

TITLE PAGE

This Report covers VLF-EM AND MAGNETOMETER Surveys carried out on the MITZI No. 1 (Six Units), in October 1983, as recommended by Siak S. Tan., P.Eng. in his Report on the Mitzi No. 1 Claim, dated November 22, 1982. This Report was included in the SAGE RESOURCES LTD. Assessment Report filed on September 29th, 1983.

LOCATION

Trail Creek Mining Division

N.T.S. 82F/4W

Latitude North: 49 00 30"

Longitude West: 117 51 00"

OWNER OF CLAIMS

Sage Resources Ltd.  
620 - 475 Howe Street  
Vancouver, B.C. V6C 2B3

OPERATOR

SAGE RESOURCES LTD.

CONSULTANT

Douglas A. Perkins, B. Sc.

AUTHOR

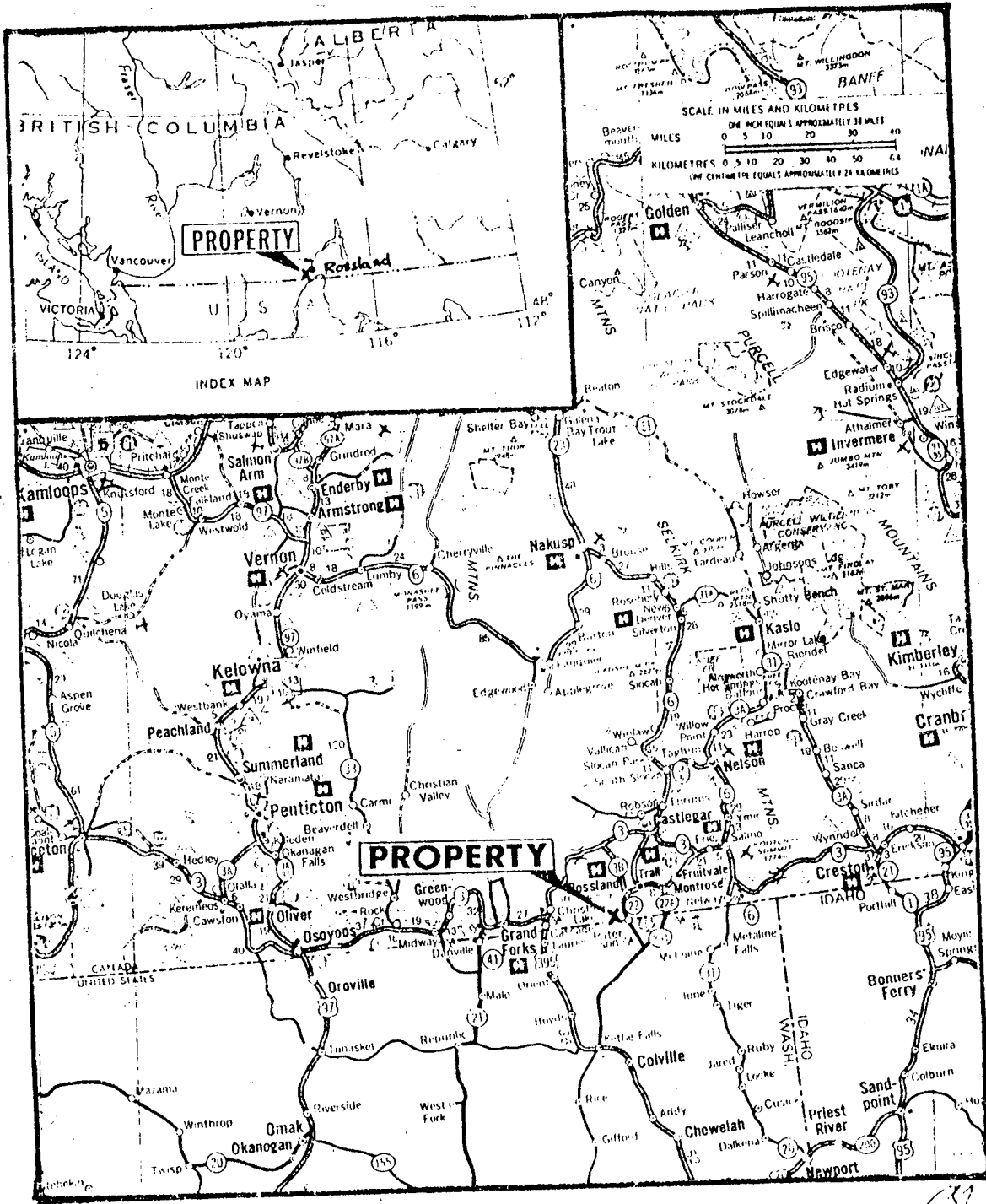
A. J. Valley, B. A. Sc., P. Eng.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

