1800

QUALITY EXPLORATION CORPORATION
Spa Mines Project Magnetometer Survey
Siwash Creek Area, B. C.

ALRAE ENGINEERING LTD.

March 26, 1969

ALRAE ENGINEERING LTD.
VANCOUVER, B.C.
ENGINEERS & GEOLOGISTS

TABLE OF CONTENTS

INTRODUCTION

During the period January 20th to March 15th, 1969, a crew of men varying in number from 2 to 16 prepared six miles of base line and over 64 miles of chained and flagged grid lines. Two parallel base lines were placed 7,500 feet apart and cross lines were spaced at 400 foot intervals along the base lines. The east and westernmost cross lines between the two base lines were picketed tie lines. Magnetometer readings were taken at flagged points spaced at 100 foot intervals along the cross lines and tie lines.

Maps of the area surveyed showing located claim boundaries, topographic features, grid-lines and numerical and contour presentations of the magnetic survey are included with this report.

LOCATION AND ACCESS

The Spa Mines project claims are located approximately 25 miles northeast of Princeton and six miles north of Bankier on the Kettle Valley Railway. Good access is provided by an old logging road turning off 26 miles from Princeton, on the Osprey Lake road which follows the Kettle Valley Railway from Princeton to Summerland. The total road distance to Princeton from the claims is approximately 35 miles.

A permanent camp on Siwash Creek, immediately east of the claims, provided accommodation for the field crew throughout the operations.

Except for the extreme northeastern portion of the area, the topography is fairly even with a difference in elevation from Siwash Creek to the main plateau at around 500 feet. The main plateau level being at about 5,500 feet.

CLAIMS

The magnetometer survey covered the majority of claims making up the Silver, Al and Top groups in addition to the San and Ban claims.

Claims and their record numbers, all of which are in the Similkameen Mining Division, are as follows:

CLAIM GROUP	CLAIM NAME	RECORD NUMBER
Silver Group	Pet 3 - 8	17128 - 17133
	Fix 048 - 057	15621 - 15630
	Fix 160 - 163	15595 - 15598
	Fix 170 - 175	15633 - 15638
	Fix 319 - 322	15889 - 15892
	Fix 333 - 336	15903 - 15906
	Fix 347 - 350	15885 - 15888
	Tent 1 & 2	18487 & 18488
Al Group	Top 41	16234
	Top 43	16236
	Top 45	16238
	Top 47	16240
	Top 49	16242
	Fix 035 & 036	15609 & 15610
	Fix 152	15587
	Fix 168	15631
	Fix 178 - 181	15639 - 15642
	Fix 183	15644
	Fix 188 - 193	15603 - 15608
	Al 14	16188
	Al 16	16190
	Al 18	16192
	Al 20	16194
	Al 22	16196
Top Group	Top 39 & 40	16232 & 16233
	Top 42	16235
	Top 44	16237
	Top 46	16239
	Top 48	16241
	Top 50	16243
	Top 69 - 88	16210 - 16229
	Top 100 & 101	16230 & 16231
	Fix 182	15643
	Fix 184 & 185	15599 & 15600
	Fix 185A	20525
	Fix 186 & 187	15601 & 15602

Top Group (Cont.)	Fix 331 & 332	15901 & 15902
	Fix 345 & 346	15915 & 15916
Ungrouped claims	Ban 1 - 15	23811 - 23825
	Ban 17 & 18	23826 & 23827
	San 1 - 18	23793 - 23810

Total 138 claims

GEOLOGICAL BACKGROUND

The Geological Survey of Canada 1" = 4 mi. geological map of the Princeton area (Sheet 92H E1/2) indicates the claim area as being underlain partly by acid intrusives of the Otter group, comprising pink and grey granites and granodiorite of Cretaceous or Tertiary age, which cut older granites and granodiorites of the Coast Intrusion series. The boundary of the Nicola Group extrusives is shown as being somewhat to the west of the property boundaries but probably extends into the western margin of the area.

In the vicinity of the claims, mineralized quartz veins containing galena, sphalerite, tetrahedrite, chalcopyrite and specular hematite have been located, and in some instances a close association with disseminated magnetite has been reported. Within the claim group, a mineralized zone known as the Dillard Zone occurs in the Silver Group and comprises a highly altered gossan or limonitic alteration zone.

Bulldozer trenching revealed the 'gossan' to be underlain by highly altered granitic rocks containing much pyrite and secondary manganese and minor amounts of magnetite. These rocks contained noteworthy amounts of silver and zinc.

MAGNETOMETER SURVEY

A detailed magnetometer survey was carried out over the main area of claims during January, February and March, 1969. The instruments used were two Sharpe fluxgate magnetometers, Model MF 1.

Readings were taken at 100 foot intervals along lines spaced 400 feet apart.

A theoretical zero point was selected well to the southwest of the property to which all points were referenced on two co-ordinates. Two parallel base lines, 85N and 160N, respectively, were cut and picketed at 100 foot intervals across the long axis of the claim groups and were aligned slightly south of west to intersect prominent topographic features. The base lines were tied by two picketed tie lines at 38E and 188E, respectively. In addition to the area within the base lines, flagged lines were extended 3,000 feet north of the 160N base line between 140E and 212E and south of the 85N base line between 96E and 132E. A two and one half mile winter road was cut to provide access to the westernmost or Top group of claims. The grid lines for the survey were prepared by blazing and chaining compass lines spaced at 400 foot intervals along the base lines. All lines were marked with numbered plastic flagging at 100 foot interval stations.

