

KENNCO EXPLORATIONS, (WESTERN) LIMITED

REPORT ON INDUCED POLARIZATION-RESISTIVITY
AND
MAGNETOMETER SURVEY

ANDREW #2 MINERAL CLAIM

Ootsa Area,
Omineca M.D., B.C.

Located 10 km West of Andrew Bay, B.C.

53°50'N

126°45'W

93 E / 15

5969

By

S.C. Gower and
R.W. Stevenson, P.Eng.

Work Done: September 25 to October 15, 1975

Vancouver, B.C.

September 2, 1976

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5969 MAP

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LOCATION AND ACCESS

The property is located near Andrew Bay on Ootsa Lake in the Omineca Mining District, British Columbia; centered at Latitude 53°50'N and Longitude 126°45'W. This survey area is approximately 70 miles by all-weather road from Houston, B.C. Access is by public road from Houston to a junction about three miles west of Wistaria, then by Eurocan Pulp and Paper Co. Ltd.'s logging roads to the property.

REPORT ON INDUCED POLARIZATION-RESISTIVITY
AND
MAGNETOMETER SURVEY

ANDREW #2 MINERAL CLAIM
Ootsa Area, Omineca M.D., B.C.

INTRODUCTION

During the period September 25, 1975 to October 15, 1975, a combined induced polarization-resistivity survey and a ground magnetometer survey were conducted on the ANDREW #2, RIP #1 and RIP #2 claims owned by Kennco Explorations, (Western) Limited. The surveys were conducted by employees of Kennco Explorations, (Western) Limited using frequency-domain induced polarization (IP) equipment and a fluxgate magnetometer. Assessment work on the RIP #1 and RIP #2 claims totalling \$10,807.94 was reported on January 30, 1976. The portion of the survey that is on ANDREW #2 is being claimed for assessment credit in this report. It is that portion of the IP survey which is west of grid 19W on lines 24N, 16N, 8N and 16S. To facilitate interpretation, the entire IP pseudo-profile for these lines is presented, as well as a map of all IP lines and anomalies. The magnetometer profiles are given for all lines. Only that portion of the total cost that refers to the area west of grid 19W on ANDREW #2 mineral claim is being claimed for assessment credit.

This report includes geophysical interpretations by D. Dorval, Professional Geophysicist registered in Alberta, and by H.W. Fleming, Chief Geophysicist for Kennco Explorations, which were included in a report on RIP #1 and RIP #2 claims by D. Dorval and R.W. Stevenson dated January 30, 1976. The survey was under the supervision of S.C. Gower, Project Manager, and R.W. Stevenson, General Manager of Kennco Explorations, (Western) Limited.

The survey was conducted to outline a potential sulfide system that was discovered by a Kennco reconnaissance IP survey of the area. The property occurs adjacent to a quartz-monzonite porphyry stock which outcrops forming a low hill. Sulfide mineralization occurs in a small outcrop within the surveyed area in the form of pyrite, magnetite, chalcopyrite and molybdenite.

SURVEY PROCEDURES

The grid was located with the origin [line 0, 0+00W] at an easily accessible site beside a logging road as shown on Plate 6. This location and every 122 m. [400'] along the baseline were marked by erecting labelled wooden posts. The baseline and crosslines were established by chain and compass and were marked with blue or red and white striped plastic flagging.

Induced Polarization-Resistivity Survey

The resistivity IP survey was conducted with a rented McPhar model P660 variable frequency IP system equipment powered by a 2.5 KVA motor-generator. Frequencies used were 0.3 and 5.0 Hz. The survey was conducted using a conventional dipole-dipole array mostly with a dipole length of 122 m. [400']. Some detailed IP surveying was done with a dipole length of 61 m. [200']. Calibration procedures were conducted as described in the McPhar operator's manual and the data have been corrected accordingly.

Magnetometer Survey

The magnetometer survey was conducted using a rented McPhar model M-700 fluxgate magnetometer. Measurements were made every 30.5 m. [100'] or 61 m. [200'] along the grid lines. Base station values were determined by setting the magnetometer to an optimum level at the grid origin and using an averaged-gradient method to establish their drift-free values relative to the origin. Instrument and diurnal drift occurring during the grid surveying was determined by "looping" to base stations and the data were corrected accordingly.

DATA REDUCTION AND PRESENTATION

Induced Polarization-Resistivity Survey

The apparent resistivity [in units of ohm-meters] of the ground for various dipole lengths [x] and separation factors [n] was determined from the measured potential difference between the receiver electrodes relative to the transmitted current and according to a geometrical factor dependent on 'x' and 'n'. The apparent Percent Frequency Effect (PFE) value was determined from the percent change in the apparent resistivity of the ground for 5.0 Hz and 0.3 Hz signals normalized according to the 5.0 Hz signal. As is common practice a quantity known as a Metal Factor (MF) is calculated by normalizing the PFE value by the measured apparent resistivity. This MF value is expressed in the conventional (non-metric) units of 1/Ohm-feet since it has no direct S.I. equivalent and the quantity is used only for interpretational purposes.

