



42114NE0001 OP92-575 SOUTH OF ALLAN ISLAND

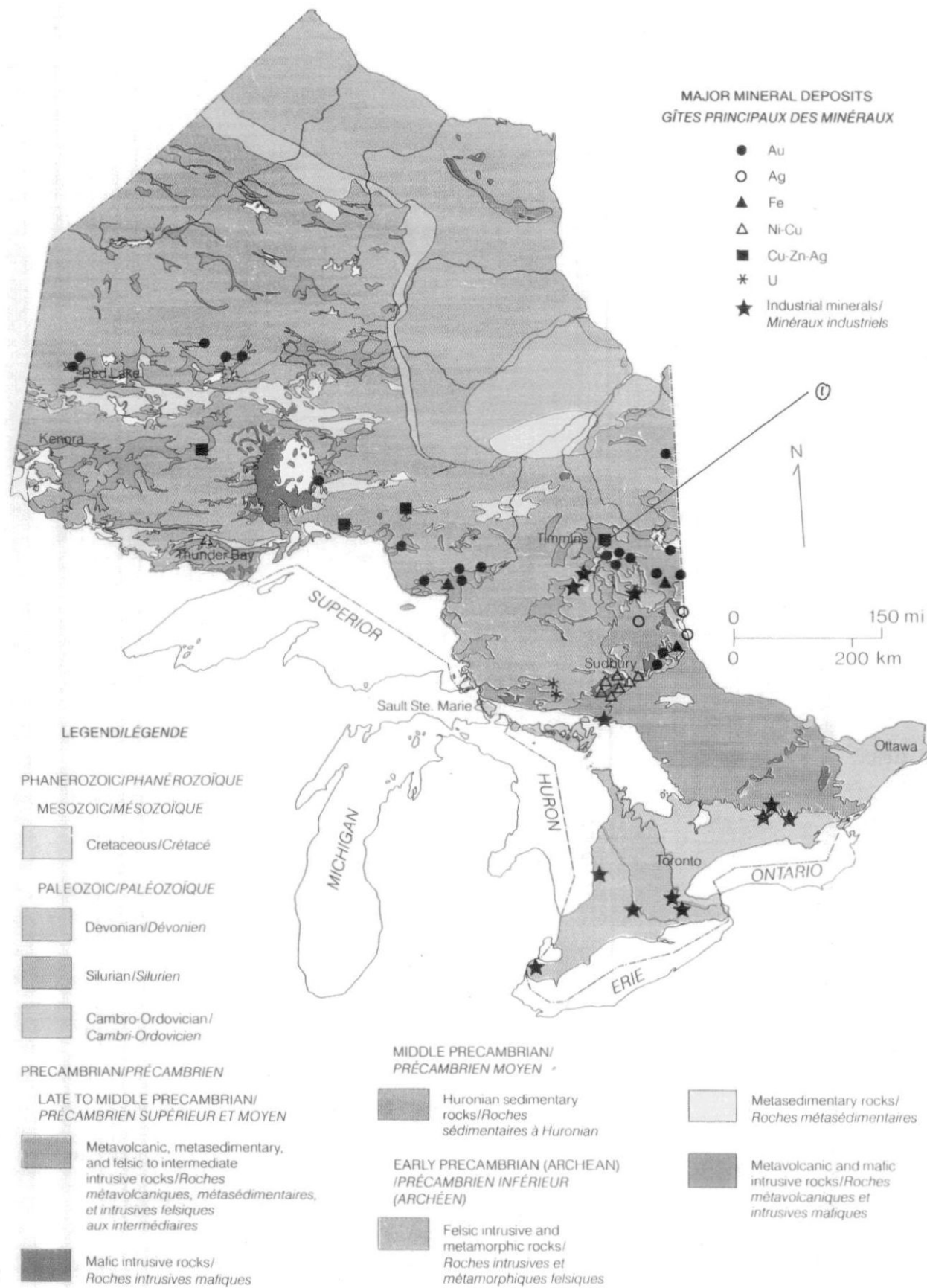
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**SECTION # 6**

**LANGMUIR / CARMAN**

**DRILLING AND PROSPECTING**

**REPORT**



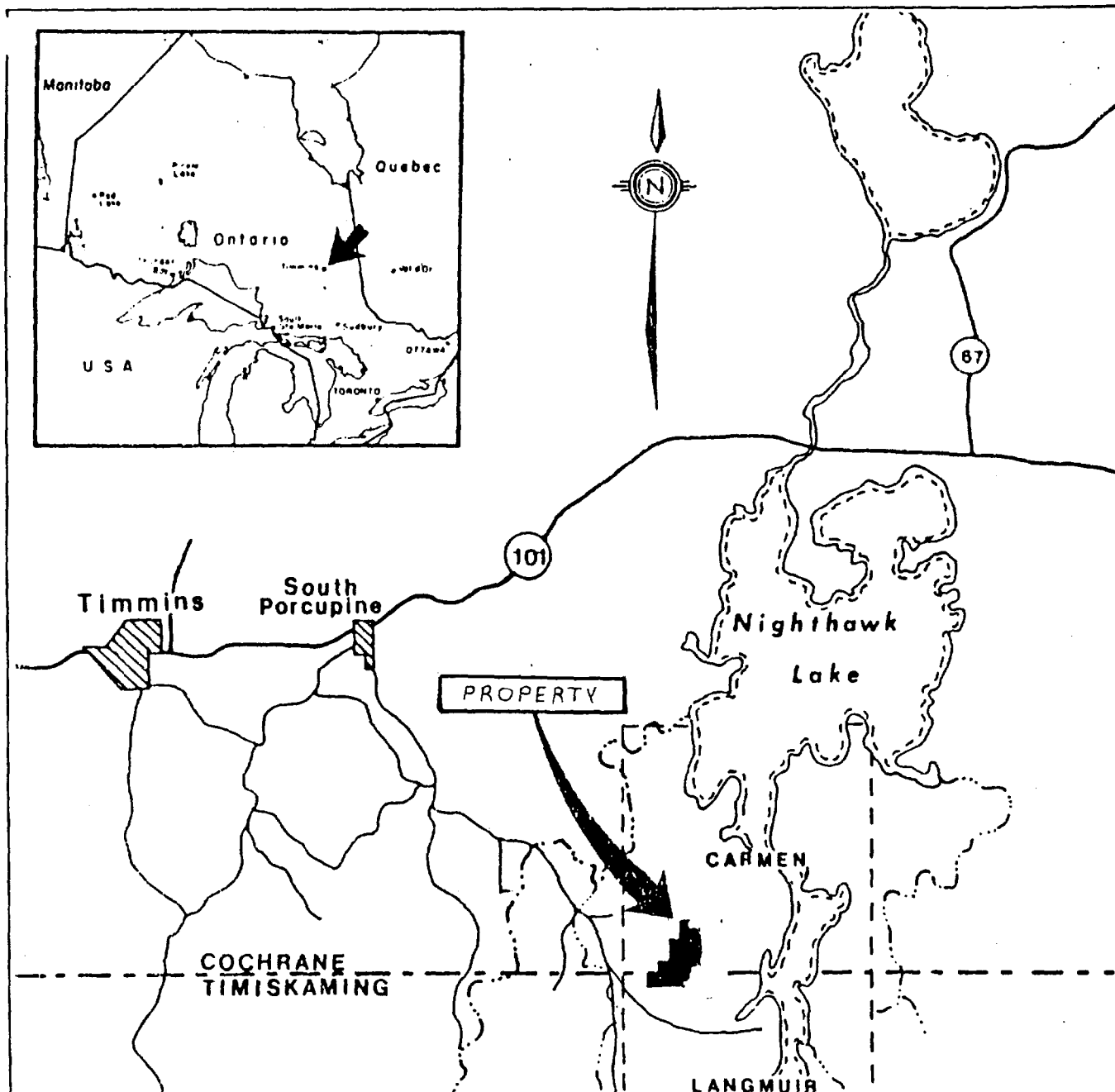


Fig. 86-1

General location map For Langmuir/ Carmen prospect

Scale: 1cm=2.5 km.

## **INTRODUCTION**

In 1992 Messrs. Kean and Filo carried out exploration work on their Langmuir and Carman Township gold prospect. Work on the prospect consisted of prospecting, recovery of old core for re-sampling and diamond drilling to evaluate new geological ideas.

Results from this program were fairly encouraging with the highlight being the intersection of visible gold in one of the two new drill holes. A more substantial; and detailed account of the program is presented within the following text of this report along with further recommendations for follow-up work.

## **PROPERTY, LOCATION AND ACCESS**

The property consist of 17 contiguous claims as shown in Langmuir and Carman Township (Fig. #S6-1,2). This prospect is located in both Langmuir and Carman Townships SSE of the City of Timmins centre. Access to the property is via the old Langmuir Mine road and a series of old bush roads throughout the property as shown in Fig. #S6-1.

## **PROPERTY HISTORY**

Initial work on this prospect was carried out by Dumont Nickel in 1962 (assessment file T-690). Dumont tested a strong electromagnetic anomaly for base metals and intersected iron formation. A section of this iron formation assayed 0.67 oz/ton Au over a core length of 6 feet (present claim 792481). This zone was considered significant by Messrs. Kean and Filo and seven original claims were staked to cover the zone.

In 1986 the prospect was optioned to Golden Pheasant Resources who staked an additional 29 claims. Golden Pheasant then carried out an extensive exploration program including ground geophysics (mag and I.P.), mapping and 1411m. of diamond drilling. Golden Pheasant did not locate any economic gold values in the iron formation proximal to the Dumont hole despite intersecting pyrrhotite and pyrite bearing quartz veins in the iron formation (Hole 88-2). However Golden Pheasant did intersect significant gold values in two other iron formations

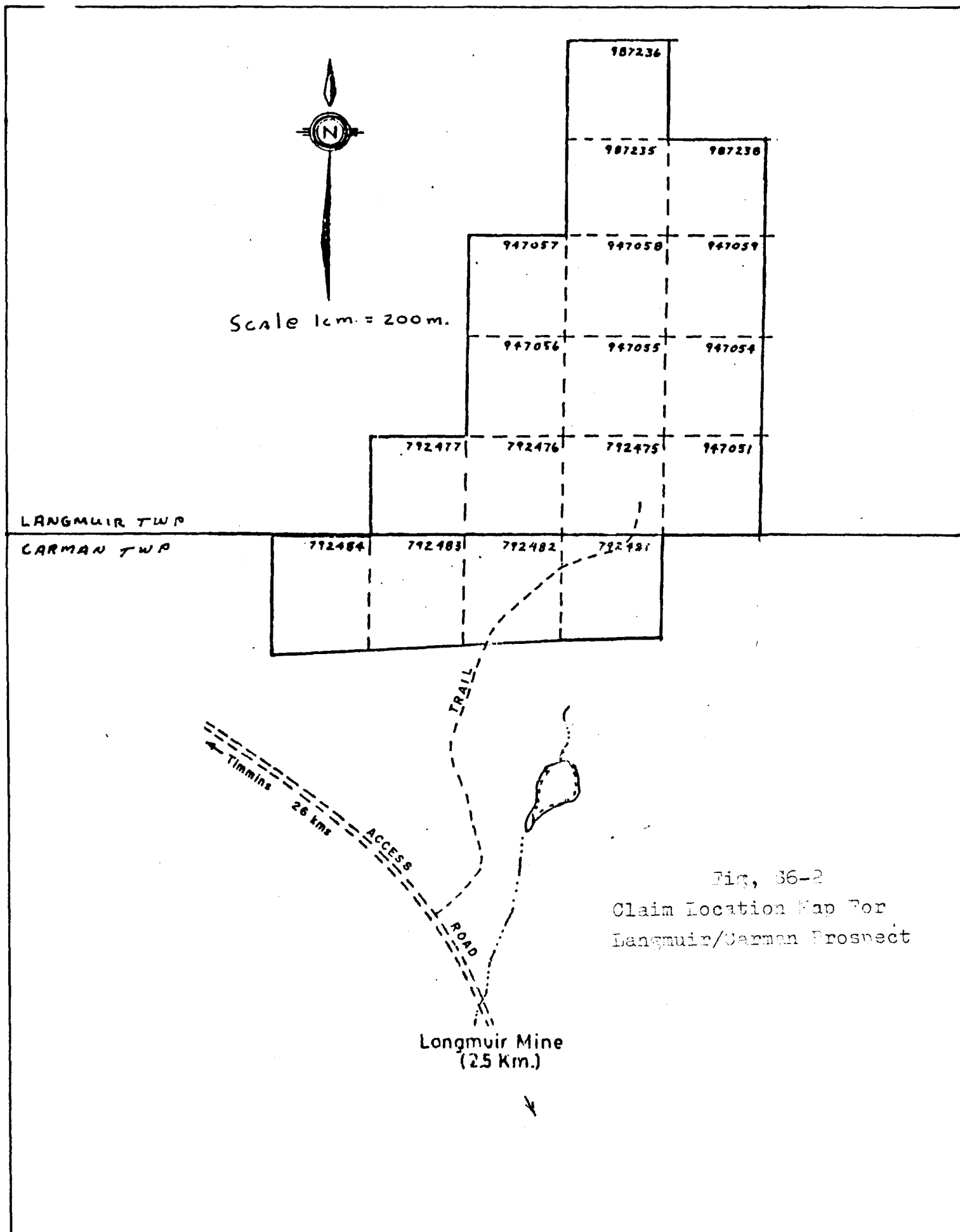


Fig. 36-2  
Claim Location Map For  
Langmuir/Carman Prospect

designated zones B & C in Fig. #S6-3. These values were .185 oz/ton Au over 0.9m (Hole 88-5) and 0.24 oz/ton Au over 1.08m (Hole 88-8) for zones B & C respectively.

Eventually the Golden Pheasant option was dropped and the entire block of claims reverted back to Mr. Filo and Mr. Kean. Of the original 36 claims, 19 claims from the block were optioned to Timmins Nickel while remaining 17 claims with gold values (Fig. S6-2) make up the area of the present gold exploration program (OPAP 1992).

### **PROPERTY GEOLOGY**

A general geological picture of the geology underlying the subject property is shown on the adapted O.G.S. Map 2455 (Fig. #S6-4). This geological picture is supported by property mapping by Golden Pheasant.

Work by Golden Pheasant suggests that the present subject block is underlain by basic to intermediate volcanics, some minor felsic volcanics and iron formation. The units have been intruded by a variety of intrusive dykes including quartz feldspar porphyry, diabase and olivine diabase.

O.G.S. mapping suggests the prospect lies south of the inferred Shaw Dome anticlinal axis; consequently formations on the subject property trend north-south generally and dip eastward.

The present subject property is underlain principally by mafic volcanics; Golden Pheasant Mapping showed both massive and porphyritic units are present. Primary structures within volcanics were not readily discernable and thus it was difficult to determine structural information. In some instances distinct contacts between iron formation and the volcanics was evident. The iron formations strike north and north-north east. This north-north east trend to the stratigraphy is believed to be the general trend for the property.

Fairly minimal amounts of structural information were obtained possibly due to lack of exposure and a rather indiscernable magnetic survey.

