YMEP 17-037

SUMMARY REPORT ON PLACER GOLD EXPLORATION AT HAYSTACK REEF, INDIAN RIVER, YUKON

Northern Exposures Inc.

Various Placer Claims held by Northern Exposures Inc.,

NTS Sheet Claim Sheets 115O/11 and 14, Haystack Reef, Indian River Area

Dawson Mining District, Yukon Territory.

Latitude: N63° 45′ 15.1″ Longitude: W139° 11′ 27.5″

Prepared by
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Kevin Kivi, P.Geo.

January 22, 2017

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Introduction

This exploration proposal describes exploration to evaluate placer gold potential of Haystack Reef, on Indian River in Dawson Mining District, Yukon, N.T.S. 114O/11 and 14.

Summary Report on Placer Gold Exploration at Haystack Reef, Indian River, Yukon is an interim for YMEP 17-037 and is an ongoing project that has not yet been completed. This report is submitted on behalf of Northern Exposures Inc., who actively mines other parts of the Indian River property.

Project Location and Access

Haystack Reef occurs in the western part of Placer Claims held by Northern Exposures Inc. (100%) at Indian River, Yukon. Claims are in good standing at the time of this report, and the company is fully permitted to explore and mine on the property.

Haystack Reef is located 35 km south of Dawson City south of Indian River in Dawson Mining District in Yukon Territory, Claim Sheet NTS 115O/11 and 115O/14. The centre of Haystack Reef is Latitude: N63° 45' 15.1" Longitude: W139° 11' 27.5" or UTM Zone 7V co-ordinates 589251 E 7070888 N (NAD83).

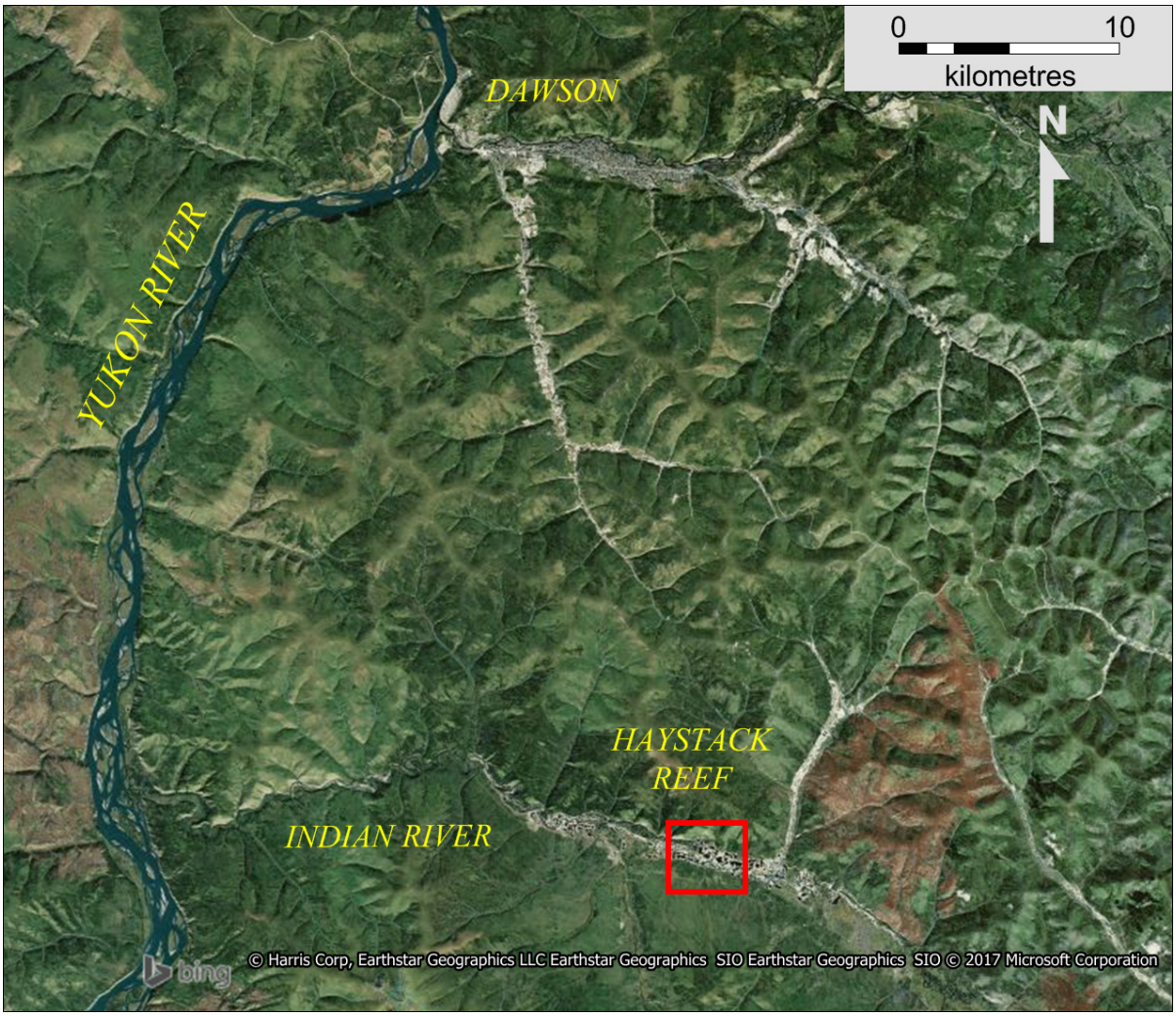

Figure 1: Haystack Reef location map.

The property is accessible by truck and ATV using a network of existing roads and trails.

Property

The Haystack Reef area occurs within a large block of Yukon placer claims, which are registered 100% to Northern Exposures Inc., of Lac La Biche, AB. Northern Exposures Inc will conduct work on up to 142 active placer claims, listed in Table 1 with this exploration proposal.

Table 1. Haystack Reef Yukon Placer Claims.

LABEL	OWNER	STAKE_DATE	RECORDED	EXPIRY	STATUS	DISTRICT
Al 12	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 13	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 14	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 15	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 18	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 19	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 20	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 21	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 234	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 24	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 25	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 28	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 16	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 17	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 26	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 27	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Al 221	Northern Exposures Inc. - 100%	24/09/1987	28/09/1987	06/05/2017	Active	Dawson
Di 5	Northern Exposures Inc. - 100%	18/04/1988	22/04/1988	06/05/2017	Active	Dawson
Di 61	Northern Exposures Inc. - 100%	18/04/1988	22/04/1988	06/05/2017	Active	Dawson
Di 72	Northern Exposures Inc. - 100%	18/04/1988	22/04/1988	06/05/2017	Active	Dawson
Di 82	Northern Exposures Inc. - 100%	18/04/1988	22/04/1988	06/05/2017	Active	Dawson
Di 9	Northern Exposures Inc. - 100%	18/04/1988	22/04/1988	06/05/2017	Active	Dawson
Di 10	Northern Exposures Inc. - 100%	18/04/1988	22/04/1988	06/05/2017	Active	Dawson
Di 39	Northern Exposures Inc. - 100%	18/04/1988	22/04/1988	06/05/2017	Active	Dawson
Di 46	Northern Exposures Inc. - 100%	18/04/1988	22/04/1988	06/05/2017	Active	Dawson
Don 4	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 5	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 60	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 70	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 8	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 94	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 10	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 11	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 12	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 13	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson

LABEL	OWNER	STAKE_DATE	RECORDED	EXPIRY	STATUS	DISTRICT
Don 14	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 15	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 16	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 17	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 18	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 19	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 20	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Don 21	Northern Exposures Inc. - 100%	06/10/1984	09/10/1984	06/05/2017	Active	Dawson
Elly 3	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 4	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 5	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 6	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 7	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 8	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 9	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 10	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 11	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 12	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 13	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 14	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 15	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 16	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 17	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 18	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 19	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 20	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 21	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 22	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 23	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 24	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 25	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 26	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 27	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 28	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Elly 29	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
IR 24	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 27	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 28	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 33	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 36	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 37	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 38	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 40	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson

LABEL	OWNER	STAKE_DATE	RECORDED	EXPIRY	STATUS	DISTRICT
IR 26	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 39	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 257	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 299	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 300	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 310	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 324	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 342	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
IR 354	Northern Exposures Inc. - 100%	23/05/1986	30/05/1986	06/05/2017	Active	Dawson
Lee 4	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 5	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 61	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 7	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 8	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 9	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 10	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 11	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 12	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 13	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 14	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 15	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 16	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 17	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
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Lee 22	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 23	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 24	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 25	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 26	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 27	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 28	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 29	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 30	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
Lee 31	Northern Exposures Inc. - 100%	14/04/1988	22/04/1988	06/05/2017	Active	Dawson
P 11	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 2	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 40	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 68	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 734	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 184	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson

LABEL	OWNER	STAKE_DATE	RECORDED	EXPIRY	STATUS	DISTRICT
P 194	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 11	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 14	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 17	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 311	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 510	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 88	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 98	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 108	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 136	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 1250	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 1521	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 1622	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
P 2022	Northern Exposures Inc. - 100%	20/09/1985	23/09/1985	06/05/2017	Active	Dawson
Tara 1	Northern Exposures Inc. - 100%	30/04/1983	06/05/1983	06/05/2017	Active	Dawson
Tara 2	Northern Exposures Inc. - 100%	30/04/1983	06/05/1983	06/05/2017	Active	Dawson
Val 20	Northern Exposures Inc. - 100%	28/03/1988	31/03/1988	06/05/2017	Active	Dawson
Val 21	Northern Exposures Inc. - 100%	28/03/1988	31/03/1988	06/05/2017	Active	Dawson
Val 22	Northern Exposures Inc. - 100%	28/03/1988	31/03/1988	06/05/2017	Active	Dawson
Val 23	Northern Exposures Inc. - 100%	28/03/1988	31/03/1988	06/05/2017	Active	Dawson
Val 24	Northern Exposures Inc. - 100%	28/03/1988	31/03/1988	06/05/2017	Active	Dawson

Geological Description and Previous Work

Bedrock Geology

Property bedrock geology is represented in digitized form after Bostock (1942) and scan of GSC Open File 4970 (2005) (Figure 2).

Local geology of the Indian River area is summarized by Lowey, 1998 as follows:

"The Indian River area is underlain by mainly Paleozoic metasedimentary (i.e., Kondike Schist and Nasina Assemblage) and meta-igneous rocks belonging to the Yukon-Tanana Terrane (Mortensen, 1996). Minor amounts of altered ultramafic rocks occur locally and are assigned to the Slide Mountain Terrane. According to Mortensen (1996), these two pre-accretionary units were juxtaposed by regional-scale thrust faulting in Early Mesozoic time. The gold-bearing quartz veins were emplaced in the earliest Cretaceous (Rushton et al., 1993), and the area was then unconformably overlain by post-accretionary sedimentary and volcanic rocks in mid- to late Cretaceous time. Lowey and Hills (1988) assigned the sedimentary rocks, in part, to the Tantalus Formation, and Lowey et al. (1986) assigned the volcanic rocks, in part, to the Carmacks Group. The property has not been glaciated, and therefore rocks found on hillsides, erode and are transported downhill, and report to streams."

Work by Rushton (1993) suggests quartz was derived from a system of mesothermal quartz veins.

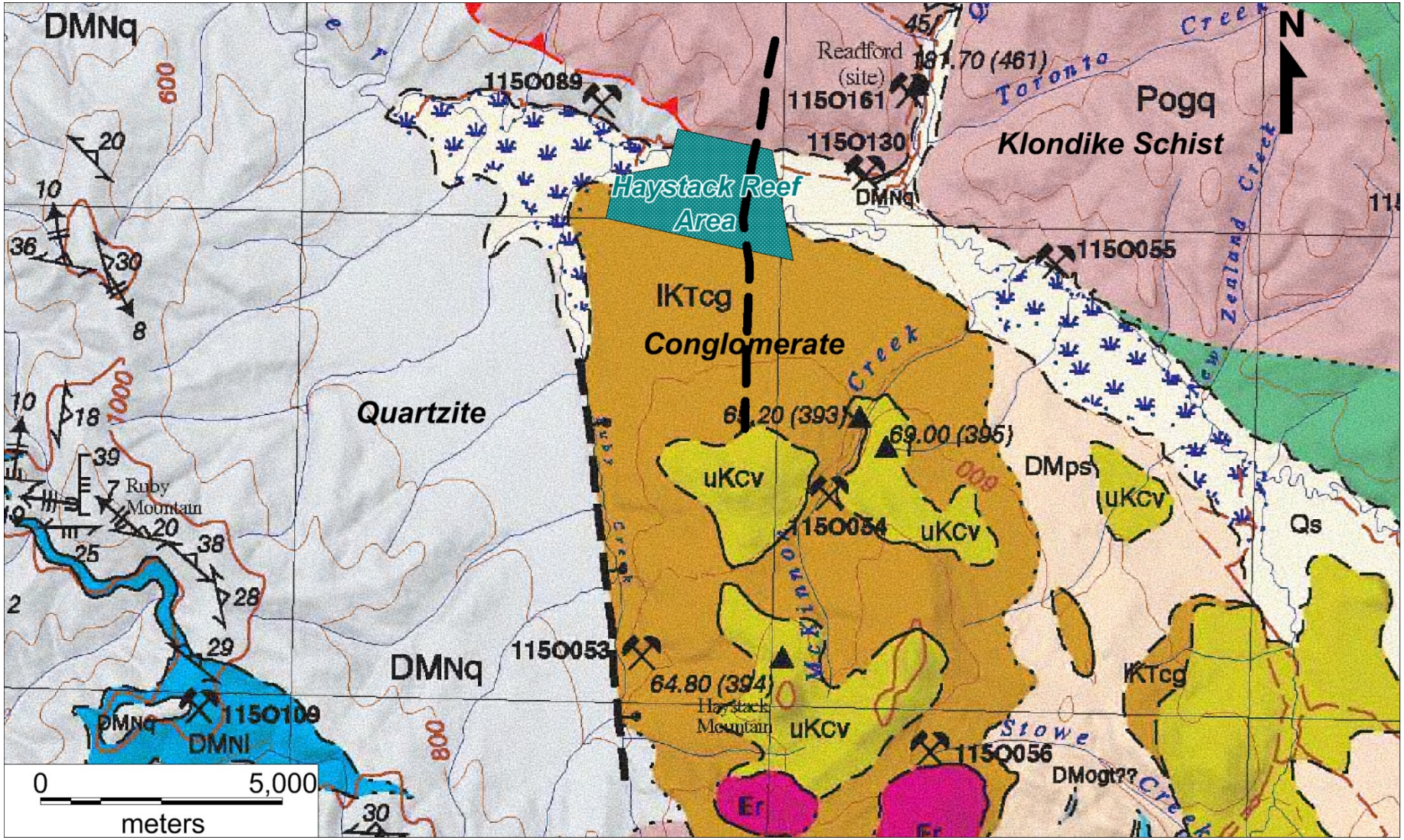


Figure 2*:* **Haystack Reef on bedrock geology (GSC OF4870 Geology).**

Economic prospects upstream of Haystack Reef on Indian River documented in the YGS Minfile database include an occurrence named Grant, reported as a wide gold-bearing quartz vein discovered by shafting (1902) just downstream of Quartz Creek. Modern RC drilling failed to relocate the vein.

Epithermal gold mineralization related to local andesitic volcanism has been proposed in past, but this theory has been not been confirmed with a bedrock gold showing in the area.