12,643

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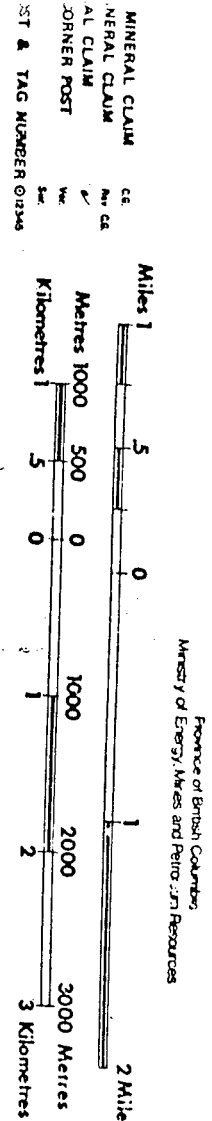
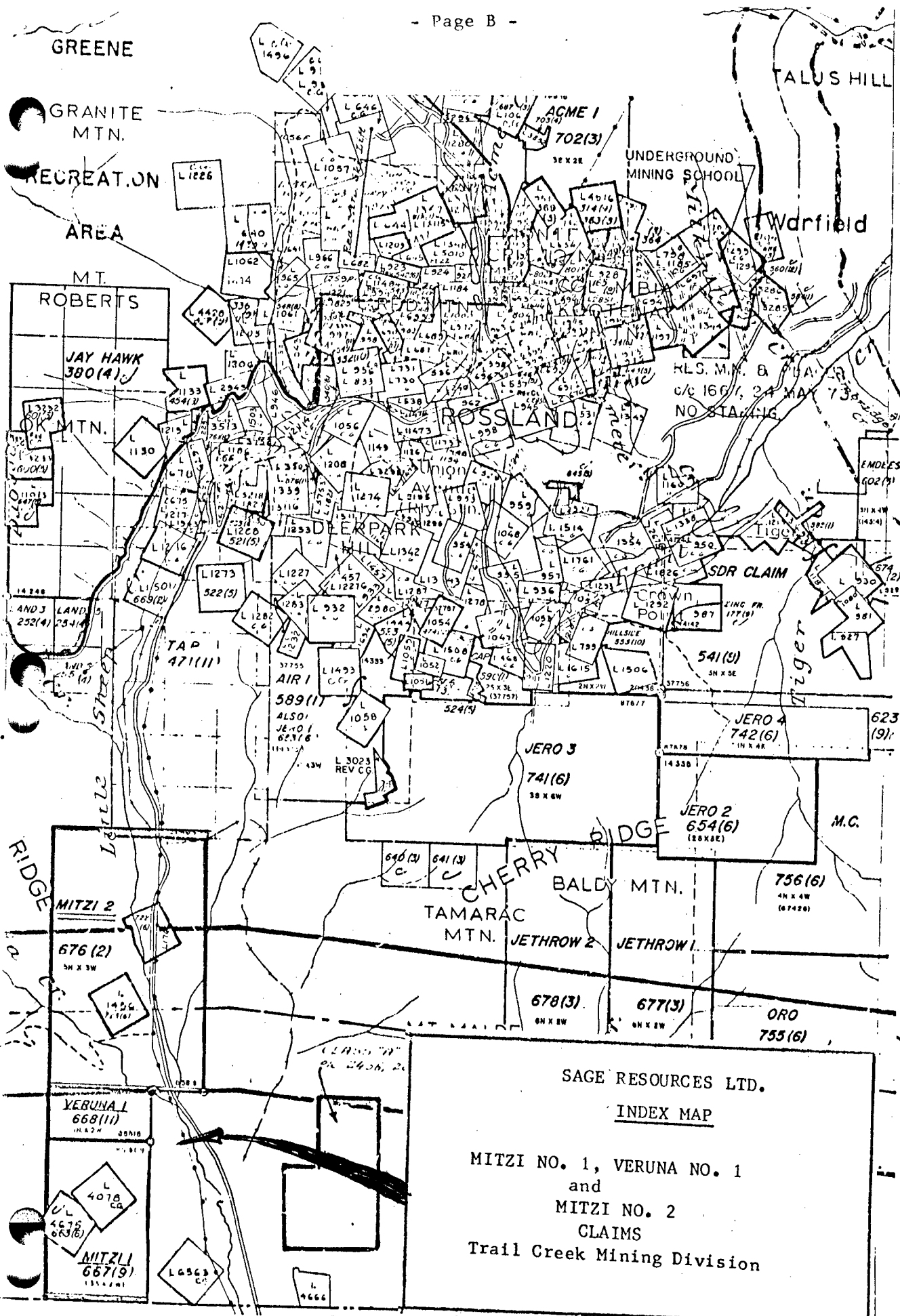


