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REPORT  
ON THE  
TOODOGGONE JOINT VENTURE  
OMINECA MINING DIVISION  
B.C.

BY  
W.R. BACON, Ph.D., P.Eng.

GANGES, B.C.

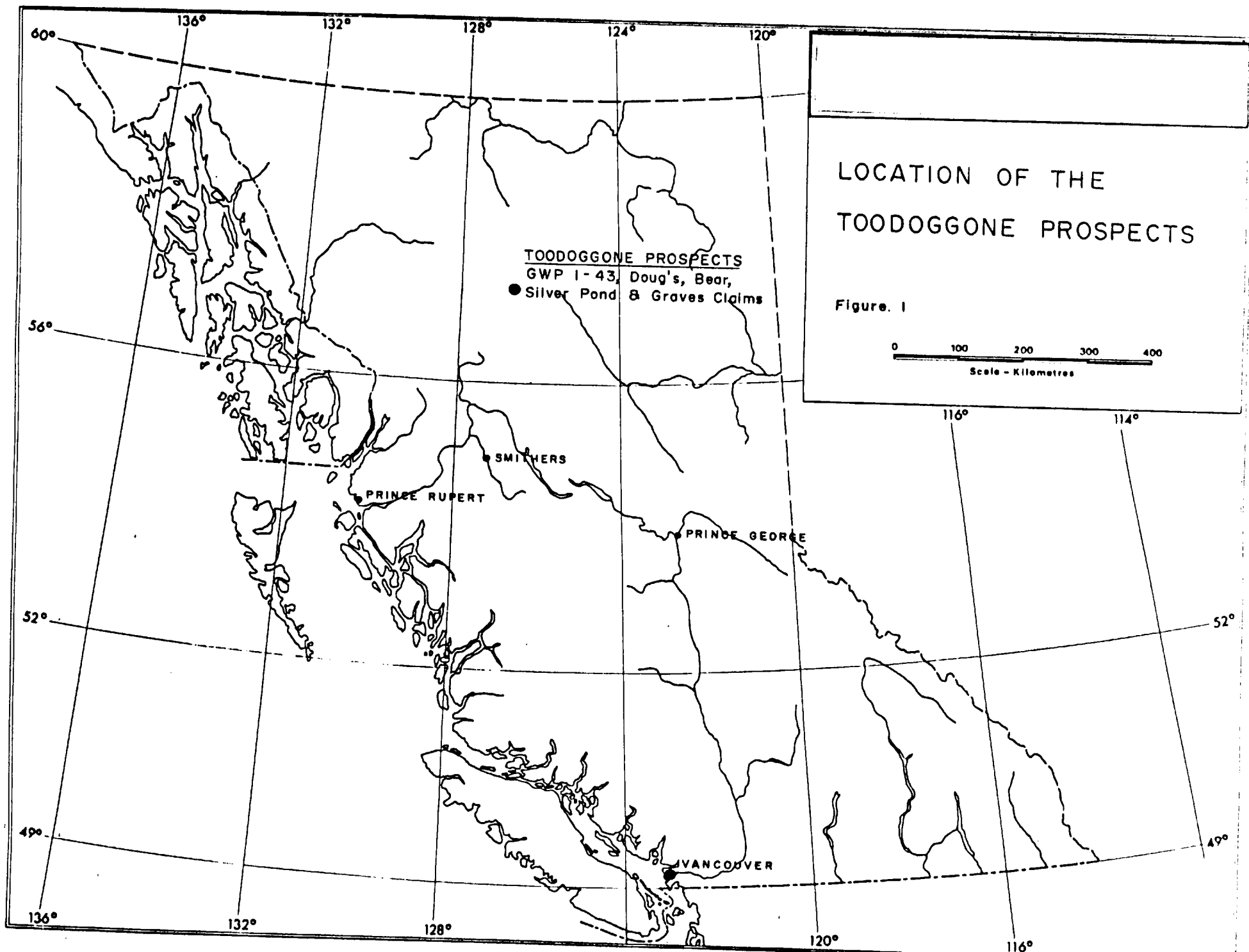
MARCH 15, 1982

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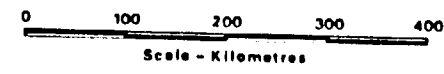
ILLUSTRATIONS

