010

MAUDE LAKE GOLD MINES LIMITED

GEOLOGICAL REPORT

FOR

SALVE SOUTH CLAIM GROUP

BEATTY TOWNSHIP

LARDER LAKE MINING DIVISION

R. A. Bennett, MSc., PEng.
January 21, 1985.

MAUDE LAKE GOLD MINES LIMITED

GEOLOGICAL REPORT - SALVE SOUTH CLAIM GROUP

INTRODUCTION

A geological mapping survey was completed over Maude Lake Gold Mines Limited's SALVE SOUTH CLAIM GROUP located in Beatty Township, north-eastern Ontario. The Group forms a small part of a larger property (285 claims) held by Maude Lake in the Matheson area that were explored during 1984.

The claim Group is located in central Beatty Township, Larder Lake Mining Division [NTS:42A9W], approximately 7 miles northeast of the Town of Matheson. The claims lie to the west and south of Salve Lake.

Access to the claims is by Highway 101 east from Matheson to the Beatty-Carr Township boundary road and then north and east along all-weather gravel roads to within 1/2 mile of the western boundary. An old farm track and bush trails provide excellent access to the center of the group. A property and location plan is provided overleaf.

Maude Lake completed magnetic, electromagnetic and radiometric surveys over the same claim Group in 1982. This report presents the results of the mapping program only.

THE PROPERTY

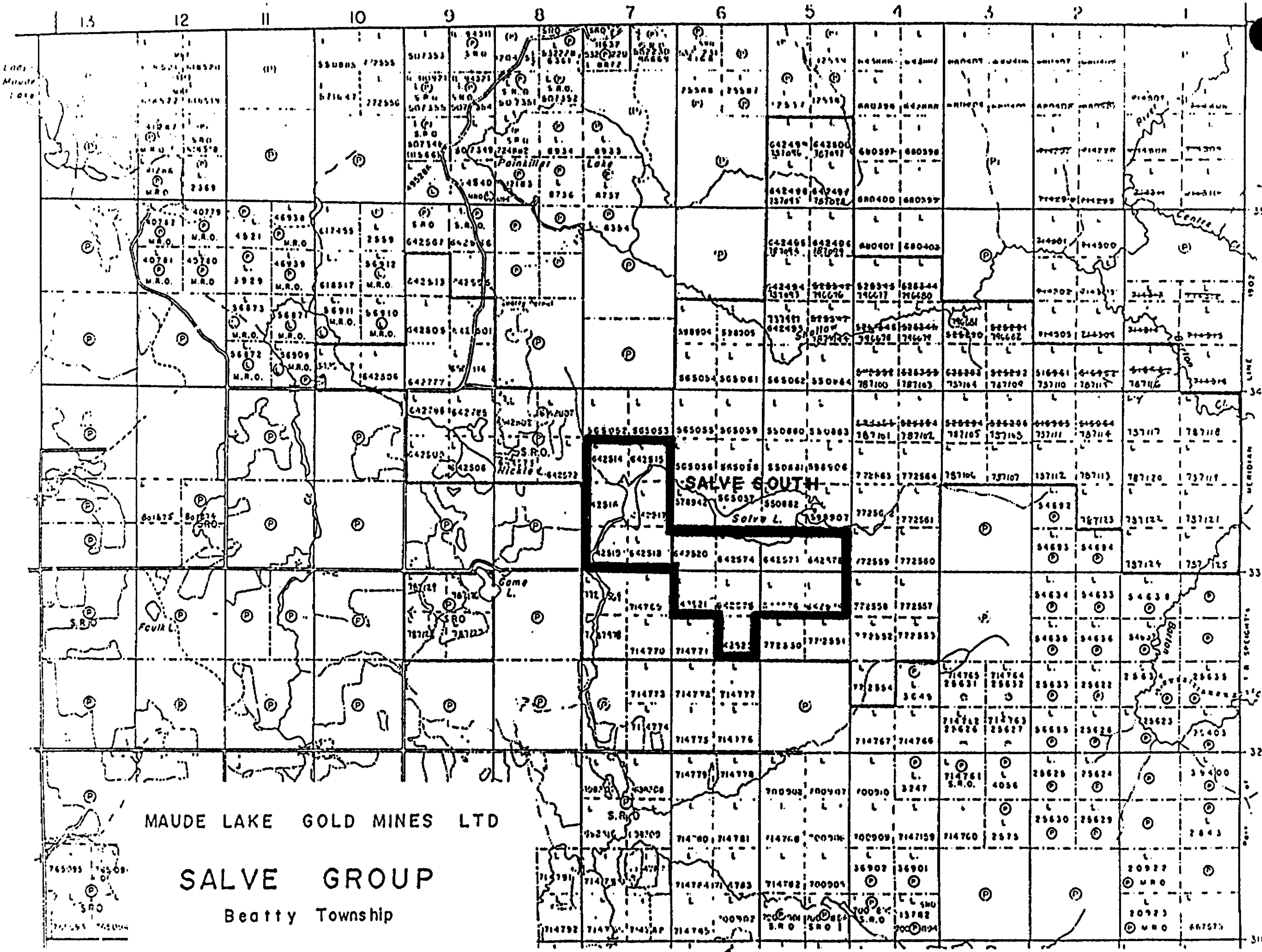
The SALVE SOUTH CLAIM GROUP consists of 15 contiguous staked mining claims numbered:

L. 642514 through 642522 inclusive [9 claims]
L. 642574 through 642579 inclusive [6 claims]

and are registered in the name of Maude Lake Gold Mines Limited, 300 Elm Street West, Sudbury, Ontario, P3C 1V4.

GENERAL GEOLOGY & HISTORY

The general geology of the area is described by J. Satterly and H. S. Armstrong (OMD Volume LVI, Part VII, 1947 - Geology of Beatty Township) as being underlain by east-west striking, north-facing mafic and felsic volcanic flows and breccias that are cut by north-striking Matachewan diabase dykes, and a few minor lamprophyre dykes.


SALVE SOUTH
Salve L.
Painkiller Lake
Nickle L.
Game L.
Foulk L.
Shallow L.
Centre Cr.
VI
V
IV
III
II
MAUDE LAKE GOLD MINES LTD
SALVE GROUP
Beatty Township

The SALVE SOUTH GROUP has seen only minor exploration in the past. In 1939, Cominco completed a geophysical survey and drilled one 290 ft borehole just east of the Group that intersected rhyolite containing quartz stringers with pyrite and low grade gold values.

In 1945, Clodan Gold Mines held 45 claims around Salve Lake. They drilled seven short X-ray holes in the outcrop area south of lake which intersected mafic and felsic volcanics and pyroclastics cut by minor quartz veins containing gold values. One Clodan borehole collar was found at 44E, 59S during Maude Lake's earlier exploration work.

In 1979, Gulf Minerals held the 40 claims south and west of Salve Lake. They drilled a north-bearing fence of 3 diamond drill holes totalling 3409 feet along the western boundary of claims L.642522 and 642575. The holes cut mafic and felsic volcanics and minor graphitic interflow horizons. The few sections of core assayed failed to return any significant values. All the Gulf core is stored at the OGS Core Farm located in Swastika.

In 1982, Maude Lake Gold Mines cut a 13.5 mile grid (400' line spacing) over all the claims and completed magnetic, electromagnetic and radiometric surveys. During 1984, one borehole totalling 450 feet was drilled at 48E, 59S to test the reported auriferous interflow graphitic horizon and several quartz structures.

GEOLOGICAL SURVEY

Geological and topographical mapping of the SALVE SOUTH claims was completed during June 1984 by the author. The grid lines [cut in 1982] were used for control but in outcrop areas, many pace and compass traverses were made in-between to ensure all the outcrops were mapped. A representative suite of rock specimens was collected from the bedrock exposures and closely examined with the aid of a binocular microscope.

