

MAP No.

105 D 3

ASSESSMENT REPORT  
N. M. E. A. P.  
CONFIDENTIAL  
OPEN FILE

X
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TYPE OF  
WORK: GEOCHEMICAL

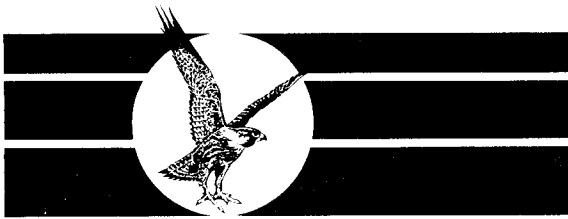
REPORT FILED UNDER	TALLY-HO EXPLORATION LTD.	DOCUMENT NO. 091793
DATE PERFORMED	JULY-SEPTEMBER 1985	DATE FILED: MARCH 26, 1986
LOCATION - LAT. LONG.	60° 17' N	AREA: WHEATON RIVER
	135° 12' W	
CLAIM NO.	CR; 8, 12 : NEIL 1-12	
VALUE \$		
WORK DONE BY	TALLY-HO EXPLORATION LTD.	
WORK DONE FOR	TALLY-HO EXPLORATION LTD.	

REMARKS  
35-GOLD HILL

A geochemical survey, consisting of 189 soil samples collected along flagged lines, was conducted in 1985. Samples were analyzed for gold, silver, copper and lead. Only two soil samples from the CR 8 claim were anomalous with 200 and 180 ppb Au. Detailed sampling in this area failed to detect further anomalies.

TEX 85 p. 92

091793

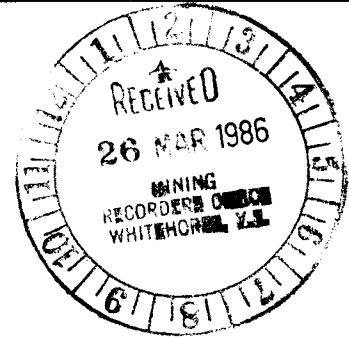


TALLY-HO EXPLORATION LTD.

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LISTED VANCOUVER STOCK EXCHANGE THL



ASSESSMENT REPORT

**GEOCHEMICAL SAMPLING**

**CR 8 (YA78399) and NEIL 1-12 (YA82973-YA82984) Mineral Claims**

Gold Hill

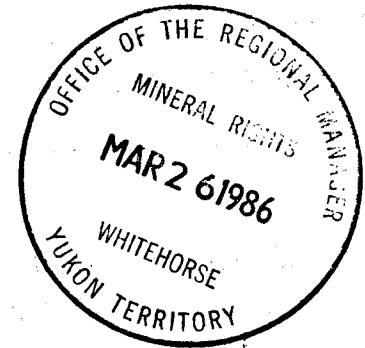
NTS 105-D-6

Whitehorse Mining District

Latitude: 60°17' North

Longitude: 135°12' West

091793

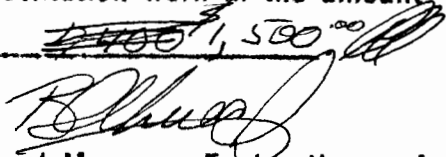


By:  
G. S. DAVIDSON, P.Geol.  
March 1986

This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (4) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ ~~7,400~~ 1,500<sup>00</sup>

Regional Manager, Exploration and  
Geological Services to: Commissioner  
of Yukon Territory.

This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (4) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ ~~2,400~~ 1,500<sup>00</sup>



Regional Manager, Exploration and  
Geological Services for Commissioner  
of Yukon Territory.

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## **INTRODUCTION**

This assessment report describes a program of geochemical sampling undertaken between 3rd July and 3rd September 1985 on the CR 8 claim owned by Tally-Ho Exploration Ltd.

## **LOCATION AND ACCESS**

The claims cover a rolling upland surface on the western side of Gold Hill in the Wheaton River district of southwestern Yukon Territory. The property is located on NTS map sheet 105-D-6 at latitude 60°17' north and longitude 135°12' west. Property location is shown on Figure 1.

