RESOLUTION MINERALS LTD
ASX: RML

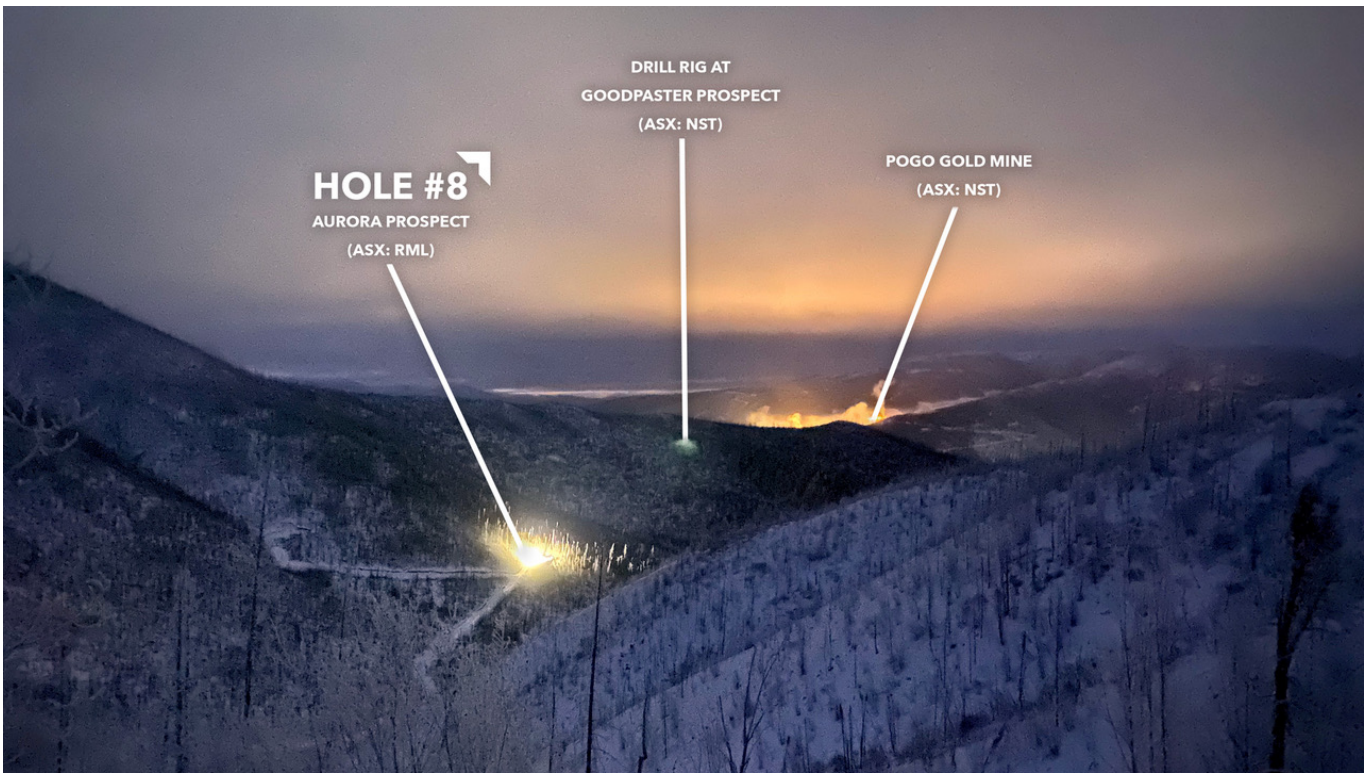
5 November 2020

Alaska Miners Association Convention Technical Presentation of the 64North Project

The annual Alaska Miners Association (AMA) Convention provides an opportunity to take a closer look at the **technical aspects of the 64North Project from a geologist's perspective**.

Resolution Minerals' own Exploration Manager, Christine Lawley presented her technical paper titled, **"64North Project - First Year Exploration Highlights from an Emerging Gold Camp!"** at the AMA Convention overnight in Alaska.

The 30 minute video of the presentation is available from Resolution's website.
www.resolutionminerals.com/investor-center/ama-presentation-nov-2020



Drilling recommenced on 2 November 2020 at the "Central Zone" of the Aurora Prospect adjacent to the world-class, high-grade 11 M oz Pogo Gold Mine and the Goodpaster Prospect owned by ASX listed Northern Star Resources Ltd.

CAPITAL STRUCTURE

Ordinary Shares
Issued 279 M

Options and rights
Listed options 6.1 M @ 10c
Listed options 69.8 M @ 12c
Unlisted options 12.3 M @ 25c
Unlisted options 13.4 M @ 6c
Unlisted rights 7.5 M

Performance Shares
Class A 9.6 M
Class B 3.6 M

Last Capital Raise
August 2020 - Placement & SPP
$5.1M @ 7c

BOARD

Len Dean - Chair
Duncan Chessell - MD
Andrew Shearer - NED
Craig Farrow - NED
Jarek Kopias - Co Sec

Level 4, 29-31 King William Street, Adelaide SA 5000

AMA 2020 Virtual Convention

Exploration Technical Session

64North Project - First Year Exploration Highlights From An Emerging Gold Camp!

2 - 5 November 2020

Christine Lawley - Exploration Manager

RML RESOLUTION MINERALS LTD

ASX: RML

DISCLAIMER, JORC INFORMATION & COMPETENT PERSONS STATEMENT

This presentation has been prepared by Resolution Minerals Ltd (Resolution). This document contains background information about Resolution current at the date of this presentation. The presentation is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation. This presentation is for information purposes only. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sales of shares or other securities in any jurisdiction. This presentation is not a prospectus, product disclosure statement or other offering document under Australian law (and will not be lodged with the Australian Securities and Investments Commission (ASIC)) or any other law. This presentation does not constitute investment or financial product advice (nor tax, accounting or legal advice) and has been prepared without taking into account the recipient's investment objectives, financial circumstances or particular needs and the opinions and recommendations in this presentation are not intended to represent recommendations of particular investments to particular persons. Recipients should seek professional advice when deciding if an investment is appropriate. All securities involve risks which include (among others) the risk of adverse or unanticipated market, financial or political developments. To the fullest extent permitted by law, Resolution, its officers, employees, agents and advisors do not make any representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of any information, statements, opinions, estimates, forecasts or other representations contained in this presentation. No responsibility for any errors or omissions from this presentation arising out of negligence or otherwise are accepted. This presentation may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Resolution. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this presentation speak only at the date of issue of this presentation. Subject to any continuing obligations under applicable law, Resolution does not undertake any obligation to update or revise any information or any of the forward-looking statements in this presentation or any changes in events, conditions, or circumstances on which any such forward looking statement is based.

JORC Information

Additional details including JORC 2012 reporting tables, where applicable can be found in the following relevant announcements lodged with the ASX and the Company is not aware of any new data or information that materially affects the information included in the announcements listed below.

This report includes results that have previously been released under JORC 2012 by the Company "Binding agreement earning 80% of Gold Project in Alaska" on 17 October 2019, "2019 AGM Managing Director's Presentation" on 26 November 2019, "Exploration Update - 64North Project Alaska" on 14 May 2020, "Drilling Update - 64North Project Alaska" on 24 June 2020, "Investor Presentation - Noosa Mining Virtual Conference" on 13 July 2020, "Drilling Commenced at Reflection Prospect - 64North" on 25 August 2020, "Assays and Operations Update 64North Project Alaska" on 10 September 2020, "Boundary Prospect Results at Pogo Trend - 64North Project" on 24 September 2020, "Drilling Results West Pogo Block – 64North Project, Alaska" on 29 September 2020 and "Quarterly Activities and cashflow Report 30 September 2020" on 30 October 2020.

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Mr Duncan Chessell who is a member of the Australasian Institute of Mining and Metallurgy and Australian Institute of Geoscientists. Mr Chessell is a Director and full-time employee of the company. Mr Chessell holds Shares, Options and Performance Rights in the Company as has been previously disclosed. Mr Chessell has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Duncan Chessell consents to the inclusion in the report of the matters based on his information in the form in which it is appears.

Ownership structure 64North Project: Vendor Millrock Resources TSXV:MRO, 4 year earn-in US$5m/yr and JV agreement to earn 60% interest, with pathway to earn up to 80% on a "best block". Mandatory exploration spend $1M / year outside West Pogo Block. A one-off grace period of 6 months allowed through the term of the earn-in (ASX:N27 17/10/19).

Tintinta Gold Province Map – source of data: Pebble (Northern Dynasty, www.northerndynastyminerals.com), Pogo (Northern Star Resources, www.nsrltd.com), Fort Knox (Kinross, www.kinross.com), Donlin Creek (NovaGold, www.novagold.com), Livengood (International Tower Hill Mines, www.ithmines.com), Eagle & Dublin Gulch (Victoria Gold Corp, www.vgcx.com), Brewery Creek (Golden Predator, www.goldenpredator.com), White Gold (White Gold Corp, whitegoldcorp.ca), Coffee (Newmont, www.newmont.com), Kensington (Coeur Mining, www.coeur.com).

CORPORATE SNAPSHOT

Duncan Chessell - *Managing Director*

Geologist, 20+ years experience in business and oil, gas and mineral exploration (gold, battery and base metals) and project generation in Australia and Papua New Guinea. Expert in remote & cold weather logistics. Currently also Non-Executive Director of the Outdoor Education Group.

Len Dean - *Chairman*

Non-Executive; Metallurgist, experienced ASX Chairman, BHP Marketing Director Iron Ore and Group General Manager Minerals Marketing. MD of India's largest listed Iron Ore Company. Over 45 years industry experience.

Andrew Shearer - *Director*

Non-Executive; Geophysicist with a technical and corporate background as resource analyst. Currently also a Non-Executive Director of Andromeda Metals (ASX:ADN), Investigator Resources (ASX:IVR) and part-time Executive Director of Okapi Resources (ASX:OKR).

Craig Farrow - *Director*

Non-Executive; Accountant with a strong commercial acumen across multi sectors including agriculture and telecommunications. Previous Directorships include Vocus Group (ASX:VOC) amongst others.

Capital Structure 1 November 2020	
Ordinary Shares (ASX:RML)	**279m**
Market Capitalisation (A$) - 3.8 cents (30/10/2020)	**$10.6m**
Cash (A$) (30 Sep 20) (last quarterly report)	**$4.6m**
Enterprise Value (A$)	**$6m**
Listed Options $0.10/sh, expire 30/6/22 (ASX:RMLOA)	6.1m
Listed Options $0.12/sh, expire 30/9/23 (ASX:RMLOB)	69.8m
Unlisted Options $0.25/sh, expire 6/9/21 (5.8m) & 21/3/21 (6.5m)	12.3m
Unlisted Options $0.06/$0.08/$0.10/sh, expire 30/11/22	13.4m
Unlisted rights	7.5m
Performance Shares - Class A (milestones on Wollogorang project)	9.6m
Performance Shares - Class B (milestones on Wollogorang project)	3.6m

Technical Team Resolution Minerals Ltd

Christine Lawley - Exploration Manager
Christine has 15 years' mineral exploration experience in gold, base and strategic metals with Newmont, Musgrave Minerals and Iluka and holds a Masters Degree in Ore Deposit Geology. Before joining RML Christine was consulting for 5 years in Australia to multiple ASX listed companies on greenfield projects. Christine leads a combined North American and Australian 64North Project technical team and as well as overall Exploration Manager for Resolution in a full-time capacity.

Kelvin Blundell - Consulting Geophysicist
Sandfire's consulting geophysicist for the significant DeGrussa Cu-Au massive-sulphide discovery with 20 years experience in Australia, Canada and Africa.

Projects

64North Project; Gold; Fairbanks Alaska (earning up to a 80% interest)
The 64North Project is adjacent to Northern Star's (NST) high grade world class operating Pogo Gold Mine with a 11M oz Au endowment. A brown fields project only 800m from recent discovery success by Northern Star. Drilling underway with a strong pipeline of regional targets.
Wollogorang Project; Copper- Cobalt & Uranium; NT, Australia
Stanton Cobalt Deposit - inferred & indicated JORC 2012 resource containing 1200 tonnes of cobalt. Drill ready base metal (Copper) targets, with uranium prospectivity.
Snettisham Project: Gold and Ti-V-Magnetite potential, Juneau, Alaska
Three (3) historic gold mines on the property in the same geological setting and style as the 1.5M oz Kensington Gold Mine operating today nearby in the Juneau Gold Belt. Also a conceptual large target of vanadium bearing titaniferous magnetite, which is drill ready.

RESOLUTIONMINERALS

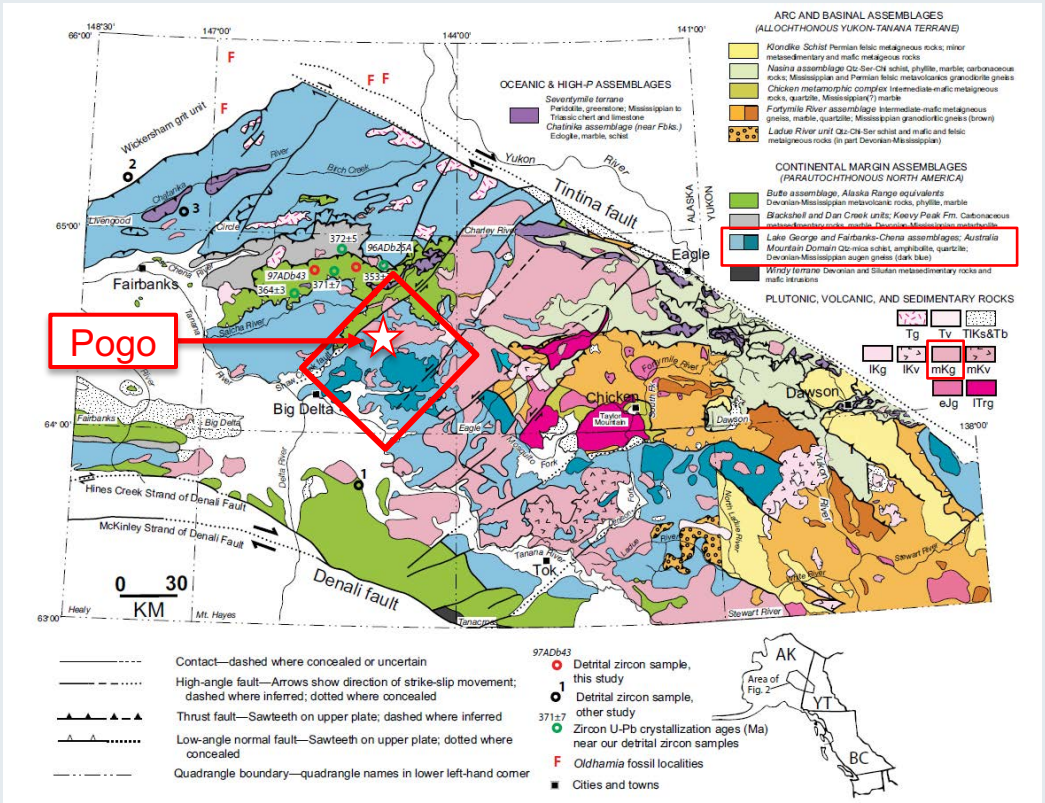
ALASKA TINTINA GOLD PROVINCE – GIANT GOLD DEPOSITS!

Resolution's 64North Project

- Within the Yukon Tanana Upland of the highly endowed Tintina Gold Province.
- 120km east of Fairbanks.
- 660km^2 land package surrounds the high-grade 11Moz Au Pogo Mine and falls within the **Goodpaster District**.
- 64North is an underexplored emerging Gold Camp scale system!

