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MID-NORTH ENGINEERING SERVICES LTD.

AIRBORNE RADIOMETRIC SURVEY

CONGER AND FREEMAN TOWNSHIPS

ONTARIO

INTRODUCTION

In June of 1975, Mid-North Engineering Services Ltd. carried out an airborne radiometric survey of some 95 square miles located in Conger and Freeman Townships, Eastern Ontario Mining Division. The purpose of the survey was to investigate the Moon River Syncline for radioactive mineral occurrences. The survey was done in June of 1975.

This report is based on the following sources of information.

1. Geological Report 52, Geology & Mineral Deposits of the Parry Sound - Huntsville Area by D.F. Hewitt, published in 1967 by the Ontario Ministry of Natural Resources.
2. The results of the airborne survey herein described.
3. The writer has not made a ground examination of the area herein reported. I have observed the Moon River Syncline from the air and I have examined and explored a number of mineral occurrences in the general area. It is my opinion that a ground examination of these claims would be time consuming and serve no useful purpose.

LOCATION AND ACCESS

The area surveyed adjoins the town of MacTier which is the main point of departure for the survey area. The area

WILLOWDALE ONTARIO
NOVEMBER 25, 1975

HARPER CONSULTING SERVICES INC.

surveyed is large and access to any particular section may require considerable travel time by vehicle, boat, and walking. Cross-country travel in summer is greatly hindered by the numerous large wet beaver swamps.

The area surveyed covers roughly the eastern half of Conger and Freeman Townships, Eastern Ontario Mining Division.

HISTORY

The general area around Parry Sound was actively prospected prior to the turn of the century. Most of this work was concentrated in the non-granitic areas where the metals sought were gold and copper.

The Moon River Syncline has been known for many years for it is readily observable from aircraft on the scheduled services between Toronto and Sudbury. Circa 1950-1955 parts of the area were prospected for radioactive minerals. There is no mining history of import in the area surveyed.

GENERAL GEOLOGY

The general geology of the area is adequately covered in Geological Report 52 published by the Ontario Ministry of Natural Resources.

Lithologically the entire area is underlain by a thick sequence of hornblende migmatites which have been granitized. Locally granitization has advanced to an extreme degree. All original primary rock structures have been eliminated by the metamorphic and the granitization processes and what remains is

chiefly a series of irregularly banded amphibolites and granitic rocks. Locally pegmatitic phases are also present.

STRUCTURAL GEOLOGY

From the exploration viewpoint, the attractive feature of the area is the huge Moon River Syncline. This structural feature is of the order of 8 miles in width and over 20 miles long. The syncline plunges southeasterly. Dip angles vary from about 20 to 70 degrees with the southwesterly limb showing the steeper dips. On the north limb some of the dip angles pass through the vertical plane indicating the existence of secondary folds.

ECONOMIC GEOLOGY

Relatively few mineral deposits have been reported from the area surveyed and most of these are located in the northeast corner. The known mineral deposits were test pitted many years ago for feldspar but more recent examinations have indicated the presence of some uranium and thorium.

SURVEY RESULTS AND INTERPRETATION

The survey results are plotted on the accompanying map in a manner that permits their instant evaluation as to the intensity of the radioactive sections and their correlation with the air photographs published by the Ontario Government. All radiometric indications $1\frac{1}{2}$ times background count or greater are shown.

BLOCK A

This is the largest block of claims in the area. It shows an appreciable concentration of radiometric anomalies first, in the area from which occurrences of feldspar, uranium, and thorium are reported and second, from an area south of the above and in the vicinity of Gordon Bay near Highway 69. This second area shows more zones of strong radioactivity ^{than} ~~in~~ the area which is known to contain some uranium and thorium occurrences. The central and western portions of Block A seem uninteresting.

BLOCK B-1

The western portion of Block B-1 has several radioactive anomalies which are particularly interesting as these occur near the nose of the Moon River Syncline.

BLOCK B-2

This block is of interest for reasons closely akin to those expressed for Block B-1. However, the radiometric responses are more numerous and stronger. Furthermore, they have a crude tendency to "line up" conformably with the limb structure of the Moon River Syncline.

