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FIREWEED PROPERTY

Omineca Mining Division

British Columbia

GEOLOGICAL REPORT

for

CANADIAN-UNITED MINERALS, INC.

Anthony L'Orsa, M.Sc., F.G.A.C.

Smithers, B.C.

15 October 1987

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## SUMMARY

The Fireweed property, comprising the GER 1,2 and 3 mineral claims totalling 50 units, is situated about 5<sup>4</sup> km northeast of Smithers, B.C.

The property is on the Skeena Arch, and on an inferred fault contact between Lower Cretaceous Skeena Group sandstones preserved in a graben and volcanics and sediments of the Upper Triassic Takla Group. An igneous complex of Eocene age is exposed nearby. Small, silver-bearing, galena veins and sphalerite veins have been found in sandstone outcrops on the claims, and numerous boulders of pyritized felsic volcanic rocks have been found, some of which contain small amounts of copper, silver and gold. These discoveries are supported by a creek that crosses the claims and exhibits an unusually low pH and anomalous amounts of mercury at the only known sample point, about 2.8 km below the claims.

An exploration program of geological mapping, geochemical and geophysical surveys, trenching and sampling is recommended. The program is expected to cost \$75,000.

## INTRODUCTION

During the summer of 1987, Gordon Leask discovered mineralized boulders in a clearcut logging area in what became the Fireweed property and the GER claims. John Leask subsequently found galena and sphalerite veins in outcrops nearby.

I examined the Fireweed property on 6 October 1987 accompanied by John Leask.

## LOCATION AND ACCESS

The GER claims are centred at approximately  $55^{\circ} 0.5'$  north latitude and  $126^{\circ} 25'$  west longitude (Map 93M/1W), 54 km northeast of Smithers, Omineca Mining Division, British Columbia (Fig. 1). Smithers has a population of about 5000 people and is on the main railway (CNR) line and paved highway (Yellowhead Highway 16) connecting the major towns of Prince George and Prince Rupert. Smithers is served by a good airport (Canadian Airlines International flights daily to Vancouver, B.C.), a natural gas pipeline and a 138 kV electricity transmission system. A 19.9 kV powerline crosses the eastern part of the GER claims.