The property is accessible from Whitehorse via the Alaska and Carcross highways and the Wheaton River-Mount Skukum gravel road. A four-wheel-drive road extends up Thompson Creek from the Wheaton River road to the ridge top on Gold Hill. Total road distance from Whitehorse to the claim is approximately 65 km.

## **PHYSIOGRAPHY, CLIMATE, VEGETATION**

The CR 8 claim lies on the rolling ridge top of Gold Hill. Elevations in the area range from 6,000' (1,830 m) at the summit of Gold Hill to 3,900' (1,190 m) at the Hodnett Lakes. The ridge top is grass covered and devoid of outcrop.

Figure 2 shows the claim location relative to the grid and topography.

Southwestern Yukon has a dry sub-arctic climate with temperatures varying between extremes of -50°C in winter and +25°C in summer. Precipitation averages 35 cm per year. Large areas of the joint venture properties are quite remote from reliable sources of water for diamond drilling; water sources are often dry by late July in years with low snowfall or exceptionally dry summers. On average, mineral exploration is practical from early June to late September.

An exceptionally snowy winter in 1984-85 delayed access to the CR claims until early July.

Strong winds and squalls at higher elevations frequently disrupt exploration activities.

BEAUFORT SEA

• Tuktoyaktuk

Aklavik Inuvik

• Old Crow

Fort McPherson



### LOCATION MAP

SCALE: 1" = 90 MILES APPROX.



PROPERTY LOCATION  
WHEATON RIVER DISTRICT

ALASKA  
YUKON

DEWSTER  
HIGHWAY

YUKON

NORTHWEST TERRITORIES  
YUKON

Eagle

TOP OF THE WORLD HWY

Dawson City

Keno  
Elsa

Mayo

Stewart Crossing

Pelly Crossing

to Tok

Beaver Creek

CANOL  
ROAD

Faro

Carmacks

Ross River

Tungsten

Burwash Landing

ROBERT CAMPBELL  
HIGHWAY

NATHAN  
RANGE RD.