# **PLACE - FIX MAP**

SAGE RESOURCES LTD.

MITZI #1 CLAIM  
Mt. Sophie Area  
Trail Creek M.D., B.C.

FIGURE 1



UNLESS VERIFIED OR SURVEYED, THE MAP POSITION OF A LEGAL CORNER POST IS BASED ON THE LOCATOR'S S. TCH. FOR FURTHER INFORMATION, APPLY TO THE OFFICE OF THE MINING DIVISION.

DATE OF MICROFILM: 83/09/01

## INTRODUCTION

### General Geographical Position and Access

The Claims are situated on the east slope of Mount Sophia, about 8 Kilometers south-southwest of the town of Rossland, B.C., in the Trail Creek Mining Division of South Central British Columbia, and are accessible from the town of Rossland through 14 kilometers of paved and 2 kilometers of gravelled road, as indicated on Index Map 82F/4W.

The topography could generally be described as being between rolling and rugged. Elevation is between 760 meters to approximately 1060 meters above sea level, on the west side of the property. The slopes are fairly heavily timbered and there is approximately ten percent rock outcrop.

### Property Definition

The property consists of the following claims:

<u>Claim</u>	<u>Number of Units</u>	<u>Record Nos.</u>
Mitzi No. 1	6	667
Veruna No. 1	2	668
Mitzi No. 2	15	676

The Mitzi No. 1 Claim overstaked the crown-granted claim L 4078 and the reverted crown grant L 4675.

### History of the Property

The property surrounding the Mountain Trail Crown Grant L 4078 and the Lonestar Reverted Crown Grant L 4675, was previously owned by Lake Kozak Mines Ltd., in 1969.

The British Columbia Department of Mines Annual Report for 1946 reported that a 65 ton shipment was made from the adjoining Mountain Trail crown granted claim to the Cominco Smelter at Trail, B.C. This shipment yielded 7 ounces of gold, 33 ounces of silver, and 7800 pounds of copper. The work consisted of two shallow inclined shafts that were sunk on iron stained but weakly mineralized steeply dipping shear zones, striking at 330 degrees Azimuth. The size of the dumps indicate only minimal underground workings, according to S. S. Tan.

Prior to 1910, it has been reported that a number of hand sorted shipments were made to the smelter located at Westport, Washington, but the records were apparently destroyed in the fire that destroyed the smelter.