Deposit sizes stated as Endowment (Resources & Reserves + Historic Production), from Company websites, as listed on disclaimer slide

64NORTH PROJECT – GOODPASTER DISTRICT GEOLOGY



Goodpaster District – Red Rectangle

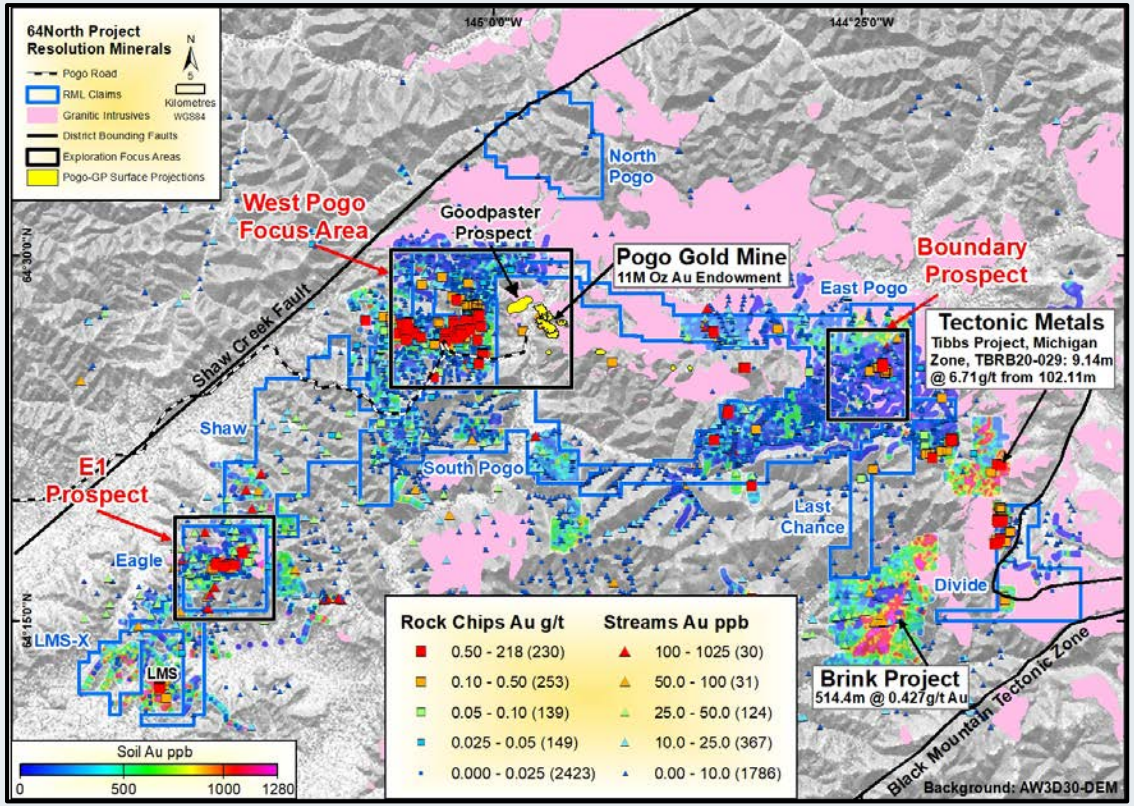
The Goodpaster District is bound by the Shaw Creek Fault to the NW and the Black Mountain Tectonic Zone to the SE (both left lateral conjugate faults trending SW-NE).

The Goodpaster District geology is dominated by amphibolite facies basement (Devonian-Mississippian Fairbanks-Chena assemblages), intruded by the mid-Cretaceous Goodpaster batholith (mKg).

Targeting Intrusion Related Gold System.

(Dusel-Bacon et al., 2017)

64NORTH PROJECT – HISTORIC DATA REVIEW



Distribution of intrusions (80-102 Ma) in the Goodpaster District
Considered the main mineralising engine room present throughout Tintina Gold Province (**pink on map**)

64North Project
9 Blocks: LMS-X, Eagle, Shaw, South Pogo, West Pogo, North Pogo, East Pogo, Last Chance, Divide

Historic Exploration Database 1998-2012

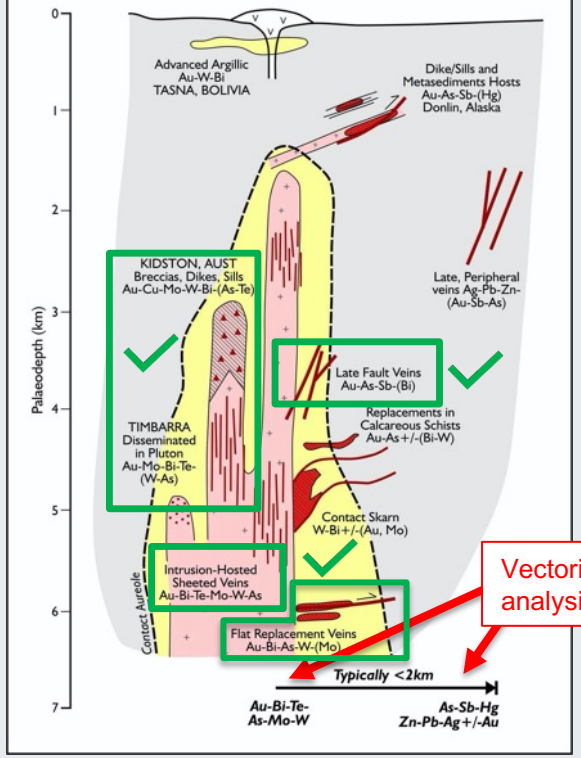
- ~40,000 Surface Samples
- 11,434 m of NQ core drilling
- Airborne Magnetics & EM

Desktop Review & Target Ranking
31 Prospects

RESOLUTIONMINERALS

MINERALISATION STYLES – WHAT ARE WE TARGETING

Reduced Intrusion Related Gold Systems **IRGS**



Applied **3 filters** with a focus on economic criteria for IRGS in the district.

1. Mineralisation style

Most Favourable: Pogo-style Flat Replacement Veins (1st), Intrusion Hosted and Late Fault Veins

2. Individual Target Ranking Score (weighted scores)

Geology, Geochemistry, Geophysics, Drilling, Social license, Access and Logistics

3. Economic Size Potential

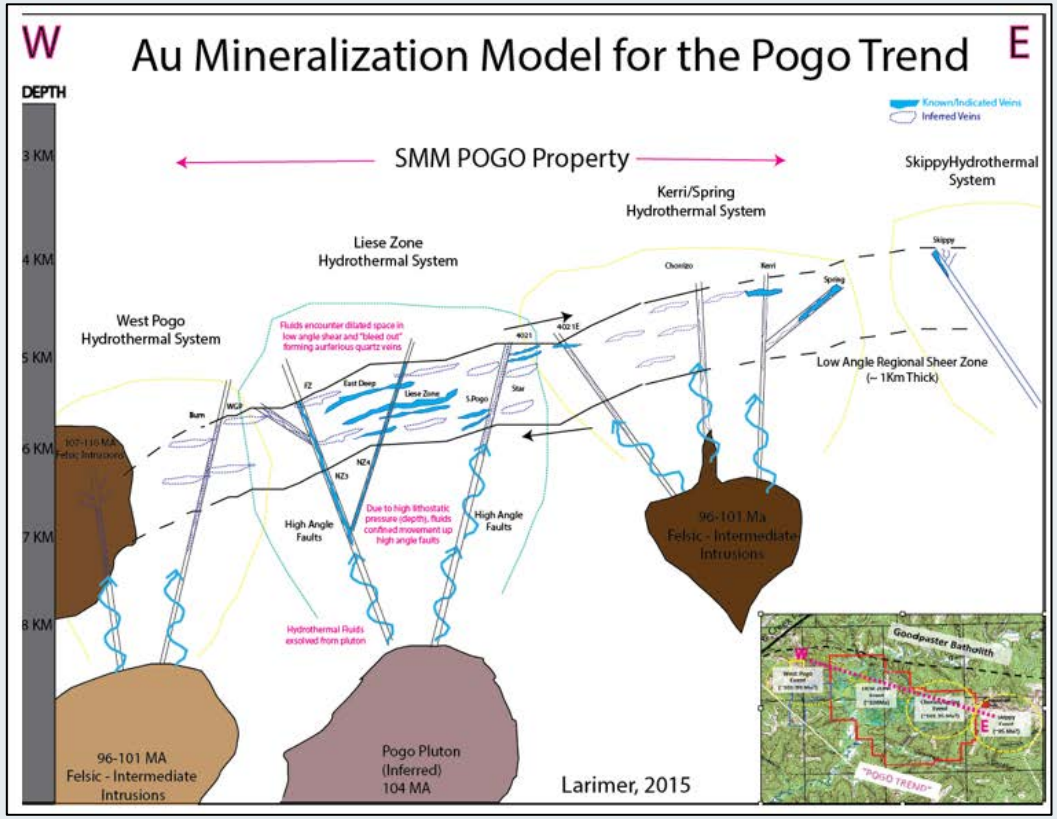
Remaining Search Space

Vectoring to higher grade zones can be guided by analysing multi-elements and minerals present.

Robert et al, 2007

RESOLUTIONMINERALS

64NORTH PROJECT – POGO TREND IN SECTION



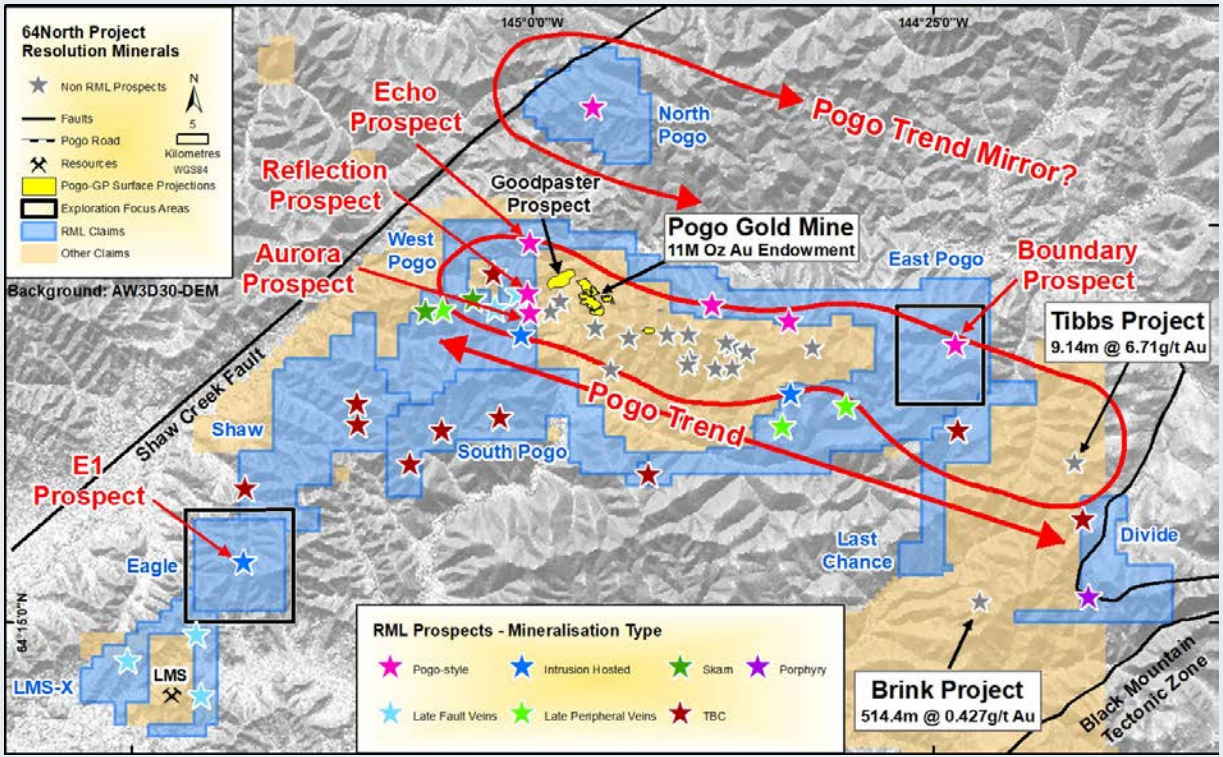
Syn-mineralisation model of the “Pogo Trend” produced by Dave Larimer (2015).

Interplay of hydrothermal fluid source (**intrusions**), fluid conduits (**high angle faults**) and dilation zones (**low angle regional shear – compression with later extension for more dilation**).

Producing 1 – 10m thick (3m av), flat lying, low sulphide quartz veins (~ 3%) with a dolomite-sericite alteration halo (**typically resistivity <600 ohm.m**)

Model is focused WNW-ESE across NST’s ground, however trend extends beyond across RML’s ground to the west and east.

64NORTH PROJECT – POGO TREND IN PLAN



Pogo Trend Includes:

- Goodpaster
- Pogo Gold Mine
- Tibbs Project
- **West Pogo Block**
- **East Pogo / Boundary**

Intrusion Hosted Includes:

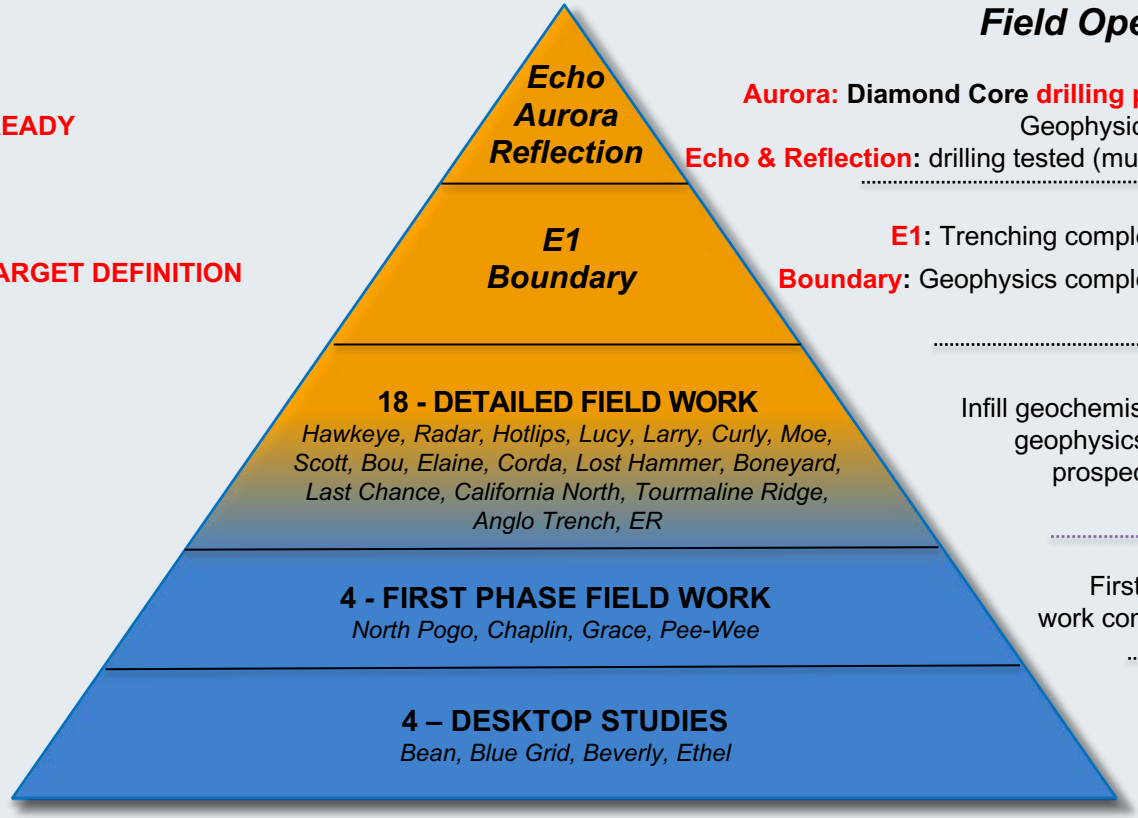
- Brink Project
- **E1 Prospect**

- **31 Prospects In Total**

- **5 Priority Prospects; Aurora, Reflection, Echo, Boundary, E1**

RESOLUTIONMINERALS

PROSPECT RANKING PYRAMID - 31 PROSPECTS



Field Operations 2020

Aurora: Diamond Core drilling program underway
Geophysics (ZTEM) complete
Echo & Reflection: drilling tested (multi-element pending)

