

## ERDENE PROVIDES UPDATES ON EXPLORATION AT THE DARK HORSE GOLD PROSPECT AND BAYAN KHUNDII GOLD PROJECT

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Press Release  
Halifax, Nova Scotia  
2021.04.08

Erdene Resource Development Corporation (TSX:ERD | MSE:ERDN) (“Erdene” or the “Company”) is pleased to provide an update on exploration at the new Dark Horse gold prospect as well as announcing the launch of an Employment Orientation program and advise on the current COVID-19 situation in Mongolia.

### Highlights<sup>1</sup>(See the attached maps and images for reference):

- Drilled nine scout holes totalling 1,900 metres in February 2021 to define the extent of the delineation program at the main Dark Horse Prospect
  - Holes AAD-65 to AAD-67, in the northern half of the target, intersected broad zones of alteration, establishing continuity and supporting further drilling:
    - AAD-65 returned 7 metres of 1.15 g/t gold beginning 113 metres downhole
    - AAD-66 returned 14 metres of 1.31 g/t gold beginning 53 metres downhole, as well as 20 metres of 1.74 g/t gold, beginning 112 metres downhole
    - AAD-67 returned 6 metres of 0.32 g/t gold beginning 110 metres downhole
  - Holes AAD-68 to AAD-73, testing areas peripheral to the north-south structure intersected gold and/or pathfinder elements:
    - AAD-68 returned 2 metres of 1.41 g/t gold beginning 192 metres downhole
    - AAD-70 returned 2 metres of 4.24 g/t gold beginning 64 metres downhole
- Commenced 3,000 metre delineation drilling program in late March
  - Delineation drilling will utilize 100-metre fence spacing along the main trend
  - Approximately 600 metres will target the southern extension of the trend (including the area around AAD-58, which intersected 45m of 6 g/t gold)
  - Results are pending for ~1,100 metres of core, currently at the lab
- Completed geophysical modelling, surface sampling, spectral analysis and other work over a 4 by 3 kilometre area in advance of further exploration
  - Studies continue to improve Erdene’s understanding of the mineralization in the greater Dark Horse area
- Launched an Employment Orientation program at the Bayan Khundii Project camp for local community members

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<sup>1</sup> Reported intervals in this release are downhole apparent widths. Continued exploration is required to confirm anisotropy of mineralization and true thicknesses.

- Two cohorts of 36 received training from Erdene's HSEC team
- Further 140 residents are registered for upcoming sessions
- Bayankhongor province registered its first COVID-19 infection on March 24
  - Provincial government has introduced precautionary measures in response
  - Erdene provided relief funding to the Provincial Emergency Commission
  - Dark Horse drilling continues with appropriate COVID safeguards

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

“Following the announcement of the exciting Dark Horse gold discovery in January 2021, our technical team completed a staged exploration plan over the past quarter,” said Peter Akerley, Erdene's President and CEO. “This Q1 program confirmed continuity of a gold mineralized system along a 1.2 km north-south trending structure and improved our understanding of the discovery and its setting relative to the Bayan Khundii Deposit and the large Ulaan-Khundii alteration system, which we believe hosts a much more significant gold mineralizing event and hydrothermal alteration system than previously recognized.”

“In late March we commenced a 3,000 metre shallow delineation drilling program on the main Dark Horse discovery area,” continued Mr. Akerley. “Although focused on the 1.2km northern portion of the Dark Horse structure, testing will cover a 2.5km strike length. The first batch of core is currently in the lab with results expected to be announced in the coming weeks.”

“Although we have been able to continue fieldwork with minimal disruption, Mongolia has seen increasing spread of COVID-19, including the first reported cases in our host province of Bayankhongor,” concluded Mr. Akerley. “We are taking all precautions to maintain a safe work environment. Furthermore, we recently provided funding to the local provincial emergency commission to ensure the safety of local residents. We are closely monitoring the COVID situation in the country and its impact on the start of construction of our Bayan Khundii Gold Project.”

### **Q1 2021 Dark Horse Exploration Program Overview**

Erdene carried out the following exploration at the Dark Horse prospect during Q1 2021:

- Completed a nine-hole, 1,900 metre drill program, carried out by Falcon Drilling, Ulaanbaatar, Mongolia;
- Completed detailed surface mapping and sampling, conducted by Erdene's Mongolian technical team;
- Completed geophysical modelling and interpretation with the assistance of Wave Geophysics, Denver Colorado;
- Completed surface and downhole spectral alteration mineral analysis and interpretation with Plus Minerals LLC, Ulaanbaatar;

- Commenced mineralogic and petrographic analysis and interpretation using APSAR Geoscience, New Zealand;
- Commenced preliminary metallurgical testing using ALS Laboratories, Ulaanbaatar; and
- Continued consultation with Dr. Jeffrey Hedenquist, Ottawa, on the style and characteristics of the mineralized system at Dark Horse and within the larger Khundii alteration system.