The base line stations were used for base station magnetic controls and a master control point was set up just inside the claim area at the fork of the existing north and south access roads. All readings throughout the survey were corrected to the master control base level. Diurnal and day-to-day variation corrections were applied to all readings and a correction factor was also applied to co-ordinate the two instruments used on the survey.

Corrected readings are plotted on the accompanying map sheets and the overlay sheets show a contour presentation of the same readings together with all located claim location lines and major topographic features.

INTERPRETATION OF MAGNETIC SURVEY

In view of the high range of readings from a -500 to +1,000 gammas background to positive peaks of up to 12,000 gammas and adjacent lows of -750 gammas, the corrected readings were contoured at 100 gamma intervals from 0 to 1,000 gammas and 500 gamma intervals below 0 and above 1,000 gammas, thus illustrating both variations in background and highly anomalous areas.

The eastern two thirds of the area surveyed shows a well modulated background pattern varying from -500 to +1,000 gammas, with a marked east - west elongation or trend. This pattern is considered to reflect a fairly homogeneous bedrock, probably of granitic composition, with a marked east - west structural or lithological varient.

Extending from the northwest corner of the grid (38E 160N), southeast, to below the 85N base line (112E 75N), a belt showing a more variable pattern is prominent and probably indicates a significant change in the country rock and may mark the easterly extent of the Nicola Group of volcanics. Within this belt three steep positive anomalies of up to 8,000, 9,000 and 12,000 gammas, respectively, are centred on claim Fix 035. The highs are complimented by adjacent lows to -750 gammas. The intensity and shape of these anomalies suggest a near surface concentration of magnetite, while the east - west elongation of individual anomalies parallels the trend to the east and enhances the suggestion of a basic structural direction.

CONCLUSIONS AND RECOMMENDATIONS

No detailed geological information or further work has yet been carried out on the property and although fairly detailed, the magnetometer survey must, at present, be regarded as an initial phase of exploration. The setting of the property with respect to acid intrusives of two ages in proximity to the regionally favourable

Nicola Group contact suggests that the northwest trending pattern change and associated anomalies should be tested by detailed geological mapping and geochemical sampling.

The resulting combination of geological, geophysical and geochemical data could then be applied to the choice of trenching and drilling sites should the magnetic anomalies be supported by geochemical data.

Respectfully submitted:

J. G. Simpson, B. Sc., Ph. D.

Rae G. Jury, P. Eng.

APPENDIX "A"

TIME AND COST DISTRIBUTION
Line Cutting and Magnetometer Survey
January 20, 1969 to March 15, 1969

Personnel	Occupation	Dates 1969	Wages
Dr. J.G. Simpson	Field Geologist	Jan. 22-30, Feb. 5-16, March 4, 5, 6 and 7	2,281.90
G.D. House	Magnetometer Operator	Jan. 20 - Feb. 9 Feb. 22 - March 15	1,878.36
D.K. Reinke	Project Foreman	Jan. 22 - March 8	1,733.74
C.D.A. Comba	Mag. Operator	Jan. 23 - March 15	2,219.88
J. Antoine	Linecutter	Jan. 22 - March 8	1,273.74
D. Ashley	Linecutter	Feb. 15 - March 8	609.18
R. Casimer	Linecutter	Jan. 22 - March 8	1,273.74
T. Doubt	Mag. Operator	Feb. 17 - 21	213.45
C. Forfar	Linecutter	Jan. 22 - March 8	1,273.74
R. Gairdner	Linecutter	Jan. 22 - March 8	1,273.74
D. Given	Linecutter	Jan. 23 - 31	235.36
P. Haggerty	Linecutter	Jan. 22 - March 8	1,273.74
D. Hogarth	Linecutter	Jan. 22 - March 8	1,273.74
D. McLaughlin	Cook	Jan. 21 - March 13	1,439.88
C. C. Olson	Linecutter	Jan. 27 - March 13	1,273.74
A. Wall	Linecutter	Feb. 15 - March 8	609.18
			$ 20,137.11
M. Payne	Draftsman	March 10, 11	70.00
R. G. Jury	Supervision and Report preparation	Jan. 28, 29 March 10, 11, 12	500.00
			$ 20,707.11
Instrument rentals - Magnetometer s/n 21104, 705286			725.00
Chain saw - rental			120.00
Ground transportation			900.00
Miscellaneous field supplies			689.12
			$ 2,434.12
			$ 23,141.23

Sheet No.s I,Ia,Ib.

Sheet No.s 2,2a,2b.

120° 19' W

49° 47' N

BAN 3 BAN 4 BAN 1 BAN 2 SAN 1 SAN 2 SAN 3 SAN 4 SAN 5 SAN 6 SAN 7 SAN 8 SAN 9 SAN 10 FIX 049 FIX 048 FIX 051 FIX 050 FIX 053 FIX 052 FIX 055 FIX 054 FIX 057 FIX 056

Road

BAN 7 BAN 6 BAN 5 BAN 8

SAN FRACTION No.1 SAN FRACTION No.2

SIWASH CREEK

PET 5 PET 6 PET 7 PET 8

FIX 163 FIX 162 FIX 161 FIX 160

PL 4 PL 2 Bl 3 Pl 1

BAN 9 BAN 10 BAN 11 BAN 12 BAN 13 AL 18 BAN 14 AL 20 BAN 15 AL 22 BAN 16 SAN 17 FIX 152 SAN 17A FIX 150 FIX FRACTION No.4 SAN 16 SAN 15 SAN 14 SAN 13 SAN 12 SAN 11

