

## **ERDENE CONTINUES TO EXPAND NEW ULAAN GOLD DISCOVERY 77 METRES OF 3.2 G/T GOLD, INCLUDING 27 METRES OF 8.7 G/T GOLD AND 152 METRES OF 1.7 G/T, INCLUDING 65 METRES OF 3.1 G/T GOLD**

Press Release  
Halifax, Nova Scotia  
2021.10.20

Erdene Resource Development Corporation (TSX: ERD | MSE: ERDN) (“Erdene” or the “Company”) is pleased to announce assay results from four (4) holes in the South Ulaan gold discovery expansion drill program. Today’s results confirm thick sequences of high-grade gold mineralization continue west of the initial discovery.

### **Highlights**

- Drilling expands mineralization at South Ulaan to the west, with multiple thick gold mineralized zones with high-grade intersections:
  - UDH-21: 77 metres of 3.2 g/t gold and 71 metres of 0.8 g/t gold
    - Includes 27 metres of 8.7 g/t gold, including one metre of 156.5 g/t gold
  - UDH-22: 65 metres of 3.1 g/t gold within 152 metres of 1.7 g/t gold
    - Includes 7 metres of 18.5 g/t gold, including one metre of 119.8 g/t gold
  - UDH-19: 190 metres of 0.7 g/t gold
    - Includes 5 metres of 12.5 g/t gold, including one metre of 60.6 g/t gold
- Together with the Bayan Khundii deposit, Dark Horse and Altan Arrow Prospects, these results demonstrate the potential scale of mineralization within the Khundii-Ulaan Hydrothermal system
  - Results from drilling at the Dark Horse Zone, consisting of 36 holes totaling 2,286 metres, will be reported by mid-Q4
  - Developing exploration plans to test high-priority geochemical and geophysical targets throughout the large Khundii-Ulaan system

### **Quotes from the Company:**

“Today’s results confirm the significance of the Ulaan gold discovery and are a testament to the potential for discovery across the wider area,” said Peter Akerley, Erdene’s President and CEO. “This new discovery is producing the thickest intervals of gold mineralization intercepted in the District to date, including exceptionally high-grade zones, and remains open at depth and to the west.”

“Ulaan is part of a very large gold-bearing hydrothermal alteration system underlying our Khundii and Ulaan licenses that shows the potential to host a multimillion-ounce gold deposit,” continued Mr. Akerley. “Exploration continues across this system with results from additional drilling at our Dark Horse prospect anticipated by mid-Q4.”

### Summary of Drill Results

The recently completed Ulaan drill program was designed to test the extent of mineralization around the discovery drill holes reported on August 11, 2021 ([see press release](#)). The program consisted of nine (9) holes totaling 3,204 metres. Drill holes were spaced 25 to 50 metres apart and to a maximum depth of 461 metres, testing targets over an area of approximately 1.2 square kilometres.

Assay results from five (5) drill holes (UDH-14 to UDH-18) were reported on September 23, 2021 ([see press release](#)). Results for the final four (4) holes (UDH-19 to UDH-22), with an aggregate meterage of 1,401.1 metres, are reported herein. Highlights are provided below in Table 1, and a drill hole plan map and section are attached to this release.

**Table 1: Ulaan Q4 2021 Drilling Highlights** (Intervals averaging over 0.30 g/t gold)

Hole	From	To	Interval <sup>(1)</sup>	g/t Au
UDH-19	82	272	190	0.73
Incl	87	92	5	12.52
Incl	87	88	1	60.55
UDH-20	98	100	2	1.10
And	288	298	10	0.59
UDH-21	115	192	77	3.19
Incl	131	158	27	8.74
Incl	139	140	1	156.54
Incl	155	156	1	20.98
And	209	280	71	0.81
Incl	257	271	14	2.79
And	304	318	14	0.34
And	346	350.3 <sup>(2)</sup>	4.3	0.38
UDH-22	85	236.7	151.7	1.71
Incl	85	150	65	3.11
Incl	87	94	7	18.50
Incl	93	94	1	119.80
And	332	338	6	0.33

1. Reported intervals in this release are downhole apparent widths. Continued exploration is required to confirm anisotropy of mineralization and true thicknesses
2. End of hole

Gold mineralization intersected at South Ulaan begins approximately 80 metres from surface and is hosted within the same white mica altered lapilli tuff sequence which hosts Erdene's Bayan Khundii epithermal gold deposit, located just east on the Khundii mining license. Gold grades up to 156.5 g/t are related to intense quartz  $\pm$  hematite veins and stockwork zones potentially related to a bounding structure and/or feeder conduit. Gold mineralization at South Ulaan also appears to be partially controlled by lithology with low permeability silicified ash tuffs focusing fluid flow and coarser lapilli tuffs acting as a preferred host to mineralization relative to the finer grained lithologies.

In general, the highest-grade gold mineralization occurs within intervals of pervasive silicification combined with adularia and white mica alteration cut by epithermal style, irregular quartz-hematite, quartz-adularia, quartz-white mica veins and quartz-chlorite-magnetite veins. In many instances visible gold has been observed finely disseminated within these veins.

