

January 1981

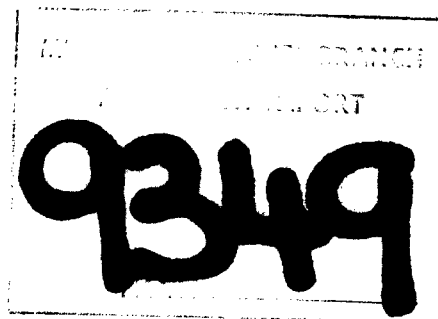
AUGUSTINE INVESTMENTS Ltd.

RANGER GROUP

MIDWAY B.C. AREA

NTS 82 E/2W

Lat 49°n Long 118° 50' w



Geophysical Report

TABLE OF CONTENTS

	PAGE
1. INTRODUCTION	1
2. REVIEW	
2.1 SUMMARY AND CONCLUSIONS	2
2.2 RECOMMENDATIONS	3
2.3 COST ESTIMATE	4
3. PROPERTY, LOCATION, ACCESS	5
4. GEOPHYSICAL SURVEYS	6
4.1 EM-16 SURVEY	6-7
4.2 SELF-POTENTIAL SURVEY	8

APPENDIX "A"

LIST OF PERSONNEL EMPLOYED AND COSTS INCURRED
DURING GEOPHYSICAL SURVEYS

ILLUSTRATIONS

Fig. 1	LOCATION MAP
Fig. 2	CLAIM MAP
Fig. 3	EM-16 SURVEY V.L.F. STATION 21.4 CONTOUR PLAN
Fig. 4	EM-16 SURVEY V.L.F. STATION 21.4 PROFILES
Fig. 5	EM-16 SURVEY V.L.F. STATION 23.4 CONTOUR PLAN
Fig. 6	SELF-POTENTIAL SURVEY PLAN

AUGUSTINE INVESTMENTS LTD.

RANGER GROUP

MIDWAY, B.C. AREA

1. INTRODUCTION

Geophysical, electromagnetic and self-potential surveys were conducted during the month of September 1980, over the Ranger Group of claims in the Midway, B.C. area. Surveys were conducted by an experienced operator, S. Presunka, and local help under the supervision of V. Cukor, P. Eng.

A total of three field days were spent to complete the surveys, and an additional three days were used to prepare the maps and report.

2. REVIEW

2.1 SUMMARY AND CONCLUSIONS

The Ranger Group, consisting of five mineral claims, is underlain by sediments of the Anarchist group, in the southern part covered by Tertiary lava. Geochemical and geophysical surveys have encountered anomalous areas.

A partially coinciding EM-16 conductor and geochemical gold anomaly represents a good drill target, and so does the self-potential anomaly at the northeast corner of the grid. The EM-16 conductor has considerable length, since it extends into the J Claims. Total length of this conductor is over 1.5 km. The self-potential anomaly, which is opened northward, is probably part of the large anomaly outlined on the J Claims. Since no graphite was encountered any place in the property area, the self-potential anomaly is most likely caused by sulfide content of the underlying rock.

2. REVIEW (Cont'd)

2.2 RECOMMENDATIONS

Geochemical and geophysical surveys on the Ranger Group outlined areas that warrant testing by diamond drilling. Two 300 feet B.Q. holes should be drilled, one on the self-potential anomaly and one on the EM-16 conductor, probably at line 6W, where the conductor is coincidental with anomalous geochemical gold readings.

If this stage of exploration shows any encouragement, further drilling of up to 2,500 feet should be considered.

2. REVIEW (Cont'd)

2.3 COST ESTIMATE

The following are the estimated costs to complete the recommended program:

Diamond drilling	600' @ \$25.00	\$15,000.00
Bulldozer		2,500.00
Mobilization and demobilization		4,000.00
On-job supervision		2,500.00
Room and board		1,500.00
Assays		300.00
Report		<u>2,000.00</u>
	Sub-total	27,800.00
	Contingencies	<u>2,200.00</u>
		<u>\$30,000.00</u>

Follow-up Program:

Diamond drilling	2500' @ \$25.00	\$62,500.00
Mobilization and demobilization		4,000.00
On-job supervision		3,500.00
Room and board		3,000.00
Assays		1,000.00
Report		<u>2,000.00</u>
		<u>\$76,000.00</u>
	TOTAL	<u>\$106,000.00</u>

