010

MAUDE LAKE GOLD MINES LIMITED

RADIOMETRIC SURVEY

SALVE LAKE "GROUP OF 20" CLAIMS

BEATTY TOWNSHIP

R. A. Bennett, MSc., PEng.
September 18, 1984.

Dual
2.1594

MAUDE LAKE GOLD MINES LIMITED

RADIOMETRIC SURVEY - SALVE LAKE "GROUP OF 20" CLAIMS

INTRODUCTION

A radiometric survey was completed over Maude Lake Gold Mines' SALVE LAKE "GROUP OF 20" CLAIMS in Beatty Township to assist the geological interpretation and test for potassium-rich alteration zones that are commonly associated with gold mineralization events. The "Group of 20" property forms the central portion of the larger SALVE LAKE GROUP which Maude Lake has been exploring over the past 3 years.

PROPERTY, LOCATION, ACCESS

The claims under consideration in this report consist of twenty (20) staked mining claims numbered:

L.550880
L.550881
L.550882
L.550883
L.550884
L.565052
L.565053
L.565054
L.565055
L.565056
L.565057
L.565058
L.565059
L.565061
L.565062
L.578942
L.598904
L.598905
L.598906
L.598907

that are held by Maude Lake Gold Mines Limited, 300 Elm Street West, Sudbury, Ontario, P3C 12V4.

The claims are located in central Beatty Township, Larder Lake Mining Division (NTS: 42A 9W) approximately 7 miles northeast of the Town of Matheson. Access to the claims is by Hw #101 east from Matheson to the Beatty-Carr Township boundary road and then north along all-weather gravel roads to within 1/2 mile of the western boundary of the claims. The 0+00 Baseline crosses the road and leads to the property.

A property and general location map is provided overleaf.

HISTORY

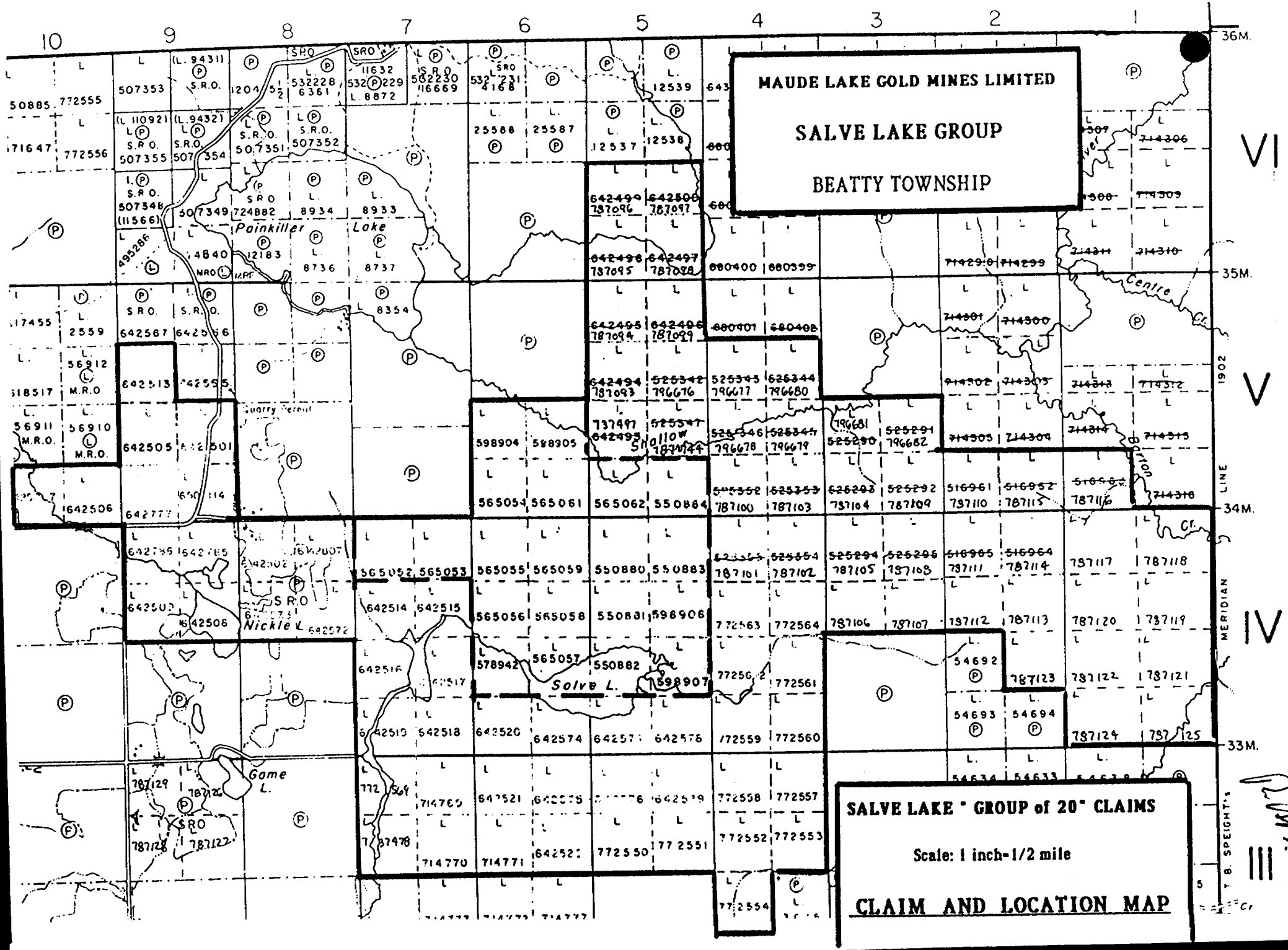
Only a limited amount of exploration work has been recorded on the Salve "Group of 20" claims. In 1960, Texas Gulf Sulphur (now Kidd Creek Mines) drilled 2 boreholes on present claim L. 565054 that intersected minor pyrite and pyrrhotite, graphite and a quartz vein in mafic volcanics and metasediments. In 1973-74, Shenadoah Mines completed magnetic and electromagnetic surveys over the 8 southernmost claims near Salve Lake. Their work failed to locate any significant targets and further work was not done.