Road

FIX 175 FIX 174 MEG 6 MEG 5 MEG 4 MEG 3 FIX 173 FIX 172 FIX 171 FIX 170

TOP 41 TOP 42 TOP 43 TOP 44 TOP 45 TOP 46 TOP 47 TOP 48 TOP 49 TOP 50

Road

FIX FRACTION No.3 TOP 50A FIX 35A FIX 35 FIX 184 FIX 183 FIX 182 FIX 181 FIX 180 BAN 18 FIX 178 BAN 17 FIX 168

FIX FRACTION No.2 FIX FRACTION No.1

MEG 7 FIX 349 FIX 350 FIX 347 FIX 348

TOP 40 TOP 39 TOP 78 TOP 77 TOP 76 TOP 75 TOP 74 TOP 73 TOP 72 TOP 71 TOP 70 TOP 69

LAKE ROAD

FIX 193A FIX 194A FIX 193 FIX 192 FIX 191 FIX 190 FIX 189 FIX 188 FIX 187 FIX 186 FIX 185A FIX 185

MEG 8

CAMP

TOP 100 TOP 101

TOP FRACTION No.1 TOP FRACTION No.2

TOP 79 TOP 80 TOP 81 TOP 82 TOP 83 TOP 84 TOP 85 TOP 86 TOP 87 TOP 88

FIX 322 FIX 321 FIX 320 FIX 319

FIX 332 FIX 331

FIX 336 FIX 335 FIX 334 FIX 333

FIX 346 FIX 345

Road

SIWASH CREEK

PRINCETON 35 Mi

120° 19' W

49° 47' N

MAG. DEC. 22° E.

N

NOTE : TO ACCOMPANY GEOPHYSICAL REPORT BY Dr. J. G. SIMPSON & R. G. JURY P. ENG. ON THE SPA MINES LTD. CLAIMS, SIWASH CREEK, SIMILKAMEEN MINING DIVISION. DATED MARCH 26, 1969.

Kai E. Jury

Mineral Claims

No. 1800 Map 192

1800

QUALITY EXPLORATION CORPORATION

INDEX AND CLAIM LOCATION MAP

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED	SCALE: HOR. 1" = 1500 VERT.
DRAWN M. P.	
CHECKED R. G. J.	DWG. No. 1
DATE MARCH 69.	

N

MAG. DEC. 22° E.

BASE LINE 160 N

38E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 92E 96E 100E 104

BAN 1 / BAN 2 / SAN 1 / SAN 2

BAN 3 / BAN 4

BAN 5

BAN 6

BAN 7

BAN 8

BAN 9 / BAN 10

BAN 11 / BAN 12

BAN 13 / AL 18

BAN 14 / AL 20

BAN 15 / AL 22

BAN 16

TOP 39

TOP 40

TOP 41 / TOP 42

TOP 43 / TOP 44

TOP 45 / TOP 46

TOP 47 / TOP 48

TOP 49 / TOP 50

TOP 50A / TOP FIX 35A

TOP 70 / TOP 69

TOP 72 / TOP 71

TOP 74 / TOP 73

TOP 76 / TOP 75

TOP 78 / BASE LINE 85N / TOP 77

TOP 79 / TOP 80

TOP 81 / TOP 82

TOP 83 / TOP 84

TOP 85 / TOP 86

TOP 87 / TOP 88

TOP 100

TOP 101

TOP FRACTION NO.1

TOP FRACTION NO.2

SWAMP

LAKE

Road

NOTE : TO ACCOMPANY GEOPHYSICAL REPORT BY Dr. J. G. SIMPSON & R. G. JURY P. ENG. ON THE SPA MINES LTD. CLAIMS, SIWASH CREEK, SIMILKAMEEN MINING DIVISION DATED MARCH 26, 1969.

52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 92E 96E 100E 104 108E 112E 116E 120E 124E 128E 132E 136E 140E 144E 148E 152E 156E

BAN 5 | BAN 4 | BAN 3 | BAN 2 | BAN 1 | SAN 1 / SAN 2 | SAN 3 / SAN 4 | SAN 5 / SAN 6 | SAN 7 / SAN 8

Road

SWAMP

BAN 16 | BAN 15 / AL 22 | BAN 14 / AL 20 | BAN 13 / AL 18

SAN 17A

SAN 17 / FIX 152

FIX 090

FIX FRACTION NO 4

SAN 16 / SAN 15 | SAN 14 / SAN 13

SAN FRACTION NO 1

Road

FIX FRACTION NO 3

TOP 49 / TOP 50 | TOP 47 / TOP 48 | TOP 45 / TOP 46

TOP 50A / FIX 35A

FIX 035

BAN 18 / FIX 178 | FIX 181 / FIX 180 | FIX 183 / FIX 182

Road

TOP 70 / TOP 69 | TOP 72 / TOP 71 | TOP 74 / TOP 73

FIX 184

FIX FRACTION NO 1

FIX 185

FIX 191 / FIX 190 | FIX 189 / FIX 188 | FIX 187 / FIX 186 | FIX 185A

TOP FRACTION NO 2

TOP FRACTION NO 1

LAKE

TOP 87 / TOP 88 | TOP 85 / TOP 86 | TOP 83 / TOP 84 | TOP 81 / TOP 82

FIX 332 / FIX 331

Department of Mines and Petroleum Resources

NO. 1800

QUALITY EXPLORATION CORPORATION

CLAIMS & TOPOGRAPHY

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED.....
DRAWN..... M. P.
CHECKED..... R. G. V.
DATE..... MARCH 69

SCALE: HOR. 1" = 400'
VERT.

