

GEOLOGICAL, GEOCHEMICAL and GEOPHYSICAL
REPORT on the KL #1 to #6 Groups of 43
mineral claims in the Nicola Mining
Division of B. C. Claims are situated
about 5 miles north of Canford, B.C. at
SW 50°, 120°. Work done between Oct. 3, 1957 and Oct. 3, 1958
Signed L. B. Gatenby
92I/2W L. B. Gatenby, P.Eng.
H. H. Kella

0227

227

I N D E X

	Page
Expenditures	1
Geological Expenditures	3
Geochemical Expenditures	4
Geophysical Expenditures	5
Geological Report and Results	6
Geochemical Report and Results	6
Geophysical Report and Results	7

Enclosed Maps

- #1 1. West Craigmont area claim map showing claims and grouping Scale 1" = 1320'
 - #2 2. West Craigmont area Geology Scale 1" = 1320'
 - #3 3. Detailed Geology area 2
 - #4 ~~#8~~ 4. Five magnetic profile maps areas 2, 2S, 3 and 4
 - #9 5. Magnetic contour map area 2
 - #10 6. E. M. Tilt Profile map area 2
 - #11 7. Gravity and Topography Profile map area 2
 - #12 8. Self Potential Profile map area 2
 - #B-16 9. Four Geochemical Soil Test Maps areas 2, 2S, 3 and 4
- Total 16 maps

Expenditures

Expenditure of Rio Tinto Canadian Exploration Ltd. on KL #1 to #5 claim groups totalling 35 claims and 8 fractions in the Nicola Mining Division of B. C.

The Groups and Claims are:

Group KL #1	--	Mineral claim	KL# 1
	--	" "	KL# 2
	--	" "	KL# 3
	--	" "	KL# 4
	--	" "	KL# 5
	--	" "	KL#19
	--	" "	KL#21
	--	" "	Rimm # 7 Fr.
Group KL #2	--	" "	KL# 6
	--	" "	KL#20
	--	" "	KL#22
	--	" "	KL#31
	--	" "	KL#36
	--	" "	KL#37
	--	" "	LX #1 Fr
	--	" "	LX# 2 Fr
Group KL #3	--	Mineral claim	KL# 7
	--	" "	KL# 8
	--	" "	KL# 9
	--	" "	KL#10
	--	" "	KL#11
	--	" "	KL#12
	--	" "	KL#13
	--	" "	Rimm # 2 Fr.
Group KL #4	--	Mineral claim	KL#14
	--	" "	KL#15
	--	" "	KL#16
	--	" "	KL#17
	--	" "	KL#18
	--	" "	KL#32
	--	" "	KL#33
	--	" "	Rimm # 5 Fr.
Group KL #5	--	Mineral claim	KL#23
	--	" "	KL#24
	--	" "	KL#25
	--	" "	KL#26
	--	" "	KL#27
	--	" "	KL#28
	--	" "	KL#30
	--	" "	Rimm # 6 Fr.

Group KL #6

--
--
--


Mineral claim
" "
" "

KL #29
Rimm #3 Fr.
Rimm #4 Fr.

Geological ExpendituresPersonnel

D. Calimente, Ma.Sc. Field Geologist Salary \$ 550.00/month plus board 44 days @ \$15.00/day allowable	\$ 660.00
C. A. Langlois - Prospector Salary \$ 350.00/month plus board 25 days @ \$15.00/day allowable	375.00
L. B. Gatenby, P.Eng. Supervisory capacity 3 days @ \$35.00/day	105.00
Unemployment Insurance and Workmen's Compensation	67.00
Camp food costs @ \$2.40/day/man 72 man days	173.00
Vehicle charges	<u>70.00</u>
Total	<u>\$1,450.00</u>

Signed



L. B. Gatenby, P.Eng.

Geochemical ExpendituresPersonnel

A. K. Rimmer, Geochemical operator Salary \$375.00/month plus board 22 days @ \$15/day allowable	\$ 330.00
C. A. Langlois, Geochemical operator Salary \$350.00/month plus board 22 days @ \$15.00/day allowable	330.00
R. McBean, Line cutter 15 days @ \$15.00/ day allowable	225.00
B. C. Welsh, Line cutter 15 days @ \$15.00/day allowable	225.00
D. Calimente, Ma.Sc. Field Geologist 6 days @ \$15.00/day allowable	90.00
L. B. Gatenby, P.Eng. 6 days @ \$35/day	210.00
Unemployment Insurance and Workmen's Compensation	73.00
Camp food costs @ \$2.40/day/man 86 man days	206.00
Geochemical supplies	85.00
Vehicle charges	40.00
Total	<u>\$ 1,814.00</u>

Signed L. B. Gatenby
L. B. Gatenby, P. Eng.

Geophysical ExpendituresPersonnel

J. A. C. Keefe - Graduate Geophysicist (Toronto) In charge of Geophysical Surveys 20 days @ \$35.00/day	\$ 700.00
W. Wasylichko - Geophysical Operator Salary \$400.00/month plus board 26 days @ \$15.00/day allowable	390.00
J. P. Duval - Geophysical operator Salary \$350.00/month plus board 26 days @ \$15.00/ day allowable	390.00
Lawrence Daly - Geophysical operator Salary \$350.00/month plus board 26 days @ \$15.00/day allowable	390.00
N. Dirks - Geophysical helper Salary \$250.00/month plus board 26 days @ \$10.00/day	260.00
L. B. Gatenby, P. Eng. Supervisory Capacity 6 days @ \$35.00/ day	210.00
Unemployment Insurance and Workmen's Compensation	92.00
Camp food costs @ \$2.40/man/day 130 man days	312.00
Geophysical equipment supplies and maintenance	35.00
Vehicle charges	<u>150.00</u>
Total	\$ 2,919.00

Signed L. B. Gatenby
L. B. Gatenby, P. Eng

Report on the Geological, Geochemical and Geophysical work done on the KL #1 to #6 groups of mineral claims in the Nicola Mining Division of B. C. between October 3, 1957 and October 3, 1958 by Rio Tinto Canadian Exploration Ltd. (formerly Rio Canadian Exploration Ltd.)

1. Geological

(see overall geological map West Craigmont and detailed geological map area 2)

Control for the geological mapping of this area was obtained from aerial photograph mosaics and surveyed grid lines cut and picketed on the ground.

The aerial photograph mosaics were prepared from B. C. Government 1" = $\frac{1}{2}$ mile photographs and subsequently enlarged to a scale of 1" = 1320' approximately. These mosaics proved very useful and economical in the geological mapping of the area. They were first used for a geological interpretation of the area and later for ground control of the many reconnaissance surveys before and outside the grid surveys.

After the geological reconnaissance surveys grid lines were cut and surveyed in the most promising areas on 400', 600' and 800' spacing with 100' stations.

Results of the combined geological mapping show the Gulchon Batholith - Nicola volcanic contact runs approximately east west through KL #2 claim group and swings to the south in KL #4 claim group. A similar contact running north easterly was mapped just west of KL #3 claim group. Lower Cretaceous Kingsvale volcanics outcrop on hill tops just east of the claims. Sedimentary members of the Nicola volcanic formation outcrop on KL #5 claim group and strike north easterly. Geological mapping of the overall claim block is shown on a scale of 1" = 1320' and detailed mapping of area 2 (KL #2 Group) is shown on a scale of 1" = 400'.

2. Geochemical

The geochemical method used is a dithizone field technique developed by Rio Tinto Canadian Exploration Ltd. General procedure is to take soil samples on surveyed grid lines at 100 foot stations and in creeks and drainage gulleys at 250 foot intervals. Anomalous samples and every tenth background sample are sent to the Company's Toronto laboratory for spectrographic analysis. Surveying of the grids is done by compass and tape.

2. Geochemical (cont'd)

On this claim group over 75,000 feet of grid line on 4 grid blocks was soil tested at 100 foot intervals. In addition soil tests were taken along David Creek, the main drainage course of the area, and its tributaries. Overburden was found to be generally thin in the grided areas and fairly heavy in the central northern part of the claim block. Soil sampling was therefore considered a good prospecting tool for at least 75% of the claim block area.

Enclosed are soil test maps of the 4 areas grided, i.e. Areas 2, 25, 3 and 4. Results of these surveys did not show any concentrations or trends of mineralization. Two anomalous samples were recorded in area 3 but on detailing at 50 foot grid spacing and geological mapping proved to be small fractured areas in granodiorite.

3. Geophysical

All 4 grided areas were surveyed with a magnetometer. A Radar magnetometer with a sensitivity of about 50 gammas per scale division was used in areas 25, 3 and 4. Four maps showing the magnetic profiles on the grid lines are enclosed. A Sharpe magnetometer with a sensitivity of about 20 gammas per scale division was used in area 2. Enclosed are a grid line profile map and a magnetic contour map of this area.

In area 2 three additional geophysical surveys were run on the grid. They are:

