

GEOLOGICAL REPORT

ON THE

MESS PROPERTY

Toodoggone River Area  
Omineca Mining Division  
British Columbia

FOR

WESTERN PREMIUM RESOURCE CORP.

BY

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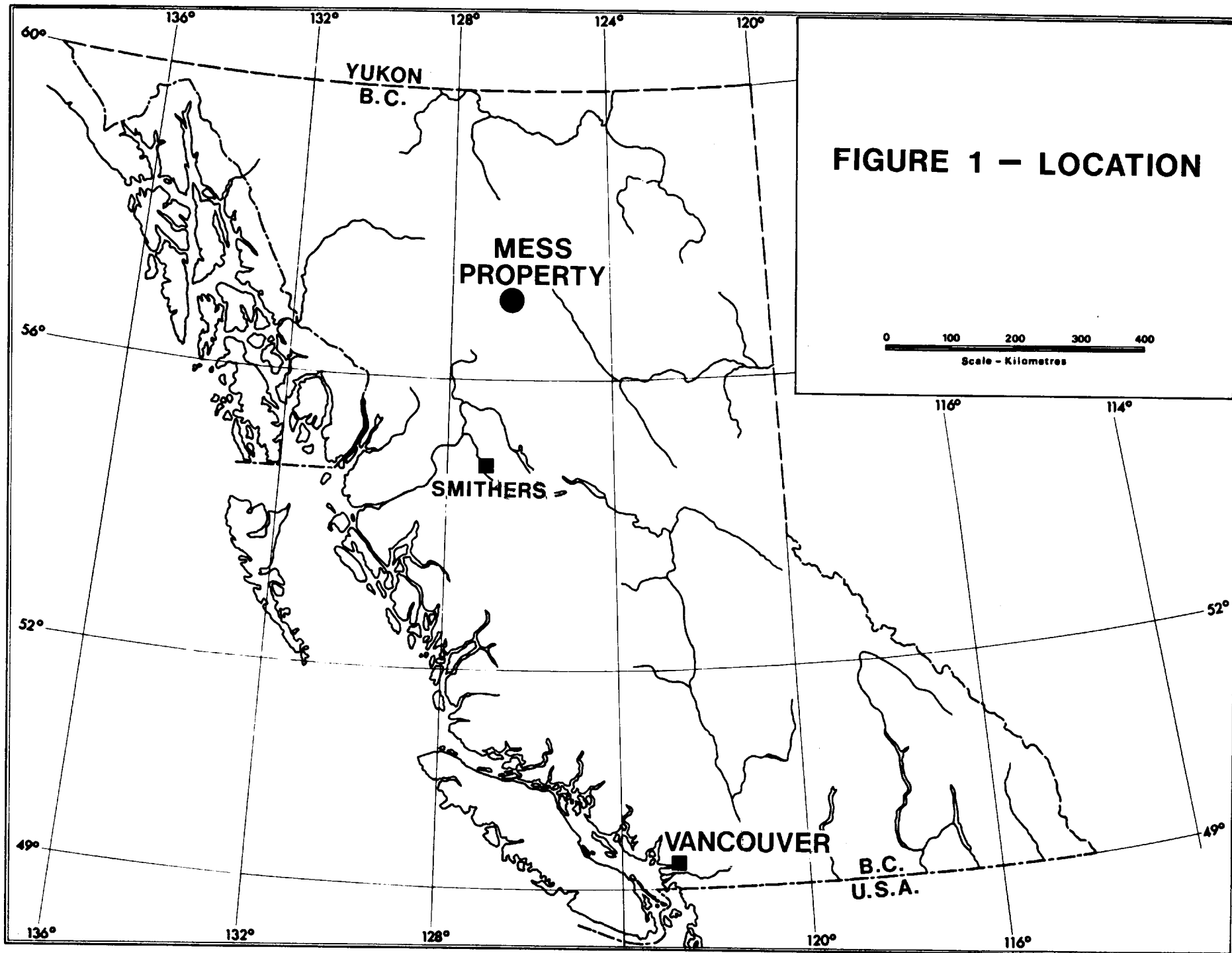
## SUMMARY

Western Premium Resource Corp. owns the Mess property comprised of 35 units in 2 modified grid mineral claims in the Toodoggone River area of north-central British Columbia.

The Mess property is situated in the southern part of the Toodoggone volcanic belt which hosts a number of significant epithermal gold-silver deposits elsewhere in the district. The geological setting of the property and work to date confirms the potential of the property for hosting similar type deposits.

Three mineralized zones containing gold-silver values have been identified on the Mess property and geochemical surveys indicate extensions to these zones and the presence of several other areas with anomalous gold and silver values.