Gold is reported in this unit at McKinnon and Fothergill showings located south of Haystack Reef. Conglomerates are mapped at Haystack Reef Bench, so there is potential for McKinnon-type paleoplacer gold mineralization contributing to Indian River placer gold deposits.

MINFILE Occurrences

Minfile showings upstream of Haystack Reef are quoted directly from YGS online database as follows:

115O 161: READFORD

Work History

"The area has been covered by claims numerous times in the past but bedrock mineralization was not identified until Mortensen's mapping in the mid 1990's. Barimundi Gold covered the showing with the MF 1-52 (YB68265) claims staked in April and May of 1996. Mortensen (1996) reports this as occurrence #115 O157."

Capsule Geology

"Bands of semi-massive pyrite up to 10 cm thick occur within rusty weathering quartz-muscovite schist and muscovite quartzite (unit Psqm) of the Permian Klondike Schist Assemblage in the bedrock of Quartz Creek. These rocks are interpreted as deformed felsic tuff and tuffaceous chert, and appear to form a screen or pendent within gneissic biotite quartz monzonite of the Sulfur Creek orthogneiss (unit Pqmg). The sulphides are thought to be syngenetic in origin. No base metal sulphides were noted but trace amounts of barite occur in some of the pyrite beds."

115O 130: GRANT

Work History

"The area was heavily staked in Dec/1900 as the Highland Mary Group, including the Highland Mary (277A) and Riverside (278A), by J. Grant, J.C. Lloyd and others. The claims were explored by trenches and short shafts and adits until 1903.
Restaked as QUA cl (YA80420) in Jun/84 by a joint venture between United Keno Hill ML and Falconbridge L, which explored with a fence of percussion holes (609.6 m) later in the year.
K. Wistey tied on Zelda, etc cl (YA87786) to the northeast in Sep/85 and added more claims in 1986 and 1987. S. Hill staked Melanie cl (YB23500) 5 km to the east in Jun/89, and the Gena 1-2 cl (YB45632) in Sep/93. In Sep/97 S. Baker staked St. A cl 1-8 (YC04621) 0.5 km to the east."

Capsule Geology

"The area is mainly underlain by gneissic biotite quartz monzonite of the Sulphur Creek orthogneiss (unit

Pqmg) that structurally overlies carbonaceous quartz-muscovite schist (unit DMsqc) and minor chlorite and chlorite-actinolite schist (unit DMasc) of the Nasina Assemblage. Late Cretaceous conglomerate (unit lKst) is exposed in some of the meander loops of the Indian River immediately southwest of the occurrence.
A quartz vein over 25 m wide was discovered in 1900 in the right bank of Indian River just below the mouth of Quartz Creek. Early newspaper accounts reported that the central 2.1 m of the vein contained free gold and returned assays of 19.9 g/t Au, while the overall vein material assayed 13.4 g/t."

115O 055: RAVEN

Work History

"The west (Esperanza) occurrence was staked as Primrose, etc cl (5478) in Jan/02 by J.C. Lloyd, who drove two short adits (4.6 m and 7.6 m) later in the year. J.J. Flanagan staked Emerald, etc cl (5702) on the east (Raven) occurrence in Apr/02 and drove a 9.1 m adit in 1903. The Primrose cl was restaked as Kelvin cl (7309) in Aug/06 by A. McKinnon, who trenched in 1907 and as Esperanza cl (12194) in Dec/11 by C. Fothergill, who drove a 7.3 m adit in 1912. Fothergill restaked the Emerald cl as Raven cl (12120) in Jun/11 and drove a 22.9 m adit in 1912.
Restaked as Spike cl 1-24 (YA10268) in Jun/77 by Riocanex Incorporated, which explored with geochem sampling later in the year and with geophysical surveys in 1978. W.G. Grant staked RA cl 1-20 (YB84648) two km to the south in Oct/84 and trenched in 1985. Gold City Resources Ltd staked Ann cl 1-2 (YB17660) 1 km to the west in Aug/88."

Capsule Geology

"At both occurrences, adits were driven on pyritic quartz lenses concordant with the foliation in a sericite-quartz facies of the Klondike Schist. In the Raven adit, chalcopyrite is disseminated with pyrite on cleavage planes. MacLean's samples all assayed trace in gold and silver but were not assayed for copper. The Riocanex work returned disappointing results."

115O 089: TORRANCE

Work History

"Early claims staked in this vicinity include Fourth of July and North Star (6.4 to 9.6 km downstream from Quartz Creek) which were trenched in 1905 by D. Torrance; Mastodon (7036) (8.9 km downstream) which was explored with two 5 m adits by S.J. Thurber in 1905-06; Chrysolite (7348) and Florence May (4.8 km below) which were staked by J.M. Pickel in Oct/06 and trenched in 1907.
The Wet cl 1-32 (YB23741) were staked 1 km to the west in Oct/89 by 6176 Yukon Ltd and Smokey cl 1-3 (YB40906) were staked 1.5 km to the east by J. Rustenburg in Jun/92. P.Lebell staked Dsp cl 1-32 (YB88788) 3 km to the southwest in Sep/96.
Restaked as Ford cl 1-34 and 37-60 (YC07568) in Jul/98 by 17363 Yukon Inc, which carried out geochemical rock sampling later that year."

Capsule Geology

"The area is underlain by carbonaceous quartz-muscovite schist of the Late Devonian (?) to mid-

Mississippian Nasina assemblage of the Yukon Tanana Terrane that is overlain to the north along a moderately to steeply northeast-dipping thrust fault by gneissic biotite quartz monzonite of the mid-Permian aged Sulphur Creek orthogneiss.
The Ford claims were staked to cover several large quartz veins hosted by the Nasina assemblage rocks in the the area. Several samples of bull quartz collected by P. Risby from the area prior to the staking of the Ford claims are reported to have assayed > 1 000 ppb Au. Extensive resampling and analysis of numerous quartz veins in the area returned values well below those reported previously by Risby, with most returning only background values for gold. The peak value obtained during the resampling was 677 ppb Au."

115O 053: HAYSTACK

Work History

"Staked as Coal Lease 1212 in Oct, 1900 by S. Cord, who drove a short adit which was caved when visited by the GSC in 1903. Restaked as coal lease 9466 in Sep/03 by D. McKinnon, who surveyed it in 1913. The coal rights were reacquired as Coal Exploration Licence #101 in Mar/78 by Yukon Revenue Mines Ltd and were explored with 3 holes (316m) in 1980 by Cyprus Anvil Mining Corporation Ltd under an option."

Capsule Geology

"Early prospectors traced a coal seam in pits for a length of about 1 km and exposed a thickness of 2 m in one pit. Hole 80-1 intersected 1.5 m of coal containing a high ash content (45%). The coal was missing in Hole 80-2 and dips too steeply to be cut in the third hole. An analysis from the first hole gave 4.2% moisture, 43.1% ash, 7.4% volatiles, 45.3% fixed carbon, 0.4% sulphur, and specific energy of 6630 BTU/lb. Vitrinite reflectance measurements on the coal are about 3%, indicating extreme thermal upgrading, possibly due to a nearby dyke which fed the overlying flows.
Drilling showed that the coal occurs within a sedimentary sequence about 100 m thick that is overlain by Carmacks Group andesitic volcanics and underlain by porphyritic felsic volcanics. The section appears to dip moderately northward. The sedimentary sequence consists of thinly interbedded mudstone, sandstone and minor conglomerate."

115O 054: MCKINNON

Work History

"Staked as Britannia group (4279) commencing in Jun/1900 by the McKinnon brothers, who put in a 8 m adit and a 18 m shaft in 1901-02. Other development included the 24 m Winchester shaft, a 30 m shaft and 46 m adit on the Andromeda claim and numerous shallow pits and open cuts. Approximately 200 claims were kept in good standing by various owners until interest waned following the death of the McKinnons in the early 1920's."

"Restaked in Oct/63 as Indiana cl 1-40 (79438) by Canex Aerial Exploration Ltd; in Jul/65 as Black Bear cl 2, 3, and 8 (87028) by F. Burkhard; in Sep/66 as Black Bear cl 1-4 (87915) by Burkhard; in Jun/68 as Mac cl 1-16 (Y15385) by Cominco Ltd; and in Jul/71 as Kin cl 1-16 (Y65020) by Yukon Revenue Mines Ltd. Only mapping and geochemical sampling have been done since 1912.
In May-Jun/73, R. Hrkac tied on Mac cl 1-9 (Y65992) and cl 10-150 (Y81401), Ray cl 1-64 (Y81542) and

Tom cl 1-88 (Y81606). Hrkac transferred the claims to a private company, Andac Resources Ltd, which mapped in 1974, entered a joint venture in 1975 with Kapvik Exploration Ltd and Action Resources Ltd, and added Bill cl 1-40 (Y90309) and others in Apr-Aug/75, conducted more mapping and sampling and drilled one hole (70 m) later in the year. Yukon Revenue mapped and sampled in 1972 and 1974 and drilled 4 holes (292.6 m) in 1975. Andac et al flew an aeromag survey in 1976, transferred the claims to McKinnon Rand Resources Ltd in early 1977, and optioned them to Dome Mines Ltd, which enlarged the property and drilled 4 holes (934.2 m) in 1979.
Restaked as Key cl 1-38 (YA87792) in Oct/85 by G. Harris and D. Waugh who performed geological mapping in 1986. In 1987, the property was optioned by Volcano Resources Corporation, which added Key cl 39-123 (YA88705) in Jan & Feb/87 and which explored with mapping, mag and VLF-EM surveys, bulldozer trenching and 9 diamond drill holes (469.7 m). D. Waugh tied on Key cl 124-143 (YB23213) to the west in Oct/88, and restaked and added Key cl 40-319 (YB30115) in Apr/90 and Tri cl 45-104 (YB30425) in May/91. B. Harris staked the Mck 1-34 cl (YB45771) in Oct/93.
Under an option agreement with D. Waugh, Richlode Investments Corporation performed a geochemical bulk sampling and trenching program on the Key and MCK claims in 1993. The occurrence was restaked as Mck cl 1-34 by Waugh in Aug/95. Several of the Key claims did not expire until after Waugh restaked the prospect.
Restaked as Long cl 1-6 (YC04112) by V. Matkovich in Apr/97."

Capsule Geology

"The original owners obtained many assays in the range 3.4 to 10.3 g/t Au from a conglomerate that they compared with the South African Rand. The GSC reported that a 1.8 tonne shipment tested at the Government stamp mill about 1901 assayed about 3.4 g/t Au. However, extensive sampling by MacLean in 1914 showed only trace amounts. Some reports have suggested that surface assays may be somewhat higher than average due to supergene enrichment.
Minor amounts of sulphides and siderite are also present in the conglomerate, which consists of well rounded pebbles of white quartz (90%) and micaceous quartzite (10%) averaging 0.4 to 2.5 cm in diameter and up to 8 cm maximum. The matrix ranges from sand to silt sized clastic debris to bluish, fine mica, which is locally silicified and well indurated. Bedding or banding is virtually absent. According to Cominco, the grade ranges from trace to 3.4 g/t Au and the gold is present in an extremely fine state in the matrix.
Andac's 1975 hole failed to reach the base of the conglomerate but did return subcommerical gold fragments from 1.8-6.0 m, 9.1-39.6 m and 51.8-70.1 m. The Yukon Revenue drilling in 1975 and Dome drilling in 1979 returned only low gold assays.
Mapping by G. Lowey for DIAND in 1983 determined that the conglomerates are Lower Cretaceous (Albian) in age and that they were deposited in fluvial and deltaic environments. Upper Cretaceous to Paleocene Carmacks Group andesite flows are interbedded with the conglomerates and coeval porphyritic andesite to (minor) dacite sills and dykes cut the sequence. Conglomerates are divisible into two sequences: a lower lithic unit and an upper quartzose unit. Only the upper unit contains gold. Historically, this deposit was regarded as a paleoplacer but Lowey suggested an alternative epigenetic epithermal origin, citing the extensive silicification and clay alteration. Assays of the conglomerate show the presence of typical epithermal trace metals such as Ag,As,Ba,Hg,Pb and Sb although the values are uniformly low.

The 1986-87 work returned disappointing results with only 6 of 47 chip samples returning greater than 20 ppb Au, with a maximum of 87 ppb Au.
Of the seven 500 kg bulk samples collected and processed in 1993, most returned low gold values. The highest assay obtained was 0.118 g/t Au."

115O 056: FOTHERGILL

Work History

"Staked as Eclipse, etc claims about 1900 by C. Fothergill, who explored with 2 shafts (9 and 15 m) and extensive hand trenching prior to 1912. Restaked as Hay cl (YA64807) in Nov/81 by Eldorado Nuclear L, which performed geochemical and radiometric surveys in 1982, and as IR cl (YB17466) in Aug/88 by Imperial Met Corp.
Restaked as Yuk's Rand 1-6 (YB48036) by T. Morgan in Dec/93. In 1994 Morgan performed 8 days of drifting on property. V. Matkovich staked Home cl 1-4 (YC03713) 5 km to the southeast in Feb/97 and Way cl 1-6 (YC05318) 1.5 km to the east in Oct/97."

Capsule Geology

"This property is similar in all respects to the McKinnon showing (Minfile 115O 054), 5.6 km to the northwest. Sampling by MacLean showed that the Eocene conglomerate contains only trace amounts of gold."

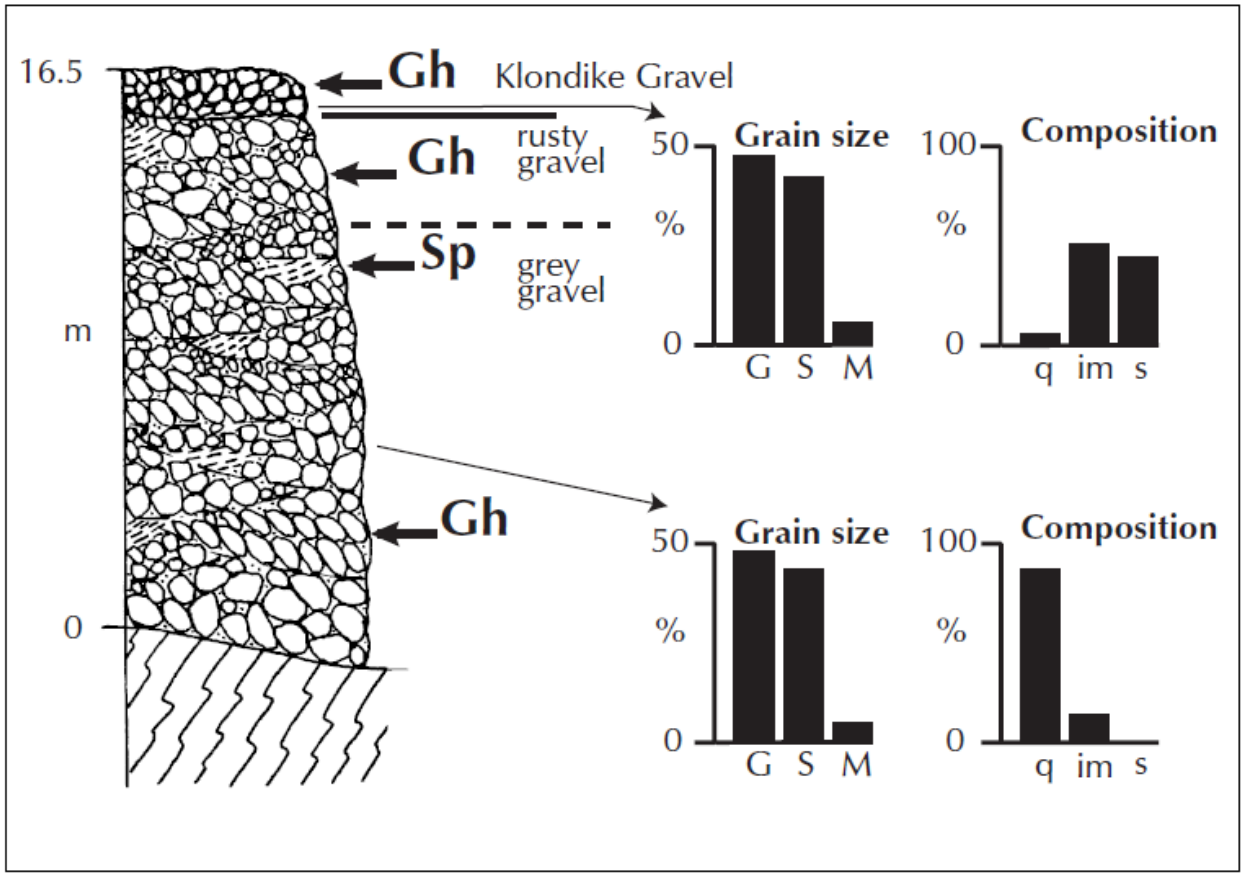
Surficial Geology

Indian River surficial geology is summarized by Lowey (1998) as follows:

"The Indian River area, thought to be a mature, subdued landscape by Miocene time, underwent a period of uplift and erosion in the Pliocene (Tempelman-Kluit, 1980). The area was not covered by glacial ice during the pre-Reid (latest Pliocene in age) or later glaciations. However, glacial outwash (i.e., the Klondike Gravel) was deposited on high-level terraces along the Indian River (Hughes et al., 1969). Duk-Rodkin (1996) has mapped some of the placer deposits as slope complexes (map unit Cx)."

