
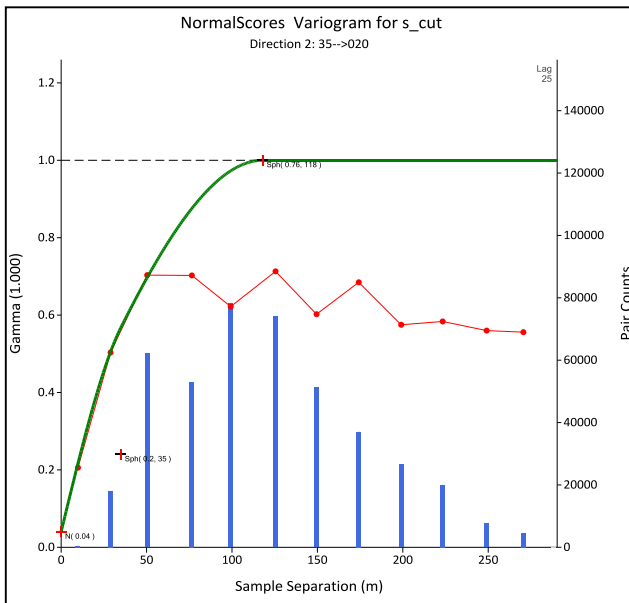
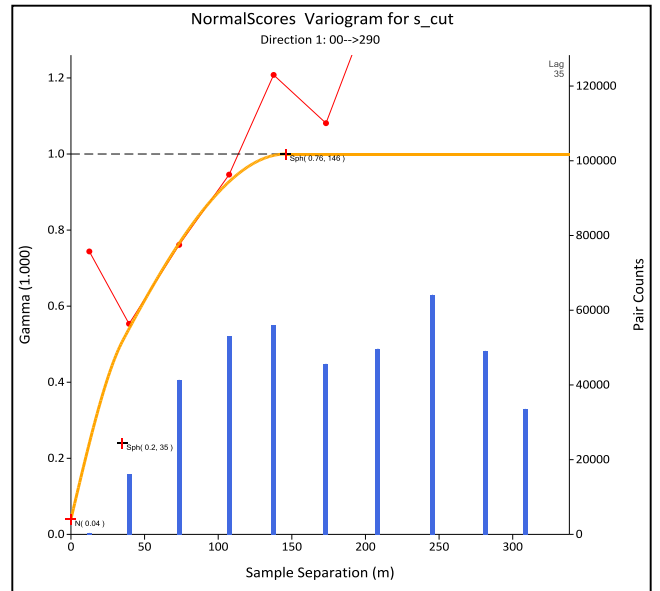
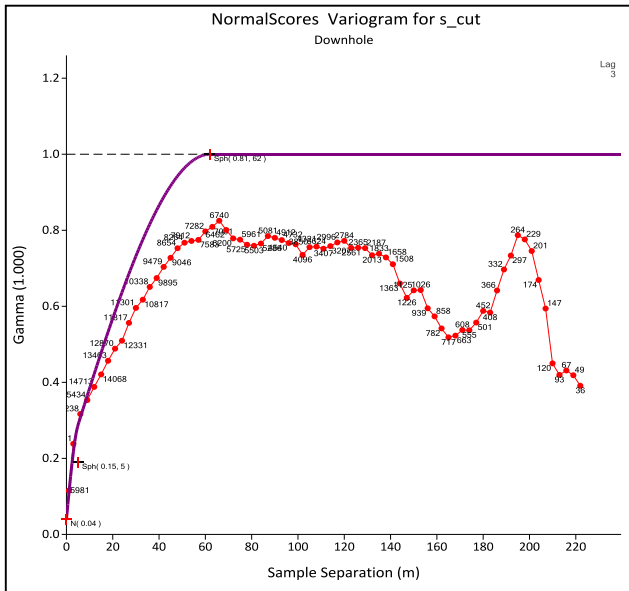


<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING VARIOGRAMS - LOW GRADE DOMAIN, OBJECT 103 (Au)	
FIGURE No. 14-32	PROJECT No. ADV-MN-00156	Date October 2018	



<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING VARIOGRAMS - LOW GRADE DOMAIN, OBJECT 103 (FE)	
FIGURE No. 14-33	PROJECT No. ADV-MN-00156	Date October 2018	





<b>CLIENT</b>		<b>PROJECT</b>	
		NAME <b>BAYAN KHANDI RESOURCE ESTIMATE TECHNICAL REPORT</b>	
		DRAWING VARIOGRAMS - LOW GRADE DOMAIN, OBJECT 103 (S)	
FIGURE No. <b>14-34</b>	PROJECT No. <b>ADV-MN-00156</b>	Date <b>October 2018</b>	

14.6 Mineral Resource estimation

14.6.1 Block Model

A Surpac block model was created to encompass the full extent of the mineralisation known to date. Block model parameters are listed in **Table 14-12**. The block dimensions used the model were 10 m NS by 10 m EW by 5 m vertical with sub-cells of 1.25 m by 1.25 m by 0.625 m.

The parent block size was selected on the basis of kriging neighbourhood analysis (**Section 14.6.3**), while sub-cells were selected to provide sufficient resolution to the block model in the across-strike and down-dip directions. The block model is rotated 300° NW to match modelled strike mineralization at Bayan Khundii.

Table 14-12 Block Model Parameters

Model Name	Bayankhundii_ok_20180910		
	Y	X	Z
Block Model Origin	4,860,300	483,500	800
Block Extents	4,861,600	485,200	1,400
Block Size (sub-blocks)	10 (1.25)	10 (1.25)	5 (0.625)
Rotation	Bearing 300 (Rotation around Z)		
Attributes			
au_cut_idw	Block Au grade with high grade cut using IDW		
au_cut_ok	Block Au grade with high grade cut using OK		
au_uncut_idw	Block Au grade without high grade cut using IDW		
au_uncut_ok	Block Au grade without high grade cut using OK		
fe_idw	Block fe grade without high grade cut using IDW		
fe_ok	Block fe grade without high grade cut using OK		
s_cut_idw	Block S grade with high grade cut using IDW		
s_cut_ok	Block S grade with high grade cut using OK		
s_uncut_idw	Block S grade without high grade cut using IDW		
s_uncut_ok	Block S grade without high grade cut using OK		
bd	bulk density		
class	resource classification		
est_zone_fe	resource zone for estimating fe		
license	License in or out		
mined	y or no		
pass_elements	Estimation pass number per elements		
pod	object number HG (1 to 71), MG (201 to 203) and LG (101 to 105)		
rock	rock types: 3=syenite, 2=Volcanic sequence, 1=Jurassic overburden,		
type	above topo, oxide, fresh, Jurassic		

14.6.2 Block Model Coding

The block model was coded with weathering type in the “type” attribute and domain codes in the “pod” attribute. **Table 14-13** below shows block model coding for the weathering type in the order they were coded, and **Table 14-14** shows block model coding for the mineralization domains.

**Table 14-13 Block Model Coding - Type**

Type	Order	Assignment Methodology
fr_was	1	Fresh waste ("fr_was") - blocks below overburden (jurassic_20180726.dtm) and base of oxidation surface (weathering_20180726.dtm) and outside the mineralization (pod=0)
ox_was	2	Oxide waste (ox_was) – block below overburden (jurassic_20180726.dtm) and topography (topo_bk2017.dtm) and above base of oxidation surface (weathering_20180726.dtm) and outside the mineralization (pod=0)
fr_min	3	Fresh mineralization - blocks below overburden (jurassic_20180726.dtm) and base of oxidation surface (weathering_20180726.dtm) and inside mineralization (pod>0)
ox_min	4	Oxide mineralization– block below overburden (jurassic_20180726.dtm) and topography (topo_bk2017.dtm) and above base of oxidation surface (weathering_20180726.dtm) and inside mineralization (pod>0)
air	5	Air ("air") - blocks above the topography surface (topo_bk2017.dtm)

**Table 14-14 Block Model Coding - Domain**

Domain	Pod	Assignment Methodology
LG	101 to 105	Low grade object– blocks within mineralized wireframe (wf_bk_au_lg_20180907_02_shell.dtm) object number (101 to 105)
MG	201 to 203	Medium grade object– blocks within mineralized wireframe (wf_bk_au_lg_20180906_05_shell.dtm) object number (201 to 203)
HG	1-71	High grade objects – blocks within mineralized wireframe (wf_bk_au_hg_20180901_15.dtm) object number (1 to 71)

### 14.6.3 Kriging Neighbourhood Analysis

Kriging neighbourhood analysis (KNA) is conducted to minimise the conditional bias that occurs during grade estimation as a function of estimating block grades from point data. Conditional bias typically presents as overestimation of low-grade blocks and underestimation of high-grade blocks due to use of non-optimal estimation parameters and can be minimised by optimising parameters such as:

- block size
- size of sample search neighbourhood
- number of informing samples

The degree of conditional bias present in a model can be quantified by computing the theoretical regression slope and kriging efficiency of estimation at multiple test locations within the region of estimation. These locations are selected to represent portions of the deposit with excellent, moderate and poor drill (sample) coverage.

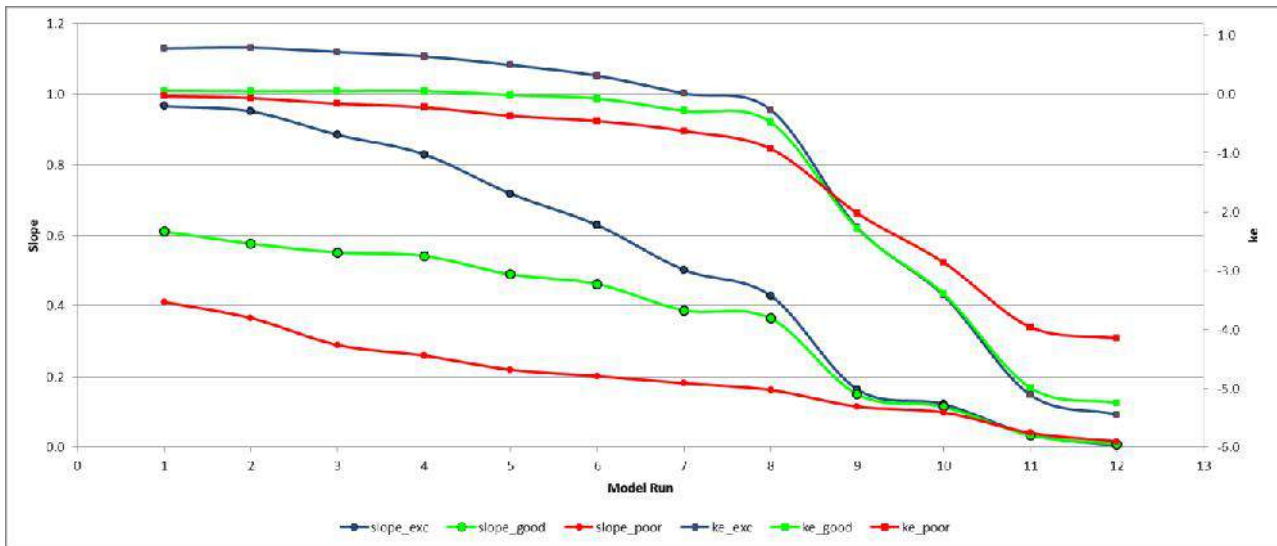
#### 14.6.3.1 Block Size

To test the optimal block size for existing drilling at Bayan Khundii, single blocks within the major High-grade lode were assessed at excellent, good and poor sample coverage locations. A range of block sizes were assessed for regression slope and kriging efficiency and summarised in **Table 14-15** and **Figure 14-35** below.

**Table 14-15 Block Sizes Assessment**

Iteration	1	2	3	4	5	6	7	8	9	10	11	12
y	5	5	10	12.5	12.5	20	25	25	50	50	100	200
x	5	5	10	12.5	12.5	20	25	25	50	50	100	200
z	2	5	5	5	10	5	5	10	10	20	20	20

**Figure 14-35 Block Size Analysis Chart**



Results from the chart above indicate that slope of regression and kriging efficiency 'sill' out around model runs two and four. These iterations represent block sizes of 10 m by 10 m in the Y and X planes and are deemed appropriate for the Bayan Khundii drill spacing of approximately 10-20 m by 10-20 m. RPM chose iteration three as the optimal block size for the Bayan Khundii block model as there is a higher likelihood of using a 5 m bench height in the case of any future open pit mining occurring at the Project.