Additional exploratory work is warranted and a two-phase program is recommended. First phase work, at an estimated cost of \$40,000, would include more detailed soil and rock geochemistry and VLF-EM surveys and hand trenching in areas defined by work to date. Pending receipt of encouraging results from first phase work, Phase II is recommended to include additional trenching and a limited diamond drilling program estimated to cost \$74,750.



## INTRODUCTION

Western Premium Resource Corp. owns the Mess property, comprised of 35 mineral claim units and situated in the Toodoggone River area of north-central British Columbia.

This report, prepared at the request of Western Premium Resource Corp., is based on a personal examination of parts of the property July 24, 1986, and on a review of the Company's 1986 field program results. Further, the writer has an extensive knowledge of the Toodoggone area, derived over the past 15 years by way of numerous property examinations and supervision of several exploration programs.

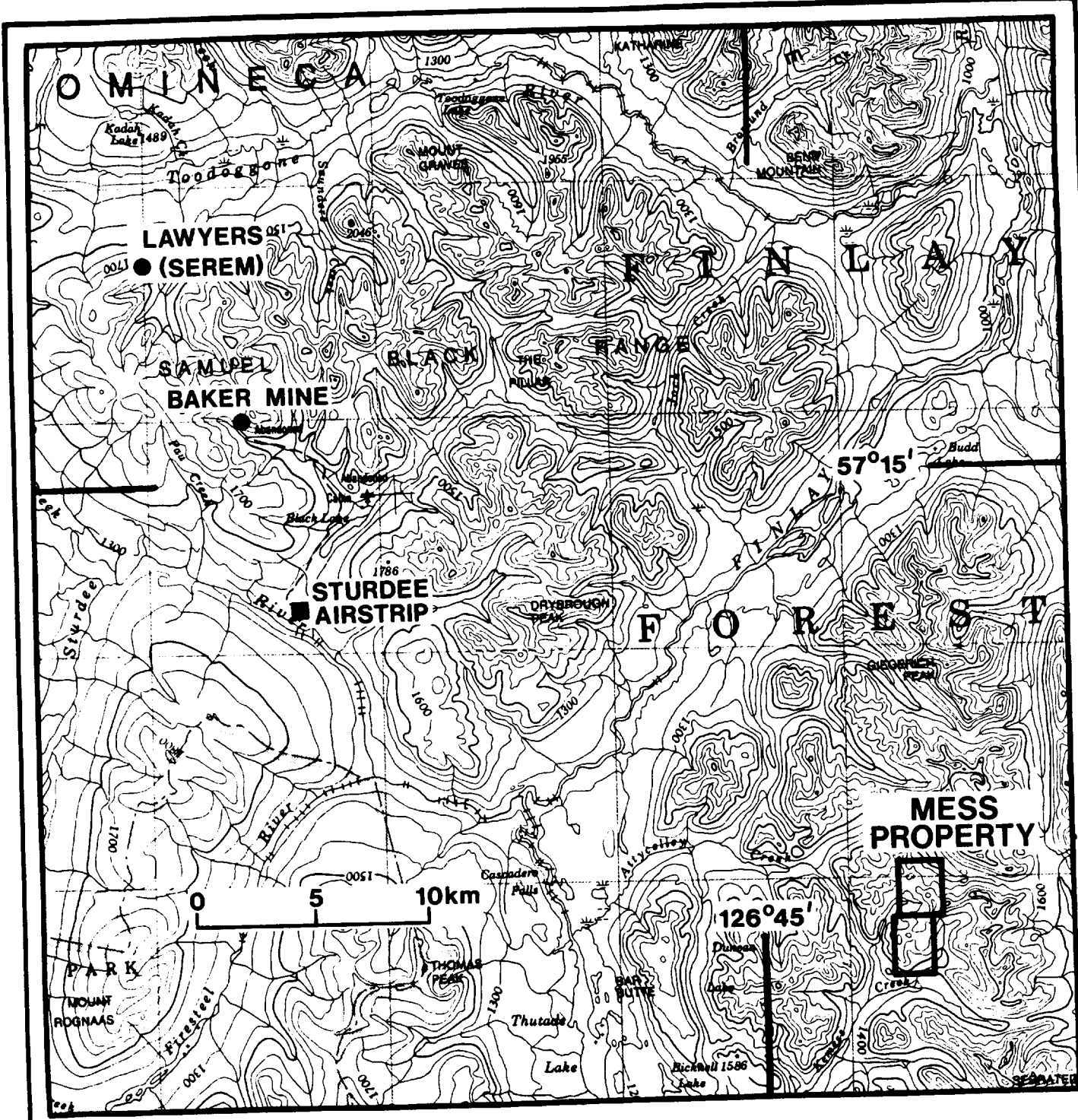
Public and private reports pertaining to the Mess property and its regional setting and used in the preparation of this report are listed in the References section.

