

42A09SE0006 2.8855 MUNRO

REPORT ON

AIRBORNE GEOPHYSICAL SURVEYS

IN

MUNRO TOWNSHIP

ONTARIO

FOR

GLEN MULLAN

BY

H. FERDERBER GEOPHYSICS

DECEMBER 15, 1985

FENTON SCOTT, P. ENG.

INTRODUCTION

An airborne geophysical survey was carried out over a claim group in Munro Township, Cochrane District of Ontario, by H. Ferderber geophysics.

Data was collected on VLF and magnetometer responses. The survey was flown from a base at Rouyn, Quebec. The portion of the survey over the 15 Mullan claims was 12 miles.

PURPOSE OF SURVEY

The survey was designed to provide data which would:

- 1. Permit an interpretation of geological structures through recording variations in the magnetic mineral content of the formations underlying the survey area.
- 2. Identify potentially economic mineral concentrations which may have marked variations in accessory magnetic minerals.
- 3. Identify linear structures, such as major shear zones, which may result in current concentrations of VLF-signals. Such structures may contain economic minerals, notably precious metals.
- 4. Identify shallow, potentially valuable metallic sulfide deposits whose lower electrical resistances give resultant secondary VLF-EM fields.

SURVEY AREA

The survey covered asclaim block in Munro Township, Larder Lake Mining Division, Ontario. The 15 unpatented mining claims included in the survey are shown on the map attached.

EQUIPMENT

The aircraft used in this survey was a Cessna 172 owned and operated by H. Ferderber Geophysics. The sensors for geophysical data were mounted in modified wing tip installations.

Magnetometer The instrument used was a GEM GSM - 18 BA proton precession type. The sensitivity of the device was set at 2 gammas at a 1 second sampling rate. Analogue was recorded on paper on-board.

<u>VLF - EM System</u> The instrument used was a Herz Totem 1 A. The total field and vertical resultant field was recorded on analogue tape. The transmitter station for this survey was Seattle, Washington, at a frequency of 24.8 kiloherz. The system was accurate to 1%.

SURVEY METHOD

The aircraft was flown at a terrain clearance of 250 feet. Navigation consisted of reference to an air mosaic, with manual fiducials recorded on the mosaic simultaneously with the geophysical tapes.

Line direction was North-South, and line spacing was 1/12 mile (440 feet).

DATA PRESENTATION

Flight lines, fiducial points, and geophysical responses are shown on the attached maps at a scale of 1/15, 840 (quartermile). These maps also show the outlines of the claim group, together with enough claim numbers to permit identification.

Magnetic Contour Maps Correction of the aeromagnetic data for diurnal variation was by reference to a cross-line. The corrected profiles were then reduced to appropriate field strength intervals, and presented as contours at 20 gamma intervals.

<u>VLF - EM Maps</u> The axes of conductivity were selected on each analogue tape, and transferred to the mosaics with reference to fiducial points. These axes are further discriminated between those conductors showing a variation in total field strength, and those whose position only relates to "crossover" points on the resultant vertical field geometry.

DISCUSSION OF RESULTS

<u>Magnetometer Survey</u> A number of discrete, medium amplitude magnetic highs trend generally northwest across the claim group. These highs are interspersed with a series of magnetic lows.

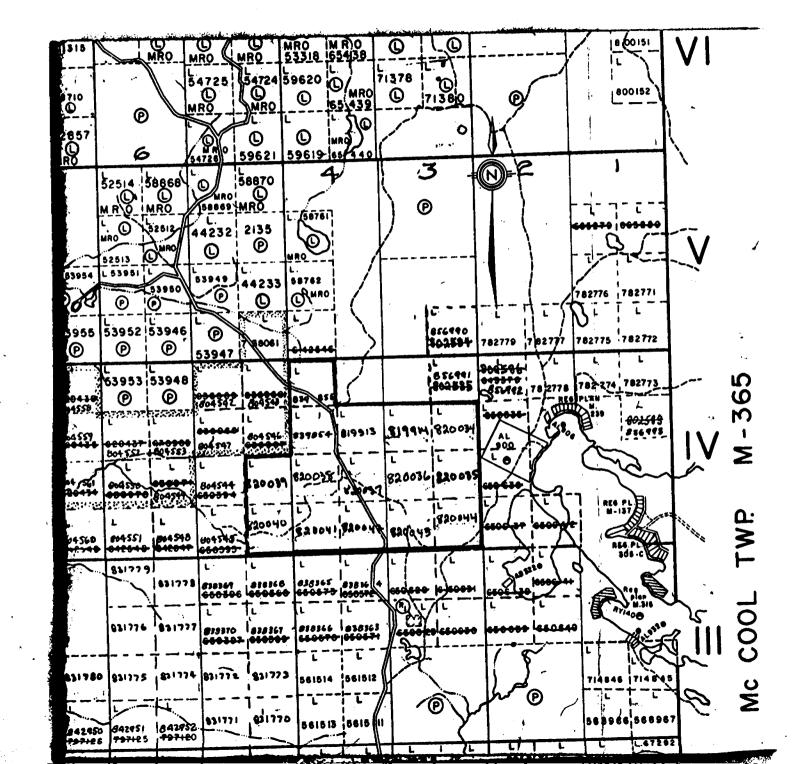
The variation is indicative of narrow magnetite concentrations in separate rock units at relatively shallow depths. The majority of these features are interpretated as smaller mafic bodies associated with the large Munro intrusive.