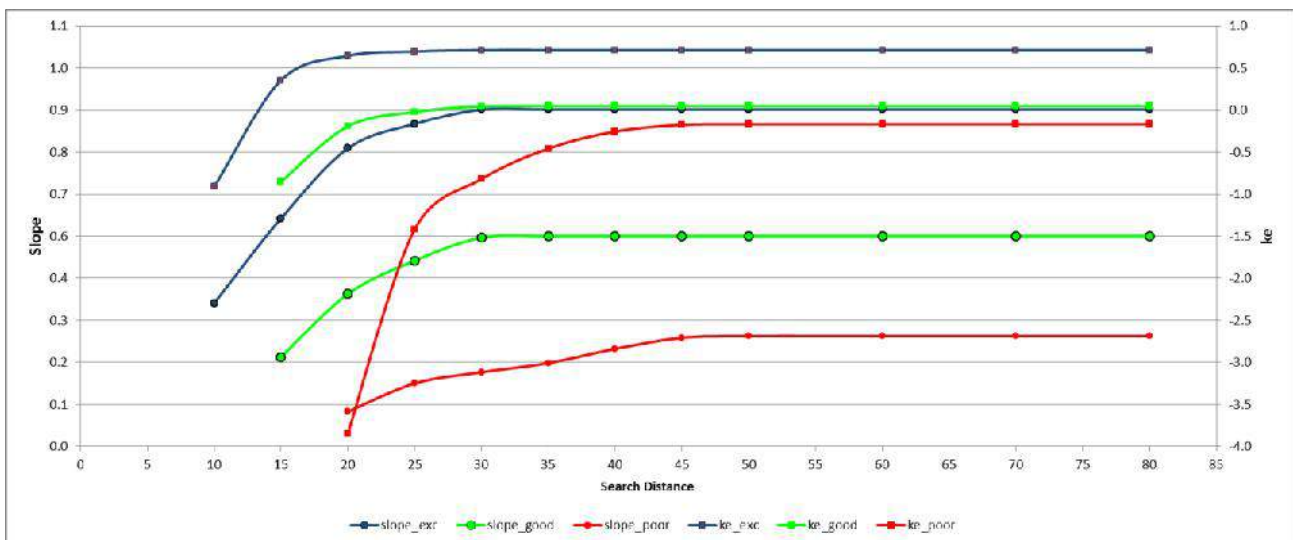
### 14.6.3.2 Search Distance

To test the optimal search distance, single blocks within the High-grade lode (Object 7) were assessed at excellent, good and poor sample coverage locations. A range of search radii were assessed for regression slope and kriging efficiency and summarised in **Table 14-16** and **Figure 14-36** below.

**Table 14-16 Search Radii Assessed**

Iteration	1	2	3	4	5	6	7	8	9	10	11	12
Search Distance	10	15	20	25	30	35	40	45	50	60	70	80

**Figure 14-36 Search Radii Analysis Chart**



The results above were used as a guide in determining optimal search distance radii for each interpolation pass. The first interpolation pass adopted a search radius of 30 m. Further details are discussed in **Section 14**.

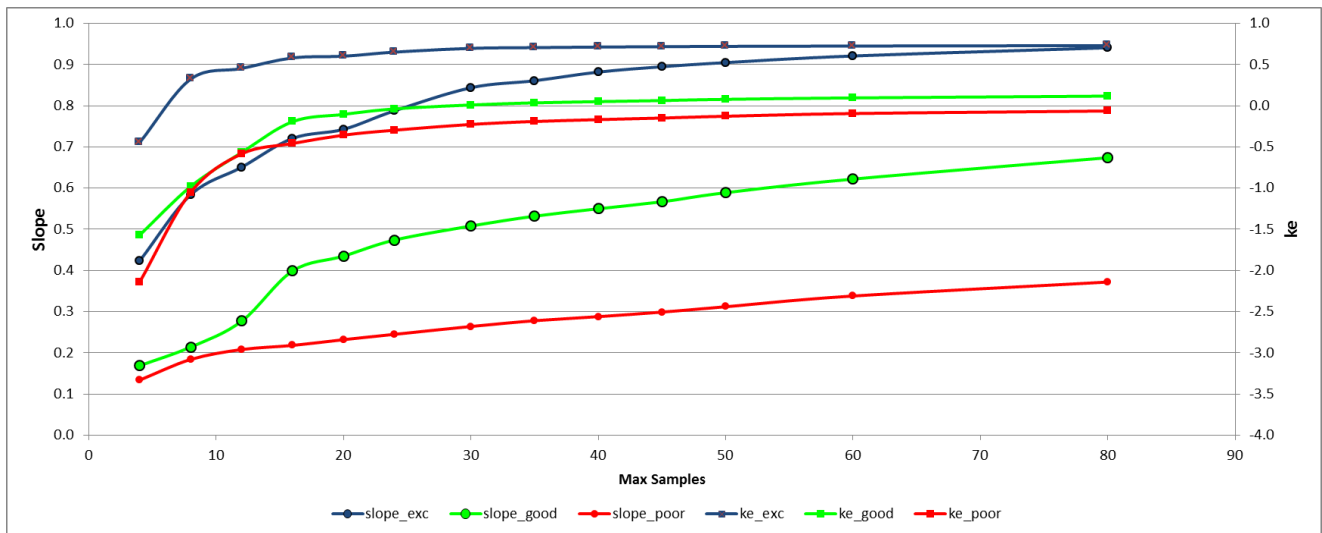
### 14.6.3.3 Number of Informing Samples

To test the optimal 'maximum number of samples' to be used in the kriging estimations, single blocks within the High-grade lode (Object 7) were assessed at excellent, good and poor sample coverage locations. A range of maximum samples were assessed for regression slope and kriging efficiency and summarised in **Table 14-17** and **Figure 14-37** below.

**Table 14-17 Maximum Number of Samples Assessed**

Iteration	1	2	3	4	5	6	7	8	9	10	11	12	13
Max Sample	80	60	50	45	40	35	30	24	20	16	12	8	4

**Figure 14-37 Maximum Number of Samples Analysis Chart**



Based on the results above, a maximum number of 24 samples was adopted for the estimate.

## 14.6.4 Grade Interpolation

### 14.6.4.1 General

The ordinary kriging ("OK") algorithm was used for the grade interpolation and the wireframes were used as a hard boundary for the grade estimation of each object. OK was selected as it results in a degree of smoothing which is appropriate for the broad disseminated nature of the mineralization and sample density.

### 14.6.4.2 Search Parameters

An orientated search ellipse with an 'ellipsoid' search was used to select data for interpolation. Each ellipse was oriented based on kriging parameters and were consistent with the interpreted geology. Variogram parameters of the main lodes were applied to the associated adjacent lodes. Differences between the kriging parameters and the search ellipse may occur in order to honour both the continuity analysis and the mineralization geometry. Search neighbourhood parameters were derived from the KNA analysis discussed in **Section 14.6.3**

Three interpolation passes were used to estimate three elements (Au, Fe and S) into the model. The search parameters are listed in **Table 14-18**.

**Table 14-18 OK Estimation Parameters**

Parameter	Pass 1	Pass 2	Pass 3
<b>Search Type</b>	Ellipsoid		
<b>Bearing</b>	32° to 349°		
<b>Plunge</b>	-30° to 45°		
<b>Dip</b>	-75° to 68°		
<b>Major-Semi ratio</b>	1.0		
<b>Major-Minor ratio</b>	4.0 to 6.0		
<b>Search Radius HG</b>	30	40	300
<b>Search Radius MG</b>	30	50	300
<b>Search Radius LG</b>	30	60	300
<b>Minimum samples</b>	8	4	2
<b>Maximum samples</b>	24	16	6
<b>Max Sample per hole</b>	4	4	4
<b>Block Discretisation</b>	3 X by 4 Y by 3 Z		
<b>Percentage Blocks filled HG</b>	36%	41%	23%
<b>Percentage Blocks filled MG</b>	72%	24%	4%
<b>Percentage Blocks filled LG</b>	26%	62%	12%

## 14.7 Model Validation

A five-step process was used to validate the estimation for the Project as outlined below:

- Mathematical Comparison by Domain;
- Vary Estimation methods;
- Swath Plots;
- Visual Inspection of the Blocks;
- Overall Validation.

In addition, given the style of deposit, and undulating nature, to verify the volume and thickness, RPM undertook an estimation of the thickness based on the intercepts from each hole using the inverse distance method.

The outcomes of the validation are presented below.

### 14.7.1 Mathematical Comparison by Domain

Mean grades of blocks compared to mean grades of input data (composites) are displayed in **Table 14-19** to **Table 14-21**. As can be observed, there is generally a low relative difference observed for Medium and Low-Grade Domains, however, some variations are observed for High-Grade domain objects. In cases where the relative difference is high, such as Au, further inspection was undertaken to determine the cause and in all cases it was interpreted that the variances were the result of data clustering. The result of data clustering as well as the impact of domaining and low maximum composites appears to influence the global averages resulting the skewing of the data. As such further analysis was undertaken to ensure to the suitability of the estimate.

Table 14-19 Average Composite Input v Block Model Output (Ordinary Kriging (OK) and Inverse Distance Squared (IDW)) – HG Domain

Object	Block Model											Composites					
	Resource	Au_OK Uncut	Au_OK Cut	Fe_OK	S_OK Uncut	S_OK Cut	Au_IDW Uncut	Au_IDW Cut	Fe_IDW	S_IDW Uncut	S_IDW Cut	Num of Comps	Au Uncut	Au Cut	Fe	S Uncut	S Cut
	Volume	g/t	g/t	%	%	%	g/t	g/t	%	%	%		g/t	g/t	%	%	%
1	14,377	5.1	2.9	2.5	0.04	0.04	4.8	3.0	2.54	0.04	0.04	25	3.2	2.4	2.6	0.04	0.04
2	7,079	13.6	11.2	2.2	0.02	0.01	13.3	11.3	2.22	0.02	0.01	24	10.8	9.2	2.2	0.03	0.01
3	38,069	4.2	3.7	2.7	0.10	0.10	4.5	4.0	2.70	0.11	0.11	66	4.9	3.9	3.1	0.09	0.08
4	47,988	5.3	5.2	2.8	0.07	0.06	5.0	5.0	2.79	0.07	0.06	122	5.9	5.8	2.9	0.09	0.07
5	58,645	6.9	6.2	2.5	0.03	0.03	6.5	5.9	2.49	0.03	0.03	155	7.4	6.5	2.5	0.03	0.02
6	28,942	3.1	3.0	2.3	0.02	0.02	3.2	3.1	2.34	0.02	0.02	80	2.7	2.6	2.5	0.02	0.02
7	68,446	13.3	12.4	2.0	0.02	0.02	13.6	12.6	2.03	0.02	0.02	173	15.5	14.1	2.1	0.02	0.02
8	61,091	2.2	2.2	2.2	0.02	0.01	2.2	2.2	2.17	0.02	0.01	87	2.4	2.4	2.0	0.02	0.02
9	68,966	1.9	1.9	1.7	0.02	0.02	1.9	1.9	1.66	0.02	0.02	149	2.1	2.1	1.6	0.02	0.02
10	33,747	2.8	2.7	2.0	0.03	0.03	2.8	2.7	2.07	0.03	0.03	56	3.3	3.2	2.2	0.02	0.02
11	50,249	3.9	3.8	2.3	0.06	0.06	3.9	3.8	2.30	0.07	0.07	59	3.5	3.4	2.2	0.07	0.07
12	16,018	3.9	2.7	2.8	0.06	0.04	3.9	2.7	2.80	0.06	0.05	29	4.2	2.7	3.0	0.05	0.04
13	135,451	4.7	4.2	1.8	0.03	0.03	4.4	4.0	1.83	0.03	0.03	194	5.6	4.7	1.7	0.03	0.03
14	74,092	5.7	5.6	1.7	0.03	0.03	5.8	5.7	1.72	0.03	0.02	131	5.7	5.6	1.6	0.03	0.03
15	7,001	10.3	3.8	2.7	0.04	0.04	11.8	4.0	2.70	0.03	0.03	15	15.5	4.6	2.7	0.03	0.03
16	29,431	3.6	3.3	1.8	0.03	0.03	3.8	3.5	1.84	0.04	0.03	66	3.7	3.4	1.6	0.05	0.04
17	15,458	3.3	3.2	2.3	0.10	0.10	3.1	3.0	2.31	0.09	0.09	30	3.0	2.9	2.2	0.08	0.08
18	4,719	3.1	3.1	2.2	0.11	0.11	3.1	3.1	2.19	0.11	0.11	4	3.1	3.1	2.3	0.12	0.12
19	41,554	2.5	2.4	2.5	0.07	0.06	2.5	2.4	2.54	0.07	0.06	90	3.1	2.9	2.6	0.04	0.04
20	34,878	1.8	1.8	1.9	0.22	0.22	1.7	1.7	1.87	0.23	0.23	30	1.9	1.9	1.7	0.11	0.11
21	4,061	2.9	2.9	1.4	0.01	0.01	2.7	2.7	1.36	0.01	0.01	8	2.9	2.9	1.4	0.01	0.01
22	5,969	12.1	12.1	1.9	0.02	0.02	12.3	12.3	1.90	0.02	0.02	4	12.5	12.5	1.7	0.02	0.02
23	1,220	22.2	22.2	3.3	0.11	0.11	22.2	22.2	3.29	0.11	0.11	2	22.2	22.2	3.3	0.11	0.11
24	2,156	2.8	2.8	2.6	0.09	0.09	3.1	3.1	2.62	0.11	0.11	3	2.9	2.9	3.1	0.10	0.10
25	6,762	9.5	8.4	2.7	0.19	0.19	9.0	7.9	2.74	0.19	0.19	17	9.6	8.0	2.8	0.24	0.24
26	7,401	5.1	5.1	2.8	0.10	0.10	5.0	5.0	2.81	0.10	0.10	13	5.8	5.8	4.3	0.11	0.11
27	5,257	3.8	3.8	2.2	0.01	0.01	3.9	3.9	2.13	0.01	0.01	8	3.6	3.6	2.6	0.01	0.01
28	1,920	2.5	2.5	2.2	0.02	0.02	2.4	2.4	2.15	0.02	0.02	12	2.2	2.2	2.3	0.02	0.02
29	1,973	1.3	1.3	2.5	0.02	0.02	1.3	1.3	2.46	0.01	0.01	4	1.3	1.3	2.3	0.02	0.02
30	706	26.1	26.1	3.9	0.02	0.02	26.1	26.1	3.90	0.02	0.02	1	26.1	26.1	3.9	0.02	0.02
31	9,052	3.2	3.2	1.6	0.04	0.04	3.2	3.2	1.56	0.05	0.05	4	3.2	3.2	1.6	0.04	0.04
32	76,162	5.1	4.9	2.0	0.10	0.10	4.8	4.5	1.99	0.10	0.10	35	5.3	5.0	2.1	0.10	0.10
33	79,997	4.5	2.9	1.6	0.09	0.09	4.4	2.9	1.56	0.09	0.09	41	5.3	3.3	1.6	0.07	0.07
34	11,270	12.0	12.0	2.0	0.07	0.07	11.6	11.6	2.04	0.07	0.07	4	11.1	11.1	2.1	0.07	0.07
10.7	15,182		2.5	2.8	0.07	0.07	10.5	2.4	2.69	0.07	0.07	13	13.7	3.0	2.8	0.05	0.05

