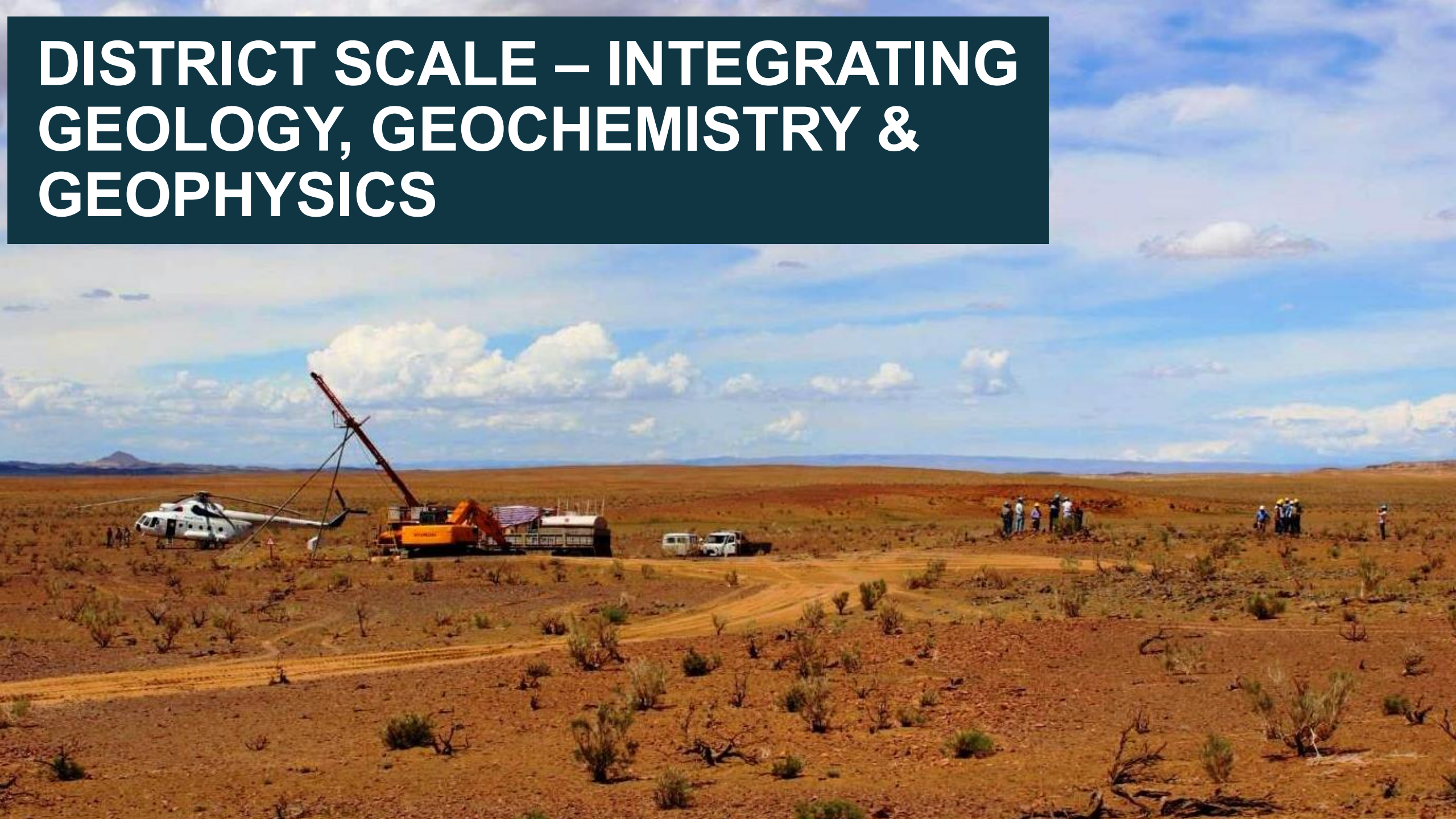
DISTRICT SCALE – INTEGRATING GEOLOGY, GEOCHEMISTRY & GEOPHYSICS





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Geological Symposium 2026

DISTRICT SCALE – INTEGRATING GEOLOGY, GEOCHEMISTRY & GEOPHYSICS

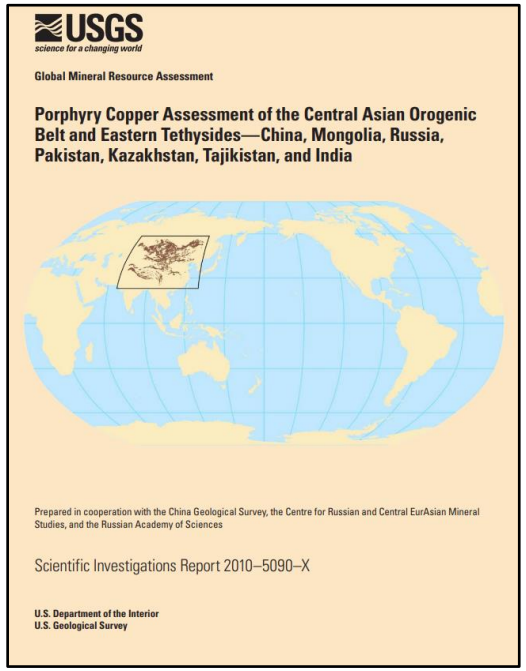
EGM Exploration G.Bat-Erdene

LOCATED IN THE GOLD AND COPPER RICH CENTRAL ASIAN OROGENIC BELT

In the underexlored, highly prospective Trans Altai Terrane in Southwestern Mongolia

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HOST TO MULTIPLE MAJOR GOLD-COPPER DEPOSITS INCLUDING MURUNTAU (175MOZ AU) AND OYU TOLGOI


USGS
science for a changing world

Global Mineral Resource Assessment

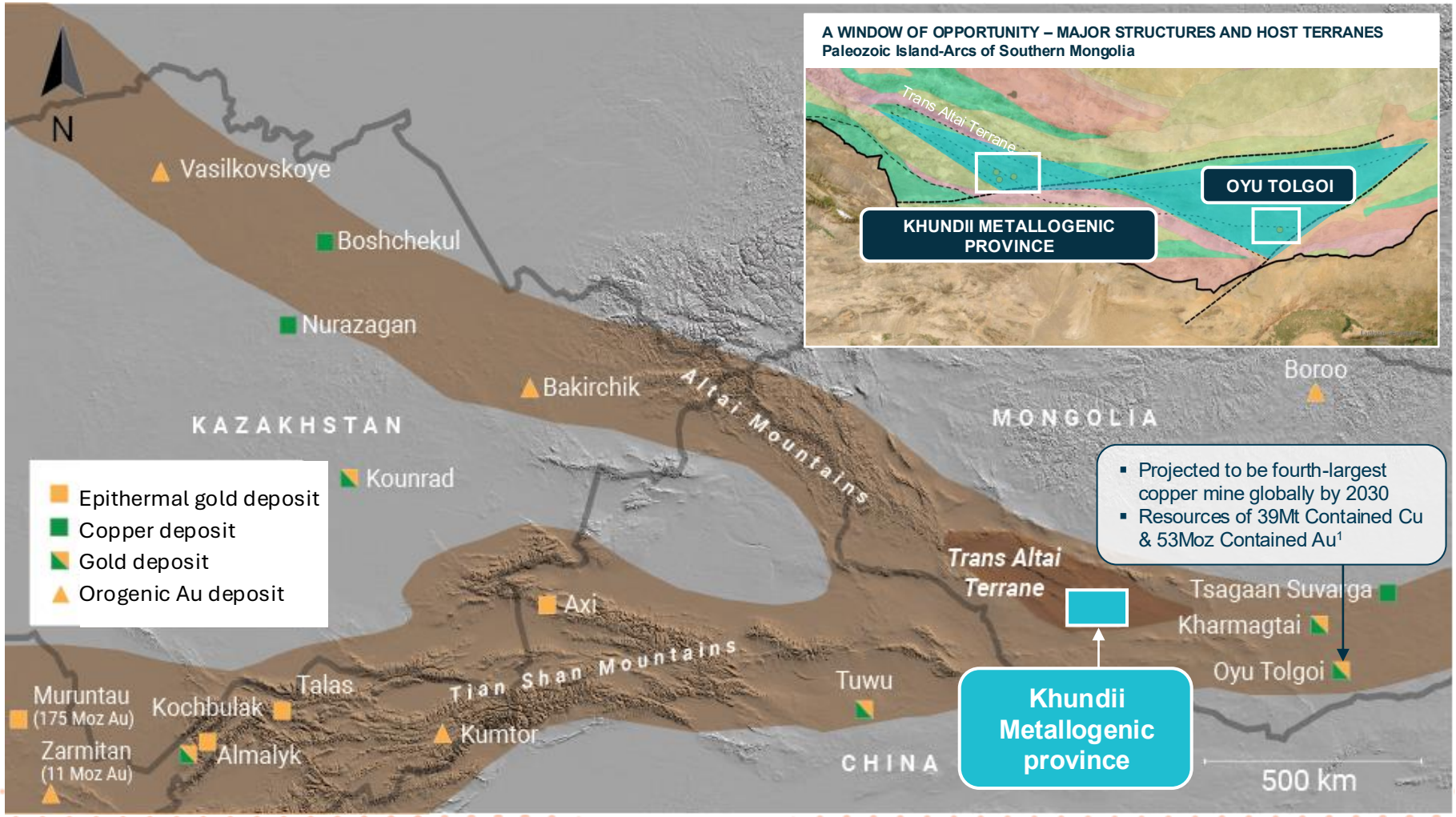
Porphyry Copper Assessment of the Central Asian Orogenic Belt and Eastern Tethysides—China, Mongolia, Russia, Pakistan, Kazakhstan, Tajikistan, and India

Prepared in cooperation with the China Geological Survey, the Centre for Russian and Central EurAsian Mineral Studies, and the Russian Academy of Sciences

Scientific Investigations Report 2010–5090–X

U.S. Department of the Interior
U.S. Geological Survey

USGS concluded the Trans Altai shows the greatest potential for porphyry / epithermal copper-gold discoveries on the CAOB



- Projected to be fourth-largest copper mine globally by 2030
- Resources of 39Mt Contained Cu & 53Moz Contained Au[1]

Notes:

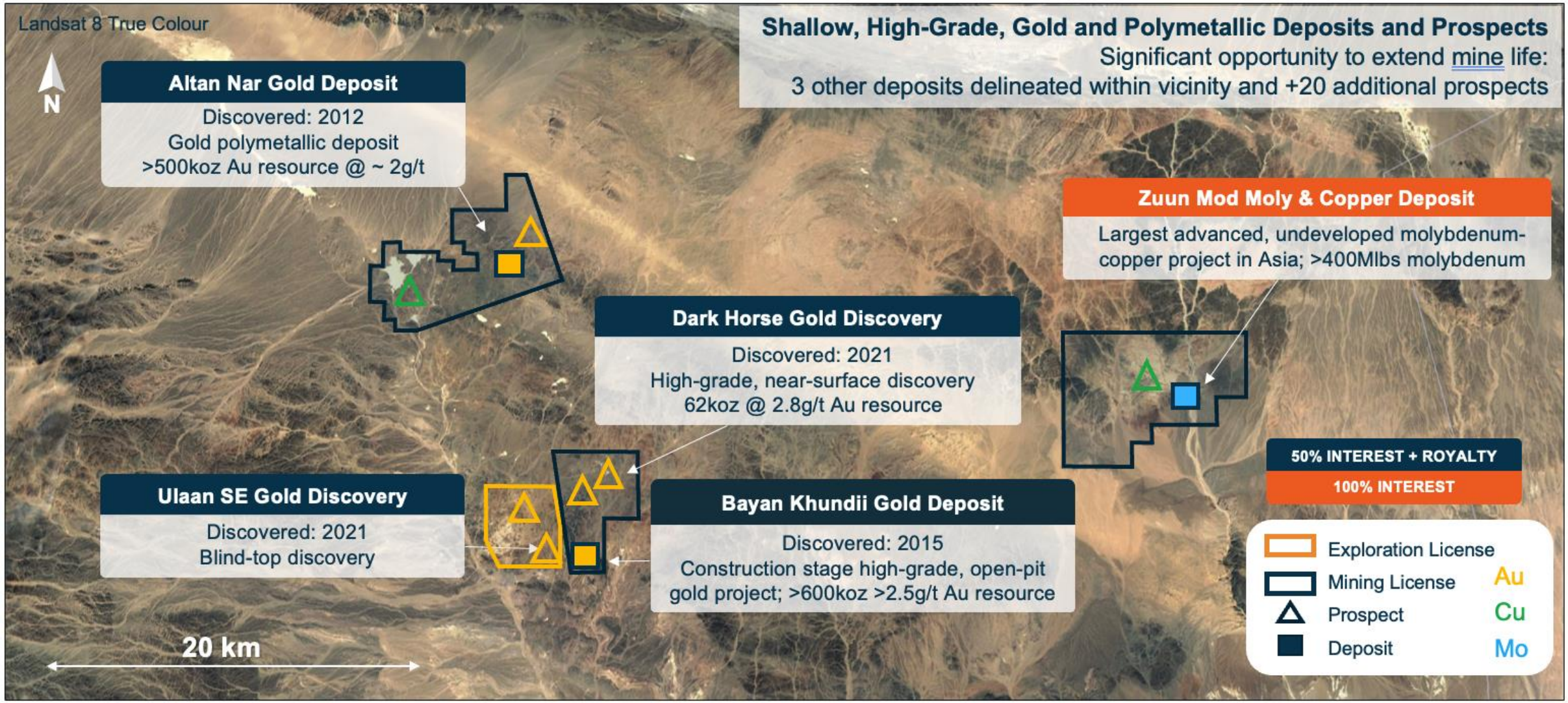
1. Contained gold = ~53Moz including Inferred
   Contained copper = ~39Mt including Inferred
   Source: Rio Tinto 2022 Annual Report

ERDENE MONGOL LLC

THE PIPELINE – MULTIPLE HIGH-QUALITY DEPOSITS AND PROSPECTS

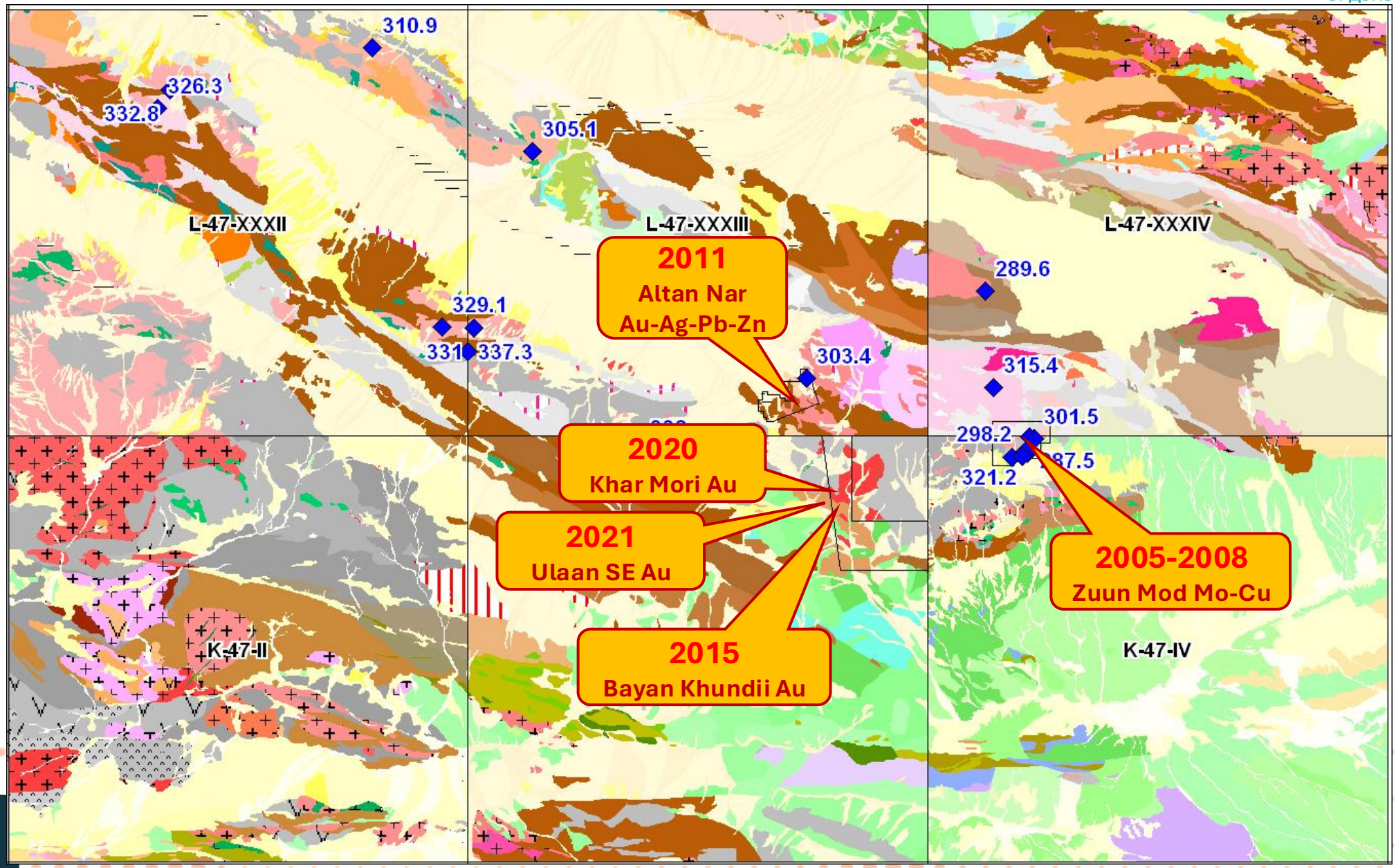
Four gold discoveries, molybdenum-copper deposit and +20 high priority targets

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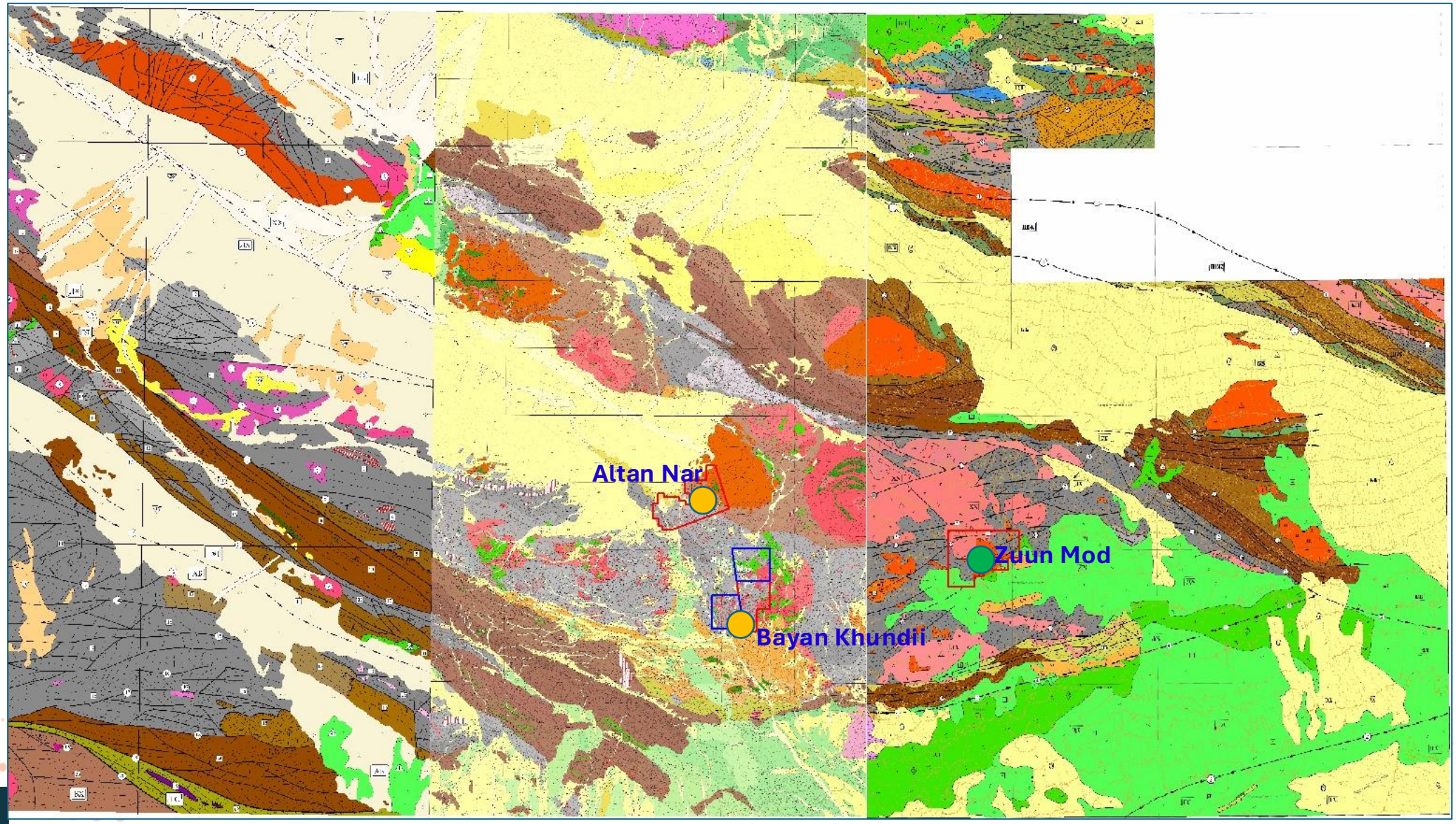
REGIONAL GEOLOGY

200 000 scale state compiled Geology map of Trans-Altay island arc terrane (2013)



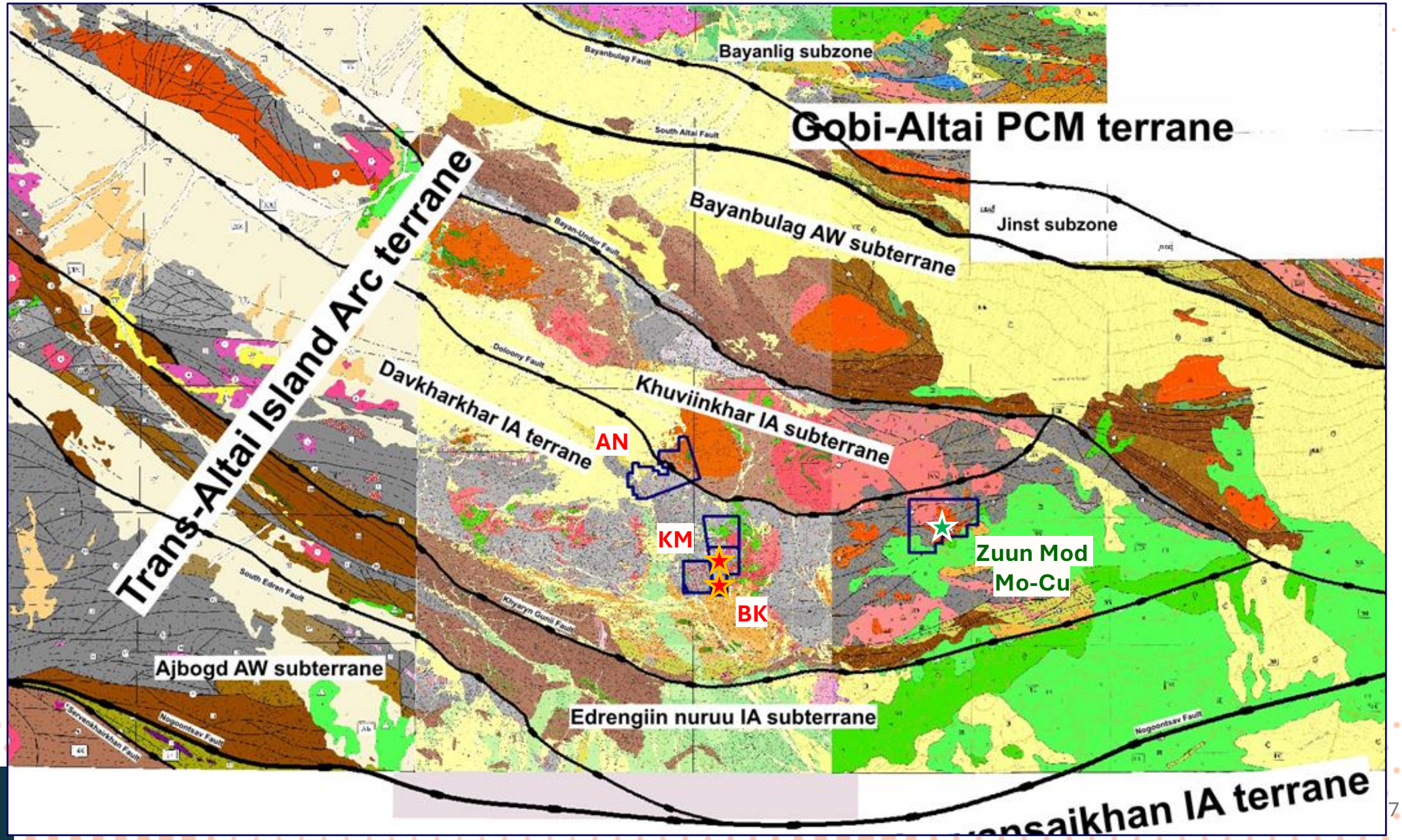
REGIONAL GEOLOGY

1:50 000 scale state Geological mapping, 2019. Trans-Altai IA terrane.



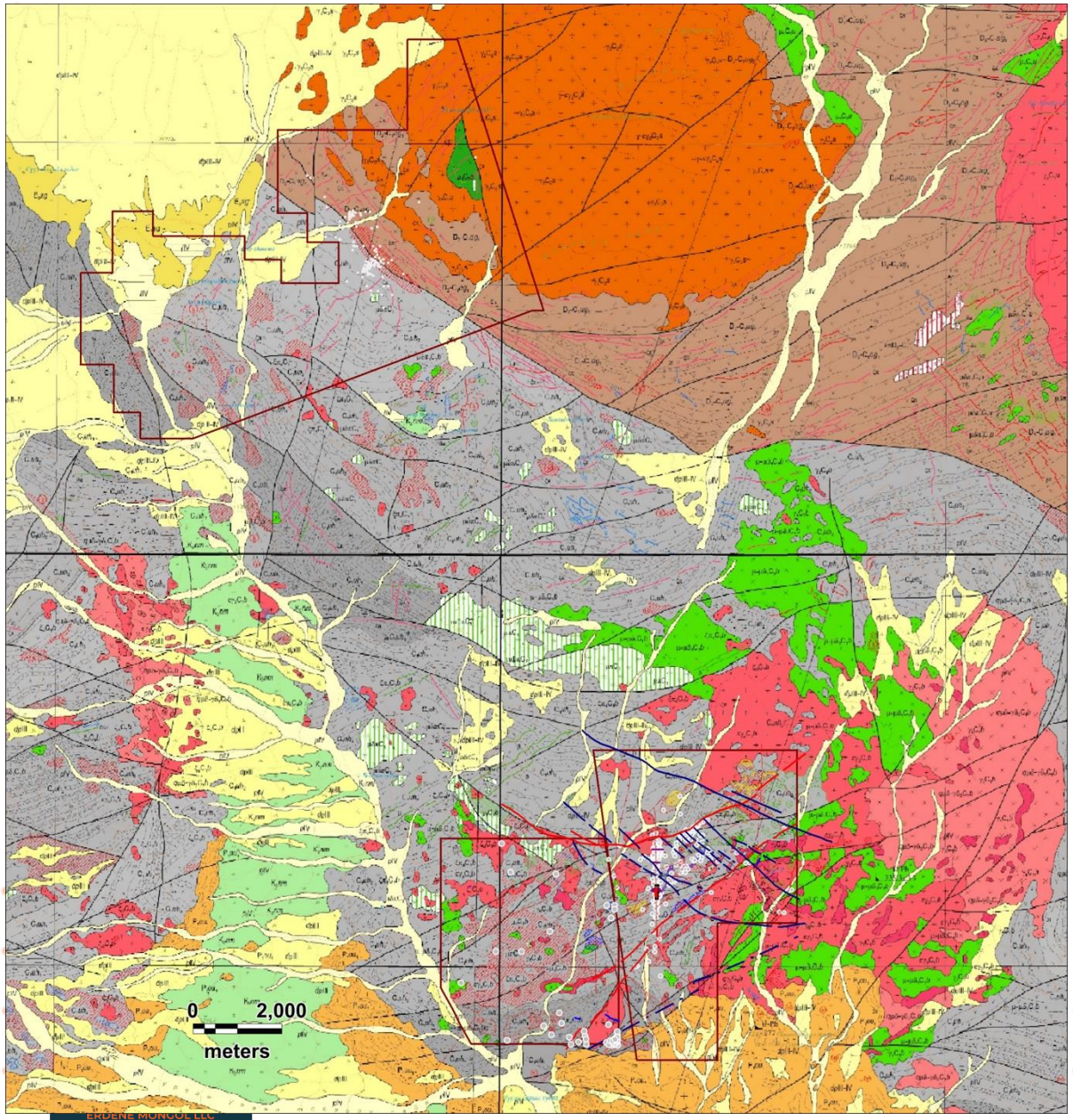
REGIONAL GEOLOGY

1:50 000 scale state Geological mapping, 2019. Trans-Altai IA terrane.

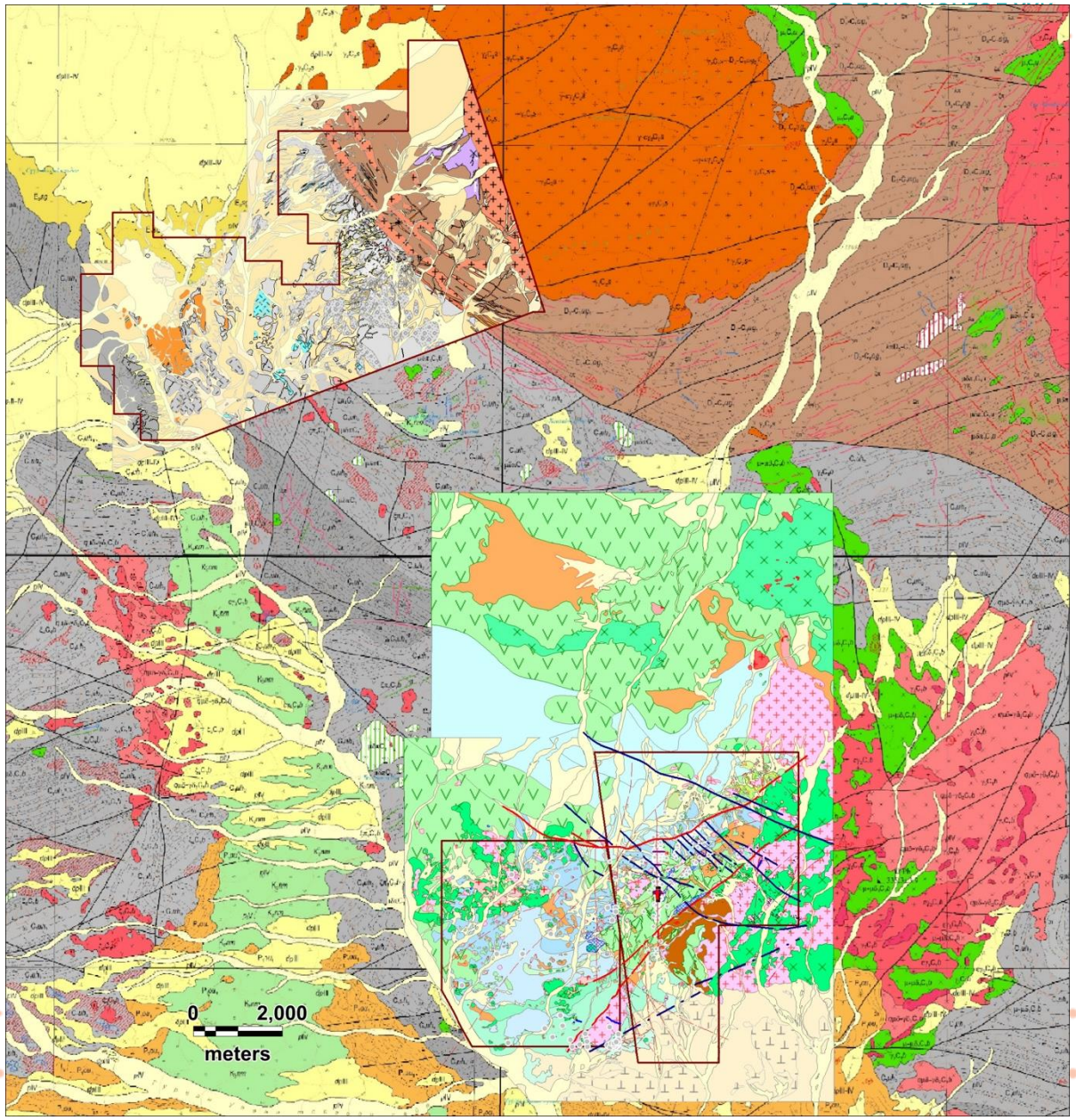


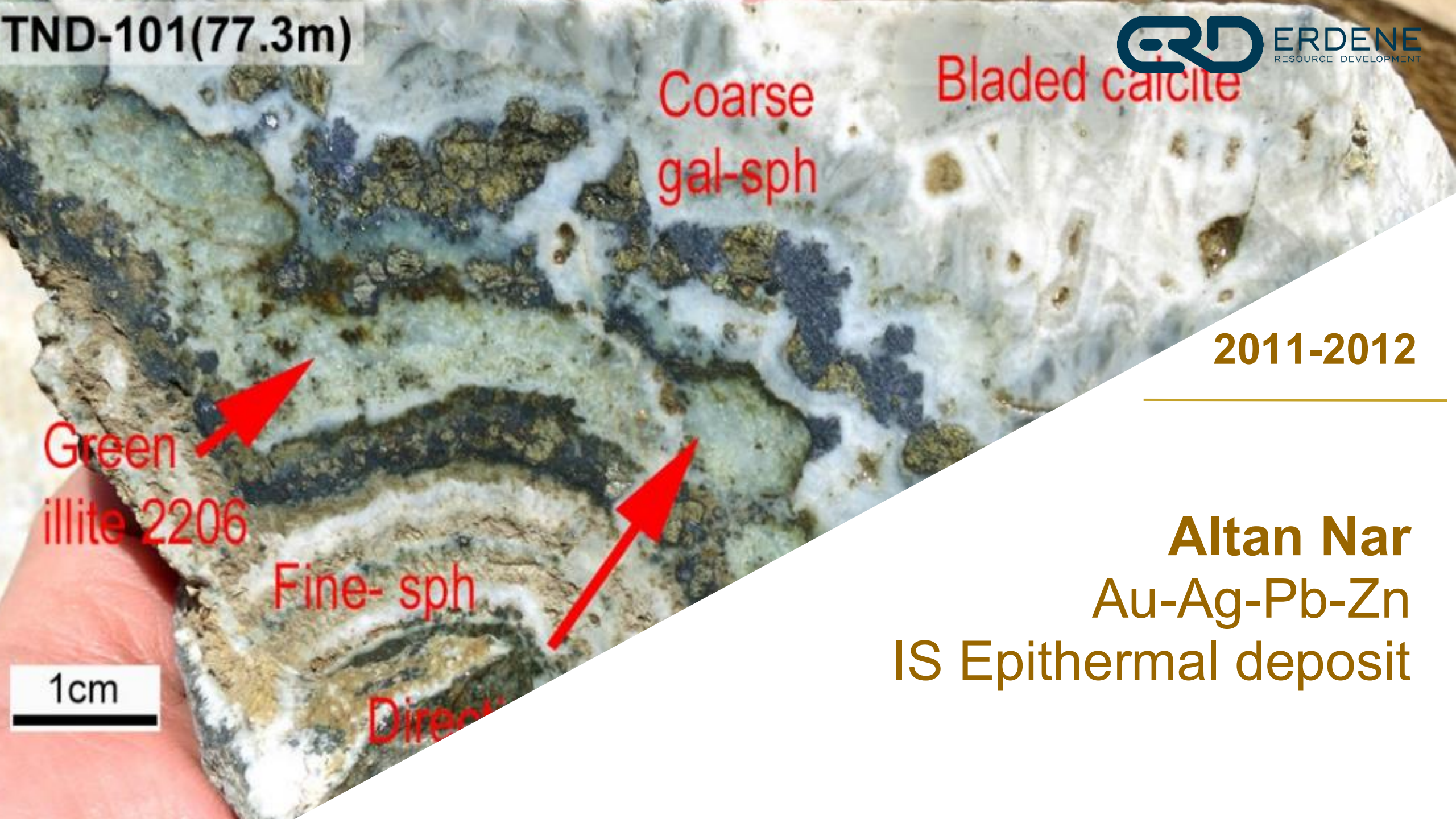
District Geology

State 1:50 000 scale Geology map, 2019



Erdene mapping 2011-2022





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RESOURCE DEVELOPMENT

2011-2012

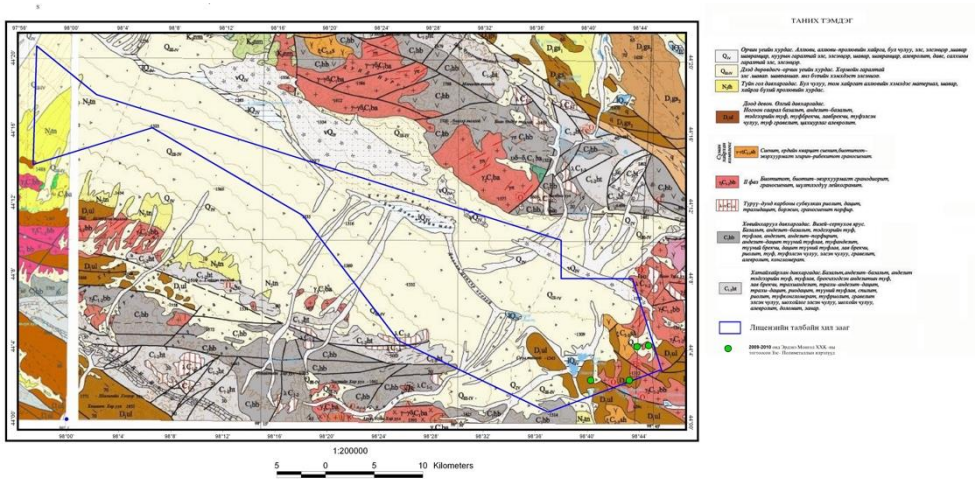
Altan Nar

Au-Ag-Pb-Zn
IS Epithermal deposit

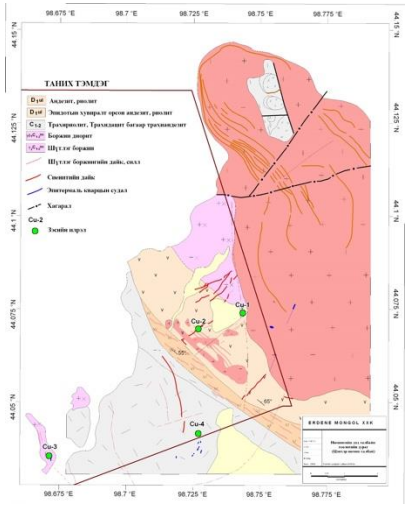
ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

Geological mapping

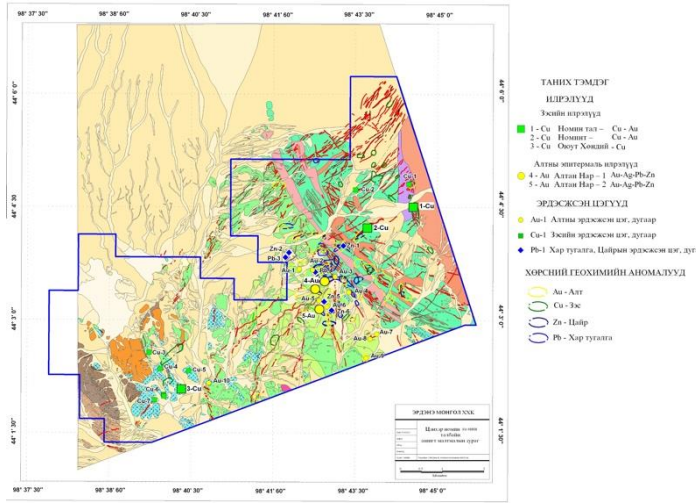
Geology map, Tsenkher Nomin license, Aj-200 project, 1:200 000 mapping, 2010 year



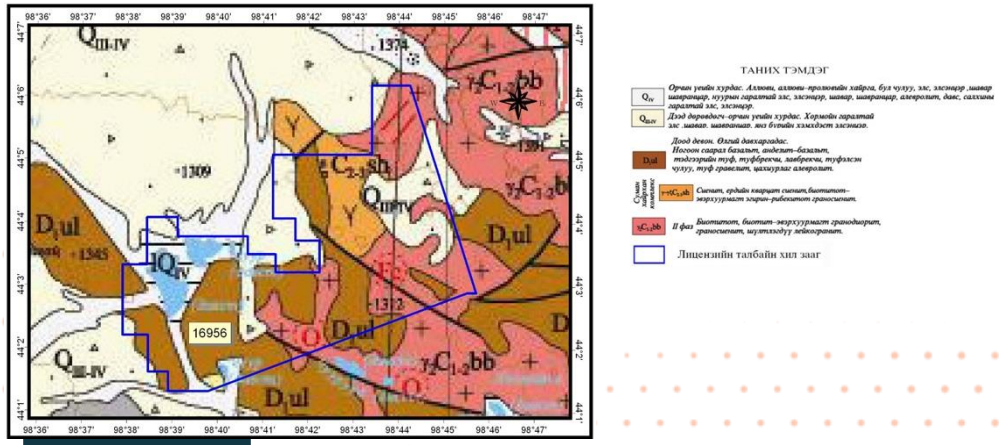
Geology map 1:50 000, 2010 year.



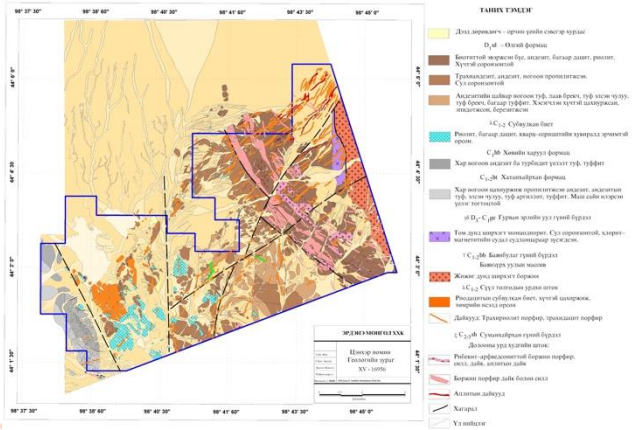
Geology map 1:20 000, 2011 year



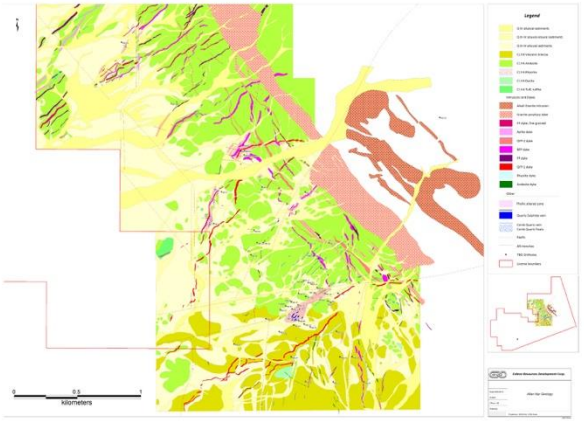
Geology map, Tsenkher Nomin license, Aj-200 project, 1:200 000 mapping, 2011 year



Geology map 1:10 000, 2012 year



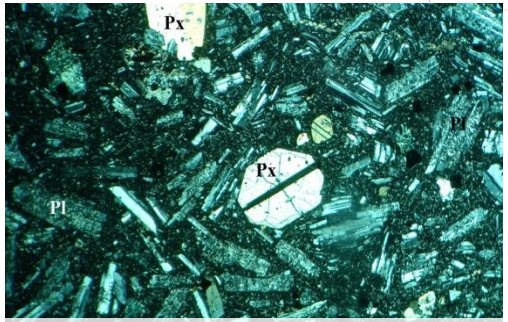
"Altan Nar" deposit geology map, 1:5 000, 2014 year



ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

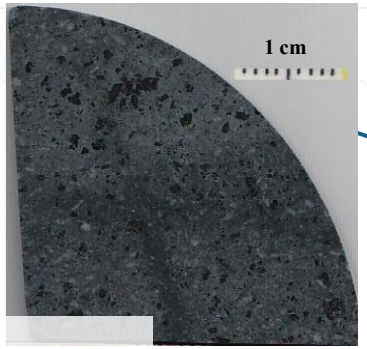
Geological mapping

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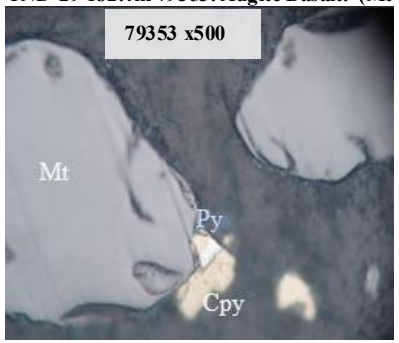


TND-29 182.4m 79353. Augite Basalt. (Mt – Py – Cpy)

79353
x40

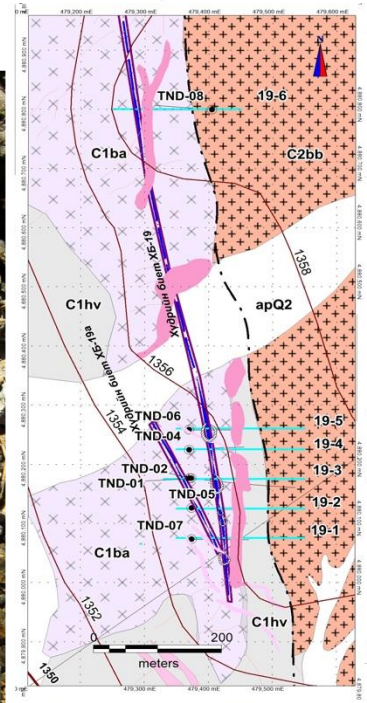


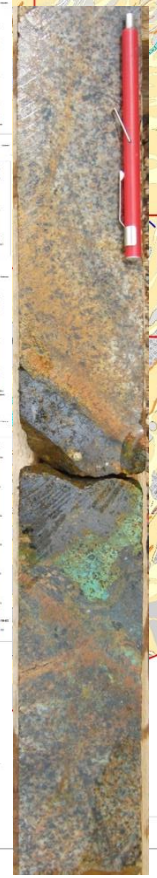
79353



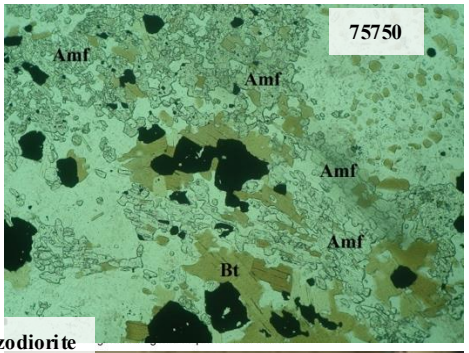


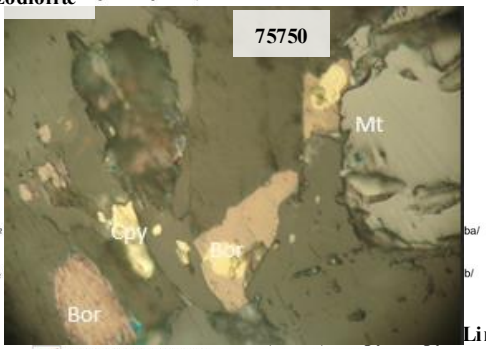






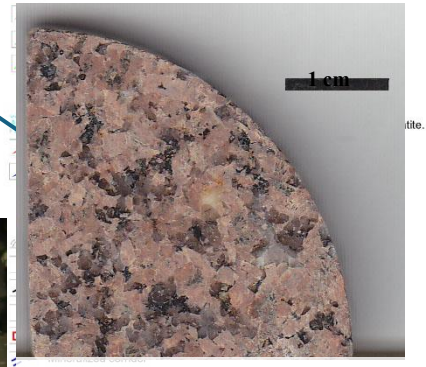
TND-08 128.3m 75750. Quartz Monzodiorite





Ribekite-arfvedsonite granite porphyry, aplite, microgranodiorite dykes

Lim



TND-08 116.8m 75736. Granite cg-mg

Erdene Mongol XXK			
MV-021547			
Tsenkher Nomin Geology Map			
Author	Senior Geologist	Bat-Erdene	Scale 1:20 000
Drawn	GIS	Ganzorig	Date: 2021

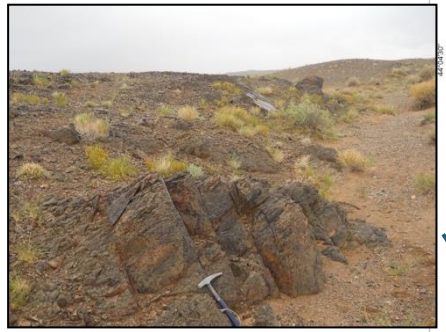
ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

Geological mapping

79353
x40

79353



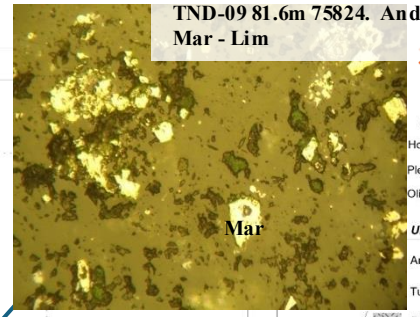




Gastropod

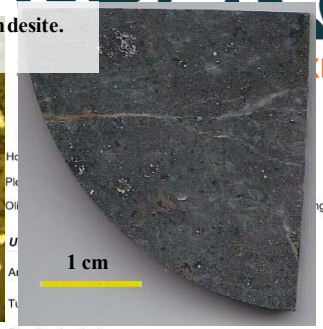






TND-09 81.6m 75824. Andesite.
Mar - Lim

Mar

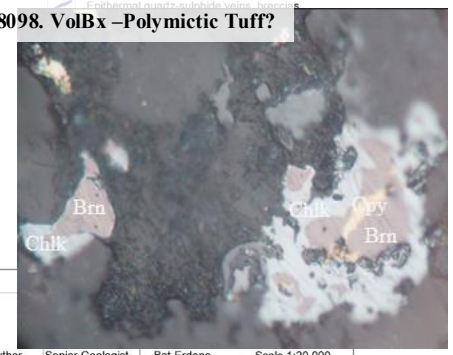


1 cm



1 cm

TND-23 59.2m 78098. VolBx –Polymictic Tuff?



