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OMIP 89-37

Concentrated Rare Earth Minerals Ltd.
Blue Rock Prospect
Monmouth Township
Southern Ontario Mining Division
Ontario

Date: December 15, 1989.

H. Grant Harper, P.Eng.
Economic Geologist.

Volume Label: CREMEng
Disk No.: 42-3
Filename: B:\Titlpg\Resamp89

Concentrated Rare Earth Minerals Ltd.
Blue Rock Rare Earth Prospect
Monmouth Township
Eastern Ontario Mining Division
Ontario

Introduction

The Location, Access, General Geology, and Exploration History of the property has been fully described in earlier reports. All of these reports are on file with the Ministry in the Assessment Files Records Office. It would be redundant to repeat this vital information here.

A tremendous amount of research is now being undertaken by physicists in the field of super-conductivity, a group of phenomena which, when fully controlled, will revolutionize human existence to a greater extent than the industrial revolution. Certain of the Rare Earth group of elements appear to be essential to the creation of superconductive media and therefore there is a growing interest in the distribution and amounts of Rare Earths in the accessible crustal rocks and in the development and mining of Rare Earth ore reserves.

Since the Bancroft Area is known to contain widely distributed occurrences of Rare Earths, and since Rare Earths are frequently associated with thorium and to a lesser extent uranium, it was decided to begin a sampling program to evaluate the Rare Earth elements known to occur on the Concentrated Rare Earth Minerals Ltd. Blue Rock claims.

At the present time the markets for Rare Earths are exceedingly limited. Yttrium is in the greatest demand for use in colour video screens. Europium is also used in this connection. The market for Yttrium amounts to some 500 tons per year at a price of about US\$52.50 per pound. Gadolinium is used as a highly efficient heat sink. Apparently it has the potential of eliminating the need for compressors in all refrigeration and air conditioning units. It is anticipated that the market for Gadolinium will double many times in the next 10 years. In their first quarter 1987 Report to Shareholders General Motors announced the opening of a new plant in Michigan to manufacture a new style of starter motor for cars and trucks. The starters will use magnets which contain Yttrium. Even more recently, General Motors has announced that their scientists are using Praseodymium and Neodymium in their research into super-conductivity.

A preliminary grab sampling program was done in 1987 on the surface outcroppings of the 'C' Zone. This zone has been developed underground by an adit, a shaft, and three levels. The preliminary sampling program was restricted with respect to the number of samples taken; the reason being the high cost of assaying for Rare Earths and the decision that, prior to extensive sampling, a preliminary program would be completed in order to ascertain just where and how the Rare Earth values, if any, occurred. Sampling would be limited to the 'C' Zone. Unfortunately there was a long delay in obtaining assay results and therefore it proved impossible to continue the sampling program in 1987.

During the summer of 1989 the writer and George Farr of Wilberforce, collected and additional 11 grab samples from the 'C' Zone which were submitted to X-Ray Assay Laboratories for analysis for Rare Earths and Yttrium. Uranium and Thorium contents were also measured. Their Certificate of Analysis is attached to this report. The sample locations are plotted on the accompanying sketch map of the trenches on the 'C' Zone. A description of each sample follows.

<u>Sample No.</u>	<u>Description</u>
8360	Neg. rad. - flesh col. peg.
8361	Sit. Rad. - brown peg.
8362	Neg. Rad. - flesh col. peg.
8363	Neg. Rad. - flesh col. peg.
8364	Sit. Rad. - brown peg.
8365	Sit. Rad. - Flesh and brown col. peg.
8366	Neg. Rad. - f gr. peg or syen.
8367	Sit. Rad. - flesh col. peg.
8368	Neg. rad. - flesh col. peg.
8369	Sit. Rad. - csr flesh col. peg.
8370	Sit. Rad. - flesh col. peg.

Discussion of Results

The preliminary surface grab sampling of the 'C' Zone trenches showed the presence of Rare Earths in noteworthy amounts in all samples collected. The Yttrium content ranges as high as 434 ppm (0.86 lbs. per ton) and the Gadolinium content appears to be considerably above average. The general Rare Earth content is much higher towards the east end of the trenches where the thorium content and hence the radioactivity is higher. This section also contains more magnetite, dark mineral, and the pegmatite has a brownish colour.

