

A Report on a Survey  
conducted over the ground held by

GREEN VALLEY MINES LTD.

Vangorda Creek Area

Yukon Territories.

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**Green Valley Mines Ltd.**

**Vangorda Creek**

**INDEX**

<b>Introduction</b>	<b>Page 1</b>
<b>Location &amp; Access</b>	<b>Page 1</b>
<b>Topography</b>	<b>Page 1 - 2</b>
<b>General Geology</b>	<b>Page 2</b>
<b>Local Geology</b>	<b>Page 2 - 3</b>
<b>Surveys</b>	<b>Page 3</b>
<b>Results</b>	<b>Page 3 - 4</b>
<b>Conclusions</b>	<b>Page 4</b>
<b>Recommendations</b>	<b>Page 4 - 5</b>
<b>Certificate</b>	<b>Page 5 (after)</b>
<b>Magnetic map</b>	<b>in binder at back</b>
<b>Geochemical map</b>	<b>in binder at back</b>

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**GREEN VALLEY MINES LTD.**

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**INTRODUCTION**

At the request of the company's management a survey using Geophysical (Magnetometer) and Geochemical techniques was conducted over the company's Vangorda Creek area, Yukon Territory claims. The results found and recommendations are hereby appended.

**LOCATION AND ACCESS**

The claims are located in the Vangorda Creek Area of Yukon Territories and lie astride the Pelly River, 7 miles south-east of the intersection of Blind Creek with the Pelly River, and 24 miles from the Ross River. The 135°00 Meridian bisects the group.

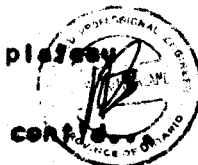
Access is by road to Ross River, a distance of 210 road miles from Whitehorse and thence by helicopter or winter road to the concession.

Three airstrips are available at Vangorda Creek, Faro Creek or Ross River for wheel equipped aircraft, or on the Pelly River for ski or float equipped aircraft. The air distance is 110 miles.

Regular air service is available to Whitehorse from Vancouver and Edmonton, and a branch from the Alaska Highway goes to Whitehorse.

**TOPOGRAPHY**

The claims lie on the Pelly River and comprise river plain



Topography (cont'd)

and foothill areas. A ground and sand bed is located along the river banks and rises to the Anvil Mountains, up to 7000 feet in height.

FEATURES

The forests of the area consist largely of white and black spruce, with balsam and jackpine. The timber line is about at 4,500 feet, but varies. Most good stands of timber are in the river valley. Recent brule has made the underbrush very difficult for walking.

Ample water is available as the Pelly River Traverses the property. Power, communication and transport services are being developed at nearby properties and would be easily available. Overburden is heavy on the property, with little outcrop - a few pieces showing in the North corner. The property is almost entirely contained in the river valley.

GENERAL GEOLOGY

The general geology will not be covered here, but reference is made to the Qualifying Report of 28th February, 1966.

LOCAL GEOLOGY

The property is covered by recent alluvium, glacial drift and volcanic ash of Cenozoic age.

While it is impossible to verify due to lack of outcrop, it would appear that the property is underlain by Mesozoic andesite and other basic volcanics and Upper and Lower group Palaeozoic



CONFIDENTIAL

Local Geology (cont'd)

sediments and volcanics, including greenstone schist, limestones and andesites. The Tintina thrust fault passes just south of the claim group.

SURVEYS

A Geochemical Survey was conducted over the claims on a grid of 300 x 100 feet, over accessible areas. Three base lines were used. Samples were taken from the B/C Horizon, at an approximate depth of 18" and bagged immediately in non contaminative paper bags. These samples were dried and assayed in Parts per Million for Lead, Zinc and Copper by atomic absorption in a laboratory under controlled conditions. The threshold and anomalous values were calculated and results plotted.

The Magnetometer Survey was conducted over the same grid using a McPhar M 700 Magnetometer, and a series of base stations set up to correct for diurnal error. Check readings were made at an established station hourly. All readings were corrected and plotted.

RESULTS

The magnetometer survey revealed a range of 800.0 gammas over the property from 1300 to 2100 gammas. Three continuous anomalous zones were located, (1) from 2500 E on line 35, BL 3 to edge of property at 33 W line <sup>9N</sup> BL2, a distance of 1500' and 300 wide. (2) from 0,0 b12, to 15 N BL9, with a width of 500 feet and a length of 2500'. (3) 2 E-215, 2 W-245, 3 W 275, with a length of 1000' and 100 feet wide. Several other smaller areas were located but covered only 1 line.