DWG. No. (2)

SHEET NO. 1

NOTE :TO ACCOMPANY GEOPHYSICAL REPORT BY Dr. J. G SIMPSON & R. G. JURY, P ENG.
ON THE SPA MINES LTD. CLAIMS, SIWASH CREEK, SIMILKAMEEN MINING DIVISION.
DATE MARCH 26, 1969.

FIX 332
FIX 331

FIX 322
FIX 321

FIX 320
FIX 319

FIX 189
FIX 188

FIX 191
FIX 190

FIX 193
FIX 192

FIX 193A
FIX 192A

FIX 348
FIX 347

FIX 349
FIX 350

MEG 9
MEG 10

FIX FRACTION NO.2

FIX FRACTION NO.1

Road

BAN 18
FIX 178

FIX 181
FIX 180

FIX 168
BAN 17

FIX 171
FIX 170

FIX 173
FIX 172

FIX 175
FIX 174

MEG 6
MEG 5

MEG 4
MEG 3

Road

SAN 14
SAN 13

SAN 16
SAN 15

SAN 12
SAN 11

FIX 163
FIX 162

FIX 165
FIX 160

PET 5
PET 6

PET 7
PET 8

P.I. 1
P.I. 2
P.I. 3
P.I. 4

SAN FRACTION NO.2

SAN FRACTION NO.1

Road

FIX 049
FIX 048

FIX 051
FIX 050

FIX 053
FIX 052

FIX 055
FIX 054

SAN 9
SAN 10

SAN 7
SAN 8

SAN 5
SAN 6

BASE LINE 160 N

132E 136E 140E 144E 148E 152E 156E 160E 164E 168E 172E 176E 180E 184E 188E 192E 196E 200E 204E 208E 212E

SIWASH CREEK

Road

FIX 051 / FIX 050

FIX 053 / FIX 052

FIX 055 / FIX 054

FIX 057 / FIX 056

188E 192E 196E 200E 204E 208E 212E BASE LINE 160 N

MAG. DEC. 22° E

N

PET 7 / PET 8

PET 5 / PET 6

FIX 163 / FIX 162

FIX 161 / FIX 160

P.I. 4

P.I. 3

P.I. 2

P.I. 1

Road

FIX 175 / FIX 174

MEG 6 / MEG 5

FIX 173 / FIX 172

MEG 4 / MEG 3

NO.2

FIX 349 / FIX 350

FIX 347 / FIX 348

MEG 9 / MEG 10

180 E 184 E 188 E

FIX 193 A / FIX 192 A

CAMP

FIX 320 / FIX 319

FIX 322 / FIX 321

FIX 334 / FIX 333

Road

SIWASH CREEK

G. SIMPSON & R. G. JURY. P ENG.
, SIMILKAMEEN MINING DIVISION

Ref. G. Jury

1600

QUALITY EXPLORATION CORPORATION

CLAIMS & TOPOGRAPHY

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B.C.

DESIGNED	SCALE: HOR. 1" = 400' VERT.
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CHECKED R. G. J.	DWG. No. 3
DATE MARCH 69	

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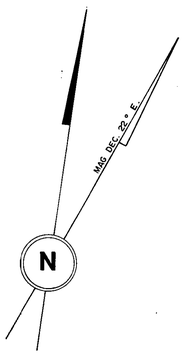

NOTE: TO ACCOMPANY GEOPHYSICAL REPORT BY Dr. J. S. SIMPSON B. R. G. JURY P. ENG. ON THE SPA MINES LTD CLAIMS, SMASH CREEK, SIMILKAMEEN MINING DIVISION. DATED MARCH 26, 1969.

Received
MAR 31 1969
M.R. #
VANCOUVER, B.C.

1800

No. 1800 Map 5

QUALITY EXPLORATION CORPORATION	
MAGNETOMETER SURVEY OVERLAY	
ALRAE ENGINEERING LTD. GEOLOGISTS AND ENGINEERS VANCOUVER, B. C.	
DESIGNED..... DRAWN. M....P..... CHECKED. R....G....H..... DATE. MARCH...69.....	SCALE: HOR. 1" = 400' VERT. DWG. No. (4)