In 1981, Maude Lake Gold Mines completed a magnetometer survey over the claims. In 1982, Maude Lake mapped and ran a VLF-EM survey over the claims.

Several old pits and trenches were found during the mapping program, but no record of the work could be found.

GENERAL GEOLOGY

The general geology of the area is described by J. Satterly and H.S. Armstrong (ODM Volume LX, Part IV, Geology of Beatty Township) as being underlain by east-west striking, northward facing andesitic and basaltic pillow lavas of early Precambrian age. These lavas are cut by a few north-striking Matachewan diabase dykes and Algoman lamprophyre dyklets. Several faults are interpreted to cut the claims (ODM Map 1947-2). The mapping survey completed in 1982 by Maude Lake located several northeast-striking quartz veins and a few strike faults. Only trace amounts of gold were found in the samples submitted.


MAUDE LAKE GOLD MINES LIMITED
SALVE LAKE GROUP
BEATTY TOWNSHIP
SALVE LAKE " GROUP of 20" CLAIMS
Scale: 1 inch=1/2 mile
CLAIM AND LOCATION MAP
Painkiller Lake
Quarry Permit
Shallow L.
Nickle L.
Solve L.
Gome L.
Centre Creek
T. B. SPEIGHT'S 1902 MERIDIAN LINE
10
9
8
7
6
5
4
3
2
1
36M.
35M.
34M.
33M.
VI
V
IV
III

EXPLORATION PROGRAM

Gridding

A grid of picket lines totalling 18.3 miles and 1.6 miles of baseline was cut over the claims during November 1981 by an exploration contractor, Gerald Bastarache of Kirkland Lake, Ontario. The baseline strikes due east-west and perpendicular crosslines were cut every 400 feet along the baseline. Pickets were chained and set every 100 feet along all the cut lines. During the summer and fall of 1982, the baseline and several of the crosslines were brushed-out by Maude Lake personnel.

A base station was established at 0+20N, 26+00W for geophysical survey tie-in purposes.

Radiometric Survey

The radiometric survey was completed over some of the claims during the summer of 1982 in conjunction with the geological mapping program. The remainder of the survey was completed between October 1 and November 30, 1982 after the very wet, swampy areas and lakes were frozen.