The magnetic survey was rather unclear due to overshadowing affects of units with

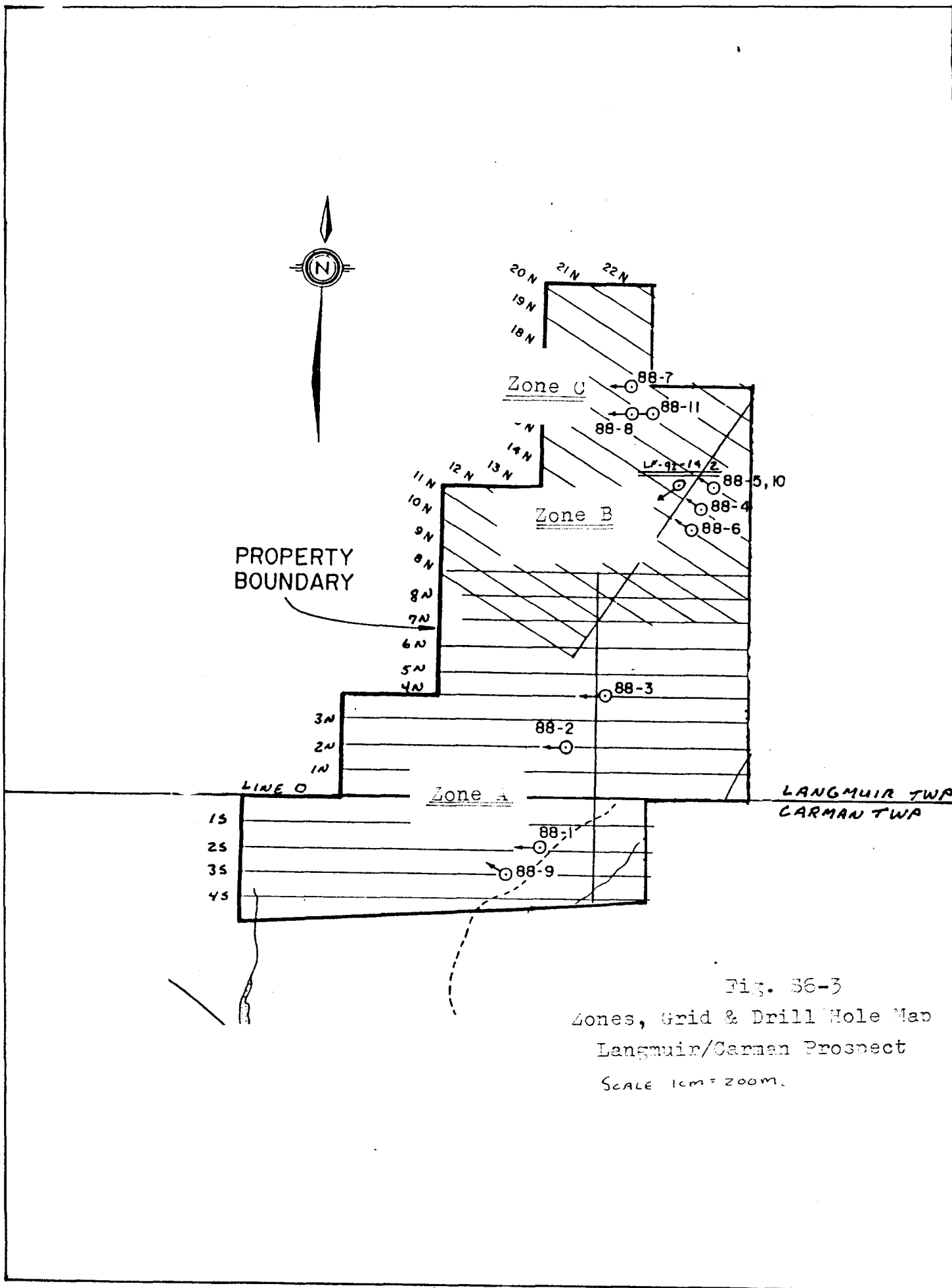
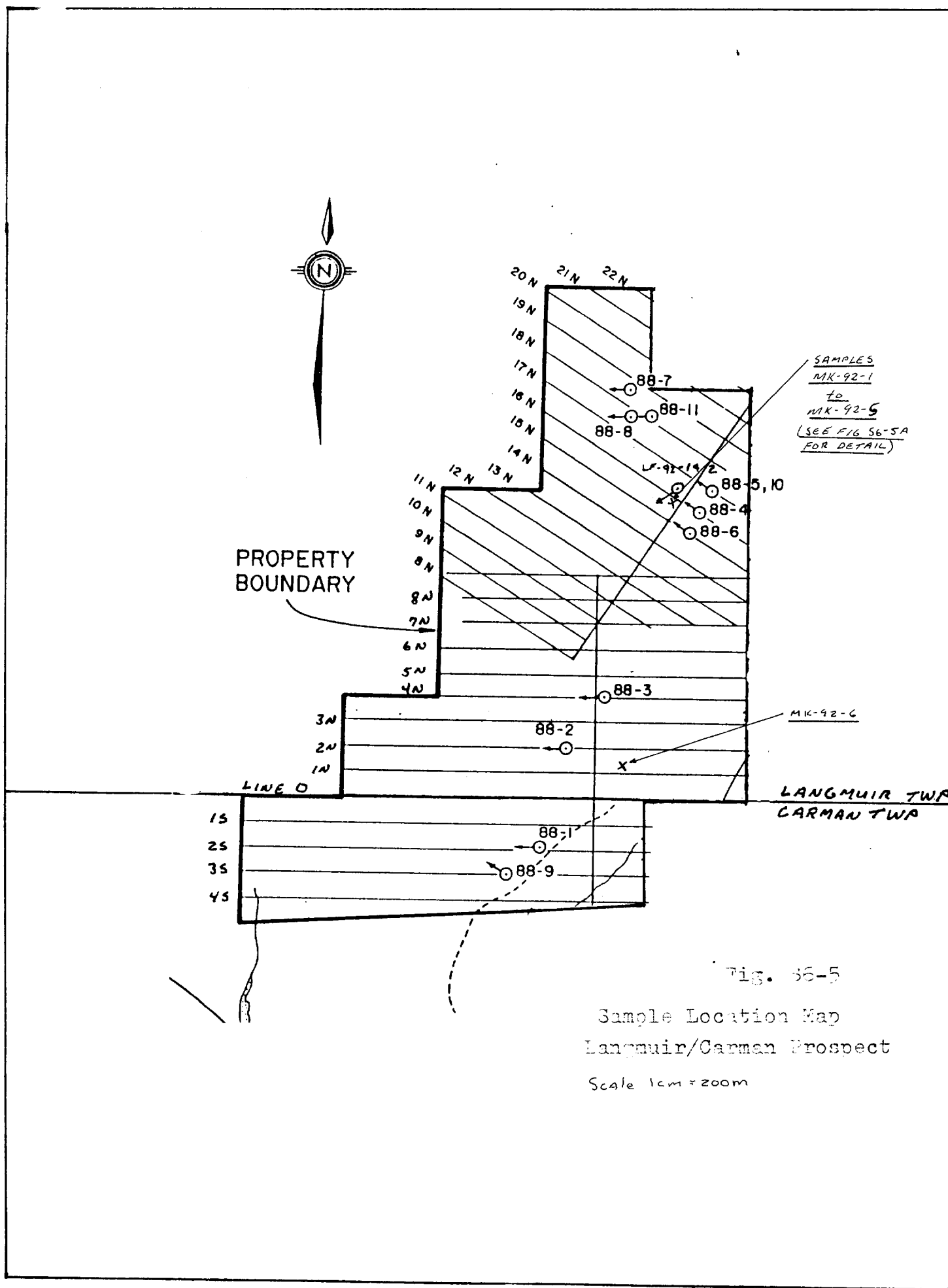


Fig. 36-3  
 Zones, Grid & Drill Hole Map  
 Langmuir/Carman Prospect  
 SCALE 1cm = 200m.





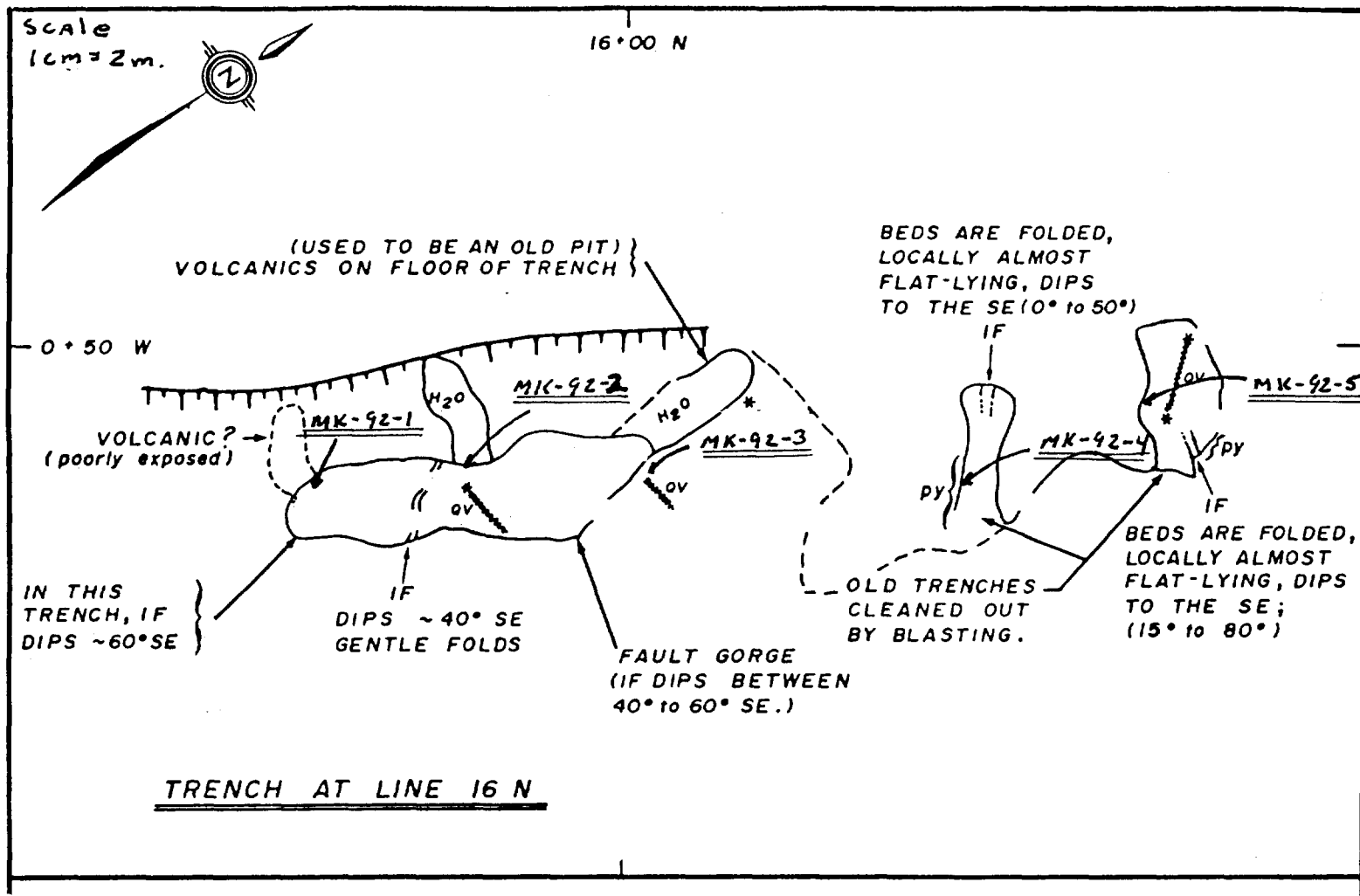


Fig. 36-5A

Detailed Location Map  
For Zone B  
Adapted From Golden  
Pheasant Assessment File  
Data

accessory magnetite and units with a high magnetic affinity such as diabase. However, Golden Pheasant geologists did document one shear system proximal to the township line associated with some green carbonate and minor quartz. Some Golden Pheasant geologists (Croone, N.C. 1989) felt that the porphyritic intrusive (i.e. feldspar porphyry) may have been the mechanism that contributed to the deposition of gold in the iron formation. Such an intrusive and/or similar one may have provided structural conduits in the iron formation for gold to be deposited.

### **DISCUSSION OF PROSPECTING AND DRILL PROGRAM**

The initial proposal for this prospect was to re-drill the old Dumont Nickel Hole and carry out prospecting of other zones.

With this in mind a thorough search of assessment file data, 1960's vintage air photo's and a field search was made in an attempt to locate the old collar. The old collar was not found and it was felt by the prospectors that since an accurate location could not be realistically determined the drill target area should be reprioritized. Thus a further evaluation of known occurrences was made to determine the best area to drill.

Further during the examination of assessment file it was noted that holes 88-1 to 88-3 were left in the bush. It was felt that it would be of interest to re-examine these holes and if possible find them and deposit them in the core library so that a full spectrum of core from the subject property would be available.

The main work on this prospect was conducted on zones A and B (Fig. #S6-3).

A variety of samples were taken from the main pits on zone (Fig. #S6-5 & S6-5A) and an examination of the structure was made as well. It was noted that the better values came from narrow pyrite quartz stringers, which cross-cut the iron formation. At zone A, in the vicinity of sample MK-6 (Fig. #S6-5), it was noted there were a number of larger quartz veins, these veins had silicifications extending outwards from these veins.

It was felt by this author that the target model for this property was cross-cutting quartz veins with associated silicification and pyritization along iron formation bands, these systems are

distinctly located within shears or fractures that "cross-cut" the iron formation.

The author believes this is a realistic model for gold mineralization in iron formations around the Shaw Dome from past experience on similar prospects in the area including the Carshaw and Malga deposits.

To evaluate such a deposit properly drilling would have to be done parallel to the iron formations and thus at right angles to the structure and quartz chutes. In the past all drilling was done at right angles to the iron formation to explore for a stratiform or "Lupin Style" gold bearing iron formation.

Thus, recent drilling was laid out parallel to the iron formation at Az 235 ° which allows the hole to cut across potential gold bearing chutes. Holes LF-92-1 and LF-92-2; intersected quartz and silicified iron formation in the tops of the holes. Visible gold was noted in hole LF-92-2. The quartz vein and silicious iron formation contained pyrrhotite and pyrite mineralization in both holes. Assay values in LF-92-1 and LF-92-2 were anomalous in Au at best, note that the visible gold was not put in with the LF-92-2 samples.

After the recently drilled core was logged a review and comparison of intersections was made between holes LF-92-1 and LF-92-2, and mineralized gold bearing sections from older previously drilled holes 88-5 and 88-7 stored at the regional core library. Similarly, a visual examination and comparison was made to the aforementioned holes with the mineralized intersection of pyrite and pyrrhotite bearing quartz vein in iron formation from recently recovered hole 88-2. A distinct similarity exists between all intersection i.e. quartz vein in iron formation with the better values in holes 88-5 and 88-7 associated with more sulphide rich sections of the quartz. Hole 88-2 had significant pyrite and pyrrhotite as well as quartz but poor values. This core was recently re-assayed and once again insignificant gold values were obtained.

Geological evidence to date suggests that gold bearing vein systems (structurally controlled) cross-cut the iron formations and gold occurs within these veins in the iron formation. There also appears to be lower grade gold values associated with silicified pyritized iron formation

SURFACE PLAN  
SECTION AZ 235°  
LOOKING N.W.

20'

LEGEND

■ CASING

▨ IRON FORMATION

▨ BASALTS

LF-92-1  
E.O.H. 142'

LF-92-2  
E.O.H. 103'

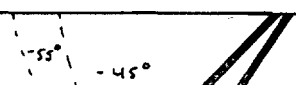


FIG # 56-6  
LANGMUIR / CARMAN  
PROSPECT  
DRILL HOLE SECTION

BY JKF & M. KEAN

adjacent those veins. Further, it is apparent that not all veins cutting the iron formation are gold bearing despite similarities in mineralogy. An examination of holes 88-5 and 88-7 suggested there were two periods of quartz injection, one type of vein milky white in colour and one more clear to grey in colour. This type of situation leads the author to believe that there was more than one period of veining and perhaps only certain periods of deposition were gold bearing. This may help to explain the similarities in vein systems and the values obtained in the different holes despite the similarities.

