

MAP NO.:	ASSESSMENT REPORT X	DOCUMENT NO:	092575
115 G 5	PROSPECTUS X	MINING DISTRICT:	Whitehorse
	CONFIDENTIAL X	TYPE OF WORK:	GEOCHEMICAL, GEOPHYSICAL
	OPEN FILE		

REPORT FILED UNDER: Lodestar Exploration Inc.

DATE PERFORMED:	June 8-10, 1988	DATE FILED:	October 27, 1988
-----------------	-----------------	-------------	------------------

LOCATION:	LAT.:	61°29'N	AREA:	Donjek River
	LONG.:	139°43'W	VALUE \$:	2,800.00

CLAIM NAME & NO.: MISSY 1-28 (YA97660-YA97687)

WORK DONE BY: G.S. Davidson

WORK DONE FOR: Lodestar Exploration Inc.

DATE TO GOOD STANDING:


REMARKS: # 85 DONJEK  
 Reconnaissance magnetometer and soil geochemical were conducted in 1988. Moderate to strongly anomalous Pt, Pd and Au values in soil coincided with two magnetic highs, one trending northeast across the MISSY 19-21 and 23 claims and the other 150 m south of a steep canyon.



M.R. file no.
R.M.M.R. file no.
Date forwarded 28 October 1988

TRANSMITTAL FORM

From Mining Recorder at: Whitehorse

To Regional Manager, Mineral Rights at Whitehorse, Y.T.

For action are:

<input type="checkbox"/> NEW APPLICATION FOR PLACER LEASE TO PROSPECT	Name	
<input type="checkbox"/> RENEWAL APPLICATION PLACER LEASE TO PROSPECT	Name	Lease no.
<input type="checkbox"/> AFFIDAVIT OF EXPENDITURE ON PLACER LEASE	Name	Lease no.
<input type="checkbox"/> SECURITY DEPOSIT		
<input type="checkbox"/> FINANCIAL ABILITY		
<input type="checkbox"/> ASSIGNMENT OF PLACER LEASE NO.	From	To
<input type="checkbox"/> GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT.	Owner	
<input type="checkbox"/> DIAMOND DRILL LOGS	Claims	Claim sheet no.
<input checked="" type="checkbox"/> QUARTZ ASSESSMENT REPORT	Claims Type of report Submitted by Cls. work performed on	Claim sheet no. \$ req. for ren. application

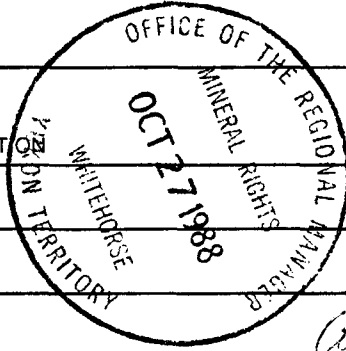
092575

Missy 1-28      YA97660-4A97687      115-G-5  
 Mag Survey & Prospecting      Lodestar for Harjay Expl. Co. Ltd.  
 Missy 1-28      2800.00

Signature

Date returned  
 20 Nov 88

REPLY ACT



Approved for annual required.

Signature

ASSESSMENT REPORT

on the

**092575**

MISSY 1-28 MINERAL CLAIMS  
(YA97660-YA97687)  
Whitehorse Mining District  
NTS 115 G-5  
Lat. 61 29'N Long. 139 43'W

For: LODESTAR EXPLORATIONS INC.  
19-4078 Fourth Ave.  
Whitehorse, Yukon

By

G.S. DAVIDSON, P. Geol.

October, 1988



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 \$ 2800.00.

*J. J. Bremner*

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

870300

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## INTRODUCTION

The MISSY claims cover aeromagnetic anomalies located on the east side of the Donjek River south of Arch Creek. The property is underlain by Skolai Group sedimentary rocks and Nikolai Greenstone. The nearby Wellgreen deposit, a large tonnage lowgrade nickel, copper and platinum group element orebody, is hosted by similar geology.

Lodestar Explorations Inc. secured the writer to undertake a preliminary evaluation of the MISSY claims in June, 1988. The writer and L. Lebedoff performed magnetometer and geochemical surveys from June 8-10, 1988. This report describes the results of the preliminary surveys.

## LOCATION AND ACCESS

The MISSY claims are located 15 km south of the Alaska Highway's Donjek River bridge and 60 km northwest of Destruction Bay in the western Yukon Territory. The property is accessible by a gravel road which runs along the east side of the Donjek River to Arch Creek. This road is only passable to trucks during dry weather.