BLOCK B-3

This block has a concentration of radiometric highs near its centre but none seem to line up with the strike of the formations. This may be due to the fact that on this particular part of the Moon River Syncline the strike of the formations tend to parallel the survey flight lines.

BLOCK D-1

Only two zones of relatively low intensity were located in this block.

BLOCK C-2

There is a definite concentration of anomalies near the centre of this block. The concentration occurs along the Moon River near a point where the river is offset by what appears to be a cross fault structure. Since the Moon River appears to follow a fault structure which is conformable with the southwest limb of the Moon River Syncline it appears that the radioactive anomalies occur adjacent to the intersection of two faults.

BLOCK C-3

A group of radiometric anomalies occur in the east central portion of this block. Map^P 2118 suggests the presence of a weak cross-fold structure in the general vicinity of the anomalies. This possibility can be investigated with precision by air photograph studies.

BLOCK E-1

A peak response is centrally located on this block.

BLOCK E-2

This block, like Block E-3, is located near the trace of the axis of the Moon River Syncline.

A zone of above normal radioactivity has a distinct N45E trend through the northern part of the claim group. Two responses of peak intensity are associated with this trend.

Wood North Engineering Services Ltd -
A 22041

Block A - 297 claims

Claim No	Days of work	Claim No	Days of Work
EO 389 396	24.2	EO 418 799	24.2
397	24.2	800	24.2
398	24.2	801	24.2
399	24.2	802	24.2
400	24.2	803	24.2
401	24.2	804	24.2
		805	24.2
EO 389 558	24.2	806	24.2
559	24.2		
560	24.2	EO 418 813	24.2
561	24.2		
562	24.2	EO 426 366	24.2
563	24.2	367	24.2
		368	24.2
EO 373 999	24.2	369	24.2
4000	24.2	370	24.2
4001	24.2	371	24.2
EO		372	24.2
EO 402 219	24.2	373	24.2
220	24.2	374	24.2
221	24.2	375	24.2
222	24.2	376	24.2
		377	24.2
EO 454 493	24.2	378	24.2
494	24.2	379	24.2
495	24.2	380	24.2
496	24.2	381	24.2
497	24.2	382	24.2
498	24.2	383	24.2
499	24.2	384	24.2
		385	24.2
EO 454 332	24.2	386	24.2
333	24.2	387	24.2
334	24.2	388	24.2
335	24.2	389	24.2
336	24.2	390	24.2
337	24.2	391	24.2
338	24.2	392	24.2
339	24.2	393	24.2
		394	24.2
EO 414 225	24.2	395	24.2
226	24.2	396	24.2
		397	24.2
EO 402 896	24.2	398	24.2
897	24.2	399	24.2
		400	24.2
EO 402 823	24.2	401	24.2
824	24.2	402	24.2
		403	24.2
EO 402 875	24.2	404	24.2
876	24.2	405	24.2
877	24.2		
		49	
EO 374 002	24.2		
003	24.2		
004	24.2		

Block A - 297 claims

Claim No.	Days of Work.	Claim Nos	Days of Work
EO 418 818	24.2	EO 426 360	24.2
819	24.2	361	24.2
820	24.2	362	24.2
821	24.2	363	24.2
822	24.2	364	24.2
823	24.2	365	24.2
824	24.2		
825	24.2	EO 437 516	24.2
826	24.2	517	24.2
827	24.2	518	24.2
828	24.2	519	24.2
829	24.2	520	24.2
830	24.2	521	24.2
831	24.2	522	24.2
832	24.2	523	24.2
833	24.2	524	24.2
834	24.2	525	24.2
835	24.2	526	24.2
836	24.2	527	24.2
837	24.2	528	24.2
838	24.2	529	24.2
		530	24.2
EO 426 326	24.2	531	24.2
327	24.2	531	24.2
328	24.2	532	24.2
329	24.2	533	24.2
330	24.2	534	24.2
331	24.2	535	24.2
332	24.2	536	24.2
333	24.2	537	24.2
334	24.2	538	24.2
335	24.2	539	24.2
336	24.2	540	24.2
337	24.2	541	24.2
338	24.2	542	24.2
339	24.2	543	24.2
340	24.2	544	24.2
341	24.2	545	24.2
342	24.2	546	24.2
343	24.2	547	24.2
344	24.2	548	24.2
345	24.2	549	24.2
346	24.2	550	24.2
347	24.2	551	24.2
348	24.2	552	24.2
349	24.2	553	24.2
350	24.2	554	24.2
351	24.2	555	24.2
352	24.2	556	24.2
353	24.2	557	24.2
354	24.2		
355	24.2		
356	24.2		
357	24.2		
358	24.2		
359	24.2		