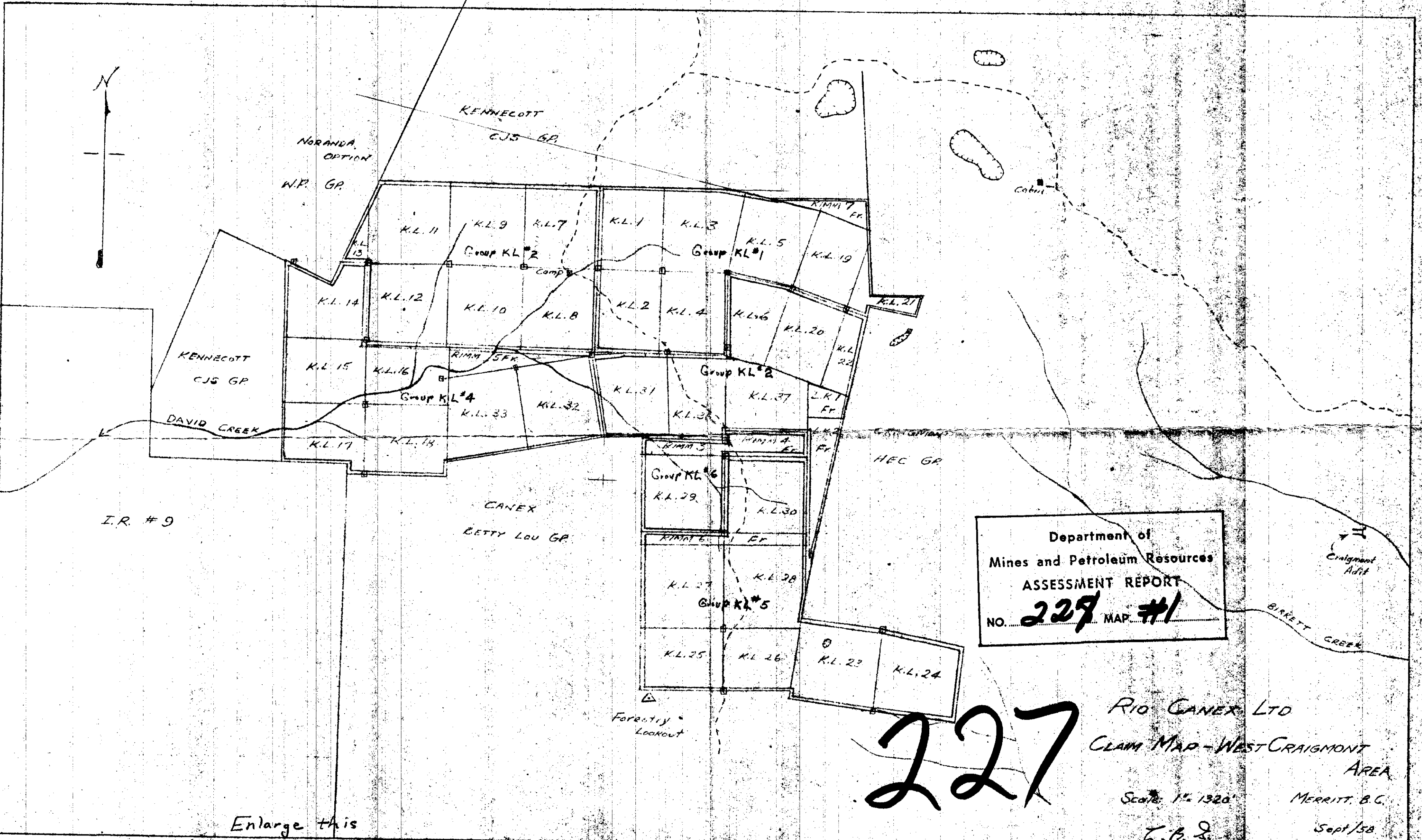
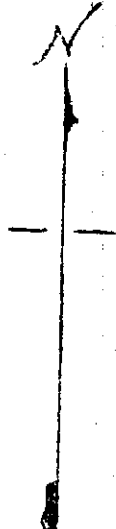
1. electromagnetic with a Sharpe Model SE 100 unit
2. gravity with a standard gravimeter and surveyor's level
3. self potential with a Geophysical Engineering Ltd. potentiometer - 1000' reel of wire and porous pots.

Three maps are enclosed showing the results of these surveys.

Results of the magnetic surveys show no large anomalies but several small ones of 1000 to 3000 gammas intensity were investigated. They are Area 2, line 14 W, area 3, line 6 N and 18 S, area 4, line 16 E, and proved to be syngenetic concentrations of magnetite in the contact area of granodiorite rocks. The magnetites in general are quite active on both the granite and volcanic sides of the contact.

Results of the three additional geophysical surveys in area 2 did not indicate any potentially economic conductive or sulfide bodies. All surveys were run at standard 100 foot stations on the 400 foot spaced grid lines. In the case of the electromagnetic survey transmitter set-ups were made for receiver readings at distances not greater than 800 feet and on the average 500 to 600 feet.

Signed L. B. Gatenby
L. B. Gatenby, P. Eng.



I.R. #9

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **227** MAP #1

227

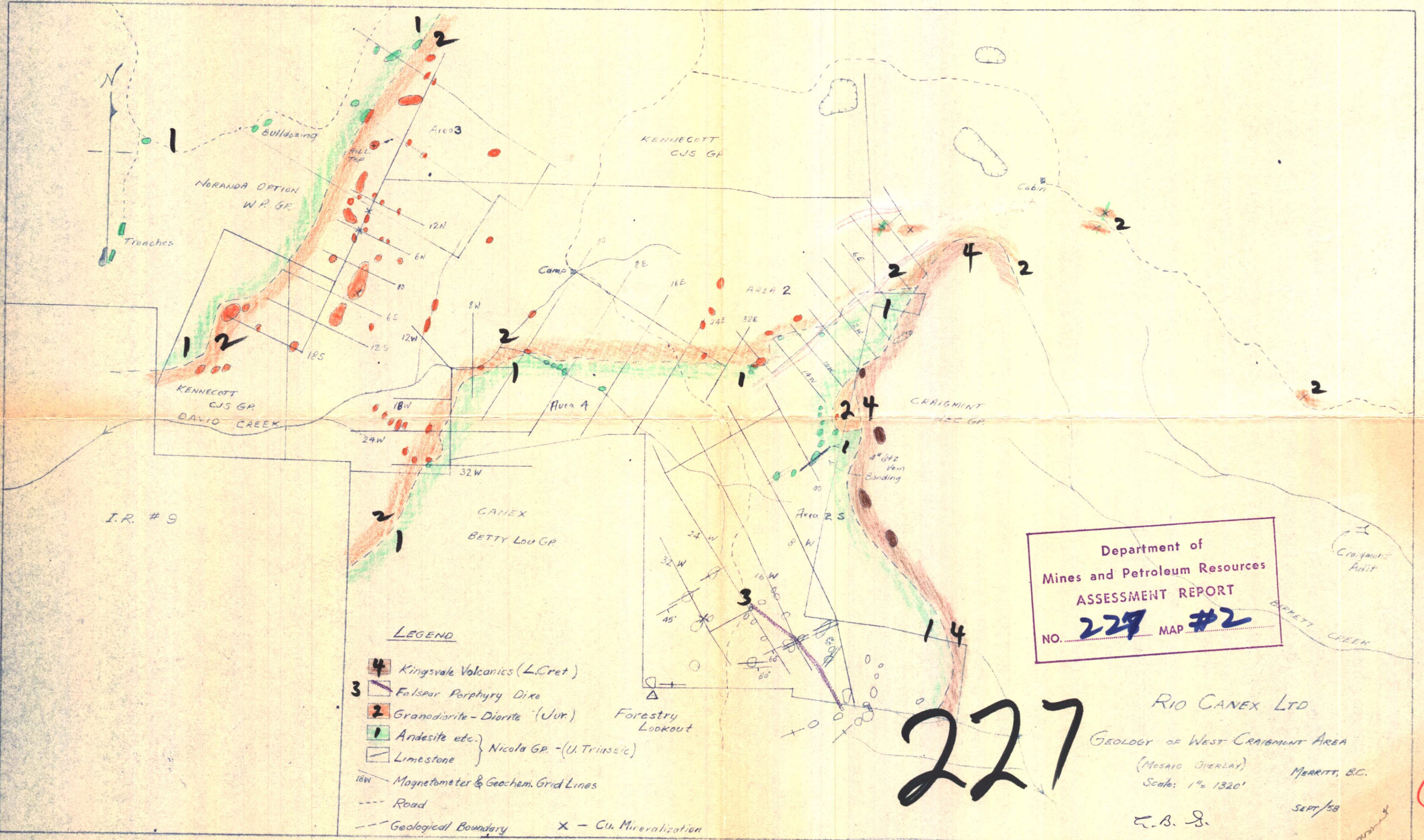
RIO CANEX LTD
CLAIM MAP - WEST CRAIGMONT
AREA
Scale: 1" = 1320'
MERRITT, B.C.
L.P. 2
Sept/58

Enlarge this

to this

①

Enlarge this
to this



LEGEND

- 4 Kingsvale Volcanics (L. Cret)
- 3 Felspar Porphyry Dike
- 2 Granodiorite - Diorite (Jur.)
- 1 Andesite etc. } Nicola Gr. - (U. Triassic)
- Limestone
- 18W Magnetometer & Geochem. Grid Lines
- Road
- - - Geological Boundary
- X - Cu Mineralization

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **227** MAP #2

227

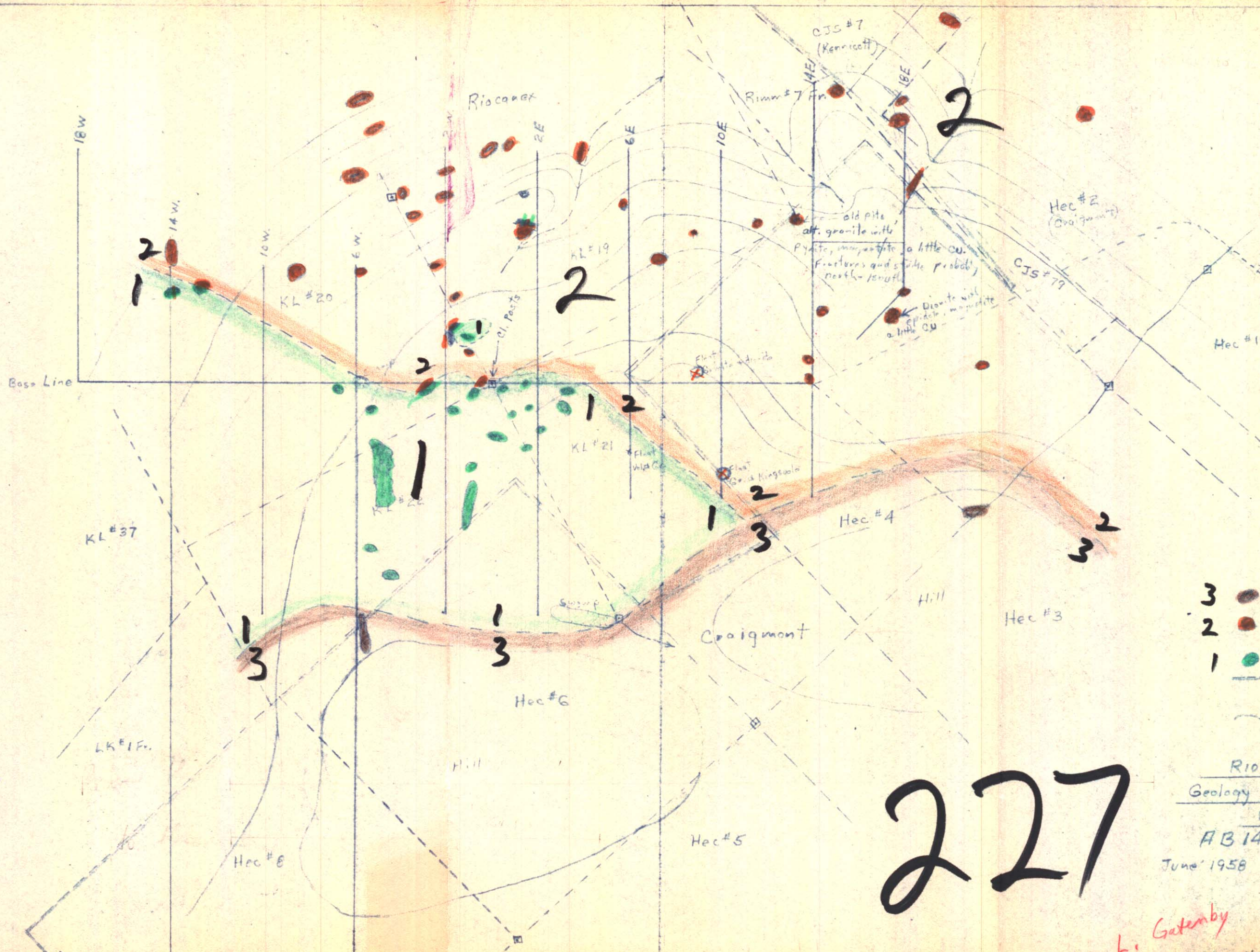
RIO CANEX LTD
GEOLOGY OF WEST CRAIGMONT AREA
(MOSAIC OVERLAY)
Scale: 1" = 1320'

T.B.S.