Destruction Bay

KLUANE NATIONAL PARK

ALASKA  
HIGHWAY

WHITEHORSE

Johnson's Crossing

Watson Lake

YUKON  
BRITISH COLUMBIA

Haines Junction

Carcross

Teslin

GULF OF ALASKA

BRITISH COLUMBIA  
ALASKA

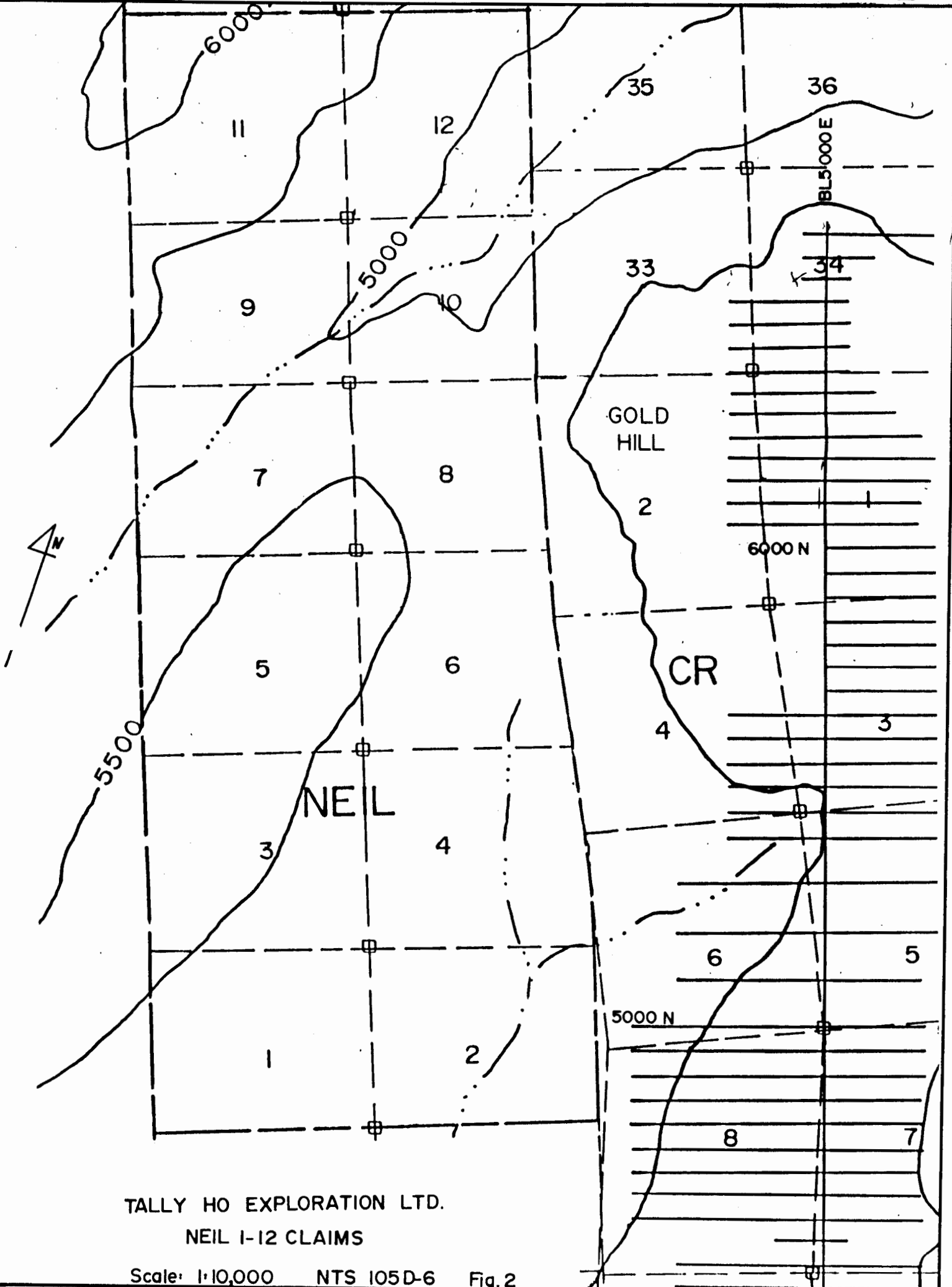
HIGHWAY

Skagway

Atlin

Haines

STURGEY  
ASSIAR RD.



TALLY HO EXPLORATION LTD.  
NEIL 1-12 CLAIMS

Scale: 1:10,000 NTS 105D-6 Fig. 2

## REGIONAL GEOLOGY

The Wheaton River/Bennett Lake district overlies the boundary between two terranes: (1) the Whitehorse Trough, consisting of Mesozoic and Paleozoic, folded metavolcanic and metasedimentary rocks, and (2) a younger volcanic and intrusive suite consisting of intrusive rocks of the Cretaceous Coast Plutonic Complex and Early Tertiary volcanic rocks of the Skukum Group.

The Whitehorse Trough features a complex assemblage of deformed volcanic and sedimentary rocks consisting of the Triassic Lewes River Group, the Lower Jurassic Laberge Group, the Jurassic Tantalus Group and the Jurassic or Cretaceous Hutshi Group. The Lewes River Group consists of andesite, basalt and pyroclastic flows, and foliated marine sedimentary rocks. A narrow but continuous unit of limestone, limestone breccia and quartzite has been traced in a northwesterly direction from the west side of Mount Stevens across Tally Ho Mountain and Gold Hill to the Hodnett Lakes. Interbedded schists occur with the limestone and volcanic rocks of the Lewes River Group. A narrow band of Tantalus Group conglomerates and Laberge Group siltstones outcrops on Folle Mountain and Idaho Hill; however, rocks of these groups primarily outcrop north and east of the Wheaton River/Bennett Lake district. Hutshi Group volcanic rocks occur on Montana Mountain and Gray Ridge. They are thought to be contemporaneous with Mount Nansen volcanics in central Yukon.

Cretaceous granitic rocks of the Coast Plutonic Complex are the most common in the district; typically, they consist of fresh quartz monzonite or quartz diorite. Pendants and masses of Yukon Group quartz-mica schist, gneisses and crystalline limestone occur in the granitic intrusives. The Yukon Group is of early Paleozoic and Precambrian age.