Object	Block Model											Composites					
	Resource	Au_OK Uncut	Au_OK Cut	Fe_OK %	S_OK Uncut	S_OK Cut	Au_IDW Uncut	Au_IDW Cut	Fe_IDW %	S_IDW Uncut	S_IDW Cut	Num of Comps	Au Uncut g/t	Au Cut g/t	Fe %	S Uncut %	S Cut %
	Volume	g/t	g/t	%	%	%	g/t	g/t	%	%	%						
36	3,050	1.9	1.9	2.1	0.05	0.05	1.9	1.9	2.08	0.04	0.04	4	1.9	1.9	2.2	0.06	0.06
37	10,080	1.4	1.4	2.1	0.09	0.09	1.4	1.4	2.15	0.08	0.08	13	1.4	1.4	2.4	0.09	0.09
38	4,680	2.0	2.0	2.3	0.03	0.03	2.0	2.0	2.28	0.03	0.03	4	2.0	2.0	2.3	0.03	0.03
39	3,535	7.4	7.4	2.9	0.10	0.10	7.4	7.4	2.95	0.10	0.10	2	7.4	7.4	2.9	0.10	0.10
40	3,710	1.9	1.9	2.7	0.01	0.01	2.0	2.0	2.65	0.01	0.01	9	2.3	2.3	2.5	0.01	0.01
41	6,264	18.0	16.8	2.2	0.01	0.01	18.4	17.0	2.16	0.01	0.01	23	17.5	16.2	2.1	0.01	0.01
42	3,051	2.1	2.1	2.0	0.01	0.01	2.1	2.1	1.97	0.01	0.01	9	1.9	1.9	2.2	0.01	0.01
43	3,049	13.9	13.9	5.2	0.27	0.27	13.9	13.9	5.22	0.27	0.27	1	13.9	13.9	5.2	0.27	0.27
44	2,701	35.9	35.9	2.4	0.05	0.05	35.9	35.9	2.43	0.05	0.05	1	35.9	35.9	2.4	0.05	0.05
45	10,382	5.7	5.7	2.7	0.09	0.09	5.5	5.5	2.71	0.08	0.08	3	5.4	5.4	4.5	0.08	0.08
46	314	6.6	6.6	3.7	0.01	0.01	6.6	6.6	3.72	0.01	0.01	2	6.6	6.6	3.7	0.01	0.01
47	4,419	7.7	7.7	2.6	0.01	0.01	7.5	7.5	2.58	0.01	0.01	3	7.4	7.4	2.7	0.01	0.01
48	9,631	4.3	2.6	2.5	0.01	0.01	4.8	2.7	2.54	0.01	0.01	10	4.0	2.6	2.1	0.01	0.01
49	7,348	84.9	11.8	2.3	0.18	0.18	77.0	11.8	2.33	0.18	0.18	35	72.7	12.7	2.4	0.18	0.18
50	1,168	1.4	1.4	2.5	0.32	0.32	1.4	1.4	2.55	0.31	0.31	7	1.4	1.4	3.1	0.32	0.32
51	1,944	3.7	3.7	2.2	0.08	0.08	3.8	3.8	2.27	0.08	0.08	5	4.3	4.3	2.1	0.09	0.09
52	3,651	1.3	1.3	3.2	0.05	0.05	1.3	1.3	3.09	0.04	0.04	5	1.3	1.3	3.0	0.04	0.04
53	9,091	2.8	2.8	1.8	0.02	0.02	2.9	2.9	1.84	0.02	0.02	17	2.8	2.8	1.7	0.02	0.02
54	12,759	4.2	4.2	2.3	0.05	0.05	4.1	4.1	2.13	0.05	0.05	10	3.8	3.8	2.0	0.06	0.06
55	4,458	0.9	0.9	1.8	0.01	0.01	0.9	0.9	1.81	0.01	0.01	2	0.9	0.9	1.8	0.01	0.01
56	4,350	1.4	1.4	2.6	0.01	0.01	1.3	1.3	2.59	0.01	0.01	13	1.4	1.4	2.8	0.01	0.01
57	298	2.3	2.3	2.2	0.32	0.32	2.3	2.3	2.24	0.32	0.32	2	2.3	2.3	2.2	0.32	0.32
58	16,095	1.9	1.9	1.5	0.03	0.03	2.2	2.2	1.52	0.03	0.03	25	1.7	1.7	1.3	0.03	0.03
59	7,118	1.7	1.7	2.2	0.01	0.01	1.7	1.7	2.17	0.01	0.01	6	1.9	1.9	2.5	0.01	0.01
60	10,685	2.4	2.4	2.2	0.05	0.05	2.5	2.5	2.19	0.06	0.06	6	2.6	2.6	2.3	0.06	0.06
61	11,139	1.7	1.7	2.0	0.14	0.14	1.7	1.7	2.02	0.14	0.14	8	1.8	1.8	2.1	0.14	0.14
62	2,648	22.9	22.9	3.5	0.07	0.07	22.9	22.9	3.53	0.07	0.07	1	22.9	22.9	3.5	0.07	0.07
63	1,969	1.5	1.5	1.5	0.01	0.01	1.5	1.5	1.52	0.01	0.01	2	1.5	1.5	1.5	0.01	0.01
64	1,683	38.5	6.9	2.3	0.11	0.11	27.9	5.5	2.27	0.09	0.09	8	32.2	6.0	2.0	0.09	0.09
65	802	2.5	2.5	2.0	0.07	0.07	2.5	2.5	2.00	0.06	0.06	3	2.6	2.6	1.6	0.06	0.06
66	12,038	3.5	3.5	2.6	0.02	0.02	3.6	3.6	2.60	0.01	0.01	59	3.5	3.5	2.6	0.01	0.01
67	509	1.9	1.9	2.1	0.01	0.01	1.9	1.9	2.07	0.01	0.01	2	1.9	1.9	2.1	0.01	0.01
68	1,813	4.5	4.5	1.9	0.01	0.01	5.4	5.4	1.84	0.01	0.01	6	5.1	5.1	1.9	0.01	0.01
69	4,647	2.9	2.9	2.3	0.07	0.07	2.9	2.9	2.30	0.07	0.07	2	2.9	2.9	2.3	0.07	0.07
70	1,391	6.8	6.8	1.9	0.01	0.01	7.6	7.6	1.93	0.01	0.01	3	6.8	6.8	2.1	0.01	0.01
71	1,980	3.1	3.1	1.5	0.01	0.01	3.2	3.2	1.48	0.01	0.01	3	3.1	3.1	1.2	0.01	0.01
<b>Total</b>	<b>1,249,734</b>	<b>5.5</b>	<b>4.5</b>	<b>2.1</b>	<b>0.06</b>	<b>0.05</b>	<b>5.4</b>	<b>4.5</b>	<b>2.12</b>	<b>0.06</b>	<b>0.05</b>	<b>2,068</b>	<b>5.8</b>	<b>4.8</b>	<b>2.1</b>	<b>0.05</b>	<b>0.05</b>



**Table 14-20 Average Composite Input v Block Model Output – Medium Grade Domain**

Object	Block Model											Composites					
	Resource	Au_OK Uncut	Au_OK Cut	Fe_OK %	S_OK %	S_OK %	Au_IDW Uncut g/t	Au_IDW Cut g/t	Fe_IDW %	S_IDW Uncut %	S_IDW Cut %	Num of Comps	Au Uncut g/t	Au Cut g/t	Fe %	S Uncut %	S Cut %
	Volume	g/t	g/t	%	%	%	g/t	g/t	%	%	%						
<b>201</b>	1,064,991	1.9	0.5	2.1	0.05	0.05	2.1	0.5	2.1	0.05	0.05	1,713	3.0	0.5	2.2	0.09	0.09
<b>202</b>	2,379,069	0.8	0.4	2.2	0.05	0.05	0.9	0.4	2.2	0.05	0.05	3,887	1.4	0.5	2.1	0.04	0.04
<b>203</b>	2,202,098	0.8	0.3	2.6	0.10	0.10	0.8	0.3	2.6	0.10	0.10	4,520	1.0	0.3	2.5	0.09	0.09
<b>Total</b>	<b>5,646,158</b>	<b>1.0</b>	<b>0.4</b>	<b>2.3</b>	<b>0.07</b>	<b>0.07</b>	<b>1.1</b>	<b>0.4</b>	<b>2.3</b>	<b>0.07</b>	<b>0.07</b>	<b>10,120</b>	<b>1.5</b>	<b>0.4</b>	<b>2.3</b>	<b>0.07</b>	<b>0.07</b>

**Table 14-21 Average Composite Input v Block Model Output – Low Grade Domain**

Object	Block Model											Composites					
	Resource	Au_OK Uncut	Au_OK Cut	Fe_OK %	S_OK %	S_OK %	Au_IDW Uncut g/t	Au_IDW Cut g/t	Fe_IDW %	S_IDW Uncut %	S_IDW Cut %	Num of Comps	Au Uncut g/t	Au Cut g/t	Fe %	S Uncut %	S Cut %
	Volume	g/t	g/t	%	%	%	g/t	g/t	%	%	%						
<b>101</b>	1,935,271	0.7	0.4	2.2	0.08	0.08	0.7	0.4	2.2	0.08	0.08	2698	2.0	0.4	2.3	0.11	0.11
<b>102</b>	1,712,151	0.5	0.3	2.3	0.05	0.05	0.5	0.3	2.3	0.05	0.05	4804	1.1	0.4	2.5	0.08	0.08
<b>103</b>	10,752,032	0.3	0.2	2.3	0.22	0.22	0.3	0.2	2.3	0.22	0.22	10876	0.6	0.3	2.3	0.20	0.20
<b>104</b>	209,283	2.4	0.3	2.8	0.08	0.07	2.1	0.2	2.7	0.08	0.07	136	1.5	0.2	2.8	0.05	0.05
<b>105</b>	567,979	0.6	0.3	2.6	0.10	0.10	0.5	0.3	2.6	0.10	0.10	620	0.7	0.3	2.5	0.09	0.09
<b>Total</b>	<b>15,176,717</b>	<b>0.4</b>	<b>0.2</b>	<b>2.3</b>	<b>0.18</b>	<b>0.18</b>	<b>0.4</b>	<b>0.2</b>	<b>2.3</b>	<b>0.18</b>	<b>0.18</b>	<b>19,134</b>	<b>0.9</b>	<b>0.3</b>	<b>2.3</b>	<b>0.17</b>	<b>0.17</b>

## 14.7.2 Swath Plots

Swath plots were used to check that the interpolation of the block model correctly honoured the drilling data. Validation was carried out by comparing the interpolated blocks to the sample composite data for each grade domain. The trend analysis was completed by comparing interpolated blocks to the sample composite data for elevation in 20m bench heights. The strike orientation of the lodes at all zones, and the use of a rotated block model required the use of 20-80 m wide panels to conduct the swath analysis across the deposit. The trend analysis results for Au are shown in **Figure 14-38 through Figure 14-40**.

The validation plots show good correlation between the composite grades and the block model grades when compared by panel and elevation. The trends show the composite data are honoured by the block model.

The comparisons show the effect of the interpolation, which results in smoothing of the block grades compared to the composite grades. RPM considers the estimate is representative of the composites and is indicative of the known controls of mineralization and the underlying data.

## 14.7.3 Varying Estimation Methods

As part of the validation process RPM undertook an Inverse Distance Squared (IDW) estimate along with a Multi Indicator Kriging (MIK) estimate. Below is a summary of the outcomes of these separate estimates.

### Inverse Distance Squared

Using the same search parameters and sample selection criteria, an IDW was undertaken for each domain and objects. The results of the estimate compared very well with little variation observed on an object by object basis, as shown in the tables above. In addition to the object by object analysis, the swath plots also shows the consistency between the methods. These show some variation which is expected based on the local variability of the grade weighting.