Brn
Chlk
Chlk
Cpy
Brn

Nomin Tal
Cu-Au

303.4 Ma

UN

DZ

Oyut Khundii
Cu-Pb-Zn

Mt (2-3%) – Apy – Cpy –Lim

Rhyolite, rhyodacite

Basalt-andesite. 337±7 Ma (U/Pb, Cha-Uul-50)

Basalt-andesite

Terrigenic-tuffogenic sequence with fauna

Aguit formation (D_3-C_1 *ag*)

Basalt, andesite-basalt, minor dacite and rhyolite.

Bayan-Airag Intrusive Complex

Syenite, quartz syenite porphyry small intrusions

Rhyodacite subvulcanic dome

Sumankhairkhan Intrusive Complex

Phase I. Medium-Coarse grained Monzodiorite, quartz-diorite, granodiorite

Phase II. Medium grained alkali amfibole bearing alkali leucogranite, granite porphyry. Age: 303.4+4.8 Ma.

Dykes

Trachyryolite porphyry, trach

Ribekite-arfvedsonite granite porphyry, aplite, micrographic dykes

Granite porphyry dyke (dQFP-2, dGP) and sill

Rhyolite dyke

Andesite dyke

Veins

Quartz veins and floats, rare with galena, chalcopyrite, malachite, hematite.

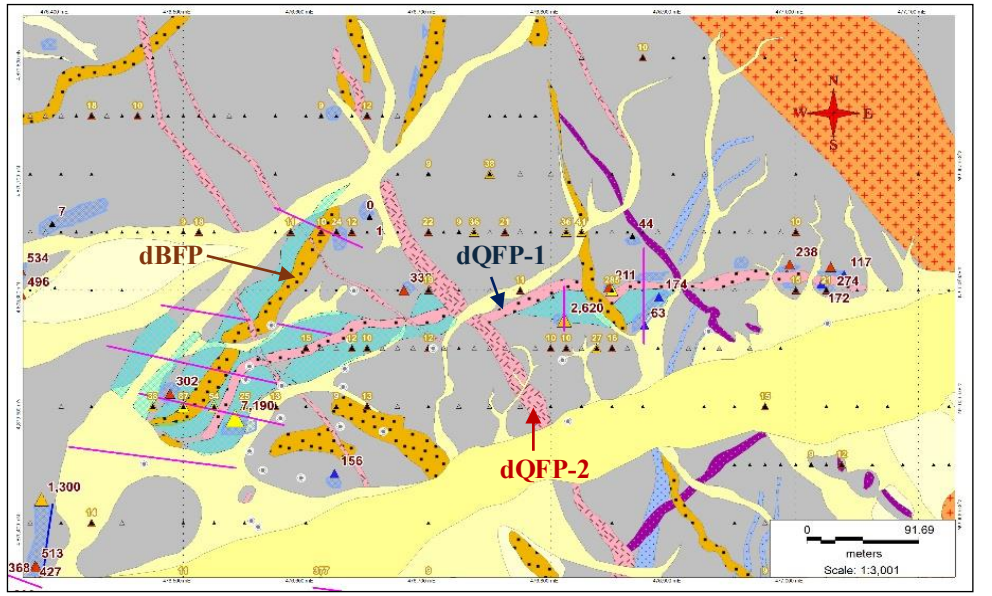
Galena-sphalerite massive ore

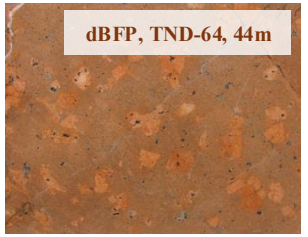
Author	Senior Geologist	Bat-Erdene	Scale 1:20 000
Drawn	GIS	Ganzorig	Date: 2021

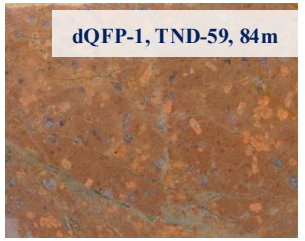
ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

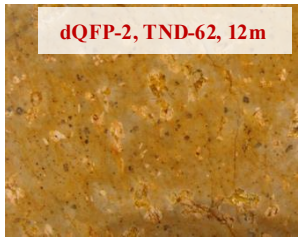
Geological map. Union North

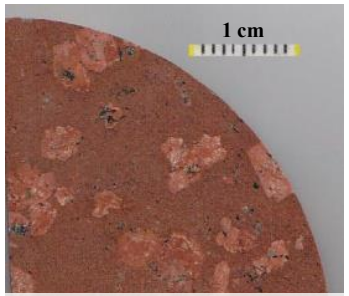




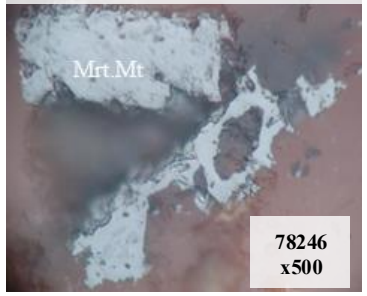






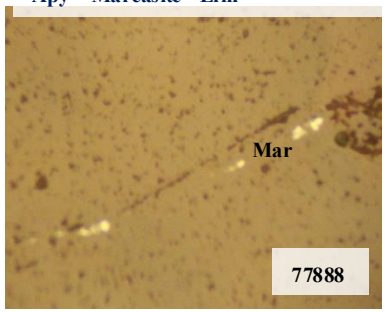


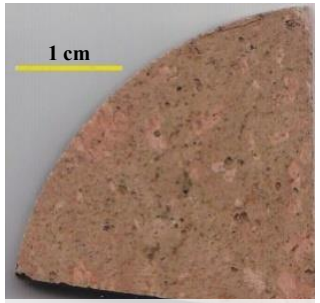
TND-24 6.4m 78246.
Trachydacite porphyry dyke (BFP).
Martitized Mt 0.5%, Hem

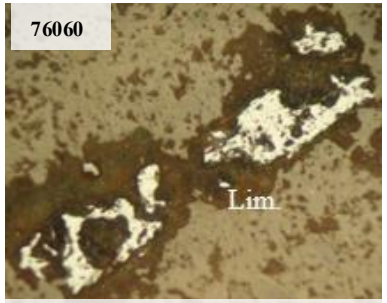




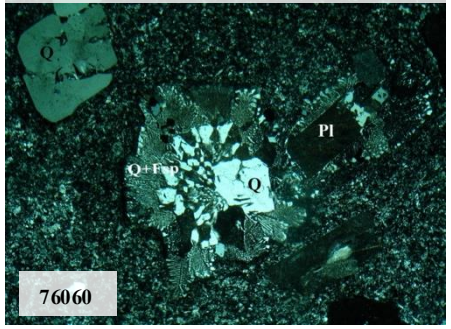
TND-22 50.5m 77888. Trachy-Rhyolite porphyry dyke (QFP-1).
Apy – Marcasite - Lim

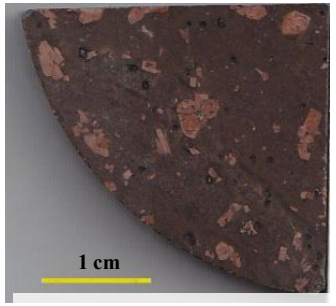


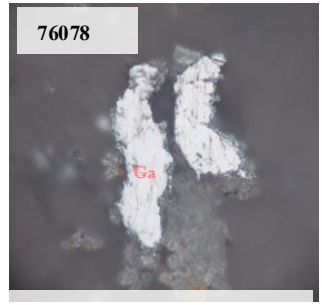




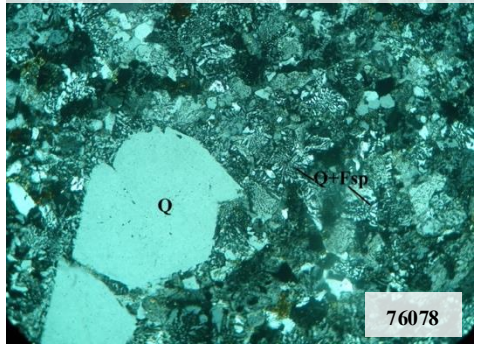
TND-13 2.2m 76060. Trachyrhyolite dyke (QFP-2). Apy (trace) – Lim - Mal







TND-13 18.9m 76078. Trachy-Rhyolite porphyry dyke (dFP)

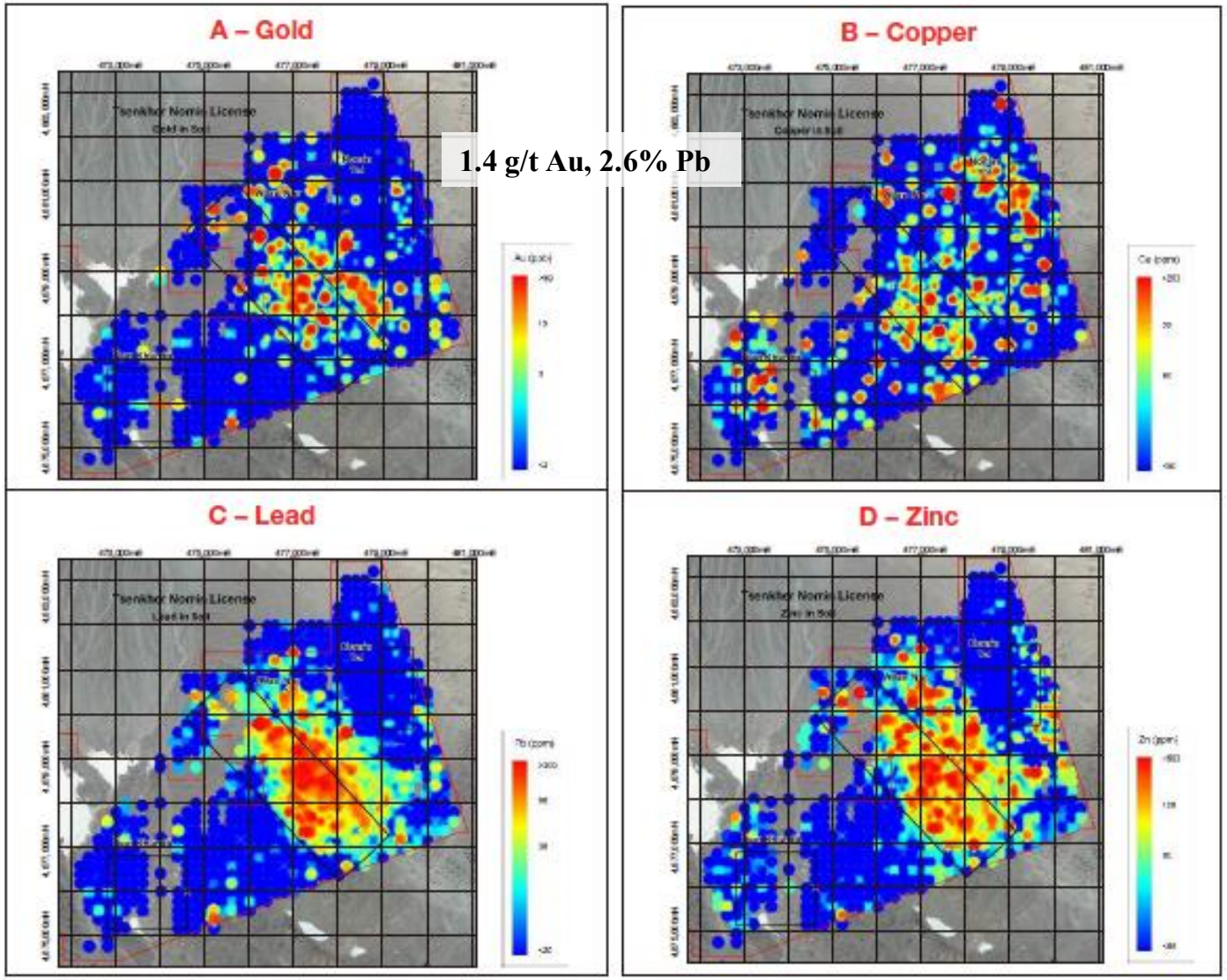


ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

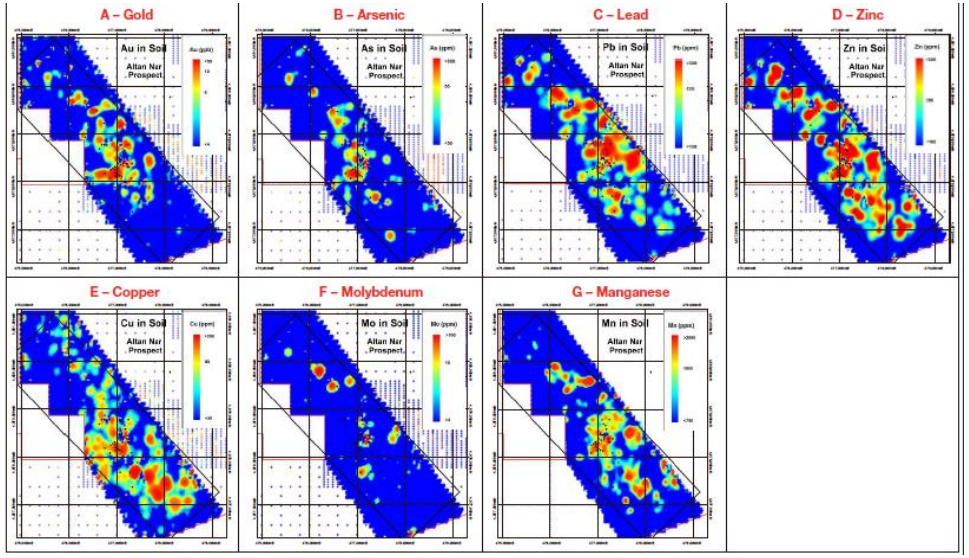
Soil sampling program: 2011, 2012, 2014.

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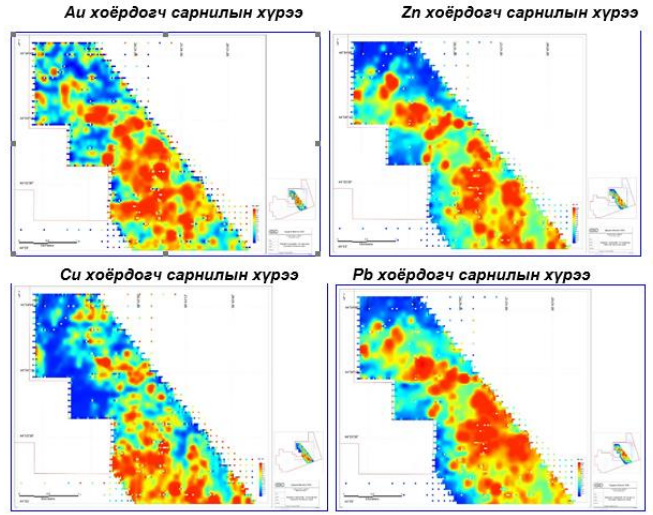
2011: 400x400m, 200x200m, 100x100m, 1789 samples



2012: 100x25m, 3456 samples



2014: 50x25m, 50x12.5m, 949 samples

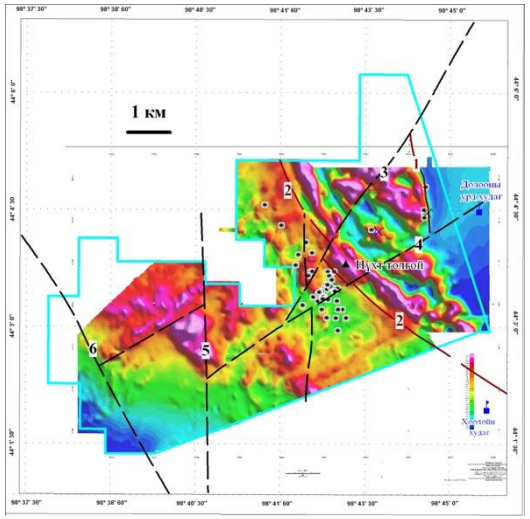


ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

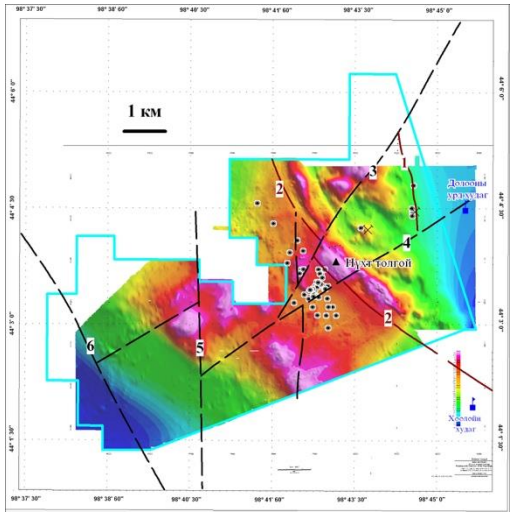
Geophysical survey: Ground Magnetic survey

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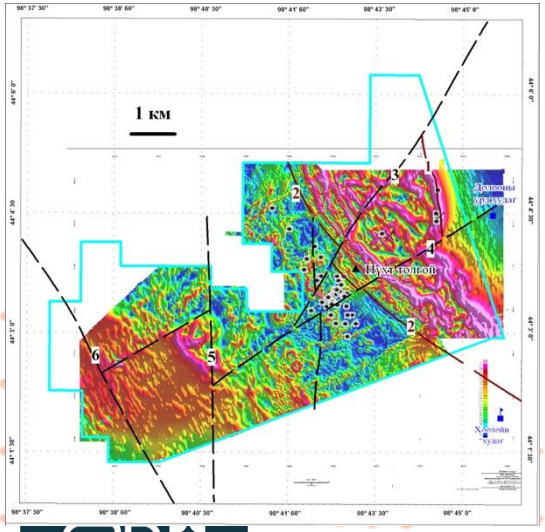
Magnetic survey, 2219.5 line km



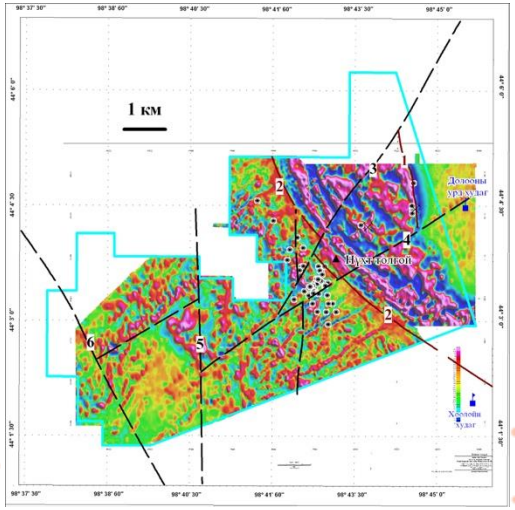
TMI RTP map



Pseudo Gravity map

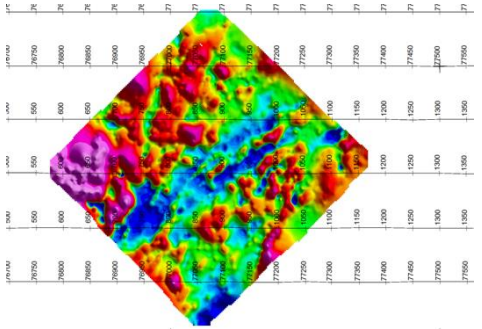


RTP Analytical signal



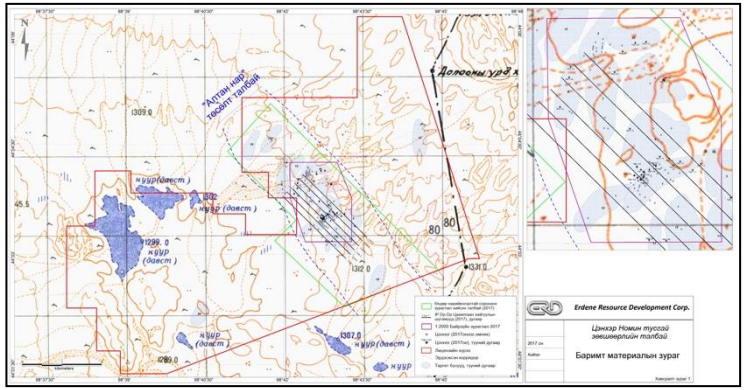
RTP 1st VD map

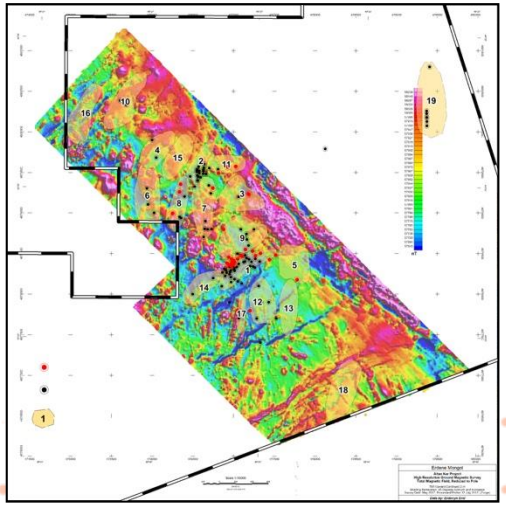
Detailed Magnetic survey, 2016, 16.4 line km Discovery zone



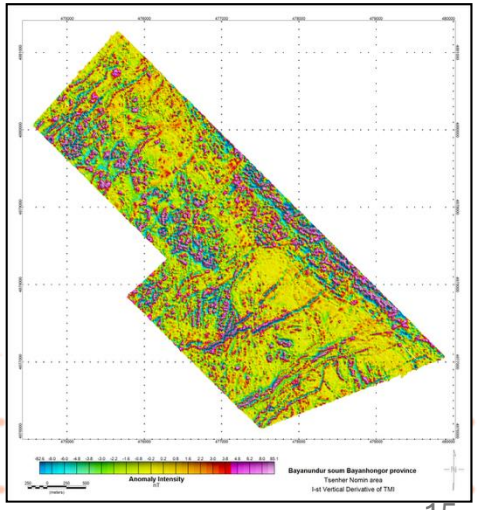
TMI RTP map

Magnetic Survey, 2017





TMI RTP map



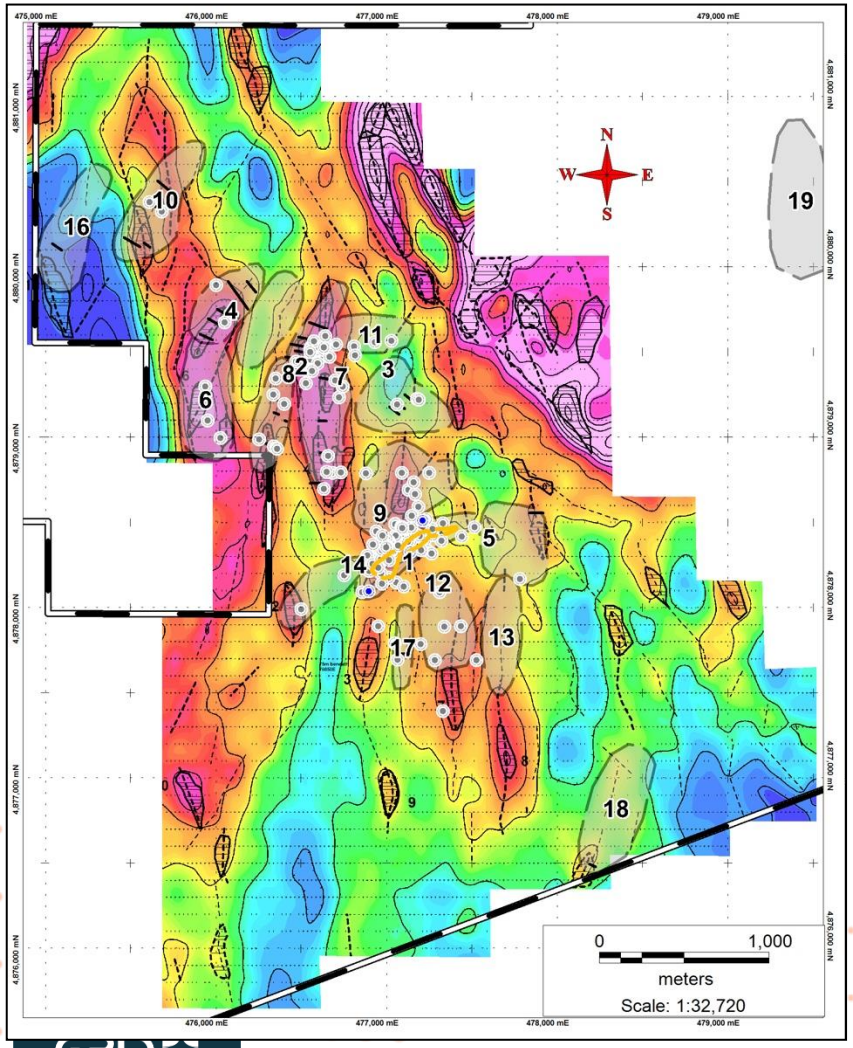
RTP 1st VD map

ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

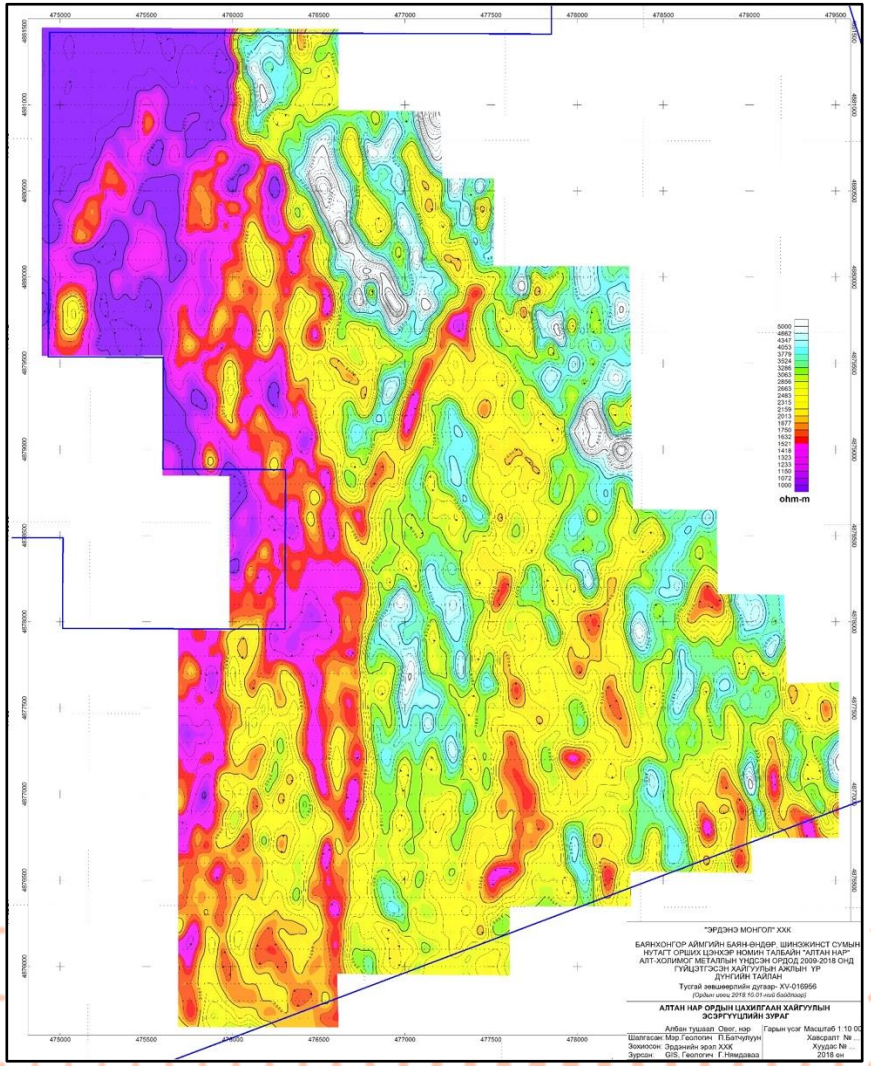
Geophysical survey: Gradient Array

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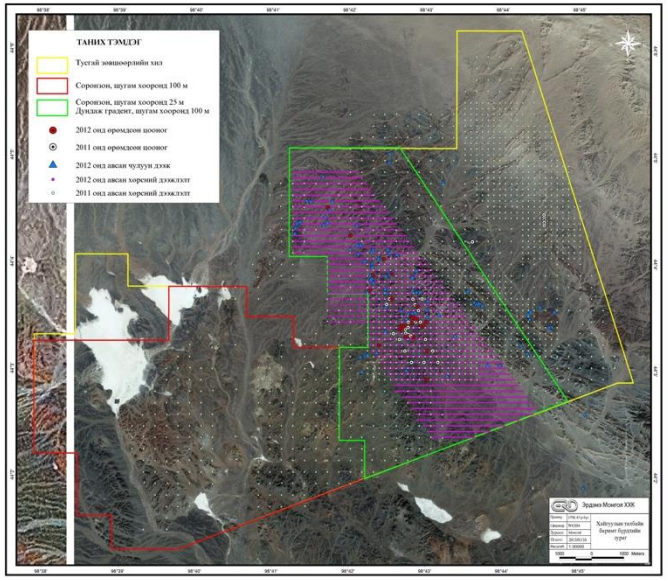
Chargeability, Altan Nar deposit



Resistivity, Altan Nar deposit



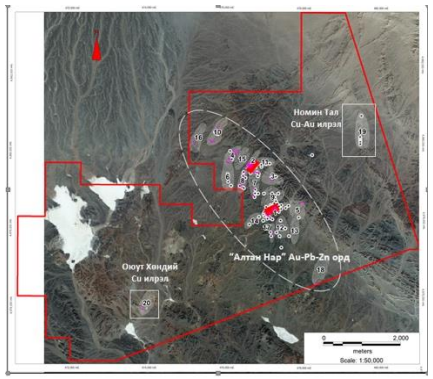
Gradient Array survey location map



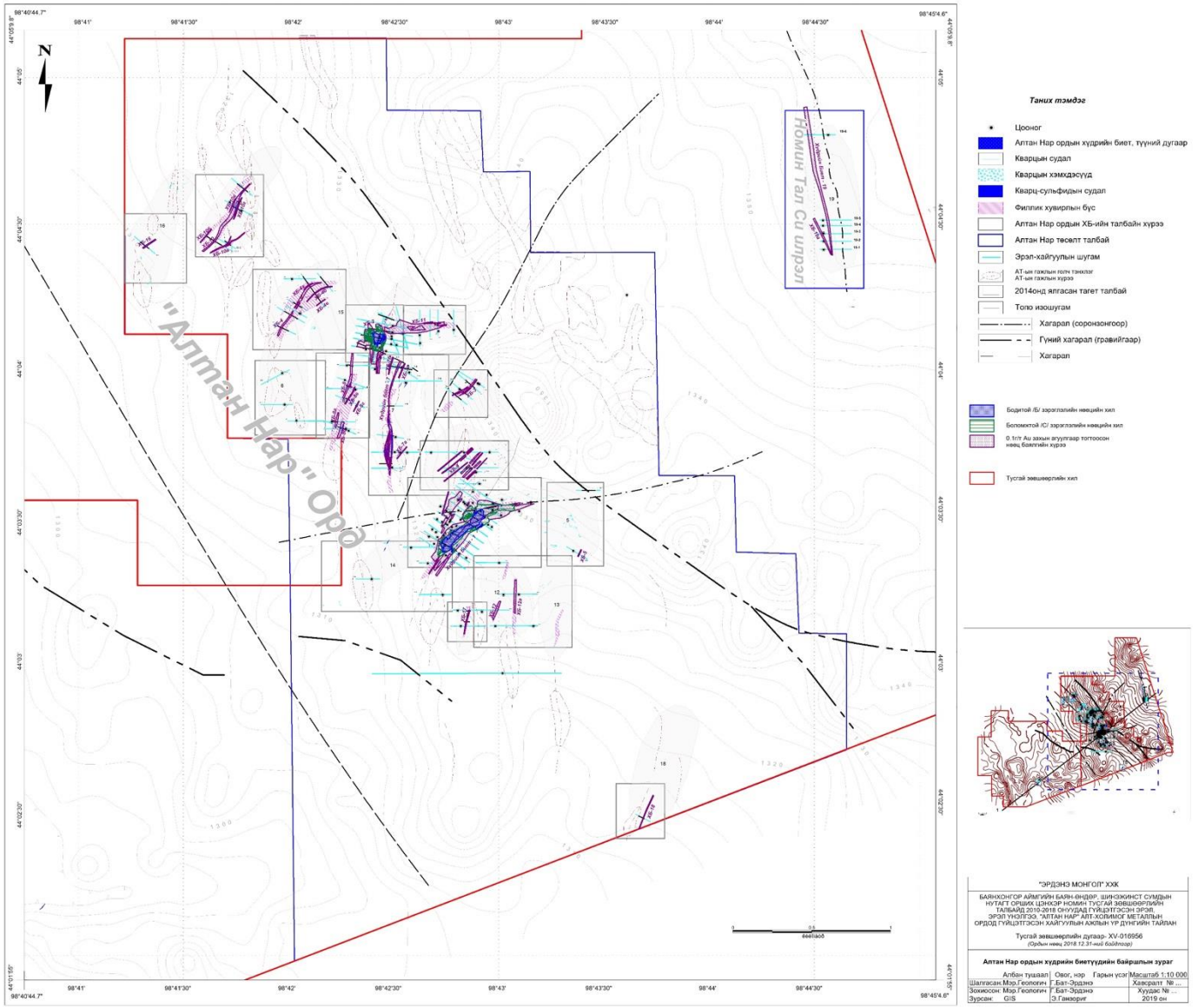
Gradient Array, 164.7 line km
“Erdeniin Erel LLC

2010-2018 онуудад “Цэнхэр Номин” тусгай зөвшөөрлийн талбайд гүйцэтгэсэн эрэл, эрэл-үнэлгээ, “Алтан Нар” алт-холимог металлын ордод гүйцэтгэсэн хайгуулын ажлын үр дүнгийн тайлан

Эрэл, эрэл-үнэлгээ, хайгуулын ажлын үр дүн



1. ХБ-1 (Нээлтийн бүс)
2. ХБ-2 (Хойд Холбоо)
3. ХБ-3 (Магги)
4. ХБ-4 (Хойд Нум)
5. ХБ-5 (Уулзварын)
6. ХБ-6 (Урд Нум)
7. ХБ-7 (Урд Холбоо)
8. ХБ-8 (Сайрын)
9. ХБ-9 (Төв Хөндийн)
9. 10. ХБ-10 (Хойд талбай)
11. ХБ-11 (Хойд Холбоон зүүн)
12. ХБ-12 (Урд Гарц)
13. ХБ-13 (Урт Нум)
14. ХБ-14 (Нээлтийн бүсийн Баруун
15. ХБ-15 (Хойд нумын Зүүн)
16. ХБ-16 (Баруун-Хойд)
17. ХБ-17 (Чанх Хойш)
18. ХБ-18 (Зүүн-Урд)
19. Номин Тал зэсийн илрэл
20. Оюут Хөндий зэсийн илрэл



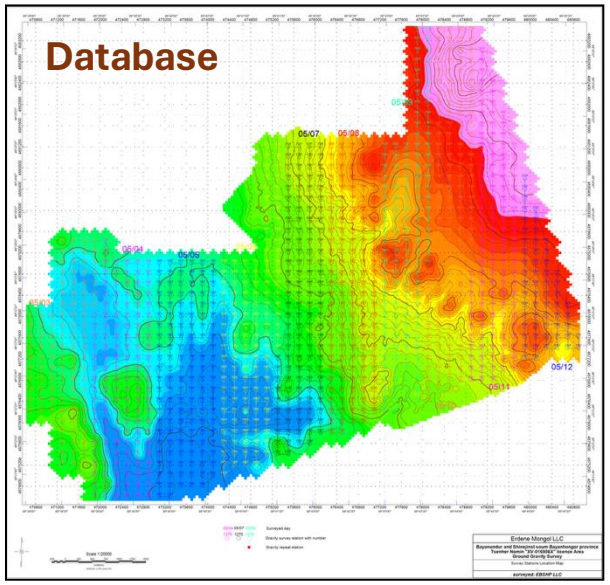


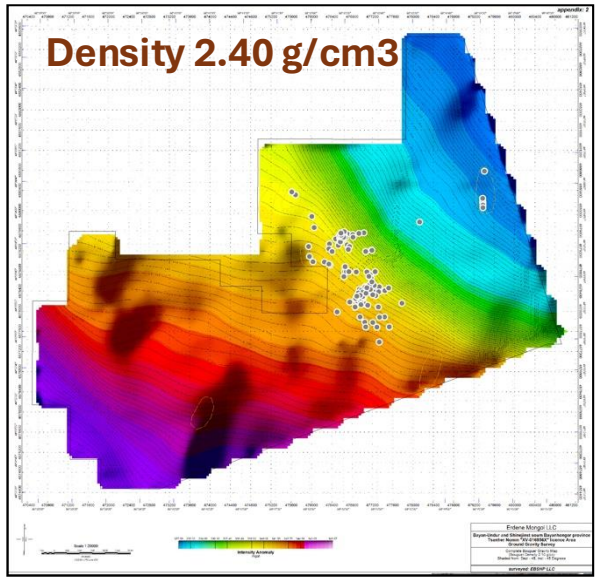
ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

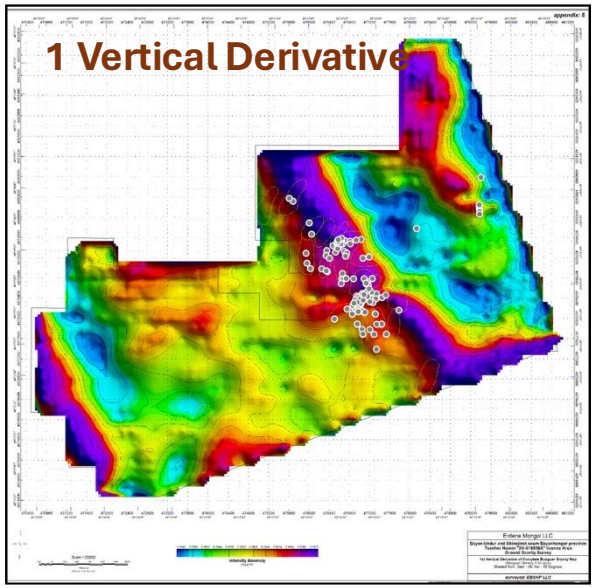
Geophysical survey: Gravity

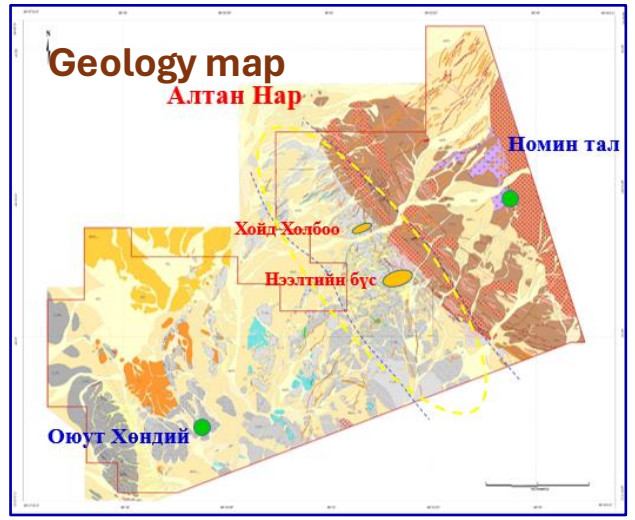
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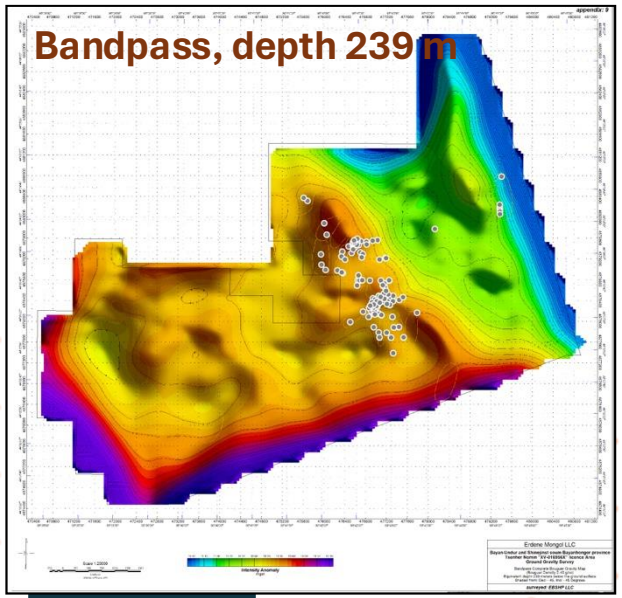
Gravity survey, 200 m x 200 m, 1218 ph.p. EBSP LLC

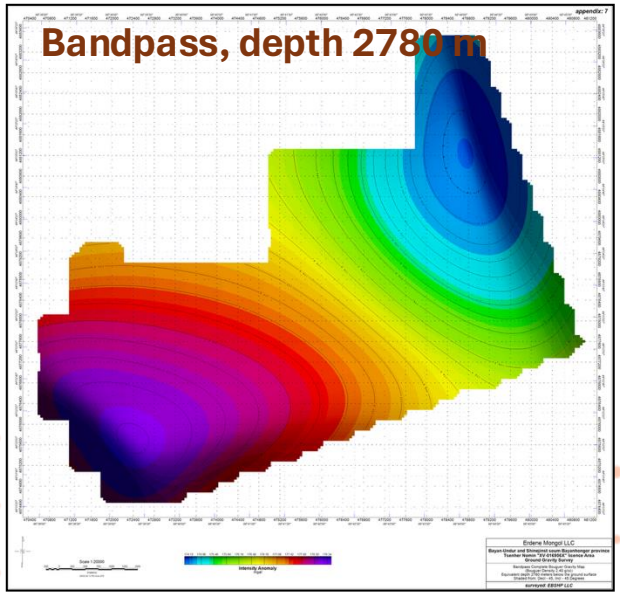


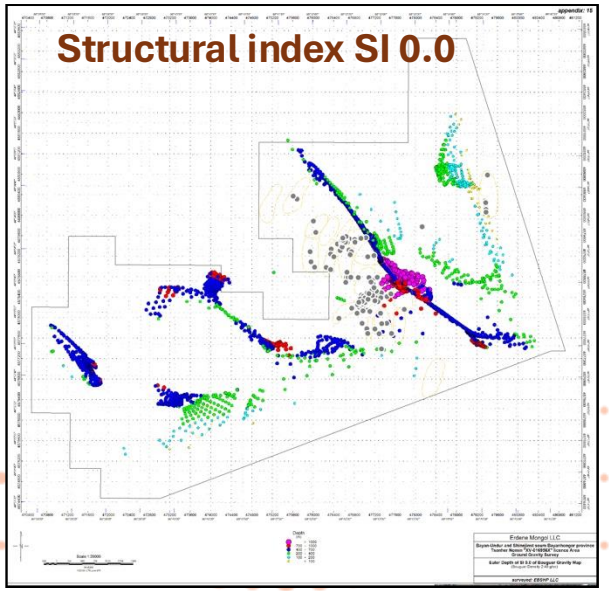


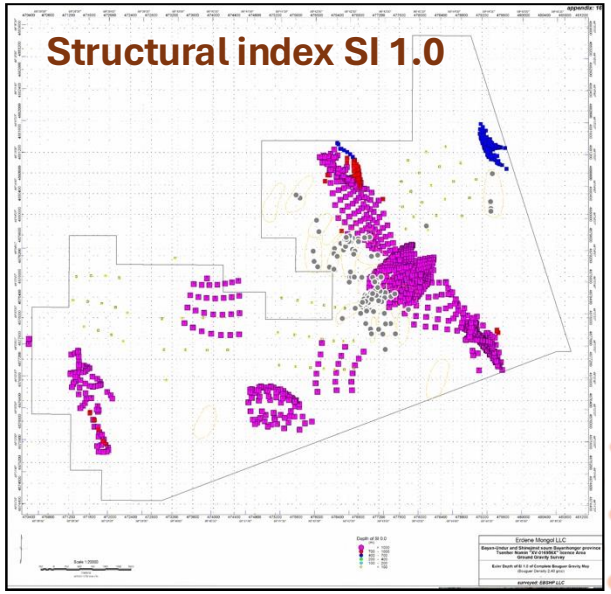










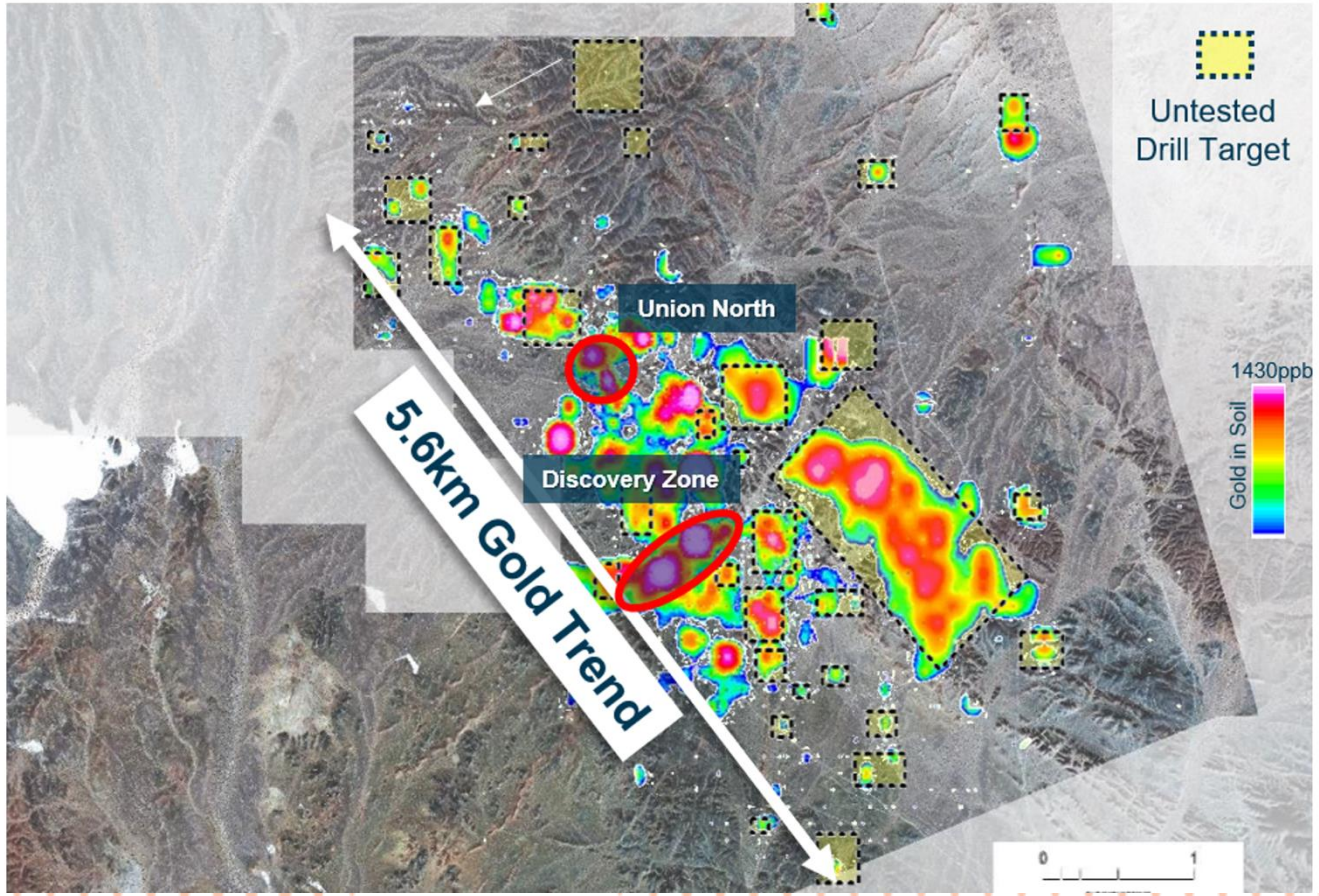


ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

Altan Nar – 5.6 km mineralized zone.