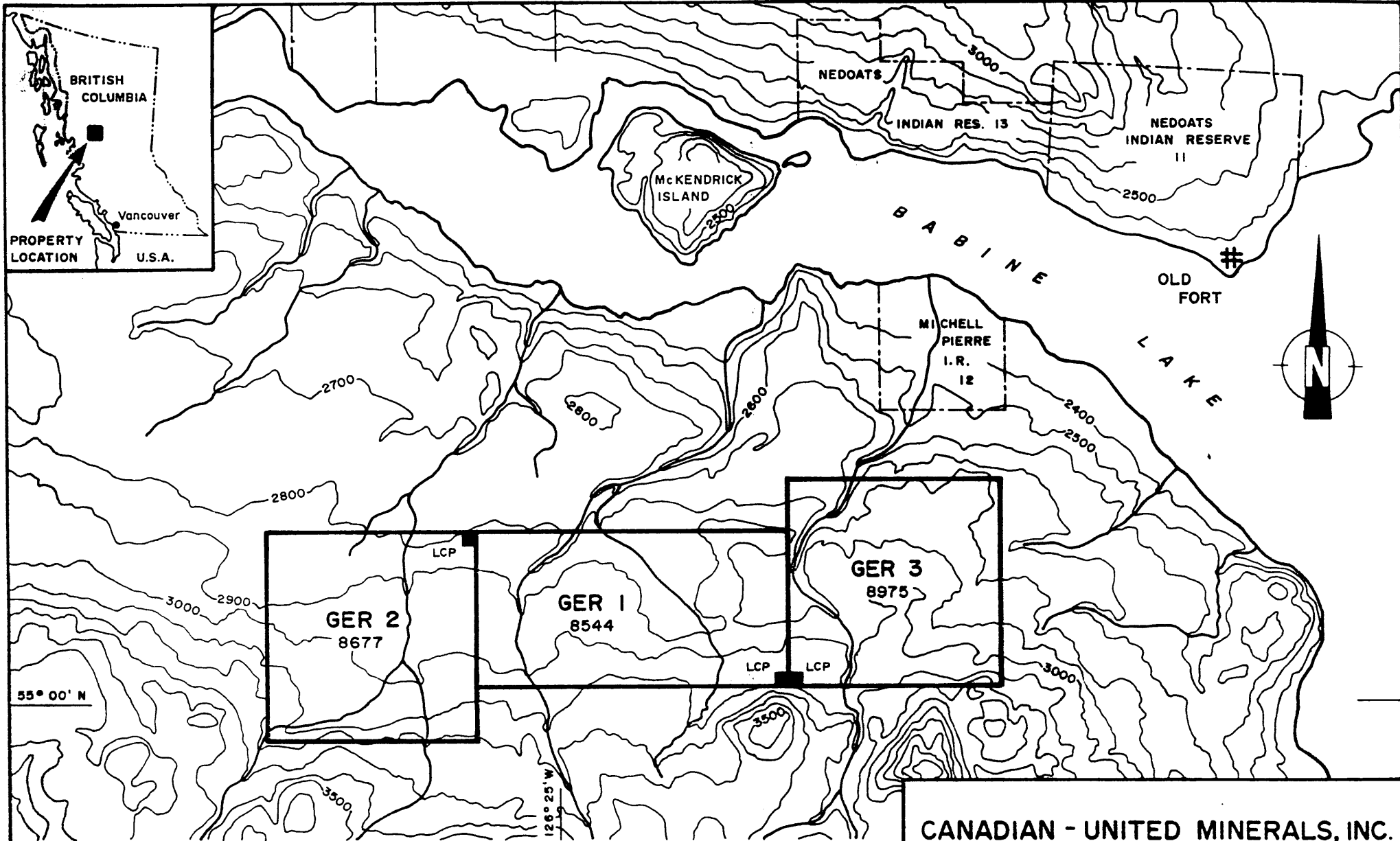
Easily improved four-wheel drive access to the claims is provided by a former logging road that branches off the Babine Lake road at km 58, about 4 km southwest of Smithers Landing. Extensive clearcuts and accompanying skid roads provide good access within much of the claims area. The road distance from Smithers to the claims is about 64 km.

The claims are mostly free of snow from May to November.

## PHYSIOGRAPHY

The claims occupy part of a gentle northerly slope, interrupted by a few small hills, that drains into Babine Lake about 2 km to the north. Elevations on the claims range from about 800 m to 1000 m above sea level. The elevation of Babine Lake is about 712 m above sea level. Several small creeks on the claims are expected to supply sufficient water for exploration purposes except in an unusually dry year.

The claims are almost entirely covered by overburden constituting mostly till and a few local swamp deposits. Outcrops are rare.



55° 00' N

126° 25' W

ELEVATIONS IN FEET.



1 : 50 000

TO ACCOMPANY A REPORT BY A. L'ORSA.

MAPS 93 M/1 & L/16

CANADIAN - UNITED MINERALS, INC.

FIREWEED PROPERTY

15<sup>th</sup> Oct. 1987

Drawn by E.C.

FIG. 1

Ice moved in a southeasterly direction in this region during the last episode of continental glaciation.

There are good stands of balsam fir and spruce on and near the claims.

#### CLAIMS AND OWNERSHIP

The Fireweed property comprises 50 units (500 m by 500 m each) as listed below.

<u>Claim</u>	<u>Units</u>	<u>Record No.</u>	<u>Expiry</u>
GER 1	18	8544	21 July 1988
GER 2	16	8677	10 Aug. 1988
GER 3	16	8975	15 Sept.1988

Canadian-United Minerals, Inc. of Vancouver, B.C., optioned the claims from Terry Lewis Eldridge of New Westminster, B.C., in accordance with an agreement dated 27 August 1987.

I examined the legal corner post of the GER 2 claim. The claims appear to be staked in accordance with the regulations.

