

GEOLOGICAL REPORT
on the
AL & JD PROPERTY

Omineca Mining Division,
British Columbia

Prepared for
Energex Minerals Ltd.

Prepared by
N. C. Carter, Ph.D., P.Eng.

Vancouver, British Columbia

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**GEOLOGICAL REPORT
AL & JD PROPERTY**

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SUMMARY

Energex Minerals Ltd. holds the AI & JD gold-silver prospects in the Toodoggone River area of north-central British Columbia. The properties are 300 kilometers north of Smithers, and access to the area is by fixed wing aircraft and helicopter.

The Toodoggone River area is recognized as a significant epithermal precious metals district. Proven desposits include the formerly producing Baker gold-silver mine and the Lawyers property which has a reported 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 AI and JD properties are known to include a number of epithermal gold and lesser silver deposits, several of which were partially tested by trenching and drilling in 1983 and 1984. Soil geochemical surveys have defined numerous other areas with anomalous values in gold and silver.

Three zones on the AI property, the Thesis III, BV and Bonanza Ridge, have been further tested by 35 diamond drill holes totalling 1,690 meters. Significant gold values have been intersected over appreciable core lengths in the southeast part of the Thesis III zone, based on results to date. Partial assay data for the BV zone indicate an expanded known strike length. No assay results are available for recent drilling on the Bonanza Ridge zone.

Results to date, particularly for Thesis III zone, are considered significant and additional diamond drilling is recommended.

Other zones on the AI property should be further assessed by backhoe trenching and detailed mapping and sampling.

A limited program of prospecting and geological evaluation is recommended for the JD property.

Estimated costs for the proposed program total \$505,000.

INTRODUCTION

Energex Minerals Ltd. holds, by way of an option agreement, the AI and JD properties which are comprised of 466 contiguous mineral claim units and situated in the Toodoggone River area of north-central British Columbia.

This report, prepared at the request of Energex Minerals Ltd., is based on a visit to the AI property between July 16 and 18, 1985, and on a review of program results to date as provided by the Company. Further, the writer has an extensive knowledge of the area, derived over the past fourteen years by way of numerous property examinations and supervision of several exploration programs.

Numerous public and private reports pertaining to the AI and JD properties and the general Toodoggone area have been used in the preparation of this report, including a previous report by the writer on behalf of Energex Minerals Ltd., dated April 26, 1985.

LOCATION AND ACCESS

The AI and JD properties are situated 300 kilometres north of Smithers in the Toodoggone River area of north-central British Columbia (Figure 1).

The claims cover a 22 by 8 kilometre area, the geographic centre of which is at 57°26' North and 127°16' West (Figure 2).

Access to the Toodoggone area is by air to a 1600-metre gravel airstrip on the Sturdee River (Figure 2). The AI and JD properties, north of Toodoggone River, are most easily reached by a 30-kilometre helicopter flight from the airstrip which is capable of handling large aircraft.

A road currently links Baker Mine and the Lawyers property with the Sturdee airstrip (Figure 2). An application has been made to the Provincial Government for assistance in extending the Omineca mining road into the area from its present terminus, 70 kilometres to the southwest. A positive decision in this regard would have a profound impact on current logistics by affording conventional access to Prince George and points south.

MINERAL PROPERTY

The AI and JD properties include 32 mineral claims and 10 fractions, comprising the equivalent of 466 units in the Omineca and Liard Mining Divisions (Figure 3).

These claims are believed to have been located in accordance with procedures specified by the Mineral Act Regulations for the Province of British Columbia. The writer has not examined claim posts or lines but has reviewed some mineral claim records on file in the Mineral Titles Office, Victoria.

Energex Minerals Ltd. has a 100% working interest on both properties subject to a 15% net profits interest held by Kidd Creek Mines Ltd.

Details of the mineral claims are as follows:

<u>Claim Name</u>	<u># Units</u>	<u>Record Number</u>	<u>Expiry Date</u>
AI 1	20	789	Jun 12/95
AI 2	20	790	Jun 12/95
AI 3	20	791	Jun 12/95
AI 4	20	792	Jun 12/95
AI 5	10	1439	Jul 18/90
AI 6	10	1440	Jul 18/90
AI 7	16	1871	Apr 21/90
AI 8	16	1872	Apr 21/95
Nii	6	3029	Jul 11/94
Bert	20	2012	Aug 13/95
Ernie	20	2011	Aug 13/95
Winkle	20	4099	Aug 13/91
Bull	20	2010	Aug 13/92
Chute	18	4100	Aug 13/92
Surprise	20	4098	Aug 13/87
Gerome	15	4097	Aug 13/87
Wankle	3	4095	Aug 13/86

<u>Claim Name</u>	<u># Units</u>	<u>Record Number</u>	<u>Expiry Date</u>
Gas 1	20	5752	Sep 08/92
Antoine Louis	10	4096	Aug 13/88
Furlong	6	4274	Sep 08/86
Tour	18	4275	Sep 08/86
Shodee	4	4277	Sep 08/87
Sturdee	18	4276	Sep 08/87
Big Bird	6	4278	Sep 08/92
JM	20	1796	Jun 12/94
JS	6	3168	Sep 03/92
JD	20	1797	Jun 12/94
JB	20	3169	Sep 03/91
JR	6	2947	Jul 18/94
Kadah 1	15	3812	Jun 15/91
Kadah 2	9	3813	Jun 15/91
Grover (fr)	1	5748	Sep 08/92
McClair 1	4	3145	Sep 03/90
JU (fr)	1	3163	Sep 03/88
JC (fr)	1	3162	Sep 03/93
JK (fr)	1	3161	Sep 03/88
Tinkle	1	4093	Aug 13/87
JO (fr)	1	4272	Sep 08/90
RJ (fr)	1	4273	Sep 08/90
Hyuk 1 (fr)	1	3026	Jul 11/90
Hyuk 2 (fr)	1	3027	Jul 11/90
Hyuk 3 (fr)	1	3028	Jul 11/89

PHYSICAL FEATURES

The Toodoggone River area is on the east margin of the Spatsizi Plateau, an open, gently rolling upland surface, dissected by wide valleys. The Toodoggone area proper features more rugged relief, broken by broad alluvium-filled valleys. Products of alpine glaciation are steep-walled cirques on north-facing slopes, while southerly slopes are more gentle and rounded.

