

4510

A GEOPHYSICAL ASSESSMENT REPORT

For The

BJ Claim Group

Of

Richard Deane

Crawford Bay

(Lat. $49^{\circ}40'$; Long. $116^{\circ}50'$)

Kaslo Mining Division

Covering Work Performed
July 21 to August 6, 1973

By

Mark Basso, P. Eng. (Mining)

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 4510 MAP.....

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Survey Lines A to D

Introduction

This report covers the assessment work and interpretation of a VLF Electromagnetic Survey on the BJ Claim Group at Crawford Bay, British Columbia. As shown in Fig. (1)

The data and interpretation are presented in this report.

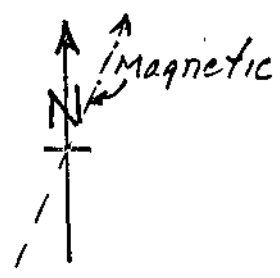
Work consisted of:

1. Line Cutting
2. VLF Electromagnetic Survey

↑ TO KIDNEL
4 MILES

POWER LINE

CRAWFORD
CREEK



GOLF COURSE

3A HWY.

KOOTENAY
BAY

2	2
BJ8	BJ7
1	1
2	2
BJ6	BJ5
1	1

B. J. CLAIM GROUP
R. DEANE AUG 19/20 1972
TAGS 208337M to 208344M

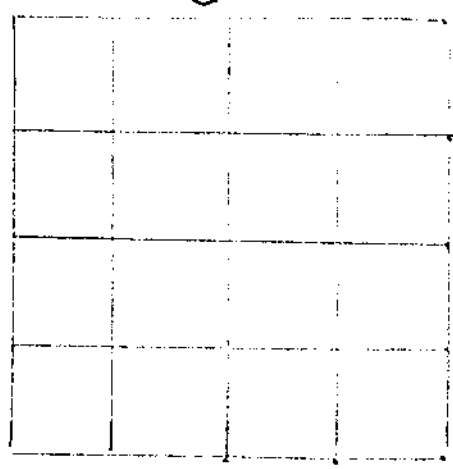
COMINCO CLAIM
GROUP →

1	BJ1
2	
1	BJ2
2	
1	BJ3
2	
1	BJ4
2	

CRAWFORD
BAY

TV. TOWER
(CBC.)
ELEV. 3285'

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NO. **4510** MAP # **1**



CRYSTAL
(LIME)
LAKE

GRAY
CREEK

KOOTENAY
LAKE

- 3 -
SCALE 1" = 1/2 MILE
FIGURE (1)

R. DEANE
SEPT. 72

LINE CUTTING

Performed by M. Basso, P. Eng. and R. Deane, P.Eng.
July 21/22 1973. Work consisted of cutting east-west parallel lines at 500 foot north-south intervals through dense forestation on the BJ 2 & 3 claims.

Subsequent work consisted of marking parallel lines within the same grid system on the BJ 1 claim. The lines as cut and marked are indicated on Fig. (2).

Line Cutting

Schedule of Expenses

Wages	- 4 Man Days @ \$ 30/MD	- \$120
Food	- @ \$ 10/MD	- 40
Lodging	- Establish Camp	- 50
Supplies	- Flagging, Maps, Etc.	- <u>10</u>
Total		\$220

VLF ELECTROMAGNETIC SURVEY

This survey was performed by M. Basso, P.Eng. and R. Deane, P.Eng. using a Geonics EM16 VLF Electromagnetic Unit #275. The instrument was tuned to transmitter station NPG in Seattle, Washington at frequency 18.6 kHz.

Readings of In-Phase and Quadrature were taken at regular 100 foot intervals along the lines. The direction of the electromagnetic field of each reading is the same on this property so all data may be contoured together.

Reading locations are as shown in Fig. (2) while all data is summarized in Table (1).

GEOLOGY

The geology and mineralization of the Crawford Bay area have been well documented in several thesis concerned with the Badshot Limestone Formation and Kootenay Arch. Sulfide minerals within the limestone host have been found north of the BJ Claim Group. For example Cominco's Bluebell Property.

Structurally there is a North-South striking shear zone associated with the Bluebell Mountain Fault, indicated by the fault scarp approximately 1000' West of the BJ Claim Group.

From a geophysical point of view it is expected that sulfide mineralization will respond well to VLF Electromagnetic techniques.

