010

SWEANY MINING SERVICES
REPORT ON EXPLORATION
CARRIED OUT IN 1988
SPLIT LAKE PROPERTY
PATRICIA MINING DISTRICT
OF ONTARIO

December, 1988

Pierre Simoneau
H.BSc. Geology

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INTRODUCTION

During the summer of 1988 Cream Silver Mines Ltd. contracted Sweany Mining Services to establish a cut grid and conduct geophysical and geological surveys over a portion of their Split Lake Project property. Ovalbay Geological Services Inc. was subcontracted to interpret available data and provide reports.

The total property consists of 326 contiguous unpatented mining claims. The claims are recorded in the Patricia Mining District of Sioux Lookout, Ontario.

The survey described in this report is from a portion of the project known as "Grid B". A total of approximately 38 claims are covered by Grid B. These claims are listed in Appendix 1.

An Imperial system grid was established over Grid B between August and October 1988. Magnetometer and VLF surveys were completed concurrent with the geologic survey utilizing the same grid.

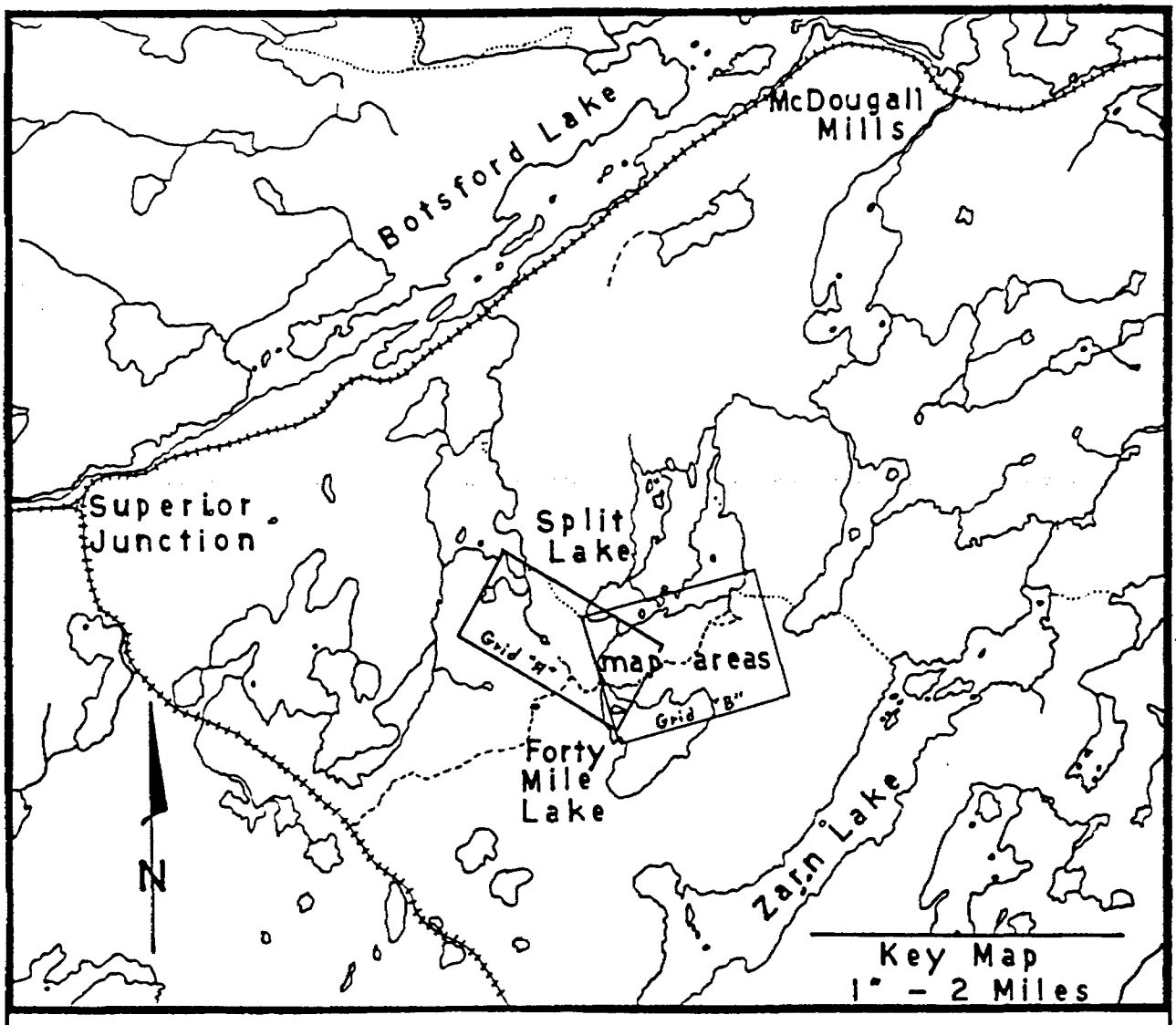
LOCATION AND ACCESS

The Split Lake property lies north of Forty-Mile Lake, 13 miles east of Sioux Lookout, in northwest Ontario (Figure 1). A temporary camp was established at the north end of Forty-Mile Lake.

Access and servicing is via aircraft from Sioux Lookout or through the use of a four and one half mile all-terrain vehicle trail from Highway 642, 14 miles southeast of Sioux Lookout.

Water is available from Forty-Mile, Split and Walton Lakes, as well as numerous ponds, creeks and rivers found on the property. A power line is available at the Alcona Junction four miles west of the property. The Alcona Junction is on a branch line of the Canadian National Railway. Labour manpower is readily available from Sioux Lookout or in northwestern Ontario.

FIGURE 1



Cream Silver Mines Ltd.

SPLIT LAKE PROJECT

N.W. ONTARIO

Zarn Lake map sheet No G-2277

LOCATION MAP

TOPOGRAPHY AND PHYSIOGRAPHY

The property lies in the drainage basins of the English River and its tributary the Sturgeon River, and has an elevation between 1,200 and 1,350 feet above sea level. The lakes in the claim group are connected to these rivers by small streams.

The map area is covered by glacial drift, swamp and muskeg. In many places, the outcrops occur on rounded hills up to 100 feet above the level of the surrounding country, with steep cliffs or gentle rises. As outcrops are scarce, it is difficult to trace particular formations just by geological mapping. Geophysical surveys undertaken were expected to assist in the geological interpretation of the property.

Much of the area is covered by a mantle of sand and gravel of glacial origin. It forms a rather thick covering of up to 60 feet in the low lying areas and a thinner blanket of boulders and clay or sand cover the hills. Swampy areas with spruce, fir, cedar, alder and birch make up over 25 percent of the area. Open muskeg occurs principally along the lakes and streams.

CLAIMS

The Split Lake Property consist of 326 contiguous claims recorded in the Patricia Mining Division of Ontario (Figure 2). Cream Silver Mines Ltd. optioned the claims from eight holders:

Ken Bernier - 43 claims

910556	913662	913673	913684
910557	913663	913674	913685
910558	913664	913675	913686
910559	913665	913676	913687
910560	913666	913677	913707
910561	913667	913678	913708
910562	913668	913679	913709
910563	913669	913680	913710
910564	913670	913681	913711
913660	913671	913682	913712
913661	913672	913683	

Vincent J. Scime - 16 claims

1007648	1007652	1007656	1007660
1007649	1007653	1007657	1007661
1007650	1007654	1007658	1007662
1007651	1007655	1007659	1007663

Joe Bernier - 6 claims

1008016	1008018	1008020
1008017	1008019	1008021

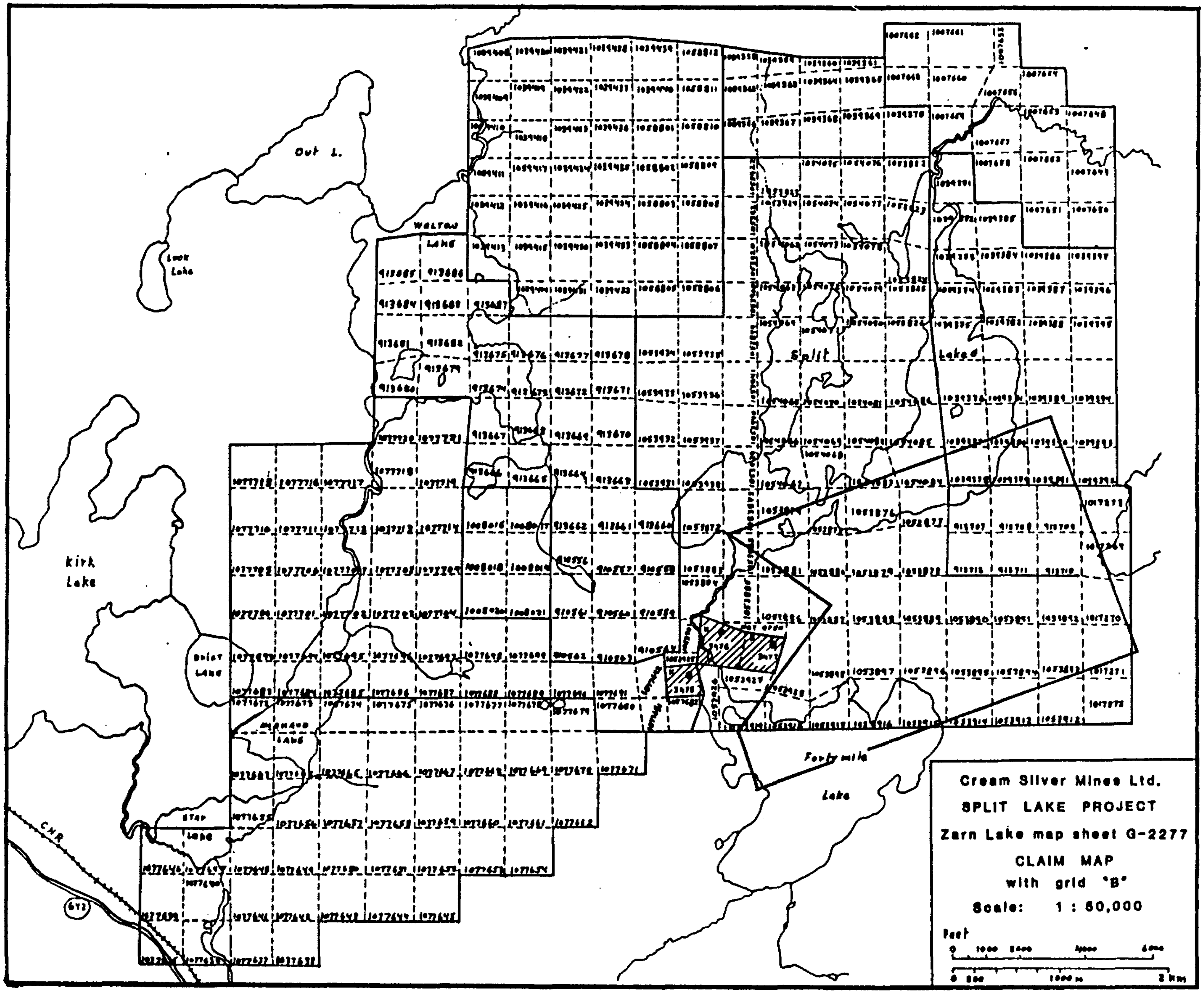

Out L.
Kirk Lake
Split Lake
Forty mile Lake
CNR
Cream Silver Mines Ltd.
SPLIT LAKE PROJECT
Zarn Lake map sheet G-2277
CLAIM MAP
with grid "B"
Scale: 1 : 50,000
Feet
0 1000 2000 4000 6000
0 500 1000 m 2 km

FIGURE 2

PREVIOUS WORK

The following descriptions are divided in two distinctive sections. The first section groups all the of regional mapping which cover the present property. The second section describes the work on three properties that are now covered by the Split Lake property. The properties are arranged in alphabetical order.