3. PROPERTY, LOCATION, ACCESS

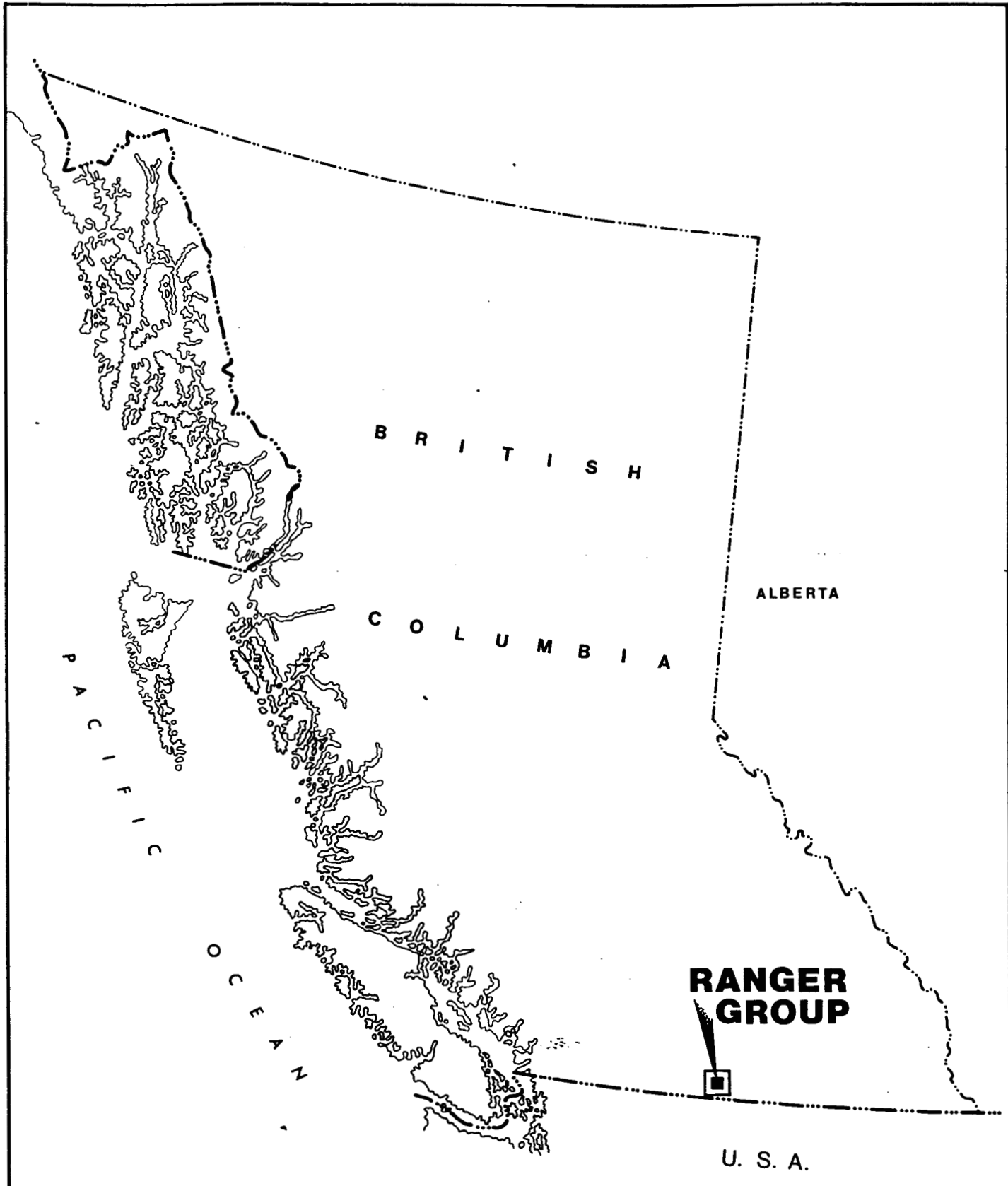
The Ranger Group consists of five contiguous mineral claims with record numbers as follows:

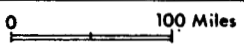
<u>CLAIM</u>	<u>RECORD NO.</u>	<u>ANNIVERSARY DATE</u>
Ranger 1 - 5 (Incl.)	1177 - 1181 (Incl.)	June 23, 1983

