42A11SW0005 2.4569 JESSOP

010

REPORT ON

GEOLOGICAL SURVEYS

AIRPORT GROUP GRIDS

PORCUPINE MINING DIVISION

NTS 42A/12

RECEIVED
FEB 23 1982
MINING LANDS SECTION

Timmins, Ontario
February 22, 1982

L.A. Baldwin
Norcen Energy Resources Limited

SUMMARY

Geological Surveys consisting of field traverses and compilations of previous work were undertaken for 22 claims in northwestern Jessop Township. The field work outlined topographic features and one outcrop area and discovered several previous drill setup locations.

Coupled with a review of the drill logs and of geophysical data, these surveys indicate two environments of substantial base metal potential in the southwestern and north-central portions of the large Airport Group. Both areas are underlain by units of felsic volcanics of unknown extent associated with abundant sulphide mineralization and carbonate and silica alteration.

Large portions of the remainder of the Airport Group are inferred to be underlain by mafic volcanics and interflow graphite plus sulphide horizons.

INTRODUCTION

This report describes an interpretation of the geology underlying 22 claims in the vicinity of three grids on a large group of claims held by Norcen Energy Resources. These claims are referred to as the Airport Group from their location in northwestern Jessop Township near the Timmins airport.

The claims covered by these grids and surveys are listed by number on the enclosed lists and sketches. Their legal description is as follows (all in Jessop Township):

Grid C-G - 10 claims

Concession 4	N1/2 Lot 12
Concession 5	S1/2 Lot 11
	E1/2 S1/2 Lot 12

Grid J-K and L-M - 12 claims

Concession 5	N1/2 N1/2 Lot 8
Concession 6	N1/2 S1/2 Lot 7
	N1/2 Lot 7
	S1/2 S1/2 Lot 8
	NE1/4 S1/2 Lot 8
	SE1/4 N1/2 Lot 8