Conclusions and Recommendations

1. The preliminary sampling program clearly indicates that more detailed sampling of the 'C' Zone is warranted. This should take the form of more samples per trench as well as extending the zone eastward. A new grid should cover the zone and the trenches should be re-mapped.
- 2.- Preliminary sampling programs should be undertaken on the Lake and Cliff Zones.

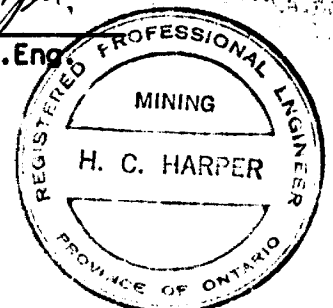
This report is respectfully submitted.

Toronto, Ontario.
December 15, 1989.

H.G. Harper

H.G. Harper, P.Eng.

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XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS SUPERVISION SERVICES INC.
1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA
TEL: (416)445-5755 TELEX: 06-986947 FAX: (416)445-4152

CERTIFICATE OF ANALYSIS REPORT 10440

TO: CONCENTRATED RARE EARTH MINERALS LTD
ATTN: GRANT HARPER
BOX 2038
20 EGLINTON AVENUE WEST, SUITE 404
TORONTO, ONTARIO M4R 1K8

CUSTOMER No. 1680
DATE SUBMITTED
13-Oct-89

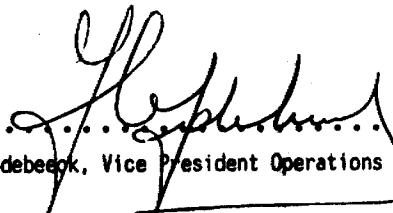
REF. FILE 6067-S3

Total Pages 2

11 ROCKS

	METHOD	DETECTION LIMIT
Y PPM	ICPMS	1.
LA PPM	ICPMS	0.1
CE PPM	ICPMS	0.1
PR PPM	ICPMS	0.1
ND PPM	ICPMS	0.1
SM PPM	ICPMS	0.1
EU PPM	ICPMS	0.05
GD PPM	ICPMS	0.1
TB PPM	ICPMS	0.1
DY PPM	ICPMS	0.1
HO PPM	ICPMS	0.05
ER PPM	ICPMS	0.1
TM PPM	ICPMS	0.1
YB PPM	ICPMS	0.1
LU PPM	ICPMS	0.05
TH PPM	ICPMS	1.
U PPM	ICPMS	1.

DATE 08-DEC-89

CERTIFIED BY 
Jean H.L. Opdebeeck, Vice President Operations

SAMPLE	Y PPM	LA PPM	CE PPM	PR PPM	ND PPM	SM PPM	EU PPM	GD PPM	TB PPM
8360	69	96.5	225.	21.1	77.4	14.1	1.94	10.9	1.7
8361	182	7.0	18.1	2.6	12.1	6.3	0.43	11.7	2.8
8362	7	2.7	18.1	0.9	4.2	1.1	0.23	0.9	0.2
8363	99	80.4	178.	17.5	56.2	12.0	1.39	13.8	2.6
8364	883	149.	316.	38.0	127.	41.6	1.56	72.6	16.0
8365	55	29.4	99.3	8.6	28.4	6.4	0.33	7.4	1.4
8366	66	6.1	13.3	1.9	6.9	2.9	0.92	6.4	1.4
8367	57	68.0	137.	15.3	52.0	9.4	0.99	6.8	1.3
8368	76	147.	285.	31.5	106.	19.0	0.77	16.9	2.5
8369	31	1.9	5.4	0.7	2.9	1.8	0.45	3.0	0.6
8370	33	9.4	18.3	2.3	8.0	3.0	0.63	4.1	0.7