Regional Geological Surveys

1897	First geological work done by W. A. Parks.
1906-1907	W. H. Collins did a reconnaissance mapping survey along the National Transcontinental Railway.
1929	During the summer, A. R. Graham examined the Sturgeon Lake area.
1931	M. E. Hurst surveyed of the Sioux Lookout area covering much of the Alcona-Split Lake area.
1936-1937	Development work on three properties in the general area of Alcona and Split Lake resulted in a reconnaissance survey of the Superior Junction-Sturgeon Lake area by H. C. Horwood.

Previous Work on the Split Lake Property

Alcona Mines Limited Property

1929 — In October, the ground was staked by George and Stanley Michaud of Alcona. Shortly afterward the Consolidated Mining and Smelting Company of Canada Limited optioned the claims and did a considerable amount of trenching and test-pitting, principally on No. 3 Vein and on the quartz-carbonate vein on claim PA 910561.

1930 — In July, Atlas Exploration Company Limited took over the ground and opened up several veins including No.'s 1 and 2, on claim PA 910560. No. 1 vein contains pyrite, chalcopyrite, sphalerite, galena and a variable amount of gold (up to 0.50 oz Au/ton).

1932 — Late in the year, Alcona Gold Mines obtained control of the property.

1933 — After some trenching and sampling, veins No. 1 2 and 3 were explored by five diamond drill holes, with a total length of about 1,960 feet. The drilling tested the continuity of the veins both along strike and to depth. Results were disappointing, as considerable core and sludge were lost in fractured ground and the quartz veins intersected gave very low gold assays.

1936 In July, Alcona Mines Limited was formed to take over Alcona Gold Mines Limited. A three compartment shaft was started in September. The shaft was sunk to 325 feet, and levels were established at 180 feet and 305 feet. The 305 foot level was driven to crosscut the No. 1 or No. 2 vein, without success.

1937 Work was stopped in May, 1937, in order to conserve the Company's funds during the market depression.

1939 Sylvanite Gold Mines Ltd. optioned the property to evaluate the potential of the Alcona Mine. Several trenches were re-opened and sampled followed by three diamond drill holes on the central vein. Samples assayed from 0.01 to 1.4 ounces Au/ton with an average of 0.03 ounces Au/ton. The option was dropped.

1979 Oriana Mines Ltd. re-evaluated the known occurrences at the Alcona site. A limited EM-17 survey was conducted adjacent to the Alcona site. Several diamond drill holes tested the No. 1 and No. 2 veins, the central vein and the No. 3 vein. No. 1 and No. 2 veins were never intersected and no significant results on the other veins is indicated. The work was stopped and the claims were allowed to lapse.

Sioux Gold Mines Limited Property

1936 — During the summer, four diamond drill holes totaling 1,578 feet, were drilled to prospect the zone containing small veins located on the surface near the shore south of the southeast bay of Walton Lake. One vein, known as the "Centre" vein has a variable width up to 27 inches. Amounts of gold in grab and chip samples varied considerably, and no estimate of average values could be made. No further work is reported during the summer of 1937.

Split Lake Gold Mines Limited Property

1935 — The claims were staked to cover the contact zone of the Split Lake granite stock where a series of quartz veins were discovered.

1935-1936 — During the winter, a program of diamond drilling was set to explore the quartz veins.

1936 — During the summer, a two compartment shaft was sunk to about 360 feet, and some crosscutting and drifting were completed on the 100, 225 and 350 foot levels.

Four quartz veins have been explored by stripping, trenching, drilling and underground work. The veins consist of fine-to-medium grained, massive white quartz, which contains up to five percent siderite, up to seven percent albite, small quantities of pyrite, and very minor amounts of chalcopyrite and

sphalerite. Samples assayed from 0.02 to 0.2 ounces of gold per ton.

Underground working was stopped in the fall. After the completion of a geological examination and some underground diamond drilling in December, the mine was closed down and all machinery and equipment moved to the railway.

RECENT WORK

Linecutting

Survey lines totalling 48.4 miles (including baselines and tielines) were cut over the property. A baseline 8,000 feet long was established. The baseline is oriented at 70 degrees azimuth and parallels the geology that follows the margin of the Split Lake granite stock.

Five tielines are used to enclose the grid. The longest tieline, TL 2000 S is 8,200 feet in length and is used as a baseline control at the grid's western extremity.

Cross lines are established at 200 foot intervals along the baselines and lines are cut to lakes or tielines. Pickets are erected at 100 foot intervals.

Geology Mapping

The geologic mapping and prospecting took place on the grid over the months of September and October, 1988. Grid lines were traversed systematically and priority in mapping and prospecting was stressed in areas of magnetic contrast and apparent conductive bedrock zones. The geology is presented at 1"=200' as Map 1.

Stripping and Trenching

The mapping program took place concurrently with a power stripping program on the mineralized veins of the Split Lake Mine site. Hydraulic washing of outcrops and detailed geological mapping yielded several mineralized vein sections and provided useful information which

assisted in the mapping of Grid B.

Geophysical Surveys

Geophysical surveys were performed using an EDA Omni IV-Plus instrument, with readings taken at 50 foot stations. Data was dumped onto hard copies. The magnetometer survey was manual and plotted onto base maps on a daily basis. The VLF survey was plotted by computer onto base maps.

The VLF Omni-IV Survey

Cutler, Maine was the station used for the VLF survey. Testing by the operator demonstrated that Seattle, Washington and Cutler produced very similar results and the coupling angle of both signals were adequate to produce a reliable survey. Cutler was selected as a survey station because of its stronger signal.

The Omni-IV Magnetometer

The magnetometer was operated in the tieline mode with tiepoints at 200 foot intervals on the baselines. Diurnal variations were processed to the initial set of tiepoint readings.

REGIONAL GEOLOGY

The studied area is part of the Wabigoon greenstone belt of Precambrian age. The rocks have been divided into three main groups, which have been termed Keewatin, Timiskaming, and Post-Timiskaming (see Figure 3).

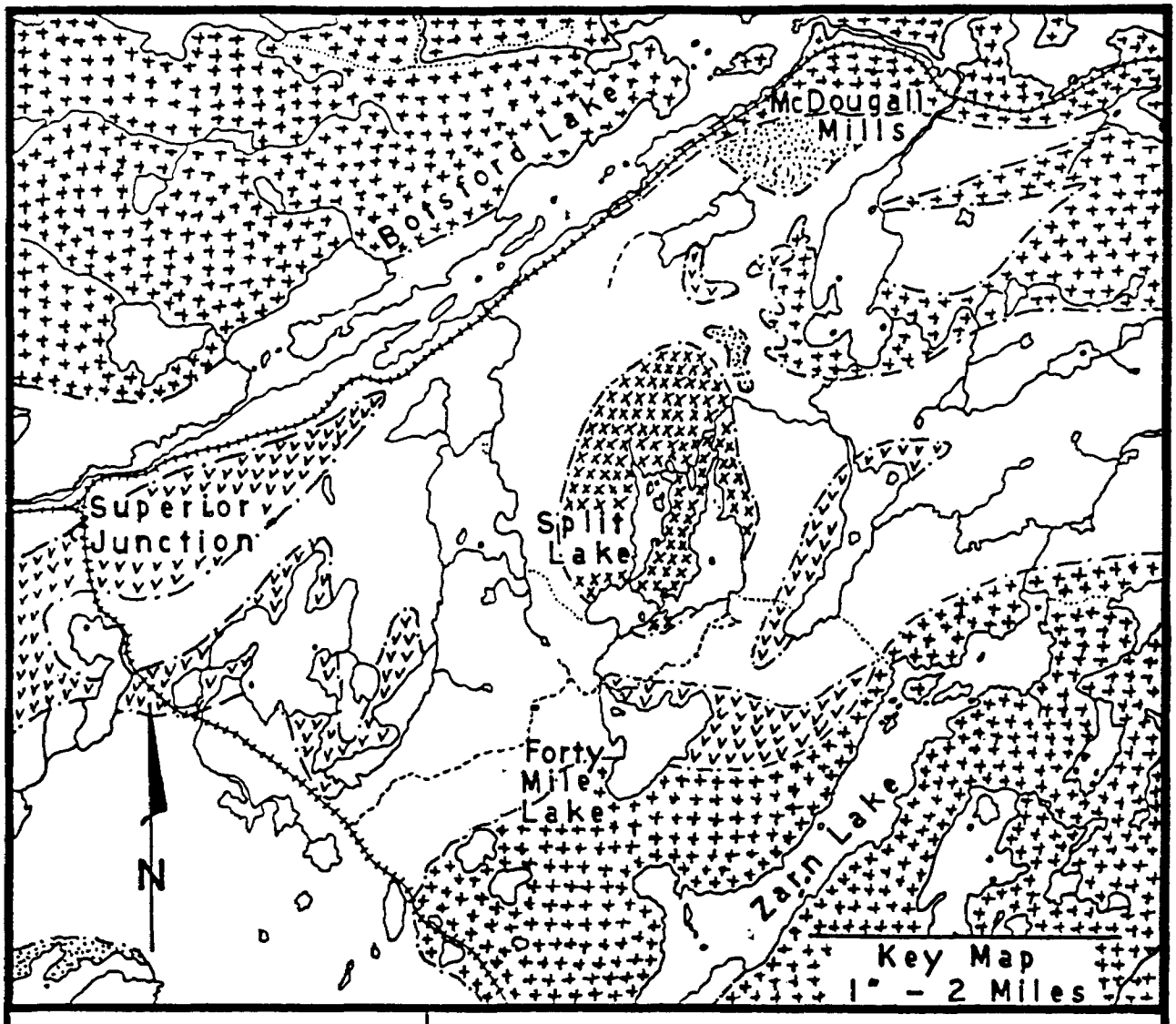
The Keewatin formations form a belt, which is 16 miles wide in the extreme western part of the area. This belt splits west of Zarn Lake to form a northern belt, which continues east for 16 miles and pinches out in the Kinnniwap Brook area, and a southern belt, which extends southeastward into the Sturgeon Lake area. In the Alcona-Split Lake area, the Keewatin formation is made up principally of andesitic and basaltic flows, with some dacitic flows, a few thin rhyolite layers, intercalated beds of volcanic breccia and tuff, and sediments (conglomerate, greywacke and slate). The Keewatin formations have been altered by two processes; first, by regional shearing in a general northeast trending, and second by contact action of intrusive bodies of granite.