## PHYSIOGRAPHY, CLIMATE, VEGETATION

The claims lie on the east side of the wide Donjek River valley. They cover the eastern side of large gravel flats cut by braided stream channels of the Donjek River. They also cover the low lying east bank of the river which features poplar and spruce forest. Elevations range from 750 to 950 m a.s.l..

The Donjek River area has a northern interior climate with long cold winters and low annual precipitation. At the low elevations encountered on the property exploration is possible on a year round basis.

Yukon Territory  
Area: 478,034 sq. km.  
Population: 25,000  
Capital: Whitehorse

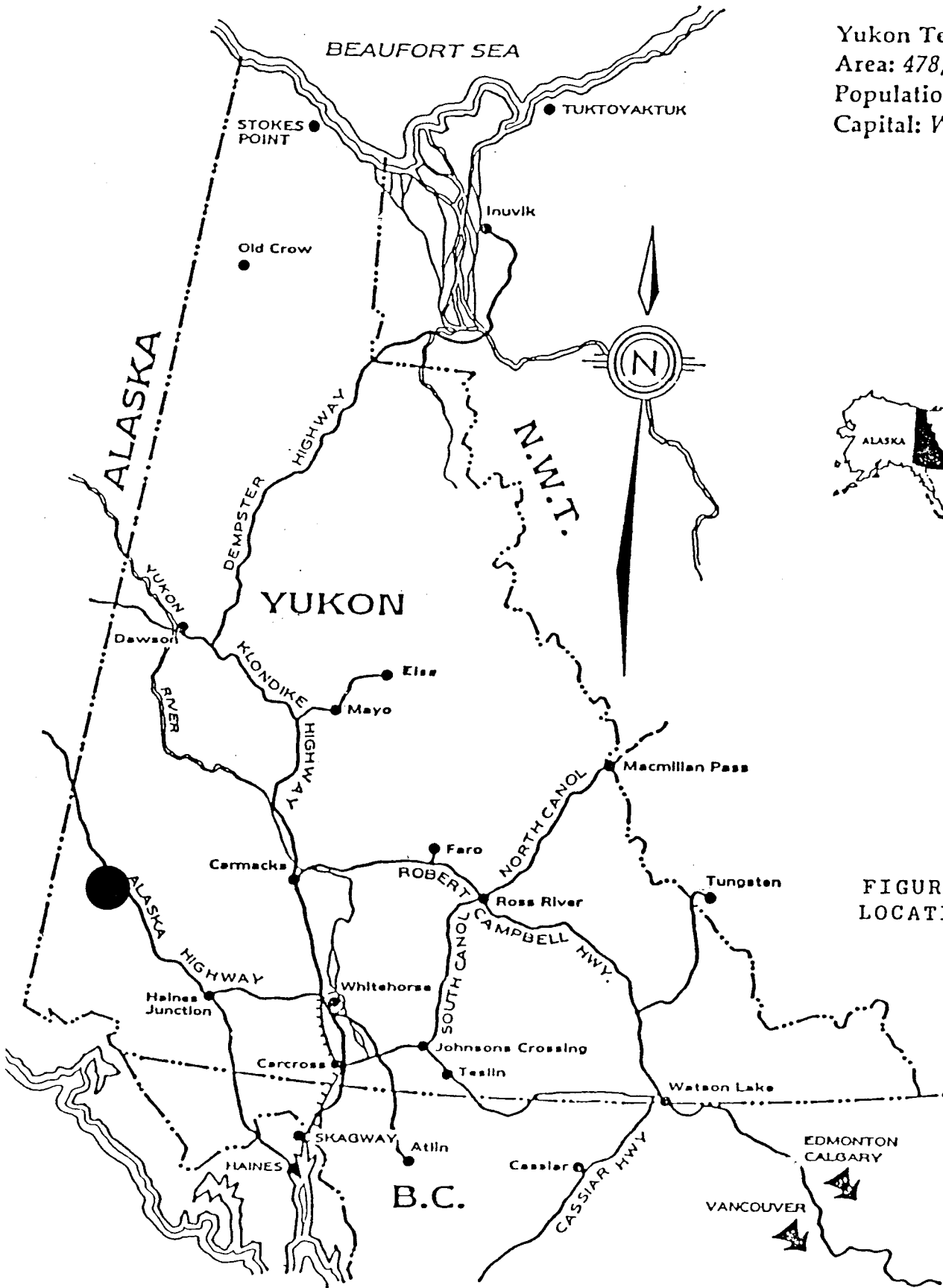


FIGURE 1  
LOCATION MAP

## PROPERTY

The property consists of 28 contiguous mineral claims registered with the district mining recorder in Whitehorse. The claims are held by Lodestar Explorations Inc. under the terms of an option agreement with Harjay Exploration Ltd.. A renewal period to June 19, 1989 has been requested for the MISSY 1-28 claims, record number YA97660-YA97687. The claim plan is shown in Figure 2.