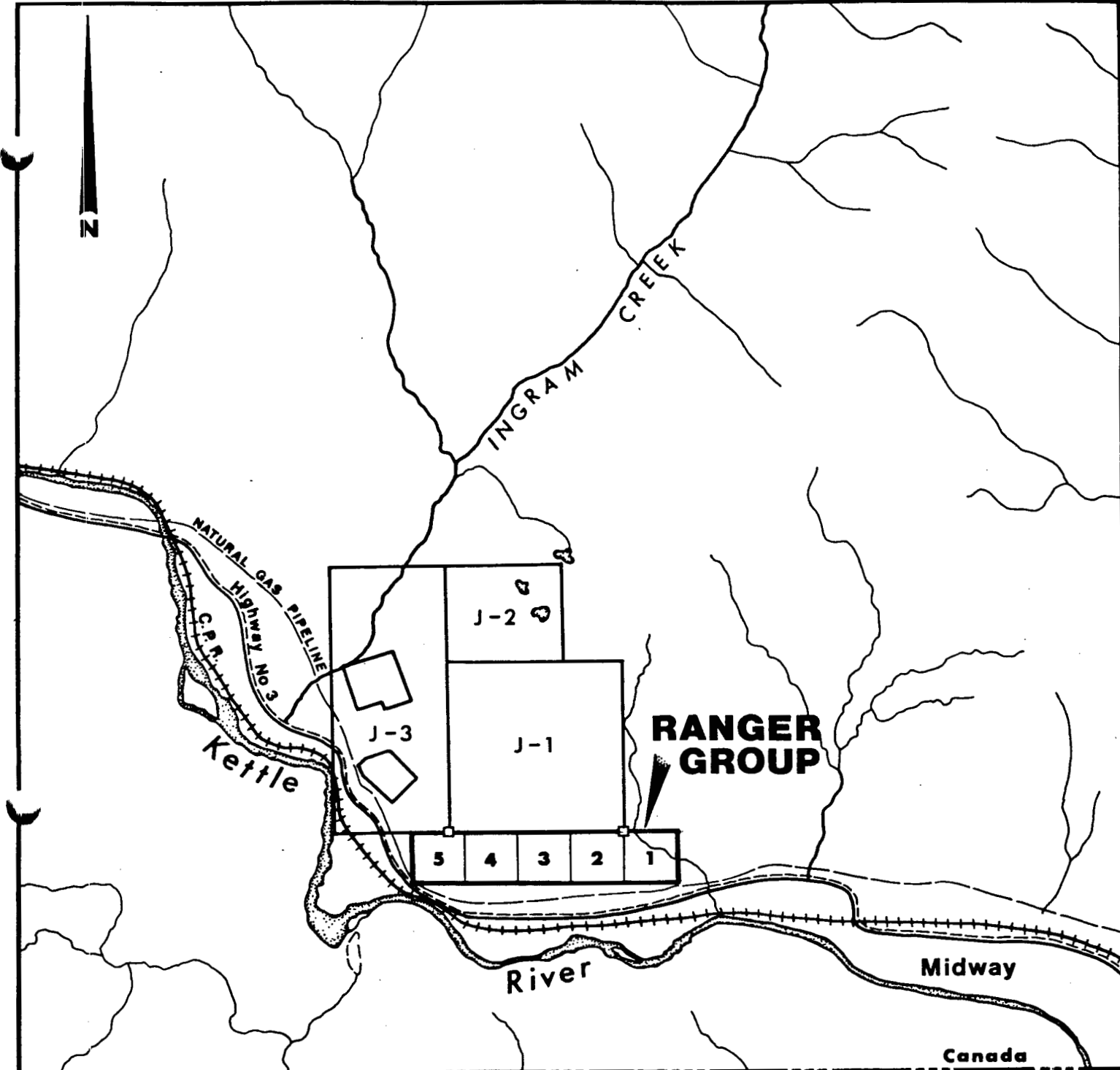
The claims were staked on the two post system by H. Vannerus, who in turn sold 100% interest to Augustine Investments Ltd.

The location of the claims is immediately north of Provincial Highway No. 3, opposite the sawmill in Midway, B.C. They are on the N.T.S. Sheet 82E/2W at approximately north latitude 49° and west longitude 118° 50'. The elevation of the claims is between 600 and 670 meters above sea level.

The Ranger Claims are accessible by a short dirt road branching from Highway No. 3; respective distances from Greenwood and Osoyoos are 15 and 60 kilometers.