### OWNER-Operator of the Property

The Owner/Operator of the Property is Sage Resources Ltd., of Vancouver, B.C.

### BRIEF ECONOMIC ASSESSMENT OF PROPERTY

Only one mineralized occurrence of any consequence was found while prospecting the Mitzi No. 1 Claim. This showing is located in the southwest quarter of unit 2 of the Mitzi No. 1, and lies some 150 meters south of the southeast boundary of the Mountain Trail crown grant, and approximately 30 meters east of the old Mountain Trail Road. This showing occurs in an andesite outcrop, and is approximately 3.5 meters wide. A chip sample taken by S. S. Tan, P. Eng., analyzed:

0.29 % Cu  
2.84 % Pb  
1.63 % Zn  
0.80 oz Ag/ton  
0.005 oz Au/ton

Several shallow pits, to bed rock, were dug along the strike and in the vicinity of the showing in June 1983, which revealed the same type of mineralization as the outcrop. In July 1983, a Geochemical Soil Survey was carried out on a grid spacing of 50 meters N-S and 25 meters E-W, over an area of some 400 meters by 600 meters, encompassing the showing. The geochemical survey indicated an extension of the strike for approximately 150 meters north and possibly 200 meters southerly from the showing with another anomaly toward the southern border of the grid also apparently on strike. (See Sage Resources Ltd A.R. Report, dated September 29, 1983). The results of the geochemical survey warranted the VLF-EM and Magnetometer Survey recommended in S. S. Tan's Report of November 22, 1982.

### SUMMARY OF WORK PERFORMED

#### VLF-EM Survey

In October 1983, a Magnetometer and VLF-EM Survey was carried out, under the supervision of Douglas A. Perkins, B. Sc., Geology, over the same grid area and on the same station spacings as the geochemical soil survey of July 1983. Because of the location and strike of the mineralization, the only VLF Stations that appeared to be effective were stations NLK in Seattle on a frequency of 18.6 kHz, and Laulualei, Hawaii on a frequency of 23.4 kHz.

Dip Angles and Field Strengths were taken with the VLF-EM instrument for both frequencies over the grid. Although the resultant dip angles produced by both Seattle and Hawaii stations agreed quite closely, there were some inconsistencies in the field amplitude, particularly on the second day of the survey, produced from the Hawaii station. (See Table No. 1). Consequently, only the resultant readings from the Seattle station were plotted. (See VLF-EM Map No. 1 in pocket).

#### Magnetometer Survey

Readings were taken at the same stations as for the VLF-EM survey. These readings from the Magnetometer did not produce any useable results, partly because of frequent failure of the instrument and partly because of the apparent low level of magnetic mineralization in this area.

CONCLUSIONS AND RECOMMENDATIONS

The VLF-EM readings, although not spectacular, due to some extent because of the oblique alignment of both the Seattle and Hawaii stations in relations to the strike, definitely show low points for dip angles. These low points lie approximately along the strike, and coincides very well with the anomalies indicated in the geochemical soil survey of July 1983. (See again VLF-EM Map No. 1, in pocket and refer to Geochemical Map No. 1 for zinc in A.R. Report dated September 29, 1983).

Further work, such as trenching or short-hole blasting is recommended to confirm the extent and grade of the mineralization below the surface.