In some cases the voltage signal measured by the receiver is strongly interfered with by telluric noise which cannot be completely filtered out. This interference which makes the accuracy of the measurement suspect, is indicated on the pseudo-profiles by parenthesizing the PFE values. When the signal-to-noise ratio was too small to enable even an approximate reading to be made, an 'N' is inserted in the data. An 'NR' on the data plots indicates that no reading was attempted.

These data are displayed in the conventional form of a pseudo-profile of each line where each value is plotted midway between the centers of the particular receiving and transmitting dipoles and according to their separation factor (n). The IP-resistivity data are shown on the following pseudo-profile data plots:

<u>Line</u>	<u>Dipole Length</u>	<u>Plate No.</u>
24N	122 m (400')	2
16N	122 m (400')	3
8N	122 m (400')	4
16S	122 m (400')	5

A plan map of the grid showing the anomalous IP responses as interpreted from the 122 m (400') dipole measurements is included as Plate 6. These anomalous areas result from an interpretation of each pseudo-profile based on experience and from reference to scale model and computer-simulated model results. Models of IP and resistivity surveys show that many sources possessing different geometries and intrinsic response values can produce similar anomaly patterns. Because of this inherent geometrical ambiguity of IP and resistivity anomalies the interpreted anomaly must at best be considered to be located to within one dipole length only. It is also possible that barren zones could occur within the anomalous zone and be obscured by the averaging effect characteristic of this geophysical method.

Magnetometer Survey

The measurements of relative values of the vertical component of the total magnetic field are shown in units of gammas in profile form in Plate 7. The plotted values have been corrected for instrument and diurnal drift.

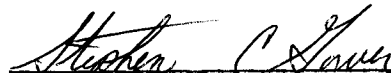
DISCUSSION OF RESULTS

Induced Polarization-Resistivity Survey

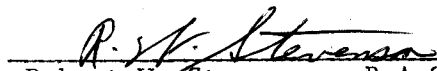
PFE and Metal Factor values for the portions of the lines discussed in this report indicate there is no appreciable concentration of underlying sulfides. There is a slight increase in resistivity to 300 ohm-meters relative to the anomalous area to the east where the resistivity is about 100 ohm-meters.

Magnetometer Survey

Magnetic values for the survey area west of 19W are fairly uniform between 100-400 gammas. There are no strong anomalies; however the magnetic intensity appears to be increasing to the north. The values are slightly lower on line 8S, probably reflecting deeper overburden.


Stephen C. Gower, B.Sc.

Vancouver, B.C.


Robert W. Stevenson, B.A.Sc., P.Eng.

September 2, 1976

ASSESSMENT DETAILS

PROPERTY: Andrew Prospect, consisting of ANDREW #2, RIP #1 and RIP #2 mineral claims (54 units in total).

OWNER: Kennco Explorations, (Western) Limited.

MINING DIVISION: Omineca.

PROVINCE: British Columbia.

LOCATION: Andrew Bay, near west end of Ootsa Lake.

TYPE OF SURVEY: Induced polarization and magnetometer.

DATE STARTED: September 25, 1975 DATE FINISHED: October 15, 1975.

KILOMETERS OF IP SURVEYING ON RIP #1,#2	: 20.5 (12.7 miles)
KILOMETERS OF IP SURVEYING ON ANDREW #2	: 2.24 (1.38 miles)
KILOMETERS OF MAG SURVEYING ON RIP #1,#2	: 20.2 (12.6 miles)
KILOMETERS OF MAG SURVEYING ON ANDREW #2	: 2.20 (1.37 miles)

GEOPHYSICIST: Dennis P. Dorval

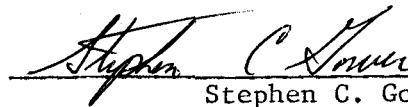
FIELD TECHNICIANS: Ingo Jackish
Lang Price
George Benmore
Doug Foerster

COOK: Marjan DeJong

PROJECT MANAGER: Stephen C. Gower

SUPERVISOR: Robert W. Stevenson.