Bedrock outcrops are generally well-exposed, occur in the eastern half of the Group only, and represent about 10 percent of the total surface area. The western half of the Group is covered by low, swampy ground and the beaver-pond flooded Salve Creek.

The attached geological plan illustrates the bedrock exposures, the

overburden conditions, past drill collar locations, and the interpreted geology.

Unit 1 - Mafic Volcanics

The mafic volcanics are andesitic to basaltic in composition, very fine to medium grained, green to dark green in colour, usually quite massive and unaltered. The andesitic phases are pale green, fine grained, typically massive and have recognizable quartz grains (under the microscope). The basalts can occur as massive, featureless flows and as well- pillowed units. Where the pillows are well exposed and close-packed, top direction appears to be to the north. A few flow top breccias were seen during the mapping but could not be traced due to limited or poor exposure. All the mafic lavas are likely iron tholeiites.

A few old pits and trenches in the southeast corner of L.642577 expose rusty, weakly sheared basaltic lavas with a few narrow quartz veinlets. Only minor pyrite mineralization was seen. The trench at 44E, 63+50S is now filled in. Several rusty oil cans and old pail at the same location suggests this may have been one of the sites that Clodan drill-tested in 1945. Another old trench at 32E, 1S exposes rusty basalt.

Graphitic Unit

Three black, graphitic horizons were intersected in the 1979 Gulf and 1984 Maude Lake diamond drill cores. These horizons do not outcrop but are always within or near rocks described as andesite, basalt, or dacite. The graphite in hole SX84-05 forms a very marked VLF cross-over anomaly and is reported to carry low gold values (Clodan). This unit forms an excellent marker horizon. Drill sections through the graphite suggest the volcanic pile dips about 76 degrees to the south; thus, the stratigraphy is overturned.

Unit 2 - Felsic Volcanics

The felsic volcanics appear to interfinger with the mafic lavas. They consist of rhyolitic to rhyodacitic flows and volcaniclastics, and have a tholeiitic affinity (R. Johnson, personnal communication). Several contacts between the mafic and felsic volcanics were located during the course of the mapping program. At 22E, 2N and 32E, 1S both the upper and lower contacts of rhyodacitic tuff units can be seen . These contacts are very sharp, strike westerly, dip steeply south, and show no significant alteration. A north-

east trending fault is interpreted to disrupt the volcanic stratigraphy in claim L.682479. This linear is evidenced by geophysical survey results on these and adjoining claims. Its displacement cannot be calculated.

The rhyolite flows are grey in colour on the fresh surface but weather an ash-white. They are very fine to medium grained, quite massive to locally fractured, and contain distinct quartz and plagioclase crystals. In a few outcrops the flows appeared almost porphyritic. Most of the exposuses show excellent flow banding, some of which form concentric or ovoid structures.

Rhyolitic to rhyodacitic volcaniclastics form the bulk of the exposed bedrock in the map area. They are characteristically medium grained, grey in colour with white, aphanitic, angular rhyolite fragments up to several inches in diameter [average is less than 1 inch]. The matrix consists of much smaller clasts and individual quartz and feldspar grains and varying amounts of chlorite. The quartz 'eyes' are clear and rounded; the feldspars are typically subhedral. Numerous rusty patches were noted throughout the fragmentals and several massive pyrite 'clasts' were seen. No sharp contacts were found between the felsic flows and volcaniclastics.

Several quartz veins were charted during the mapping program. They are milky-white in colour, have irregular shapes and dips but usually strike east- northeast. The veins contained occasional carbonate patches (calcite) and only rare pyrite. Adjacent wallrock showed only very weak alteration. A few old pits and trenches expose narrow rusty shears and quartz veinlets.