The JD property covers a prominent highland area between the broad valleys of Moosehorn Creek on the west, McClair Creek on the north and east, and Toodoggone River to the south. Topography is moderately rugged and elevations range from about 1400 metres above sea level on the valley floors to nearly 2000 metres in the southern part of the property.

The prominent features of the A1 property are Alberts Hump, a low hill near the western margin of the claims, which rises above an easterly trending broad, upland ridge bounded by deeply incised valleys. Relief is gentle to moderate and elevations range from 1400 to 1700 metres.

Locally dense alpine spruce extends from the valley floors to about 1600 metres elevation above which is typical open alpine country.

Bedrock exposures are confined to drainages, steeper slopes and ridge crests. Abundant felsenmeer is believed to be very close to bedrock.

The property areas are snow-free between mid-June and early October.

HISTORY

The Toodoggone area was initially explored for placer gold in the mid 1920s, 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 1930s, principally by Consolidated Mining and Smelting, who explored lead-zinc mineralization near the north end of Thutade Lake and south of Baker Mine. This company also reportedly did some limited drilling on Oxide Peak, several kilometres north of the present JD property.

Intermittent exploration work continued in the region until the mid 1960s 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 by 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 1970s and 80s, 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 3000 mineral claim units. Exploration and development expenditures to date are estimated to be in the order of \$33 million.

Parts of the areas now comprising the JD and AI properties were staked by Sumac Mines Ltd. in 1971, following a reconnaissance geochemical survey. Exploration work through 1974 included soil and rock geochemistry, IP and magnetometer surveys, geological mapping, limited hand trenching and one 120-metre diamond drill hole on what is now the JD property.

The claims lapsed in 1977 and were re-staked in 1978 by T. C. Scott and Petra-Gem Exploration Ltd. Energex Minerals Ltd. acquired an option on the property in 1979, and did geological and geochemical surveys and limited hand trenching. At that time, the core of the AI property claims (AI 1 to 4) were staked by Energex.

Texasgulf Canada Ltd. (now Kidd Creek Mines Ltd.) negotiated an option agreement with Energex in 1980, and by the end of the 1984 field season, had completed extensive soil and rock geochemical surveys, geological mapping, limited geophysical surveys, hand and backhoe trenching, and 2878 and 1781 metres of diamond drilling on the AI and JD properties respectively. Estimated expenditures to the end of 1984 exceeded \$3 million.

The properties were returned to Energex in late 1984. Pursuant to the writer's recommendations regarding a 1985 exploratory program, personnel and equipment were mobilized into the Toodoggone area in mid-June, and diamond drilling commenced June 26, 1985.

Three zones on the AI property, the Thesis III, BV and Bonanza Ridge, have been further drill-tested to date by 35 holes totalling 1,690 metres. Only partial assay results are presently available.

Phases I and II, as recommended in the writer's report of April 26, 1985, are essentially complete. Expenditures to date approximate \$590,000, or 8% above the recommended \$546,750, but cost overruns, particularly in camp construction, have precluded any work on the JD property or surface investigation of other zones on the AI property.

REGIONAL GEOLOGICAL SETTING AND MINERAL DEPOSITS

The Toodoggone River area is situated near the eastern margin of the Inermontane tectonic belt. Oldest rocks in the area are late Paleozoic limestones in the vicinity of Baker Mine. These are in fault contact with late Triassic Takla Group volcanic rocks exposed at Baker Mine and east and north of the Moose property.

A distinctive lithologic volcanic assemblage of early Jurassic age was first recognized by the writer in 1971, 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

X 25 kilometre 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 identified (Panteleyev, 1982; Diakow, 1983). 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 metal 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 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 principal quartz vein, 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 18.7 grams/tonne (0.55 oz/ton) gold and 356 grams/tonne (10.4 oz/ton) silver. 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 and recently announced reserves (Schroeter, 1985) are 1 million tonnes grading 7.27 grams/tonne (0.21 oz/ton) gold and 254 grams/tonne (7.11 oz/ton) 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, Moosehorn, Mets, Metsantan, Al, JD and Golden Lion prospects. Most of these are on or adjacent to two regional northwest-striking fault zones; the Baker-Lawyers-Al structure on the west, and the McClair-Saunders Fault system on the east.

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 useful.

Studies of alteration mineral suites have helped to delineate precious metals bearing zones on both the Al and JD properties.

PROPERTY GEOLOGY AND MINERALIZATION

The geological settings and mineral zones of the Al and JD properties have been previously described in a general way by Schroeter (1982, 1983 & 1985) and Diakow (1984) and in detail by Sutherland (1984) and von Fersen (1984). Much of the following description was contained in the writer's report of April 26, 1985, and is expanded, where appropriate, to include recent diamond drilling results.

Diakow (1984) describes the area north of Toodoggone River as being underlain by five andesite units comprising subaerial lava flows, ash flow tuffs

and pyroclastic ash fall deposits. The upper two units, trachyandesite lava flows and comagmatic intrusive rocks overlain by massive flows, underlie the area of the AI and JD properties.

Both properties include several gold-silver bearing zones. For purposes of discussion, each property will be described separately.

AI Property

Generalized geological features and principal mineralized zones are shown on Figure 4, adapted from Kidd Creek Mines Ltd. work (Sutherland, 1984).

The property is underlain by a subaerial volcanic sequence of porphyritic intermediate to felsic flows, tuffs and comagmatic intrusions. Seven mappable units are recognized, but stratigraphic relationships are hampered by less than 10% bedrock exposure, faulting and the shallow dipping to subhorizontal nature of the sequence.

Comagmatic intrusions include coarser grained granodiorite dykes and finer grained intermediate to felsic dykes. Felsic dykes are commonly adjacent to some of the larger alteration/mineralization zones and may be part of the mineralizing processes as at Baker mine.

Known alteration zones and related mineralization are adjacent to northwest trending faults and lineaments reflected by drainages, and are clustered near the northwest projection of the Baker-Lawyers regional trend.

