

6635  
part 3 of 4

GEOPHYSICAL SURVEY

NORMA CLAIM #207 10 UNITS

SIMILKAMEEN M.D. B.C.

120-50 SE 1-11-77 : 8-12-77  
92H-7E

Alfred R. Allen, P. Eng.

For:

GILFORD RESOURCES LTD.

302 - 750 West Pender Street  
Vancouver, B.C.

MINERAL RESOURCES BRANCH ASSESSMENT REPORT NO. <u>6635</u> MAP NO. <u>PART 3 OF 4</u>
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By:

ALLEN GEOLOGICAL ENGINEERING LIMITED

203 - 2025 Bellevue  
West Vancouver, B.C. V7V 1B9

December 27, 1977.

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## INTRODUCTION (A)

The Norma property is 24 kilometres south of Princeton on Highway #3 between Friday and Deep Gulch Creeks at  $49^{\circ}-18'$  latitude and  $120^{\circ}-34'$  longitude.

Mr. J.W. Galagher staked the area in 1952. It was subsequently held by Deep Gulch Mines and Oro Mines. Gilford Resources Ltd. acquired the Norma claim from J. Turner, locator, in early 1977.

The east boundary of the property is just west of the exposed Copper Mountain igneous complex. The north three-fifths of the claim is underlain by Nicola andesitic rocks and the remainder by Princeton volcanics. Faulted and silicified rocks exposed by trenches near the east boundary contain pyrite with some pyrrhotite and chalcopyrite.

Geological, topographic, geochemical, magnetometer and electromagnetic surveys were conducted over a surveyed grid covering the 250 hectare property by Allen Geological Engineering Ltd., from November 1 - December 8, 1977.

Over 26.5 line kilometres 268 soil samples were taken and assayed for copper. Two hundred and fifty altimeter, 363 magnetometer and 400 VLF-EM observations were recorded. Geological traverses included roads and all grid lines.



GILFORD RESOURCES LTD.  
 INDEX  
 PROPERTY MAP

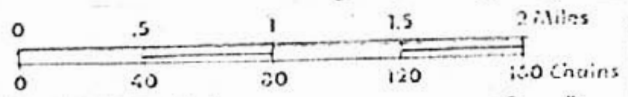
NORMA 1-10 207 (4)

No. 2

27/12/77

Allen Geological Engineering Ltd.

Per Alfred R. Allen P. Eng.



SCALE

Sunday Cr. 49°-15' 92 H-7 E

MAGNETOMETER SURVEY

NORMA CLAIM - 207 (4)

SIMILKAMEEN M.D., B.C.

INTRODUCTION

Persuant to the request of the Directors of Gilford Resources Ltd., a magnetometer survey was conducted over the Norma property, November 1 - December 8, 1977.

Field work was conducted from Princeton, B.C., by Alfred R. Allen, P.Eng. T. Thomas and R. Thomas.

LOCATION AND ACCESSIBILITY

The Norma property is located in southwestern British Columbia, 15 miles southerly from Princeton. The southern portion of the claim is crossed by Highway #3 at Friday Creek.

Several secondary roads extend from the Highway westerly across the property.

It is southwest and across the Similkameen River 4 kilometres from the former Copper Mountain mine, and about 10 kilometres from the operating Similkameen mine.

Geographic location is  $120^{\circ}-34'$  west longitude and  $49^{\circ}-18'$  north latitude.



PROPERTY

The legal corner post of the Norma claim is about 60 metres west of the Hope-Princeton Highway, 2,500 metres north of Friday Creek.

It measures 5 units north by 2 units west.

The metal tag number is 35043.

The claim was located by John C. Turner March 7 and 8, 1977.

It is designated as #207 and shown on Claims Map 92 H - 7 E of the B.C. Department of Mines and Petroleum Resources.

HISTORY

The area was staked by J.W. Galagher in 1952. It was held by Deep Gulch Mines Ltd. in the late 1950's. In 1968 Oro Mines carried out some exploratory work, including trenching, geophysical surveying and diamond drilling.

Gilford Resources Ltd. purchased the claim from John C. Turner in the spring of 1977.

GEOLOGY

The Norma property lies just west of the surface exposure of the Copper Mountain intrusives. These are composed of syenogabbro, syenodiorite and monzonite. They intruded the Coast Range granitic mass and the Upper Triassic Nicola group.

On the Norma claim the exposed Nicola rocks are sheared and altered grey to black andesites, and in places silicified and pyritized.

Those on the southern part of the property are masked by Tertiary volcanics of the Princeton Group. These are rough weathering reddish-purple to black basaltic rocks, light grey syenitic porphyry and grey-green agglomerate and andesite.

Numerous veins of white quartz are exposed within Nicola rocks in the trenches on the east boundary of the property and iron mineralization occurs within silicified and fractured zones adjacent to the faults.