A McPhar TV-1A Radiation Spectrometer was used and total field readings were taken every 100 feet along all the grid lines. In all, 859 readings were taken. The readings were corrected for diurnal drift using the time-linear method. General topography and outcrop areas were also charted and the results compared with the mapping survey.

A summary of the TV-1A's specifications is appended.

Results

The results of the radiometric survey are plotted on Figure #2, in back pocket.
The total field readings ranged from 1 to 20 counts per minute for the survey area. The readings can be grouped into distinct populations based on the overburben and bedrock conditions. The lowest readings (1 to 3 counts per minute) only fell over Salve Lake. Readings over the swampy and wet areas ranged from 2 to 6 cpm and while the low alder and spruce

areas returned values between 5 and 11 cpm. The large basaltic outcrop areas typically ran between 6 and 10 cpm. The highest readings always occured in areas covered by thick lacutrine clay deposits (usually marked by poplar forest). This likely reflects the higher potassium concentrations in the clays. No significant enrichment was found on or near outcrop areas, although some weak alteration zones were noted during the geological mapping.

CONCLUSIONS AND RECOMMENDATIONS

A radiometric survey was completed over Maude Lake Gold Mines' SALVE LAKE "GROUP OF 20" CLAIMS in central Beatty Township. The results of the work assisted in the geological understanding of the area and helped to predict the overburden conditions. These results as well as those of all the previous exploration work will be used to outline follow-up targets for future testing.

RAB
Matheson, Ontario

R. A. Bennett, MSc., PEng.
September 18, 1984

attachment: appendix
In pocket: Map#SR-005, 1"-400' Radiometric Survey.

REFERNCES

1) Assessment Files, Office of the Resident Geologist, Kirkland Lake.

2) Maude Lake Gold Mines Ltd. - 1981 and 1982 Company Reports.

3) Satterly J. and Armstrong H. 1947 - Geology of Beatty Township, ODM Volume LVI, Part VII and Map No. 1947 - 2.

McPHAR TV-1A Radiation Spectrometer

A 3-channel instrument for reconnaisance use

Both meter and audio reading

Four count scales

Trigger on-off switch

Functional pistol design

Lightweight

Model TV-1A is a three channel, integral type radiation spectrometer. Measurements are based on the spectral characteristics of gamma radiation from radioactive elements. Selection of the operating threshold is made by means of the threshold selector switch.

The instrument is designed primarily for reconnaissance. The total count position provides for maximum sensitivity. Additional thresholds however, provide the capability to differentiate between gamma radiations emanating from daughter elements of uranium and thorium and provide quantitative information relating to each.

The meter is calibrated to display zero to 100 counts per minute. A four position scale multiplier switch provides four full scale ranges of 100, 1,000, 10,000 and 100,000 counts per minute. A fifth position on this switch is employed to test the condition of the batteries.

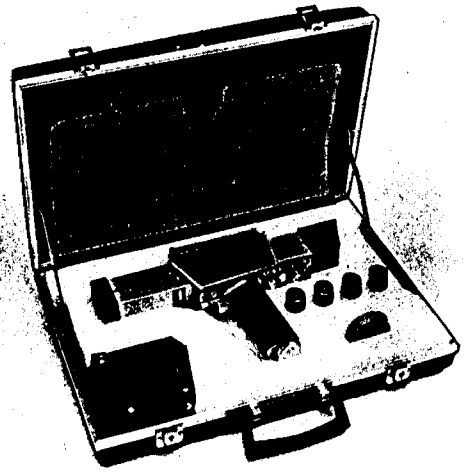
The variable time constants are tied in with the threshold selector switch. In the total count (maximum sensitivity) position, a fast or slow time constant may be selected. In the upper thresholds (lower net count), the long time constant only, is in effect.