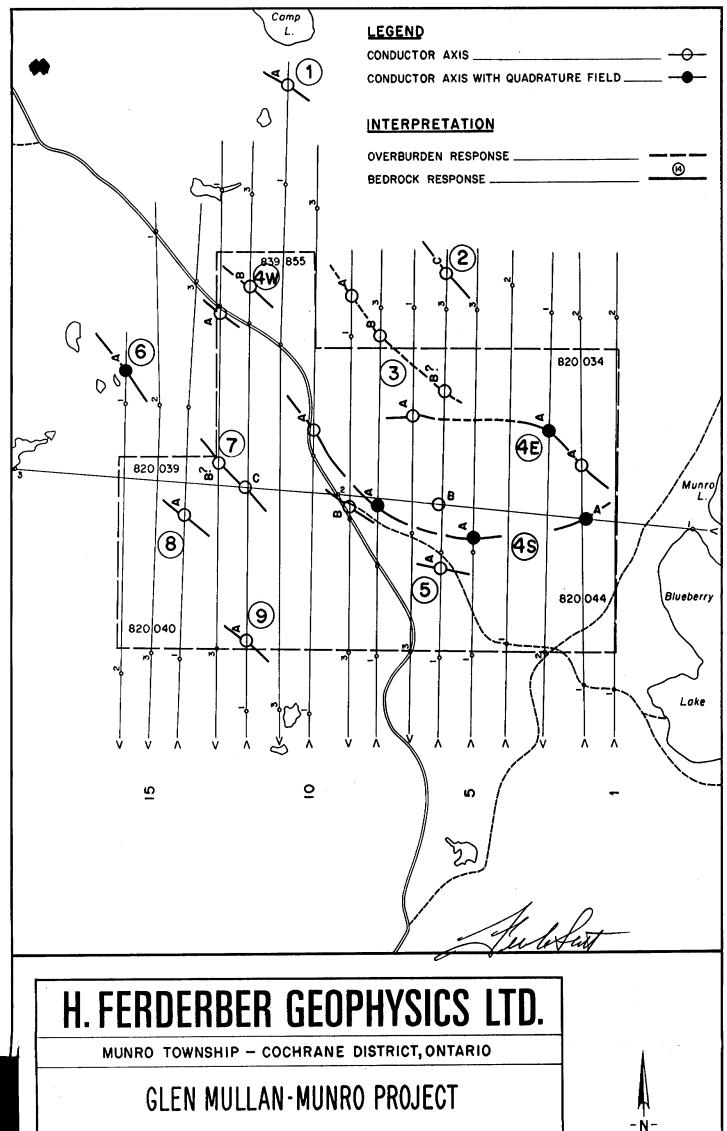
<u>VLF - EM Survey</u> The number of VLF conductor axes in the course of the survey suggest that the prevalent sand overburden at the edge of the Munro Esker is relatively thin at this location.

The majority of the VLF conductor axes are interpreted as related to bedrock features. These are described bellow.