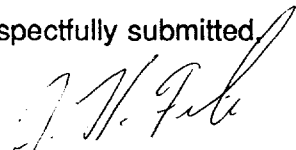
### **CONCLUSIONS AND RECOMMENDATIONS**

It is this author's opinion that this prospect has the potential to host narrow vein quartz bearing gold ore chutes within the evaluated known gold occurrences keeping in mind the structural picture on this prospect.

The following recommendations should be considered:

- i) drill a few more holes in the vicinity of known gold occurrences at right angles to the strike of the iron formation to cross-cut veins at a better angle.
- ii) have a geophysicist examine the mag data to locate areas that the iron formations have thickened due to structure. These areas may contain gold bearing systems. If they do, they may be of significant tonnage as the thicker the iron formation, the greater the depth extent of the vein, as there appear to be little or no gold outside the iron formation.

Respectfully submitted,



J. K. Filo, H.BSc., P.Geo

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**APPENDIX S6-A**

**SAMPLE AND DESCRIPTIONS**

**AND**

**ASSAYS**

## SAMPLE DESCRIPTIONS

- MK-92-1 (Grab) • sulphide facies iron formation, gossan zone, crenulated cherty bands and quartz stringers of pyrite 1-2%
- MK-92-2 (Grab) • magnetic (oxide facies iron formation) with quartz, 60:40 respectively, 2-3% cubic pyrite in veins of quartz
- MK-92-3 (Grab) • quartz veinlet in iron formation with 40-50% pyrite, possible speck of VG?
- MK-92-4 (Grab) • sample consists of quartz intercalated with sulphide and oxide facies iron formation host rock, wall rock to quartz 70:30 ratio, roughly 15% pyrite in this sample
- MK-92-5 (Grab) • quartz vein in sulphide facies iron formation with quartz (20%), roughly 10% pyrite and 10% pyrrhotite as well, and a clotted bornite
- MK-92-6 (Grab) • sample mainly sugary pyrrhotite textured quartz/calcite replacement of iron formation band, minor oxide facies iron formation (2-3%) and (2-3%) cubic pyrite in replacement band.

A series of samples 224801 to 224820 were taken from drill core, these sample descriptions are recorded with enclosed logs.





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## Assay Certificate

2W-0879-RA1

Company: **M. KEAN**

Date: **AUG-21-92**

Project:

Copy 1. BOX 2120, TIMMINS, P4N 7X8

Attn:

2. FAX 268-7411

We hereby certify the following Assay of 5 ROCK samples  
submitted AUG-14-92 by .

Sample Number	Au oz/ton	Au check oz/ton
MK-92-1	0.006	
MK-92-2	0.060	
MK-92-3	0.326	0.338
MK-92-4	0.035	
MK-92-5	0.058	

Certified by Donna Gardner

P.O. Box 10, Swastika, Ontario P0K 1T0  
Telephone (705) 642-3244. FAX (705) 642-3300



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**LABORATOIRES/LABORATORIES**  
**DIVISION DE/OF ASSAYERS CORPORATION LTD.**

780, AV. DU CUIVRE, C.P. 665, ROUYN-NORANDA (QUÉBEC) J9X 5C8 TÉL.: (819) 797-4653 FAX: (819) 797-4601

**Certificat/Certificate**

**2R-1638-RG1**

Comp: **M.KEAN**

Date: **OCT-13-92**

Proj:

Attn: **J.K.FILO**

Nombre D'Echantillons/No. of Samples:

Soumis le/Submitted: **SEP-28-92**

No. D'Echantillon Sample Number	AU PPB	AU CH'KS PPB	AU CH'KS PPB	AU OZ/TONNE	AU CH'KS OZ/TONNE	AU CH'KS OZ/TONNE
224801	44					
224802	25					
224803	*			0.032	0.032	0.032
224804	380					
224805	448					
224806	56					
224807	125					
224808	54					
224809	7					
224810	8					
224811	25					
224812	88					
224813	52					
224814	34					
224815	59					
224816	170					
224817	31					
224818	17					
224819	9					
224820	8					
MK-92-6	56	48	64			

Certifié par/Certified by \_\_\_\_\_

J.J. Landers

"AU SERVICE DE L'INDUSTRIE DEPUIS PLUS DE 50 ANS"  
"SERVING INDUSTRY FOR OVER 50 YEARS"



**APPENDIX 6-B**

**DRILL LOGS**



THE MINING ACT - MINISTRY OF NATURAL RESOURCES  
DIAMOND DRILLING LOG

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. LF-1-92  
PAGE NO. 1

DRILLING COMPANY L. SALO		COLLAR ELEVATION -	BEARING OF HOLE FROM TRUE NORTH 235°	TOTAL FOOTAGE 142	DIP OF HOLE AT - collar   - 45°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM SEE SKETCH FIG # 5-	MAP REFERENCE NO.	CLAIM NO. 987238
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY J.K. FILO P. Geo		ft		LOCATION (Twp., Lot, Con. OR Lat. and Long.) LANSMUIR/CARMAN TWP 5 SEE SKETCH	
EXPLORATION CO., OWNER OR OPTIONEE M. KEAN & J.K. FILO		DATE SUBMITTED	SUBMITTED BY (Signature) J.K. FILO		ft			
					ft			
							PROPERTY NAME MK GOLD PROSPECT	

FOOTAGE FROM	TO	ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE*	CORE SPECIMEN FOOTAGE +	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE		SAMPLE LENGTH	PPB Au	ASSAYS + Au	02/00
							FROM	TO				
0	6'	CASING										
6	16	IRON FORMATION	- consists bands of magnetite with quartz veins & minor sections of altered wall rock (ie country rock (basalt) ratios 20:35:45, basalt, magnetite & quartz respectively - core angles are variable from 30° to 70° to core axis - some evidence of folding of quartz veins at 95°; pyrite & pyrrhotite clots & stringers in veins - note beyond 12' volcanics (basalt) intercalated with iron formation (magnetite) and 1. HLE OR NO QUARTZ PRESENT - lower contact along a slip @ 45° to CA			224803	6'	8'	2'			.032
						224804	8'	10'	2'	380		
						224805	10'	12'	2'	448		
						224806	12'	15'	3'	56		
						224807	15'	16'	1'	125		
						224808	30'	33'	3'	54		
16	43.3	Bleached BASALT	- except for the first few inches of this unit the unit is light grey color giving it a bleached appearance - the unit is fine grained with a few minor medium grained sections noted over 0.5' foot intervals, on fresh broken surface unit is more of a greenish-grey color - a few minor quartz vesicles noted in this section - joints (minor) generally at 45° to core axis - unit has weak, lower contact (fault/ground up)									
43.3	142	Basalt	- greenish grey unit, roughly the last six feet from 43.3 to 49' fairly fine grained massive unit with specks of calcite throughout it, beyond 49' to 59' unit becomes coarser grained, (gabbric texture), gradational relationship between finer & coarser grained material			224809	48'	49'	1'	7		
						224810	100.5'	102.5'	2'	8		

\* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

+ Additional credit available. See Assessment Work Regulations.



THE MINING ACT - MINISTRY OF NATURAL RESOURCES  
DIAMOND DRILLING LOG

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. LF-1-92  
PAGE NO. 2  
CLAIM NO.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT collar	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	CLAIM NO.	
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Twp., Lot, Con. OR Lat. and Long.)		
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		ft				
					ft		PROPERTY NAME		

FOOTAGE FROM TO		ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE *	CORE SPECIMEN FOOTAGE +	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM TO		SAMPLE LENGTH	ASSAYS +	
			- from 84 to 84 still massive basalt mainly finer grained but some slightly coarser sections still subhedral calcite noted throughout section, joints minor @ 35-40° to c.a., very minor pyrite noted at @ 80.5'								
			- from 84 to 100' no significant change, still intercalated phases of coarse grained basalt, still subhedral calcite present								
			- from 100' to 142' no change, as described previously from 84-100								
			- very minor shear zone from 100.25 to 102.25 with some minor quartz, shearing oriented 80° to c.a., also very weak shear with very minor quartz stringers from 102.5 to 107.5								
			E.O.H. 142								

\* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

+ Additional credit available. See Assessment Work Regulations.



THE MINING ACT - MINISTRY OF NATURAL RESOURCES  
DIAMOND DRILLING LOG

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE

HOLE NO. 1F-92-2  
PAGE NO. 1  
CLAIM NO. 989238

DRILLING COMPANY L. SALO		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH 235°	TOTAL FOOTAGE 103	DIP OF HOLE AT COLLAR -55°	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM SEE SKETCH	MAP REFERENCE NO.	LOCATION (Tp., Lot, Con. OR Lat. and Long.) LANGLMuir/LARMAN TWP'S SEE SKETCH
DATE HOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY J.H. Fild P.600	ft	ft		PROPERTY NAME ML GOLD PROJECT	
EXPLORATION CO., OWNER OR OPTIONEE M. KEAN + J.K. FILD		DATE SUBMITTED	SUBMITTED BY (Signature) <i>[Signature]</i>	ft	ft			
				ft	ft			

FOOTAGE FROM TO		ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE*	CORE SPECIMEN FOOTAGE †	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM TO		SAMPLE LENGTH	PP6 Au	ASSAYS †
0	7	CASING									
7	13.5	IRON FORMATION	- this section is composed of magnetite quartz & some altered volcanic material at roughly the ratios 45:35:20 for quartz, magnetite & altered volcanic material - clots of pyrite and pyrrhotite found in quartz & one fleck of visible gold @ 11.5' - VARIABLE core angles varying from 80° to c.A. to 45° to c.A., some evidence of vein being folded right at 7' - lower contact at 75° to c.A.			224811 224812 224813	7' 9' 11	9' 11' 13.5	2' 2' 1.5	25 88 52	
13.5	19.0	BASEALT (SHEARED)	- weakly sheared greyish-green fine grained unit, fabric orientated at roughly 30° to c.A. this section has some minor pyrite @ 19', a few minor quartz clots & blebs are present, this quartz is minor								
19.0	45.0	WEAKLY REACHED MASSIVE BASEALT	- this unit has coarse & fine grained sections, the majority of the unit is fine grained, calcite flecks noted throughout unit, a few quartz blebs noted as well, these are minor								

\* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

† Additional credit available. See Assessment Work Regulation



THE MINING ACT - MINISTRY OF NATURAL RESOURCES  
DIAMOND DRILLING LOG

Start a new page for every new hole, but fill in top portion of form only on first page for each hole.

FILL IN ON EVERY PAGE  
HOLE NO. LF-92-2  
PAGE NO. 2  
CLAIM NO.

DRILLING COMPANY		COLLAR ELEVATION	BEARING OF HOLE FROM TRUE NORTH	TOTAL FOOTAGE	DIP OF HOLE AT collar	LOCATION OF HOLE IN RELATION TO A FIXED POINT ON THE CLAIM	MAP REFERENCE NO.	HOLE NO. LF-92-2	PAGE NO. 2
DATE MOLE STARTED	DATE COMPLETED	DATE LOGGED	LOGGED BY		ft		LOCATION (Tp., Lot, Con. OR Lot. and Long.)		
EXPLORATION CO., OWNER OR OPTIONEE		DATE SUBMITTED	SUBMITTED BY (Signature)		ft				
					ft			PROPERTY NAME	

FOOTAGE FROM TO		ROCK TYPE	DESCRIPTION Colour, grain size, texture, minerals, alteration, etc.	PLANAR FEATURE ANGLE	CORE SPECIMEN FOOTAGE	YOUR SAMPLE NUMBER	SAMPLE FOOTAGE FROM TO		SAMPLE LENGTH	ASSAYS +		
45	103	MASSIVE BASALT	- greenish colored unit fine and medium grained & sections inter-related. sub-hedral calcite noted throughout unit. - note @ 49' definite slip with minor quartz oriented 90° to C.A. - from 64 to 103 unit becomes distinctly medium grained with some coarser grained almost gabbroic sections - still lots of subhedral quartz/calcite in this unit from 64' to 103 - a few very small quartz inclusions in this last section 1"-2" & rare flock of pyrite									
			E.O.H. 103'									

\* For features such as foliation, bedding, schistosity, measured from the long axis of the core.

+ Additional credit available. See Assessment Work Regulations.

Property Owner: Golden Pheasant Resources Ltd.

Grid location: 2+00N/1+23W

Length: 89 m

Core Size: BQ

Claim No: P792475

Township: Carman

Started: April 5, 1988

Logged by: R. Anderson

Azimuth: 270 degrees, Grid West

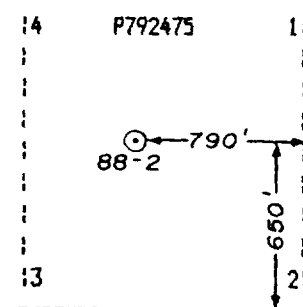
Dip: -55 degrees @ 0m, -54 @ 89m

Elevation: Surface

Drill Company: McKnight Diamond Drilling

Completed: April 9, 1988

Date Logged: April 9, 1988



Hole location in claim

From (m)	To (m)	Description	From (m)	To (m)	Tag Number	Gold (ppb)	Silver (ppm)
0.0	12.1	Casing, overburden					
12.1	14.3	Altered Diorite. Dark grey with white speckles which could be magnetite altering to carbonate. Non-magnetic, slightly calcareous, medium-grained. Becomes paler near lower contact.	13.3	14.3	018	10	
14.3	14.6	Quartz vein. White with pyrite and calcite-filled fractures. Approximately 5% pyrite. Oriented at 90 degrees to core axis.	14.3	14.6	019	30	
			14.6	15.6	020	nil	
			15.6	16.5	021	40-60	
14.6	18.5	Sheared zone, with light and dark alternating bands of andesite and quartz-carbonate. Some folding. Bands are oriented at 50 to 70 degrees to core axis and are 1-5 cm thick. Pyrite, 5%, as irregular blebs in the quartz-carbonate. Minor euhedral grains of pyrite up to 3 mm. in diameter.	16.5	17.5	022	20	
			17.5	18.5	023	10	
			18.5	19.5	024	nil	
18.5	89	Altered andesite. Carbonate altered. Lacks the white flecks of the previous diorite. Varying amounts of carbonate alteration and calcite content. Dark green-grey, medium-grained. Foliated at 60 degrees to core axis. Relatively uniform. Crystal boundaries are generally poorly defined. Pyrite, 1-2%, as minor stringers near upper contact and/or euhedral grains up to 5 mm. in diameter. Minor, pink to white, quartz-carbonate veins up to 5 cm thick. Randomly oriented.	28	28.6	224801	44	*
			45.2	45.5	224802	25	*

38 - coarser grained below this point with mafic minerals clearly altered to chlorite.

X NOTE, Log adapted from Golden Pheasant Log Resampled sections 224 sample number series J. Hab

R. Anderson  
T. 31 35



From (m)	To (m)	Description	From (m)	To (m)	Tag Number	Gold (ppb)	Silver (ppm)
		Altered diorite (cont.)					
		41.25-41.8 pink, calcareous, aplite-like vein with sub-angular chloritic xenolith, 5 cm in diameter.					
		61.2 Fracture, clayey. With relatively heavy chlorite alteration. Start to get silicification zones alternating with carbonate alteration. Also get better crystal definition but this does not appear to be related to the alteration.					
89		End of Hole. Problems removing the casing. Casing left in hole.					