The geochemical results were interesting but inconclusive.



Results (cont'd)

In the area of Base line 1 and lines 9S and 12S of BL 3 zinc results were quite consistently high. Lead and Copper were also well above threshold along Base line B1, but less for copper and lead along the Base line B3. Along the centre portion of the property results are generally lower by at least 50%.

CONCLUSIONS

It is felt that the concentration of zinc values along BL 1 and BL 3-south, is due to the greater mobility of zinc ions, causing a concentration in the flat lying gravel beds along the Pelly River. Since lead is considerably less mobile there would be less movement of lead on the slope areas and more zinc concentrated in the flat area. This concentration could also be caused by deposition of stream carried ions along the edge of a bend or curve.

It is felt that a majority of metallic ions have been carried from outside the claim boundaries.

The magnetic anomalies are linear in form and suggest a series of parallel beds or shears from the known fault structure present. These may be mineralized.

RECOMMENDATIONS

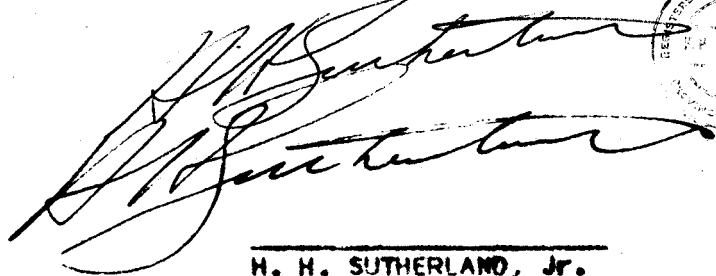
No work could or should be done at this point. The data now available should be thoroughly evaluated and a re-examination of information made in the spring and summer season as whether to explore further by geophysical means. (I.P. or E.M.) to determine the potential of the



RECOMMENDATIONS (cont'd)

anomalies.

Respectfully Submitted,



H. H. SUTHERLAND, Jr.  
B.A.Sc., P.Eng. M.E.

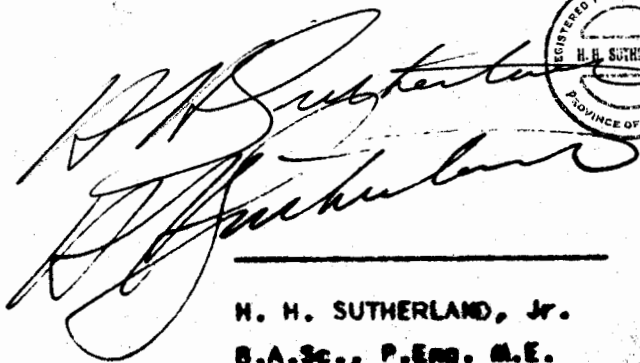

Toronto, Ontario  
NOVEMBER 25th, 1966.