A younger series of andesite and rhyolite flows, tuffs and agglomerates mapped as the Tertiary Mount Skukum Group intrude and overlie granitic rocks, forming volcanic complexes at Mount Skukum and Mt. Macauley. Also, Skukum Group rhyolite and granite porphyry dykes and plugs intrude Lewes River Group rocks and Cretaceous granodiorites throughout the Wheaton River area.

The geology of the Wheaton River region was initially mapped by D. D. Cairnes of the G.S.C., published in Memoir #31 (1912) and later by J. Wheeler published in Memoir #312 (1961). A reinterpretation of the regional geology formed part of the metallogenic map published as Open File E.G.S. 1979-6 (G. W. Morrison) by the Department of Indian Affairs and Northern Development.

Table 1  
TABLE OF FORMATIONS

QUATERNARY	Q	Alluvium; glacial and fluvial deposits.
QUATERNARY(?)		
Miles Canyon Volcanics		Basalt; minor pyroclastics.
LATE CRETACEOUS/ EARLY TERTIARY		
Skukum Group	Trp	Stocks, plugs and dykes of quartz and feldspar porphyry with aphanitic rhyolitic matrix. Some granite porphyry; some intermediate plugs and dykes.
	Tva	Rhyolite and trachyte breccias, tuffs and flows; some felsic plugs and dykes (Trp).
	Tvb	Andesite and basalt tuffs, flows and breccias; minor greywacke at base.
MID-CRETACEOUS		
Coast Plutonic Complex	Kgd	Medium to coarse grained homogeneous biotite-hornblende granodiorite and quartz monzonite. Includes undifferentiated Trp and Tva.
JURASSIC/CRETACEOUS		
Hutshi Group(?)		Andesite, rhyolite flows and pyroclastic equivalents.
JURASSIC		
Tantalus Group		Mainly conglomerate
LOWER JURASSIC		
Laberge Group		Greywacke, arkose, quartzite, siltstone, argillite and conglomerate.
TRIASSIC		
Lewes River Group	uRc	Fine to medium grained limestone, quartzite and some marble.
	uRwp	Greywacke, siltstone, argillite and minor conglomerate.
	uRvb	Basalt and andesite flows and flow breccias; augite and/or feldspar porphyry locally.
PROTEROZOIC AND PALEOZOIC		
"Yukon Group"	PIPc	Marble, crystalline limestone, minor graphitic limestone, skarn.
	PIPsq	Quartz-mica and quartz-chlorite schist, quartzite, minor amphibolite, feldspathic gneiss.

(Note: Symbols from Morrison (1979))

Mesozoic and Paleozoic sedimentary and volcanic rocks of the Whitehorse Trough Terrane are deformed and generally metamorphosed to at least lower green schist facies. These units trend north to northwest and are internally complex.

Structurally, the area features major faults, primarily along river valleys, associated with movement in the Coast Plutonic Complex and with early Tertiary volcanism at Mount Skukum, Mount Macauley and Montana Mountain(?). The Skukum Group volcanic rocks are equivalent to the Sloko Group of northern British Columbia and the Mount Nansen Group of central Yukon. Late stage features of Skukum Group volcanism include dacite, rhyolite and granite porphyry dykes, emplaced in fracture and fault zones around the volcanic complexes, and quartz or quartz carbonate veining with significant precious and base metal mineralization. Figure 3 shows the regional geology.

#### **HISTORY OF EXPLORATION**

The Wheaton River/Lake Bennett district was first explored by prospectors travelling along the major lakes and rivers of southwestern Yukon in the early 1890's. The original claims recorded in the district were those of prospectors Corwin and Rickman who, in 1893, located antimony showings on Carbon Hill and gold-silver bearing quartz veins at an undisclosed site. The untimely deaths of the two men occurred before revealing the location of the high grade quartz showings.

The Klondike Gold Rush brought a great influx of people to the Yukon, many of whom crossed Lake Bennett en route to Dawson City. Some of these individuals strayed into the Wheaton Valley, locating claims in the Schnabel Creek drainage in 1903.

