

52E10SW8582 2.3671 SHOAL LAKE

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MINING LANDS SECTION

KENORA GOLD PROJECT
CROWN POINT CLAIMS
(FAIRSERVICE OPTION)
GEOLOGICAL AND TRENCHING REPORT

Bag Bay (Shoal Lake) Area
Glass Township, District of Kenora, Ontario
for
Sherritt Gordon Mines Limited
by

D. Glenn Harder, B.A., B.Sc.
Robert H. Morse, Ph.D., P.Eng.

December 31st 1980

SUMMARY

The six claims comprising the Fairservice option covering the old Crown Point Mine and two new claims to the north have been thoroughly prospected and sampled and mapped geologically. The new data have been evaluated in the light of earlier government reports and assessment files. Core from two old diamond drill holes was found and sampled. The gold results were discouraging. In the old drill core a nickel value of .17% over 1.6 metres and a copper value of .12% over 1.3 metres were observed. The drill holes are on a strong ground mag and EM anomaly.



Respectfully submitted,

Robert H. Morse, Ph.D., P. Eng.

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R. H. Morse & Associates Ltd.

DESCRIPTION OF CLAIMS

The property consists of eight unpatented mining claims in Glass Township (Claim Map M2339) and includes the old Crown Point Mine. The claim numbers are K533164 through 69 and K560559 and 60. The first six were staked by R. Fairservice of Dryden, Ontario, recorded in January, 1980 and optioned to Sherritt Gordon Mines Limited. The last two were staked for Sherritt and recorded in October, 1980. The latter were staked to cover the northerly extension of a ground EM and mag anomaly and some favourable looking quartz veins on the lake shore and because other exploration groups were believed to be active in the area.

The property is located on the north side of Bag Bay and the southeast side of Clytie Bay, both parts of Shoal Lake. Access is by boat from the Clytie Bay landing or a car can be driven to a point about one kilometre northeast of the northeast corner of the claims. The Echo Bay road connects both these points with the Trans-Canada Highway.

PREVIOUS WORK

The property was worked around the turn of the century when three shafts were opened up to depths of 60, 65 and 125 feet and 100 feet of drifting carried out. Reportedly

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150 tons of ore were treated for a recovery of 100 ounces of gold. The three shafts can still be seen on the property together with the remains of what may have been a mill. The shafts are nearly filled with water.

The old Mikado and Cedar Island (Cornucopia) mines are situated 2 kilometres to the south. The Mikado produced 28,335 ounces of gold and the Cedar Island 4,941 ounces.

In 1968 the claims were covered by ground magnetometer and horizontal loop EM along lines at N22°W. In 1972 a ground magnetometer survey was run along east-west lines. Line spacing in both cases was 400 feet. A geological map in the assessment files from 1972 was found to be inaccurate and of no use. Seven diamond drill holes were reported on the property from 1968 and two of them were re-located during the present survey.

In 1978 Alex Motzok of Long Lac Mineral Exploration Ltd. collected 5 samples on the property. All his gold values were nil except for one basalt which ran .06 oz/T.

PRESENT WORK

Work on the property by R.H. Morse & Associates Ltd. on behalf of Sherritt Gordon Mines Limited began September 26th and ended October 16th 1980. The work consisted of geological mapping, prospecting, rock trenching and sampling.

As well, a small amount of check work was done with a Radem VLF EM. The earlier geophysical reports in the assessment files were examined and the major anomalies have been plotted on figure 1.

Control for the exploration surveys was by reference to air photos and to a new system of cut lines. The latter comprises a base line 900 metres long at an azimuth of 70° and 5 cross lines totalling 1,800 metres. More detailed control was by pace and compass.

GEOLOGY

The area was mapped geologically by Davis and assistants in 1968 (O.D.M. Map P. 528). The property lies on the west edge of the Canoe Lake stock.

The precambrian geology of the property is complex and includes felsic to ultramafic intrusive and extrusive rocks. Contacts are not well exposed and the age relationships are not certain.

The oldest rocks on the property appear to be basalt which is altered and schistose in part. The basalt is closely related to mafic and ultramafic rocks which are medium to coarse grained.