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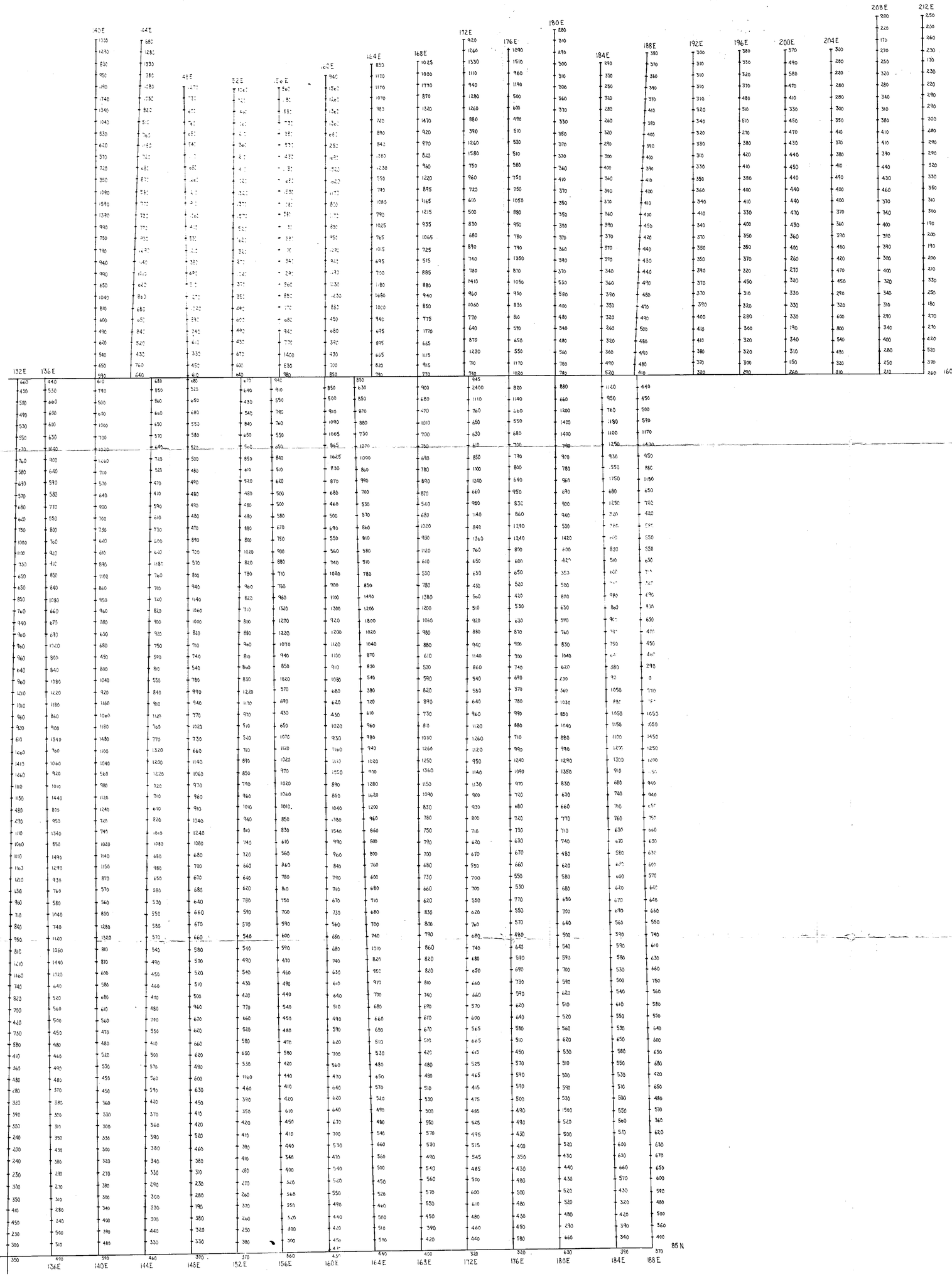
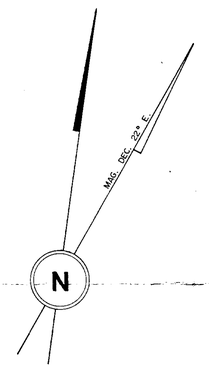
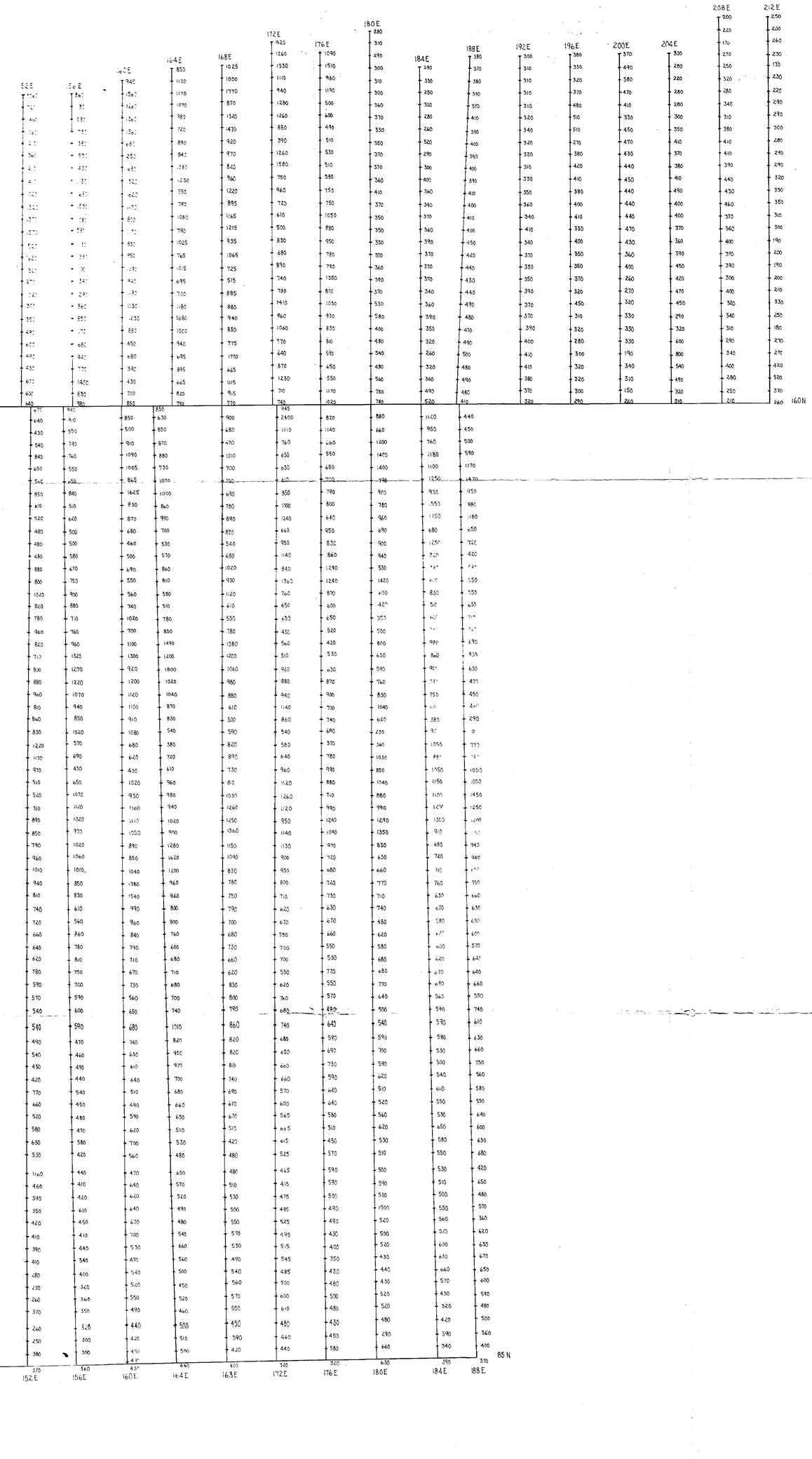
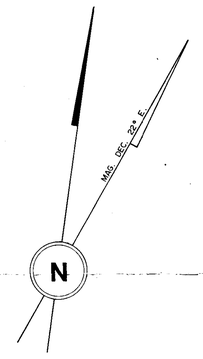




