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**GEOLOGICAL REPORT
ON THE
GRAVY I, III, TODO AND DEBRA LYNN MINERAL CLAIMS
OMINECA MINING DIVISION
BRITISH COLUMBIA**

**FOR
KELLEY-KERR ENERGY CORPORATION**

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Victoria, B.C.

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SUMMARY

Kelley-Kerr Energy Corporation owns the Gravy I, III, Todo and Debra Lynn mineral claims, each comprising a total of 58 units and situated in the Toodoggone River area of north-central British Columbia.

The four claims are 300 kilometers north of Smithers and are accessible by fixed-wing aircraft and helicopter.

The Toodoggone River area is a significant epithermal precious metals district. Proven deposits include the formerly producing Baker gold-silver mine and the Lawyers property which has a reported reserve of 1 million tonnes grading 7.27 grams/tonne gold and 254 grams/tonne silver. The Lawyers and several other significant gold-silver prospects in the area are hosted by early Jurassic Toodoggone volcanic rocks.

The claims are underlain by early Jurassic volcanic rocks which are intruded by Omineca granitic rocks. Areas of gossans within and adjacent to the Debra Lynn claim are known to include geochemically anomalous base and precious metals values.

A two phase exploratory program is recommended to evaluate the four claims. Phase I is recommended to include geological mapping and prospecting, geochemical sampling and geophysical surveys at an estimated cost of \$45,000. A second phase, contingent on results of Phase I work, has estimated costs of \$50,000.

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INTRODUCTION

Kelley-Kerr Energy Corporation owns the Gravy I, III, Todo and Debra Lynn mineral claims situated in the Toodoggone River area of north-central British Columbia.

This report, prepared at the request of Kelley-Kerr Energy Corporation, is based on several examinations of the areas now covered by the aforementioned mineral claims in 1981 and 1982 and on published and unpublished reports and maps listed in the References section of this report.

The writer supervised exploration programs in the Mount Graves area and has a good general knowledge of the Toodoggone area by way of numerous property examinations over the past 14 years.

LOCATION and ACCESS

The Gravy I, III, Todo and Debra Lynn mineral claims are situated 300 kilometers north of Smithers in the Toodoggone River area of north-central British Columbia (Figure 1). The claims are northwest and southeast of the summit of Mount Graves at latitude 57°23' North and longitude 126°58' West.

Access into the Toodoggone River area is by fixed wing aircraft to a 1,600 metre long gravel airstrip on the Sturdee River (Figure 2). The mineral claims are a 20 to 25 kilometer helicopter flight northeast of the airstrip.

A road currently links Baker mine and the Lawyers property with the Sturdee airstrip (Figure 2). Extension of the Omineca mining road into the area from the present terminus 65 kilometers to the southwest, would provide conventional

access to Prince George and points south.

MINERAL PROPERTY

The Gravy I, III, Todo and Debra Lynn modified grid mineral claims are comprised of 18, 18, 6 and 16 units respectively and are situated in the northern part of the Omineca Mining Division.

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. The claims were located recently in winter conditions and the Gravy I and III claims are in part an overstaking of pre-existing Graves 1 and 2 and GWP 4 claims, such that they effectively cover 6 units or less each on the west slope of Mount Graves (Figure 3).

The writer has reviewed data provided by locators of the claims and records on file with the office of the Gold Commissioner, Vancouver.

The distribution of the four claims is shown on Figure 3 and details are as follows:

Name of Claim	Units	Tag Number	Expiry Date
Gravy I	18	102396	March 25, 1986
Gravy III	18	102394	March 25, 1986
Todo	6	102384	March 25, 1986
Debra Lynn	16	102405	March 25, 1986