E1: Trenching complete, drill ready Q2'21
Boundary: Geophysics complete, drill ready Q2'21

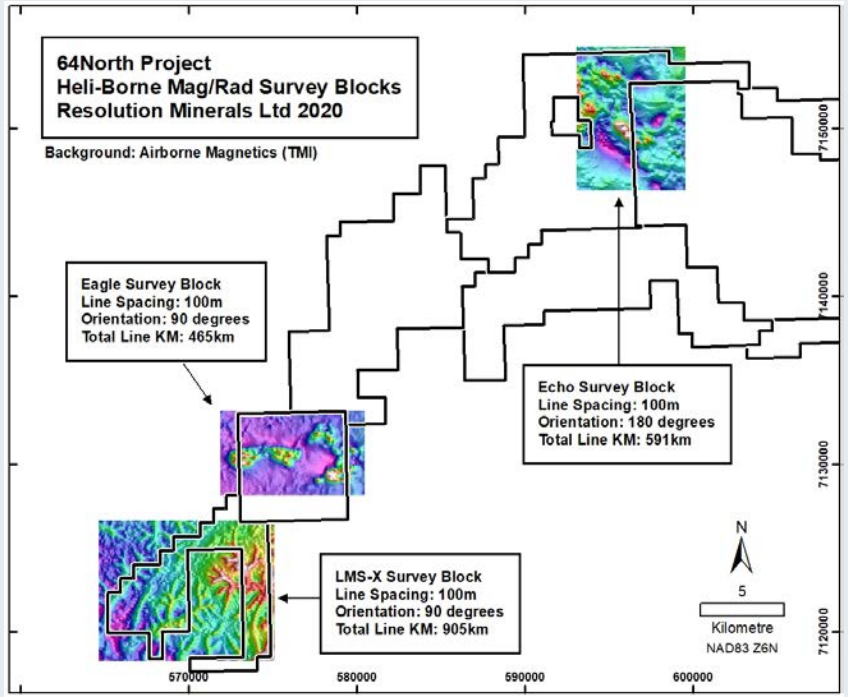
Infill geochemistry, mapping and/or geophysics complete on **12/18** prospects (results pending)

First pass validation field work complete at North Pogo

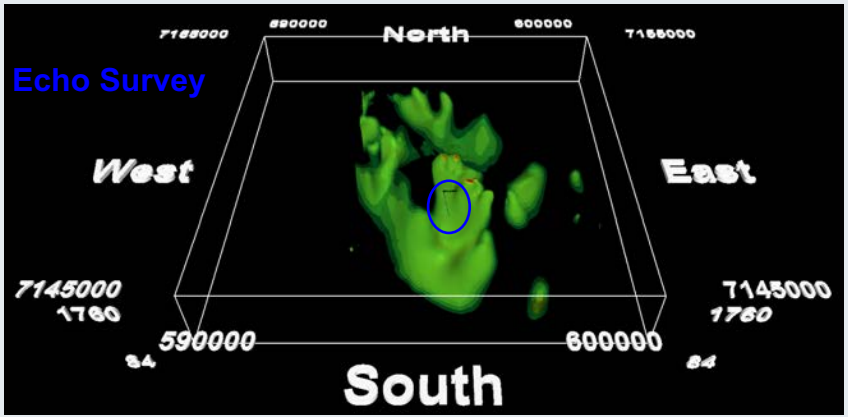
Desktop Review

RESOLUTIONMINERALS

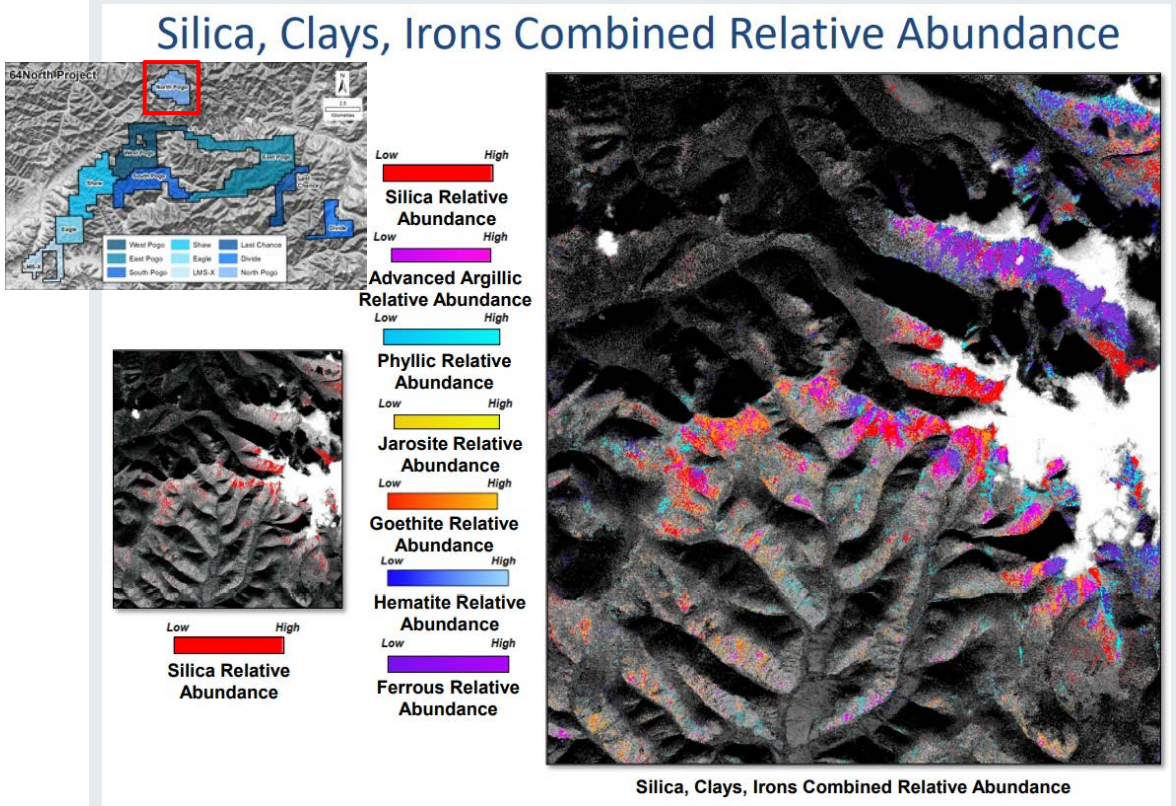
2020 DGGS SHAW CREEK AND SHAWNEE PEAK MAG/RAD



- Participants in the 2020 DGGS airborne magnetic and radiometric geophysical survey (GPR 2020-16).
- Three survey blocks; West Pogo, Eagle & LMS-X.**Total: 1961 line km**
- 3D magnetic models (unconstrained inversions) created to aid drill targeting.
- 20AU07 (712m) for reference



INNOVATIVE EXPLORATION TECHNIQUES: WORLDVIEW-3



Silica, Clays, Irons Combined Relative Abundance

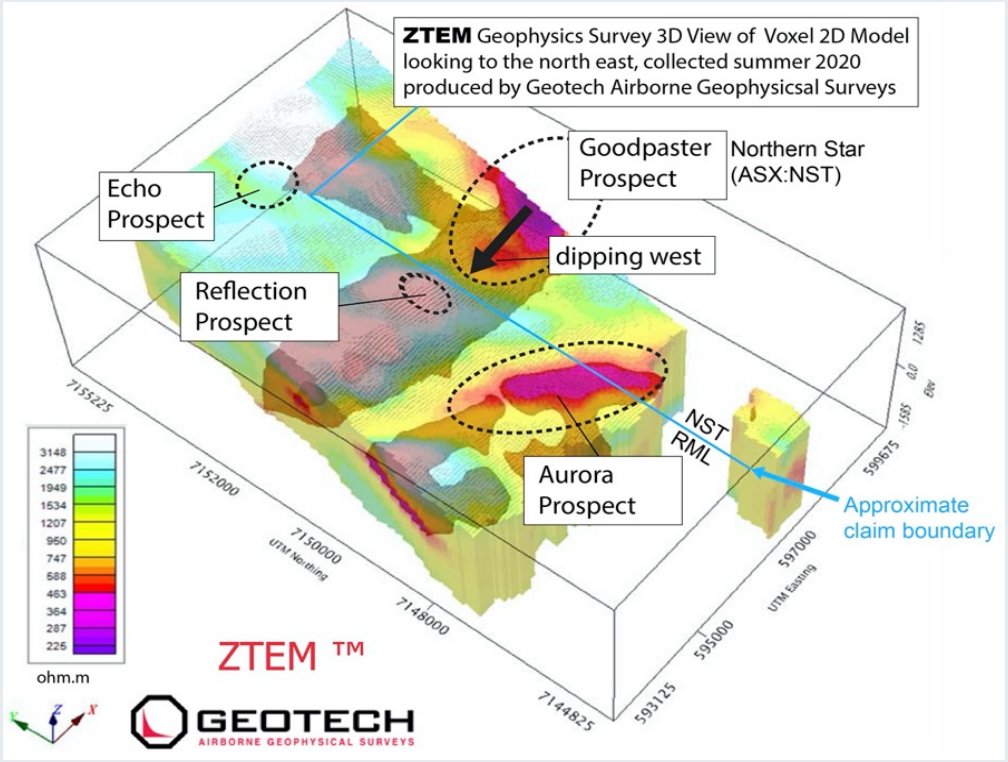
WordView-3 Satellite

- 17 spectral bands.
- WV3 high resolution (30cm) verse Landsat and ASTER (15m).
- Image processing maps: cover type, spectral geology and alteration (35 derivatives).
- Concentrations of iron, clay and silica minerals mapped.

- **Successfully** trialled two areas with minimal vegetation.
- Narrow window of opportunity in AK - snow & cloud!
- June-Oct = 5% chance of having <10% cloud!!!

RESOLUTIONMINERALS

INNOVATIVE EXPLORATION TECHNIQUES: ZTEM



3D view of ZTEM (2D) inversion resistivity voxel model looking to the NE

ZTEM (Z-Axis Tipper Electromagnetic System) is an airborne passive electro-magnetic (EM) technique used to map subsurface resistivity contrasts (note: conductivity is the inverse of resistivity).

The advantage of using ZTEM is it can cover large areas quickly and cost effectively and can penetrate conductive cover to depths beyond 1km.

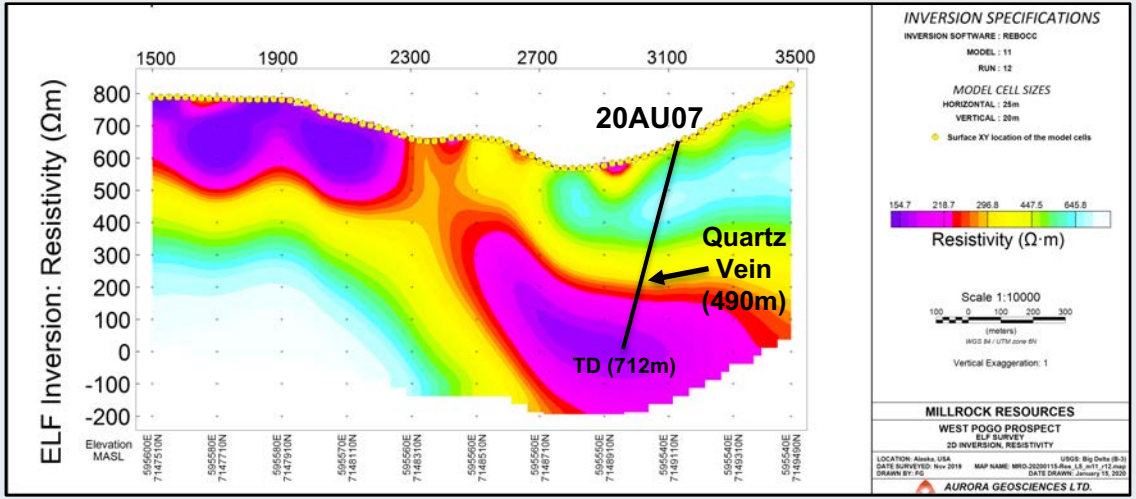
ZTEM was flown across **West Pogo**, extending east across the Goodpaster Prospect for validation purposes. ZTEM defined an **anomaly coincident with Goodpaster Prospect and defined anomalies at West Pogo**. 2nd survey completed at East Pogo.

INNOVATIVE EXPLORATION TECHNIQUES: ELF-EM

Extremely Low Frequency Electromagnetics (ELF-EM) is a light-weight (10kg), ground based geophysical system, which typically requires only 2 operators.

ELF-EM measures the spatial attitude and ellipticity of the local time varying magnetic field, which reflects horizontal changes of ground conductivity (inverse of resistivity).

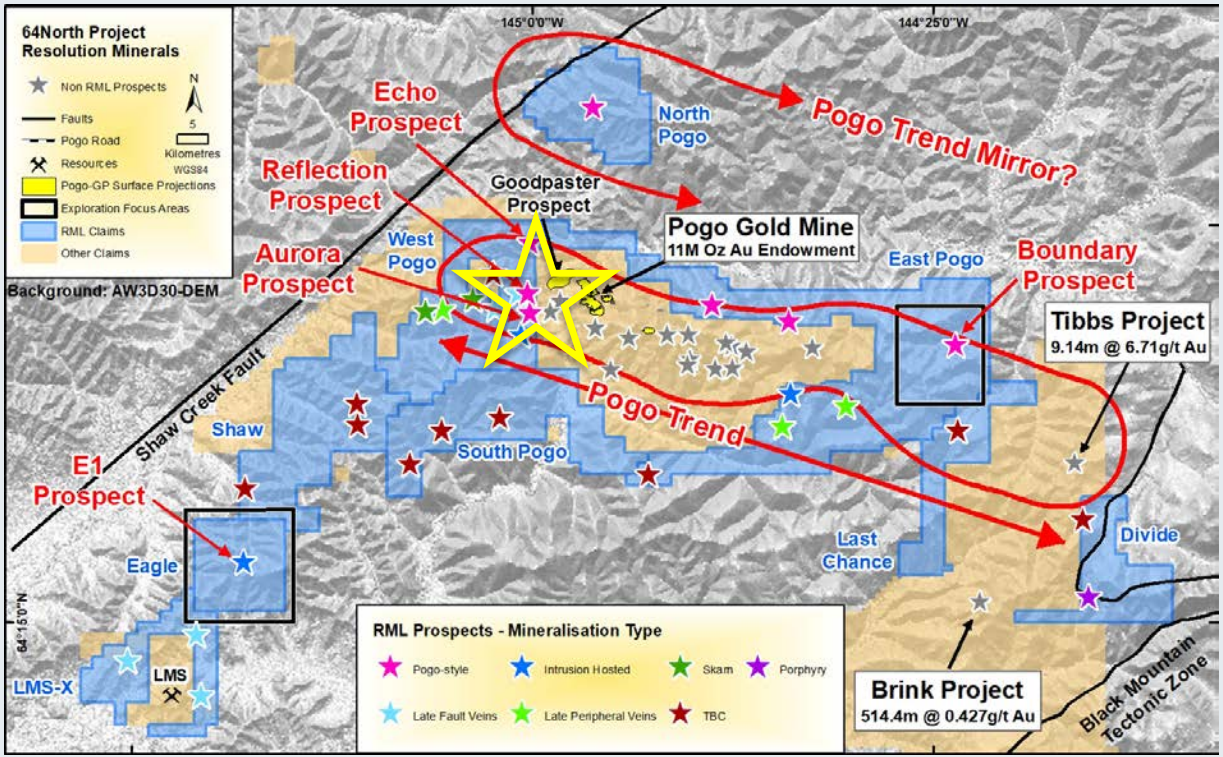
ELF can be used to “follow up” ZTEM airborne survey to detail and validate ZTEM anomalies.