Quartz diorite underlies the southeast portion of the claims. It represents the western limit of the

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Canoe Lake stock. The quartz diorite consists of white altered feldspar, 60%, chlorite, 25% and quartz, 15%.

Granite, which may be related to the Canoe Lake stock, occurs in the south part of the claim group. It consists of pinkish to white feldspar, 55%, quartz, 25%, fresh biotite and hornblende, 20%.

Felsic volcanics are present on the shore of Clytie Bay. The feldspar (pink) content appears to be high. Coarse angular fragments and quartz lenses are common. Felsite dykes and quartz veins occurring in the other units may be related to the intrusion of the felsic volcanics.

A porphyry dyke occurs at the contact shaft. It consists of large crystals of yellowish feldspar in a pale green matrix of fine grain quartz, carbonate and chlorite. It is locally sheared with minor chalcopyrite along shear planes.

GEOPHYSICAL CHECKING

An attempt was made to relocate by VLF the small EM anomaly reported near the southwest corner of the claims. No VLF crossover was found there. The strong EM anomaly in claim number K560559 was not checked.

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OLD DRILL CORE

A strong ground EM and mag anomaly trends north-northeasterly through claim number K 560559. Seven diamond drill holes are reported from 1968 along this anomaly and core from two of these was found. The depth markings on the core are for the most part illegible and some of the boxes are broken. Sixteen samples of this core were assayed for gold, copper and nickel. The highest nickel value was .17% over 1.6 metres and the highest copper was .12% over 1.3 metres. The high nickel value is in a section of green banded quartz with 30% pyrite stringers. Most of the sulfides are in quartz-(carbonate)-rich rocks as bands and veinlets in altered mafics. Massive pyrrhotite and minor chalcopyrite are fairly common in the core. Gold values were all trace or nil.

TRENCHING SAMPLING AND ASSAYING

Trenches were blasted into the rock at 9 locations (T1 to T9 on figure 1). Sampling these trenches as well as other locations on the claims resulted in 83 samples in addition to the 15 from the core mentioned above. All the samples were assayed for gold and some for silver and

base metals.

Nearly all the samples ran nil or trace with a few values of .01 to .02 oz/T (see figures 1, 2, 3, 4 & 5). The only higher value was .06 oz/T collected from a 20-cm-wide shear zone running between the main and vent shafts. Apparently this was the zone "mined" in the early 1900s. This narrow shear zone is in quartz diorite of the Canoe Lake stock which is barren.