Unit 3 - Diabase

Two north-striking Matachewan-type diabase dykes are exposed at 30E, 4S and 42E, 2+50S [sample S-13]. They are massive, medium grained, dark green-black and consist of feldspar, augite [chlorite], and rare quartz crystals. They exhibit sub-diabasic textures and their contacts have excellent chill margins. Another north-striking diabase dyke is interpreted along Line 24E from the magnetic data.

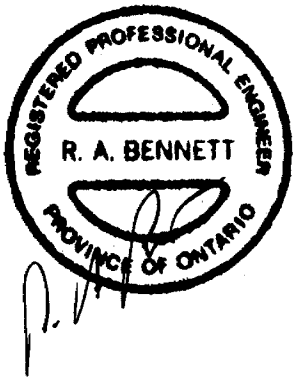
Unit 4 - Ultramafic

A northwest-trending ultramafic body [sill?] is interpreted to cross the northern portion of the Group. Diamond drill data both to the east and west, and ground magnetic results on these and adjoining claims suggest an

ultramafic body [likely peridotite] intrudes the volcanic pile. The ultramafic is further interpreted to fall along the extension of the Pipestone-Munro Fault Structure.

CONCLUSIONS AND RECOMMENDATIONS

A geological mapping survey was completed over Maude Lake Gold Mines' SALVE SOUTH CLAIM GROUP located in central Beatty Township. The claims are underlain by an east-west striking, steeply dipping and overturned pile of interfingering Precambrian mafic and felsic volcanics that are cut by three north-trending Matachewan diabase dykes. An ultramafic body intrudes the pile and is interpreted to occupy the extension of the Pipestone-Munro Fault. This environment has produced significant gold mineralization on Maude Lake's MAIN GROUP of claims along strike to the northwest. Continued exploration should focus along this structure. Detailed sampling of the exposed veins is also recommended.



Sudbury, Ontario

R. A. Bennett, MSc., PEng.
January 21, 1985.

In Pocket: Map#SS-001 - Geological Plan (1 inch=400 feet)

REFERNCES

1. Assessment Files, Office of the Resident Geologist, Kirkland Lake.
- Clodan Gold Mines file, Comminco file, Gulf Minerals file

2. Maude Lake Gold Mines Ltd - 1981 to 1984 Company Reports

3. Satterly & Armstrong 1947 - ODM Vol. LVI, Part VII & Map 1947-2.

900

Mining Lands Section

File No 2.7784

Control Sheet

TYPE OF SURVEY

____ GEOPHYSICAL

__✓__ GEOLOGICAL

____ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

cgd. L.D.

L. Hurst

Signature of Assessor

85-02-07

Date

1985 03 18

Your File:
Our File: 2.7784

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

Dear Sir:

RE: Notice of Intent dated February 15, 1985
Geological Survey on Mining Claims
L 642514, et. al., in Beatty Township

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

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

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

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

S. Hurst:mc

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

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

Encl.

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

cc: Resident Geologist
Kirkland Lake, Ontario

Ministry of Natural Resources
Ontario

Technical Assessment Work Credits

File 2.7784

Date 1985 02 15

Mining Recorder's Report of Work No.

Recorded Holder: MAUDE LAKE GOLD MINES LTD

Township or Area: BEATTY TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 40 days	L 642514 to 522 inclusive 642575-76-78-79
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☐ Credits have been reduced because of partial coverage of claims.	
☐ 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

30 DAYS

L 642574-77

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; Geological — 40; Geochemical — 40; Section 77(19)—60:

828 (83/6)

Ministry of
Natural
Resources

Ontario

March 4/85

1985 02 15 Our File: 2.7784

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

Dear Sir:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. R.J. Pichette at 416/965-4888.

Yours sincerely,

S.E. Yundt
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3

S. Hurst:mc

Encls.