  
A. J. Valley, P. Eng.

TABLE NO. 1

<u>Station</u>	F1 - Seattle		F2 - Hawaii	
	<u>Dip Angle</u>	<u>Field Strength</u>	<u>Dip Angle</u>	<u>Field Strength</u>
<u>Line 0</u>				
00	+ 10	360	+ 4	280
ON-1W	+ 24	360	+ 10	220
ON-2W	+ 10	380	+ 10	340
ON-3W	+ 10	320	+ 10	400
ON-4W	+ 18	380	+ 12	350
ON-5W	+ 12	380	+ 14	320
ON-6W	+ 8	400	+ 7	380
ON-7W	+ 2	400	+ 5	360
ON-8W	+ 10	380	+ 10	380
ON-9W	+ 10	375	+ 17	400
ON-10W	+ 18	385	+ 18	415
ON-1E	0	360	0	650
ON-2E	+ 5	360	+ 7	680
ON-3E	+ 8	360	+ 8	670
ON-4E	+ 7	320	+ 7	650
ON-5E	+ 10	340	+ 7	650
ON-6E	+ 8	320	+ 8	640
ON-7E	+ 4	320	+ 4	640
ON-8E	+ 10	320	+ 6	650
<u>Line 1N</u>				
1N-0W	+ 5	380	+ 5	600
1N-1W	+ 8	400	+ 8	600
1N-2W	+ 10	400	+ 10	600
1N-3W	+ 8	430	+ 10	600
1N-4W	+ 10	400	+ 10	560
1N-5W	+ 10	390	+ 11	510
1N-6W	+ 15	420	+ 12	515
1N-7W	+ 13	400	+ 10	490
1N-8W	+ 13	390	+ 11	470
1N-9W	+ 13	380	+ 25	445
1N-10W	+ 24	390	+ 24	410



		<u>F1</u>		<u>F2</u>	
<u>Station</u>	<u>Dip</u>	<u>Field</u>	<u>Dip</u>	<u>Field</u>	
	<u>Angle</u>	<u>Strength</u>	<u>Angle</u>	<u>Strength</u>	

Line 1N Continued

1N-1E	+	0	320	+	4	720
1N-2E	+	0	340	+	0	720
1N-3E	+	14	320	+	14	750
1N-4E	+	10	320	+	10	700
1N-5E	+	10	300	+	8	700
1N-6E	+	20	280	+	16	630
1N-7E	+	8	320	+	10	680
1N-8E	+	3	320	+	5	650

Line 2N

2N-1W	+	4	360	+	6	720
2N-2W	+	8	380	+	8	720
2N-3W	+	7	400	+	6	720
2N-4W	+	8	360	+	7	680
2N-5W	+	9	350	+	9	680
2N-6W	+	8	360	+	8	680
2N-7W	+	10	370	+	10	700
2N-8W	+	10	380	+	11	720
2N-0E	+	8	400	+	8	720
2N-1E	+	2	420	+	3	720
2N-2E	+	3	420	+	5	720
2N-3E	+	8	420	+	9	720
2N-4E	+	2	440	+	10	720
2N-5E	+	9	420	+	10	700
2N-6E	+	10	400	+	10	670
2N-7E	+	8	420	+	10	680
2N-8E	+	8	430	+	8	660

Line 3N

3N-0W	+	6	400	+	6	700
3N-1W	+	10	380	+	6	680
3N-2W	+	8	400	+	10	700
3N-3W	+	14	400	+	12	700
3N-4W	+	10	370	+	10	660
3N-5W	+	18	360	+	18	680

		<u>F1</u>		<u>F2</u>	
<u>Station</u>	<u>Dip</u>	<u>Field</u>	<u>Dip</u>	<u>Field</u>	
	<u>Angle</u>	<u>Strength</u>	<u>Angle</u>	<u>Strength</u>	

Line 3N Continued

3N-6W	+	14	360	+	14	660
3N-7W	+	12	370	+	14	700
3N-8W	+	9	400	+	20	700
3N-1E	+	1	450	+	6	620
3N-2E	+	1	480	+	8	680
3N-3E	+	8	460	+	10	660
3N-4E	+	8	400	+	8	660
3N-5E	+	6	440	+	8	670
3N-6E	+	9	440	+	10	650
3N-7E	+	3	420	+	10	660
3N-8E	+	7	440	+	9	660