AIRPORT GROUP

Jessop Township

Claims covered by geological surveys

P516492

P516493

P516501

P516502

P516507

P516508

P516510

P516511

P516512

P516514

P516515

P516516

P516520

P516521

P516530

P516531

P516533

P516534

P516535

P516545

P521641

P521642

TOTAL: 22 claims

Norcen
Energy Resources Limited

FIGURE 1

LOCATION MAP

NORCEN ENERGY RESOURCES

LOCATION MAP

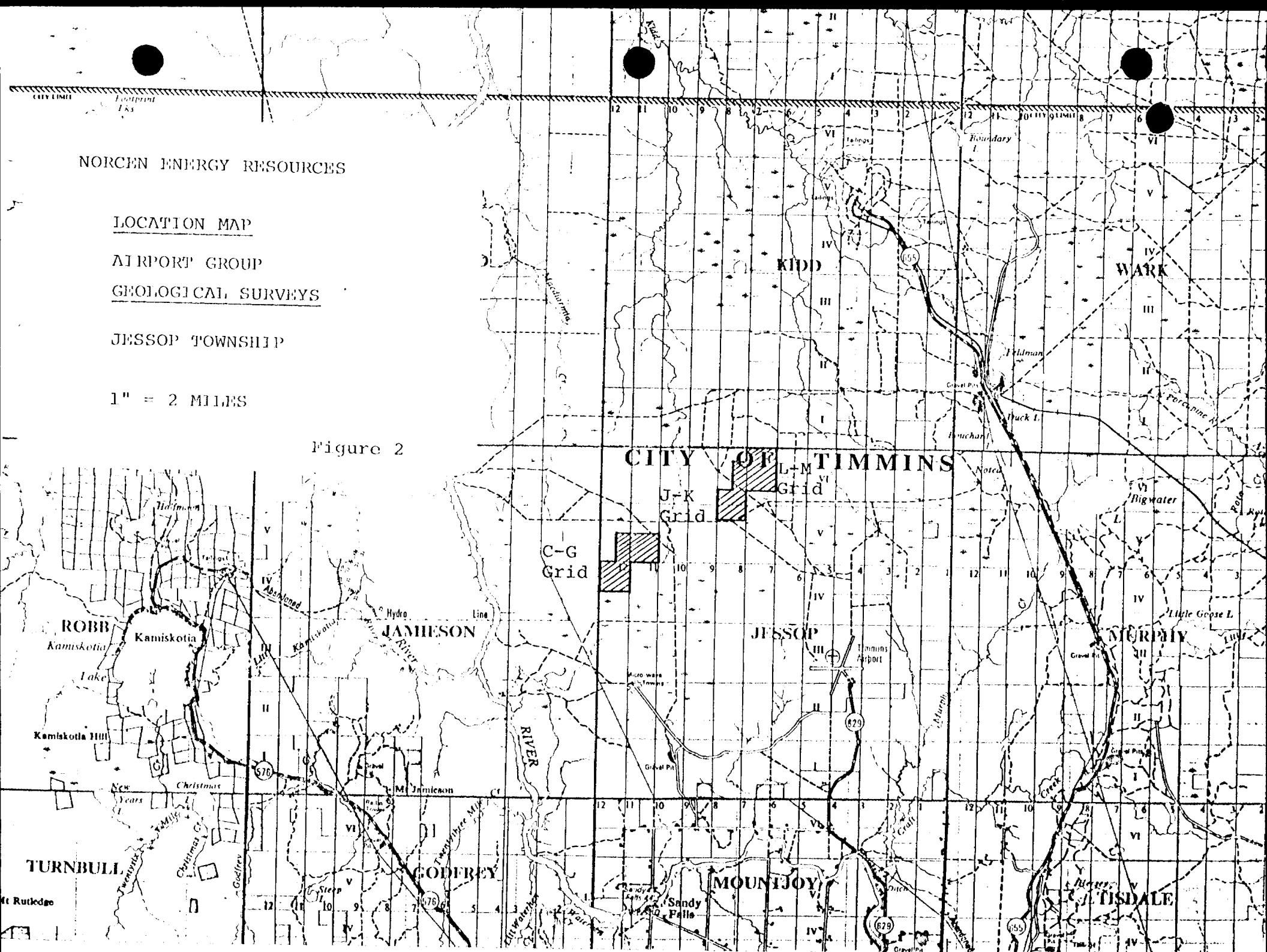
AIRPORT GROUP

GEOLOGICAL SURVEYS

JESSOP TOWNSHIP

1" = 2 MILES

Figure 2



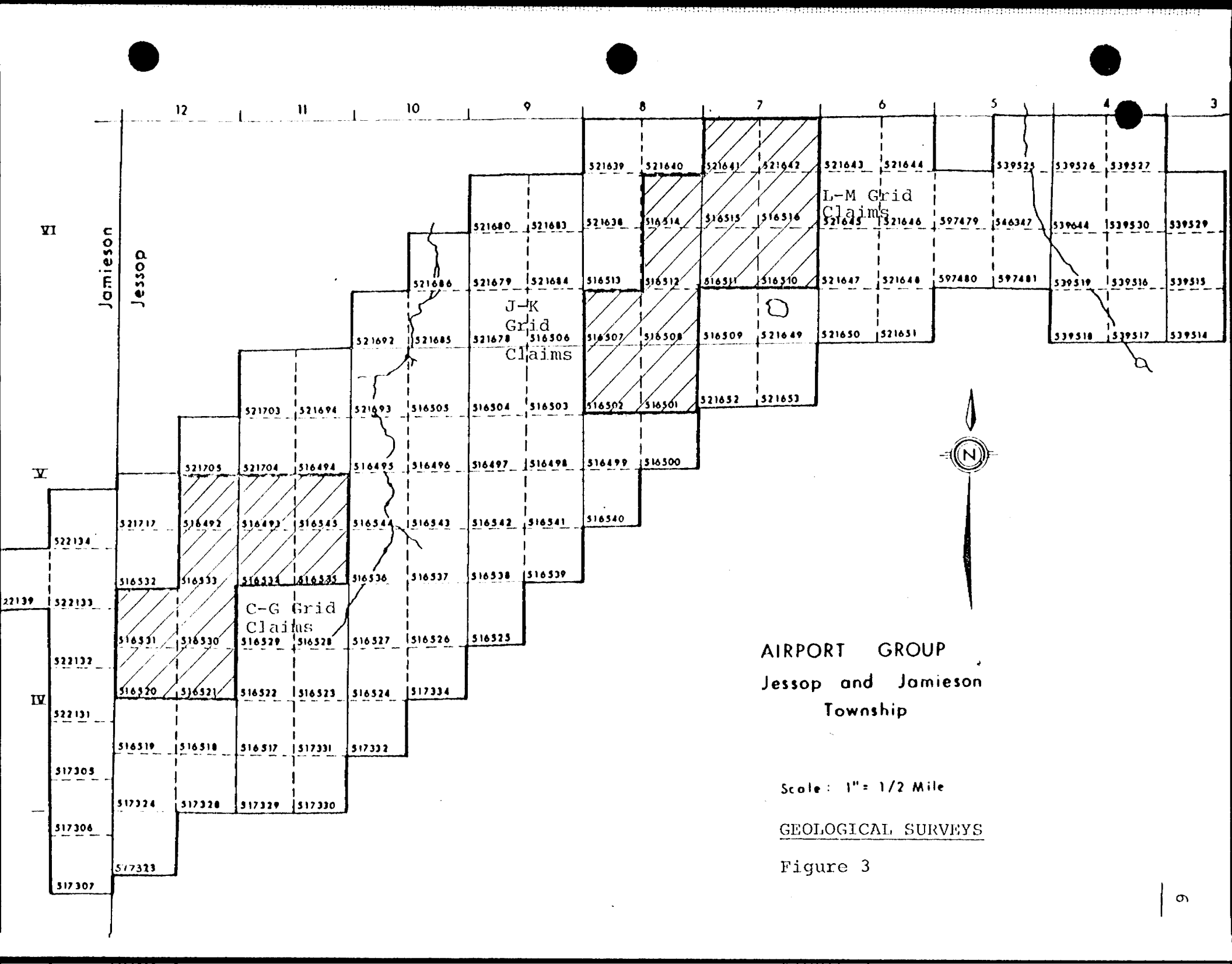

12
11
10
9
8
7
6
5
4
3
VI
V
IV
Jamieson
Jessop
L-M Grid Claims
J-K Grid Claims
C-G Grid Claims
N
AIRPORT GROUP
Jessop and Jamieson Township
Scale: 1" = 1/2 Mile
GEOLOGICAL SURVEYS

Figure 3

LOCATION AND ACCESS

The claims covered by this report consist of two blocks located approximately 16 kilometres northwest of Timmins, Ontario in northwestern Jessop Township.

In winter, ground access is provided by the service road of a powerline that passes west of the claims and by numerous trails and old logging roads that enter from the powerline or from the Timmins Airport (six kilometres to the southeast). However, all roads are generally impassable in summer; helicopters are available in Timmins.

TOPOGRAPHY

All claims are covered by generally wet swampy terrain consisting of either alder swamp or spruce taiga. Locally cedar bog with balsam predominates. Portions of the claims have been logged in the past; these activities are now represented by a dense tangle of alder, spruce and cedar and subparallel swampy roads. Numerous swampy winter roads traverse the claims; these are often choked with alders.

Topography is generally flat with little variation between swamp and forest. Several sandy ridges occur southeast of the northeastern claims towards the airport. Slight relief occurs in the eastern part of claim P516515. A large stream choked with beaver dams traverses east of the southwestern claims in a northerly direction.