These studies and analyses continue to improve Erdene's understanding of the Dark Horse Discovery and its geologic setting relative to the nearby Bayan Khundii epithermal gold deposit, as well as the greater Ulaan-Khundii quartz-sericite-pyrite alteration footprint. Exploration results show evidence of a widespread mineralizing hydrothermal system consistent with many of the world's major epithermal gold deposits. Evidence suggests that Dark Horse shares a structural relationship with the Bayan Khundii gold deposit through a 4-kilometres long N-S trending dilation zone connecting the two project areas.

### Drill Results – Q1 2021

The Q1-2021 drill program was designed to collect geologic information for the surrounding area and define the area of interest for more detailed drilling. The majority of targets were cross-cutting or parallel structures with limited testing of the northern portion of the Dark Horse target area.

In February 2021, the company drilled nine holes at the Dark Horse prospect, totalling 1,900 metres. Three holes, AAD-65 through AAD-67, were drilled along the northern portion of the 1.2 km Dark Horse target area. The remaining holes were drilled in areas peripheral to the trend with one hole, AAD-71, testing the main structure 1km south of the nearest drilling (AAD-58).

Table 1 below, includes highlights from the program.

**Table 1 - Dark Horse Scout Drilling Highlights**

	Hole	From	To	Interval <sup>(1)</sup>	g/t Au <sup>(2)</sup>
Along N-S Structure	AAD-65	113	120	7	1.15
	and	128	142	14	0.51
	and	196	205	9	0.69
	AAD-66	53	67	14	1.31
	and	112	132	20	1.74
	and	137	139	2	0.96
	AAD-67	110	116	6	0.32
Peripheral Areas	AAD-68	192	194	2	1.41
	and	250	252	2	0.47
	AAD-70	52	53	1	0.66
	and	64	66	2	4.24
	and	110	116	6	0.33

<sup>1</sup> Reported intervals are apparent thicknesses (i.e. downhole widths). Insufficient drilling has been completed at Dark Horse to determine orientation of the mineralized zones and therefore true widths cannot be determined at this time. Exploration drill holes are typically oriented normal to (at a right angle to) the trend of potential mineralized targets and holes dips range from 45 to 75 degrees.

<sup>2</sup> Reported grades for intervals are weighted averages based on length of sampling intervals, typically 1 to 2 metres. No top cut has been applied; however, intervals greater than 10 g/t gold are reported separately for clarity.

Note: Exploration holes AAD-69, AAD-71, AAD-72 and AAD-73 intersected anomalous gold and/or zones anomalous in pathfinder elements (arsenic, molybdenum and antimony) but no significant intervals greater than 0.3 g/t gold.

Three holes (AAD-65, AAD-66 and AAD-67) were drilled across the northern portion of the Dark Horse prospect. AAD-65 and 66 were collared 290 metres and 160 metres, respectively, north-northeast of previously reported hole AAD-61 (130 metres of 0.5 g/t gold). Both holes intersected multiple gold-bearing zones, including intersections of 14 metres of 1.3 g/t gold and 20 metres of 1.7 g/t gold in AAD-66 and up to 59 g/t silver over 1 metre in AAD-65. Mineralization in both holes is hosted within pervasively clay altered and brecciated volcanoclastic rocks with varying degrees of oxidation in the form of hematite, limonite and goethite. AAD-67 was drilled 260 metres south of AAD-61 and returned relatively narrow anomalous gold zones within thick intervals of pervasively clay altered and hydrothermally brecciated volcanic sequences. These three holes have successfully demonstrated continuity of mineralization along the north-south strike, indicating the Dark Horse structure as a preferred fluid conduit with an interpreted pinch and swell pattern common to many structurally controlled epithermal systems.