#### TOPOGRAPHY

The Norma property is located on the northeast slopes of Friday Mountain, about 2 kilometres west of the Similkameen River, between 3,700 and 4,800 feet above sea level.

Friday Creek and Deep Gulch Creek flow easterly and northeasterly into the northerly flowing Similkameen River.

#### GRID CONTROL

A base line was established on the east boundary of the property, coinciding, for the most part, with the location line from the legal corner post to Friday Creek.

Stations were established along the blazed and flagged base line at 75 metre intervals.

On the northerly 2/3's of the property lines were blazed and flagged west to the west boundary and stations established at 50 metre intervals.

On the southern 1/3 of the property lines were blazed and flagged to the west boundary at 150 metre intervals and stations established at 100 metre intervals.



Surveying was done with nylon chain and Brunton compass.

Stations were marked with grid location numbers on stakes and/or flagging.

The grid is shown on the accompanying map #3, Isomagnetic Plan, on a scale of 1 cm to 50 m.

#### MAGNETOMETER SURVEY

An MF - 1 Scintrex instrument was used to measure and record the vertical component of the magnetic field at each grid station. Three hundred and sixty-five observations were made.

Diurnal variations were recorded at least twice daily at convenient grid locations. The field notes were corrected for diurnal variations each night, and 1,000 gammas added to each corrected reading for mapping convenience.

The magnetometer was calibrated for correct latitude prior to commencement of the survey.

#### SURVEY RESULTS

The corrected final vertical component of the magnetic field at each grid station was mapped, and is shown on the accompanying Map #3, Isomagnetic Plan.

1. The highest was a "spot determination" of 4,150 gammas, at 7+50 W and 9+75 S. In the same west central area a second "spot determination" of 3,520 gammas was recorded at 10+00 W and 11+25 S.
2. At stations 9+00 and 9+75 W on lines 12+00 S and 12+75 S 3,070 and 3,300 determinations were made.

3. At stations 8+00 W on line 16+50 S a determination of 3,050 was made.
4. An area of moderately high readings extends from 6+50 W on 9+75 S. This is above the 2400 gamma range.
5. An elongated area of low readings lies at 9+00 W from 12+75 S to 13+50 S, these being -540 and -1,600 gammas. This is close to, and roughly parallel to the area of high readings of #2 above.
6. An area of moderately low intensity extends from 5+50 W and 10+50 S to 2+75 W and 11+25 S.
7. A long area of low intensity follows the Deep Gulch Creek draw from 8+00 W on 9+00 S to 5+00 W on 6+75 S.
8. A small area of low intensity is located between 4+25 W and 2+80 W on line 1+50 S.
9. A small area of low intensity is located on the east boundary of the property at line 10+50 S. Trenches near this location expose heavy faulting trending north 30 degrees east.

#### DISCUSSION OF RESULTS

The areas of magnetic high intensity from 6+00 W on 10+50 S to the west boundary of the property lie within the area of Tertiary volcanic rocks.

The long northeasterly-trending low, on the Deep Gulch Creek area may represent a zone of faulting in Nicola andesite. Similarly, the low area curved easterly from 5+50 W on 10+50 S to 0+00 on 10+50 S may have been caused by heavy overburden since there are sizeable glacial eskers at this location.

SUMMARY AND CONCLUSIONS

The location of the Norma property, southwest of the Similkameen mine and the former Copper Mountain mine, is favourable for the occurrence of copper mineral deposits.

The magnetometer survey indicates the locations of nine areas with variations in the vertical component of the earth magnetic field above or below the norm.

The approximate location of the contact between the Nicola and younger Princeton groups of volcanic rocks appears to be indicated by the trend of the anomalous areas in the central and western part of the property. The trend northeasterly of low intensity along the Deep Gulch Creek drainage may indicate a fault zone or a thick glacial till cover.

It is concluded that the magnetometer survey provided information which assists with the evaluation of the mineral potential of the Norma property.

RECOMMENDATIONS

It is recommended that the information acquired by the magnetometer survey be coupled with electromagnetic data to assist with locating target areas for the continued exploration of the Norma property.

Respectfully submitted,

ALLEN GEOLOGICAL ENGINEERING LIMITED

Per Alfred R. Allen P. Eng.  
Alfred R. Allen

Vancouver, B.C.  
December 27, 1977.

REFERENCES

- Rice, H.M.A., G.S.C., Princeton Sheet, Mem. 243
- B.C. Department of Mines, M.M. Report 1959 pp. 53-54
- Maps, 888A, 889A G.S.C.
- Map, Princeton Sheet 92 H/SE, N.T.S., 1969
- Watson, R.K. and Finney, W.R.,  
Reports on the JJJ, JILL, ASH, EVA, TOW Groups,  
Oro Mines Ltd., 1968  
Assessment Report #1601
- Fraser, D.C.,  
Contouring of VLF - EM Data,  
Geophysics, Vol 34, #61, 1969, pp. 958-967

\* \* \* \* \*

# Allen Geological Engineering Limited

203 - 2025 Bellevue  
West Vancouver, B.C. V7V 1B9

926-4785

## CERTIFICATE

December 27, 1977.