SEPT/58

from assessment file

2



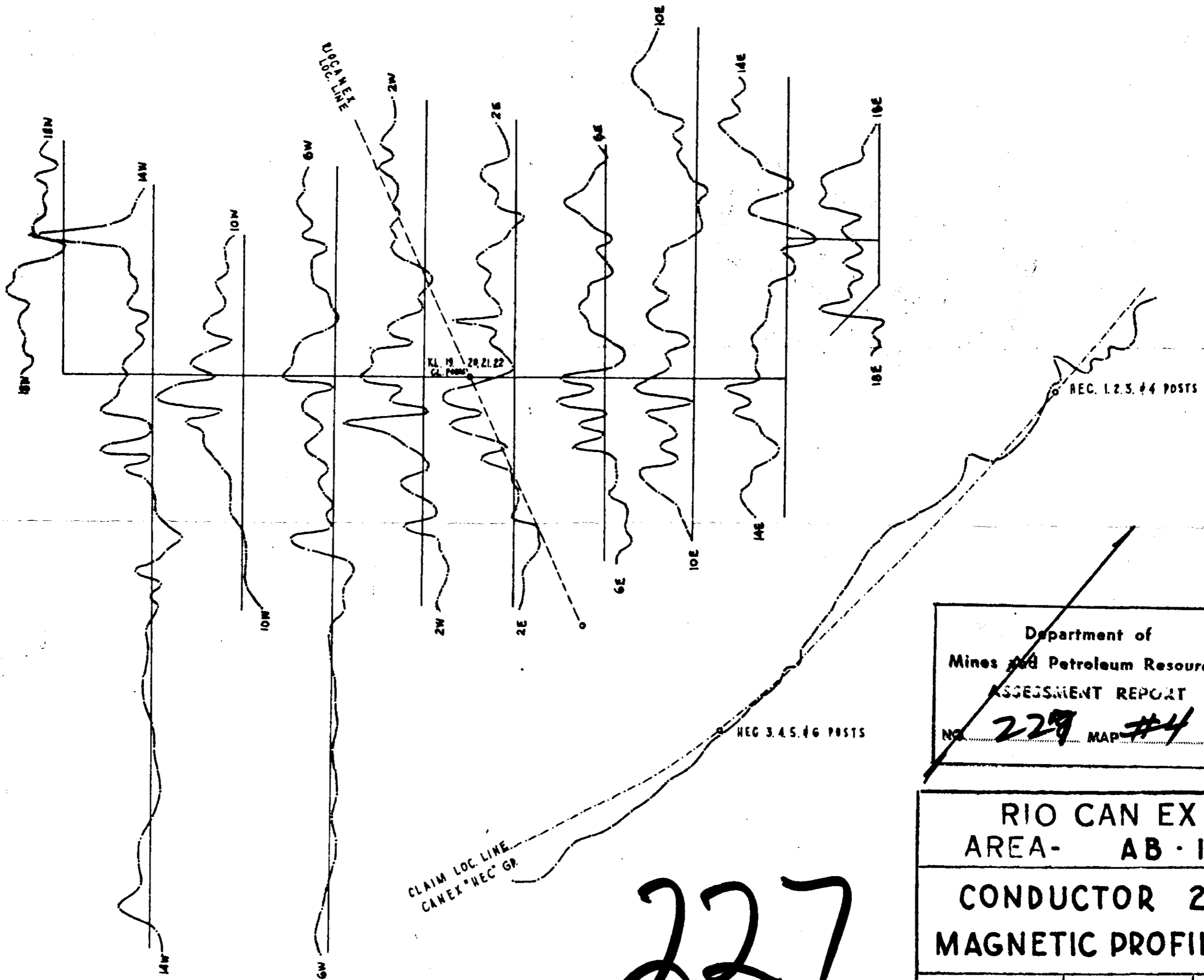
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 227 MAP #3

- Legend
- 3 ● - Kingsvale sds & volc.
 - 2 ● - Intrusive - granodiorite etc.
 - 1 ● - Nicola sds & volc.
 - - - - - Rio Canex property boundary.
 - ~ ~ ~ ~ ~ Topo Form Lines

227

Rio Can Ex.
Geology and Geophysical
Grid
AB 14: Areas 1 and 2
June 1958 Scale 1" = 400'

L. Gatenby
Z.B. &
3

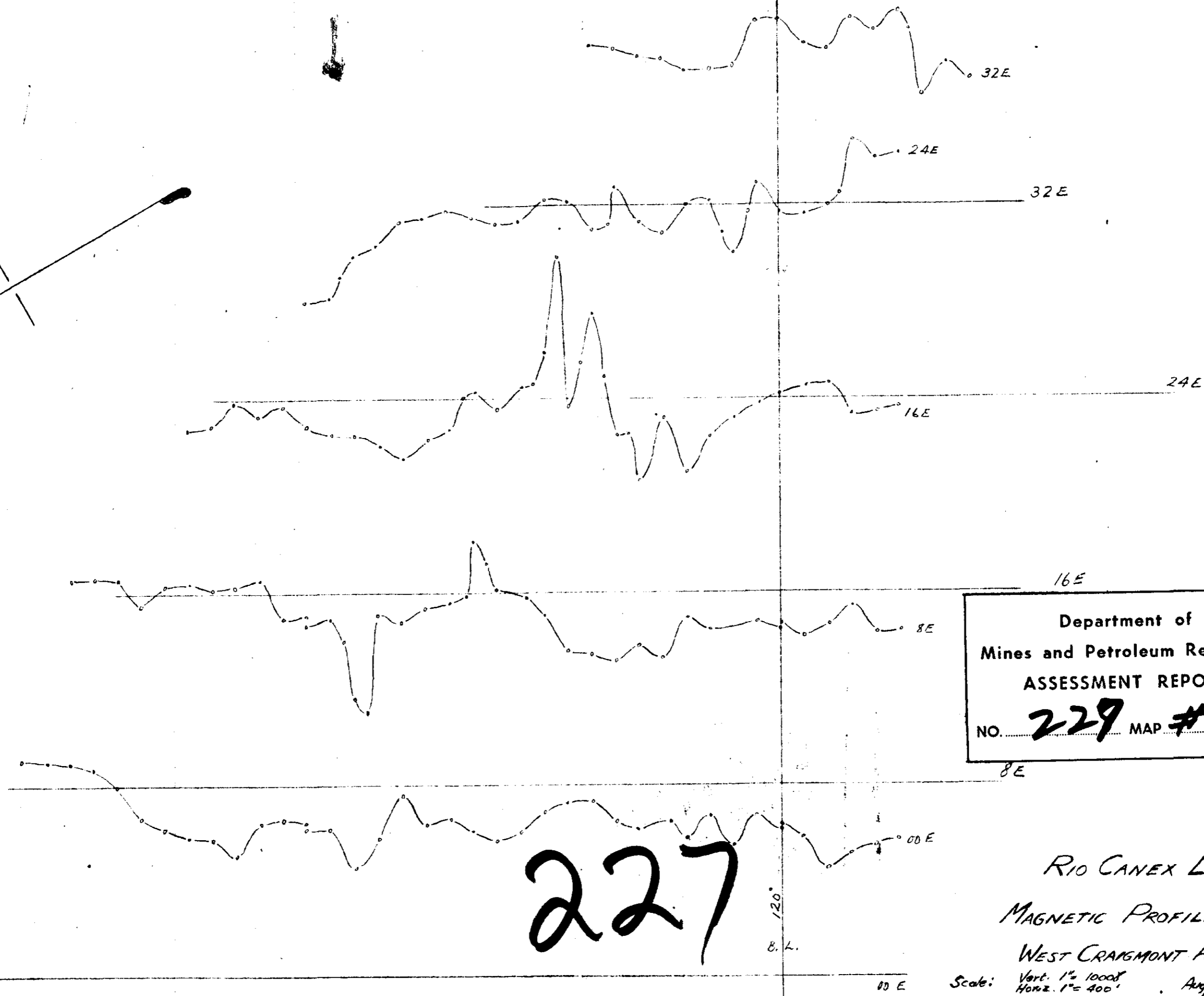
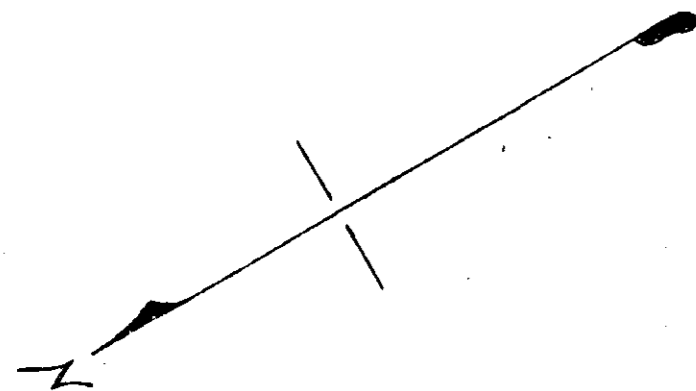


Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **227** MAP **#4**

RIO CAN EX
 AREA- AB-14
 CONDUCTOR 2
 MAGNETIC PROFILES

WORK BY: W.W., A.R.	SCALE: 1" = 400'	DATE: 7-VI-58
PLOT BY: J.K.	1" = 2000 Y	
INT. BY: J.K.		