### Khundii-Ulaan Mineralized System

The Ulaan exploration license and adjoining Khundii mining license cover nearly 4,000 hectares of the Khundii-Ulaan hydrothermal alteration zone, which extends from Ulaan over 10 kilometres to the northeast. This alteration trend has a central zone of intense secondary silica with a peripheral halo of sericite alteration, and an outer zone of white mica and sericite, which hosts the Bayan Khundii gold deposit. This northeast trending alteration area, which incorporates the Ulaan, Bayan Khundii, Dark Horse and other mineralized targets in the area, is associated with a regional structural dilational jog and associated major volcano-plutonic centre, along a northeast trending transform fault. The various styles of alteration and mineralization within the Khundii-Ulaan target area are consistent with a fertile magmatic island arc, with evidence for possible arc migration, and overlapping or telescoped mineralization along major structures.

Exploration results to date suggest the greater Khundii-Ulaan alteration zone and known gold occurrences are part of the same, large, gold-bearing hydrothermal system which remains largely under-explored. Gold mineralization identified to date is hosted within an expansive, white mica and silica altered tuffaceous sequence exposed around the periphery of the Khundii-Ulaan hydrothermal alteration system. Quartz vein textures and clay alteration compositions indicate a large-scale epithermal type gold mineralizing environment existed within the Khundii-Ulaan system with the tuffaceous lithologies acting as preferred hosts for gold mineralization. Exploration planning is currently underway to test multiple high-priority geological, geochemical and geophysical targets across the Khundii-Ulaan target area.

### Khundii Gold District

Erdene's deposits are in the Edren Terrane, within the Central Asian Orogenic Belt, host to some of the world's largest gold and copper-gold deposits. The Company has been the leader in exploration in southwest Mongolia over the past decade and is responsible for the discovery of the Khundii Gold District comprised of multiple high-grade gold and gold/base metal prospects, one of which is currently being developed, the 100%-owned

Bayan Khundii Gold Project, and another which is being considered for development, the 100%-owned Altan Nar Project. Together, these deposits comprise the Khundii Gold Project.

The Bayan Khundii Gold Resource<sup>1</sup> includes 585,100 ounces of 2.19 g/t gold Measured and Indicated (“M&I”)<sup>2</sup> and 35,900 ounces of Inferred resources at 2.18 g/t gold. Within the M&I resource, a Proven and Probable open-pit reserve totals 409,000 ounces at 3.7 g/t gold<sup>3</sup> (press release [here](#)), providing significant potential for reserves growth with the development of the remaining M&I and Inferred resources<sup>1</sup>.

In July 2020, Erdene announced the results of an independent Feasibility Study for the Bayan Khundii Gold Project ([press release here](#)). The Feasibility Study results include an after-tax Net Present Value at a 5% discount rate and a US\$1,400/oz gold price of US\$100 million and Internal Rate of Return (“IRR”) of 42%. The Feasibility Study envisions an open-pit mine at Bayan Khundii, producing an average of 63,500 oz gold per year, for seven years, at a head grade of 3.71 g/t gold, utilizing a conventional carbon in pulp processing plant. Production is expected to commence in 2023 based on the current project schedule.

Erdene Resource Development Corp. is a Canada-based resource company focused on the acquisition, exploration, and development of precious and base metals in underexplored and highly prospective Mongolia. The Company has interests in three mining licenses and two exploration licenses in Southwest Mongolia, where exploration success has led to the discovery and definition of the Khundii Gold District. Erdene Resource Development Corp. is listed on the Toronto and the Mongolian stock exchanges. Further information is available at [www.erdene.com](http://www.erdene.com). Important information may be disseminated exclusively via the website; investors should consult the site to access this information.

### Qualified Person and Sample Protocol

Peter Dalton, P.Geo. (Nova Scotia), Senior Geologist for Erdene, is the Qualified Person as that term is defined in National Instrument 43-101 and has reviewed and approved the technical information contained in this news release. All samples have been assayed at SGS Laboratory in Ulaanbaatar, Mongolia. In addition to internal checks by SGS Laboratory, the Company incorporates a QA/QC sample protocol utilizing prepared standards and blanks. All samples undergo standard fire assay analysis for gold and ICP-OES (Inductively Coupled Plasma Optical Emission Spectroscopy) analysis for 33 additional elements. For samples that initially return a grade greater than 5 g/t gold, additional screen-metallic gold analysis is carried out which provides a weighted average

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<sup>1</sup> For details of the Mineral Resources see Erdene’s Q2/2021 results press release, dated August 16, 2021, and the Company’s Q2 2021 MD&A, available on the Company’s website or SEDAR.

<sup>2</sup> M&I: 232,700 ounces of 2.39 g/t gold Measured and 352,400 ounces of 2.08 g/t gold Indicated

<sup>3</sup> P&P: 165,000 ounces of 4.4 g/t gold Proven and 256,000 ounces of 3.4 g/t gold Probable; For details of the Mineral Reserves see Khundii Gold Project NI 43-101 Technical Report, Tetra Tech December 4, 2019 available on the Company’s website or SEDAR

gold grade from fire assay analysis of the entire +75 micron fraction and three 30-gram samples of the -75 micron fraction from a 500 gram sample.

