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SUMMARY REPORT  
on the  
GWP CLAIMS  
Omineca Mining Division  
British Columbia

for  
WESTERN PACIFIC ENERGY

by  
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## INTRODUCTION

Western Pacific Energy has a 50% working interest in 16 mineral claims owned by Great Western Petroleum Corporation and situated in the Toodoggone River area of north-central British Columbia.

This summary report, prepared at the request of Mr. Gordon A. Keevil, is based on the writer's experience in the area, and more particularly on his involvement in the initial acquisition and exploration of the subject claims.

## LOCATION AND ACCESS

The Toodoggone River area is 300 km north of Smithers and is accessible by aircraft, utilizing a 1600 metre gravel airstrip on Sturdee River (Figures 1 and 2).

A road linking Baker mine and the Lawyers property with the airstrip passes through the southern end of the most southerly claim included in the present joint venture. Other claims are accessible by helicopter.

Extension of the Omineca mining road into the area from its present terminus 70 km to the southwest would provide conventional access to Prince George and points south.

## MINERAL PROPERTY

A recent Great Western information circular refers to 19 mineral claims on which cashin lieu was paid in January,

17 of which are subject to the joint venture with Western Pacific. Only 16 claims can be identified by the writer, one of the claims, GWP 43 has forfeited.

The 16 mineral claims (Figure 2) comprise 222 units as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Expiry Date</u>
GWP 11	3	January 1986
" 12	6	" "
" 13	6	" "
" 14	12	" "
" 15	12	" "
" 16	16	" "
" 17	12	" "
" 18	16	" "
" 19	15	" "
" 20	20	" "
" 21	18	" "
" 22	16	" "
" 23	16	" "
" 25	18	" "
" 26	18	" "
" 41	18	" "

#### 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 GWP claims have elevations ranging from 1200 metres in the Toodoggone River valley to more than 2000 metres in the southern claims. Steep cirque headwalls are prevalent in the south, but most of the area of the claims features

relatively moderate relief. Bedrock is well exposed in the higher areas and in drainages but is virtually non-existent in the Toodoggone valley. Much of the area is above tree line.

#### HISTORY

The Toodoggone area was investigated for placer gold in the 1920's and 1930's. Some exploration for lead-zinc was also undertaken at this time.

Gold-silver mineralization was discovered on the Chappelle (Baker Mine) property by Kennco in 1969. DuPont of Canada acquired the property in 1974 and began production at a milling rate of 100 tons per day in late 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 to SEREM Ltd. in 1979. Work on this property to date has included trenching, drilling and underground development and a feasibility study is currently underway.

The Toodoggone area has been the scene of intense exploration activity over the past four years with a number of companies (principally majors) exploring over 3,000 mineral claim units. Exploration and development expenditures to date are estimated to be in the order of \$33 million.

Great Western became involved in the area in mid 1980 when the GWP 1 block northeast of Baker mine was staked.

The Silver Pond property, west of Lawyers and currently farmed out to St. Joe Canada, was optioned early the following year. The claims under consideration were acquired by staking in late 1980 and early 1981 and were part of a larger block comprising a total of 335 units. Cost of acquisition was \$31,486, the cost of which was borne by E&B Mines Ltd. who earned a 50% working interest.

Several other claims were staked and optioned (Graves) in 1981; these were considered to be part of the joint venture.

Reconnaissance and follow-up geochemical surveys and geological mapping in 1981 was successful in identifying three principal gold-silver bearing zones on the joint venture lands - Moosehorn on GWP 30 and a geochemically anomalous zone on GWP 28, both at the western extremity of the claims area, and Mt. Graves on the east. Costs of the 1981 program were \$200,000.

The 1982 program, costing \$60,000, was undertaken by Great Western alone, and included detailed bedrock sampling of the Moosehorn and Graves zones (both of which should be drilled) and limited work on the GWP 28 claim. E&B's interest was diluted to 43% following this program.

No work was done in 1983 and 1984. Great Western farmed out the Silver Pond property in late 1983 and the Graves option lapsed in 1984.

Attempts were made to farm out most of the subject claims in late 1983; this work ceased in early 1984 when a new group took an interest in Great Western. Cash in lieu, amounting to \$24,000 was paid in January, 1984 to maintain these claims in good standing. A further \$49,940 was paid in January, 1985.

Estimated total exploration expenditures on the 16 claims (mainly incurred in 1981) are \$65,000.

#### REGIONAL GEOLOGICAL SETTING AND MINERAL DEPOSITS

Most of the significant gold-silver deposits in the area are hosted by a distinctive lithologic volcanic sequence of early Jurassic age known as the Toodoggone volcanics. These overlie, or are in fault contact with older Takla and Hazelton Group volcanic rocks and are overlain by late Cretaceous sedimentary rocks to the west. Omineca granitic rocks intrude Toodoggone and older volcanic rocks.