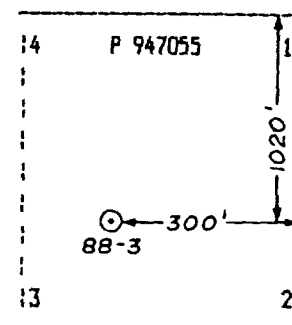
*R. Ashkin*

T. 3135

## DIAMOND DRILL LOG - JAMES WADE ENGINEERING LTD.

Hole No: 88-3  
Page : 1

Property Owner: Golden Pheasant Resources Ltd.  
 Grid location: 4+00N/0+22E \_\_\_\_\_ Azimuth: 270 degrees, Grid West \_\_\_\_\_  
 Length: 92.7m \_\_\_\_\_ Dip: -55 degrees @ 0m, -54 @ 92.7 \_\_\_\_\_  
 Core Size: BQ \_\_\_\_\_  
 Claim No: P947055 \_\_\_\_\_ Elevation: Surface \_\_\_\_\_  
 Township: Carman \_\_\_\_\_ Drill Company: McKnight Diamond Drilling \_\_\_\_\_  
 Started: April 9, 1988 \_\_\_\_\_ Completed: April 10, 1988 \_\_\_\_\_  
 Logged by: R. Anderson \_\_\_\_\_ Date Logged: April 10, 1988 \_\_\_\_\_



Hole location in claim

From (m)	To (m)	Description	From (m)	To (m)	Tag Number	Gold (ppb)	Silver (ppm)
0.0	5.0	Casing, overburden					
5.0	10.2	Altered andesite flow or diorite. Green-grey with white flecks. Medium-grained, slightly calcareous, non-magnetic. White flecks appear to be dolomite. Becomes paler downhole. Foliated at 45 degrees to core axis. Trace of fine disseminated pyrite.	9.3	10m	224814	34 *	
			10	10.8m	224815	59 *	
			10.8	11.8m	224816	170 *	
Near lower contact the rock is very chloritic and the foliation steepens to near parallel to the core axis.							
10.2	12.9	White quartz vein with white calcite. With 5-10% stringers of pyrrhotite and 3% blebs of pyrite. Some irregular fracturing. Black irregular shale like zone, compatible with sulphide facies exhalite.	9.2	10.2	025	10	
			10.2	10.9	026	40	
			10.9	11.9	027	40-20	
			11.9	12.9	028	20	
12.9	92.7	Altered andesite flow. Grey-green with poorly defined crystal rims. Fine to medium-grained. Pyrite, disseminated, up to 3%. Foliated at 50 degrees to core axis. Non-magnetic	12.9	13.9	029	nil	
			14.6	15.6	030	nil	
			15.6	15.9	031	20	
			15.9	16.9	032	10	
			16.9	17.5	033	20	
15.6-15.9, 17.1 - Stringer-like zones of calcite with 5-10% pyrite, mostly as blebs, some euhedral grains.							
Approximately 10%, irregular, up to 1/2 cm carbonate veins. Mafic minerals clearly altered to chlorite.							
		30-35 Calcareous with irregular calcite veins with pyrite and pyrrhotite, 5%.	30.7	31.7	034	10	
			31.7	32.7	035	nil	
			32.7	33.7	036	10	
		47-50 - 1 cm carbonate-filled vesicles. Crystals rims are better defined.	33.7	34.7	037	10	
		72.3-72.8 - Quartz-carbonate vein, pink, oriented at 20 degrees. No sulphides.					

## NOTE

\* Log adapted from Golden Pheasant Log Resampled Sections 224 SAMPLE NUMBER SERIES 0.7/56

T. 31 35

Hole No: 88-3  
Page: 2

From (m)	To (m)	Description	From (m)	To (m)	Tag Number	Gold (ppb)	Silver (ppm)
		Rock is very uniform. Foliated at 45 degrees.					
	77 - 80.5	Green-pink, carbonate and quartz. Contorted, calcareous. Possible flow breccia zone. Trace of disseminated pyrite.	79.5	80.5	038	nil	
		Finer grained below 85					
92.7		End of hole					
			41.75	41.85m	224817	31	
			72.20	73.65m	224818	17	
			76.45	76.75m	224819	9	
			77.8	78.6m	224820	8	

\*NOTE Log adapted from  
Golden Pheasant Log  
Resampled Sections  
224 sample series  
JTB

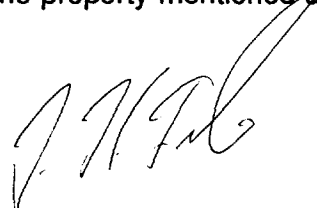
*R. Anderson*

T 3135

## CERTIFICATE

I, J. K. Filo of 535 Bartleman, Timmins, Ontario, do hereby certify that:

- i) I personally worked on a series of OPAP projects in conjunction with Messrs. Kean and Jones; these projects included prospects in Halcrow, Denyes, Net Lake, Fripp, Nova and Langmuir/Carman.
- ii) I provided geological in-put on all of these projects and provided geological expertise where necessary; I personally carried out all core logging and wrote the reports pertaining to the above mentioned projects.
- iii) I hold an Honours Bachelor of Science degree in geology from Laurentian University, Sudbury, Ontario (1980) and I am a member of the Association of Professional Engineers and Geoscientists of British Columbia.
- iv) I have practised my profession as both a mine and exploration geologist continuously since graduation. I have worked for various mining and exploration companies including Texasgulf Exploration Inc., Urangasellschaft Canada, Amax Potash, Cominco, Pamour Porcupine Mines, Nerco Con Mines and various junior companies.
- v) I hold some interest in all of the property mentioned above.



J. K. Filo, HBSc., P.Geo



**ASSAYERS**  
LABORATOIRES/LABORATORIES  
DIVISION DE/OF ASSAYERS CORPORATION LTD.

780, AV. DU CUIVRE, C.P. 665, ROUYN-NORANDA (QUÉBEC) J9X 5C6 TÉL.: (819) 797-4653 FAX: (819) 797-4501

Certificat/Certificate

2R-1638-RG1

Comp: **M.KEAN**  
Proj:  
Attn: **J.K.FILO**

Date: OCT-13-92

Nombre D'Echantillons/No. of Samples:  
Soumis le/Submitted: **SEP-28-92**

No. D'Echantillon Sample Number	AU PPB	AU CH'KS PPB	AU CH'KS PPB	AU OZ/TONNE	AU CH'KS OZ/TONNE	AU CH'KS OZ/TONNE
224801	44					
224802	25					
224803	*			0.032	0.032	0.032
224804	380					
224805	448					
224806	56					
224807	125					
224808	54					
224809	7					
224810	8					
224811	25					
224812	88					
224813	52					
224814	34					
224815	59					
224816	170					
224817	31					
224818	17					
224819	9					
224820	8					
MK-92-6	56	48	64			

Certifie par/Certified by

J.J. Landers

"AU SERVICE DE L'INDUSTRIE DEPUIS PLUS DE 50 ANS"  
"SERVING INDUSTRY FOR OVER 50 YEARS"





Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

Donation Receipt  
Drill Core Library

Reçu de don  
Géothèque

Donated To/Bénéficiaire du don

Material Received From/Don reçu de

896 Riverside Drive Timmins, Ontario P4N 3W2	Company/Entreprise J.K. Filo / M. Kean	Representative/Représentant(e) J.K. Filo
	Address/Adresse 535 Bartleman St.	
	Timmins, Ont., P4N 7X2	Telephone/Téléphone (705) 268-9045 Ext./Poste

Type of Samples Received  
Type d'échantillons reçus

Core

No. of Boxes/Samples Received  
Nbre de boîtes/d'échantillons reçus

7

Material Confidential Until  
Les données relatives aux échantillons doivent rester confidentielles jusqu'à  
(maximum of one year/un an maximum)

Hole No. Forage n°	Submitted for Assessment Credits (y/n) Soumis pour crédits d'évaluation (o/n)	No. of Boxes/ Samples Nbre de boîtes/ d'échantillons	Feet/Metres Pieds/mètres	Delivered to Core Library (feet/metres) Délivré à la géothèque (pieds/mètres)	Refused - Left on Drill Site (feet/metres) Refusé - laissé sur l'emplacement du forage (pieds/mètres)	Collected by DCL Staff (feet/metres) Ramassé par le personnel de la géothèque (pieds/mètres)	Township Canton	Drill Logs/ Location Received Journal de sondage/ relevé des emplacements reçu(s)
LF-92-1	Y	7	142'	142	/	/	Carman	
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/

I have read and hereby agree to the above information and the terms and conditions on the reverse of this agreement and understand that I am bound by those terms.

J'ai lu les renseignements ci-dessus, et j'en atteste l'exactitude. J'ai pris connaissance des conditions figurant au verso du présent document, et je me considère lié par elles.

Signature of Representative/Signature du (de la) représentant(e) Donated By Don de		Date 92/08/31
Signature of Core Library Personnel/Signature du responsable de la géothèque Received By Reçu par		Date 92/08/31



Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

Donation Receipt  
Drill Core Library

Reçu de  
Géothèque

Donated To/Bénéficiaire du don

Material Received From/Don reçu de

896 Riverside Drive  
Timmins, Ontario  
P4N 3W2

Company/Entreprise J. K. Filo / M. Kean	Representative/Représentant(e) J. K. Filo
Address/Adresse 535 Bartleman St., Timmins, Ont., P4N 4X2	
Telephone/Téléphone (705) 268-9045	Ext./Poste

Type of Samples Received  
Type d'échantillons reçus

Core

No. of Boxes/Samples Received  
Nbre de boîtes/d'échantillons reçus

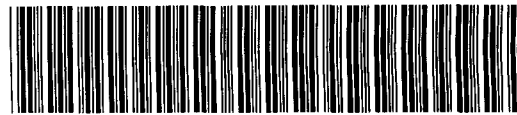
Material Confidential Until  
Les données relatives aux  
échantillons doivent rester  
confidentielles jusqu'à  
(maximum of one year/un an maximum)

Hole No. Forage n°	Submitted for Assessment Credits (y/n) Soumis pour crédits d'évaluation (o/n)	No. of Boxes/ Samples Nbre de boîtes/ d'échantillons	Feet/Metres Pieds/mètres	Delivered to Core Library (feet/metres) Délivré à la géothèque (pieds/mètres)	Refused - Left on Drill Site (feet/metres) Refusé - laissé sur l'emplacement du forage (pieds/mètres)	Collected by DCL Staff (feet/metres) Ramassé par le personnel de la géothèque (pieds/mètres)	Township Canton	Drill Logs/ Location Received Journal de sondage/ relevé des emplacements reçus(s)
LF-2	Y	5	103.0'	103.0'	/	/	Carman	Y/Y
88-2	N	14	89.0m	89.0m	/	/	Carman	Y/Y
88-3	N	13	92.7m	80.7m	/	/	Carman	Y/Y
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
/	/	/	/	/	/	/	/	/
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I have read and hereby agree to the above information and the terms and conditions on the reverse of this agreement and understand that I am bound by those terms.

J'ai lu les renseignements ci-dessus, et j'en atteste l'exactitude. J'ai pris connaissance des conditions figurant au verso du présent document, et je me considère lié par elles.

Donated By Don de	Signature of Representative/Signature du (de la) représentant(e) J. K. Filo	Date 92/09/15
Received By Reçu par	Signature of Core Library Personnel/Signature du responsable de la géothèque	Date 92/09/15



42114NE0001 OP92-575 SOUTH OF ALLAN ISLAND

020

**MOOSE RIVER  
GYPSUM DEPOSIT**

**DIGITAL BASE MAP  
CARROLL & CANFIELD TWPS.**



## INTRODUCTION

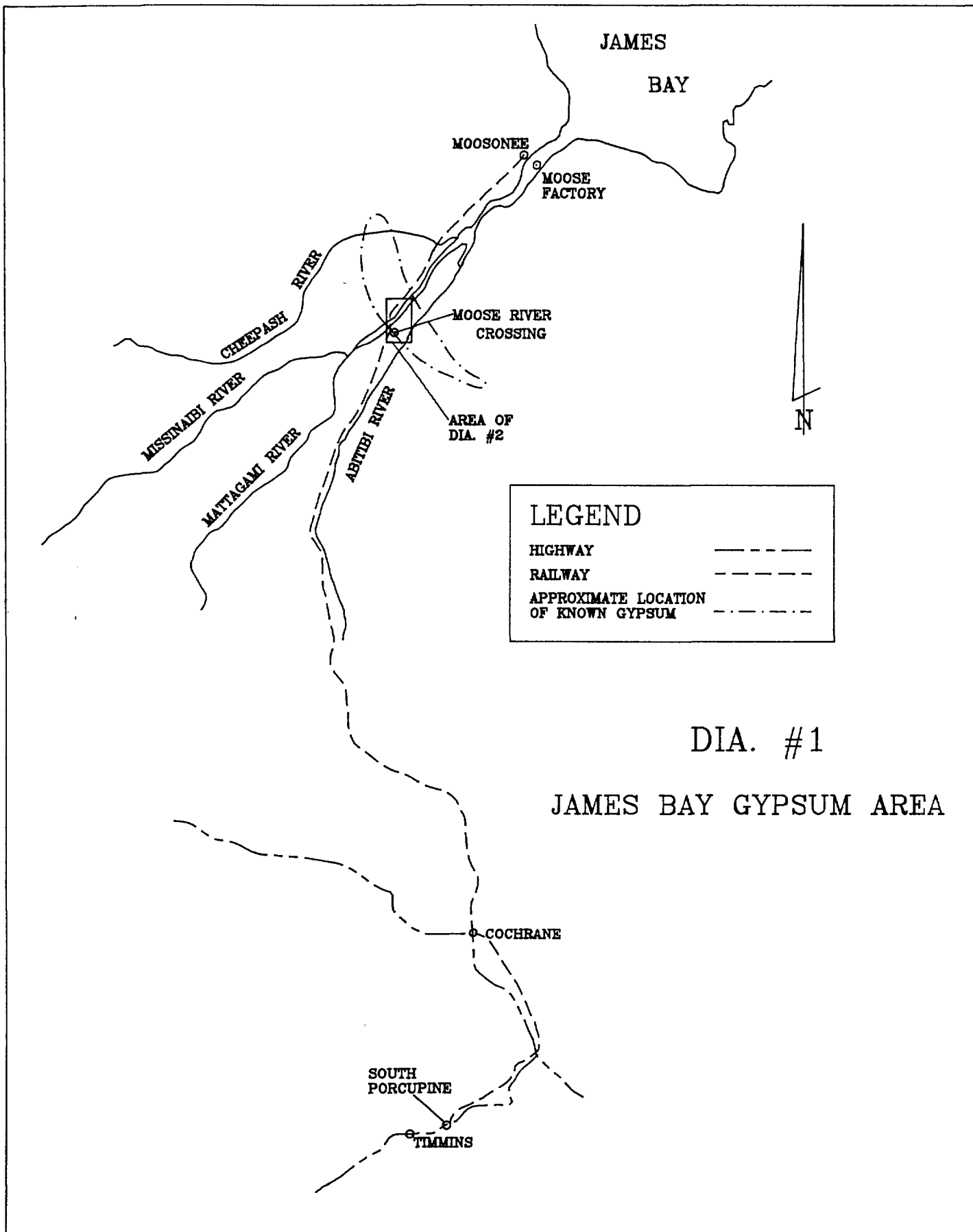
The James Bay Gypsum Development Group consists of four privately owned companies or proprietorships from Ontario. This group has been interested in the development of the gypsum deposits of the James Bay Basin for approximately four years. From May 1991 to March 1992 the group created two plans for developing these deposits. Both plans require that gypsum is available so that samples may be taken for research and development. A digital base map of the Moose River Gypsum property ( see diagram #1 for property location ) was created from various sources in order to identify and locate features that might indicate the presence of gypsum on or near the surface. Eleven features of interest were identified in total ( marked as S1, S2... on diagram #2 ). The base map was also used to plan and perform work on the property. Physical work was carried out on the property in order to further investigate the features of interest and to search for accessible gypsum. This report will describe the digital base map and the methods used for its production.