2019 Resource	Category	Au Oz (1.9g/t)	Ag Oz (~10g/t)	Pb lbs (~0.6%)	Zn lbs (~0.6%)
Altan Nar 0.7g/t AuEq cut-off	Indicated	318,000	2,350,000	63,800,000	69,520,000
	Inferred	186,000	866,000	49,060,000	52,140,000

- Carbonate base metal-intermediate sulfidation epithermal deposit similar to some of the world's largest:
  - Fruta del Norte (Ecuador): 6.7Moz Au
  - Porgera (Papua New Guinea): >25Moz Au
  - Kelian (Indonesia): 5.7Moz Au
  - Montana Tunnels (USA): 36Moz Ag
  - Roșia Montană (Romania): 17Moz Au
- Potential satellite deposit to Bayan Khundii
  - Historical test work indicated that a portion of the deposit could be processed by the Bayan Khundii plant
- Tremendous potential to materially increase resources with minimal drilling
  - Resources are focused in two zones within a 5.6km x 1.5km mineralized corridor
  - +20 mineralized target areas along trend
  - Extremely shallow – 90% of resources are within 150 meters of surface with system open at depth

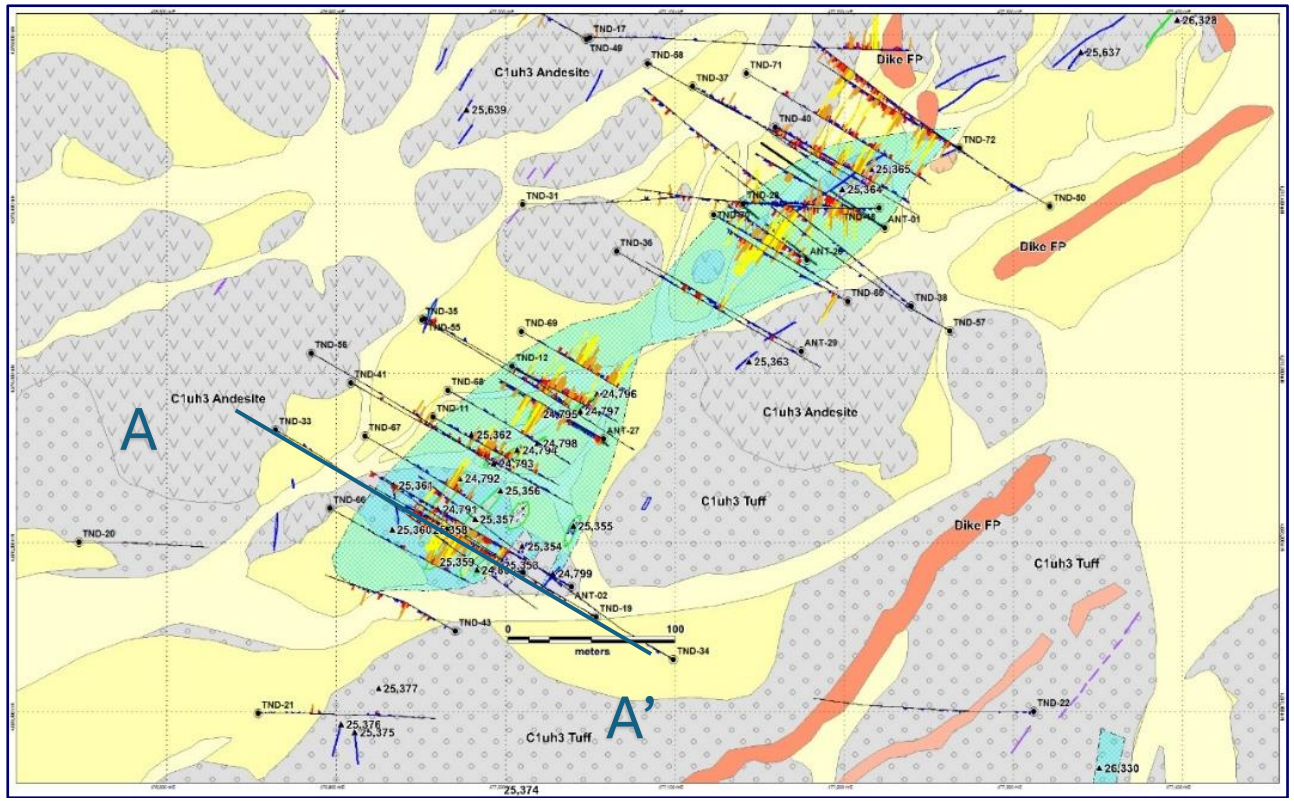


ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

Discovery zone



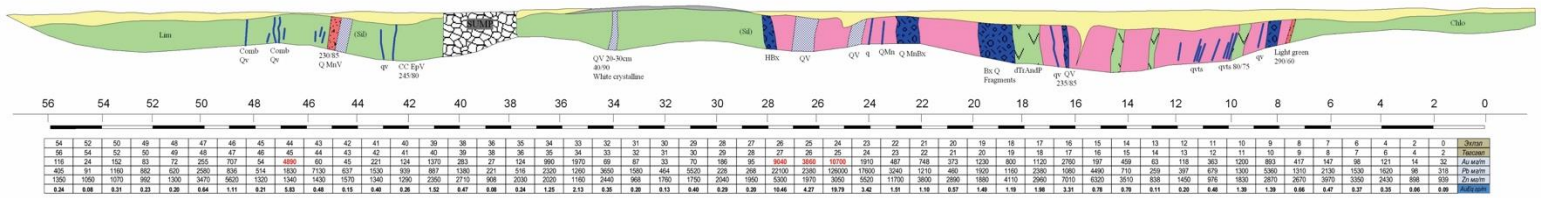
Discovery zone Geological map

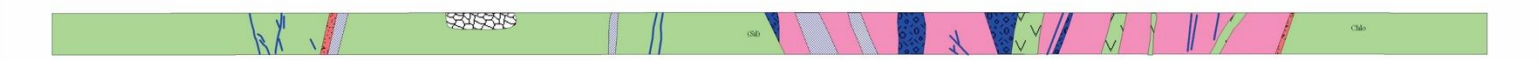


Уртраг 104°42'54.59"
Өргөрөг 44°3'30.08"
1314m

ANT-26 Сувгийн зүсэлт
Масштаб 1:100
305°БХ

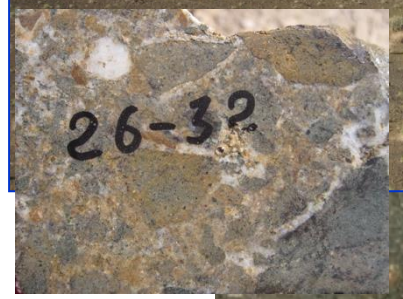
Уртраг 104°42'54.24"
Өргөрөг 44°3'27.91"
1316m





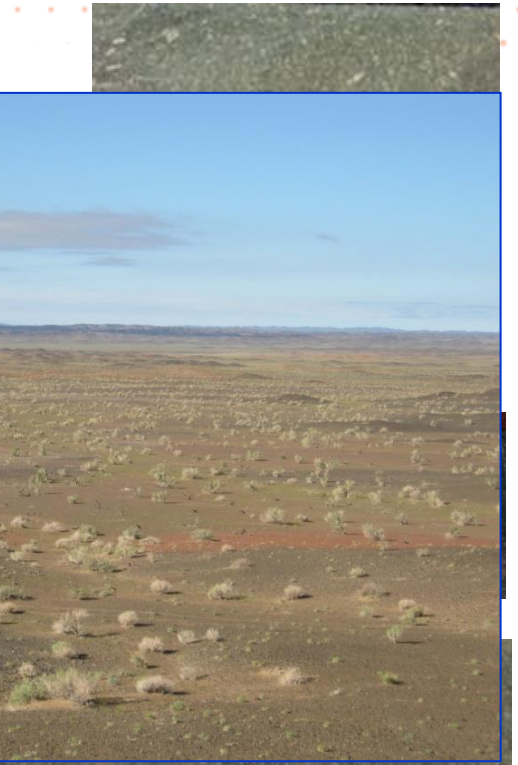






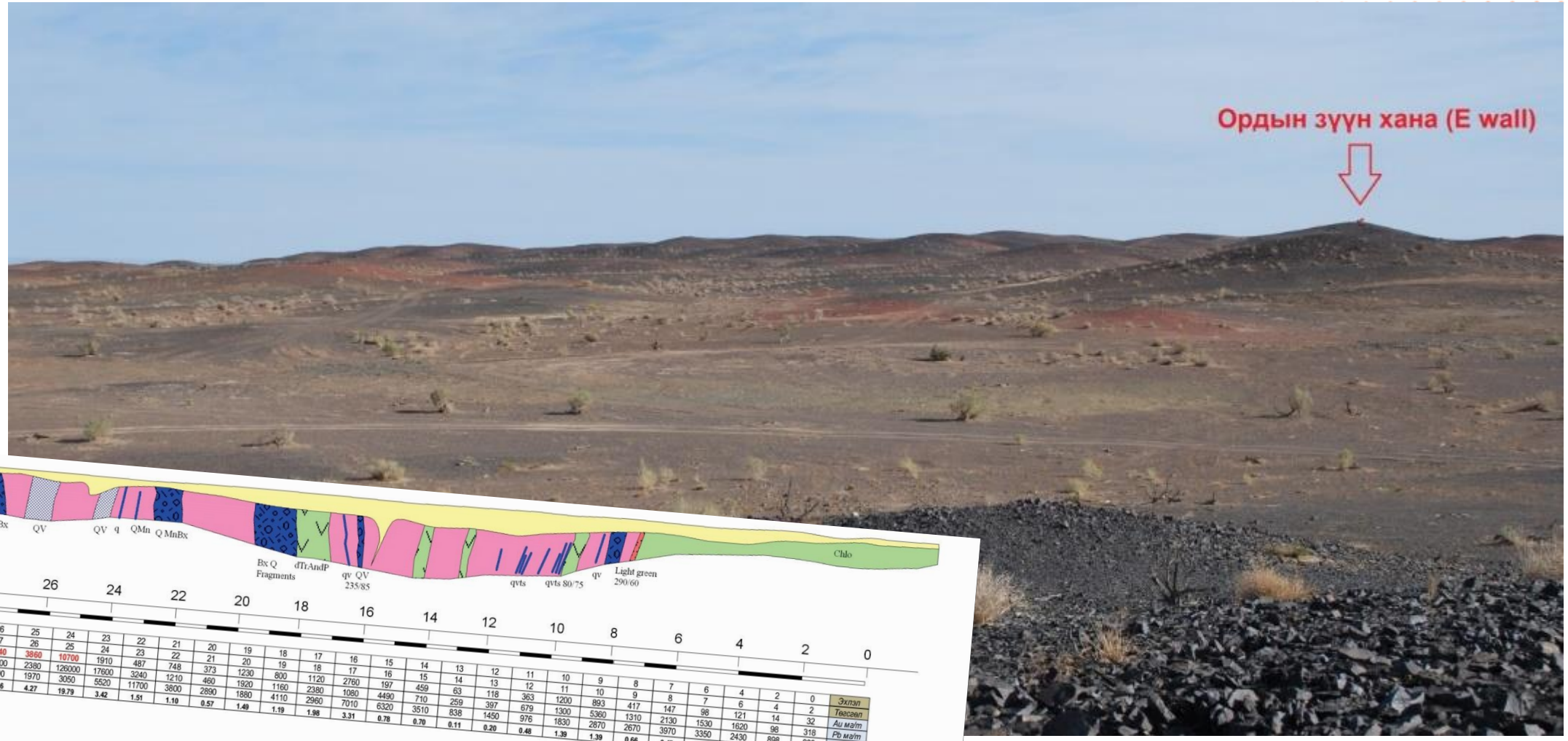






ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

Discovery zone

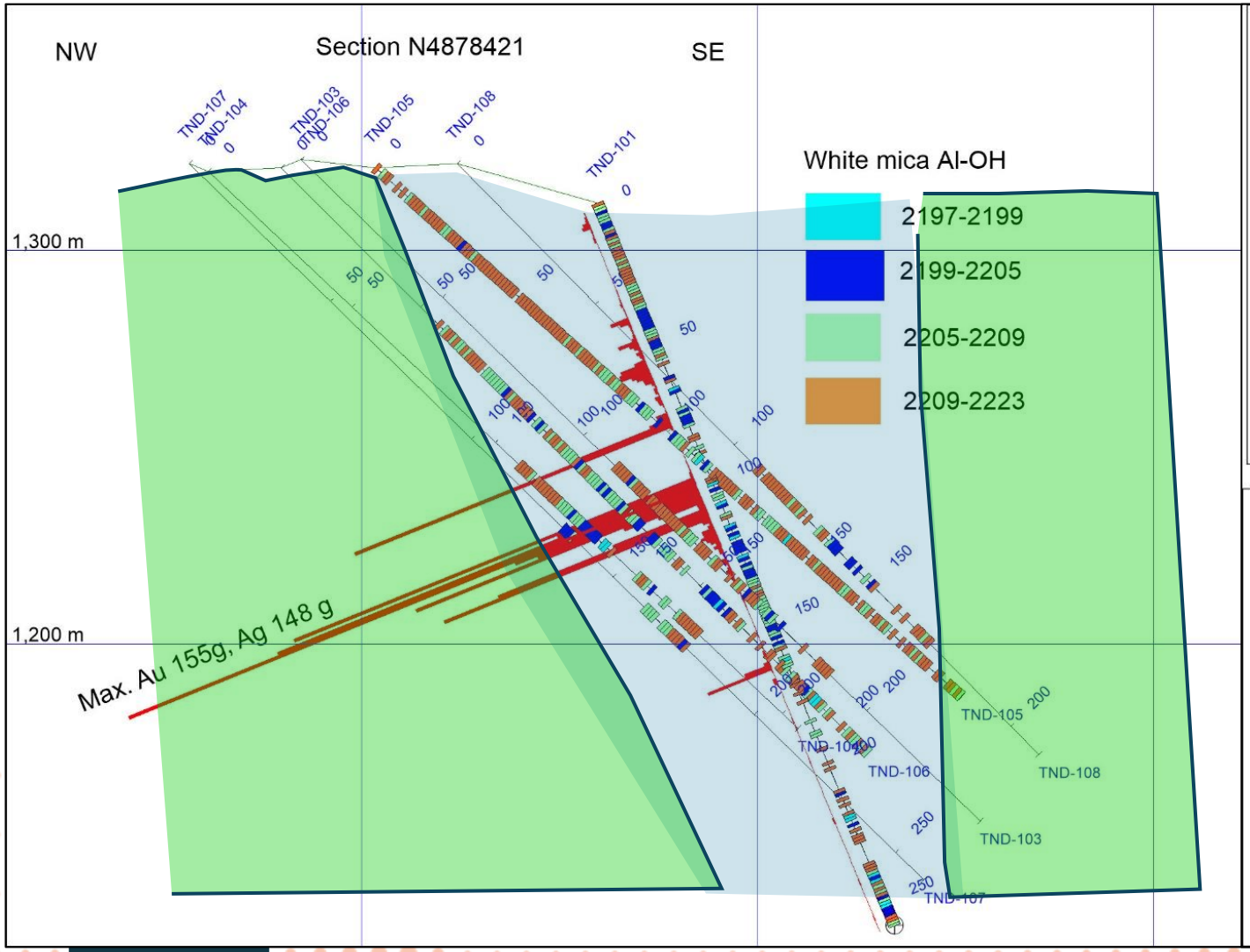


ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

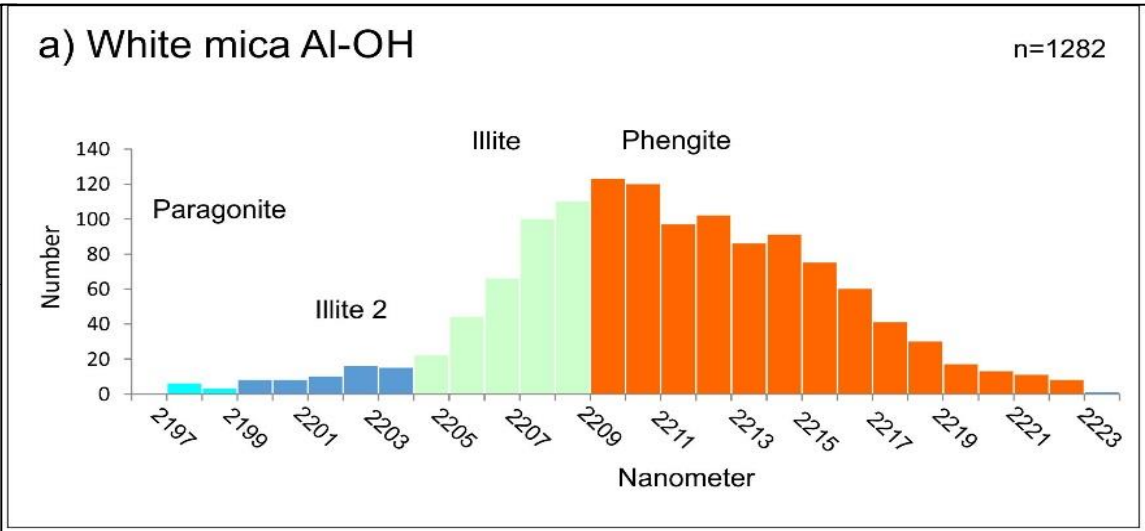
Discovery zone alteration (ser-ill, chl-epi)

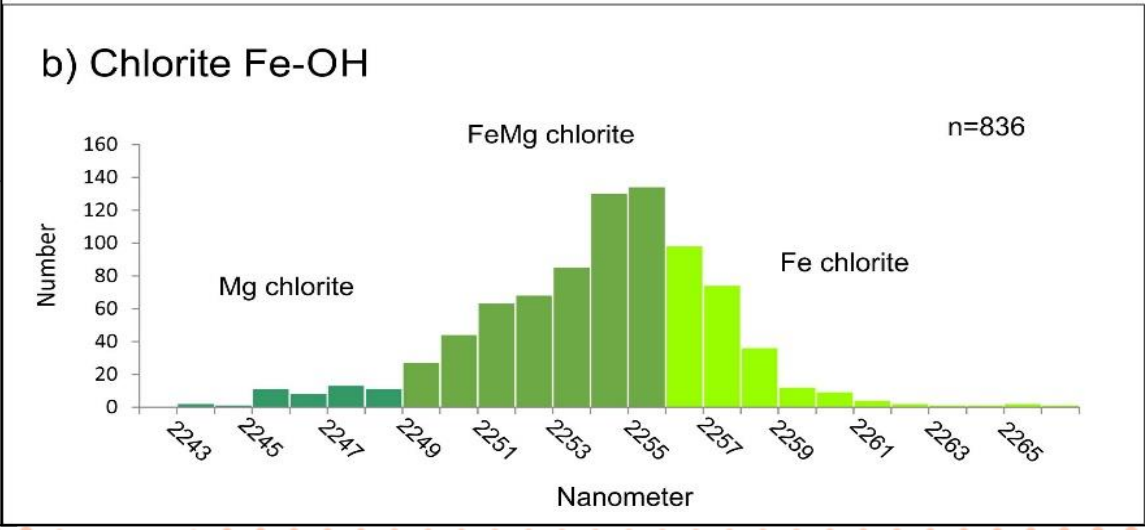
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Discovery zone cross-section



Alteration SWIR results





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ALTAN NAR DEPOSIT – DISCOVERY ZONE – HIGH GRADE POLYMETALLIC DEPOSIT

Deposit Remains Open at Depth with Multiple Holes Ending in Mineralization

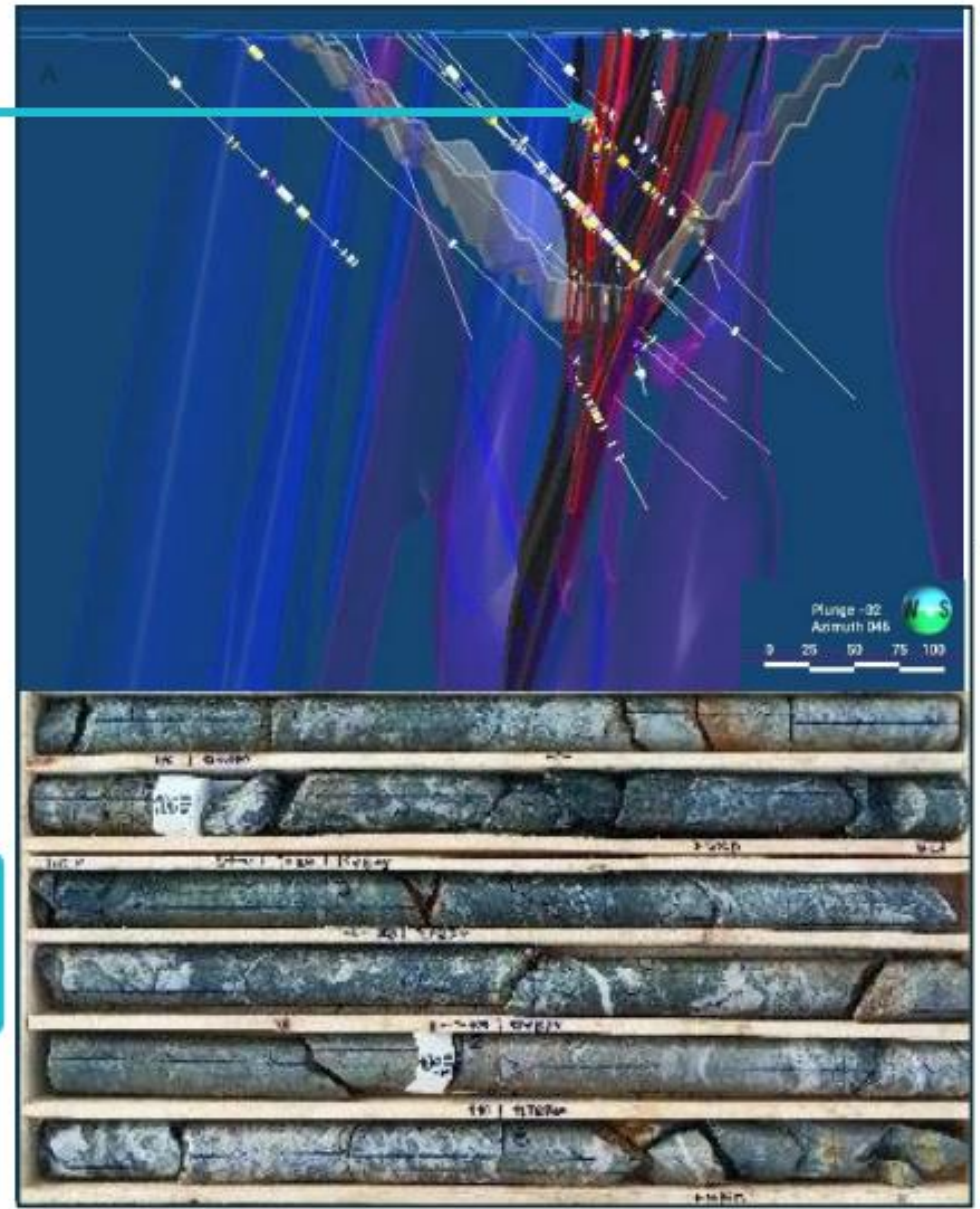
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High Grade Discovery Zone

Mineralized epithermal and hydrothermal breccia (black/red) surrounded by phyllic alteration

- **4m of 104 g/t Au, 108 g/t Ag, 3.7% Pb and 5.9% Zn (TND-101)**
- **7m of 45.7 g/t Au, 93 g/t Ag, 1.5% Pb, 3.4% Zn (TND-135)**

Discovery Zone mineralization is formed at the contact of a volcanic breccia and andesite

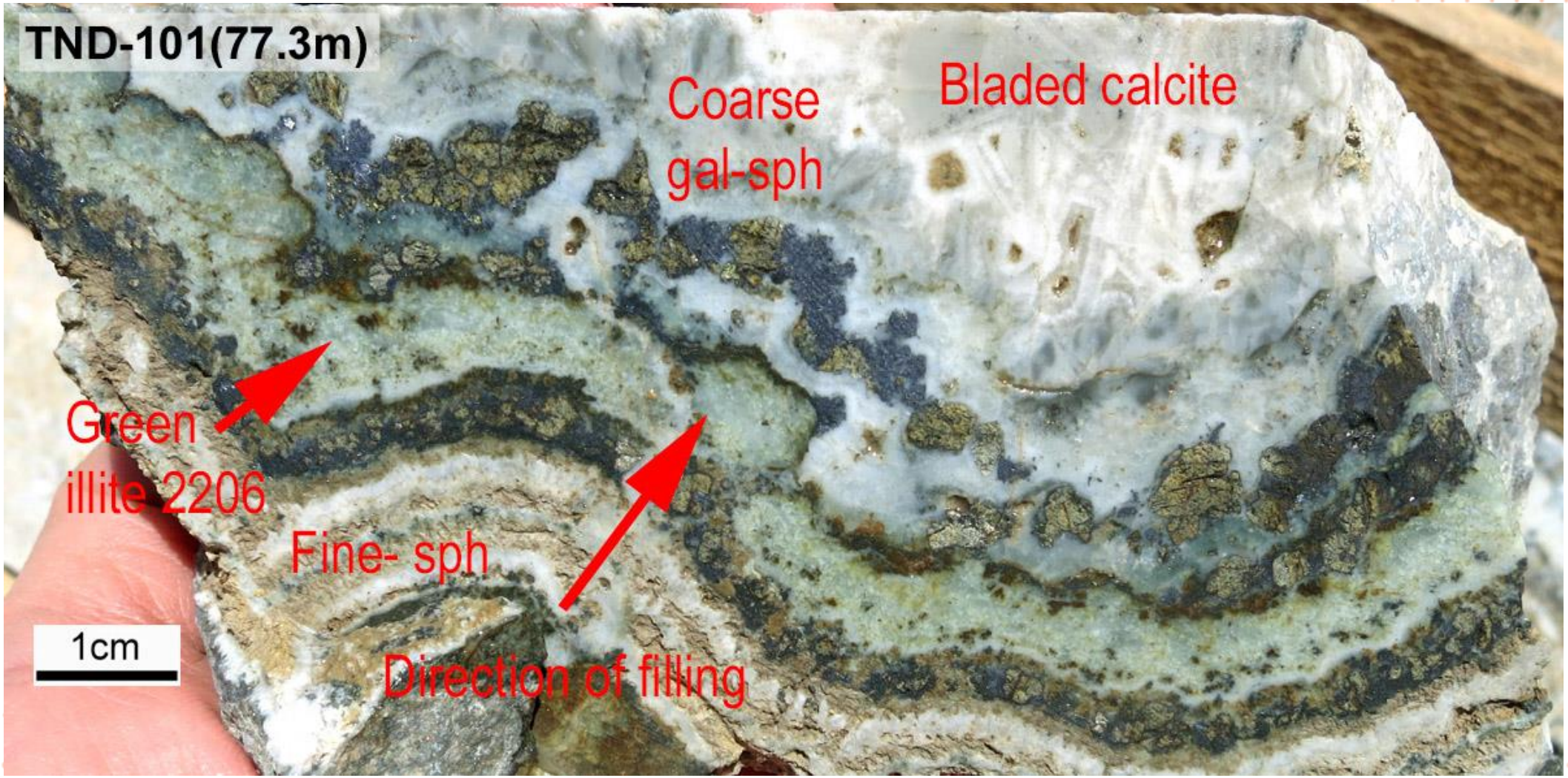


100M THICK SECTION – Looking NE

	From	To	Width	Au g/t	Au Eq g/t
TND-69	47	91	44	2.3	3.2
TND-90	91	131	40	2	2.8
TND-91	78	81	3	0.92	1.8
TND-101	39	82	43	4.6	5.70
incl.	76	78	2	56.3	59.8
and	94	140	46	17.5	19.2
incl.	96	111	15	52.3	56.9
and	158	170	12	2.8	3.3
TND-104	126	163	37	2.2	2.50
TND-105	100	114	14	7.9	10.20
TND-110	97	117	20	10.3	11.80
TND-134	101	111	10	12.2	13.4
TND-135	97	120	23	17	18.8
incl.	105	112	7	45.7	49.70

ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

Mineralization. Discovery zone

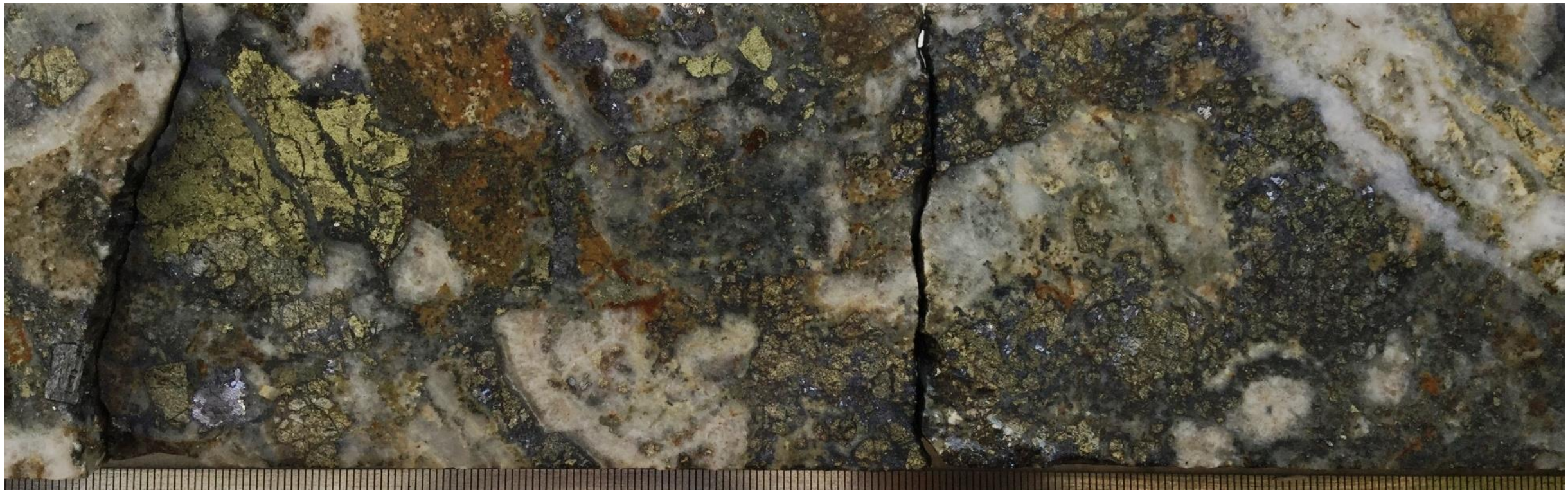


TND-101, 77-78m: 86.5 g/t Au, 75 g/t Ag, 0.12% As, 0.4% Cu, 1.8% Mn, 1.23% Pb, 3.7% Zn

Mineralization. Discovery zone

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TND-101: 96-110m: **14 m @ 55.6 g/t Au, 131.1 g/t Ag, 2.64% Pb, 3.01% Zn;** 60.4 g/t AuЭкв



TND-101, 107.5m: sphalerite-galena-chalcopyrite bearing breccia;
1 m @ 25.3 g/t Au, 338 g/t Ag, 0.2% As, 4.55% Pb, 3.05% Zn, 1.93% Cu, 1.59% Mn.

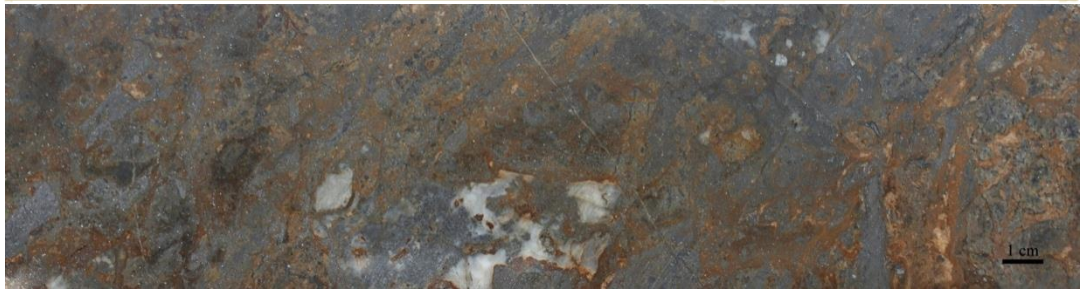
ERDENE MONGOL LLC

ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

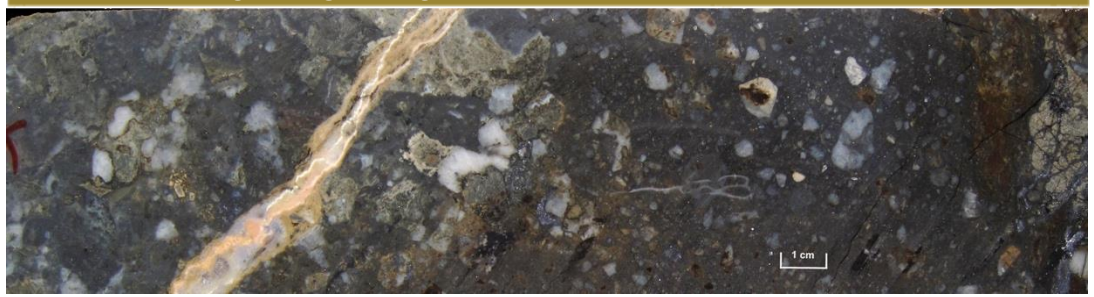
Mineralization. Discovery zone

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Mineralized breccia (TND-19, 150m)
Au 14.3g/t, Ag 22g/t, As 11.9%, Pb 0.16%, Zn 1.15%



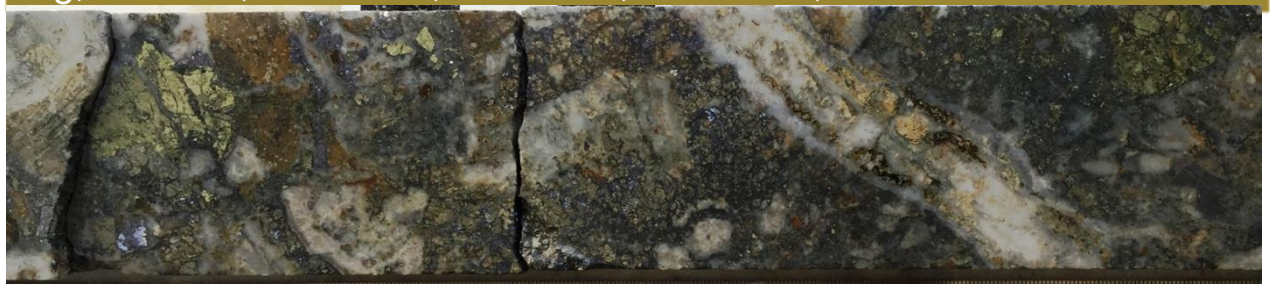
Mineralized Black breccia (TND-35, 119.5m)
Au 2.56g/t, Ag 109g/t, As 1.5%, Pb 1.13%, Zn 0.55%



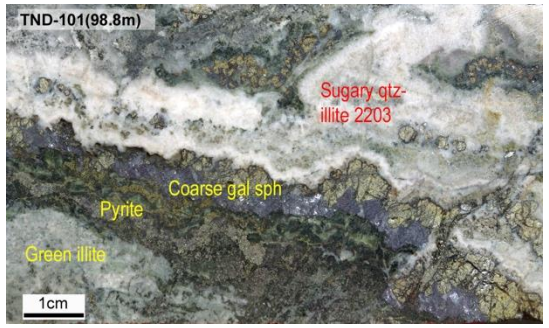
Mineralized breccia (TND-70, 52.4m)
Au 3.2g/t, Ag 19g/t, As 0.04%, Pb 0.2%, Zn 0.3%

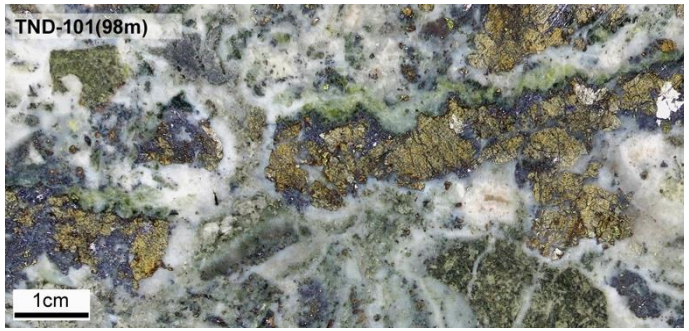


Epithermal breccia (TND-101, 107-108m) 1m @ 25.3g/t Au, 338g/t Ag, 0.2% As, 4.55% Pb, 3.05% Zn, 1.93% Cu, 1.59% Mn.









ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

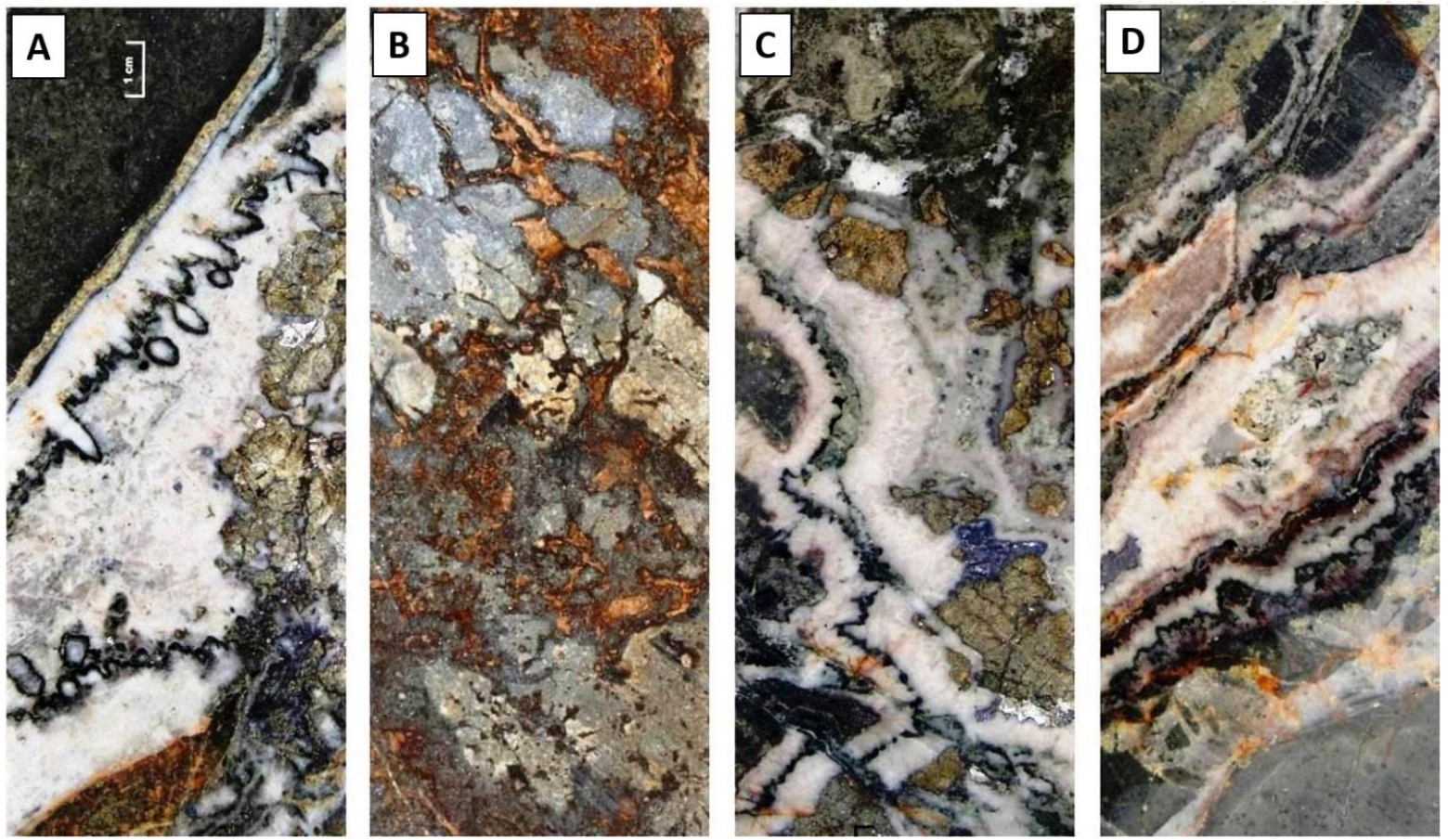
Mineralization. Discovery zone

Ore minerals:

Sphalerite, galena, pyrite, arsenopyrite, chalcopyrite, tetrahedrite, Ag-Cu minerals (Ag_5SbS_4/$(Ag,Cu,Fe)_{12}(Sb,As)_4S_{13}$) polybasite ($[Ag,Cu)_6(Sb,As)_2S_7]$), argentite, gold/electrum

Gangue minerals:

Quartz, calcite, ankerite, sericite-illite, kaolinite, adularia, rhodochrosite (MnCO3), Fe-Mn oxides- jacobsite (MnFe2O4), pyroxmangite, Mn-Cr oxides, Mn oxide - manganite (MnO(OH)), Mn-Ca carbonate– cutnohorite, Mn-silicates (Mn,Fe,Mg,Ca)SiO3



Representative textures from Au-Ag-Zn-Pb mineralized core samples from Altan Nar DZ zone).
A) Crustiform quartz textures (left) and light brown coloured coarse low Fe (honey) sphalerite (right);
B) Coarse grained sphalerite with Mn-carbonate gangue minerals (brownish material);
C) Crustiform quartz textures with light brown sphalerite and galena;
D) Crustiform-colloform quartz textures.

ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

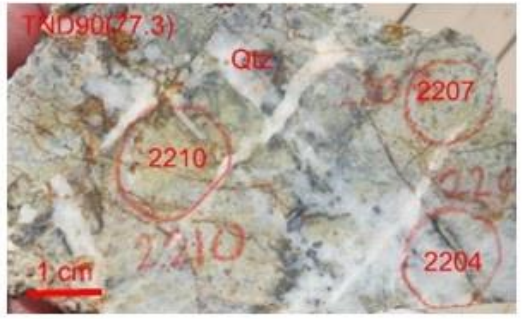
Mineralization. Discovery zone

Ore minerals:

Sphalerite, galena, pyrite, arsenopyrite, chalcopyrite, tetrahedrite, Ag-Cu minerals (Ag_5SbS_4/$(Ag,Cu,Fe)_{12}(Sb,As)_4S_{13}$) polybasite ($[Ag,Cu)_6(Sb,As)_2S_7]$), argentite, gold/electrum

Gangue minerals:

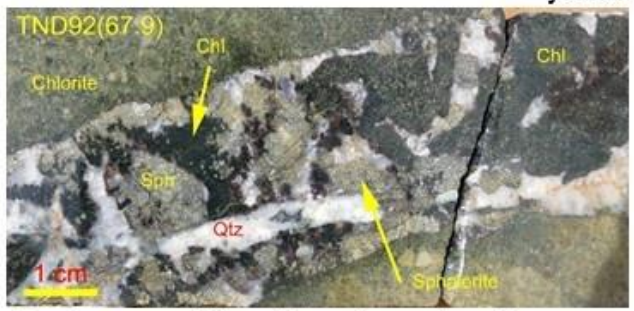
Quartz, calcite, ankerite, sericite-illite, kaolinite, adularia, rhodochrosite ($MnCO_3$), Fe-Mn oxides- jacobsite ($MnFe_2O_4$), pyroxmangite, Mn-Cr oxides, Mn oxide - manganite ($MnO(OH)$), Mn-Ca carbonate– cutnohorite, Mn-silicates $(Mn,Fe,Mg,Ca)SiO_3$



Stockwork quartz veins



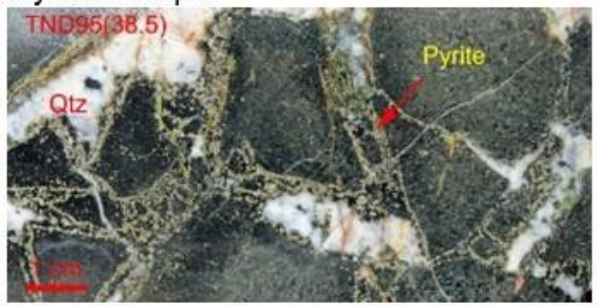
Pink-Mn-cal vein in-filled by coarse yellow sph and cal



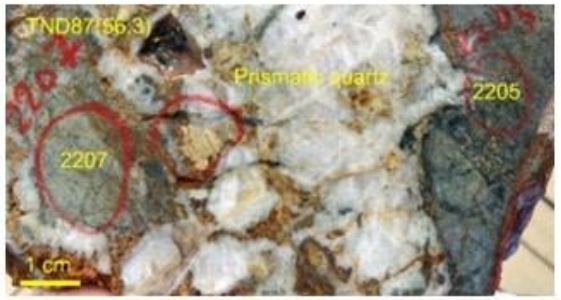
Dark green chl and qz-cb enclose large crystals of sph



Pink-brown rhodonite vein



Angular breccia, comprising andesite wall rock clasts, in-filled by qz & py

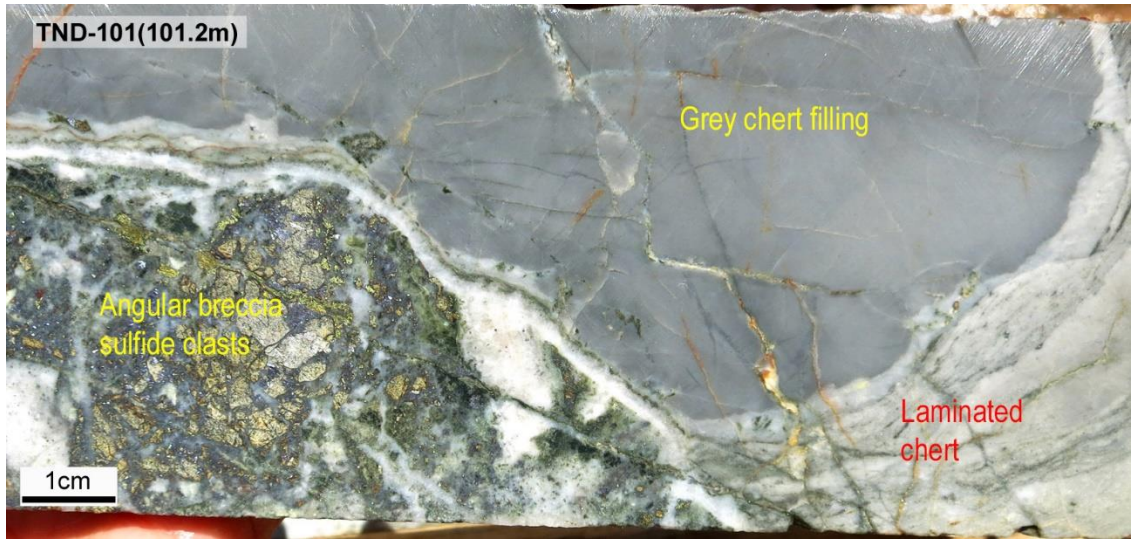


Large, zoned prismatic crystals of qz, in-filled by yellow sph; wall rock clasts are illite altered (2205-2207 nm)

ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

Geopetal filling of grey chert. Discovery zone, Altan Nar Deposit

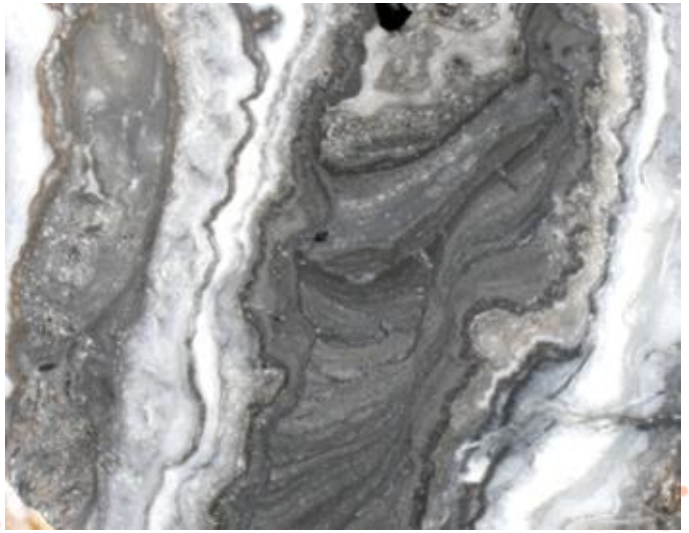
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Geopetal texture





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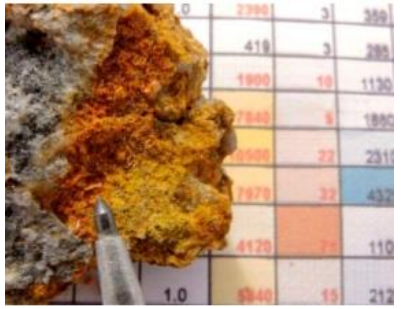
ALTAN NAR ISE GOLD DEPOSIT

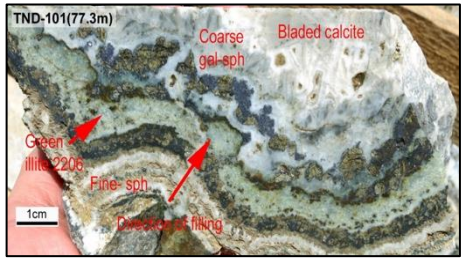
Deposit features that support Intermediate Sulphidation Epithermal classification

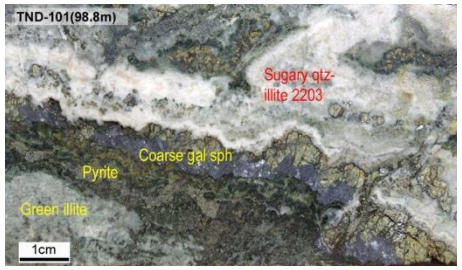


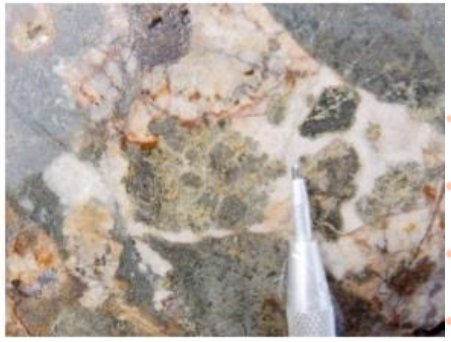
- Quartz (± adularia ± sericite-carbonate) Au (Ag) vein and breccias
- Quartz-sericite (muscovite) alteration
- Boiling textures:
  - Local colloform bands, some with finely disseminated Au (electrum)
  - Common bladed calcite textures with calcite now pseudomorphed by quartz
- Moderate Ag:Au ratios (7:1, in the ore zone ~1-2)
- High base metal concentrations, mostly >1 wt% Pb+Zn, galena, Fe-low sphalerite
- Variable As content, but sometimes high Cu value. As presented in arsenopyrite, also, in orpiment (As2S3) – realgar (AsS)
- Abundant carbonate: Mn-calcite, rhodonite, rhodochrosite, dolomite, siderite, Mn-carbonate & silicate
- Geo petal textures













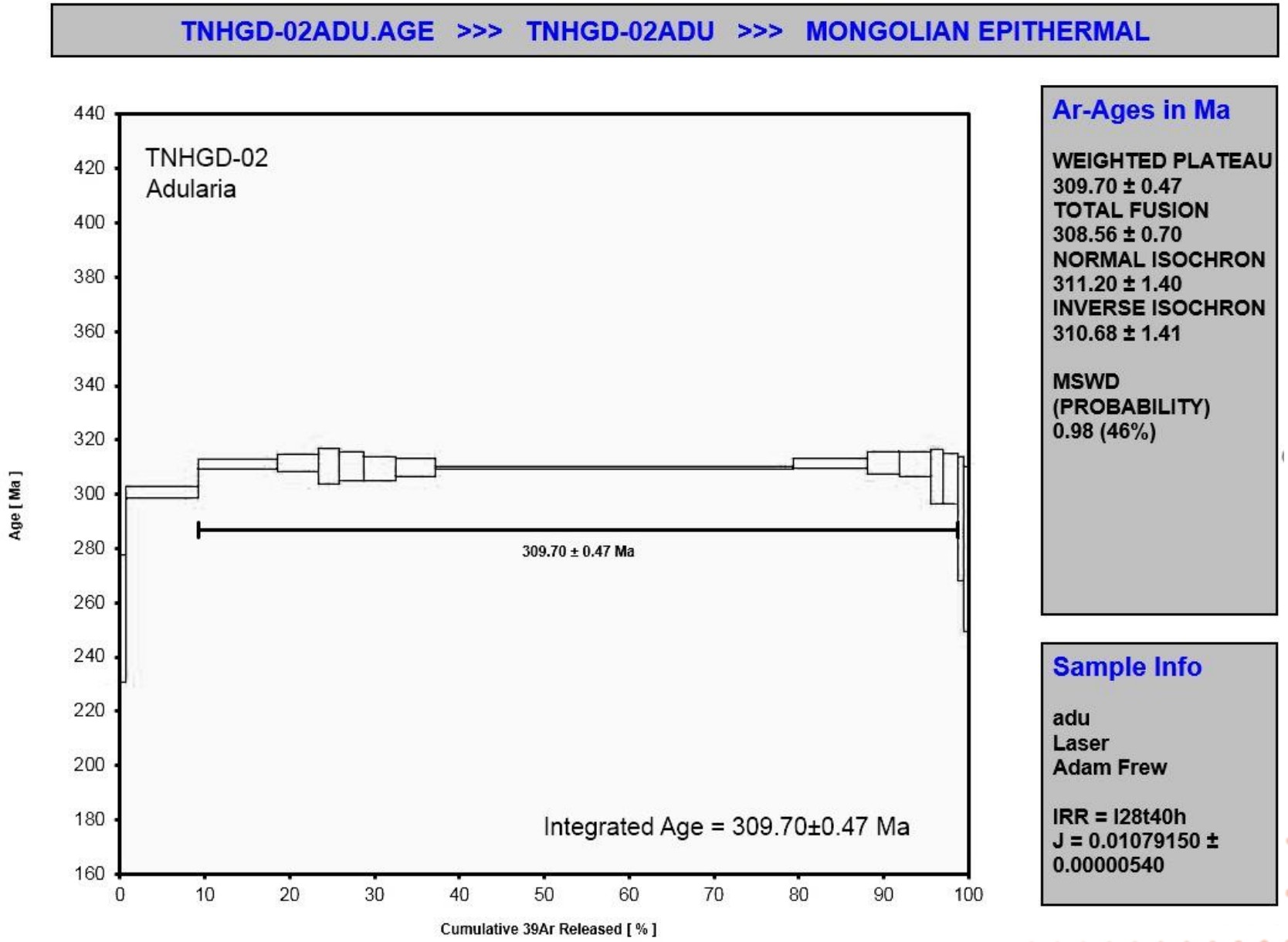
ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

Mineralization age.