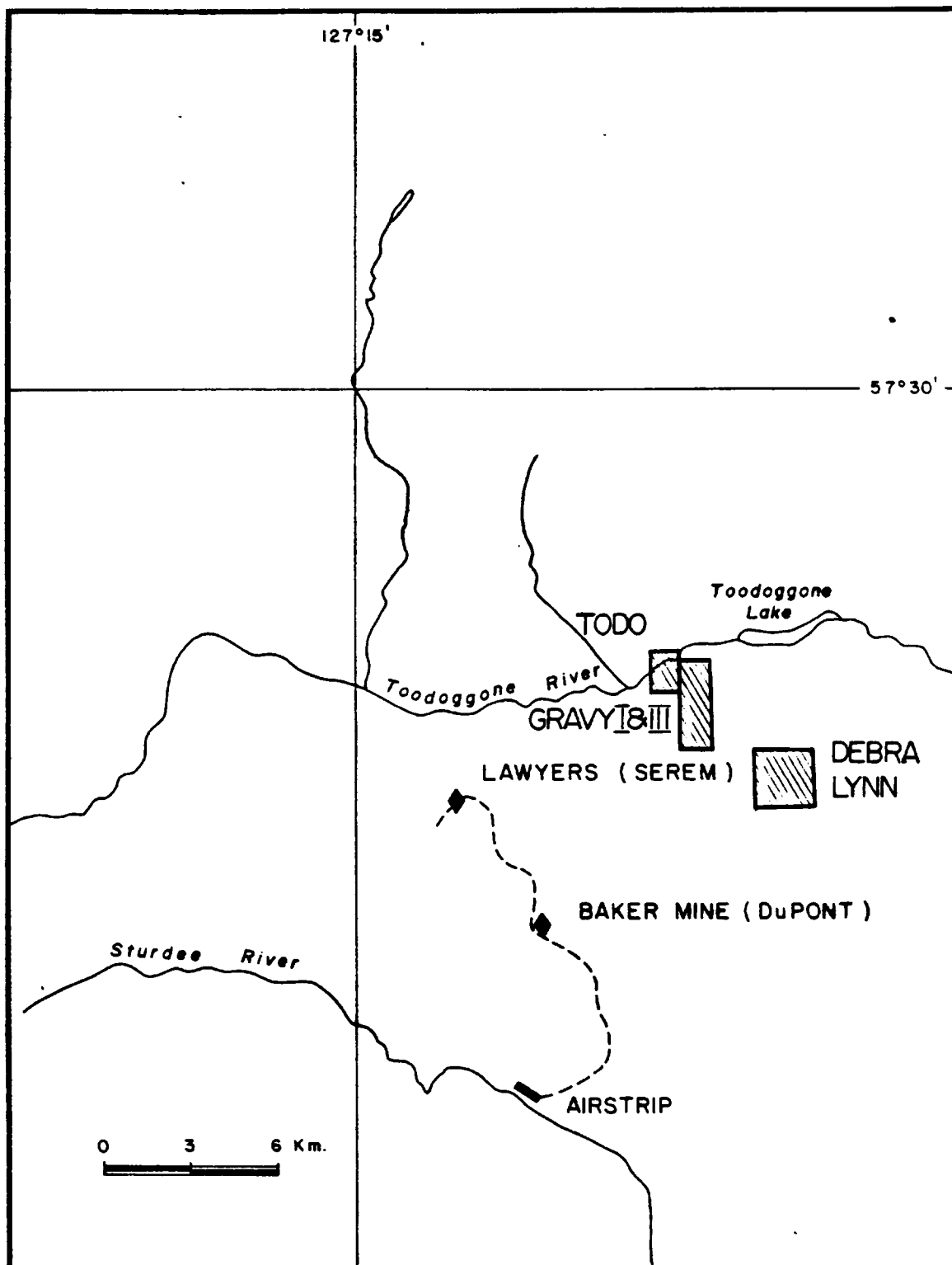


FIGURE 2 - LOCATION - GRAVY I & III, TODO, DEBRA LYNN MINERAL CLAIMS

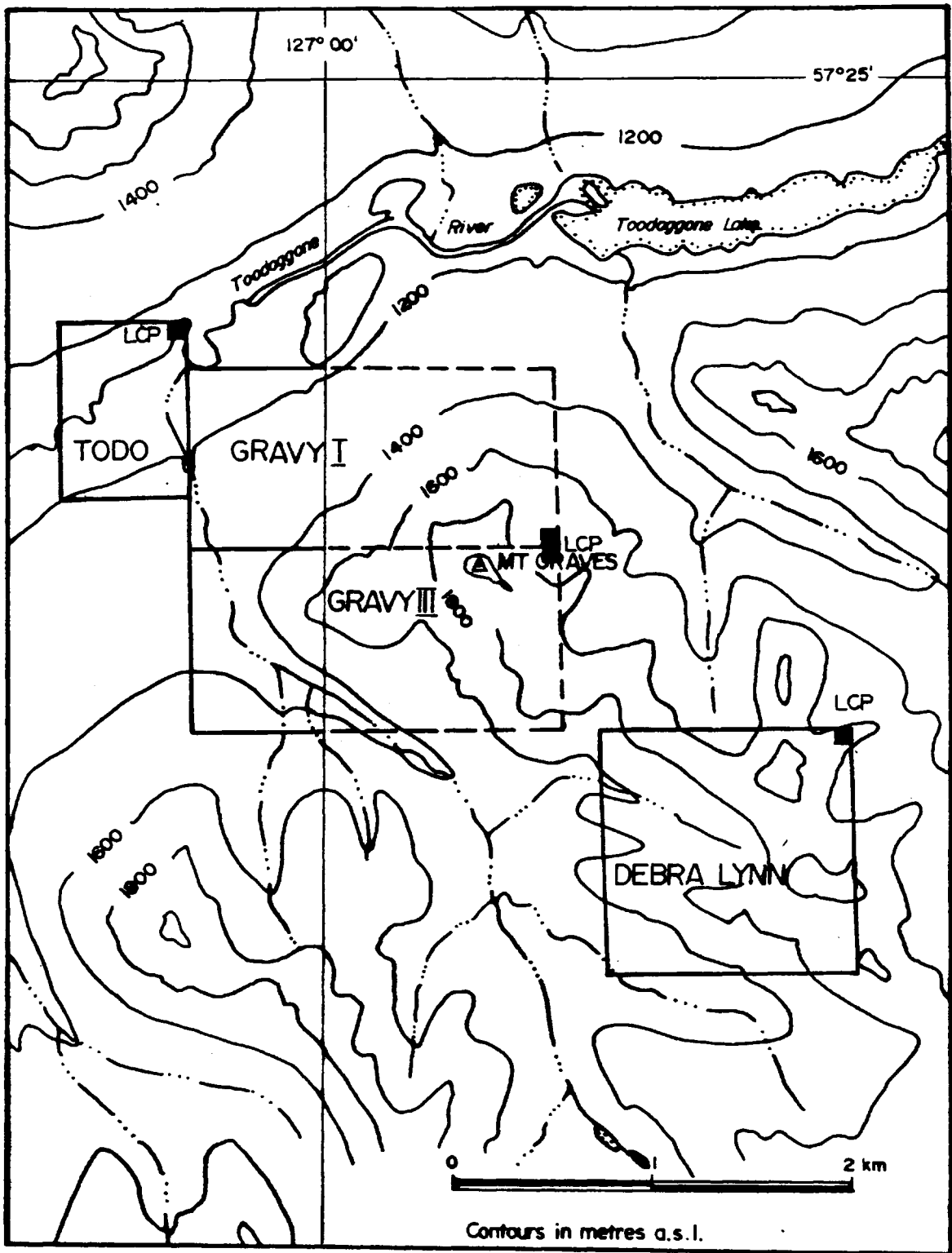


FIGURE 3 GRAVY I; III, TODO, DEBRA LYNN MINERAL CLAIMS

PHYSICAL FEATURES

The Toodoggone River region is an upland area featuring rounded to craggy mountains and ridges dissected by broad alluvium-filled valleys. Steep-walled cirques are common on north-facing slopes while southerly slopes are generally more gentle and rounded.

The Debra Lynn claim covers a serrated ridge southeast of the summit of Mount Graves (Figure 3). Elevations range from 1,500 metres at the southwest corner of the claim to 2,100 metres near the legal corner post. Virtually the entire claim is above tree-line and bedrock exposures, talus and felsenmeer are prevalent.

The Gravy I and III claims are located on a relatively gentle slope south of Toodoggone River and west of Mount Graves and elevations range from 1,150 metres on Toodoggone River to more than 1,600 metres on the west slope of Mount Graves. Locally dense alpine spruce, balsam and fir over the slope above the partially open Toodoggone River valley.

The Todo claim principally covers the gravel-filled Toodoggone River flood plain (Figure 3) which features some swampy areas and willows and buckbrush.