Several hydrothermal alteration assemblages typical of epithermal systems have been recognized (Sutherland, 1984) and in an idealized vertically descending sequence these include: quartz-alunite, quartz-clay, quartz-barite-clay, quartz (barite), quartz-hematite and quartz-sulfide. Intense alteration zones are generally linear and confined to fault and fracture systems.

Better mineralization is associated with zones of intense hydrothermal alteration. Higher grade gold mineralization identified to date on the property is associated with quartz-barite veins while lower grades are contained in quartz-hematite and quartz-sulfide zones.

As illustrated on Figure 4, a number of gold-bearing zones, associated with intense hydrothermal alteration, have been recognized to date on the AI property. The more significant of these at present are the Bonanza-Ridge, Thesis II and III and BV zones. Most known zones have undergone some investigation; the Hump and Furlong zones were each tested by two diamond drill holes in 1982 with generally disappointing results (Schroeter, 1983).

The Thesis III, BV and Bonanza Ridge zones have been recently further tested by an additional 1,690 meters of diamond drilling. At time of writing, assay results were available for only some of the Thesis III and BV drill holes.

Seventeen additional diamond drill holes, totalling 942 meters, have been drilled on the Thesis III zone in the central part of the AI property (Figure 4). Locations of the first eleven holes are shown on Figure 5. HQ-size core was drilled to obtain better core recoveries than those encountered in earlier drilling.

Previous trenching and drilling indicate three parallel northwest-trending gold-bearing zones within the Thesis III structure over an aggregate width of 120 meters and a known strike length of 160 meters. Apparent boundaries of the main structure width are marked by northwest gullies which may represent major faults. The three known gold-bearing zones appear to occupy tensional fracture zones between the bounding faults and may be part of one structure which has been segmented by left-lateral faulting.

Gold mineralization is contained in fractured and brecciated silicified zones cemented by quartz-barite veins. Host rocks are buff coloured and vuggy, and better gold grades bear a direct relationship to increased barite content.

Eight of the first eleven holes were drilled to confirm or expand on 1984 Kidd Creek drilling; the other three were step-outs at the known northwest and southeast ends of the gold-bearing zones (Figure 5).

Significant assay results to date are as follows, and these assume a 3.43 gram/tonne (0.10 ounce/ton) cut-off grade.

<u>Drill Hole</u>	<u>From</u> <u>(m)</u>	<u>To</u> <u>(m)</u>	<u>Interval</u> <u>(m)</u>	<u>Au</u> <u>(g/tonne)</u>	<u>Interval</u> <u>(feet)</u>	<u>Au</u> <u>(oz/ton)</u>
A85-01	9.75	22.57	12.8	46.98	42.0	1.36
Includes	16.77	20.57	3.8	146.05	12.5	4.24
and	19.07	19.57	0.5	776.48	1.6	22.52
A85-02	12.68	16.18	3.5	9.51	11.5	0.28
	29.18	35.67	6.5	12.14	21.3	0.35
Includes	29.68	31.09	1.4	47.50	4.6	1.38
A85-03	11.17	26.01	14.8	11.02	48.7	0.32
Includes	22.51	24.01	1.5	62.30	4.9	1.81
A85-04	9.00	22.50	13.5	6.22	44.3	0.18
Includes	21.50	22.50	1.0	25.10	3.3	0.73
A85-10	26.90	48.50	21.6	40.22	70.8	1.67
Incudes	31.90	34.40	2.5	319.90	8.2	9.28

Holes A85-05, -06 and -09 contained no significant intersections, while Holes A85-07, -08 and -11 yielded intersections of between 2.52 and 4.60 grams/tonne (0.07 to 0.13 ounces/ton) over core lengths averaging 3 meters. An additional six holes, for which no assay data is available were drilled in the southeast part of the central zone.

Results to date indicate best potential to be in the southeast part of the central or main zone. Drilling and trenching data suggest that better grades in plan occur in a cymoid curve structure. In sections, the zone has an apparent steep dip to the southwest near surface, steepening to vertical and then to steeply northeast. The apparent plunge of the gold-bearing zone is 15° to the southeast.

Exceptionally high gold assays from individual samples in several of the better holes obviously weight the overall grade over significant core lengths. For example, a 0.5-meter section in Hole A85-10, between 33.9 and 34.4 meters, assayed 1,375.0 grams/tonne (39.9 ounces/ton) gold. Deleting this value from a weighted average grade calculation results in an average 8.61 grams/tonne (0.25 ounces/ton) over a 21-meter core length which is considered a significant intersection.

The BV zone, 800 meters southeast of the Thesis III has been further assessed by eleven holes totalling 481 meters. Holes were drilled at declinations of between -45° and -83° on southerly azimuths and over a distance of 480 meters along the strike of the zone. Eight holes were fill-in drilling between widely-spaced Kidd Creek drilling in the central part of the zone which strikes west-northwest and dips steeply to the north. Like the Thesis III zones, better grade gold mineralization is intimately associated with barite filled fractures within a silicified-pyritic-clay mineral alteration zone.

Two holes, A85-16 and -17, were significant step-out holes drilled to test the southeast extension of the zone 70 to 100 meters southeast of the easternmost Kidd Creek trench. These holes intersected 1 meter plus silicified and brecciated zones with barite and a possible silver-bearing grey mineral. Hole A85-22 was drilled at the known western limit of the BV zone.

Most of the silicified and brecciated zones intersected by drilling to date are generally in the order of 2-meter core lengths, similar to previous Kidd Creek drilling. Partial assay results indicate gold grades of 7.33 to 10.76 grams/tonne (0.21 to 0.31 ounces/ton) over 2-meter lengths, again in agreement with Kidd Creek results. Of significance are values of 2.93 to 4.58 grams/tonne gold (0.09 to 0.13 ounces/ton) over 2 to 2.5 meter lengths in Holes A85-16 and -17, 175 to 215 meters southeast of the furthest east drilling done by Kidd Creek. This indicates a known strike length of at least 450 meters for the BV zone, over which consistent gold grades have been obtained.

Two zones in the central part of the Bonanza Ridge zone, 2 kilometers northeast of Thesis III (Figure 4), have been tested by an additional 7 holes. No assay data are presently available.