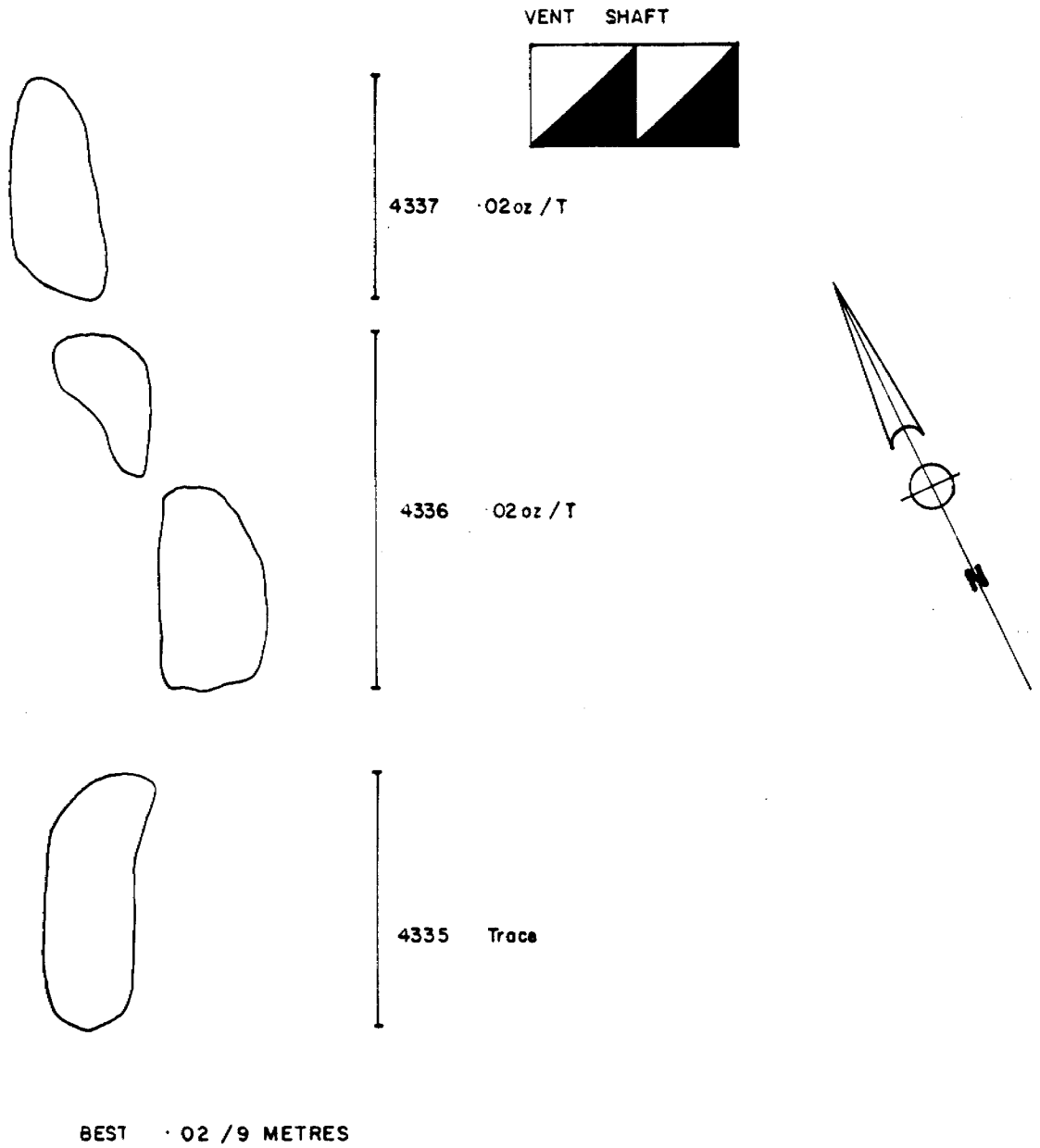
South east of the vent shaft a shear zone 14 metres wide in the same quartz diorite was trenched and sampled (T1). An assay of .02 oz/T over 9 metres was obtained and the rock contains some large (1 cm) cubes of pyrite. This assay and width is the best on the property but not economic. It was the presence of this wide shear zone, reported to contain encouraging values (O.B.M. Vol. IX, P.59, 1899), that led to Sherritt's interest in the property.