FIGURE 1 .....	FRONTSPIECE
FIGURE 2 .....	FOLLOWING PAGE 1



LOCATION OF THE  
TOODOGGONE PROSPECTS

Figure. 1



## INTRODUCTION

(see Figures 1 and 2)

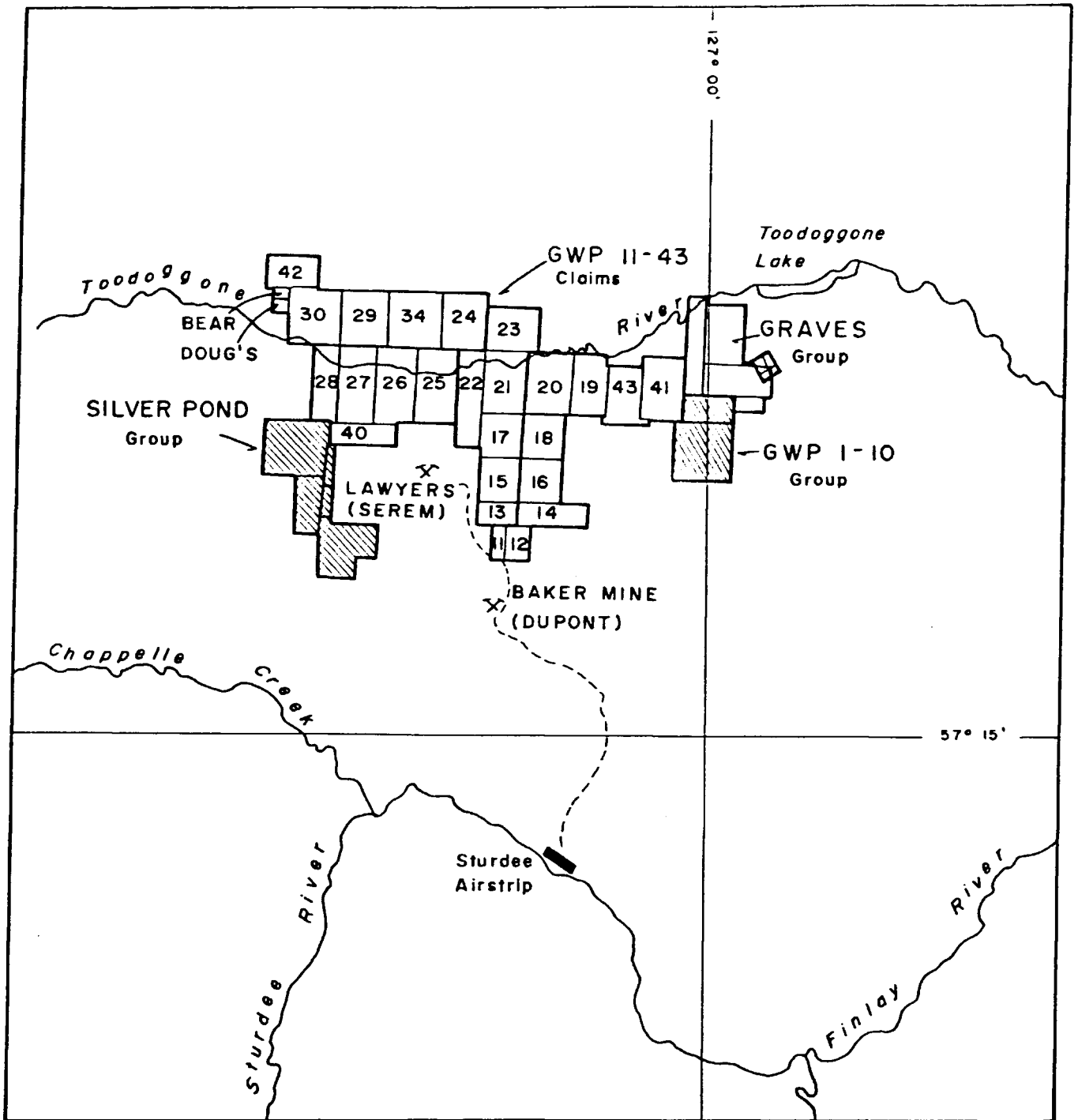
The Toodoggone River area is a new gold area in north central British Columbia. It is located 300 km. north of Smithers, at the headwaters of the Finlay River.