Ten widely spaced holes have now been drilled along a 1.2-kilometre portion of the N-S structure. The holes have an average spacing of 160 metres apart (ranging from 42 to 255 metres) with an average vertical depth of 155 metres with the deepest hole (AAD-57) drilling to a depth of 242 metres vertically and exhibiting strong gold mineralization over the lower 100 metres of the hole. Drilling in early Q1-2021 focused on the northern portion (north of AAD-57) of the Dark Horse structure, recognizing that the southern portion of the Dark Horse structure hosting previously reported discovery holes AAD-58 (45m of 6 g/t gold) and AAD-57 (45m of 1.2 g/t gold) will be subject to close-spaced drilling during the next round of drilling, now underway.

Scout drilling outside the main N-S Dark Horse structure (holes AAD-68 to AAD-70, and AAD-72 to ADD-73) focused on testing geophysical and geochemical soil anomalism within the general Dark Horse prospect area. These holes confirmed widespread and pervasive hydrothermal alteration, brecciation and mineralization within the wider Dark Horse prospect area. Zones of anomalous gold mineralization in conjunction with key indicator element anomalism, hydrothermal alteration, silicification and prospective volcanoclastic-brecciated geology suggest the Dark Horse prospect is located in an environment capable of hosting a major mineralizing event. These concepts will be followed up in future drilling.

### Drill Program – Q2-2021 Exploration

Core from the first 1,110 metres of drilling has been transported to SGS Laboratories, Ulaanbaatar for analysis. Assay results are expected to be announced in the coming weeks.

### Geophysical Modelling and Interpretation

The Dark Horse area's 2D and 3D geophysical modelling serves as an important targeting tool and structural lineation mapping tool. Magnetics appear to support a relationship between magnetic low signatures and zones of magnetite destructive clay alteration, which have been shown to host anomalous gold mineralization. Induced polarization (IP) also serves as an important targeting tool at Dark Horse as high concentrations of disseminated sulphide minerals have been locally observed in drill core coincident with intervals of elevated gold.

Geophysical modelling, interpretation and targeting are ongoing as we continue to understand the larger Dark Horse system and its relationship to the Bayan Khundii system to the south. Further geophysical surveys are planned for the 2021 field season to aid in exploration success.

### Clay Alteration and Short-Wave Infrared (SWIR) analysis

The presence of low-temperature argillic clay assemblages at Dark Horse suggests formation within the upper stratigraphic levels (less than 150 metres) of an epithermal system. Similar to Bayan Khundii, Dark Horse is dominated by illite clay alteration. However, the presence of both smectite and kaolinite at Dark Horse indicates a lower temperature environment consistent with the near-surface regions of an epithermal system. These clay minerals are absent at Bayan Khundii, which has been interpreted to have formed at greater than 150 metres depth. If Dark Horse represents the upper part of a hydrothermal system, then the potential for zones of high-grade mineralization exists at depth. This theory is further supported by the presence of vuggy/residual silica bodies near AAD-57 and AAD-58, which may represent remnant near-surface lithocap zones.

## Fault Hosted Epithermal Model

The North-South structural feature at Dark Horse is best defined on the magnetic survey map (see plan maps below), as are numerous zones of intersection between northeast and northwest-trending cross structures and splays. Structural interpretations suggest that the N-S trending structure is associated with dilation zones formed during tectonic compression from the south-southwest (Kloppenborg 2017). The resulting dilation zones produced conduits for hydrothermal fluid channelling and subsequent alteration and mineralization. Continued understanding of the prospect's structural framework will be key in further identifying zones of mineralization at Dark Horse and within the Khundii tenements.

## Bayan Khundii Gold Project Employment Orientation Program

In late 2020, Erdene began developing a series of training and community outreach programs as part of the Bayan Khundii Gold Project's construction readiness. These programs include the company's employment orientation, internship, and vocational training opportunities, initially targeting local residents in the sub-province and province. In March 2021, Erdene launched its employment orientation program with local residents at its Bayan Khundii Gold Project site. Led by Erdene's Mongolian management and HSEC team, the five-day orientation covered the key topics of mine development, community health and safety, environmental management, and local stakeholder engagement through a combination of individual and team-based methods. To date, 36 people attended the orientation as a result of which all of whom identified a personal development plan linked to the proposed mine operation. Given the strong interest and active participation in the program, the company plans to re-start the program as soon as COVID-19 restrictions allow.

Erdene expects the Project to provide direct employment for approximately 500 individuals during construction and as many as 400 during peak operation. The Bayan Khundii Gold Project is expected to become the largest employer in Bayankhongor Province and to generate over US\$100 million in profit tax and royalty for the Government of Mongolia over the life of mine.