## HISTORY

The region was first explored in the early 1900's by prospectors looking for the sources of placer copper on the upper White River. The Canyon City native copper deposit was discovered in 1905. Limited development work uncovered several large tabular masses of native copper. In the early days a network of trails were established linking the gold fields in central Alaska to Whitehorse and coastal Alaska. Many miners and prospectors travelled through the Kluane district en route to the various gold finds.

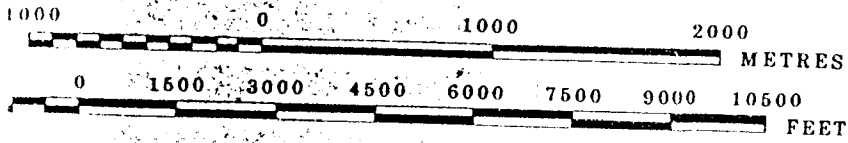
Placer miners have been active in the area since the 1930's.

In the 1950's, the Kluane Ranges were intensely explored for copper-nickel mineralization. Two deposits, Wellgreen and Canalask, were discovered and developed. Hudson Bay Mining and Smelting Company mined the higher grade Wellgreen deposit from 1972-1973. It contained a reported tonnage of 728,000 tons grading 2.05% nickel, 1.42% copper, 0.073% cobalt, 0.038oz/ton platinum, 0.027 oz/ton palladium and 0.005oz/ton gold. At the Canalask property an orebody with reserves of 550,000 tons assaying 1.68% nickel and 0.04% copper was outlined by surface diamond drilling and underground exploration, however no mining took place.

In the area of the MISSY claims no previously recorded exploration has taken place.

The rise in the price of platinum group minerals in 1986-1987 prompted a surge of exploration throughout the Kluane Ranges. Resource companies active in the district include All-North Resources Ltd., Chevron Minerals Ltd., Pak-Man Resources Inc. and Silverquest Resources Ltd..