The Timiskaming formations outcrop in the area around the east bay of Minnitaki Lake and at the McDougall Mills. The rocks include conglomerate greywacke or arkose and slate. The conglomerate contains pebbles that are generally of granitic composition.

The Post-Timiskaming formations include older intrusive rocks of granitic to granodiorite in composition, which outcrop in most of the area surrounding the older volcanic and sedimentary formation, and younger intrusive rocks (like the Split Lake stock) ranging from granite to granodiorite, which occurs as small stocks intrusive into all the older rocks. The Split Lake stock is a medium-to-course grained greyish-pink rock with 60 percent orthoclase, 18 percent oligoclase,

15 percent quartz and seven percent biotite. In places at the south side, it approaches a granodiorite in composition.

The bedrock is overlain by sand, gravel and clay of glacial or post-glacial origin, and in some localities by recent swamp and musket accumulations.



LEGEND

PRE-CAMBRIAN

*Post-Timiskaming

Younger Intrusives: *Granite, granodiorite, syenite, granite porphyry, quartz-feldspar porphyry, quartz diorite.*

INTRUSIVE CONTACT

Older Intrusives: *Granite, granodiorite, diorite.*

INTRUSIVE CONTACT

*Timiskaming?

Conglomerate, greywacke, slate.

POSSIBLE UNCONFORMITY

*Keewatin

FELSIC TO INTERMEDIATE METAVOLCANICS

Greenstone, basalt, andesite, diorite, rhyolite, breccia, tuff.

Cream Silver Mines Ltd.

SPLIT LAKE PROJECT

N.W. ONTARIO

Zarn Lake map sheet No. G-2277

GEOLOGICAL MAP

PROPERTY GEOLOGY

The geology of Grid B is summarized on Figure 4. The geology consists predominately of mafic volcanics at the central and eastern part of the property. The western part consists of units of sediments, tuff and volcanic flows. The southwest part of the Grid B is underlain by felsic tuff with some thin mafic layers. Units of intermediate volcanics occur at the eastern part of the Grid B. The Split Lake Stock occurs on the north end of the Grid.

The sediments and flows are "wrapped around" the stock which appears to be a late (post tectonic?) felsic intrusion. Quartz feldspar porphyry dikes which crosscut all rock units and structures on the property are probably related to the Split Lake Stock.

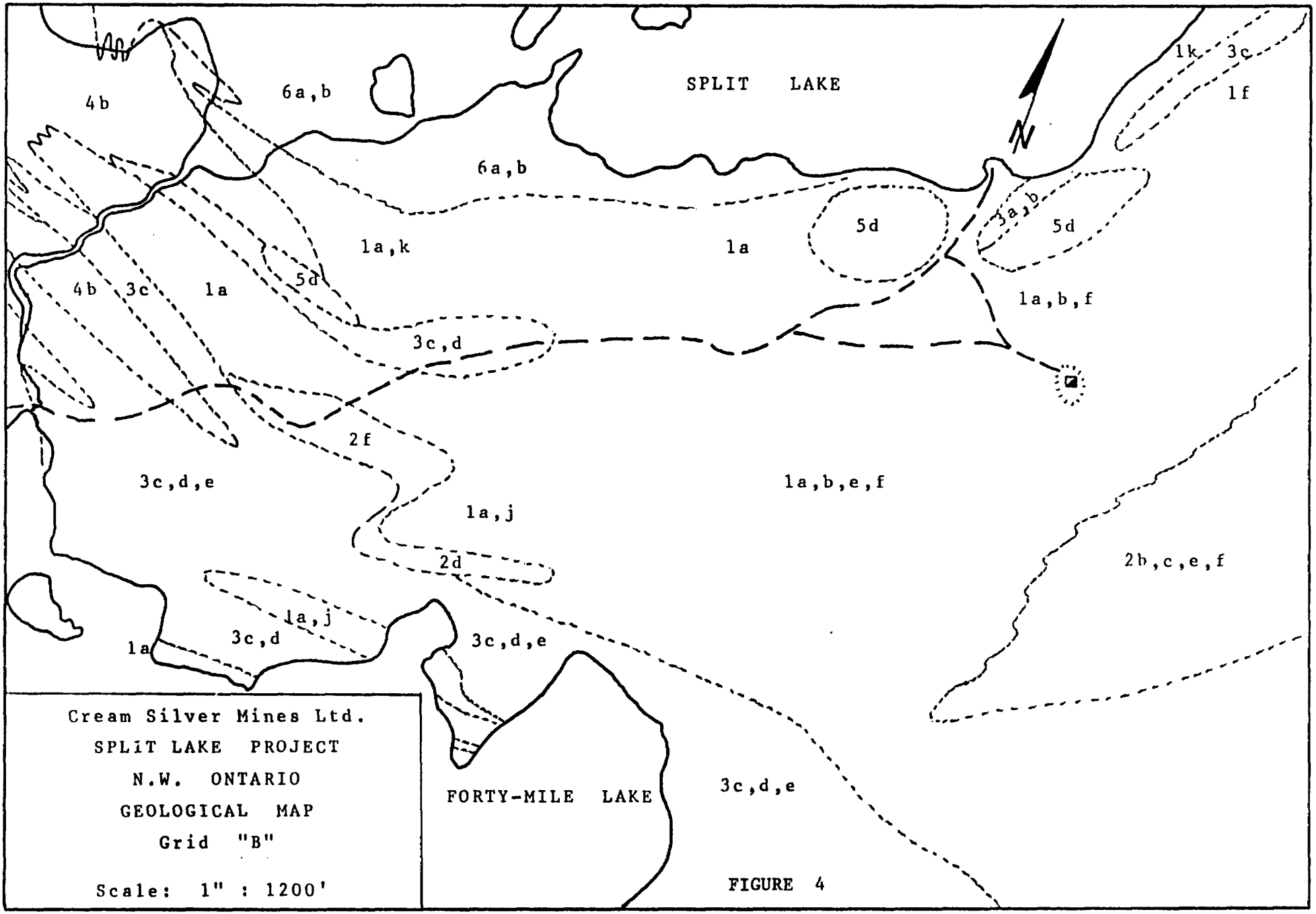

SPLIT LAKE
FORTY-MILE LAKE
N
4b
6a,b
6a,b
1k
3c
1f
1a,k
1a
5d
3a,b
5d
4b
3c
1a
5d
1a,b,f
3c,d
2f
3c,d,e
1a,b,e,f
1a,j
2d
2b,c,e,f
1a,j
1a
3c,d
3c,d,e
3c,d,e
Cream Silver Mines Ltd.
SPLIT LAKE PROJECT
N.W. ONTARIO
GEOLOGICAL MAP
Grid "B"
Scale: 1" : 1200'

FIGURE 4

DISCUSSION OF GEOPHYSICAL SURVEYS

Introduction

The known mineralization on the property consists of fissure filling quartz veins in post-tectonic brittle fault zones. Potential exists to locate conductive mineralized faults in the areas other than the known occurrences. Potential also exists on the property to locate significant deposits of conductive sulphides in mineralized stratigraphic horizons or shear zones. The surveys yield excellent information on the local geology and defined numerous interesting exploration targets.

The Magnetometer Survey

The magnetic highs indicate the regional trend of the underlying geology. High magnetic zones generally give expression between 1,000 to 4,000 gammas above background. These highs probably result from magnetite in mafic flows or in thin iron formations, the latter of which was never mapped on the property.

The strongest magnetic trend is located at the Split Lake Gold Mine site. The magnetometer survey shows a major fold at the mine site. The high readings follow the north flank of the fold where the trenches are. The nose of the fold is approximately a 100 feet south of the mine shaft. The high mag follows a carbonated zone with sulphides and/or an iron formation not yet shown by the present geological mapping.

Northwest of the mine site, near the shore of Split Lake, from line 68E to 72E, the gabbro intrusion is well shown with high magnetic values.

South of the Split Lake Mine the geological contact between the mafic and intermediate volcanics is well shown by the high readings over felsic tuff units.

The total field survey was useful in outlining several magnetic areas which underlie Grid B.

The VLF Survey

The results of the VLF survey proved useful in delineating numerous conductive horizons present on the property. Each conductive zone which may be significant is given an arbitrary number (eg. 24). A description of each conductive zone and its interpretation is presented in Appendix 1.

A total of 47 conductive zones are labelled on Grid B. Seventeen of these zones are interpreted to represent bedrock conductors. Most of these responses are weak to moderate. Four of the conductive zones are interpreted to result from conductivity changes at geological contacts.

The remainder of the conductive zones are thought to result from topographic configurations. These are generally strong to moderate responses and often correlate with swamp or cliffs.