KENNCO EXPLORATIONS, (WESTERN) LIMITED



Stephen C. Gower

DATED: September 2, 1976

STATEMENT OF COST

Induced Polarization and Magnetometer Survey
September 25 to October 15, 1975

SALARIES:

Geophysicist	D.P. Dorval	26 days @ \$35.58/day	\$ 960.58
Project Manager	S.C. Gower	26 days @ \$60.00/day	1,560.00
Supervisor	R.W. Stevenson	8 days @ 100.00/day	800.00
Crew Chief	I. Jackish	23 days @ \$42.17/day	969.91
Crew Member	L. Price	26 days @ \$38.34/day	1,035.18
Crew Member	G. Benmore	23 days @ \$38.34/day	881.82
Crew Member	D. Foerster	23 days @ \$38.34/day	881.82
Cook	M. DeJong	26 days @ \$39.45/day	1,025.70

EXPENSES:

Vehicle expenses: 3 trucks @ \$25/day x 26 days	1,950.00
Gasoline: 500 gals. @ 70¢/gal.	350.00
Air Freight	302.61
Supplies	63.00
Support Costs: 147 mandays @ \$11/day	1,617.00
Travel Costs: Van/Smithers/Return	160.00

GEOPHYSICAL EQUIPMENT RENTAL:

M-700 Magnetometer	262.50
P660 IP Equipment	2,250.00

INTERPRETATION & DRAFTING:

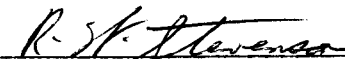
500.00
\$15,570.12

Applicable: 10.9% for survey conducted on ANDREW #2	\$ 1,697.13
ANDREW #2 Report Preparation	175.00
	<u>\$ 1,872.13</u>

KENNCO EXPLORATIONS, (WESTERN) LIMITED

September 2, 1976

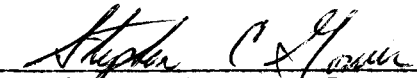

Stephen C. Gower, Geologist


Robert W. Stevenson, P.Eng.

CERTIFICATION


I, Stephen C. Gower of the Municipality of Coquitlam, Province of British Columbia, do certify that

1. I am a geologist residing at 987 Gatensbury Street, Coquitlam, British Columbia.
2. I am a graduate of the University of British Columbia with a Bachelor of Science degree in geology.
3. I have practised my profession for six years while in the employ of Kennco Explorations, (Western) Limited.



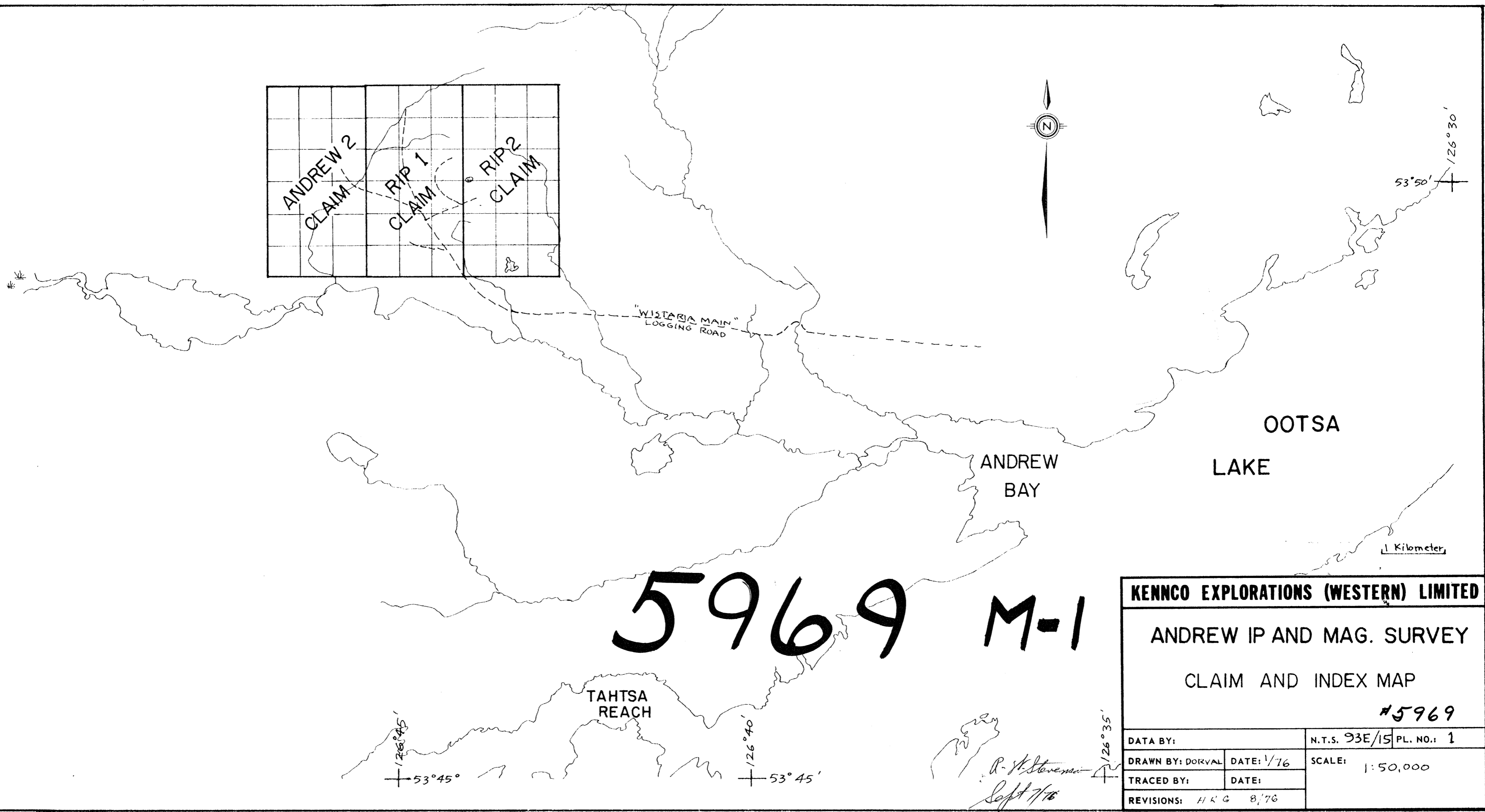
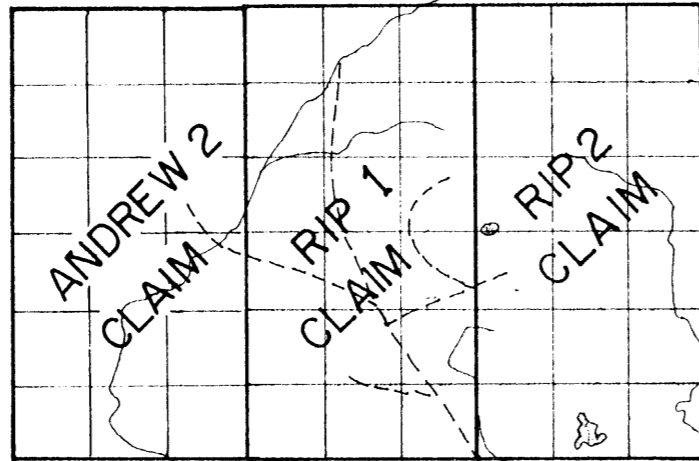
Stephen C. Gower, B.Sc.