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

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

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

845

Ministry of Natural Resources

Ontario

Notice of Intent

for Technical Reports

1985 02 15

2.7784

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Land Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

Ministry of Natural Resources
Ontario

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

The Mining Act

W8508-40514
2.7784.
(Prefix L642514)

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): GEOLOGICAL

Township or Area: BEATTY TWP

Claim Holder(s): MAUDE LAKE GOLD MINES LTD

Prospector's Licence No.: T1181

Address: 300 ELM ST WEST, SUDBURY, ONT P3C1V4

Survey Company: R.A Bennett, CONSULTING GEOLOGIST

Date of Survey (from & to): 04 Day | 05 Mo. | 84 Yr. | 29 Day | 06 Mo. | 84 Yr.

Total Miles of line Cut: 13.5

Name and Address of Author (of Geo-Technical report): R.A. Bennett, P Eng. RR#4 SITE 37, BOX 1 SUDBURY ONT P3E4M9

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	40
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical - Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	642514	600
	642515	
	642516	
	642517	
	642518	
	642519	
	642520	
	642521	
	642522	
	642574	
	642575	
	642576	
	642577	
	642578	
	642579	

RECEIVED
FEB 04 1985
MINING LANDS SECTION

LARDER LAKE MINING DIV.
RECEIVED
JAN 24 1985
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: 15

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: Jan 17/85

Recorded Holder or Agent (Signature):

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
600	JAN 24 1985	
	Date Approved as Recorded	Branch Director
	See Revised Statement	

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.Bennett RR#4 SITE 37 BOX 1 SUDBURY ONT P3E4M9

Date Certified: JAN 17/85

Certified by (Signature):

1362 (81/9)

Ontario

Ministry of Natural Resources

File_____

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) GEOLOGICAL

Township or Area BEATTY

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

Survey Company R.A.Bennett, Consulting Geologist

Author of Report R.A. Bennett, MSc., PEng

Address of Author RR4, Site 37, Box 1, Sudbury, Ont

Covering Dates of Survey June 4 to 29, 1984
(linecutting to office)

Total Miles of Line Cut 13.5 miles

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

DAYS per claim

Geophysical
–Electromagnetic
–Magnetometer
–Radiometric
–Other
Geological 40
Geochemical

RECEIVED
FEB 07 1985
MINING LANDS SECTION

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

Magnetometer_____ Electromagnetic_____ Radiometric_____
(enter days per claim)

DATE: January 25/85 SIGNATURE: R. A. Bennett
Author of Report or Agent

Res. Geol._____ Qualifications 2.1594

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix) L, 642514 (number)
642515
642516
642517
642518
642519
642520
642521
642522
642574
642575
642576
642577
642578
642579

TOTAL CLAIMS 15

If space insufficient, attach list

OFFICE USE ONLY

837 (5/79)

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 _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(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 _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