Access is by air. The Sturdee airstrip is on the north side of the Sturdee River and on the south side of the camp. The strip was built mainly to assist DuPont of Canada Exploration Limited in its effort to initiate an underground gold-silver operation (BAKER MINE) on known gold-silver-quartz veins.



Thus far, the Baker is the only operating mine in the Toodoggone. It was started up toward the end of 1980. Published reserves were 100,000 short tons averaging 0.92 oz. gold/ton and 18.7 oz. silver/ton.

The Lawyers gold-silver deposit, approximately 15 km. north of the Baker mine, holds out considerable hope of being larger than Baker. At Lawyers the gold occurs in the "AMETHYST GOLD BRECCIA", a zone that has been traced for a length of 610 metres, a width 60-75 metres, and a vertical depth of 75 metres. This exotic host rock and its exotic mineralization - acanthite, electrum, native silver - definitely suggest an epithermal deposit, as do the vein textures that feature open spaces.

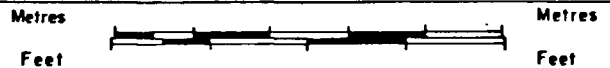
During 1979-80, approximately 2000 mineral claim units were staked in the area and, in 1981, a further 1,300 units were staked .



**LEGEND**

-  100% Great Western Petroleum
-  Toadoggone Joint Venture

**LOCATION OF GWP 1-43, DOUG'S, BEAR SILVER POND & GRAVES CLAIMS**



MAPPED BY:	SCALE: 1: 250,000	DRAWING NUMBER
DRAWN BY: D.L.Y	DATE: JAN. 1982	FIGURE 2
REVISED:	N.T.S.	

TOODOGGONE JOINT VENTURE

Great Western Petroleum Corporation staked the G.W.P. 1-9 claims in the Toodoggone River area during the summer of 1980. As the potential of the area became increasingly more apparent, the Corporation planned further staking and took in a partner, E & B Explorations Ltd., of Calgary, to defray the entire cost of this additional staking for a 50% working interest - in the additional claims only.

This arrangement evolved into the Toodoggone Joint Venture which was formalized on April 12, 1981. Currently, the Joint Venture holds (in Great Western Petroleum's name) 35 mineral claims (containing 420 units) as follows:

GWP II GROUP - GWP CLAIMS - 11, 12, 14, 16, 18  
GWP III GROUP - GWP CLAIMS - 19, 20, 41, 43  
GWP IV GROUP - GWP CLAIMS - 13, 15, 17, 21, 22, 23  
GWP V GROUP - GWP CLAIMS - 25, 26, 27, 28, 40  
GWP VI GROUP - GWP CLAIMS - 24, 29, 30, 34, 42, Doug's,  
and Bear  
GRAVES GROUP - GRAVES CLAIMS - 1-8

In addition to these 35 claims, there are 13 others (81 units, 3 fractions) that are presently owned entirely by Great Western Petroleum, which would be available to E & B on a first refusal basis.

REGIONAL GEOLOGY

According to T.G. SCHROETER,\* the Toodoggone area is underlain by the Toodoggone volcanic sequence which consists of a pile of complexly intercalated and varicoloured, subaerial andesitic, dacitic and trachytic tuffs, ash flow sheets, and minor epiclastic rocks that is at least 1000 metres thick. These rocks are tentatively correlated with Early Jurassic rocks of the Hazelton Group and, according to K-AR and Sb-Sr dates obtained from whole rock and mineral samples, range between 179 and 190±7 Ma.