Lowey (1998) also describes Indian River gravel, interpreted to be "Upper Bench" as:

"Placer Deposit 2 occurs along the Indian River, where it forms high-level terraces (Fig. 6). The terraces consist of approximately 16 m of slightly muddy, sandy gravel that is dominated by vein quartz clasts (Fig. 7). The gravel is also interpreted as Pliocene(?), and represents paleofloodplain deposits of a braided stream. It too is assigned to the White Channel Gravel unit. The White Channel Gravel of this deposit type is buried by the Klondike Gravel which is composed of vein quartz, igneous, metamorphic, and sedimentary clasts, and represents glacial outwash (Hughes et al.,1969)."



Gh=*horizontally bedded gravel*	***G***=*gravel*	***M***=*mud*	***im***=*igneous and metamorphic clasts*
Sp=*planar bedded sand*	***S***=*sand*	***q***=*quartz vein clast*	***s***=*sedimentary clasts*

Figure 3: Indian River "Upper bench" gravel profile (from Lowey, 1998).

In 2002 J.W. Murton and Associates sampled upper bench gravels at Indian River, and locations at Haystack Reef returning that returned gold values from several sites. This work is unpublished and likely conducted for the claim holders.

In 2003, William LeBarge (YGS) sampled the same upper bench gravels as Murton did the previous year, and reported in a 2004 poster that general stratigraphy *"consists of several metres of White Channel Gravel, overlain by various thicknesses of pre-Reid glaciofluvial outwash gravels and sand. Both units have values in gold and other heavy minerals however the White Channel Gravel is the main Gold-Bearing unit."*

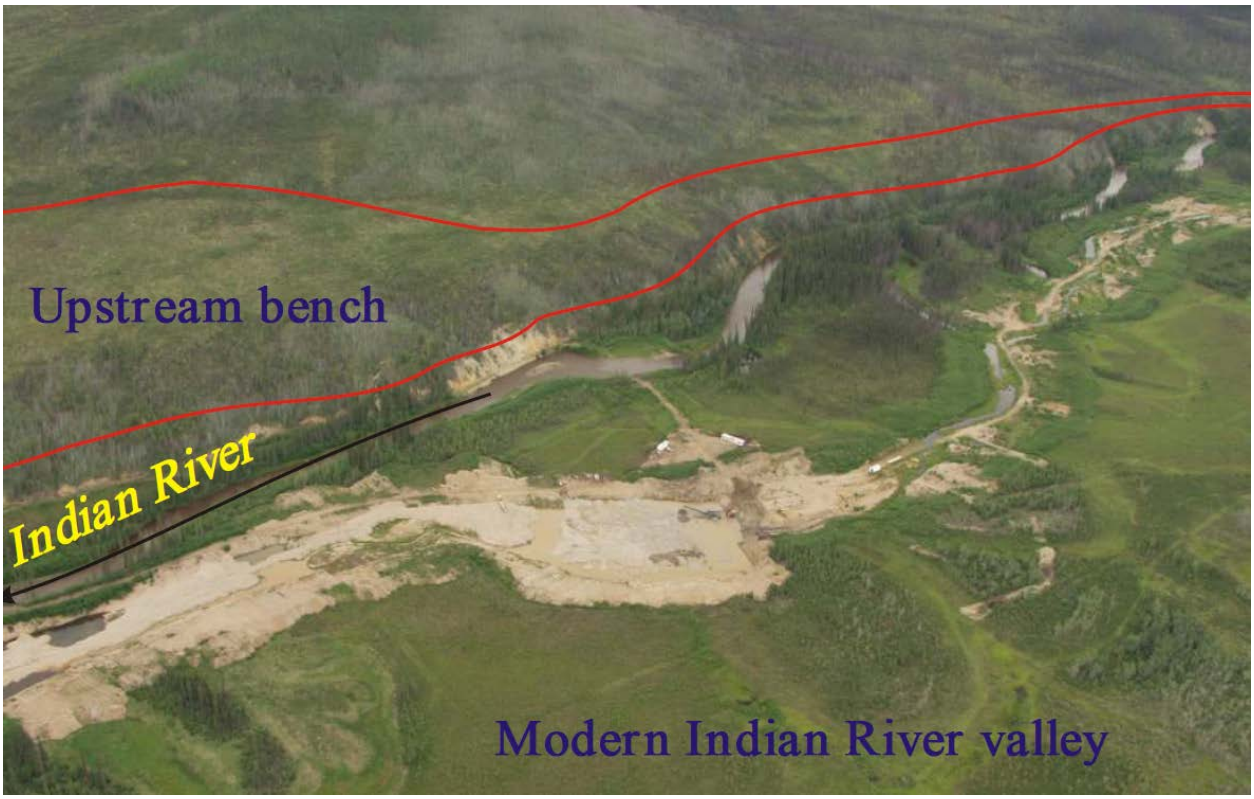


Figure 4: Indian River "Upstream bench" samples from roadside upstream of Quartz Creek (from LeBarge, 2004).

Head Grade g/t	C$/yd C$15.56/g (US$400/oz)	Comments	Stratigraphy
0.858	$15.01	first truck stop	87 bottom
1.183	$20.69	first truck stop	88 middle
1.130	$19.76	second truck stop	bedrock to 20 ft
1.679	$29.36	second truck stop	20 ft to 55 ft
0.350	$6.12	4th truck stop	
0.158	$2.76	site UT 30	road level to 25 ft
1.010	$17.66	top gravel with wedge and loess	
3.024	$52.89		
1.579	$27.63	waypoint 33, 25 to 50 ft, along road	
0.986	$17.25	stop 1	
0.523	$9.15	UT 35, terrace near bedrock bank	35 ft section, 7 mounds
0.010	$0.17	same area as Thurston sample	
1.801	$31.49	bedrock contact on high bank	White Channel gravels
0.543	$9.49	trench with sand seams	
0.037	$0.65	pebbly gravel top of section	
1.130	$19.76		
1.197	$20.93	above sand lense (Morison section)	White Channel gravels
9.217	$161.20	below sand lense (Morison section)	White Channel gravels
1.931	$33.77	channel on bedrock contact	possible valley side alluvial fan
0.014	$0.24		
0.054	$0.95		White Channel gravels

Detailed Work Plan

Northern Exposures Inc contracted KIVI Geoscience Inc (Thunder Bay ON) to complete the exploration proposal and YMEP Placer Module application. The company and contractor will work together to complete the proposed exploration plan. The author has worked on the Indian River property from time to time since 2010.

The proposed work program will commence in April 2017 and continue through the summer placer mining season and will explore the Haystack Reef and Haystack Reef Bench for placer gold deposits. The exploration area is approximately 2 km downstream from Northern Exposure's Indian River camp, and is accessible by a network of gravel roads and trails.

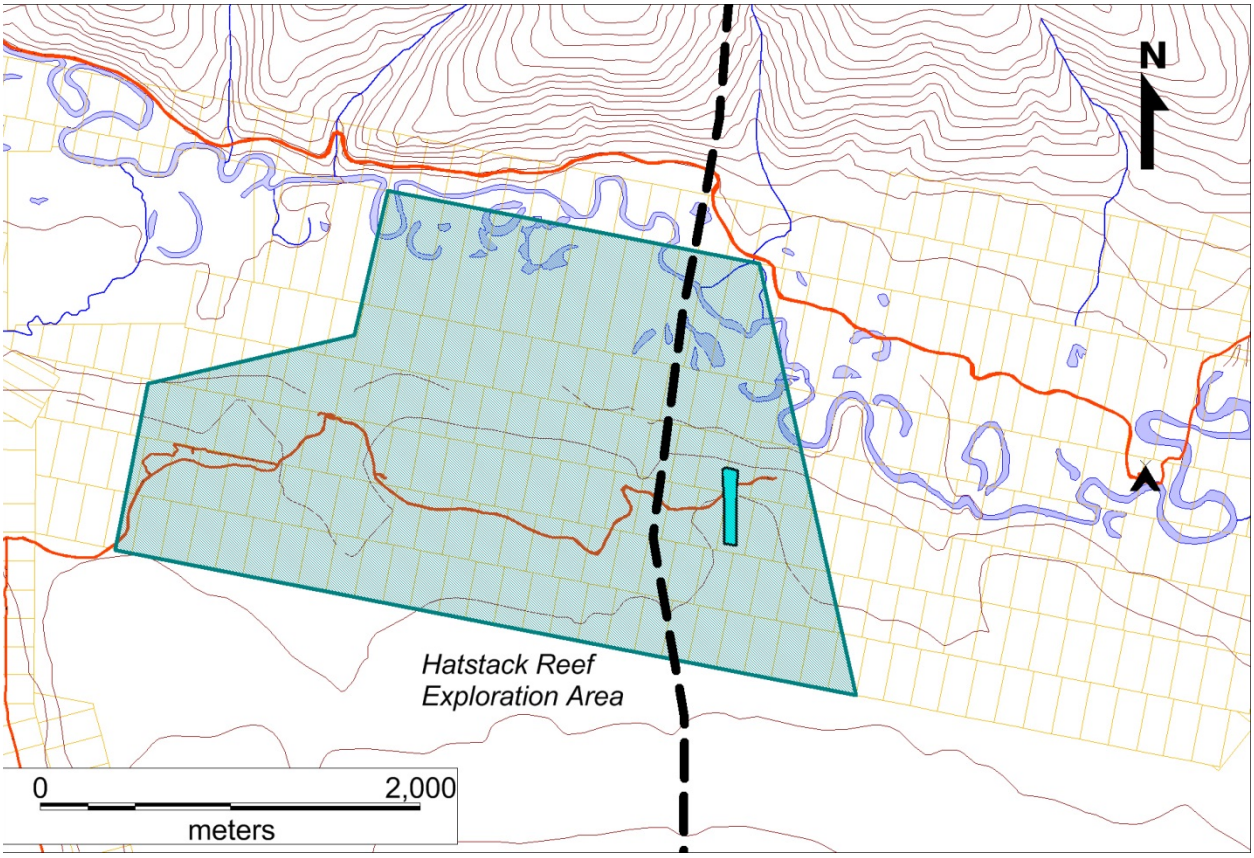


Figure 5: Haystack Reef exploration area (green) existing trails and roads in red, Indian River camp to east, Old Airstrip (blue) on Haystack Reef Bench.

The Haystack Reef Bench is an elevated plateau that follows the southern bank of Indian River valley between Northern Exposure's camp and Ruby Creek. A trail extends along the bench that will allow easy movement of mobile equipment.

Magnetometer Surveys

In the northern part of the Haystack Reef in the Indian River valley, we intend to conduct a ground magnetometer survey, at 50m centre lines over the magnetic feature shown in Figure 5. A survey grid, oriented West-East will be generated and uploaded to GPS for navigation. Lines will be approximately 500m long, and the initial survey will cover about 10 line kilometers.

If the northern survey is successful at mapping a magnetic intrusive dike, then the survey will be continued up the southern bank and onto Haystack Reef Bench. Survey lines will run perpendicular to the N-S airborne magnetic anomaly.

The magnetometer may also map heavy mineral concentrations in a paleochannel. If a paleochannel is found, additional magnetometer surveys will be conducted to map the channel to guide subsequent test pitting and sampling.

Ground magnetics will be completed using a Geometrics G-859 Cesium Vapor Magnetometer (rover), with Geometrics G856AX Proton Procession (base station). The rover will collect magnetic data at 5Hz, and onboard Novotel CDGPS will collect sub-meter accurate location data at 1Hz. The base station will be set to collect a reading every 15 seconds so that diurnal corrections can be made.

Base Station: Geometrics 856-AX operating at 1 reading per second, set up near local grid.

Rover: Geometrics Model G-859 Mineral Mag™, portable cesium vapour magnetometer with integrated Novatel Smart Antenna™ for sub-meter positioning.

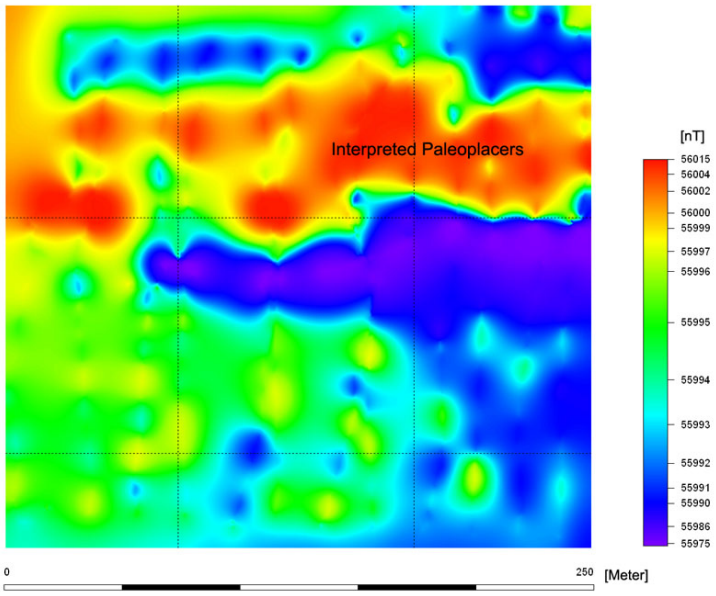


Figure 6: Geometrics G-859 rover magnetometer, and magnetic paleo-channel (Arctic Geophysics)

In completion of the magnetic surveys, data processing and map generation will follow so that test pit samples can be laid out in an orderly manner.

Placer Test Pitting and Processing

Test pits are dug with a Hyundai 480 Excavator on tracks. A large excavator is required because when mud and gravel is frozen, a significant force is required to dig down to basal gravel layers which host placer gold mineralization.