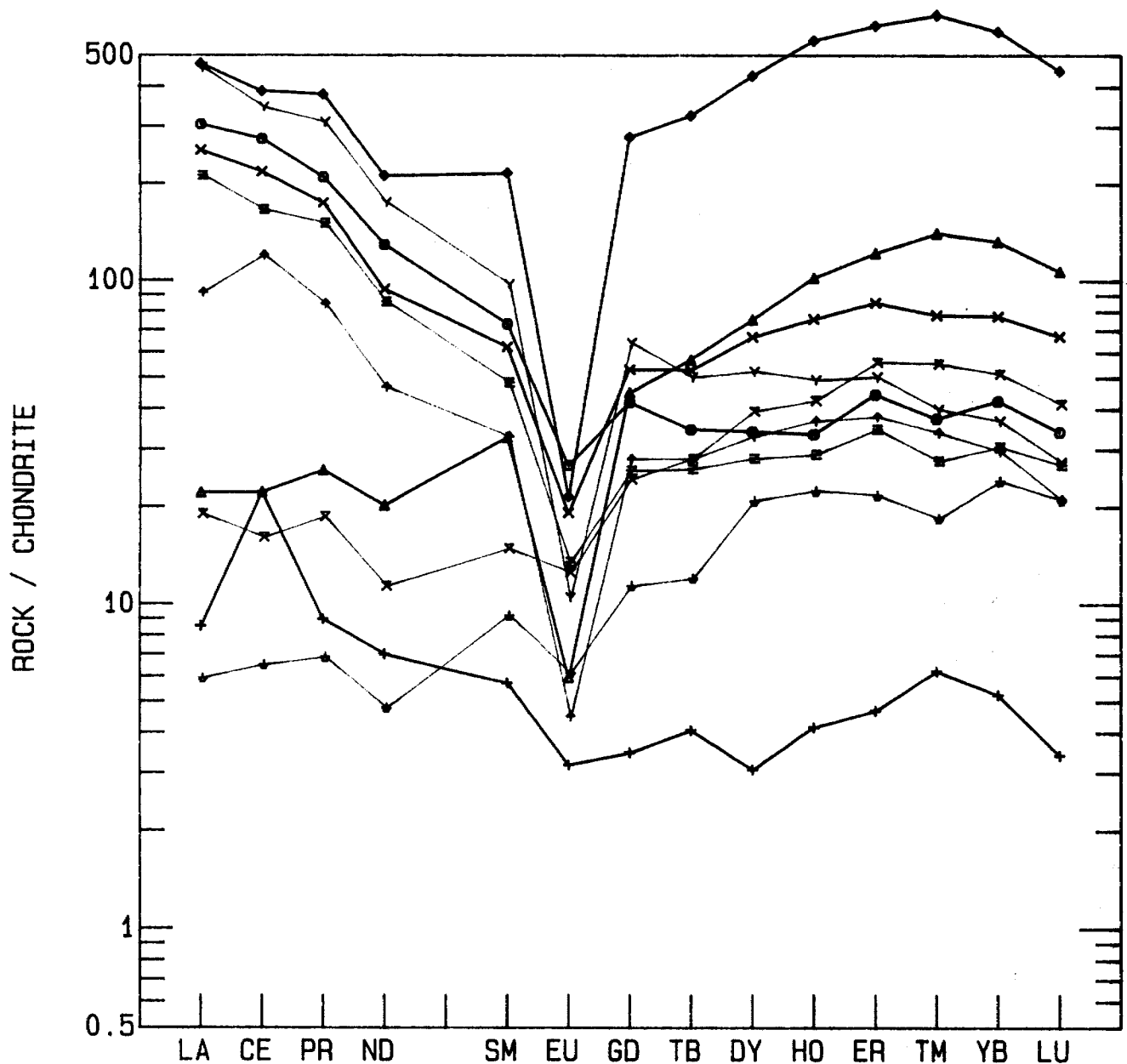


SAMPLE	DY PPM	HO PPM	ER PPM	TM PPM	YB PPM	LU PPM	TH PPM	U PPM
8360	11.1	2.41	9.5	1.2	8.9	1.10	220	250
8361	24.6	7.36	26.0	4.5	27.7	3.46	146	170
8362	1.0	0.30	1.0	0.2	1.1	0.11	26	15
8363	21.8	5.47	18.2	2.5	16.2	2.17	247	280
8364	141.	40.1	132.	21.4	124.	14.5	614	879
8365	10.9	2.69	8.2	1.1	6.3	0.69	83	37
8366	13.0	3.11	12.1	1.8	10.9	1.36	36	35
8367	9.3	2.12	7.5	0.9	6.5	0.88	122	118
8368	17.3	3.60	10.9	1.3	7.8	0.90	349	844
8369	6.9	1.64	4.7	0.6	5.1	0.69	47	32
8370	7.3	1.79	6.2	0.7	4.7	0.60	22	15