Schroeter considers that the Toodoggone volcanic rocks and intrusions are probably COEVAL with the Omineca Intrusions.

The Toodoggone volcanic rocks are subdivided as follows:

- |        |   |
|--------|---|
| UPPER  | Volcanic - sedimentary assemblage.<br>(locally present)   |
| MIDDLE | Rhyolites, dacites; intermediate to acidic, orange crystal to lithic tuffs, minor welded tuffs, and quartz feldspar porphyries. |
| LOWER  | Pyroclastic maroon agglomerate and grey to green to maroon andesitic and dacitic tuffs.   |

Schroeter considers that major structural breaks and mineralizing events (e.g. LAWYERS) coincide with the contact between lower and middle volcanic divisions.

The dominant structures of the area are persistent northwest striking faults similar possibly to the Pinchi fault. Some of these faults may have served as channelways for the sulphur-poor, hydrothermal solutions that transported the precious metals to their places of deposition at Baker, Lawyers, etc.

\*SCHROETER, T.G.: PAPER 1981-1, GEOLOGICAL FIELDWORK,  
B.C. MINISTRY OF ENERGY, MINES AND  
PETROLEUM RESOURCES

### AREAL EXPLORATION TECHNIQUES

There is no easy way to explore the Toodoggone terrain. The hills are essentially treeless and rock rubble is common. Outcrop is sparse in the tributary valleys (except in canyons) and non-existent in the valley of the Toodoggone River where an unknown thickness of overburden is present.

Traversing on foot along compass oriented grid lines - parallel to claims lines over much of the area - is the tedious, unchanging order of the day. Soil and/or rock samples are taken at 100 metre intervals and prospecting and geological mapping are done simultaneously. Where the hills are steep, the work is done on contour lines 100 metres apart in elevation.

Silt samples are taken from all streams encountered during traversing.

As far as the writer is concerned, the above constitutes standard preliminary exploration procedure. The known deposits and their setting do not readily suggest any additional approach (such as geophysics) that might be useful. Under the circumstances, one can only follow the preliminary (100 m.) grid sampling with closer sampling where this is warranted.

Soil samples over the main (A) vein at BAKER ranged up to 3000 ppb gold and 70 ppm silver. At LAWYERS, soil values greater than 240 ppb and 3.4 ppm silver are considered strongly anomalous.

### JOINT VENTURE EXPLORATION

The results of the preliminary exploration program over the entire 35 claims indicate that, geochemically, there is something that is interesting and, hence, merits investigation on perhaps half a dozen of the claims. There are, however, two



localities that can aptly be called Prime Targets in the upcoming (1982) program. They are:

(1) CLAIM 30, GROUP 6

In the canyon of Moosehorn Creek, about two (2) kilometres above its junction with Toodoggone River, amethystine to white quartz occurs intermittently in a pink feldspar porphyry over a north-south strike length of 500 metres. This zone, the FORSTER zone, is open at both ends; its true width is obscured by trachytic caprock.

The FORSTER zone is brecciated, manganese stained and open space textures are a feature. This zone is similar to the "Amethyst gold breccia" at LAWYERS. Numerous chip samples yielded values up to 2000 ppb gold and 60 ppm silver.

The FORSTER zone obviously merits diamond drilling.

(2) MT. GRAVES, GRAVES GROUP

Anomalous gold-silver values in soils and rocks occur in cirque headwalls east of the summit of Mt. Graves.

In addition to a large (width to 15 metres) quartz vein structure, there is silicification in the volcanic wallrock.

Chip samples across the 15 metre vein width gave values up to 570 ppb gold and 60 ppm silver. Apparently a grab sample of silicified material (containing argentite,  $Ag_2S$ ) carried 11,000 ppb gold and 7,500 ppm silver. As might be expected, however, the silicified material generally gave lower gold and silver values than the quartz vein.