CONCLUSIONS

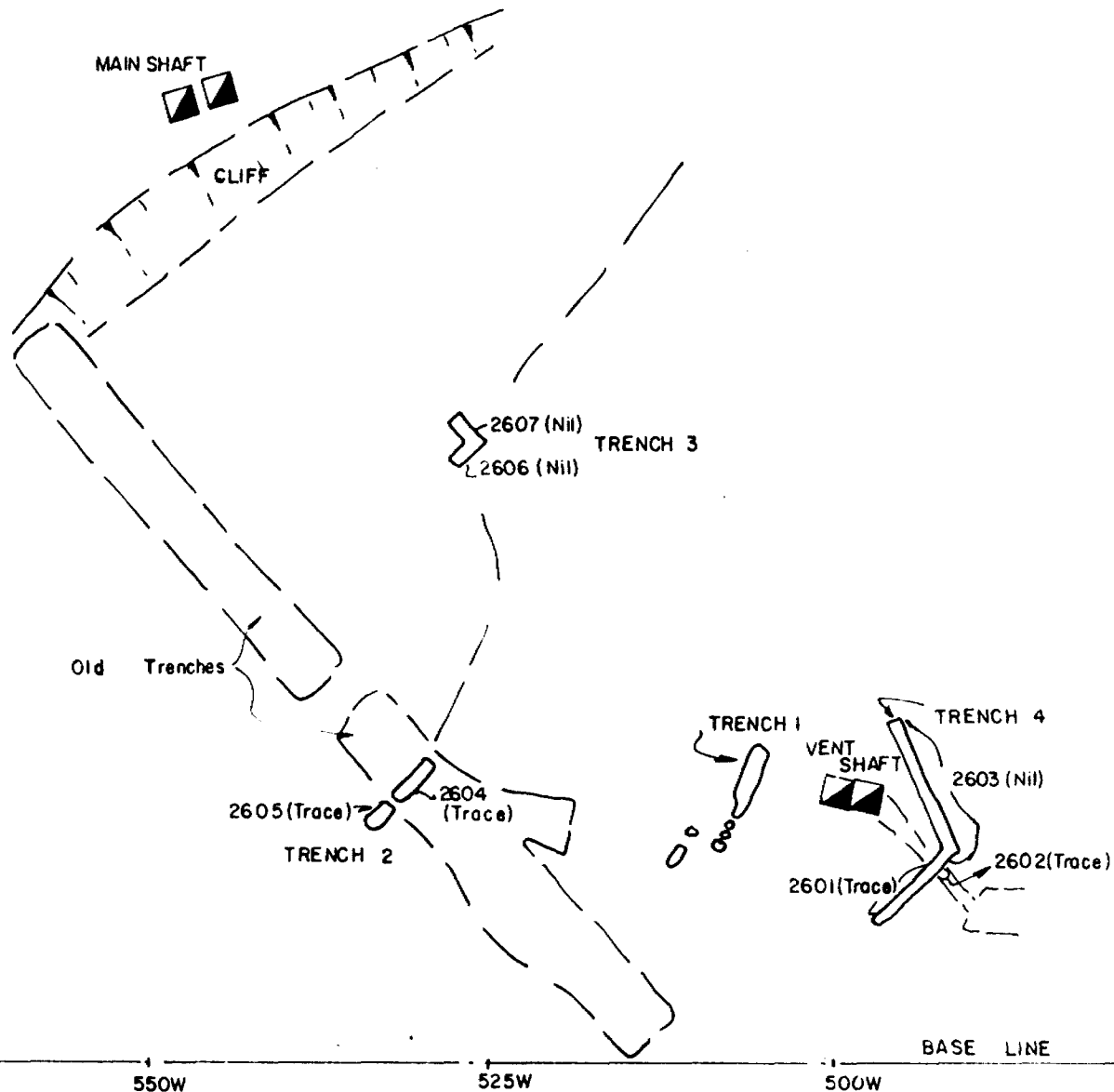
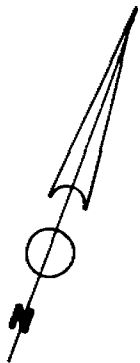
The claims have been thoroughly explored for gold but no economic concentrations were found. The zone which the miners were following in the early 1900s and which reportedly produced 100 ounces of gold was sampled with poor results. The wide shear zone south east of the vent shaft carried only .02 oz/T.

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Core from two old holes apparently drilled to test a strong ground mag and EM anomaly gave values of .17% Ni over 1.6 metres and .12% Cu over 1.3 metres.