4



227

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **227** MAP. **#5**

8E

RIO CANEX LTD

MAGNETIC PROFILES

(4)

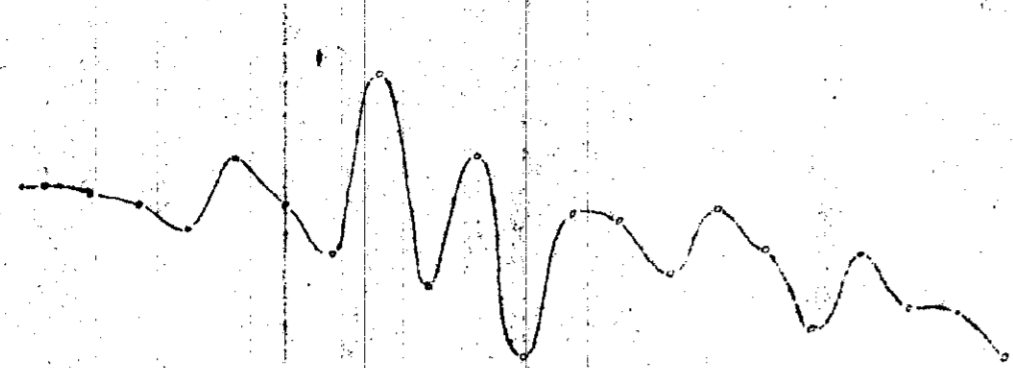
WEST CRAIGMONT AREA 4

Scale: Vert. 1" = 1000'
Horiz. 1" = 400'

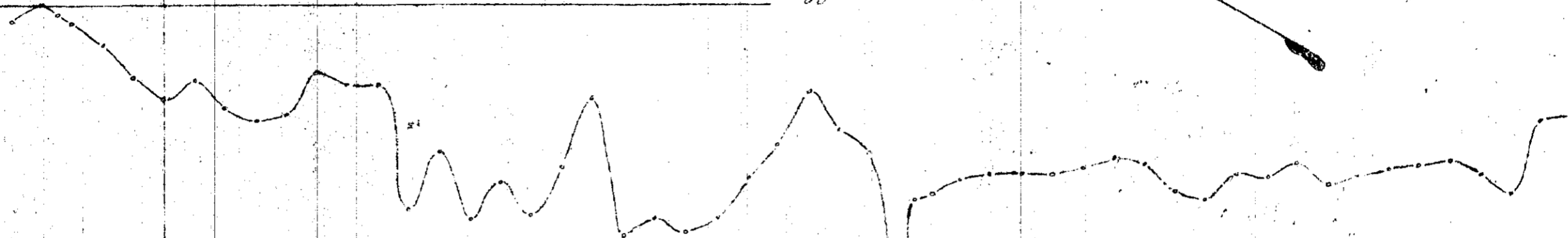
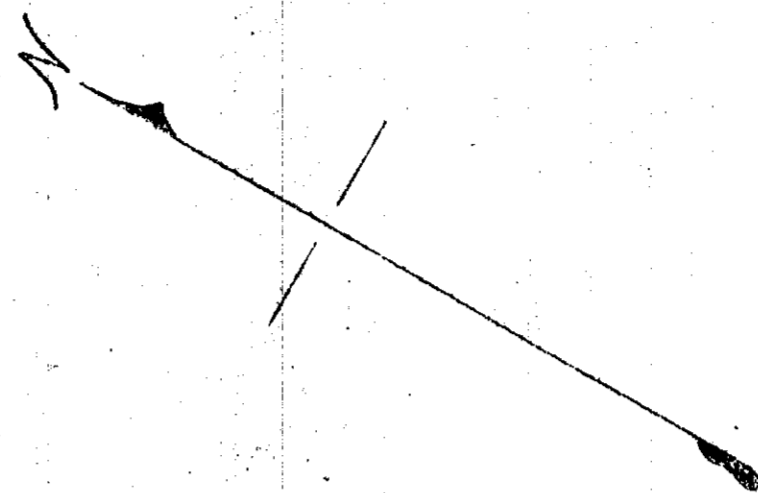
MERRITT, BC
Aug/58 L.B.S.

120°
B.L.

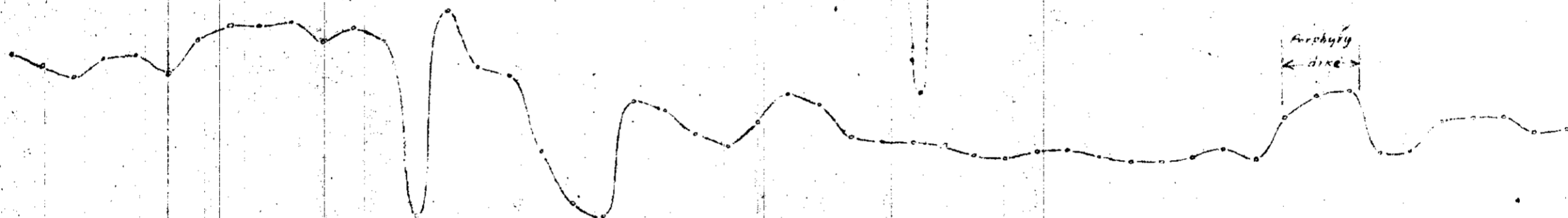
00 E



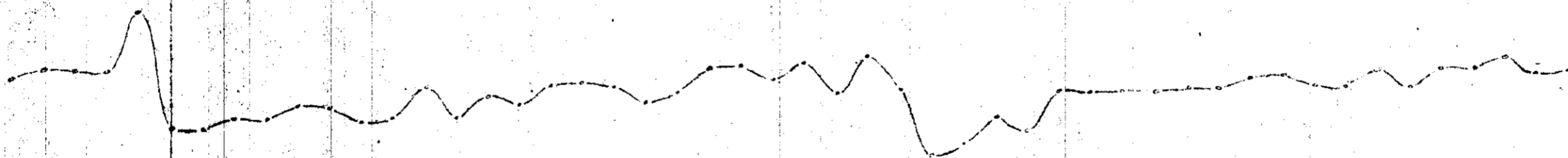
00



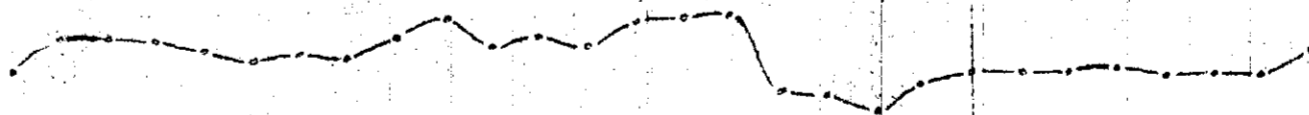
3W



16W



24W



32W

30 S

227

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 228 MAP #6

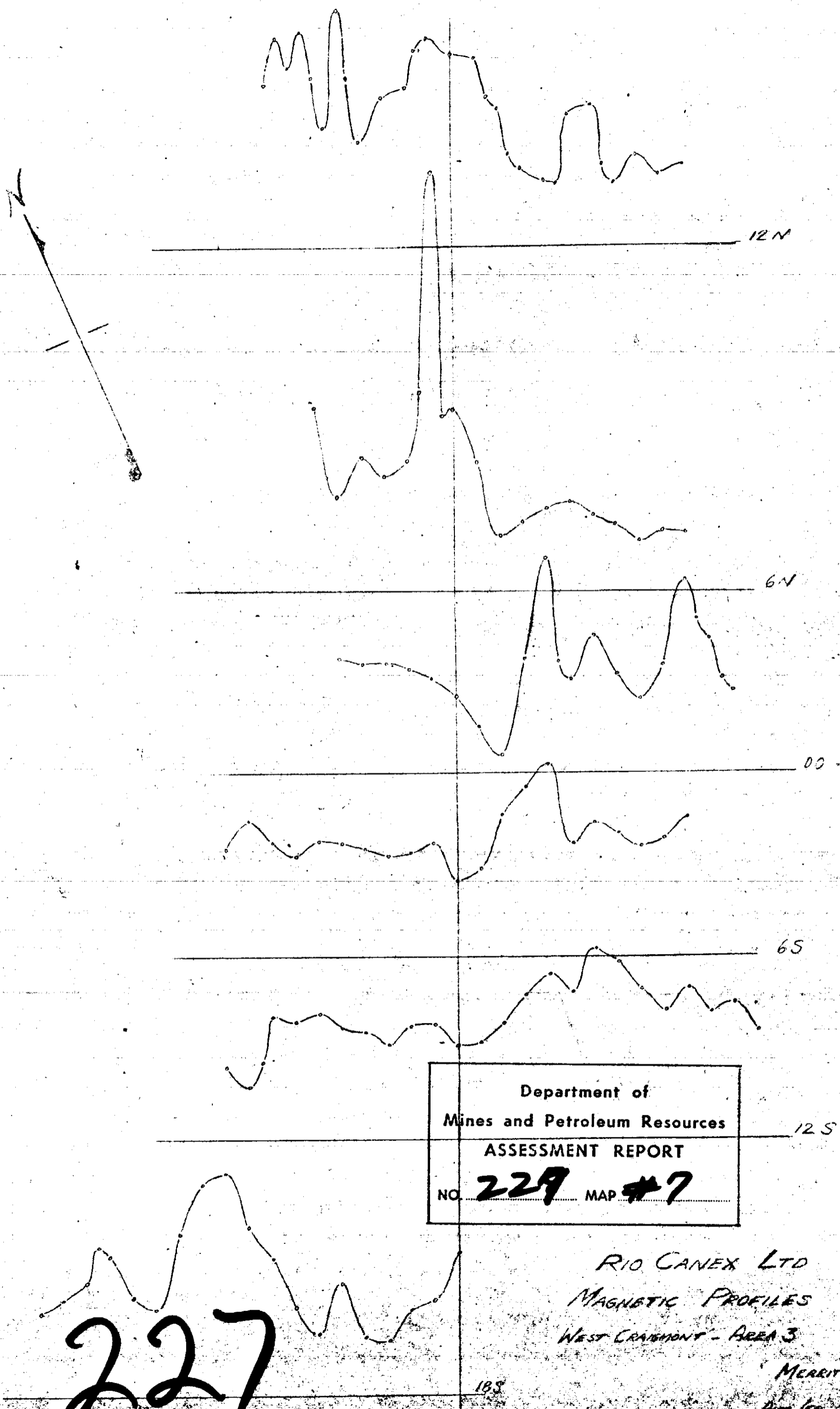
RIO CANEX LTD
MAGNETIC PROFILES
WEST CRAINMONT - AREA 2 South

Scale: Vertical: 1" = 1000'
Horiz.: 1" = 400'