Block A - 297 claims.

Claim Nos	Days of Work	Claim Nos	Days of Work
EO 411957	24.2	EO 426448	24.2
958	24.2	449	24.2
959	24.2	450	24.2
960	24.2	451	24.2
961	24.2	452	24.2
962	24.2	453	24.2
963	24.2	454	24.2
964	24.2	EO 426466	24.2
965	24.2	467	24.2
966	24.2	468	24.2
967	24.2	469	24.2
968	24.2	470	24.2
969	24.2	471	24.2
970	24.2	472	24.2
971	24.2	473	24.2
EO 426455	24.2	474	24.2
456	24.2	475	24.2
457	24.2	476	24.2
458	24.2	477	24.2
459	24.2	478	24.2
460	24.2	479	24.2
461	24.2	480	24.2
462	24.2	481	24.2
463	24.2	482	24.2
464	24.2	483	24.2
EO 426416	24.2	484	24.2
417	24.2	485	24.2
418	24.2	486	24.2
419	24.2	487	24.2
420	24.2	488	24.2
421	24.2	489	24.2
422	24.2	490	24.2
423	24.2	491	24.2
424	24.2	492	24.2
425	24.2	493	24.2
426	24.2	494	24.2
427	24.2	495	24.2
428	24.2	496	24.2
429	24.2	497	24.2
430	24.2	498	24.2
431	24.2	499	24.2
432	24.2	500	24.2
433	24.2	EO 437501	24.2
437	24.2	502	24.2
438	24.2	503	24.2
439	24.2	504	24.2
440	24.2	505	24.2
441	24.2	506	24.2
442	24.2	507	24.2
443	24.2	508	24.2
444	24.2	509	24.2
445	24.2	510	24.2
446	24.2	511	24.2
447	24.2	512	24.2
		513	24.2
		514	24.2
		515	24.2

J. H Forbes
K 18275

Block B-1

Claim Nos

14

Days of
Work.

EO

441 716

717

718

719

720

721

722

723

724

725

726

727

728

729

J. H. Forbes
K 18275

Block B-2

Claim Nos	Days of Work	24 Claims
E0 441746	26.6	
747	26.6	
748	26.6	
749	26.6	
750	26.6	
751	26.6	
752	26.6	
753	26.6	
754	26.6	
755	26.6	
756	26.6	
757	26.6	
758	26.6	
759	26.6	
760	26.6	
761	26.6	
762	26.6	
763	26.6	
764	26.6	
765	26.6	
766	26.6	
767	26.6	
768	26.6	
769	26.6	

J. Forbes
K18275

37 Claims
Block B-3

Claim Nos	Days of Work
EO 429351	26.4
352	26.4
353	26.4
354	26.4
355	26.4
356	26.4
357	26.4
358	26.4
359	26.4
360	26.4
361	26.4
EO 441 770	26.4
771	26.4
772	26.4
773	26.4
774	26.4
775	26.4
776	26.4
777	26.4
778	26.4
779	26.4
780	26.4
781	26.4
782	26.4
783	26.4
784	26.4
785	26.4
786	26.4
787	26.4
788	26.4
789	26.4
790	26.4
791	26.4
792	26.4
793	26.4
794	26.4
795	26.4