I, Robert W. Stevenson of Vancouver, Province of British Columbia, do certify that I graduated in Mining Geology from the University of Toronto in 1952, and have practiced the profession of geology since that time. I have been registered as a Professional Engineer (Geological) in the Province of British Columbia since 1959. The work on the Andrew Bay property was conducted by Dennis Dorval, Geophysicist, and Stephen C. Gower, Project Manager, under my supervision.



Robert W. Stevenson, B.A.Sc., P.Eng.

September 2, 1976

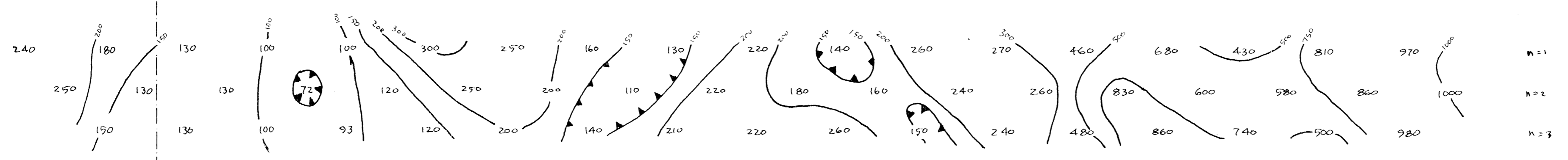


5969 M-1

KENCO EXPLORATIONS (WESTERN) LIMITED			
ANDREW IP AND MAG. SURVEY			
CLAIM AND INDEX MAP			
#5969			
DATA BY:	N.T.S. 93E/15		PL. NO.: 1
DRAWN BY: DORVAL	DATE: 1/76	SCALE: 1:50,000	
TRACED BY:	DATE:		
REVISIONS: H R G	8/76		

R. H. Stevenson
Sept 7/76

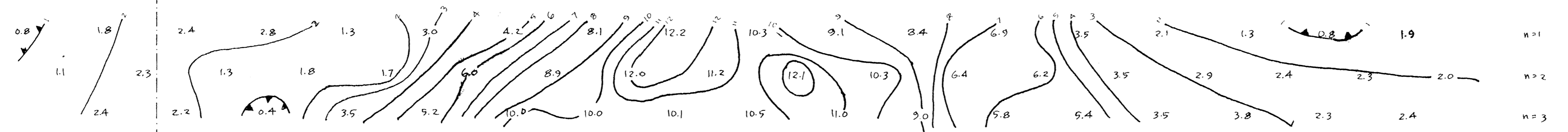
32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E