Diamond Drill Test (20AU07)

- ELF target horizon in the Aurora Prospect “Central Zone” drill tested
- 7m (20ft) sulphide bearing quartz vein intersected.
- No significant gold grades, but values > background.
- Follow-up drilling underway chasing high grade.

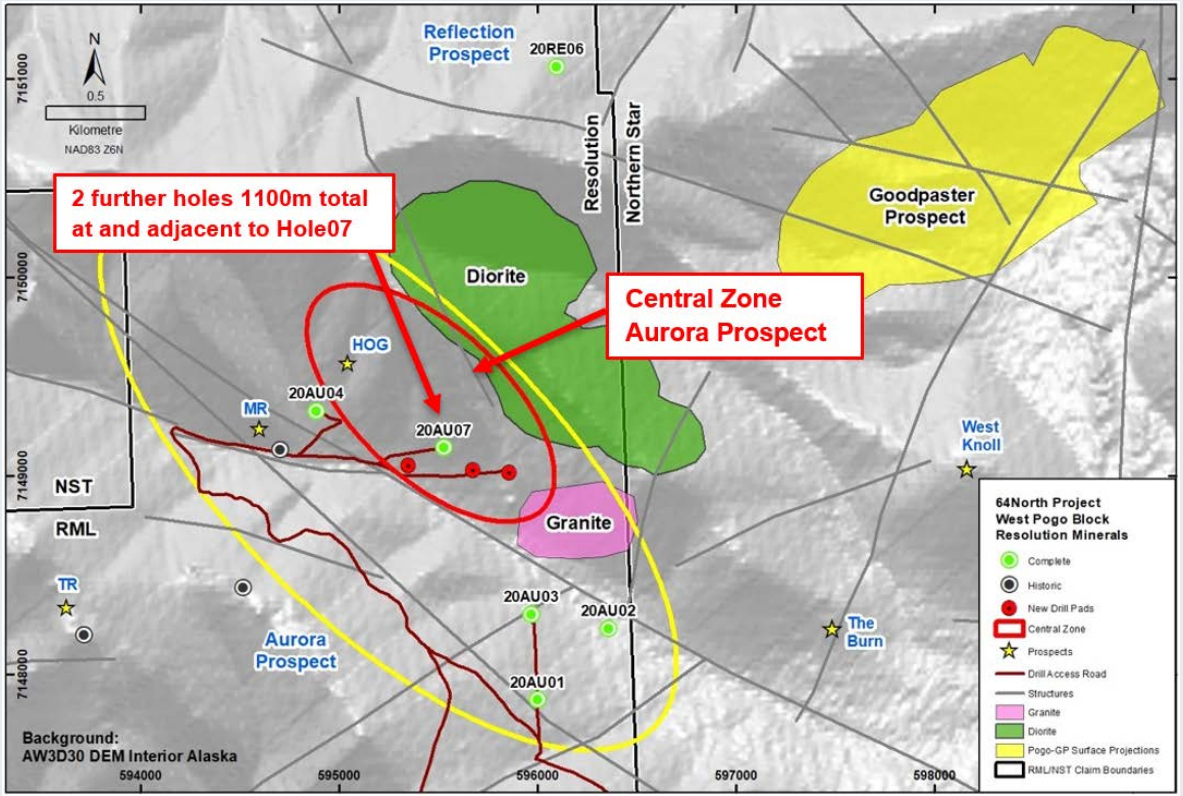
WEST POGO BLOCK, AURORA PROSPECT



Aurora Prospect
Favourably positioned along the “Pogo Trend” ~ 1km west of Pogo & Goodpaster.

Opportunity
Target anomalies immediately along strike, with equivalent; lithological, structural, geochemical and geophysical signatures.

WEST POGO BLOCK, AURORA PROSPECT



Targeting involved the integration of historic mapping, drilling and surface geochemistry with recently acquired CSAMT, ELF-EM, ZTEM, magnetic and radiometric geophysical data sets.

With each drill hole, the technical team have acquired a greater understanding of the geology and structural regime of the project area.

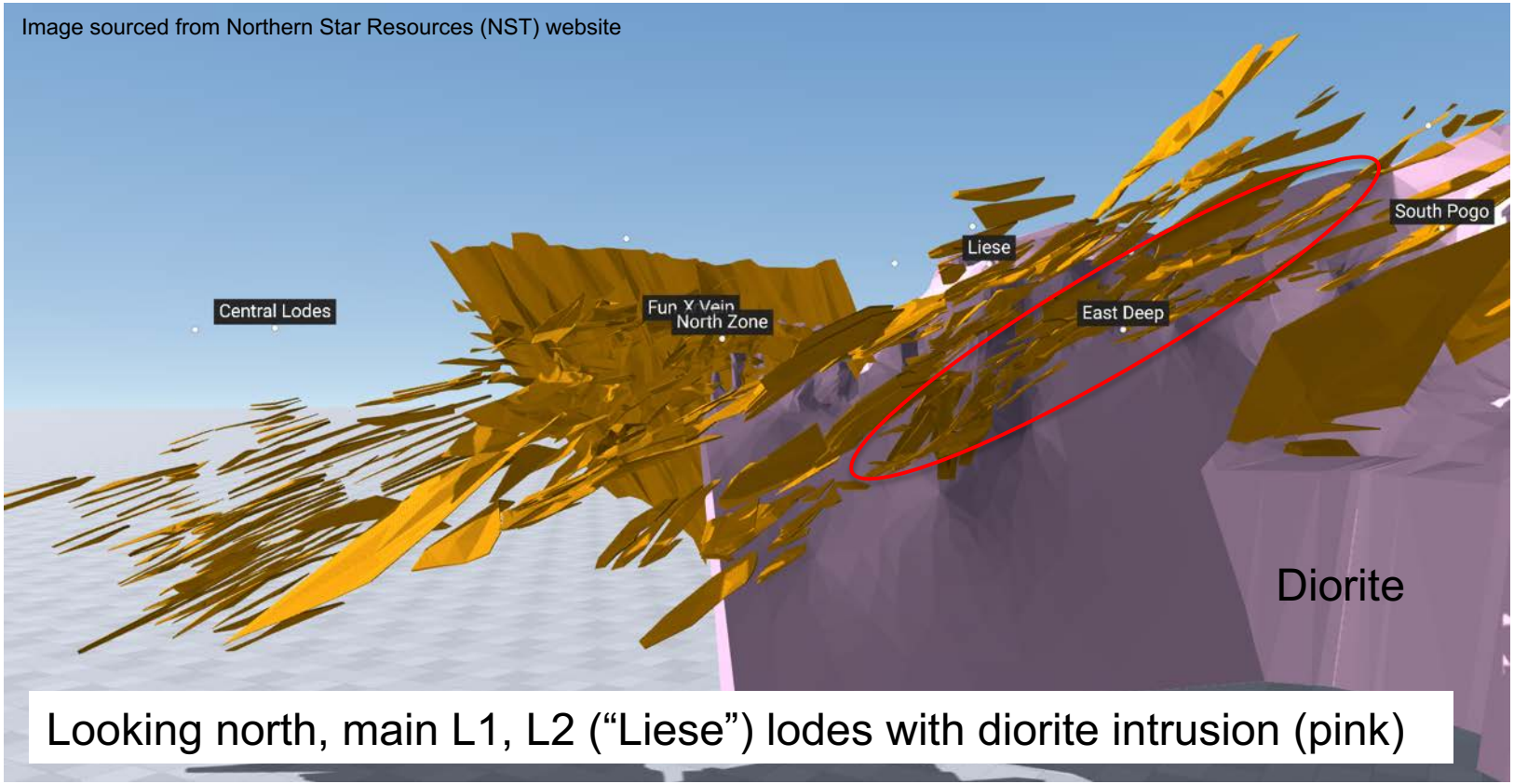
On the seventh drill hole had a major technical success intersecting a **flat lying, 7m thick, sulphide bearing quartz vein, hosted in paragneiss** in the Central Zone (1500 x 750m).

AURORA PROSPECT – Hole #7 (20AU07)

Hole#7 (20AU07) Quartz vein with fuchsite and sulphides - arsenopyrite, pyrite, pyrrhotite (did not carry Au grade)

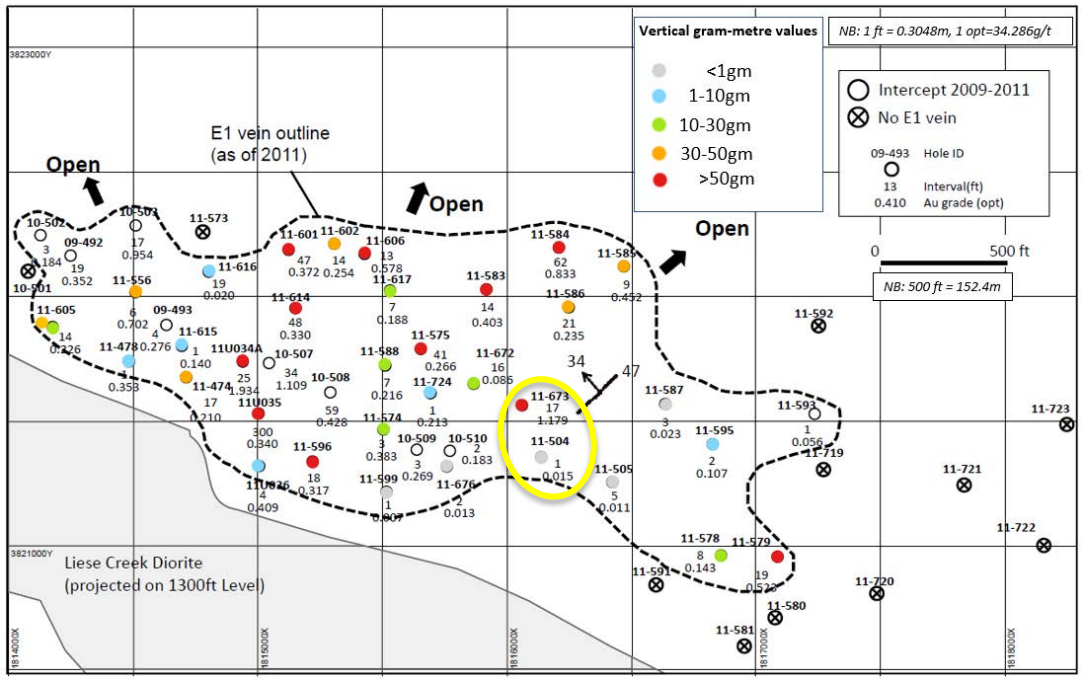
- Pogo-style quartz vein.
- Thick, flat lying quartz vein demonstrates the right structural setting to create space and focus fluids (dilational zone) but not significant mineralisation.
- Maximum grade intersected Aurora Prospect 1.59g/t Au HoleID:20AU01, with typical Pogo Au-As-Bi-Te pathfinder elements.

Northern Star Pogo Gold Mine 3D Model – NST website



Looking north, main L1, L2 (“Liese”) lodes with diorite intrusion (pink)

WEST POGO BLOCK, AURORA PROSPECT



gm (gram.metres) = Grade x thickness for drill intercepts for E1 vein as at 2011 (modified from Larimer et al 2013)

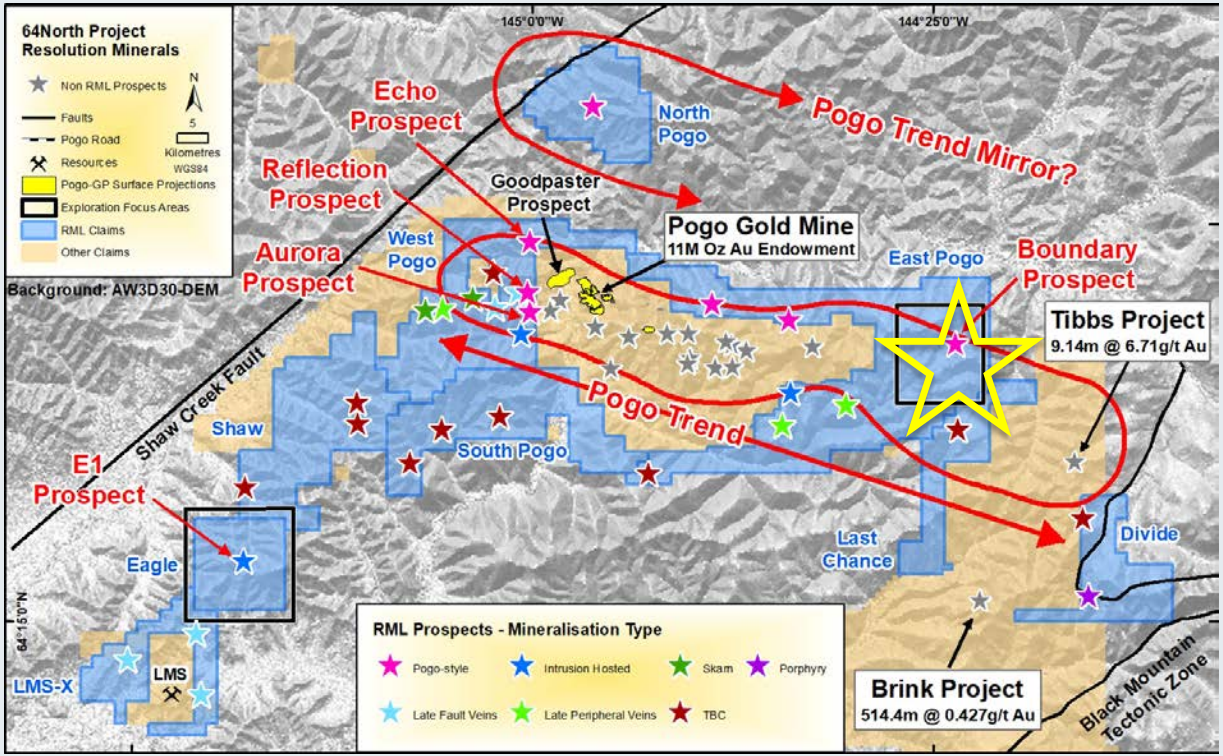
Near miss?
Published literature (Larimer et al, 2013) indicates extreme grade variability seen over short distances (50m) in veins at the Pogo Mine.

Grid squares ~150m

Note: pre-2011 intersections left blank (unverified vertical).

RESOLUTIONMINERALS

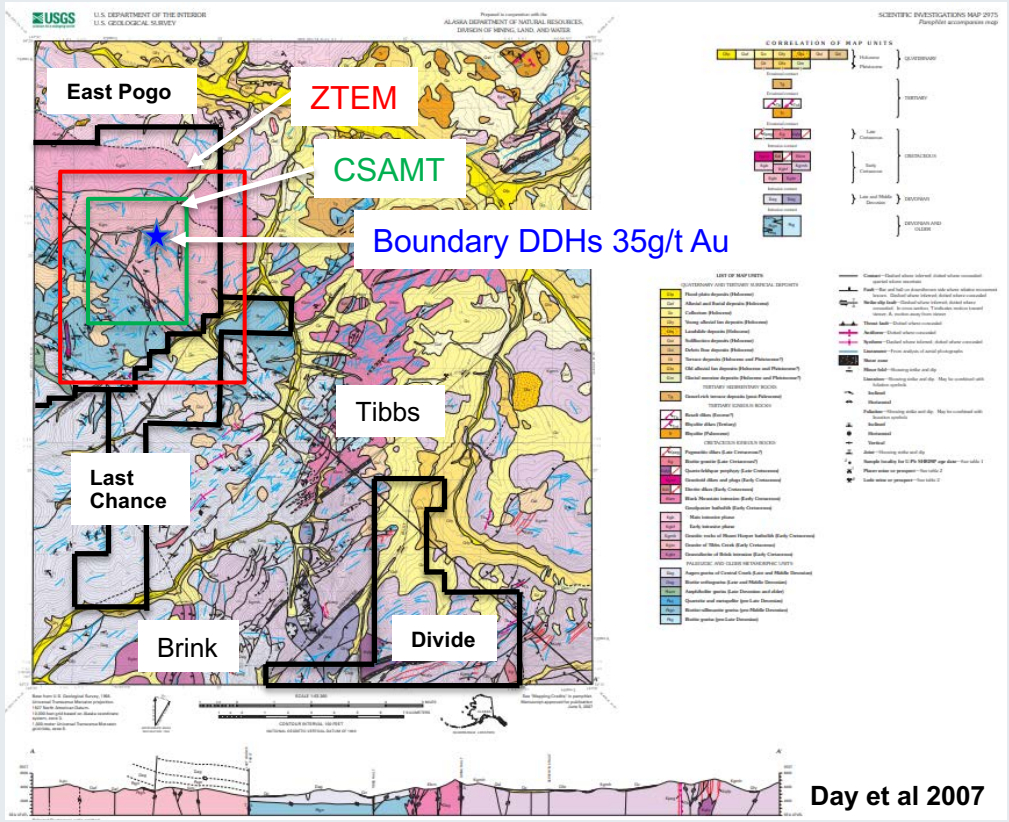
EAST POGO BLOCK, BOUNDARY PROSPECT



Boundary Prospect
Favourably positioned along the “Pogo Trend” between Pogo Mine /Goodpaster Prospect and the Tibbs Project.