Erdene's drill core sampling protocol consisted of collection of samples over 1 or 2 metre intervals (depending on the lithology and style of mineralization) over the entire length of the drill hole, excluding minor post-mineral lithologies and un-mineralized granitoids. Sample intervals were based on meterage, not geological controls, or mineralization. All drill core was cut in half with a diamond saw, with half of the core placed in sample bags and the remaining half securely retained in core boxes at Erdene's Bayan Khundii exploration camp. All samples were organized into batches of 30 including a commercially prepared standard, blank and either a field duplicate, consisting of two quarter-core intervals, or a laboratory duplicate. Sample batches were periodically shipped directly to SGS in Ulaanbaatar via Erdene's logistical contractor, Monrud Co. Ltd.

Reported intervals are apparent thicknesses, i.e. downhole widths. The current Ulaan drill holes are all dipping at 85 degrees and oriented to intersect SW dipping WNW trending gold bearing veins. Additional study is required to confirm true widths. Reported grades for intervals are weighted averages based on length of sampling intervals. No top cut has been applied; however, all intervals greater than 10 g/t gold are reported individually for clarity

### Forward-Looking Statements

Certain information regarding Erdene contained herein may constitute forward-looking statements within the meaning of applicable securities laws. Forward-looking statements may include estimates, plans, expectations, opinions, forecasts, projections, guidance, or other statements that are not statements of fact. Although Erdene believes that the expectations reflected in such forward-looking statements are reasonable, it can give no assurance that such expectations will prove to have been correct. Erdene cautions that actual performance will be affected by a number of factors, most of which are beyond its control, and that future events and results may vary substantially from what Erdene currently foresees. Factors that could cause actual results to differ materially from those in forward-looking statements include the ability to obtain required third party approvals, market prices, exploitation, and exploration results, continued availability of capital and financing and general economic, market or business conditions. The forward-looking statements are expressly qualified in their entirety by this cautionary statement. The information contained herein is stated as of the current date and is subject to change after that date. The Company does not assume the obligation to revise or update these forward-looking statements, except as may be required under applicable securities laws.

**NO REGULATORY AUTHORITY HAS APPROVED OR DISAPPROVED THE CONTENTS OF THIS RELEASE**

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Facebook: <https://www.facebook.com/ErdeneResource>

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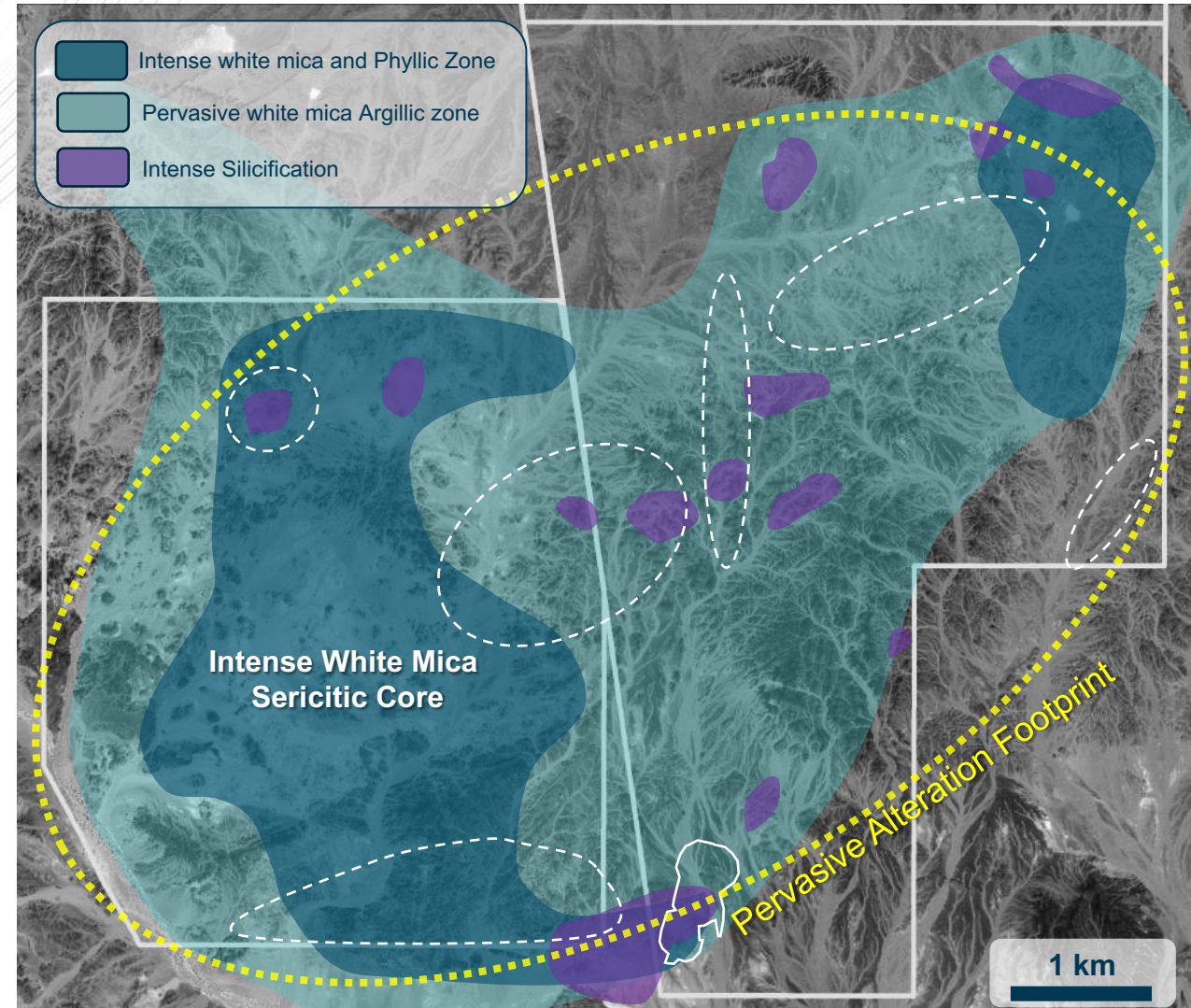
# THE BAYAN KHUNDII (“RICH VALLEY”) DISCOVERY