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Ar-Ar 309.7±0.47 Ma
(pennsylvanian)

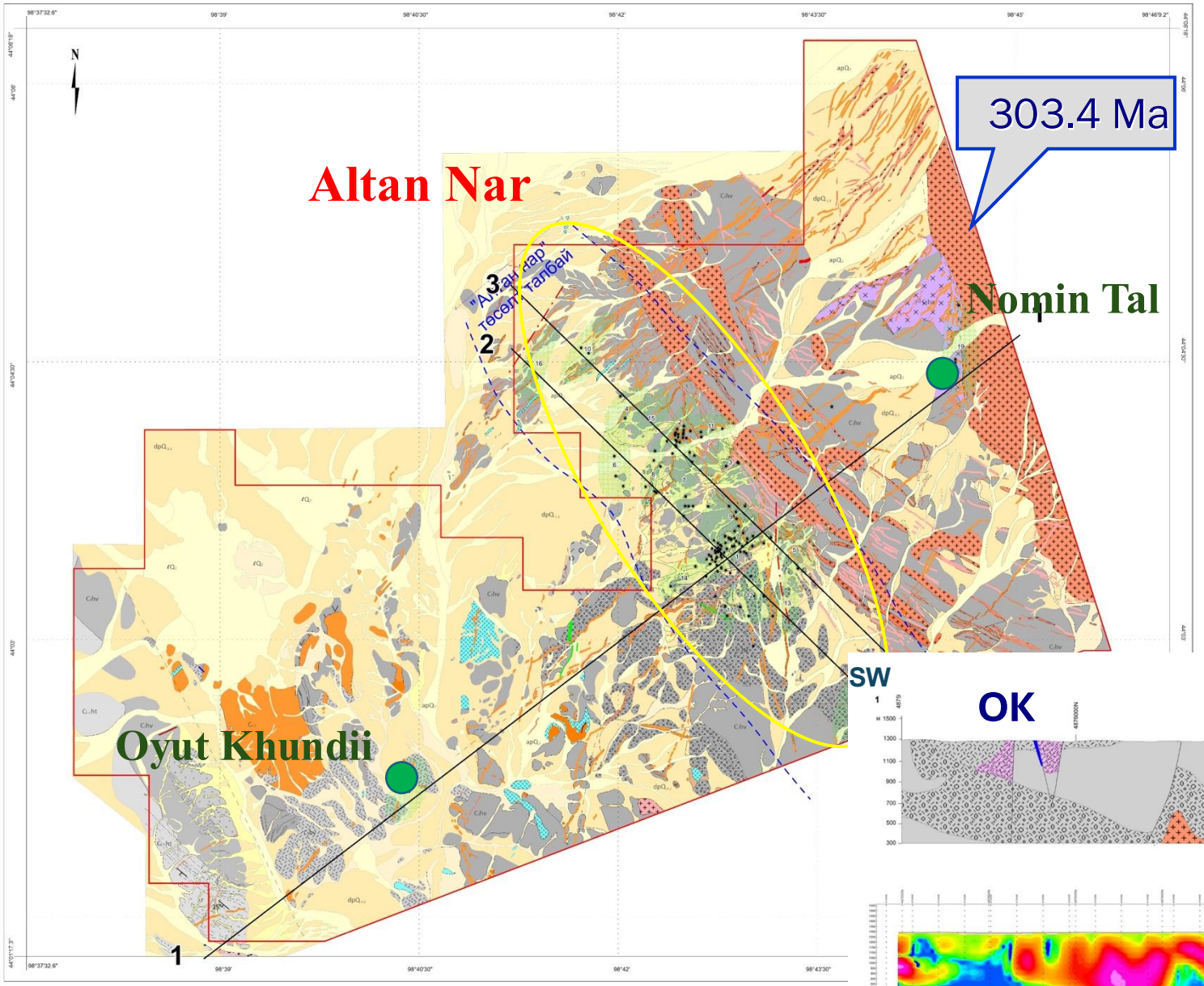
C1uh3 andesite (TND-71)
U/Pb 320.4±9.8 Ma



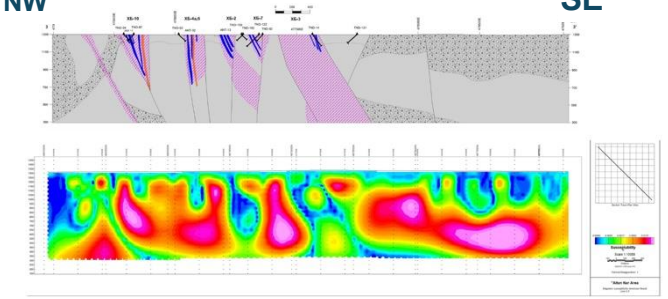
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ALTAN NAR ISE GOLD-SILVER-BASE METAL DEPOSIT

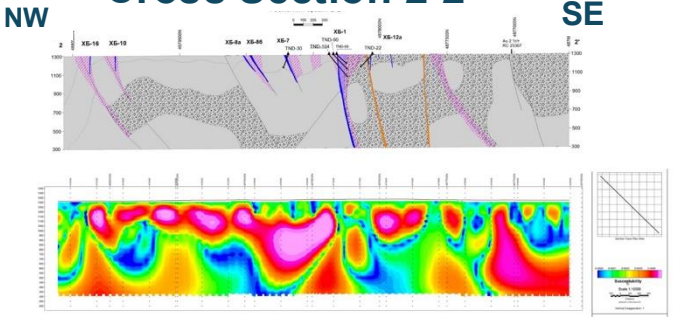
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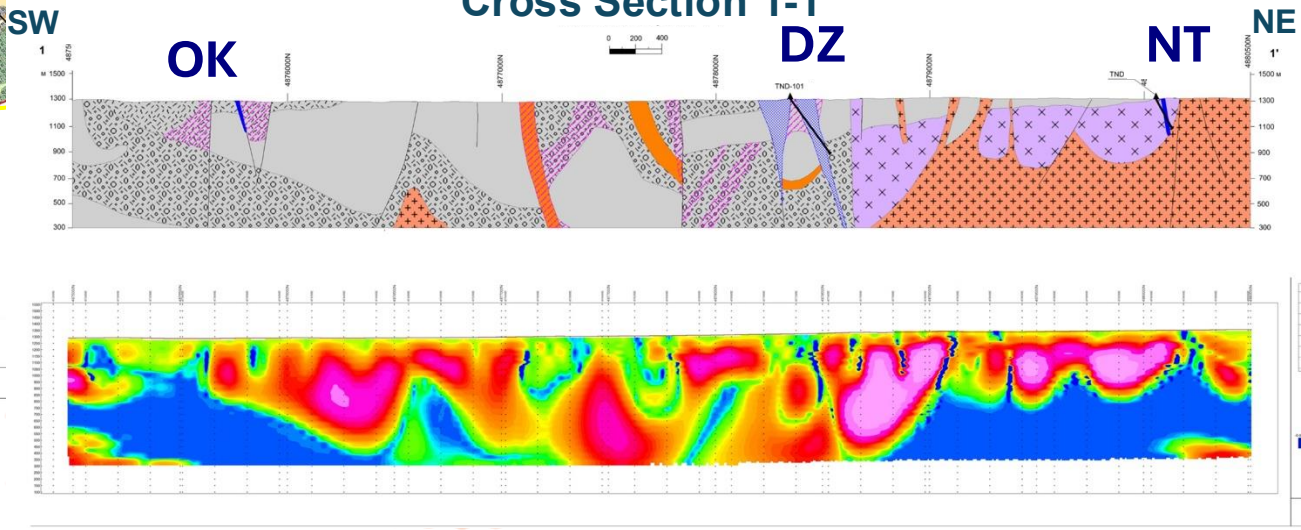
Cross Section 3-3’



Cross Section 2-2’



Cross Section 1-1’



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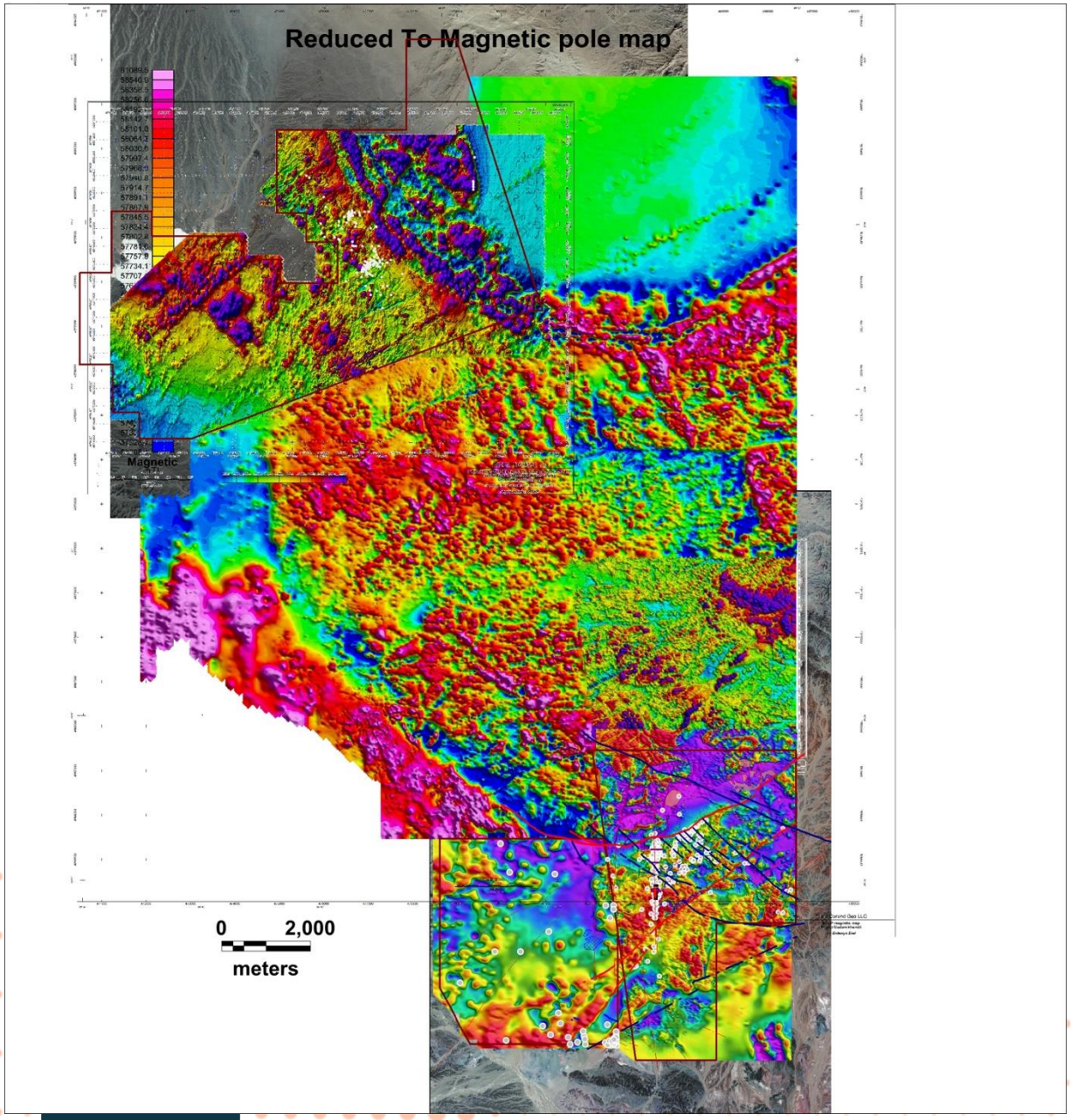
ERDENE
RESOURCE DEVELOPMENT

2015

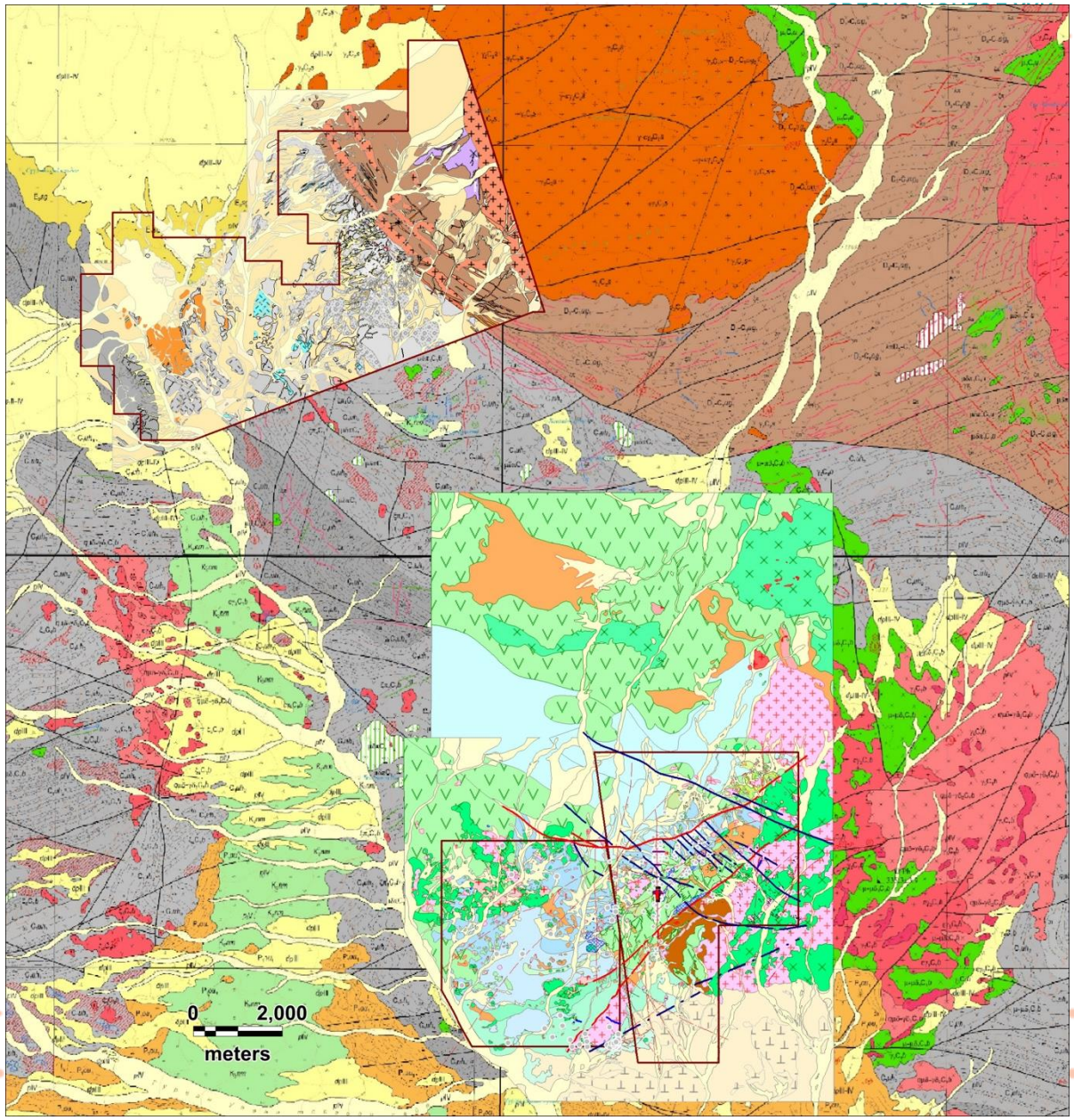
Bayan Khundii
Low Sulphidation Epithermal Gold deposit

District Geology

Reduced to Pole Magnetic Map

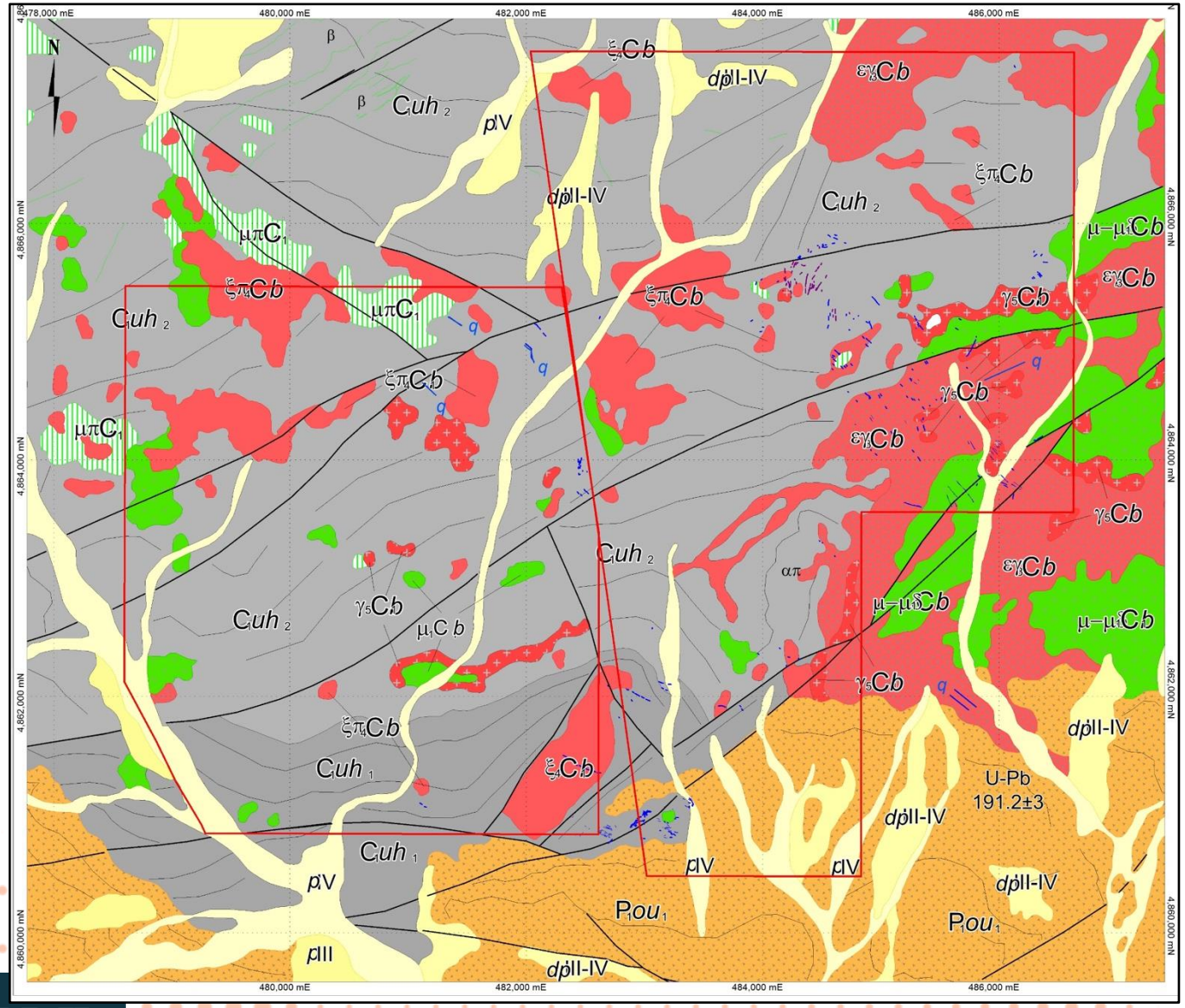


Erdene mapping 2011-2022



REGIONAL GEOLOGY

Khundii area geology map, 1:50 000 state map.



LEGEND

Ulziitkhar formation C uh:

C_1uh_1 **Lower member:** Sandstone, alevrolite, tuff alevrolite, tuff sandstone, tuff gravelite, lithoclastic tuff, agglomerate, basalt, andesite, lava breccia. Poorly preserved fauna remnant. Age: U-Pb 334.2±6.1Ma.

C_1uh_2 **Middle member:** Basalt, andesibasalt, dacite, rare rhyolite, and their tuffs, tuffite.

Bayan-Airag subvolcanic complex

$q\xi_3\pi C\ b$ Porphyritic monzodiorite, porphyritic monzonite, minor granodiorite porphyry.

Bayan-Airag intrusive complex

$\nu-\mu_1C_1\ b$ **Phase I:** medium-grained biotite-hornblende monzonite, quartz monzonite, quartz monzodiorite. Age: U-Pb *335±3.9Ma* Dyke: leucogranite ( ). Vein: quartz ( ), quartz-tourmaline ( ), quartz-tourmaline breccia.

$\gamma_3C_1\ b$ **Phase III:** fine-medium grained sub alkalic granite, quartz syenite near the margin. Dyke: leucogranite ( ). Vein: quartz (q), quartz-tourmaline (q-t), quartz-tourmaline breccia.

$q\xi-\xi_4C_1\ b$ **Phase IV:** fine-grained quartz syenite, syenite porphyry. Age: U-Pb 310±27Ma.

$\gamma_5C_1\ b$ **Phase V:** red fine-grained sub alkalic leucogranite.

Permian system

Ovoot-Ulaan formation P_1ou

P_1ou_1 **Volcanogenic-tuffogenic Lower member:** Brown tuff, tuff gravelite, tuff sandstone, tuff conglomerate, basalt, andesite, minor sandstone, alevrolite, siltstone. Poorly preserved flora remnant. Basalt age: U-Pb 191.2±3Ma.

Quaternary system

dp III-IV **Upper Pleistocene-Holocene.** Deluvial-proluvial brown grey, yellowish grey bull stone, breccia, gravelitic sand, sandstone, clay, claystone.

ap IV **Holocene.** Alluvial-proluvial, proluvial (p), lake (l) and eolian (v) sand, sandstone, clay, claystone.

Layer bedding

Basalt dykes

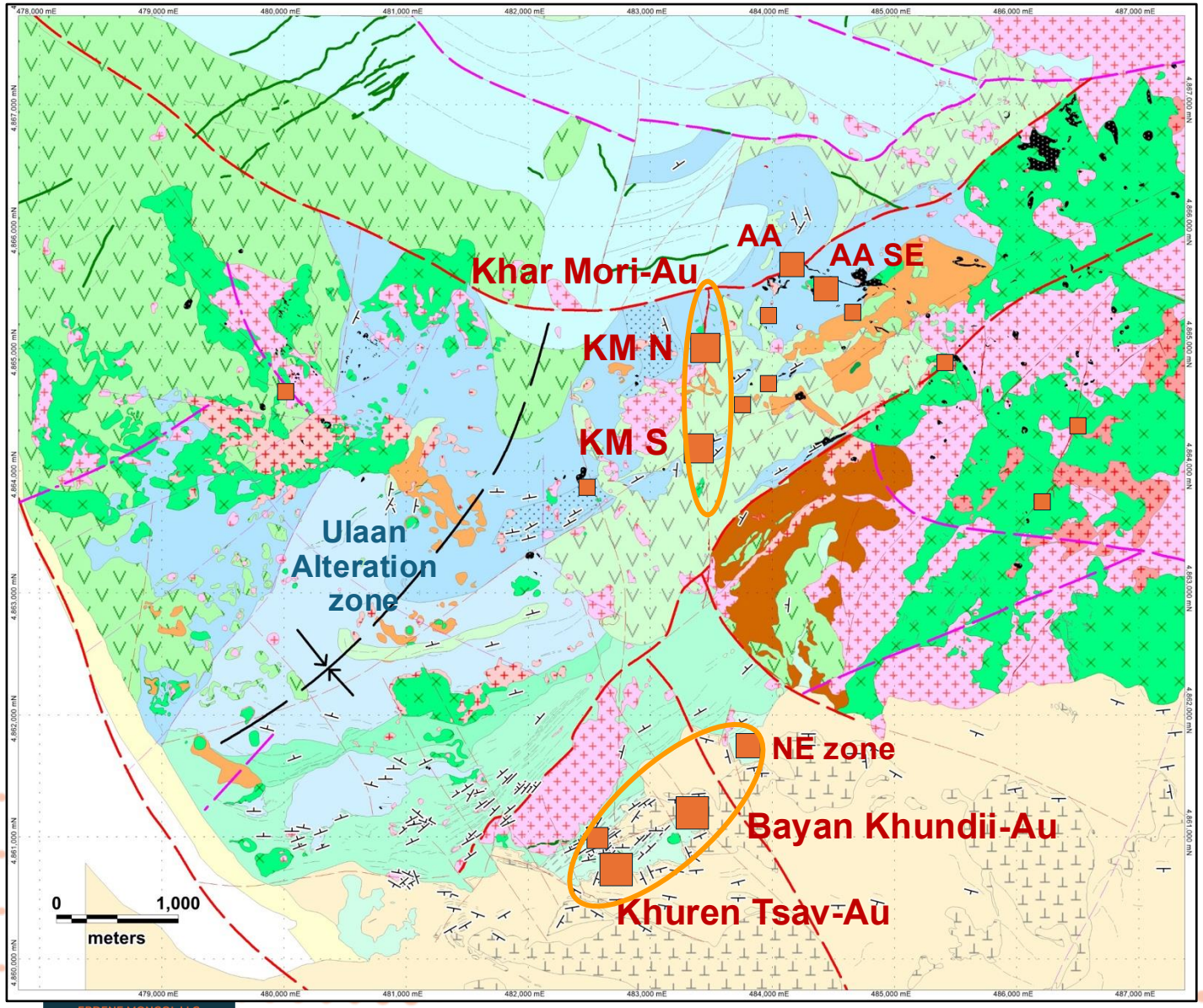
QV dykes

KMD QAV

Faults

Khundii Area Geology map

Geology map, Erdene Resources, 2022



Legend

Carboniferous: Ulziitkhar Formation, C1uh
Lower Member, C1uh1

- BK tuff, qtz-ill altered, C1uh1
- Ignimbrite, acidic tuff, sm-ill-chl altered, C1uh1
- Intermediate-mafic tuff, TFSST, well banded, chl, chl-sm-ill altered, C1uh1
- Mafic tuff, chl altered, C1uh1

Middle Member, C1uh2

- Acidic crystal flow tuff, tuff SST, white, intensely qtz-ser-py altered, C1uh2
- Green tuff, chl altered, C1uh2
- Acidic-intermediate tuff, TFSST, strong qtz-wm altered, C1uh2
- Sandstone, tuffaceous sandstone, well banded, wm-cb altered, C1uh2
- Dacite porphyritic, dacitic tuff, ill, wm-tour altered,C1uh2
- Andesite porphyritic, BTA, andesite-basalt, ill, chl, chl-ep, chl-mt-tour altered, C1uh2
- Intermediate tuff, siliceous, variable magnetic, C1uh2

Carboniferous: Bayan-Airag intrusive complex, C1ba

- Phase I: monzodiorite, monzonite, monzonite porphyry, quartz monzonite porphyry, cut by acidic red fg dykes
- Phase III: mg-cg granite, quartz syenite porphyry stocks, small bodies, tour, mus-tour altered
- Phase IV: Syenite, syenite porphyry, locally qtz-mus-tour altered
- Dome: Dacite sunvolcanic dome
- Phase V: Red alkali granite, fg, seriate stock and dyke.

Permian: Ovoot Ulaan Formation, P1ou

- Permian sediments: conglomerate, tuffaceous sandstone, siltstone, acidic ash tuff
- Permian basalt

Quatenary sediment:

- Alluvial, deluvial, eluvial
- Lake

- Massive tourmaline, qtz-tour-mus, tourmaline breccia

Veins

- Quartz vein
- Quartz-Adularia+-fluorine vein
- vein related qtz-wm alteration
- qtz-wm alteration around veins
- Tourmaline, qtz-tourmaline vein

Dyke

- Basaltic dyke
- Mafic dyke mafic (Trachyandesite)

Other

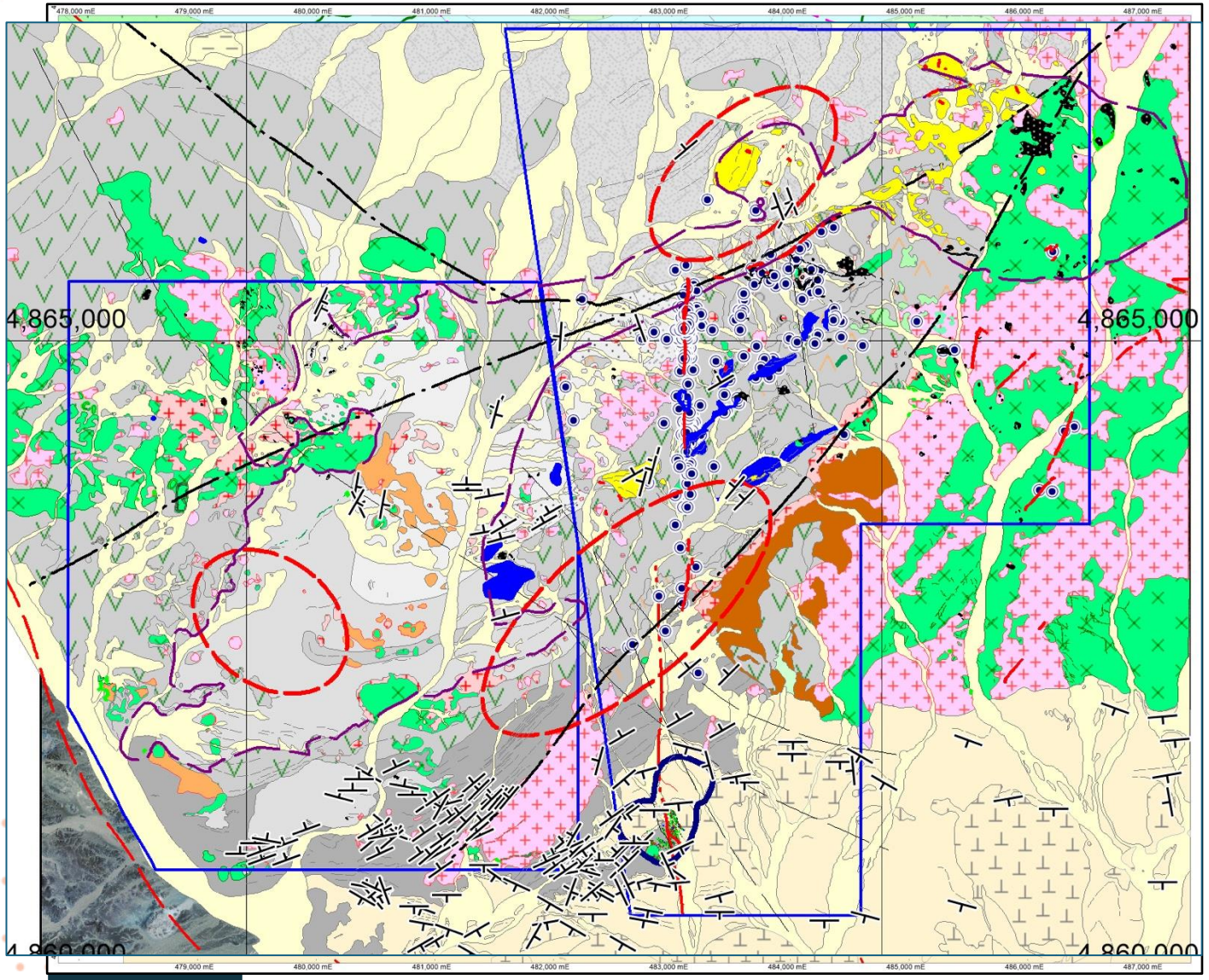
- Tectonic breccia, overprinted by multi-stage epithermal, hydrothermal alterations
- Main fault
- Minor faults, interpreted by magnetic
- Faults interpreted by magnetic
- Bedding
- Dip

- Epithermal Gold deposit
- Gold occurrence

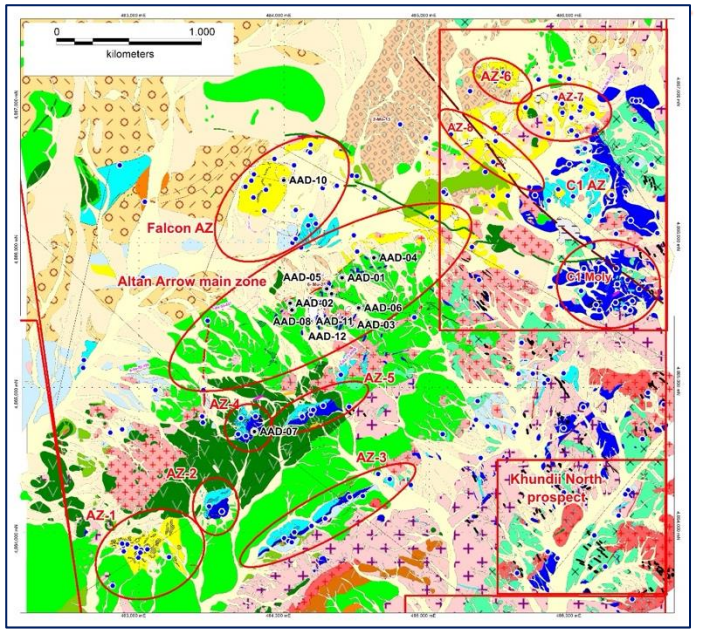
Gold deposit name: BK-Bayan Khundii, KhTs-Khuren Tsav, U SE-Ulaan South-East, KM N-Khar Mori North zone, KM S-Khar Mori South zone,
Gold occurrences: AA-Altan Arrow main, AA SE-Altan Arrow South-East

Khundii Area Geology map

Combined Geology map of BK, DH & Ulaan, Erdene Resources, 2023



Alteration map of DH-AA area

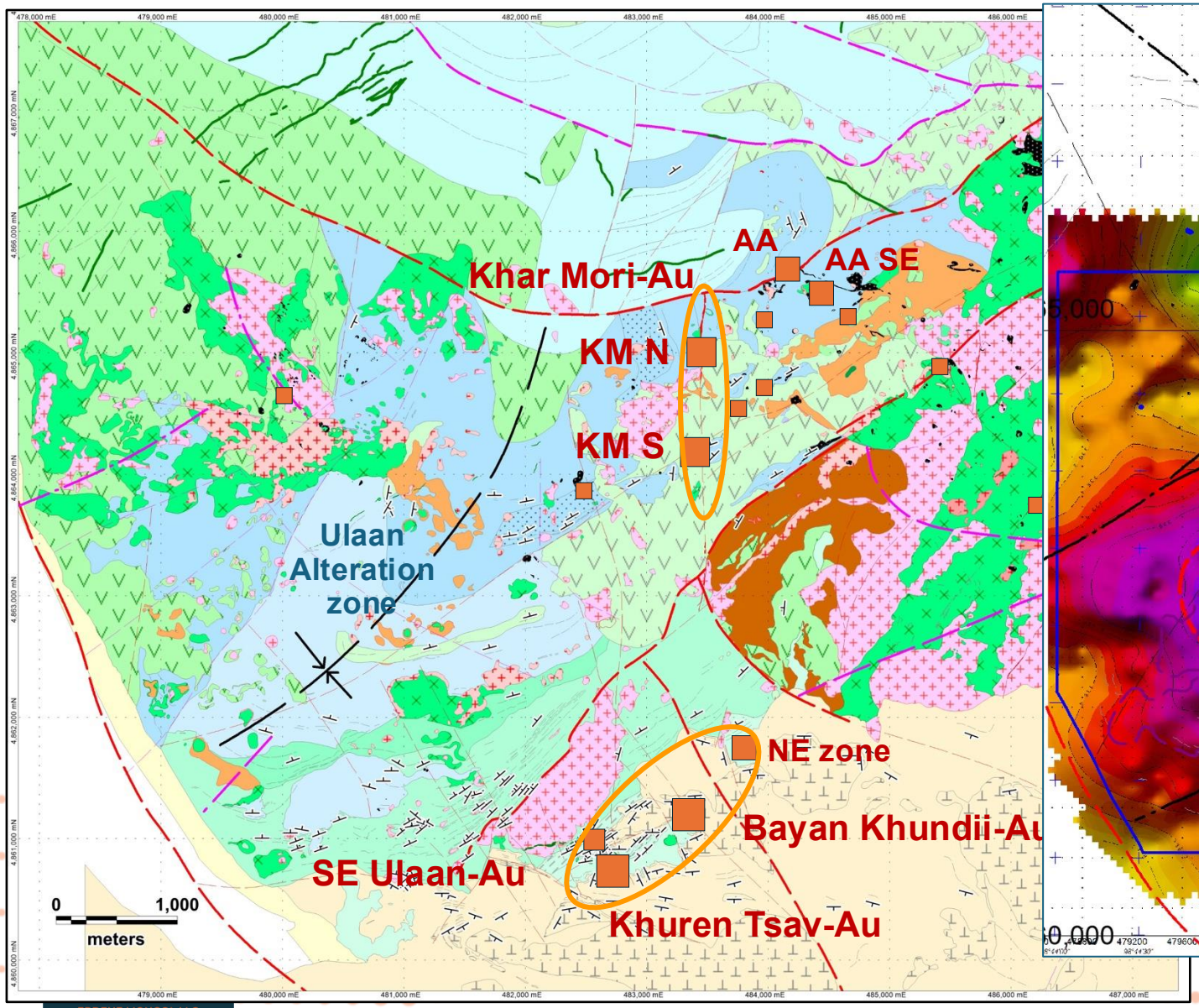


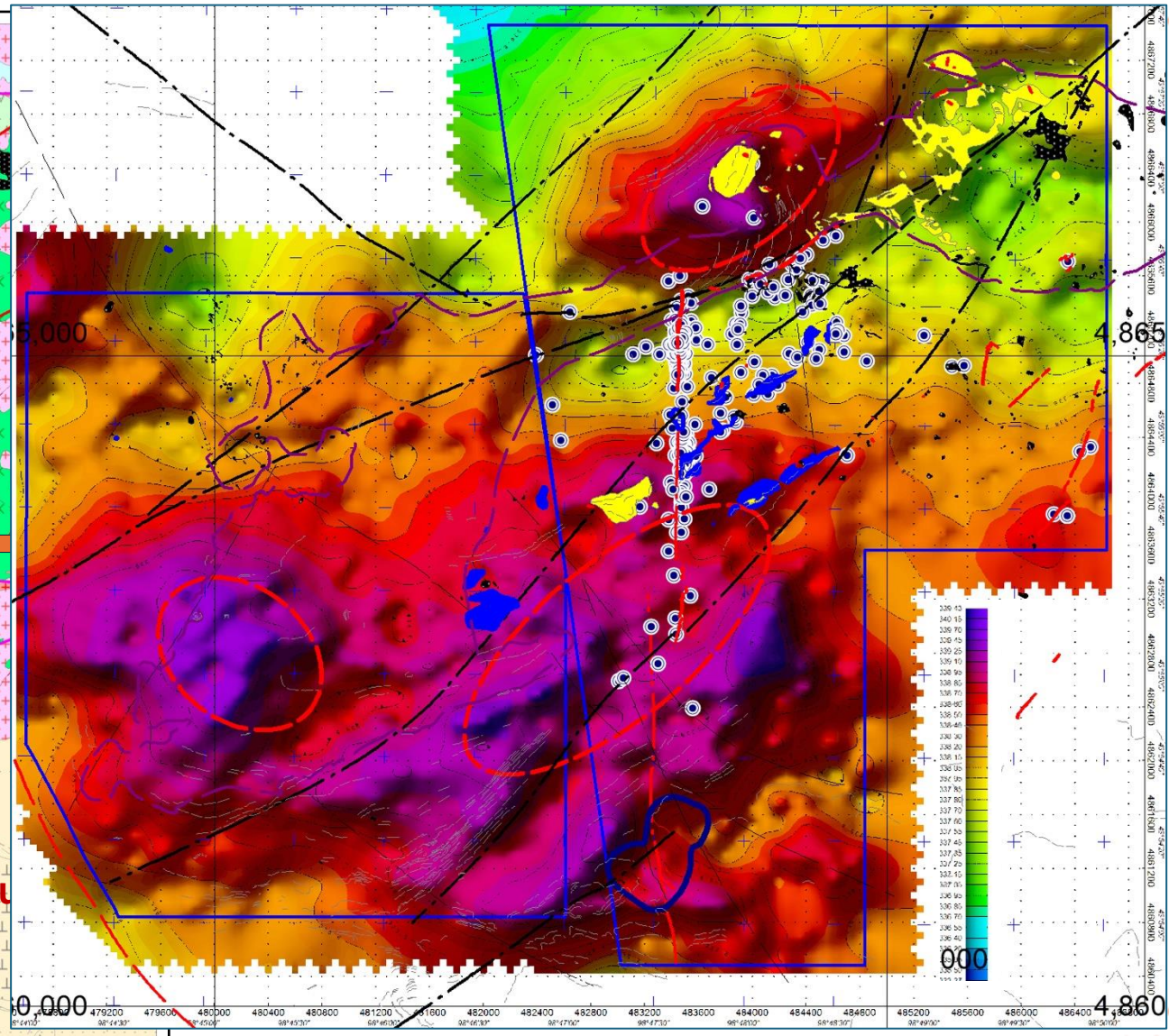
Assembledges	WM com	zones	T° C
AAA		Qtz-alu-dik-kao-zun-tz	120-310
AAA		prp	200-320
Quartz-sericite	2190-2199	par	250-350
Quartz-sericite	2200-2205	mus	250-350
Illite	2206-2209	ill	220-290
phengite	2210-2213	phe	250
propylitic		chl	200-320
Inner propylitic		Epi-chl	250-350
tourmaline		tour	
epithermal		Qtz-adu-ill	<230