Principal zones on the Al property have a notable lack of silver mineralization, a direct correlation between gold and barite contents and a marked irregularity in both plan and section, a feature typical of epithermal deposits.

JD Property

The JD property is underlain by a shallow dipping sequence of andesite flows and flow breccias of at least 800 metres thickness which have been divided into two formations on the basis of textures and field relationships (von Fersen, 1984). These formations are separated by a low angle fault which dips north to northeast in the central part of the property (Figure 5).

Two styles of gold-silver mineralization are evident on the property, including steeply dipping quartz-calcite veins and zones of silicification and clay mineral alteration within and adjacent to the shallow dipping fault contact between the two principal volcanic formations.

Recent work has been directed to the Gumbo and Gasp zones (Figure 5) which are good illustrations of the two styles of mineralization. The Gumbo zone is marked by extensive silicification and clay alteration along the shallow dipping fault zone over a northwest trending strike length of 400 metres and a maximum width of three metres. Gold-silver mineralization occurs in silicified andesites in the footwall of the fault zone. Some of the better values obtained in trenching in the southeast part of the zone were 17.84 grams/tonne gold and 69.5 grams/tonne silver over a 1.3-metre width. Down-dip potential of the zone was tested by drilling in 1984. The fault zone has an average 18° dip and a width of two to five metres. Galena, sphalerite, chalcopyrite and pyrite are contained in quartz-carbonite veinlets in both hangingwall and footwall rocks within and

adjacent to the fault zone. Rare native gold was noted in silicified footwall rocks. Best intersection was 44.82 grams/tonne gold and 1.32 grams/tonne silver over 4.72 metres, with decreasing values noted toward the northwest. The potential of this zone is hampered by the fact that it is contained in a fault zone which dips into the hillside (Figure 5).

The Gasp zone, by contrast, has a steep northeast dip over its exposed 150-metre strike length. Mineralization is associated with quartz-carbonate veins and breccia fillings over widths of up to 20 metres, and consists of native gold and silver and galena, sphalerite, chalcopyrite and pyrite. Values obtained from trenching ranged up to 14.3 grams/tonne gold and 45. grams/tonne silver over a width of 12 metres, with lower values over narrower widths encountered in a two-hole drill program.

Several other gold-silver zones are known on the JD property (Figure 5); all have been surface prospected and sampled and most have been trenched with some limited drilling.

CONCLUSIONS

Three zones on the AI property have undergone additional investigation by way of diamond drilling.

On the basis of available results, the zone with best potential is Thesis III, where significant gold grades are indicated over appreciable core lengths. This zone is open to the southeast and to depth and may extend through the Thesis II zone several hundred meters southeast.

The known strike length of the BV zone has been extended and the zone contains fairly consistent gold grades over core lengths averaging 2 meters.

The Bonanza Ridge zone includes a number of zones of complex geometry. Good gold grades have been encountered in surface trenching and recent drilling may result in a better understanding of the geometry of the zones.

Several other zones on the AI property warrant additional surface work.

Work on the JD property includes trenching and diamond drilling on some of the more significant zones found to date (Gasp and Gumbo) which has indicated that gold mineralization is erratic in grade. The complex geology in the area requires more detailed surface work to decipher the structural complexities of the mineralized zones.

Exploratory work to date on both the AI and JD properties suggests that both have potential for extension of known zones and for discovery of additional zones.

RECOMMENDED PROGRAM

Additional diamond drilling is recommended for the AI property. This should consist of closely-spaced holes, locations of which will be predicated on results of work to date. It is also recommended that holes be drilled from both sides of known structures to enable a better definition of the geometry of these complex zones.

Several zones on the AI property should be further investigated by backhoe trenching, detailed geological mapping and sampling.

A limited program on the JD property should consist principally of a re-examination of mineralized zones defined to date by way of detailed prospecting and geological mapping. This work should assist in a better understanding of the property which will aid in proper future assessment.

COST ESTIMATE

AI Property

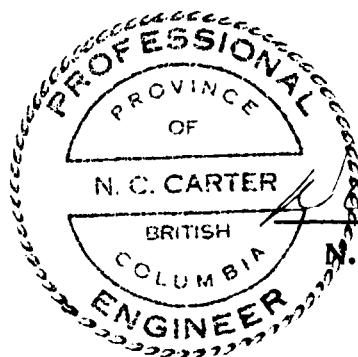
Diamond Drilling (1600m @ \$100/m)	\$ 160,000
Backhoe Trenching	20,000
Analytical Costs	20,000
Geological Mapping, Prospecting	15,000

JD Property

Prospecting, Geology, Sampling	25,000
Camp Costs	35,000
Air Support - Fixed Wing	25,000
Air Support - Helicopter	60,000
Supervision, Administration	45,000
General Support Costs (Freight, etc.)	10,000
Report Preparation, Drafting, etc.	10,000
Contingencies	<u>80,000</u>

TOTAL

\$ 505,000



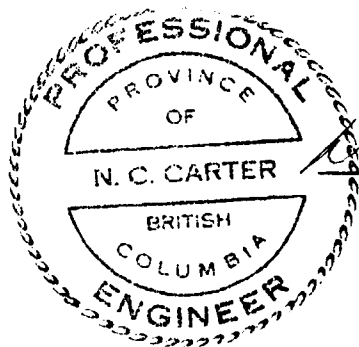
N. C. Carter Ph.D. P.Eng.
N. C. Carter, Ph.D., P.Eng.

CERTIFICATE

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

1. THAT I am a Consulting Geologist resident at 1410 Wende Road, Victoria, British Columbia,
2. THAT 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. THAT I am a registered Professional Engineer in the Association of Professional Engineers of British Columbia,
4. THAT I have practised my profession in eastern and western Canada and in parts of the United States over the past twenty-four years,
5. THAT this report is based on a visit to the Property July 16, 1985, a review of diamond drilling results to date as provided by Energex Minerals Ltd. , and on my background knowledge of the Toodoggone River area,
6. THAT I have no direct interest or indirect interest in the AI or the JD properties, or in Energex Minerals Ltd.
7. THAT permission is hereby granted to Energex Minerals Ltd. to use this report in support of any Filing Statement, Statement of Material Facts or Prospectus to be filed with the Office of the Superintendent of Brokers for the Province of British Columbia and the Vancouver Stock Exchange.