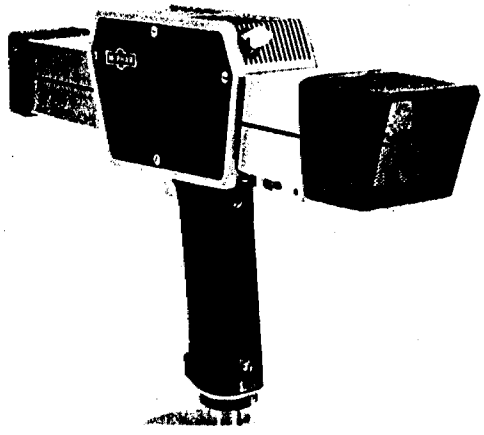
The detecting element is a 1½ by 1½ inch sodium iodide crystal coupled to a photomultiplier tube. These are hermet-

Field use is convenient with leather holster

ically sealed, magnetically shielded and mounted in the forward end of the scintillometer housing.
A speaker provides a variable pitch output with changing radiation levels. A speaker control, mounted on the top of the instrument, can be used to adjust the pitch for any given level of radiation.

TV-1A spectrometer comes complete with a leather holster, thorium calibrating source and a foam fitted attache case.





Specifications

Measurement Ranges: Four switch positions provide full scale counts per minute of 100, 1,000, 10,000 and 100,000.

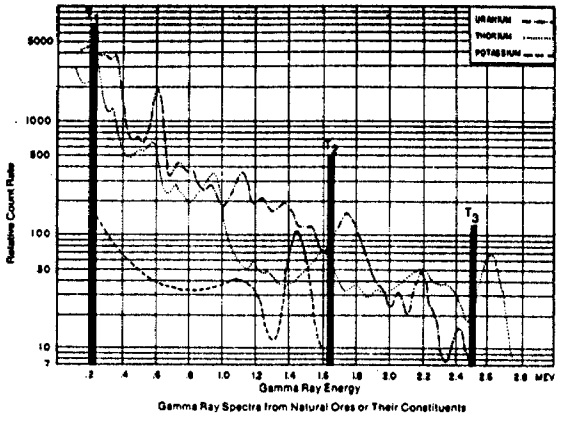
Time Constant: Threshold T_1: 1 and 10 seconds. Thresholds T_2 and T_3: 10 seconds.

Speaker: Variable pitch output governed by radiation intensity.

Temperature Range: −35 degrees to +55 degrees C.

Detector Crystal: NaI (T) 1½" x 1½" (43 cu. cm.) and matched photomultiplier hermetically sealed.

Battery Supply: Two "C" size flashlight cells located in handle. On-off control by either trigger or slide switch.



Gamma Ray Spectra from Natural Ores or Their Constituents

Voltage Regulation: Internally generated high and low voltages are highly regulated down to ½ initial battery voltage.

Accessories: Leather belt holster, thorium calibrating source, spare batteries, instruction manual, foam fitted attache case.

Weight: 3 pounds.

McPhar Instrument Corporation

Head Office:

55 Tempo Avenue
Willowdale, Ontario, Canada M2H 2R9
Tel: (416) 497-1700 Telex: 0623541
Cable: McPHAR TOR

Sales agents in:

Africa, Asia, Australia, Europe,
North & South America

Contact McPhar Instrument Corp. head office for the agent in your area.

Ontario

Ministry of Natural Resources

File L. 550880

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) RADIOMETRIC

Township or Area BEATTY TOWNSHIP

Claim Holder(s) MAUDE LAKE GOLD MINES LTD
300 Elm St., West, Sudbury, Ontario

Survey Company R.A. Bennett, Consulting Geologist

Author of Report R.A. Bennett, PEng

Address of Author RR#4, Site 37, Box 1, Sudbury, Ont

Covering Dates of Survey 01/11/81 - 30/11/82
(linecutting to office)

Total Miles of Line Cut 19.9

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

Geophysical	DAYS per claim
–Electromagnetic	
–Magnetometer	
–Radiometric	20
–Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: SEPT 18/84 SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

RECEIVED
SEP 24 1984
MINING LANDS SECTION

MINING CLAIMS TRAVERSED
List numerically

If space insufficient, attach list

(prefix)	(number)
L.	550880
	550881
	550882
	550883
	550884
	565052
	565053
	565054
	565055
	565056
	565057
	565058
	565059
	565061
	565062
	578942
	598904
	598905
	598906
	598907

TOTAL CLAIMS 20

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 857 Number of Readings 859

Station interval 100 feet Line spacing 400 feet

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

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

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument McPHAR TV-1A Radiation Spectrometer

Values measured Total Field Readings

Energy windows (levels) _____

Height of instrument 3 feet Background Count 10 cpm

Size of detector 1¼ inch X 1¼ inch

Overburden Swamp, Clay, Outcrop, and Lake - plotted on map.