#### PREVIOUS WORK

No evidence of previous mineral exploration work has yet been found on the claims, but part of the claims area was staked by Jimmy Donald of Pendleton Bay (Eagle and Jack Pine claims) in 1953, and by Stanley H. Wells of Burns Lake (Black and White claim) and Paddy Leon of Topley (Fancy claim) in 1954.

The Eocene igneous complex immediately south of the claims was explored for copper by Texas Gulf Sulphur Co. in 1966 and 1967. This work included preliminary mapping and geochemistry but no drilling.

## GEOLOGICAL SETTING

The Fireweed property (Fig. 2) is in the Intermontane Belt and on the Skeena Arch near the southern edge of the Bowser Basin in an area underlain mainly by Lower Cretaceous epiclastic rocks of the Skeena Group that are preserved by a graben in the Babine Valley. Sedimentary and volcanic rocks of the Lower to Middle Jurassic Hazelton Group outcrop nearby to the southwest and Upper Triassic Takla Group volcanics and sediments outcrop to the south and southeast. An igneous complex of Eocene age occurs just south of the claims (Richards, 1980; Tipper, 1976; Tipper & Richards, 1976).

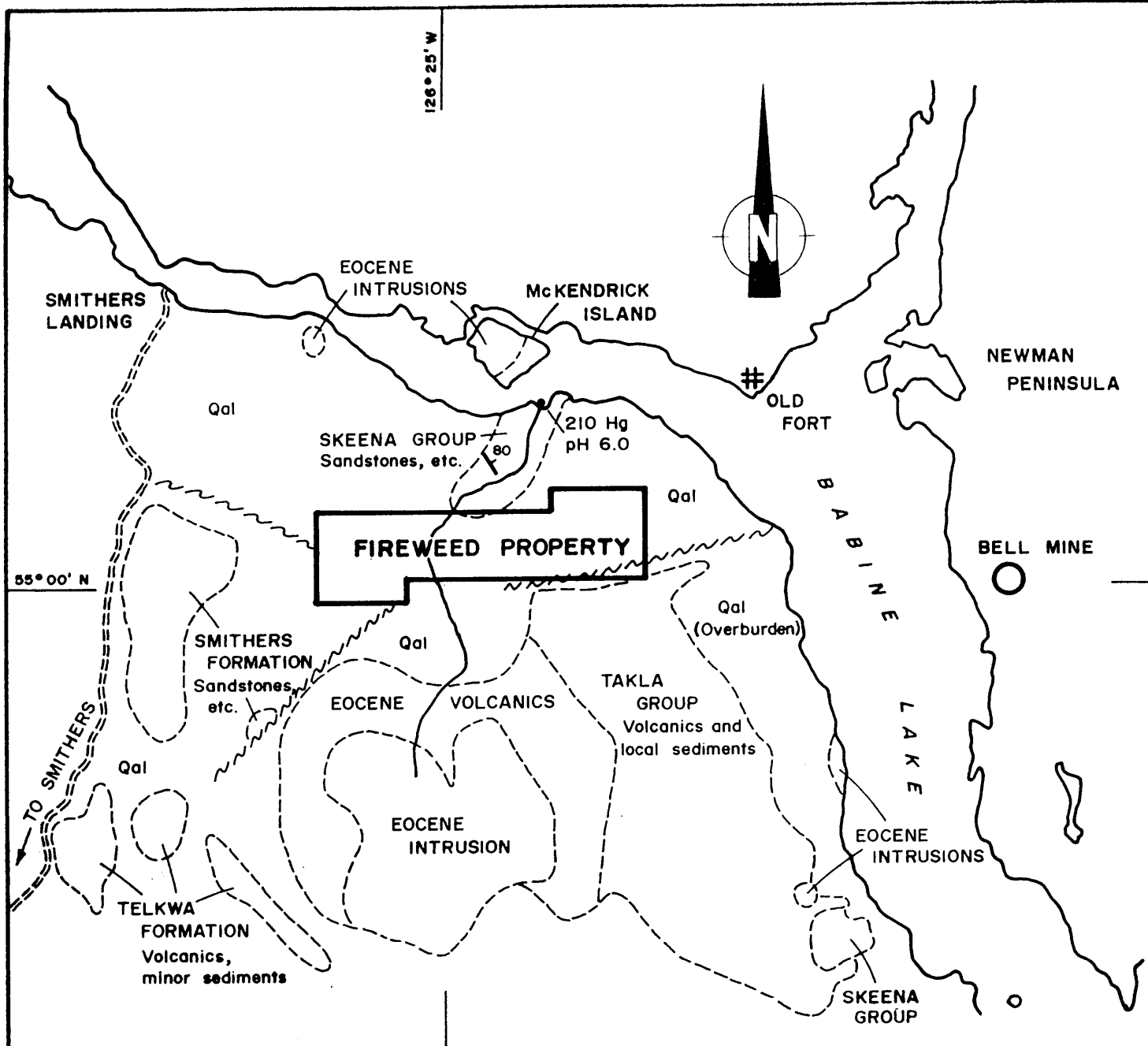
The Fireweed property is about 10 km west of Noranda's Bell Mine, a major copper and gold producer.