A smaller zone was noted at a lower elevation in the cirque. Values here ranged up to 1,230 ppb gold and 14.5 ppm silver.

PROPOSED 1982 PROGRAM

Forster Zone

Five (5) angle holes, each of 200 metres length, are recommended. With holes of this length, there should be no problem testing the zone with angle holes from setups on relatively flat ground above the canyon.

Mt. Graves

In order to sample properly the quartz vein and silicified wall rock on this steep terrain, it is recommended that a Winkie - type drill be used and that 500 metres of drilling be done.

COST ESTIMATES

1982 Program

FORSTER ZONE

DIAMOND DRILLING, 1000M. OF NQ-BQ @ \$100/M. ....	\$100,000
MOBILIZATION, DEMOBILIZATION FROM SMITHERS .....	48,000
HELICOPTER, 80 HRS. @ \$550/HR. ....	44,000
SUPERVISOR - CORE LOGGER - SURVEYOR - (1 MAN) .....	5,000
SUPERVISOR'S ASSISTANT AND CORE GRABBER - (1 MAN) .....	3,000
	<hr/>
	\$200,000
CONTINGENCIES 15%	30,000
	<hr/>
SUB - TOTAL	\$230,000

MT. GRAVES

DIAMOND DRILLING, 500M. OF AQ @ \$60/M. ....	\$ 30,000
MOBILIZATION, DEMOBILIZATION FROM SMITHERS .....	30,000
HELICOPTER, 40 HRS. @ \$550/HR. ....	22,000
SUPERVISOR - CORE LOGGER - SURVEYOR .....	2,500
SUPERVISOR'S ASSISTANT .....	1,500
	<hr/>
	\$ 86,000
CONTINGENCIES 15%	12,900
	<hr/>
SUB - TOTAL	\$ 98,900

COST ESTIMATES

1982 Program

CONTINUING FIELD WORK (INCLUDING TRENCHING)

SIX PERSONS x 2.5 MOS. x \$1,500 AVGE. ....	\$ 22,500
HELICOPTER 80 HRS. @ \$550/HR. ....	<u>44,000</u>
SUB - TOTAL	\$ 66,500
ASSAYING, ANALYSIS	<u>3,000</u>
TOTAL	<u><u>\$398,400</u></u>

*Wm Bacon, P. ENG.*

CERTIFICATE

I, WILLIAM R. BACON, of Ganges, B.C., DO HEREBY

CERTIFY THAT:

1. I am a consulting geological engineer registered with the Association of Professional Engineers of British Columbia since 1950;
2. I am a graduate of the University of British Columbia with B.A. Sc., (1939) and M.A. Sc., (1942) degrees in Geological Engineering;
3. I am a graduate of the University of Toronto with a Ph.D. degree (1952) in Economic Geology;
4. During the past 40 years I have been engaged in economic geology and the search for mineral deposits in North America, South America, Australia, Asia and Europe;
5. I personally examined the Toodoggone area by foot and by helicopter on August 26, 1980;
6. I have no interest in the Silver Pond property, or the GWP claims or in Great Western Petroleum Corporation, or in E & B Explorations Ltd. of Calgary, Alberta nor do I intend to acquire any.

*William R. Bacon, P.Eng.*

William R. Bacon  
Professional Engineer

Great Western Petroleum Corporation,  
3rd Floor,  
744 West Hastings Street,  
VANCOUVER, B.C.,  
V6C 1A5

Dear Sirs:

I, William R. Bacon, Ph.D., P.Eng., hereby consent to the use of my reports dated March 15, 1982 on the Toodoggone Joint Venture and the Silver Pond Group, Omineca Mining Division, British Columbia, in any Filing Statment, Statement of Material Facts, or Prospectus to be issued by Great Western Petroleum Corporation.

DATED at Vancouver, British Columbia, this 6th day of April, 1982.

*William R. Bacon, P.ENG.*

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William R. Bacon, Ph.D., P.Eng.