INTERPRETATION AND CAUSE OF ANOMALIES

A number of strong in-phase anomalies cross the lines and can be interpolated from line to line. The general effect suggests a series of stratified units some of which are quite conductive. The strike direction of the conductors generally conforms with the strike of the Badshot Limestone Formation.

Anomalies can be given one of three classifications according to the relationship of the in-phase response to the quadrature. These classifications are:

- (a) Conductors typical of sulphides
- (b) Surface conductors typical of overburden features such as swamp edges or faults which come to surface
- (c) Unclassified surface conductors

Profiles across sulfides provide an EM response. Many EM anomalies were observed on the property with sulphide characteristics and may in fact represent sulfide deposition. They may also, however, represent conductive alteration zones and it is concluded that the VLF-EM method is overly sensitive for this particular area in that it is unable to distinguish between sulfides and less conductive natural conductors.

Respectfully Submitted

Mark Basso

Mark Basso, P.Eng. (Mining)

VLF SURVEY
SCHEDULE OF EXPENSES

Wages	- 8 Inst. Man Days @ \$50/MD	\$400
Food	@ \$10/MD	80
Lodging	- Established	
Interpretation & Mapping	- 2 Man Days @ \$150/MD	<u>300</u>
		\$780

STATEMENT OF QUALIFICATIONS

A. Mark Basso, P.Eng.

- 1968 BSc Metallurgical Engineering, University of Alberta
- 1968-1970 Development Engineer 1 Metal Production, Cominco Ltd., Trail, B.C.
- 1970- P.Eng. status Association of Professional Engineers of British Columbia
- 1970-1971 Secretary, Vice President Inland Systems Engineering Ltd., Cranbrook, B.C.
- 1972 BSc Mining Engineering, University of Alberta
- 1972-1973 Chief Mine Engineer, Placid Oil Company, Bull River Mine, Cranbrook, B.C.

Box 1133
Rossland, B.C.
September 12, 1973

Mr. R. Rutherford
Deputy Chief Gold Commissioner
Department of Mines and Petroleum Resources
Victoria, B.C.

Dear Mr. Rutherford:

Re: Your letter of August 27, 1973
B.J. Mineral Claims
Geophysical-Line-Cutting Report #4510

In reply to your queries, please find enclosed:

1. My statement of qualifications
2. Two (2) copies of working sheet (1) showing the plot of In-Phase and Quadrature for lines A to D with respect to a common datum; the western boundary of mineral claims BJ 1 to 3.
During the VLF-EM survey all line surveys originated at Station 1 and proceeded magnetic East. Readings were taken at 100 foot intervals except where abnormal responses were received.
3. The (40) and (17) on D line indicate the distances to abnormal responses.

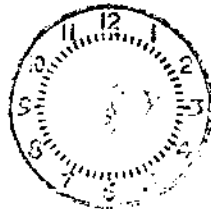
Thanking you and trusting this information answers your questions satisfactorily, I remain,