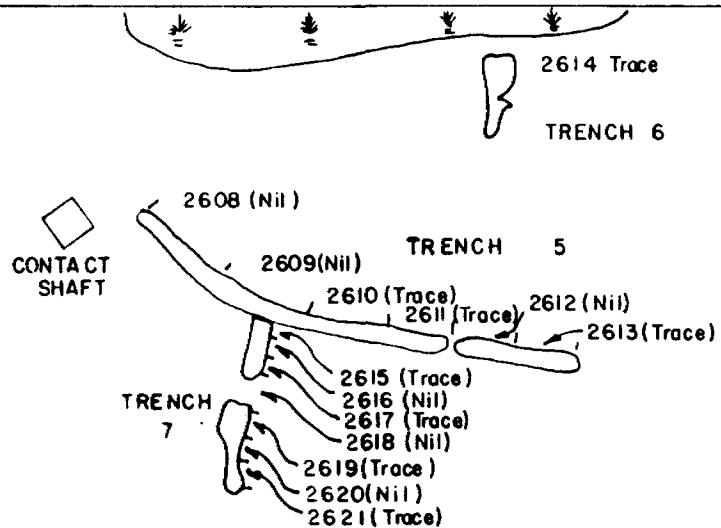


TRENCH I
SCALE 1:100



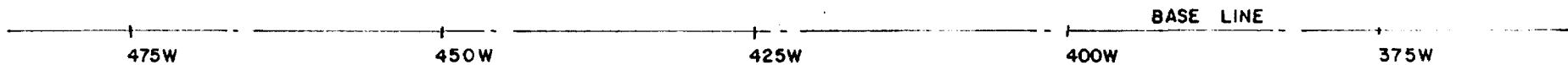
TRENCHES 2,3 & 4

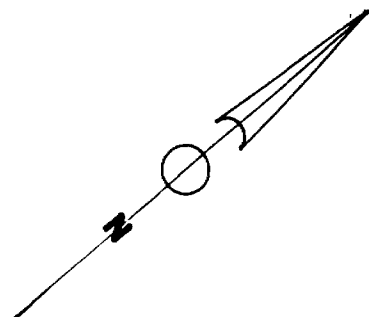
SCALE 1 : 500



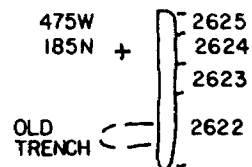
TRENCHES 5, 6 & 7

SCALE 1:500





LENGTH 10.5m
 WIDTH .75m
 DEPTH 3m



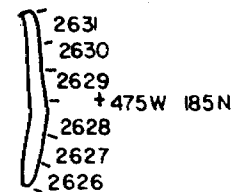
SAMPLE	oz/Ton RESULT
2622	Trace
2623	Trace
2624	Trace
2625	Trace

TRENCH 8

SCALE 1:500



LENGTH 12m
 WIDTH .75m
 DEPTH 3m



SAMPLE	oz/Ton RESULT
2626	Trace
2627	Nil
2628	Nil
2629	Trace
2630	Trace
2631	Trace

TRENCH 9

SCALE 1:500



Ministry of

GEOPHYSICAL - GEOTECHNICAL



52E10SW8582 2.3671 SHOAL LAKE

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TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS
MINING LANDS SECTION
CROWN POINT

JAN 16 1981

Type of Survey(s) Geological
Township or Area Glass Twp.
Claim Holder(s) Robert J. Fairservice
Sherritt Gordon Mines Limited
Survey Company R. H. Morse & Associates Ltd.
Author of Report R. H. Morse D. G. Harder
Address of Author 298 Beech Ave. Box 1360 Deep River
Toronto Ont.
Covering Dates of Survey Aug. 26 - Oct. 16, 1980
Total Miles of Line Cut 2.7 km

Table with 2 columns: Mining Claims Traversed (List numerically), Prefix, Number. Includes entries like K 533164, K 533165, etc.

Table with 2 columns: SPECIAL PROVISIONS CREDITS REQUESTED, DAYS per claim. Includes entries for Geophysical, Electromagnetic, Magnetometer, Radiometric, Other, Geological, Geochemical.

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer Electromagnetic Radiometric
DATE: Jan. 14, 1980 SIGNATURE: Robert H. Morse
Author of Report or Agent

Table with 4 columns: Res. Geol., Qualifications, Previous Surveys (File No., Type, Date), Claim Holder. Includes handwritten 'L.D.' in the Claim Holder column.