## DESCRIPTION

The base map was created using AutoCad release 12. It covers the townships of Carroll and Canfield, Porcupine Mining District, Ontario. It consists of many layers which are categorized and described below. The sources of information used for producing the map are also listed below. Sources for specific layers are listed under the "layer description" heading. This digital base map was not created to display all layers simultaneously. The intent was to create one map source with the ability to display spatial data in many possible configurations. The hard copies supplied with this report are samples of configurations made possible by the creation of the digital base map.

## METHOD

All of the sources were digitized using an 18" x 12" Summagraphics digitizing tablet linked to a 486 DX personal computer system using DOS version 5 operating system. The township corners were used as calibration points for all of the sources except the air photos ( sources #8 and #10 ). The intersection of the north shore of the Moose River/Ontario Northland Railway line and the intersection of a trail/Ontario Northland Railway line were used as calibration points for Source #8. Various prominent topographic features, near the principle points of the photos, were used as calibration points for source #10.



#### SOURCES

- 1- Map created by the Ministry of Natural Resources Surveys and Mapping Branch entitled Carroll, District of Cochrane, Porcupine Mining Division. Scale 40 chains = 1 inch. Obtained from the Porcupine Mining Division Recording Office, Timmins, Ontario. (PLAN M-439)
- 2- Map created by the Ministry of Natural Resources Surveys and Mapping Branch entitled Canfield, District of Cochrane, Porcupine Mining Division. Scale 40 chains = 1 inch. Obtained from the Porcupine Mining Division Recording Office, Timmins, Ontario. (PLAN M-435)
- 3- Map created by the Ministry of Natural Resources Surveys and Mapping Branch entitled Blacksmith Rapids, Ontario. Scale 1 inch to 2 miles. Obtained from Surveys and Mapping Branch, Ministry of Natural Resources, Queens Park, Toronto, Ontario.
- 4- Ontario Mineral Map, specific title unknown at time of writing this report. Map contains Carroll and Canfield Townships including vertical sections through the area. Photocopies of this map were used for digitizing purposes.
- 5- Maps from assessment file #T-427 completed by the James Bay Basin Oil Company in 1929.
- 6- Maps from assessment file #T-634 completed by Atlas Gypsum Corporation in 1955/56.
- 7- Maps of the Moose River Crossing area from the open file report of the gypsum of the James Bay Lowland area obtained from the Timmins Resident Geologists office.
- 8- Air photos, Scale 1:37700 (approximate) obtained from the National Air Photo Library, Ottawa, Ontario.
- 9- Map produced by The Canada Centre For Mapping, Department of Energy Mines and Resources, entitled Moose River, Cochrane District, Ontario. Scale 1:250,000. Obtained from The Ministry of Natural Resources, Cochrane Ontario.
- 10-Sixteen air photos, approximate scale 1: 16,500, obtained from The Ministry of Natural Resources, Natural Resource Infocentre, Room M1-73, McDonald Block, 900 Bay St., Toronto, Ont., M7A 2C1.

## CATEGORIES

All information from the above sources fall into the following categories and into the drawing layers named.

- Contours
- Streams/Lakes
- Roads/Trails
- Railroads
- Surface Cover
- Geology
- Cultural Detail
- Survey Fabric
- Claims (current and historical)
- Assessment History
- Reserved Land
- Features of Interest

CATEGORY	RELATED LAYERS
CONTOURS	CONTOURS
STREAMS/LAKES	WATER WATER1 WATER2 WATER3
ROADS/TRAILS	TRAILS
RAILROADS	RAIL
SURFACE COVER	SURFACE SURFACE1
GEOLOGY	GEOLOGY GEOLOGY1 GEOLOGY2
CULTURAL DETAILS	CULTURE
SURVEY FABRIC	SURVEY
CLAIMS	CLAIM CLAIM1 CLAIM2
ASSESSMENT HISTORY	T427 T634
RESERVED LAND	RESERVE
FEATURES OF INTEREST	FOI

## LAYER DESCRIPTIONS

### CONTOURS

The CONTOURS layer contains contour lines and bench mark locations. Source #2 - bench mark locations. Source #9 - contours.

### WATER

The WATER layer contains rivers and lakes. Source #1&2.

### WATER1

The WATER1 layer contains rivers, streams, and ponds that were obtained from Source #2 but not positively identified on air photos (source #8 and #10).

### WATER2

The WATER2 layer contains streams and ponds that were obtained from Source #6 but not positively identified on air photos.(source #8 and #10)

### WATER3

The WATER3 layer contains rivers, lakes, streams and ponds. Source #8 and #10.

### TRAILS

The TRAILS layer contains trails, some of which were old logging roads. Sources #8, #10, #3, and #7.

### RAIL

The RAIL layer contains the railways. Source #1&2

### SURFACE

The surface layer contains an interpretation of the vegetation types, and the location of a major ridge. Source #8 and #10.

### SURFACE1

The SURFACE1 layer contains the surface cover information from assessment file #T-634. Source #6.

### GEOLOGY

The GEOLOGY layer contains outcrops and outcrop descriptions. Source #7.

### GEOLOGY1

The GEOLOGY1 layer contains gypsum outcrops from assessment file #T634. Source #6.

### GEOLOGY2

The GEOLOGY2 layer contains an outline of the gypsum area known to date. Source #4.

#### CULTURE

The CULTURE layer contains the community of Moose River Crossing. Source #7.

#### SURVEY

The SURVEY layer contains the Carroll and Canfield Township lines. Sources #1&2.

#### CLAIM

The CLAIM layer contains the claims held by the James Bay Lowland Gypsum Development Group. Sources #1&2

#### CLAIM1

The CLAIM1 layer contains the claims currently held by parties other than the James Bay Lowland Gypsum Development Group. Sources #1&2.

#### CLAIM2

The CLAIM2 layer contains the claims that were held by other parties in the past. It is not a complete history of claims held in the area. Sources #1, #2, #5, and #6.

#### T427

The T427 layer contains the diamond drill hole locations from assessment file #T-427.(The James Bay Basin Oil Company) Source #5.

#### T634

The T634 layer contains the property, grid, cross-section location and basic information from assessment file #T-634. (The Atlas Gypsum Corporation) Source #6.

#### RESERVE

The RESERVE layer shows the location of any reserves. (mineral related reserves) Sources #1&2.

#### FOI

The FOI layer contains a symbol and number for each of the eleven features of interest identified on this base map. The features or sites are numbered S1, S2, ...

## TIME RECORD

MOOSE RIVER GYPSUM PROPERTY SEPTEMBER/OCTOBER 1992

DATE	NAME	DESCRIPTION	HOURS
SEPT. 28/92	KEVIN COOL	DIGITIZING SOURCE #1	10
SEPT. 29/92	KEVIN COOL	DIGITIZING SOURCE #6	6
SEPT. 30/92	KEVIN COOL	DIGITIZING SOURCE #6	6
OCT. 1/92	KEVIN COOL	DIGITIZING SOURCE #7	8
OCT. 2/92	KEVIN COOL	DIGITIZING SOURCE #7	8
OCT. 3/92	KEVIN COOL	DIGITIZING SOURCE #3	10
OCT. 4/92	KEVIN COOL	CREATE LAT/LONG GRID	3
OCT. 4/92	KEVIN COOL	CREATE AND ORGANIZE LAYERS	4
OCT. 5/92	KEVIN COOL	DIGITIZING SOURCE #2	10
OCT. 6/92	KEVIN COOL	LEGEND, SCALE BAR AND OTHERS	6
OCT. 7/92	KEVIN COOL	DIGITIZING SOURCE #4	1
OCT. 7/92	KEVIN COOL	DIGITIZING SOURCE #5	1
OCT. 9/92	KEVIN COOL	DIGITIZING SOURCE #8	10
OCT. 10/92	KEVIN COOL	DIGITIZING SOURCE #8	10
OCT. 11/92	KEVIN COOL	DIGITIZING SOURCE #9	2
OCT. 11/92	KEVIN COOL	DIGITIZING SOURCE #10	10
OCT. 12/92	KEVIN COOL	DIGITIZING SOURCE #10	10
OCT. 13/92	KEVIN COOL	MISC. DRAWING ORGANIZATION	8
		TOTAL HOURS OF COMPUTER DIGITIZING AND DRAFTING. RATE \$50/HOUR (\$6,150)	123



42114NE0001 OP92-575 SOUTH OF ALLAN ISLAND

030

**MOOSE RIVER  
GYPSUM DEPOSIT**

**PHYSICAL WORK REPORT  
CARROLL & CANFIELD TWPS.**



## INTRODUCTION

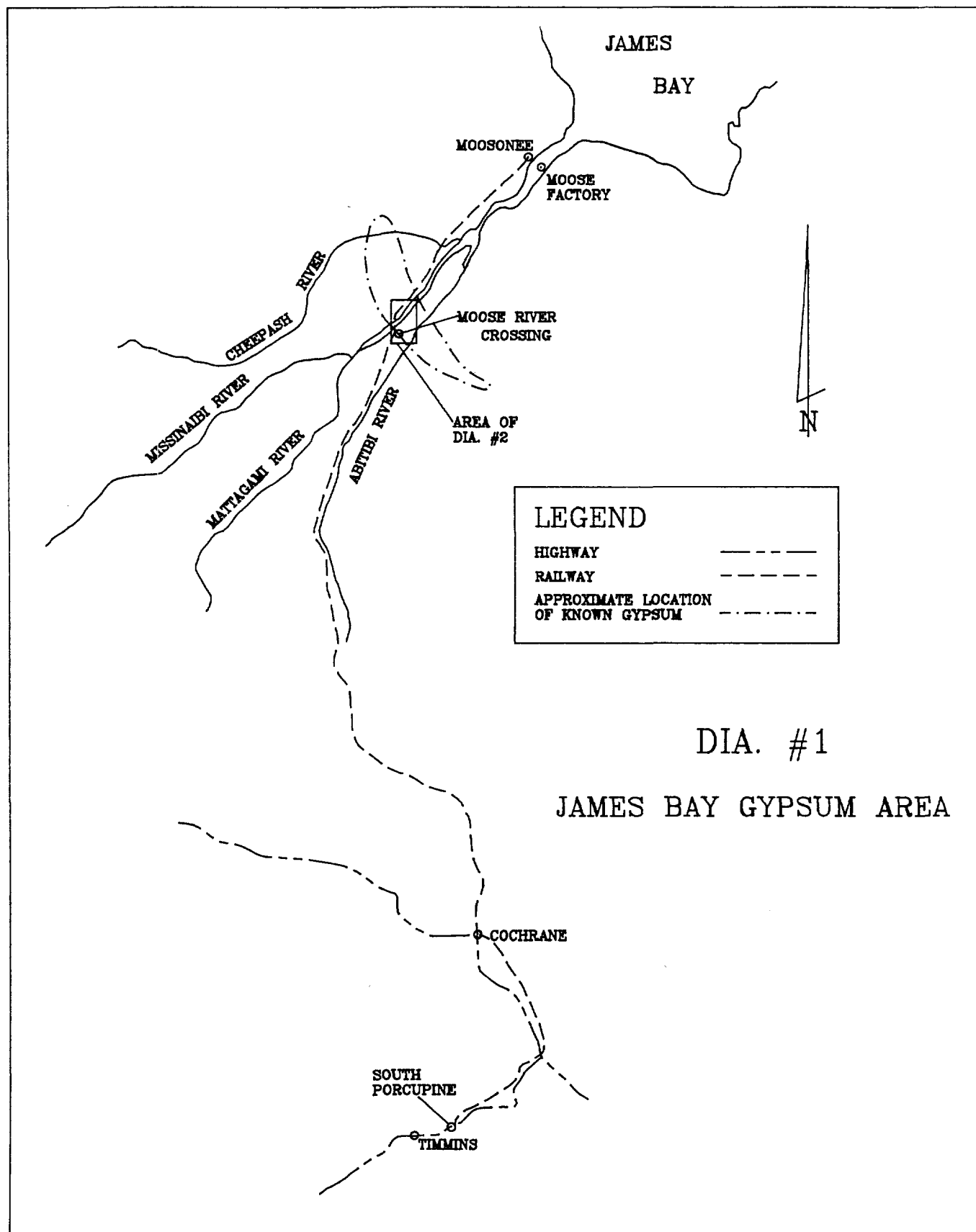
The James Bay Gypsum Development Group consists of four privately owned companies or proprietorships from Ontario. This group has been interested in the development of the gypsum deposits of the James Bay Basin for approximately four years. From May 1991 to March 1992 the group created two plans for developing these deposits. Both plans require that gypsum is available so that samples may be taken for research and development. A digital base map of the Moose River Gypsum property was created from various sources in order to identify and locate features that might indicate the presence of gypsum on or near the surface. Eleven features of interest were identified in total ( marked as S1, S2... on diagram #2 ). The base map was also used to plan and perform work on the property. Physical work was carried out on the property in order to further investigate the features of interest and to search for accessible gypsum. This report will document all the results of the physical work and provide conclusions and recommendations.

## LOCATION AND ACCESS

Diagram #1 is a key map showing the location of the Moose River Property. The property is in Carroll and Canfield Townships, Porcupine Mining District and consists of sixteen contiguous claims numbered 1131388, 1131389, 1131390, 1170583, 1170584, 1170585, 1170586, 1170587, 1170589, 1170590, 1188872 (15 units), 1188873 (9 units), 1188874 (4 units), 1188875 (1 unit), 1188876 (2 units) and 1188877 (1 unit). ( See Diagram #2 ). The Ontario Northland Railway was used to access the property.

## TOPOGRAPHY

The property is covered by spruce, poplar, birch and alder. The railway line divides the property into two distinct vegetation areas. To the North of the railway is low-lying spruce and alder swamp. To the South of the railway and bounded to the North by the Moose River is generally higher ground with a mix of the deciduous and coniferous trees. A distinct ridge runs through the property south of the rail and roughly parallel to the river and rail.



SITE #4

This site is a feature of interest because it is topographically similar to the location where gypsum was found near the surface in 1956. This site was visited however digging was not practical due to the swamp conditions surrounding the lake. Pit # P5 was excavated nearby. See diagram #2 for materials found.

SITE #5

This site is a feature of interest because it is similar in appearance ( on air photos ) to the small, round ponds that are associated with Karst topography. This site was visited however digging within a 300' radius of the site was not practical due to the wet ground surrounding the pond.

SITE #6

Not visited.

SITE #7

Not visited.

SITE #8

Not visited.

SITE #9

This site is a feature of interest because it is similar in appearance ( on air photos ) to the small, round ponds that are associated with Karst topography. This site was visited however digging was not practical due to the wet ground surrounding the ponds.

SITE #10

Not visited

SITE #11

This site ( the entire ridge is site #11 ) is a feature of interest because it is the main relief in the area. It is hoped that information gained about selected areas along the ridge will contribute greatly to the general model that our group is developing for the property. This site became the focus for physical work for this field trip because of the ground conditions at the above mentioned sites. Sixteen pits were excavated along to north foot of the ridge. See diagram #2 for materials found in these pits.

## SAMPLE DESCRIPTIONS

### SAMPLE #1

Light brown to brown moist limestone clay with very occasional well rounded fragment, Lacustrine clay, approximately 10% organics.

### SAMPLE #2

Dirty porous limestone boulder, sub-rounded.

### SAMPLE #3

Coarse till, well rounded clasts ( over 9 cm. ), mostly limestone clasts in a limestone matrix. Also 1 sub angular coarse grained granitic boulder.

