010

REPORT ON

GEOCHEMICAL ORIENTATION STUDY

K 580422 AND K 580423

BENNETT LAKE AREA

KENORA MINING DIVISION

ONTARIO

Prepared by:
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Wabigoon, Ont.
P0V 2W0

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Jan 28/88

Introduction

A variety of exploration techniques have been used on this property to date. These include vertical and total field magnetic surveys, a VLF survey and trenching. Results to date has been unable to characterize the gold - bearing area. Trenching costs are prohibitive to cover the entire Property, and could only be used in areas of thin overburden regardless of cost. Consequently, a geochemical orientation was carried out to evaluate the possible application of geochemistry to define areas for further exploration.

Location and Access

The claims are located about 1.5km north of the junction of Hwy. 11 and the Manion Lake road, 12km east of Mine Centre. An old tote road leads from a point 0.1km north of the CNR tracks on the Manion Lake road to the claims, a distance of about 0.7km. Recent up-grading work carried out on the Manion Lake road has disturbed the drainage pattern resulting in a partial flooding of the tote road.

Previous Work

These two claims cover the workings of the Alice A mine - a gold prospect actively explored in the 1890's. Development consisted of two shafts, 100 and 50 feet deep. The shafts are 125 feet apart. About 50 feet of cross - cutting was done in the deeper shaft. A 10 - ton bulk sample was reported to have assayed 0.6 oz./ton Au.

Mineralization

The gold occurrence known as the Alice A is located along the common boundary of the two claims. The occurrence consists of a series of drag-folded quartz veins within an area about 25x50m.

The only macroscopic differences between these gold-bearing veins and other quartz veins in the area is the presence of sulphides in the quartz and the drag-folding of the quartz veins. It is likely that these two features are related.

The sulphides present are pyrite, chalcopyrite, sphalerite and galena.

Methodology

Based on the known Presence of Gold with the sulPhides, detailed analyses of the sulPhides should indicate which trace elements would be most suitable as indicative of Potential Gold dePosits in this Geological terrain.

Selected samPles of quartz containing 5 - 20% sulPhides were collected from the dumP material adjacent to the two shafts on the ProPerty. The total weight collected was 25 - 30 kg.

This material was crushed to a nominal - 5mm. From this crushed Product sulPhide - rich Pieces were selected to Provide a Pyrite - chalcoPyrite samPle, a Galena - sPhalerite samPle and a Pyrite - chalcoPyrite - Galena - sPhalerite samPle.

Results

The Pertinent analyses of the three samPles follow:

Element / Units		AA-2	AA-3	AA-4
Ag	PPm	150	90	80
As	PPm	40	46	45
Au	PPm	56	120	89
Cd	PPm	200	160	180
Co	PPm	51	42	54
Cu	PPm	2000	7400	7400
F	PPm	1400	550	360
Fe	PPm	58000	97000	110000
Hg	PPb	30	19	45
In	PPm	8	5	6
Mn	PPm	26	58	54
Pb	PPm	510000	35000	42000
Sb	PPm	140	47	56
Se	PPm	44	17	27
Te	PPm	40	24	21
Zn	PPm	59000	24000	26000
La	PPm	30	50	60

Sample identifications

AA 2 Galena - sPhalerite

AA 3 Pyrite - chalcoPyrite

AA-4 Pyrite - chalcoPyrite - Galena - sPhalerite

All analyses were carried out by NAS Ltd.

Conclusions:

1. The gold values correlate with As, Cu and Mn.

2. The silver - lead - zinc values correlate with Cd, F, In, Sb, Se and Te.

3. The Co, Fe, La and Mg values do not form a distinct correlation with either the gold or silver.

4. The Au/Ag ratio in the average material is approximately 1.1.

5. The Au/Ag ratio suggests that the elements which follow the Ag could also be used to define gold - enriched zones.

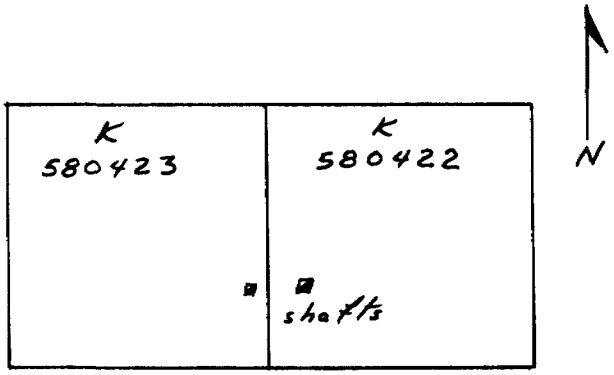
Recommendations:

1. Mn, Zn and Cu equate closely with the results of the 'Total Heavy Metals' (THM) geochemical field technique. The use of THM as a reconnaisance tool in the area is suggested.

2. As, Sb, Au, Hg and F are considered the most suitable indicators for detailing areas located with THM.

3. Humus geochemical techniques should be investigated.

Location Map



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Methodology

Based on the known presence of gold with the sulphides, detailed analyses of the sulphides should indicate which trace elements would be most suitable as indicative of potential gold deposits in this geological terrain.

Selected samples of quartz containing 5 - 20% sulphides were collected from the dump material adjacent to the two shafts on the property. The total weight collected was 20 - 30 kg.