Line 1S

1S-0W		0	320		0	220
1S-1W	+	3	330	+	5	100
1S-2W	+	4	340	+	6	60
1S-3W	+	3	340	+	6	60
1S-4W	+	4	350	+	10	60
1S-5W	+	10	360	+	3	70
1S-6''W	+	4	350	+	4	80
1S-7W	+	1	380	+	8	100
1S-8W	+	3	440	+	8	110
1S-0E		0	200		0	500
1S-1E		0	200		0	500
1S-2E	+	2	190	+	3	480
1S-3E		0	200	+	6	450
1S-4E	+	2	200	+	5	530
1S-5E	+	3	200	+	6	430
1S-6E	+	3	220	+	6	420
1S-7E	+	4	220	+	8	400
1S-8E	+	4	240	+	4	380
1S-9E	-	4	220		0	350

Line 2S

2S-0W	+	1	330	+	1	180
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	<u>F1</u>		<u>F2</u>	
<u>Station</u>	<u>Dip Angle</u>	<u>Field Strength</u>	<u>Dip Angle</u>	<u>Field Strength</u>

Line 2S Continued

2S-1W	+	1	330	+	3	170
2S-2W	+	4	330	+	4	170
2S-3W	+	3	330	+	4	150
2S-4W	+	1	330	+	4	140
2S-5W	+	4	350	+	8	150
2S-6W	+	3	370	+	4	140
2S-7W	+	5	380	+	4	140
2S-8W	+	6	380	+	8	120
2S-0E	+	2	320	+	2	220
2S-1E	-	1	360		0	370
2S-2E	+	6	350	+	7	280
2S-3E	+	3	350	+	5	300
2S-4E	+	4	350	+	6	320
2S-5E	+	4	320	+	6	300
2S-6E	+	2	290	+	4	320
2S-7E		0	230		0	330
2S-8E	-	2	240		0	370

Line 3S

3S-0W	-	3	230	-	2	670
3S-1W	-	6	170	-	4	700
3S-2W	-	2	200	+	2	670
3S-3W	+	1	250	+	2	670
3S-4W	+	3	280	+	5	650
3S-5W	+	2	310	+	3	650
3S-6W	+	2	350	+	2	640
3S-7W		0	400	+	3	620
3S-8W	+	6	420	+	6	620
3S-1E	+	2	280	+	5	600
3S-2E	+	2	270	+	4	600
3S-3E	+	1	290	+	4	580
3S-4E	+	3	310	+	5	600
3S-5E	+	5	340	+	6	580
3S-6E	+	3	320	+	3	600
3S-7E		0	340	+	2	620

	<u>F1</u>		<u>F2</u>	
<u>Station</u>	<u>Dip Angle</u>	<u>Field Strength</u>	<u>Dip Angle</u>	<u>Field Strength</u>

Line 3S Continued

3S-8E	-	1	360	+	1	650
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Line 4S

4S-0W		0	400	-	1	650
4S-1W	-	1	400	-	1	660
4S-2W	-	2	400		0	620
4S-3W	-	2	420	-	2	640
4S-4W		0	400	+	2	620
4S-5W		0	400	-	1	630
4S-6W	-	1	400	-		-
4S-7W		0	400	-		-
4S-8W		0	400	-		-
4S-0E	+	2	420	+	2	670
4S-1E	+	2	360	+	3	650
4S-2E	-	2	380		0	650
4S-3E		0	360	+	2	680
4S-4E	-	2	330	+	2	700
4S-5E		0	320	+	2	700
4S-6E		0	320	+	2	690
4S-7E	+	2	300	+	3	680
4S-8E	+	3	300	+	8	700

VALUATION OF WORK

Geophysical Survey - Magnetometer and VLF-EM on MITZI No. 1 Claim

October 21 to October 23, 1983:

Meals	\$ 68.05
Motel	63.60
Gasoline for automobile	147.48
Field supplies	6.31
Rental of VLF-2, serial no. 1058 for 4 days @\$23/day	92.00
Rental of Magnetometer - 3 days at \$20.00/day	60.00
Labour: D. Perkins - 4 days @ \$150.00/day	600.00
A. Valley - 3 days @ \$80.00/day	240.00
R. Tuschek - 3 days @ \$80.00/day	240.00
Cost of writing report, printing, maps etc	500.00
Total Value of Work -	<u>\$2,017.44</u>