X-RAY ASSAY LABORATORIES 07-DEC-89
 RARE EARTH CHONDRITE PLOTS

CONCENTRATED RARE EARTH (REF 6067)

- | | | | |
|---|------|---|------|
| ○ | 8360 | ◆ | 8365 |
| ▲ | 8361 | × | 8366 |
| + | 8362 | ■ | 8367 |
| × | 8363 | ∨ | 8368 |
| ◆ | 8364 | ♣ | 8369 |



X-RAY ASSAY LABORATORIES 07-DEC-89

CONCENTRATED RARE EARTH (REF 6067) CHONDRITE NORMALIZED VALUES

SAMPLE	LA	CE	PR	ND	SM	EU	GD	TB	DY	HO	ER	TM	YB	LU
8360	306.3	276.8	211.0	129.6	73.4	26.9	42.1	34.7	34.2	33.5	44.6	37.5	42.6	34.1
8361	22.2	22.3	26.0	20.3	32.8	6.0	45.2	57.1	75.7	102.2	122.1	140.6	132.5	107.1
8362	8.6	22.3	9.0	7.0	5.7	3.2	3.5	4.1	3.1	4.2	4.7	6.2	5.3	3.4
8363	255.2	218.9	175.0	94.1	62.5	19.3	53.3	53.1	67.1	76.0	85.4	78.1	77.5	67.2
8364	473.0	388.7	380.0	212.7	216.7	21.6	280.3	326.5	433.8	556.9	619.7	668.7	593.3	448.9
8365	93.3	122.1	86.0	47.6	33.3	4.6	28.6	28.6	33.5	37.4	38.5	34.4	30.1	21.4
8366	19.4	16.4	19.0	11.6	15.1	12.7	24.7	28.6	40.0	43.2	56.8	56.2	52.2	42.1
8367	215.9	168.5	153.0	87.1	49.0	13.7	26.3	26.5	28.6	29.4	35.2	28.1	31.1	27.2
8368	466.7	350.6	315.0	177.6	99.0	10.7	65.3	51.0	53.2	50.0	51.2	40.6	37.3	27.9
8369	6.0	6.6	7.0	4.9	9.4	6.2	11.6	12.2	21.2	22.8	22.1	18.7	24.4	21.4