PREVIOUS EXPLORATION

Several companies have previously carried out work programmes on the claims covered by this report. Most work was undertaken after the discovery of the Kidd Creek deposit in 1964. Those that have undertaken drilling include the following:

a) Lake Expanse Gold Mines Ltd. (1958) reported a total of 6 diamond drill holes in northwestern Jessop including four on the C-G Grid and one on the L-M Grid. The holes were targeted apparently only on magnetic anomalies. The five holes on the claims total 505.3 metres (Holes 1 to 4 and 6). Four of these holes were marked in the bush by high casings.

b) Jessop Mines Ltd. (1964-1965) drilled six holes on the C-G Grid for a total of 706.6 metres. These holes were testing ground EM anomalies (Holes J-2, J-3, J-4, J-5, J-6 and J-8).

c) Hollinger Consolidated Gold Mines Ltd. (1966-1967) drilled numerous holes on and south of the J-K Grid. The three within the claims covered by this report total 514.5 metres (Holes J-1, J-2 and J-4). One of these holes (J-2) was marked by casing.

d) White Star Copper Mines Ltd. (1967) put two holes on the L-M Grid for a total of 296.8 metres of drilling (Holes 1 and 2).

e) Newmont Mining Corp. (1972) drilled two fences of overburden holes accross the northern and southern parts of the C-G Grid (a total of eleven holes) and bored one diamond drill hole near the southern boundary of the southwestern group of claims (Hole J-1, 288.6 metres).

f) Dome Exploration (Canada) Limited (1973) completed three holes on and north of the J-K Grid for a total of 395.6 metres of drilling (Holes 44-1, 44-3 and 44-4).

g) Asarco Exploration (1976) drilled a considerable number of overburden holes, mostly in Jamieson Township to the west. In Jessop Township, several holes were put down to the north and west of the claims covered by this report.

h) Norcen Energy Resources Ltd. (1981) drilled one hole on the J-K Grid to a depth of 225.2 metres (Hole TP-81-4).

SURVEY METHODS

The mapping surveys were completed by Norcen personnel (the author alone and with up to two assistants) during numerous visits to the claims during the spring and summer of 1981. The last pertinent field work was carried out during a drilling programme in August, 1981.

The claims, where gridded, were traversed along picket lines cut at 125 metre intervals as shown on the enclosed grid maps. As well, terrain between lines and off the grids was traversed by regularly spaced pace-and-compass lines and by pacing along claim lines. Two large scale (1" = 1320 feet and 1:5000) airphoto mosaics previously prepared for airborne surveys were also used for topographic control. Most of the lengthy traverses were carried out during the early spring with snow and ice cover still available that facilitated greatly the access via snowmobile along frozen and snow covered winter roads and the traversing on snowshoes through thick bush and over otherwise swampy and wet to inundated terrain. Many drill setups were discovered at this time; traverses after breakup were usually less successful (due mostly to mobility and visibility problems) but were useful to confirm or to check on setups without visible casing.

Emphasis was placed on this search for and tying to the grids of setups for diamond drill holes bored by previous operators. These were marked by casings left in the ground or by small clearings with log sills and other evidence of drill operation. By neccessity, most of the geological interpretation described below is based on the logs of these drill holes with some help from magnetometer and electromagentic surveys carried out on the same grids (see other assessment submissions by Norcen). No core was discovered in the bush.

The results of the traverses (topographic and drill hole location information) plus the inferred locations of undiscovered holes, horizontal projections of all pertinent drill hole data and EM anomalies are plotted on three maps, one for each grid area (Maps 2, 3, and 4).

REGIONAL GEOLOGY

Previous compilations (by the Ontario Geological Survey and by Norcen) based on geophysical surveys and diamond drilling data available in the area have suggested that the northwestern part of Jessop Township is underlain by a sequence of mixed mafic and felsic volcanic rocks that strikes northeasterly and, here, faces towards the southeast. These volcanics are inferred to be folded about northeasterly trending fold axes and dislocated by several northerly and northwesterly trending faults and by some northeasterly trending faults.

This package of volcanic stratigraphy is inferred to be grossly correlative across these folds and faults to the volcanic rocks that host the Kidd Creek Mine located approximately 10 kilometres to the northeast in Kidd Township. Correlation might be made also to the host stratigraphy of the deposits in the Kamiskotia area in Godfrey and Jamieson townships to the southwest and west of Jessop. Numerous interflow horizons of graphite plus sulphides and local bands and stringers of massive sulphide have been intersected by previous drilling in northwestern Jessop but nothing of economic significance has been discovered to date.

Southeast of the volcanic package occurs a thick section of sediments. The contact may be unconformable.

PROPERTY GEOLOGY

The local geology is discussed below in sections pertaining to the areas centered on each of the three grids covered by this report (Figure 3 and Map 1). The grid names refer to designations of airborne electromagnetic anomalies.

Grid C-G (Map 2)

Geological Data

The geophysical surveys of this grid defined three conductor axes trending easterly accross the northern, central and southwestern portions of the grid. All have a high magnetic susceptibility.

The northern conductor has been investigated by Lake Expanse Holes 1 and 2 and by Jessop Mines Hole J-5, J-6 and J-8. The Lake Expanse holes suggest an exhalative sulphide source for the conductor at a contact between flow laminated rhyolites and pillowed basalts to the north. The Jessop Mines holes intersected graphitic slips and minor sulphides in mafic volcanics. It appears that these latter holes drilled into N-S faults that appear to displace locally the exhalative stratigraphy near the centre of the conductor zone. To the east the exhalite appears to become pyritic and relatively non-magnetic. The Newmont overburden holes indicate a thick felsic unit to the south and mafic volcanics to the north.

The central conductor near the baseline was drilled by Lake Expanse Hole 3 near its west end and by Jessop Mines Holes J-2 and J-3 near the east end of the grid. Lake Expanse intersected massive pyrite associated with a narrow band of rhyolite within mafic volcanics. Along strike to the east, the Jessop Mines holes again intersected massive pyrite and pyrrhotite but completely within mafic volcanics.

The southwestern conductor was tested by Lake Expanse Hole 4. Only the upper part of this log is available. Numerous bands and streaks of pyrite and pyrrhotite were cut within a thick section of spherulitic and flow laminated rhyolite. The Newmont overburden holes indicate a predominance of felsic rocks south of the conductor with interfingering mafic volcanics.

Near the southern boundary of the claims traversed for this report, Newmont Hole J-1 intersected abundant streaks and bands of pyrite, marcasite, and pyrrhotite within a thick section of siliceous rhyolite fragmentals and carbonaceous tuffs. To the south occur graphitic sediments with some pyrrhotite blebs. To the north of the rhyolites a thick section of sericitic and chloritic mafic fragmentals was intersected.