The following VLF anomalies are considered notable:

5. moderate to weak, persistent anomaly crossing a swamp and passing south of a broad high magnetic anomaly on lines 32E to 36E with possible bedrock conductor;

6. strong to weak, continuation of VLF anomaly 74 from grid A, possibly a fault or bedrock conductor;

7. weak, possible bedrock conductor near old trenches;

10. weak to moderate persistent anomaly crossing a ridge, prospecting zone with trenches, probably bedrock conductor;

12. moderate to strong, south contact of felsic volcanic unit;

16. moderate, linear, north flank of felsic volcanic unit, possibly continues east as anomaly B-21;

24. strong to moderate, high ground, bedrock conductor?

30. moderate, probably overburden layer (clay) effect, may be bedrock fault on conductive zone masked by overburden;

37. strong, a bedrock conductor?

38. moderate to strong, magnetic correlation on line 84E

43. moderate, high ground, on strike with vein system of the Split Lake Gold Mine, possibly shear zone.

44. moderate, possibly parallel fault with the vein system of Split Lake Gold Mine.

RESULTS OF THE GEOPHYSICAL SURVEYS

Numerous conductive horizons cross the property, some of which can be interpreted as resulting from bedrock conductors (ie. faults or conductive rocks).

The area of known mineralization, namely Split Lake Gold Mine, appears to occur in an area of magnetic contrast, not restricted to a given magnetic signature. The magnetic survey indicates a fold south of the old Mine site. The vein structures and VLF conductors crosscut the local magnetic strike indicating that the displacement across strike of the mineralized vein-fault system is following the axial plan of the fold.

CONCLUSIONS AND RECOMMENDATIONS

1. The geophysical surveys were successful in defining a number of magnetic and conductive horizons occurring on the property. The geophysical targets on the property outlined responses, although some very weak, that indicate potential for economic sulphide mineralization.

2. The known mineralization on the property consists of fissure filling quartz veins in post-tectonic brittle fault zones.

3. Potential exists to locate conductive mineralized faults in the areas others than the known occurrence.

4. Several conductors were outlined adjacent to the Split Lake Mine. This may reflect conductive mineralization or related shearing.

5. The planned Phase I of exploration of Grid B has been completed. The grid extension east of the Split Lake Gold Mine should be completed to allow for extension of the geophysical surveys.

6. A program of power stripping over known gold occurrences has yielded positive information which indicates potential for economic mineralization on the property.

7. It is recommended that a detailed magnetic survey be conducted over the Split Lake Mine site. The area would include L90E to L83E, lines at 100 foot intervals, between 2+50 South and 3+00 North using 10 foot readings stations. This will allow for conclusive interpretation and yield useful information of the fold, particularly the extent of the fold flexure where possible economic mineralization could occur.

CERTIFICATE OF QUALIFICATIONS

THIS IS TO CERTIFY THAT:

- I am a resident of Thunder Bay, province of Ontario, Canada (366 Foley Street, Thunder Bay, Ontario, P7B 1P8).

- I have been engaged in base and precious metal exploration as a geologist since 1987.

- I am a graduate of University of Quebec at Chicoutimi, Chicoutimi, Quebec (M.Sc. Earth Sciences, 1987), and University of Montreal, Montreal, Quebec (B.Sc. Geology, 1982).

- I am a member of the Professional Association of Geologists and Geophysicists of Quebec (APGGQ).

- I have not received, directly or indirectly, or expect to receive any interest in the company and its properties.

Pierre Simoneau
Geologist, M.Sc.

Approved by
J.Garry Clark,
H.B.Sc. Geology

Appendix 1

List of Claims covered by this Report

Dennis Sweany

Claim Number	Recording Date	Work Days Applied	Expiry Date*
PA 1017269	May 24/88	80	May 24/90
PA 1017270	May 24/88	80	May 24/90
PA 1053875	May 24/88	80	May 24/90
PA 1053876	May 24/88	80	May 24/90
PA 1053877	May 24/88	80	May 24/90
PA 1053878	May 24/88	80	May 24/90
PA 1053879	May 24/88	80	May 24/90
PA 1053880	May 24/88	80	May 24/90
PA 1053881	May 24/88	80	May 24/90
PA 1053886	May 24/88	80	May 24/90
PA 1053887	May 24/88	80	May 24/90
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PA 1053889	May 24/88	80	May 24/90
PA 1053890	May 24/88	80	May 24/90
PA 1053891	May 24/88	80	May 24/90
PA 1053892	May 24/88	80	May 24/90
PA 1053893	May 24/88	80	May 24/90
PA 1053894	May 24/88	80	May 24/90
PA 1053895	May 24/88	80	May 24/90
PA 1053896	May 24/88	80	May 24/90
PA 1053897	May 24/88	80	May 24/90
PA 1053898	May 24/88	80	May 24/90
PA 1053913	May 24/88	80	May 24/90
PA 1053914	May 24/88	80	May 24/90
PA 1053916	May 24/88	80	May 24/90
PA 1053917	May 24/88	80	May 24/90
PA 1053918	May 24/88	80	May 24/90
PA 1053928	Jun 27/88	80	Jun 27/90

Ken Bernier

Claim Number	Recording Date	Work Days Applied	Expiry Date*
PA 913707	Jan 15/88	80	Jan 15/90
PA 913708	Jan 15/88	80	Jan 15/90
PA 913709	Jan 15/88	80	Jan 15/90
PA 913710	Jan 15/88	80	Jan 15/90
PA 913711	Jan 15/88	80	Jan 15/90
PA 913712	Jan 15/88	80	Jan 15/90

Appendix I

Marcus Kwivila

Claim Number	Recording Date	Work Days Applied	Expiry Date*
PA 1039379	May 06/88	80	May 06/88
PA 1039380	May 06/88	80	May 06/88
PA 1039390	May 06/88	80	May 06/88
PA 1039391	May 06/88	80	May 06/88

*Pending

Appendix II

THEORY OF OPERATION

The Proton Magnetometer

The Proton Precession Magnetometer is so named because it utilizes the precession of spinning protons or nuclei of the hydrogen atom in a sample of hydrocarbon fluid to measure the total magnetic field intensity. The spinning protons in a sample of kerosene behave as small, spinning magnetic dipoles. These magnets are temporarily polarized by application of a uniform magnetic field generated by a current in a coil of wire. When the current is removed, the spin of the protons causes them to precess about the direction of the ambient (earth's) magnetic field. The precessing protons then generate a small signal whose frequency is precisely proportional to the total magnetic field intensity and independent of the orientation the coil (sensor). The proportionality which related frequency to the field intensity is called the gyromagnetic ratio of the proton. The precession frequency, typically 2000 Hz, is measured as the absolute value of the total magnetic field intensity with an accuracy of 1 gamma.

The total magnetic intensity, as measured by the proton magnetometer is the magnetitude of the earth's field vector independent of its direction. The measurement can be expressed as a length (50,000 gammas) of the earth's field vector. A local disturbance, say 10 gammas, would add (or subtract) to the undisturbed field o 50,000 gammas in the usual manner of vector addition. Since the proton magnetometer measures only the magnitude of the resultant vector (whose direction is almost parallel to the undisturbed total field vector), that which is measured is very nearly the component of the disturbance vector in the direction of the undisturbed total field. Thus the change in total field intensity is called the anomaly.

The VLF Sensor

The VLF transmitting stations operating for communications with submarines have a vertical antenna. The antenna current is thus vertical, creating a concentric horizontal magnetic filed around them. When these magnetic fields meet conductive bodies in the ground, there will be secondary fields radiating from

these bodies. The Omni-IV VLF sensors measure the vertical components of these secondary fields.

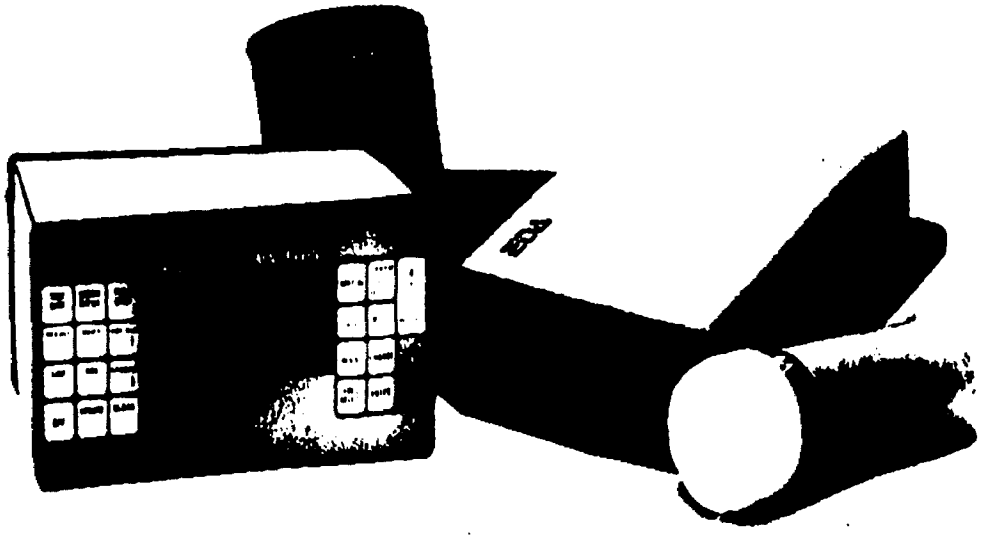
The Omni-IV VLF is a sensitive receiver covering the frequency bands of the VLF transmitting stations with means of measuring the vertical filed components.

The receiver has two inputs with two receiving coils built into the instrument. One coil has a normally vertical axis and the other has a horizontal axis.

The signal from one of the coils (vertical axis) is first minimized by tilting the instrument. The tilt angle on the Omni-IV is calibrated as a percentage and not as a true dip. This is significant in the calculation of the Fraser Filter data since the larger numbers obtained from the percentage data will result in larger filtered values. The remaining signal in this coil is balanced out by a measured percentage of a signal from another coil, after being shifted 90 degrees. This coil is normally parallel to the primary field.

Thus, if the secondary field signals are small compared to the primary horizontal field, the mechanical tilt angle is an arcurate measurement of the vertical real component, and the compensation 90 degree signal from the horizontal coil is a measure of the quadrature vertical signal.