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

Ministry of Natural Resources
Ontario

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

W8408-291

42A09SW0069 2.7213 BEATTY

900

(Plan L565052)

Type of Survey(s): RADIOMETRIC

Township or Area: BEATTY

Claim Holder(s): MAUDE LAKE GOLD MINES LTD

Prospector's Licence No.: T1181

Address: 300 ELM ST. WEST, SUDBURY, ONT P3C 1V4

Survey Company: R.A. Bonnett, PEng.

Date of Survey (from & to): 01 Day | 10 Mo. | 82 Yr. | 30 Day | 11 Mo. | 82 Yr.

Total Miles of line Cut: 20.8

Name and Address of Author (of Geo-Technical report): R.A. Bonnett, RR#4, SITE 37, Box 1, SUDBURY ONT P3E 4M9

Credits 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	20
	- 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.
L	550880	
	550981	
	550882	
	550883	
	550884	
	565052	
	565053	
	565054	
	565055	
	565056	
	565057	
	565058	
	565059	
	565061	
	565062	
	578942	
	598904	
	598905	
	598906	
	598907	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
AUG 08 1984
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 20

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

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.

Date: JULY 26/84

Recorded Holder or Agent (Signature):

For Office Use Only

Total Days Cr. Recorded: 400

Date Recorded: JUL 26 1984

Date Approved as Recorded: 84.10.10

Mining Recorder:

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: R.A Bonnett RR#4, SITE 37, BOX 1 SUDBURY ONT P3E 4M9

Date Certified: JULY 26/84

Certified by (Signature):

1362 (81/9)

1984 10 10

Your File: 291
Our File: 2.7213

Mining Recorder
Ministry of Natural Resources
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

We received reports and maps on Seppember 24, 1984 submitted for a Geophysical (Radiometric) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 550880 et al in the Township of Beatty.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-6918

A. Barr:sc

cc: Maude Lake Gold Mines Limited
300 Elm Street West
Sudbury, Ontario
P3C 1V4

cc: R.A. Bennett
R.R. #4
Site 37
Box 1
Sudbury, Ontario
P3E 4M9

Mining Lands Section

File No 2.7213

Control Sheet

TYPE OF SURVEY

✓ GEOPHYSICAL

____ GEOLOGICAL

____ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

lgd.

L.I.D.

Dennis Kinney

Signature of Assessor

Oct. 11/84

Date

	Radio.
L-550880	✓
81	✓
82	✓
83	✓
550884	✓
565052	✓
565053	✓

	Radio.
565054	✓
55	✓
56	✓
57	✓
58	✓
565059	✓
565061	✓

2.7213	Radio.
565062	✓
578942	✓
598904	✓
05	✓
06	✓
598907	✓
D.K.	

20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E 56E

24N 20N 16N 12N 8N 4N 0·0 BASELINE 4S 8S 12S 16S 20S 24S 28S 32S 36S 40S 44S

TRUE

L. 598904 L. 598905 L. 565054 L. 565061 L. 565062 L. 550884
L. 565052 L. 565033 L. 565055 L. 565059 L. 550880 L. 550883
L. 565056 L. 565058 L. 550881 L. 598906
L. 578942 L. 565057 L. 550882 L. 598907

Alder Spruce Poplar Old Field POND SHALLOW R. SALVE LAKE CON 5 CON 6 LOT 8 LOT 7 LOT 6 LOT 5 LOT 4

INSTRUMENT : McPhar TV-1A Radiation Spec.

READINGS : Total counts per minute

BASE STATION : ●

REGISTERED PROFESSIONAL ENGINEER R. A. BENNETT PROVINCE OF ONTARIO

MAUDE LAKE GOLD MINES LIMITED

SALVE LAKE GROUP OF 20

RADIOMETRIC SURVEY

BEATTY TWP

Scale: 1 inch = 400 feet

August 1984 Map No. SR-015

2.7213

42A09SW0069 2.7213 BEATTY

200