Opportunity
Apply geophysical techniques (new to the Goodpaster District) to test for blind targets.

EAST POGO BLOCK, BOUNDARY PROSPECT



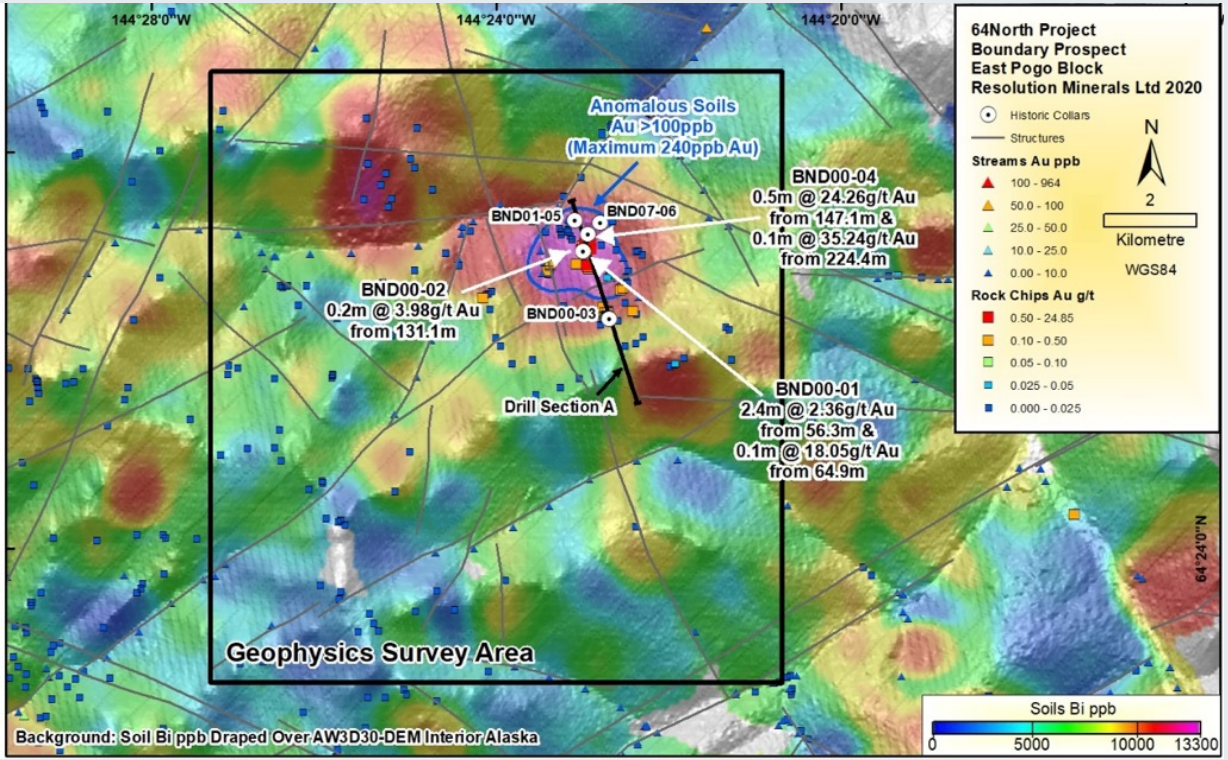
According to Day et al 2007, augen gneiss/orthogneiss has been thrust upon paragneiss.

Timing of the thrusting is interpreted at 111 Ma (compressional event), prior to the influx of mineralising fluids between 80-102 Ma (extensional event).

Recent mapping indicates significantly more paragneiss then previously thought and the presence of thrust contacts coincident with ZTEM & CSAMT anomalies.
(daylighting anomalies on talus slopes).

Major Last Chance Fault runs parallel to the Tibbs and Brink Fault (fluid pathways).

EAST POGO BLOCK, BOUNDARY PROSPECT



Historic Exploration

>100ppb Au broad multi-element soil anomaly (Au-Bi-Te-As-W-Sb) with rock chips up to **24.85g/t Au**

Historic Drilling - 6 holes 1690m, Western Keltic (2000) & Rimfire (2007)

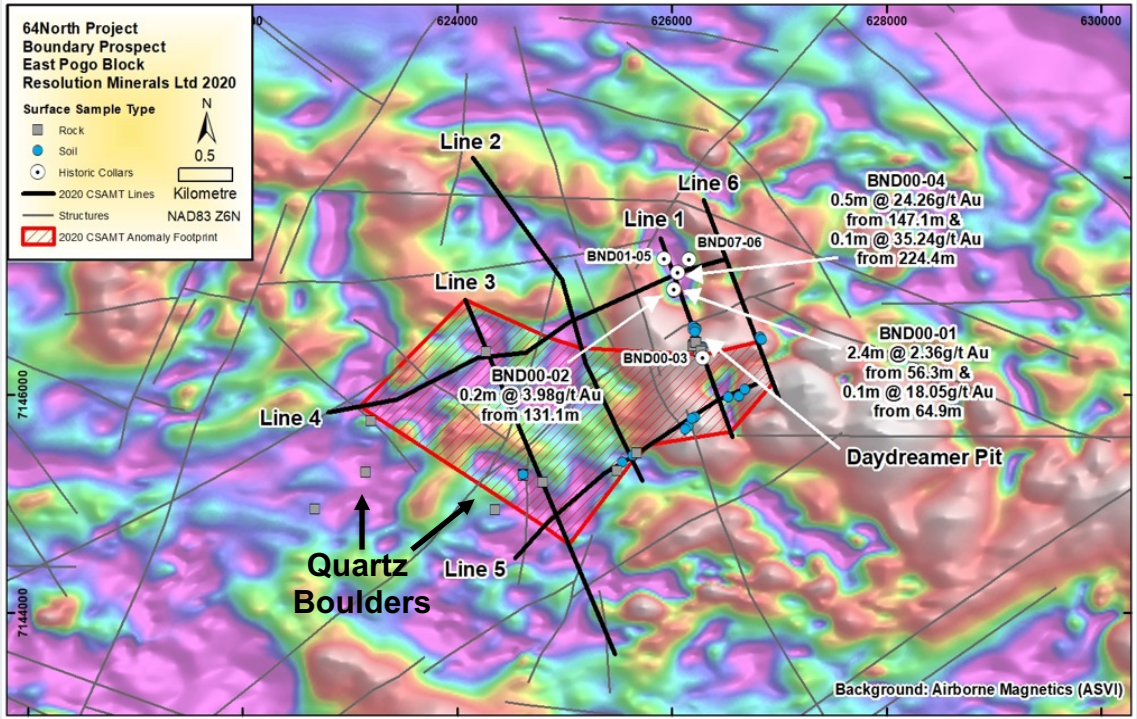
→ BND00-04: 0.5m @ **24g/t Au** from 147m

→ BND00-04: 0.1m @ **35g/t Au** from 224m

→ Narrow tensional veins hosted in paragneiss

RESOLUTIONMINERALS

EAST POGO BLOCK, BOUNDARY PROSPECT



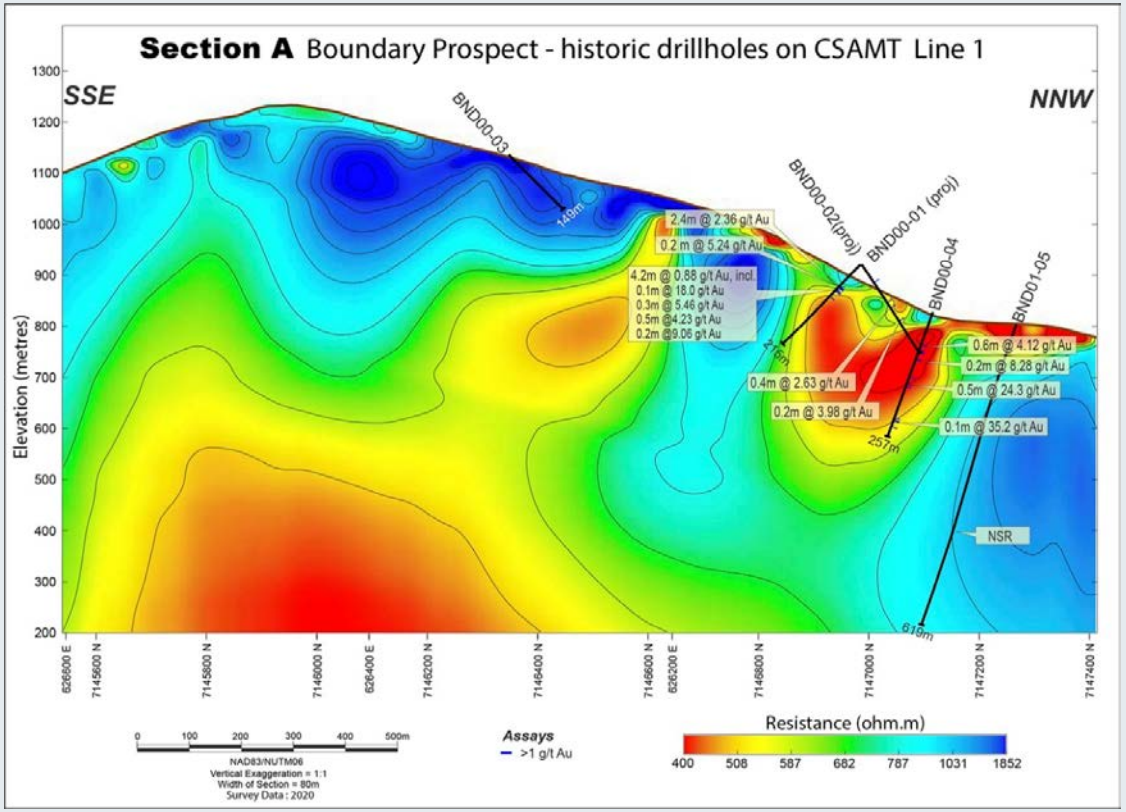
CSAMT completed in two orientations across historic Au drill intercepts.

Larger survey was focussed on demagnetised zones in areas of mapped paragneiss.

Surface sampling and mapping completed across “daylighting” CSAMT anomalies.

Anomalies coincide with thrust contacts (talus slopes). **Sulphide bearing quartz boulders present.** Assays pending.

EAST POGO BLOCK, BOUNDARY PROSPECT

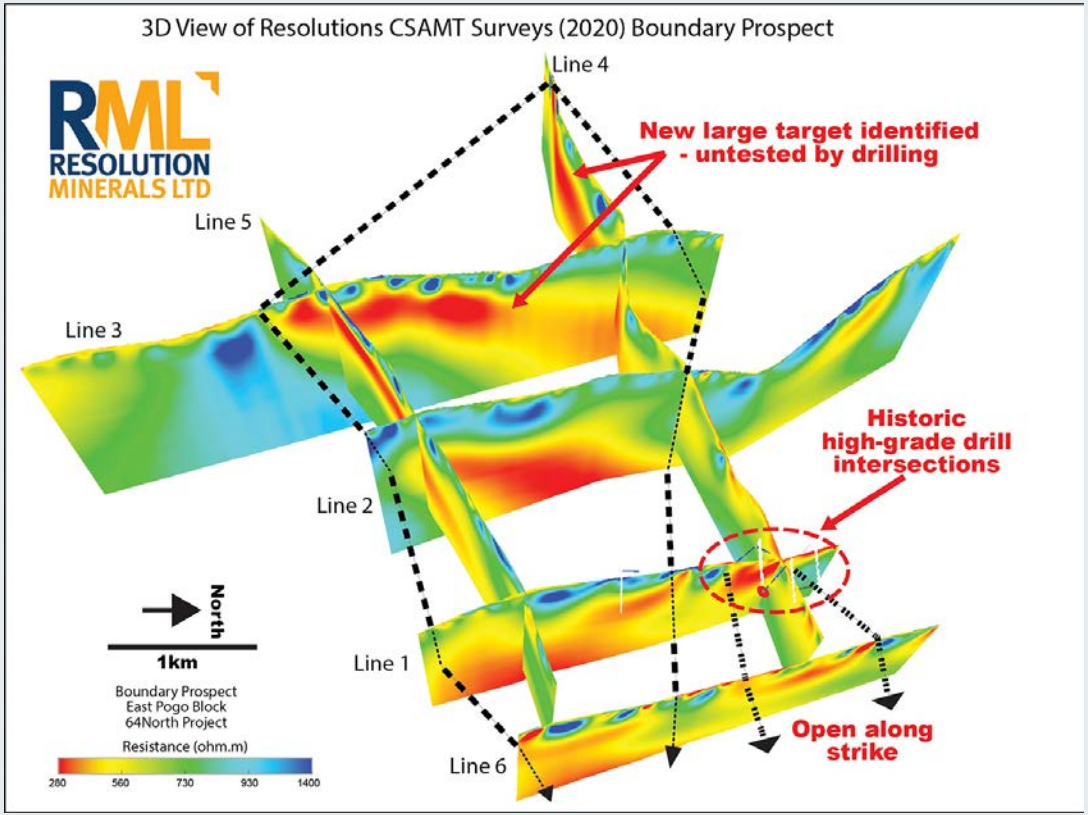


RML deem the survey results to be extremely positive given;

- ✓ Known mineralisation (**35g/t Au**) coincides with a resistivity response consistent with Pogo.
- ✓ The right host rocks (paragneiss) and structural setting (thrusts) to create space and focus fluids.
- ✓ Additional targets, focussed search space & large scale potential.