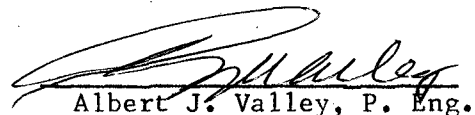
STATEMENT OF QUALIFICATION

I, Albert J. Valley, residing at 3265 Westmount Road, West Vancouver, British Columbia, hereby certify that:

1. I am a graduate in Chemical Engineering (B. S. Sc.), from the University of Toronto, 1951.
2. I am a Registered Professional Engineer in the Association of Professional Engineers of the Province of British Columbia - No. 2944, in the Chemical Engineering Division.
3. I have been engaged in the Engineering Profession from 1951 until 1980, and was employed in the Petrochemical Industry in the United States for 5 years, and in the Chemical Industry in Canada, for 24 years.
4. I have taken the British Columbia and Yukon Chamber of Mines "Prospecting and Mining School" om 1968 and 1969.
5. I have taken the "Geophysical Methods in Prospecting" Course at the British Columbia Institute of Technology, in 1970.
6. I have been involved in the Mining Industry by prospecting, investing, association and field work, for the past 25 years.

Dated at Vancouver, British Columbia, this 20th day of June 1984.


Signed

  
Albert J. Valley, P. Eng.

STATEMENT OF QUALIFICATIONS

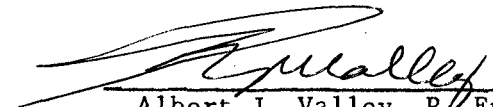
I, DOUGLAS A PERKINS, geologist, with business address in Vancouver, British Columbia, and residential address in Vancouver, British Columbia, hereby certify that:

- 1) I graduated from the University of British Columbia, in 1979 with a B.Sc. majoring in Geology.
- 2) From 1979 to the present I have been actively engaged as a geologist in mineral exploration in British Columbia and the Yukon Territory.
- 3) I personally participated in the field work on the Mitzi No. 1 claim of SAGE RESOURCES LTD., and have interpreted data resulting from this work.
- 4) I am a member of the Geological Association of Canada.

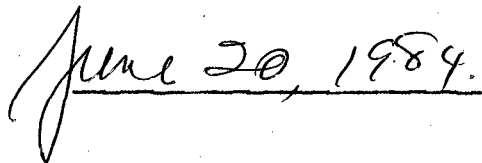
  
Douglas A. Perkins

AFFIDAVIT SUPPORTING SUMMARY OF COSTS

I, Albert J. Valley, P. Eng., Director and President of SAGE RESOURCES LTD., Vancouver, British Columbia, do hereby state that, to the best of my knowledge, the statement of costs in this report, is a true account of the expenditures incurred on the Geophysical Survey carried out on the Mitzi No. 1 Claim, located in the Trail Creek Mining Division of British Columbia.

  
Albert J. Valley, P. Eng.

Dated:

  
June 20, 1984.

# VLF-EM PROFILE

## GEOLOGICAL BRANCH ASSESSMENT REPORT

# 12.643

NORTH LATITUDE: 49° 00' 30"

WEST LONGITUDE: 117° 51' 00"

### LEGEND:

VLF STATION: NLK, SEATTLE  
18.6 kHz

DIP ANGLE: —○—○—○—○—

FIELD STRENGTH: x---x---x---

Meters  
0 25 50 75 100  
GRID SCALE - 1:1250

SAGE RESOURCES LTD.  
MITZI NO.1 CLAIM  
TRAIL CREEK MINING DIVISION  
ROSSLAND, B.C.

VLF-EM  
NO1 MAP

Drawn by: A.J. Valley  
Checked by: A.J.V.  
June 15, 1984