### Multiple Indicator Kriging

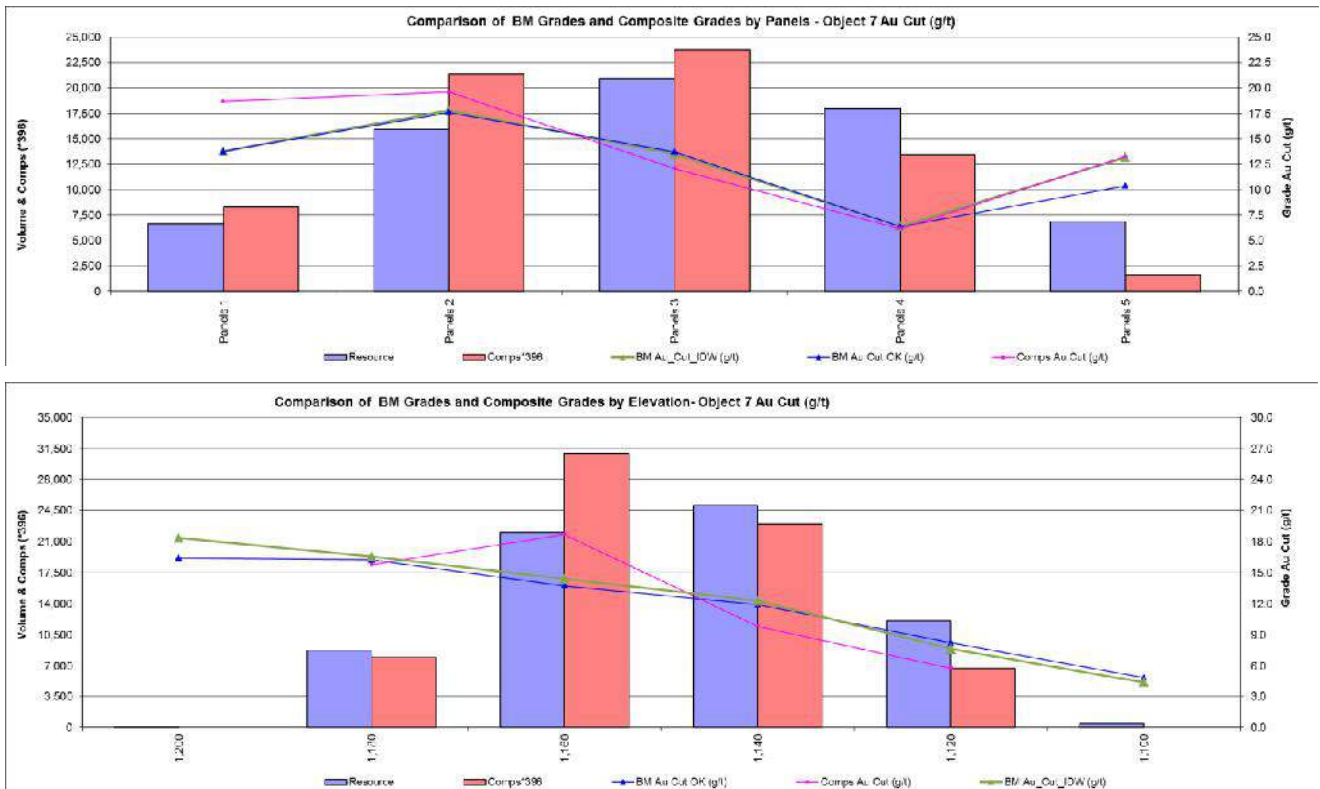
Multi Indicator Kriging (MIK) is a non-linear method of Mineral Resource Estimation which relies on breaking up the original population distribution of sample values into discrete intervals and using these intervals for the estimate. MIK is often recommended when;

- The sample population contains extreme grades and there is a need to avoid excessive capping of the underlying data; or
- There is a desire to produce a more 'mineable' resource in which the effects of mining are to a large extent incorporated into the final resource.

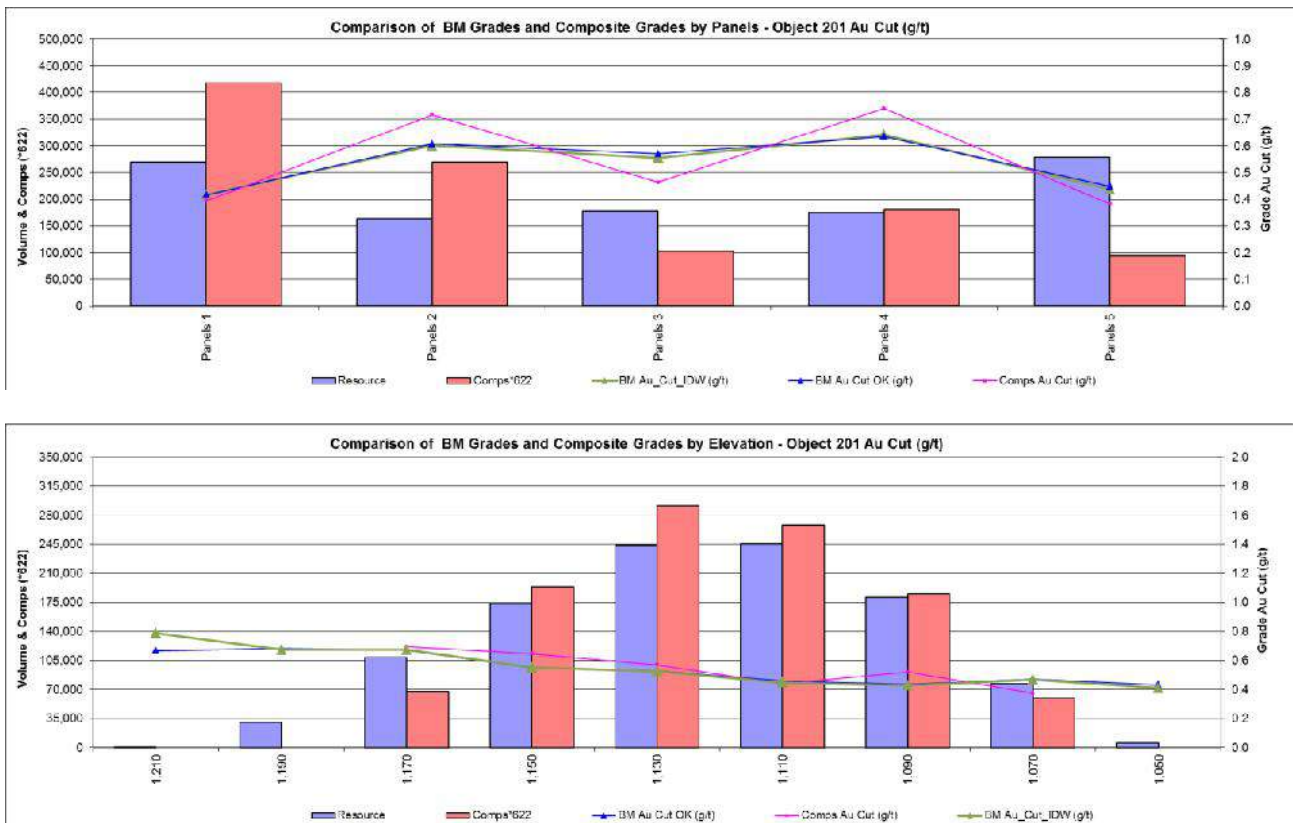
Outcomes of MIK estimate as follows:

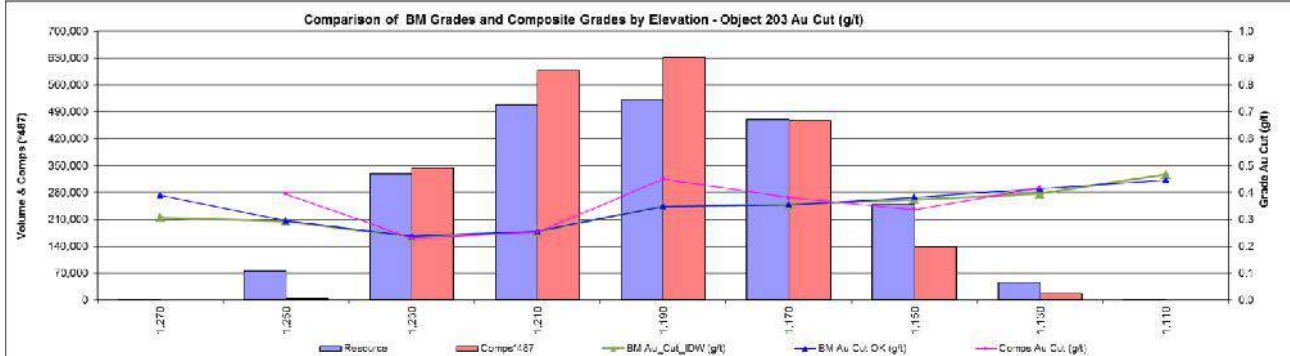
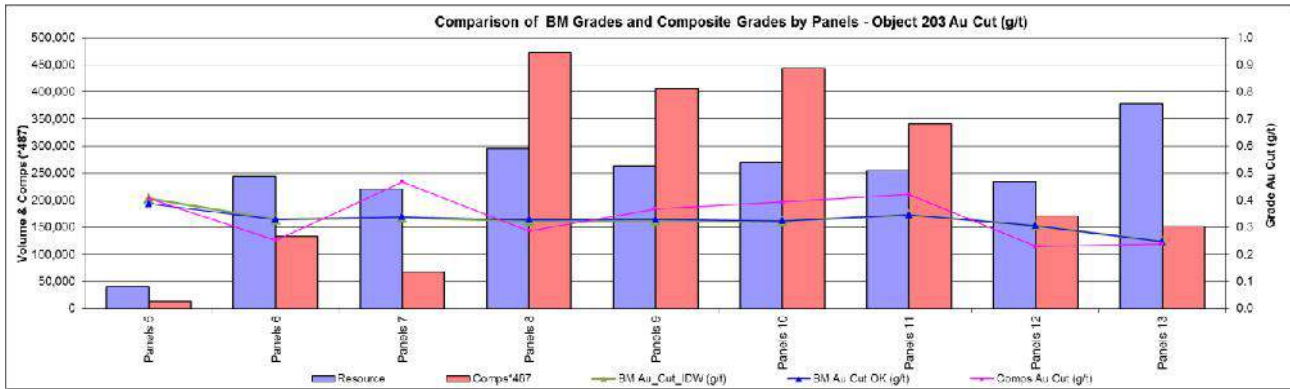
- The MIK estimate confirms the OK estimate
- The MIK estimate is very sensitive to two extremely high values
- With these cut offs the estimate generally gives a lower grade estimates at greater tonnage at various options from dealing with outliers and choice of grades (mean or median) applied to the upper parts of the distribution

**Figure 14-38 Block Model Validation by Panels and Elevation - High Grade Domain (Object7)**

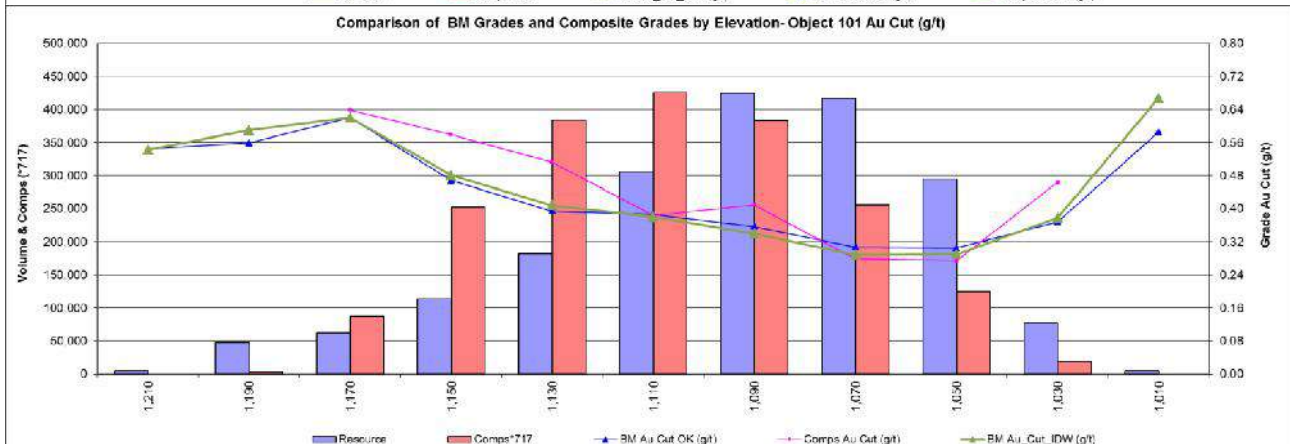
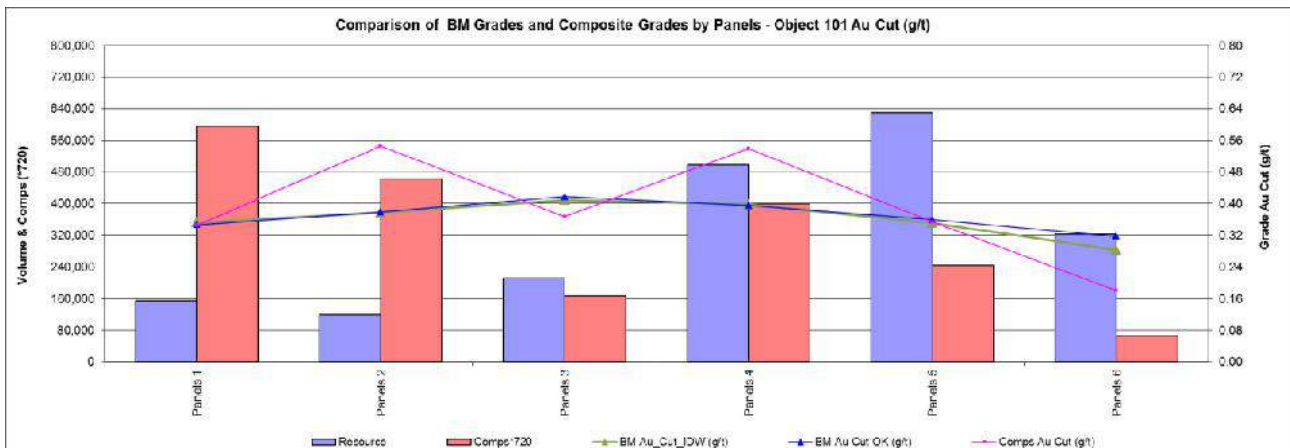