NOTE : TO ACCOMPANY GEOPHYSICAL REPORT BY Dr. J. G. SIMPSON & R. G. JURY P.ENG. ON THE SPA MINES LTD. CLAIMS, SIWASH CREEK, SIMILKAMEEN MINING DIVISION. DATED MARCH 26, 1969.

Rae G. Jury





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Rae S. Jury

1800

Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 1800 MAP 6

QUALITY EXPLORATION CORPORATION

MAGNETOMETER SURVEY OVERLAY

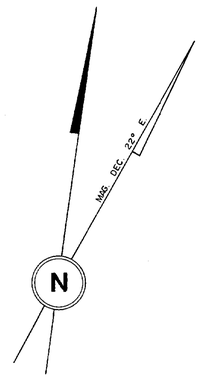
ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED.....
DRAWN..M...P...
CHECKED..R...G...J...
DATE.....MARCH...69...

SCALE: HOR. 1" = 400'
VERT.

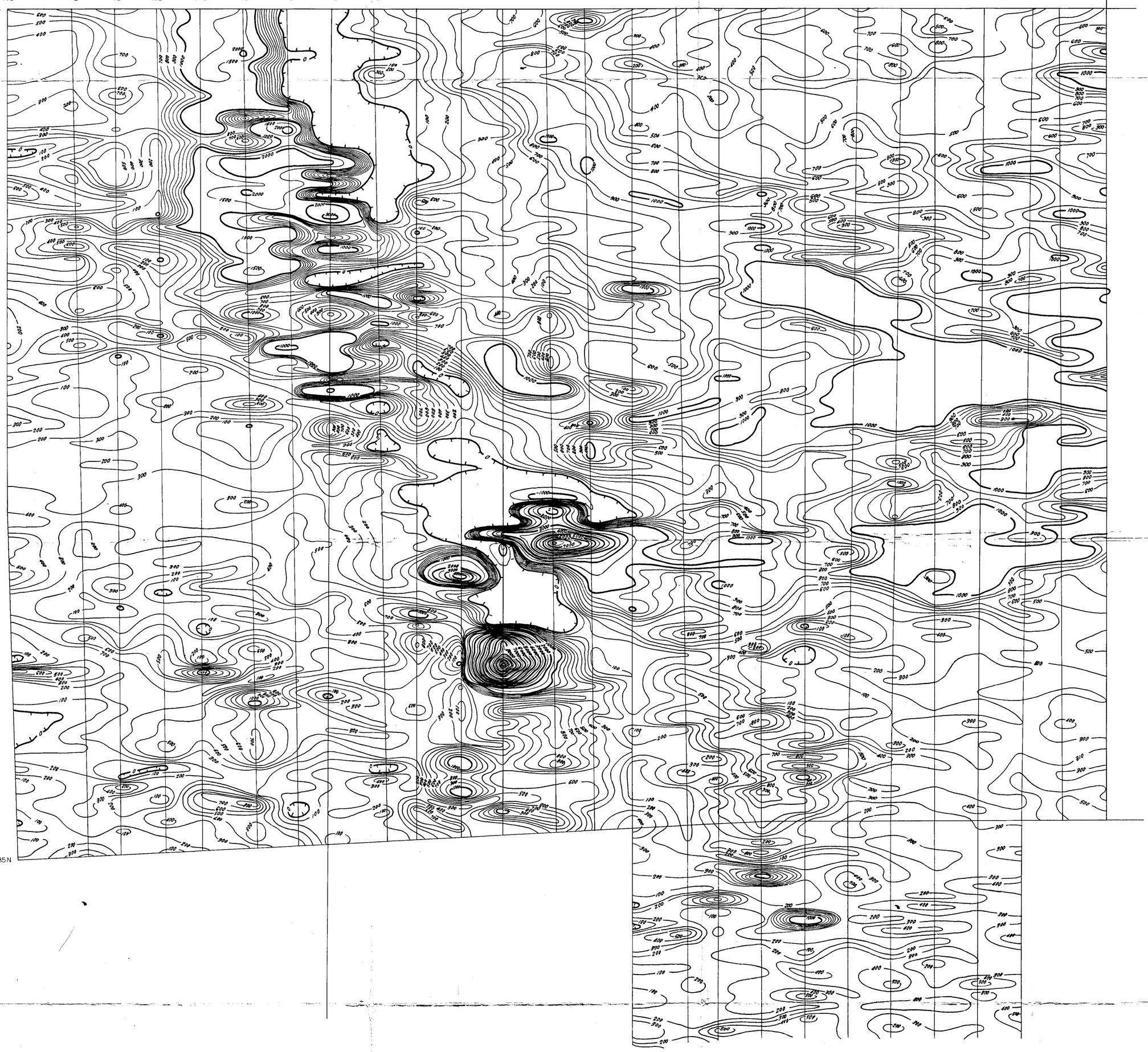