This material was crushed to a nominal - 5mm. From this crushed product sulphide - rich pieces were selected to provide a pyrite - chalcopyrite sample, a galena - sphalerite sample and a pyrite - chalcopyrite - galena - sphalerite sample.

The three samples are being analysed for Au, Ag, Cu, Pb, Zn, As, Sb, Hg, Te, plus a large number of other elements.

Results

The three samples will be compared using ratios of the various elements to determine the significant correlations between gold and the other elements. By using ratios it is expected that a definitive geochemical signature can be identified. Such a signature will permit the use of geochemistry to define other targets on the claims.

Due to the high level of exploration this year, lengthy delays are experienced before results are received. This is the case with these samples. Once the analyses are received, the evaluation of the data can be carried out.

Conclusions

Conclusions will be made upon receipt and evaluation of the analyses.

Ministry of Northern Development and Mines

Ontario

Report of Work (Geophysical, Geological, Geochemical and Expenditures)

#1,177-87 #1

MINING LANDS Mir

52C16SW8244 2.10549 BENNETT LAKE

900

Type of Survey(s)
EXPENDITURE

Township or Area
Bennett Uk Area

Claim Holder(s)
J.W. Redden

Prospector's Licence No.
E23950

Address
Box 117, Wabigoon Ont P0V2W0

Survey Company
J.W. Redden

Date of Survey (from & to) Day | Mo. | Yr. | Day | Mo. | Yr.
10 09 87 | 11 09 87

Total Miles of line Cut
—

Name and Address of Author (of Geo-Technical report)
J.W. Redden, Box 117, Wabigoon, Ont., P0V2W0

Crecits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
K	580422	17			
	580423	16			

RECEIVED

MINING LANDS SECTION

KENORA MINING DIV. RECEIVED SEP 15 1987 AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Total number of mining claims covered by this report of work. 2

Expenditures (excludes power stripping)

Type of Work Performed
sampling, ~~first report~~

Performed on Claim(s)
BOTH

Calculation of Expenditure Days Credits

Total Expenditures: $ 500.00 ÷ 15 = Total Days Credits: 33

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
33	87.09.15	
	Date Approved as Recorded	Branch Director
		See verbal statement.

Date: Sept 11/87

Recorded Holder or Agent (Signature): J.W. Redden

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying
J.W. Redden
Box 117, Wabigoon, Ont. P0V2W0

K 580422

Date Certified: Sept 11/87

Certified by (Signature): J.W. Redden

(382,85/12)

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File 2.10549

Date February 10, 1988

Mining Recorder's Report of Work No. 173-87

Recorded Holder: J.W. Redden

Township ~~XXXXXX~~ Area: Bennett Lake

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	$500.00 SPENT ON A PROPERTY EVALUATION ON MINING CLAIMS:
Electromagnetic _____ days	
Magnetometer _____ days	K-580422-23
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☐ Ground ☐	
☐ Credits have been reduced because of partial coverage of claims.	33 DAYS CREDIT ALLOWED WHICH MAY BE GROUPED IN ACCORDANCE WITH SECTION 76(6) OF THE MINING ACT R.S.O. 1980.
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

Ministry of
Northern Development
and Mines

Ontario

Ministère du
Développement du Nord
et des Mines

February 10, 1988

Our File: 2.10549

Mining Recorder
Ministry of Northern Development and Mines
808 Robertson Street
Box 5050
Kenora, Ontario
P9N 3X9

Dear Sir:

RE: Property Evaluation submitted under Section 77(19)
of the Mining Act R.S.O. 1980 on Mining Claims
K-580422-23 in the Area of Bennett Lake

The enclosed statement of assessment work credits for assaying has been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

W.R. Cowan, Manager
Mining Lands Section
Mines & Minerals Division

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

DK:pl
Enclosure (2)

cc: Resident Geologist
Kenora, Ontario

Mr. J.W. Redden
Box 117
Wabigoon, Ontario
POV 2WO

MANION LAKE AREA - G-2686

92°30' 92°15' 48°52'30" 48°42'30"

LITTLE TURTLE LAKE AREA - G-2682

HEPBURN LAKE AREA - G-2675

BENNETT TWP.

FOR STATUS REFER TO TWP. PLAN

Indian Reserve No. 23

WILD POTATO LAKE AREA - G-2703

48°45'

LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION OR COMPOSITE PLAN
- RESERVATIONS
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◓
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	◨
" , MINING RIGHTS ONLY	◧
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	⑧
CANCELLED	⊗
SAND & GRAVEL	⑤

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

SAND AND GRAVEL

⑤ GRAVEL FILE 162719
⑤ M.T.C. PIT 1099 GRAVEL FILE 162718
⑤ M.T.C. PIT 1058
⑤ GRAVEL FILE 16799 vol 7
⑤ M.N.R. Gravel Reserve No 228, File 162718.
⑤ M.T.C. PIT Nº 18-14

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

AREA

BENNETT LAKE

M.N.R. ADMINISTRATIVE DISTRICT

FORT FRANCES

MINING DIVISION

KENORA

LAND TITLES / REGISTRY DIVISION

RAINY RIVER

Ontario Ministry of Natural Resources — Land Management Branch

Date FEBRUARY, 1984. Number G-2687

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