SEP 14 1973 PM

Yours truly,

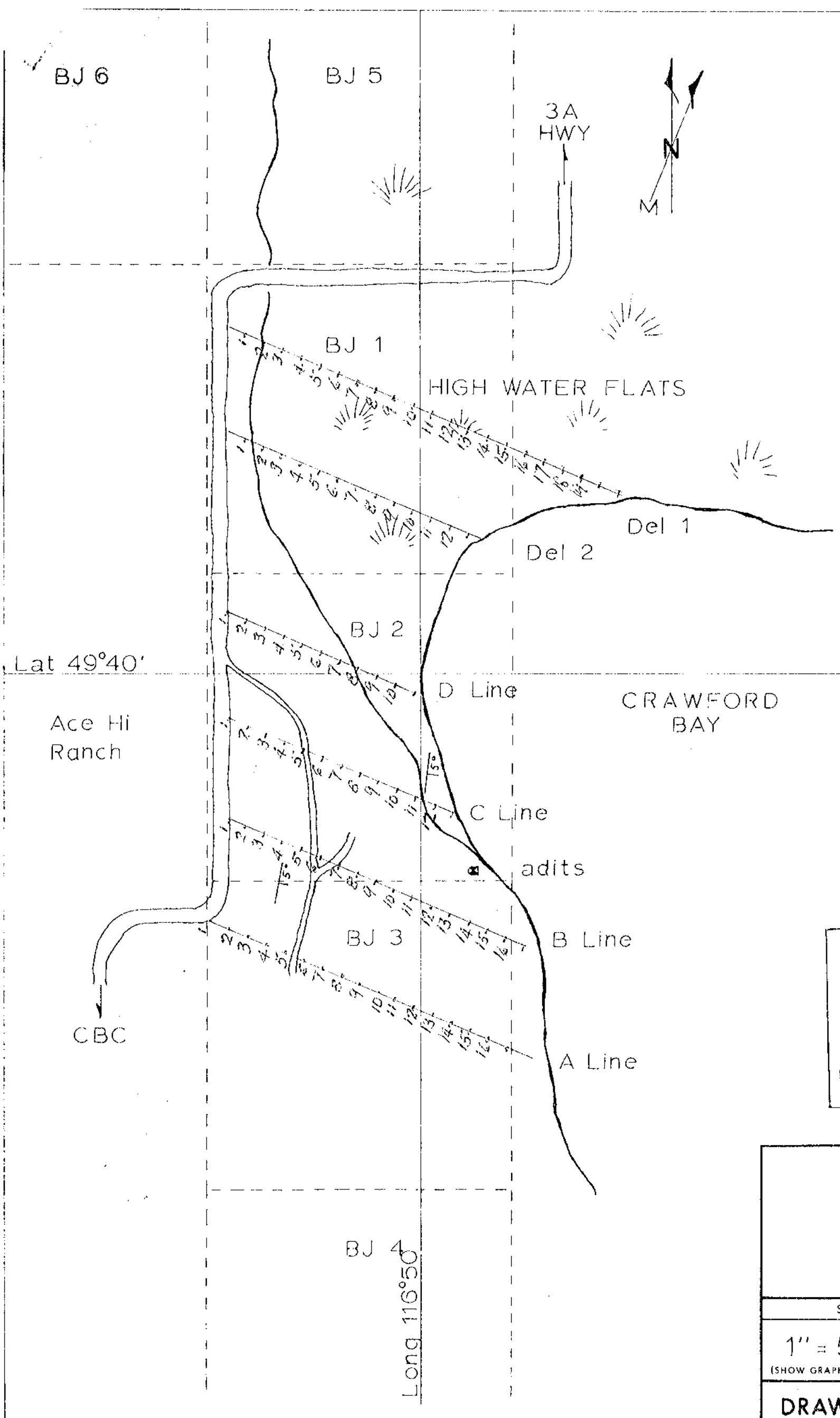
Mark Basso
Mark Basso, P.Eng.
(For R. Deane, P.Eng.)

9995



Enclosures

DEPT. OF MINES
AND PETROLEUM RESOURCES



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 NO. **4510** MAP #2

BJ CLAIM GROUP CRAWFORD BAY VLF-EM GRID			
SCALE	REFERENCE	NAME	DATE
1" = 500' <small>(SHOW GRAPHIC SCALE ON MAPS)</small>	DRAWN BY	<i>Nancy Basso</i>	<i>8/8/73</i>
	CHECKED BY		
	REVISED BY		
DRAWING No.		FIGURE (2)	