## GEOLOGY OF CLAIMS

Preliminary work on the Fireweed property indicates that the northern part of the claims is underlain by volcanic sandstone and siltstone. These rocks generally strike northeasterly and dip to the southeast. Northwesterly dips were noted in some western outcrops. The sandstone outcrops I have examined include clasts of light grey to black felsic tuffs, many of which are pyritized.

Felsic pyroclastic rocks ranging from lapilli to very fine-grained tuffs have been found in the very few outcrops known in the central claims area. These rocks include a distinctive lapilli tuff carrying light to very light grey angular to subrounded clasts in a dark grey matrix. Light grey tuffs are abundant in float. All the pyroclastic rocks seen contain disseminated pyrite (up to about 3%) and some carry small vugs with pyrite and quartz crystals.

In the southern sector of the claims, a few andesitic outcrops



After: Richards, T.A., 1980  
 Tipper, H.W., 1976

**CANADIAN-UNITED MINERALS, INC.**

GENERAL GEOLOGY

**FIREWEED PROPERTY AREA**

TO ACCOMPANY A REPORT BY A. L'ORSA.

15<sup>th</sup> Oct. 1987

Drawn by E.C.

FIG. 2



with subsidiary felsic volcanics, limestone and chert have been found. In places, the andesitic rocks exhibit quartz, carbonate, hematite, chlorite and epidote alteration. In contrast to the sandstone sequence, these rocks appear to generally strike in a westerly direction.

A fault separating the Takla Group to the south from the Skeena Group is inferred to strike northeasterly across the southeastern part of the claims (Richards, 1980). Pelecypod fossils collected south of GER 1 have been sent to Dr. H. W. Tipper for identification.

#### MINERALIZATION

The "discovery boulder" was a dark grey, medium-grained, andesitic tuff with pyrite in quartz veins and in massive fracture fillings. Minor chalcopyrite and probable marcasite are also present in the fragment seen by me. A sample of the boulder yielded 1200 ppb gold, 1.9 oz/ton silver, 0.87% copper, and 0.30% lead. Subsequently, several other mineralized volcanic boulders were found containing pyrite and small amounts of chalcopyrite, sphalerite, galena and very minor gold and silver. Two boulders discovered on the GER 2 claim are reported to carry tourmaline with pyrite in a rhyolite breccia, and a sandstone boulder recovered from the most easterly creek on the claims carries heavy pyrrhotite fracture fillings with chalcopyrite.

Galena and sphalerite have been found in two small sandstone and siltstone outcrops about 300 m apart in a creek on the GER 2 claim. In the upper outcrop, north of the main road, narrow veins of clear quartz containing small amounts of galena cut a coarse to very coarse-grained volcanic sandstone with minor disseminated cubic pyrite. The outcrop is heavily coated with manganese oxides. Grab samples from this occurrence assayed up to 4 oz/ton silver.