Previous sampling using this excavator has resulted in collection of three samples per day in the Indian River valley. Based on 10-days sampling, about 30 test pits will be sampled.

If coarse basal gravels are encountered, the gravel will be sampled and collected in pails for testing. Placer samples of about 50 litres each are transported to Northern Exposure's Indian River camp for processing. Sample processing and gold classification is completed by a senior geologist.

Figure 7: Test pit in Indian River valley beside a coarse tailings pile

The initial sample volume is measured, and samples are fed to the hopper/grizzly which removes +2.5 cm material. Undersize gravel and sand washed though the grizzly and down the sluice with clean water. Devon sluice uses an array of vortex-shaped holes that are cut into a thick sheet of aluminum. When tabular water flow carries sand over the vortex-shaped holes, flow is disrupted by the cyclone-shaped holes below, which create a low-pressure cell to capture and hold heavy minerals.

Figure 8: Feeding the Devon Sluice: Indian River Prospector Model in 2016

On completion of sluicing, a heavy mineral concentrate is washed from the Devon sluice to a large gold pan. The Devon sluice is that the sluice is then thoroughly cleaned, which is a simple process because of the exceptional design of this gold concentrator.

The heavy mineral concentrate from the Devon Sluice is panned, and gold grains are recovered and isolated from other heavy minerals. Gold grains are grouped according to standard sieve sizes, counted and described.

Based on experience, an average of three samples can be processed daily, which provides same-day results. This allows subsequent sampling to actively follow positive results.

Figure 9: Placer gold recovered from exploration sample at Indian River

Gold data is then entered to excel and plotted with GIS.

Gold grain size distribution is compared to an ever-increasing placer gold dataset from Indian River, which is used to estimate an indication of gold grade.

Additional test pits will be dug and sampled until a mineable pit is delineated, and marked for development.

Exploration Results

Regional high-level airborne geophysical surveys like GSC Open File 3992 prominently display strong magnetic anomalies in the south which may correspond to andesitic volcanism related to emplacement and eruption of Haystack Mountain, in the southern part of Figure 10.

A weak north-trending magnetic low anomaly from Haystack Mountain crosses Indian River Valley in the airborne dataset. This trend has been named Haystack Reef, as it may represent intrusive rocks related to andesitic volcanism at Haystack Mountain.

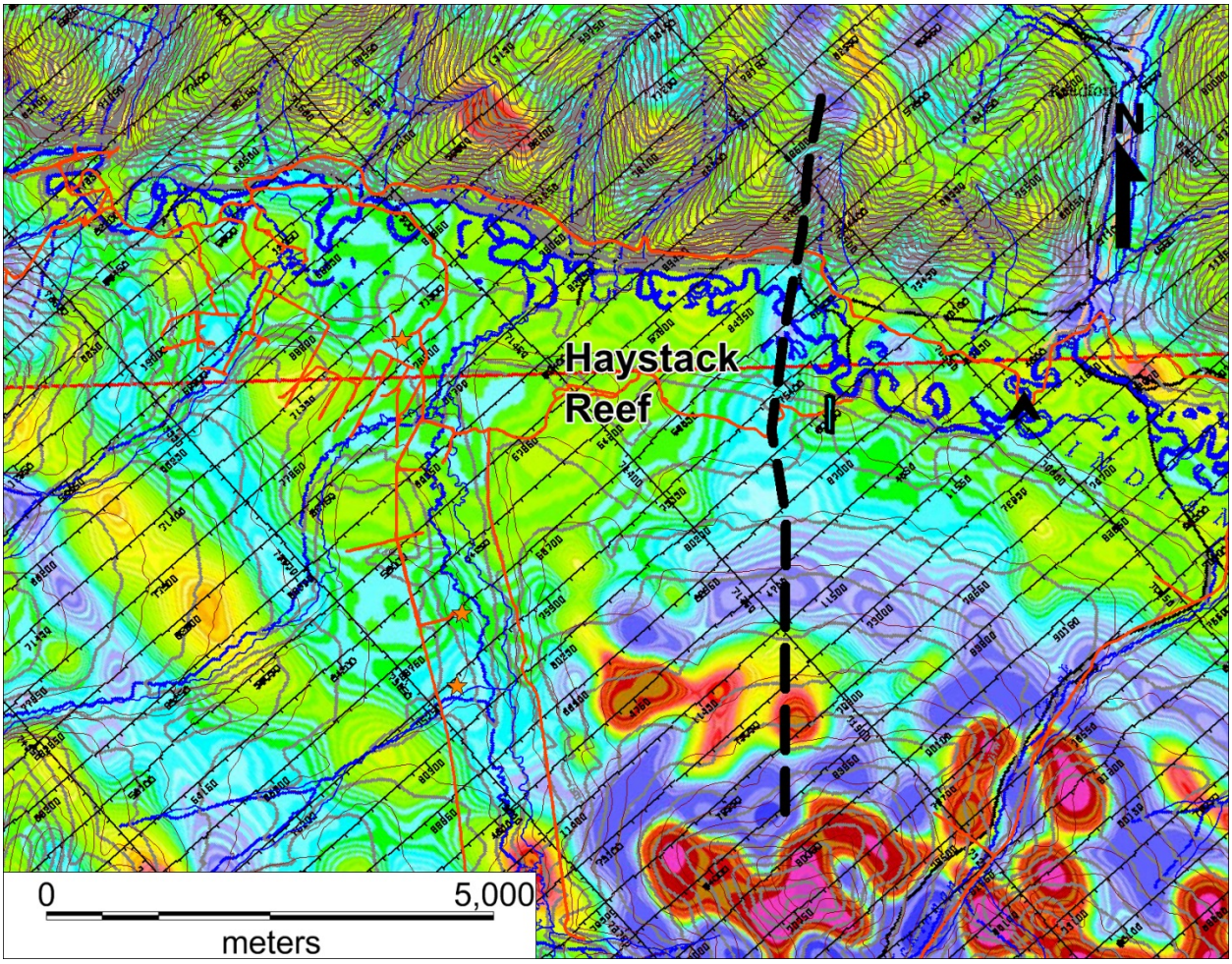


Figure 10: Magnetic First Vertical Derivative Map with haystack Reef Lineament, and trails in red.

Ground Magnetometer Surveys

Equipment necessary to conduct magnetometer geophysical surveys were brought to Indian River to search for placer gold.

Geophysical crews targeted two areas:

1. Haystack Reef, which is located in the Indian River valley
2. Haystack Bench, which is located on a high plateau immediately south of Haystack Reef.

Gridded total field magnetic image of each survey is show on Figure 11.

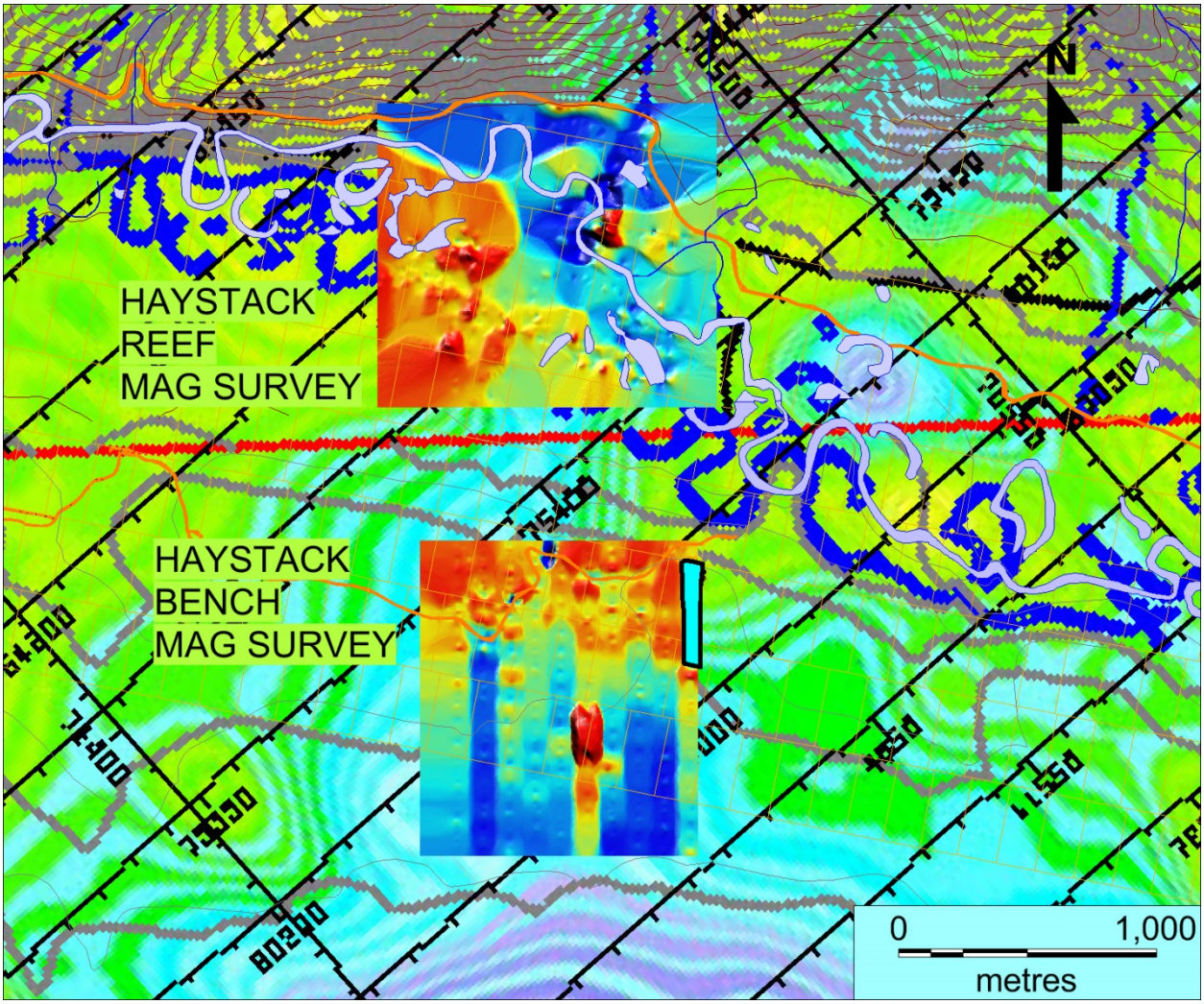


Figure 11: Ground Magnetic Surveys completed in the project area.

HAYSTACK REEF

Geophysical surveys began in the Indian River valley with the objectives to map bedrock intrusions and map areas of unmined ground with good potential for gold paleoplacer deposits.

A Geometrics G-856AX base station was established, with sensor on a tripod located on the grid at UTM 7 V 589326E 7070726N (NAD83). The base station was set on automatic mode at the start of each survey day, reading every 10 seconds, and shut down at the end of the survey day then downloaded at camp.

Figure 12: Base Station sensor on tripod and magnetometer set 20m away on Haystack Reef.

Grid lines were surveyed using a Geometric G-859 Cesium Rover magnetometer with on-board Novatel GPS. The magnetometer was set to read at 5 hertz (5 readings per second) and the GPS sensor collected location data once per second, with sub-meter accuracy.

The Rover was dumped at the end of each survey day, and MagMap2000 software was used for diurnal corrections, to remove spikes and dropouts, and to apply simple filters. When data was sufficiently clean, an ASCII file in Geosoft format (*.XYZ) was generated.

The magnetometer operator was magnetically clean, wearing no significant metal and non-ferrous boots for the entire survey. The operator was accompanied by a GPS operator, who carried safety equipment and ferrous items like an axe or machete to clear thick bush that entangles cables and antennae.

Haystack Reef surveys occurred on August 1, 2, 3, and 9, 2017.

The survey area has undergone considerable mining in the past, which posed a significant challenge to establishing surveys that resembled a grid pattern over the project. Crews followed berms and shorelines of man-made lakes which are resultant from placer mining operations of the past.

Initial lines in the north were run east-west in the northern part of the survey. A nominal line spacing of about 100m was established along shorelines and berms over flooded placer mine pits. This line spacing

was suitable to map a mafic dike from an outcrop on the road in the north, southward sub-parallel to the trend first observed in sparse regional airborne data.

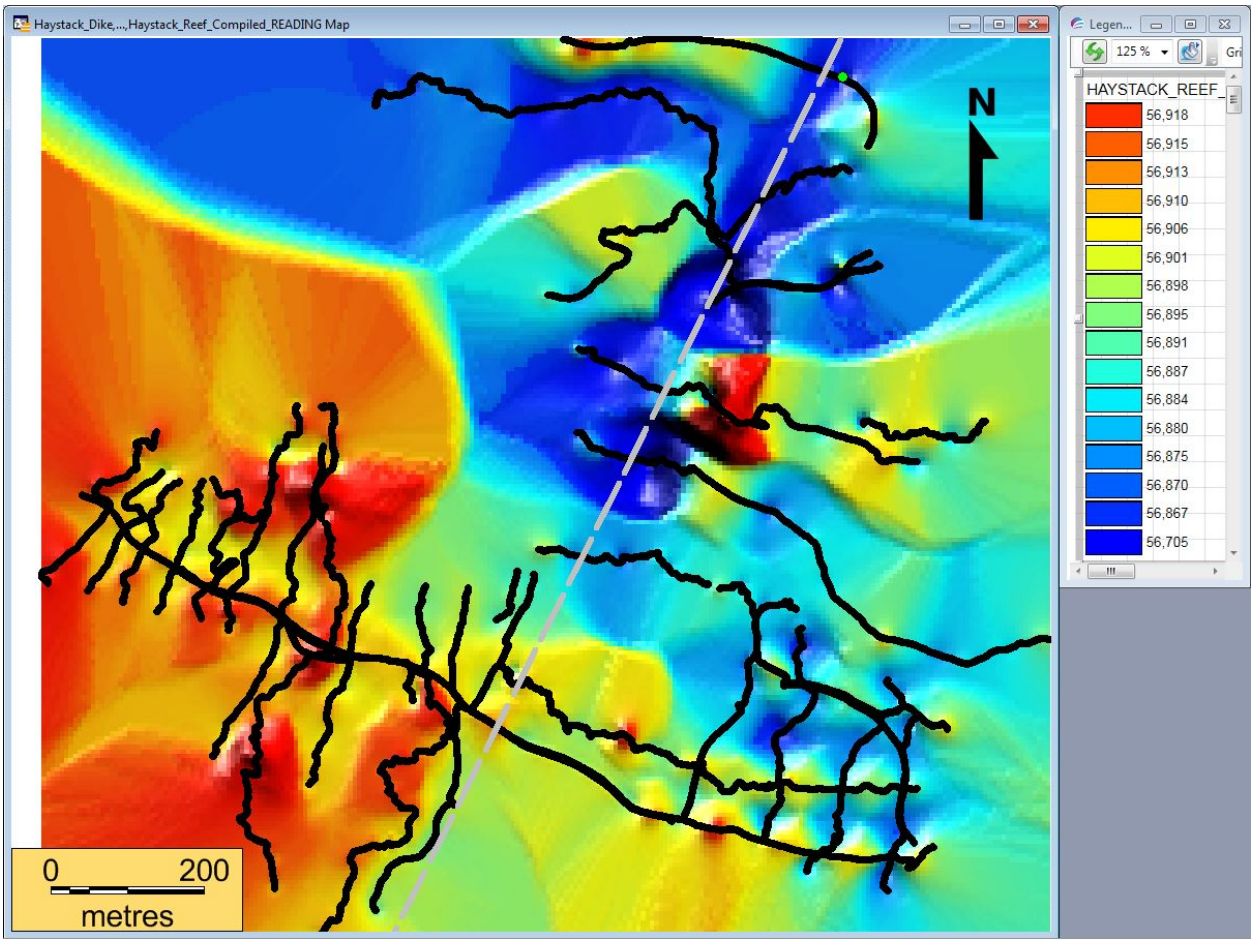


Figure 13: Haystack Reef Survey lines followed trails, berms, game trails and shorelines when available.