4510-M2

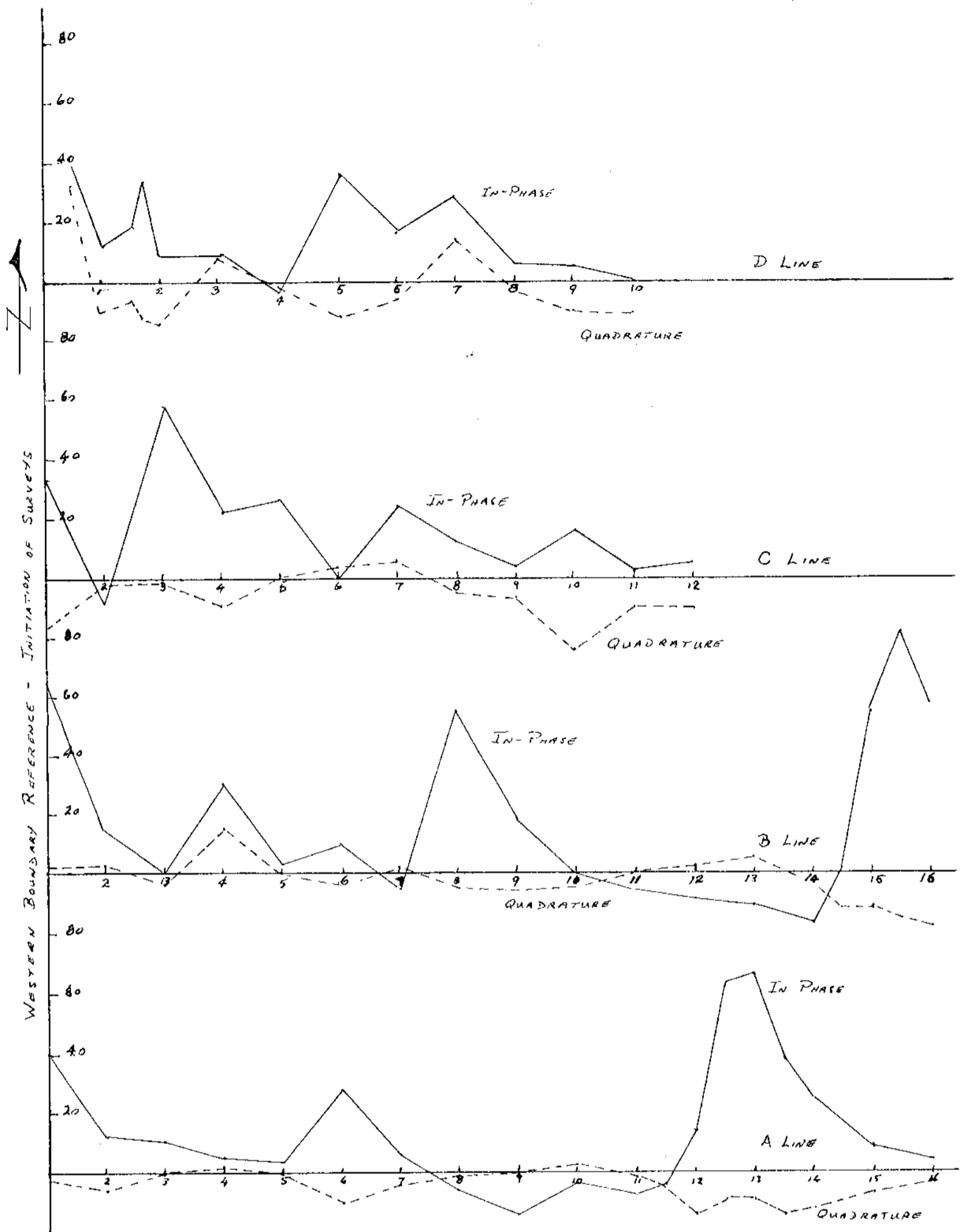
V.L.F. SURVEY

B.L. CLAIM GROUP

DATA TABLE (1)

A LINE	B LINE	C LINE	D LINE	DEL 2	DEL 1
I.P. Qu	I.P. Qu	I.P. Qu	I.P. Qu	I.P. Quad	I.P. Quad
1 +40 -3	+66 +2	+32 -16	+43 +32 +11 -10 +19 -7(40) +34 -12(17) +5 -15	+23 -10	+30 +5
2 +13 -6	+14 +3	-7 -3	+5 -15	+14 -12	+10 -12
3 +11 0	0 -4	+58 -1	+8 +7	+4 -11	+7 -6
4 +5 +2	+30 +15	+20 -9	-3 -2	+2 -7	+4 -2
5 +4 0	+3 0	+25 +1	+37 -12	0 -2	0 0
6 +28 -10	+10 -4	0 +4	+14 -7	0 0	0 0
7 +6 -4	-5 +2	+23 +6	+28 +14	0 0	0 0
8 -6 -1	+55 -5	+12 -5	+5 -3	-4 +2	+5 0
9 -14 0	+18 -6	+2 -7	+5 -10	-4 +2	+3 +3
10 -4 +3	0 -5	+18 -25	0 -11	-4 +2	+3 +2
11 -8 -2	-6 0	0 -9		0 4	+4 0
-4 -5					
12 +14 -14	-9 +2	+5 -10			+3 -1
+63 -9					
13 +66 -9	-11 +5				0 0
+42 -14					
14 +25 -12	-16 -4				0 0
	+2 -12				
15 +9 -7	+54 -12				-3 +2
	+82 -15				
16 +4 -3	+57 -18				-5 0
17					-6 0
18					-10 -3
19					0 +10

4510
M3



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 4510 M.P. #4

WORK SHEET (1)
 PROF OF IN-PHASE AND QUADRATURE
 SURVEY LINES A TO D
 BJ CLAIM GROUP
 MARK BASSO
 29/7/73

4510-MA