DATED at Vancouver, British Columbia, this 30th day of July, 1985.



N. C. Carter Ph.D. P.Eng.
N. C. Carter, Ph.D., P.Eng.

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Figure 6	Generalized Geology, JD Property

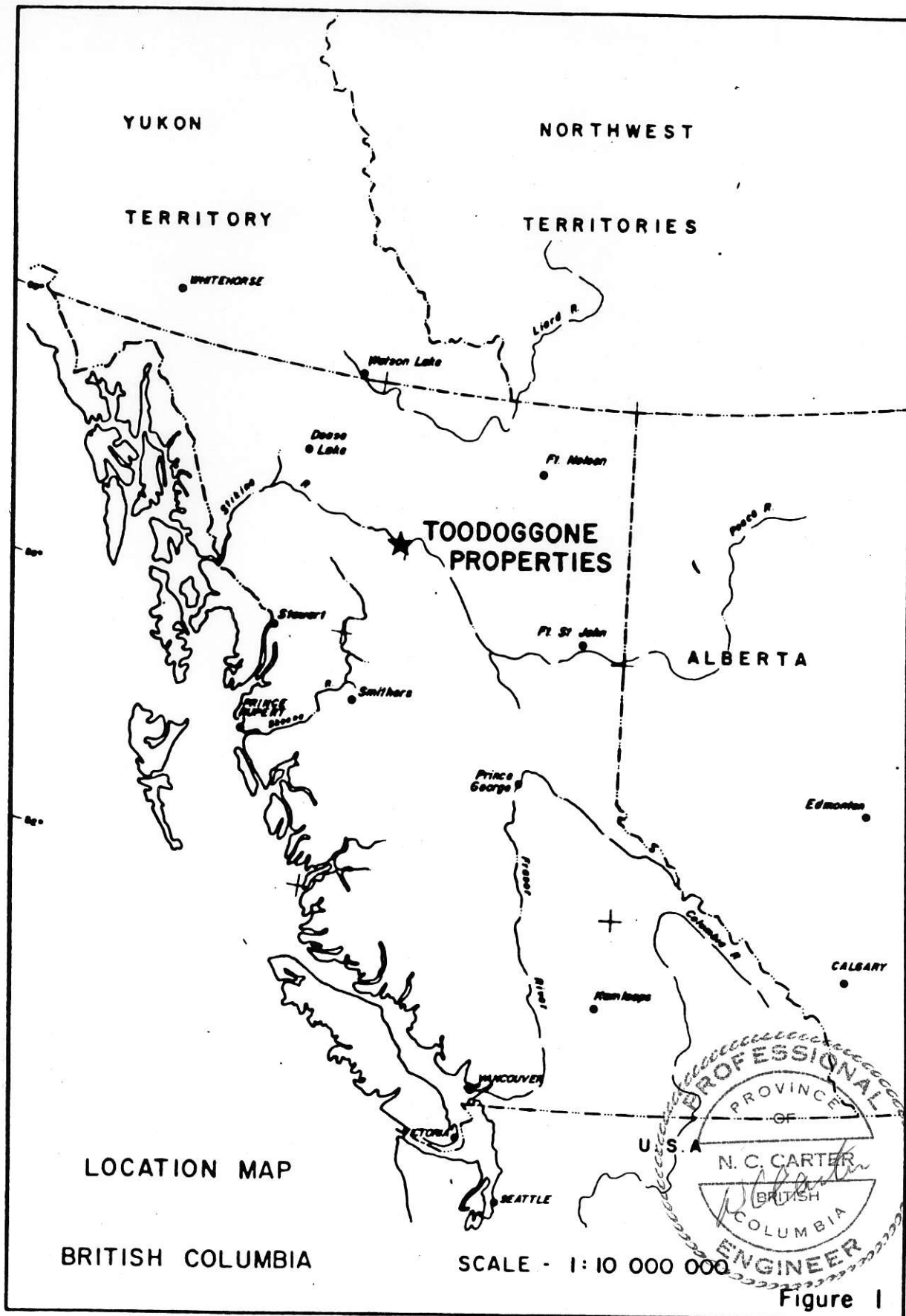
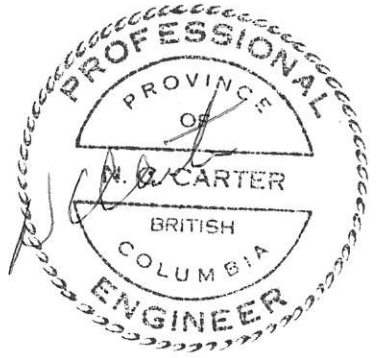
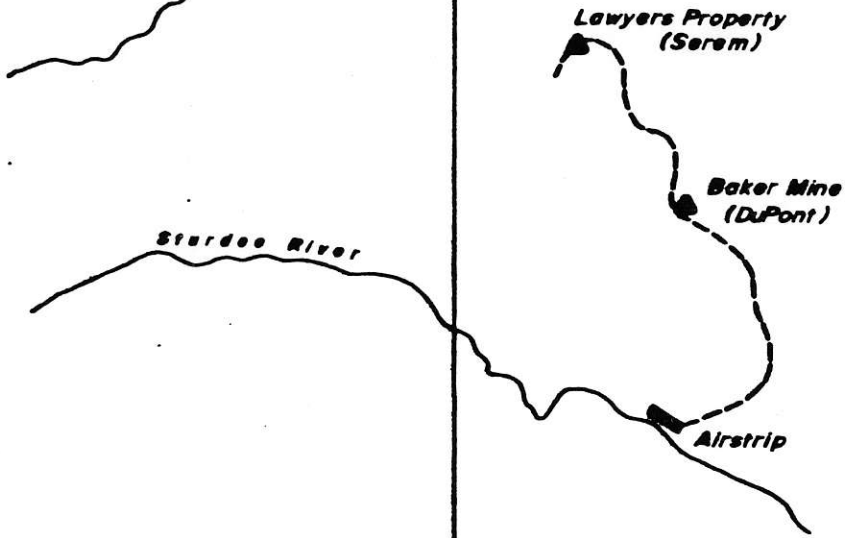
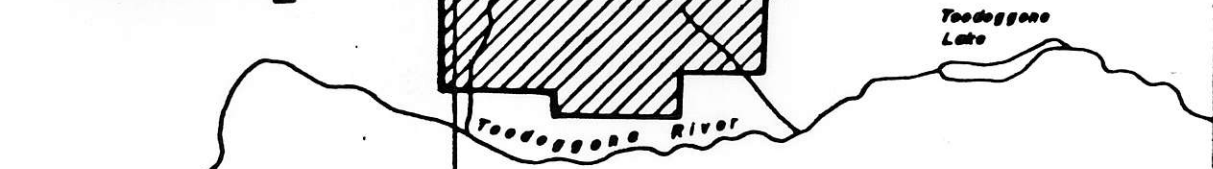
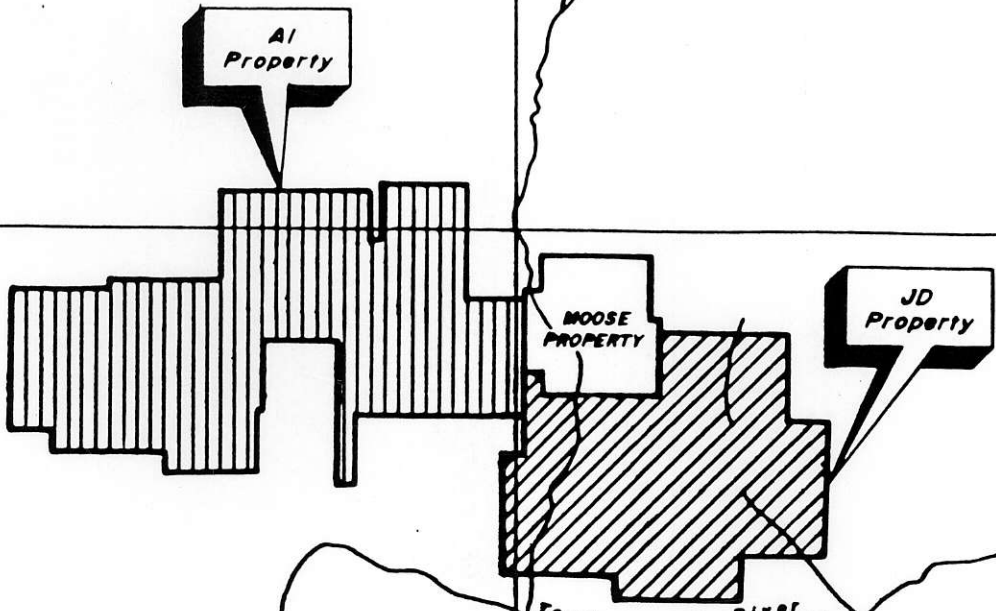