Toodoggone volcanics are comprised of subaerial flows and pyroclastic rocks of andesitic composition. Three principal units have been identified; a lower and middle sequence of andesitic flows and breccias which are overlain by a "grey dacite" ash flow unit.

Epithermal gold-silver deposits, including Lawyers (1.5 million tons grading 0.21 oz/ton gold and 7.37 oz/ton silver) and the Energex properties are contained in veins, stockworks breccias and silicified areas developed in lower and middle units of the Toodoggone sequence.

Baker mine, a fissure vein system in Takla volcanic rocks

is spatially related to dykes believed to be associated with Toodoggone volcanic processes. This deposit had a pre mining reserve of 100,000 tons grading 0.9 oz/ton gold and 18 oz/ton silver. Recovered grades over the three year mining period were about half due to poor initial mill recoveries and greater than expected dilution during mining.

Many of the known deposits and occurrences lie on or near two regional northwest fault structures - the Baker-Lawyers-Al (Energex) structure and the Saunders-McClair system.

#### GEOLOGY AND GEOCHEMISTRY - GWP CLAIMS

The 16 GWP claims are underlain by Toodoggone volcanic rocks with the exception of an isolated area in the eastern part of GWP 12 claim where older limestones are thrust over middle unit Toodoggone rocks. The northeast half of GWP 41 is underlain by Omineca granitic rocks.

The Toodoggone volcanics within the claims have gentle to moderate northerly dips except where disrupted by block faulting. Bedrock exposures are fairly abundant in the central and southern claims but are virtually non-existent near Toodoggone River.

The favourable lower and middle units underlie all or parts of claims GWP 12,14,16,18 and 19 in the central part of the block and claims GWP 25 and 26 and 41 on the east and west extremities respectively. Bedrock on claims GWP 11,13,15,17,21,22 and 23 is principally the "grey dacite"



ash flow unit which is an essentially barren unit. This is particularly well shown in geochemical maps of the claims area - all anomalous precious metals values are confined to those areas underlain by lower and middle units of the Toodoggone volcanic sequence.

Reconnaissance geochemical sampling of the claims area was by two methods: in areas of moderate relief, soil and/or rock samples were collected at 50 metre stations along 100 metre spaced north-south flagged compass lines. In steeper terrain, sampling at 50 metre intervals along 100 metre spaced topographic contours was undertaken. Limits and method of sampling are shown on Figure 3.

Reconnaissance sampling is virtually complete - areas not covered are the eastern half of GWP 14 (because of a possible boundary problem with the adjacent DuPont Pel claim), the southern part of GWP 22, the north half of GWP 23 and the north part of GWP 41.

Sample sites with anomalous gold and/or silver values were followed up by sampling at sites 25 metres apart outward from the anomalous sample site. In most cases the anomalous values could not be duplicated or the potential zone extended.

The following range of anomalous values were encountered on the claims:

	<u>Au</u>	<u>Ag</u>
Weakly Anomalous	10-20 ppb	1.6-3.2 ppm
Moderately Anomalous	21-40 ppb	3.3-6.4 ppm
Strongly Anomalous	+40 ppb	+6.4 ppm

The central and southern claims yielded the best geochemical responses, principally from soils taken along topographic contours in the central part of the GWP 16 claim (Figure 3 - Area "A"). This area has isolated gossans due to quartz vein stockworks containing disseminated pyrite and arsenopyrite in middle unit Toodoggone rocks. Follow-up sampling yielded values of 35,65,100 and 175 ppb gold and silver values of 3.2,3.4, and 3.9 ppm within a 150 by 150 metre area. Lead values within the same area included several between 158 and 530 ppm. Two isolated samples in the same general area had values of 100 and 175 ppb gold but no corresponding silver values. Limonite stained volcanic rocks in the southeast part of GWP 12 claim had only background gold values.

Geochemical values elsewhere in the south-central claims are low due to the presence of the barren "Grey dacite" unit.

Isolated gold values in soils (up to 2250 ppb) occur in the north parts of claims GWP 21 and 22 (Figure 3 - Area "B") These have no coincident silver values and are probably due to contamination by minute quantities of placer gold. Follow-up work in this area yielded poor results. Silicified volcanic rocks in a north flowing drainage in the same area carried no values.

No significant values were encountered on claims GWP 26 and 27.

Two isolated gold in soil anomalies on GWP 19 of 125 and 245 ppb could not be duplicated by follow-up sampling. The most interesting area in the eastern claims area appears to be in the central part of GWP 41 (Figure 3 - Area "C") where several silt samples from a drainage adjacent to a granite contact had silver values of 7.9 to 19.8 ppm. Gold values from the same samples were at detection limit or 5 ppb. The northern half of this claim has not been covered.