Pa
(n.m.)
log contouring

ARRAY: DIPOLE - DIPOLE
METHOD: FREQ. DOMAIN
FREQ: 0.3 - 5.0 Hz

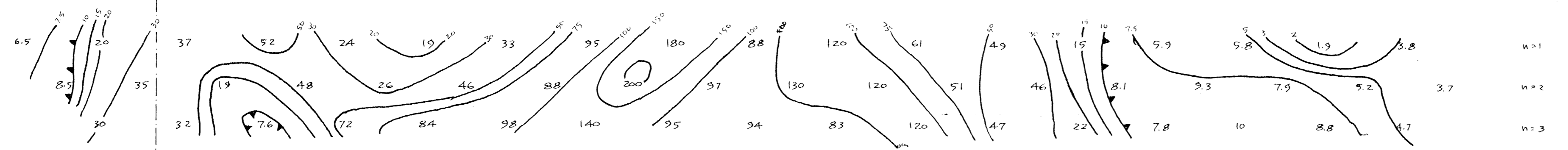
32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E



PFE

■ DEFINITELY ANOMALOUS
▣ PROBABLY ANOMALOUS
▤ POSSIBLY ANOMALOUS

32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E 48E 52E



MF
(1/ft)
log contouring

APPROVED: Dennis Donald
Jan 21, 1976

ANDREW 2 CLAIM

RIP 1 CLAIM

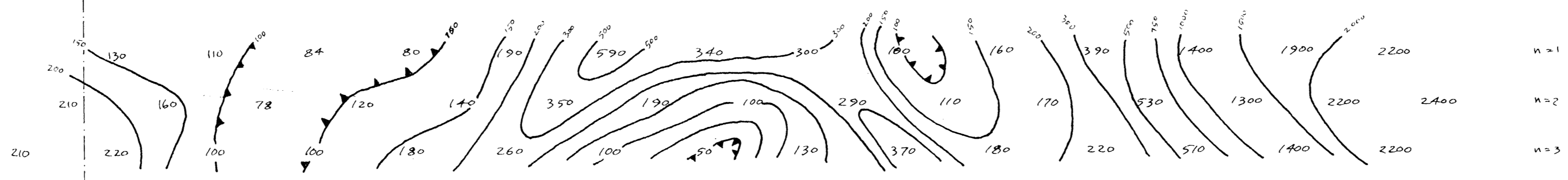
KENCO EXPLORATIONS (WESTERN) LIMITED

ANDREW IP SURVEY
OMINECA MD, B. C.
LINE 24N #5969
400' DIPOLES

DATA BY: D. DOORVAL	N.T.S.	PL. NO.: 2
DRAWN BY: DD	DATE: 1/76	SCALE: 1" = 400' 1cm = 48m
TRACED BY:	DATE:	
REVISIONS: H.R.G. 8/76		

R.S. Stevenson
Sept 7/76

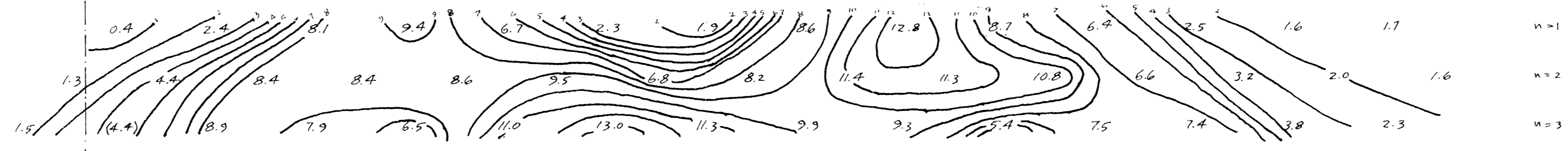
32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E



Pa
(log m)
log contouring

ARRAY: DIPOLE-DIPOLE
METHOD: FREQ. DOMAIN
FREQ. 0.3- 5.0 Hz

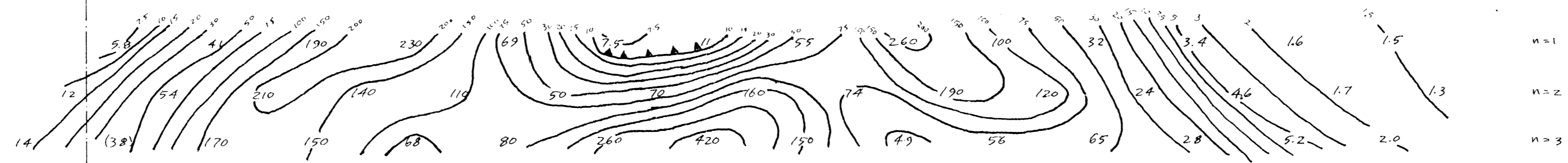
32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E