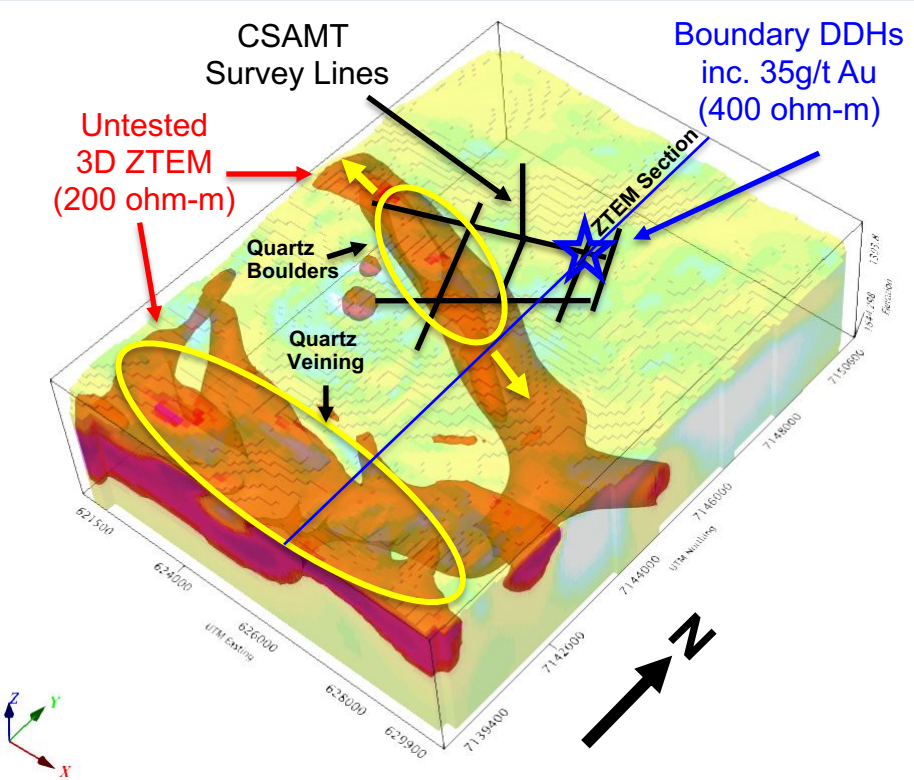
RESOLUTIONMINERALS

EAST POGO BLOCK, BOUNDARY PROSPECT – CSAMT SURVEY



- ✓ Historic high grade mineralisation up to 35g/t Au.
- ✓ Conductive response (anomaly) associated with the known mineralisation.
- ✓ Survey defined a large, thick contiguous anomaly to the south-west.
- ✓ Mapping identified orthogneiss thrust over “conductive” paragneiss.
- ✓ Potential Pogo-style.

EAST POGO & LAST CHANCE BLOCKS – ZTEM SURVEY

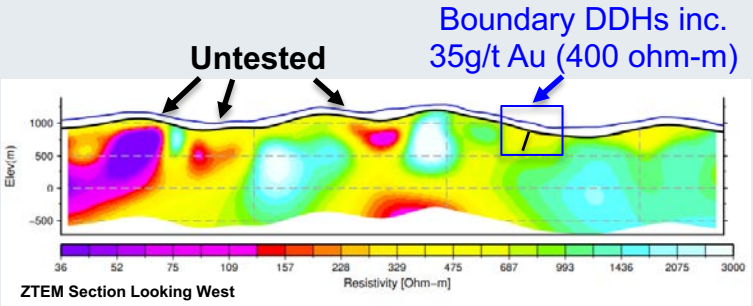


ZTEM flown coincident beyond a CSAMT.

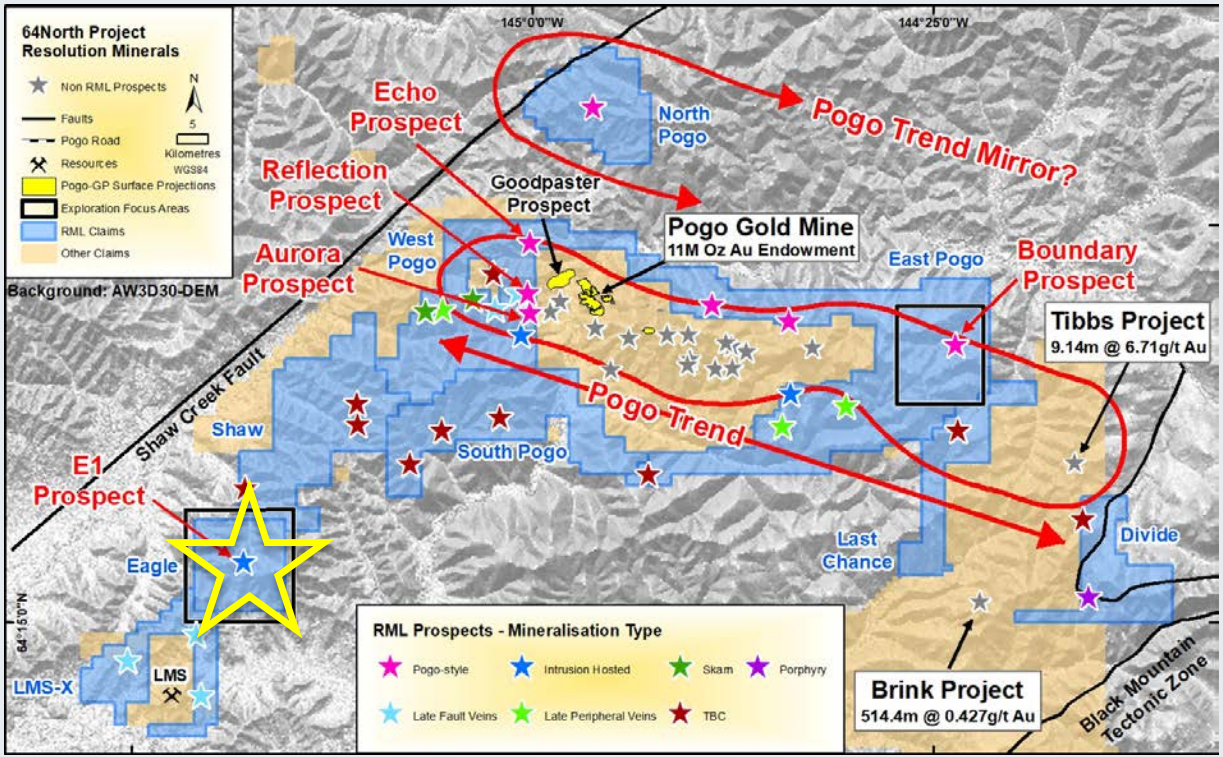
ZTEM results support the CSAMT anomalies (200-400 ohm-m) and have defined additional anomalies along strike and to the south.

Rock chips, including **sulphide-bearing quartz boulders** and paragneiss cross cut by quartz veining. Assays Pending.

ELF-EM / infill surface Geochem planned to aid drillhole definition.



EAGLE BLOCK, E1 PROSPECT - LOCATION

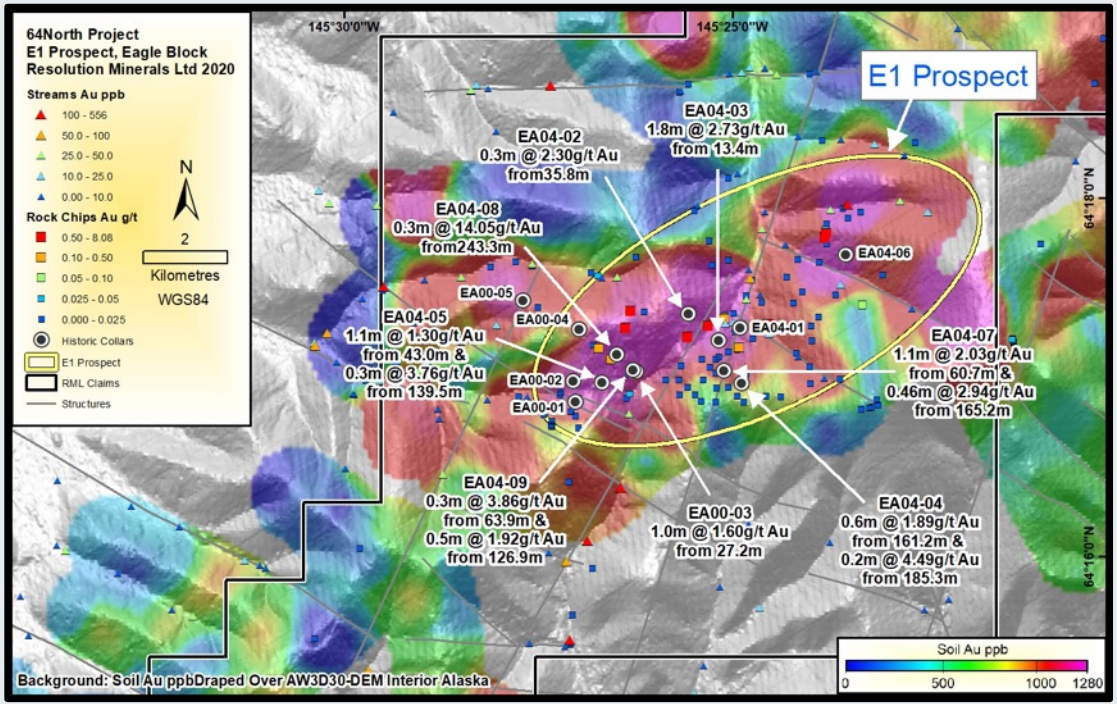


E1 Prospect Large-scale Intrusion Hosted Gold Potential

Opportunity
Target anomalies, with equivalent; lithological, structural, geochemical and geophysical signatures to Fort Knox & the Brink Project.

Causative intrusion is 5x that of Fort Knox, one of the most profitable mines in AK.

EAGLE BLOCK, E1 PROSPECT – HISTORIC WORK



E1 Prospect, Eagle Block. Historic drill holes and selected significant intersections.
Drilling completed prior to airborne magnetics survey!

Elevated Au geochemistry

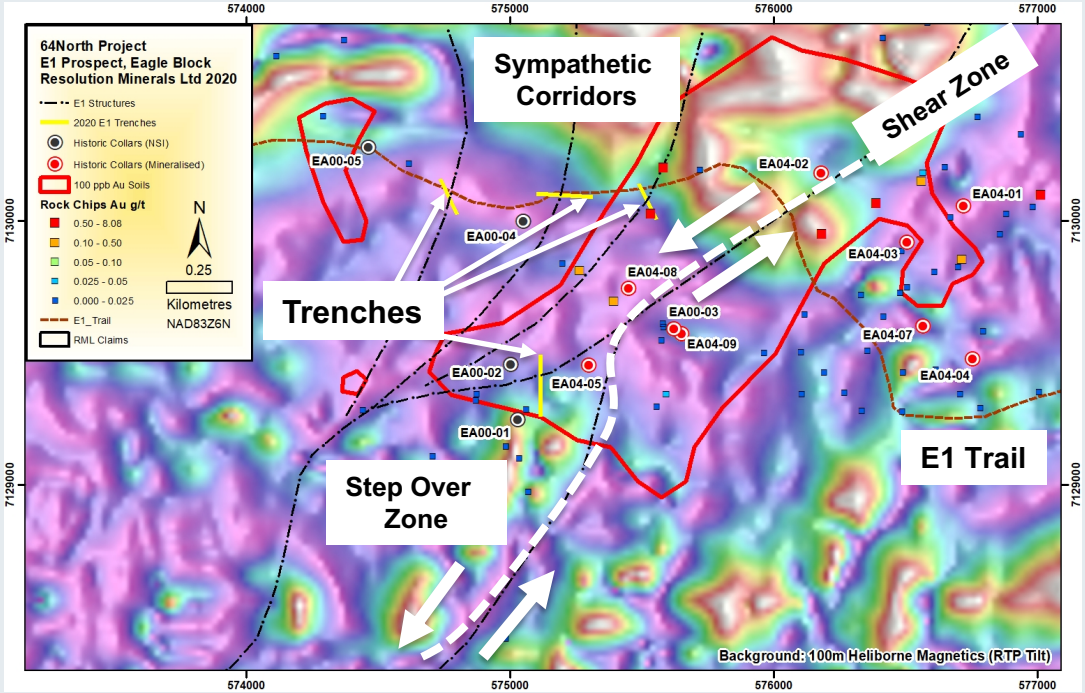
- 40km^2 footprint
- Rock chips to 8g/t Au
- Soils to 1280ppb Au
- Stream Sediments 556ppb Au
- Historic drill intersections max 14g/t Au (EA04-08)

2020 Field Program

- Airborne magnetics survey
- Structural analysis
- Road construction
- Trenching

RESOLUTIONMINERALS

EAGLE BLOCK, E1 PROSPECT – 2020 TRENCHING



E1 Prospect

- Structural analysis of historic drilling determined off-shoot shears and sympathetic corridors host highest grades.
- Furthermore, a prospective step-over zone was identified.
- The structural interpretation was extrapolated using detailed 100m EW heli-borne magnetic data.
- 4 x 200m trenches were completed. Assays Pending.

RESOLUTIONMINERALS

SUMMARY

Year 1 Successes Attributed To;

- ✓ Strong technical team - Australian & Northern American geoscientists
- ✓ 6 months detailed desktop review & methodical target ranking - leveraging from historic work
- ✓ Application of innovative exploration techniques (WV3, ZTEM, ELF-EM, CSAMT, Clay Separation)

Following up our convictions with the drill bit

2020 Highlights Include;

- Intersection of thick (7m) Pogo-style quartz vein (**Aurora Prospect**) *Drilling ongoing
- Large CSAMT/ZTEM/geochemical anomaly (**Boundary Prospect**) *Drilling summer 2021
- Structural analysis & trenching support Fort Knox-style (**E1 Prospect**) *Drilling 2021
- Reconnaissance work setting up a pipeline of targets for **2021 & beyond!**

REFERENCES

Arne, D. & MacFarlane, B., 2014. Reproducibility of Gold Analyses in Stream Sediment Samples from the White Gold District and Dawson Range, Yukon Territory, Canada. Association of Applied Geochemists, Explore;164: 1-11.

Dusel-Bacon, C., Holm-Denoma, C.S., Jones, J.V., Aleinikoff, J.N. & Mortensen, J.K., 2017. Detrital zircon geochronology of quartzose metasedimentary rocks from parautochthonous North America, east-central Alaska. Lithosphere; 9 (6): 927–952.

Larimer, D., Uesugi, J., Puchlik, K. & Fukuda, E., 2013. Discovery of East Deep Ore Body of the Pogo Deposit. Resource Geology, 63(2), 91-104.

Larimer, D., 2015. Pogo mine update: exploration results showing a bright future for Alaska's largest underground mine(s). AEMA. Sumitomo Metal Mining Pogo LLC.

Robert, F. [1] , Brommecker, R. [1], Bourne, B. T. [2] , Dobak, P. J. [3], McEwan, C. .J. [4], Rowe, R. R. [2], Zhou, X. [1], 2007. Models and Exploration Methods for Major Gold Deposit Types. Proceedings of Exploration 07: Fifth Decennial International Conference on Mineral Exploration, p691-711.

CONTACT

Authorised for release by
Duncan Chessell
Managing Director
Resolution Minerals Ltd
+61 8 6118 7110

ASX:RML

info@resolutionminerals.com
Level 4, 29-31 King William Street
Adelaide SA 5000, AUSTRALIA
www.resolutionminerals.com

Appendix 1. ZTEM, ELF-EM & WorldView3 Results, 64North Project, ALASKA

Appendix 1a: ZTEM & ELF-EM Geophysics & WorldView3 Satellite Remote Sensing Survey Results

ZTEM (Z-Axis Tipper Electromagnetic System) is an airborne passive electromagnetic (EM) technique used to map Subtle subsurface resistivity contrasts (note: conductivity is the inverse of resistivity). The advantage of using ZTEM is it can cover large areas quickly and cost effectively and can penetrate conductive cover to depths beyond 1km. The presence of conductive zones can indicate graphitic schists, shale or ideally alteration zones in paragneiss, which is the host rock for the Pogo Gold Mine mineralisation. On the East Pogo Block highly conductive zones of paragneiss rock type are present, which are known to be either a fluid pathway or sites of gold mineralisation. It should be clearly understood that existence of elevated conductivity of a unit of rock is not necessarily a direct link to mineralisation.

ELF-EM (Extremely Low Frequency Electromagnetics) is a light-weight (10kg), ground-based geophysical system, which typically requires only 2 operators. ELF-EM measures the spatial attitude and ellipticity of the local time varying magnetic field, which reflects horizontal changes of ground conductivity (inverse of resistivity). ELF can be used to detail and validated ZTEM airborne survey anomalies (i.e. specifications are comparable).

WorldView-3 is a similar satellite remote sensing technique to Landsat and ASTER, with the advantage that is produces much higher resolution (0.3-3.7m pixel size compared to 15-90m) and an increase number of spectral band passes within the Visible-Near Infrared (VNIR) and Short Wave Infrared (SWIR) spectral wavelengths (17 compared to <10). WorldView-3 data can be used to produce spectral geology and alteration maps based on the concentrations and types of iron, clay and silica spectral responses.