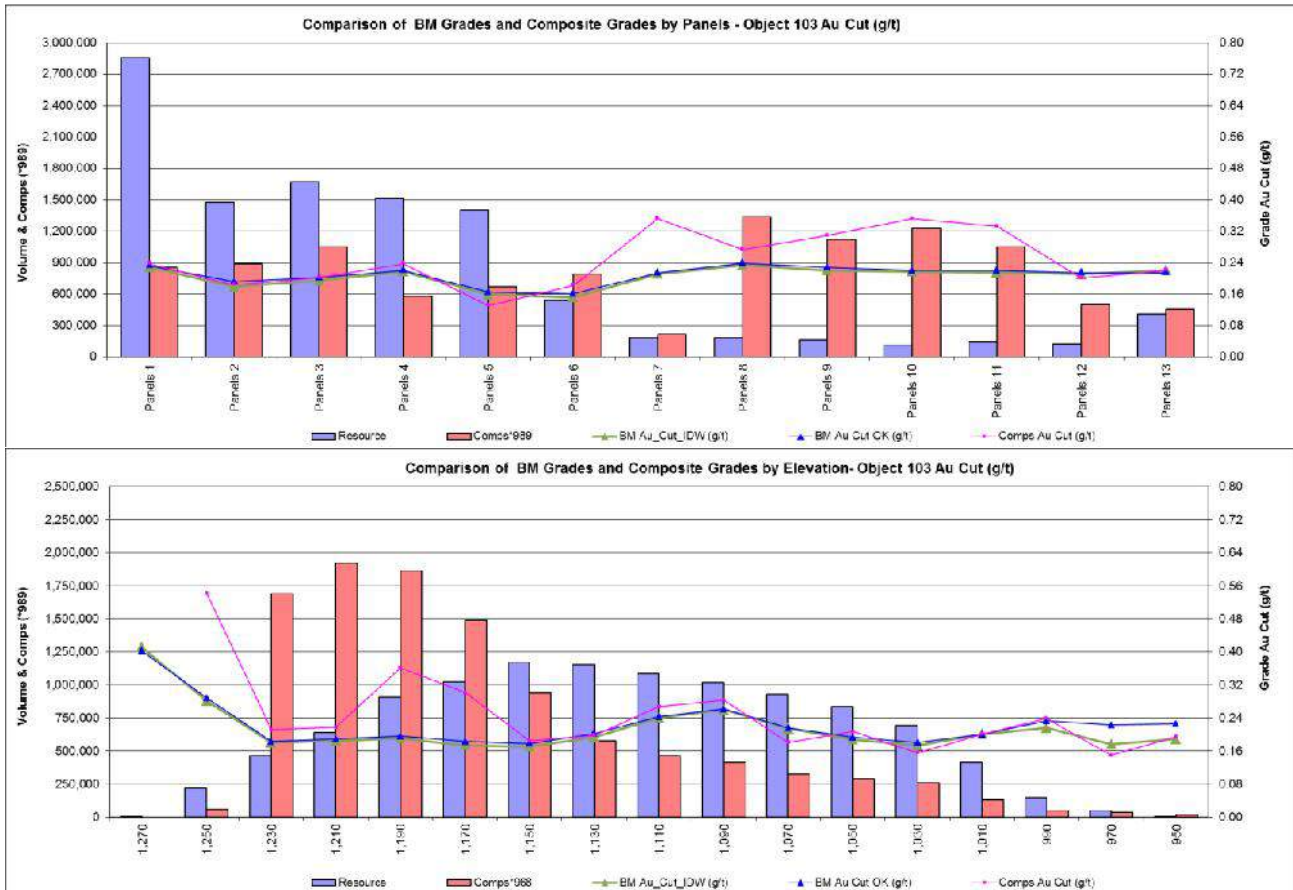
**Figure 14-39 Block Model Validation by Panels and Elevation - Medium Grade Domain (Object 201 and 203)**





**Figure 14-40 Block Model Validation by Panels and Elevation – Low Grade Domain (Object 101 and 103)**



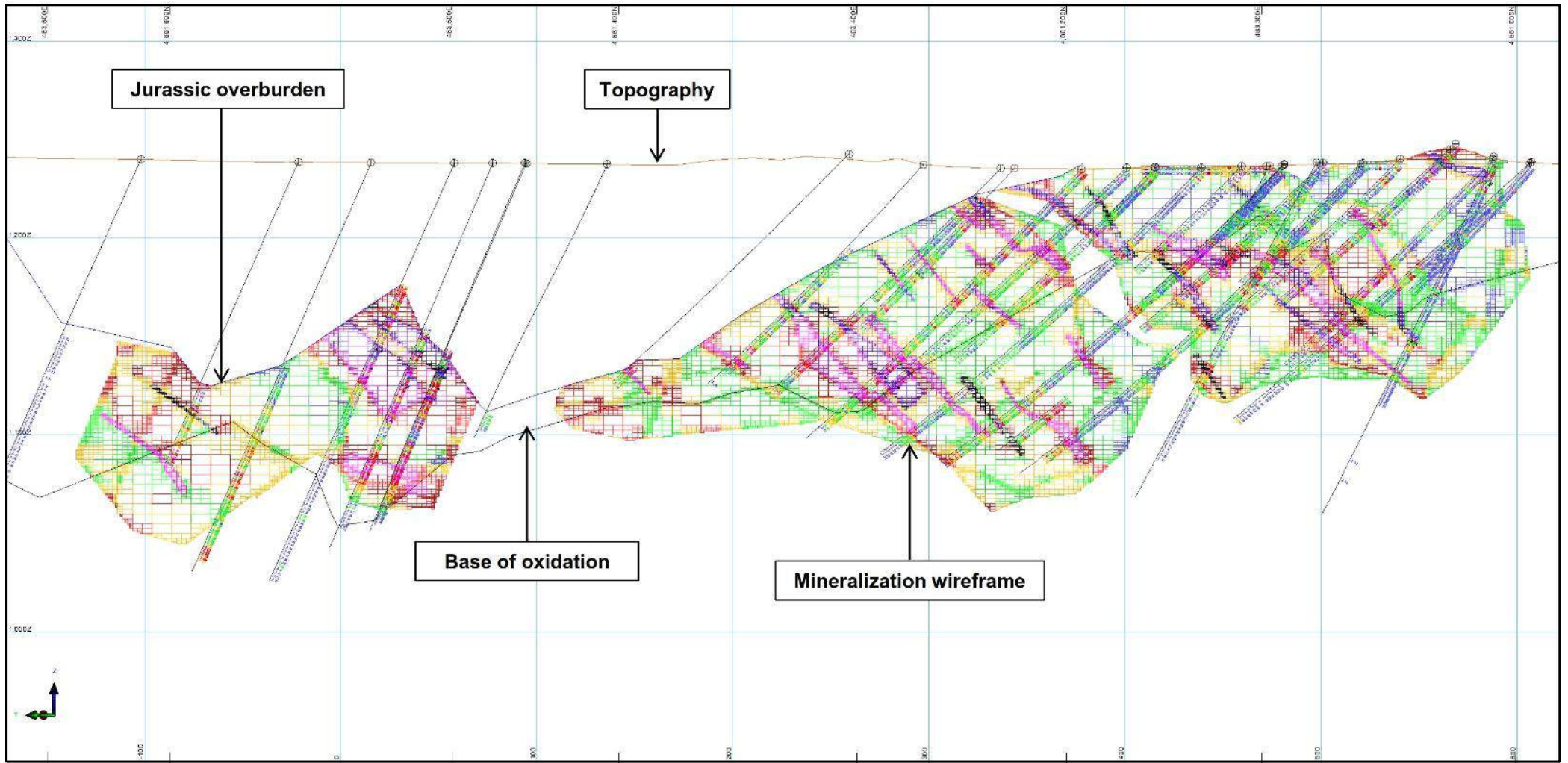


#### 14.7.4 Visual Inspection of the Blocks

Following the mathematical comparison, a visual qualitative comparison of the block estimates to the composites was completed. The visual inspection indicates a good correlation exists at a local scale, particularly in areas of closer spaced drilling. As to be expected, there is a degree of smoothing due to a combination of the block dimensions and the OK algorithm, however, RPM considers this level of smoothing suitable for the style of mineralization. Estimated block grades were checked against the drill hole grades visually and results are shown in **Figure 14-41**.

#### 14.7.5 Overall Grade Validation

The review of the mathematical comparison indicates that while variation globally can be seen, the swath plots highlight that a good overall correlation exists between the block estimates and the composite grades within each mineralised and estimated domain. Correlation of the drill holes and interpolated block model is further supported by a visual inspection completed by RPM. As a result of the validation completed, RPM considers the estimate is representative of the composites and is indicative of the known controls of mineralisation and the underlying data.



LEGEND - Au (ppm)		
0 - 0.1	0.5 - 1	10 - 2300
0.1 - 0.3	1 - 3	
0.3 - 0.5	3 - 10	



CLIENT

**ERDENE**  
RESOURCE DEVELOPMENT

PROJECT		
NAME <b>BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT</b>		
DRAWING Au BLOCK GRADES - SECTIONAL VALIDATION		
FIGURE No. 14-41	PROJECT No. ADV-MN-00156	Date October 2018

## 14.8 Mineral Resource Classification

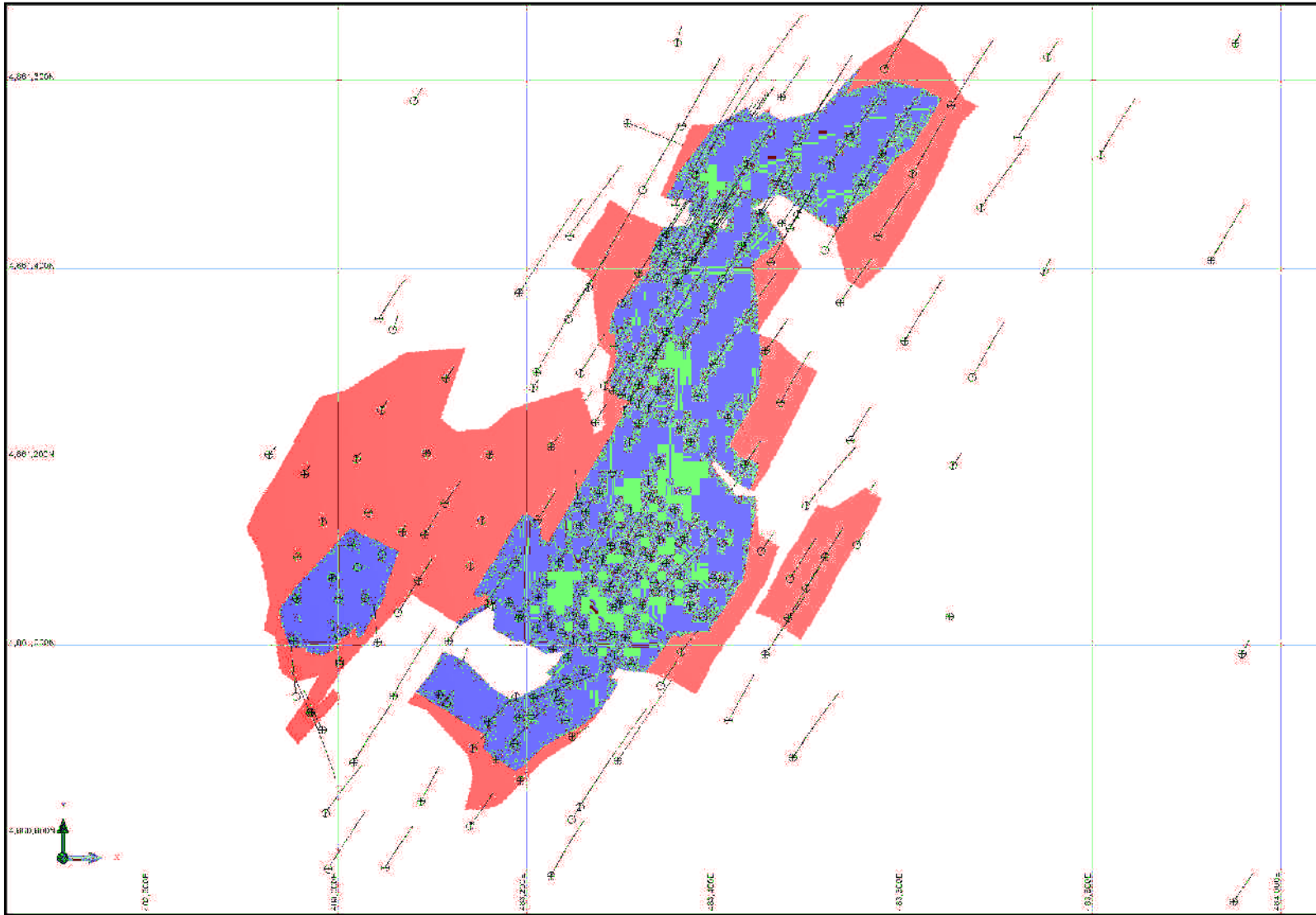
Mineral Resources were classified in accordance with the CIM Standards. The Mineral Resource was classified on the basis of data quality and quantity, sample spacing, and mineralisation continuity