### SAMPLE #4

Fine to coarse polymictic till, one highly weathered granitic boulder, well rounded limestone clasts.

### SAMPLE #5

Same as sample #4 but with one large mafic clast.

### SAMPLE #6

Angular fragments of limestone.

### SAMPLE #7

Coarse till, strong local component of angular bedded limestone.

### SAMPLE #8

Quartz biotite granite.

### SAMPLE #9

Organic soil.

### SAMPLE #10

Small sub-angular limestone fragments showing layering and a few vugs.

### SAMPLE #11

Stream bed sample. approximately 10% organics, 20% sand, and sub-angular to well rounded mainly limestone gravel ( less than 3cm. ).

### SAMPLE #12

Dirty, very porous limestone boulder with crude layering.

## PHYSICAL WORK

Physical work was carried out on the property from October 21/1992 to October 27/1992. Using the digital base map as a guide and a Magellan Global Positioning System Receiver ( model NAV 1000 PLUS ) for position seven out of eleven features of interest were visited. ( See Diagram #2 ).

The digging of numerous test pits was also carried out in areas where sinkholes were found, where creek beds cut deeply into the landscape, or where uprooted trees made it practical for digging. All digging was done using a mattock, axe, and narrow shovel. A 1.5m steel rod was also used to probe further into the overburden in search of gypsum or related mineral beds. The steel rod proved particularly valuable for determining where to dig because the minerals found (mainly limestone clasts ) were soft enough to leave white powder on the tip of the rod after pounding.

Diagram #2 indicates the site/pit locations, pit dimensions, sample locations and the nature of any material found. Most of the pits are located in light brown to brown moist limestone clay with approximately 10% organics. Where pits are near water and swamp the clay is darker with a higher organic content. See codes on diagram #2 for descriptions of specific pits and sites.

## SITE VISITS

### SITE #1

This site is a feature of interest because it is topographically similar to the location where gypsum was found near surface in 1956 ( Assessment file # T-634, also this location is indicated in the South-West corner of diagram #2 ). This site was visited however digging was not practical due to the swamp conditions surrounding the lake. Pit # P4 was excavated nearby in a sinkhole. The pit was excavated 4' lower than the bottom of the sinkhole that was already 5' lower than the surrounding ground. See diagram #2 for materials found.

### SITE #2

This site was visited at the same time site #1 was visited. Due to similar conditions as mentioned above pit # P4 was the only pit excavated near site #2.

### SITE #3

This site is a feature of interest because it is similar in appearance ( on air photos ) to the small, round ponds that are associated with Karst topography. This site was visited however digging on site was not practical due to the wet ground surrounding the pond. Pits # P10 and #P11 were excavated nearby. See diagram #2 for materials found.

## CONCLUSIONS

Based on the areas visited and excavated there appears to be an uninterrupted layer of limestone clay or coarse to fine till covering the property. If gypsum or limestone beds exist below these layers they are not at depths accessible (within practical reason) to the hand tools used on this field trip.

## RECOMMENDATIONS

To continue the search for accessible gypsum a diamond drill or hammer drill could be used to penetrate deeper into the overburden. Other possible methods include a seismic or resistivity survey to determine overburden depths.

TIME RECORD

MOOSE RIVER GYPSUM PROPERTY OCTOBER 1992

DATE	NAME	EQUIPMENT	HOURS
OCT. 21/92	KEVIN COOL	G.P.S. RECEIVER, SHOVEL, MATTOCK	5
OCT. 22/92	"	"	9
OCT. 23/92	"	"	9
OCT. 24/92	"	"	9
OCT. 25/92	"	"	9
OCT. 26/92	"	"	9
OCT. 27/92	"	"	3
OCT. 21/92	MARK KEAN	G.P.S. RECEIVER, SHOVEL, MATTOCK	5
OCT. 22/92	"	"	9
OCT. 23/92	"	"	9
OCT. 24/92	"	"	9
OCT. 25/92	"	"	9
OCT. 26/92	"	"	9
OCT. 27/92	"	"	3
		TOTAL MAN HOURS RATE: \$20/MAN HOUR ( \$2,120.00 )	106

SAMPLE PLOT SHOWING PART OF  
**BASE MAP**  
JAMES BY LOWLAND GYPSUM DEVELOPMENT GROUP  
SCALE 1" = 4000'

SANDERSON

RBBITT

CANFIELD

CARROLL

APPROXIMATE EXTENTS OF KNOWN GYPSUM AREA

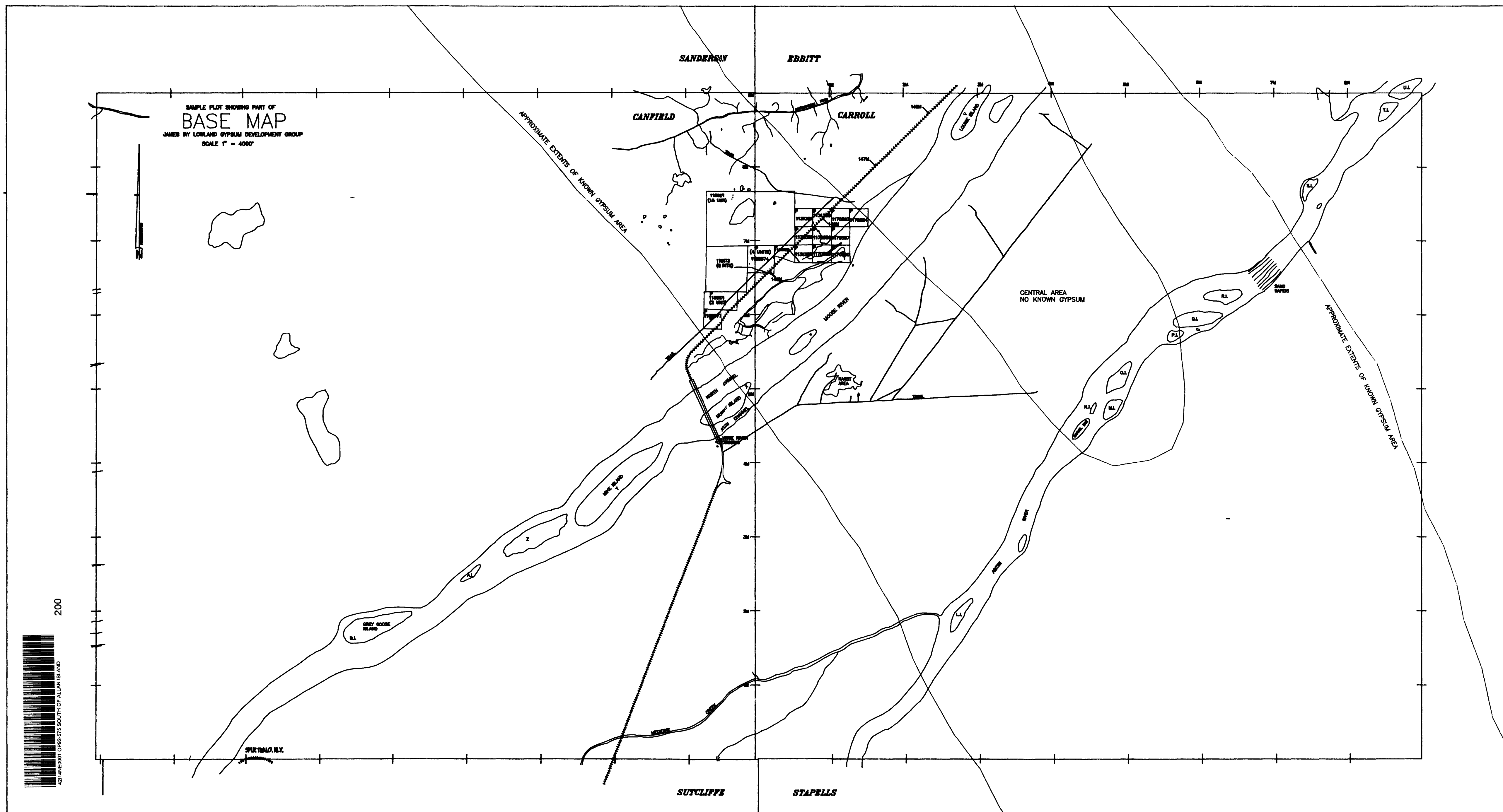
CENTRAL AREA  
NO KNOWN GYPSUM

APPROXIMATE EXTENTS OF KNOWN GYPSUM AREA

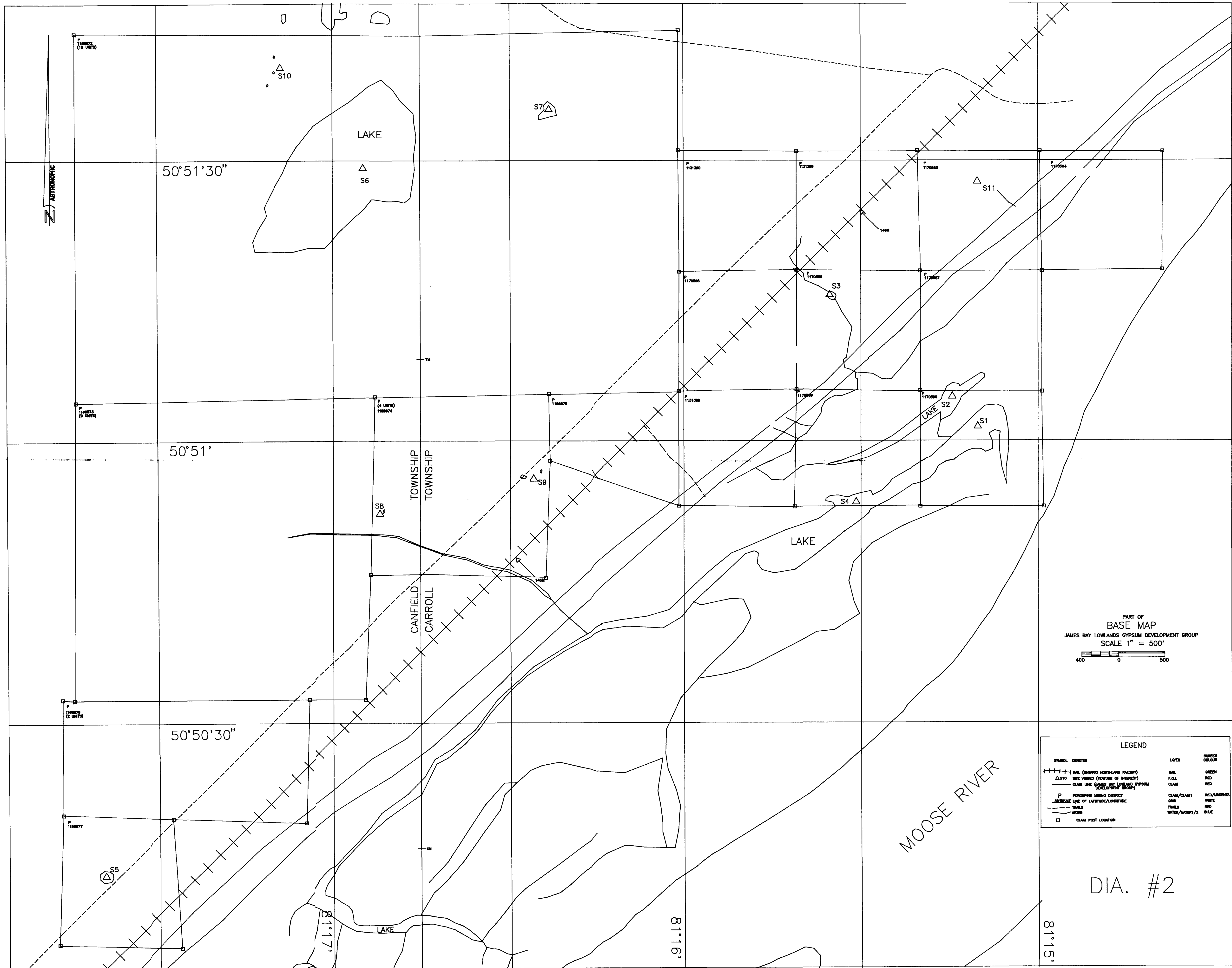
SUTCLIFFE

STAPRELLS

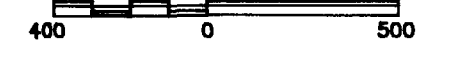
200





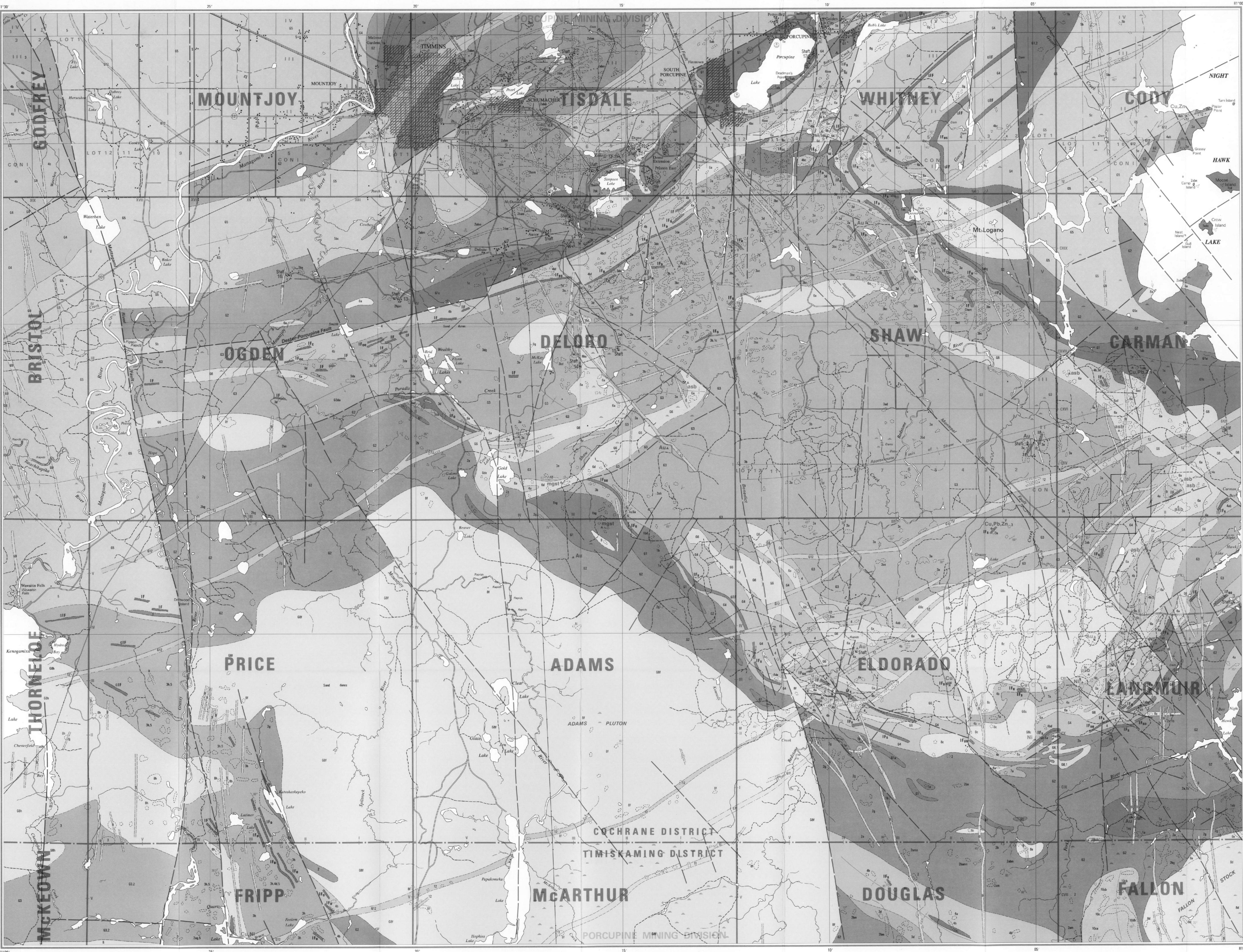


PART OF  
 BASE MAP  
 JAMES BAY LOWLANDS GYPSUM DEVELOPMENT GROUP  
 SCALE 1" = 500'