## Khundii – Ulaan Tenements, BK Deposit and Prospects Location Map

### Khundii – Ulaan Active Discoveries and Prospects



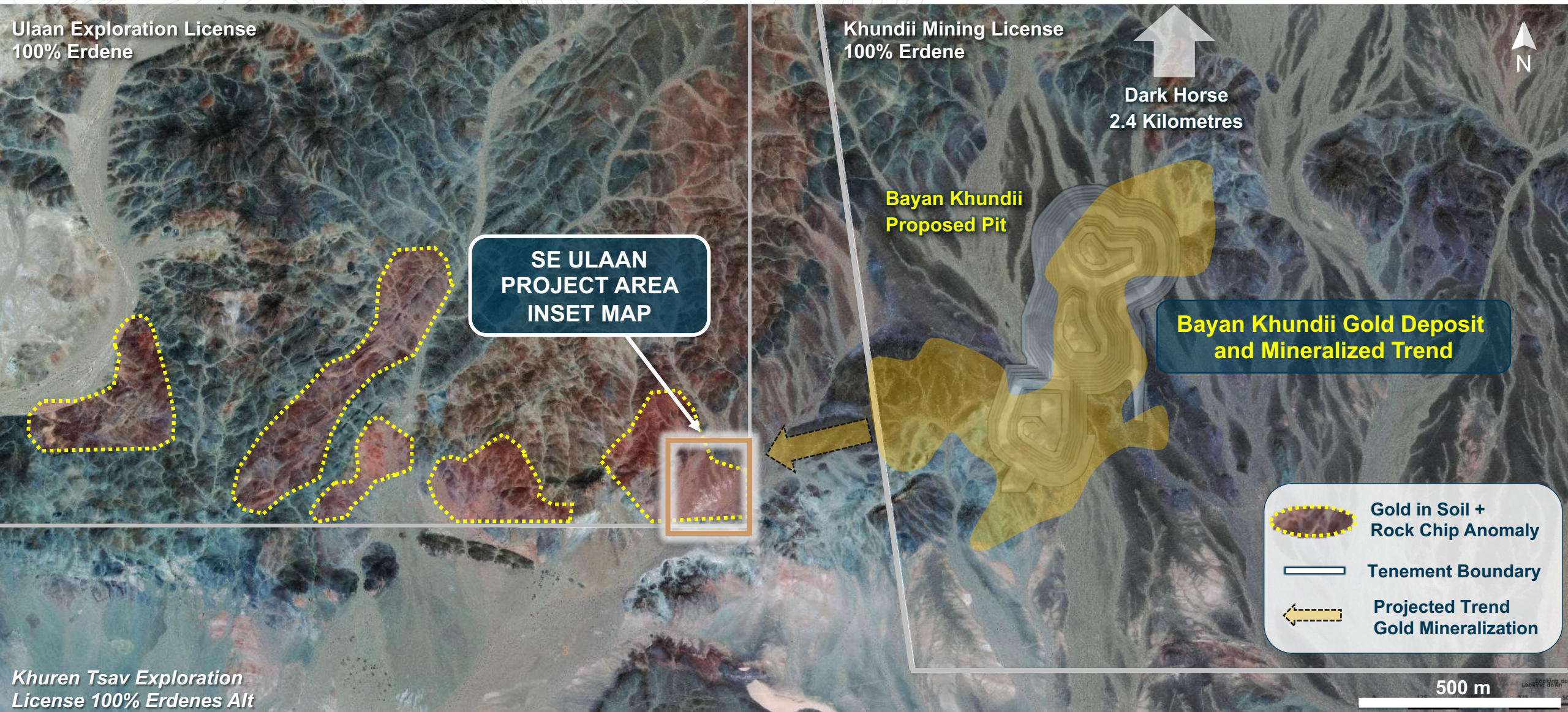
### Khundii – Ulaan Hydrothermal Alteration Footprint