## Mongolia COVID-19 Update

With the confirmation of the first community transmission of COVID-19 in November 2020, the Government of Mongolia implemented a series of restrictions on the movement of people and delivery of goods and services. While restrictions were temporarily eased in mid-Q1 2021, preventive measures prohibiting certain business and public activities remain in place in Ulaanbaatar, the country's capital, and much of the country's territory, where there has been a recent increase in the number of reported cases. Additionally, in March 2021, Bayankhongor Province, where Erdene's Projects are located, reported its first confirmed case of community transmission of COVID-19, imposing restrictions on the movement of people within and to/from the province. In response, Erdene provided



emergency funding assistance to the Bayankhongor Emergency Commission to support its efforts to contain the spread of COVID-19 within the province.

Since mid-2020, Erdene has implemented operational changes to ensure the safety and productivity of its people. In the field, daily health and safety briefings, body temperature checks, enhanced hygiene protocols, rapid testing, and additional personal protective equipment have been instituted. The company maintains a dedicated, registered nurse at site with the capability to administer COVID-19 testing. With these measures, our team safely and successfully completed the Q1 2021 Dark Horse Scout drilling program and launched a follow up exploration program in late March 2021. The Company's corporate and administrative teams continue to work modified schedules and have adopted enhanced hygiene measures that allow operations to continue without significant disruption.

Though the impact of COVID-19 on the Company's operations has been modest to date, the COVID-19 pandemic continues to evolve. The Company will monitor the impact of COVID-19 on its operations in 2021, particularly potential disruptions to the Bayan Khundii Gold Project schedule or budget, prior to reaching a construction decision, which is expected in mid-2021.

The Company extends its appreciation to all medical, public safety, and essential workers for their efforts to safeguard public health and help prevent the spread of COVID-19 in Mongolia and Canada.

### Khundii Gold District

Erdene's deposits are located 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, two of which are being considered for development: the 100%-owned Bayan Khundii and Altan Nar projects. Together, these deposits comprise the Khundii Gold Project.

The Bayan Khundii Gold Resource<sup>1</sup> includes 521,000 ounces of 3.16 g/t gold Measured and Indicated ("M&I")<sup>2</sup> and 103,000 ounces of Inferred resources at 3.68 g/t gold. Within the M&I resource, a proven and probable open-pit reserve totals 409,000 ounces at 3.7 g/t (see the full press release [here](#)), providing significant potential growth of reserves with the development of the remaining M&I and Inferred resources<sup>2</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 early 2022 based on the current project schedule.

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<sup>1</sup> For details of the Mineral Resources see Khundii Gold Project NI 43-101 Technical Report, Tetra Tech December 4, 2019 – SEDAR

<sup>2</sup> M&I: 171,000 ounces of 3.77 g/t gold Measured, and 349,700 ounces of 2.93 g/t gold Indicated

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.Geol. (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 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.

### 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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# KHUNDII GOLD DISTRICT