Current work by Northern Exposures has mapped reverse-polarized magnetic intrusive dikes cutting through metaquartzite and conglomerate host rocks (which are non-magnetic). Numerous ground magnetic surveys have been completed in the project area, which reveal that the broad magnetic low airborne response is mapping a north-trending dike swarm.

One magnetic mafic dike outcrops on a road that extends along the north bank of the river. A magnetic survey along this road generated a significant magnetic response as the survey crossed the magnetic dike.

A strong negative magnetic response was mapped along the road as the operator surveyed past the mafic dike. Another anomaly exists west of the dike outcrop, which suggests another dike is present but buried just west of this outcrop.

Figure 14: Haystack Dike, a fine grained gabbro/andesite dike that is resistant to erosion.

The outcrop exposure (NAD83 Zone 7 V 589398E 7071541N) shows that the mafic dike is more resistant to weathering, and forms a topographic high compared to adjacent Klondike schist rocks. The weathering profile of this dike could change as the dike cuts conglomerate or sandstone in Indian River valley and on Haystack Bench south of Indian River.

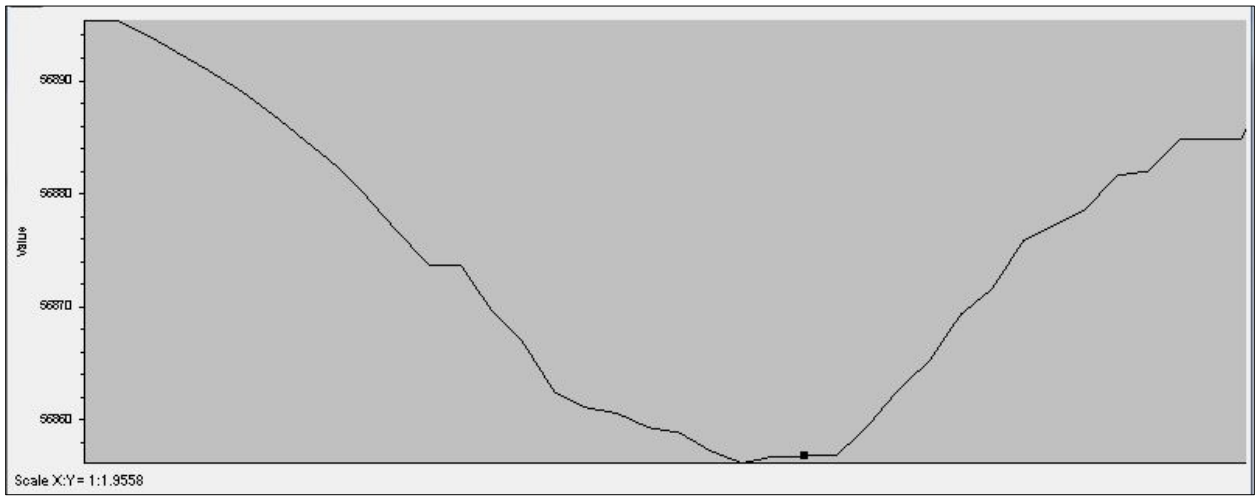


Figure 15: Haystack Dike Magnetic Profile (Dike location is small black square).

Because large lakes now occupy prior mined pits, the optimal plan of 50m-spaced lines is not possible unless the lakes are frozen. Current traverses are along shorelines and discontinuous berms. Surveys also were completed using moose trails and other natural openings in otherwise thick bush, so the survey lines are not straight.

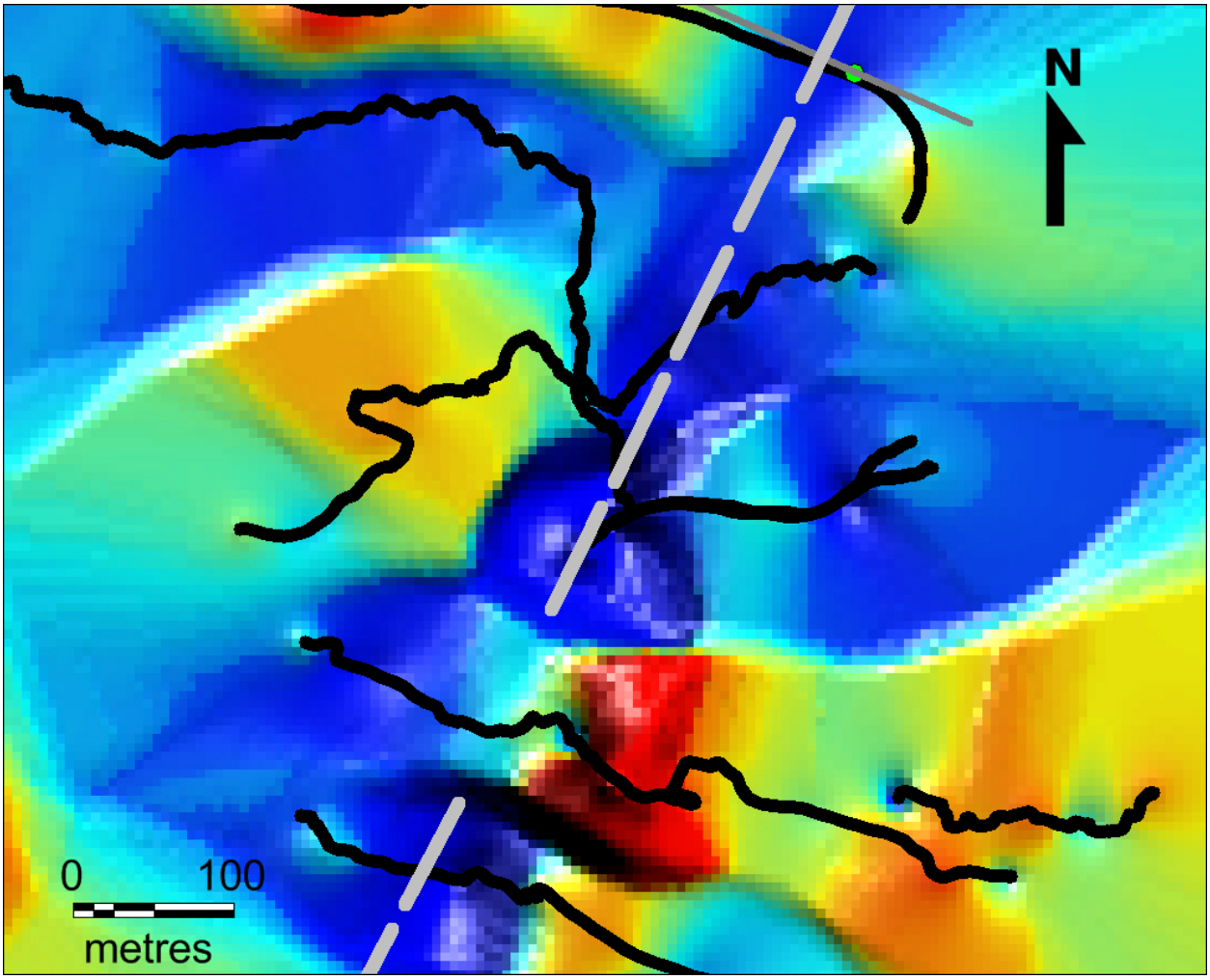


Figure 16: Haystack Dike gridded image; Dike OC is green dot; Profile is along solid Grey Line.

Gridding software maps a prominent magnetic low for about 700m that passes through the Dike OC (outcrop) location, which confirms the mafic dike crosses beneath Indian River gravels in the vicinity of very large continuously mined pits, with large tailings piles.

Previous placer operators mined large continuous areas of Indian River valley gravels downstream of Haystack Reef, which suggests placer gold deposits in this area had good grade. Some of the largest pits in this part of Indian River valley occur at Haystack Reef, and prior pits fit together like pieces of a jigsaw puzzle, leaving no unmined ground.

The strong magnetic high (red) anomaly in the southern part of Figure 16 corresponds to a large tailings pile that the geophysical crew climbed over.

The northern part of the survey is mined, leaving few areas for test pitting or new economic placer pits.

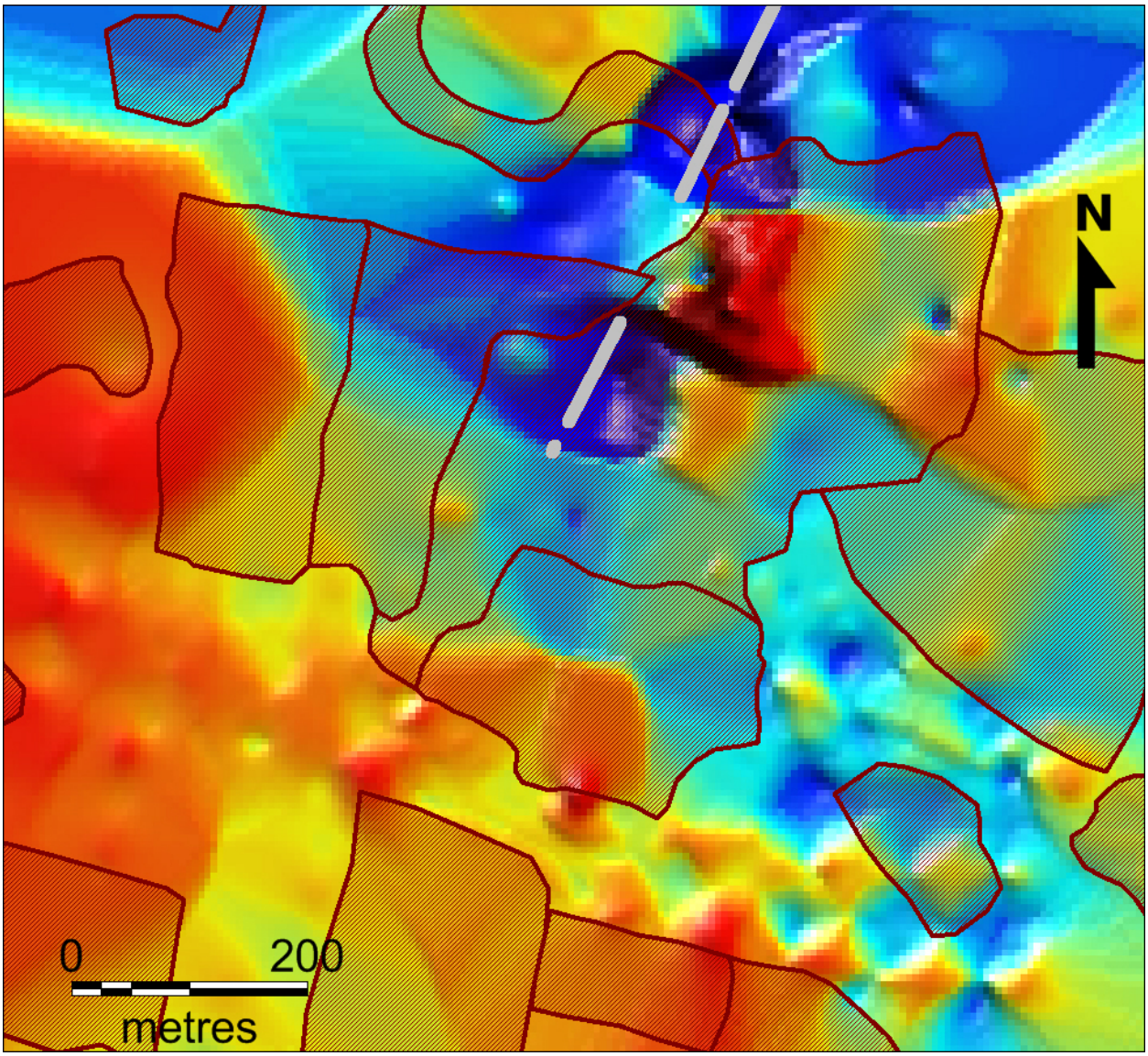


Figure 17: Mafic dikes strike beneath unmined ground and potential gold placer deposits that are mapped with positive background magnetic response.

Unmined ground present in the southern part of the survey area (Figure 17) with previously mined pits indicated by cross-hatched brick-red polygons. In this area higher magnetic background levels are present which may correspond to gravel containing significant black sand (magnetite). A layer of gravel with significant magnetite may mask the negative magnetic response of mafic dikes, which likely occur beneath Indian River gravels. The magnetometer survey may have characterized the gravel in areas that require testing to determine if they have a high content of magnetic minerals and other heavy minerals such as placer gold.

The elevated magnetic response in the southern part of the Haystack Reef survey may be mapping gold-bearing paleo-placer deposits. The magnetometer image was converted to *.kmz files and uploaded to a Garmin GpsMAP62st and used to select test pits for sampling.

HAYSTACK BENCH

Northern Exposures also conducted magnetometer surveys on the south raised bench of Indian River, locally known as Haystack Bench. This survey also mapped a magnetic low (possibly a reverse-polarized mafic dike) and another unusually strong isolated magnetic anomaly located in a stream valley on the bench.

A nominal grid of 1.2km long north-south lines using an existing ATV trail and other previously cut lines as tie lines was laid out using GIS, and uploaded to GPS.