To the east of claim P516521, another Lake Expanse hole (Hole 6) intersected numerous bands of massive pyrite and lesser pyrrhotite within massive to fragmental felsic rocks.

Geological Interpretation

The general similarity of type and setting of the sulphide sections intersected for the northern and southwestern conductors as well as for Lake Expanse Hole 6 and Newmont Hole J-1, suggest that these segments of volcanic stratigraphy might be correlative. The main difference appears to be in the thickness of the rhyolite section. This distribution of sulphides and rhyolite could be attributed to segments of a dome-shaped unit dissected by block faults trending north-northwest. The stratigraphic relationships would then suggest northerly tops. The rhyolite section thins eastward as is evident in the vicinity of the northern conductor.

The central conductor stratigraphy could be separated from the correlative northern conductor by a fault trending east-northeast south of Lake Expanse Hole 2. The eastward thinning of the rhyolite unit at the northern conductor is confirmed by the very thin section at the west end of the central conductor. The felsic unit pinches out along strike to the east.

This interpretation of the geology underlying these claims in the southwestern portion of the Airport Group suggests excellent potential for massive sulphides. The sulphide sections intersected to date are presumably of low tenor as the very few analytical results that are available indicate only minor copper and zinc values. Detailed geophysics and overburden and diamond drilling with lithogeochemistry are required to further define this stratigraphic model.

Grid J-K (Map 3)

Geological Data

Two old drill sites were discovered on these four claims; three others are inferred. Norcen drilled one hole in 1981.

It appears in the current replotting of data that Hollinger Hole J-1, Norcen Hole TP-81-4, and Dome Holes 44-1 and 44-3 have tested the same conductor. All four holes intersected variably graphitic sections within basalt flows and hyaloclastites. The ground magnetic survey had suggested a crosscutting low susceptibility feature to the north of the area in which the EM conductor exhibited a marked change in susceptibility. This area was investigated by Norcen Hole TP-81-4. The graphitic horizon appears to become more pyritic to the east.

Hollinger Holes J-2 nd J-4 to the south and Dome Exploration Hole 44-4 to the north intersected two other graphitic horizons in basalt flows and fragmentals. Hollinger Hole J-2 intersected three narrow biotitic lamprophyre dykes.

Geological Interpretation

This central portion of the Airport Group seems to be underlain by a thick section of variably carbonated basalt flows and hyaloclastites; several of the logs refer to these rocks as "dacites". They are characterized by several interflow graphite horizons with variable but low sulphide contents. The basalts are interpreted to be pillowed with abundant streaky fragmental sections that include both hyaloclastites and breccias. The brecciation is a pervasive crackling with carbonaceous and chloritic infilling that may have resulted from volume changes on carbonatization.

The environment in this immdiate area is not particularly favourable for massive sulphides.

Grid L-M (Map 4)

Geological Data

The eight claims covered by this report have seen litle previous exploration. Previous exploration has concentrated in the vicinity of two strong conductors that were outlined by the ground geophysics. Both conductors are magnetic.

Lake Expanse Hole 6 overshot its target to the north but did intersect considerable pyrite and pyrrhotite stringers in rhyolite tuff and pillowed basalt flows. This same EM target was well tested by White Star Hole 2 which again cut pyrite bands in silicified banded rhyolite tuff (chert?) and pyrrhotite bands and stringers in pillowed basalt.

To the north, White Star Hole 1 accounted for its target with a horizon of heavy graphite and numerous streaks and bands of massive pyrrhotite in pillowed basalts.

At least two small areas of outcrops occur between these two areas of drilling. These were not well exposed at the time of the traverse due to residual snow cover. This outcrop area has previously been described as rhyolite agglomerate (OGS Map P158). However samples obtained during traverse suggest that at least portions of these are likely streaky and bleached carbonated and silicified basalt fragmental. Dips are steep and strikes probably northeasterly.

To the southwest, on claim P-516512, Dome Exploration Hole 44-4 intersected graphite and pyrite bands in massive to fragmental basalts.

Sediments were intersected in a previous drill hole on claim P-521645 to the east of these claims.

Geological Interpretation

Most of these eight claims are interpreted to be underlain by basalt flows, flow breccias and hyaloclastites with only local minor graphitic horizons. Felsic rocks described as banded rhyolite tuffs occur as a unit of unkown thickness at the top of holes Lake Expanse 6 and Whiter Star 2. This rhyolite is associated with strong carbonate and silica alteration of all rocks in this area as well as abundant stringers and massive bands of pyrite and pyrrhotite.

The environment inferred appears to be quite similar to that on the C-G Grid claims to the southwest and also merits detailed geophysics coupled with overburden and diamond drilling plus lithogeochemical analyses to define and assess its potential.

CONCLUSIONS AND RECOMMENDATIONS

Two environments favourable to the deposition of massive sulphide deposits are inferred to underlie the north central L-M Grid and southwestern C-G Grid portions of the Airport Group. Each is characterized by abundant stringers (and locally exhalative) sulphide mineralization (to date barren) associated with felsic stratigraphy intercalated in basalt flows. The southwestern C-G felsic unit may be a domal structure that has been dissected by block faulting.

The central part of the claims in the vicinity of the J-K Grid are underlain by a thick section of pillowed to fragmental basalts with interflow graphitic horizons. These likely represent infill of topographic lows between felsic topographic highs.

Detailed geophysical surveys plus overburden and diamond drilling are required in the C-G and L-M areas to define and investigate the potential of the indicated favourable environments. Lithogeochemical analyses of rock specimens (core and chips) should also be obtained to and in stratigraphic mapping and to search for alteration systems.

