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Title B.S. Cape Caution

013034 Author SSH

Date and Typist Jan. 31/58 cs 1

92M/4E  
92M-4

BLACK SAND AT CAPE CAUTION  
(51° 127° S.W.)

Concentrations of magnetite in beaches near Cape Caution were discovered by G. K. Storey of Port Hardy. <sup>Some years ago</sup>

In August, 1956 application for a Special Placer Mining Lease was made by A. G. Karop of Qualicum Bay to cover a beach on the mainland coast  $4\frac{1}{2}$  miles southeast of Cape Caution. Cape Caution is about 35 miles northwest of Port Hardy.

The beach is on the mainland, its north <sup>end</sup> end being about  $4\frac{1}{2}$  miles southeast of Cape Caution. It is about 2 miles long and lies between the rocky headlands of Raynor Point and Buccleugh Point. Quartz diorite outcrops at the northern end of the beach and rises in bluffs immediately back of the backshore zone. Bedrock outcrops for about 2,500 feet south of the northern end of the beach. No rock outcrops southward from there, and a low <sup>bench</sup> ~~beach~~ of about 400 acres extends eastward from the back <sup>shore</sup> ~~beach~~ area. At

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the southern end ~~are~~ quartz diorite outcrops extending southward to Buccleugh Point.

The beach faces southwest and is fully exposed to the open ocean. It is subjected to numerous storms and as a consequence the backshore zone has ~~an~~ crisscrossed accumulation of driftwood, part of which is buried in ~~the~~ sand to unknown depth.

A landing was made on the beach on June 23 for the purpose of sampling the beach sands. Samples were taken by hand auger along five lines, at right angles to the beach, 1,000 feet apart. The first line of sample holes is at the extreme north end of the beach. ~~On~~ Visual examination the <sup>slows them</sup> sands ~~can readily be seen~~ to contain most magnetite at the north end of the beach; This is also apparent from the sample results. It was not considered necessary to sample farther south <sup>than</sup> ~~because~~ from the last line of samples, the <sup>has</sup> beach material by visual examination ~~had~~ essentially the same <sup>because</sup>

DC

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magnetite content. *as in Line No. 5.*

Spectrochemical analyses show that the titanium content is approximately 10 per cent that of the iron. The sampling results are summarized in the following table. The first sample in each row was taken at the western edge of the accumulation of driftwood which for the most part was 50 to 100 feet wide.

CAPP CAUTION

B.S.

92M/4E

5633

50 gm

—

0.15 mag.

—

0.3%

0.30

76 gm

—

0.22

—

0.29%

5632

85

—

.61

=

.71

0.64

100

.57

=

$\frac{57}{128}$

5628

100

—

1.32 gm

=

1.32%

1.66

100

2.00

2.00

5638

100

—

0.20

0.2%

0.18

100

0.17

0.17%

5634

100

—

0.71

0.71%

0.69

0.66

0.66%

5639

100

—

1.40

1.4%

1.38

100

1.37

1.37%

5624

100

—

0.8

0.8

0.72

0.65

0.65

5630

100

—

0.82

0.82

.91

1.0

1.0

5641

100

—

.75

0.75%

.73

.72

.72

5627

100

—

2.21

2.21%

2.18

2.15

2.15%

5621

100

—

0.81

.81%

.78

0.76

.76%

5636

0.80

0.80%

.79

.78

.78

5635

100

—

1.50

1.50

1.46

1.42

1.42

5623

100

—

.74

.74

.68

.62

.62

5629	100	pm	.72	0.72%	.69
			.67	0.67%	
5626	100	pm.	5.8	5.8%	← 5.40
			5.0	5.0%	
5620	100		1.12	1.12	1.03
			.95	.95	
5631	100		1.13	1.13	1.03
			.94	.94	
5619	100		6.74	6.74	7.04
			7.35	7.35	
5622	100		.67	0.67%	.55
			.44	0.44	
5637	100		.40	0.40%	.46
			.52	0.52%	
5625	100		3.96	3.96%	4.36
			4.56	4.56	
5618	100		3.21	3.21%	3.26
			3.32	3.32%	
5640			0.84	0.84%	.80
			0.75	0.75	
composite of all.	100		1.72	1.72%	1.62
			1.52	1.52	

24 | 37.73  
 24  
 13.73  
 1.62

1.57

Numerical average 1.57%  
 average of composite 1.62%



92M/4E

*Samplers from Tony Karop.*

C O P Y

*Cape Caulwin B. P.*

DEPARTMENT OF MINES  
VICTORIA

SAMPLE RECEIVED FROM..... Dr. H. Sargent,

ADDRESS..... Chief, Mineralogical Branch, Dept. of Mines, Buildings.