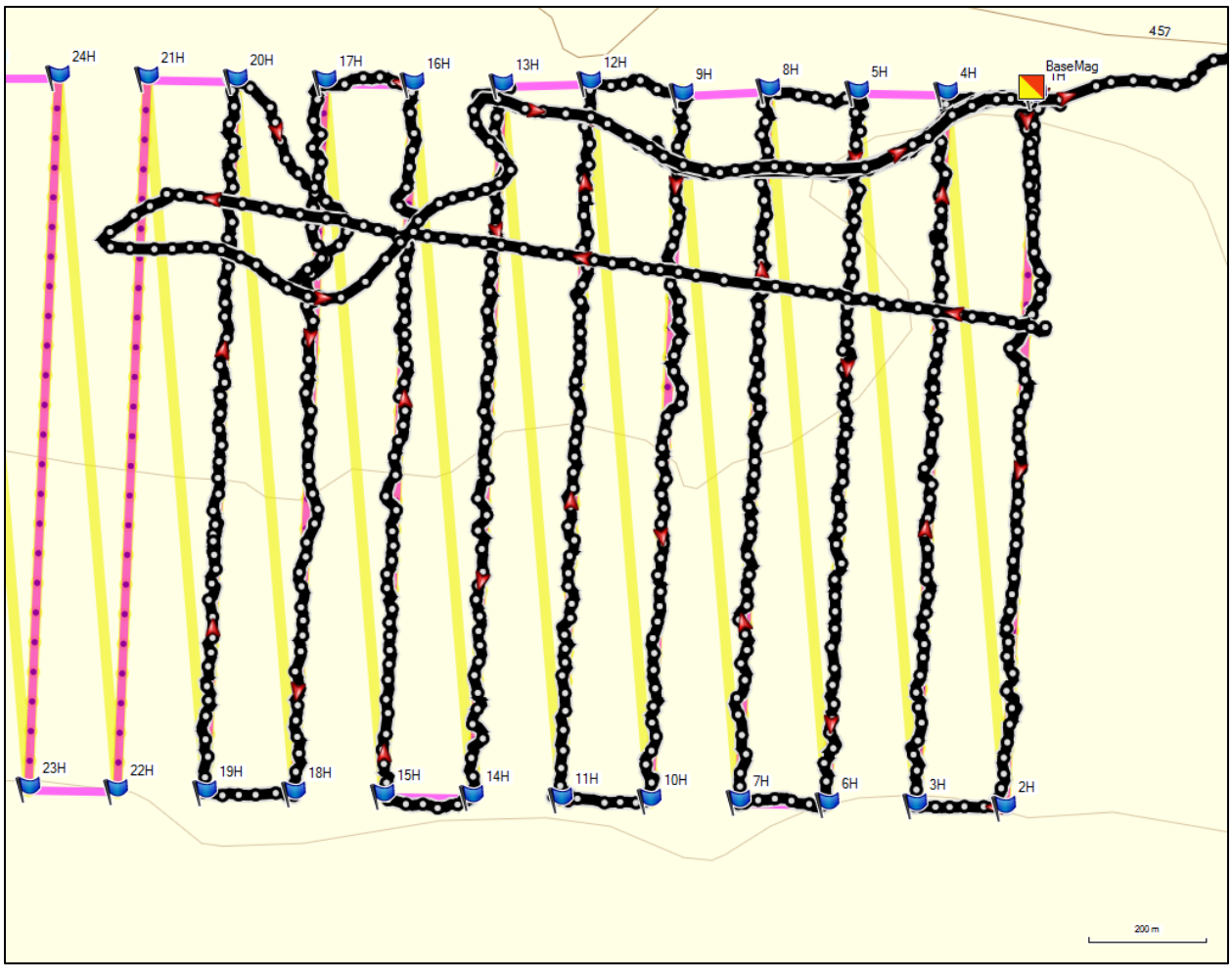


Figure 18: Garmin MapSource display of Haystack Bench 100m N-S grid, and Base Station location.

Access to the grid is along existing roads and trails at Indian River. Due to a significant climb up to the bench from river level, two ATVs were utilized to carry the geophysical equipment and crew to the Haystack Bench grid.

A Geometrics G-856AX base station was established, with sensor on a tripod located on the grid at UTM 7 V 589565E 7069909N (NAD83). The base station was set on automatic mode at the start of each survey day, reading every 10 seconds, and shut down at the end of the survey day.

Figure 19: Base Station sensor on tripod and magnetometer set 20m away on Haystack Bench.

Once the base station was collecting diurnal readings, the crew used GPS to navigate along the grid from one line to the next.

A geophysical technician used GPS navigation (Garmin GPSmap76CSx) and followed a pre-programmed route that was generated using GIS, which was then loaded to GPS using Garmin MapSource software. The GPS operator carried safety equipment and ferrous items like an axe or machete to clear thick bush that entangles cables and antennae, and kept 20-50m ahead of the magnetometer operator.

Grid lines were surveyed using a Geometric G-859 Cesium magnetometer with on-board Novatel GPS. The magnetometer was set to read at 5 hertz (5 readings per second) and the GPS sensor collected location data once per second, with sub-meter accuracy.

The Rover was dumped at the end of each survey day, and MagMap2000 software was used for diurnal corrections, to remove spikes and dropouts, and to apply simple filters. When data was sufficiently clean, an ASCII file in Geosoft format (*.XYZ) was generated.

Haystack Bench surveys occurred on August 4, 5, 6, 7, 8 and 14, 2017.

On August 4, the operator noticed significant noise and expected a magnetic storm was occurring. Canadian Space weather verified active weather during survey times on August 4, 2017, and the day's production was lost.

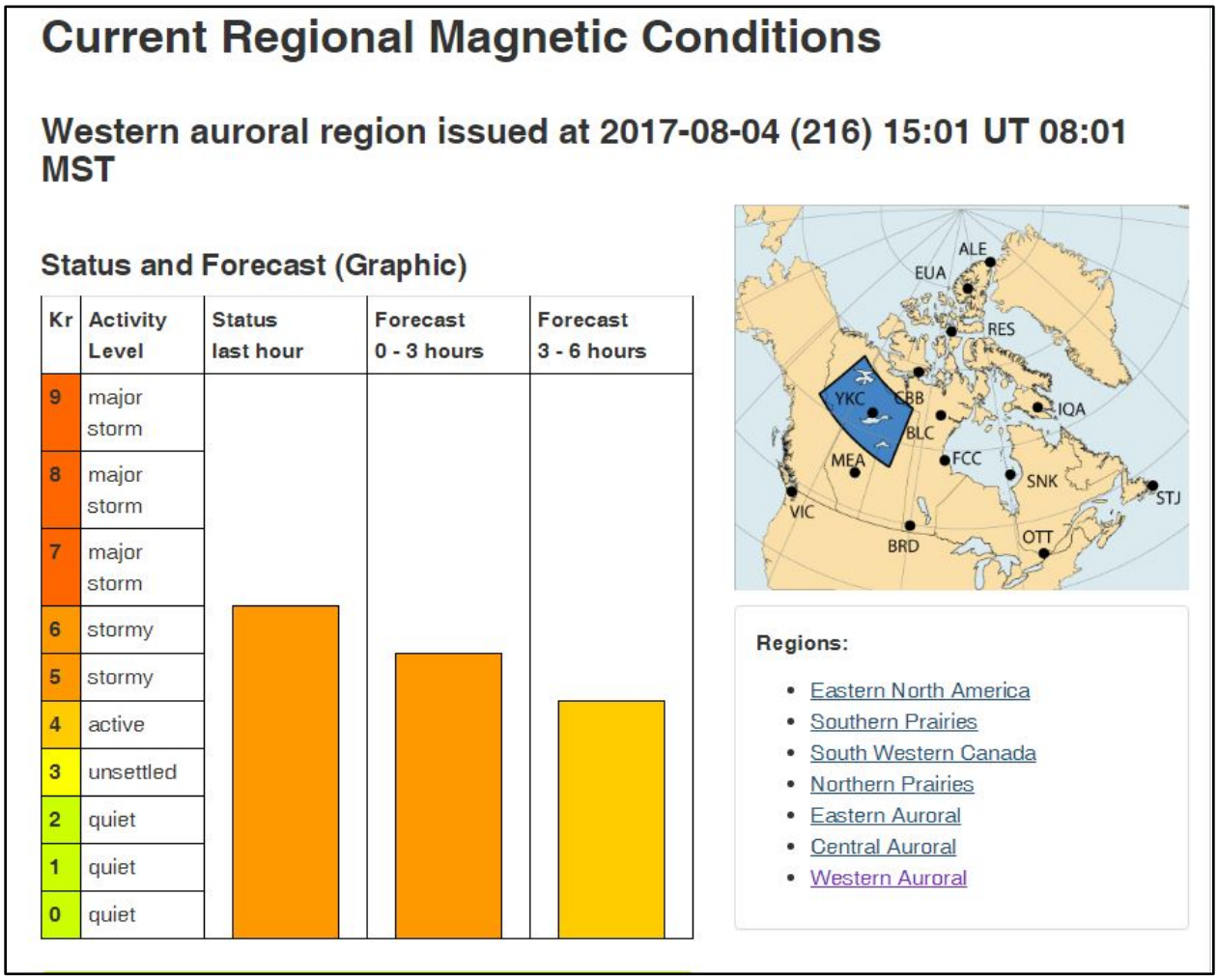


Figure 20: Active Space weather in Yukon resulted in a lost day on August 4, 2017.

The magnetometer operator was magnetically clean, wearing no significant metal and non-ferrous boots for the entire survey.

On one line the crew swapped jobs, but they soon learned that the rubber boots worn by the GPS operator had steel shanks, which resulted in significantly noise. The line was re-run.

When data was initially processed and viewed in GIS, it was immediately obvious that the dataset was striped along lines, which can occur for a variety of technical reasons that are beyond the scope of this report.

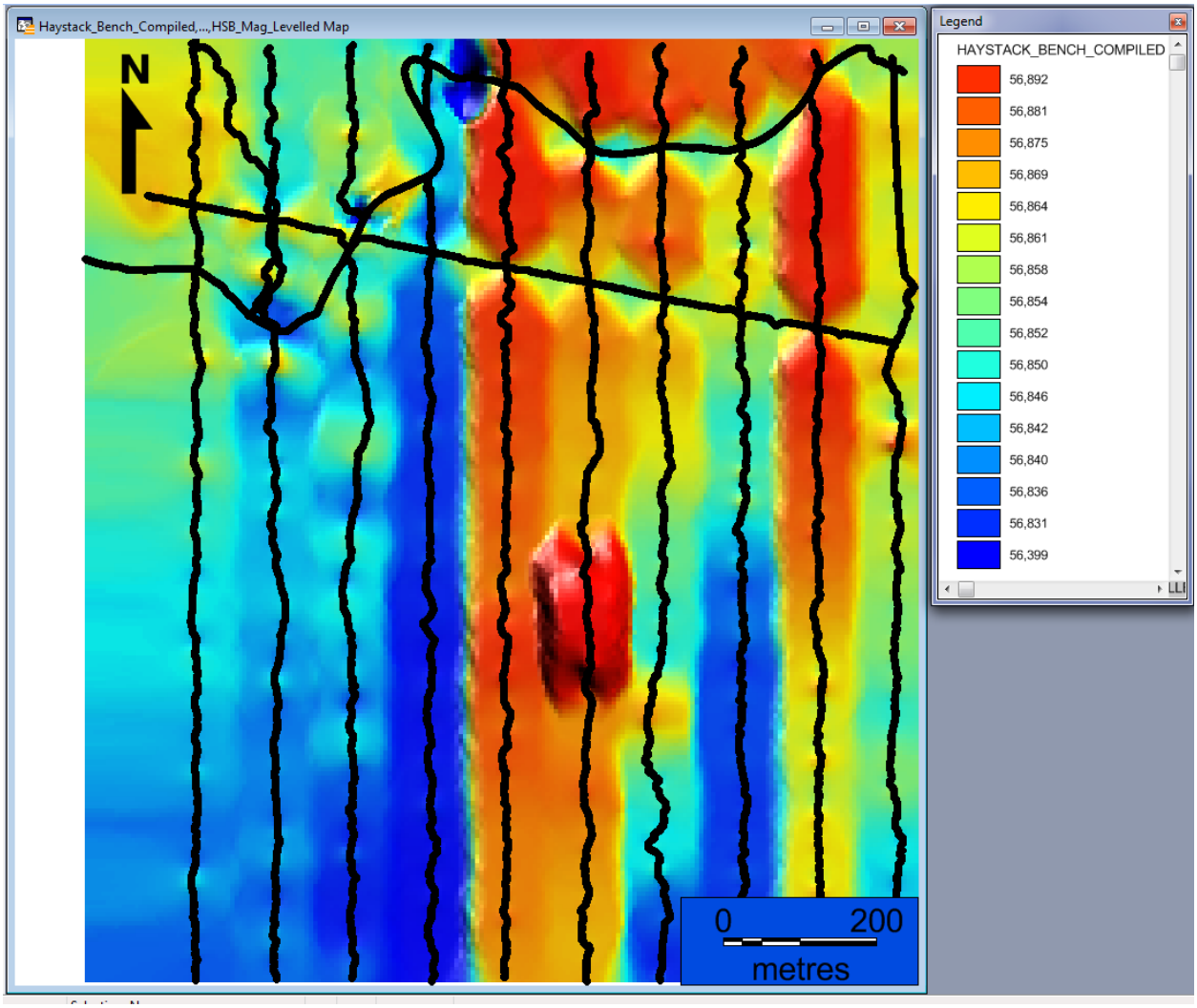


Figure 21: Haystack Bench Magnetometer survey, showing significant striping along lines.

Striping can be filtered by conducting tie-line surveys and applying a correction to readings collected on grid lines.

An ATV trail and a previously cut line were surveyed across grid lines to tie-in readings to level the data and reduce the magnetic striping was evident in un-levelled data (Figure 22). Geophysical software can level data with the push of a button, but this expensive software was not available to the operator, so levelling corrections were manually applied to the GIS-based magnetometer reading database. This process took considerable time.

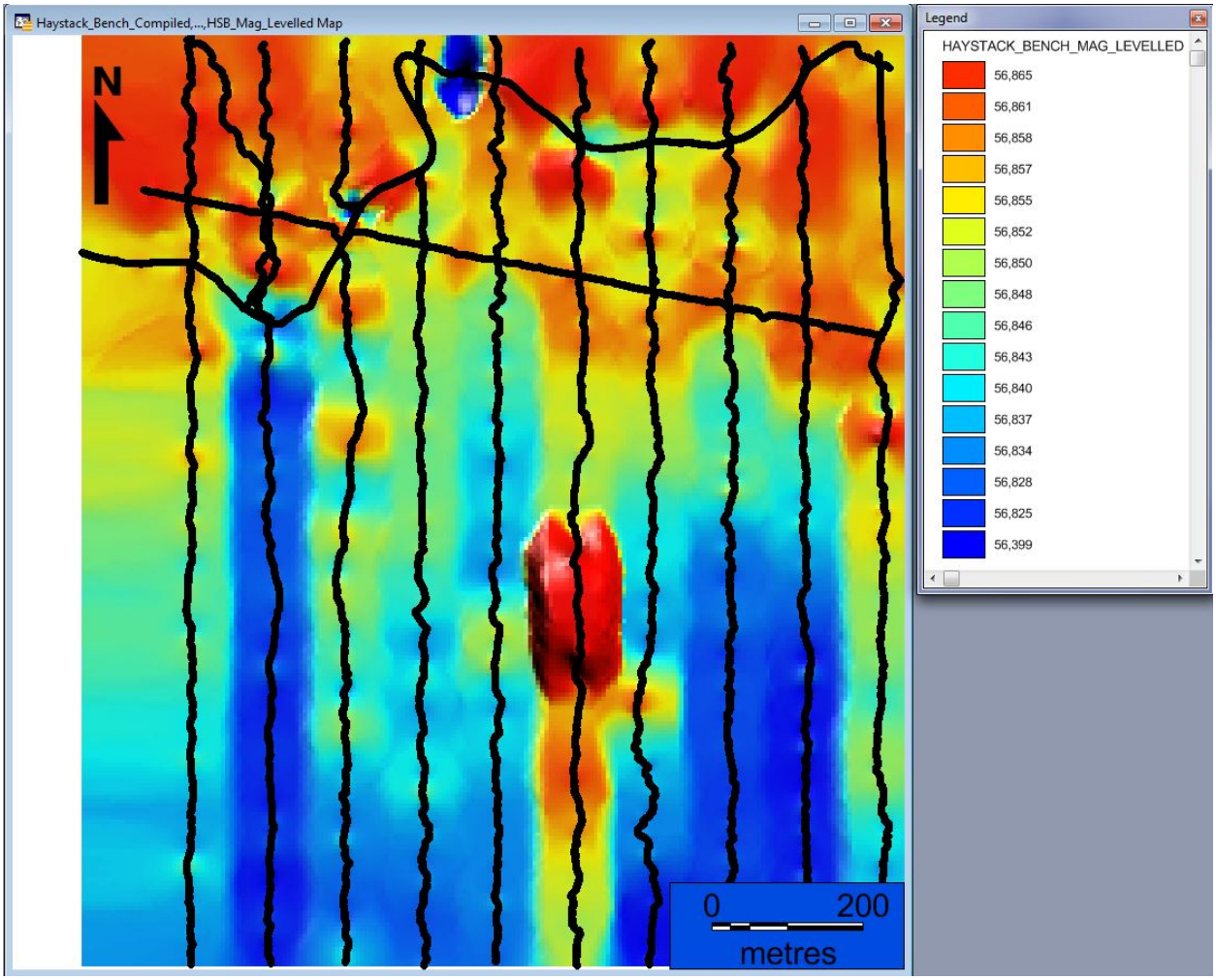


Figure 22: Haystack Bench Magnetometer survey, showing ten 1.2 km long wing lines, and two tie lines.