# ULAAN GOLD DISCOVERY – 300 METRES WEST OF BAYAN KHUNDII DEPOSIT

## Bayan Khundii Gold Trend Continuation and Ulaan Gold Discovery



Ulaan Exploration License  
100% Erdene

Khundii Mining License  
100% Erdene

Dark Horse  
2.4 Kilometres

SE ULAAN  
PROJECT AREA  
INSET MAP

Bayan Khundii  
Proposed Pit

Bayan Khundii Gold Deposit  
and Mineralized Trend

- Gold in Soil + Rock Chip Anomaly
- Tenement Boundary
- Projected Trend Gold Mineralization

Khuren Tsav Exploration  
License 100% Erdenes Alt

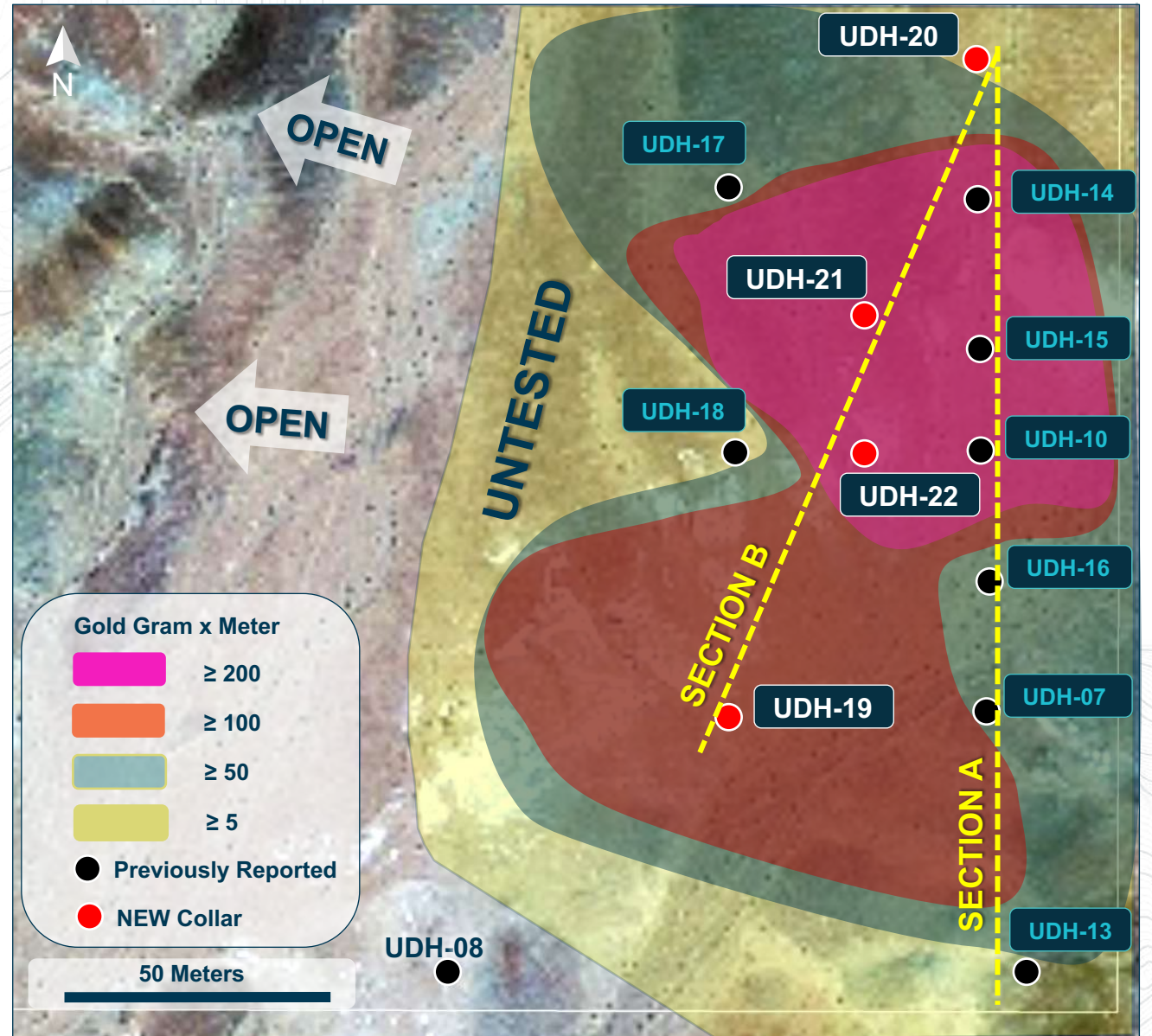
500 m



# SE ULAAN PROJECT AREA PLAN MAP

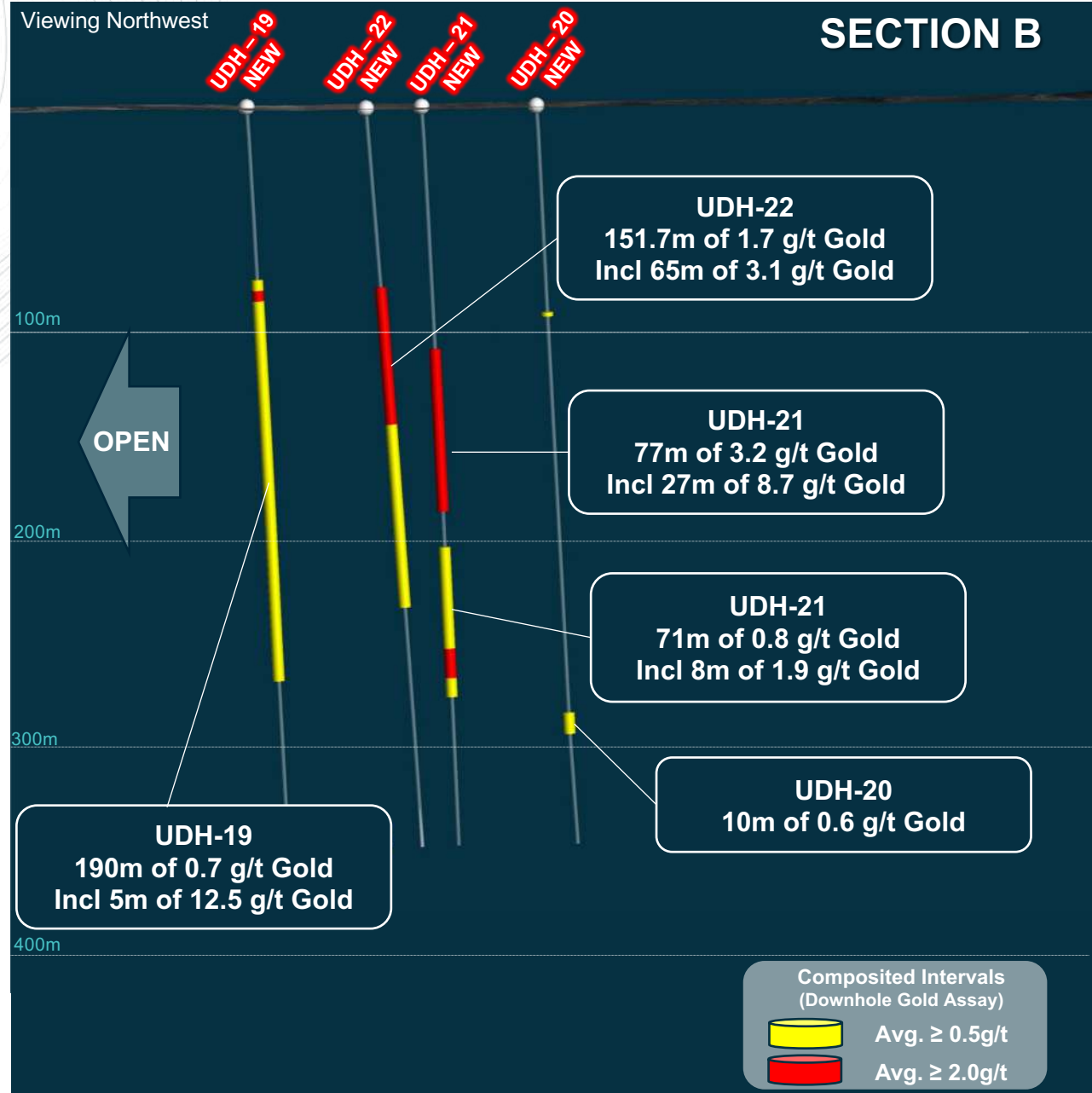
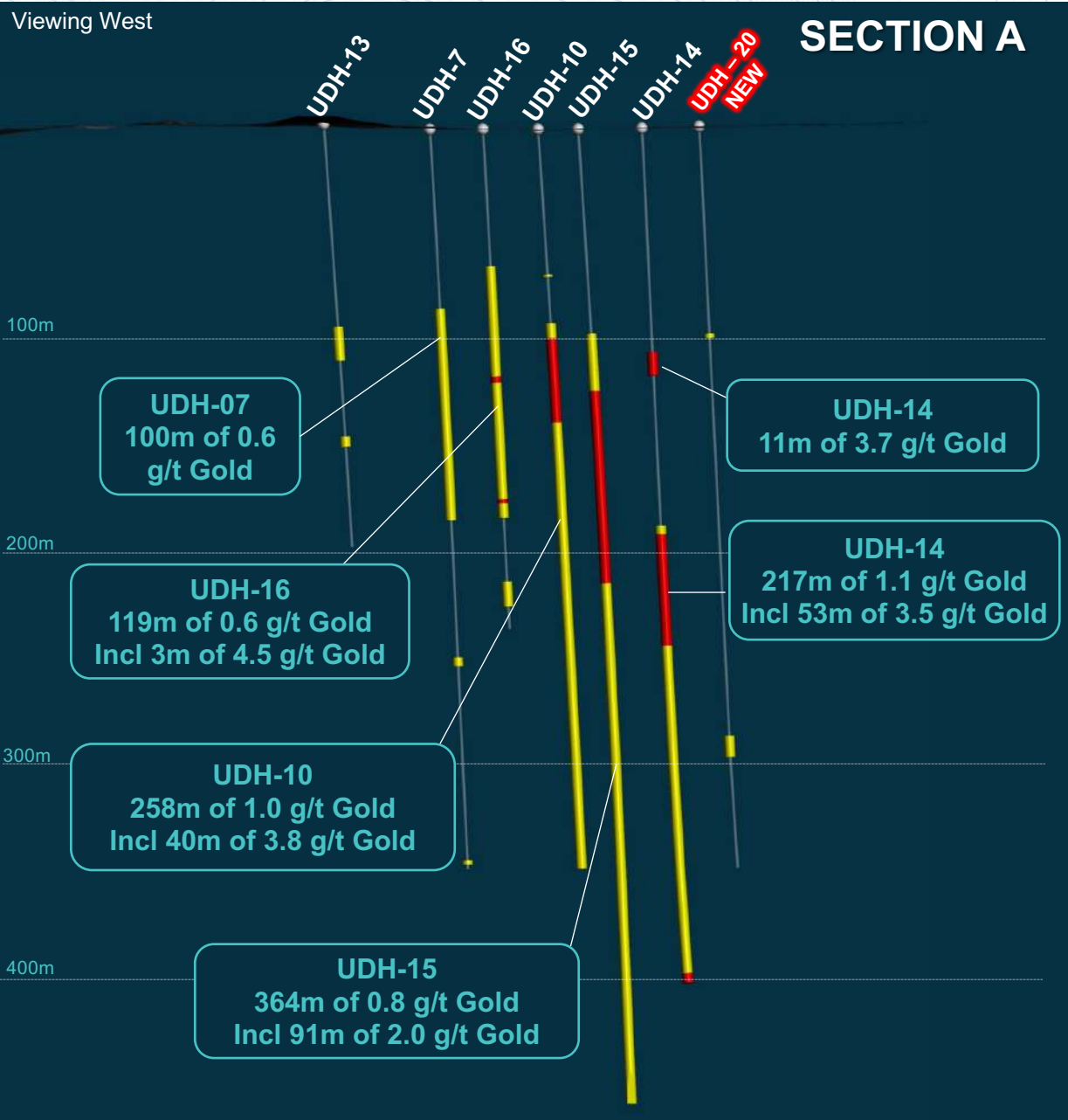
## Gram\* Thickness Contours Projected to Surface