More intensive exploration began in 1906 after the discovery of free gold and gold-silver tellurides on Gold Hill by D. Hodnett and J. Stagar, and the rediscovery of the Corwin-Rickman antimony-silver showings on Carbon and Chieftain Hills. Wagon roads were built along the Wheaton River, Thompson Creek and Stevens Creek to provide access to numerous adits and pits on Gold Hill, Mineral Hill, Mount Stevens, Wheaton Mountain and Mount Anderson. Limited mining of high grade gold and silver bearing ore occurred on the Gold Reef vein at the northeast end of Gold Hill and on the Becker-Cochran (WHIRLWIND) property on the west face of Mount Anderson. Adits and shafts on Mount Stevens and Wheaton Mountain were probably exploratory; no record of ore production exists.

The Tally Ho Mine on Tally Ho Mountain was the most significant operation during the early years of activity in the area. In 1918, a shipment of 14 tons of hand-sorted ore grading 2.35 oz/ton gold, 5.1 oz/ton silver and 7% lead was smelted at Tacoma. Underground development was continued at various times between 1909 and 1938; additional ore shipments were sent to Juneau but details no longer exist. On Montana Mountain, Colonel Conrad and associates developed several gold and silver bearing quartz veins on the slope above Windy Arm (Tagish Lake). A small mill on the shore of Windy Arm processed ore extracted from the Venus, Montana and

Big Thing quartz veins between 1906 and 1920.

From the mid-1920's to the late 1960's, little exploration of significance took place. By 1970, many of the old showings were restaked as an increase in the value of base and precious metals rekindled the interest of mining companies and prospectors. The Venus and Arctic mines operated on Montana Mountain between 1969 and 1971. The Venus Mine was briefly rehabilitated during 1980-1981 and a new mill was installed at the southern end of Windy Arm.

In 1981, Agip Canada Ltd. discovered a gold bearing vein structure on Mount Skukum and proceeded to define a commercially viable ore-body consisting of 165,000 tons grading 0.73 oz gold and 0.63 oz silver per ton by 1984. Mount Skukum Gold Mines Ltd., through a joint venture agreement with Agip, has developed the ore-body and constructed a 300 ton-per-day mill. Production is expected to commence in March 1986.

The discovery of gold on Mount Skukum has intensified exploration activities in the Wheaton district and initiated a methodical staking rush in which all of the known showings and most of the surrounding area has been staked. Presently, large claim blocks are held by Erickson Gold Mines Ltd., United Keno Hill Mines, Omni Resources Inc., Tally-Ho Exploration Ltd., Shakwak Exploration Co. Ltd., Island Mining and Exploration Ltd., Kerr Addison Mines Ltd., Berglynn Resources Inc., Carmac Resources Ltd. and Noranda Exploration Co. Ltd.

On Gold Hill, Tally-Ho Exploration Ltd. has investigated the ridge top in a program consisting of grid development, geological mapping, geophysical and geochemical surveys and bulldozer trenching during 1984-1985.

#### **GEOCHEMISTRY (1985)**

On the CR 8 claim, a three-man field crew supervised by the writer collected 189 soil samples which were analyzed for gold, silver, copper and lead. Analytical methods are described in Appendix I.

During soil sampling, 3.5 km of flag and picket grid line were established perpendicular to the existing baseline. Soil samples were taken from the B soil horizon using a mattock or rock hammer. Figure 4 shows the soil geochemical results.

Geochemical response on Gold Hill was generally background to threshold - see Table 2.

Table 2  
GEOCHEMICAL RESPONSE

<u>Element</u>	<u>Background</u>	<u>Threshold</u>	<u>Anomalous</u>
Au	0.10 ppb	10-30 ppb	>30 ppb
Ag	<0.2-0.4 ppm	0.4-1.0 ppm	>1.0 ppm
Cu	10-24 ppm	24-56 ppm	>56 ppm
Pb	6-20 ppm	20-60 ppm	>60 ppm

One moderately anomalous gold value (200 ppb) was recorded at L4900N/4720E on CR 8. It is aligned in a northwesterly trend with a second gold value of 180 ppb, 100 metres away on CR 6. A detailed soil sampling program undertaken around these two gold values failed to identify further moderately anomalous readings in gold; however, several weakly anomalous values were obtained. The significance of this anomaly is not known.