- 1. Isolated, possibly overburden
- 2. Isolated
- 3. Volcanic rocks? Follows magnetic low
- 4W, 4E, 4S. These conductor axes coincide with a circular magnetic high. This magnetic high is related to the Munro basic and ultrabasic intrusive. Conductivity is interpreted as related to serpentinization, with a lower probability alternative of concentrations of sulfides
- 5. Isolated, flank of magnetic high
- 6. Isolated, magnetic
- 7. Isolated, on strike with magnetic low
- 8 & 9. Isolated

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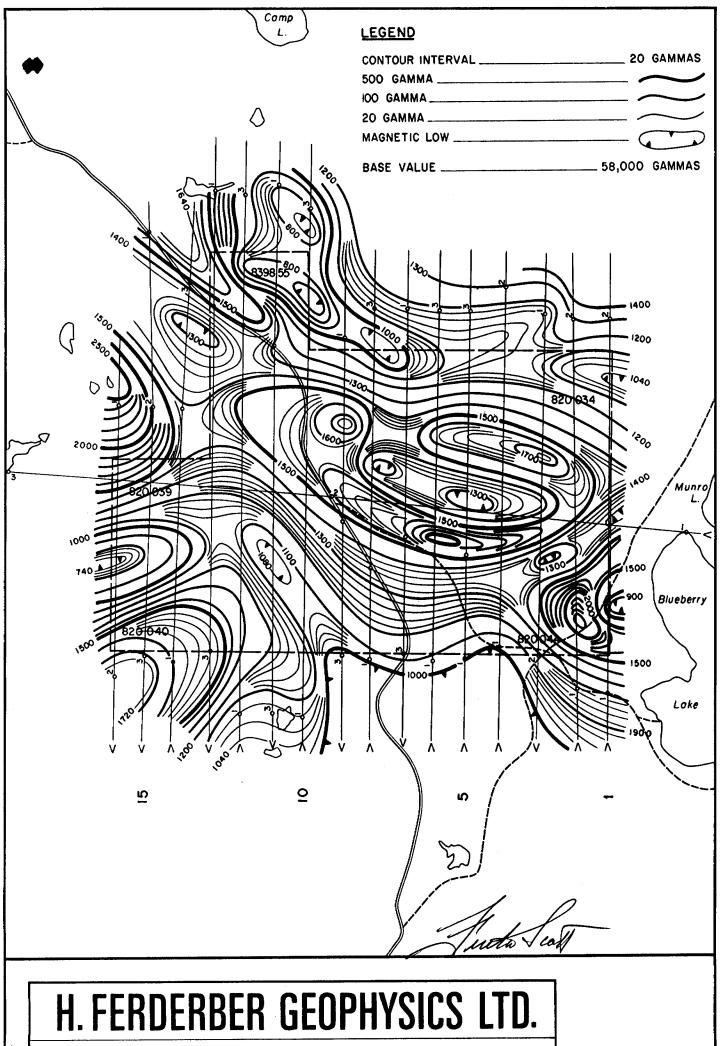




AIRBORNE V.L.F.-EM SURVEY

INTERPRETED BY: 42 A/9 DEC. 1985 . F. SCOTT PLATE 1٧

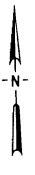
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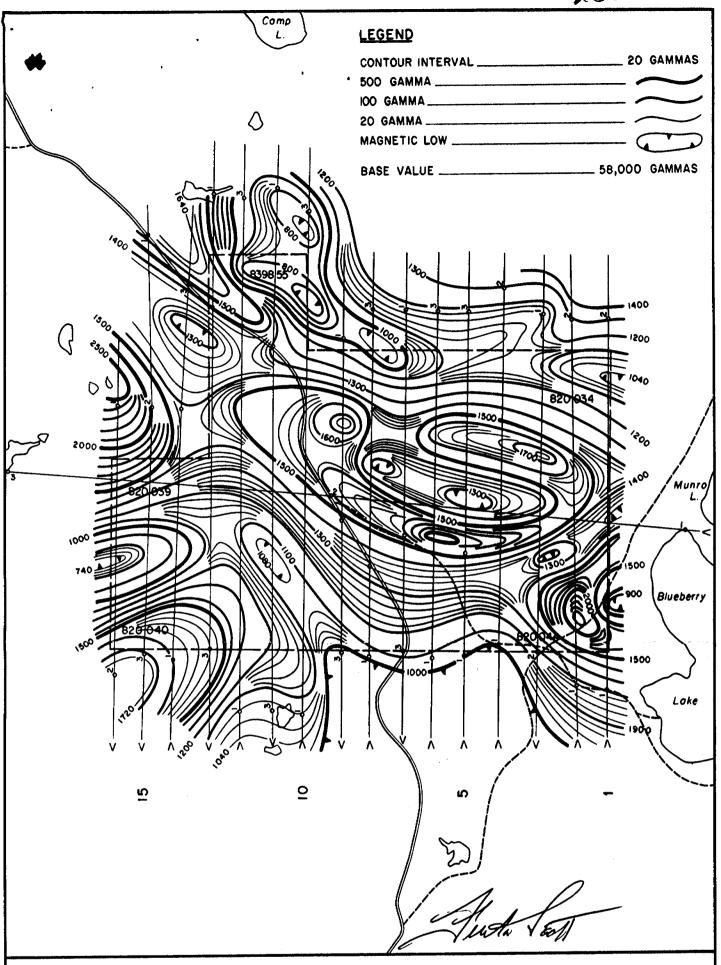