Hole	From	To	Interval	g/t Au
<b>UDH-07</b>	85	185	100	0.63
And	250	254	4	1.39
<b>UDH-10 (EOH)</b>	92	350.2	258.2	0.98
And	99	139	40	3.77
<b>UDH-13</b>	96	112	16	0.79
And	134	154	20	0.38
<b>UDH-14</b>	106	117	11	3.68
And (EOH)	188	404.6	216.6	1.07
Incl	192	245	53	3.55
Incl	192	226	34	5.43
<b>UDH-15 (EOH)</b>	97	461.3	364.3	0.79
Incl	124	215	91	1.98
Incl	130	140	10	7.29
<b>UDH-16</b>	65	184	119	0.59
Incl	117	120	3	4.52
And	212	226	14	0.44
<b>UDH-17</b>	287	289	2	1.71
And (EOH)	314	350.3	36.3	2.26
Incl	344	350.3	6.3	9.04
Incl	348	350.3	2.3	22.81
<b>UDH-18</b>	4	6	2	0.51
And	142	146	4	0.45
And	263	279	16	0.32
And	300	308	8	0.65
And (EOH)	346	350.3	4.3	0.49
<b>UDH-19</b>	82	272	190	0.73
Incl	87	92	5	12.52
<b>UDH-20</b>	98	100	2	1.10
And	288	298	10	0.59
<b>UDH-21</b>	115	192	77	3.19
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And	209	280	71	0.81
Incl	257	271	14	2.79
And	304	318	14	0.34
And (EOH)	346	350.3	4.3	0.38
<b>UDH-22</b>	85	236.72	151.72	1.7
Incl	85	150	65	3.1
Incl	87	94	7	18.4
And	332	338	6	0.33



# SE ULAAN SECTIONS

## Gold Mineralized Intervals and Average Grade



Composited Intervals (Downhole Gold Assay)