DWG. No. 5

SHEET No. 22



38E 44E 48E 52E 56E 60E 64E 68E 72E 76E 80E 84E 88E 92E 96E 100E 104E 108E 112E 116E 120E 124E 128E 132E 136E 140E

BASE LINE 160N



BASE LINE 85N

NOTE : CONTOURS SHOWN FROM -1500 TO 0 AT 500 GAMMA INTERVALS.
0 TO 1000 " 100 " " "
1000 TO 12000 " 500 " " "

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J. G. Simpson

R. G. Jury

1800

QUALITY EXPLORATION CORPORATION

MAGNETIC CONTOUR OVERLAY

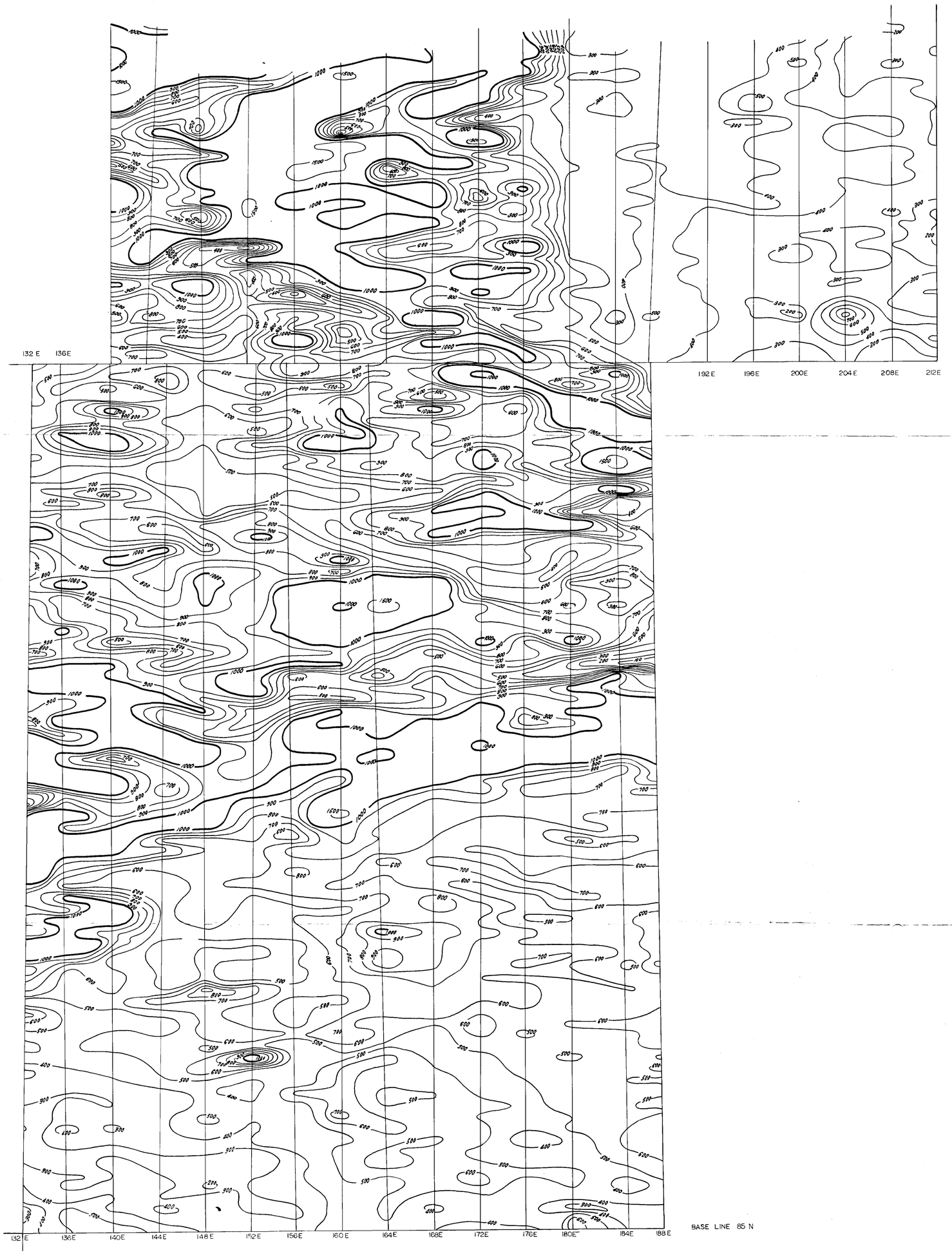
ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED.....
DRAWN..... M. P.
CHECKED..... R. G. J.
DATE..... MARCH 69

SCALE: HOR. 1" = 400'
VERT.