MUNRO TOWNSHIP - COCHRANE DISTRICT, ONTARIO

GLEN MULLAN-MUNRO PROJECT AIRBORNE MAGNETIC SURVEY

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SCALE:	1000	2000	3000	PLATE	1M		
F. SCOTT		42 A/9		DEC.	1985		
INTERPRETED BY:	N.T.S.		DATE:				



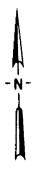


H. FERDERBER GEOPHYSICS LTD.

MUNRO TOWNSHIP - COCHRANE DISTRICT, ONTARIO

GLEN MULLAN-MUNRO PROJECT AIRBORNE MAGNETIC SURVEY

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F. SCOTT		42 A/9		DEC.	1985
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Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

37 8



The Mining

42409SE0006 2.8855 MUNRO

900

Type of Survey(s)	*				Township o	r Area		
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Name and Address of Author (of	f Geo-Technical report)				_			
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OFFICE USE ONLY

837 (5/79)



Ministry of Natural Resources

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

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

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			Township	
Claim Holde			•	MINING CLAIMS TRAVERSED List numerically
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Total Miles o			(linecutting to office)	L- 830035
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CREDITS			DAYS Geophysical per claim	FEOMB -1 &EOMB -1
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ENTER 20 additional same grid.	•		-Other	T-8900dl
			Geochemical	T- 8900A9
		Electromagn	ision credits do not apply to airborne surveys) netic 32 Radiometric	L-880043
DATE: 1986		(enter d	days per claim)	1-83029H
DATE		SIG111	Author of Report or Agent	
Res. Geol		Qualif	fications <u>63.1263</u>	
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				TOTAL CLAIMS 15
				TOTAL CLAIMS__

GEOPHYSICAL TECHNICAL DATA

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

1	Number of Stations		Numb	er of Readings	•
5	Station interval		Line s	pacing	•
	Profile scale			•	
(Contour interval				
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r al	Instrument				
Ħ	Accuracy - Scale constant	***			
MAGNETIC	Diurnal correction method				
X	Base Station check-in interval (I	10urs)			
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				•	
	Instrument	· · · · · · · · · · · · · · · · · · ·		•	
SNETIC	Coil configuration				***************************************
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ğ	Accuracy				
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E E	Frequency		(specify V.L.F. station		
꾀	Parameters measured				
	Instrument				
	Scale constant				
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RESISTIVE	 Integration time 				
X	Power				
•	Electrode array				
	Electrode spacing				
	Type of electrode				

INDUCED POLARIZATION

•	
SELF POTENTIAL	
Instrument	Range
Survey Method	
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Corrections made	
RADIOMETRIC	
Instrument	
Values measured	
Energy windows (levels)	
Height of instrument	Background Count
Size of detector	
Overburden	
(type, depth — include outcr	op map)
OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)	
Type of survey	
Instrument	
Accuracy	
Parameters measured	
Additional information (for understanding results)	
Traditional information (for understanding results)	
AIRBORNE SURVEYS	
Type of survey(s) DAIREDRIVE MAGNETIC + (2) AIRE	MRIVE V.L.F E.M.
Instrument(s) MAGNETIC SURVEY = GEM GEM VLF EVELEY = HERE (specify for each type of surv	
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Sensor altitude 850 FEET	
Navigation and flight path recovery method Navigation &	LA COLOROUS TO ALE HYSLAICS.
Marine Provided Simultaneous	
A A	Line Spacing HHO Feet (Vis Mile)
, m	Over claims only 12 Miles

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken	
Total Number of Samples	
Type of Sample(Nature of Material)	Values expressed in: per cent
Average Sample Weight.	p. p. m. 🖳
Method of Collection	p. p. v
	Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)
Soil Horizon Sampled	Others
Horizon Development	Field Analysis (tests
Sample Depth	Extraction Method
Terrain	Analytical Method
	Reagents Used
Drainage Development	Field Laboratory Analysis
Estimated Range of Overburden Thickness	
	Extraction Method
	Analytical Method
	Reagents Used
SAMPLE PREPARATION	Commercial Laboratory (tests
(Includes drying, screening, crushing, ashing)	Name of Laboratory
Mesh size of fraction used for analysis	Extraction Method
	Analytical Method
	Reagents Used
	General
General	General
<u> </u>	

Fenton Scott Management Inc.