AUGUSTINE INVESTMENTS Ltd.		
RANGER GROUP LOCATION MAP		
GREENWOOD M.D., B.C.	82 E/2W	
V.CUKOR, P.Eng. - NVC ENGINEERING Ltd. VANCOUVER, B.C.		
DATE: JAN. 1981	SCALE: 0  100 Miles	FIG. 1



AUGUSTINE INVESTMENTS Ltd.		
RANGER GROUP CLAIM LOCATION		
GREENWOOD M.D., B.C.	82 E / 2W	
V.CUKOR, P.Eng. - NVC ENGINEERING Ltd. VANCOUVER, B.C.		
DATE: JAN. 1981	SCALE: 0 1 km	FIG. 2

4. GEOPHYSICAL SURVEYS

The contract for geophysical surveys was given to Presunka Geophysical Exploration Ltd. An experienced operator, S. Presunka, conducted the surveys. To help with the self-potential survey, R. Smidt of Midway was hired. The supervision was by V. Cukor, P. Eng., the author of this report.

4.1 EM-16 SURVEY

The instrument used for the survey was a Ronka EM-16, serial No. 2. All readings were taken along the grid constructed in 1979, at 25 meter intervals. In the anomalous areas, readings were taken at closer spacing. Signals of two V.L.F. Stations were used to obtain the readings: V.L.F. Station 21.4 Annapolis and V.L.F. Station 23.4 Hawaii. All crossovers were marked in the field by a red ribbon tied in a cross fashion. Results are presented in the report on three plans in a scale of 1:2,500. Figure 3 is an

4. GEOPHYSICAL SURVEYS (Cont'd)

4.1 EM-16 SURVEY (Cont'd)

inphase contour plan for the V.L.F. Station 21.4, and figure 4 is a profiled plan for the same station. Figure 5 represents an inphase contour plan for V.L.F. Station 23.4.

The results of the survey are best represented on the profiled plan (fig. 4). One long conductor is outlined along the north part of the grid. It strikes from ENE to WSW and crosses the baseline at 8W. This zone is the west extension of a long conductor found by the electromagnetic survey on the J Claims, owned by Maymac Explorations Ltd. Since this conductor coincides in parts with the anomalous geochemical gold readings, it should be considered a fair drill target.

A long secondary conductor more or less parallels the first one on its south side, and crosses the baseline between lines 1W and 2W. This conductor should be drill tested as well.

4. GEOPHYSICAL SURVEYS (Cont'd)

4.2 SELF-POTENTIAL SURVEY

After a good response was recorded by the self-potential survey on the adjoining J Claims, it was decided to conduct the same survey over the Ranger Group. Slightly moist soil provided excellent contact and almost ideal survey conditions. Since no graphite was encountered on the property, all anomalous readings were interpreted as response from increased sulfide content.

The self-potential survey was carried out by S. Presunka of Presunka Geophysical Exploration Ltd. The instrument used was a Sharpe unit, a two man operation. The survey was carried out by establishing control bases along the base line and corrections were applied for each line. The pot error was applied whenever necessary. In most cases there was no pot error as clean porous pots were used. The copper sulphate solution was kept at maximum strength for proper contact in order to get proper readings.

4. GEOPHYSICAL SURVEYS (Cont'd)

4.2 SELF-POTENTIAL SURVEY (Cont'd)

The base reel was on established base line stations. The travelling pot readings were taken at 25 meter intervals along the lines and the freshly dug holes were in moist soil for good contact. The corrected results were plotted and contoured at 10 m.V. intervals. These results are mostly in negative readings with four exceptions which are in positive for contrast. The negative readings above 20 m.V. could be considered anomalous as shown on the northwest portion of the grid.

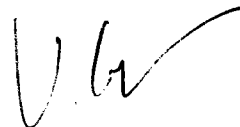
As shown on figure 6, fairly uniform low readings were encountered over most of the grid area, with the background being around 10 m.V. Anomalous readings of over 20 m.V. are concentrated in the northwest part of the grid, in a zone 400 meters long and 50 meters wide. This anomaly is most likely