The Bayan Khundii mineralisation shows good continuity within the main mineralized lodes which allowed the drill hole intersections to be modelled into coherent, geologically robust wireframes. Consistency is evident in the thickness of the structure, and the distribution of grade appears to be reasonable along strike and down dip. The resource block model has an attribute “class” for all blocks within the resource wireframes coded as either “mea” for Measured or “ind” for Indicated or “inf” for Inferred. The Plan view of Mineral Resource classification is shown in **Figure 14-42**. The classification was based on the following criteria:

- The Measured Mineral Resource was within areas of sample spacing less than 20 m by 20 m, and where the geological structure and continuity of the mineralized lodes were able to be modelled with high confidence. This spacing was deemed appropriate for the application of Measured Mineral Resource after considering the reasonable mineralization and grade continuity, the relatively low to moderate nugget effect within each domain, low coefficient of variance statistics and variogram ranges of between 50 and 60 m depending on the domain.
- The Indicated Mineral Resource was confined within areas of close spaced diamond drilling of 40 m by 40 m or less, and where the continuity and predictability of the lode positions was good. This spacing was deemed appropriate for the application of Indicated Mineral Resource after considering the reasonable mineralization and grade continuity, the relatively low to moderate nugget effect, low coefficient of variance statistics and variogram ranges in the order of more than 50-60 m.
- The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 40 m by 40 m, where small isolated pods of mineralization occur outside the main mineralized zones, and to geologically complex zones.

The extrapolation of the lodes along strike has been limited to a distance equal to the previous section drill spacing or to 20-30 m. Extrapolation of lodes down-dip has been limited to a distance equal to the previous down-dip drill spacing or to 20-30 m. Areas of extrapolation have been classified as Inferred Mineral Resource.

Internal audits have been completed by RPM which verified the technical inputs, methodology, parameters and results of the estimate. The lode geometry and continuity has been adequately interpreted to reflect the applied level of Measured, Indicated and Inferred Mineral Resource. The data quality is good and the drill holes have detailed logs produced by qualified geologists. A recognised laboratory has been used for all analyses. The Mineral Resource statement relates to global estimates of tonnes and grade.



**LEGEND**

- Measured
- Indicated
- Inferred

**CLIENT**



**PROJECT**

NAME  
**BAYAN KHUNDII RESOURCE ESTIMATE TECHNICAL REPORT**

DRAWING  
MINERAL RESOURCE CLASSIFICATION  
- PLAN VIEW

FIGURE No.  
14-42

PROJECT No.  
ADV-MN-00156

Date  
October 2018



## 14.9 Mineral Resource Statement

RPM has independently estimated the Mineral Resources contained within the Project, based on the data collected by ERD as at 27<sup>th</sup> June, 2018. The Mineral Resource estimate and underlying data complies with the guidelines provided in the CIM Definition Standards under NI 43-101. Therefore RPM considers it is suitable for public reporting. The Mineral Resources were completed by Mr. David Princep under the supervision of Mr. Jeremy Clark (Qualified Person).

The Statement of Mineral Resources has been constrained by the topography, Jurassic overburden surface, exploration license boundary XV-015569, and reported at a cut-off grade of 0.6 g/t Au. In addition the underlying syenite body was utilised to restrict mineralisation at depth.

The results of the Mineral Resource estimate for the Bayan Khundii deposit are presented in **Table 14-22**. RPM recommends using a 0.6 g/t as a reporting cut-off based on a mining / process cost parameters for the Project.

**Table 14-22 Bayan Khundii Deposit as of September 12, 2018 Mineral Resource Estimate**

Cut-off Grade <sup>(1)</sup>	Resource Classification	Oxide		Fresh		Total		Gold Koz
		Quantity (Mt)	Grade Au g/t	Quantity (Mt)	Grade Au g/t	Quantity (Mt)	Grade Au g/t	
0.2	Measured	2.9	1.6	1.3	1.0	4.3	1.4	195
	Indicated	6.7	1.0	6.9	0.8	13.5	0.9	384
	Measured & Indicated	9.6	1.2	8.2	0.8	17.8	1	579
	Inferred	2.8	0.5	9.9	0.6	12.7	0.6	225
0.4	Measured	1.8	2.4	0.6	1.9	2.4	2.3	177
	Indicated	4.0	1.5	3.1	1.3	7.1	1.4	324
	Measured & Indicated	5.8	1.8	3.7	1.4	9.5	1.6	501
	Inferred	1.1	0.8	3.7	1.0	4.9	1	153
0.6	Measured	1.1	3.6	0.3	3.5	1.4	3.6	161
	Indicated	2.3	2.2	1.4	2.4	3.7	2.3	272
	Measured & Indicated	3.4	2.7	1.7	2.6	5.1	2.6	433
	Inferred	0.4	1.5	1.4	2.0	1.8	1.9	105
1	Measured	0.7	5.4	0.1	6.3	0.8	5.6	148
	Indicated	1.1	3.8	0.6	4.3	1.8	4	224
	Measured & Indicated	1.8	4.4	0.8	4.7	2.6	4.5	372
	Inferred	0.1	3.7	0.6	3.8	0.7	3.8	79
1.4	Measured	0.6	5.7	0.2	6.7	0.8	5.9	145
	Indicated	0.9	4.5	0.5	5.2	1.4	4.7	212
	Measured & Indicated	1.5	5.0	0.7	5.6	2.2	5.2	357
	Inferred	0.1	4.1	0.4	4.4	0.5	4.4	74

Note:

1. The Statement of Estimates of Mineral Resources has been compiled under the supervision of Mr. Jeremy Clark who is a full-time employee of RPM and a Member of the Australian Institute of Geoscientists. Mr. Clark has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity that he has undertaken to qualify as a Qualified Person as defined in the CIM Standards of Disclosure.
2. All Mineral Resources figures reported in the table above represent estimates based on drilling completed up to 27<sup>th</sup> June, 2018. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.
3. Mineral Resources are reported on a dry in-situ basis.
4. The Mineral Resources is reported at a 0.6 g/t Au cut-off. Cut-off parameters were selected based on an RPM internal cut-off calculator, which indicated that a break-even cut-off grade of 0.6 g/t Au, assuming an open cut mining method, a Au price of US \$1500 per ounce, an open mining cost of US \$6 per tonne and a processing cost of US \$20 per tonne milled and processing recovery of 95% Au.
5. Mineral Resources referred to above, have not been subject to detailed economic analysis and therefore, have not been demonstrated to have actual economic viability

### 14.9.1 Selection of Reportable Cut-off Grade

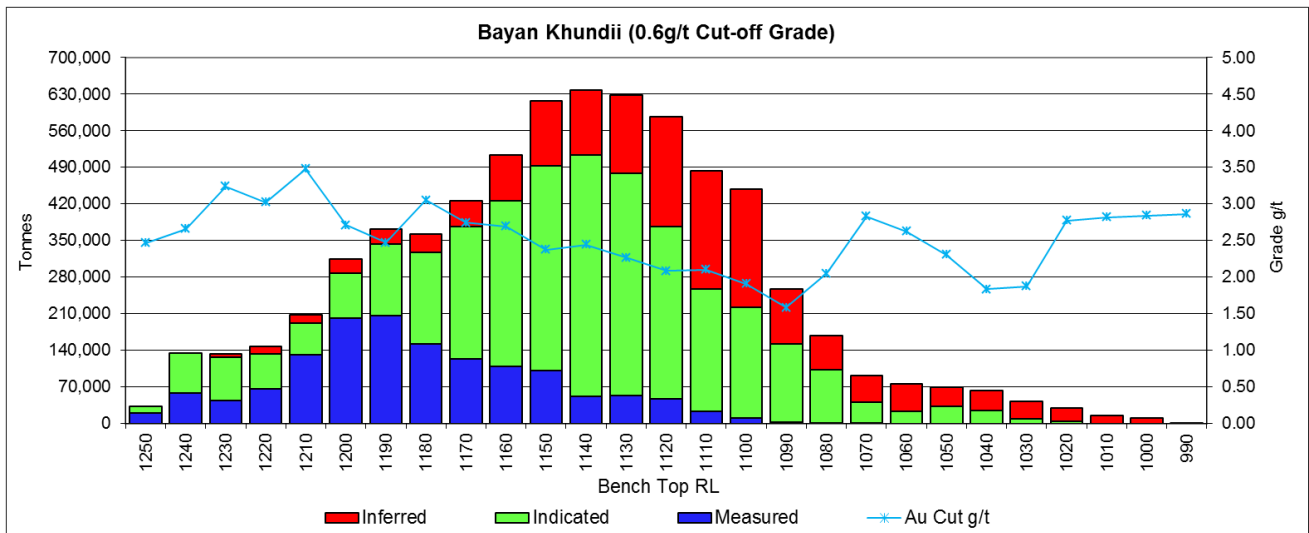
The Mineral Resources is reported at a 0.6 g/t Au cut-off. Cut-off parameters were selected based on an RPM internal cut-off calculator, which indicated a break-even cut-off grade of 0.6 g/t Au, assuming an open cut mining method, an Au price of US \$1500 per ounce, an open pit mining cost of US \$6 per tonne, a processing cost of US \$20 per tonne milled and processing recovery of 95% Au.

While a detailed schedule and option analysis has not been completed to confirm the optimal mining method, given the moderately dipping continuous style of mineralization within disseminated broader mineralization halo, open pit mining is likely to be appropriate, pending the option analysis. Additional mining design and more detailed and accurate cost estimate mining studies and testwork are required to confirm viability of extraction.

RPM notes that these pit shells were completed to report the resource contained within to demonstrate reasonable prospects for eventual economic extraction and highlights that these pits do not constitute a scoping study or a detailed mining study which along with additional drilling and testwork, is required to be completed to confirm economic viability. It is further noted that in the development of any mine it is likely that given the location of the Project that CAPEX is required and is not included in the mining costs assumed. RPM has utilised operating costs based on in-house databases of similar operations in the region and processing recoveries based on preliminary testwork as outlined in **Section 13**, along with the price noted above in determining the appropriate cut-off grade. Given the above analysis RPM considers open pit material demonstrates reasonable prospects for eventual economic extraction, however, highlights that additional studies and drilling is required to confirm economic viability.

- To show the tonnages and grade distribution throughout the entire deposit, a bench breakdown has been prepared using 10m bench height which is shown graphically in **Figure 14-43**.

**Figure 14-43 Bench Tonnage Graph**



### 14.9.2 Dilution and Ore Losses

The block model is undiluted with no ore loss factors applied. As a result appropriate dilution and ore loss factors must be applied for any economic reserve estimation.

### 14.9.3 Other Information

RPM is not aware of any other factors, including environmental, permitting, legal, title, taxation, socio-economic, marketing and political or other relevant factors, which could materially affect the Mineral Resource.

## 14.10 Risk and Opportunities

The key opportunities for the Project include:

- Resource Expansion:**

- RPM considers there is good potential to expand the currently defined resource with further drilling. Mineralization is open north-east, north-west and east of the currently defined Mineral Resource, where several medium to high-grade intersections are located which require follow up exploration works. RPM recommends targeting near surface medium to high grade mineralization, which if successfully delineated will potentially have a positive impact on any mining study undertaken on the Project.
- There are large areas of low grade (0.1~0.2 g/t Au) mineralization halos recorded outside of currently defined mineralization wireframes. Changing modelling cut-off grade should substantially increase global mineralization volume. This material is currently excluded from the reported resource due to the low grade, however, this material could impact the dilution grade applied during the mining studies.

The key risks to the Project include:

- **Interpretation Complexity:** The Project exhibits a moderate to high degree of structural complexity. The mineralised envelopes were defined by drilling on a 20 m by 20 m drill spacing in some areas, however, the majority was based on 40 m by 40 m and 80 m by 80 m drill spacing in extensional areas. Therefore there is potential for tonnage and overall geometry variations between modelled and actual mineralization. RPM does not envisage any material variations in the closer spaced drilling areas, however, this could potentially occur in the areas of greater than 40 m spacing, as a result these areas are classified as Inferred.
- **QAQC:** Sampling and assaying methodology and procedures were satisfactory for the ERD drilling. QAQC protocols were adequate and review of the data did not show any consistent bias or reasons to doubt the assay data. Slight underestimation of higher grades Au (8.0g/t) has been observed in the OREAS62c standard for the 2015 and 2016 drilling, as well as the Au (9.2 g/t) grade observed in OREAS62e for 2016 and 2017 drilling. RPM does however note that any variation will not be material to the resources quoted and highlights these did not vary beyond acceptable limits.
- **High Grade Variability:** Geostatistical analysis generated models of spatial grade continuity that reflected the geological understanding of the deposit. The modelled nugget is low to moderate however this is due to the domaining which has been applied to the deposit. A significant proportion of the variance occurs within the scale of the block dimensions resulting in a moderate degree of smoothing as is considered appropriate. RPM notes that there are some high-grade zones with a low number of samples which potentially results in an overestimate of the metal content relative to those zones with higher sample counts. As such there is a moderate degree of uncertainty in the grades associated with objects with lower sample counts, as such these areas are classified as inferred.
- **Lithological Surfaces:** RPM interpreted weathering, Jurassic overburden and upper syenite surfaces. The overburden layers are un-mineralized while all indications are that the syenite truncated mineralisation at depth. While suitable drilling and logging is available to define the overburden surface, due to the depth, the upper surface of the syenite body is less well defined. This is reflected in **the** classification applied in these areas. RPM further notes that some mineralisation is observed below this surface, however, the extent of this is not known nor the relationship to the reported resource.