Figure 1



67°30'

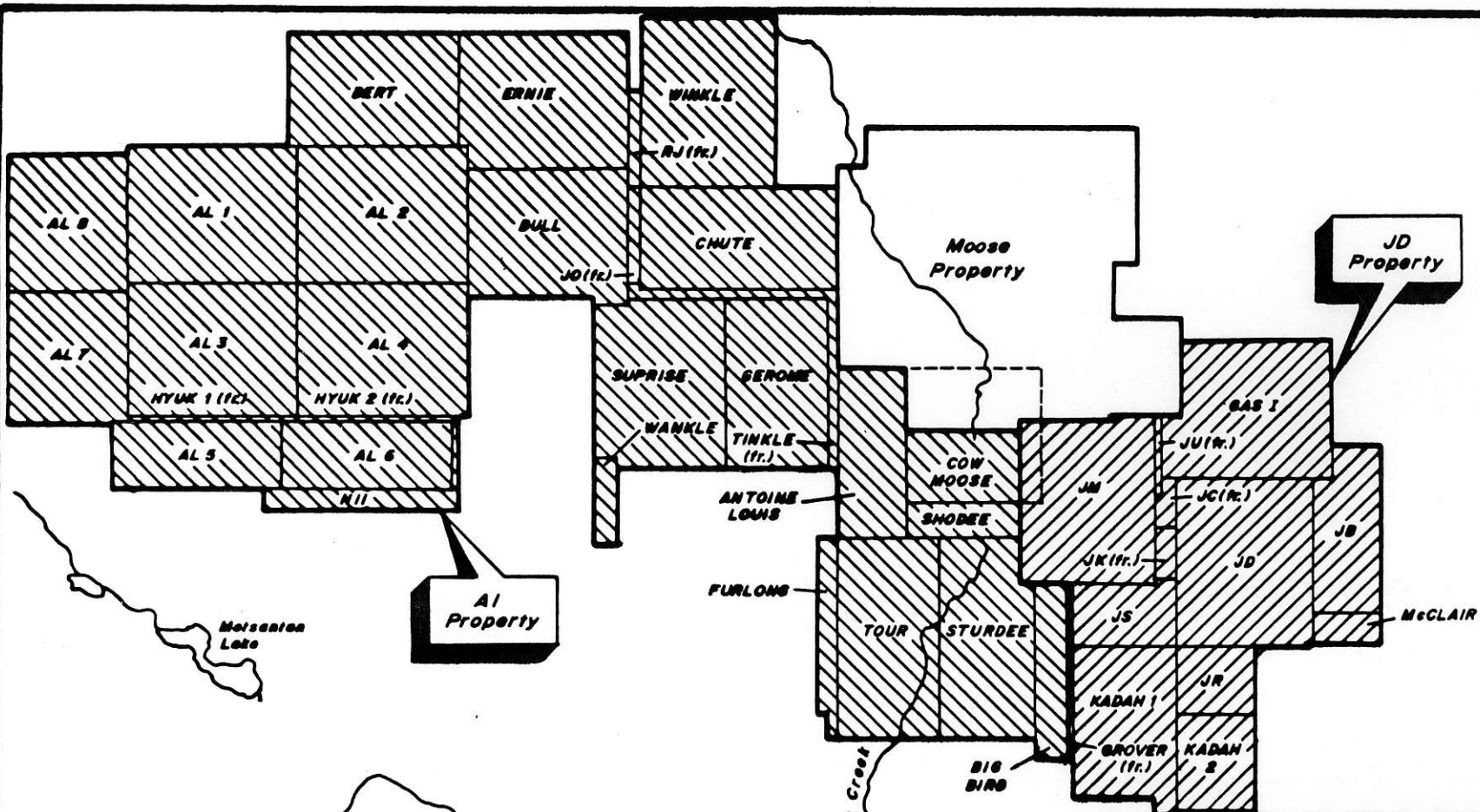
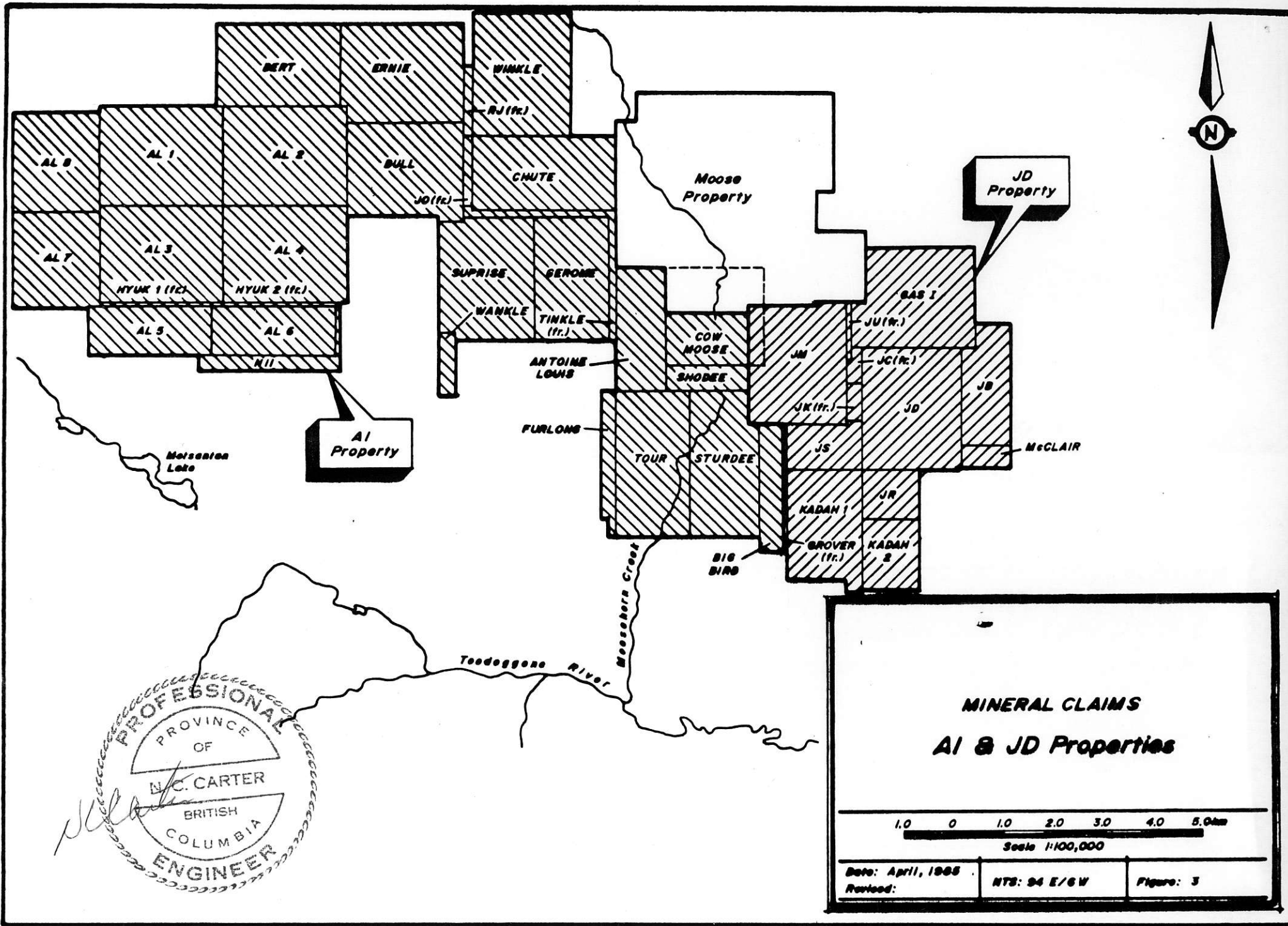