OMNI PLUS "Tie-Line" VLF/Magnetometer System



Major Benefits

- Combined VLF/Magnetometer/Gradiometer System
- No Orientation Required
- Four VLF Magnetic Parameters Recorded
- Automatic Calculation of Fraser Filter
- Automatic Correction of Primary Field Variations
- Calculation of Ellipticity
- Measurement of VLF Electric Field

EDA

Specifications

Frequency Tuning Range	15 to 30 kHz, in 100 Hz increments, with bandwidth of 150 Hz; tuning range accommodates new Puerto Rico station at 28.5 kHz.
Transmitting Stations Measured	Up to 3 stations can be automatically measured at any given grid location within frequency tuning range.
Recorded VLF Magnetic Parameters	Vertical in-phase, vertical quadrature (out-of-phase), total field strength (or optional horizontal amplitude), dip angle.
Standard Memory Capacity	1300 combined VLF magnetic and VLF electric measurements as well as gradiometer and magnetometer readings.
Display	Custom designed, ruggedized liquid crystal display with built-in heater and an operating temperature range from −40°C to +55°C. The display contains six numeric digits, decimal point, battery status monitor, signal strength status monitor and function descriptors.
RS232C Serial I/O Interface	Variable baud rate from 300 to 9600 baud, 8 data bits, 2 stop bits, no parity.
Test Mode	A. Diagnostic Testing (data and programmable memory). B. Self Test (hardware).
Sensor Head	Contains 3 orthogonally mounted coils with automatic tilt compensation.
Operating Environmental Range	−40°C to +55°C; 0 – 100% relative humidity; Weatherproof.
Power Supply	Non-magnetic rechargeable sealed lead-acid 18V DC battery cartridge or belt; 18V DC disposable battery belt; 12V DC external power source for base station operation only.
Weights and Dimensions	
Instrument Console	3.8 kg, 122 x 246 x 210 mm.
Sensor Head	0.9 kg, 140 dia. x 130 mm.
VLF Electronics Module	1.7 kg, 280 x 190 x 60 mm.
Lead Acid Battery Cartridge	1.8 kg, 138 x 95 x 75 mm.
Lead Acid Battery Belt	1.8 kg, 540 x 100 x 40 mm.
Disposable Battery Belt	1.2 kg, 540 x 100 x 40 mm.

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Printed in Canada

OMNI PLUS "Tie-Line" VLF/Magnetometer System

Description

The OMNI PLUS geophysical system combines the OMNI IV "Tie-Line" magnetometer and gradiometer together with a VLF measurement capability.

The OMNI PLUS VLF/Magnetometer System has been developed in co-operation with Geophysical Surveys Inc. of Quebec, Canada.

This brochure concentrates on the VLF magnetic and electric field parameters measured and recorded by the OMNI PLUS. More information on the OMNI PLUS magnetometer system and tie-line capability is available in the OMNI IV brochure.

Features

Each OMNI PLUS incorporates the following features:

- Measurement and recording in memory of the following VLF data for each field reading:
  - vertical in-phase,
  - vertical quadrature (out-of-phase),
  - total field strength,
  - dip angle,
  - primary field direction,
  - apparent resistivity,
  - phase angle,
  - time,
  - grid co-ordinates,
  - direction of travel along grid lines, and
  - natural and cultural features.
- Complete data protection for a number of years by an internal lithium backup battery.
- "Tie-Line" or "Looping" algorithm, unique only to EDA's OMNI IV and OMNI PLUS Series, for the self-correction of atmospheric variations and variations in the primary field from the VLF transmitter(s).
- Measurement of up to three VLF transmitting stations to provide complete coverage of an anomaly regardless of the orientation of the survey grid or of the anomaly itself.
- Display descriptors to monitor the quality of the first two VLF transmitter signals being measured.
- Choice of three data storage modes:
  - spot record, for readings without grid co-ordinates
  - multi record, for multiple readings at one station
  - auto record, for automatic update of station number
- Output of grid co-ordinates with the designated compass bearing, using N, S, E, W descriptors.

Major Benefits

• Combined VLF/Magnetometer / Gradiometer System

The OMNI PLUS incorporates the capabilities of the OMNI IV "Tie-Line" Magnetometer and Gradiometer System with the OMNI VLF's ability to measure the VLF magnetic and electric fields.

Only one OMNI PLUS is needed to record all of the following geophysical parameters:

1. The total magnetic field
2. The simultaneous gradient of the total magnetic field
3. The VLF magnetic field, including:
   - the vertical in-phase
   - the vertical quadrature
   - the total field strength
   - the dip angle
4. The VLF electric field, including:
   - the phase angle
   - apparent resistivity

As an example, at each location the OMNI PLUS can calculate and record **in less than 8 seconds**, four VLF magnetic field parameters from three different transmitters, a magnetic total field reading and a simultaneous magnetic gradient reading. In addition, the OMNI PLUS can also measure and record two VL electric field parameters from three different transmitters.

• No Orientation Required

The OMNI PLUS requires no orientation, by the operator, of the sensor head toward the transmitter station. This simplifies field procedures as well as saving considerable survey time. When three VLF transmitters are measured, the benefits of this time-saving feature are automatically tripled. There is no requirement for the operator to orient himself and the sensor head toward the first selected transmitting station and then re-orient towards the second o. third transmitting station.

Consistent high quality data is achieved in the OMNI PLUS due to the utilization of three orthogonal sensor coils rather than two sensor coils used in conventional systems. The quality of data is not then dependent on the operator's ability to correctly orient the sensor head for optimum coupling with the transmitting station.

The OMNI PLUS compensates automatically for the direction of travel along the grid lines as well as for the angle of the sensors from the vertical plane through the use of tiltmeters.

• Four VLF Magnetic Parameters Recorded

The OMNI PLUS calculates and records in memory the:

- vertical in-phase
- vertical quadrature
- total field strength
- dip angle

The operator has the option to substitute the horizontal amplitude for the total field strength. The OMNI PLUS calculates each of these parameters from the in-phase and quadrature measurements of all three components.

Automatic Calculation of Fraser Filter

The OMNI PLUS automatically calculates the Fraser Filter, from the dip angle data, regardless of the interval between the stations along the grid lines. The operator no longer has to manually perform this mathematical calculation thereby reducing the possibility of human error. The Fraser Filter algorithm follows established conventions.

The operator can choose to output either the dip angle or the Fraser filtered data, or both.

Automatic Correction of Primary Field Variations

The OMNI PLUS can be used as a base station to monitor primary field changes from up to three VLF transmitters as well as alternately measuring the variations in the magnitude of the earth's magnetic field. Only **one** OMNI PLUS is needed to perform both functions.

The OMNI PLUS base station can then automatically correct, by linear interpolation, the field units for these drift variations in the primary and total magnetic fields.

Calculation of Ellipticity

The OMNI PLUS calculates the true ellipticity of the VLF magnetic field from the measurement of the in-phase and quadrature of all three components. The ellipticity provides more interpretative information about the anomaly than the dip angle and is less influenced by overburden shielding.

- **Measurement of VLF Electric Field**

The OMNI PLUS calculates and records the apparent resistivity and phase angle from the measurement of the VLF electric field. This VLF electric field measurement can be accomplished by using capacitively or resistively coupled electrodes at spacings of 5, 10 or 20 meters.

Other Benefits

- **Automatic Tuning**

The OMNI PLUS automatically tunes up to three VLF transmitters within a frequency range of 15 to 30 kHz, once the operator has programmed in the specific frequencies.

- **Base Station Synchronization**

The OMNI PLUS has a unique "count-down" feature which can be activated in the field unit upon synchronization with the base station. The field unit then displays and decrements the remaining time, in seconds, until the base station is scheduled to take a measurement. The operator can obtain a field reading at exactly the same time as the base station. The simultaneous field and base station measurements significantly improve the automatic correction accuracy.

- **Automatic "Tie-Line" Correction**

The OMNI PLUS can automatically correct by itself the VLF field data for atmospheric variations and changes in the primary field originating from the VLF transmitter. By tieing-back into one or several tiepoints on the grid, the OMNI PLUS will automatically calculate and apply the drift measured to the field data previously recorded in memory. More information on this unique "tie-line" method can be obtained from page 3 of the OMNI IV brochure.

- **Notation of Natural and Cultural Features**

The OMNI PLUS can record natural and cultural features unique to each grid location. This capability eliminates the need for a field notebook and provides additional information that can assist in interpreting recorded data.

- **Analogue Output**

Since VLF as well as magnetic data is often easier to interpret as a profile plot, data collected by the OMNI PLUS can be represented in analogue format at a vertical scale best suited for data presentation. The operator can selectively output in analogue and/or digital format:

- Fraser filtered data
- magnetic total field strength
- magnetic vertical gradient

- **Computer Interface**

The OMNI PLUS can transfer uncorrected, corrected or filtered data to most computers and printers with a RS-232 serial port.

VLF TRANSMITTING STATIONS

Rugby , England	: 16.0 kHz
Annapolis , Maryland	: 21.4 kHz
Lualualei , Hawaii	: 23.4 kHz
Cutler , Maine	: 24.0 kHz
Seattle , Washington	: 24.8 kHz
Aguada , Puerto Rico	: 28.5 kHz

APPENDIX III

COMPILATION LIST OF ANOMALIES

Ano. No.	Length (feet)	Best Definition along axis	Est. Depth feet	Magnetic Correlation?	Strength / Interpretation BRC: Bedrock conductor GC: Geological contact
1	600	8E	100	none	moderate, swamp topographic - south edge
2	2100	8E, 12E	100	follow linear low (-600 g)	strong, topographic low with swamp at eastern end, fault? possible continuation with B-3
3	1100	34E	125	none	strong to moderated, swamp topographic
4	600	34E	100	none	moderate, swamp topographic - north edge, GC
5	2500	36E	75	flanking south of broad high on lines 32E to 36E (+2800 g)	moderate to weak, crosses swamp and follows valley, fault? possible BRC near 34E
6	1700+	12E, 16E	125	none	strong to weak, strike continuation with A-74, BRC
7	800+	22E	100	none	weak, BRC
8	1800	32E, 34E	150	flanking south of a broad high on lines 30E to 36E (+1200g)	strong to weak, swamp topographic, BRC?
9	600	22E	125	none	moderate to weak, BRC
10	2200	32E, 42E	100	none	weak to moderate, trenches between L26E & 28E where crossing ridge, probably BRC
11	1600	44E, 46E	125	none	weak to strong, swamp topographic
12	600	30E	75	none	moderate, topographic low GC
13	1500	32E	75	none	moderate to weak, swamp topographic
14	1300	42E	75	none	moderate, swamp topographic
15	900	26E	50	none	moderate, swampy topographic low
16	1300	40E, 44E	50	none	moderate, GC?
17	600	32E	25	none	weak, near granite contact, topographic low
18	1200	26E	50	none	moderate to weak, swamp topographic
19	600	22E	25	none	weak, swamp topographic
20	600	56E	50	none	weak, possible fault 200 feet south of granite contact
21	1100	50E	100	none	weak, topographic low
22	700	62E	150	none	weak, possible BRC
23	1000	54E	75	none	moderate, topographic low
24	800	48E	150	none	strong to moderate, BRC
25	1200	54E	125	none	moderate to weak, swamp topographic
26	600	46E	75	none	weak, topographic ridge, BRC?
27	900	54E	50	none	weak, topographic, low swampy ground
28	1800	54E	50	none	weak, topographic swamp