SCALE 1:30,000



MAGNET N 29°

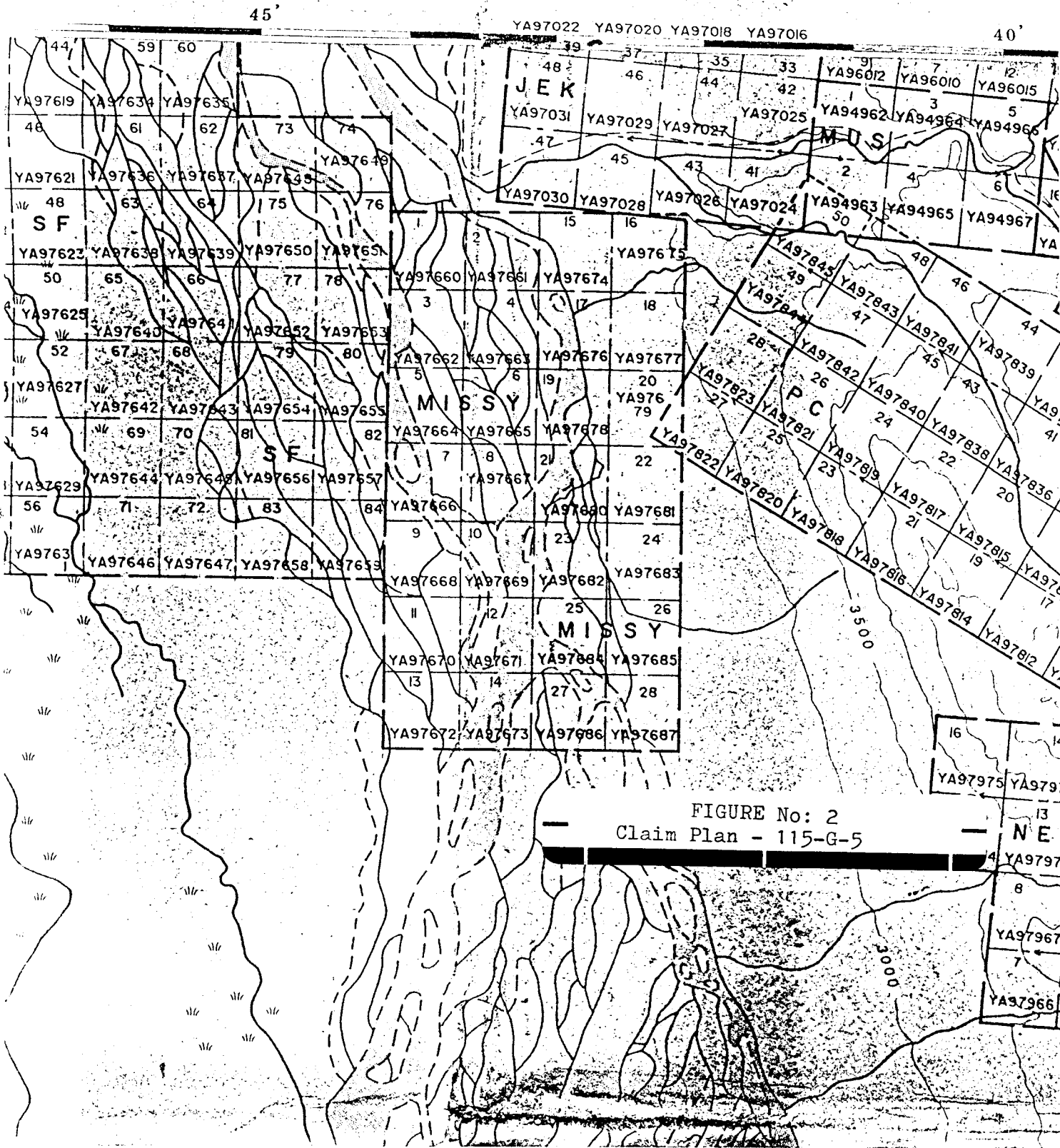


FIGURE No: 2  
Claim Plan - 115-G-5

## REGIONAL GEOLOGY

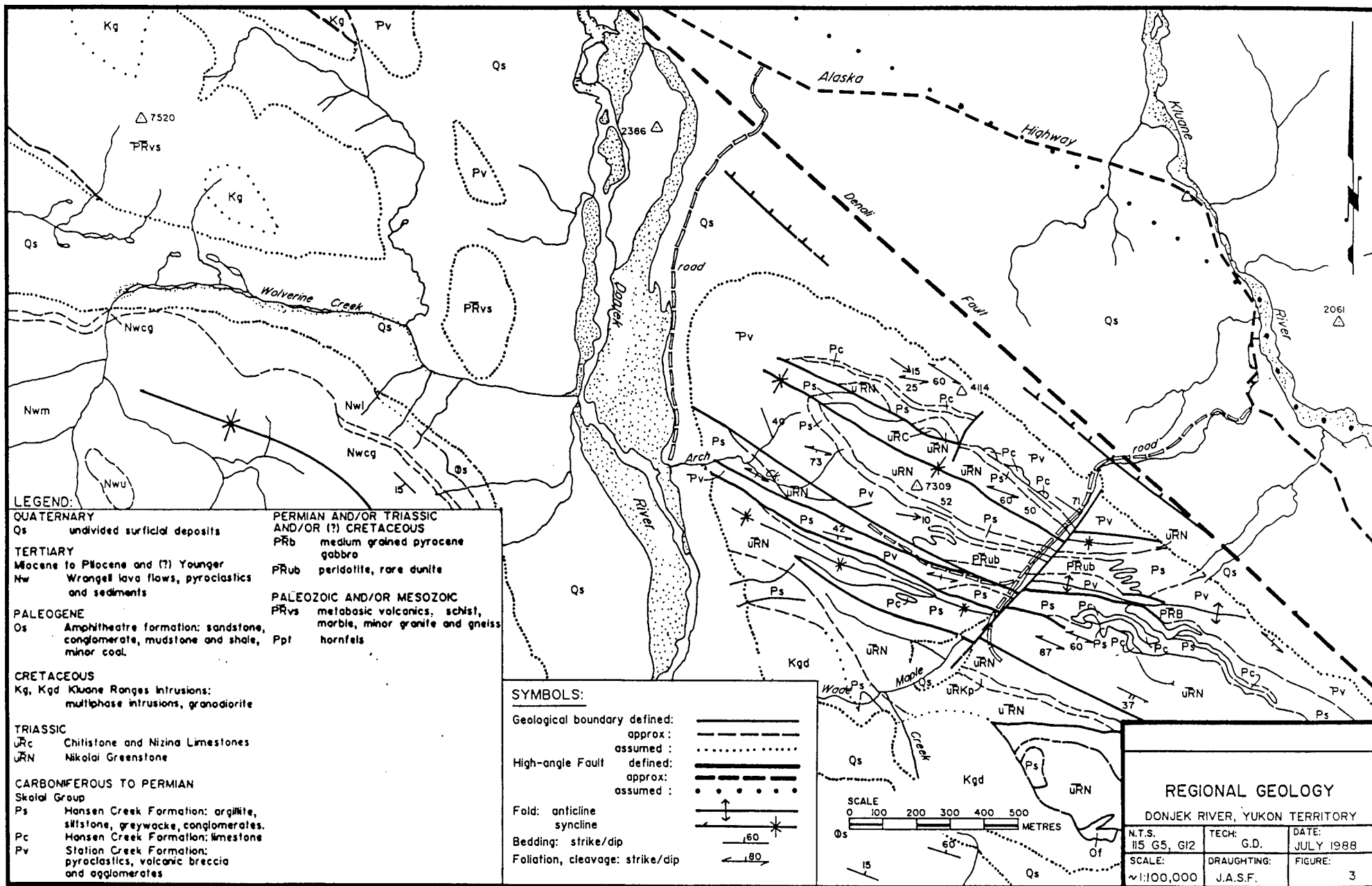
The Donjek River area southwest of the Shakwak Valley is underlain by Carboniferous to Permian, and Triassic sedimentary and volcanic units intruded by granitic and mafic bodies of Cretaceous and Triassic age. The Shakwak Valley is part of the Denali Fault system, the structural division between the Coast Plutonic Belt and Wrangell Terrane in the Kluane Ranges. The geology of the district was released in Open File #829 by the G.S.C.. Figure 3 shows the regional geology.