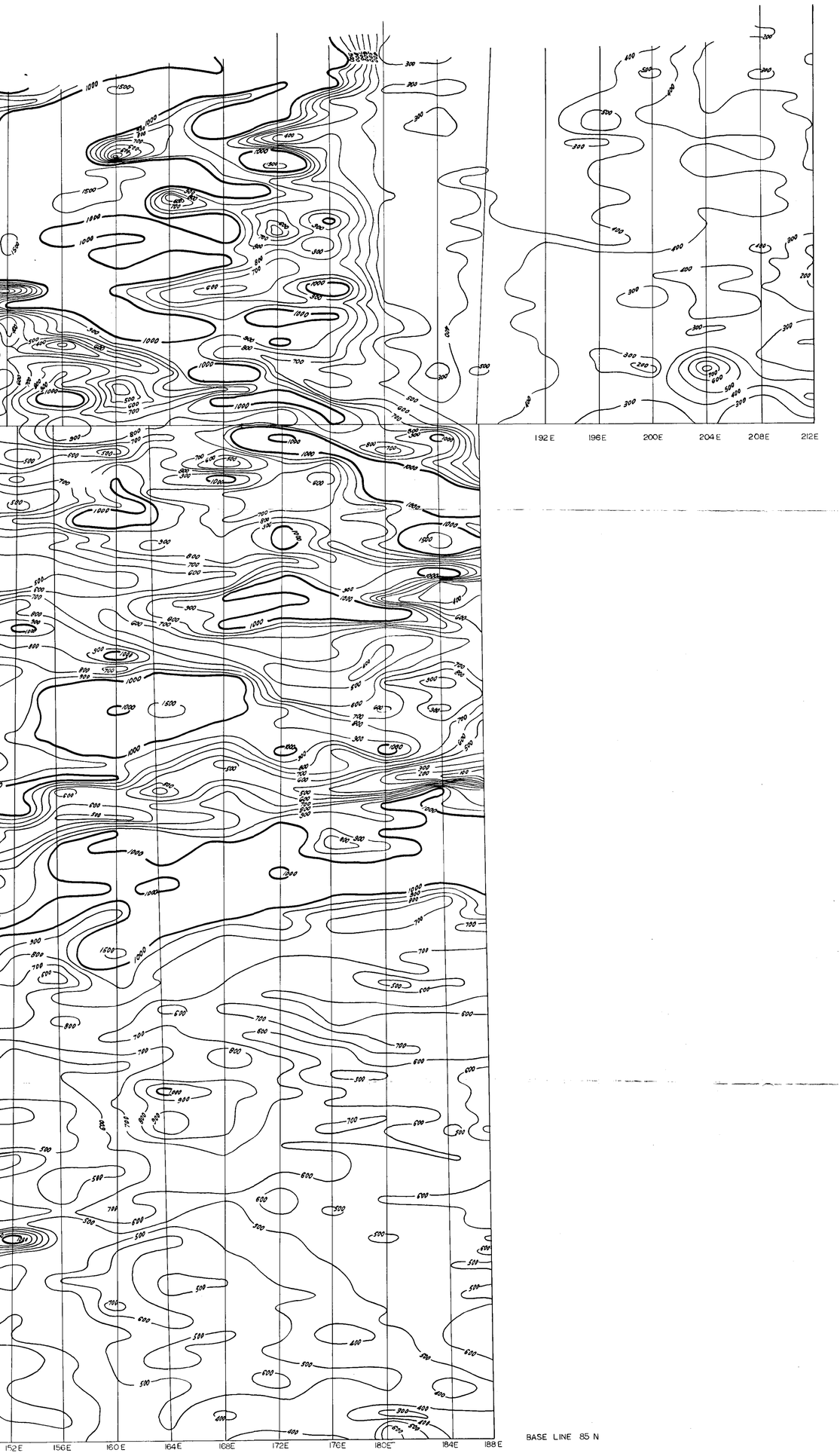
DWG. No. 6

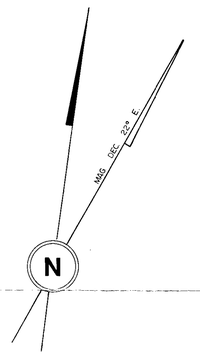
SHEET No. 12



NOTE : CONTOURS SHOWN FROM -1500 TO 0 AT 500 GAMMA INTERVALS
0 TO 1000 " 100 " "
1000 TO 12000 " 500 " "

NOTE : TO ACCOMPANY GEOPHYSICAL REPORT BY Dr. J. G. SIMPSON & R. G. GLORY, P. ENG
ON THE SPA MINES LTD CLAIMS, SMASH CREEK, SMILKAMEEN MINING DIVISION
DATED MARCH 26, 1969





NOTE : CONTOURS SHOWN F-1500 TO 0 AT 500 GAMMA INTERVALS
0 TO 1000 " 100 " "
1000 TO 12000 " 500 " "

NOTE : TO ACCOMPANY GEOPHYSICAL REPORT BY Dr. J. G. SIMPSON, B. R. G. GERY, P. ENG ON THE SPA MINES LTD CLAIMS, SWASH CREEK, SIMILKAMEEN MINING DIVISION DATED MARCH 26, 1969

QUALITY EXPLORATION CORPORATION

MAGNETIC CONTOUR OVERLAY

ALRAE ENGINEERING LTD.
GEOLOGISTS AND ENGINEERS
VANCOUVER, B. C.

DESIGNED.....
DRAWN.....M.....P.....
CHECKED.....R.....G.....V.....
DATE.....MARCH....69.....

SCALE: HOR. 1" = 400'
VERT.

DWG. No. (7)

SHEET No. 23

P.C