Bedrock exposure is believed to be virtually non-existent on the Todo claim and restricted principally to the principal north-flowing drainage on the Gravy I and III claims.

HISTORY

The Toodoggone area was investigated for placer gold in the 1920's and 1930's. A public company, Two Brothers Valley Gold Mines Ltd., undertook considerable test work, including drilling, in 1934. Most of this work was directed to extensive gravel deposits principally near the junction of McClair Creek and Toodoggone River a few kilometers west of the present Todo and Gravy I claims.

Lead-zinc mineralization near the north end of Thutade Lake and south of Baker mine was also investigated in the 1930's.

Gold-silver mineralization was discovered on the Chappelle (Baker Mine) property by Kennco Explorations (Western) Ltd. in 1969. DuPont of Canada Exploration Ltd. acquired the property in 1974 and began production at a milling rate of 90 tonnes per day in 1980.

Numerous other gold-silver discoveries were made in the area in the 1970's and 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 and a feasibility study is currently underway.

The Toodoggone area has been the scene of intense exploration activity during the past four 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 \$33 million.

The Debra Lynn claim is partially a relocation of the TO 2 claim previously held by DuPont of Canada Exploration Ltd. and the Argus 2 claim held by SEREM inc. The Gravy I and III claims partly cover ground formerly held by Great Western Petroleum Corporation (Graves 3, Snafu) while the Todo claim covers former placer leases on Toodoggone River. Previous operators carried out geological and geochemical work, records of which are contained in reports by Harron (1981), Crawford and Vulimari (1981), Crawford (1982), Caira (1982) and Eccles (1982).

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 in the vicinity of Baker mine where they are in fault contact with late Triassic Takla Group volcanic rocks.

A distinctive lithologic volcanic unit of early Jurassic age, called the Toodoggone volcanics, is a subaerial pyroclastic assemblage of predominantly andesitic composition (Pantelyev, 1983). These unconformably overlie, or are in fault contact with older rocks, principally Takla Group volcanic rocks and undivided Hazelton Group feldspar porphyry flows and fragmental rocks.

Toodoggone volcanic rocks are contained in a 100 by 25 kilometer northwest-trending belt extending from Thutade Lake in the south to Stikine River in the north.

Several major stratigraphic subdivisions of Toodoggone volcanics have been the 3 year mine life were about half the indicated grades due to initial mill

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 and recently announced reserves (Schroeter, 1985) are 1 million tonnes grading 7.27 grams/tonne gold and 254 grams/tonne silver. 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, Graves, Moosehorn, Mets, Metsantan, Al, JD and Golden Lion prospects. It is interesting to note that most of the known deposits and occurrences are adjacent to two northwesterly striking regional fault structures; the Sha-Baker-Lawyers-Alberts Hump structure and the Saunders-McClair fault system.

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

PROPERTY GEOLOGY and MINERALIZATION

Recent geological mapping (Gabrielse et al, 1976; Panteleyev, 1983) shows the Mount Graves area to be underlain by early Jurassic Hazelton Group andesitic flows and pyroclastic rocks. These are slightly older than, and in fault contact with lower and middle units of the Toodoggone volcanic sequence several kilometers west. Omineca granitic rocks also occur along the contact area between Hazelton and Toodoggone sequences.

The Debra Lynn claim is underlain by Hazelton Group feldspar porphyry flows, crystal and lapilli tuffs and coarse pyroclastic rocks intruded by Omineca granitic rocks a short distance south of the claim (Crawford, 1982). Basic dike swarms and northwest trending quartz feldspar porphyry dikes also intrude the layered rocks.

The western parts of the Gravy I and III claims, on the west slope of Mount Graves, are principally underlain by Omineca quartz monzonites which intrude Hazelton Group volcanic rocks on the east and middle units of the Toadoggone sequence to the west.

The Todo claim may cover the contact between granitic rocks and Toadoggone volcanics. The Saunders-McClair fault system is a few kilometers west of the Todo claim.

Several areas of gossan are known within and adjacent to the Debra Lynn claim. Stream sediment samples from drainages adjacent to these areas yielded anomalous copper, lead and zinc values in addition to anomalous silver in the 2 to 4 ppm range and some anomalous gold values ranging from 50 to 80 ppb (Crawford and Vulimari, 1981). Samples from the north flowing drainage on the north boundary of the claim had anomalous base and precious metal values believed to be due to narrow quartz veins in the volcanic sequence containing pyrite, chalcopyrite, sphalerite and galena. One of these assayed 0.002 oz/ton gold, 0.19 oz/ton silver, 0.226% copper, 0.10% lead and 0.52% zinc (Harron, 1981).