In the lower outcrop, medium brown sphalerite was found in narrow quartz veins and as disseminations in coarse to medium-grained volcanic sandstone with minor disseminated pyrite.

A silt sample collected at Babine Lake from the creek draining the central claims, and areas north and south of the claims, yielded anomalous amounts of mercury (210 ppb) and an unusually low pH (6.0) compared with other creeks on the map sheet (GSC, 1984).

### CONCLUSIONS

Potentially economic mineralization, associated with widespread pyritization, has been found on the claims in outcrops and in float boulders. These discoveries are reinforced by a creek displaying an unusually low pH and anomalous amounts of mercury. These substantially new discoveries in an interesting geological setting, and in a proven mining district, warrant a thorough exploration program.

### RECOMMENDATIONS

The source of the mercury anomaly in the creek flowing through GER 1 should be found, staked if outside the claims, and included in this program.

A survey grid should be established on the claims and a geological map prepared. Soil, silt and rock geochemical surveys should be carried out. Geochemical analyses should include copper, lead, zinc, silver and arsenic, as well as local mercury and gold as required. Geophysics, comprising VLF-EM, magnetometer and IP surveys, should be done in areas selected by geological and geochemical work. A backhoe should be used to trench anomalous areas. Exposed potentially economic mineralization should be blasted and assayed.

REFERENCES

Geological Survey of Canada, 1984, National Geochemical Reconnaissance 1:250 000 map series, Hazelton (NTS 93M): Geol. Surv., Canada, O.F. 1000.

Richards, T. A., 1980, Geology of Hazelton (93M) map area, B.C., 1:250 000: Geol. Surv., Canada, O.F. 720.

Tipper, H. W., 1976, Smithers map area, British Columbia: Geol. Surv., Canada, O.F. 351.

Tipper, H. W., and Richards, T. A., 1976, Jurassic stratigraphy and history of north-central British Columbia: Geol. Surv., Canada, Bull. 270, 73 p.

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Anthony L'Orsa, Geologist

COST ESTIMATE

1. Grid, flagged.	\$12,000.00
2. Geologist, 15 days @ \$350/day	5,250.00
3. Assistant, 15 days @ \$125/day	1,875.00
4. Prospectors-samplers, 18 man days @ \$150/day	2,700.00
5. Travel	1,600.00
6. Room & board for above, 48 man days @ \$50/day	2,400.00
7. Field supplies & equipment rental	1,000.00
8. Geochemical analyses	16,000.00
9. Assays	1,005.00
10. Geophysical surveys, selected areas	18,560.00
11. Trenching	3,000.00
12. Vehicle, 15 days @ \$70/day	1,050.00
13. Data compilation and report	5,400.00
	<hr/>
	\$71,840.00
Contingencies	3,160.00
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TOTAL	\$75,000.00

Anthony L'Orsa, Geologist

CERTIFICATE

I, Anthony T. L'Orsa, of Smithers, British Columbia, hereby certify that:

1. I am a consulting geologist with a business address at RR 2, S57, C23, Adams Road, Smithers, B.C., VOJ 2N0.
2. I was born in and raised near Smithers, B.C.
3. I am a graduate of Tulane University, New Orleans, La., U.S.A., with the degrees of B.Sc. (1961) and M.Sc. (1964) in geology.
4. I have practised my profession in mineral exploration since 1962 in western Canada, Australia and Mexico.
5. I am a Fellow in good standing of the Geological Association of Canada and a member of the Society for Geology Applied to Mineral Deposits.
6. I visited the GER claims on 6 October 1987.
7. I have no interest in the properties or securities of Canadian-United Minerals, Inc. or their affiliates, nor do I expect to receive any such interest.
8. I consent to the review of this report by geologists and engineers of the Vancouver Stock Exchange or Superintendent of Brokers.
9. I consent to the use of this report or summary thereof by Canadian-United Minerals, Inc. in a statement of material facts or for whatever purpose they deem necessary.

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Anthony L'Orsa, Geologist