SEPT/58

MERRITT, BC
Z. B. 28

4

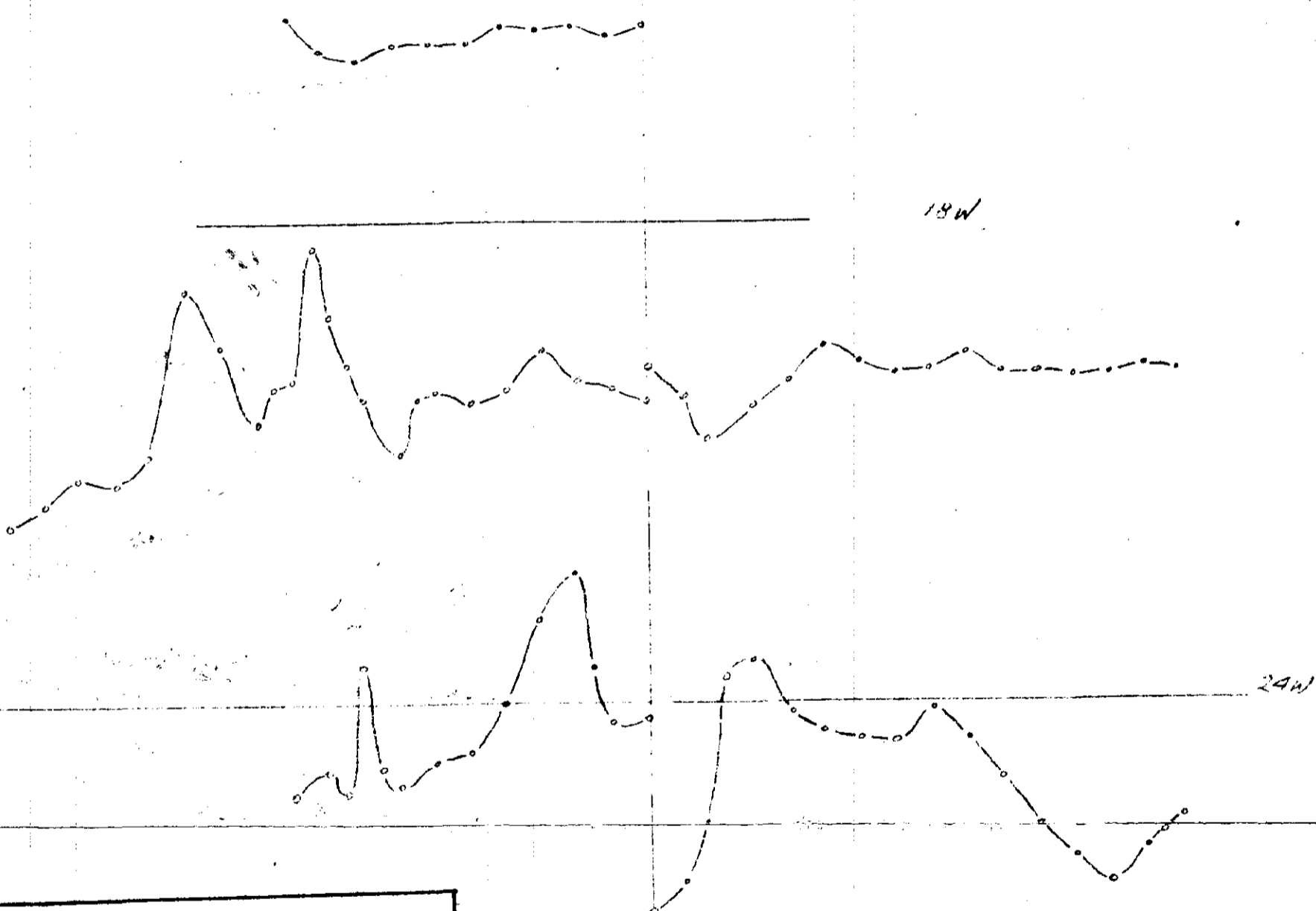
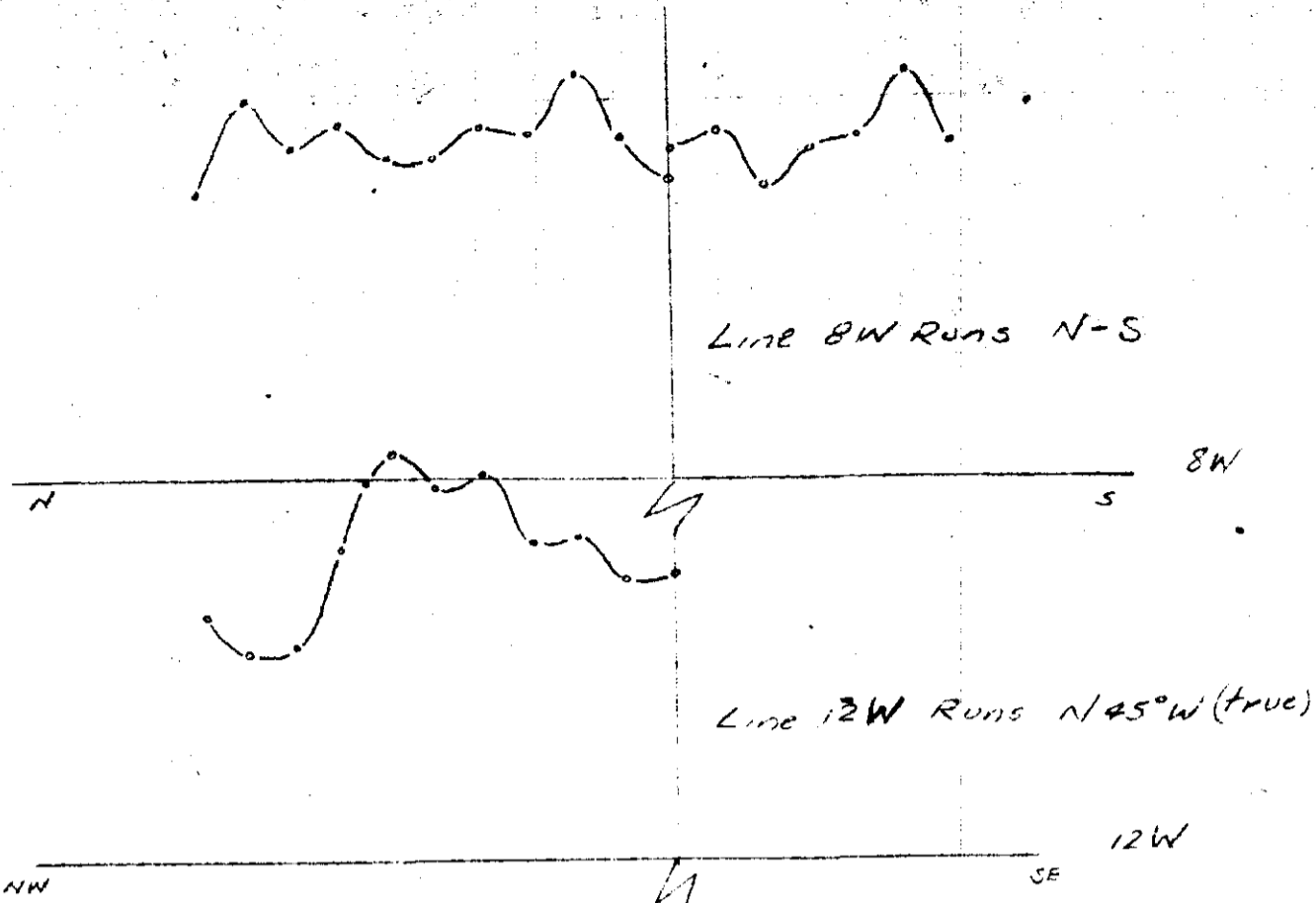


Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **229** MAP # **7**

RIO CANEX LTD
 MAGNETIC PROFILES
 WEST CRAWMONT - AREA 3

227

MERRITT BC
 Aug 1988
 Scale: 1:25000
 F. R. S. (4)