PFE

DEFINITELY ANOMALOUS
PROBABLY ANOMALOUS
POSSIBLY ANOMALOUS

32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E 44E



MF
(1/ft)
log contouring

ANDREW 2 CLAIM

RIP 1 CLAIM

APPROVED: Dennis Dorval
Jan 24, 1976

KENCO EXPLORATIONS (WESTERN) LIMITED

ANDREW IP SURVEY

OMINECA M.D., B.C.

LINE 8N

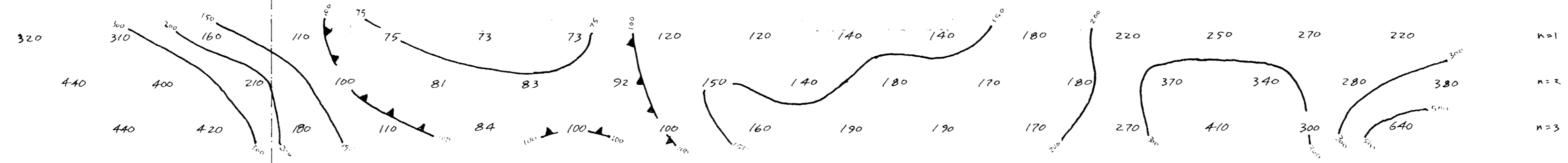
400' DIPOLES

#5969

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TRACED BY:	DATE:	
REVISIONS: H.R.G. 8/76		

R. H. Stevenson
Sept 7/76

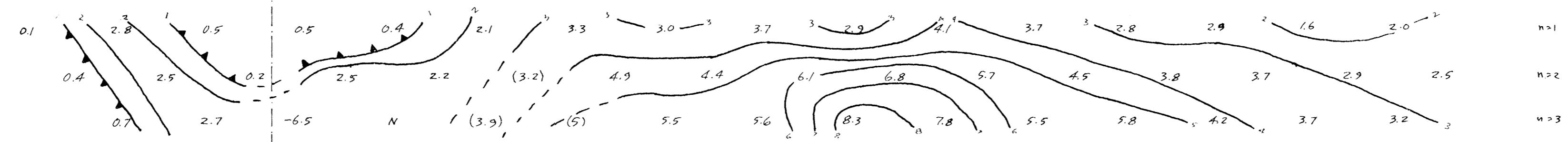
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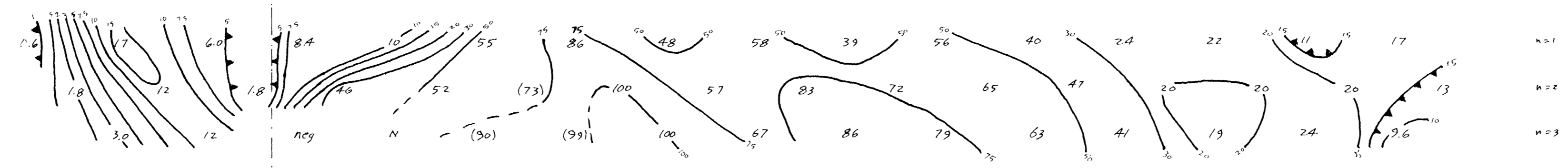
ARRAY: DIPOLE - DIPOLE
 METHOD: FREQ. DOMAIN
 FREQ. USED: 0.3 - 5.0 Hz