Khundii Area Geology map

Geology map, Erdene Resources, 2022

Gravity map

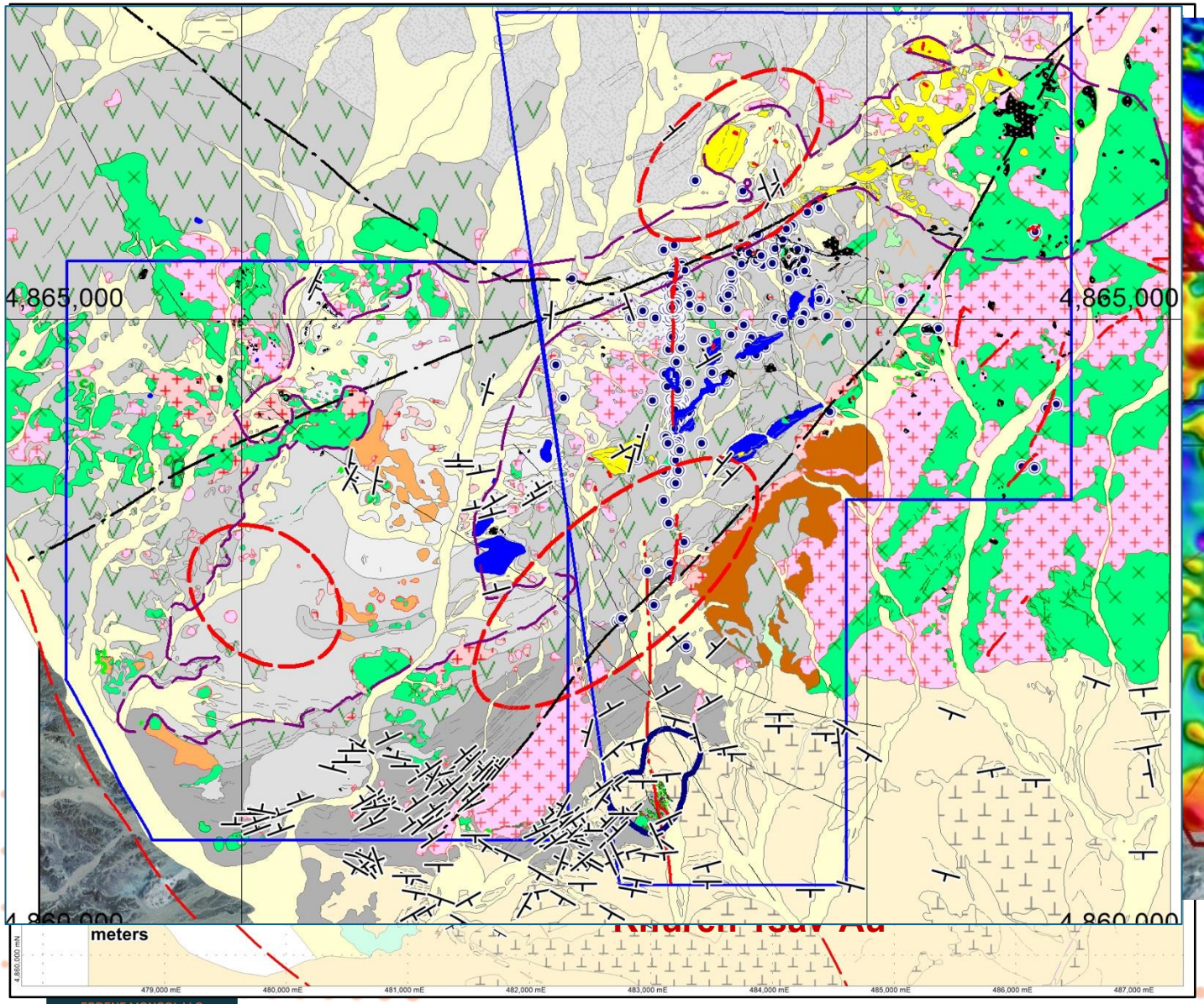


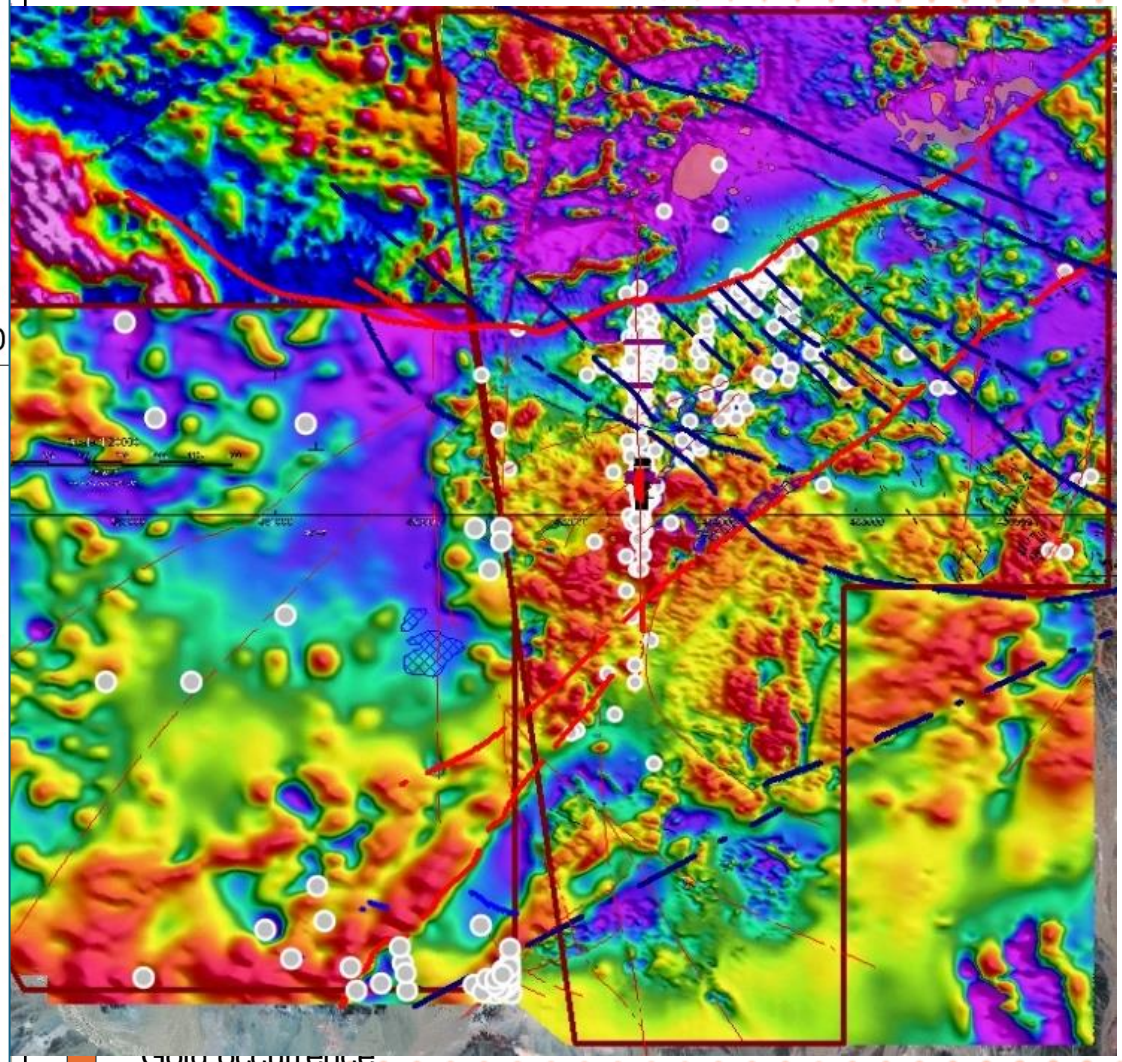


Khundii Area Geology map

Geology map, Erdene Resources, 2022

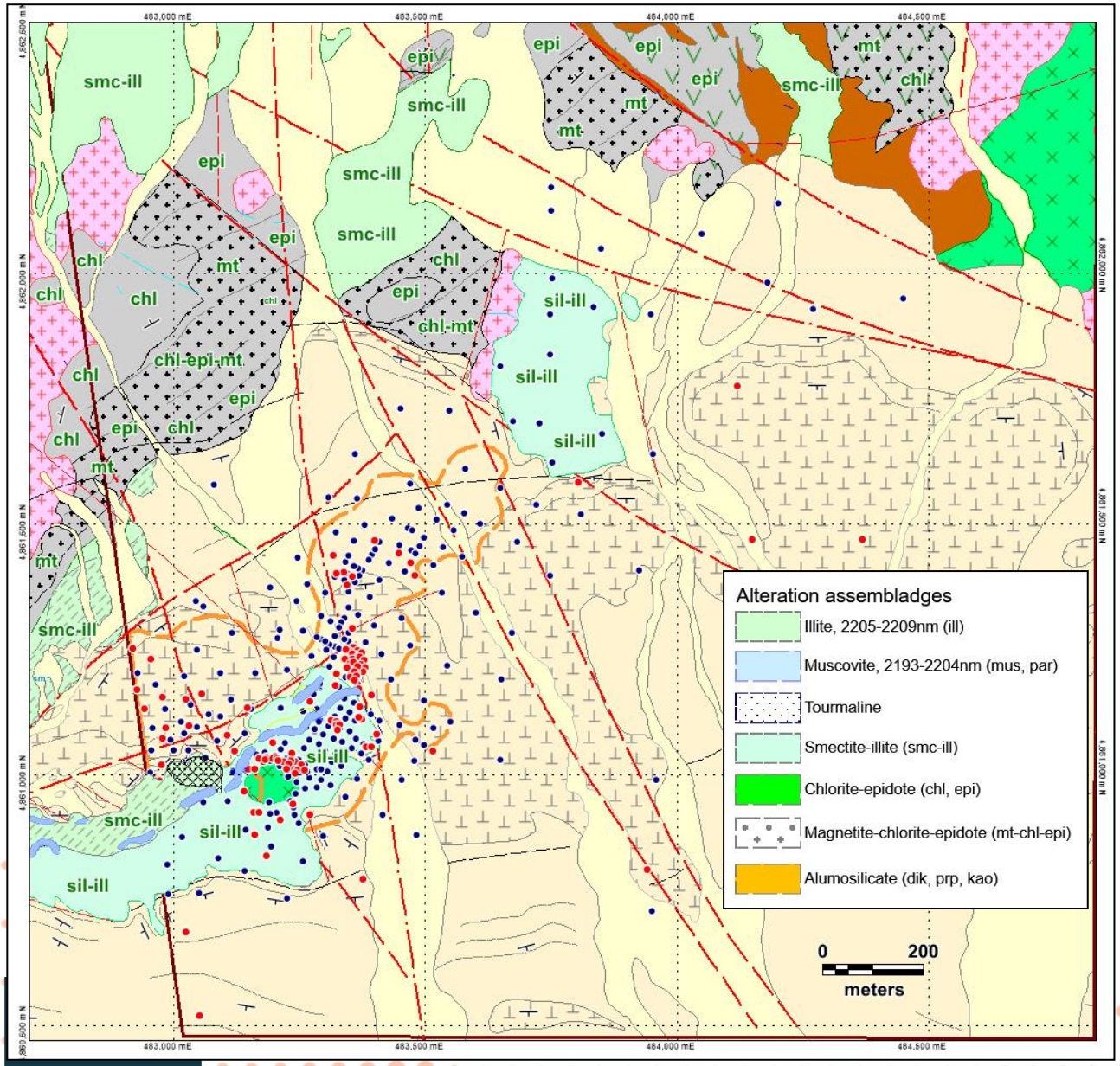
Magnetic map RTP

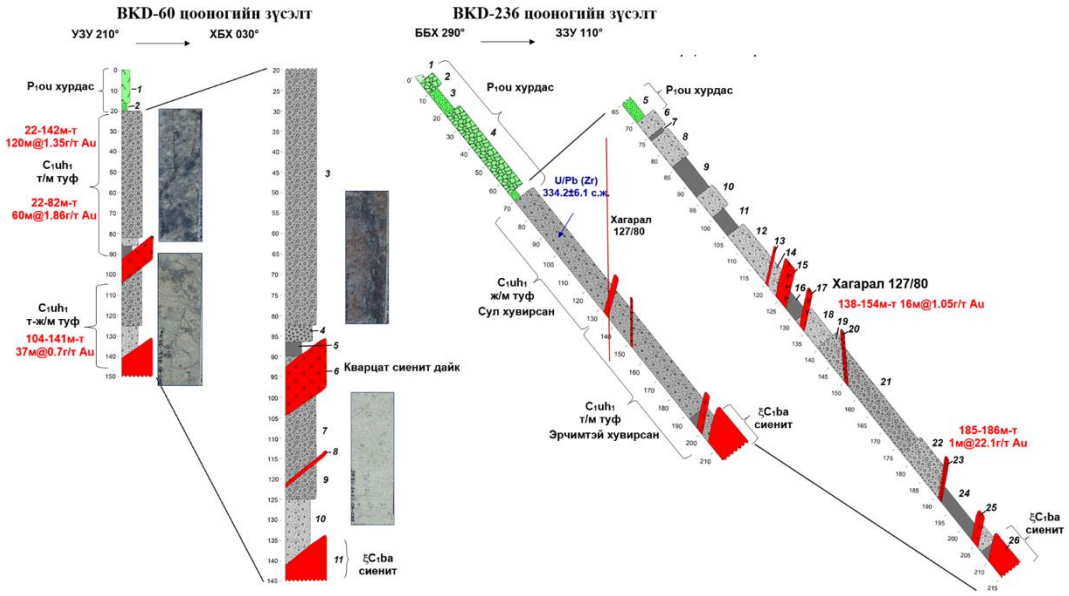




BAYAN KHUNDII LSE GOLD DEPOSIT

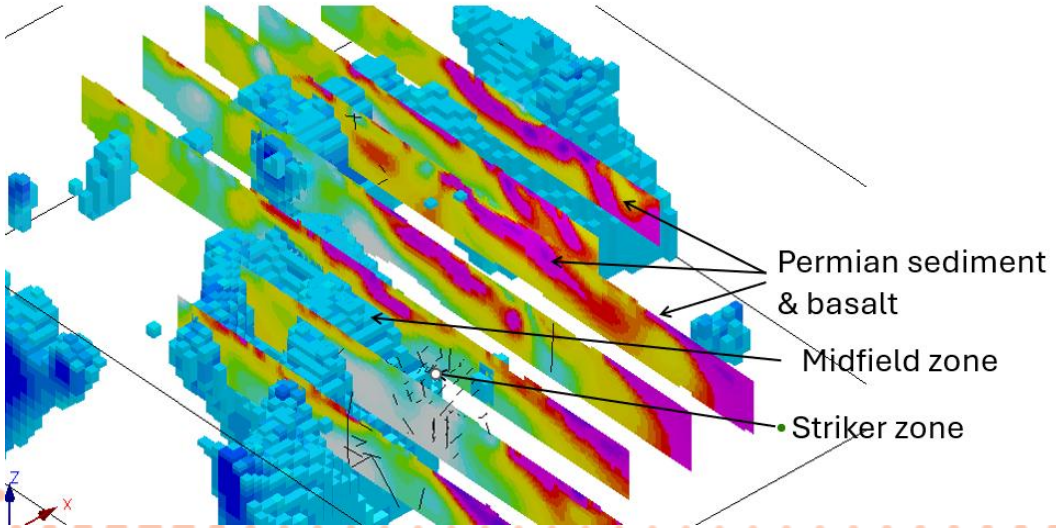
Bayan Khundii Geology & Alteration map





Зураг цооногийн зүсэлтийг харуулсан бөгөөд хажууд нь Өлзийтхар формацын доод терриген-туфоген мэмбэрийн зүсэлтийг өгсөж нарийвчлан үзүүллээ.

High resistivity zones corresponds to the altered tuff (± syenite)



BAYAN KHUNDII GOLD DEPOSIT

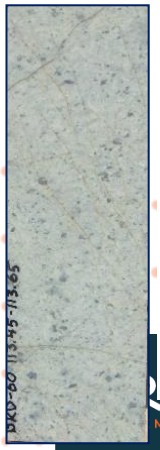
Bayan Khundii Structure

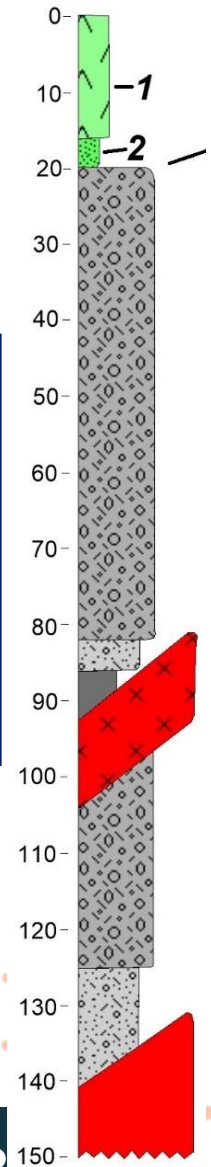
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Hole BKD-60 cross section & geological model

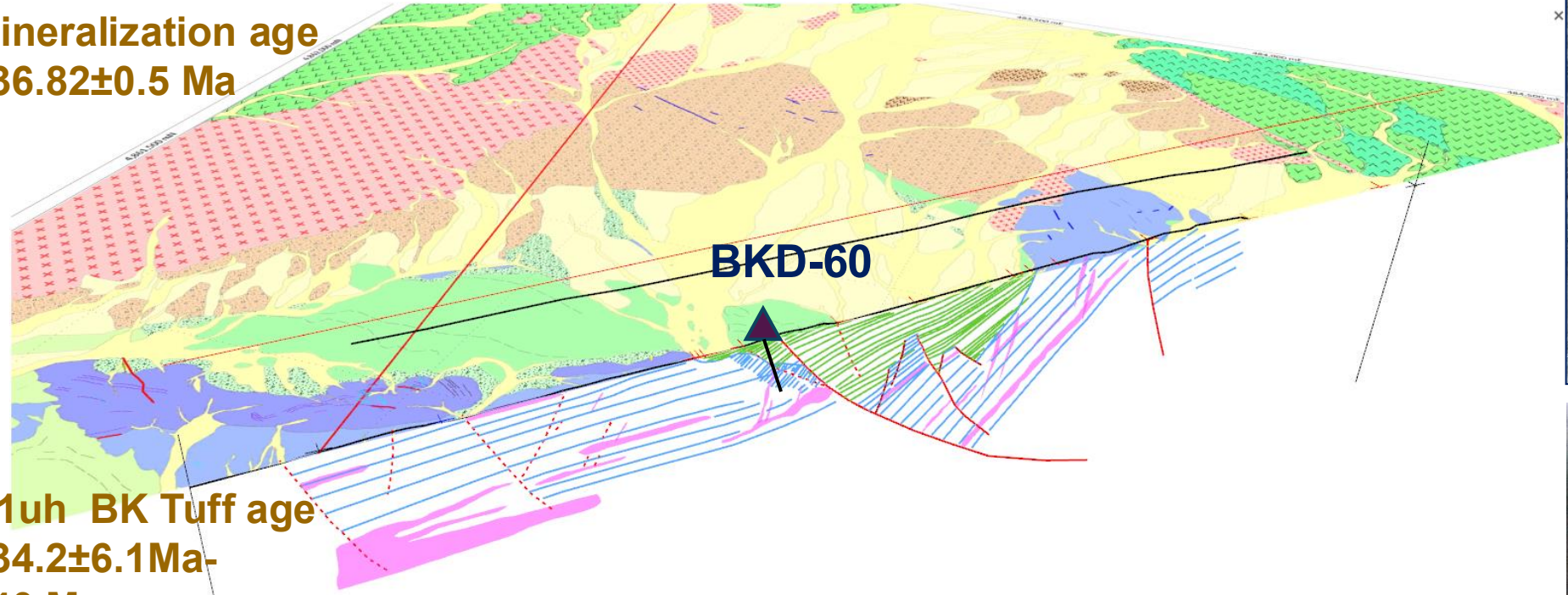






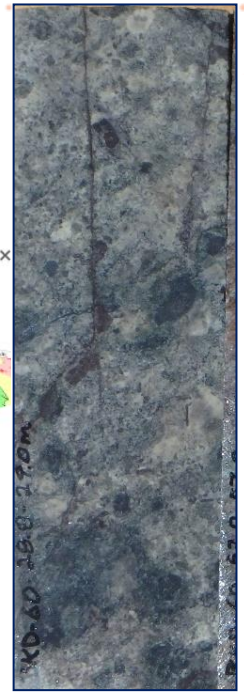


Gold Mineralization age 336.82±0.5 Ma



C1uh BK Tuff age 334.2±6.1Ma-340 Ma

ξC2b Syenite age 320.4±9.8 Ma



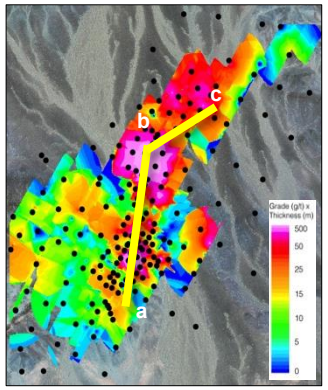


BAYAN KHUNDII GOLD DEPOSIT

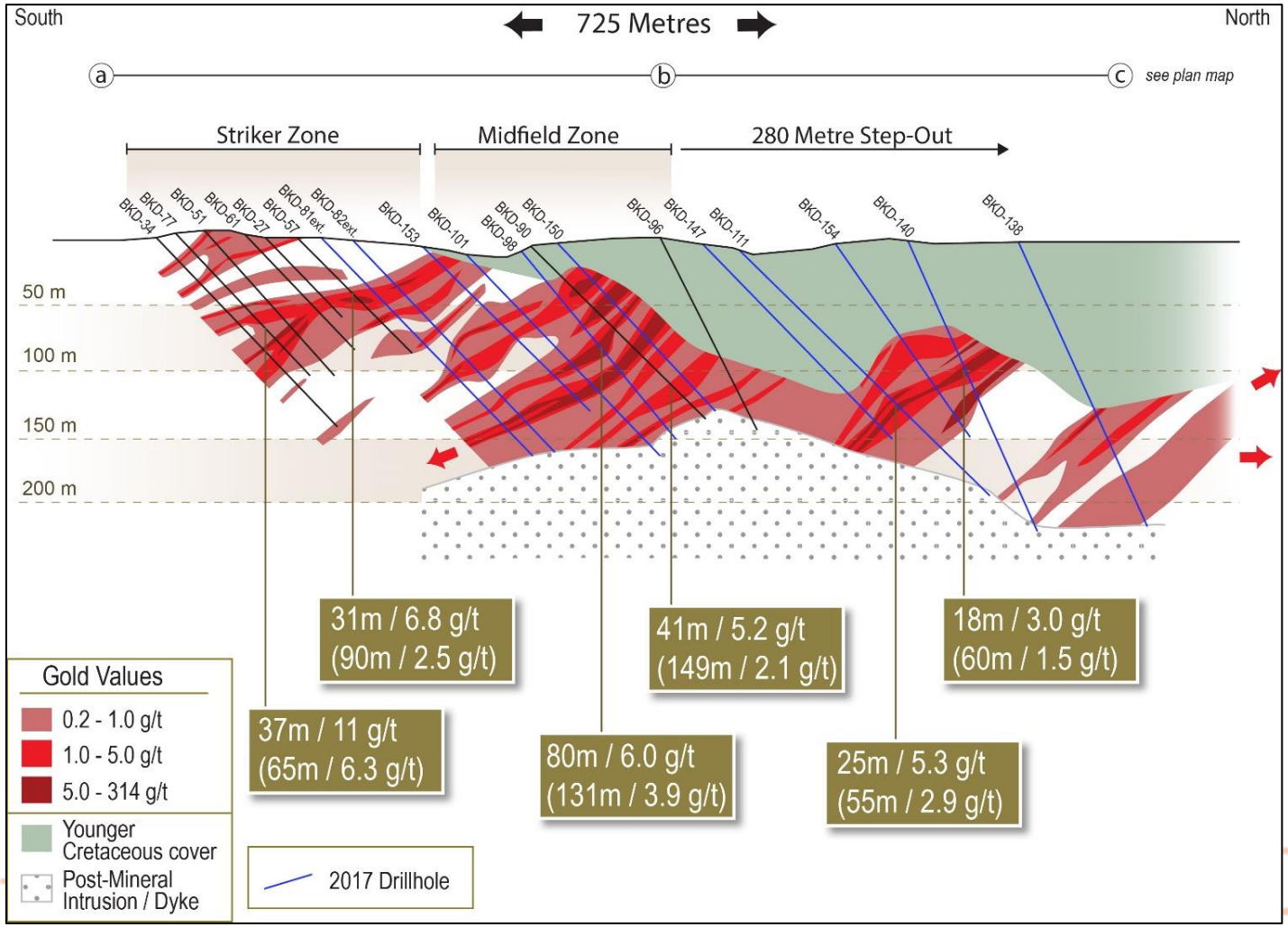
Bayan Khundii deposit cross section



Cross section: from Striker zone to Midfield zone, looking west



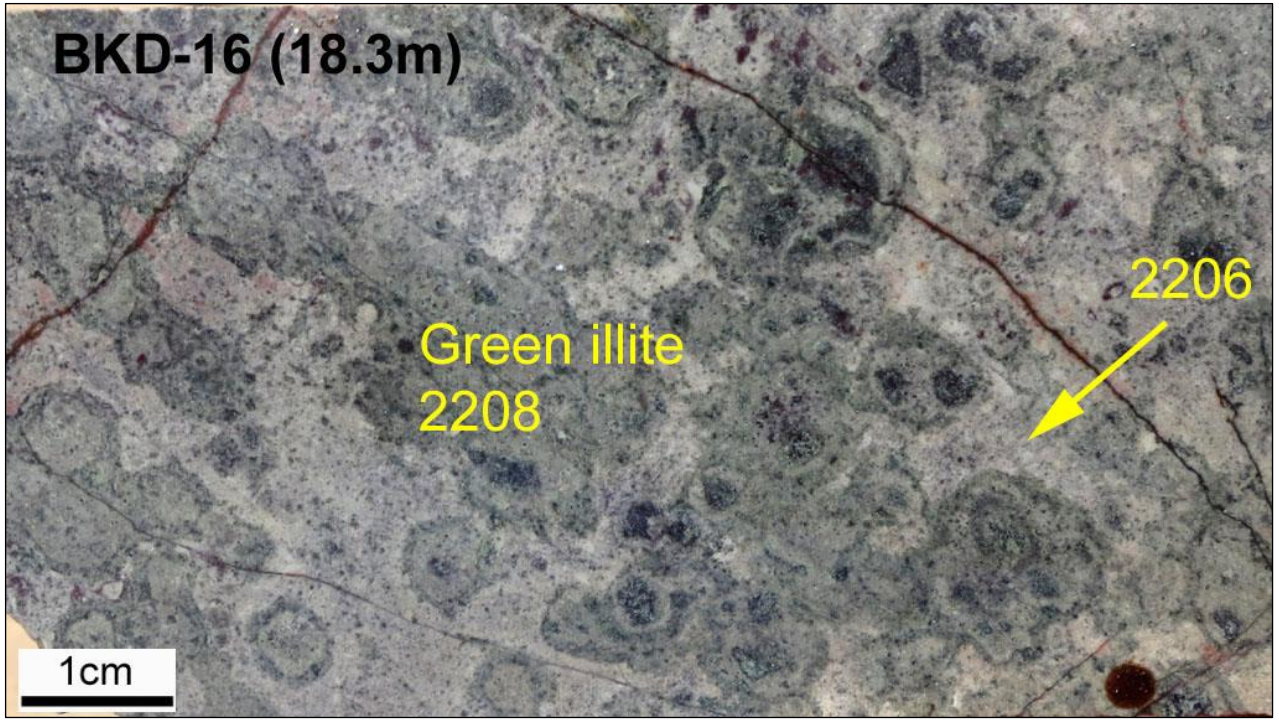
Wide mineralized zones up to **131 m 3.9 g/t Au**, including up to **8 m 51 g/t Au** High-grade zones

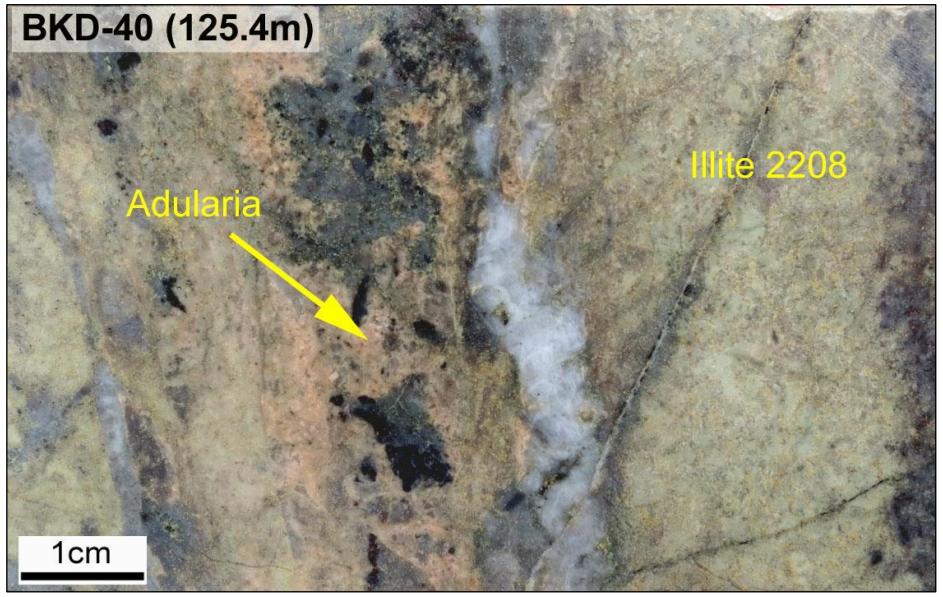




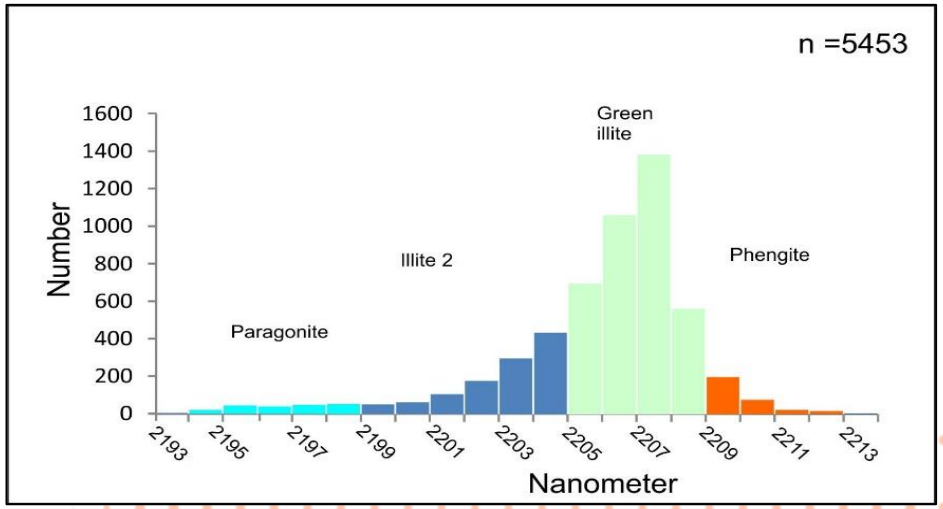
BAYAN KHUNDII GOLD DEPOSIT

Alteration: silica-illite-adularia



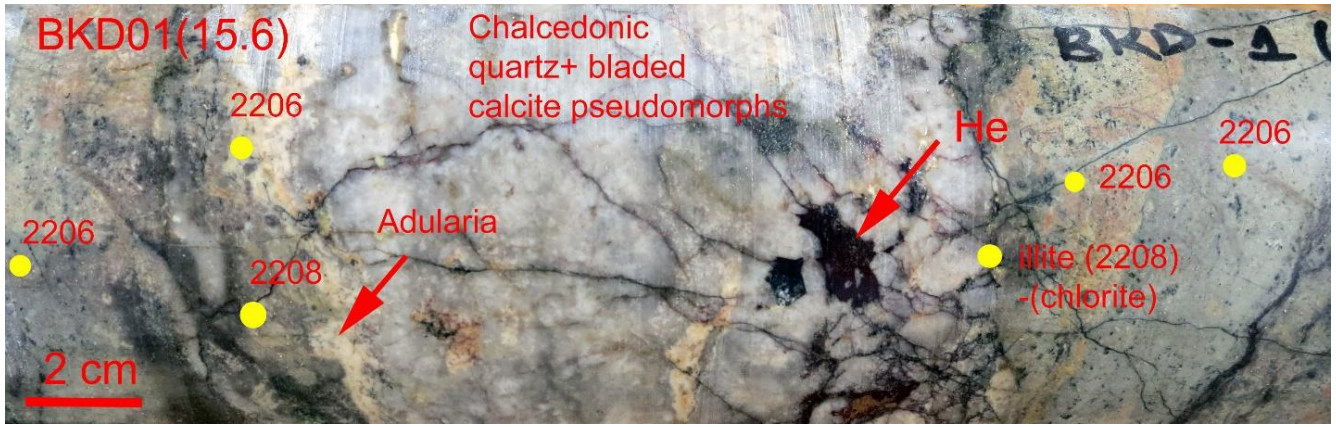


Fine-grained tuff with gusano (or patchy alteration), altered by green illite; lighter areas have mica Al-OH absorption of 2206 and darker areas are 2208; no chlorite is present

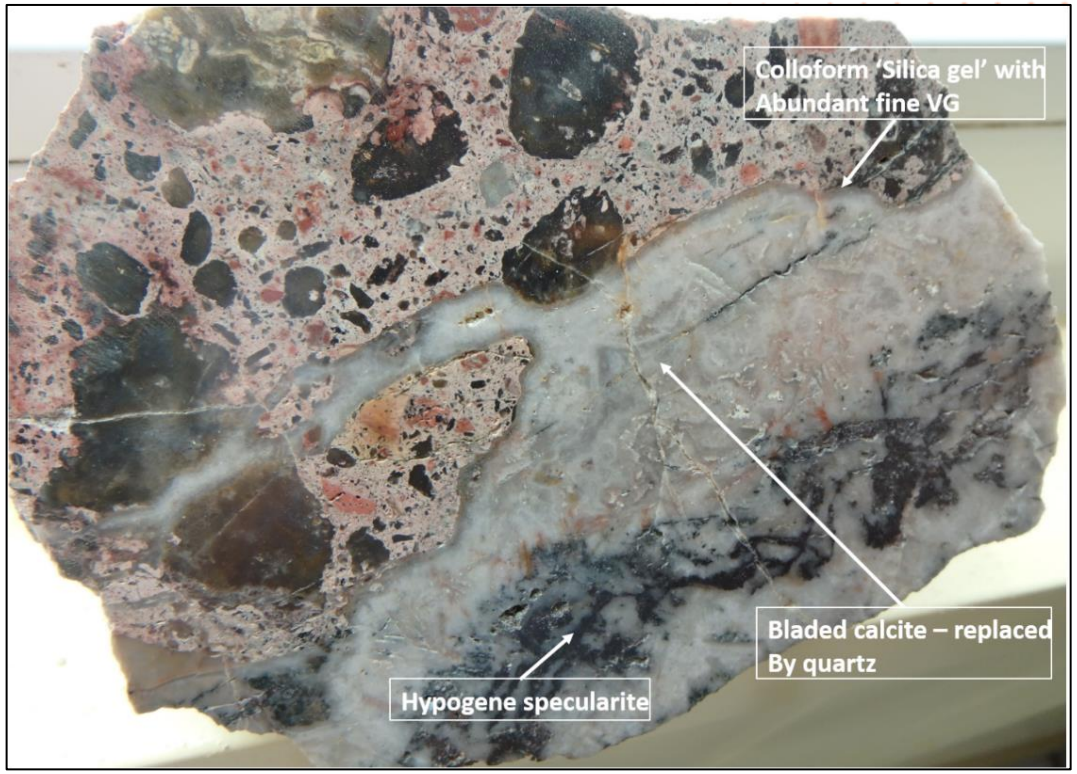


BAYAN KHUNDII GOLD DEPOSIT

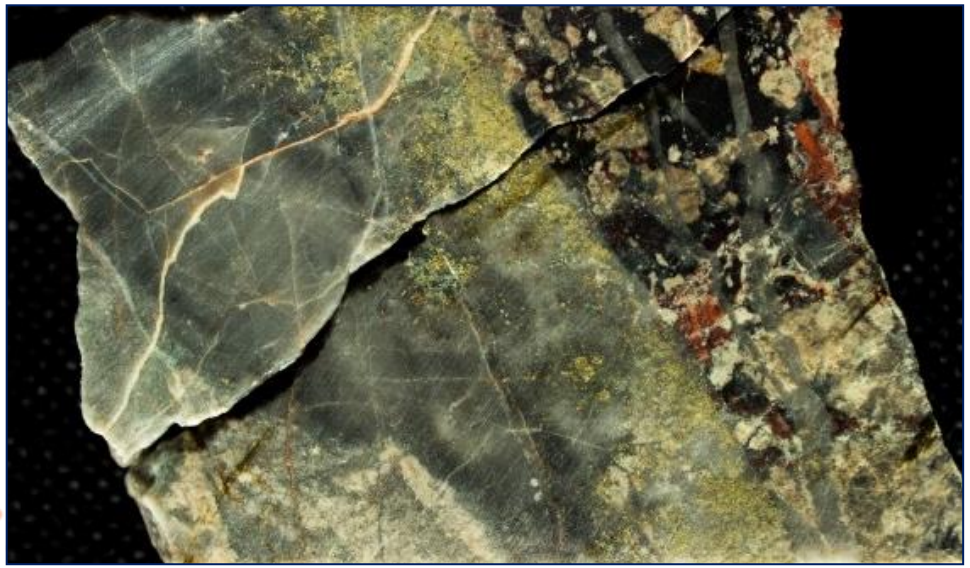
Ore mineralization: gold/electrum, pyrite, hematite



BKD-01, 15.6m. High grade quartz-adularia vein (1m @ 187g/t Au, 68g/t Ag)



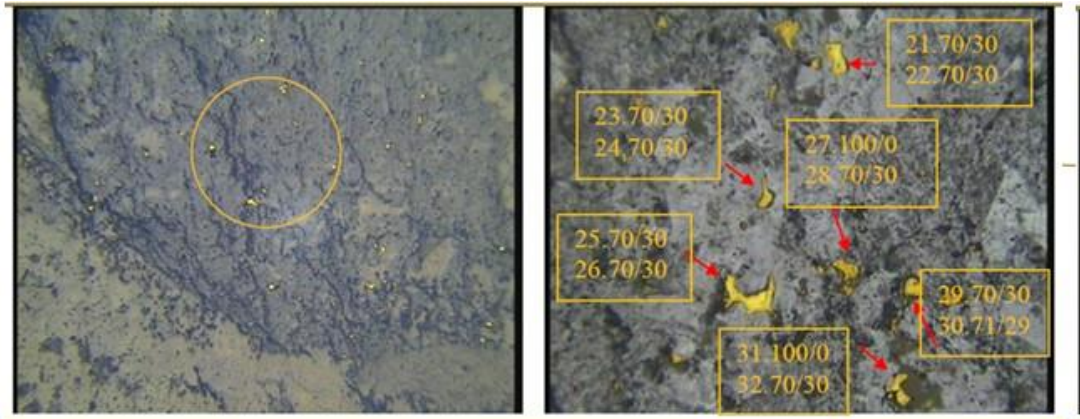
Au mineralized hand sample of very coarse-grained lapilli tuff with coarse chalcedony clasts. Abundant visible gold (VG) is present in narrow bands of silica gel which, along with the bladed calcite (now silica) textures, indicate boiling conditions.



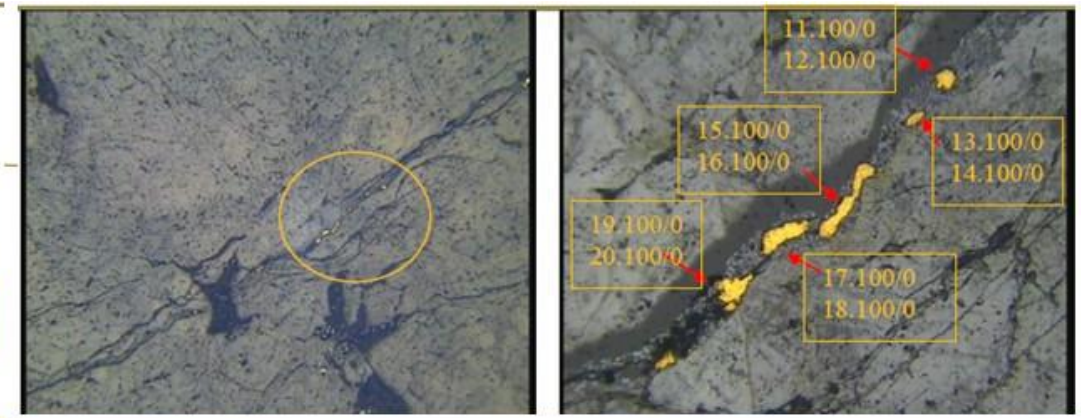
BKD-231, 193.1m; 9cm quartz-adularia-gold vein, abundant VG (2200 g/t Au, 948 g/t Ag, 230 g/t Cu)

BAYAN KHUNDII GOLD DEPOSIT

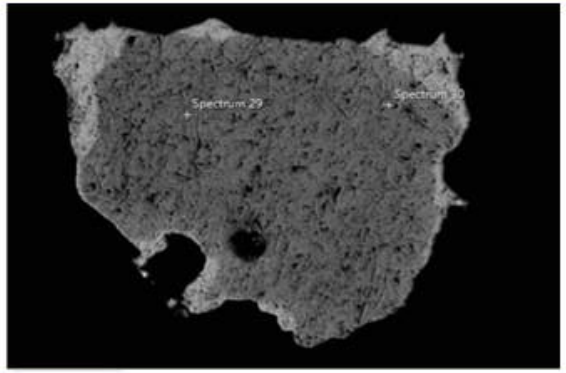
Gold Mineralization. Electrum



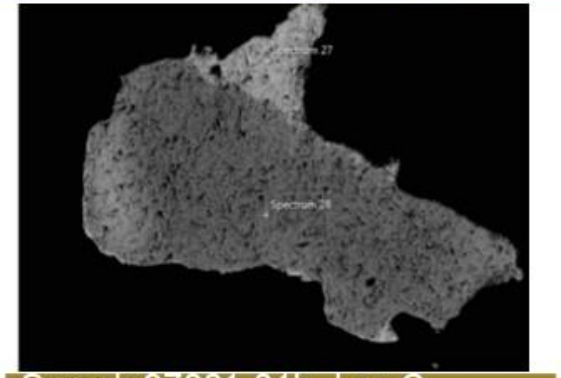
Sample 97001.01b (BKD-01, 15.35m). A-Loc. C . As right. 6 mm. B- Loc. C. 600 µm. Gold/electrum intergrown with and interstitial to quartz and adularia (wallrock) (Spectrum # & Au/Ag ratio). 600 µm. Ppl/rl.



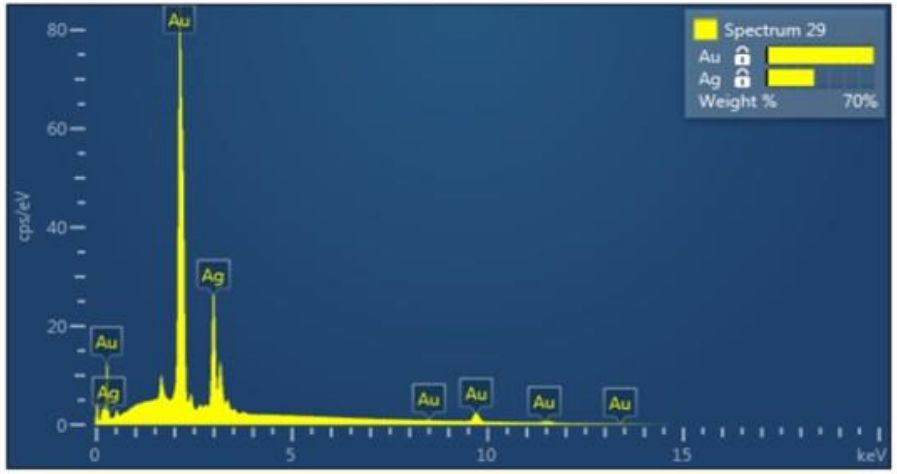
Sample 97001.01b (BKD-01, 15.35m). A-Loc. B. As right. 6 mm. B- Loc. B. 600 µm. Gold/electrum intergrown with very fine grained hematite filling late fracture in quartz (Spectrum # & Au/Ag ratio).



Sample 97001-01b. Loc C. Electron Image 15: Spec 29 (70/30), Spec 30 (79/21). Silver-poor gold overgrowing hypogene gold intergrown with quartz and adularia.



Sample97001-01b. Loc C. Electron Image 14: Spec 27 (100/0) & 28 (80/20).: Gold/electrum grain interstitial to quartz and adularia with low Ag overgrowths/rims.



Sample 97001.01b. Location C. Spectrum 29, Au, Ag composition

BAYAN KHUNDII LSE GOLD DEPOSIT

Mineralization age

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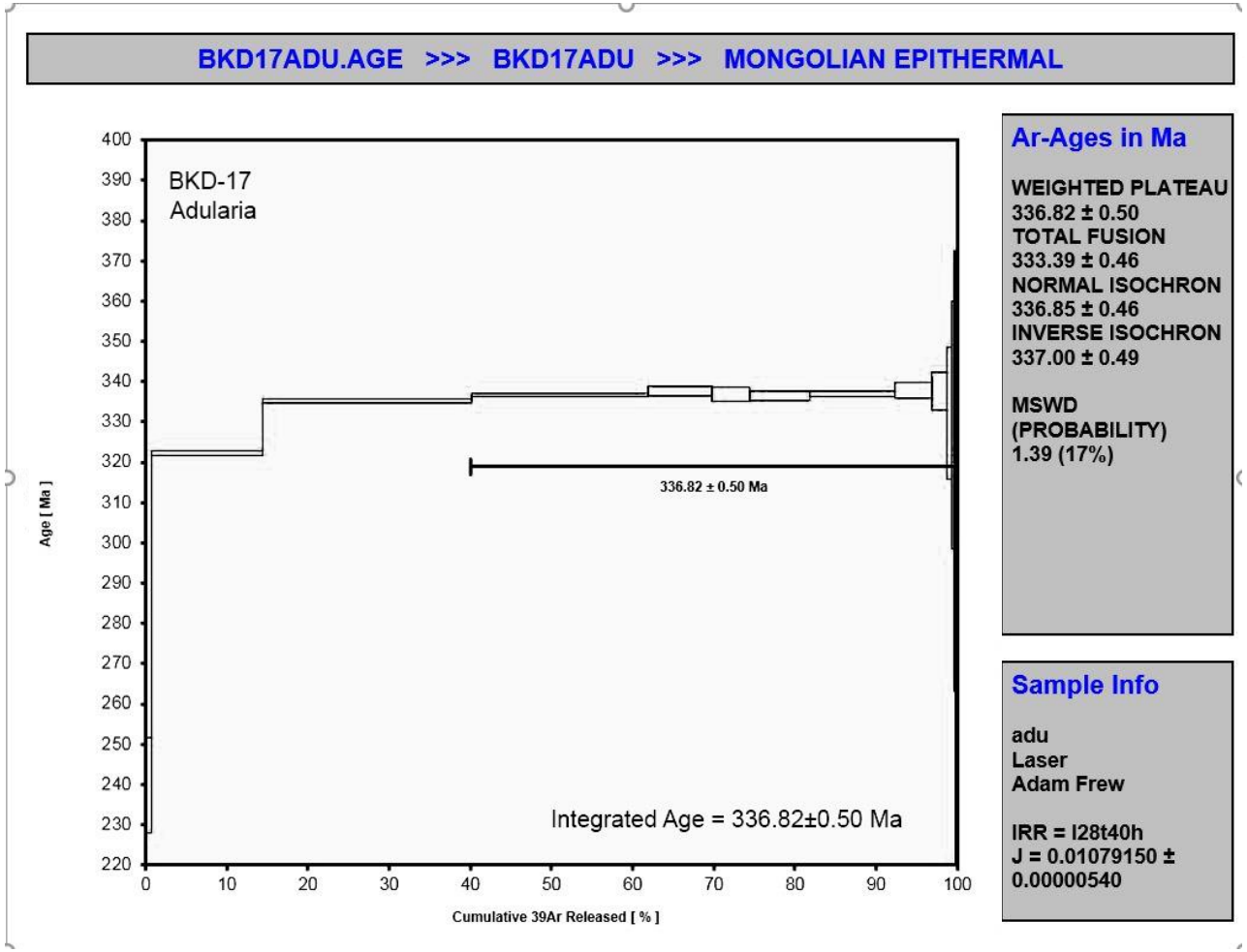
Mineralization age:

Ar-Ar 336.82+-0.50 Ma
(Mississippian)

C1uh1 tuff
U/Pb 334.2±6.1 Ma - ~340 Ma

ξC2b quartz syenite porphyry
U/Pb 320.4±9.8 Ma

дд	Цооног №	Интервал	Чулуулгийн нэр	Формац	Арга	Үнэмлэхүй нас, Сж
1	BKD236/90	90-96м	Хувирсан туф	C_1uh_1	U/Pb (Zr)	334.2±6.1
2	BKD96/225	224-228м	Кварцат сиенит	C_1ba	U/Pb (Zr)	310±27 (~325)
3	BKD213	161-179м	Базальт	P_1ou	U/Pb (Zr)	262±29



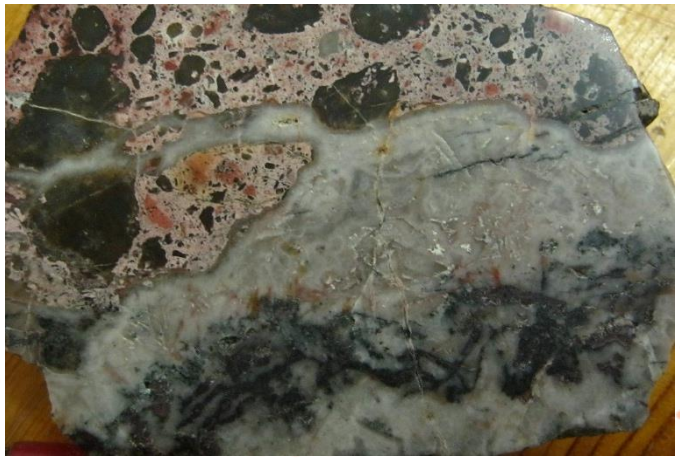
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BAYAN KHUNDII GOLD DEPOSIT

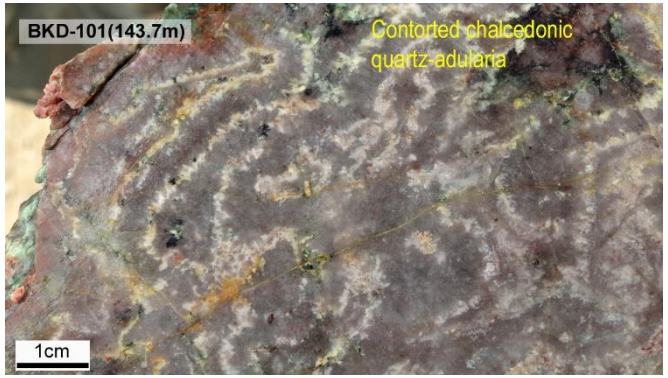
Deposit features that support Low Sulphidation Epithermal classification

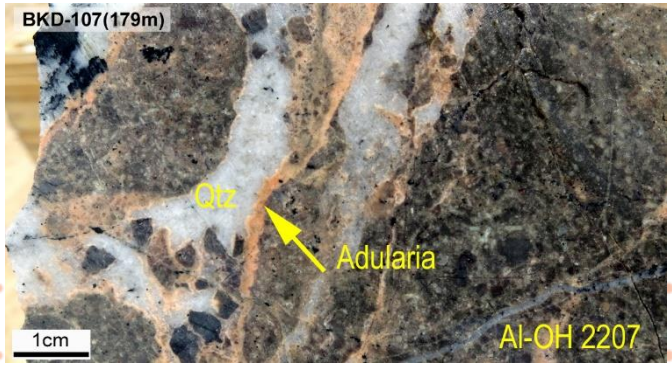


- Pervasive illite and silica alteration
- Common adularia as the dominant mineral species of K-feldspar
- Local colloform bands, some with finely disseminated Au (electrum), in banded quartz veins
- Common bladed calcite “boiling” textures with calcite now pseudomorphed by quartz
- Low Ag:Au ratios for gold and electrum (0.1->5, ~0.4)
- Low overall proportions of sulphide minerals (e.g. <1-2% pyrite)
- Trace amounts of arseno-pyrite and pyrrhotite
- Very low base metal (Pb-Zn) concentrations
- Hypogene hematite (specularite) veinlets and disseminated impregnations



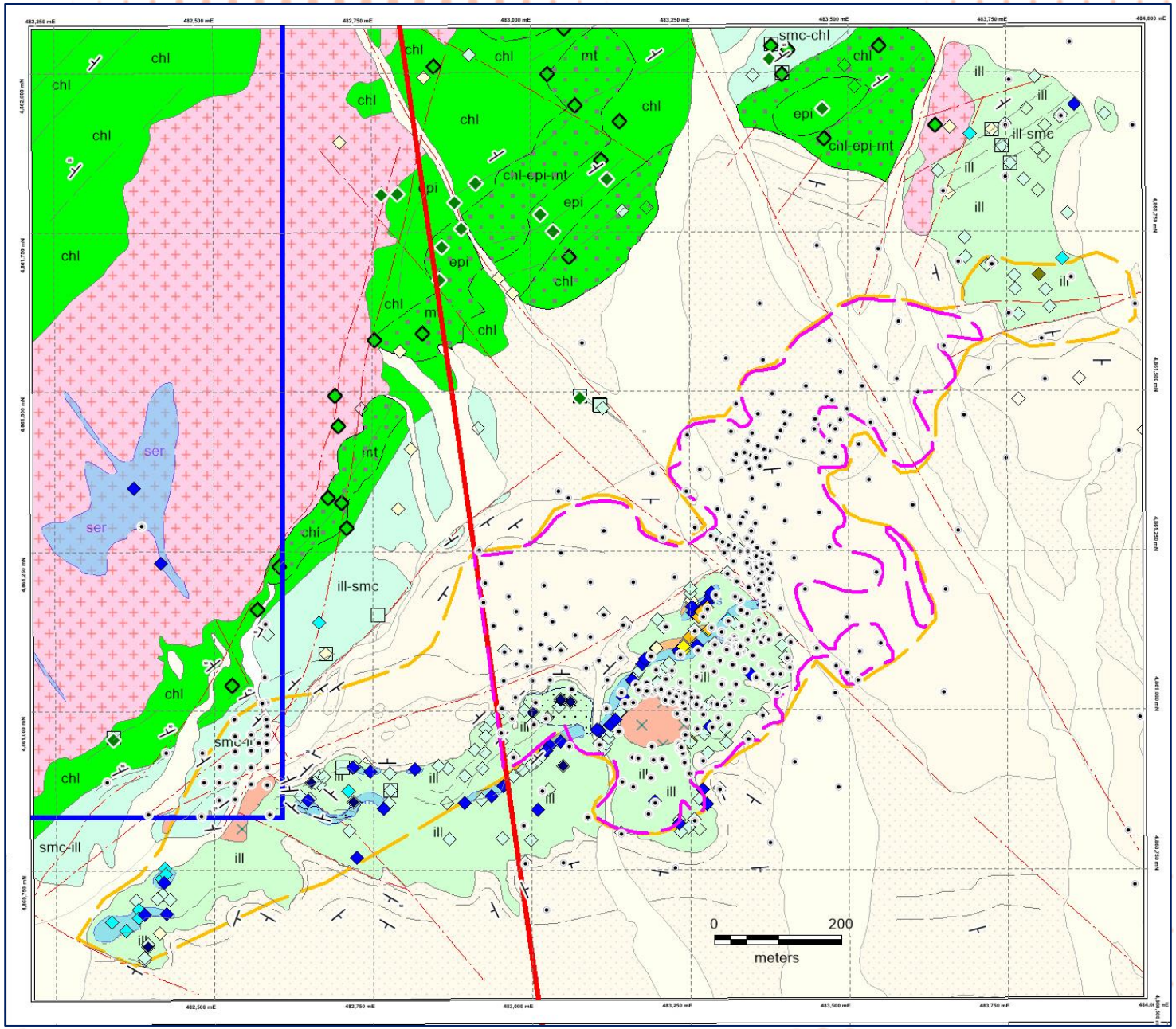






Bayan Khundii – Khuren Tsav – Ulaan SE deposit Alteration map

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Post-mineralization

- Permian sedimentary-volcanogenic rock
- Permian basalt
- Quaternary sediment

Altered lithologies

- BK tuff, C1uh1
- Ignimbrite, ash flow tuff, C1uh1
- Lapilli tuff cg-fg, C1uh1
- Monzonite porphyry
- Syenite porphyry
- Fault
- Bedding
- Strike and dip
- BK deposit shell (cut off 0.2g/t Au)
- BK mineralized zone

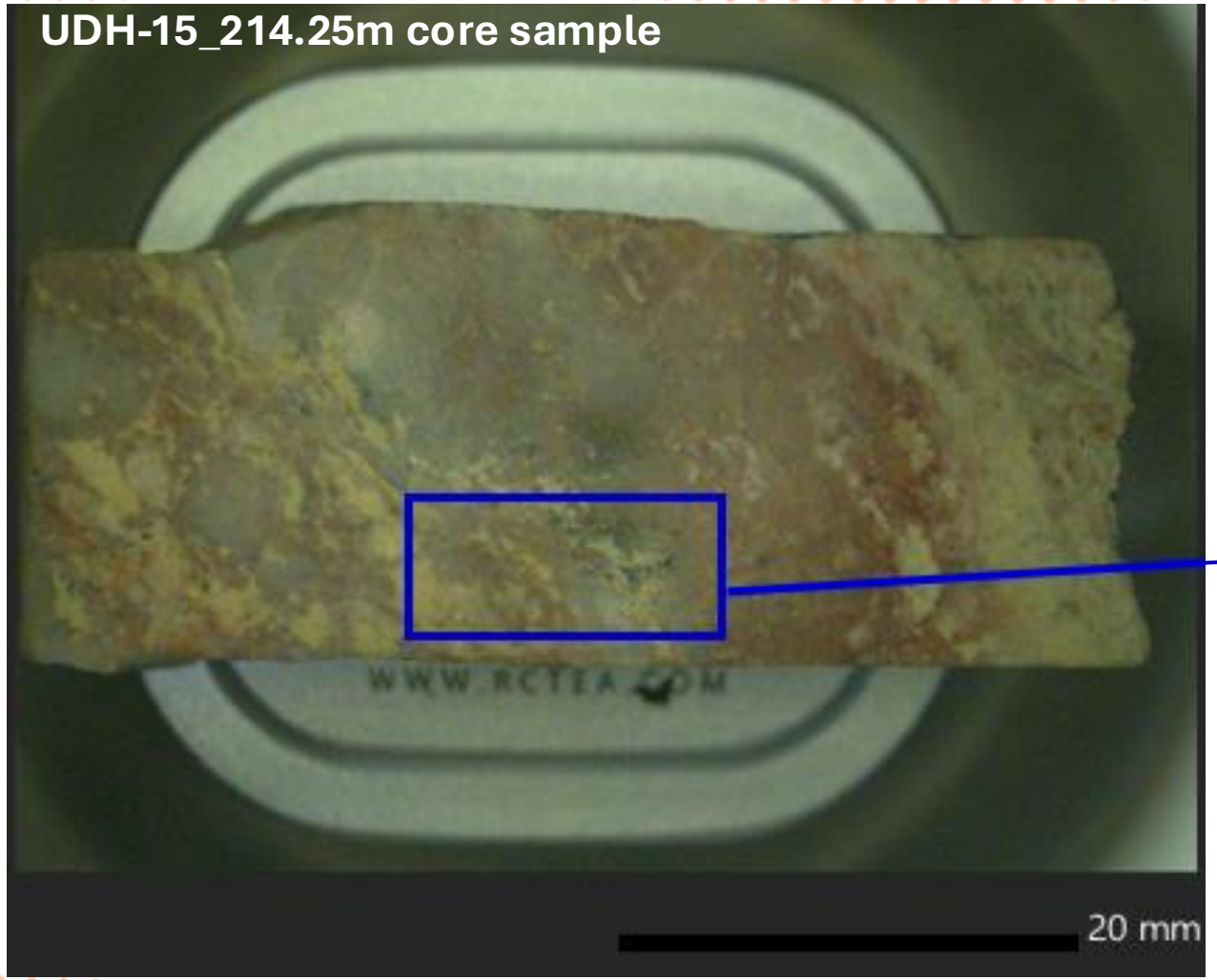
Alteration assembladges

- Illite, 2205-2209nm (ill)
- Muscovite, 2193-2204nm (mus, par)
- Tourmaline
- Smectite-illite (smc-ill)
- Chlorite-epidote (chl, epi)
- Magnetite-chlorite-epidote (mt-chl-epi)
- Alumosilicate (dik, prp, kao)

- Paragonite 2193-2199nm
- Muscovite 2200-2204nm
- Illite 2205-2209nm
- Phengite 2210-2213nm
- Tourmaline
- Smectite
- Chlorite
- Epidote
- Kaolinite
- Dickite
- Pyrophyllite
- No spectrum

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Ulaan SE Au Deposit

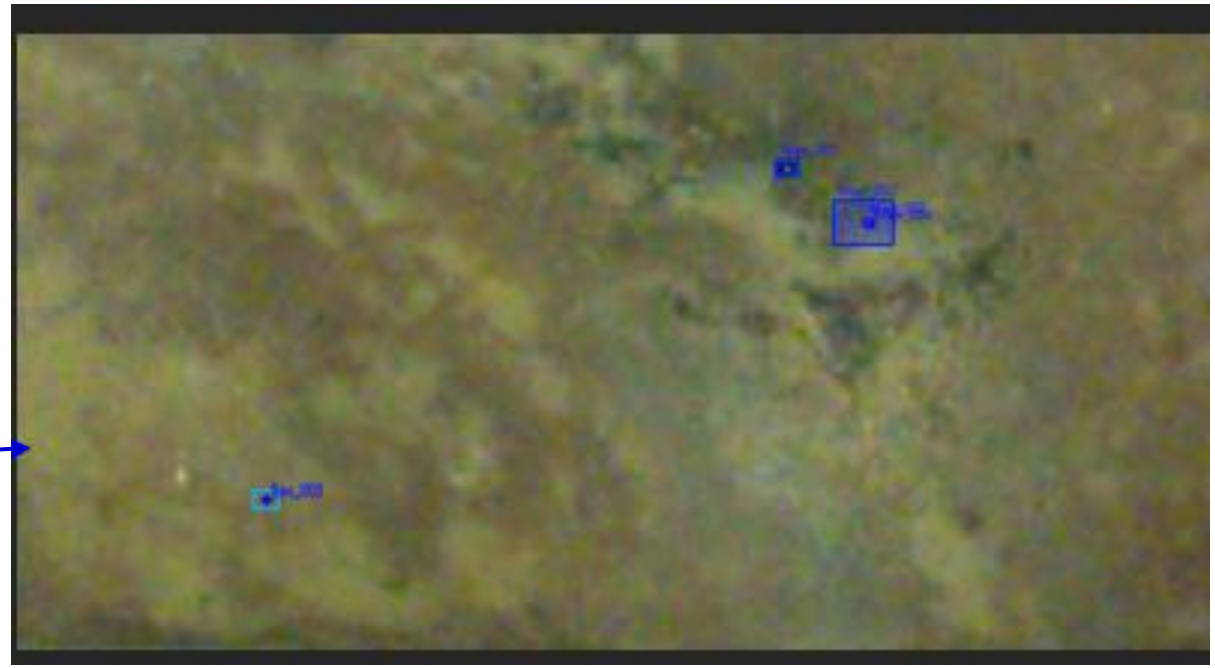


Polished section №UDH-15/214.25m.