In the Kluane Ranges the most widespread group is the Carboniferous to Permian Skolai Group. It consists of two formations; the Station Creek Formation composed of green cherty tuffs and volcanic breccia, and the Hansen Creek Formation composed of argillite, siltstone, greywacke, conglomerate and limestone. Skolai Group strata are foliated parallel to the Denali Fault and contain variable amounts of chlorite, pyrite and base metal sulphides.

Triassic Nickolai greenstone also occurs extensively in the Kluane Ranges. It consists of fine to medium grained mafic flows which weather a dark green or purple color.

Sills and elongated bodies of peridotite and gabbro of Triassic age were emplaced in the tuffaceous rocks of the Skolai Group. The gabbros, serpentized peridotites and enclosing rocks host nickel and copper mineralization which contains low grades of PGE metals.

The Cretaceous Kluane Range Intrusions intrude the older layered rocks. They consist of multiphase intrusions of granite and granodiorite.



**LEGEND:**

**QUATERNARY**  
 Qs undivided surficial deposits

**TERTIARY**  
 Miocene to Pliocene and (?) Younger  
 Nw Wrangell lava flows, pyroclastics and sediments

**PALEOGENE**  
 Os Amphitheatre formation: sandstone, conglomerate, mudstone and shale, minor coal.

**CRETACEOUS**  
 Kg, Kgd Klwane Ranges intrusions: multiphase intrusions, granodiorite

**TRIASSIC**  
 URC Chitilstone and Nizina Limestones  
 URN Nikolai Greenstone

**CARBONIFEROUS TO PERMIAN**  
 Skalar Group  
 Ps Hansen Creek Formation: argillite, siltstone, greywacke, conglomerates.  
 Pc Hansen Creek Formation: limestone  
 Pv Station Creek Formation: pyroclastics, volcanic breccia and agglomerates

**PERMIAN AND/OR TRIASSIC AND/OR (?) CRETACEOUS**  
 PRb medium grained pyroclastic gabbro  
 PRub peridotite, rare dunite

**PALEOZOIC AND/OR MESOZOIC**  
 PRvs metabasic volcanics, schist, marble, minor granite and gneiss  
 Ppt hornfels

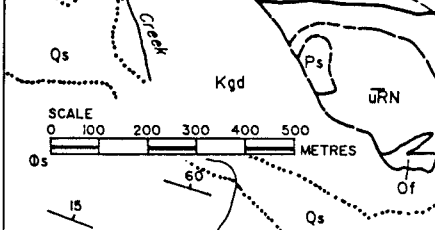
**SYMBOLS:**

Geological boundary defined:  
 approx: defined:   
 assumed:

High-angle Fault defined: approx:   
 assumed:

Fold: anticline syncline

Bedding: strike/dip 60  
 Folliation, cleavage: strike/dip 80



REGIONAL GEOLOGY		
DONJEK RIVER, YUKON TERRITORY		
N.T.S.	TECH: G.D.	DATE: JULY 1988
1:5 G5, G12	DRAUGHTING: J.A.S.F.	FIGURE: 3
SCALE: ~1:100,000		

## EXPLORATION PROGRAM

In June, 1988 the writer and L. Lebedoff performed reconnaissance magnetometer and geochemical surveys. The magnetometer survey was conducted using a Scintrex MF-2 instrument. Soil samples (30) were collected along the eastern claim line at 50 m intervals. The samples were analysed by Bondar-Clegg for Au-Pt-P1-Ni-Cu. The Geochemical Lab Report is presented in the appendix.