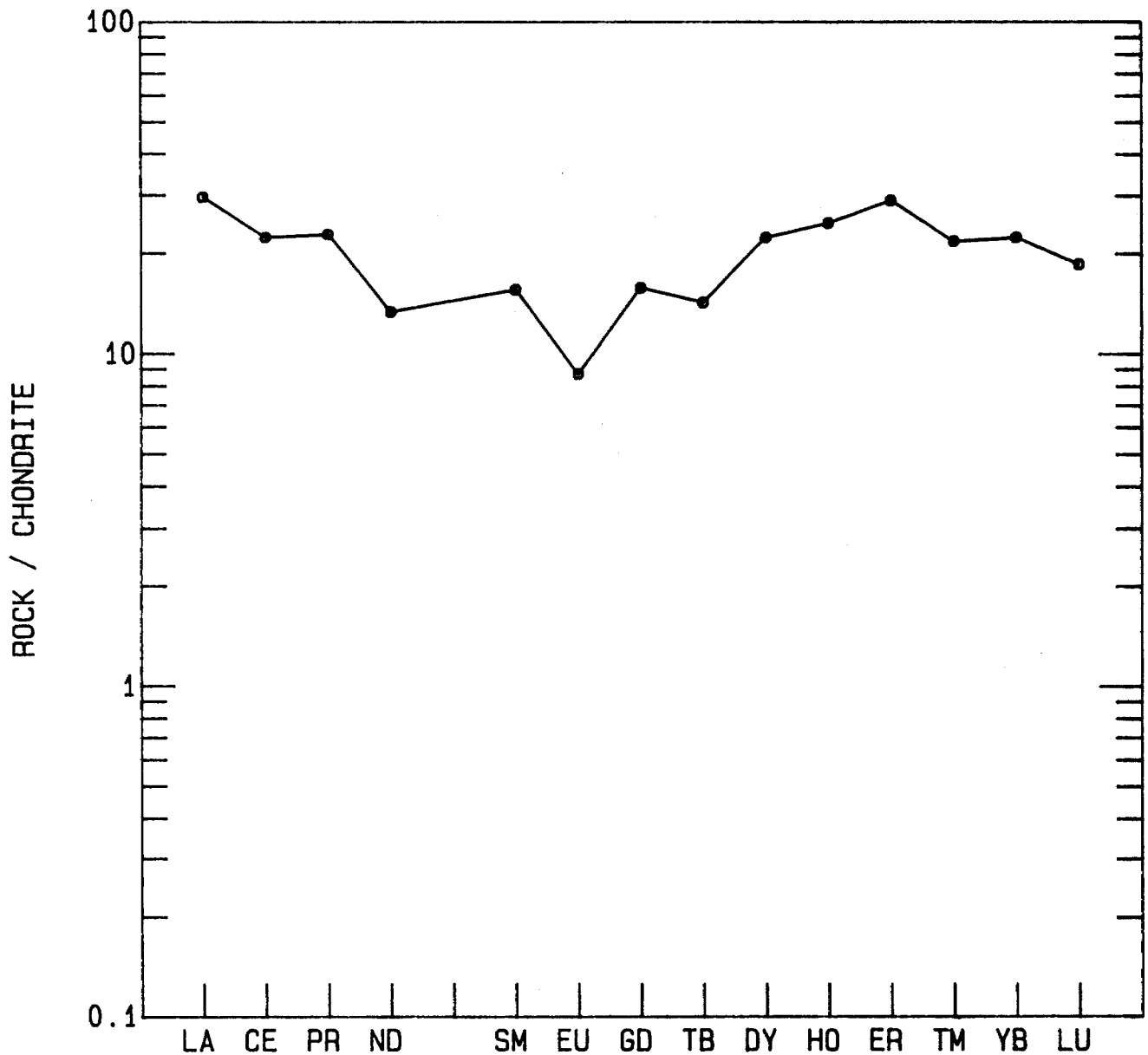
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LA .315 CE .813 PR .100 ND .597 SM .192 EU .0722 GD .259
 TB .049 DY .325 HO .072 ER .213 TM .032 YB .209 LU .0323

X-RAY ASSAY LABORATORIES 07-DEC-89
RARE EARTH CHONDRITE PLOTS

CONCENTRATED RARE EARTH (REF 6067)

• 8370



X-RAY ASSAY LABORATORIES 07-DEC-89

CONCENTRATED RARE EARTH (REF 6067) CHONDRITE NORMALIZED VALUES

SAMPLE	LA	CE	PR	ND	SM	EU	GD	TB	DY	HO	ER	TM	YB	LU
8370	29.8	22.5	23.0	13.4	15.6	8.7	15.8	14.3	22.5	24.9	29.1	21.9	22.5	18.6

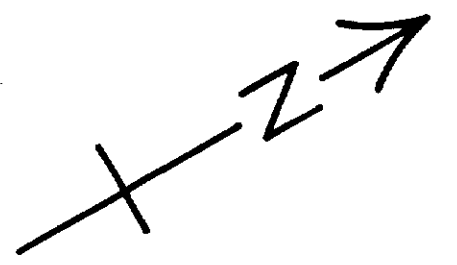
CHONDRITE RARE EARTH ELEMENT FACTORS USED TO NORMALIZE THE SAMPLE DATA:

LA .315	CE .813	PR .100	ND .597	SM .192	EU .0722	GD .259
TB .049	DY .325	HO .072	ER .213	TM .032	YB .209	LU .0323

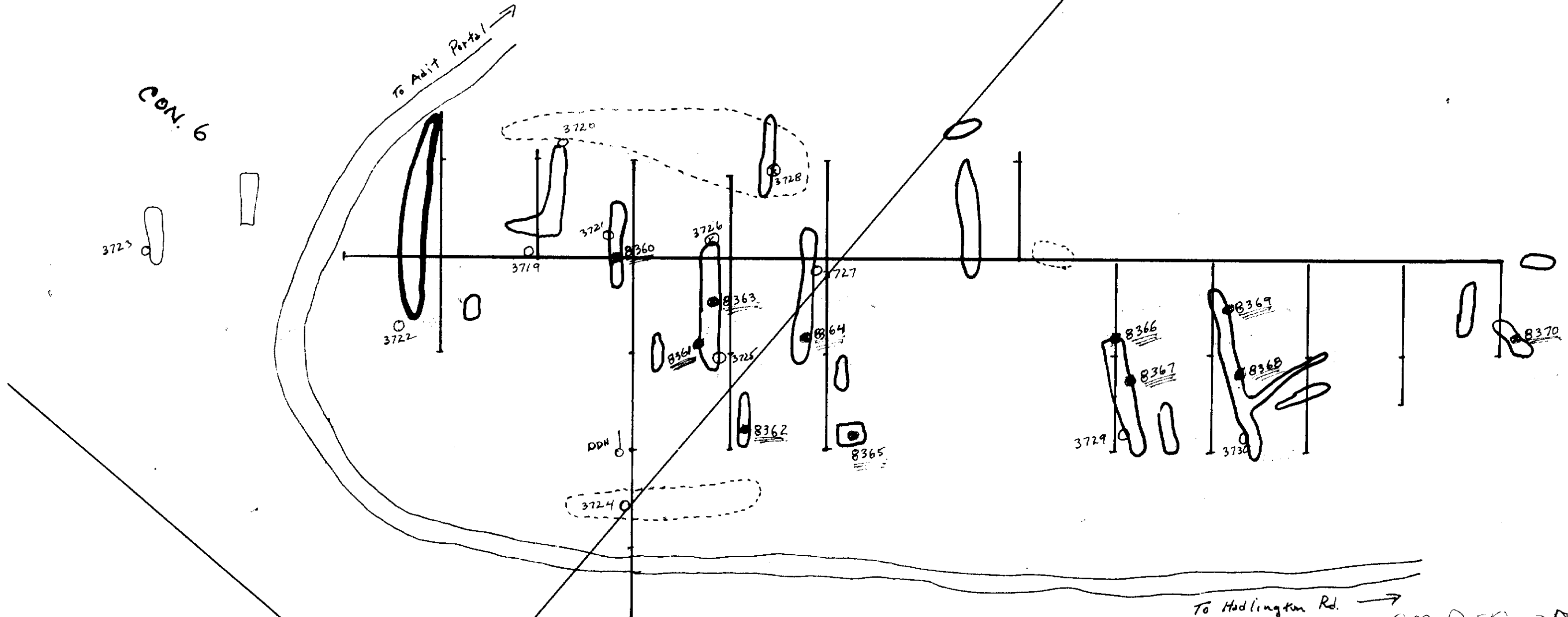
00400
 10450E
 11400E
 11450E
 12400E
 12450E
 13400E
 13450E
 14400E
 14450E
 15400E
 15450E
 16400E

CON. 6

To Adit Portal →



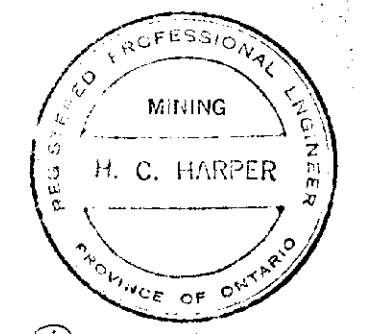
BL. N30E Ast.



#2 shaft

To Hadlington Rd. →

EO 4970
 LOT 19
 EO 4961
 LOT 20



Dec 9 189
 H. C. Harper

- Sample Location (1987) & Number
- Sample Location (1989) & Number.

OMIP 89-37

Concentrated Rare Earth Minerals Ltd.
 Blue Rock Property
 "C" Zone
 Rare Earth Sample Locations
 1"=50'

Sept 1987 & Sept. 1989

63.5542