Summary Geophysics West Pogo: The Goodpaster Prospect and Pogo Gold Mine are structurally controlled, with alteration and associated gold and sulphide mineralised zones expressed as subtle resistivity contrasts (i.e. weakly conductive). Intrusive rocks provide the source for mineralisation and provide the heat to drive mineralising processes. Diorite (an intrusive rock with a strong magnetic signature) is known to be spatially important to mineralisation at the Pogo Gold Mine. Therefore, the combination of close-spaced airborne ZTEM and magnetics data, with existing ground-acquired CSAMT & ground-based ELF-EM lines provides a very powerful evidence base for identifying potential fluid pathways, likely structural controls for mineralisation and locations of intrusive rocks. As the known mineralisation is relatively shallow dipping there need not be a surface expression of mineralisation making geophysics a crucial tool. Every drill hole provides the technical team with more empirical data to better validate geophysical data sets and improve drill targeting.

Summary Geophysics East Pogo: The Boundary Au Prospect includes high grade (up to 35g/t Au), late fault vein drill intersections, which coincides with a narrow, high angled, 400-500 ohm-m ZTEM anomaly. Possible repeats of the apparently structurally controlled ZTEM anomaly occur to the south and the anomalies also appears to extend to the east and west along strike. A large 8km by 1.5km, north-east, shallow dipping anomaly occurs less than 1km to the south-west, with the top of the anomaly expressing a depth range from 0-500m (possibly daylighting towards the west). The ZTEM results are consistent with the previously reported CSAMT results. Field crews have collected surface samples above the anomalies. Assays are pending.

The magnetic data and historic mapping indicate the area is structurally complex. Structural preparation of host rocks is considered important in many mineral systems because structures provide conduits for mineralising fluids. Furthermore, demagnetised zones in the magnetic data have a strong correlation with the large ZTEM anomaly indicative of fluid flow and magnetically destructive alteration. The host rock across the region has been mapped predominately as paragneiss and orthogneiss with various cross cutting intrusive rock units. Discrete magnetic highs have been interpreted as diorite intrusions. The geology, geochemistry and geophysical signatures seen at Boundary Prospect are analogous to the Goodpaster Prospect and Pogo Gold Mine.

Summary Satellite Remote Sensing North Pogo and Divide: The North Pogo and Divide Blocks contains significant exposure, with much of the terrain being above the alpine treeline. Vegetation obscures the spectral response from soil/rock and therefore hinders WorldView-3 data acquisition. Snow and cloud cover also obscure collection. Whilst the period between June and October have the least amount of snow cover, cloud cover can be problematic, especially at higher altitudes on “low ceiling” days. There is a 5% chance of <10% cloud cover during June to October.

WorldView-3 mapping can provide indications of alteration and the presence abundant silica. In freeze/thaw environments some clay responses can be accounted for by mechanical weather, however the presence of a haematite response is indicative of a hydrothermal system (not a product of mechanical weathering).

At North Pogo, amphibolite facies basement positioned north of the Goodpaster Batholith is considered prospective for an Intrusion Related Gold System (IRGS). Known gold occurrence in the district are associated with quartz veining and dolomite-sericite alteration haloes. There is an overall strong alteration response at North Pogo.

A small outcrop of Cu-(Au) porphyry mineralisation occurs at Divide. Porphyry deposits tend to have large alteration haloes, producing strong spectral response including phyllic, advanced argillic and silica alteration responses, which are all present on the Divide Block.

Appendix 1b: Location of ZTEM, ELF-EM & WorldView3 Surveys & Raw Images of 3D ZTEM model, 2D ELF-EM sections and plan view of WorldView3 alteration maps.

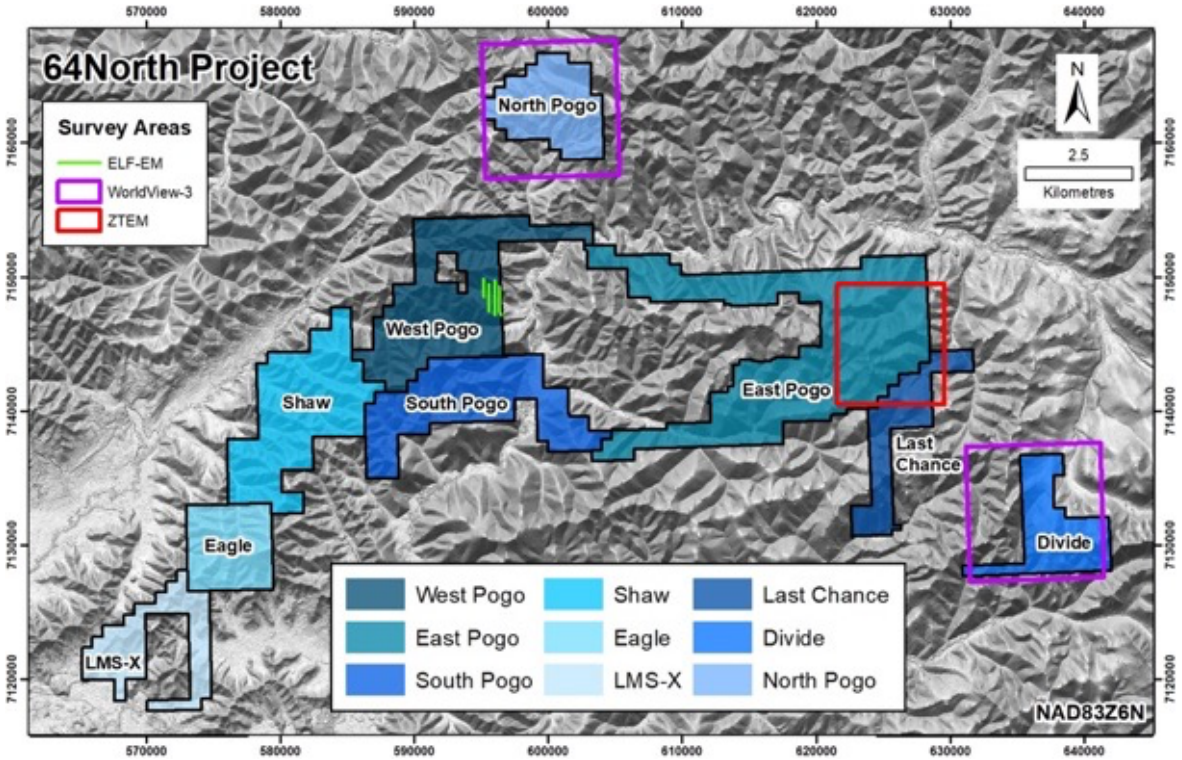


Figure 1: Location of ZTEM, ELF-EM & WorldView3 Data Acquisition Areas, 64North Project Alaska.

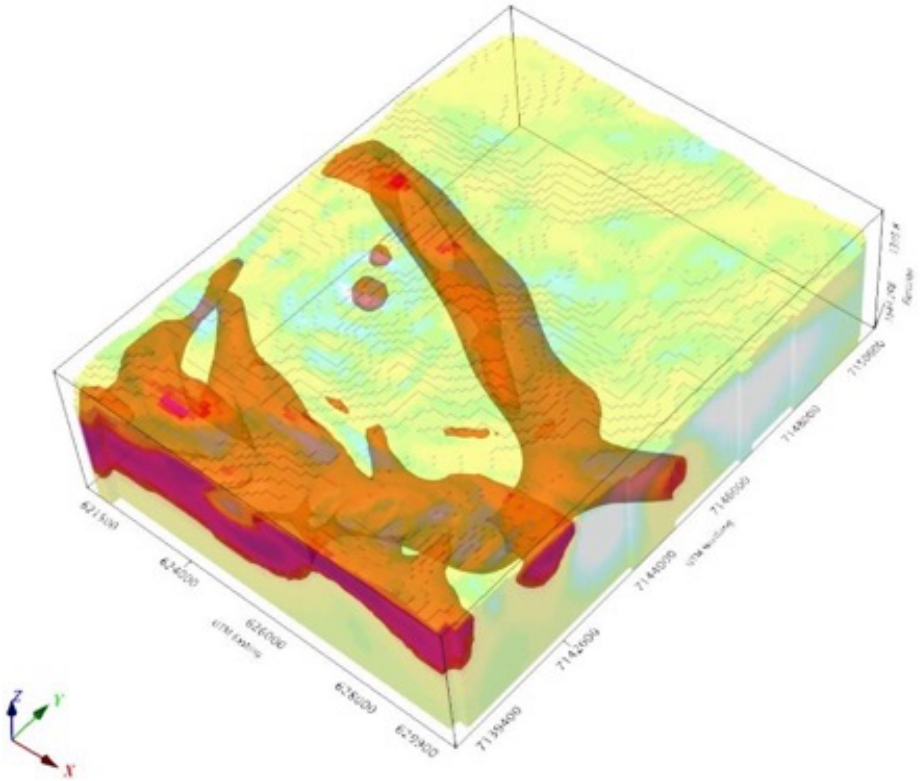


Figure 2: 3D ZTEM model looking north-west with 200ohm-m shells (orange), East Pogo Block, 64North Project.

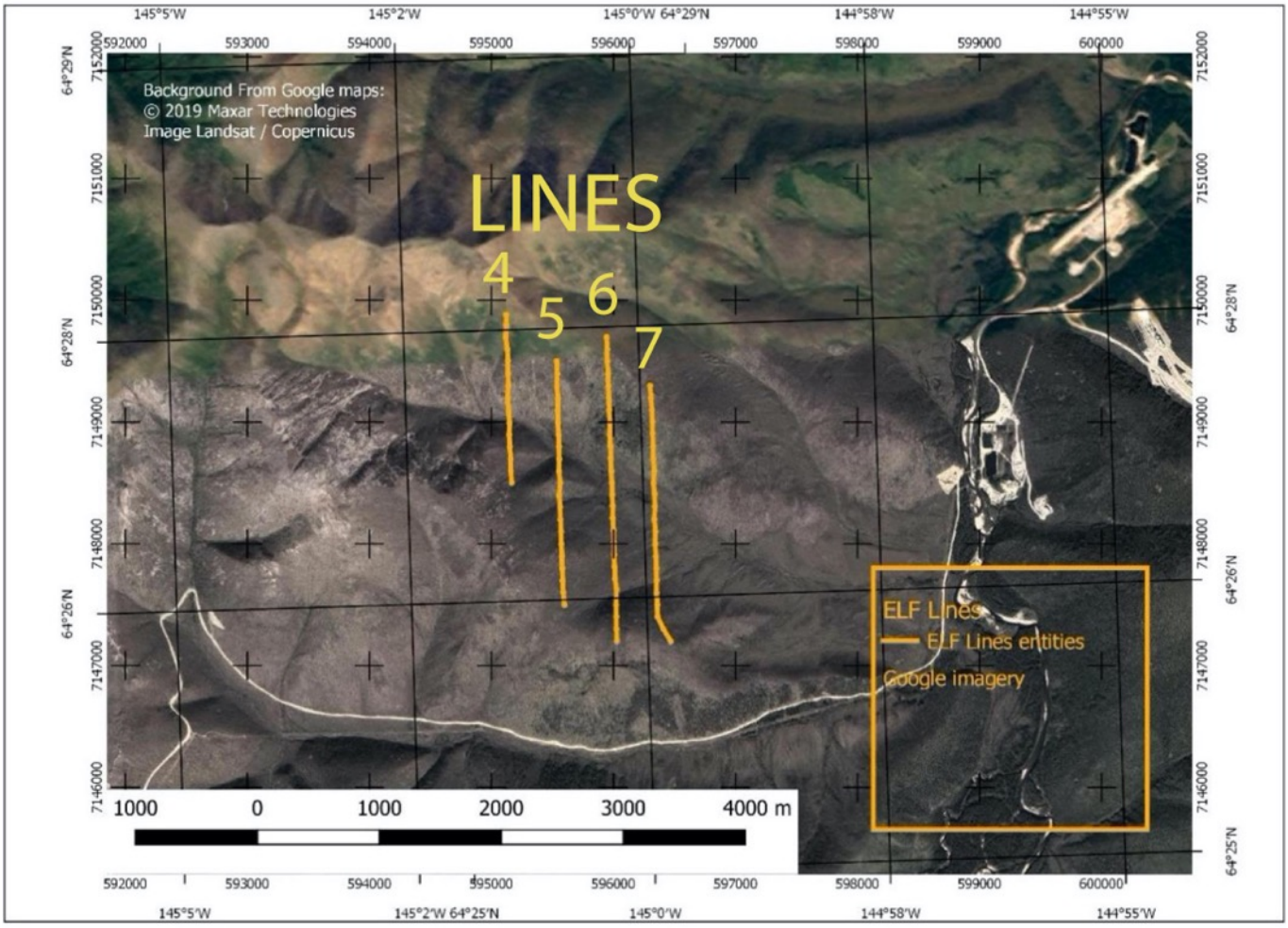


Figure 3: Location of ELF-EM Lines of Data Acquisition, West Pogo Block, 64North Project Alaska.

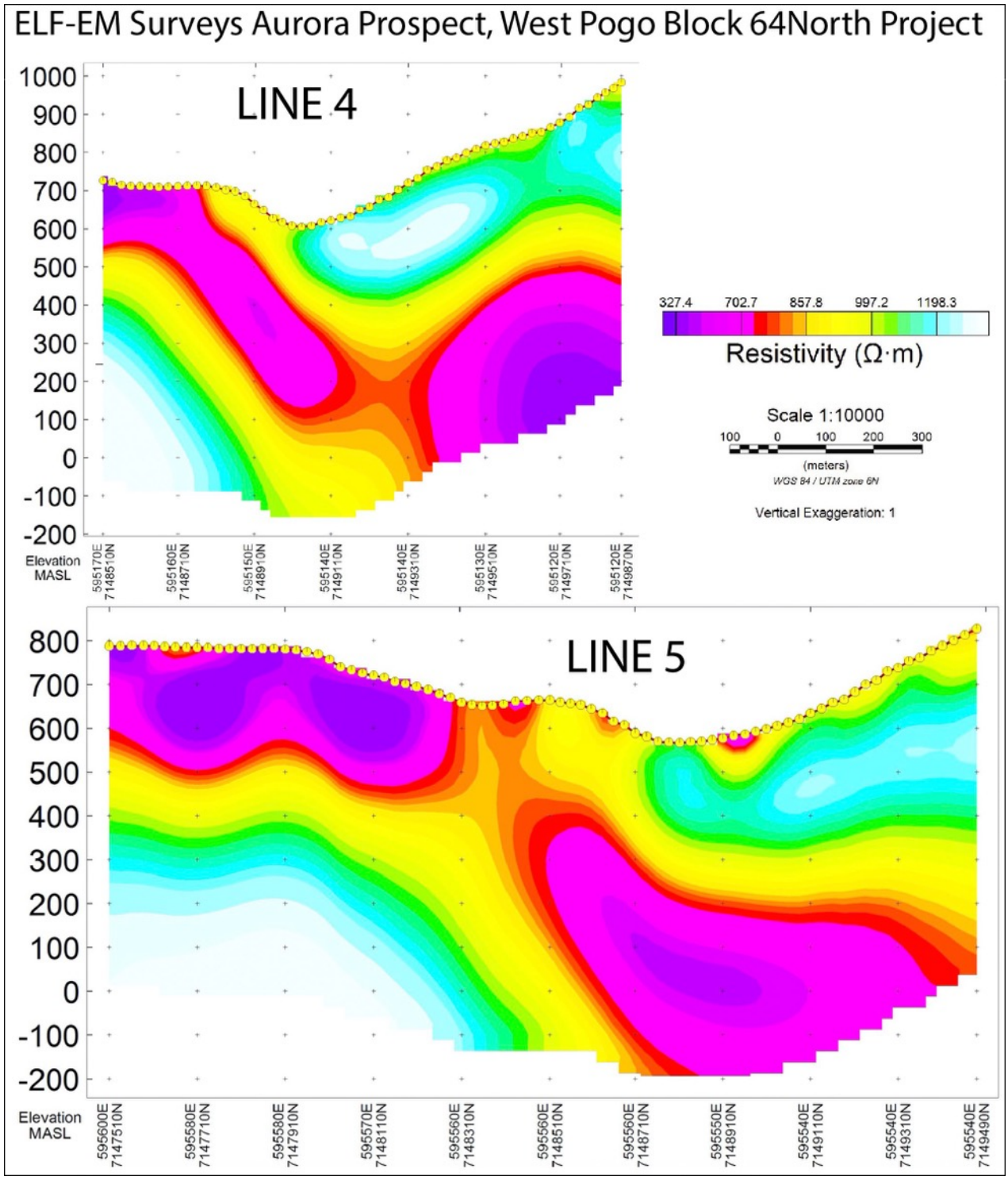


Figure 4: Line 4 and Line 5, 2D ELF-EM section looking west, West Pogo Block, 64North Project Alaska.