Placer gold mineralization is known on perched gravels at Indian River in other areas (see Page 18 – this report), so test pitting will be conducted in perched gravels near the dike, and downstream of the dike in search of new economic placer deposits. If gold is found on the Haystack Reef Bench, then additional test pitting will be conducted until an economic pit is delineated.

Pay gravel contains a high concentrate of black sand paramagnetic minerals and magnetite, and therefore may be indicated on magnetic maps as areas with higher background magnetism.

At Haystack bench, the 290° Azimuth cut line follows the southern limit of high magnetic background. This area should be tested using an excavator to determine if high background magnetism is mapping heavy mineral concentrates in coarse basal gravel. Sampling should target basal gravels, and they should be of sufficient size to measure gold content.

The southern portion of the grid, which is dominated by lower magnetic background, is of low interest. The quality of the magnetic survey itself would benefit from another E-W tie line to filter out striping in this area, but with no indications of placer gold at present. Surveying another tie line in the south part of the grid is not justified given the area is unresponsive to magnetometer surveys.

MAG LOW

A prominent magnetic low anomaly occurs in the north part of the grid on the tie line conducted along the ATV trail. The significant response may be a bedrock response from an underlying reverse-polarized mafic dike. The operator noticed the response during the survey and did not see anything on surface to explain the anomaly.

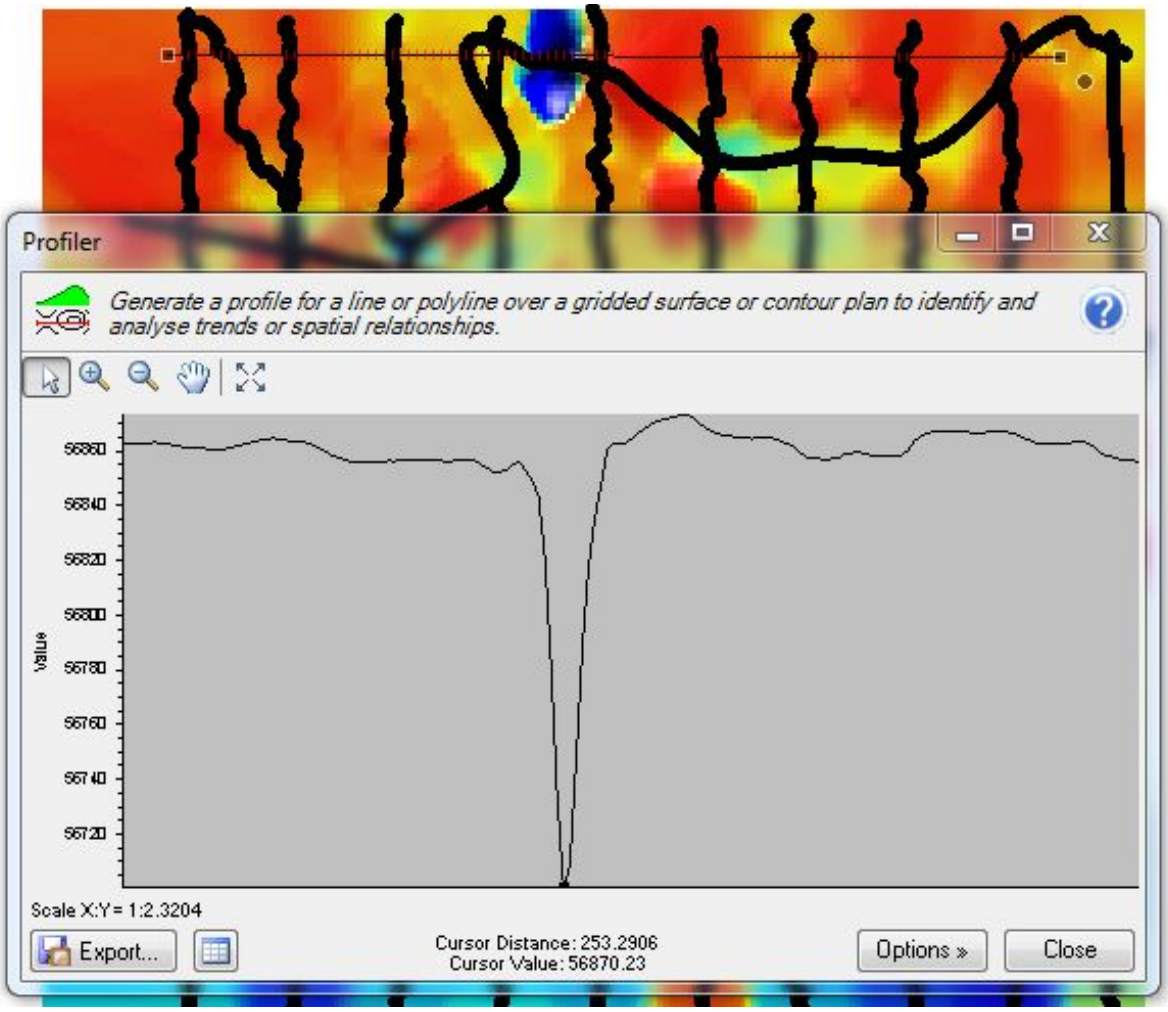


Figure 23: Magnetic profile of magnetic low anomaly at 589,019E and 7,069,851N (NAD83 z 7).

The anomaly is only a couple meters wide, and therefore may be a result of a narrow magnetic mafic dike, as found on the Haystack Reef survey.

A test pit is required to explain the magnetic low anomaly. Basal gravels should also be tested in this area in case the dike forms a raised bedrock structure capable of concentrating economic quantities of placer gold.

MAG HIGH

A prominent magnetic high anomaly occurs along a narrow drainage that followed the line for the entire length of the anomaly. The response only occurs on one line, and the operator did not see any reason on surface to explain the anomaly. This anomaly cannot be explained by buried metal or other cultural debris, as the area is undisturbed.

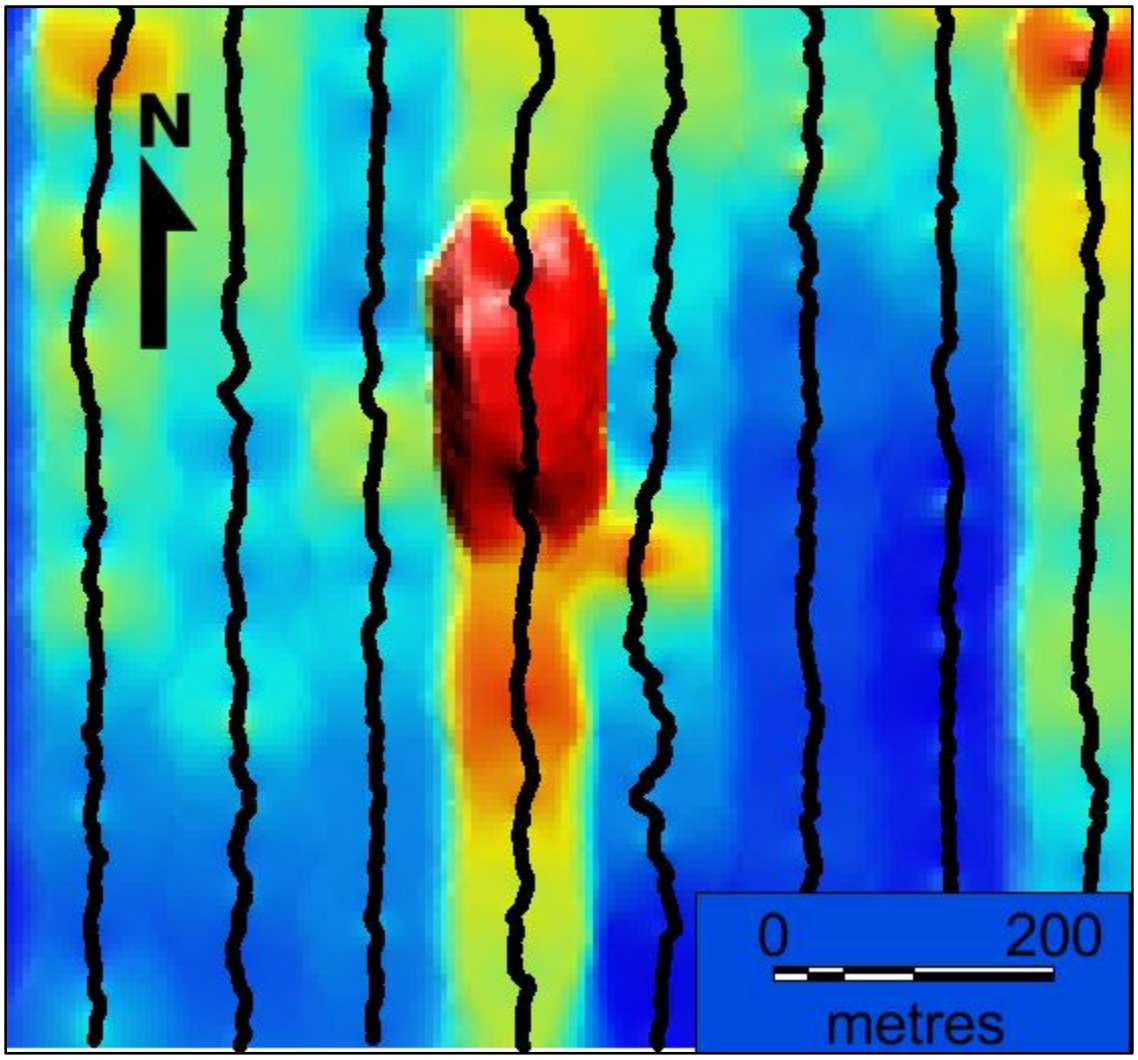


Figure 24: Magnetic high anomaly at 589,170E and 7,069,162N (NAD83 z 7).

The magnetic high anomaly and sub-parallel drainage should be trenched, and tested for heavy minerals and gold in basal gravels.

Magnetometer surveys at Haystack Bench located two prominent magnetic targets that are worth follow-up exploration. Detailed magnetometer surveys oriented in an East-West grid is recommended, as well as test pitting.

The large northern area of Haystack Bench has elevated magnetometer readings which is similar to unmined areas of Haystack Reef. Test pitting is recommended in areas of higher magnetic response, and samples collected should be tested for placer gold.

Placer Test Pits and Sample Processing

Test pitting commenced at Haystack Reef mid-August and continued thru September. Sampling occurred at sites, from which 24 samples, 50 and 60 litres volume were collected. Six test pits were not sampled for various reasons. Sampling only occurred where surficial characteristics suggested the area was not previously mined and coarse basal gravel is present.

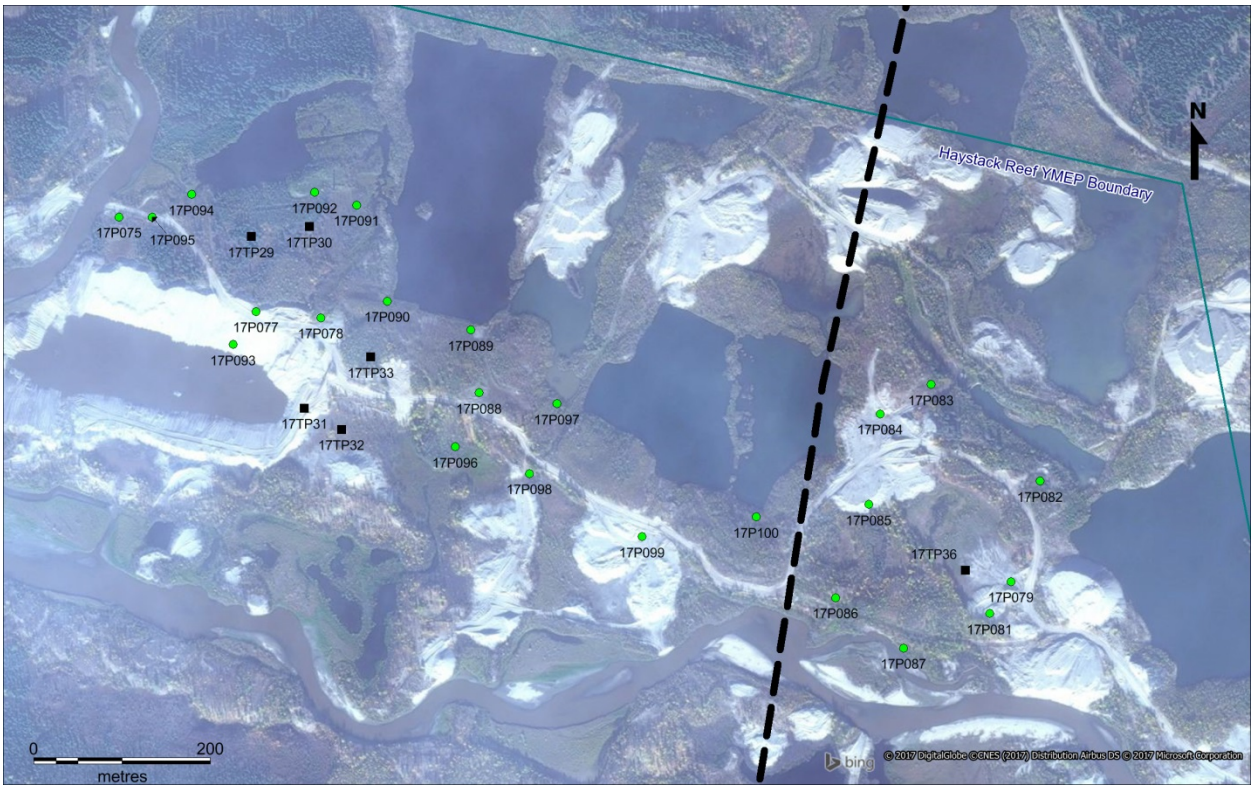


Figure 25: Test pit locations in Haystack Reef area.

Table 2: Haystack Reef Test Pit Locations.