## **15 Mineral Reserve Estimates**

Not included in this NI43-101 Report because of the early stage of Project investigation.

## **16 Mining Methods**

Not included in this NI43-101 Report because of the early stage of Project investigation.

## **17 Recovery Methods**

Not included in this NI43-101 Report because of the early stage of Project investigation.

## **18 Project Infrastructure**

Not included in this NI43-101 Report because of the early stage of Project investigation.

## **19 Market Studies and Contracts**

Not included in this NI43-101 Report because of the early stage of Project investigation.

## **20 Environmental Studies, Permitting and Social and Community Impact**

Not included in this NI43-101 Report because of the early stage of Project investigation.

## **21 Capital and Operating Costs**

Not included in this NI43-101 Report because of the early stage of Project investigation.

## **22 Economic Analysis**

Not included in this NI43-101 Report because of the early stage of Project investigation.

## 23 Adjacent Properties

Altan Nar Au-polymetallic deposit is located 20 km north of Bayan Khundii deposit which is fully owned by ERD. The Altan Nar project was described in the NI43-101 Report titled “Altan Nar Gold Project Mineral Resource Technical Report, by RPMGlobal Asia Limited. Additionally, the Project is situated in a well mineralized belt with the ERD owned Zuun Mod porphyry molybdenum / copper deposit situated 40 km east of the Project. The Zuun Mod project was described in the NI43-101 Report titled “Erdene Resource Development Corp., Zuun Mod Porphyry Molybdenum Copper project, by Minarco Mine Consult, June 2011”.

There are no adjacent properties with similar publically well-known mineralization to provide comparative mineralization characteristics. RPM is aware that ERD recently has acquired significant white mica altered porphyry target adjacent to the Bayan Khundii project. The heat and fluid involved in the formation of the mineralization may be derived from similar intrusion related hydrothermal systems at depth under the wider Bayan Khundii area, however further analysis is required to confirm this interpretation.

There is potential for a number of other deposits to be found in this apparently well mineralized belt which has previously not been well explored.

## 24 Other Relevant Data and Information

### 24.1 Project Development

RPM notes the following through discussion with the Company:

- ERD commenced a Preliminary Economic Assessment (PEA) study, in accordance with the requirement of NI 43-101, for the global resource of the Project. The PEA will provide a high-level economic evaluation of the Project.
- ERD plans to carry out the necessary studies to register the mineral resource in accordance with the terms and conditions of the Minerals Law of Mongolia and related regulations. Registration of the mineral resource is required prior to applying for a mining license.
- Included in the necessary studies for the mineral resource registration process are geotechnical and hydrology studies of the Bayan Khundii deposit area, additional metallurgical testing and an economic evaluation study of the Project.
- ERD, through the Company's Mongolian contractor, has carried out work on a baseline environment and social impact assessment study over the past year or more. This study is expected to be finalized in end of 2018. This study is also required as part of the mining license application process in Mongolia.
- As part of ERD's commitment to minimizing the social and environmental impact of its operations, the Company has started trial reclamation and rehabilitation studies at Bayan Khundii project area.
- Additional metallurgical testing is planned following this Maiden Mineral Resource Results with sample material designed to further enhance the current knowledge around mineral processing and metal recovery.

### 24.2 Development Programs

ERD developed plans to continue investigation of the Project for remainder of 2018 includes:

1. Complete a joint Preliminary Economic Assessment study, in accordance with the requirement of NI 43-101, for the Bayan Khundii and Altan Nar Projects;
2. Advance the mining license application process;
3. Mining and Processing Studies; and
4. Complete the social and environmental baseline study.

## 25 Interpretation and Conclusions

RPM concludes the following:

- Gold mineralization at Bayan Khundii is hosted by an intensely quartz-illite altered sequence of Devonian age pyroclastic rocks (lapilli tuffs, massive and layered ash tuffs, welded tuffs). Mineralization has been identified to date in separate zones over a 1.7 km strike length, termed the Gold Hill, Striker, Midfield, North Midfield, Striker West and Northeast zones. Most of the exploration work completed to date has focused on and near the first four of these zones with limited work external to these zones and in the Northeast Zone. Gold mineralization, commonly as visible Au, 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 meters to 150 m
- The mineralized domains show variation in thickness and geometry, however, the drill density has allowed the delineation of coherent bodies of mineralization.
- Sampling and assaying methodology and procedures were satisfactory for the ERD drilling. QA/QC protocols were adequate and detailed review of the data did not show any consistent bias or reasons to doubt the assay data.
- Generally QAQC data suggests slight negative bias for high Au standards potentially as a result of approaching the method over-range limit. The results for Au grades >9 ppm may be understated, however, cross laboratory check doesn't indicate any bias with the original laboratory. Thus this is not considered a material issue and supports the assay data used in the Mineral Resource estimate.
- The Bayan Khundii Project exhibits a moderate to high degree of structural complexity. The block model is defined by drilling on a 20 m by 20 m with extension out to 80 m by 80 m drill spacing. Therefore there is potential for tonnage and overall geometry variations between modelled and actual mineralization.
- The Mineral Resource was classified as Measured, Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity. The Measured Mineral Resource was within areas of sample spacing less than 20 m by 20 m, and where the geological structure and continuity of the mineralized lodes were able to be modelled with high confidence. This spacing was deemed appropriate for the application of Measured Mineral Resource after considering the reasonable mineralization and grade continuity, the relatively low to moderate nugget effect, low coefficient of variance statistics and variogram ranges of between 50 to 60 m depending on grade domain. The Indicated Mineral Resource was confined within areas of close spaced diamond drilling of 40 m by 40 m or less, and where the continuity and predictability of the lode positions was good. This spacing was deemed appropriate for the application of Indicated Mineral Resource after considering the reasonable mineralization and grade continuity, the relatively low to moderate nugget effect, low coefficient of variance statistics and variogram ranges in the order of more than 50-60 m. The Inferred Mineral Resource was assigned to areas of the deposit where drill hole spacing was greater than 40 m by 40 m, where small isolated pods of mineralization occur outside the main mineralized zones, and to geologically complex zones.
- Metallurgical work, completed in 2016 on representative composite samples from 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 Au recovery of 99% for a high-grade (24.9g/t Au) composite sample and 92% for a low grade (0.7g/t Au) composite.
- Metallurgical work completed in 2017 concluded that recoveries for high grade (4.4g/t Au) composites using a 48-hour cyanide leach were 95% and 96%, where as a combination of gravity and leach on tails for the moderate-grade (1.9 g/t Au) composite was 92%. Low grade (0.75 g/t Au) with standard leach parameters processing generally has Au recovery of 85% after 48-hour leach. The comminution tests indicate that Bayan Khundii is moderately hard to hard. Heap leach amenability test work was also conducted and it indicated that heap leach, while not optimal, may be applicable to low grade portions of the Bayan Khundii deposit where Au recoveries were 57% on the 3.35 mm material, 63% on the 1.7 mm material and 83% on the 69 micron grind size. The higher recovery associated with the finer grind size suggests that conventional tank leaching would likely yield higher overall recoveries.
- The high-grade nature of the mineralization and the substantial thickness and size of the deposit suggest that the Project has potential for eventual economic extraction using open pit mining technique. A preliminary economic analysis is currently underway to assist in understanding the project potential.

- For these reasons the Qualified Person is of the opinion that the Bayan Khundii Project is of sufficient grade and tonnage to have reasonable prospects for eventual economic extraction using open pit mining technique.



## 26 Recommendations

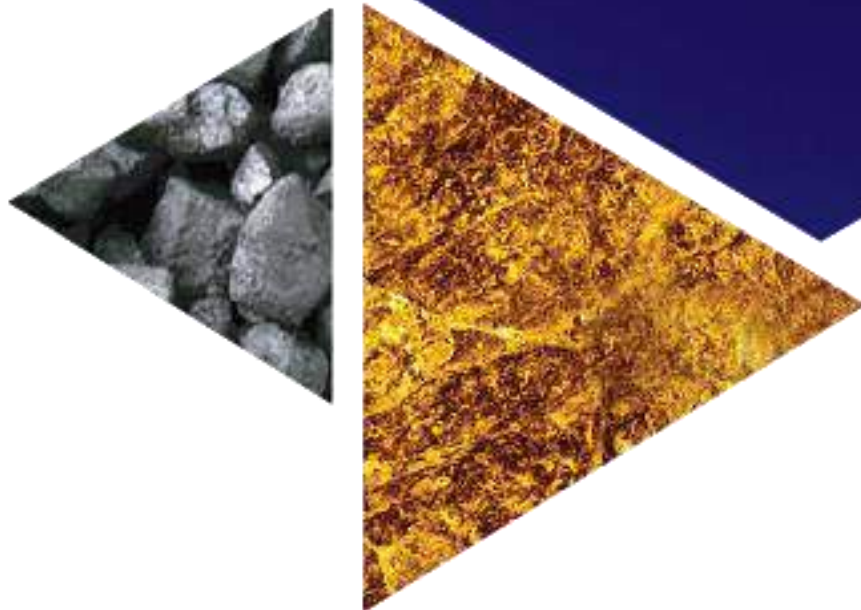
The recommendations provided are based on observations made during the site visit and subsequent geological and metallurgical reviews and Mineral Resource estimate detailed in **Sections 13, and 14**.

- **QAQC:** Further monitoring of the slight bias and underestimation observed in high grade assays at the SGS Laboratory is recommended. Approximately costs during the future drilling USD 10,000.
- **Bulk Density:**
  - RPM recommends that ERD continue recording density measurements, ensuring that measurements should cover variety of Fe grades to further refine the regression equation; and
  - RPM hasn't excluded any data from raw bulk density data however RPM observed some extreme high or low outliers noted in data and these determination needs to be re-checked for future use. No cost would be incurred.
- **Metallurgical Testwork:** Following on from the increased geological understanding of the mineralization styles and likely run of mine feed grades of any operation, RPM recommends processing testwork on samples that are representative of the deposit. This testwork would identify the grinding requirements, as well as Au recoveries and processing requirements based on conventional flowsheets as well as the potential for recovering the low grade Au mineralization into marketable products. RPM estimates that the cost of this testwork and associated works would be approximately USD 300,000 and would include:
  - Additional cyanidation process development work on lower grade composites that reflect the average grade of the Bayan Khundii deposit;
  - Further variability testing, including optimal grind size analysis, incorporating composites that represent the full range of head grades and depths within Bayan Khundii;
  - An extended gravity recoverable Au (E-GRG) test on a sample representing the average grade of the deposit.
- **Mining Study:** In order to guide additional infill drilling, define pit limits and expansion drilling, as well as highlight the economic potential, RPM recommends a preliminary economic assessment ("PEA") which should consider the various opportunities with the Project's development. Approximately costs for PEA USD 180,000.

## 27 References

- Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, NI43-101 Technical Report prepared by Erdene Resource Development Corp, MacDonald, M.A., March, 2018.
- Applied Petrologic Services & Research (APSAR), 2017. Petrologic Studies of Drill Core from the Bayan Khundii Gold project, Bayankhongor Aimag, Southwest Mongolia. Independent report prepared for Erdene Resource Development Corp., 40 p.
- Badarch, G., Cunningham, W.D., and Windley, B.F., 2002. A new terrane subdivision for Mongolia: implications for the Phanerozoic crustal growth of Central Asia. *Journal of Asian Earth Sciences* 21. Pp. 87-110.
- Buchanan, L.J. (1981): Precious Metal Deposits associated with Volcanic Environments in the Southwest; in Relations of Tectonics to Ore Deposits in the Southern Cordillera; Arizona Geological Society Digest, Volume 14, pages 237-262.
- Fossen, H. and Rotevatn, A., 2016. Fault Linkage and relay structures in extensional settings – A review. *Earth Science Reviews*. No. 154. Pp 14-28.
- Kloppenberg, A., 2017. Structural framework analysis, Bayan Khundii and Altan Nar assets, Mongolia. Independent project report 1268 prepared for Erdene Resource Development Corp., 110 p.
- MacDonald, M.A., 2017 Bayan Khundii Gold Project (Khundii Exploration License), Bayankhongor Aimag, Southwest Mongolia, National Instrument 43-101 Technical Report. Internal report Erdene resource Development Corp., 67 p.
- Mineral Resource Authority of Mongolia 1:200,000 scale geology maps of Mongolia; include L-47-XXXII, L-47-XXXIII, L-47-XXXIV, K-47-II, K-47-III, and K-47-IV.
- RungePincockMinarco, 2015. Altan Nar and Bayan Khundii Site Visit. Independent report prepared for Erdene resource Development Corp. 21 pp.
- Windley, B.F., Alexeiev, D., Xiao, W., Kröner, A. and Badarch, G. (2007). Tectonic models for accretion of the Central Asian Orogenic Belt. *Journal of the Geological Society*. No. 164 (1), pp. 31-47.
- Yakubchuk, A. 2002. Geodynamic reconstructions of Mongolia and Central Asia. Internal report for Gallant Minerals.