I, Alfred R. Allen, certify that:

I am a graduate of the University of British Columbia  
and hold the following degrees therefrom:

BASc Geological Engineering 1939

MASc Geological Engineering 1941

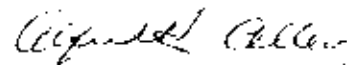
I am a member of the Association of Professional Engineers of  
the Province of British Columbia.

I have practised my profession for the past thirty years.

I hold no interest in the properties or securities of Gilford  
Resources Ltd., or affiliates thereof, nor do I expect to  
receive any, directly or indirectly.

The accompanying report on the Norma property is based on  
field work done by the writer during November - December, 1977.

I consent to this report being filed with the British Columbia  
Securities Commission.



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Alfred R. Allen

# Allen Geological Engineering Limited

#203 - 2025 Bellevue  
West Vancouver, B.C.

V7V 1B9

926-4785

December 27, 1977.

British Columbia Securities Commission  
756 Fort Street  
Victoria, B.C.

Dear Sirs:

Re: Gilford Resources Ltd.

I hereby consent to the use of my report on the Norma property, Copper Mountain Area, Similkameen M.D., B.C., in any prospectus or Statement of Material facts or other material to be filed with the British Columbia Securities commission or the Vancouver Stock Exchange by Gilford Resources Ltd.

Yours very truly,

Alfred R. Allen P.Eng.

Alfred R. Allen

For:

ALLEN GEOLOGICAL ENGINEERING LIMITED

THE NORMA PROPERTYSIMILKAMEEN M.D. B.C.120 - 50 SEPERSONNEL AND TIME

## GRID

GEOLOGICAL SURVEY

GEOCHEMICAL SURVEY

MAGNETOMETER SURVEY

ELECTROMAGNETIC SURVEY

TRENCHING

Alfred R. Allen, P.Eng., Field

	<u>Grid,</u>	<u>Geol.</u>	<u>Geochem.,</u>	<u>Mag.</u>	<u>EM</u>	<u>Trenches</u>	<u>Man Days</u>
Nov.77	-	16-20	22&23	24&25	26	•	10
Dec.77	-	--	--	--	1,2,4,5,7	6	6

Tom Thomas and Richard Thomas, Field

Nov.77	1-9	10&11	12-18	19-24	25-30	--	60
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Alfred R. Allen, P.Eng., Reports and Maps

Dec.77 9-17, 19-22, 27-31

Jan.78 3-10.

MAGNETOMETER SURVEYNORMA CLAIM - #207120 - 50 SESIMILKAMEEN M.D. B.C.For: GILFORD RESOURCES LTD.

OPERATOR: Alfred R. Allen, Geological Engineer, @ \$185.00/day  
 202 - 2025 Bellevue, West Vancouver, B.C.  
 November 1, 1977 - January 10, 1978

ASSISTANTS: Thomas Thomas, Experienced field man @ \$ 99.00/day  
 Richard Thomas, Field helper @ \$ 55.00/day  
 R.R. 4, Mission, B.C.  
 November 1-30, 1977.

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<u>SURVEY:</u>	<u>Man Days</u>	<u>Costs</u>
T. Thomas	6	\$ 594.00
R. Thomas	6	330.00
Alfred R. Allen	2	370.00

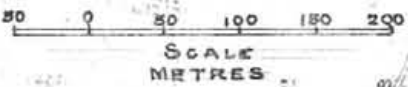
Data Processing, Mapping, Interpretation, Preparation

Alfred R. Allen	5	925.00
Transportation		160.00
Food		200.00
Supplies		35.00
Accommodation 14 Man days		300.00
Maps, reproductions, stenographic,		35.00
Grid (pro-rated)		330.00
Instrument rental MF-4 # 20753, 22 days @ \$12.50		282.50
<b>Total costs,</b>		<b>\$3,561.50</b>



GILFORD RESOURCES LTD.  
 NORMA PROPERTY  
 Similkameen M.D. B.C.  
 ISOMAGNETIC PLAN  
 Scale: 1cm = 50m

No. 3  
 Date: 27 Allen Geological Engineering Ltd.  
 12/77 Per *[Signature]* P. Eng.  
 92H-7E



LEGEND  
 Isomagnetic Contours  
 Vertical Component  
 300 Gamma Intervals  
 -1600 to +1150 Gammas  
 MF - 1 Magnetometer

LEGEND

GAMMAS

- 1 0 - 1600
- 2 0 - 600
- 3 600 - 900
- 4 900 - 1200
- 5 1200 - 1500
- 6 1500 - 1800
- 7 1800 - 2100
- 8 2100 - 2400
- 9 2400 - 2700
- 10 2700 - 3000
- 11 3000 +

MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
 No. **6635**  
 Part 3 of 4