The magnetometer survey results are shown in Figure 4. The total magnetic field in the survey area varies from 57,020 to 58,325 gammas. A contour reading of 500 corresponds to a total field value of 57,500 gammas. Magnetic highs were outlined in two areas. The strongest high trends northeast across both survey lines in MISSY claims 19-21 and 23. A second high is located 150 m south of a steep canyon.

The geochemical survey is shown in Figure 5. Moderate to strongly anomalous values in Pt, Pd and Au were obtained in many of the samples. A peak Pt value of 300ppb was recorded at station 5+00S. This correlates well with the magnetic high on MISSY claims 16-18. Other anomalous values are distributed around the magnetic highs at 12+00S and 14+00S.

## DISCUSSION AND RECOMMENDATIONS

The preliminary surveys have delineated anomalous Pt-Pd values associated with magnetic highs. The cause of the anomalous readings is unclear due to deep overburden in the survey area.

In the steep canyon at the northeastern end of the property interbedded limestones, siltstones and conglomerates are intruded by diorite dykes and gabbroic lenses. Some of the conglomerate beds contain up to 5% pyrite. The gabbroic rocks also contain disseminated pyrite and pyrrhotite. The intrusive rocks strike northeasterly and dip 50 NW, consistent with the trend of the magnetic highs.

On the Wellgreen property altered gabbro's host PGE bearing disseminated sulfide mineralization. This mineralization assays on average 800ppb Pt and 833ppb Pd, and composes much of the low grade ore delineated as reserves.

On the MISSY claims the magnetic highs probably overlie lenses or dykes of gabbro and diorite, and anomalous Pt-Pd geochem values may outline zones of PGE bearing sulphide minerals located within or near the mafic intrusive rocks.

The property warrants detailed surface exploration. The work program should include grid development, VLF and magnetometer surveys, geochemistry and geological mapping. The following program is proposed:

Geological mapping and supervision	\$ 3,000
Grid construction	5,000
Geochemistry 250 samples Au-Pt-Pd-Cu-Ni	4,500
VLF and magnetometer surveys	3,500
Camp and support	3,500
Transportation	3,000
Report and assessment	2,500
Contingency	2,500
TOTAL	\$27,500

CERTIFICATE

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

1. That I am a consulting geologist and that I performed the work program described in this report.
2. That I am a graduate of the University of Western Ontario (H.B.Sc., Geology, 1981).
3. That I am registered as a Professional Geologist by the Association of Professional Engineers, Geologists and Geophysicists of Alberta (#42038).
4. That I have been engaged in mineral exploration on a full time basis for seven years in the Yukon, Northwest Territories and British Columbia.

SIGNED at Whitehorse, Yukon this 27 day of October, 1988.