C. P. Forbes
K 18293

Block C-2

Claim No	Days of Work	56 Claims
EO 441636	23.2	
637	23.2	
638	23.2	
639	23.2	
640	23.2	
641	23.2	
642	23.2	
643	23.2	
644	23.2	
645	23.2	
646	23.2	
647	23.2	
648	23.2	
649	23.2	
650	23.2	
651	23.2	
652	23.2	
653	23.2	
654	23.2	
655	23.2	
656	23.2	
657	23.2	
658	23.2	
659	23.2	
660	23.2	
661	23.2	
662	23.2	
663	23.2	
664	23.2	
665	23.2	
666	23.2	
667	23.2	
668	23.2	
669	23.2	
670	23.2	
671	23.2	
672	23.2	
673	23.2	
674	23.2	
675	23.2	
676	23.2	
677	23.2	
678	23.2	
679	23.2	
680	23.2	
681	23.2	
682	23.2	
683	23.2	
684	23.2	
685	23.2	
686	23.2	
687	23.2	
688	23.2	
689	23.2	
690	23.2	
691	23.2	

C. P. Forbes
K 18293

Block C-3
21 Claims

Claim Nos	Days of Work.
E0 441692	23.8
693	23.8
694	23.8
695	23.8
696	23.8
697	23.8
698	23.8
699	23.8
700	23.8
701	23.8
702	23.8
703	23.8
704	23.8
705	23.8
706	23.8
707	23.8
708	23.8
709	23.8
710	23.8
711	23.8
712	23.8

Mincer
A 41307

Block D-1

Claim Nos

Days of
Work.

15 claims

EO 454 493 27.5
494
495
496
497
498
499

EO 454 332
333
334
335
336
337
338
339

Block E-1 Joe Kakish A 39165

	Claim Nos	Days of Work	
EO	460 923	24	4 claims
	460 924	24	
	460 925	24	
	460 926	24	

Block E-2 - J Kakish A 39165

	Claim Nos	Days of Work	
EO	460 915	27	4 claims
	460 916	27	
	460 917	27	
	460 918	27	

Block E-3 - J Kakish A 39165

	Claim Nos	Days of Work	
EO	460 919	34	4 claims
	460 920	34	
	460 921	34	
	460 922	34	



Copy II

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

Type of Survey(s) Radiometric
 Township or Area Conger & Freeman Twp.
 Claim Holder(s) variable. see lists
 Survey Company Edward T. Blanchard - Sudbury
 Author of Report E. G. Hooper, P.Eng.,
 Address of Author 314 Hendon Avenue,
Willowdale, Ontario
 Covering Dates of Survey from 7/1975 to Nov 17/75
M2M 1B2 (linecutting to office)
 Total Miles of Line Cut N/A

MINING CLAIMS TRAVERSED
List numerically

see attached lists
(prefix) (number)

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 _____
 Geochemical _____

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

Magnetometer _____ Electromagnetic _____ Radiometric see list.
(enter days per claim)

DATE: Nov 17/75 SIGNATURE: H. G. Hooper
Author of Report or Agent

Res. Geol. L.D. Qualifications 63-1058

Previous Surveys

File No.	Type	Date	Claim Holder
2.110	Radiometric	1970	Richore Gold Mines
2.148	Radiometric	1970	" "

TOTAL CLAIMS 489

If space insufficient, attach list

OFFICE USE ONLY

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) Radiometric

Instrument(s) Shorpe GIS-2 Ser # 801128 - Sensor Probe Type ASP-5

(specify for each type of survey)

Accuracy Eastline Argus Type AW 1400 Ω Recorder.

(specify for each type of survey)

Aircraft used Cessna 180 PKL Instrument Constant: 2 cps.

Sensor altitude 300'

Navigation and flight path recovery method Air Photos w/ tie to topo features.

Aircraft altitude 300' Line Spacing 1/8 mile

Miles flown over total area 865 Over claims only 310

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations N/A Number of Readings Continuous
Station interval N/A Line spacing 1/8 mile (approx 660')
Profile scale N/A
Contour interval N/A

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

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

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

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

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____