LEGEND	
<b>SYMBOL DENOTES</b>	<b>LAYER</b>
+++++ RAIL (ONWARD NORTHWARD RAILWAY)	RAIL GREEN
△S10 SITE VISITED (FEATURE OF INTEREST)	F.O.I. RED
— CLAIM LINE (JAMES BAY LOWLAND GYPSUM DEVELOPMENT GROUP)	CLAIM RED
P PORCUPINE MINE DISTRICT	CLAIM/CLAIM1 RED/AMBER
— SURVEY LINE OF LATITUDE/LONGITUDE	GRID WHITE
--- TRAILS	TRAILS RED
--- RIVER	WATER/WATER/2 BLUE
□ CLAIM POST LOCATION	

DIA. #2



**LEGEND**

**PHANEROZOIC**  
**CENOZOIC**  
 QUATERNARY  
 PLEISTOCENE AND RECENT  
 Clay, sand, gravel, fill

**PRECAMBRIAN**  
**LATE PRECAMBRIAN**  
 MAFIC INTRUSIVE ROCKS\*  
 12 Olivine diabase

**MIDDLE PRECAMBRIAN**  
 MAFIC INTRUSIVE ROCKS\*  
 11 Quartz diabase

**EARLY PRECAMBRIAN (ARCHEAN)**  
 MAFIC INTRUSIVE ROCKS\*  
 9 Diabase

**FELSIC INTRUSIVE ROCKS**  
 8 Unsubdivided  
 8a Quartz and/or labradorite porphyry  
 8b Pyroxene-hornblende  
 8c Hornblende-biotite-trondhjemite  
 8d Pyroxene monzonite  
 8e Contaminated mafic-rich zone associated with 8c  
 8f Perthynite granodiorite  
 8g Equigranular leucocratic granodiorite  
 8h Hornblende diorite, quartz diorite  
 8i Diorite, quartz diorite containing minor late igneous quartz

**METAMORPHOSED MAFIC INTRUSIVE ROCKS**  
 7 Unsubdivided  
 7a Gabbro  
 7b Quartz gabbro  
 7c Pyroxenitic gabbro

**METAMORPHOSED ULTRAMAFIC INTRUSIVE ROCKS**  
 5 Unsubdivided  
 5a Serpentinized dunite-carbonate  
 5b Serpentinized pyroxenite  
 5c Pyroxene-hornblende  
 5d Talc-magnesian alteration

**METAVOLCANICS AND METASEDIMENTS**  
 4 Unsubdivided  
 4a Massive flows  
 4b Tuff, lapilli-tuff  
 4c Schistose, scoriotic  
 4d Breccia  
 4e Rhyolite weathering  
 4f Carbonatized  
 4g Amphibolized

**CALC-ALKALIC METAVOLCANICS**  
 3 Unsubdivided  
 3a Massive flows  
 3b Pillowed flows  
 3c Amygdaloidal flows  
 3d Tuff, lapilli-tuff  
 3e Breccia  
 3f Shear zone  
 3g Carbonatized  
 3h Amphibolized  
 3i Chloritized

**THOLEIIC METAVOLCANICS**  
 2 Unsubdivided  
 2a Massive flows  
 2b Pillowed flows  
 2c Amygdaloidal flows  
 2d Metaclastic flows  
 2e Tuff, lapilli-tuff  
 2f Breccia  
 2g Amphibolized, epidote veined  
 2h Shear zone  
 2i Carbonatized  
 2n Dominantly Fe-tholeiitic composition  
 2m Dominantly Mg-tholeiitic composition

**KOMATIIC METAVOLCANICS**  
 1 Unsubdivided  
 1a Massive, polysaturated, serpentinized and/or carbonatized komatiite flows  
 1b Olivine spinel-textured peridotite komatiite flows  
 1c Massive basaltic komatiite flows  
 1d Pyroxene-spinel-textured basaltic komatiite flows  
 1e Pillowed flows  
 1f Carbonatized  
 1g Shear zone  
 1h Chloritized

**IF** Iron formation (subscripted O, S, and C denote whether the oxide, sulphide or carbonate carbonate respectively, is dominant)  
 Carbonatized rock of undetermined origin

**SYMBOLS**  
 Glacial drift  
 Small bedrock outcrop  
 Area of bedrock outcrop  
 Bedding, top unknown (inclined, vertical)  
 Bedding, top (arrow) from gran production (inclined, vertical, overturned)  
 Lava flow, top (arrow) from pillows shape and packing (good, poor)  
 Lava flow, top (arrow) from variation in size of coarse clasts forming spangle texture or from inclined and fractured  
 Foliation (horizontal, inclined, vertical)  
 Lineation with plunge

**METAL AND MINERAL REFERENCES**  
 Ag Silver  
 Al Aluminite  
 Au Gold  
 Cu Copper  
 Zn Zinc  
 mgst Magnetite  
 Ni Nickel  
 Pb Lead  
 Lc Lead  
 talc Talc

**MINERAL PRODUCTION AND RESOURCES**  
 Economic geology  
 Gold: Ferguson et al. (1968) have given a comprehensive description of the gold-bearing veins and mines of Tisdale Township, and Carman (1967) of the mines and prospects north of the DeLoro-Porcupine Fault. Most of the auriferous quartz veins tend to be along well-defined faults, and most are in close proximity to areas of quartz-hellgraben porphyry (Ferguson et al. 1968).  
 Copper: A copper ore body (6 million tons, 0.7 percent copper) (Pyle and Middleton 1970) occurs in a sub-arcuate (from 1080 quartz-hellgraben porphyry on the property of McIntyre Gold Mines Limited in south central Tisdale Township. The ore zone consists of a number of steeply plunging ore shoots in a zone 300 feet (91 meters) wide and 1200 feet (365 meters) long. The porphyry is extensively sheared and sectioned and contains abundant copper and silver in and around the ore zones. Mineralization consists mainly of chalcocite and bornite.  
 Nickel: Locally, large bodies of ultramafic rocks have been replaced by carbonates, minor talc and quartz. The large bodies of magnetite-bearing ultramafic rocks in the area may also contain substantial quantities of magnetite.  
 Nickel: The Langmuir Property Nickel Mine of Noranda Mines Limited was brought into production in 1973. The ore zone occupies about 30 feet (9 meters) thick and occurs at the base of a medium-grained serpentinized peridotite about 200 feet (60 meters) thick. Massive sulphide mineralization tends to occupy depressions at the base of the serpentine and is overlain by a thick of disseminated sulphide mineralization. Footwall rocks consist of massive argillite and greenstone. One mineralization consists of both pentlandite and magnetite, the latter being most abundant at the northern end of the ore body where the footwall rocks are ultramafic rather than argillite.  
 The general stratigraphic interval at which the Langmuir Property ore zone is located is approximately the same interval at which the McArthur Deposit and Hart Deposit are located (Pyle and Middleton 1970). That is, at or near the base of the second volcanic cycle in the area, as defined approximately by the cessation of intramagmatic felsic volcanism with associated iron formation development and the onset of ultramafic volcanism. This contact can be traced intermittently around much of the southern part of the Shaw Dome. Recently, a promising a useful guide for exploration. This is also the same stratigraphic interval at which the Timmins Mine occurs in Barlett and Galkie Townships (Pyle 1973).  
 Asbestos: Narrow veins of asbestos occur in both the intrusive and ultramafic rocks, but are invariably best developed in the former. In general, the relationship seems to be true throughout the Timmins-Kilgus Lake area, as both the Timmins Mine (1972) and the Murrin Mine (Slatery 1961) occur in intrusive sill-like bodies of ultramafic rocks. The limited production from the Timmins area has all been from the intrusive sills in central Deloro Township.

**PRODUCTION MINES**  
 Asarco Gold Mines Ltd. Au, Ag  
 1. Asarco mine Au, Ag  
 2. Shaw mine Au, Ag, Cu  
 3. Noranda mine Ni  
 4. Farnum Porcupine Mine Ltd. Au, Ag, Cu  
 5. McIntyre mine Au, Ag, Cu

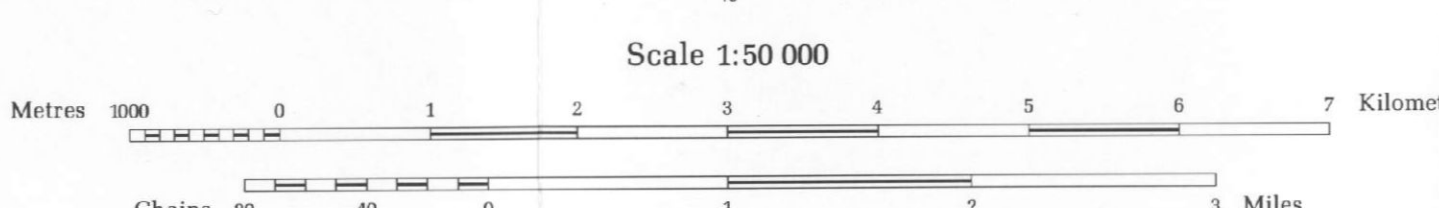
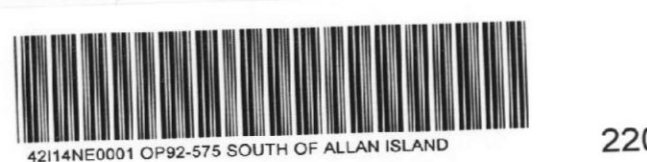
**PAST PRODUCING MINES**  
 Associated Porcupine Mines Ltd. Au, Ag  
 6. Galkie Lake mine Au, Ag  
 7. Porcupine-Plymouth mine Au, Ag  
 8. Noranda mine Au, Ag, Cu  
 9. Farnum mine Au, Ag, Cu  
 10. Farnum mine Au, Ag, Cu  
 11. Carleton Place mine Au, Ag  
 12. Viper mine Au, Ag  
 13. Noranda mine Au, Ag, Cu  
 14. Noranda mine Au, Ag, Cu  
 15. Farnum mine Au, Ag, Cu  
 16. DeSelle mine Au, Ag  
 17. Porcupine Lake mine Au, Ag  
 18. Porcupine mine Au, Ag  
 19. Murrin mine Au, Ag  
 20. New York mine Au, Ag  
 21. Noranda mine Au, Ag, Cu  
 22. Chisholm mine Au, Ag

**SOURCES OF INFORMATION**  
 Geology from published maps of the Division of Mines, unpublished maps and reports of mining companies, and supplementary mapping by D. R. Pyle and assistants, 1972.  
 Geology is not tied to surveyed areas.

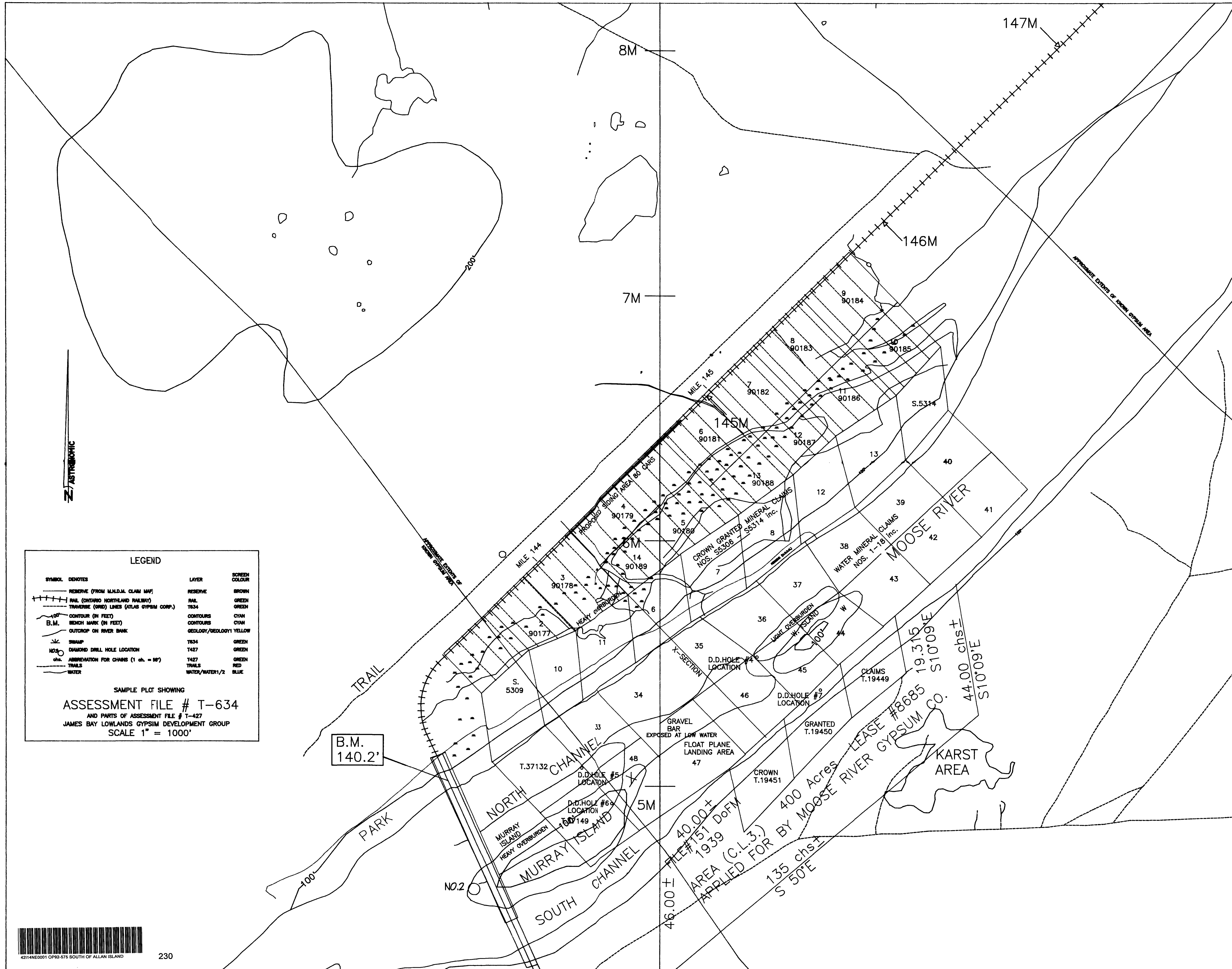
**Assessment files, Ministry of Natural Resources**  
 Base map derived from maps of the Forest Resources Inventory, Ontario Division of Lands.  
 Cartography by C. A. Harris and assistants, Surveys and Mapping Branch, 1981.  
 Magnetic declination in the area was approximately 5° W 1972.

**Information from this publication may be quoted if credit is given to the Ontario Division of Mines. It is recommended that reference to this map be made in the following form:**  
 Pyle, D. R.  
 1982. Timmins Area, Ontario Geological Survey Map 2455, Synoptic Series, scale 1:50 000. Geology and comparative maps.