OFFICE USE ONLY

If space insufficient, attach list

TOTAL CLAIMS 8

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations _____ Number of Readings _____

Station interval _____ Line spacing _____

Profile scale _____

Contour interval _____

MAGNETIC

Instrument _____

Accuracy -- Scale constant _____

Diurnal correction method _____

Base Station check-in interval (hours) _____

Base Station location and value _____

ELECTROMAGNETIC

Instrument _____

Coil configuration _____

Coil separation _____

Accuracy _____

Method: Fixed transmitter Shoot back In line Parallel line

Frequency _____
(specify V.L.F. station)

Parameters measured _____

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

**INDUCED POLARIZATION
RESISTIVITY**

Instrument _____

Method Time Domain Frequency Domain

Parameters -- On time _____ Frequency _____

-- Off time _____ Range _____

-- Delay time _____

-- Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

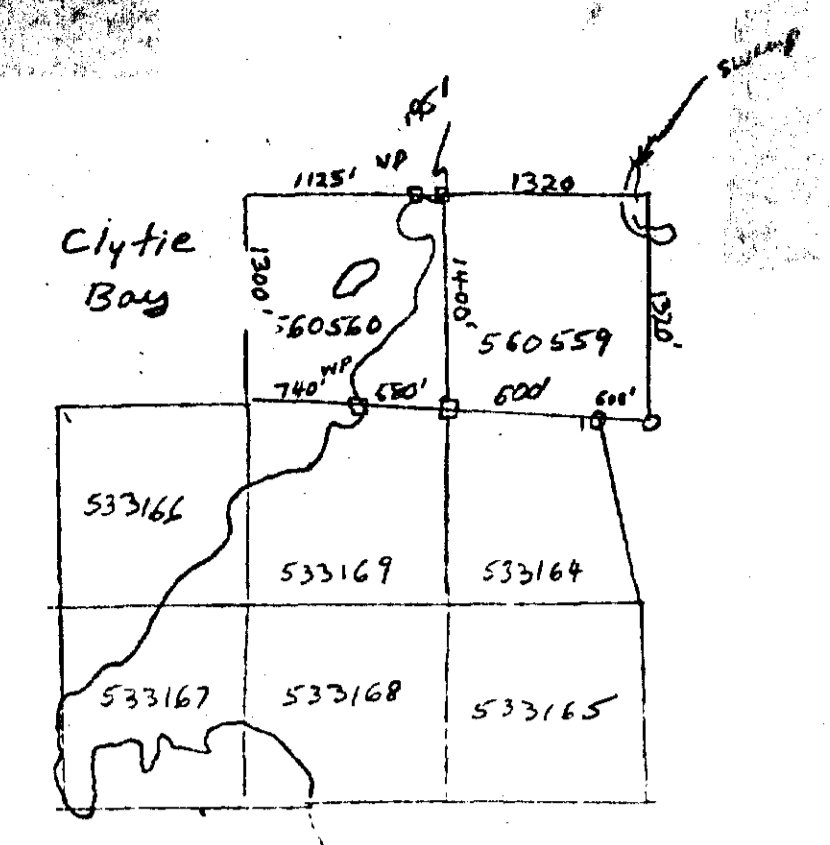
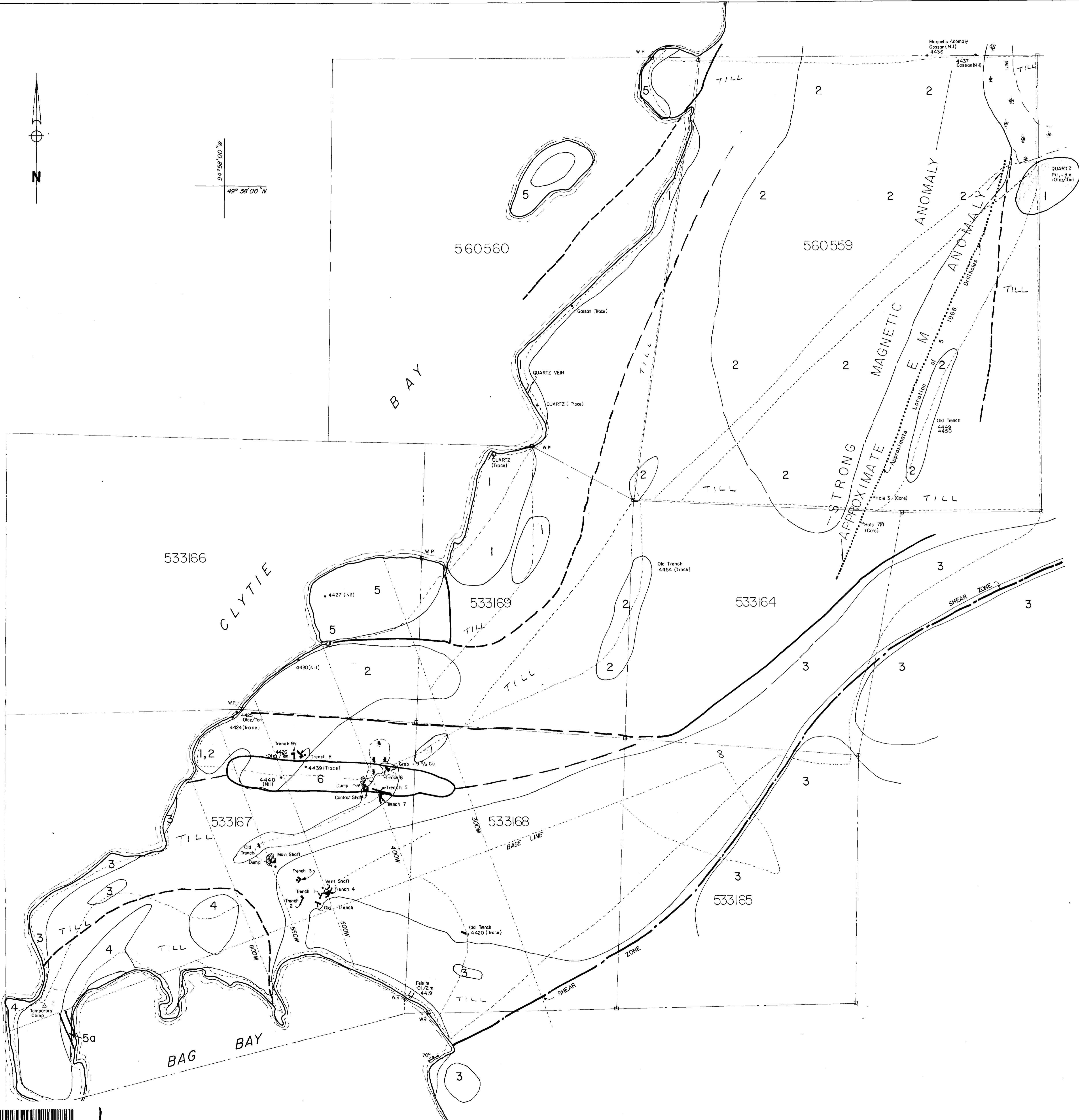
Notification required for claims K560559-560