## LOCATION AND ACCESS

The Mess property is situated 260 km north of Smithers in the Toodoggone River area of north-central British Columbia (Figure 1).

The claims comprising the property cover a 2 by 5 km area near the headwaters of Kemess Creek 14 km east of the outlet of Thutade Lake (Figure 2). Geographic centre of the property is at latitude 57°04' North and longitude 126°38' West.

Access into the Toodoggone River area is by air into the 1600 metre Sturdee gravel airstrip (Figure 2). The Mess property



**FIGURE 2 – LOCATION – MESS PROPERTY**

is most easily reached by a 30 km helicopter flight from the airstrip.

A road currently links the formerly producing Baker mine and Serem Ltd.'s Lawyers property with the Sturdee airstrip. Consideration is currently being given to extending the Omineca mining road into the Toodoggone area from its present terminus at Moose Valley 70 km southeast of the Sturdee airstrip. The designated road right-of-way passes within 15 km of the Mess property.

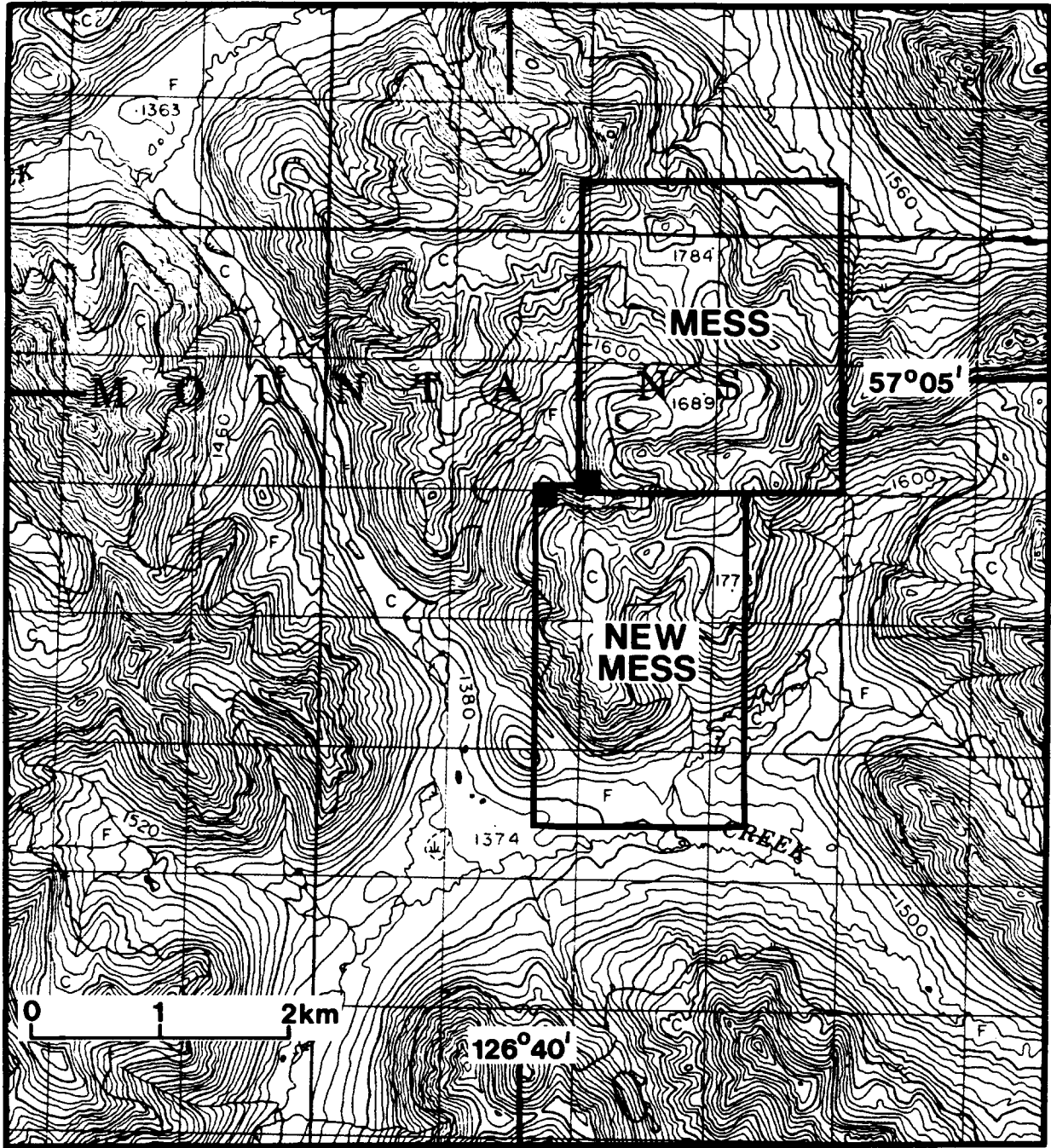
#### MINERAL PROPERTY

The Mess property includes the Mess and New Mess modified grid mineral claims which together comprise 35 mineral claim units in the Omineca Mining Division (Figure 3).

No claim posts or lines were examined by the writer during a visit to the property. The claims are believed to have been located in accordance with procedures as specified by the Mineral Act Regulations for the Province of British Columbia.

Western Premium Resource Corp. has a 100% interest in both claims, details of which are as follows:

| <u>Claim Name</u> | <u>Units</u> | <u>Record Number</u> | <u>Record Date</u> |
|-------------------|--------------|----------------------|--------------------|
| Mess              | 20           | 7515                 | April 4, 1986      |
| New Mess          | 15           | not available        | August 7, 1986     |



**FIGURE 3 – MESS PROPERTY – MINERAL CLAIMS**



## PHYSICAL FEATURES

The Mess property covers moderately rugged alpine terrain in the northern part of the Swannell Ranges (Figures 2 and 3). The area is drained by the broad valleys of Kemess and Attycelley Creeks.

Elevations on the property range from 1400 metres above sea level near the south boundary of the New Mess claim to more than 1800 metres in the northern part of the Mess claim. Scrub vegetation extends from valley floors to about 1700 metres above which is typical sparse alpine vegetation.

Bedrock is well exposed on cliffs and ridges but is sparse in some of the plateau-like alpine areas and valley bottoms.