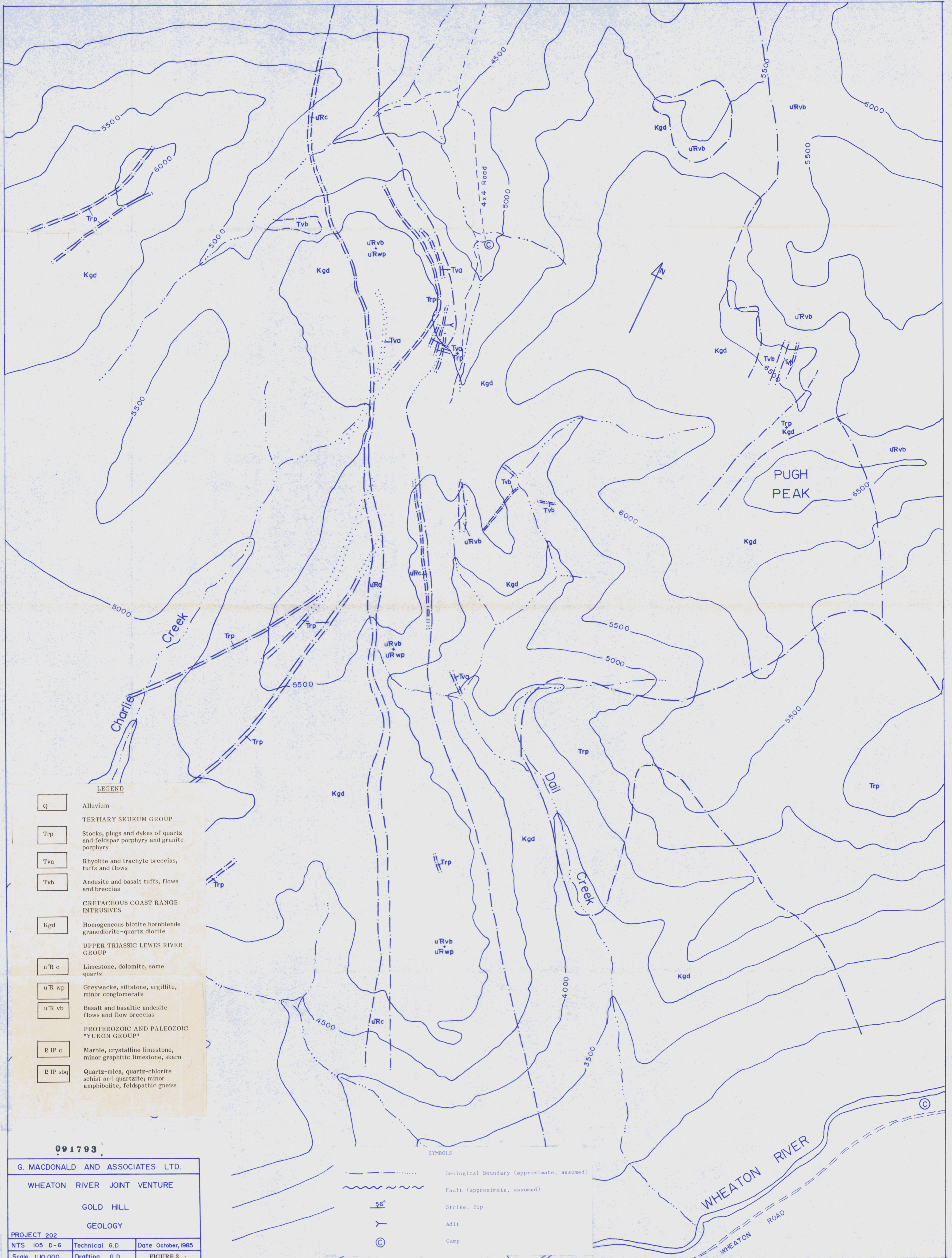
Elsewhere, soil geochemical values were very low and only one spot anomaly was recorded at L4950N/4940E (169 ppm Cu).

#### DISCUSSION

On the CR 8 claim, a soil geochemical survey has outlined one gold anomaly of significance. A detailed soil sampling program developed around this anomaly did not produce further anomalous readings. Although the gold anomaly is restricted to two sample sites, it warrants further inspection through prospecting, directed towards identifying mineralized quartz or quartz-carbonate veins.