533 164	✓
165	1/2
166	1/2
167	✓
168	✓
169	✓
560 559	✓
560	3/4

Plans require key map
Outcrops to be coloured
Table of formation + symbols.



94° 58' 00" W
49° 58' 00" N



Key Map 1" = 1320 Feet

LEGEND

- 6 PORPHYRY
- 5 FELSIC VOLCANIC
of felsite Dikes
- 4 GRANITE
- 3 QUARTZ DIORITE
- 2 GABBRO ULTRAMAFIC ROCKS
- 1 BASIC VOLCANICS
- E.M. ANOMALY
- SHEAR ZONE
- OUTCROP, APPROXIMATE
- GEOLOGICAL CONTACT, DEFINED, ASSUMED
- MAJOR TRAVERSE LINE
- Swamp

ENTIRE AREA IS FOREST COVERED EXCEPT FOR SWAMP & LAKE

Geophysics taken from previous reports in assessment files



R.H. Morse
2371 Shoal Lake
G. Fisher

R.H. MORSE & ASSOCIATES LTD.
FOR
SHERRITT GORDON MINES LIMITED
KENORA GOLD PROJECT
CROWN POINT — SHOAL LAKE AREA
(FAIRSERVICE OPTION)
GLASS TOWNSHIP, DISTRICT OF KENORA, ONTARIO M2339 52E/10SW
GEOLOGY