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **227** MAP **#8**

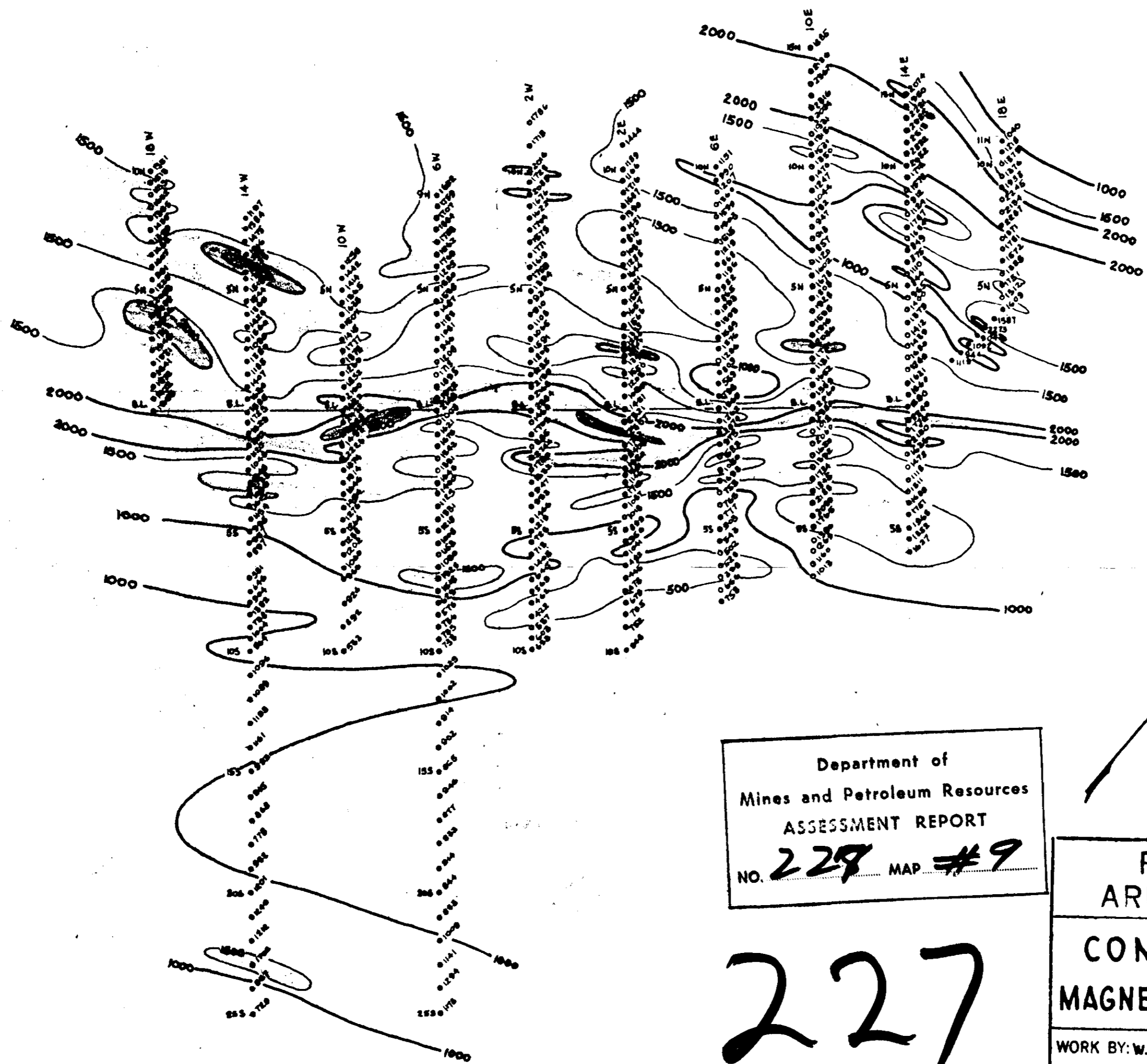
LINES 18, 24W & 30W RUN E-W

Base Line

227

NOTE: FOR ORIENTATION OF
BASE LINE SEE GRID PLAN

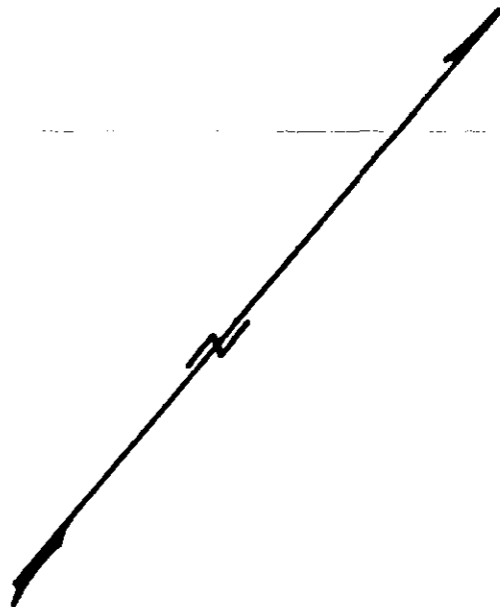
RIO CANEX LTD
MAGNETIC PROFILES
WEST CRAIGMONT AREA 4 **(4)**
Scale: Vertical 1" = 1000'
Horizontal 1" = 400'
MERRITT, B.C.
Aug/58 L.B.S.



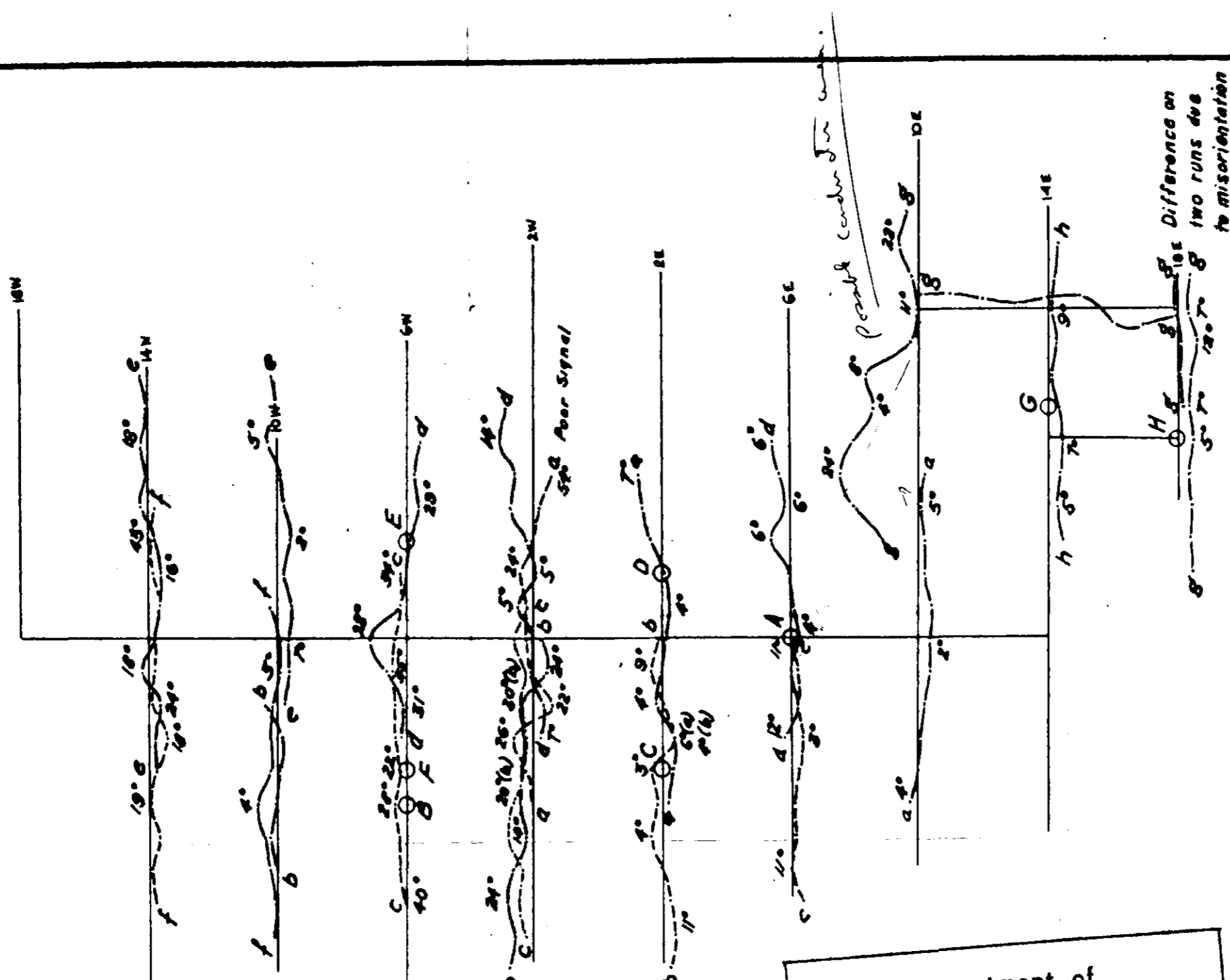
Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. **227** MAP # **9**

227

RIO CAN EX AREA- AB-14		
CONDUCTOR 2 MAGNETIC CONTOUR MAP		
WORK BY: W.W, A.R.	SCALE: 1" = 400'	DATE:
PLOT BY: J.K.	CONTOUR INT: 500 Y	7-VI-58
INT. BY: J.K.		



5



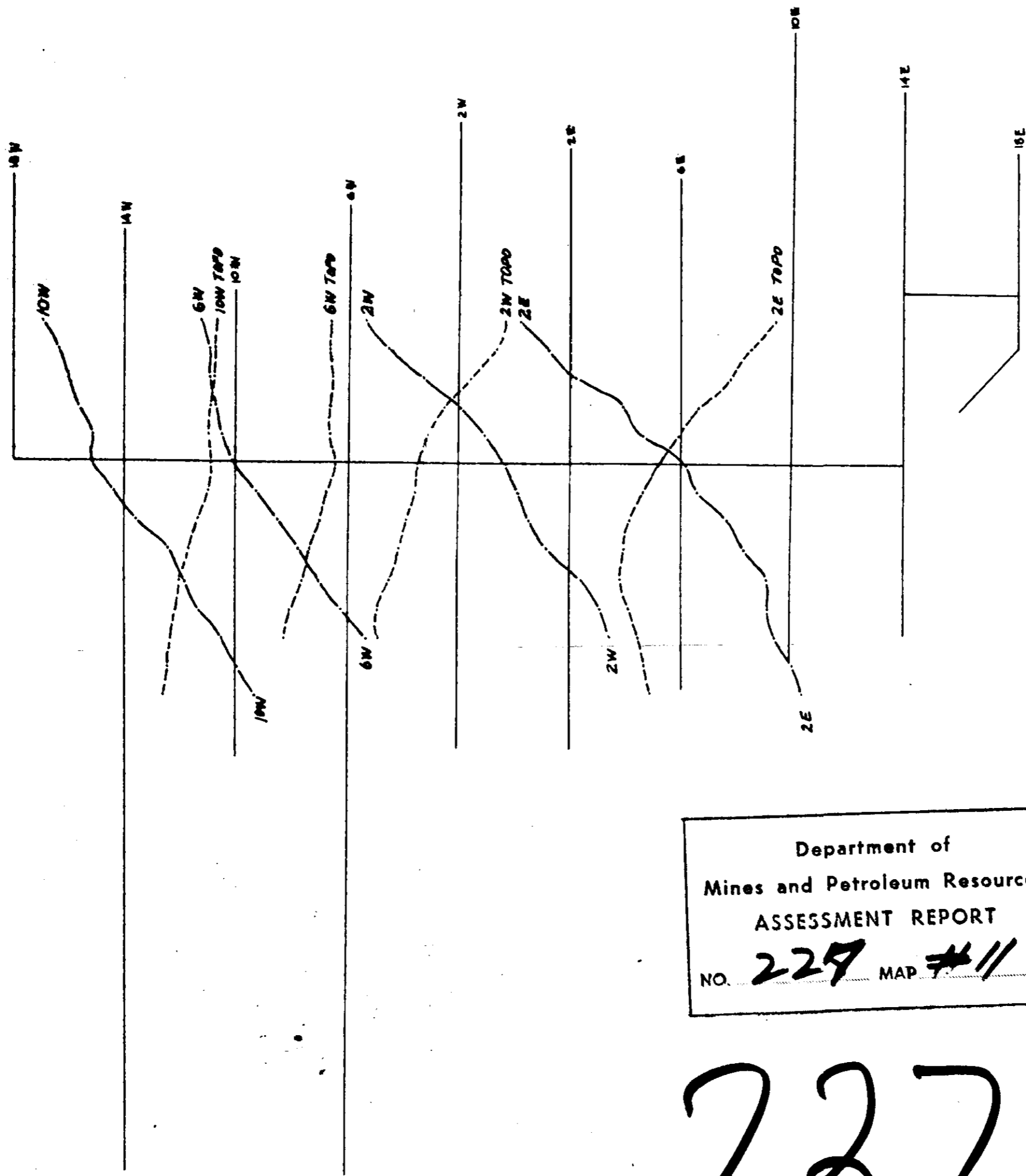
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **227** MAP #10

227

RIO CAN EX AREA- AB-14		
CONDUCTOR 2 E.M. TILT PROFILES		
WORK BY: W.W.	SCALE: 1" = 400'	DATE: 8-VI-58
PLOT BY: J.K.	1" = 20'	
INT. BY: J.K.		