## HISTORY

The Toodoggone River area was initially explored for placer gold in the mid-1920's when a Charles McLair reportedly recovered \$17,500 in gold. An Edmonton syndicate conducted further work near the junction of McClair Creek and Toodoggone River in 1932. A public company, Two Brothers Valley Gold Mines Ltd., was formed in 1934 and a 30-man camp was entirely serviced by air from Takla Lake. Considerable test work, including drilling, was carried out in late 1934 with values of \$0.50 to several dollars per cubic yard reported from gravels along both McClair Creek and Toodoggone River.

The lode potential of the region was also first investigated

in the 1930's, principally by Consolidated Mining and Smelting, who explored lead-zinc mineralization near the north end of Thutade Lake and south of Baker mine.

Intermittent exploration work continued in the region until the mid-1960's when it was investigated by a number of companies for porphyry copper-molybdenum potential. Gold-silver mineralization in quartz veins was recognized at the Chappelle (Baker mine) property by Kennco Exploration (Western) Ltd. in 1969, and this property was explored by trenching, limited drilling and 200 metres of underground cross-cutting and drifting by Conwest Exploration in 1973. The property was acquired by DuPont of Canada Exploration Ltd. in 1974 and extensive surface and underground work over the next five years led to a production decision in 1980. The construction of an airstrip in the Sturdee River valley enabled air transport of all equipment necessary to sustain a 90 tonnes per day mining and milling operation for three years.

Numerous other gold-silver discoveries were made in the area in the late 1970's and early 1980's, including the Lawyers deposit which was discovered by Kennco in 1973 and optioned by Serem Ltd. in 1979. Work on this property to date has included considerable trenching, drilling and underground development on three levels and a production decision is imminent.

The Toodoggone area has been the scene of intense exploration activity during the past five years, with numerous companies

exploring over 3,000 mineral claim units. Exploration and development expenditures to date are estimated to be in the order of \$40 million.

The present claims are a relocation of the central part of the Mess 1-4 mineral claims previously held by Serem Ltd. These claims were staked following a reconnaissance stream sediment sampling program which yielded a 3800 ppb gold result in a west flowing tributary of Kemess Creek. Work in 1980 and 1981 included additional stream sediment geochemistry, contour and grid soil sampling, rock geochemistry, geological mapping and hand trenching in one locality. Documented expenditures were more than \$18,000.

The current Mess claim was located in early 1986 and was subsequently covered by an airborne magnetometer and VLF-EM survey. The definition of geophysical anomalies south of the Mess claim led to the staking of the New Mess claim.