Ano. No.	Length (feet)	Best Definition along axis	Est. Depth feet	Magnetic Correlation?	Strength / Interpretation BRC: Bedrock conductor GC: Geological contact
29	2000	56E, 58E	125	none	weak, topographic swamp
30	1700	62E	100	none	moderate to weak, BRC?
31	600	50E, 52E	75	none	moderate, swamp topographic
32	800	60E	150	none	moderate to weak, swamp topographic
33	800	62E	50	none	weak, BRC?
34	1200	72E	100	none	weak, BRC?, follows gentle rise
35	650	80E, 82E	50	none	strong, topographic valley
36	1650	68E	75	none	weak, topographic low
37	1100	82E, 84E	100	none	strong, BRC
38	1300	82E	75	crosses high on L84E (+1000 g)	weak to moderate, topographic low
39	600	72E	100	none	weak, swamp topographic
40	1300	84E	50	none	moderate, swamp topographic -south edge
41	2150	74E, 86E	150	crosses high on L78E to L86E south of Split Lake mine (+1600 g)	moderate, partial swamp topographic -north edge, probably BRC near mine
42	2300	64E, 70E	275	direct with linear high (+1000 g)	moderate, BRC
		72E, 74E	100		
43	800	82E	50	almost crossing the high at the flexure of the fold on L84E (+1200 g)	moderate, BRC
44	1200	88E, 90E	100	none	moderate to strong, fault?
45	1800	80E	50	none	moderate to weak, swamp topographic
46	800	74E	50	crosses high on L70E and and L72E (+1400 g)	weak, topographic (cliff) and BRC?
47	600	80E	50	none	weak, GC

Mining Lands Section
3rd Floor, 880 Bay Street
Toronto, Ontario
M5S 1Z8

Telephone: (416) 965-4888

June 14, 1989

Your file: W8903-52
Our file: 2.12271

Mining Recorder
Ministry of Northern Development and Mines
Court House
P.O. Box 3000
Sioux Lookout, Ontario
P0V 2T0

Dear Sir:

Re: Notice of Intent dated May 10, 1989 for Geological, Geophysical (Electromagnetic and Magnetometer) Survey submitted on Mining Claims PA 1053878 et al in Aarn Lake Area.

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,

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

RM:eb
Enclosure

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

Resident Geologist
Sioux Lookout, Ontario

Dennis J. Sweany
Dryden, Ontario

Cream Silver Mines Ltd.
Vancouver, B.C.

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File: 2.12271

Date: 1989:05:10

Mining Recorder's Report of Work No.: W8903-52

Recorded Holder: DENNIS SWEANY/CREAM SILVER MINES LIMITED

Township or Area: ZARN LAKE

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	PA 1053878 to 898 incl 1053928 1053912 to 14 incl 1053916 to 19 incl
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 16 days	
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

No credits have been allowed for the following mining claims

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

PA 1053915

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

Technical Assessment Work Credits

File: 2.12271

Date: 1989:05:10

Mining Recorder's Report of Work No.: W8903-52

Recorded Holder: DENNIS SWEANY/CREAM SLIVER MINES LIMITED

Township or Area: ZARN LAKE

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic 17 days	
Magnetometer 34 days	PA 1053878 to 81 incl 1053884 1053886 to 98 incl 1053928 1053912 to 14 incl 1053916 to 18 incl
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.	
☐ 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

PA 1053882-83
1053885
1053915
1053919

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.

Ministry of Northern Development and Mines
Ontario

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

DOCUMENT No. W8903.052

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.

Mining Lands Section

2.12271 Mining Act

Type of Survey(s)	Township or Area
GEOLOGICAL - GEOPHYSICAL	ZARN LAKE G 2229
Claim Holder(s)	**Prospector's Licence No.**
DENNIS SWEANY A40024 for CREAM SILVER Miles Ltd.	CORP. T-1523
Address	
116 ORVIS ST. DRYDEN, ONT. P0N 1P1	
Survey Company	**Date of Survey (from & to)** (Day / Mo. / Yr.)	**Total Miles of line Cut**
SWEANY MINING SERVICES	1 8 88 to 30 10 88	48.4
Name and Address of Author (of Geo-Technical report)	
PIERRE SIMENEAU / DUAL BAY	

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	20
	- Magnetometer	40
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	20
	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	

RECEIVED
MAR 17 1989
MINING LANDS SECTION
PATRICIA MINING DIVISION

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
PA	1053878	80
	1053879	80
	1053880	80
	1053881	80
	1053882	80
	1053883	80
	1053884	80
	1053885	80
	1053886	80
	1053887	80
	1053888	80
	1053889	80
	1053890	80
	1053891	80
	1053892	80
	1053893	80
	1053894	80
	1053895	80
	1053896	80
	1053897	80
	1053898	80
	1053928	80

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	1053912	80
	1053913	80
	1053914	80
	1053915	80
	1053916	80
	1053917	80
	1053918	80
	1053919	80

Total number of mining claims covered by this report of work: 30

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.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
2400	Mar 6, 1989	R. Mycho
	Date Approved as Recorded	Branch Director
		see revised work Statement.

Date	Recorded Holder or Agent (Signature)
FEB. 22/89	D. Sweany

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

DENNIS J. SWEANY for CREAM SILVER

Ontario

June 10, 89

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

880 Bay Street
3rd Floor
Toronto, Ontario

(416) 965-4888

May 10, 1989

Your File : W8903-52
Our File : 2.12271

Mining Recorder
Ministry of Northern Development and Mines
Court House
P.O. Box 3000
fSioux Lookout, Ontario
P0V 2T0

Dear Sir:

Enclosed is one copy of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please check your records to ensure that the recorded holder is correct. If it is not, please photocopy this letter and attached Notice of Intent, and forward to the new recorded holder. In approximately thirty 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 Dennis Kinvig at (416) 965-4888.

Yours sincerely,

Robert Mungall

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

Encl:

DK:sc

cc: Dennis J. Sweany, President
16 Orvis Street
Dryden, Ontario
P8N 1P8

cc: Cream Silver Mines Ltd
Suite 1900
999 W. Hastings St.
Vancouver, B.C.
V6C 2W2

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

Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Notice of Intent

for Technical Reports

May 10, 1989
2.12271/W8903-52

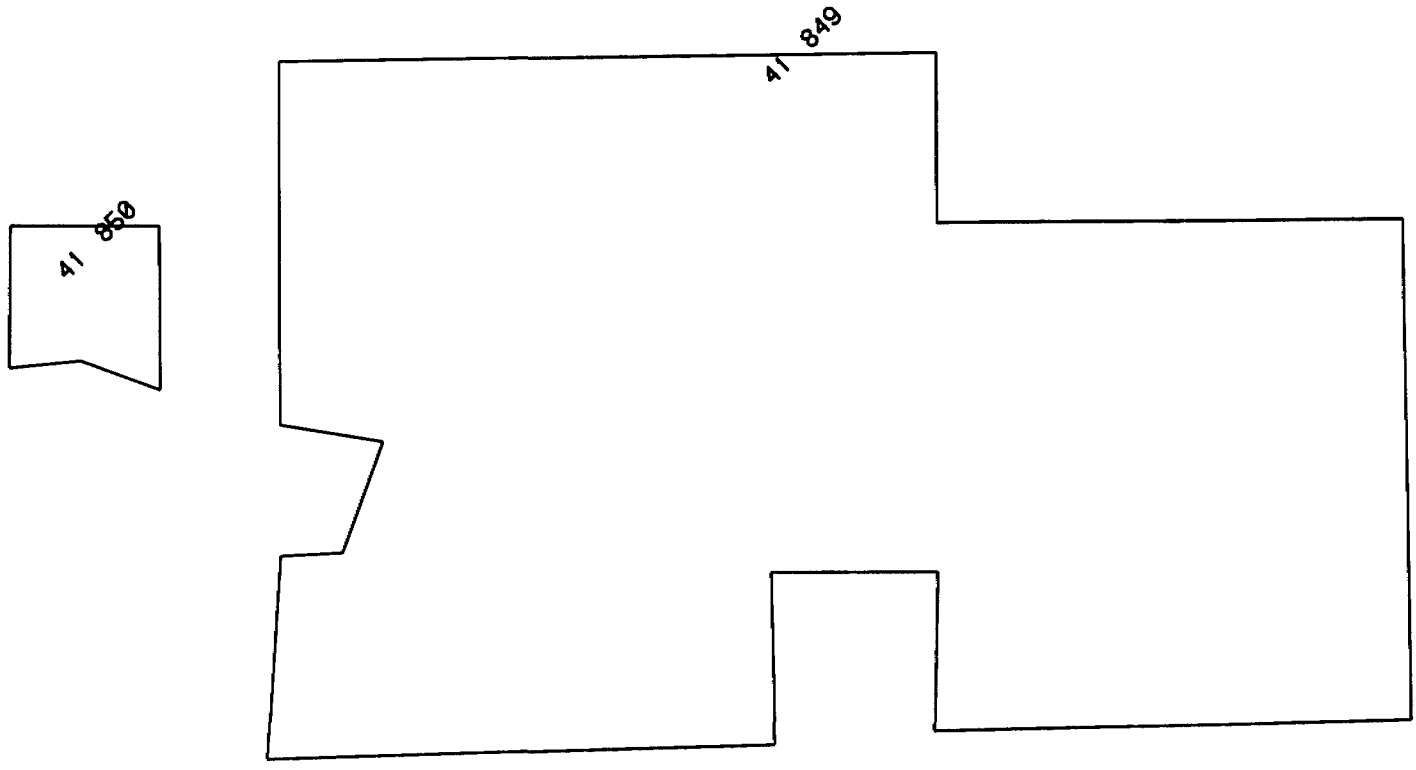
An examination of your technical survey report indicates that the requirements of the Mining Act have not been fully met to warrant maximum work credits as calculated on the submitted work report(s). This notice is a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 30 days from the above date, the Mining Recorder will be advised of the change in credits and will amend the entries on the record sheets to agree with the enclosed statement.