Ontario

Ministry o

GEOPHYSICAL – GE(
TECHNICAL

42A11SW0005 2.4569 JESSOP

900

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 SURVEY

Township or Area JESSOP TOWNSHIP

Claim Holder(s) NORCEN ENERGY RESOURCES LIMITED
715 - 5th AVE. S.W. CALGARY, ALTA. T2P 2X7

Survey Company NORCEN ENERGY RESOURCES

Author of Report L.A. BALDWIN

Address of Author 715 - 5th AVE. S.W. CALGARY, ALTA. T2P 2X7

Covering Dates of Survey MARCH - DECEMBER 1981
(linecutting to office)

Total Miles of Line Cut N/A

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	20
Geochemical	

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

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

DATE: Feb. 22, 1982 SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications 2.2982

Previous Surveys

File No.	Type	Date	Claim Holder

LD

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
P	516492
P	516493
P	516501
P	516502
P	516507
P	516508
P	516510
P	516511
P	516512
P	516514
P	516515
P	516516
P	516520
P	516521
P	516530
P	516531
P	516533
P	516534
P	516535
P	516545
P	521641
P	521642

TOTAL CLAIMS 22

If space insufficient, attach list

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 _____

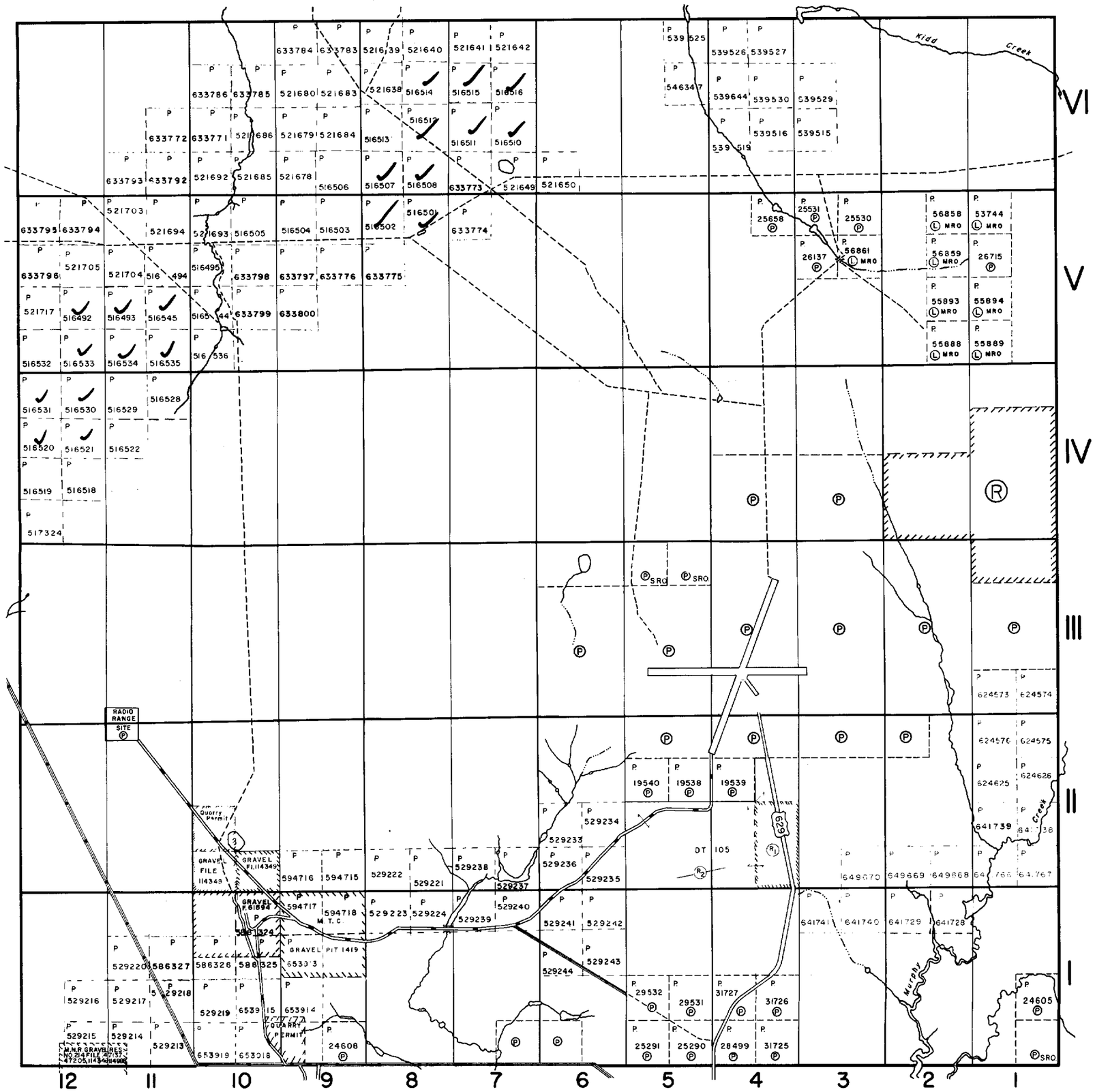
[illegible]						[illegible]		2.4568
P.5[illegible].	3/4	✓	[illegible].	1/2	✓			
[illegible].	3/4	✓	[illegible]211.41	0				
30.	✓		42	0				
31/.	1/2	✓	[illegible]					
33.	✓		[illegible] = 16 days					
34.	✓							
35/.	✓							
516492.	✓							
93/.	1/4							
5165[illegible].	3/4	×						
516501.	3/4	×						
2.	1/2	?						
7.	✓							
8/.	✓							
[illegible].	3/4							
[illegible].	✓							
12/.	✓							
1[illegible].	3/4	✓						
[illegible].	✓							

Kidd Twp. - M.291

Jamieson Twp. - M.288

Murphy Twp. - M.303

Mountjoy Twp. - M.302



THE TOWNSHIP
OF

JESSOP

DISTRICT OF
COCHRANE

PORCUPINE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C.

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

This township lies within the Municipality of CITY of TIMMINS.

(R) -- S.R.O. Withdrawn from Staking under Sec. 42 of The Mining Act (R.S.O. '60). Files: 108158, 110302.