# Appendix A. Glossary



The key terms used in this report include:

- **Company** means ERD Resources Inc. “ERD” or “the Client”.
- **concentrate** a powdery product containing higher concentrations of minerals resulting from initial processing of mined ore to remove some waste materials; a concentrate is a semi-finished product, which would still be subject to further processing, such as smelting, to effect recovery of metal
- **contained metal** refers to the amount of pure metal equivalent estimated to be contained in the material based on the metal grade of the material.
- **element** Chemical symbols used in this report  
Au – Gold; Ag – Silver; S - Sulfur
- **exploration** activity to identify the location, volume and quality of a mineral occurrence
- **Exploration Target/Results** includes data and information generated by exploration programmes that may be of use to investors. The reporting of such information is common in the **early** stages of exploration and is usually based on limited surface chip sampling, geochemical and geophysical surveys. Discussion of target size and type must be expressed so that it cannot be misrepresented as an estimate of Mineral Resources or Ore Reserves.
- **exploration right** the licensed right to identify the location, volume and quality of a mineral occurrence
- **flotation** is a separation method for to the recovery of minerals using reagents to create a froth that collects target minerals
- **gangue** is a mining term for waste rock
- **grade** any physical or chemical measurement of the concentration of the material of interest in samples or product. The units of measurement should be stated when figures are reported
- **grind** means to crush, pulverize, or reduce to powder by friction, especially by rubbing between two hard surfaces
- **In situ** means rock or mineralization in place in the ground
- **In Situ Quantities** estimates of total in ground tonnes and grade which meet the requirements of the PRC Code or other international codes for reserves however do not meet either NI 43-101 or Joint Ore Reserves Committee's recommendations
- **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.
- **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, however not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.
- **ITR** stands for Independent Technical Review
- **ITRR** stands for Independent Technical Review Report
- **Km** stands for kilometre
- **Kt** stands for thousand tonnes

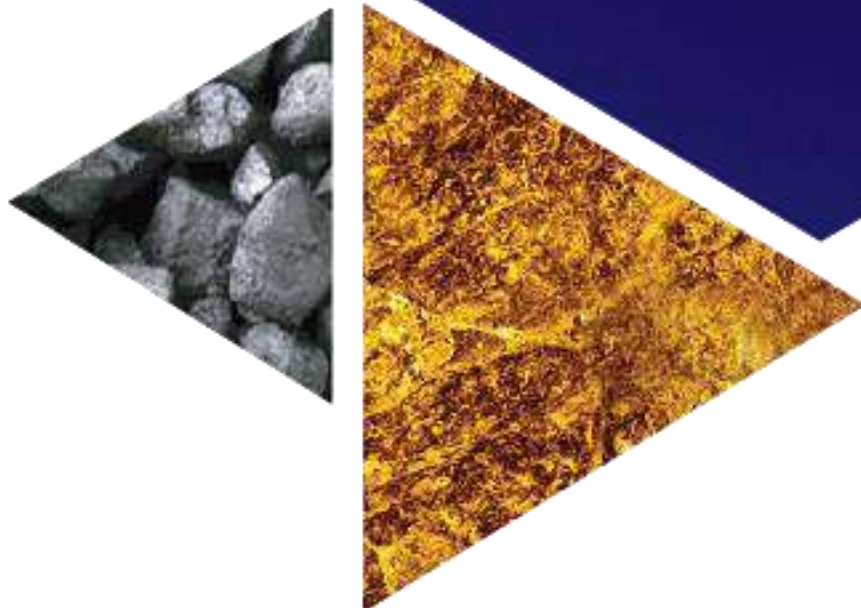
- **Lb** stands for pound, a unit of weight equal to 453.592 grams
- **m** stands for m
- **M** stands for million
- **Measured Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.
- **metallurgy** Physical and/or chemical separation of constituents of interest from a larger mass of material. Methods employed to prepare a final marketable product from material as mined. Examples include screening, flotation, magnetic separation, leaching, washing, roasting etc.
- **mine production** is the total raw production from any particular mine
- **Mineable Quantities** Estimates of in ground tonnes and grades which are recoverable by mining
- **Mineral Reserves** is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.
- **mineral right** for purposes of this Projects, mineral right includes exploration right, mining right, and leasehold exploration or mining right
- **mineralization** any single mineral or combination of minerals occurring in a mass, or deposit, of economic interest. The term is intended to cover all forms in which mineralization might occur, whether by class of deposit, mode of occurrence, genesis or composition
- **mining rights** means the rights to mine mineral resources and obtain mineral products in areas where mining activities are licensed
- **RPM** refers to RPMGlobal Asia Limited
- **mRL** means meters above sea level
- **Mt** stands for million tonnes
- **Mtpa** means million tonnes per annum
- **NI 43-101** National Instrument 43-101
- **OC** open cut mining which is mining from a pit open to surface and usually carried out by stripping of overburden materials
- **Ore** is the portion of a reserve from which a metal or valuable mineral can be extracted profitably under current or immediately foreseeable economic conditions
- **ore processing** is the process through which physical or chemical properties, such as density, surface reactivity, magnetism and colour, are utilized to separate and capture the useful components of ore, which are then concentrated or purified by means of flotation, magnetic selection, electric selection, physical selection, chemical selection, reselection, and combined methods
- **ore selection** the process used during mining to separate valuable ore from waste material or barren rock residue
- **ore t** stands for ore tonne

- **preliminary feasibility study** is a comprehensive study of the viability of a mineral Project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established and an effective method of mineral processing has been determined, and includes a financial analysis based on reasonable assumptions of technical, engineering, legal, operating, economic, social, and environmental factors and the evaluation of other relevant factors which are sufficient for a Qualified Person, acting reasonably, to determine if all or part of the Mineral Resource may be classified as a Mineral Reserve.
- **primary mineral deposits** are mineral deposits formed directly from magmas or hydrothermal processes
- **Probable Mineral Reserve** is the economically mineable part of an Indicated and, in some circumstances, a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.
- **Project** means a deposit which is in the pre-operating phase of development and, subject to capital investment, feasibility investigations, statutory and management approvals and business considerations, may be commissioned as a mine
- **Proven Mineral Reserve** is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.
- **raw ore** is ore that has been mined and crushed in an in-pit crusher, however has not been processed further
- **recovery** The percentage of material of initial interest that is extracted during mining and/or processing. A measure of mining or processing efficiency
- **regolith** is a geological term for a cover of soil and rock fragments overlying bedrock
- **reserves** the [economically] mineable part of a Measured and/or Indicated Mineral Resource, including diluting materials and allowances for losses which may occur when the material is mined
- **resources** a concentration or occurrence of a material of intrinsic economic interest in or on the earth's crust in such form, quality and quantity such that there are reasonable Projects for eventual economic extraction
- **Resources** Resources which have been estimated in accordance with the recommendations of the guidelines provided in the JORC or NI 43-101 Standards of Disclosure for Mineral Projects.
- **RL** means Reduced Level, an elevation above sea level
- **RMB** stands for Chinese Renminbi Currency Unit;
- **RMB/t** stands for Chinese Renminbi per material tonne
- **ROM** stands for run-of-mine, being material as mined before beneficiation
- **saprolite** is a geological term for weathered bedrock
- **secondary mineral deposits** are mineral deposits formed or modified as a result of weathering or erosion of primary mineral deposits
- **shaft** a vertical excavation from the surface to provide access to the underground mine workings
- **sq.km** square Kilometre
- **t** stands for tonne
- **t/bcm** stands for tonnes per bank cubic m (i.e. tonnes in situ) a unit of density

- **tonnage** An expression of the amount of material of interest irrespective of the units of measurement (which should be stated when figures are reported)
- **tonne** refers to metric tonne
- **tpa** stands for tonnes per annum
- **tpd** stands for tonnes per day
- **UG** underground mining which is an opening in the earth accessed via shafts, declines or adits below the land surface to extract minerals
- **upgrade ratio** is a processing factor meaning ROM Grade% / Product Grade %
- **USD** stands for United States dollars
- **\$** refers to United States dollar currency Unit

# Appendix B.

## Participants' relevant experience





**Jeremy Clark – Project Director – RPMGlobal Hong Kong, Bsc. with Honours in Applied Geology, Grad Cert Geostatistics, MAIG, MAUSIMM**

Jeremy has over 15 years of experience working in the mining industry. During this time he has been responsible for the planning, implementation and supervision of various exploration programs, open pit and underground production duties, detailed structural and geological mapping and logging and a wide range of experience in resource estimation techniques. Jeremy's wide range of experience within various mining operations in Australia and recent experience working in South and North America gives him an excellent practical and theoretical basis for resource estimation of various metalliferous deposits including iron ore and extensive experience in reporting resource under the recommendations of the NI-43-101 reporting code.

With relevant experience in a wide range of commodity and deposit types, Jeremy meets the requirements for Qualified Person for 43-101 reporting, and Competent Person ("CP") for JORC reporting for most metalliferous Mineral Resources. Jeremy is a member of the Australian Institute of Geoscientists.

**Bob Dennis, Executive Mining Consultant – RPMGlobal Brisbane, Bsc. With Honours, First class in Applied Geology, FAUSIMM**

Mr. Dennis has 30 years involvement in the mining industries of Australia and in Italy. He has worked in operations management, including mining, processing, planning and support services; planned and executed exploration programs from grass roots to feasibility study levels; recruited and developed teams; estimated resources using geostatistical methods and evaluated prospect and mining opportunities.

Specific Au experience includes ongoing due diligence on numerous epithermal and hydrothermal Au and cu projects in Indonesia, Malaysia and Mongolia. Bob has reviewed and made specific recommendations with respect to the geology, geostatistics, hydrology, environmental studies and the interaction between these aspects and the mining and metallurgy and has assisted Clients in successfully identifying and developing a number of projects within Asia.

**David John Princep – Principal Geologist – Resource Estimation – RPMGlobal Perth, Bsc. MAIG, FAUSIMM**

David is a highly experienced geologist with more than 25 years' experience in the mining industry. David's experience includes, however is not limited to, Due Diligence, Mineral Deposit/Resource Evaluation and Audit, Strategic Pit Optimisation, Conditional simulation grade control implementation, development and training, and Geostatistical training. David is also a Licensed Professional Geoscientist.

David is a Competent Person under JORC and a Qualified Person under NI 43-101.

**Oyunbat Bat-Ochir – Resource Geologist, RPMGlobal, Mongolia, Bsc. Geology**

Oyunbat is geologist with 8 years of experience in Mongolian mining industry. He has technical background in fields of exploration and mapping projects for base metals and Au including detailed mapping and logging, supervision of designing various holes, data analysis and implementation of QA/QC. He involved technical and Mongolian standard resource reports for main Au, VMS, Iron skarn, Au-Co-Mo porphyry projects. He also has good background on GIS softwares for processing data analyses.

Since joined RPMGlobal in 2012, Oyunbat has been working on Due Diligence, GRL, ITR and Exploration advisory projects for Iron, Copper-Au, Molybdenum, Tungsten minerals commodities. Oyunbat has gained an expert level of proficiency in Surpac 3D modelling software.

**Tony Cameron – Executive Mining Consultant MAIG, FAUSIMM**

Tony is a mining engineer with over 30 years of experience in the mining industry. With a strong background in mine geology, Tony gained post graduate qualifications in Business, Law, and Arbitration leading to a specialisation in contracts, along with reserve estimation and project evaluation. Tony worked in operational roles in the first half of his career. He obtained his first class mine manager's certificate and advanced to the positions of Mine Superintendent and Mine Manager for mining companies. He also worked as Project Manager and Area Manager for a Mining Contractor. Over the last 16 years Tony has worked as a mining consultant focused on the Asian and African regions and has been based in Beijing for the past 8 years. During his time as a consultant, Tony has worked with leading consulting groups and financial institutions across Asia, Europe, and Africa on transactions ranging from Due Diligences to IPO's and has gained detailed understanding of the requirements of both investors and banks in regards to public technical report requirements and listing processes on various financial exchanges. Tony has an in depth knowledge of the Asian reserve reporting systems and has gained significant experience in both reviewing projects based on these systems and in converting projects from this region to international standards of reporting such as JORC and NI 43-101. Tony meets the requirements for Qualified Person for 43-101 reporting, and Competent Person for JORC reporting for most metalliferous and non-metalliferous Ore Reserves and is a Fellow of the Australian Institute of Mining and Metallurgy (Membership No: 108264)



– END OF REPORT –

**RPM**GLOBAL

[www.rpmglobal.com](http://www.rpmglobal.com)

AUSTRALIA | BRAZIL | CANADA | CHILE | CHINA | HONG KONG | INDIA | INDONESIA  
MONGOLIA | RUSSIA | SOUTH AFRICA | TURKEY | USA