The effect of the proposed reduction on the mining claims should be considered immediately. If the anniversary date in respect of which the assessment work was recorded has not passed and the proposed reduction will create a forfeiture of the mining claims on the anniversary date, you may, before the anniversary date, record additional unrecorded work or apply to the Mining and Lands Commissioner within the usual thirty day period for an extension of time to perform additional assessment work. If the anniversary date has passed, you may wish to apply to the the Commissioner for relief from foreiture and an extension of time to record unrecorded assessment work that you have performed or to perform assessment work. This must be done within six months of the date of forfeiture.

If you intend to apply to the Commissioner for relief from forfeiture and an extension of time, arrangements should be made with the Mining Recorder to have representative abstracts submitted to the Commissioner.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the 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 thirty day period, submit an assessment work breakdown listing the employees' names, addresses, dates and hours they worked. The new work breakdown should be submitted directly to the Mining Lands Section, Mineral Development and Lands Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.



ZARN LAKE 2.12271 52J04SE0300

AFRI PROJECT

HOLD Q

AFO #: L. 12271

AFRI #: 52 J0405E0300

ITEM: July 91 p 52 in for Grid "A" which isn't in file report.

Date: 19 Jan 93
Indexer: Sh. Clarke
Supervisor: Kathy

RESOLVE

Date:
Authorized by:

AFRI PROJECT

HOLD Q

AFO #: 2.12271

AFRI #: 52J04SE0300

ITEM: 2 polys, no poly plot

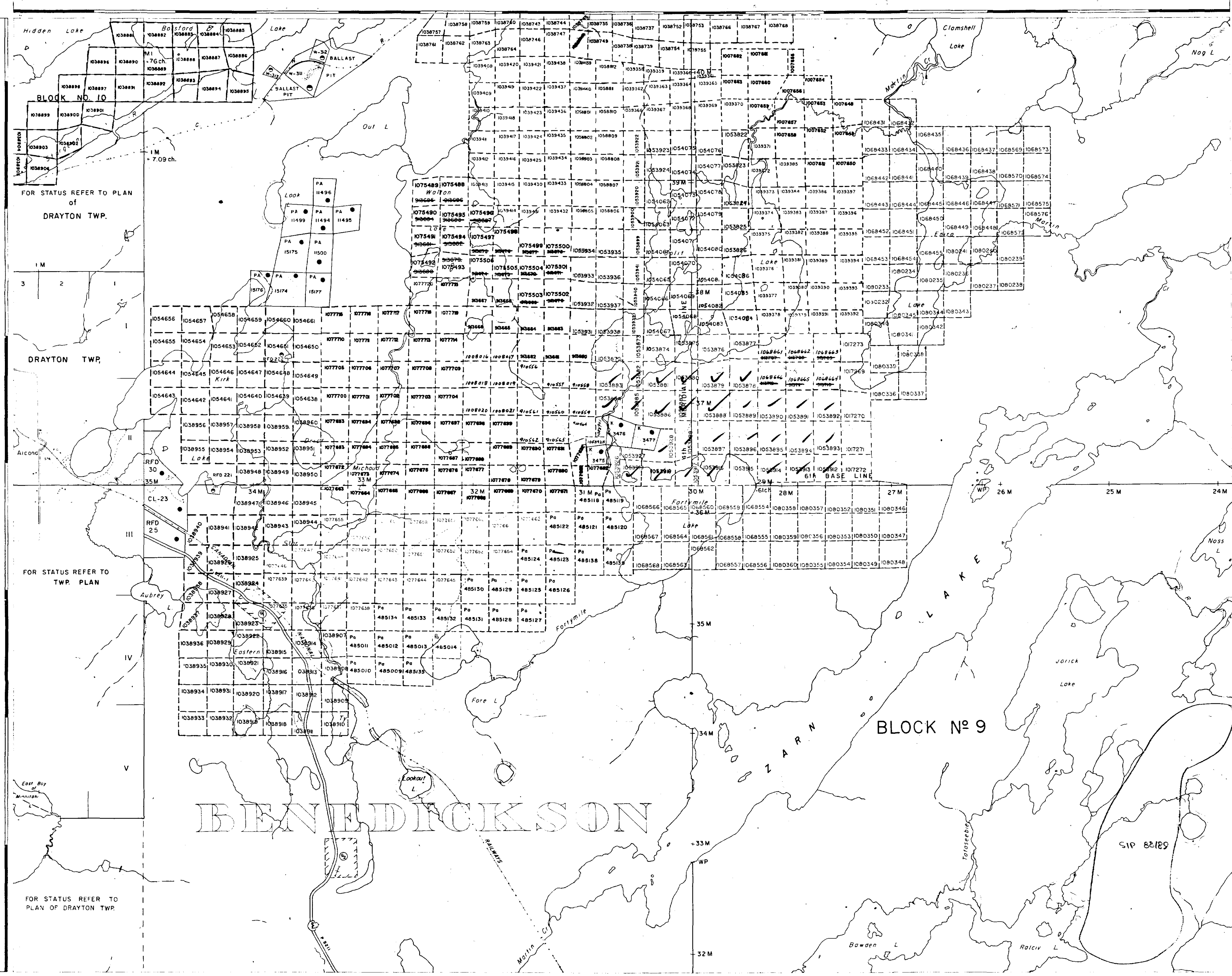
Fixed

M. C.

Date: Jan 15/93
Indexer: Ray
Supervisor:

RESOLVE

Date:
Authorized by:



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	
CANCELLED	
SAND & GRAVEL	

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

88/01/04
88/01/08
88/01/15
88/01/22
88.05.26
88.07.05
OCT.12/88
OCT.26/88
Nov 7/88

SAND and GRAVEL

GRAVEL — FILE 163474
MTC GRAVEL RESERVE — FILE 163474

SCALE: 1 INCH = 40 CHAINS

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

AREA

ZARN LAKE

M.N.R. ADMINISTRATIVE DISTRICT
SIOUX LOOKOUT
MINING DIVISION
PATRICIA
LAND TITLES / REGISTRY DIVISION
KENORA

Ministry of Natural Resources — Ministry of Northern Development and Mines
Ontario

Date: JANUARY 1987
Number: G-2277

52J04SE9330 2.12271 ZARN LAKE 200

501913

SPLIT LAK

FORTY-MILE LAKE

-20-00 E-

-30-00 E-

-40-00 E-

-50-00 E-

-L 6 W-

-L 00-

-TL 40 N-

-20 E-

-TL 20 N-

-L 32 E-

TL 2000 south

TL 4000 south

-10-00 E-

-20-00 E-

-00 E-

-00 E-

-00 E-

1053883
1053884
1053882
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1053881
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913712
1053890
1053927
1053919
1053928
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1053898
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1053897
1053916
1053896
1053915
1053895
1053914

LEGEND

QUATERNARY
RECENT
Lake, stream, and bog deposits.

PLEISTOCENE
Sand, gravel and ground moraine deposits.

- UNCONFORMITY -

PRECAMBRIAN

ARCHEAN FELSIC TO INTERMEDIATE INTRUSIVE ROCKS

6a Homogeneous biotite trondhjemite, hornblende-biotite trondhjemite.
6b Inhomogenous biotite-hornblende trondhjemite, mafic xenolith bearing hornblende-biotite trondhjemite.
6d Quartz porphyry, quartz-feldspar porphyry, quartz-sericite schist.
6h Fine grained to aphanitic leucocratic granodiorite, quartz monzonite, aplite.

MAFIC INTRUSIVE ROCKS

5d Equigranular oophitic gabbro.

— INTRUSIVE CONTACT —

METASEDIMENTS

4a Greywacke, quartz wacke.
4b Slate, graphitic slate.
4c Quartz porphyry and vein quartz boulder and conglomerate.

FELSIC METAVOLCANICS

3a Massive to flow-banded.
3b Massive to flow-banded, porphyritic.
3c Breccia, tuff-breccia, agglomerate.
3d Lapilli tuff, lapilli-crystal tuff.
3e Crystal-lithic tuff, lithic tuff.
3f Quartz-sericite schist.
3g Quartz "eye" quartz-sericite schist.

INTERMEDIATE METAVOLCANICS

2b Pillowed.
2c Breccia, tuff-breccia, agglomerate.
2e Crystal-lithic tuff, lithic tuff.
2f Schistose, lineated intermediate metavolcanics.
2g Hornfels, biotite-quartz-plagioclase schists.

MAFIC METAVOLCANICS

1a Massive, aphanitic to holocrystalline.
1b Plagioclase phenocryst (megacryst) massive.

Strike and dip of foliation.
Strike of vertical foliation.
Strike and dip of bedding.
Geological boundary approximate or defined.
Boundary of bedrock outcrops.
Small bedrock outcrops.
Quartz vein.
Trench.
Tailing coming from the trench.
Shaft.
Buildings or cabins.
Claim post.
Claim line surveyed.
Claim line of patented claim.
Road.
Portage trail.
Creek.
Downward slope from hill or high ground.
Lake or pond.
Swamp.
Swamp with trees.
Grassy swamp.

Carbonate alteration.