AREAS WITHDRAWN FROM DISPOSITION

S.R. — SURFACE RIGHTS M.R. — MINING RIGHTS

	Description	Order No.	Date	Disposition	File
(R1)	SEC. 43	W.63/77	12/9/77	MR & SR	109371
(R2)	SEC. 43	W.78/81	24/7/81	MR & SR	145730

DATE OF ISSUE
SEP. 22 1982
Ministry of Natural Resources
TORONTO

2.4569 71246

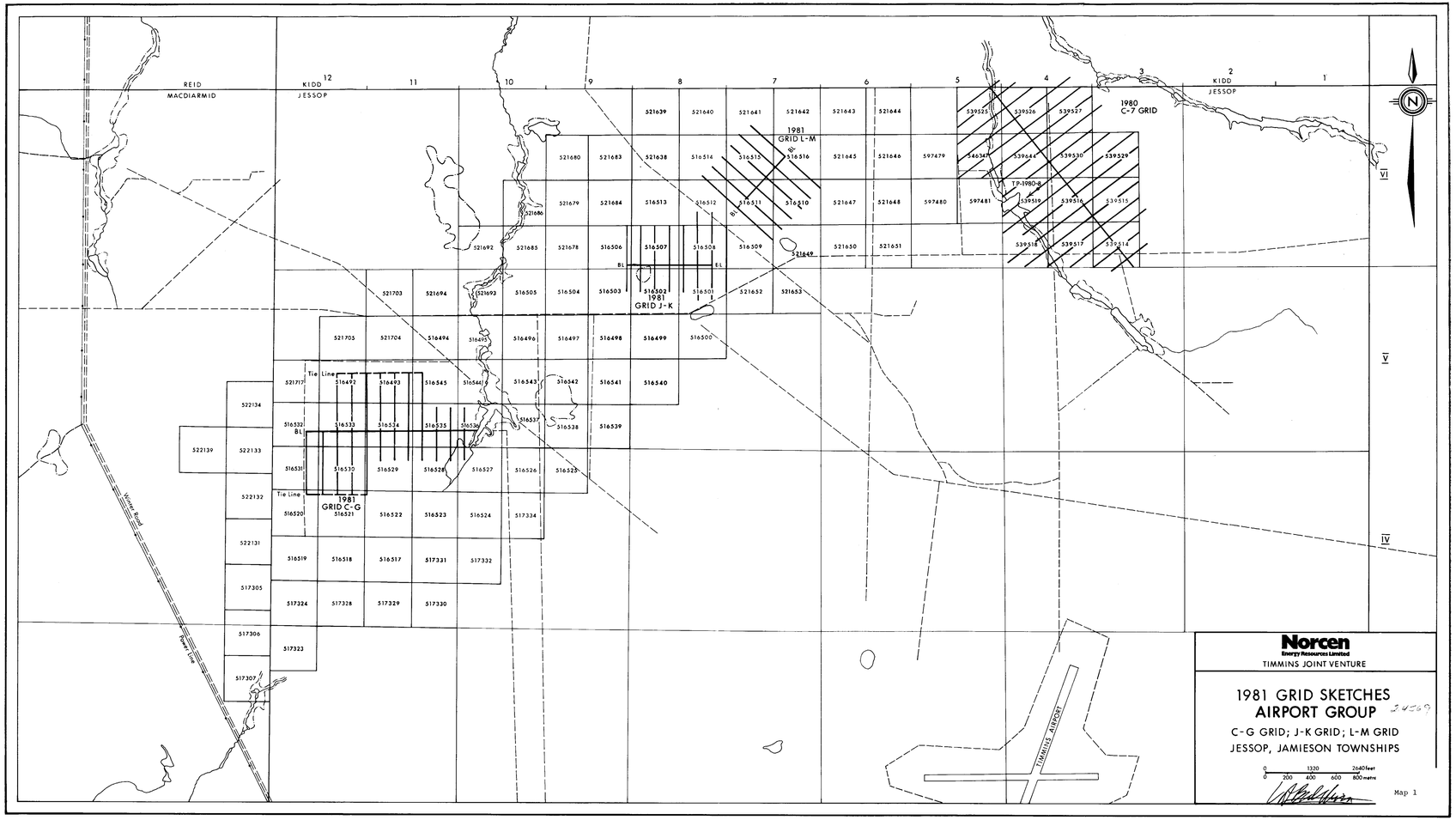
PLAN NO. M.289

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

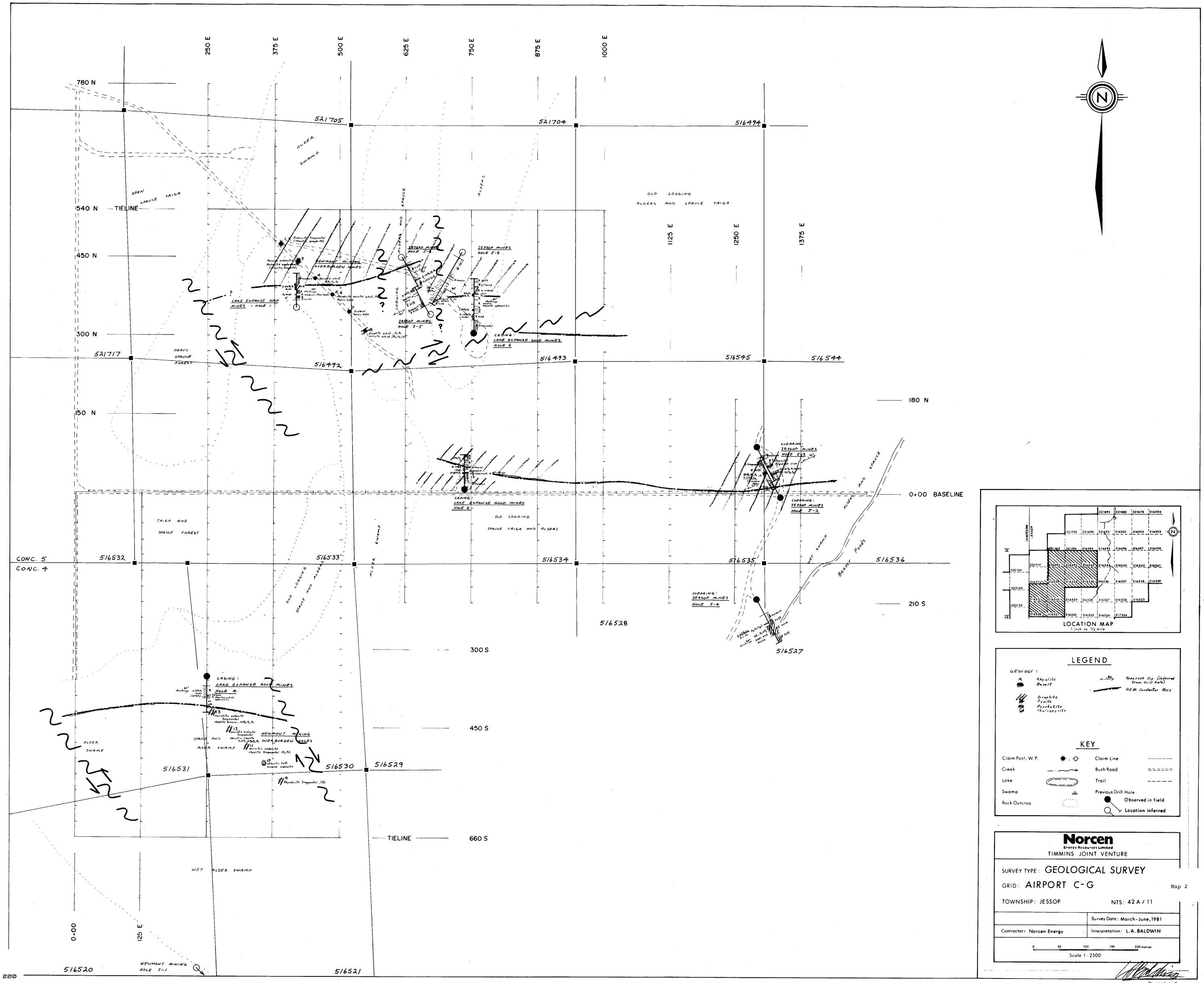
42A11SW0005 2.4569 JESSOP

200

b.k.



ADDITIONAL INFORMATION ON JESSOP



LEGEND

GEOLOGY :

- A — Rhyolite
- Basalt
- Graphite
- Pyrite
- Pyrrhotite
- Chalcopyrite
- Apparent Dip (Inferred from drill hole)
- HEM Conductor Axis

KEY

- Claim Post, W.P.
- Claim Line
- Creek
- Bush Road
- Lake
- Trail
- Swamp
- Previous Drill Hole
- Rock Outcrop
- Observed in field
- Location inferred

Norcen
Energy Resources Limited
TIMMINS JOINT VENTURE

SURVEY TYPE: GEOLOGICAL SURVEY

GRID: AIRPORT C-G

Map 2

TOWNSHIP: JESSOP

NTS: 42 A / 11

	Survey Date: March - June, 1981
Contractor: Norcen Energy	Interpretation: L.A. BALDWIN