SampleID	E_NAD83z7	N_NAD83z7	RL_m	Depth_m	Push	Virgin	Surface_Mud	MidGravels	WC_Present	Bedrock	Notes
17TP45	588883	7070621	423	4.5	4.5	N		0	N	sandstone	1.5m brown push, 3m grey coarse cobble-sand push, sandstone bedrock
17TP29	588596	7070959	425	4	0	y	4	0			Dug 4m into grey-brown sand, frozen, no sample, tried again on Sept 20th
17TP30	588662	7070972	425	4	0	y	4	0			4m deep hole in fine grey sand, minor cobble gravel at base, flooding, possibly hole is for 17P077 moved to roadside to avoid carrying pails
17TP31	588662	7070766	428	3	0	y	3	0			Top is thick unit of fine sand, base is sand/cobble layer, no sample
17TP32	588705	7070743	427	3	0	y	3	0			3m deep test hole, grey fine silt/sand, no gravels, no sample
17TP33	588736	7070826	431	4	0	y	4	0			4m deep hole, dark grey-brown sand, 1m basal pebble cobble gravel, no sample
17TP36	589419	7070603	428	2	0	N	4	0	N	sandstone	2m sand, 4m grey clay, sandstone bedrock, old pit
17TP37	589447	7070507	417	7	7	N		0	N	sandstone	7m push/mixed with clay, grey sandstone bedrock
17TP38	588730	7070899	433	3.2	0	Y	2	1	Y	Grey siltstone	2m grey silt and black organics/mud, 1m sand and pebbles, 20cm coarse sand and cobbles (thin no sample), grey sandstone bedrock
17TP39	588562	7070908	421	3.5	1.5	Y	2	0	Y		1.5m push, pebbly sand, 2m brown silt, 0m Frozen cobble boulder gravel, no sample
17TP40	588562	7070954	422	4.4	1	Y	2.9	0.5	Y		1m push, 40cm organic with roots, 2.5m brown silt, 50cm pebble gravel, Frozen - no sample

SampleID	E_NAD83z7	N_NAD83z7	RL_m	Depth_m	Push	Virgin	Surface_Mud	MidGravels	WC_Present	Bedrock	Notes
17TP41	588513	7071016	421	6	6	N		0	N	grey bedrock	6m push, red top 50cm, rest is grey, mined!, light grey bedrock
17TP42	588498	7071047	423	3	3	N		0	N		Grey clay top/ cobble mix, mined
17TP43	588464	7071046	423	5	3	N	2	0	N		2m river sands, 3m grey mud, mined
17TP44	588946	7070654	423	6	6	N		0	N	sandstone	6m grey clay, mine slimes, sandstone bedrock
17TP46	588837	7070572	423	5.3	3	Y	0.8	1.5	N		1.5m brown push, 1.5m grey push, 80cm grey clay, 1.5m brown pebble-sand gravel, likely virgin, no coarse pay observed, no sample
17TP47	588869	7070691	421	4	0	N	4	0	N	sandstone	4m grey mud, brown broken sandstone
17TP48	589057	7070693	423	6.5	4	N		2.5	N		4m push on S side lake, 2.5m washed gravel, mined
17TP49	589187	7070667	422	4	3	N		1	N		3m push brown and earthy look, 1m grey-black coarse cobble boulder gravel, up to 40cm boulders, not sampled, black sketchy look

Table 3: Haystack Reef Sluice Results with Weight of Gold in milligrams.

SampleID	E_NAD83z7	N_NAD83z7	Volume_l	mg_Au_Weighed
17P075	588445	7070977	59	0.003
17P077	588604	7070874	59	0.03
17P078	588678	7070869	59	0.002
17P079	589471	7070592	59	0.008
17P081	589448	7070555	57	0.007
17P082	589501	7070707	58	0.244
17P083	589374	7070813	60	0.251
17P084	589317	7070778	60	0.026
17P085	589307	7070675	60	0.001
17P086	589272	7070568	56	0.08
17P087	589351	7070513	58	0.391
17P088	588860	7070789	58	0.055
17P089	588849	7070860	58	0.032
17P090	588753	7070890	59	0.024
17P091	588715	7070998	59	0.027
17P092	588667	7071011	60	0.018
17P093	588579	7070836	62	0.011
17P094	588527	7071005	60	0.007
17P095	588483	7070978	62	0.013
17P096	588835	7070727	62	0.047
17P097	588949	7070779	60	0.002
17P098	588920	7070699	60	0.044
17P099	589050	7070631	60	0.006
17P100	589179	7070657	60	0.001

Test pitting continued into late September, and processing into October. Positive samples are shown in Figure 26 with graduated red circles (big is better). Test Pits where no sample was collected are indicated with a black square. Samples are not collected when ground is frozen or the test pit location was previously mined or coarse basal gravel was not present. Details are provided in Table 2.

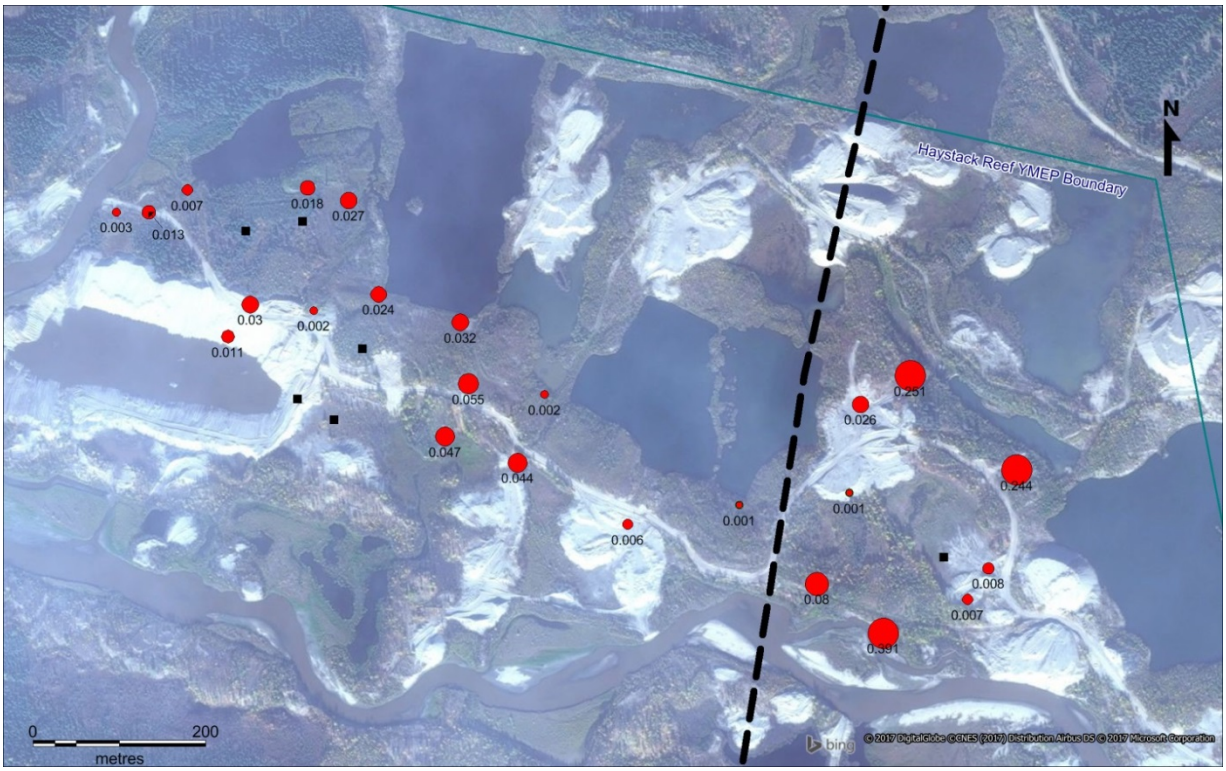


Figure 26: Gold content (mg. Au) in Test Pits of Haystack Reef.

Higher magnetic readings correlate with elevated gold values downstream of Haystack Reef. Elevated gold upstream does not correlate with elevated magnetics, so there is something else in play.

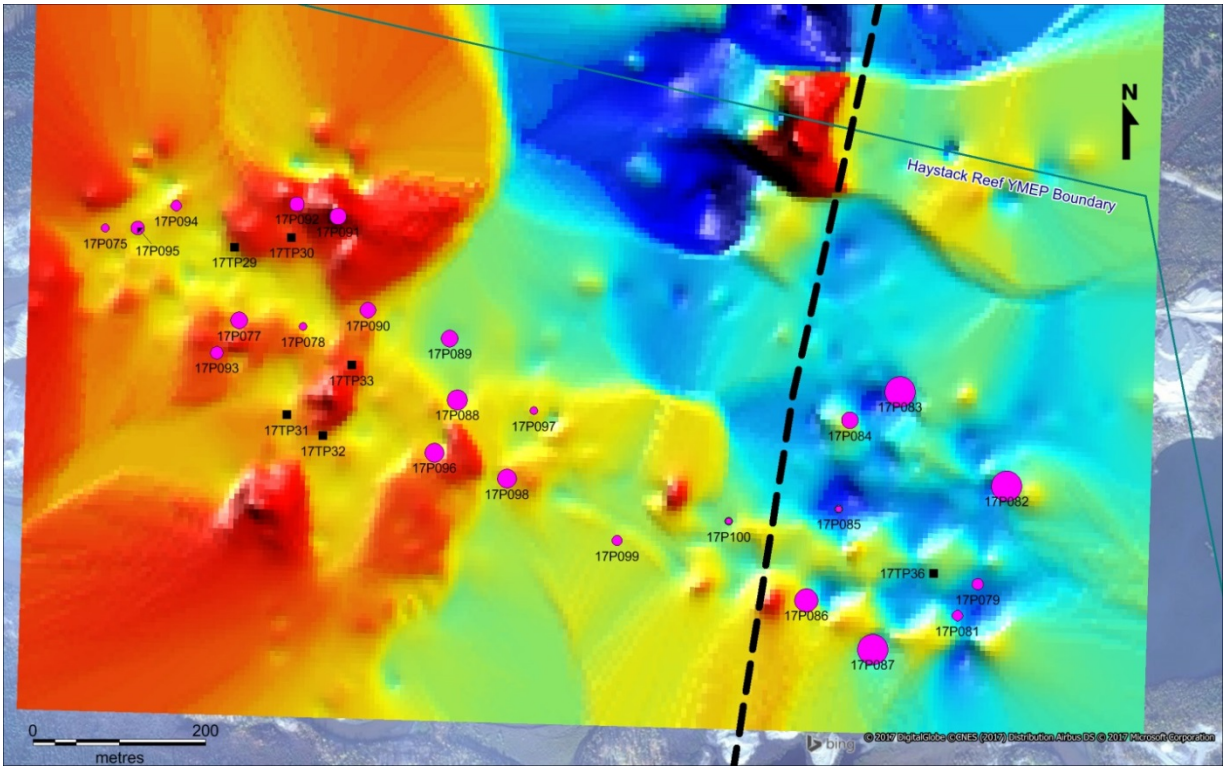


Figure 27: Test pit samples on Total Field Magnetics.

Budget

Current expenditures at Haystack Reef and Haystack Bench are tabulated below:

Table 4. Budget

Item	Cost	Unit	Number Units	Total
MAGNETOMETER				
Base and Rover Rental	$200	Per day	10 days	$2,000
Mag operator	$500	Per day	14.5 days	$7,250
GPS Operator	$250	Per day	10 days	$2,500
Mine Truck	$50	Per day	4 days	$200
ATVs (x2)	$40	Per day	6 days x 2 ATVs	$480
Data Processing	$500	Per day	3 days	$1,500
Daily Field Expenses	$100	Per day	25	$2,500
Yukon Mileage	0.54	Per km	1180 km	$637
TEST PITS AND SAMPLING				
Hyundai 480	$300 (* 75%)	Per hour (wet)	36	$10,800
Operator	$350	Per Day	9	$3,150
Sample Technician	$250	Per Day	8	$2,000
Geologist	$500	Per day	5	$2,500
Mine Truck	$50	Per day	11	$550
ATV	$40	Per Day	2	$80
Daily Field Expenses	$100	Per day	22	$2,200
Yukon Mileage	0.54	Per km	1054 km	$569
SAMPLE PROCESSING				
Senior Geologist	$500	Per Day	2	$1,000
Sample Technician	$250	Per Day	9	$2,250
2” Honda pump	$10	Per Day	9	$90
Daily Field Expenses	100	Per day	9	$900
REPORT				
Final Report and Maps				$7,000
TOTAL				**$50,156**
TOTAL YMEP REQUEST	**To Dec. 31st**			**$25,078**

Sampling and processing continued to the end of the mining season. Northern Exposures completed the proposed YMEP program as planned, within budget.

Personnel

Kevin Kivi	30+ year Professional Geologist, NAPEGG L821.
Allen McGregor	Veteran Yukon prospector and placer miner, and equipment operator
Labourers	As required, several Northen Exposures employees worked on project.

Project Timeline

Haystack Reef

Mobilization:	July 29, 2017
Magnetometer Surveys:	July 31 to August 9, 2017 - complete
Test Pits and Sample Processing:	August 19 - 21, 2017 and September 17-October 5, 2017.

Haystack Bench

Magnetometer Surveys:	August 4-14, 2017 - complete
Test Pits and Sample Processing:	TBA

Technical Report:	October 20-22, 2017 & January 21, 2018

Conclusions

Exploration work conducted at Haystack Reef and Haystack Bench has produced favourable results that warrant follow-up test pitting, and has identified several new areas that may warrant placer mining.

On Haystack Bench there are two significant magnetic anomalies that warrant test pitting next season to explain the anomalies, and test basal gravels for gold content.

At Haystack Reef magnetometer surveys and test pit sampling reported herein identified several areas where additional sampling is required to delineate a new placer mine pit and a large area of high values upstream from the Haystack Reef magnetic structure, locally known as the Donut Pit that will be mined in 2018.

Respectfully Submitted,

"Kevin Kivi"

Kevin R. Kivi, P.Geo.
KIVI Geoscience Inc.
January 22, 2018

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GSC Open File 3992, Magnetic First Vertical Derivative Map, 115O/14.

Yukon Geological Survey's Integrated Data System (YGSIDS), online at: http://data.geology.gov.yk.ca/

Certificate of Author

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I Kevin Robert Kivi, P.Geo., am a Professional Geoscientist, employed by KIVI Geoscience Inc. (KGI) of Thunder Bay, Ontario.

I am:

- A practising member of the Association of Professional Geoscientists of Ontario (APGO), Registration 0326, and formerly an elected councillor for NW Ontario;
- A member of the Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (NAPEGG), Registration L821;
- A member of the Association of Professional Engineers and Geoscientists of the Province of Manitoba (APEGM), Registration 25680.
- A member of the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS), Registration #13687.

I graduated from Lakehead University, Thunder Bay with a Bachelor of Science Geology (4 year programme) in 1983, and I have practiced in my profession continuously since 1983. Since 1983 I have been involved in:

- gold exploration with Ovaltex Inc. along the Cadillac Break in Rouyn and Val D'Or, Quebec in winters of 1984, 1985 and 1986, and between 1986-1988 in NW Ontario.
- diamond exploration with BP Resources Inc – Selco Division in Ontario, Quebec, Manitoba and NWT in summers of 1984, 1985 and 1988;
- gold and base metals exploration in NW Ontario with Rio Algom Exploration between 1988 and 1992.
- diamond exploration with Kennecott Canada Exploration between 1992-1994 at Lac De Gras, NWT, Diamond Laboratory Manager between 1995-2000 in Thunder Bay, Ontario, diamond exploration 2000-2004 in Wawa in Archean lamprophyric volcaniclastic rocks and Group 2 kimberlites, 2004, Exploration Manager at Diavik Diamond Mines Ltd, Lac De Gras, NT.
- 2004 to present: Geological consultant specializing in diamond, gold and base metal exploration in Canada, recently Placer Gold evaluation. My current clients include: Northern Exposures Ltd., Churchill Diamonds Corp., RT Minerals Corp., Arctic Star Exploration Corp., Aurion Resources Ltd., and Orebot Inc.

Dated at Thunder Bay, ON, CANADA this 22nd day of January, 2018.

KIVI Geoscience Inc.

Per: "Kevin Kivi"

Kevin R. Kivi, P.Geo., President