4. GEOPHYSICAL SURVEYS (Cont'd)

4.2 SELF-POTENTIAL SURVEY (Cont'd)

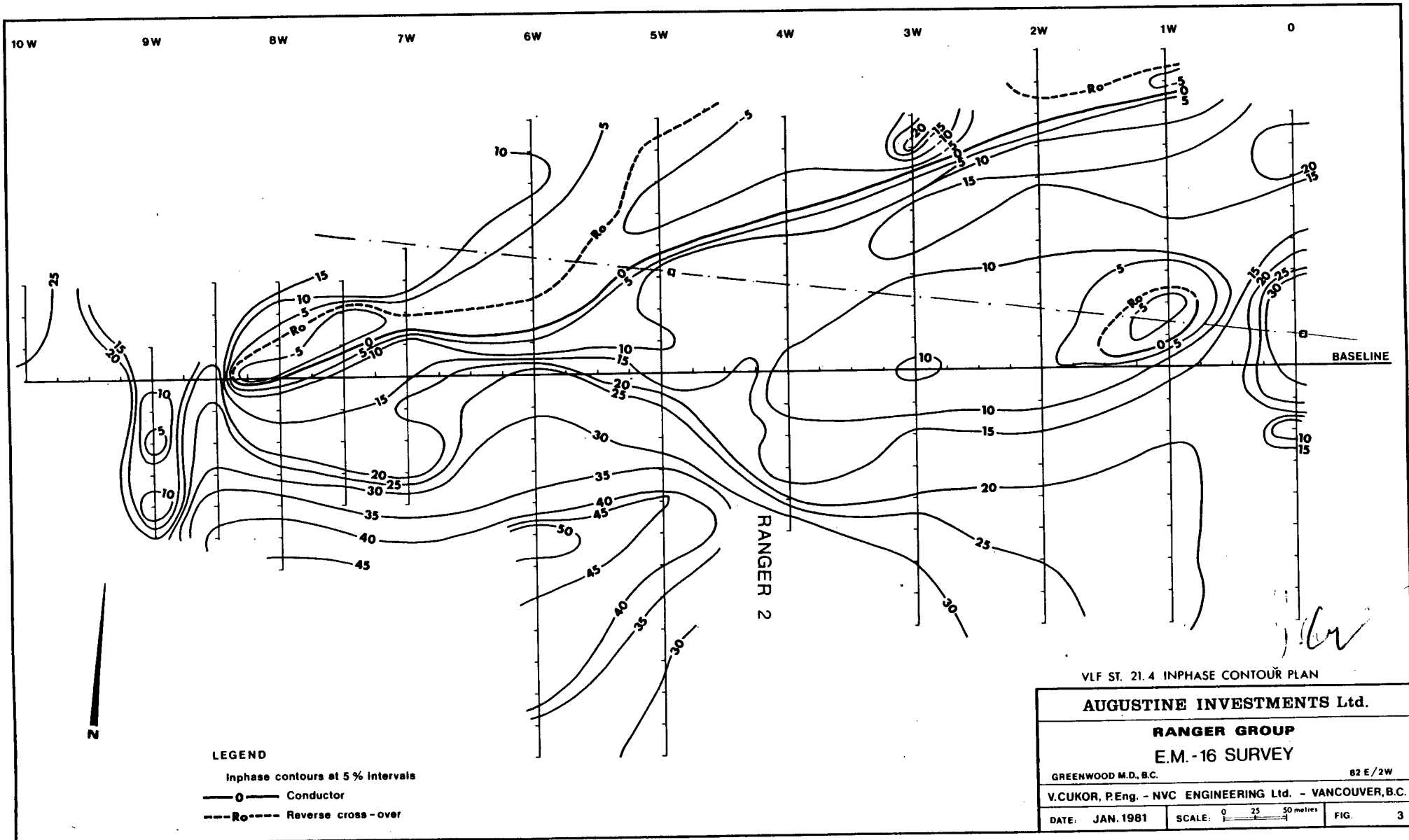
part of a large anomalous area discovered on the J
Claims, and warrants further investigation.

Respectfully submitted,



V. Cukor, P. Eng.
NVC Engineering Ltd.

January 28, 1981



LEGEND

- Inphase contours at 5 % intervals
- Conductor
- Ro--- Reverse cross-over

VLF ST. 21.4 INPHASE CONTOUR PLAN

AUGUSTINE INVESTMENTS Ltd.

RANGER GROUP
E.M. - 16 SURVEY

GREENWOOD M.D., B.C.