Work undertaken on the property in July of 1986 included prospecting and the collection and analysis of 950 soil samples, 85 conventional and heavy mineral concentrate stream sediment samples and 62 rock samples.

Expenditures to date on the Mess property are in the order of \$55,000, which includes costs incurred in both the airborne geophysical survey and the 1986 field program.

## REGIONAL GEOLOGICAL SETTING AND MINERAL DEPOSITS

The Toodoggone River area is situated near the eastern margin of the Intermontane tectonic belt. Oldest rocks in the area are late Paleozoic limestones and cherts in the vicinity of Baker mine and south of the Finlay River in the area of the Mess property. In both localities these are in fault contact with Late Triassic Takla Group volcanic rocks.

A distinctive lithologic volcanic assemblage of early Jurassic age was first recognized by the writer in 1971 (Carter, 1972), and informally called the 'Toodoggone volcanics'. These are a subaerial pyroclastic assemblage of predominantly andesitic composition (Panteleyev, 1983), which unconformably overlie, or are in fault contact with older rocks. Toodoggone volcanic rocks are contained in a 100 by 25 kilometre northwest-trending belt extending from east of Thutade Lake in the south to Stikine River in the north.

Several major stratigraphic subdivisions of Toodoggone volcanics have been identified (Panteleyev, 1982, Diakow, 1983, Diakow et al, 1985). These include a basal, predominantly andesitic flow and minor tuff unit, a middle unit of principally ashfall pyroclastics and flow rocks, and an upper, distinctive 'grey dacite' ash flow unit. Radiometric ages indicate Toodoggone volcanic rocks were deposited over a 20 million year span, beginning in the earliest Jurassic (Panteleyev, 1983).

Toodoggone volcanics and older layered rocks are cut by Omineca granitic rocks of early Jurassic age and by subvolcanic

intrusions related to Toodoggone volcanism.

Clastic sedimentary rocks of the Cretaceous - Tertiary Sustut Group overlie older layered rocks near the Stikine River and form the southwestern exposed margin of the Toodoggone volcanic belt.

Several styles of economic mineralization have been identified in the Toodoggone area (Schroeter, 1981), of which the most important are epithermal precious and base metals deposits related to volcanic processes associated with the eruption of the Toodoggone volcanic rocks. These deposits occur as fissure veins, quartz stockworks, breccia zones and areas of silicification in which principal ore minerals are fine-grained argentite, electrum, native gold and silver with lesser chalcopyrite, galena and sphalerite. Alteration mineral suites are typical of epithermal deposits with internal silicification, clay minerals and locally alunite, grading outward to sericite and clay minerals, chlorite, epidote and pyrite.

Baker mine is a fissure vein system developed in late Triassic Takla Group basic volcanic rocks, but mineralized quartz veins are spatially related to dykes believed to be feeders for nearby Toodoggone volcanic rocks. The quartz vein mined by DuPont between 1980 and 1983, with a 200 metre strike length and a width of 3 metres, had an indicated 90,000 tonnes (to a depth of 40 metres) grading 31 grams/tonne (0.90 oz/ton)

gold and 617 grams/tonne (18 oz/ton) silver. Milling of 70,000 tonnes over a three year period yielded recovered grades of 16.58 grams/tonne (0.48 oz/ton) gold and 329 grams/tonne silver (9.6 oz/ton). Recovered grades were lower than anticipated due to initial recovery problems and greater than expected dilution during mining.

The Lawyers deposit has gold-silver mineralization in banded chalcedony-quartz stockwork veins and breccia zones developed in Toodoggone volcanic rocks. Three potential ore zones have been defined to date of which one, the AGB, has announced reserves of 1 million tonnes grading 7.27 grams/tonne (0.21 oz/ton) gold and 254 grams/tonne (7.11 oz/ton) silver (Schroeter,1985).

Numerous other epithermal gold-silver deposits in the area are hosted by lower and middle units of the Toodoggone volcanic sequence. These include the Sha, Saunders, Moosehorn, Mets, Metsantan, Al, JD and Golden Lion prospects. Most of these are along or adjacent to regional northwest-striking fault zones.

Soil, rock and stream sediment geochemistry have proven to be useful tools in the search for epithermal precious metals deposits in the area. Gold and silver give diagnostic geochemical signatures but analyses for copper, lead, zinc and arsenic are also useful.