Quartz vein with fine VG's (~30cm)

MIC, Prof. Jargalan, 2026

(SEM-EDS, Laser Raman spectrometer)



Au 10.47 g/t, Ag 10 g/t, As 64 ppm, Sb 11 ppm,
Ba 533 ppm, Cu 7 ppm, Pb 18 ppm, Zn 91 ppm

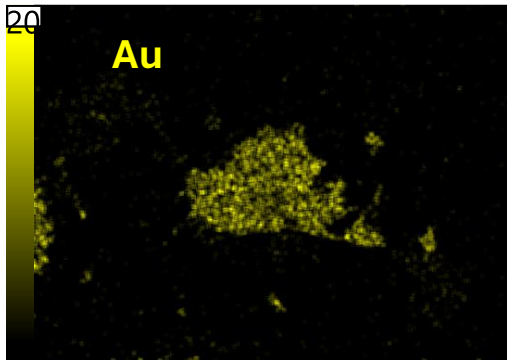
Ulaan SE Au Deposit

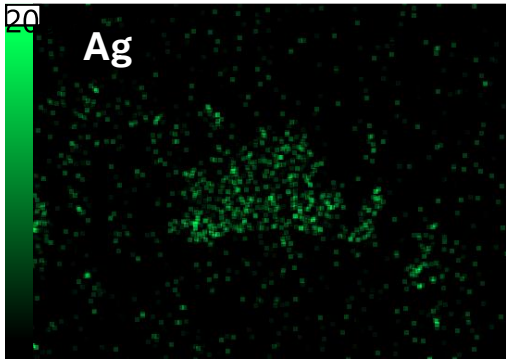
UDH-15_214.25m. Mapping-1

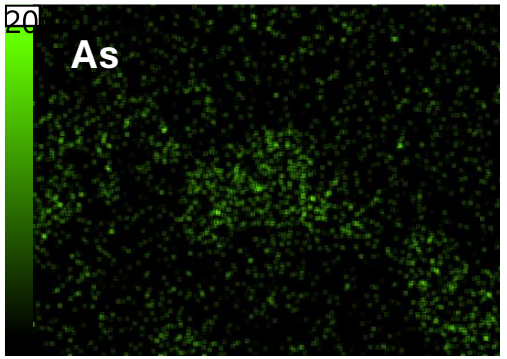
UDH-15_214.25m core sample

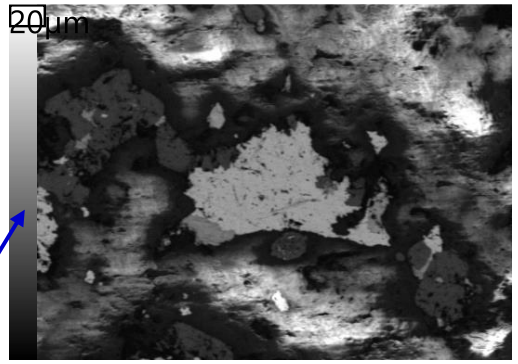


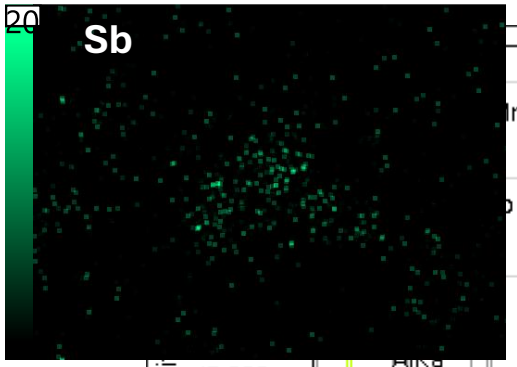


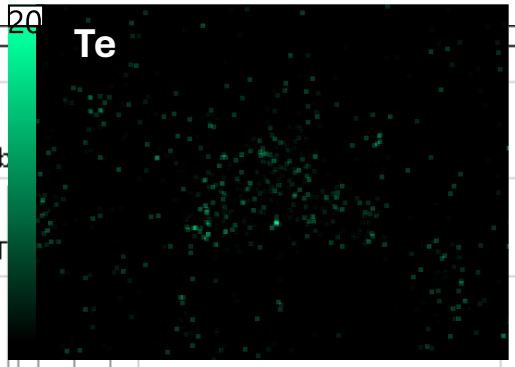


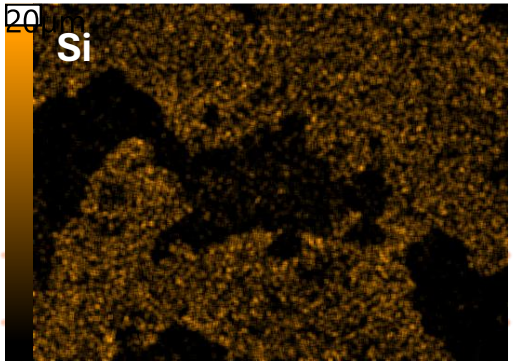


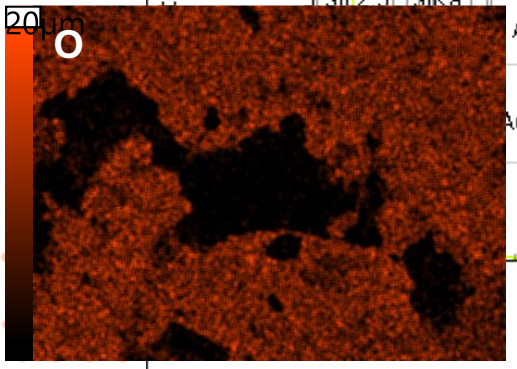


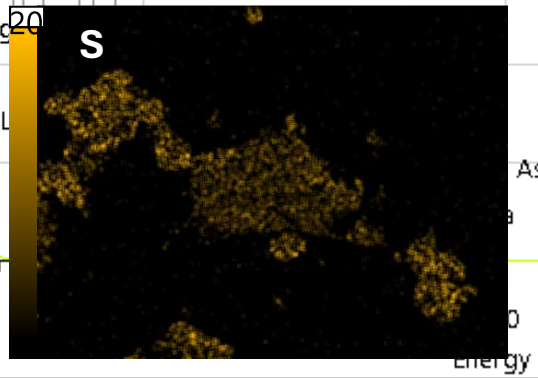












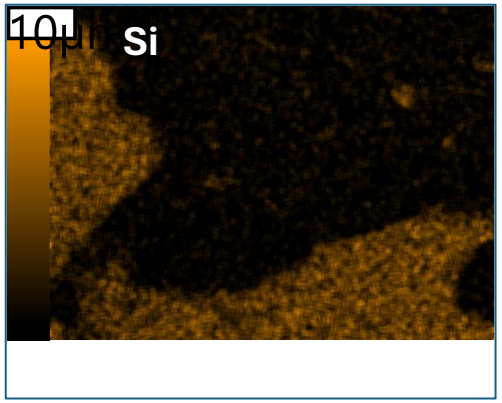
Ulaan SE Au Deposit

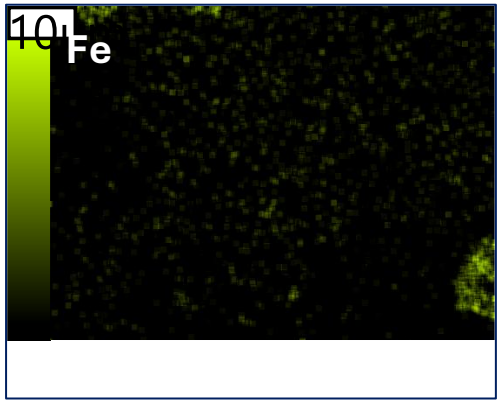
UDH-15_214.25m core sample

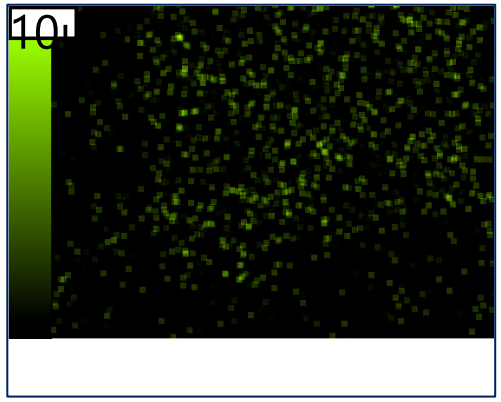


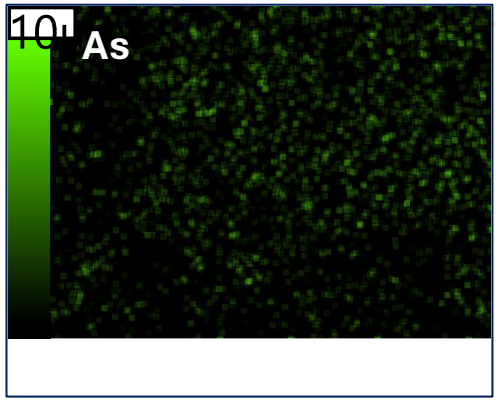


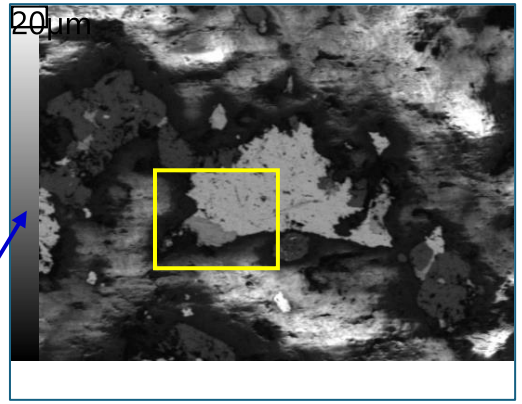
UDH-15_214.25m. Mapping-1

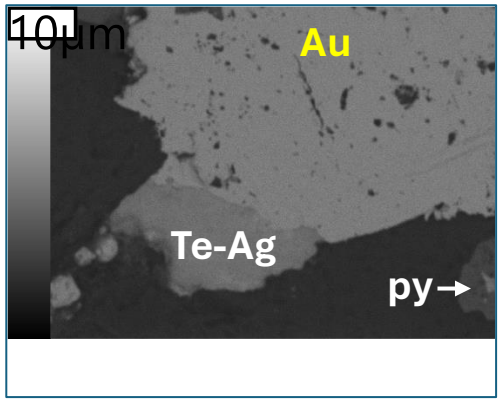


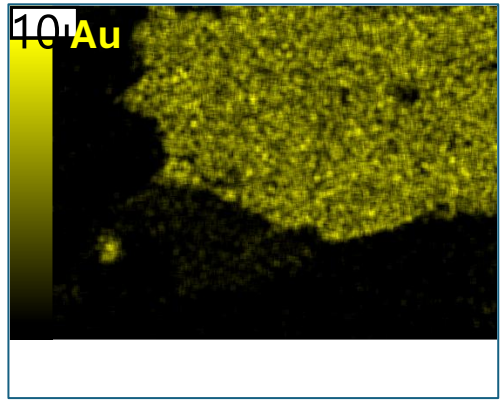


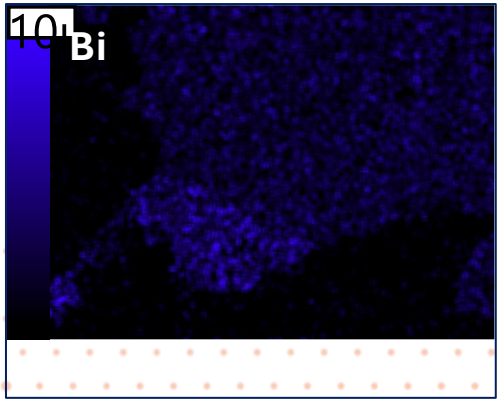


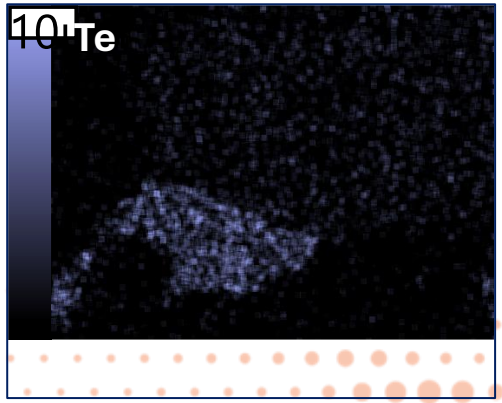


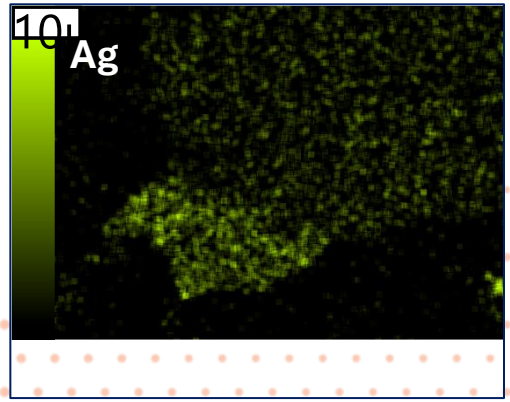












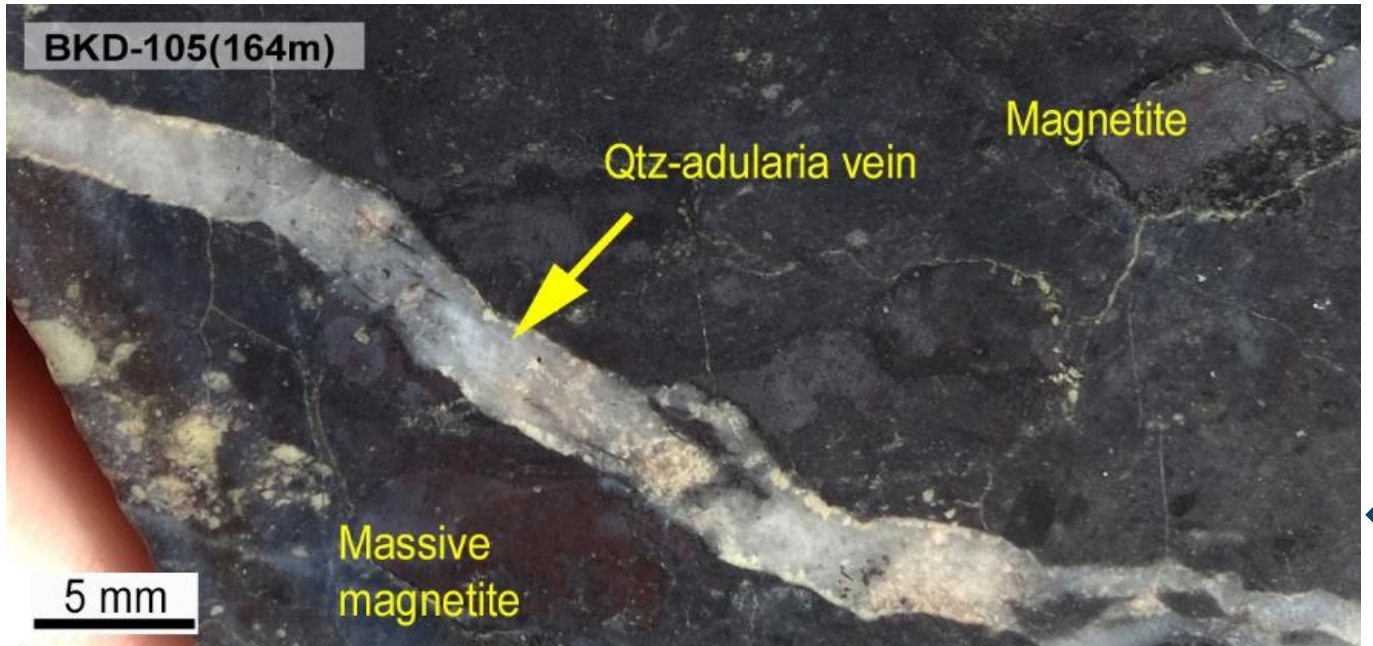
Magnetite stage -1

Pervasive magnetite-chlorite alteration preceding the epithermal mineralization



Magnetite stage -2



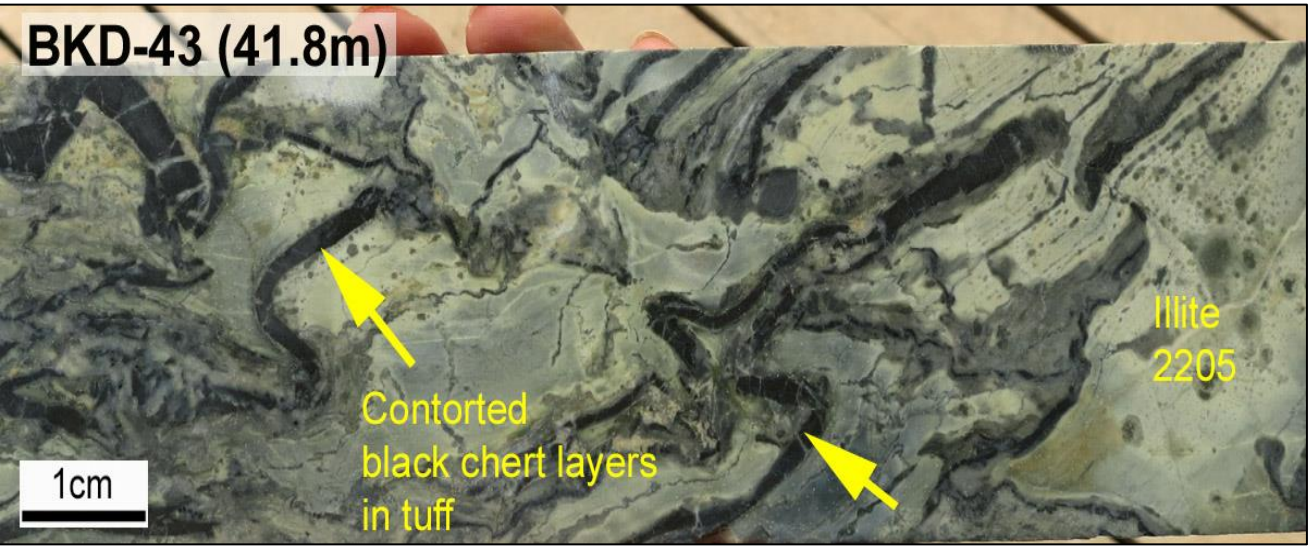


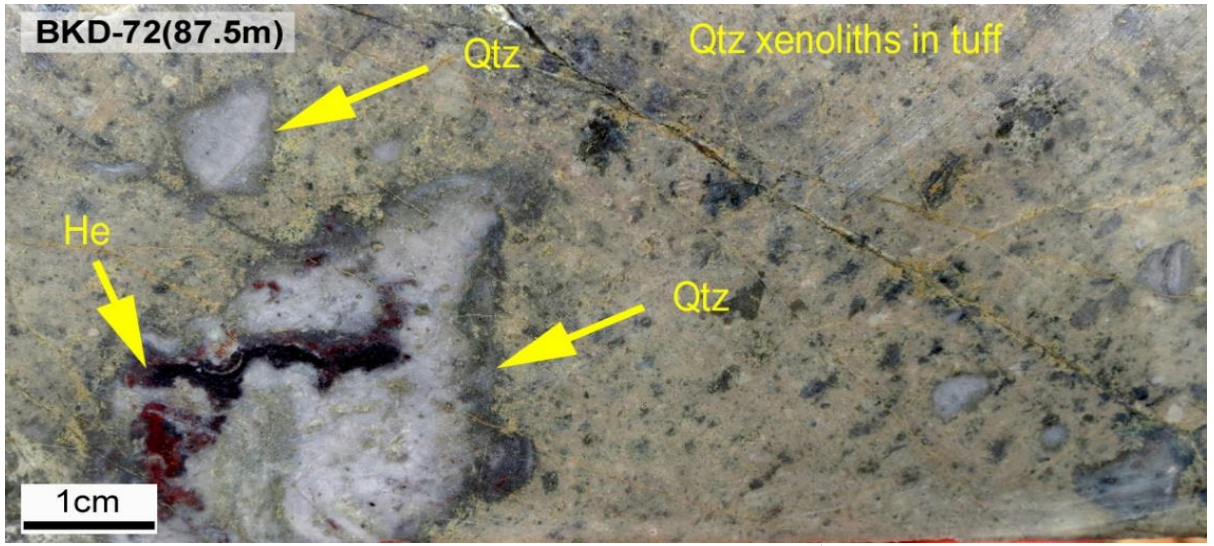
massive magnetite infilling brecciated quartz-adularia vein

quartz-adularia vein crossing massive magnetite

Timing of mineralization and tilting

Mineralization could be synchronous with volcanic deposition







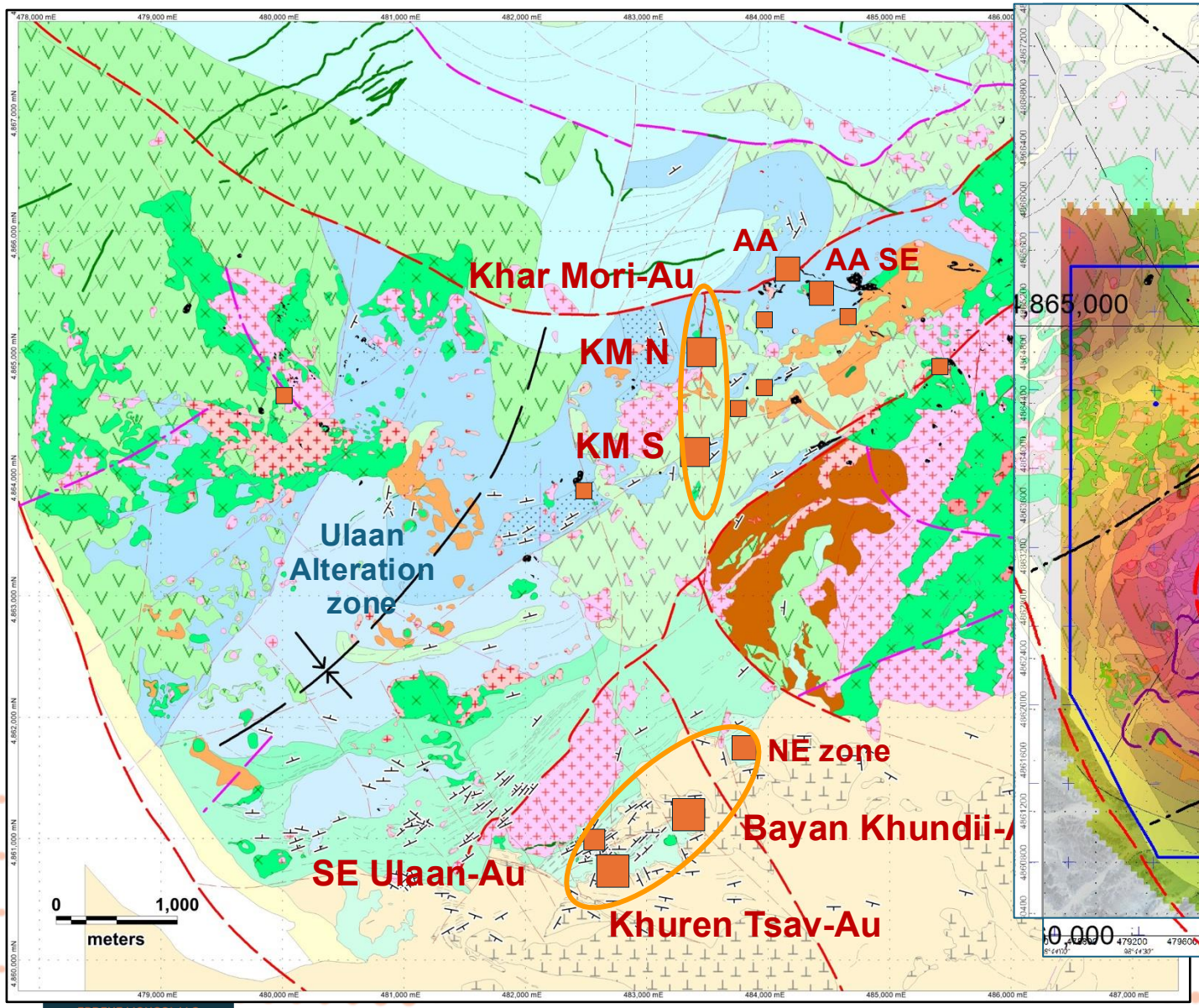
Xenoliths of quartz with hematite in tuff. This could mean epithermal system formed as the volcanic sequence was deposits

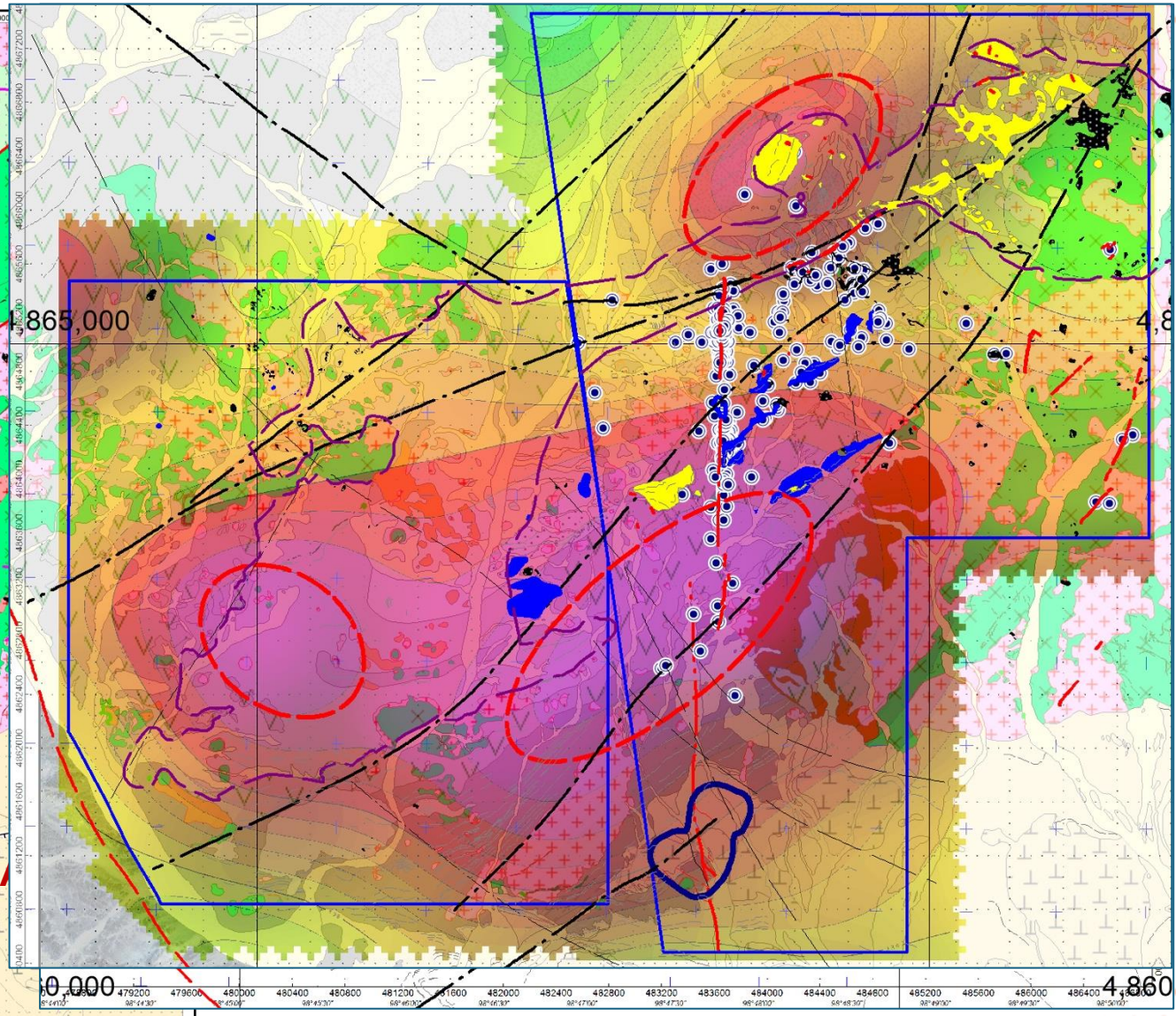
Chalcedonic quartz vein aligned with fiamme texture. This suggests some veins are flat

Khundii Area Geology map

Geology map, Erdene Resources, 2022

Gravity map

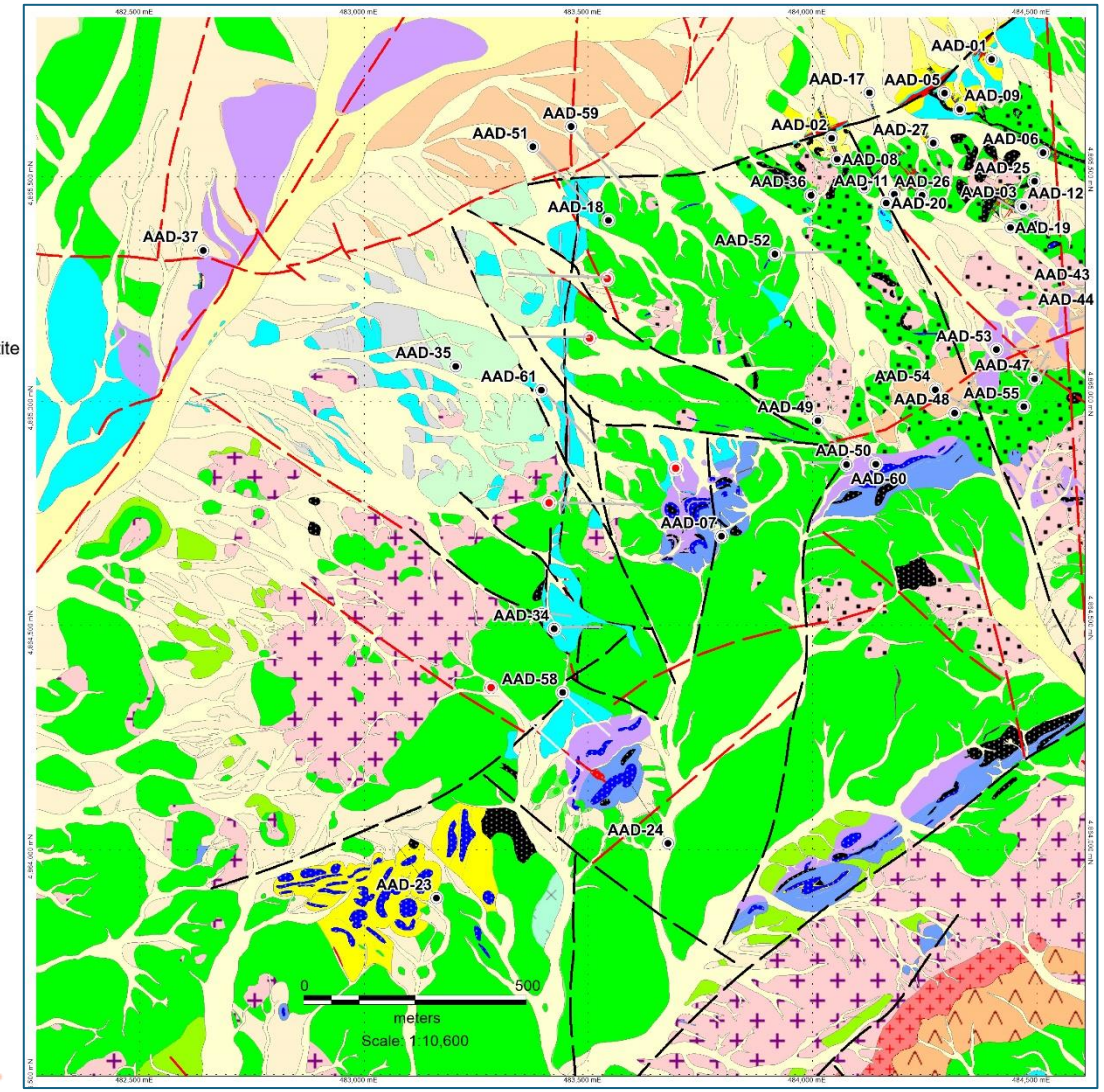




Dark Horse (Khar Mori) discovery

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Geological and Alteration map

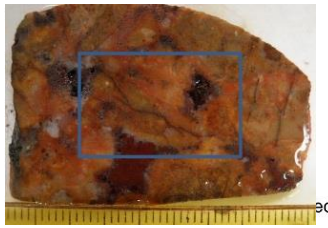




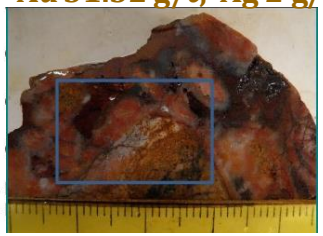
AAD-58/38.4m
Au 3.77 g/t, Ag 11 g/t



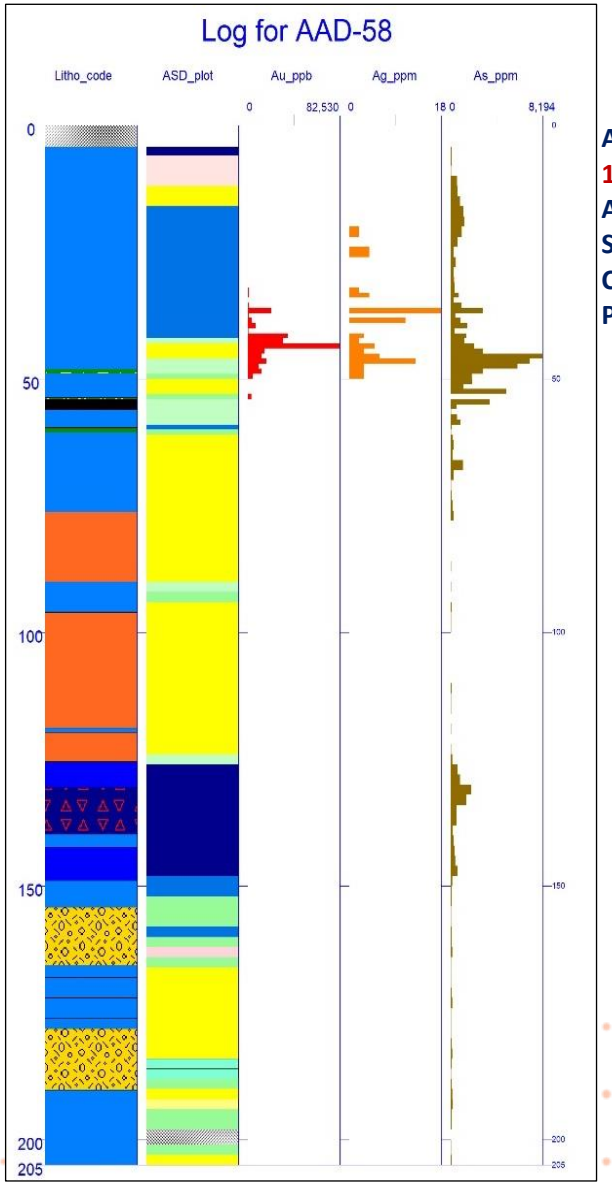
AAD-58/38.5m
Au 3.77 g/t, Ag 11 g/t



AAD-58/42.4m
Au 31.32 g/t, Ag 2 g/t



AAD-58/42.9m
Au 31.32 g/t, Ag 2 g/t



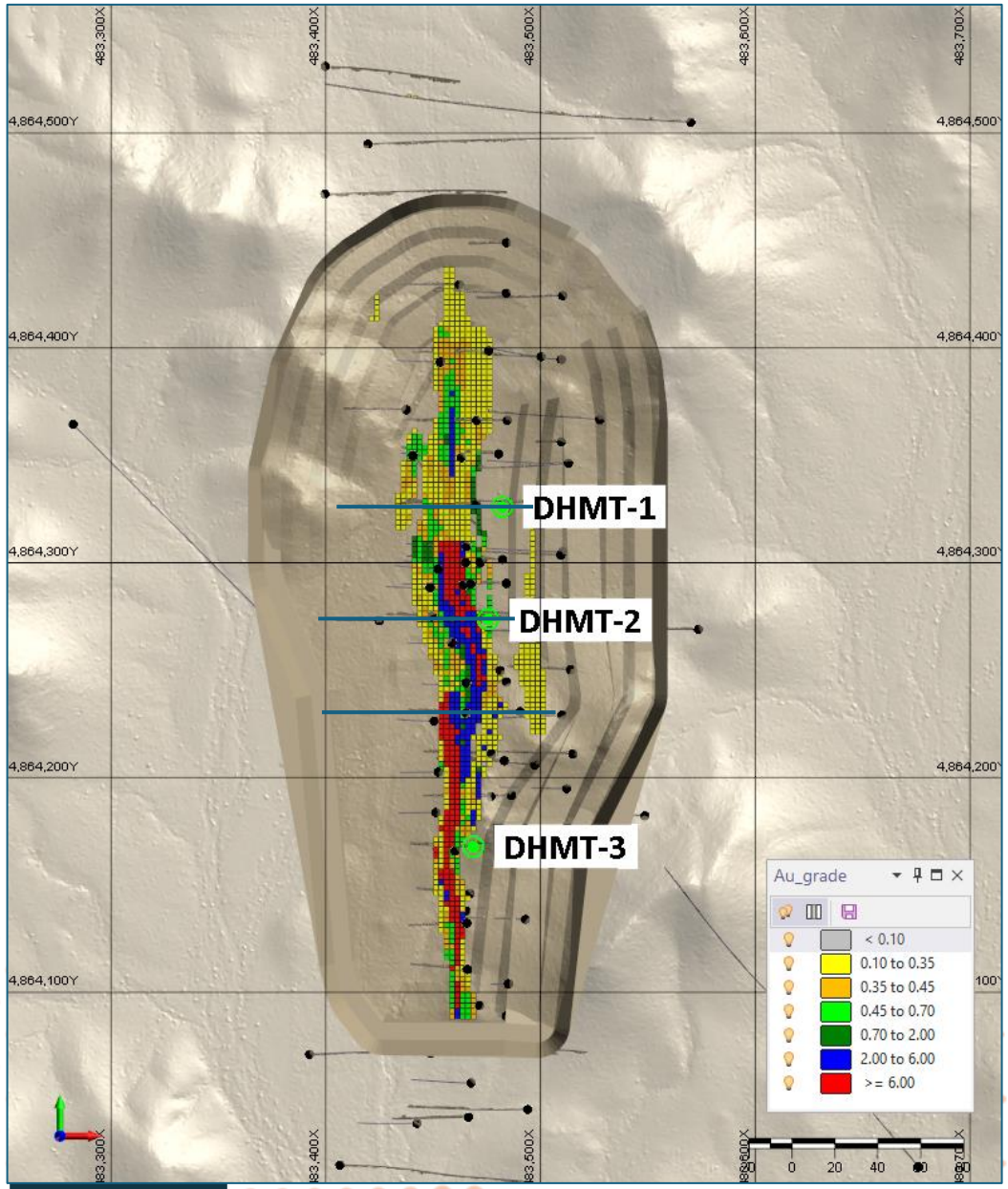
AAD-58, 32-50m:
18m @ Au 14.42 g/t,
Ag 5.85 g/t, As 2347 ppm,
Sb 68 ppm, Ba 256 ppm,
Cu 82 g/t, Mo 13 g/t,
Pb 13 ppm, Zn 18 ppm

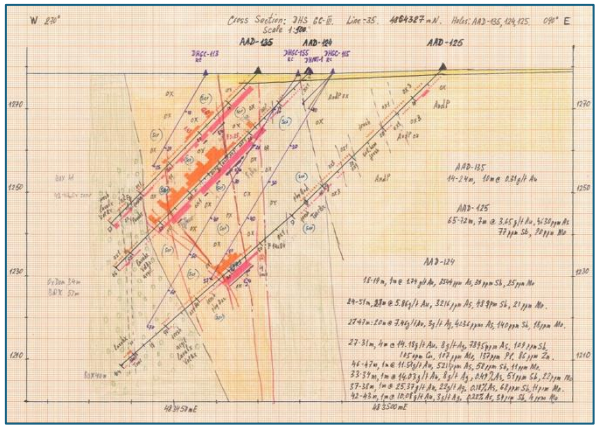


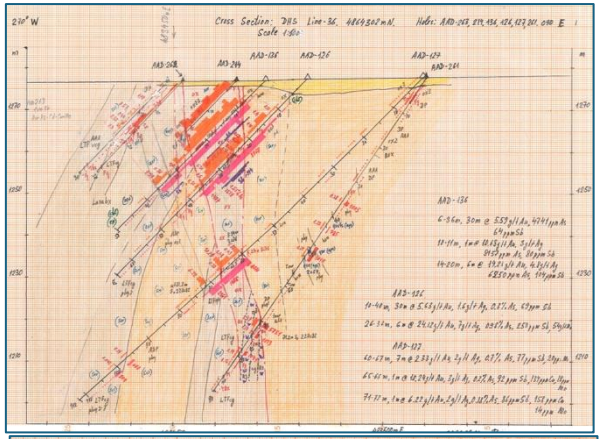
ERDENE MONGOL LLC

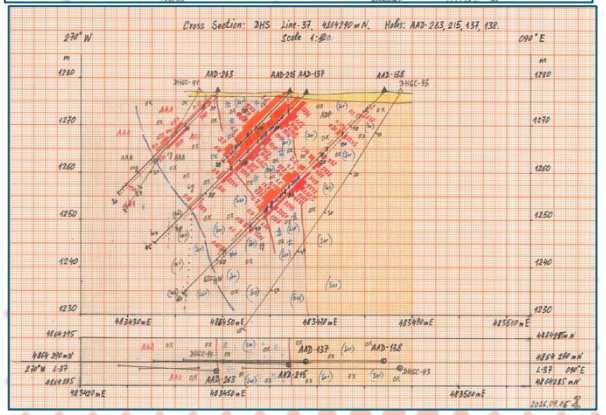
Dark Horse South (Khar Mori South) deposit

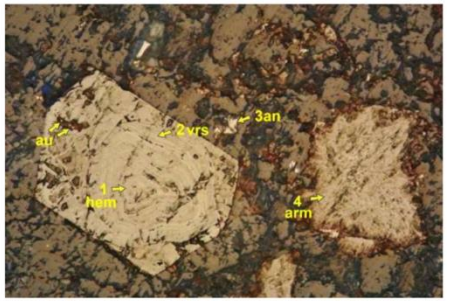
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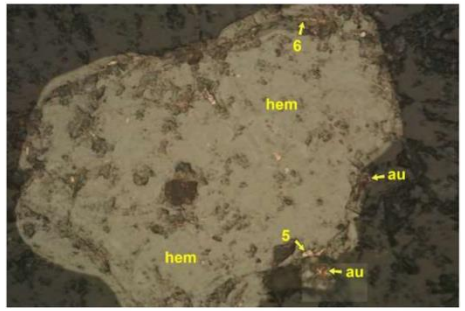




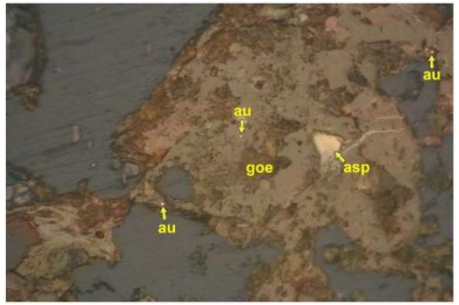




Зураг- 6. Ойсон гэрэлд, всвелт*20х, Анхдагч пиритийн мөхлөгийн хэлбэрийг хадгалсан, төмрийн усан ислүүдээр хүчтэй түрэгдсэн псевдоморф агрегатууд



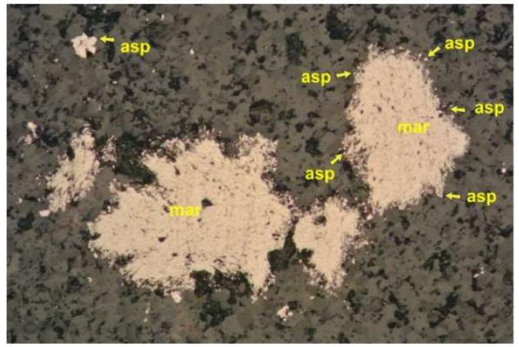
Зураг- 32. Ойсон гэрэлд, всвелт*20х, Гематитийн псевдоморф мөхлөг ба түүний ан цав дах жижиг үлдэгдэл пирит, алт

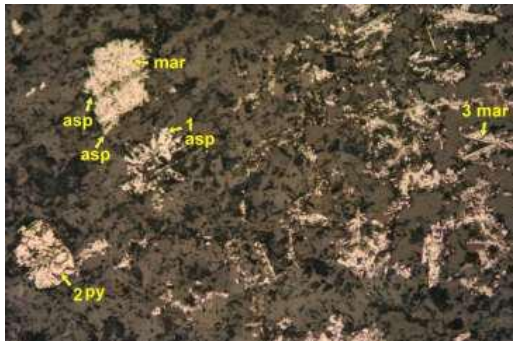


Зураг- 22. Ойсон гэрэлд, всвелт*20х, судлын компонент, арсенопиритийн үлдэгдэлтэй, алт агуулсан, ромбо хэлбэр тод ажиглагдах псевдоморф гетит, захараа гематитаар хүрээлэгдсэн байх ба алт агуулна