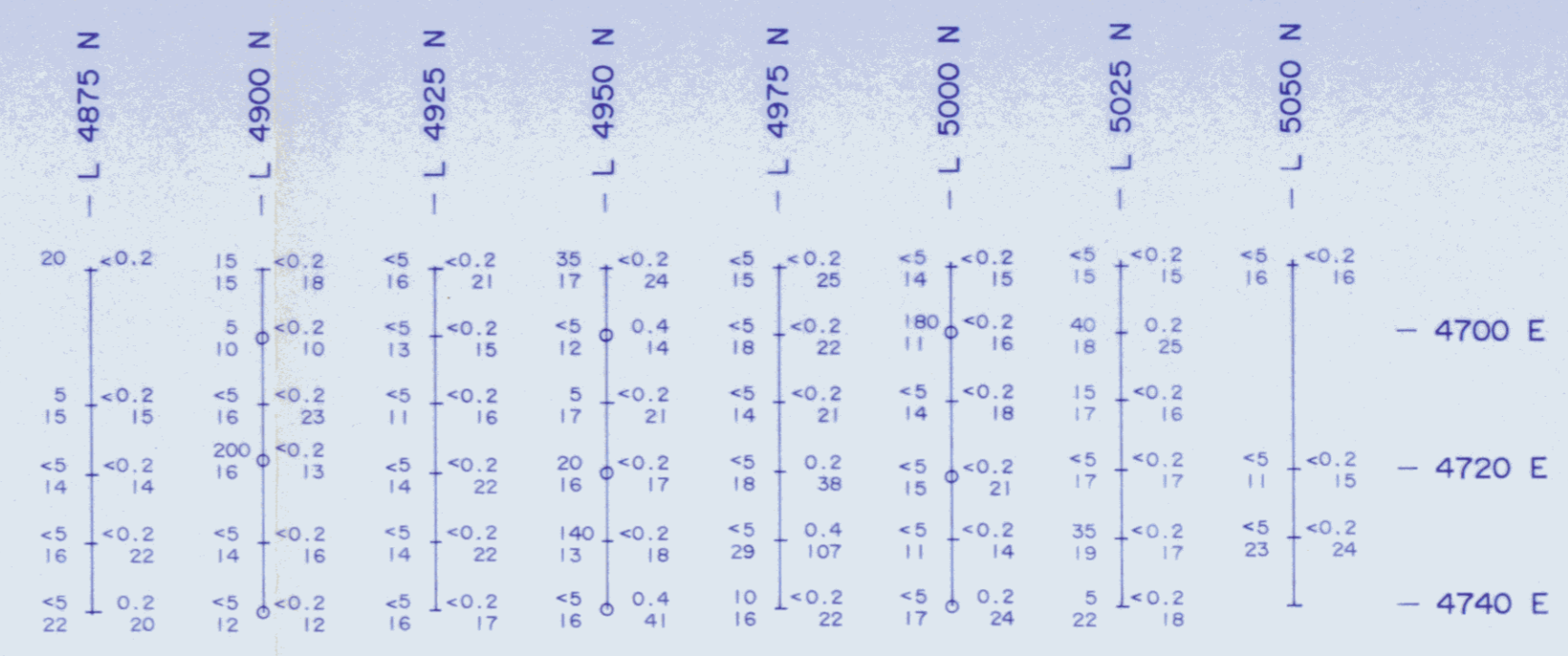
#### REFERENCES

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NEIL 2

L 4200 N L 4250 N L 4300 N L 4350 N L 4400 N L 4450 N L 4500 N L 4550 N L 4600 N L 4650 N L 4700 N L 4750 N L 4800 N L 4850 N L 4900 N L 4950 N L 5000 N