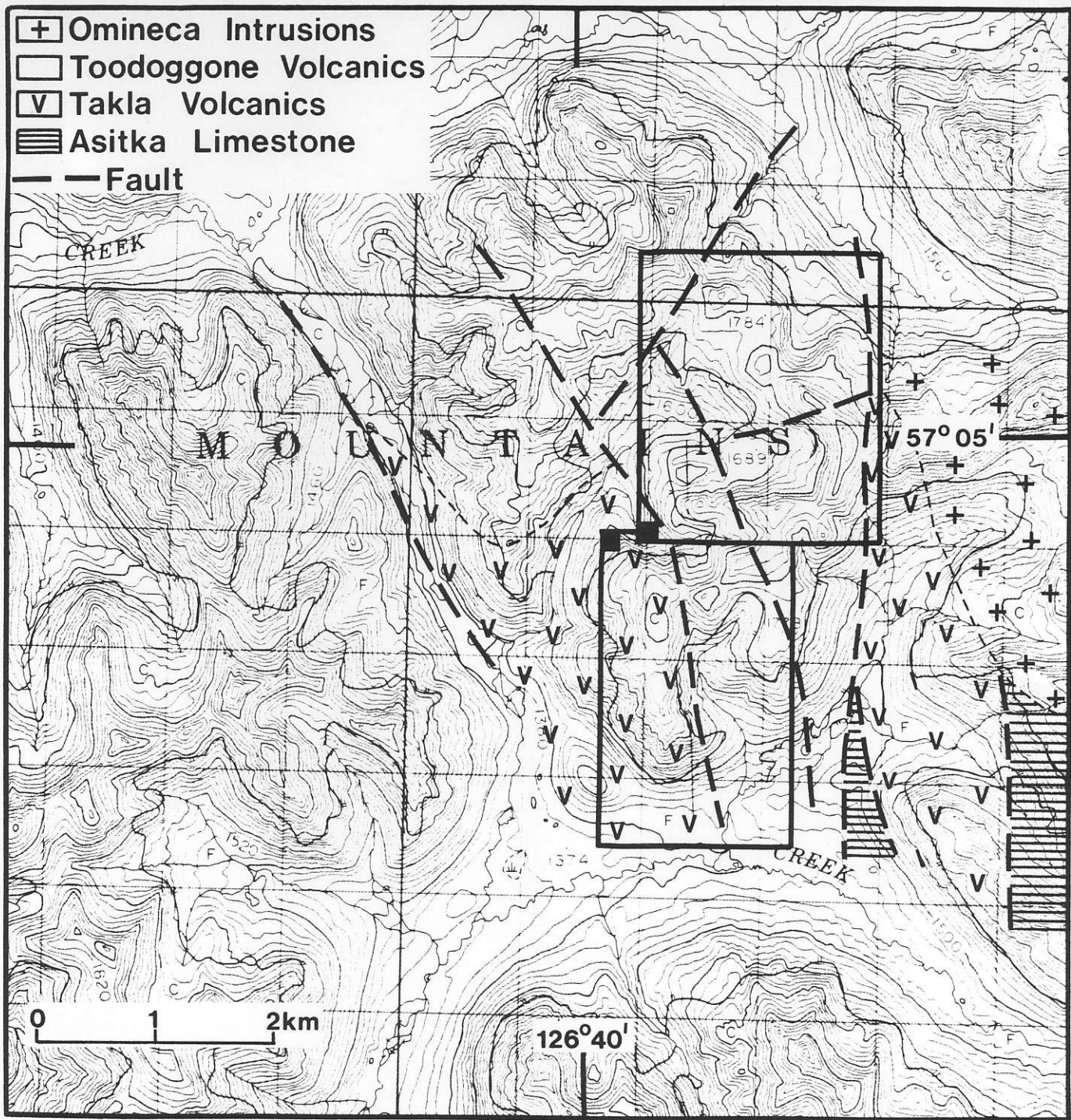
PROPERTY GEOLOGY, MINERALIZATION AND GEOCHEMISTRY

The geological setting of the Mess property has been described by Crawford(1982), Panteleyev(1982) and Cooke(1986). Generalized geology of the claims area is shown on Figure 4.

The Mess property is centrally located in the southernmost extension of the Toodoggone volcanic belt. In the area south of Finlay River, Toodoggone volcanics are exposed in a linear north-south belt 3 to 6 km wide which is bounded on the east and west by Omineca intrusive rocks and older layered rocks of the Asitka, Takla and Hazelton Groups (Panteleyev,1982; Diakow et al,1985).

The property area is principally underlain by at least three units of the middle part of the Toodoggone sequence (Figure 4). These are in fault contact with older Takla Group basic volcanic rocks which underlie the southwest corner and east boundary of the Mess claim and the western half of the New Mess claim. Late Permian Asitka Group limestones and cherts are in thrust fault contact with Takla Group volcanics south and east of the property (Figure 4) and Omineca granitic rocks intrude both Takla and Toodoggone volcanic rocks east of the Mess claim.