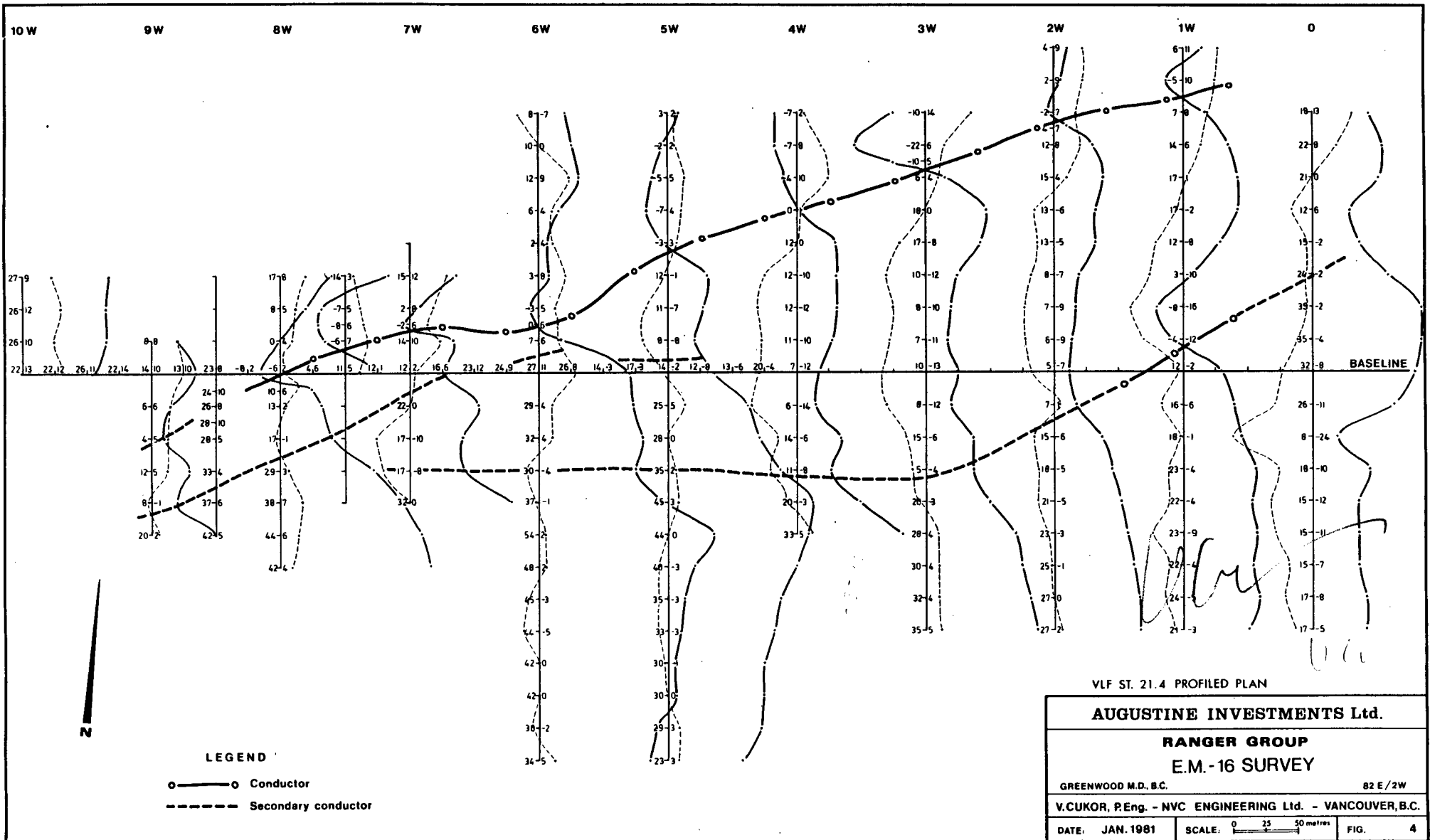
82 E/2W

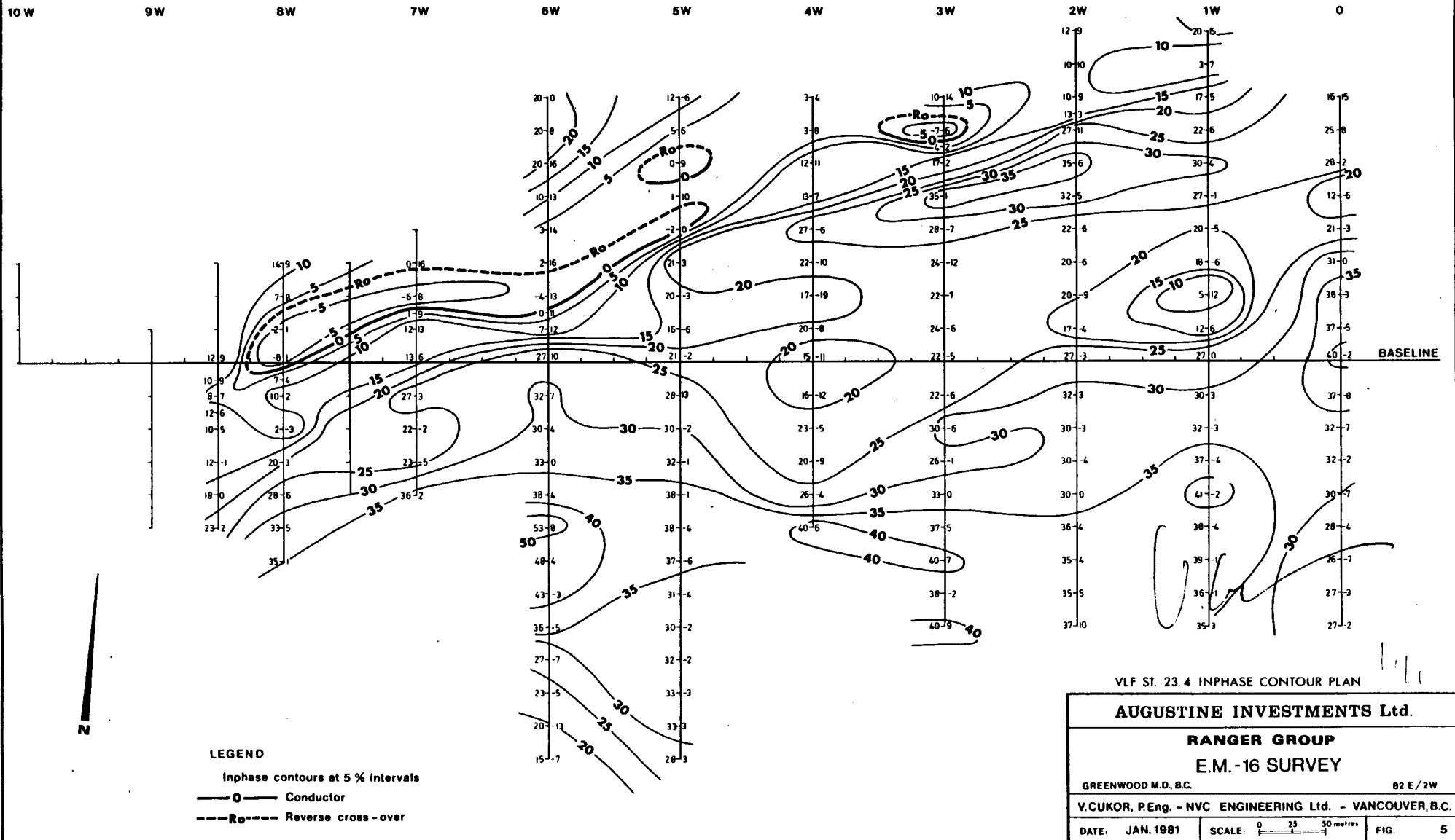
V. CUKOR, P.Eng. - NVC ENGINEERING Ltd. - VANCOUVER, B.C.