_____

_____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

_____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

_____

Drainage Development _____

Estimated Range of Overburden Thickness _____

_____

_____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

_____

_____

_____

General _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

_____

_____

_____

_____

_____

_____

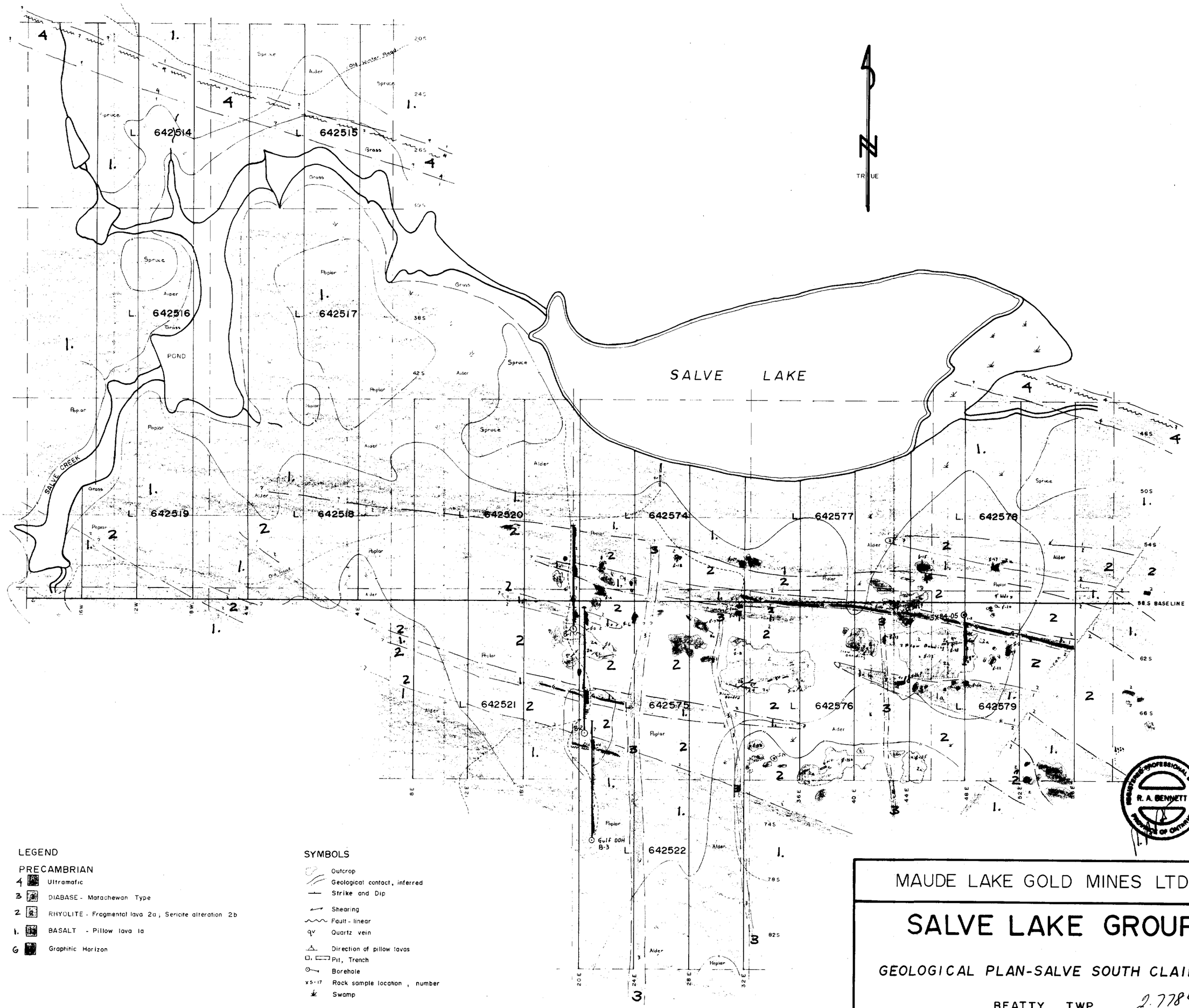
_____

_____

_____

2·7784

642514	✓			642574	1/4							
15	✓			75	✓							
16	✓			76	✓							
17	✓			77	1/4			5				
18	✓			78	✓							
19	✓			79	✓							
20	✓											
21	✓											
22	✓											



LEGEND

PRECAMBRIAN

4 Ultramafic

3 DIABASE - Marachewan Type

2 RHYOLITE - Fragmental lava 2a, Sericite alteration 2b

1. BASALT - Pillow lava 1a

G Graphitic Horizon

SYMBOLS

- Outcrop
- Geological contact, inferred
- Strike and Dip
- Shearing
- Fault - linear
- qv Quartz vein
- Direction of pillow lavas
- Pit, Trench
- Borehole
- x S-17 Rock sample location, number
- Swamp

MAUDE LAKE GOLD MINES LTD.

SALVE LAKE GROUP

GEOLOGICAL PLAN-SALVE SOUTH CLAIMS

BEATTY TWP. 2.7784

LARDER LAKE MINING DIVISION

Scale: 1" = 400 ft.

January 1985

Map No. SS - 001

f 200