17 Malabar Place, Don Mills, Ontario M3B 1A4 416-444-1717

RECEIVED

APR 1 0 1986

MINING LANDS SECTION

Ms Susan Hurst Mining lands Section Ministry of Northern Development and Mines Whitney Block, 6th Floor Queen's Park, Toronto, Ontario M7A 1W3

April 7, 1986

Dear Ms Hurst:

Your File: 2: 8855

As requested, I enclose the VLF plan (in duplicate) with the addition of the geometric factors.

Cordially yours,

CC:H. Ferderber

G. Mullan

March 19. 1986

F11e:2.8855

Fenton Scott Management Inc 17 Malabar Place Don Mills, Ontario M3B 1A4

Dear Sirs:

RE: Airborne Geophysical (Magnetometer and Electromagnetic) Surveys submitted on Mining Claims L 819913, et al, in Munro Township

As requested in your letter of March 4, 1986, returned herein is the VLF plan (in duplicate). Please add the required geometric factors and return the plans to this office, quoting file 2.8855.

For further information, please contact Susan Hurst at (416)965-4888.

Yours sincerely.

J.C. Smith, Supervisor Mining Lands Section

Whitney Block, 6th Floor Queen's Park Toronto, Ontario M7A 1W3

Telephone: (416) 965-4888

SH/mc

cc: H. Ferderber 169 Perreault Avenue Val d'Or, Quebec J9P 2H1

Mining Recorder
Kirkland Lake, Ontario
#37/86

Encl.

Glen J. Mullan 1393 Argyle Avenue Montreal, Quebec H3G 1V5

Fenton Scott Management Inc.

17 Malabar Place, Don Mills, Ontario M3B 1A4 416-444-1717

RECEIVED

MAR 0 7 1986

MINING LANDS SECTION

March 4, 1986

Ms Susan Hurst Land Management Branch Mining Lands Section Whitney Block, 6th Floor Queen's Park Toronto, Ontario M7A 1W3

Dear Ms Hurst:

Your File: .2.8855

Please forward me copies of the pertinent VLF-Em survey maps for addition of the required geometric factors.

Cordially Yours,

Fenton Scott

February 20, 1986

F11e: 2.8855

Mr. Glen J. Mullan 1393 Argyle Avenue Montreal, Quebec H36 1V5

Dear Sir:

RE: Airborne Geophysical (Magnetometer & Mlectromagnetic) Surveys submitted on Mining Claims L 819913, et al. in Munro Township

In order to complete the above-described submission, please forward (in duplicate) a VLF plan showing the contoured or profiled values. When submitting this material, please quote file 2.8855.

For further information, please contact Susan Hurst at (416)965-4888. Yours sincerely,

S.E. Yundt, Director Land Management Branch

Mining Lands Section Whitney Block, 6th Floor Queen's Park Toronto, Ontario M7A 1W3

Telephone: (416) 965-4888

SH/mc

cc: Mining Recorder Kirkland Lake, Ont. #37/86

H. Ferderber 160 Perreault Street 17 Malabar Place Val d'Or, Quebec J9P 2H1

Fenton Scott Don Mills, Ontario M3B 1A4

Mining Lands Section

File No 28855

Control Sheet

		TYPE OF	SURVEY	GEOPHYSICAL GEOLOGICAL GEOCHEMICAL EXPENDITURE
MINING	LANDS	COMMENTS	:	
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				Signature of Assessor
				april 11/86.

Date

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GUIBORD TWP M-352

THE TOWNSHIP

MUNRO

DISTRICT OF COCHRANE

LARDER LAKE MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

PATENTED LAND C.S. CROWN LAND SALE **∕**Ø LEASE8 Los. LOCATED LAND L.0:-LICENSE OF OCCUPATION M.R.O. MINING RIGHTS ONLY S.R.O. SURFACE RIGHTS ONLY ROADS IMPROVED ROADS KING'S HIGHWAYS RAHLWAYS POWER LINES MARSH OR MUSKEG MINES CANCELLED PATENTED S.R.O.

NOTES

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

Areas withdrawn from staking under Section
43 of the Mining Act, R.S.O. 1970 (see, 42, 820, 1960);
Order No. File Date Disposition

(f) 164386 9/1/69 S.R.O. (f) W 14/77 188522 10/2/77 S.R.O. (f) NR W (185522 21/3/83 S.R.O.

aug. 22/85

PLAN NO. M-376

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

200

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BEATTY