■■■■■ DEFINITELY ANOMALOUS
 ■■■■■ PROBABLY ANOMALOUS
 ■■■■■ POSSIBLY ANOMALOUS

36W 32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E



36W 32W 28W 24W 20W 16W 12W 8W 4W 0 4E 8E 12E 16E 20E 24E 28E 32E 36E 40E



ANDREW 2 CLAIM

RIP 1 CLAIM

APPROVED: *Dennis Dorval*
 Jan 21, 1976

R. H. Stevens
 Sept 7/76

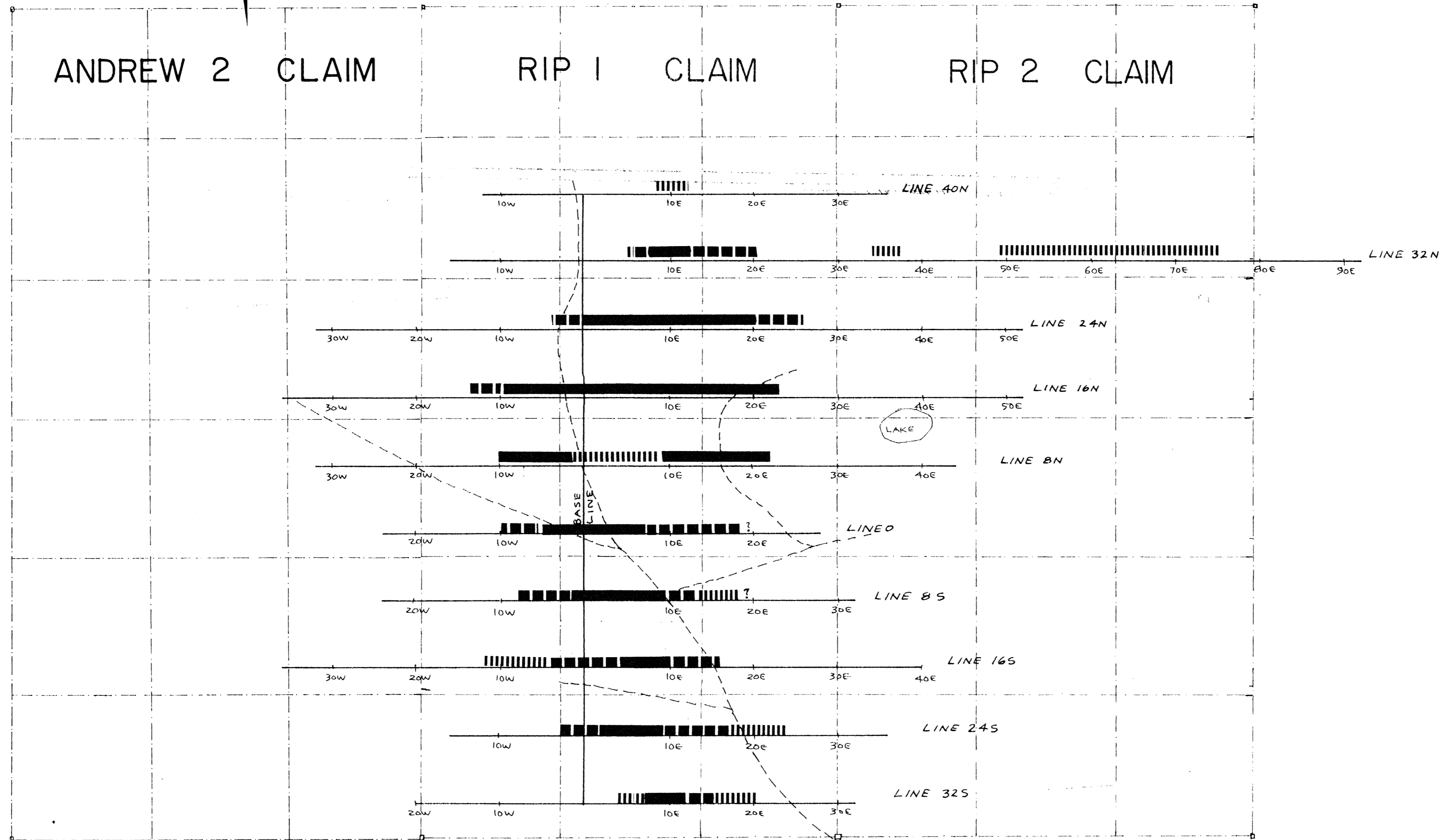
KENCO EXPLORATIONS (WESTERN) LIMITED		
ANDREW IP SURVEY		
OMINECA M.D., B. C.		
LINE 16S		
400' DIPOLES #5969		
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TRACED BY:	DATE:	
REVISIONS: H.R.G. 8/76		