Three Priority Areas For Growth on 100% owned 17,000 ha Licence Holdings

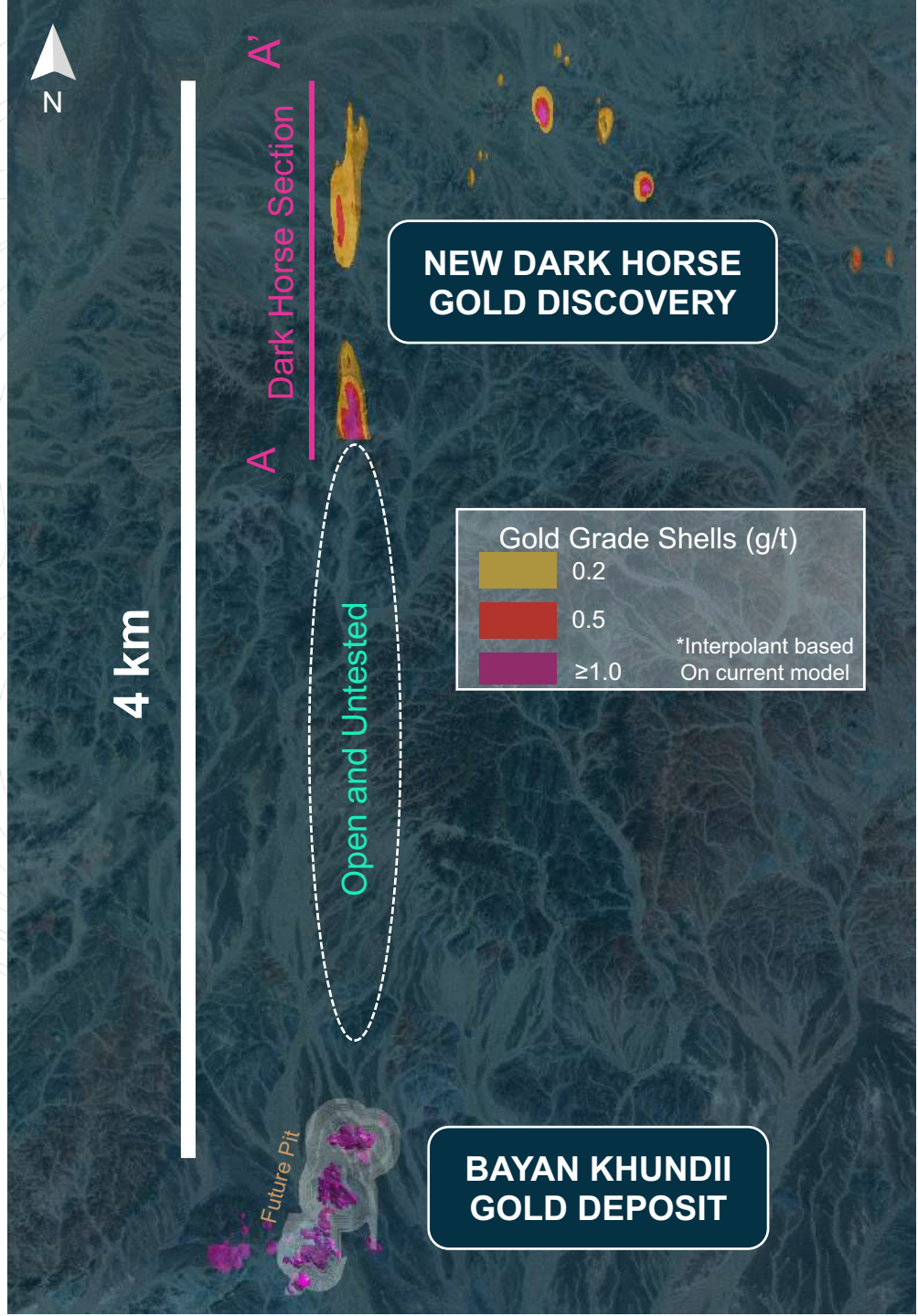
Landsat 8 True Colour



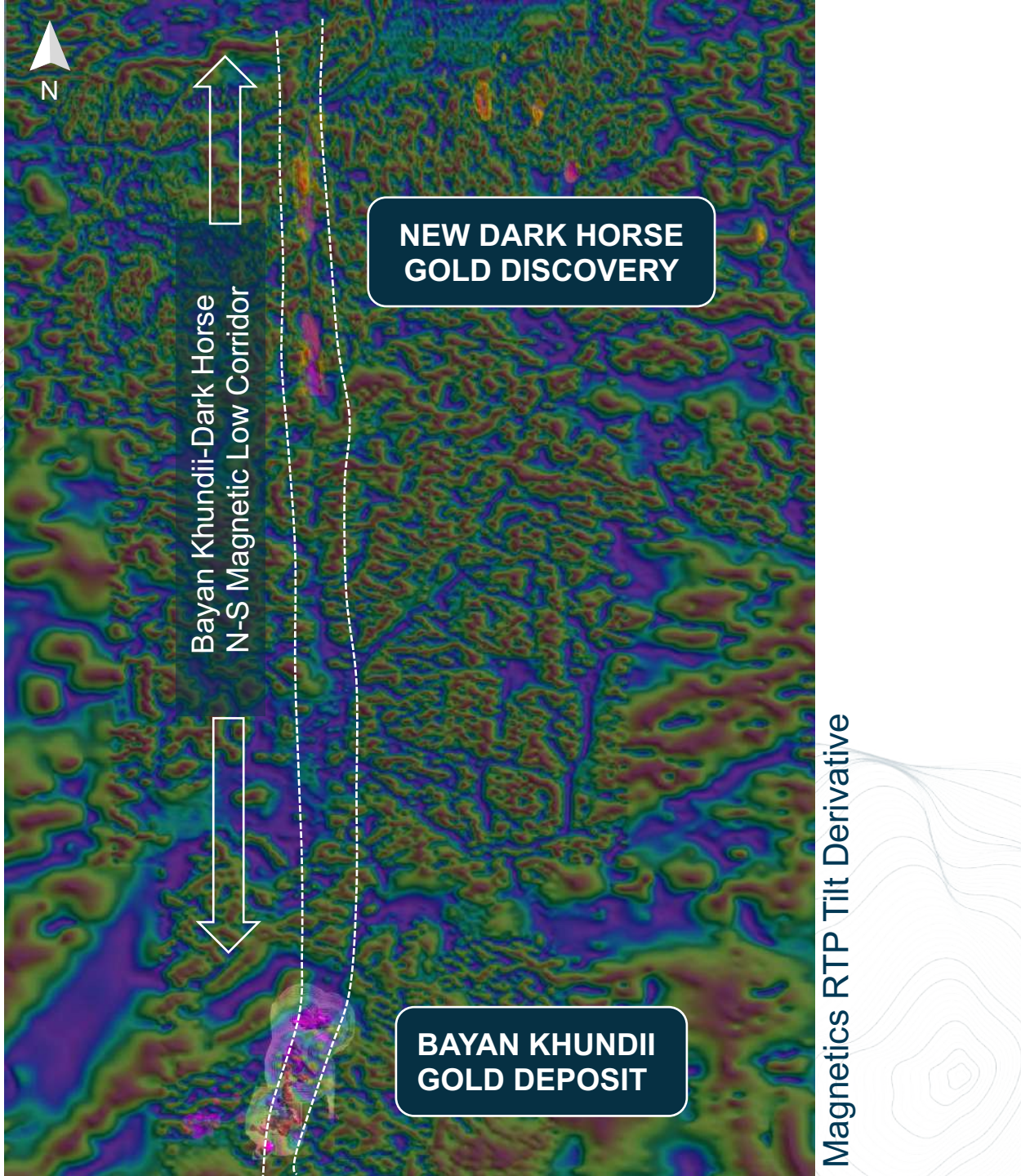


# NEW DARK HORSE GOLD PROJECT

## Mineralized