TYPE OF VEGETATION

ald Alder
Bir Birch
Ced Cedar
Fir Fir
Pj Jackpine
Pop Poplar
Sb Blackspruce
T Tamarack

SPLIT

FORTY— MILE LAKE

10-00E

20-00E

30-00E

40-00E

50-00E

TL 2000 North

TL 2000South

00 Base Line

TL 40 N

TL 20 N

L 20 E

1 32 E

GRID A

1053883

1053884

1053882

1053876

1053878

1053881

1053880

1053885

1053886

1053887

1053888

1053889

1053918

1053917

1053898

1053897

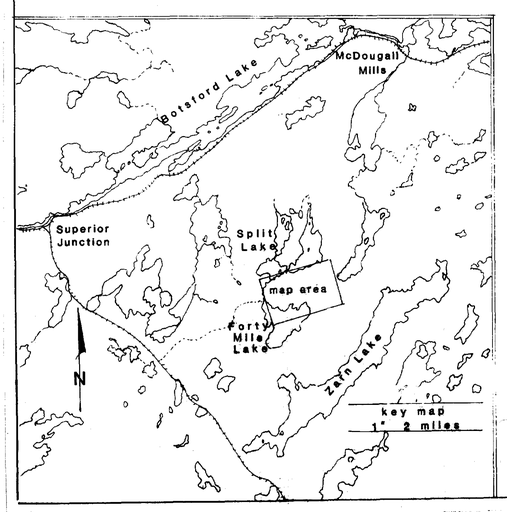
1053916

1053915

PATENTED CLAIM
3476

PATENTED CLAIM
3477

Beaver Lodge



220

10-00E

20-00E

30-00E

40-00E

50-00E

SPLIT

1053882

1053881

1053880

1053879

1053878

1053876

1053875

1053885

Patented Claim
3476

Patented Claim
3477

1053887

1053888

1053889

1053919

1053918

1053917

1053898

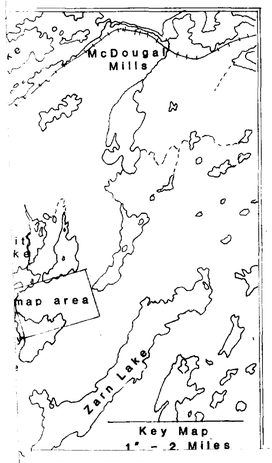
1053897

1053896

1053916

1053915

FORTY MILE LAKE



52JN4SE9330 2.12271 ZARN LAKE

SPLIT

FORTY – MILE LAKE

TL 2000 North

TL 2000 South

TL 40 N

TL 20 N

L 20 E

L 32 E

GRID A

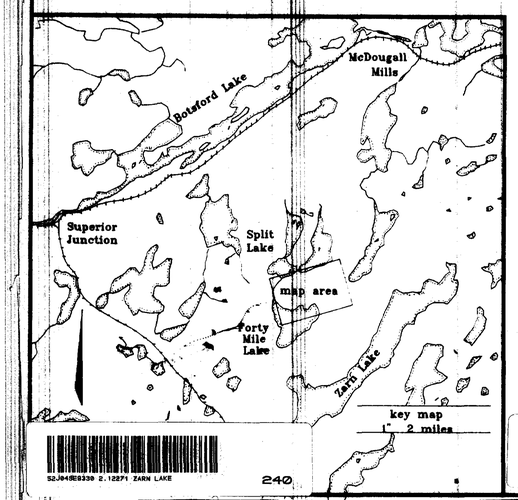
PATENTED CLAIM
3476

PATENTED CLAIM
3477

BEAVER LODGE

1053883
1053884
1053882
1053885
1052386
1053819
1053816
1053817
1053880
1053881
1053879
1053878
1053886
1053888
1053889
1053890
1053891
1053915

10+00E
20+00E
30+00E
40+00E
50+00E



SPLIT LAKE

LAKE

-50-00E -60-00E -70-00E -80-00E -90-00E -100-00E

TL 4000 south TL 3000 south TL 2000 south

1053876 1053877 1053879 1053888 1053878 1053889 913712 1053890 913710 1053892 1053896 1053915 1053895 1053914 1053894 1053913 1053893 1053912

6a,b 1k 1a 1a,b 1a,b,e,f 2e 2b,c,f 3a,b,c,d,e

Beaver Lodge

Creek

RECEIVED MAR - 6 1989 PATRICIA MINING DIVISION

2.12271

CREAM SILVER MINES LTD

SPLIT LAKE PROJECT

N.W ONTARIO

ZARN LAKE MAP SHEET No. G-2277

GRID "B"

GEOLOGICAL MAP

1 Inch to 200 Feet

SWEANY MINING SERVICES SMS

DRYDEN, ONTARIO

Key Map

Botsford Lake
McDougall Mills
Superior Junction
Split Lake
map area
Forty Mile Lake
Zarn Lake

50-00E

60-00E

70-00E

80-00E

90-00E

LAKE

TL 3000 NORTH

Beaver Lodge

Old Camp

1053876

1053877

1053878

1053879

1053888

1053889

1053890

1053891

1053892

1053893

1053894

1053895

1053896

1053897

1053898

1053912

1053913

1053914

1053915

1039378

1039379

1039390

1039391

913707

913708

913709

913710

913711

913712

1017233

1017269

1017270

Baseline 00

TL 2000 South

TL3000 South

LEGEND

CREAM SILVER MINES LTD.

SPLIT LAKE PROJECT

N.W. ONTARIO

ZARN LAKE MAP SHEET No. G-2277

GRID "B"

1 Inch to 200 Feet

2.12271

SWEANY MINING SERVICES SMS

DRYDEN, ONTARIO

LAKE

50-00E
60-00E
70-00E
80-00E

1053876
1053877
1053878
1053879
1053880
1053881
1053882
1053883
1053884
1053885
1053886
1053887
1053888
1053889
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1053900
1053901
1053902
1053903
1053904
1053905
1053906
1053907
1053908
1053909
1053910
1053911
1053912
1053913
1053914
1053915
913711

TL 2000 SOUTH

TL 3000 SOUTH

RECEIVED
MAR - 6 1989
PATRICIA MINING DIVISION

LEGEND

- contour intervals
- 1053894 — claim line, post & number
- roads
- 0-00 — baseline & picketline
- mine shaft

2.12271

CREAM SILVER MINES LTD.

SPLIT LAKE PROJECT

N.W. ONTARIO

ZARN LAKE MAP SHEET No. G-2277

GRID "B"

OMNI-PLUS

MAGNETOMETER SURVEY

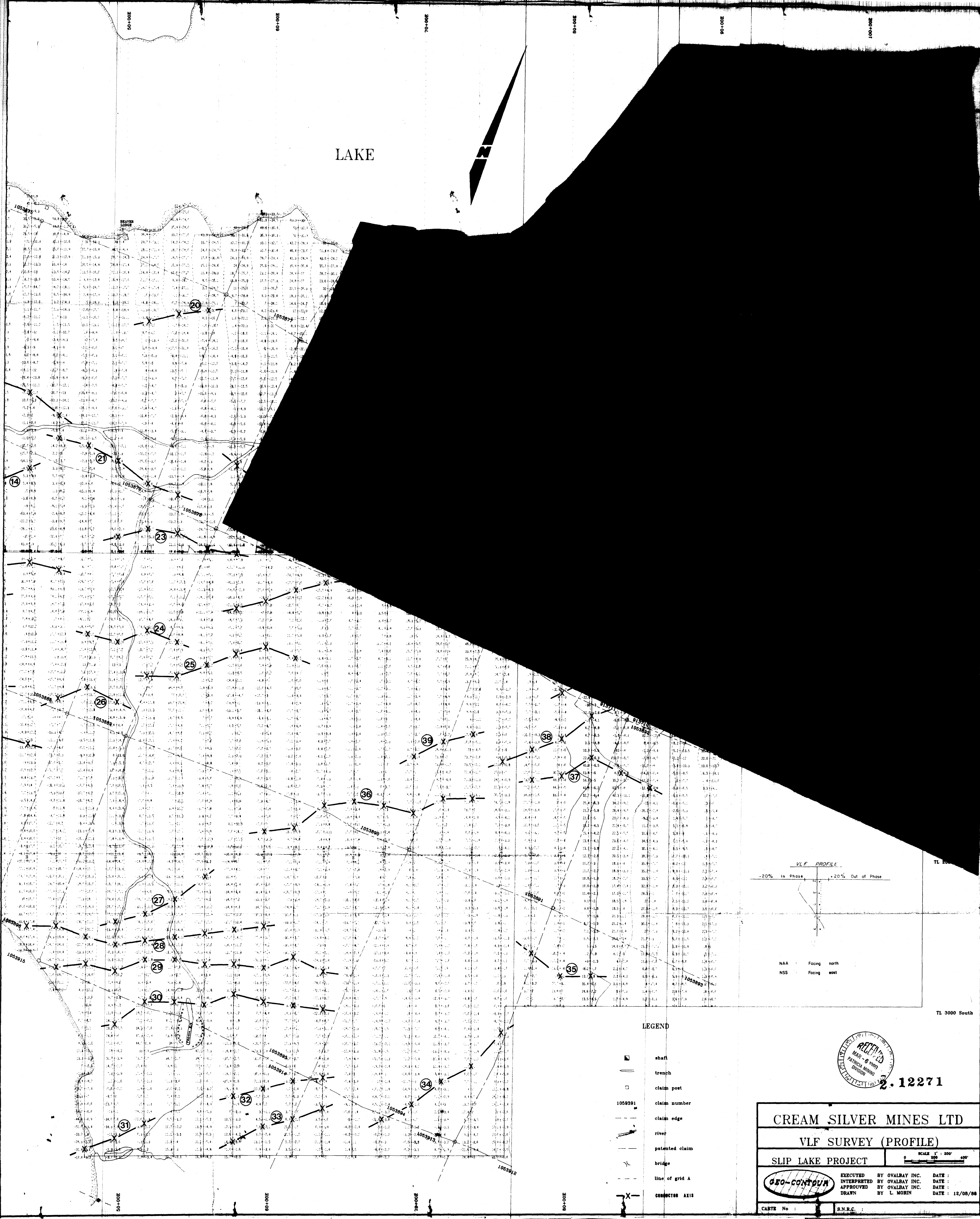
(corrected) TOTAL FIELD

CONTOUR INTERVAL - 200γ

1 inch to 200 feet

SWEANY MINING SERVICES SMS

DRYDEN, ONTARIO



50+00E
60+00E
70+00E
80+00E
90+00E
100+00E
LAKE
BEAVER LODGE
1053875
1053877
1053879
1053878
1053888
1053889
1053890
1053891
1053892
1053893
1053894
1053895
1053896
1053912
1053913
1053914
1053915
913711
913710
VLF PROFILE
-20% In Phase
+20% Out of Phase
NAA : Facing north
NSS : Facing east
TL 3000 South
LEGEND
shaft
trench
claim post
1059391 claim number
claim edge
river
patented claim
bridge
line of grid A
CONDUCTOR AXIS
RECEIVED
MAR - 6 1989
PATRICIA MINING DIVISION
2.12271
CREAM SILVER MINES LTD
VLF SURVEY (PROFILE)
SLIP LAKE PROJECT
SCALE 1" : 200'
0 200 400'
GEO-CONTOUR
EXECUTED BY OVALBAY INC. DATE :
INTERPRETED BY OVALBAY INC. DATE :
APPROUVED BY OVALBAY INC. DATE :
DRAWN BY L. MORIN DATE : 12/08/88
CARTE No :
S.N.R.C. :