Takla Group volcanics in the claims area are principally augite porphyries, similar to those at Baker mine. Toodoggone volcanic rocks include brown, grey and purple quartz-feldspar-hornblende crystal ash and lapilli tuffs with some epiclastic



**FIGURE 4 – GENERALIZED GEOLOGY**  
 (after Diakow et al., 1985)



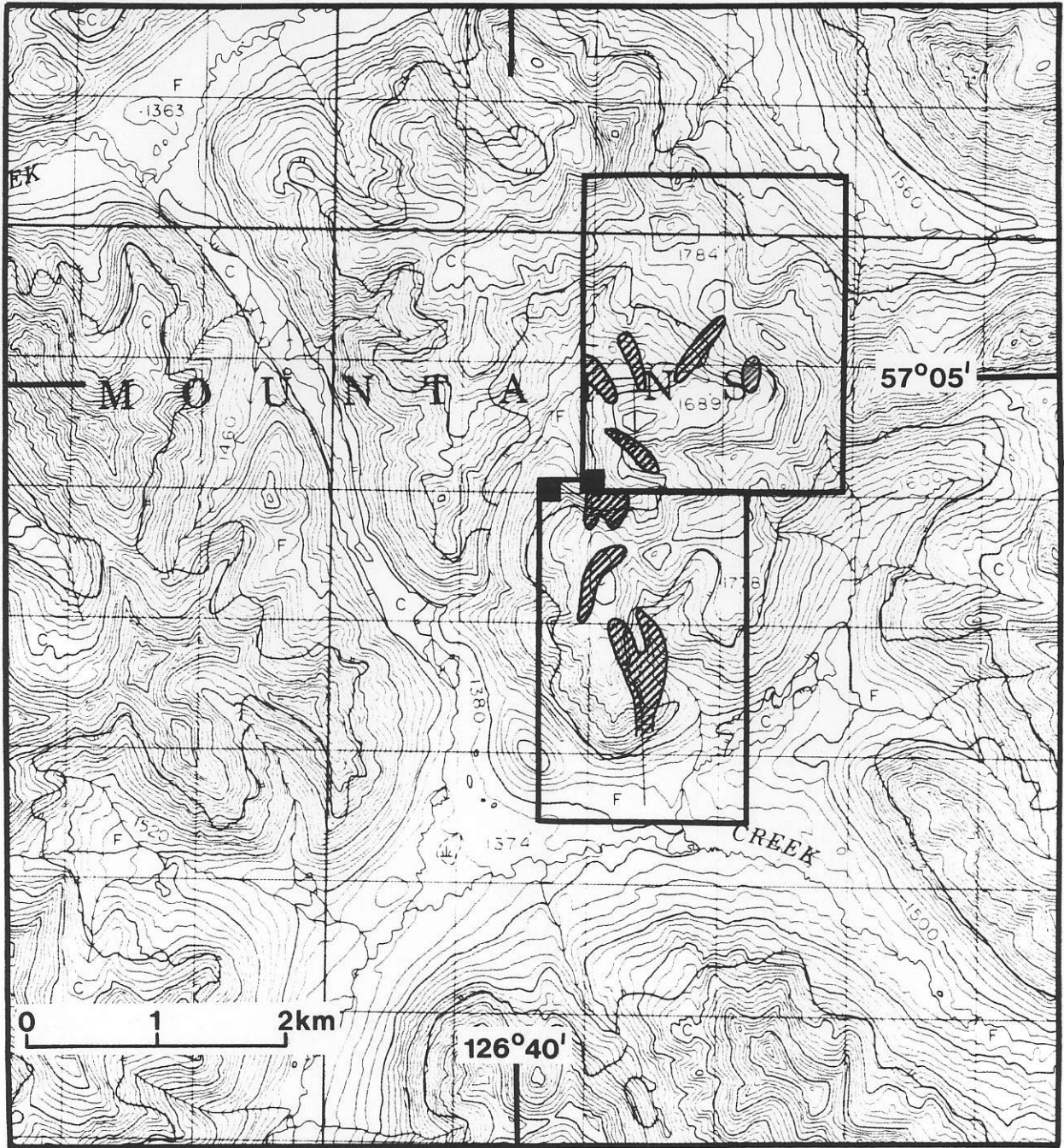
sedimentary rocks.