**GEOLOGICAL MAP COVERAGE**  
 Detailed mapping scales 1" to 1/4" mile 1" to 1/2 mile  
 Semi-detailed and reconnaissance mapping scales 1" to 1/2 mile 1" to 2 miles



TOWNSHIP	DETAILED MAPPING	SEMI-DETAILED AND RECONNAISSANCE MAPPING
MOUNTJOY	1" to 1/4" mile	1" to 1/2 mile
TISDALE	1" to 1/4" mile	1" to 1/2 mile
WHITNEY	1" to 1/4" mile	1" to 1/2 mile
CODY	1" to 1/4" mile	1" to 1/2 mile
OGDEN	1" to 1/4" mile	1" to 1/2 mile
DELORO	1" to 1/4" mile	1" to 1/2 mile
ADAMS	1" to 1/4" mile	1" to 1/2 mile
SHAW	1" to 1/4" mile	1" to 1/2 mile
CARMAN	1" to 1/4" mile	1" to 1/2 mile
PRICE	1" to 1/4" mile	1" to 1/2 mile
ADAMS	1" to 1/4" mile	1" to 1/2 mile
ELDERADO	1" to 1/4" mile	1" to 1/2 mile
LANGMUIR	1" to 1/4" mile	1" to 1/2 mile
FRIPP	1" to 1/4" mile	1" to 1/2 mile
MCARTHUR	1" to 1/4" mile	1" to 1/2 mile
DOUGLAS	1" to 1/4" mile	1" to 1/2 mile
FALLON	1" to 1/4" mile	1" to 1/2 mile

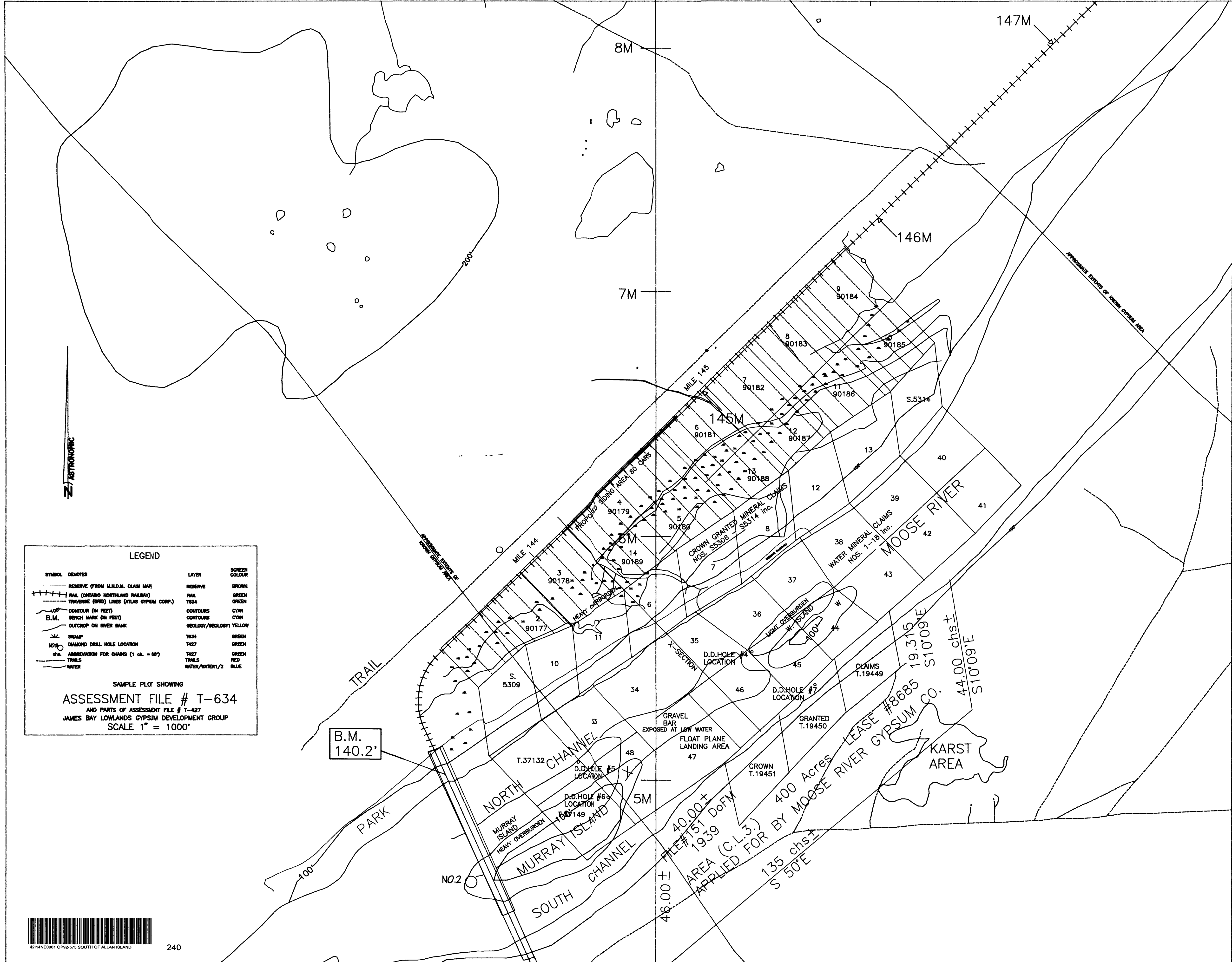


**LEGEND**

SYMBOL	NOTES	LAYER	SCREEN COLOUR
--- (dashed line)	RESERVE (FROM M.L.D.M. CLAIM MAP)	RESERVE	BROWN
--- (solid line)	RAIL (ONTARIO NORTHLAND RAILWAY)	RAIL	GREEN
--- (dotted line)	TRaverse (GRID) LINES (ATLAS GYPSUM CORP.)	T834	GREEN
--- (solid line)	CONTOUR (IN FEET)	CONTOURS	CYAN
--- (dotted line)	BENCH MARK (IN FEET)	CONTOURS	CYAN
--- (solid line)	OUTCROP ON RIVER BANK	GEOLOGY/GEOLOGY 1	YELLOW
--- (solid line)	SWAMP	T834	GREEN
--- (solid line)	DIAMOND DRILL HOLE LOCATION	T427	GREEN
--- (solid line)	Abb. ABBREVIATION FOR CLAIMS (1 ch. = 10')	T427	GREEN
--- (solid line)	TRAILS	TRAILS	RED
--- (solid line)	WATER	WATER/WATER 1/2	BLUE

**SAMPLE PLOT SHOWING**  
**ASSESSMENT FILE # T-634**  
 AND PARTS OF ASSESSMENT FILE # T-427  
 JAMES BAY LOWLANDS GYPSUM DEVELOPMENT GROUP  
 SCALE 1" = 1000'





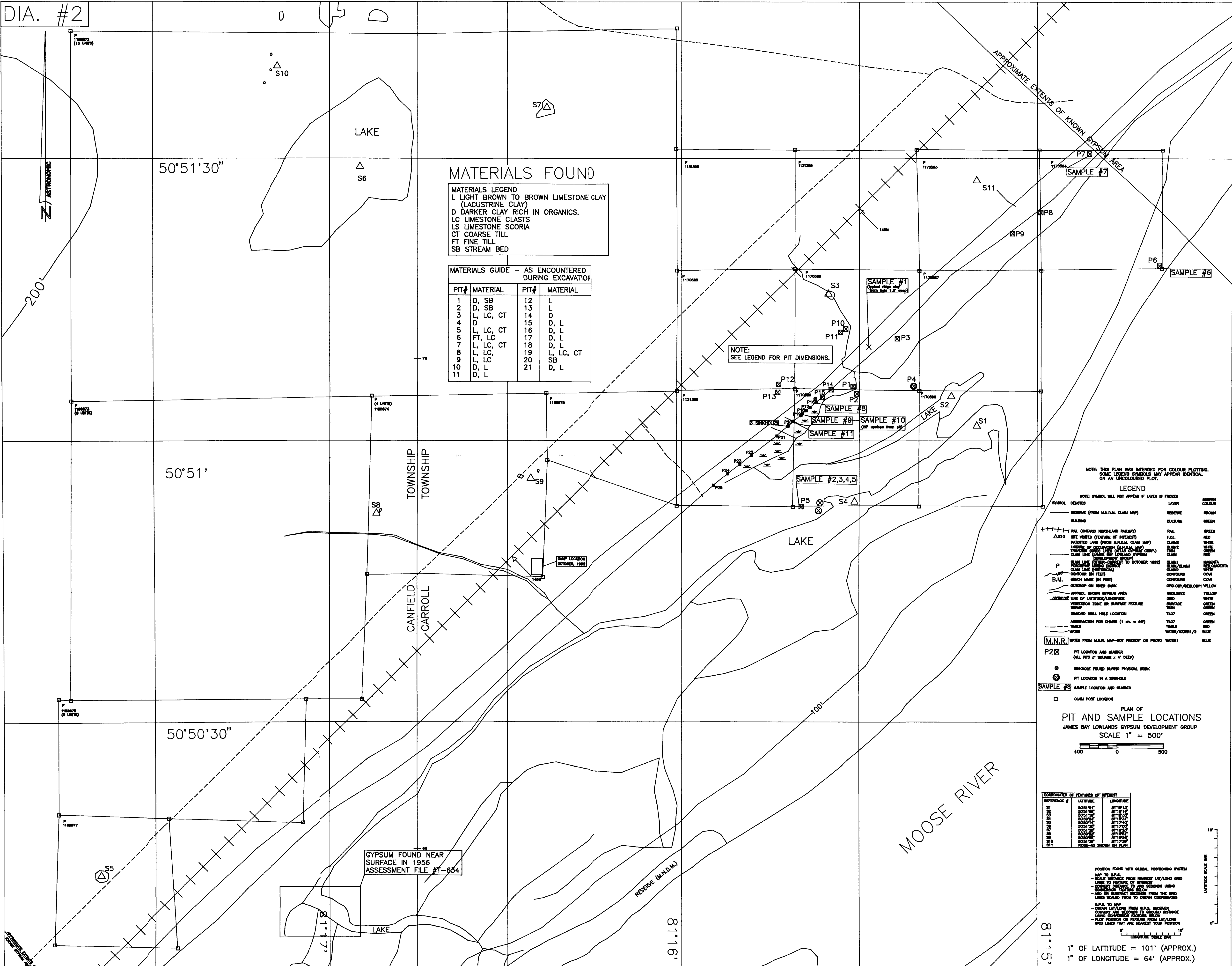
**LEGEND**

SYMBOL	DENOTES	LAYER	SCREEN COLOUR
---+---	RESERVE (FROM M.L.D.M. CLAIM MAP)	RESERVE	BROWN
---	RAIL (ONTARIO NORTHLAND RAILWAY)	RAIL	GREEN
---	TRANSVERSE (GRID) LINES (ATLAS GYPSUM CORP.)	T834	GREEN
---	CONTOUR (IN FEET)	CONTOURS	CYAN
---	B.M. BENCH MARK (IN FEET)	CONTOURS	CYAN
---	OUTCROP ON RIVER BANK	GEOLOGY/SEDIMENT	YELLOW
---	SWAMP	T834	GREEN
---	DIAMOND DRILL HOLE LOCATION	T427	GREEN
---	Abbreviation for CHANS (1 ch. = 80')	T427	GREEN
---	TRAILS	TRAILS	RED
---	WATER	WATER/WATER 1/2	BLUE

SAMPLE PLOT SHOWING  
**ASSESSMENT FILE # T-634**  
 AND PARTS OF ASSESSMENT FILE # T-427  
 JAMES BAY LOWLANDS GYPSUM DEVELOPMENT GROUP  
 SCALE 1" = 1000'



DIA. #2



### MATERIALS FOUND

**MATERIALS LEGEND**  
 L LIGHT BROWN TO BROWN LIMESTONE CLAY (LACUSTRINE CLAY)  
 D DARKER CLAY RICH IN ORGANICS.  
 LC LIMESTONE CLASTS  
 LS LIMESTONE SCORIA  
 CT COARSE TILL  
 FT FINE TILL  
 SB STREAM BED

### MATERIALS GUIDE - AS ENCOUNTERED DURING EXCAVATION

PIT #	MATERIAL	PIT #	MATERIAL
1	D, SB	12	L
2	D, SB	13	L
3	L, LC, CT	14	D
4	D	15	D, L
5	L, LC, CT	16	D, L
6	FT, LC	17	D, L
7	L, LC, CT	18	D, L
8	L, LC	19	L, LC, CT
9	L, LC	20	SB
10	D, L	21	D, L
11	D, L		

NOTE: SEE LEGEND FOR PIT DIMENSIONS.

NOTE: THIS PLAN WAS INTENDED FOR COLOUR PLOTTING. SOME LEGEND SYMBOLS MAY APPEAR IDENTICAL ON AN UNCOLOURED PLOT.

**LEGEND**

NOTE: SYMBOL WILL NOT APPEAR IF LAYER IS FROZEN

SYMBOL	DESCRIPTION	LAYER	COLOR
(Symbol)	REMOVE FROM M.A.D.M. CLAIM MAP	REMOVE	BROWN
(Symbol)	BUILDING	CULTURE	GREEN
(Symbol)	RAIL (OTHER THAN RAILROAD)	RAIL	GREEN
(Symbol)	SEE VERTED FEATURE OF INTEREST	F.A.L.	RED
(Symbol)	PAVED LAND (FROM M.A.D.M. CLAIM MAP)	CLASSE	WHITE
(Symbol)	BOUNDARY OF COVEY (FROM M.A.D.M. CLAIM MAP)	CLASSE	WHITE
(Symbol)	TRAILWAY (FROM M.A.D.M. CLAIM MAP)	CLASSE	WHITE
(Symbol)	CLAM LINE (CLAM DEVELOPMENT GROUP)	CLASSE	GREEN
(Symbol)	CLAM LINE (CLAM DEVELOPMENT GROUP TO OCTOBER 1982)	CLASSE	GREEN
(Symbol)	PIT LOCATION AND NUMBER	PIT	RED
(Symbol)	WHOLE FOUND DURING PHYSICAL WORK	WHOLE FOUND	RED
(Symbol)	PIT LOCATION IN A BRICKLE	PIT LOCATION	RED
(Symbol)	SAMPLE LOCATION AND NUMBER	SAMPLE	RED
(Symbol)	CLAM POST LOCATION	CLAM POST	BLUE

**PLAN OF PIT AND SAMPLE LOCATIONS**  
 JAMES BAY LOWLANDS GYPSUM DEVELOPMENT GROUP  
 SCALE 1" = 500'

400 0 500

**COORDINATES OF FEATURES OF INTEREST**

REFERENCE #	LATITUDE	LONGITUDE
S1	50°51'0"	81°16'0"
S2	50°51'0"	81°16'0"
S3	50°51'0"	81°16'0"
S4	50°51'0"	81°16'0"
S5	50°51'0"	81°16'0"
S6	50°51'0"	81°16'0"
S7	50°51'0"	81°16'0"
S8	50°51'0"	81°16'0"
S9	50°51'0"	81°16'0"
S10	50°51'0"	81°16'0"
S11	50°51'0"	81°16'0"

POSITION GIVEN WITH GLOBAL POSITIONING SYSTEM MAP TO G.P.S.  
 - SCALE GIVEN FROM NEAREST LAT/LONG GRID  
 - LINE TO FEATURE OF INTEREST FROM  
 - COMMISSION FACTORS BELOW  
 - TO OR CONTACT NUMBER FROM THE GRID  
 - LINES SCALED FROM TO OBTAIN COORDINATES  
 - G.P.S. TO MAP  
 - CORRECT LAT/LONG FROM G.P.S. RECEIVER  
 - CORRECT AND REDUCE TO HORIZONTAL DISTANCE  
 - CORRECT POSITION ON FEATURE FROM LAT/LONG  
 - READ LINES THAT ARE NEAREST YOUR POSITION

1" OF LATITUDE = 101' (APPROX.)  
 1" OF LONGITUDE = 64' (APPROX.)