Previous geochemical soil and rock sampling on the west slope of Mount

Graves (Caira, 1982), in the area of the Gravy I and III claims, showed no significant values within those areas underlain by Omineca granitic rocks. Some values have been reported from Toodoggone volcanics in contact with granitic rocks in the same general area (Eccles, 1982).

A 900 by 800 metre gossan area developed in Hazelton Group rocks marginal to a north-trending fault zone 2 kilometers southeast of the Gravy III claim includes several zones with moderately to strongly anomalous gold values in the 80+ ppb range and silver in the 6 to 8 ppm range.

CONCLUSIONS

The Gravy I, III, Todo and Debra Lynn mineral claims are situated in the Toodoggone River area which is noted for epithermal gold-silver deposits and occurrences.

The claims are in part a relocation of previously held ground for which records of work are available. These indicate several areas within and adjacent to the Debra Lynn claim which have geochemically anomalous values for gold, silver and base metals.

The Gravy I and III and possibly the Todo claim cover Omineca granitic rocks in contact with early Jurassic volcanic rocks known to host precious metals prospects elsewhere on Mount Graves. The Saunders-McClair fault system, along which several gold-silver occurrences are known, is a few kilometers west of the Todo claim.

A preliminary exploratory program of the four claims is warranted on the

basis of their geological settings.

RECOMMENDED PROGRAM

A first phase exploratory program, to include geological mapping and prospecting, geochemical sampling and limited geophysics, is recommended.

The varying geologic and physiographic settings of the claims necessitates different programs for each.

Soil and/or rock samples should be collected at 100 metre stations along 100 metre spaced topographic contours on the Debra Lynn claim. Stream sediment samples should be collected from available major and tributary drainage within the claim. Gossanous areas warrant prospecting and sampling in more detail.

Initial work on the Gravy I and III claims should be directed to determining the area of these claims covering previously staked claims. Assuming that ground on the lower west slope of Mount Graves is available for exploratory work, soil and/or rock samples should be collected from a 100 metre flagged grid on the north-facing slope above the Toodoggone River flood plain.

Geochemical samples collected from all claims should be analyzed for gold, silver, copper, lead and zinc.

The Todo claim covers gravel deposits of unknown depths along Toodoggone River which are probably contaminated by low concentrations of placer gold; consequently conventional soil sampling is of no value. VLF-EM and magnetometer surveys are recommended to determine possible bedrock structures.

Contingent on results of first phase work, phase two could include more detailed geochemical sampling and geophysical surveys and possibly some hand trenching.

COST ESTIMATE

PHASE I

Geological Mapping and Prospecting	\$ 2,500
Crew Wages	10,000
Camp Costs	4,000
Mobilization and Demobilization	5,000
Helicopter Support	5,000
Analytical Costs	5,000
VLF-EM and Magnetometer Surveys	4,000
Engineering, Supervision	2,500
Report Preparation	2,000
Contingencies	<u>5,000</u>
TOTAL OF PHASE I	<u>\$45,000</u>

PHASE II

Follow up sampling, geophysics, hand trenching and analytical work	<u>\$50,000</u>
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CERTIFICATE

I, NICHOLAS C. CARTER, do hereby certify that:

1. I am a Consulting Geologist, resident at 1410 Wende Road, Victoria, British Columbia.
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 am a registered Professional Engineer in the Association of Professional Engineers of British Columbia.
4. I have practised my profession in eastern and western Canada, and in parts of the United States over the past 24 years.
5. This report is based on several examinations in the area of the Gravy I, III, Todo and Debra Lynn mineral claims, the writer's extensive background in the Toodoggone River area and on published and unpublished reports and maps.
6. I have no direct or indirect interest in the Gravy I, III, Todo and Debra Lynn mineral claims or in Kelley-Kerr Energy Corporation.

Nicholas C. Carter
Consulting Geologist

DATED in the City of Vancouver, this 15th day of April, 1985.