Structural Corridor



GEOEYE Satellite Image





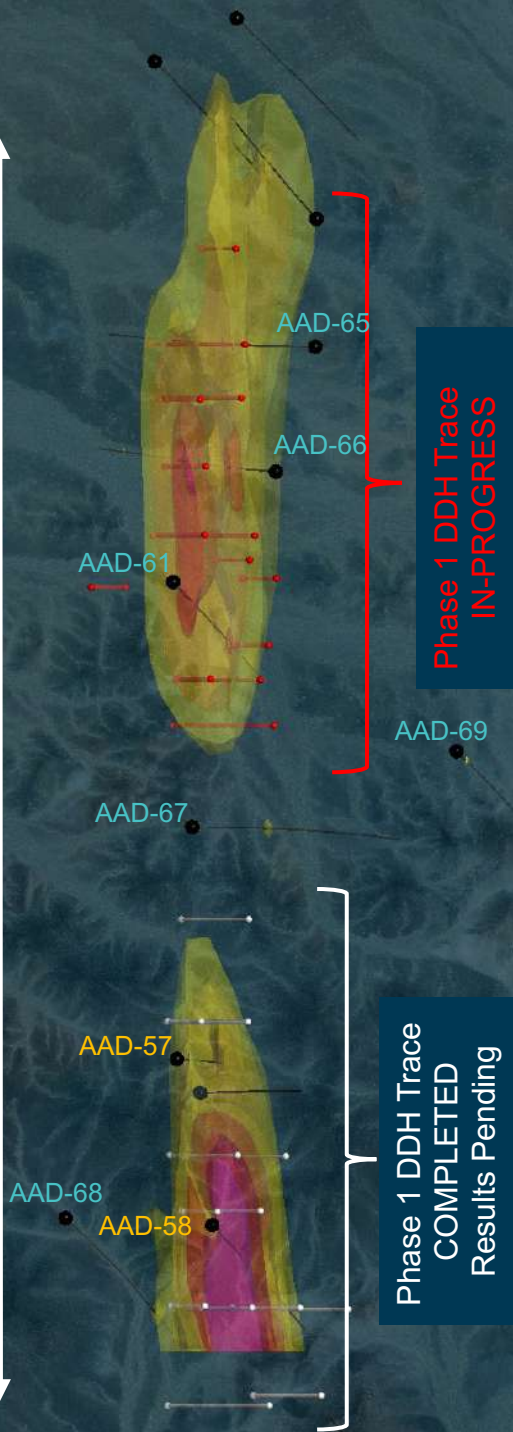
# DARK HORSE DISCOVERY 2021

## Q1-Q2 Planned and Completed Drilling

OPEN

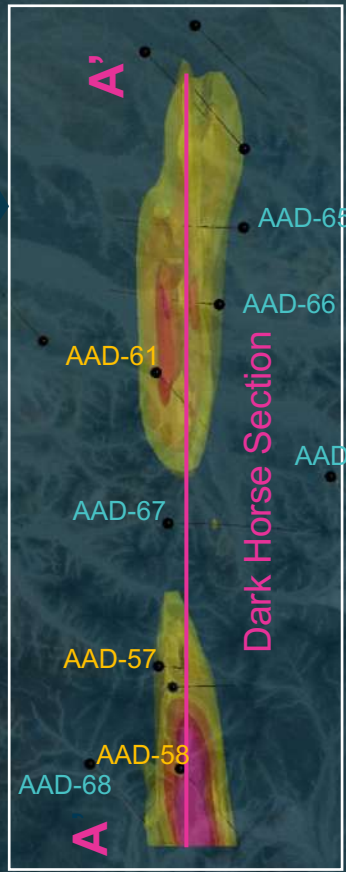
1.2 km

OPEN