LR, SEM-EDS study. ТЭСИТ-34/2026

Marcasite FeS_2





*Зураг- 45. Нэвтэрсэн гэрэлд, өсгөлт*5х, том хэмжээтэй марказитийн мөхлөг тэдгээрийг хүрээлэн-хөвөөлөн үрчасан арсенопирит*

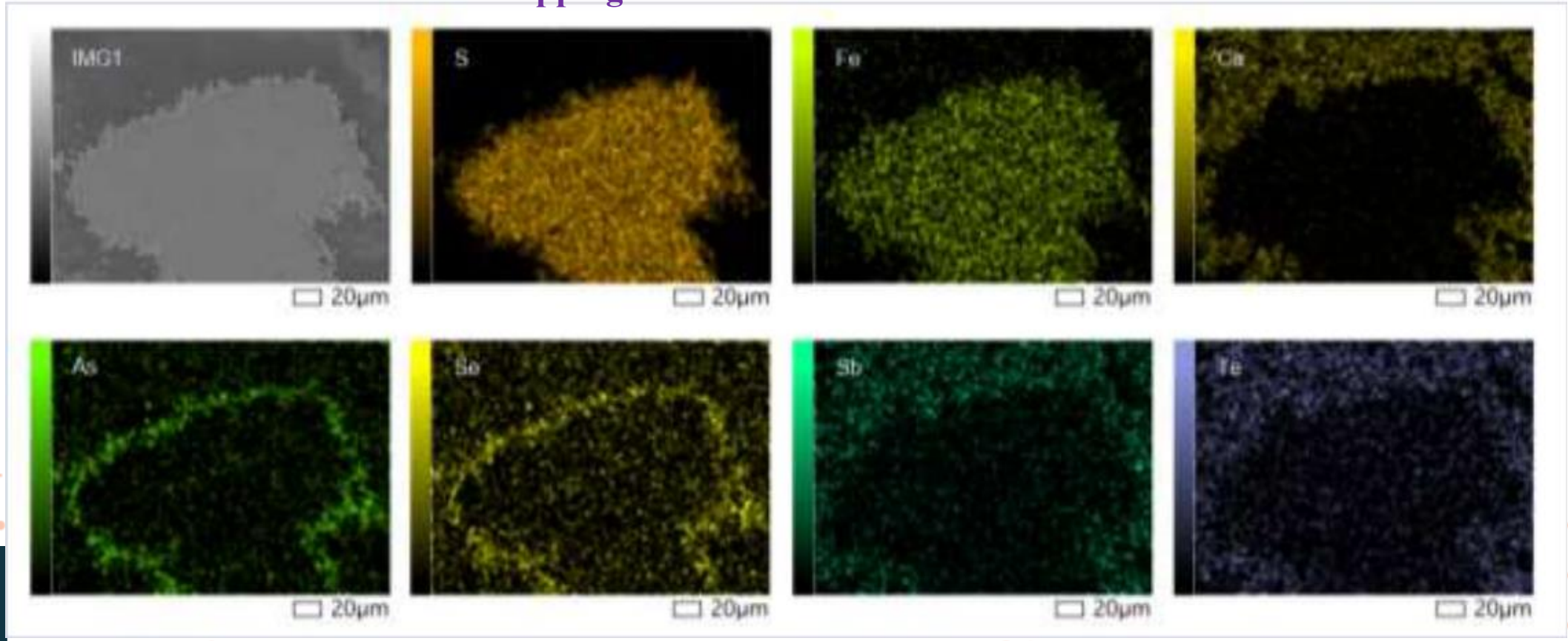
DHTM-2/21.4 дугаартай дээжийн судалгааны үр дүн





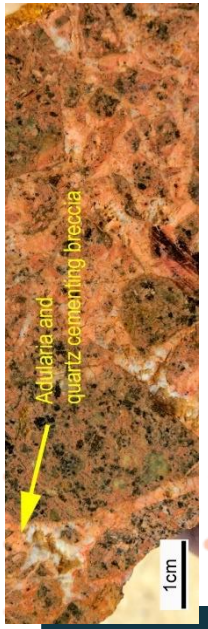
Au 2.4 ppm, Ag 3.2 ppm,
As 9450 ppm, Sb 136 ppm,
Cu 21 ppm, Mo 24 ppm;
Ca 12.4%, Fe 6.68%, S 0.7%,
Mn 0.42%, Mg 1.32%

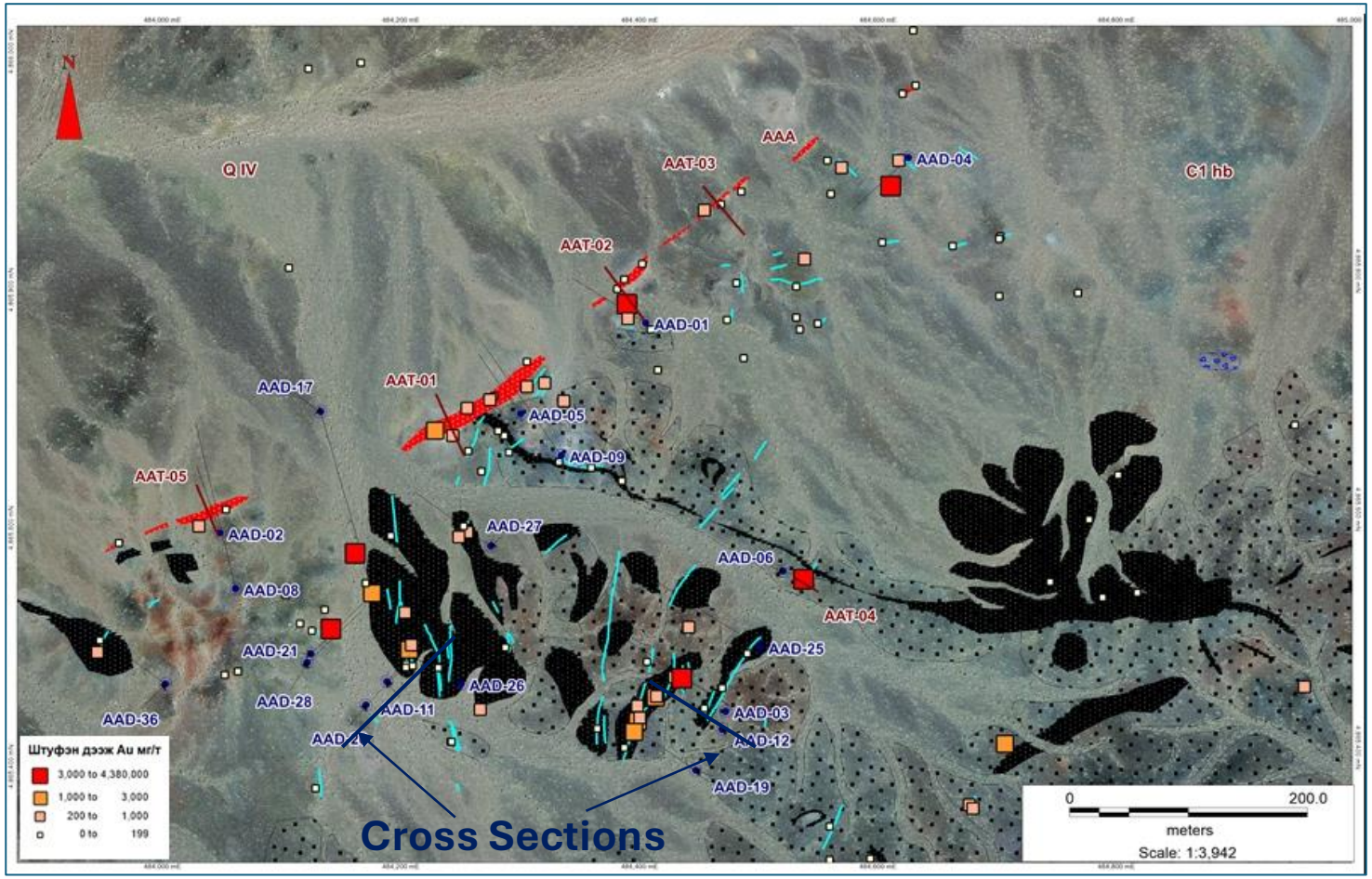
SEM-EDS mapping



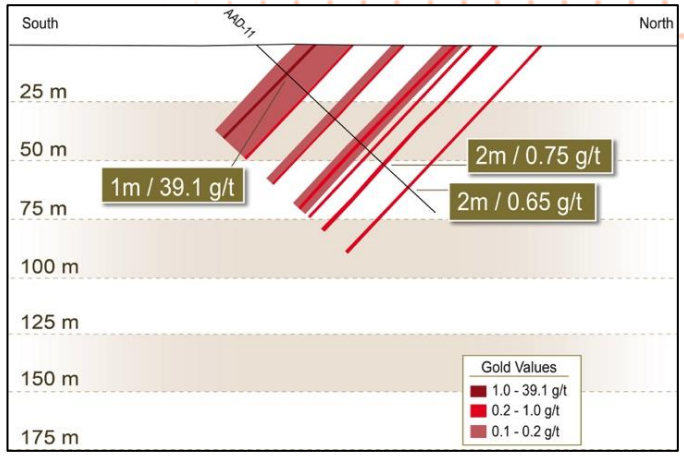
Altan Arrow prospect



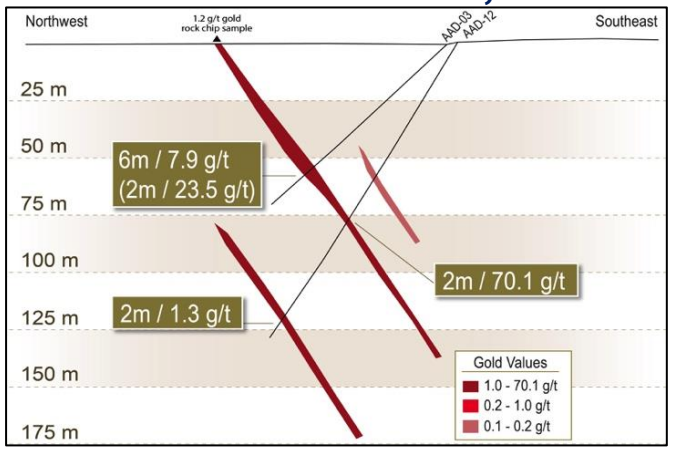




Cross Section AAD-11



Cross Section AAD-03, 12



AAD-02, 45.7 m

(0.25 g/t Au, 17 g/t, 600 ppm As, 220 ppm Mn, 600 ppm Pb, 90 ppm Zn), veined and brecciated tuff. Colloform quartz bands plus strong Fe oxide

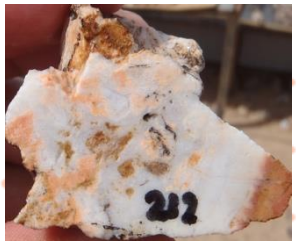




AAD-05, 36.5 m,

breccia cemented by feathery quartz, milky (0.4 g/t Au, 171 g/t Ag), cockade sulfides

Quartz-adularia vein



Quartz-Fluorite vein (AAD-21)



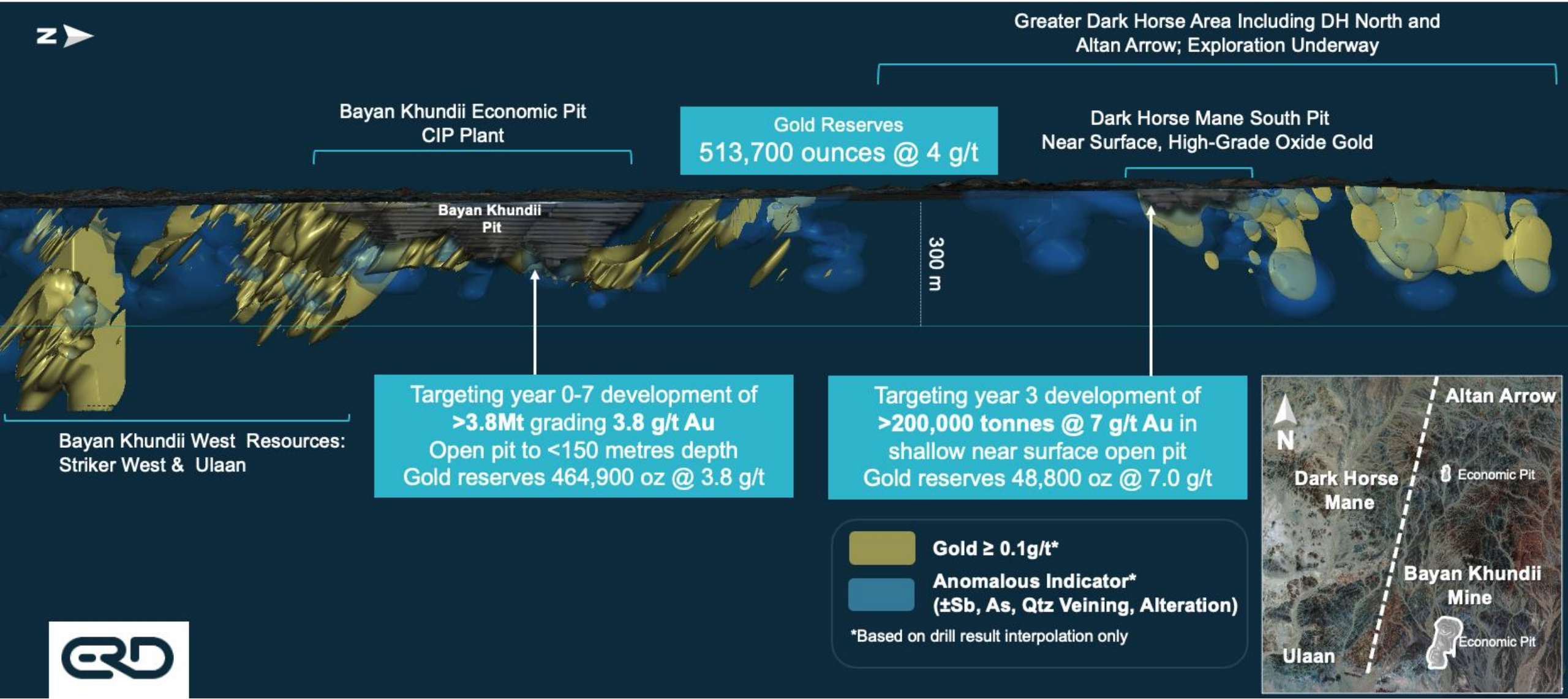
ERDENE MONGOL LLC

BAYAN KHUNDII DEPOSIT – EXPANSION ALONG STRIKE AND AT DEPTH

Current economic pit comprises only a portion of the mineralized envelopes

ЭРДЭНЭ МОНГОЛ ХХК

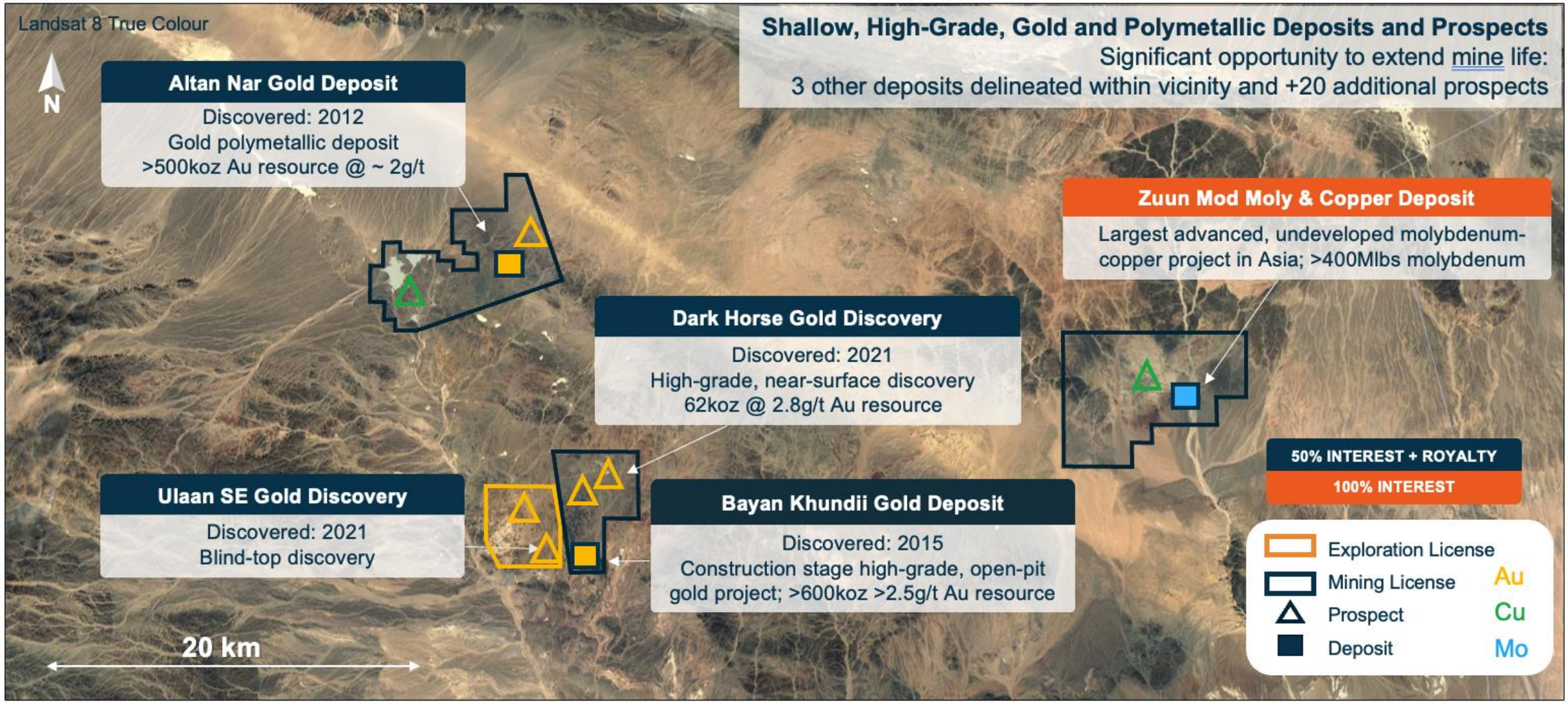
Shallow (150m max. depth), open-pit mine with six-year reserve life, significant resource expansion potential and 93% recovery using Carbon in Pulp



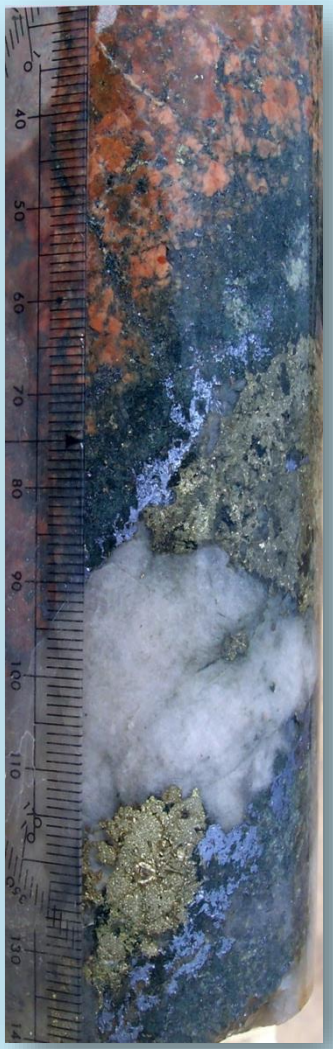
THE PIPELINE – MULTIPLE HIGH-QUALITY DEPOSITS AND PROSPECTS

Four gold discoveries, molybdenum-copper deposit and +20 high priority targets

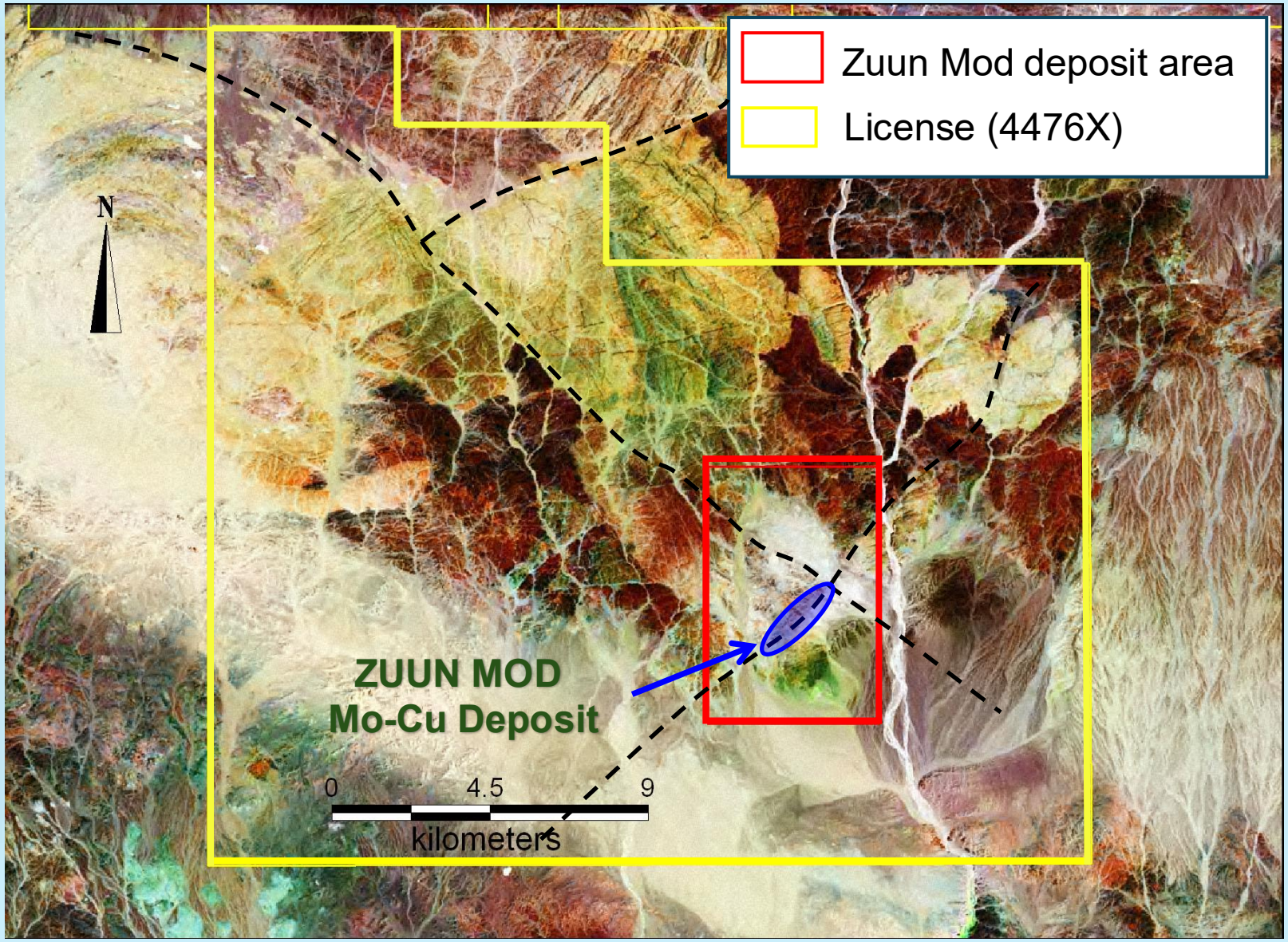
ЭРДЭНЭ МОНГОЛ ХХК



Zuun Mod as one of Asia's largest undeveloped Mo-Cu projects



Mo mineralization age
Re/Os 298.2±0.9 Ma.



Drilling

Gallant Minerals 2003:

RC: 587.7 м.

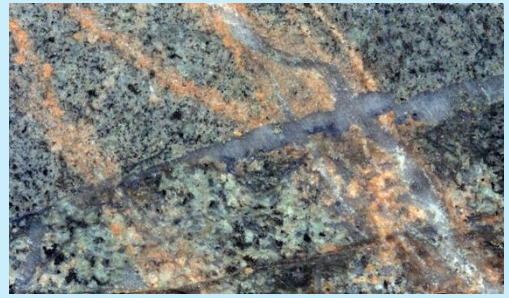
Diamond: 14 holes totaling 2608.9 м.

Anian Resources 2005-2008:

Diamond: 114 holes totaling 35,625 м.

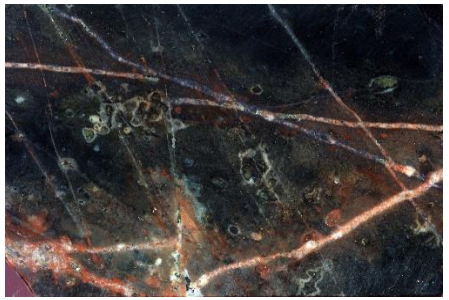
Zuun Mod deposit

Total 128 holes
40,483.1 м.

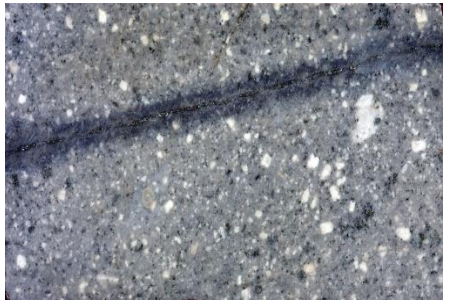


Zuun Mod Mo-Cu porphyry deposit. Geology map

Ulziitkhar formation C1uh



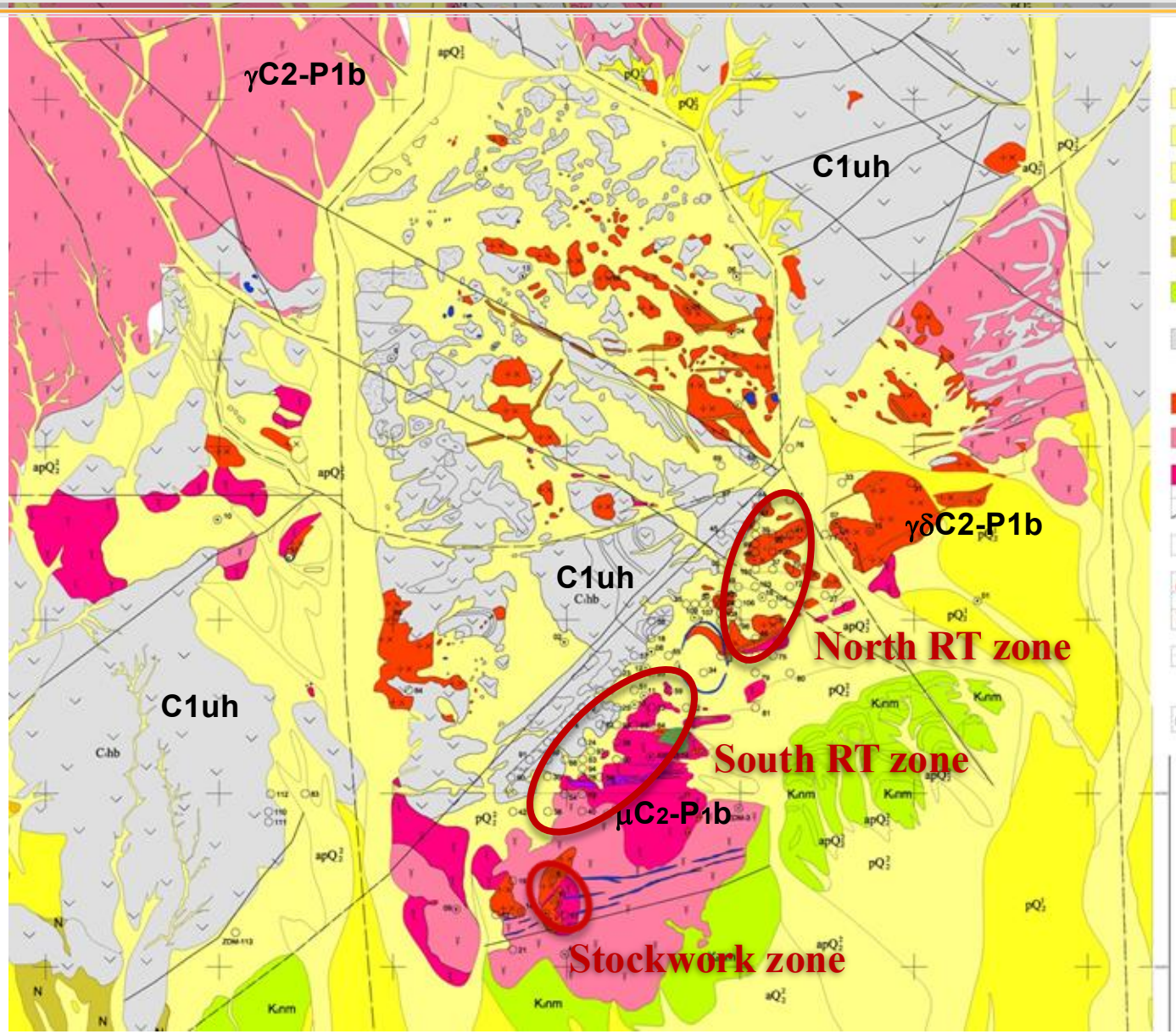
Andesite-Basalt



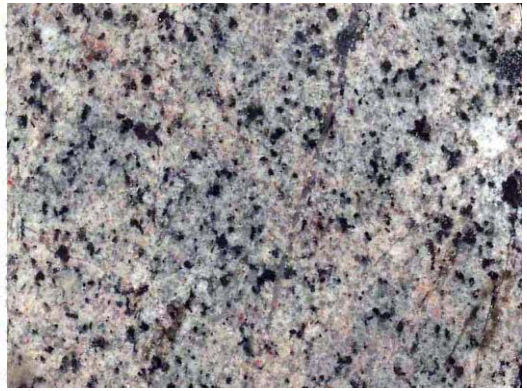
Dacite porphyry



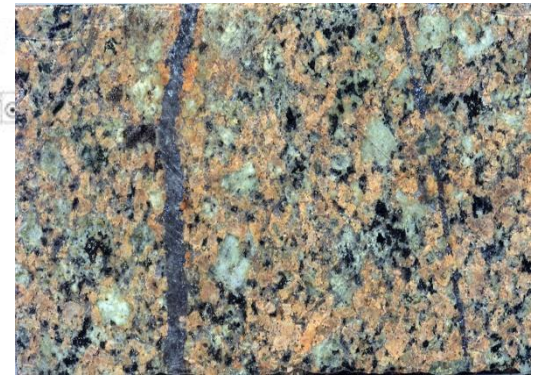
Alkali granite, syenite
U-Pb 313±19 Ma



Baga Ovoot intrusive complex C2-P2b



Biotite Granodiorite (γδC2-P1b)
K-Ar 301.5±7.8 Ma.
U-Pb 301.8±2.7 Ma.
Crystallization 678-727°C

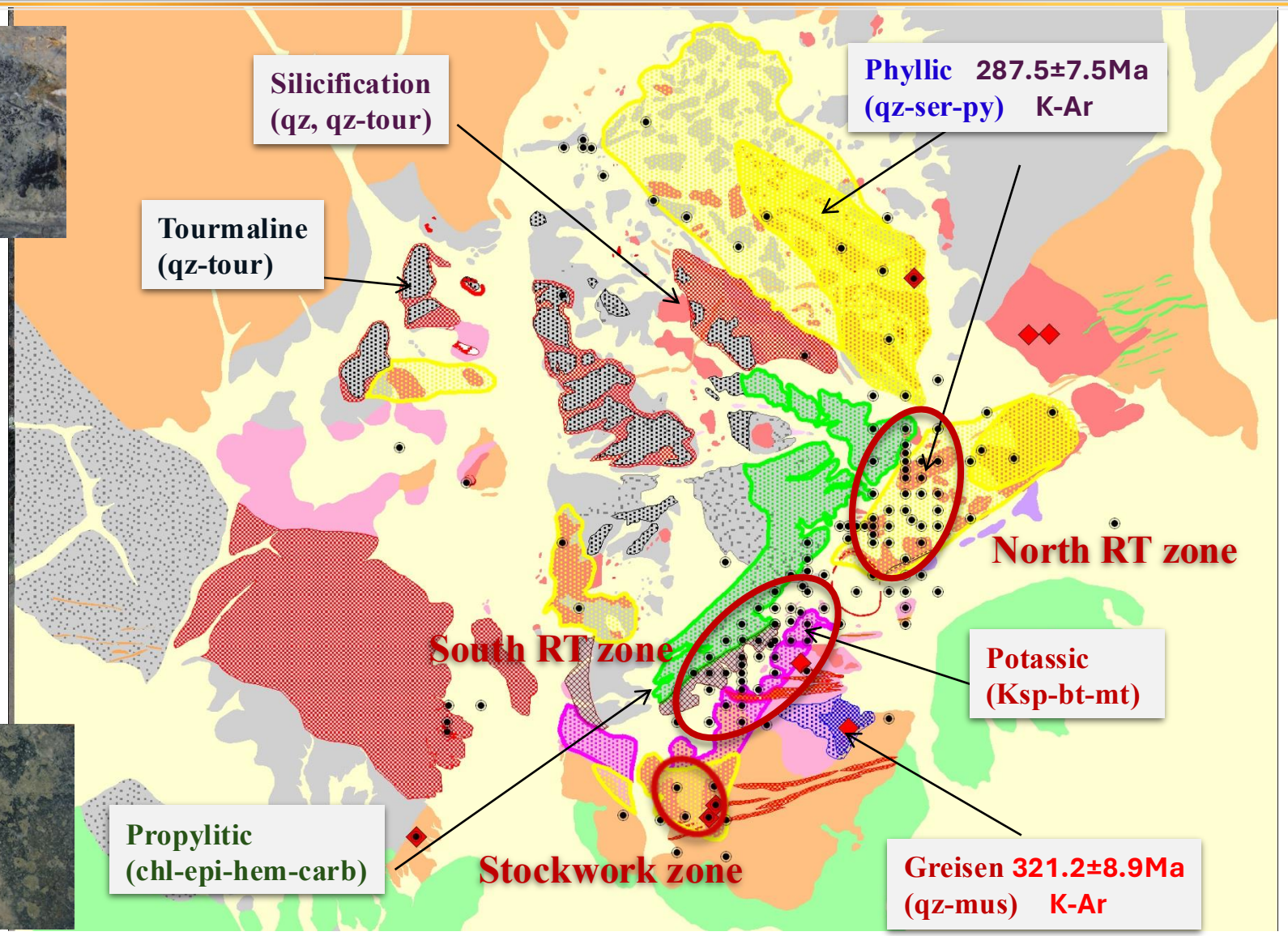


Quartz Monzonite (μC2-P1b)
U-Pb 305.3±3.6 Ma.
Crystallization 700-793°C

Zuun Mod Mo-Cu porphyry deposit. Alteraton map



Tourmaline (qz-tour) altered rock. ZMD-09 (28.3m)





Propylitic (chl-epi) altered volcanic rock. ZMD-45 (31.5m)

Re-Os (Mo) 298.2±0.9Ma Gallants, 2003;

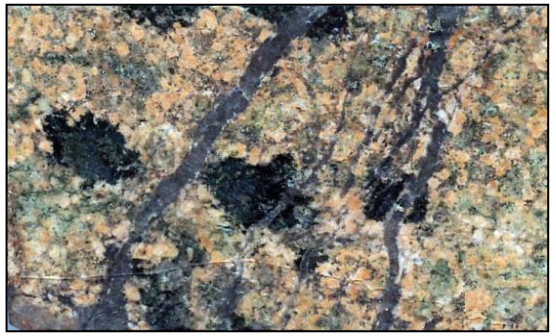
Re-Os (Mo) 297±4.8 Ma Altankhuyag, Enkhjargal, 2023

Phyllic alteration (qz-ser-py):

K-Ar 287.5±7.5 Ma. Gallants, 2003.



Phyllic (qz-ser-py) altered Granodiorite, cut by D veins. KKMD-06 (117.1m)

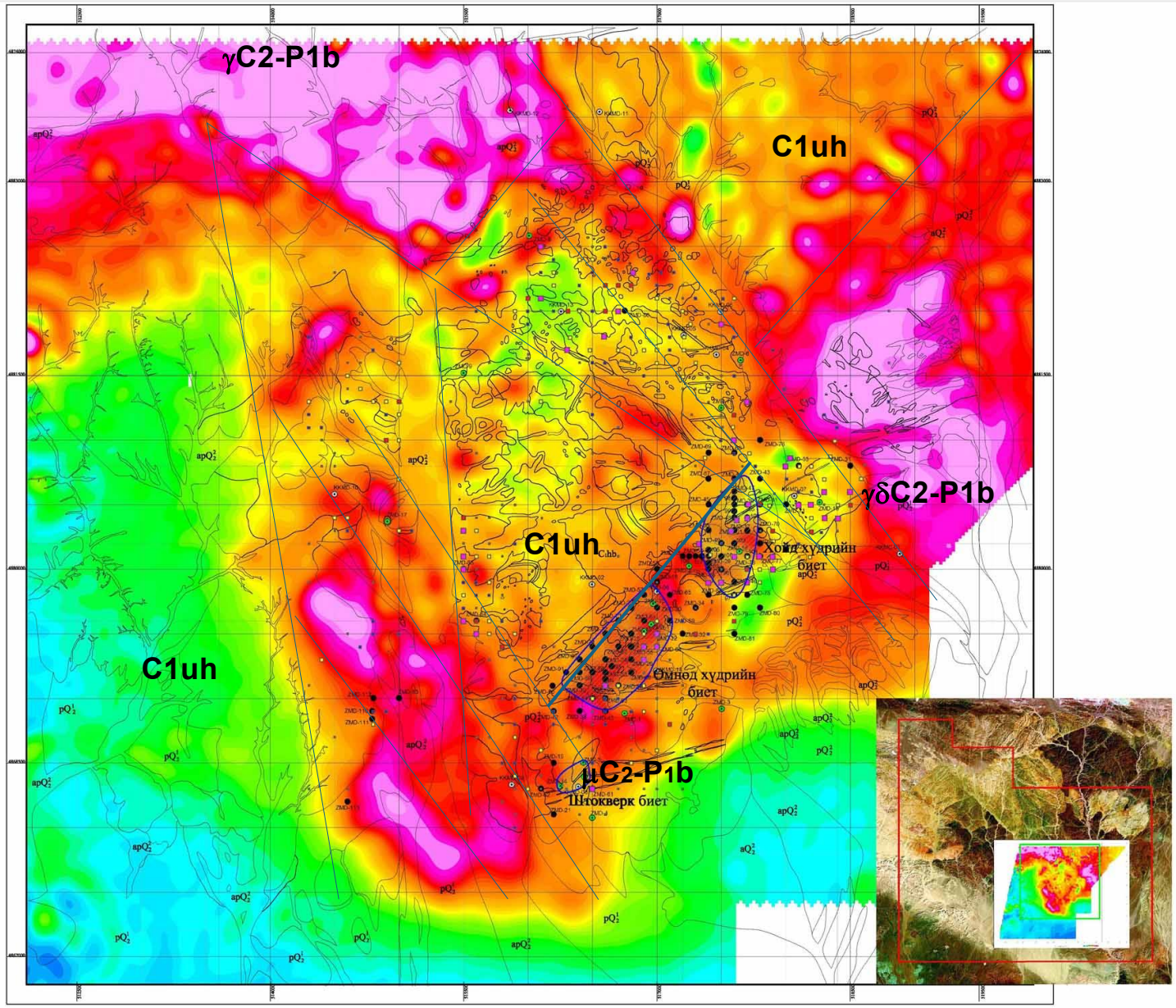


Potassic (mt, patchy secondary bt, K spar) altered Monzonite, cut by stockwork quartz-moly veins. ZMD-28 (90.1m)

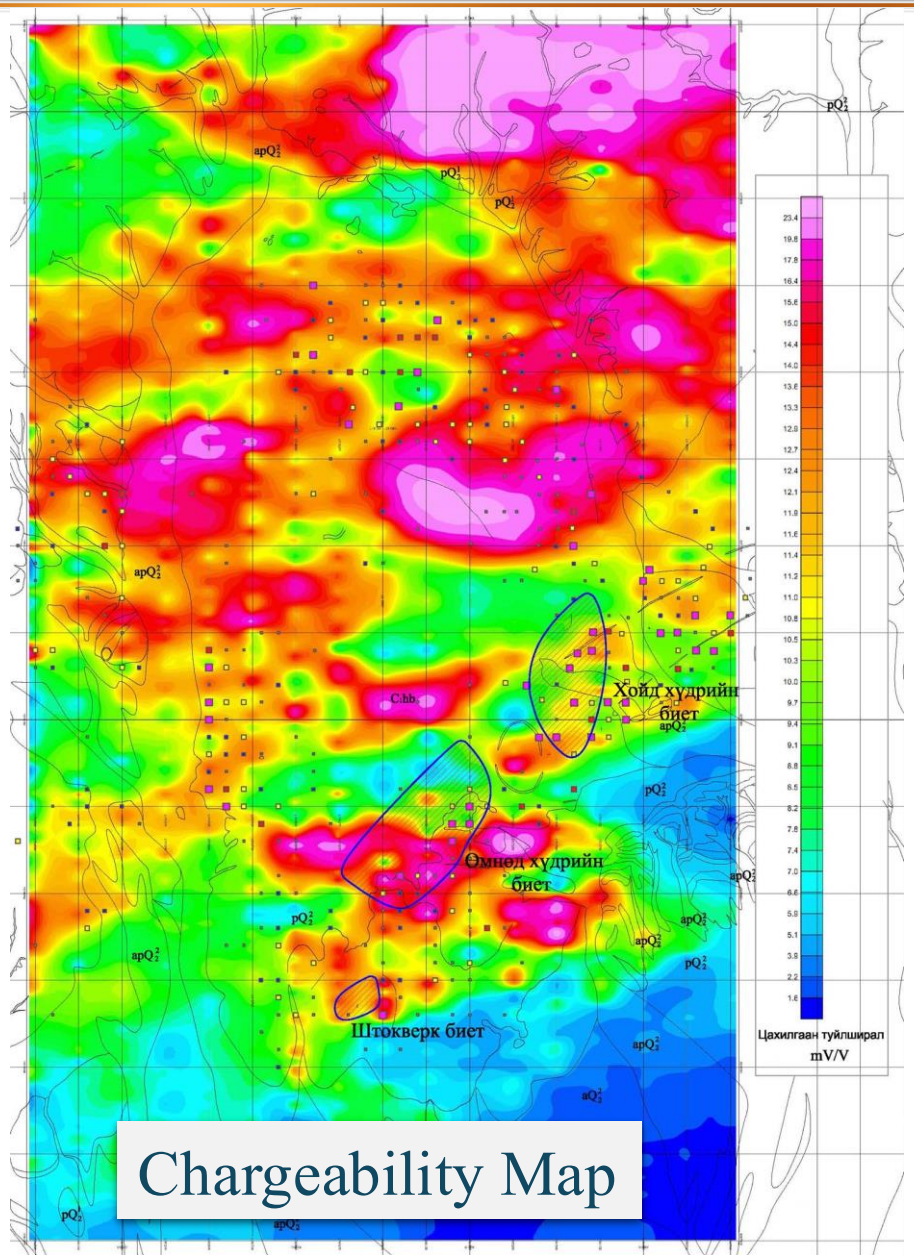
Muscovite greisen:

K-Ar 321.2±8.9 Ma. Gallants, 2003.