As indicated on Figure 4, the property area is transected by north-, northwest- and northeast-trending faults which are reflected by airborne geophysics (Pezzot and White,1986). Toodoggone volcanic rocks within these fault blocks are gently dipping and occupy broad, open folds (Panteleyev,1982).

The principal mineralized zone on the property is along a northwest fault separating Takla and Toodoggone volcanics in the southwest part of the Mess claim. Quartz-calcite-barite-tetrahedrite-galena mineralization, developed in Takla volcanics adjacent to a syenite dyke, was trenched by Serem Ltd. in 1981 and yielded values as high as 14.64 oz/ton silver over a 6 metre length and 0.045 oz/ton gold over 1 metre (Crawford,1982). Rock chip sampling in 1986 yielded results of up to 2000 ppm silver and 500 ppb gold (Cooke,1986).

A zone of quartz-carbonate-barite veins, some up to 1 metre wide and hosted by Takla volcanics, are exposed on a northerly trending ridge in the northwest part of the New Mess claim. Anomalous gold and silver values in rocks were obtained in 1986, the best values being 275 ppb gold and 38.6 ppm silver (Cooke,1986).

A third mineralized zone, investigated by Western Premium Resource Corp., is a quartz vein in a south flowing creek in the central part of the New Mess claim which yielded significant copper, lead and zinc values and 35.1 ppm silver and 245 ppb gold.



**FIGURE 5 – MESS PROPERTY – SOIL GEOCHEMISTRY ANOMALOUS GOLD(+15 ppb) and SILVER (+1.5 ppm)**

Soil sampling in the alpine areas of the property at 25 metre intervals along east-west grid lines 100 metres apart detected several areas with coincident anomalous gold (+15ppb) and silver(+1.5ppm) values. These anomalous areas, shown on Figure 5, coincide with, and indicate extensions to, the three mineralized areas referred to previously. The mineralized zone in the central part of the New Mess claim, in addition to gold and silver values, has coincident anomalous values in copper, lead and arsenic (Cooke,1986) and anomalous lead values are associated with the trenched area in the southwest part of the Mess claim.

Several other areas of anomalous gold and silver in the central part of the Mess claim require further investigation - one of these is adjacent to a limonitic alteration zone (Diakow et al,1985).

#### CONCLUSIONS AND RECOMMENDATIONS

The Mess property is underlain by lithologies and fault structures similar to those associated with epithermal precious metals deposits near Toodoggone River to the northwest.

The geological setting of the property is considered permissive for the development of such deposits and work to date has identified three areas of precious and base metals mineralization. Geochemical surveys, particularly soil sampling, indicates possible extensions to known mineralized zones.

Additional exploratory work is warranted.

#### RECOMMENDED PROGRAM

More detailed soil and rock sampling is recommended to adequately test the mineralized zones and anomalous areas defined to date. Hand trenching and blasting of the three mineralized areas should also be carried out following VLF-EM surveys to better define trends of these zones.

Pending receipt of favourable results from the proposed first phase work, a program of additional trenching and limited diamond drilling could be considered.

Additional work on the property would be contingent on results obtained from Phases I and II.

COST ESTIMATE

Phase I

|                            |                |
|----------------------------|----------------|
| Soil and rock geochemistry | \$10,000       |
| Trenching                  | \$5,000        |
| VLF-EM surveys             | \$2,500        |
| Transportation             | \$7,000        |
| Support costs              | \$5,000        |
| Supervision                | \$5,000        |
| Contingencies              | <u>\$5,500</u> |
| Total                      | \$40,000       |

Phase II

|                               |                |
|-------------------------------|----------------|
| Trenching                     | \$5,000        |
| Diamond drilling - 300 metres | \$50,000       |
| Supervision                   | \$10,000       |
| Contingencies                 | <u>\$9,750</u> |
| Total                         | \$74,750       |

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CERTIFICATE

I, NICHOLAS C. CARTER of Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist registered with the Association of Professional Engineers of British Columbia since 1966.
2. I am a graduate of the University of New Brunswick with B.Sc. (1960), Michigan Technological University with M.S. (1962) and the University of British Columbia with Ph.D. (1974).
3. I have practised my profession in eastern and western Canada and in parts of the United States over the past 25 years.
4. This report is based on a personal examination of the Mess property July 24, 1986, and on published and unpublished reports pertaining to the regional setting of the property and to results obtained during a 1986 field program.
5. I have no interest, direct or indirect, in the Mess property or in Western Premium Resource Corp.
6. Permission is hereby granted to Western Premium Resource Corp. to use this report in support of a prospectus to be submitted to the Office of the Superintendent of Brokers and the Vancouver Stock Exchange.

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Victoria, B.C.  
October 14, 1986

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