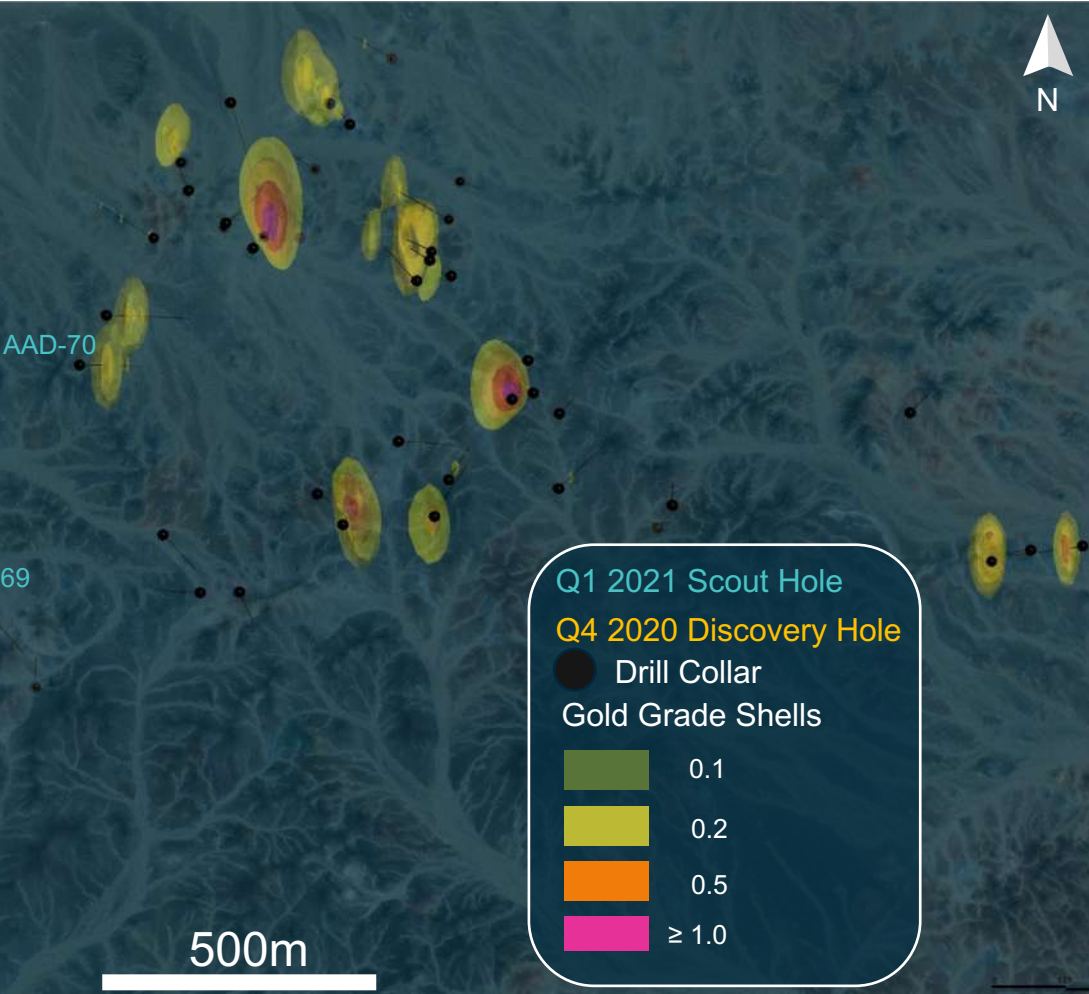


Phase 1 DDH Trace  
IN-PROGRESS

Phase 1 DDH Trace  
COMPLETED  
Results Pending



Dark Horse Section



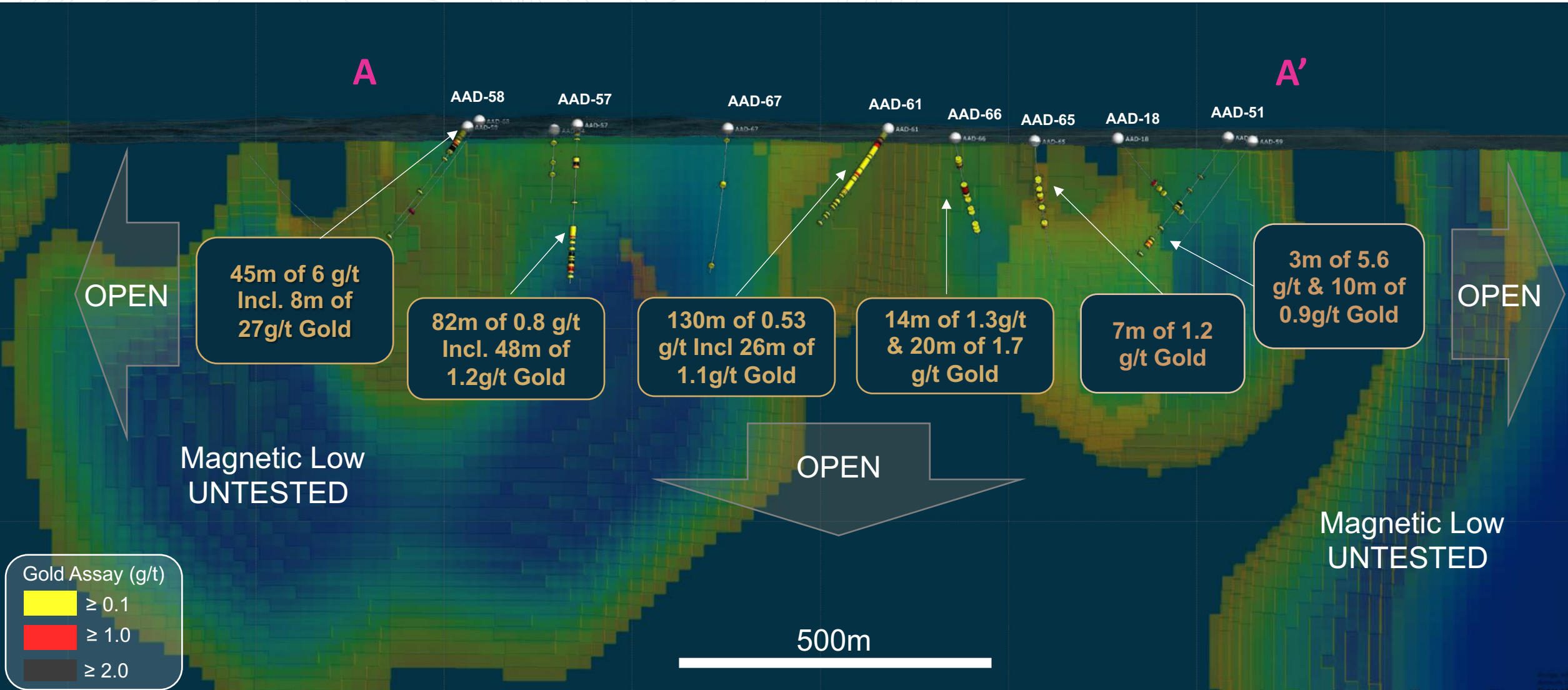
Q1 2021 Scout Hole  
Q4 2020 Discovery Hole  
● Drill Collar  
Gold Grade Shells

0.1
0.2
0.5
≥ 1.0

500m

# DARK HORSE LONG SECTION

Looking West (Gold in Drill Intersections on 3D Magnetics)





# DARK HORSE DISCOVERY SECTIONS

Looking North (each section 250m wide)