Map 227

(6)



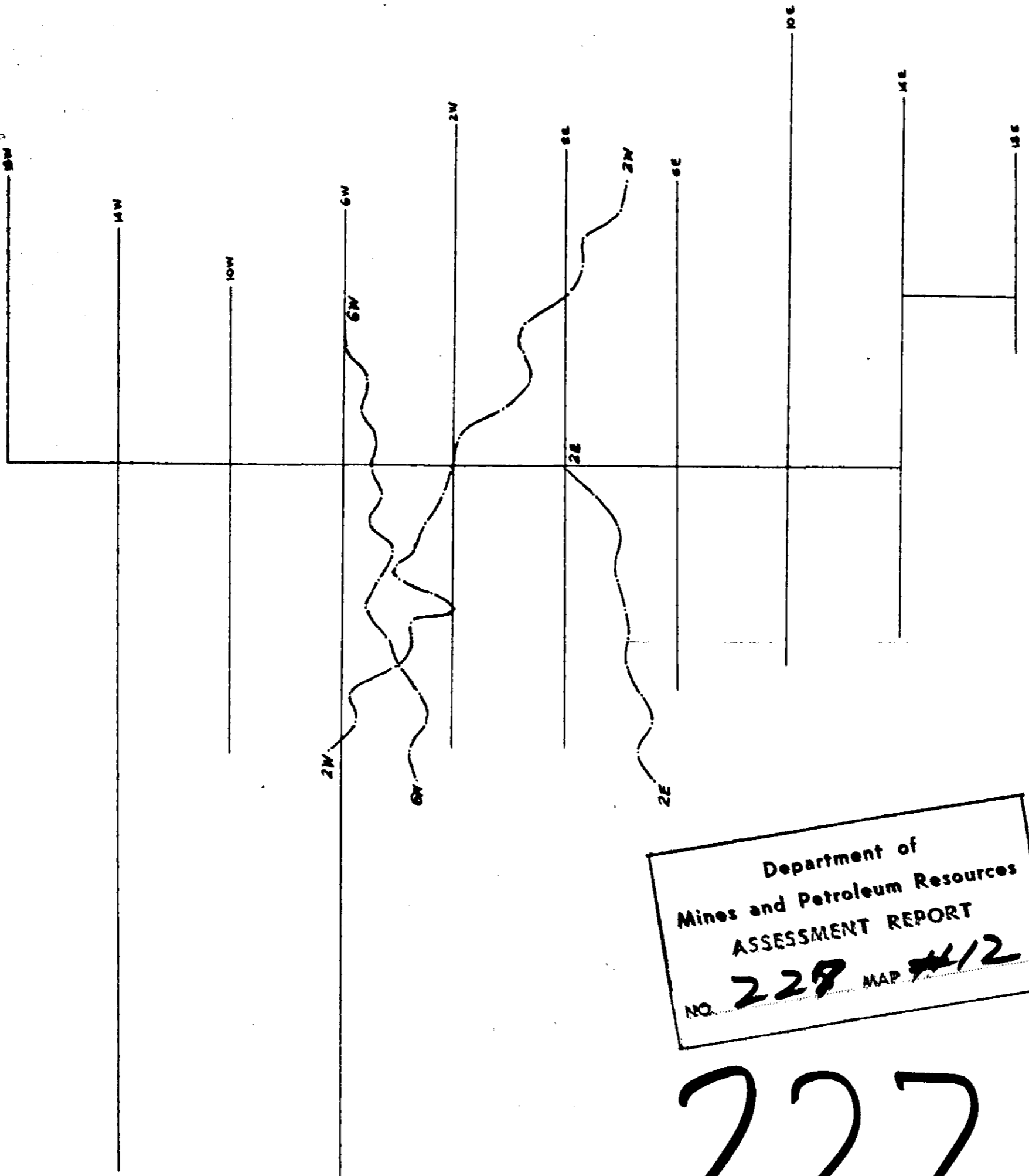
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **227** MAP #11

227

RIO CAN EX AREA- AB-14		
CONDUCTOR 2 GRAVITY PROFILES		
WORK BY: W.W.	SCALE: 1" = 400'	DATE: 7-VI-58
PLOT BY: J.K.	1" = 1.0 mg	
INT. BY: J.K.	1" = 100'	

⑦

W.W. Z.B.J.



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 227 MAP #12

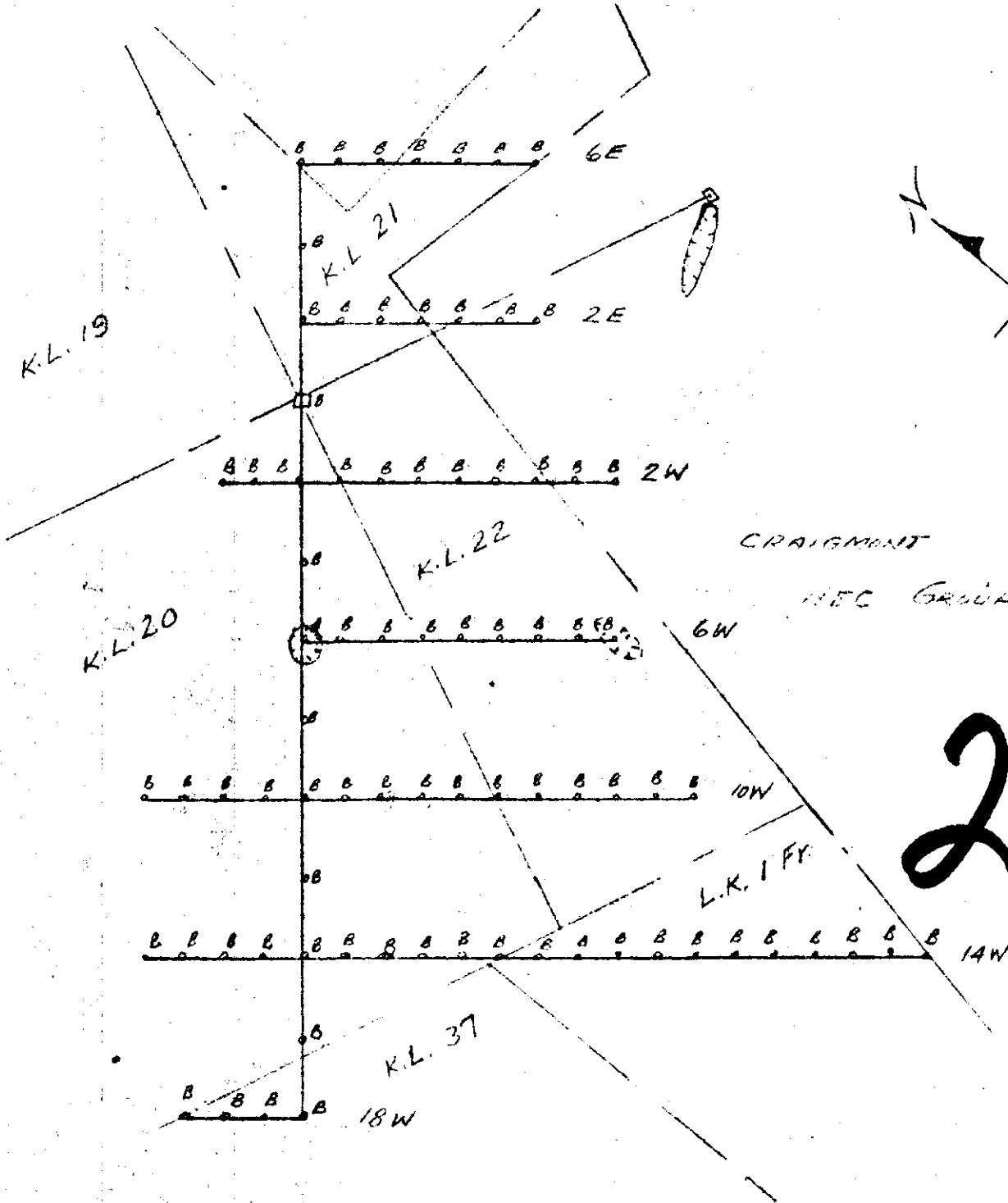
227

RIO CAN EX AREA- AB-14		
CONDUCTOR 2 S. P. PROFILES		
WORK BY: A.R. PLOT BY: J.K. INT. BY: J.K.	SCALE: 1" = 400' 1" = 100 mv.	DATE: 9-VI-58

8

M. J. B. 8

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **227** MAP **#13**



LEGEND

- o B - Background Soil Test
- o L - Low " "
- o M - Medium " "
- o H - High " "
- - Claim Posts

227

RIO CANEX LTD
GEOCHEMICAL SOIL SAMPLING
WEST CRAIGMONT - AREA 2

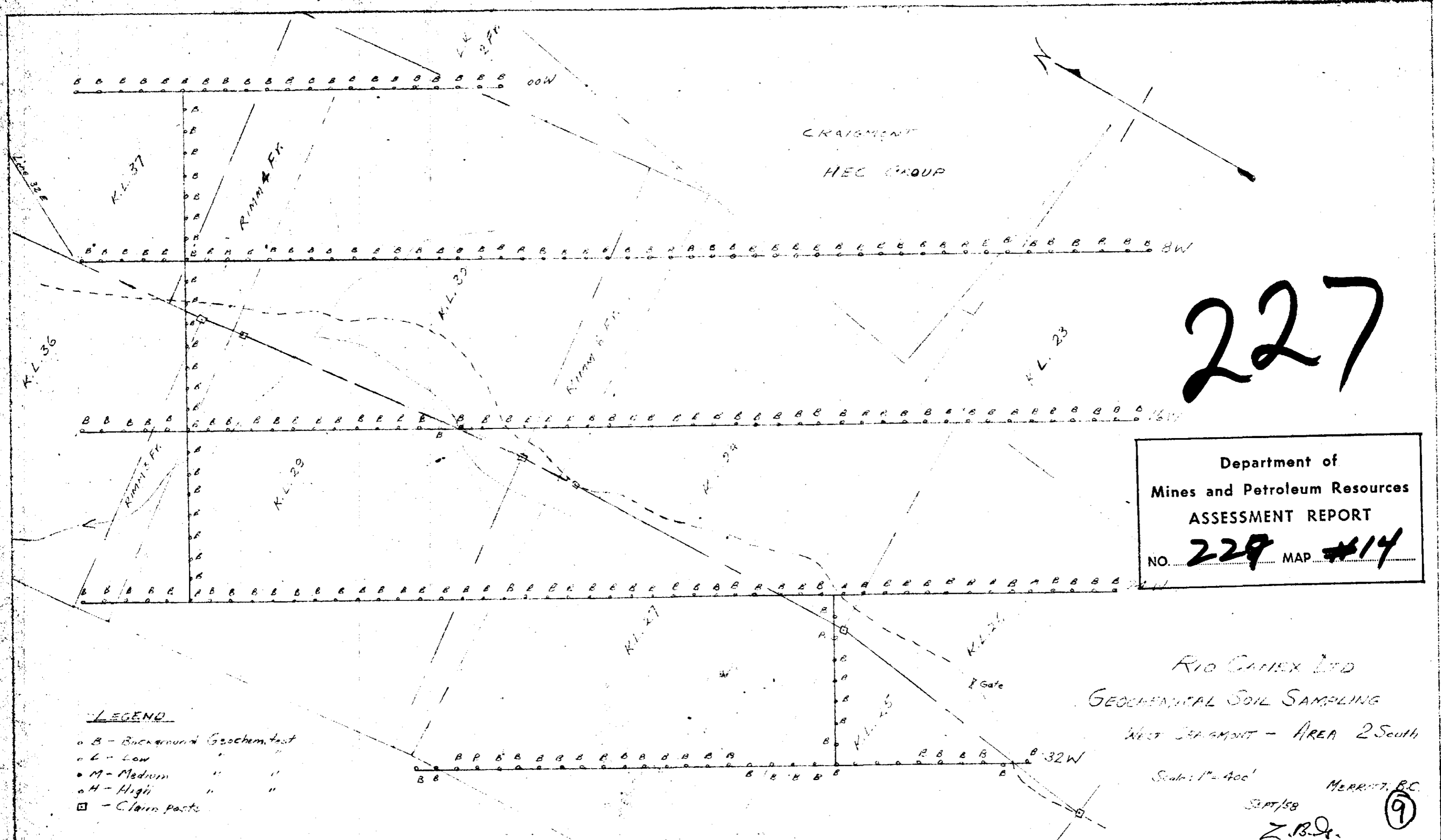
Scale: 1" = 400'