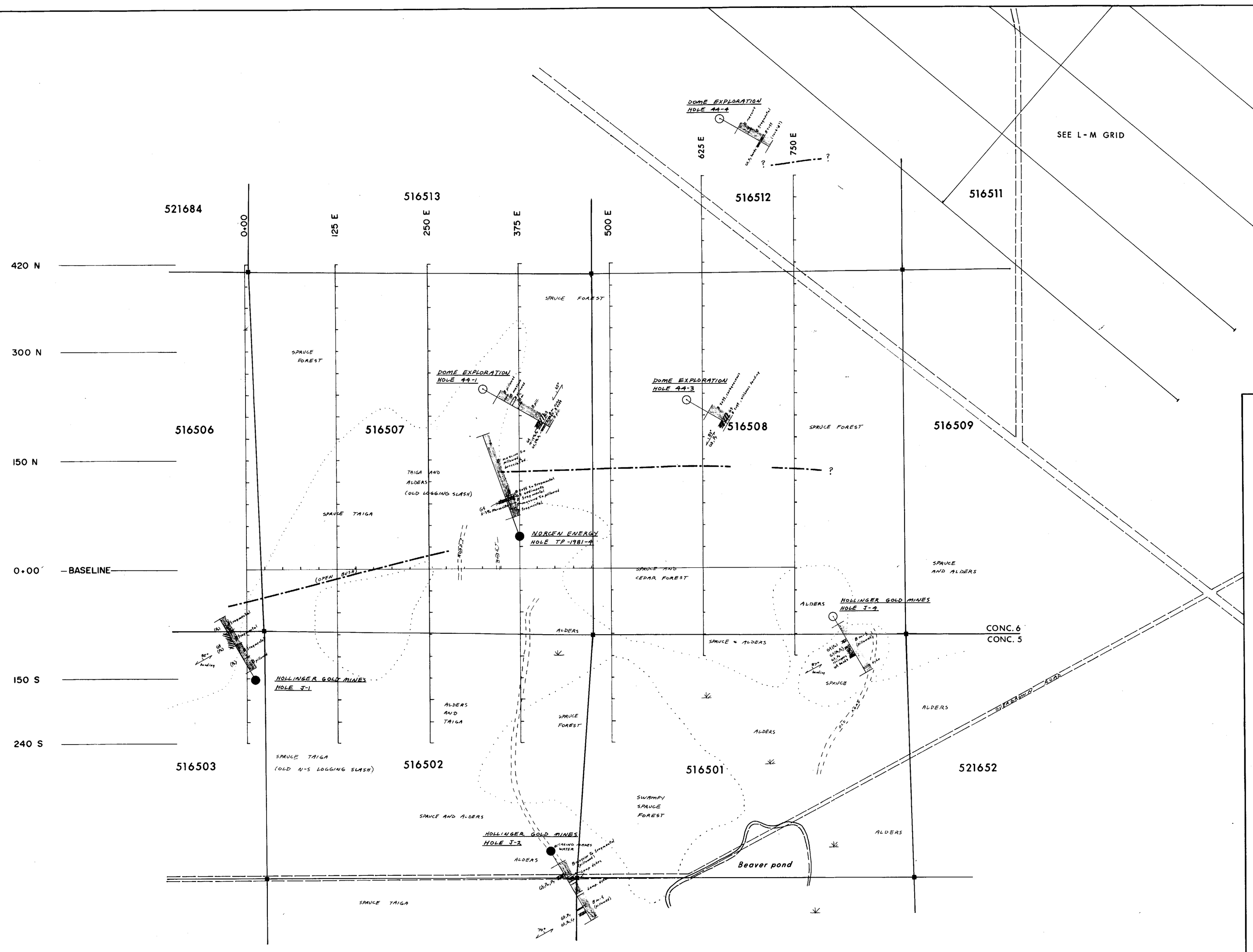
0 50 100 150 200 metres

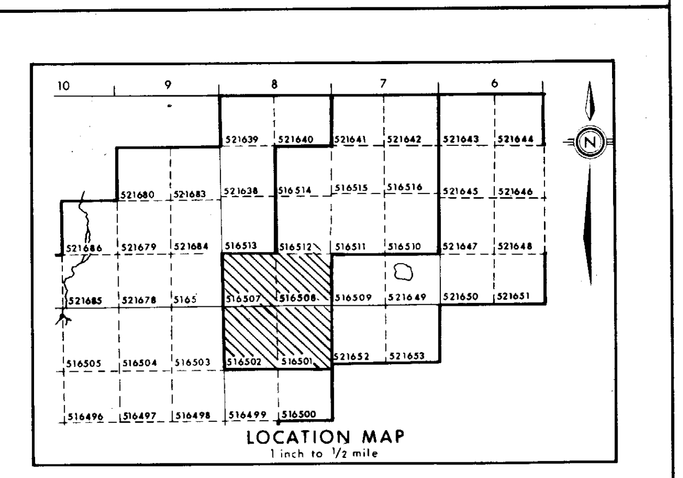
Scale 1 : 2500

220

42A11SW8905 2.4569 JESSOP

24569





LEGEND

GEOLOGY :

- R — Rhyolite
- B — Basalt
- Gr — Graphite
- Py — Pyrite
- Po — Pyrrhotite
- Cp — Chalcopyrite
- 80° — Apparent Dip (Inferred from drill hole)
- HEM Conductor Axis

KEY

- Claim Post, W.P.
- Creek
- Lake
- Swamp
- Rock Outcrop
- Claim Line
- Bush Road
- Trail
- Previous Drill Hole
  - Observed in field
  - Location inferred

Norcen
Energy Resources Limited
TIMMINS JOINT VENTURE

SURVEY TYPE : GEOLOGICAL SURVEY

GRID : AIRPORT J - K

Map 3

TOWNSHIP : JESSOP

NTS : 42 A / 11

	Survey Date : March - Aug., 1981
Contractor : NORCEN ENERGY	Interpretation : L. A. BALDWIN

0 50 100 150 200 metres

Scale 1 : 2500

42A11SW0005 2.4569 JESSOP

2.4569

KIDD - JESSOP TOWNSHIP LINE
APPROXIMATELY 100 METRES NORTH

MOSTLY ALDERS, SOME SPRUCE PATCHES
(OLD LOGGING)

SPRUCE FOREST

ALDERS

ALDERS AND SPRUCE

SWAMPY SPRUCE FOREST

ALDERS (OLD LOGGING)

SPRUCE FOREST

ALDER SWAMP

OPEN SPRUCE FOREST

SWAMPY SPRUCE FOREST AND ALDERS

SWAMPY SPRUCE AND ALDERS

621540 | 521641 | 521642