#### CONCLUSIONS AND RECOMMENDATIONS

1. Most of the claims area has been reasonably well covered by soil and/or rock geochemical surveys. Most anomalous gold and silver values have been followed up by more detailed sampling with mixed results.
2. Some of the claims include areas that have not been sampled; there are also isolated anomalous sample sites that have had no follow-up work. These could be important in view of the fact that two of the principal showings areas on the Energex Al property were reflected by three or fewer spot highs of 100 to 150 ppb gold which were not considered significant for immediate follow-up.
3. Three areas within the claims area warrant further work- these include Area "A" on GWP 16, the northern part of GWP 41 and silicified rocks on GWP 12. The latter area will require definition of the DuPont boundary.

4. Claims along Toodoggone River are difficult to assess. Extensive depths of overburden and probable contamination by concentrations of placer gold render geochemistry to be of limited value. VLF-EM and magnetometer surveys could be considered for these areas.

5. Western Pacific is apparently short one claim - if this is the case, I would recommend attempting to have GWP 24 included in the joint venture. An area of silicified volcanic rocks is exposed in Kadah Creek (Figure 3) and rock samples returned values of up to 300 ppb gold and 49 ppm silver.

6. These claims are centrally located in the Toodoggone area and considering the current interest, it may be possible to farm out all or part of the claims area should Western Pacific choose to go this route.

7. If a decision is made to proceed with a work program, I would recommend only a modest expenditure pending results of follow-up work.