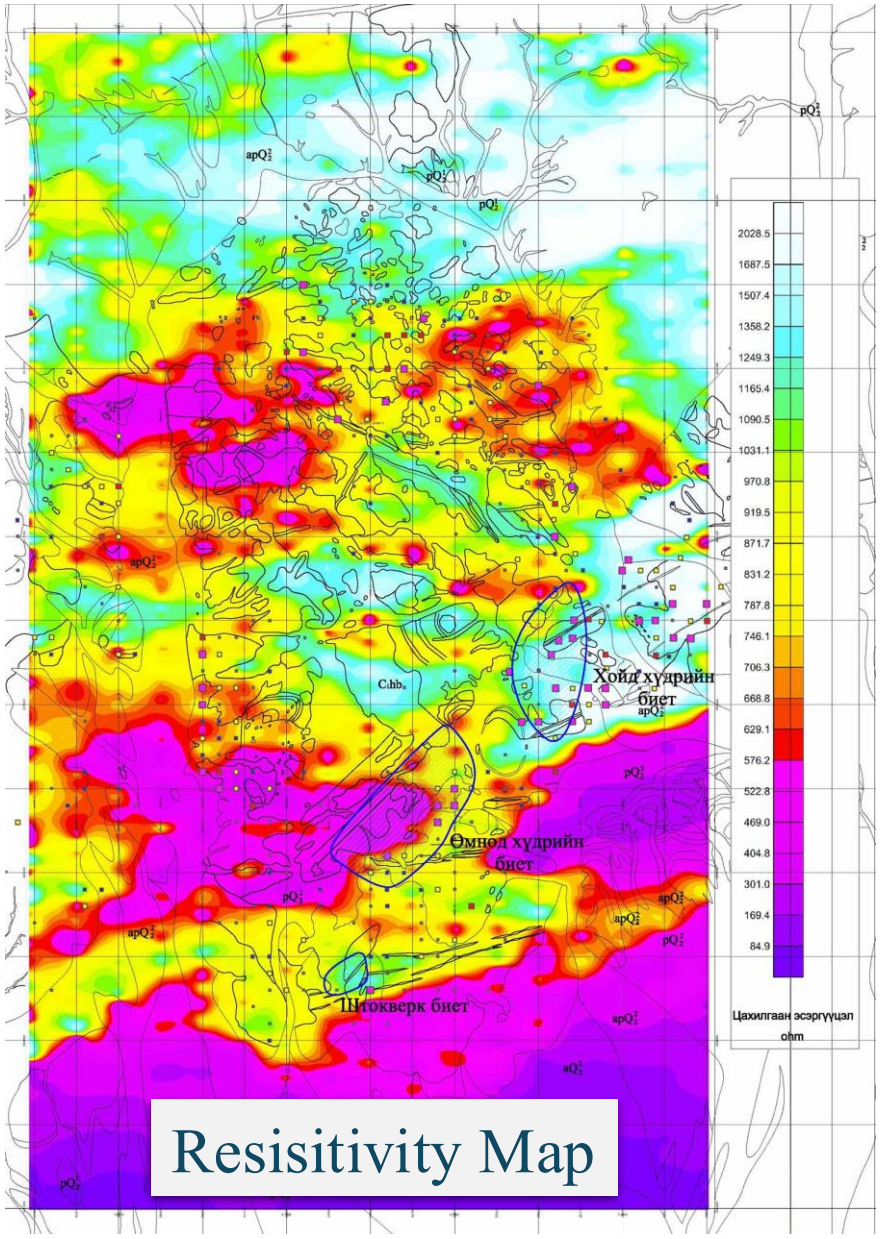
Zuun Mod Mo-Cu porphyry deposit. Magnetic RTP map



Zuun Mod Mo-Cu porphyry deposit. Gradient Array map

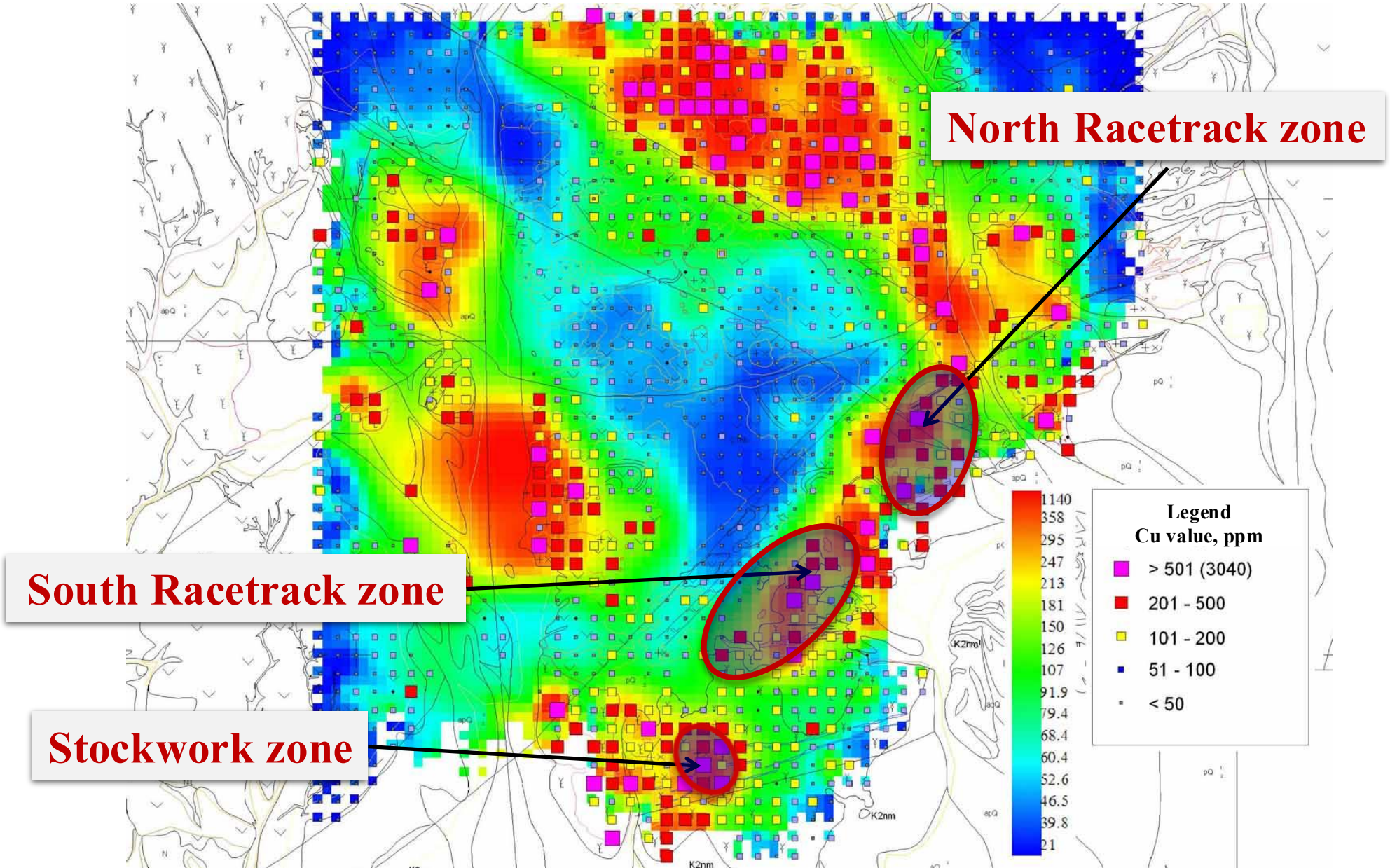


Chargeability Map

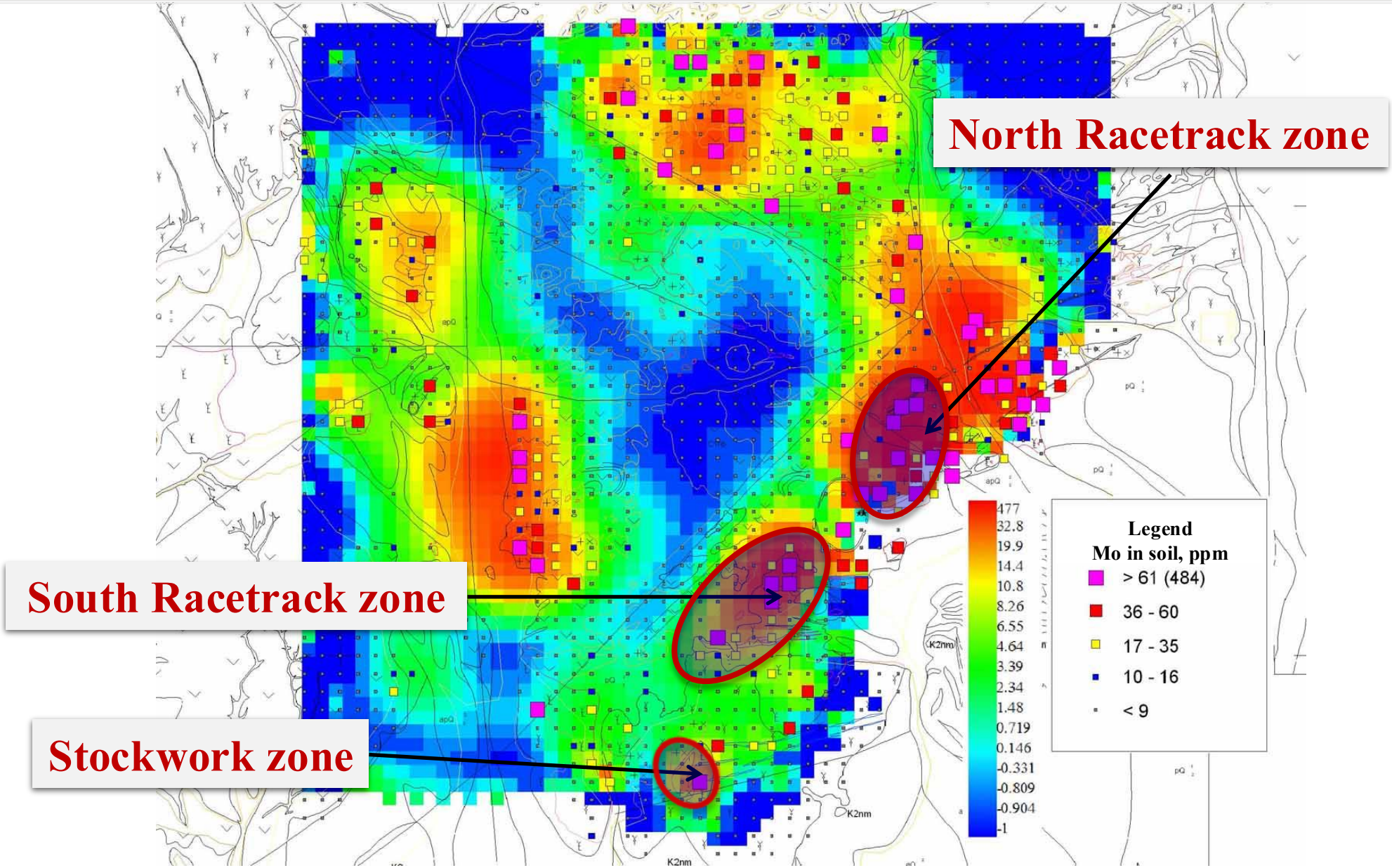


Resisitivity Map

Zuun Mod Mo-Cu porphyry deposit. Cu soil geochemistry (2438)



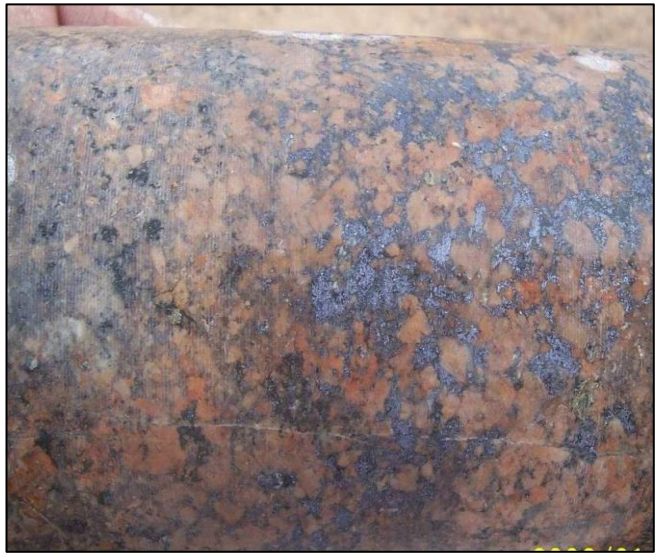
Zuun Mod Mo-Cu porphyry deposit. Mo soil geochemistry (2438)

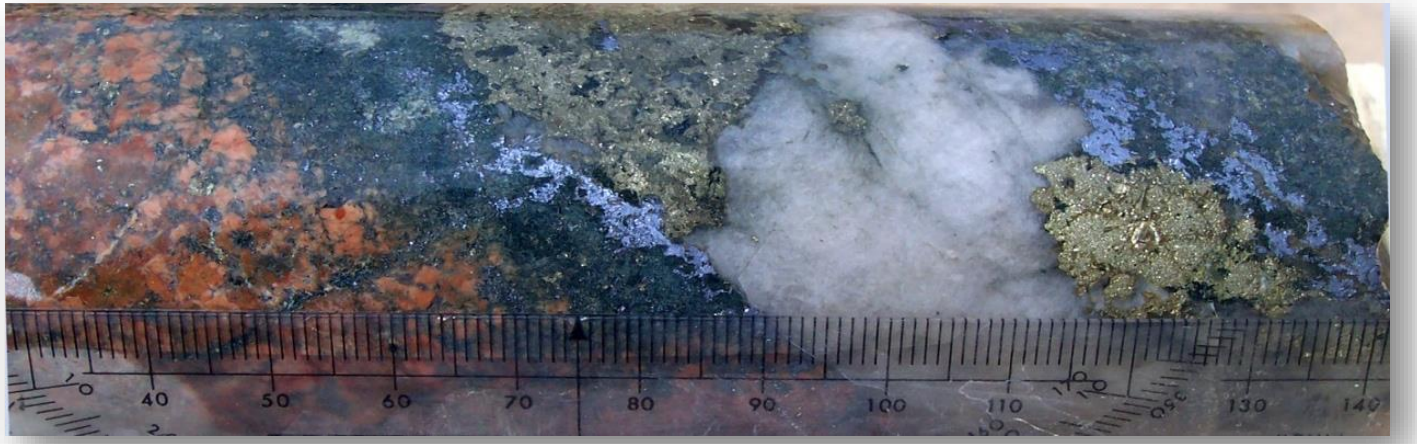


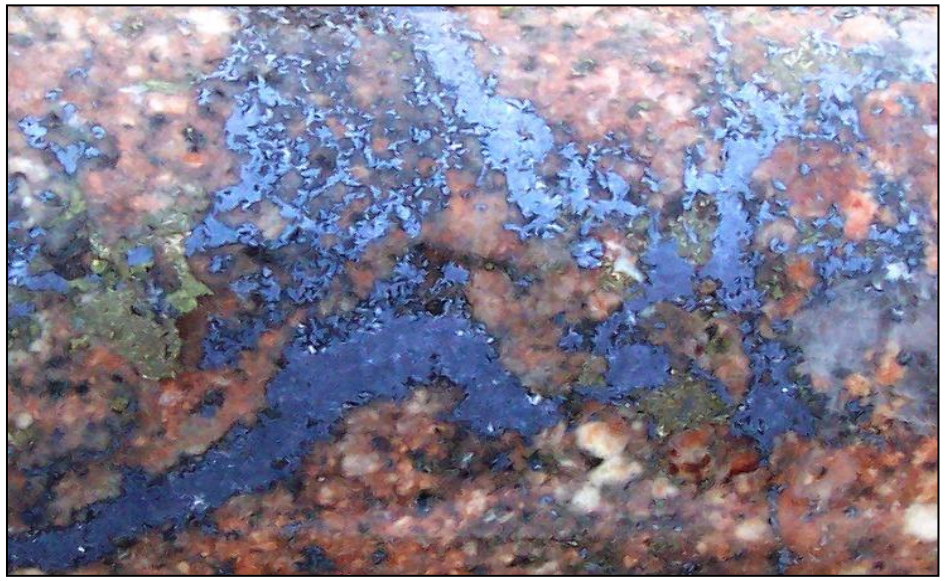
Zuun Mod Mo-Cu porphyry deposit. Mineralization



Mineralization age:
Re-Os 298.2 Ma
Re-Os 298.4 Ma
Re-Os 295.6 Ma

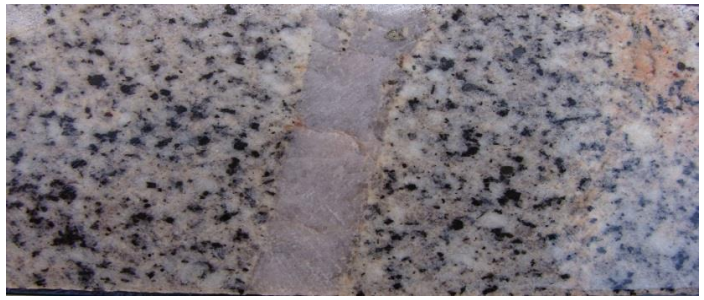




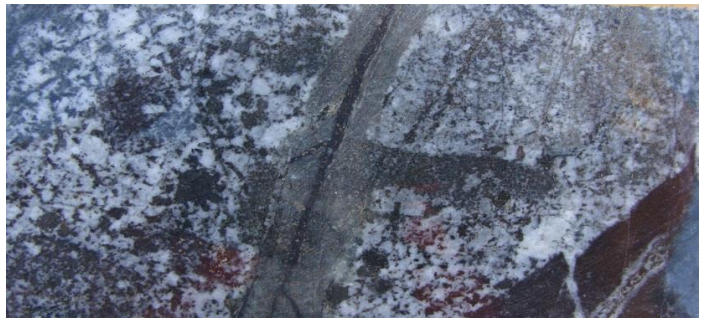


Zuun Mod Mo-Cu porphyry deposit. Vein type



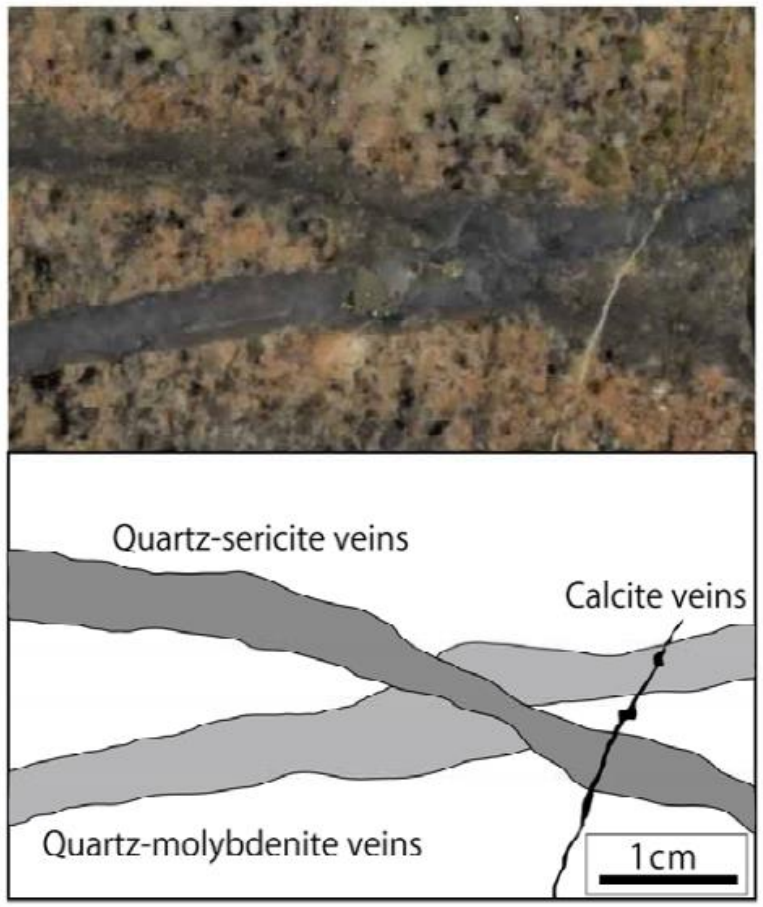




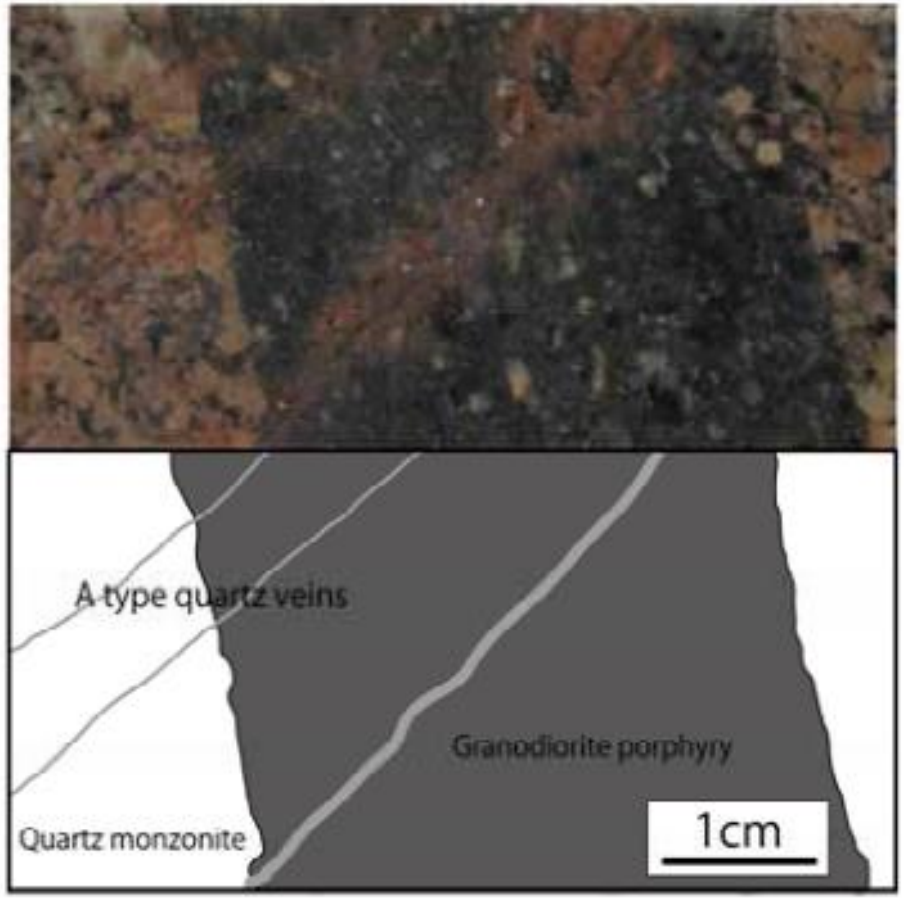


- Early biotite veinlet – no alteration selvage
- A-vein (quartz with no alteration selvage)
- B-vein (quartz Mo with K-feldspar alteration selvage)
- D-vein (quartz –pyrite with quartz-sericite alteration selvage)

Zuun Mod Mo-Cu porphyry deposit. Vein type

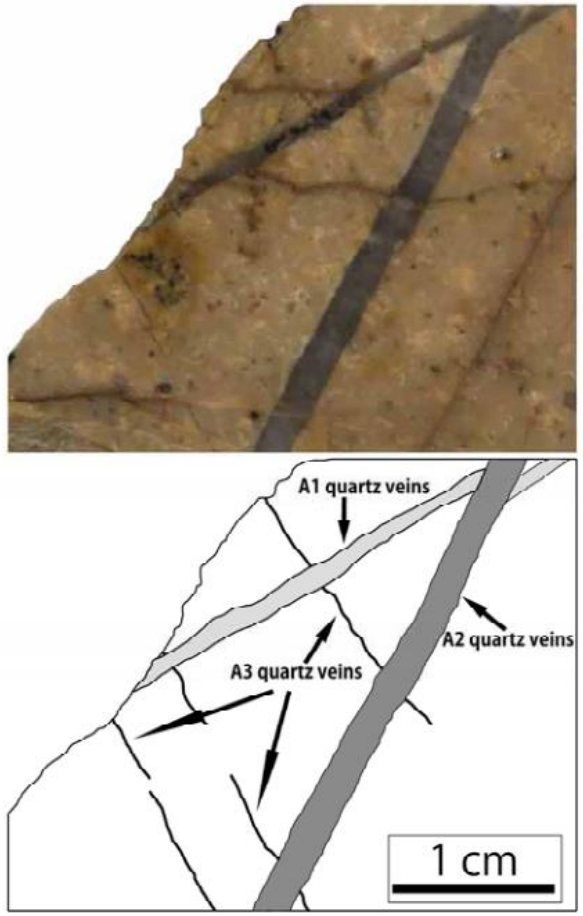


Cross cutting relationships between quartz-moly veins, quartz-ser veins and calcite veins in granodiorite (ZMD-39, 82.5m)



A-type quartz veins which cuts quartz monzonite and granodiorite porphyry (ZMD-22, 84.25m)

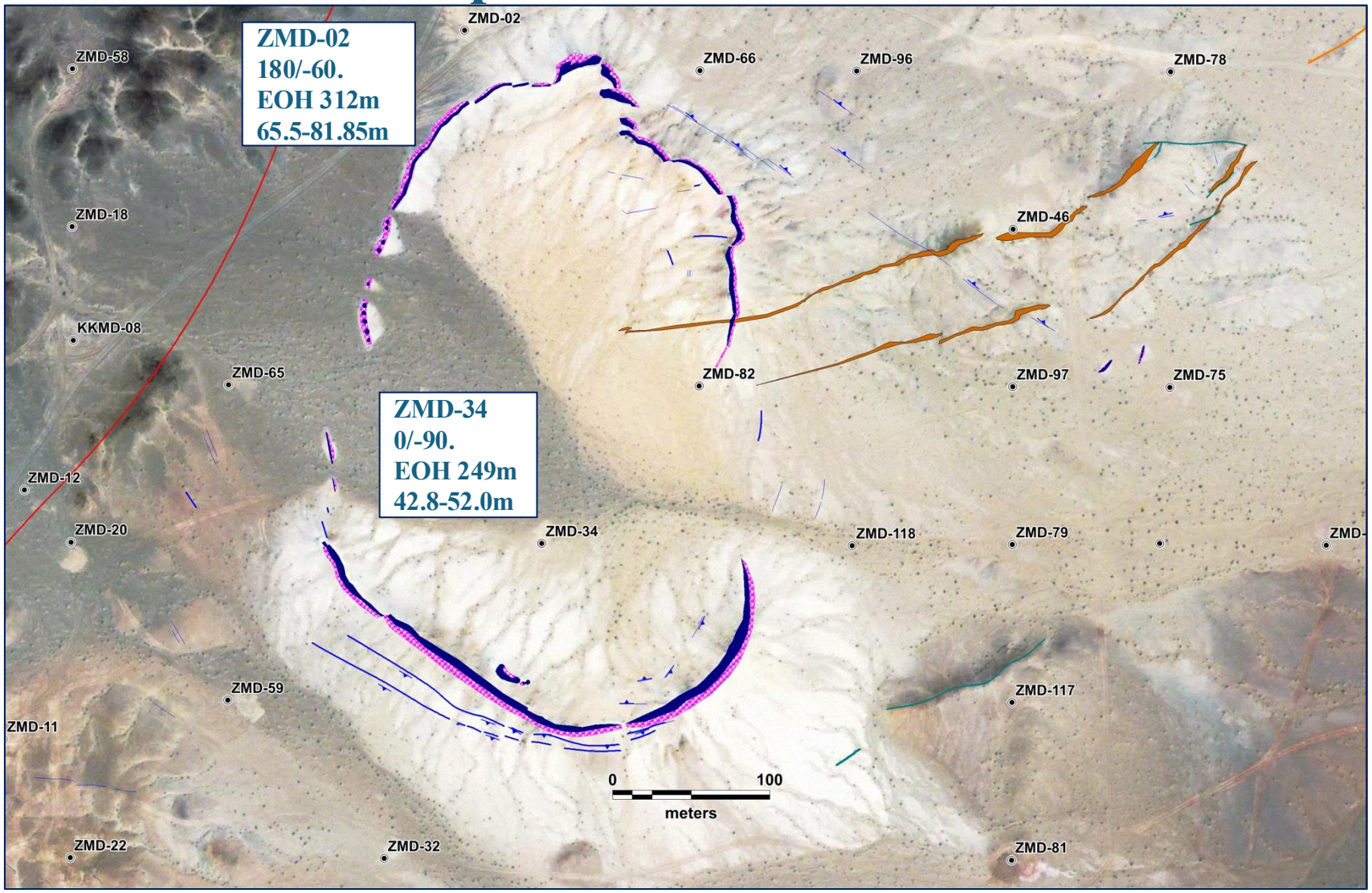
Source: Hachiya, Akita University, 2013

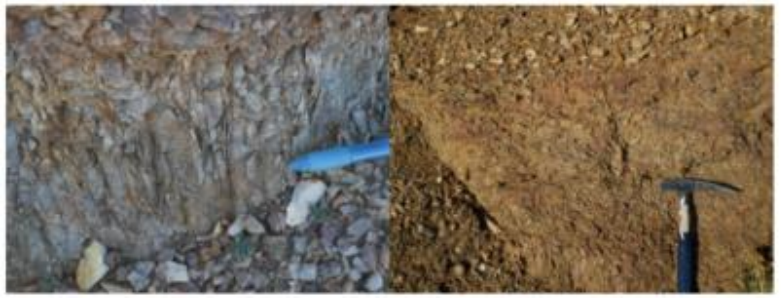


Cross cutting relationships between A-type quartz veins in dacite porphyry (ZMD-39, 34.75m)

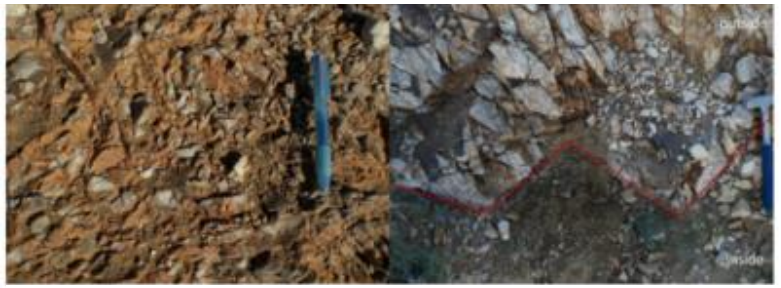
Zuun Mod Mo-Cu porphyry deposit. Racetrack porphyry

Racetrack cupola

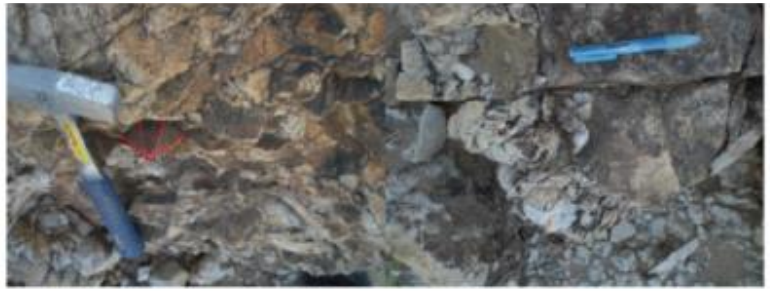




Quartz-muscovite zone (left), shear zone (right)



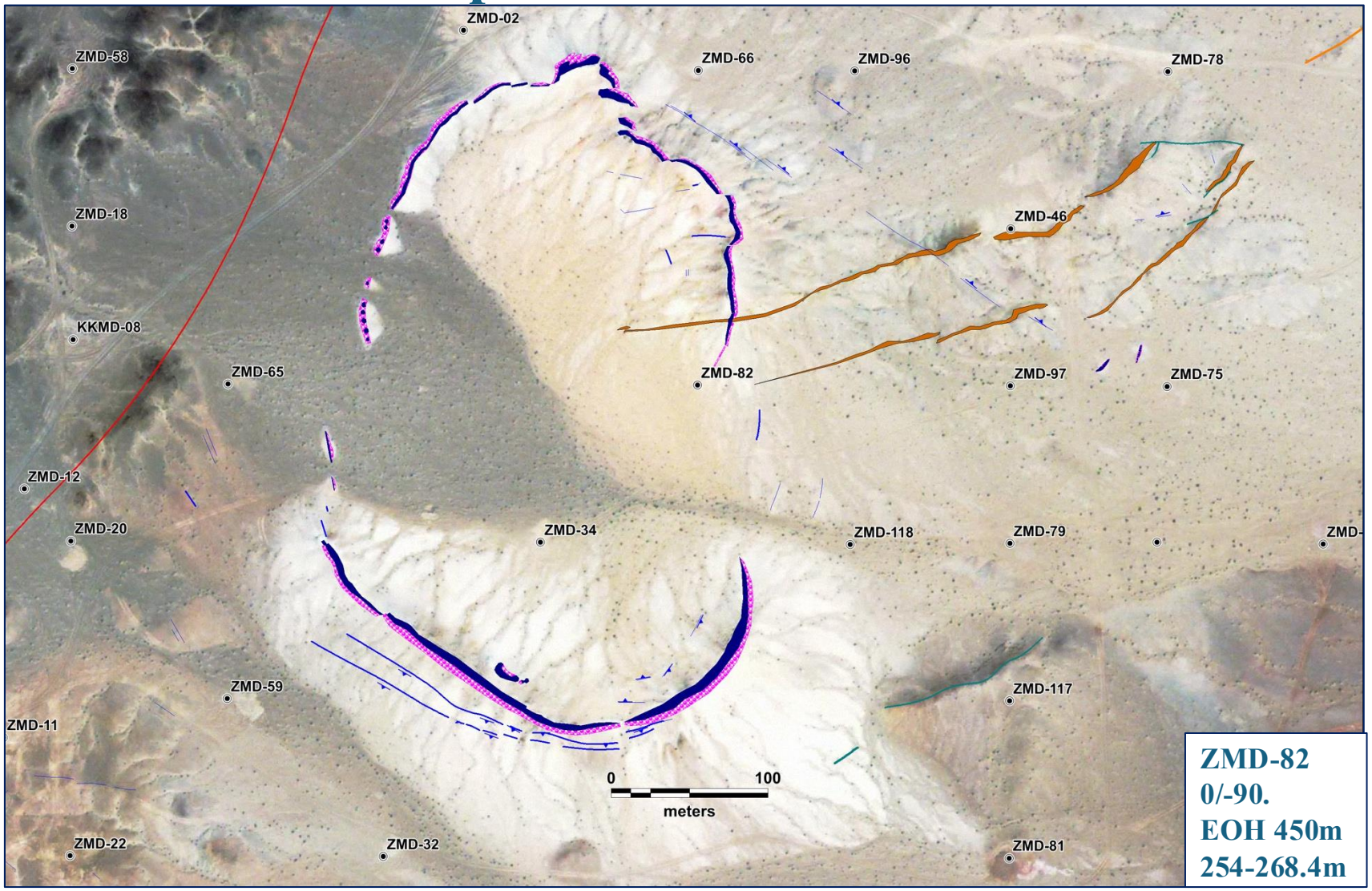
UST's (left), silica cap (right)



Euhedral massive quartz –Silica cp (left), massive quartz (contain tourmaline (right)

Zuun Mod Mo-Cu porphyry deposit. Racetrack porphyry

Racetrack cupola





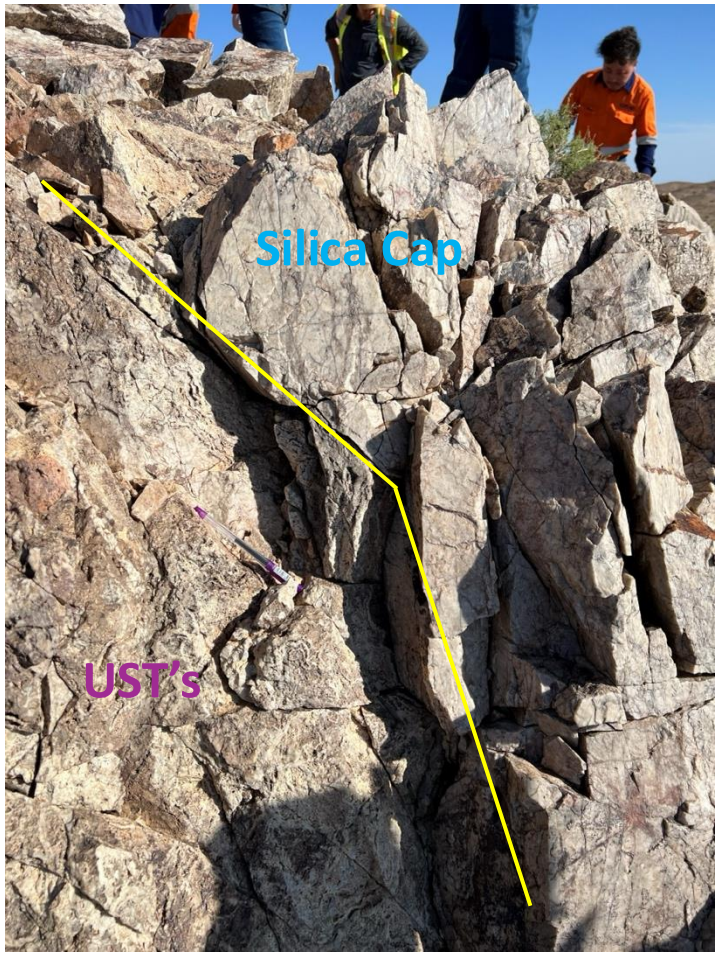
Zuun Mod Mo-Cu porphyry deposit. UST's



Silica cap & UST outcrop view



Rhythmic UST layering consisting of alternating quartz and K-feldspar rich layers



Silica Cap (in the right side) & UST's (on the left)

- Unidirectional Solidification Textures (USTs):
  - are primary magmatic features consisting of parallel to sub-parallel bands of alternating quartz and quartz-feldspar
  - are located in apical and margins of plutons with quartz crystals uniformly growing inwards toward the core of the pluton
  - consist of rhythmic precipitation of quartz and quartz-feldspar during periods of fluid over-pressuring within small degassing plutons
  - are frequently associated with porphyry Cu deposits (Kirwin, 2005)
  - are seldom mineralized with the exception of minor chalcopyrite

Zuun Mod Mo-Cu porphyry deposit. Geology map

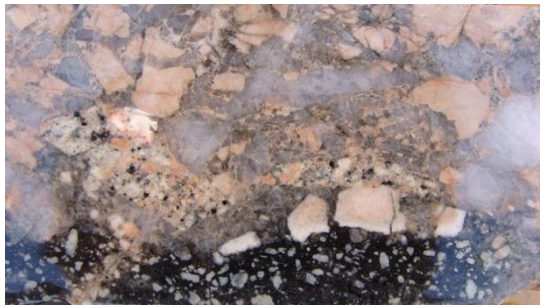
Silica cap, UST's

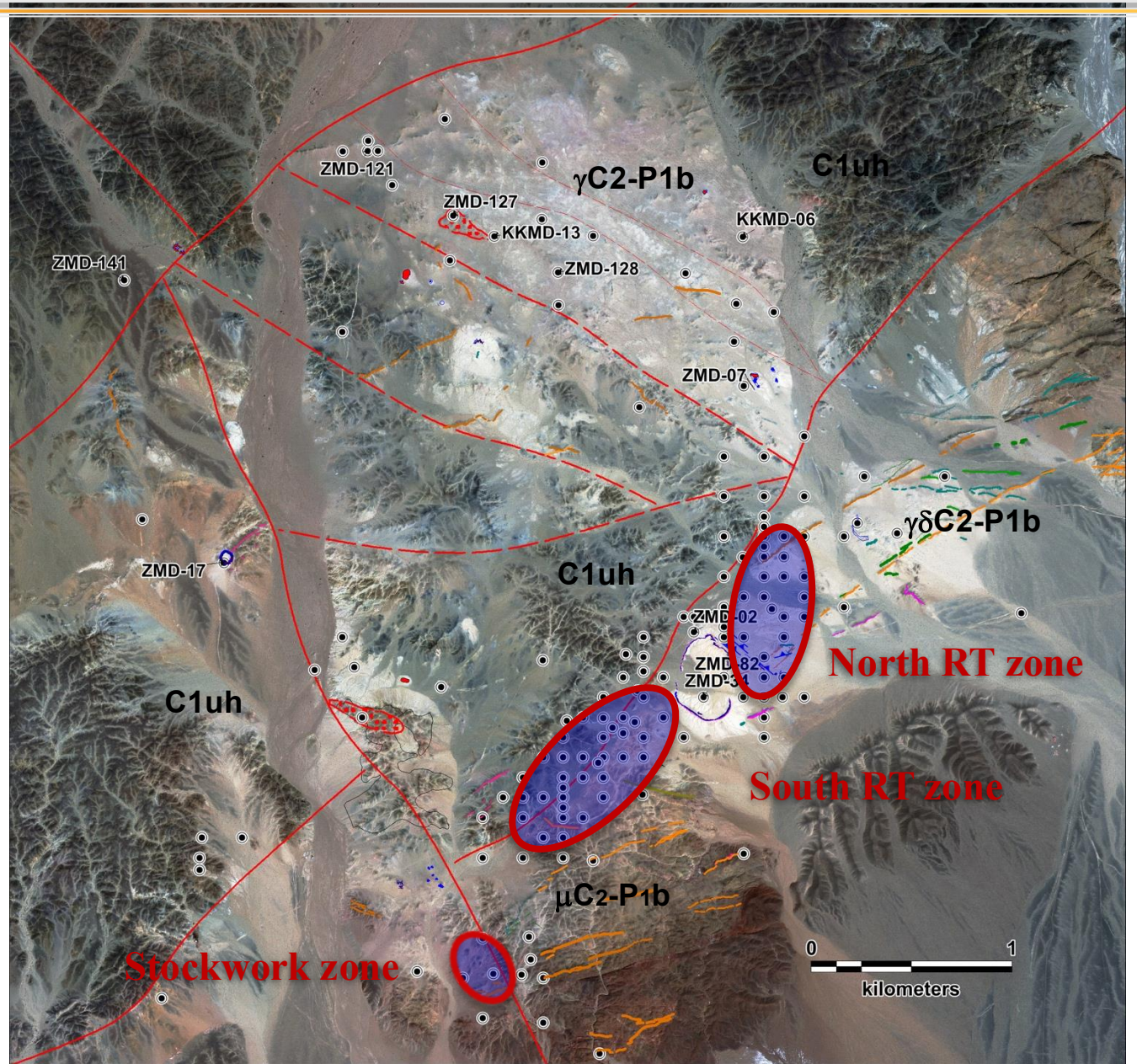


Silica cap & UST outcrop view



Rhythmic UST's





ZMD-121 309.35m



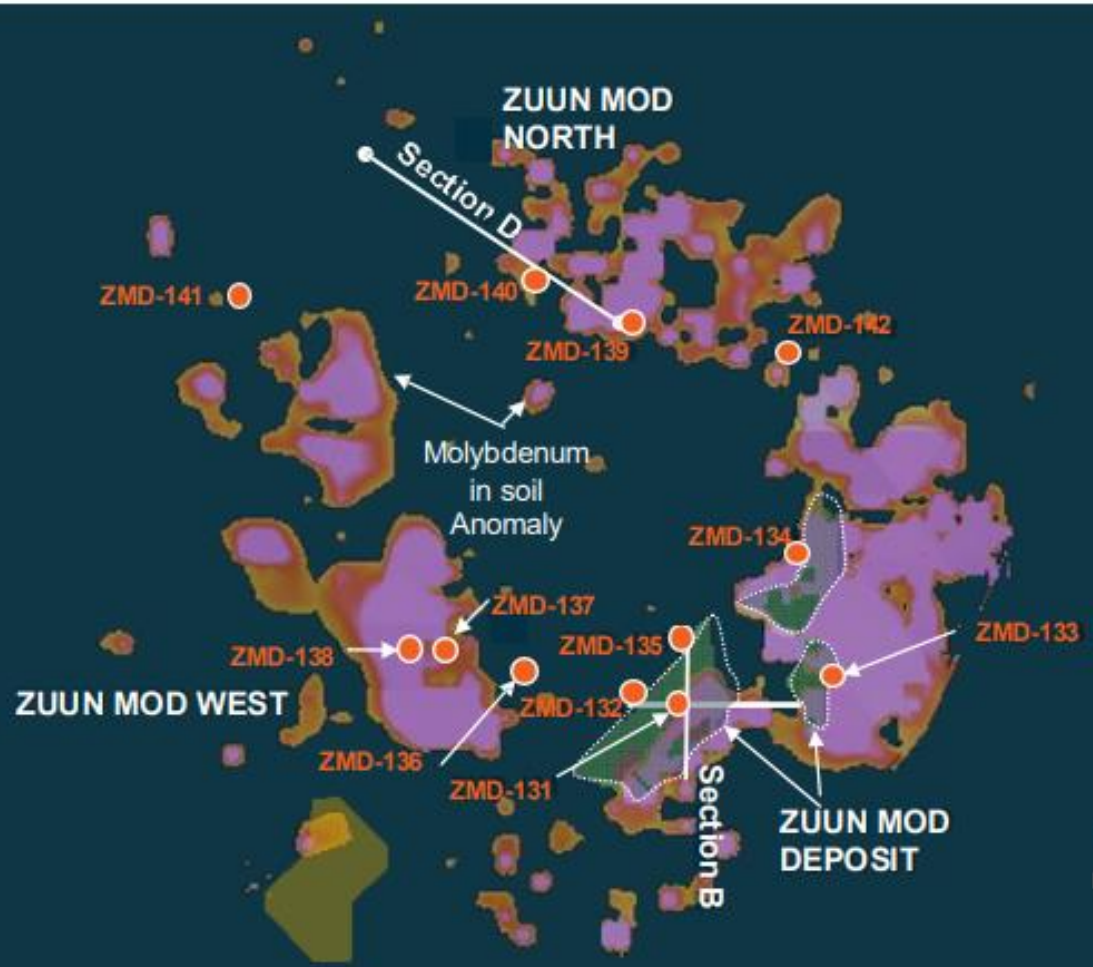
ZMD-121 312.1m

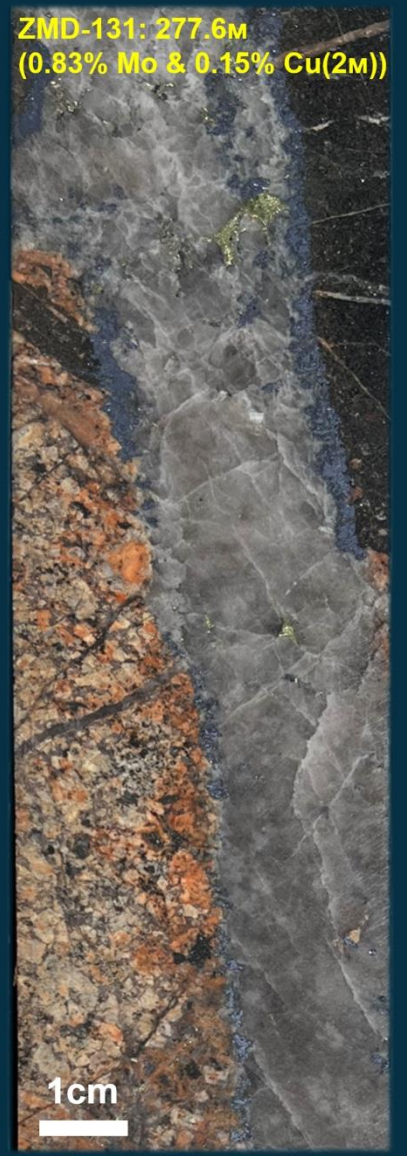


ZMD-121 0/-90.
EOH 377.85m
308.85-338.85m

ZUUN MOD – PORPHYRY MOLYBDENUM, COPPER, SILVER SYSTEM, 16KM IN CIRCUMFERENCE

35 km West of Bayan Khundii – Open at Depth with Multiple Prospects within and outside of Current Mineralized Envelope







New Collar

Zuun Mod Resource M&I NI 43-101 Classification

43-101 Resou

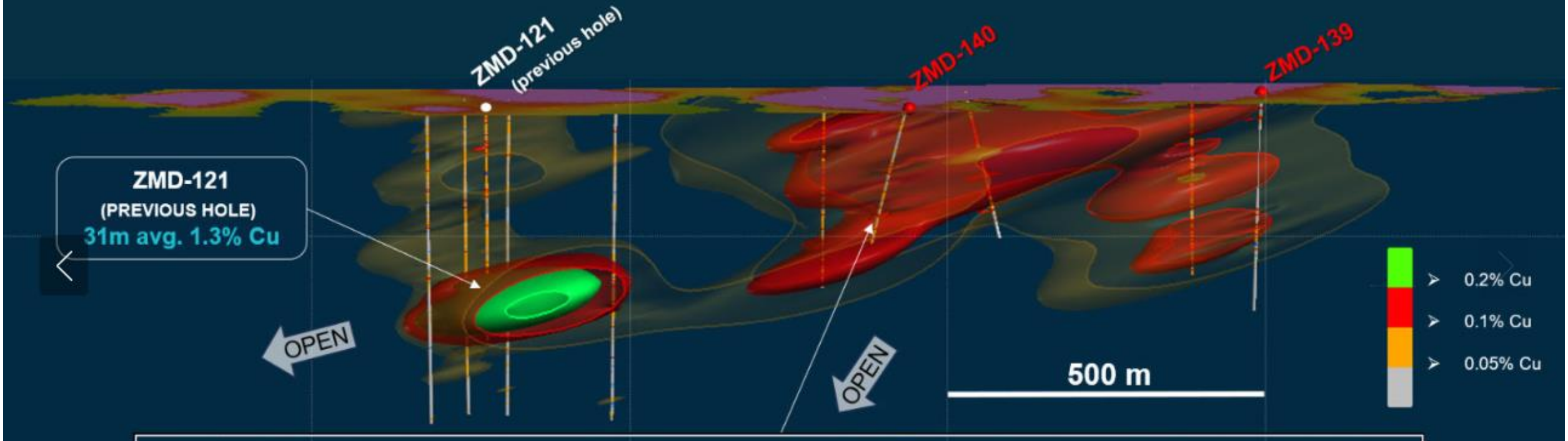
Ordinary Kriging

NI 43-101 Classification	Tonnage Mt	Mo %	Mo lbs (0
Measured	40	0.056	49,5
Indicated	178	0.057	224,(
Total M&I	**218**	**0.057**	**273,5**

NORTHERN ZUUN MOD COPPER ZONE – EXPANSION OPPORTUNITIES

Zuun Mod North Section D – looking north

ERDENE RESOURCE DEVELOPMENT

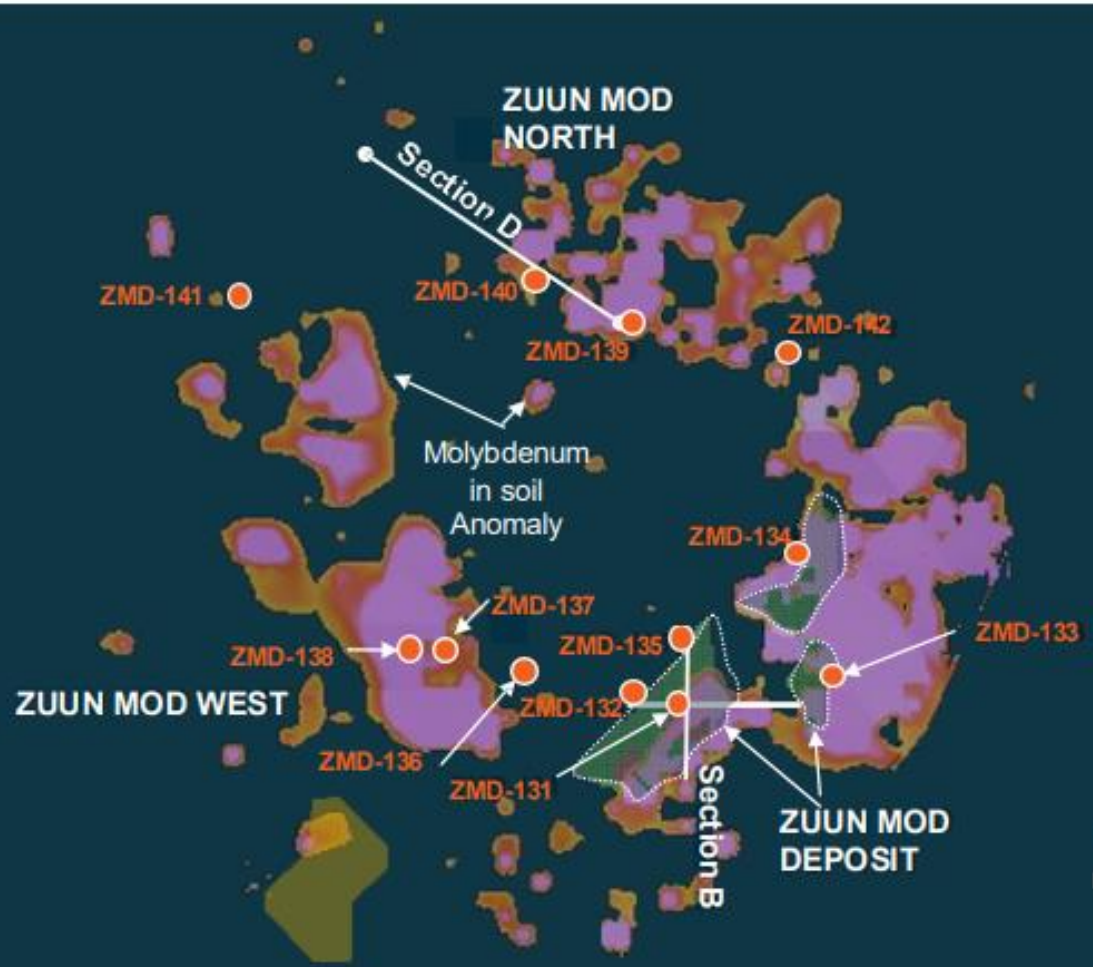


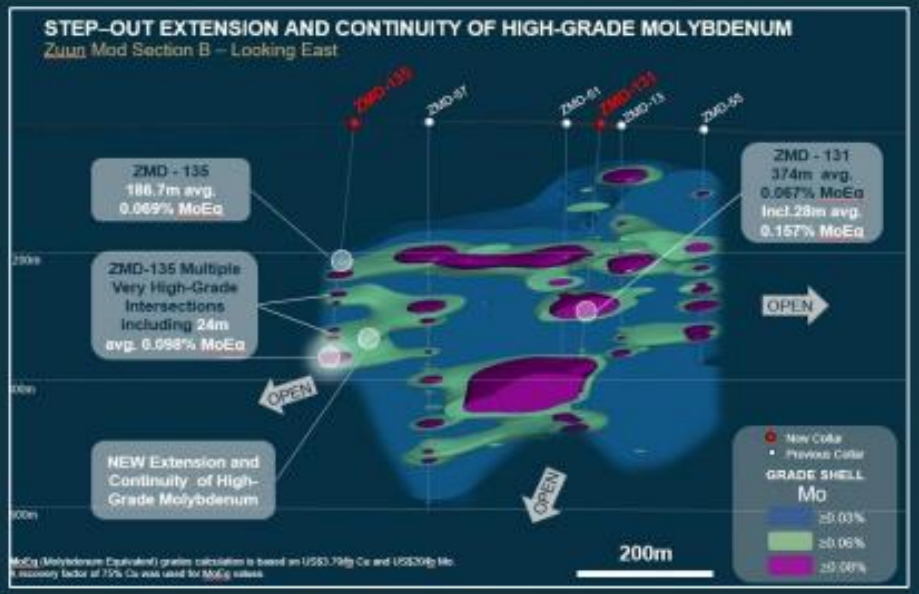
ZMD-140: Targeted untested southern portion of copper zone in northern ZM; Hydrothermal breccia's with strongly silicified granodiorite fragments with quartz pyrite veins and anomalous copper exceeding 0.2% copper over 4 metres.

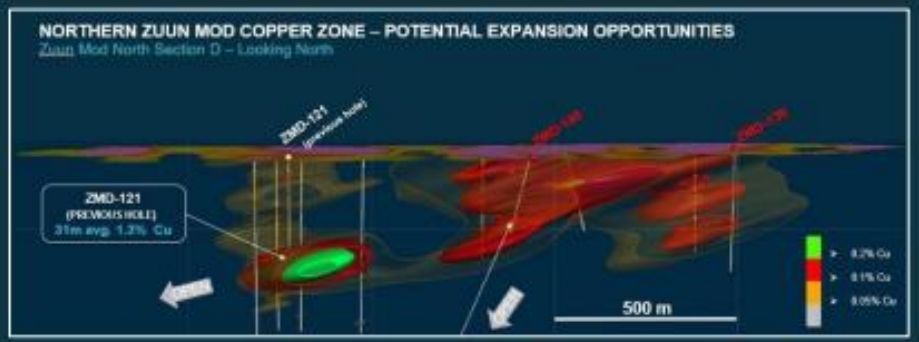


ZUUN MOD – PORPHYRY MOLYBDENUM, COPPER, SILVER SYSTEM, 16KM IN CIRCUMFERENCE

35 km West of Bayan Khundii – Open at Depth with Multiple Prospects within and outside of Current Mineralized Envelope







New Collar

Zuun Mod Resource M&I NI 43-101 Classification

43-101 Resource Estimate Cutoff 0.04% Mo

Ordinary Kriging Estimate Zuun Mod

NI 43-101 Classification	Tonnage Mt	Mo %	Mo lbs (000's)	Cu %	Cu lbs (000's)	Re PPM	Re lbs (000's)
Measured	40	0.056	49,500	0.064	57,000	0.225	20
Indicated	178	0.057	224,000	0.070	273,700	0.242	95
Total M&I	**218**	**0.057**	**273,500**	**0.069**	**330,700**	**0.239**	**115**


Thank you for your attention