LABORATORY No.	SUBMITTER'S MARK	LABORATORY REPORT												
6837M	1334	<p><u>Semi-Quantitative Spectrographic Analyses</u></p> <table> <tr> <td>Si over 10%</td> <td>Mn 0.05-0.5%</td> </tr> <tr> <td>Al 2-20%</td> <td>V 0.02-0.2%</td> </tr> <tr> <td>Mg 3-30%</td> <td>Ti 0.7-7%</td> </tr> <tr> <td>Ca 2-20%</td> <td>Na 0.3-3%</td> </tr> <tr> <td>Fe 6-60%</td> <td>Zr 0.03-0.3%</td> </tr> </table> <p>Cu, Ni, Co, Sr, Cr, Ba, Ga: Traces.</p>	Si over 10%	Mn 0.05-0.5%	Al 2-20%	V 0.02-0.2%	Mg 3-30%	Ti 0.7-7%	Ca 2-20%	Na 0.3-3%	Fe 6-60%	Zr 0.03-0.3%		
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6838M	1335	<table> <tr> <td>Si over 10%</td> <td>Mn 0.02-0.2%</td> </tr> <tr> <td>Al 3-30%</td> <td>V 0.02-0.2%</td> </tr> <tr> <td>Mg 2-20%</td> <td>Ti 0.2-2%</td> </tr> <tr> <td>Ca 2-20%</td> <td>Na 0.3-3%</td> </tr> <tr> <td>Fe 3-30%</td> <td>K 0.1-1%</td> </tr> </table> <p>Cu, Ni, Co, Sr, Cr, Ba, Zr: Traces</p>	Si over 10%	Mn 0.02-0.2%	Al 3-30%	V 0.02-0.2%	Mg 2-20%	Ti 0.2-2%	Ca 2-20%	Na 0.3-3%	Fe 3-30%	K 0.1-1%		
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6839M	1336	<table> <tr> <td>Si over 10%</td> <td>V 0.01-0.1%</td> </tr> <tr> <td>Al 2-20%</td> <td>Ti 0.03-0.3%</td> </tr> <tr> <td>Mg 2-20%</td> <td>Na over 1%</td> </tr> <tr> <td>Ca 2-20%</td> <td>K 0.2-2%</td> </tr> <tr> <td>Fe 3-30%</td> <td></td> </tr> </table> <p>Cu, Mn, Ni, Co, Sr, Cr, Ba, Zr: Traces</p>	Si over 10%	V 0.01-0.1%	Al 2-20%	Ti 0.03-0.3%	Mg 2-20%	Na over 1%	Ca 2-20%	K 0.2-2%	Fe 3-30%			
Si over 10%	V 0.01-0.1%													
Al 2-20%	Ti 0.03-0.3%													
Mg 2-20%	Na over 1%													
Ca 2-20%	K 0.2-2%													
Fe 3-30%														
6840M	1337	<table> <tr> <td>Si over 10%</td> <td>Mn 0.03-0.3%</td> </tr> <tr> <td>Al 2-20%</td> <td>V 0.02-0.2%</td> </tr> <tr> <td>Mg 2-20%</td> <td>Ti 0.3-3%</td> </tr> <tr> <td>Ca 2-20%</td> <td>Na over 1%</td> </tr> <tr> <td>Fe 5-50%</td> <td>K 0.2-2%</td> </tr> <tr> <td>Zr 0.03-0.3%</td> <td></td> </tr> </table> <p>Cu, Ni, Co, Sr, Cr, Ba, Ga: Traces</p>	Si over 10%	Mn 0.03-0.3%	Al 2-20%	V 0.02-0.2%	Mg 2-20%	Ti 0.3-3%	Ca 2-20%	Na over 1%	Fe 5-50%	K 0.2-2%	Zr 0.03-0.3%	
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Al 2-20%	V 0.02-0.2%													
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Ca 2-20%	Na over 1%													
Fe 5-50%	K 0.2-2%													
Zr 0.03-0.3%														

Cont'd - - 2

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DATE..... June 11, 1956.

*G. B. Lewis*

CHIEF ANALYST AND ASSAYER.



DEPARTMENT OF MINES Page 2  
VICTORIA

SAMPLE RECEIVED FROM..... Dr. H. Sargent,.....

ADDRESS..... Chief, Mineralogical Branch, Dept. of Mines, Buildings......

LABORATORY No.	SUBMITTER'S MARK	LABORATORY REPORT
6841M	1338	Si over 10% Al 2-20% Mg 2-20% Ca 2-20% Fe 3-30% Mn 0.007-0.07% V 0.02-0.2% Ti 0.2-2% Na over 1% K 0.1-1% Cu, Ni, Co, Sr, Cr, Ba, Zr: Traces.
6842M	1339	Si over 10% Al 2-20% Mg 2-20% Ca 2-20% Fe 4-40% Zr 0.03-0.3% Mn 0.01-0.1% V 0.02-0.2% Ti 0.3-3% Na over 1% K 0.07-0.7% Cu, Ni, Co, Sr, Cr, Ba: Traces.
		The above results are qualitative analyses, with estimates of percentages, and should not be used for publication without prior permission of the Chief Analyst.
		<u>Assays:</u> Iron
6837M	1334	14.00%
6838M	1335	8.23%
6839M	1336	7.06%
6840M	1337	11.02%
6841M	1338	7.75%
6842M	1339	10.85%

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DATE..... June 11, 1956......

*G. B. Lewis*  
.....  
CHIEF ANALYST AND ASSAYER.