MERRITT, BC.

Z B - S.

SEPT/50

(9)



227

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **229** MAP #14

- LEGEND
- B - Background Geochem. test
 - L - Low " "
 - M - Medium " "
 - H - High " "
 - - Claim posts

RIO CANEX LTD
GEOCHEMICAL SOIL SAMPLING
WEST SEGMENT - AREA 2 South

Scale: 1" = 400'
MERRITT, B.C.
SEPT/58
Z.B.G. (9)

KENNECOTT
CJS GR

K.L. # 11

N

NORANDA
SECTION
WP GR

KENNECOTT
CJS GR

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 227 MAP #15

Legend

- B - Background soil test
- L - Low " "
- M - Medium " "
- H - High " "

227

RIO CANEX LTD

GEOCHEMICAL SOIL SAMPLING

WEST GRAMMONT - AREA 3

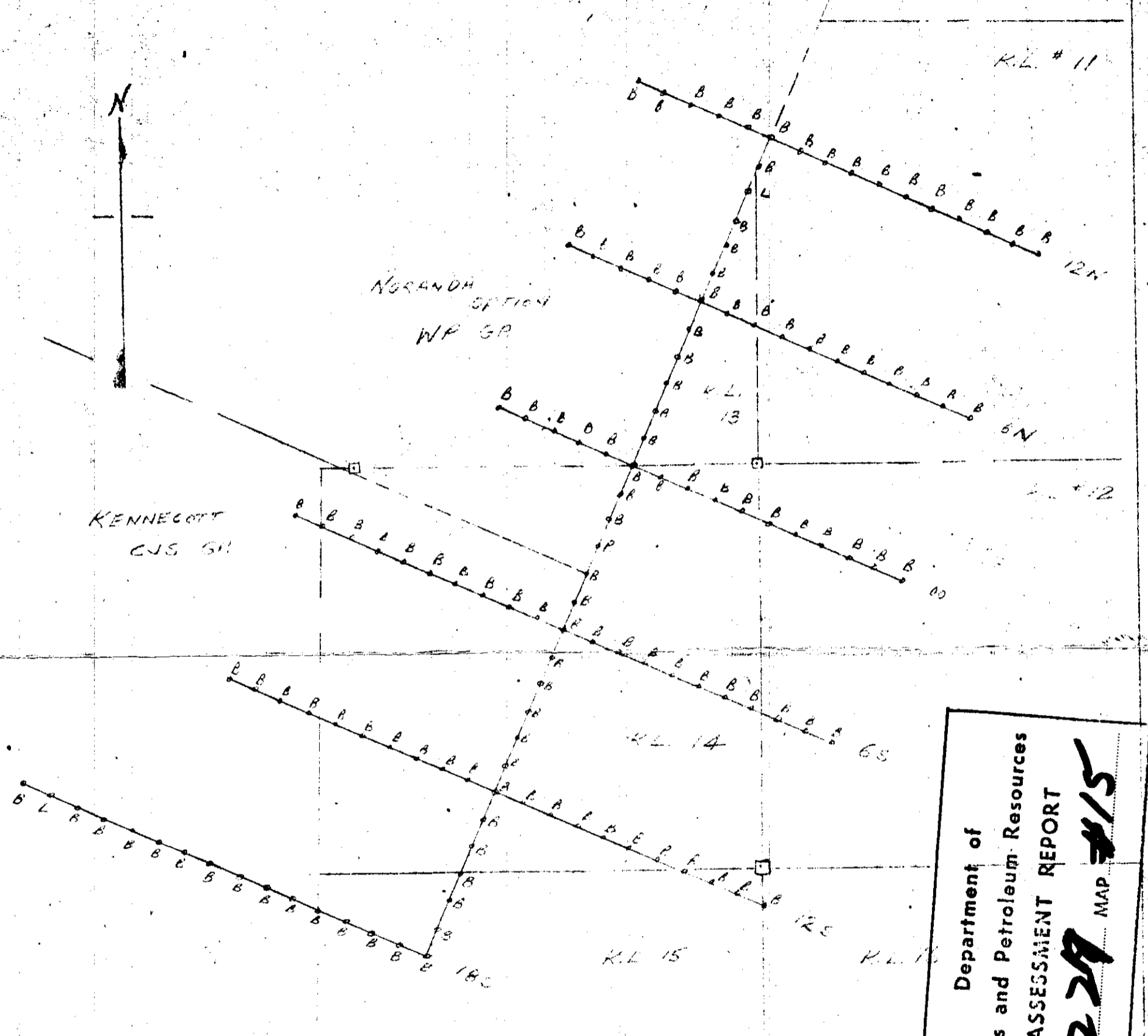
Aug/59

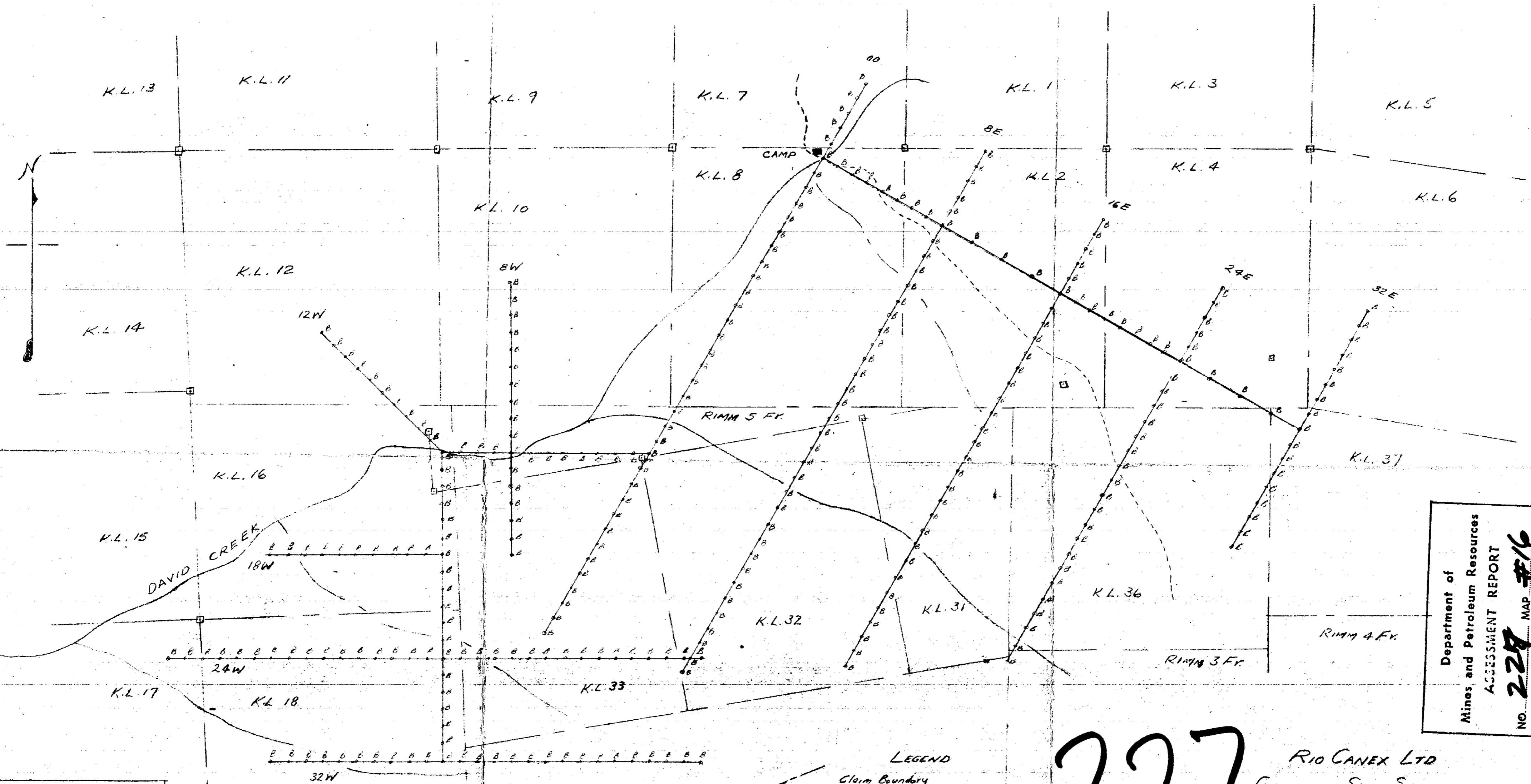
MERRITT, B.C.

Scale: 1" = 400'

Z.B. &

(9)





Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 227 MAP #16

LEGEND
 --- Claim Boundary
 □ Claim Posts
 - - - Road
 ○ B - Background Soil test
 ○ L - Low " "
 ○ M - Medium " "
 ○ H - High " "

227

RIO CANEX LTD
GEOCHEM. SOIL SAMPLING
AREA 4 WEST CRAIGMONT

Scale: 1" = 400'

MERRITT, BC
Aug/58
Z. B. S.

9