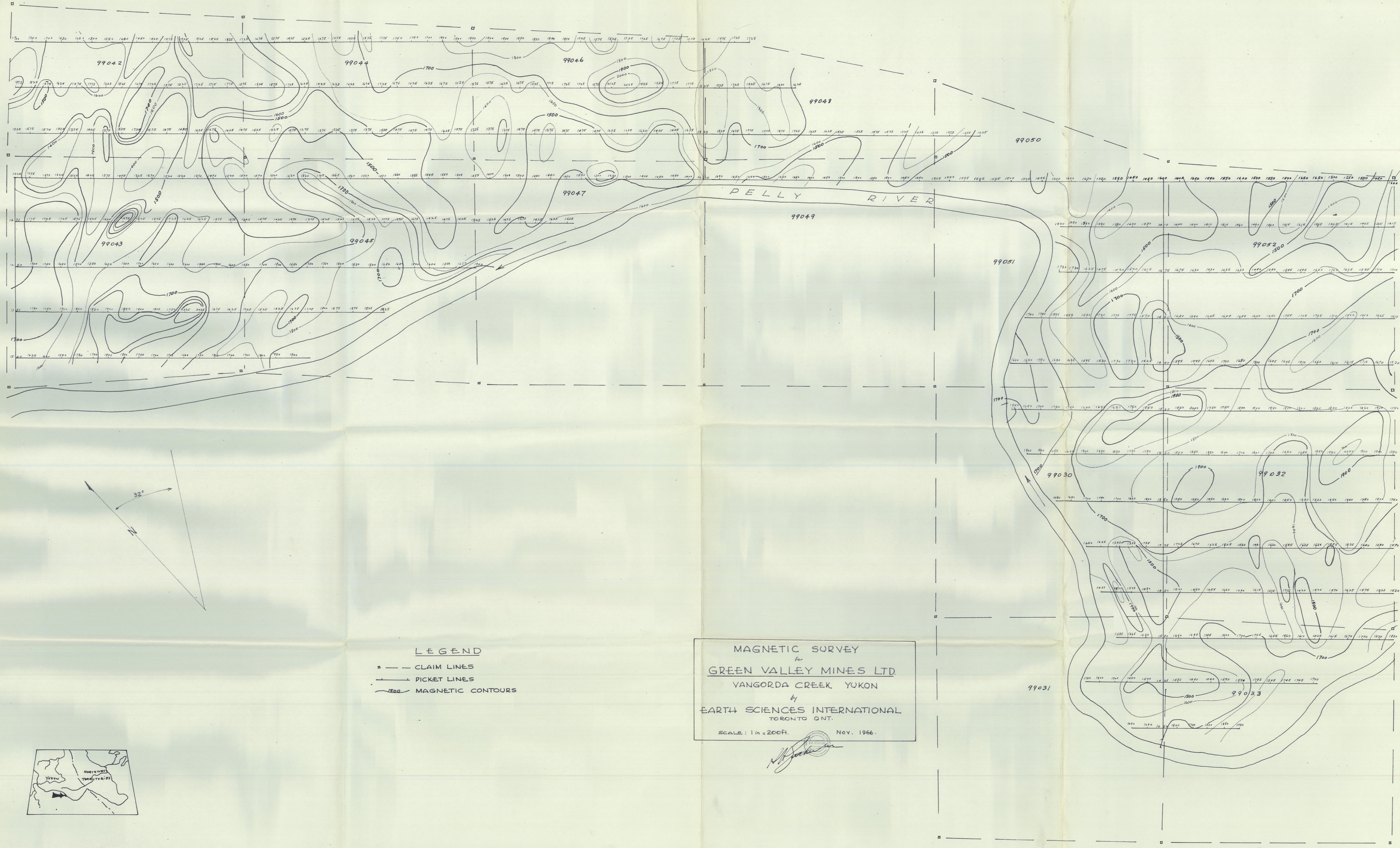
**CERTIFICATE**

I, the undersigned, do hereby certify:

- (1) I am a Mining Geologist with offices located at No. 12 Richmond St. East, in Toronto.
- (2) I have been practicing my profession continuously for over 14 years.
- (3) I am a graduate of the University of Toronto, 1952, with a degree in Mining Engineering.
- (4) I have no interest, nor expect to receive any interest in the property or securities of Green Valley Mines Ltd.
- (5) I am a member of the Association of Professional Engineers of Ontario.
- (6) The above report was based on personal supervision and interpretation of the surveys conducted in Sept, Oct, 1966.

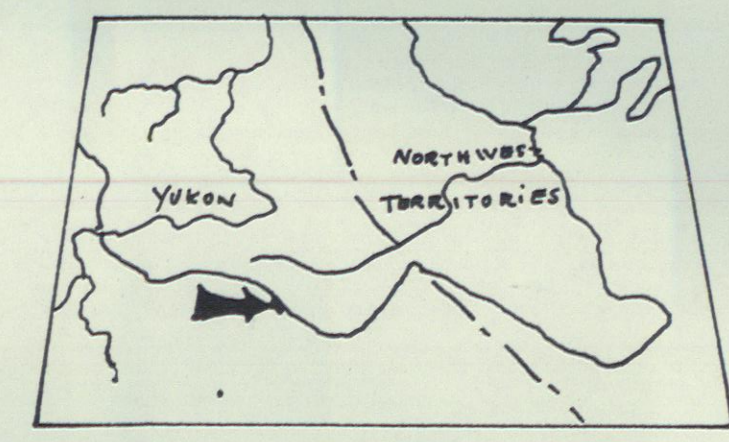
DATED at Toronto this 25th day of November, 1966.