- Avg. ≥ 0.5g/t
- Avg. ≥ 2.0g/t



# ULAAN DRILL CORE PHOTOS

## Gold Mineralization Zones from UDH-21 and UDH-22



## UDH-21

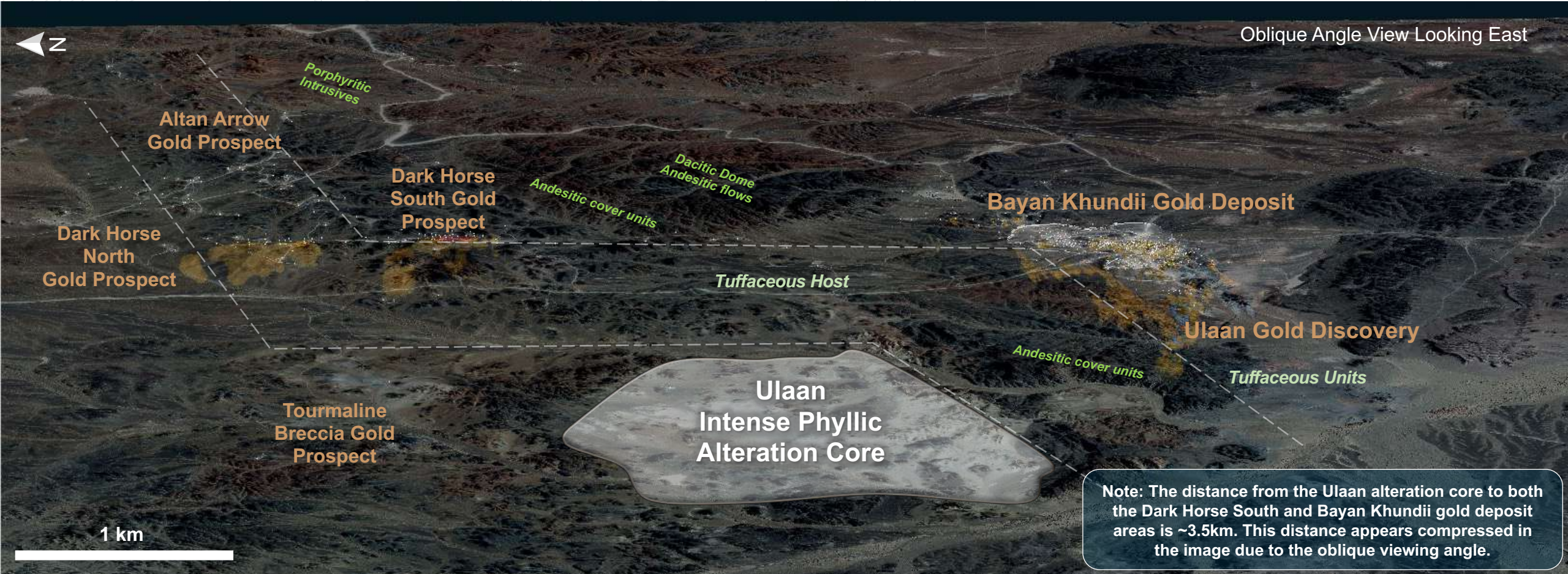
From	To	Gold g/t
138.00	139.00	0.8
139.00	140.00	156.5
140.00	141.00	4.6
141.00	142.00	1.9
142.00	143.00	4.3
143.00	144.00	2.9
144.00	145.00	2.1
145.00	146.00	0.7
146.00	147.00	3.1
147.00	148.00	7.4
148.00	149.00	4.9
149.00	150.00	3.1
150.00	151.00	1.6
151.00	152.00	2.2
152.00	153.00	0.5
153.00	154.00	5.4
154.00	155.00	1.2
155.00	156.00	21.0
156.00	157.00	2.7





# KHUNDII-ULAAN HYDROTHERMAL ALTERATION COMPLEX

## Gold Deposits and Prospects





Appendix of Significant Previously Reported Ulaan Drill Results  
(All intervals averaging greater than 0.30 g/t gold)

Hole	From	To	Interval <sup>(1)</sup>	g/t Au
UDH-07	85	185	100	0.63
And	250	254	4	1.39
And	340	350 <sup>(2)</sup>	10	0.34
UDH-08	20	22	2	0.44
UDH-10	69	70	1	0.57
And	92	350.2 <sup>(2)</sup>	258.2	0.98
Incl	99	139	40	3.77
Incl	103	104	1	39.57
Incl	123	124	1	58.40
UDH-13	96	112	16	0.79
And	134	154	20	0.38
UDH-14	106	117	11	3.68
Incl	110	111	1	36.58
And	188	404.6 <sup>(2)</sup>	216.6	1.07
Incl	192	245	53	3.55
Incl	202	207	5	19.58 <sup>(3)</sup>
Incl	208	209	1	16.75
UDH-15	60	63	3	0.41
And	97	461.3 <sup>(2)</sup>	364.3	0.79
Incl	124	215	91	1.98
Incl	130	140	10	7.29
Incl	130	131	1	15.13
Incl	138	139	1	49.36
Incl	214	215	1	10.47
UDH-16	65	184	119	0.59
Incl	117	120	3	4.52
Incl	119	120	1	11.91
And	212	226	14	0.44
UDH-17	287	289	2	1.71
And	314	350.3 <sup>(2)</sup>	36.3	2.18
Incl	344	350.3	6.3	8.59
Incl	348	350.3	2.3	21.57
UDH-18	4	6	2	0.51
And	142	146	4	0.45
And	263	279	16	0.32
And	300	308	8	0.65
And	346	350.3 <sup>(2)</sup>	4.3	0.49

1. Reported intervals in this release are downhole apparent widths. Continued exploration is required to confirm anisotropy of mineralization and true thicknesses.
2. End of hole.
3. Each of the five one-metres samples in this interval returned gold values greater than 10 g/t gold: range was 15.53 to 21.76 g/t gold.