521638 | 516514 | 516515 | 516516 | 521645

516513 | 516512 | 516511 | 516510 | 521647

516508 | 516509 | 521649

625 E
500 E
375 E
250 E
125 E
0-00

420 N
300 N
150 N
BASELINE (AZ 040°)
0-00
150 S
300 S
420 S

WHITE STAR COPPER MINES HOLE 1

LAKE EXPANSE GOLD MINES HOLE 6

WHITE STAR COPPER MINES HOLE 2

DOME EXPLORATION HOLE 44-4

OLD CUT LINE FROM LAKE

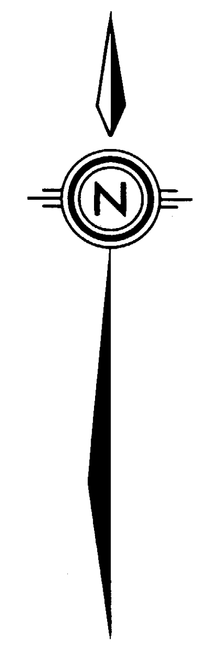
OLD CAMP
Helicopter landing

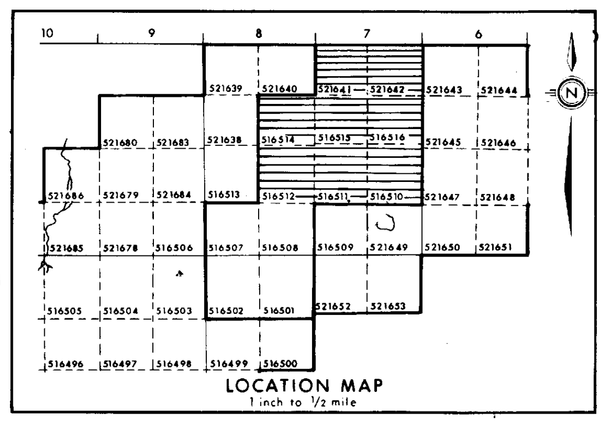
Lake

SEE J-K GRID

LOT 8

LOT 7





LOCATION MAP
1 inch to ½ mile

LEGEND

GEOLOGY :

- R — Rhyolite
- B — Basalt
- Gr — Graphite
- Py — Pyrite
- Po — Pyrrhotite
- Cp — Chalcopyrite

Apparent Dip (Inferred from drill hole)

HEM Conductor Axis

KEY

- Claim Post, W.P.
- Creek
- Lake
- Swamp
- Rock Outcrop
- Claim Line
- Bush Road
- Trail
- Previous Drill Hole
  - Observed in field
  - Location inferred

Norcen
Energy Resources Limited
TIMMINS JOINT VENTURE

SURVEY TYPE: GEOLOGICAL SURVEY

GRID: AIRPORT L - M

Map 4

TOWNSHIP: JESSOP

NTS: 42 A / 11

	Survey Date: March - June, 1981
Contractor: NORCEN ENERGY	Interpretation: L.A. BALDWIN

0 50 100 150 200 metres
Scale 1 : 2500

42A11SW0005 2.4569 JESSOP

2456?