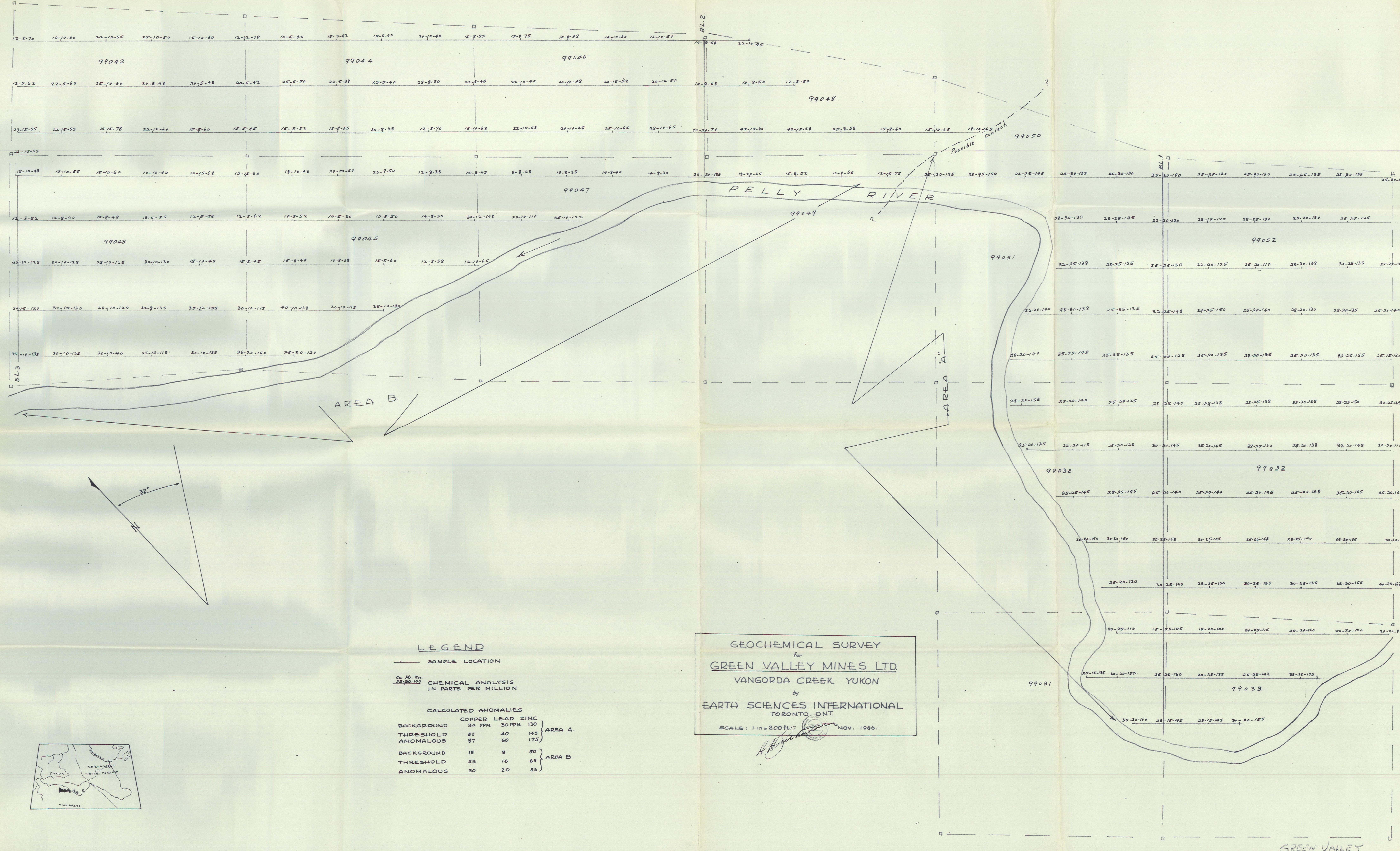
  
  
W. H. SUTHERLAND, Jr.  
B.A.Sc., P.Eng. M.E.



**LEGEND**  
 □ — CLAIM LINES  
 — PICKET LINES  
 — MAGNETIC CONTOURS

MAGNETIC SURVEY  
 for  
**GREEN VALLEY MINES LTD.**  
 VANGORDA CREEK YUKON  
 by  
**EARTH SCIENCES INTERNATIONAL**  
 TORONTO ONT.  
 SCALE: 1 in = 200ft.      Nov. 1966.





**LEGEND**

— SAMPLE LOCATION

$\frac{Cu \text{ Pb } Zn}{25, 20, 100}$  CHEMICAL ANALYSIS IN PARTS PER MILLION

	CALCULATED ANOMALIES		
	COPPER	LEAD	ZINC
BACKGROUND	34 PPM	30 PPM	130
THRESHOLD	52	40	145
ANOMALOUS	87	60	175
BACKGROUND	15	8	50
THRESHOLD	23	16	65
ANOMALOUS	30	20	85

GEOCHEMICAL SURVEY  
for  
**GREEN VALLEY MINES LTD.**  
VANGORDA CREEK YUKON  
by  
**EARTH SCIENCES INTERNATIONAL**  
TORONTO, ONT.  
SCALE: 1 in = 200 ft. NOV. 1966.