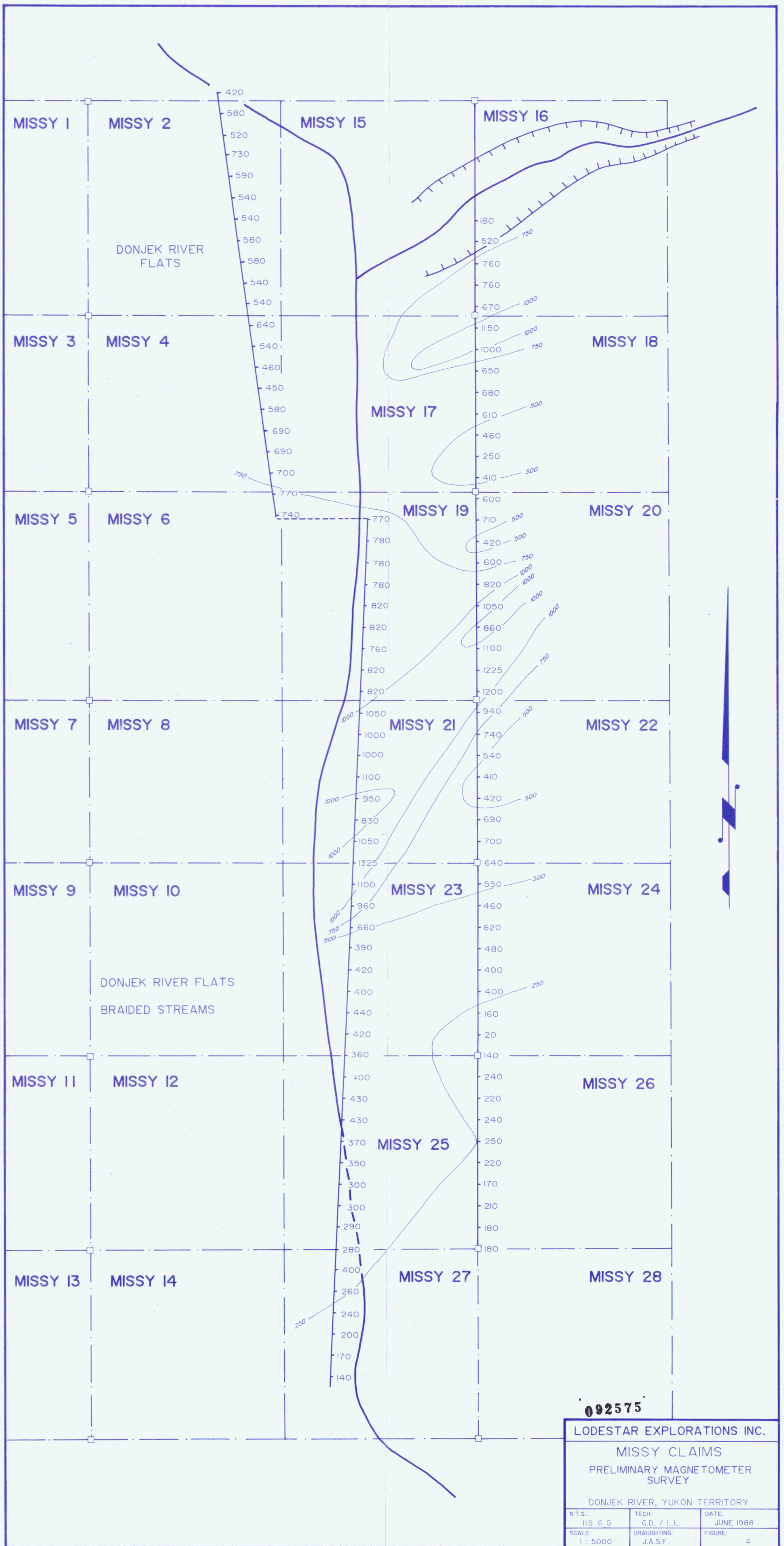


G.S. DAVIDSON, P.Geol.



#### REFERENCES

- Antoniuk, T., 1967: Report on the Micro Nickel Project
- Campbell, S.W., 1976: Open File 1976-10, Nickel-Copper Sulphide Deposits in the Kluane Ranges, Y.T.
- Open File #829, 1984: G.S.C., Geology of the 115 G Map Sheet
- Hulbert, L.J. et. al., 1988: Geological Environments of the Platinum Group Elements



502

PROPERTY

BOUNDARY

DONJEK RIVER  
FLATS  
BRAIDED STREAMS

0+00S

0+50S

1+00S

1+50S

3+00S

3+50S

4+00S

4+50S

5+00S

5+50S

6+00S

6+50S

7+00S

7+50S

8+00S

8+50S

9+00S

9+50S

10+00S

10+50S

11+00S

11+50S

12+00S

12+50S

13+00S

13+50S

14+00S

14+50S

15+00S

15+50S

88-4  
88-5  
88-6X  
88-3  
88-1  
88-2

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Pt PPB	Pd PPB	FF/wt. G	Cu PPM	Ni PPM
SI SLO+00		53	<15	75	2.0	19	36
SI SLO+50S		15	15	15	15	21	37
SI SL1+00		38	<15	75	2.0	22	40
SI SL1+50S		218	30	15	2.0	26	48
SI SL3+00S		19	40	20	7.0	49	60
SI SL3+50S		16	50	20	15.0	80	109
SI SL4+00S		24	80	25	5.0	21	35
SI SL4+50S		30	30	75	2.0	18	32
SI SL5+00S		53	300	75	2.0	15	44
SI SL5+50S		15	15	15	15	14	31
SI SL6+00S		<5	55	10	14.0	20	36
SI SL6+50S		<5	21	10	14.0	19	34
SI SL7+00S		<5	20	17	13.0	20	34
SI SL7+50S		8	30	8	15.0	18	37
SI SL8+00S		<5	30	6	15.0	27	36
SI SL8+50S		5	<15	20	3.0	30	37
SI SL9+00S		9	30	10	12.0	26	42
SI SL9+50S		15	15	15	15	22	37
SI SL10+00S		30	150	75	2.0	21	38
SI SL10+50S		12	45	30	5.0	20	41
SI SL11+00S		13	<15	20	7.0	31	40
SI SL11+50S		8	95	30	8.0	15	34
SI SL12+00S		9	20	10	15.0	38	43
SI SL12+50S		9	20	10	15.0	20	38
SI SL13+00S		7	20	10	15.0	21	37
SI SL13+50S		11	15	10	15.0	17	36
SI SL14+00S		7	45	15	15.0	16	36
SI SL14+50S		13	<15	10	15.0	17	34
SI SL15+00S		11	45	20	15.0	32	60
SI SL15+50S		10	60	20	15.0	33	69

092575

LODESTAR EXPLORATIONS INC.