LOCATION MAP
AI & JD Properties

0 1 2 3 4 5 6 7 8 9 10 5km

Scale 1:200,000

Date: April, 1985	NTS: D4 E/SW	Figure: 2
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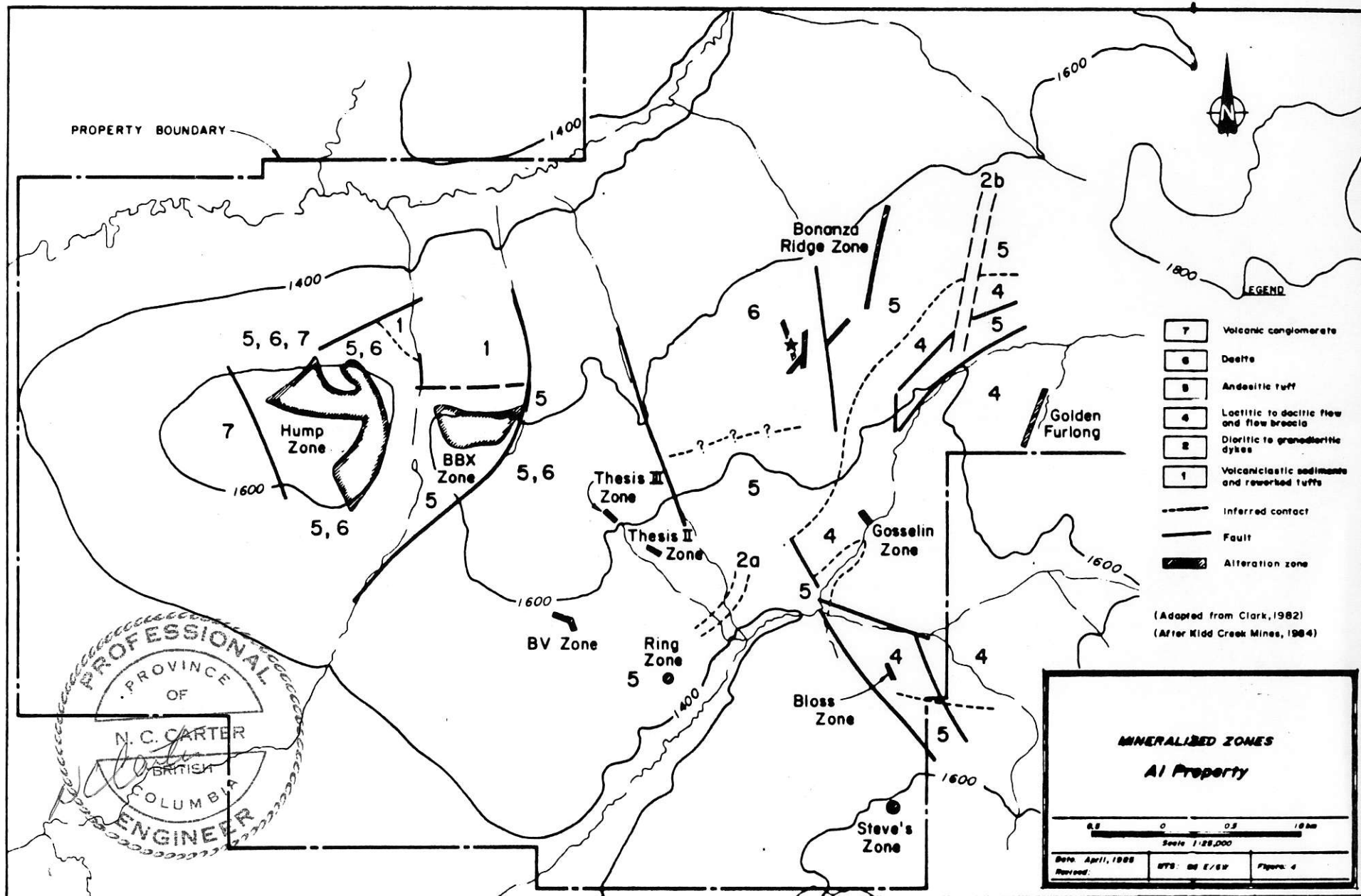


Molsonian Lake

Moosehorn Creek





Toodoggone River

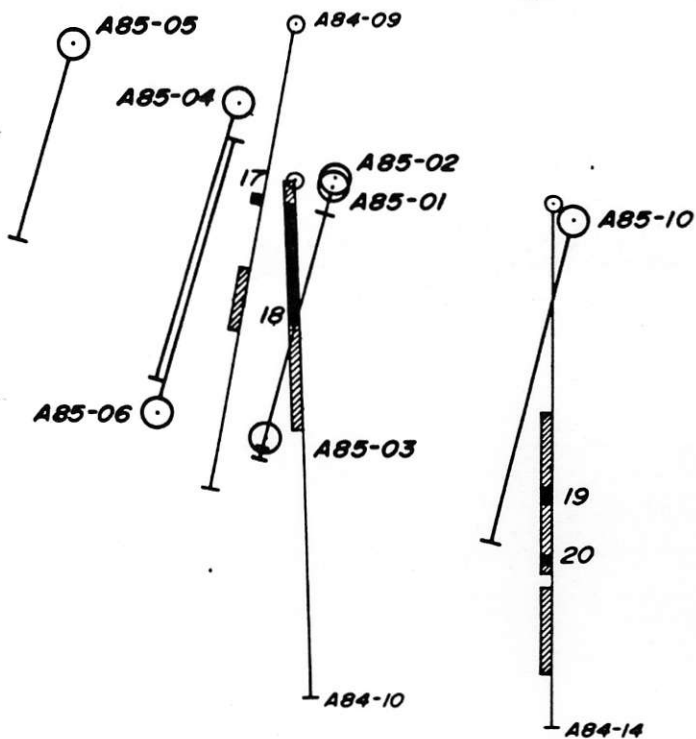
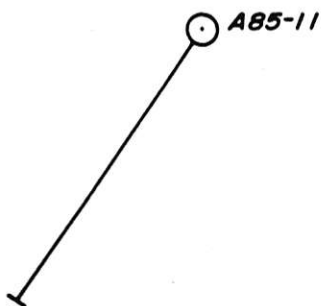
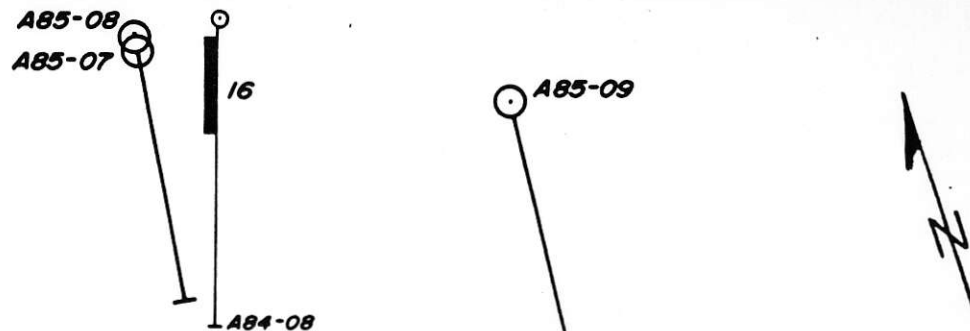




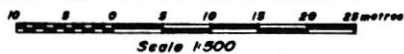
PROFESSIONAL
PROVINCE
OF
N. C. CARTER
BRITISH
COLUMBIA
ENGINEER

LEGEND

-  Mineralization
-  Geochemically anomalous gold
-  Diamond drill hole (Kidd Creek, 1984)
-  Diamond drill hole (Energen, 1985)



AI Property
Thesis III Zone
DIAMOND DRILL HOLES &
SIGNIFICANT ASSAYS



Date: July, 1985
 Revised:

NTS: 94 E 6/W

Figure: 5