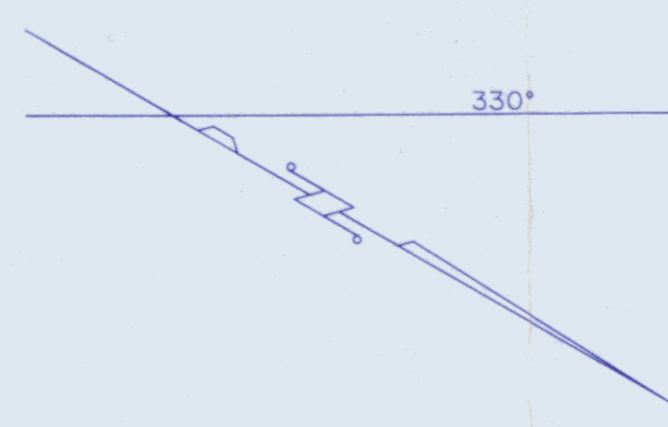


CR 8

CR 6



SCALE 1 : 2000



Au (ppb) Ag (ppm)  
Cu (ppm) Pb (ppm)

Designates samples collected in 1994

G. MACDONALD AND ASSOCIATES LTD.

WHEATON RIVER JOINT VENTURE  
GOLD HILL

SOIL GEOCHEMISTRY  
4500 N GRID

PROJECT : 202

NTS: 105 D-6 TECHNICAL: G.D. DATE: NOV. 1985

SCALE: 1 : 2000 DRAFTING: INF/GRAPHICS FIGURE: FIGURE 4

APPENDIX I  
ANALYTICAL TECHNIQUES

Rock and soil samples were analysed by Bondar-Clegg Laboratories in Whitehorse and Vancouver. Most samples were analysed for Au, Ag, Cu and Pb. Soil samples were collected in the B horizon; however, in many areas soil profiles are poorly developed. On very rocky ground or talus slopes, insufficient fine material was available for sampling.

Soil samples are dried and sieved to minus 80 mesh while rock and chip samples are pulverized and a split of the minus 150 mesh fraction is analysed.

Gold analyses are by fire assay techniques using a 10 g sample (30 g sample for rocks) but, after preparation of the lead bead, the bead is dissolved in acid and the gold content determined by atomic absorption spectrophotometry.

Gold assays are by standard fire assay techniques using a 30 g sample. After preparation of the bead, silver is removed by dissolving with nitric acid and the bead weighed to determine the gold content of the original sample.

Copper, lead and silver are analysed by atomic absorption techniques; the sample is dissolved in hot aqua regia. Silver values greater than 4.0 ppm are checked using a nitric acid digestion.

APPENDIX II

STATEMENT OF EXPENDITURE

3 July to 3 September 1985:

Personnel

J. Atkinson (Senior Field Assistant): 1 day	\$125.00
D. Roberts (Field Assistant): 2 days	150.00
M. Jenner (Field Assistant): 2 days	150.00

Geochemical Analysis

75 Au, Ag, Cu, Pb soil samples x 11.65	873.75
--	--------

Camp

Camp costs, groceries, equipment: 5 man days @ 35.00/day	175.00
--	--------

Miscellaneous

Report, preparation, typing, drafting	400.00
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TOTAL	\$1,873.75
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=====

**G. MACDONALD AND ASSOCIATES LIMITED**  
Consulting Professional Geologists

4 Hyland Crescent  
Whitehorse, Y.T.  
Y1A 4P6

(403) 668-2044

(403) 667-7229

**APPENDIX III**

**STATEMENT OF QUALIFICATIONS**

I, **GRAHAM DAVIDSON**, of the City of Whitehorse in the Yukon Territory,  
HEREBY CERTIFY:

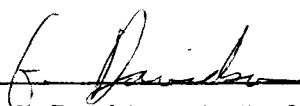
THAT I am a geologist employed by G. Macdonald and Associates Limited AND  
THAT I participated in the work described in this report;

THAT I am a graduate of the University of Western Ontario (H.B.Sc., Geology,  
1981);

THAT I am registered as a Professional Geologist by the Association of Professional  
Engineers, Geologists and Geophysicists of Alberta (No. 42308);

THAT I have been engaged in mineral exploration on a full-time and part-time  
basis for seven years, of which five have been in the Yukon and Northwest  
Territories.

SIGNED at Whitehorse, Yukon Territory, this 26 day of March, 1986.

  
\_\_\_\_\_  
G. S. Davidson, P.Geol.