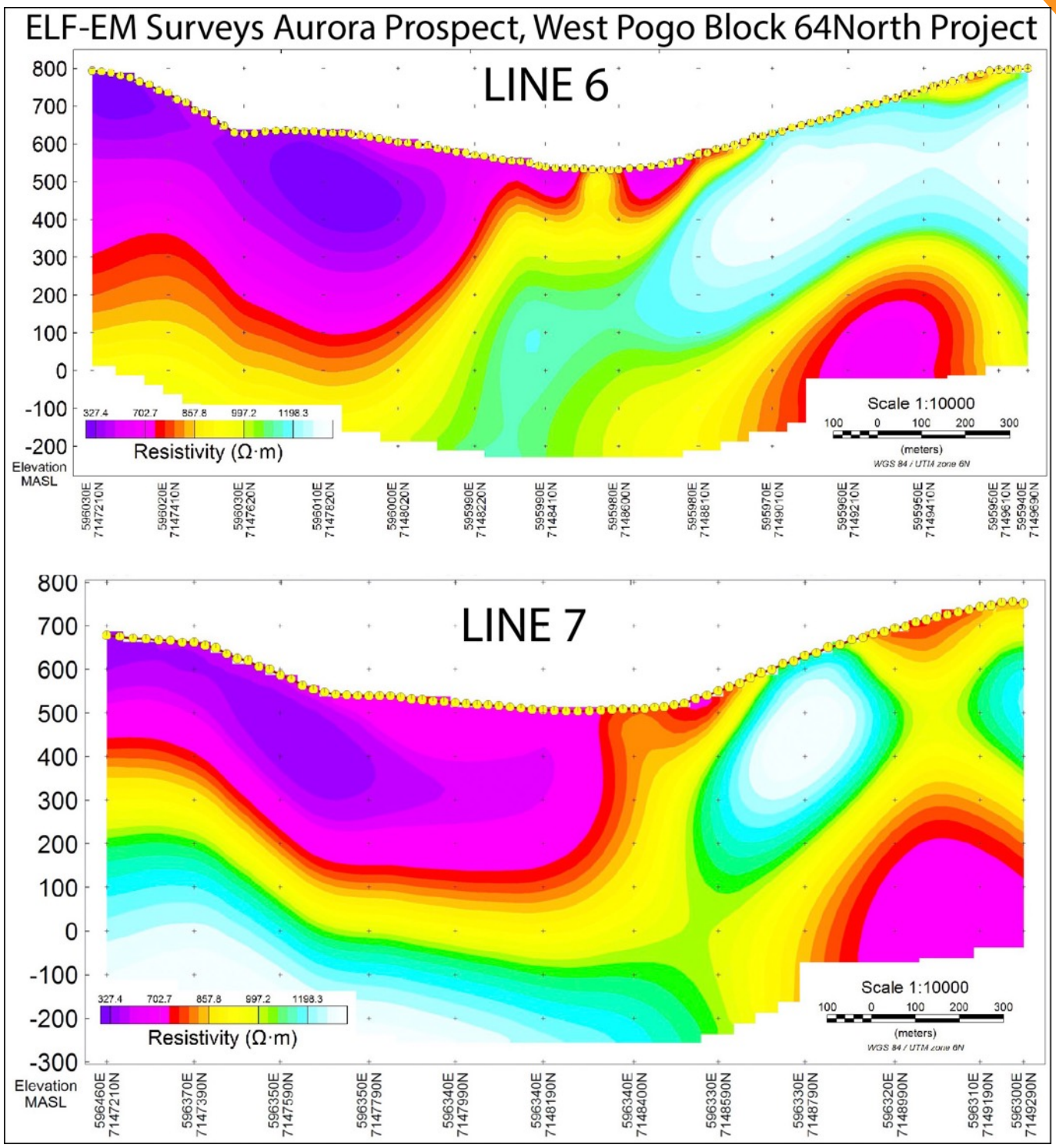


Figure 5: Line 6 and Line 7, 2D ELF-EM section looking west, West Pogo Block, 64North Project Alaska.

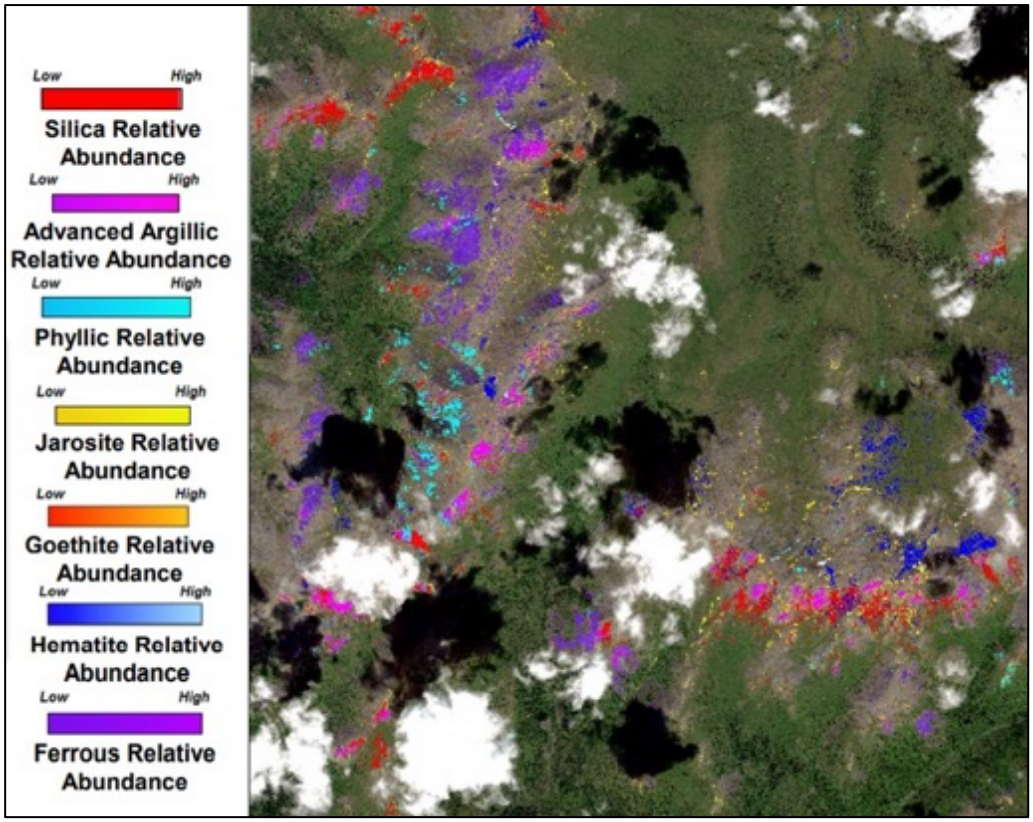


Figure 6: WorldView3 Alteration Map, Divide Block, 64North Project Alaska

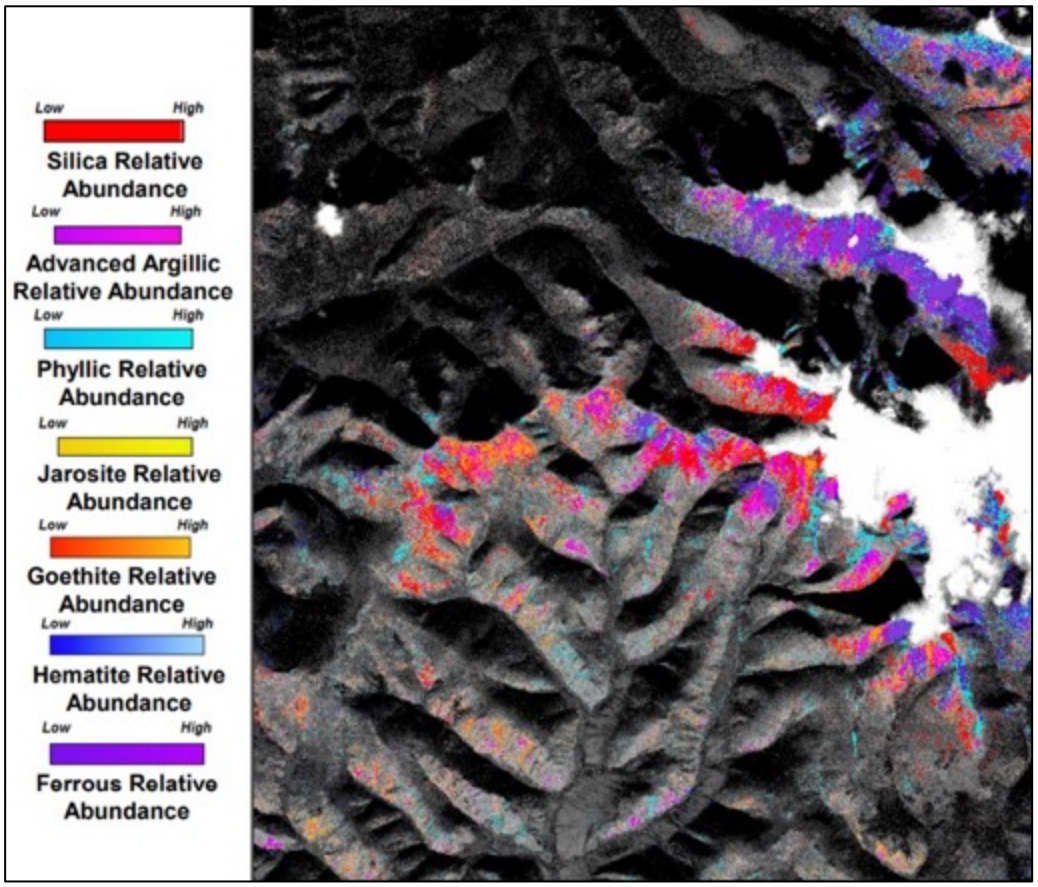


Figure 7: WorldView3 Alteration Map, North Pogo Block, 64North Project Alaska

Appendix 2. The following tables are provided to ensure compliance with the JORC Code (2012) requirements for the reporting of the exploration results for the 64North Project – Alaska.

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse Au that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.

Criteria	JORC Code explanation	Commentary
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.

Criteria	JORC Code explanation	Commentary
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• This release relates to results from geophysical and remote sensing surveys; therefore the accuracy and quality of surveys used to locate drill holes is not relevant to this release. • The grid system used for the geophysical and remote sensing surveys was UTM grid (NAD83 Z6N) • Airborne survey lines have been measured by a Real time GPS Navigation System providing an in-flight accuracy up to 1.5 metres. • Topographic control of the airborne geophysical survey was achieved using a Radar altimeter with an accuracy of approximately 1 metre. • Ground survey lines have been measured by Differential GPS (DGPS) which has sub-metre (decimetre) real-time vertical and horizontal accuracy. • Satellite attitude determination and control utilises 3-axis stabilised type, with control moment gyro actuators and star trackers precision IRU (GPS) sensors with <3.5m positioning accuracy.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Airborne geophysical survey data was acquired continuously on 250m line spacing. • Ground geophysical survey data was acquired at 100m station, with 400m line spacing and variable line lengths (1.4 – 2.5km). • Satellite remote sensing survey data was acquired in 13.1km swath widths (satellite pass), with a spatial resolution between 0.3-3.7m pixels over a 131km^2 total area on the Divide Block and a 140km^2 total area over the North Pogo Block. • This release relates to results from geophysical and remote sensing surveys; therefore the data spacing is not relevant for establishing the degree of geological control and grade continuity, nor was any sample compositing applied.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Geophysical survey data was acquired in an orientation to avoid running parallel to the dominant structural trend and therefore maximise structural definition. • This release relates to results from geophysical and remote sensing surveys; therefore drilling orientation and sampling bias is not relevant to this release.
Sample security	• *The measures taken to ensure sample security.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No independent audit was undertaken on the geophysical data. • Internal review of all data was undertaken by RML geoscientists on contractor provided data and analysis. • The internal review determined the data and analysis are of good quality. No issues were identified.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Resolution Minerals Ltd executed a binding agreement with Millrock Resources to acquire, via joint venture earn-in, a 60% interest on entire project and conditionally up to 80% interest in a best block of the 64North Project in Alaska (ASX:RML Announcement 16/12/2019). • The total tenement area comprising the 64North Project consists of 1176 State of Alaska claims (66,050 hectares). • The 64North Project is located approximately 120km east of Fairbanks. • The tenure is in good standing and no known impediments exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Previous exploration work includes; • Surface Geochemical Sampling: Pan concentrates, fine silts, silts, soils & rock chips. Airborne Geophysics: EM, LiDAR, Radiometric & Magnetics. Ground Geophysics: Magnetics, Radio-metrics, EM, VLF-EM, NSAMT & CSAMT. Exploration Drilling: 46 Diamond.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Resolution Minerals Ltd is primarily exploring for Intrusion Related Gold mineralisation (e.g. Pogo-style) within the Yukon-Tanana Terrane of the northern Cordillera, Alaska.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why*
		• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.

Criteria	JORC Code explanation	Commentary
	this is the case.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• This release relates to results from geophysical and remote sensing surveys; this section is not relevant to this release.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• A heli-borne Z-Axis Tipper Electromagnetic (ZTEM) survey was flown by Geotech Limited over the East Pogo Block and Last Chance Block of the 64North Project. The survey comprised 320 line km of data with a NS line orientation, with 250m line spacing and a nominal sensor height of 80m. ZTEM uses the natural or passive fields of the Earth as the source of transmitted energy, therefore no controlled source transmitter is required. The standard signal strength

Criteria	JORC Code explanation	Commentary
		frequencies collected are: 30Hz, 45Hz, 90Hz, 180Hz & 360Hz. • A ground-based ELF-EM survey was completed by Aurora Geosciences over the West Pogo Block of the 64North Project. The survey comprised of 4 lines for a total of 8 line km of data. Line orientation was NS, with 400m line spacing. • Instrumentation for the ELF-EM consisted of and ELF Sensor containing three orthogonal EM sensors (air coils) and an ELF console. Specifications are comparable to the ZTEM system. The standard signal strength frequencies collected are: 11Hz, 22Hz, 45Hz, 90Hz, 180Hz, 360Hz, 720Hz & 1440Hz. • A satellite based remote sensing WorldView-3 survey was acquired by Exploration Mapping Group Inc. over the Divide Block and North Pogo Block of the 64North Project. The Divide survey comprised a 131km^2 area and North Pogo a 140km^2 area, both with a spatial resolution between 0.3-3.7m pixel size. WorldView-3 measures 17 spectral bands across the visible, near infrared and short wave infrared portion of the spectrum which are used to produce 35 layers of derivative data. • The grid system used for both geophysical and remote sensing surveys was NAD83 Z6N.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• A range of exploration techniques are being considered to progress exploration including drilling. • Drilling currently ongoing on the Aurora Prospect, West Pogo Block. • Refer to figures in the body of this report.