MISSY CLAIMS

PRELIMINARY GEOCHEMISTRY

DONJEK RIVER, YUKON TERRITORY

N.T.S.: 115 G 5	TECH: G.D./L.L.	DATE: JUNE 1988
SCALE: 1 : 5000	DRAUGHTING: J.A.S.F.	FIGURE: 5

(503)

APPENDIX-CERTIFICATES OF ANALYSES

Bondar-Clegg & Company Ltd.  
 130 Pemberton Ave.  
 North Vancouver, B.C.  
 7P 2R5  
 (04) 985-0681 Telex 04-352667



**Geochemical  
 Lab Report**

REPORT: V88-H6853.11 ( COMPLETE )

REFERENCE INFO:

CIENT: IODESTAR EXPLORATION LTD.  
 PROJECT: MISSY CLAIMS

SUBMITTED BY: G. DAVIDSON  
 DATE PRINTED: 27-SEP-88

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au Gold - Fire Assay	27	5 PPM	FIRE-ASSAY	Fire Assay AA
2	Pt Platinum	27	15 PPM	FIRE-ASSAY	
3	Pd Palladium	27	2 PPM	FIRE-ASSAY	
4	FF/wt. Sample weight/grams	27	11.1 G		
5	Cu Copper	30	1 PPM	HNO3-HCl HOT EXTR	Atomic Absorption
6	Ni Nickel	30	2 PPM	HNO3-HCl HOT EXTR	Atomic Absorption

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
S SOILS	30	1 -80	30	DRY, SIFVF -80	30

REMARKS: 'IS' DENOTES INSUFFICIENT SAMPLE

REPORT COPIES TO: IODESTAR EXPLORATION LTD.

INVOICE TO: IODESTAR EXPLORATION LTD.

REPORT: V88-116853.11 ( COMPLETE )

REFERENCE INFO:

CLIENT: IONESTAR EXPLORATION LTD.  
 PROJECT: MISSY CLATHS

SUBMITTED BY: G. DAVIDSON  
 DATE PRINTED: 27-SEP-88

SAMPLE NUMBER	ELEMENT UNITS	Au PPR	Pt PPR	Pd PPR	FF/wt G	Cu PPM	Ni PPM
S1 SL0+U00		53	<15	75	2.11	19	36
S1 SL0+50S		IS	IS	IS	IS	21	37
S1 SL1+U00		38	<15	75	2.11	22	40
S1 SL1+50S		218	30	15	2.11	26	48
S1 SL3+U0S		19	40	20	7.11	49	60
S1 SL3+50S		16	50	20	15.11	80	109
S1 SL4+U0S		24	80	25	5.11	21	35
S1 SL4+50S		30	30	75	2.11	18	32
S1 SL5+U0S		53	300	75	2.11	15	44
S1 SL5+50S		IS	IS	IS	IS	14	31
S1 SL6+U0S		<5	55	10	14.11	20	36
S1 SL6+50S		<5	21	10	14.11	19	34
S1 SL7+U0S		<5	20	17	13.11	20	34
S1 SL7+50S		8	30	8	15.11	18	37
S1 SL8+U0S		<5	30	6	15.11	27	36
S1 SL8+50S		5	<15	20	3.11	30	37
S1 SL9+U0S		9	30	10	12.11	26	42
S1 SL9+50S		IS	IS	IS	IS	22	37
S1 SL10+U0S		30	150	75	2.11	21	38
S1 SL10+50S		12	45	30	5.11	20	41
S1 SL11+U0S		13	<15	20	7.11	31	40
S1 SL11+50S		8	95	30	8.11	15	34
S1 SL12+U0S		9	20	10	15.11	38	43
S1 SL12+50S		9	20	10	15.11	20	38
S1 SL13+U0S		7	20	10	15.11	21	37
S1 SL13+50S		11	15	10	15.11	17	36
S1 SL14+U0S		7	45	15	15.11	16	36
S1 SL14+50S		13	<15	10	15.11	17	34
S1 SL15+U0S		11	45	20	15.11	32	60
S1 SL15+50S		10	60	20	15.11	33	69