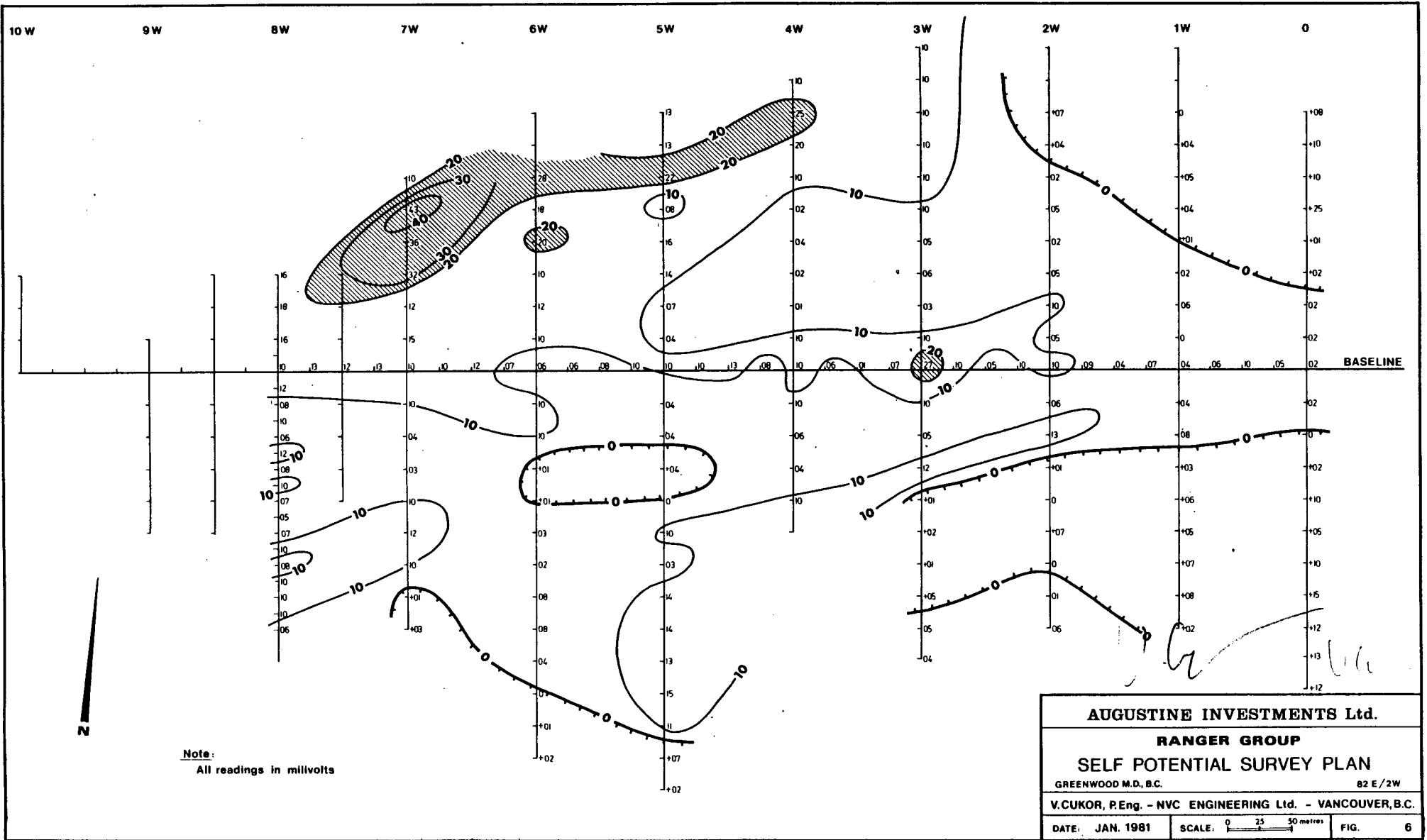
DATE: JAN. 1981

SCALE: 0 25 50 metres

FIG. 3







APPENDIX "A"

LIST OF PERSONNEL EMPLOYED AND COSTS INCURRED DURING
GEOPHYSICAL SURVEYS

LIST OF PERSONNEL EMPLOYED AND COSTS INCURRED DURING
GEOPHYSICAL SURVEYS

Personnel:

S. Presunka, Instrument Operator
R. Smidt, Helper
V. Cukor, P. Eng., Supervision and Report

Costs incurred:

a) Field work:	
Wages	\$1,305.00
Truck rental	135.00
Room, board & field expenses	125.00
b) Office:	
Report	750.00
Drafting	240.00
Printing, binding	125.00
	<hr/>
TOTAL	<u>\$2,680.00</u>

AFFIDAVIT

I, Vladimir Cukor, of 2830 West 37th Avenue,
Vancouver, B.C. do hereby declare:

In the matter of the Ranger Group Report and
the list of personnel employed and costs incurred as
listed in Appendix "A" of this report, that I have
personally carried out and/or supervised the described
work, and that the information contained in Appendix
"A" is true and accurate to the best of my knowledge
and belief.



V. Cukor, P. Eng.

CERTIFICATE

I, VLADIMIR CUKOR, of 2830 West 37th Avenue,
Vancouver, British Columbia, DO HEREBY CERTIFY that:

1. I am a Consulting Geological Engineer with business address as above;
2. I graduated from the University of Zagreb, Yugoslavia in 1963;
3. I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia;
4. I have practised my profession as a Geological Engineer for the past 18 years, both in Yugoslavia and Canada;
5. I have personally supervised the field work described in this report;
6. I have no interest direct or indirect in the property described in this report.

January 28, 1981


V. Cukor, P. Eng.