ANDREW 2 CLAIM

RIP 1 CLAIM

RIP 2 CLAIM

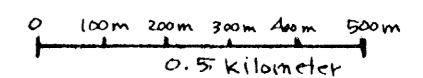


- DEFINITELY ANOMALOUS
- ▣ PROBABLY ANOMALOUS
- ▨ POSSIBLY ANOMALOUS

- - - LOGGING ROAD
- - - CLAIM LINE

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5969 MAP # 6

APPROVED BY: *Donna Dornal*
Jan 30, 1976



KENCO EXPLORATIONS (WESTERN) LIMITED

ANDREW IP SURVEY
OMINECA M.D., B.C.
GRID PLAN SHOWING
400' DIPOLE ANOMALIES

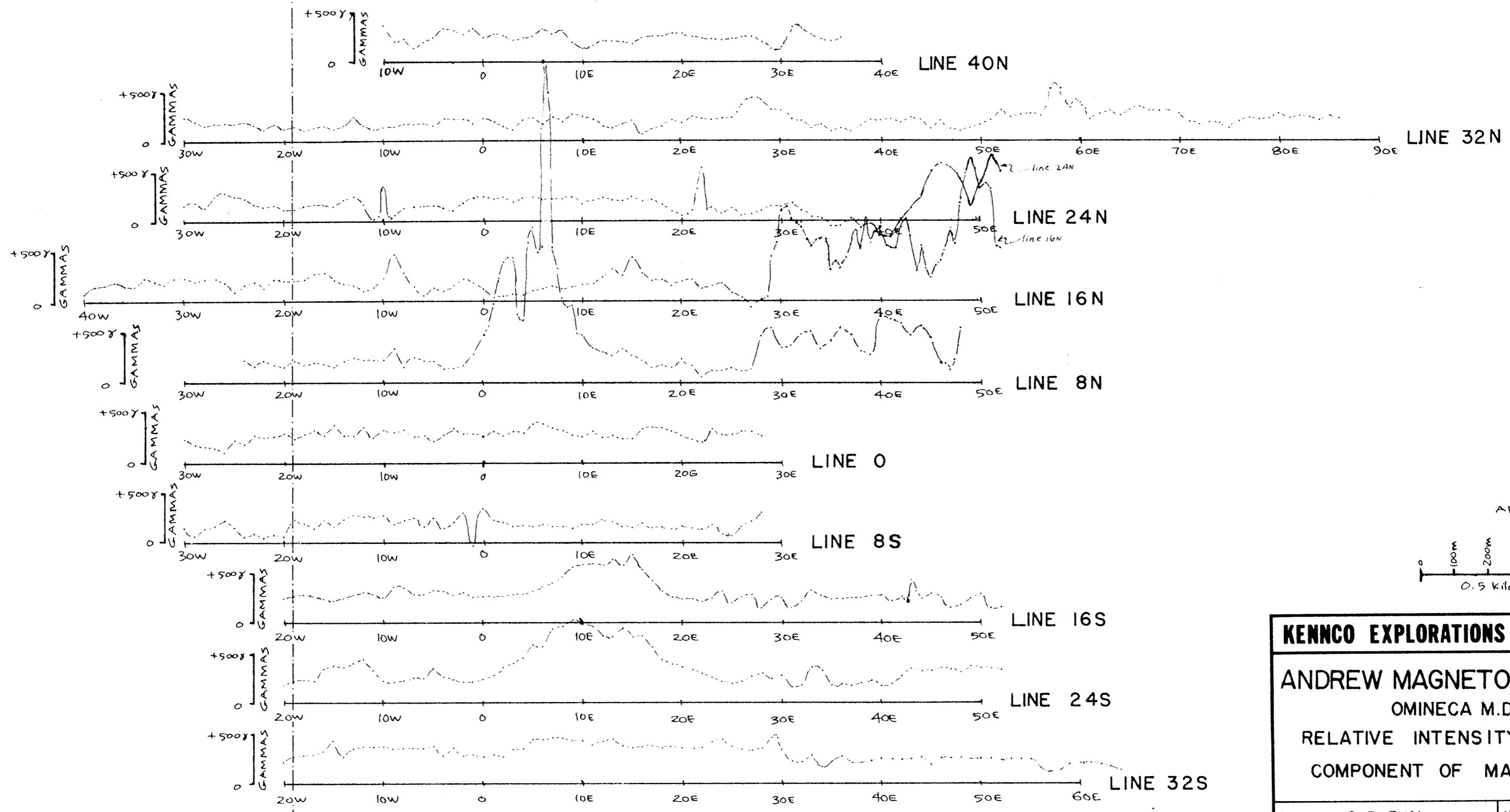
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TRACED BY:	DATE:	1cm = 120m
REVISIONS: H.R.G. 8/76		

5969 M-6

W. Stevenson
Sept 7/76

ANDREW 2 CLAIM

RIP 1 CLAIM



APPROVED: *Remis Dorval*
Jan 21, 1976

0 100m 200m 300m 400m 500m
0.5 kilometers

KENCO EXPLORATIONS (WESTERN) LIMITED		
ANDREW MAGNETOMETER SURVEY		
OMINECA M.D., B.C.		
RELATIVE INTENSITY OF VERTICAL COMPONENT OF MAGNETIC FIELD		
#5969		
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TRACED BY:	DATE:	1 cm = 120m
REVISIONS: HRG 8/76	"VERT." SCALE: 1" = 1000 GAMMAS	

R. H. Stevens
Sept 7/76