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

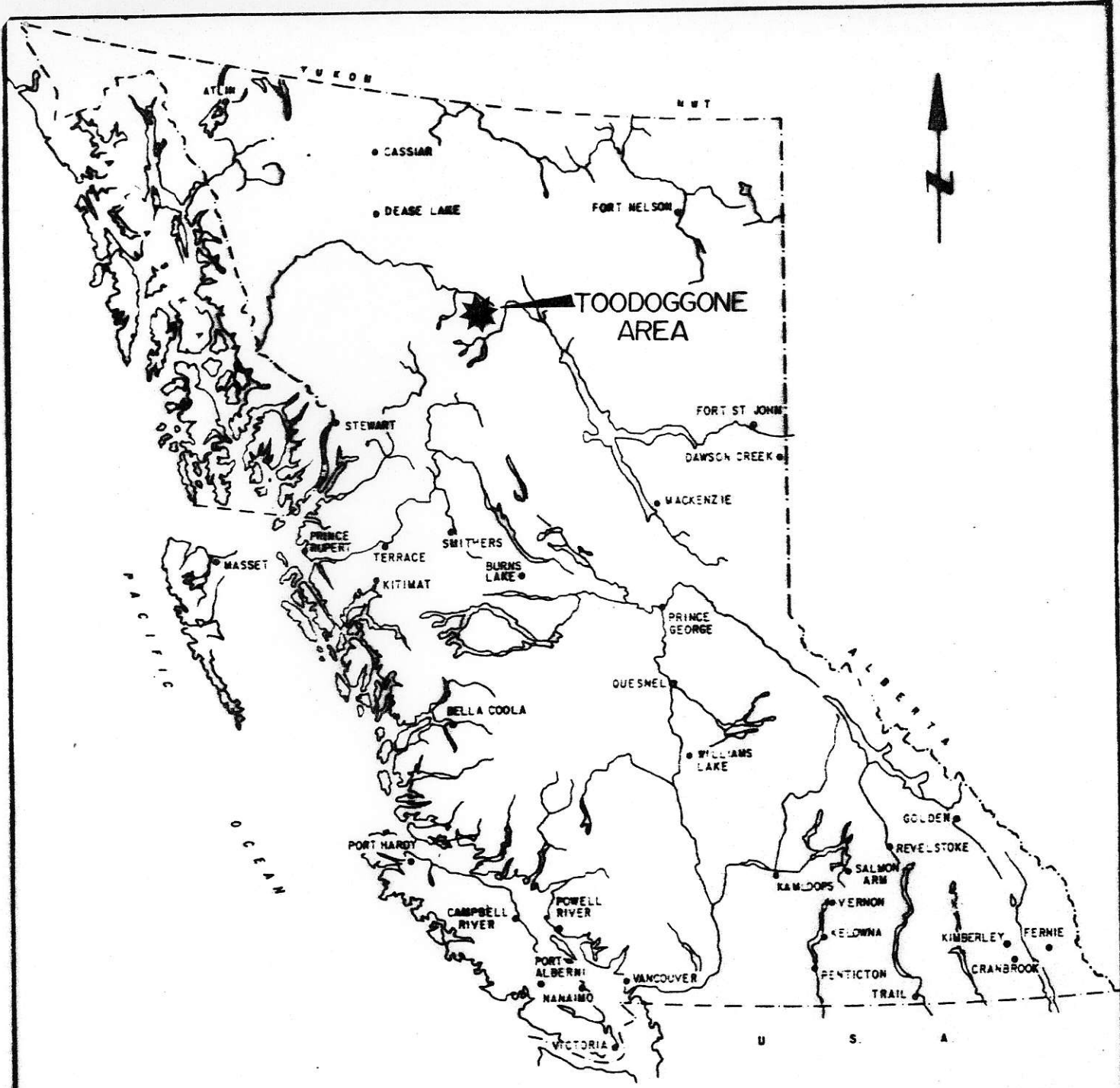


FIGURE I  
LOCATION MAP

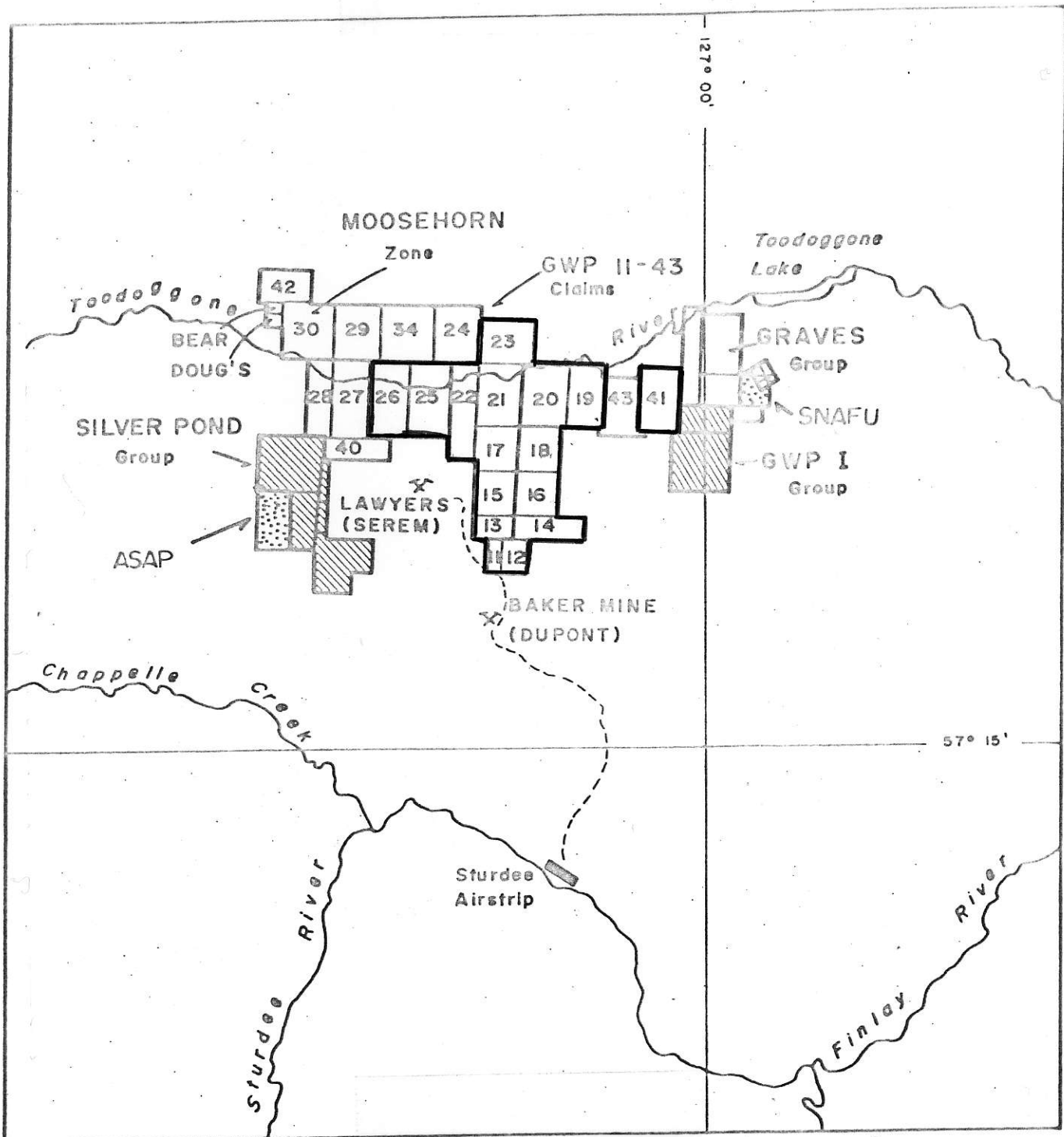
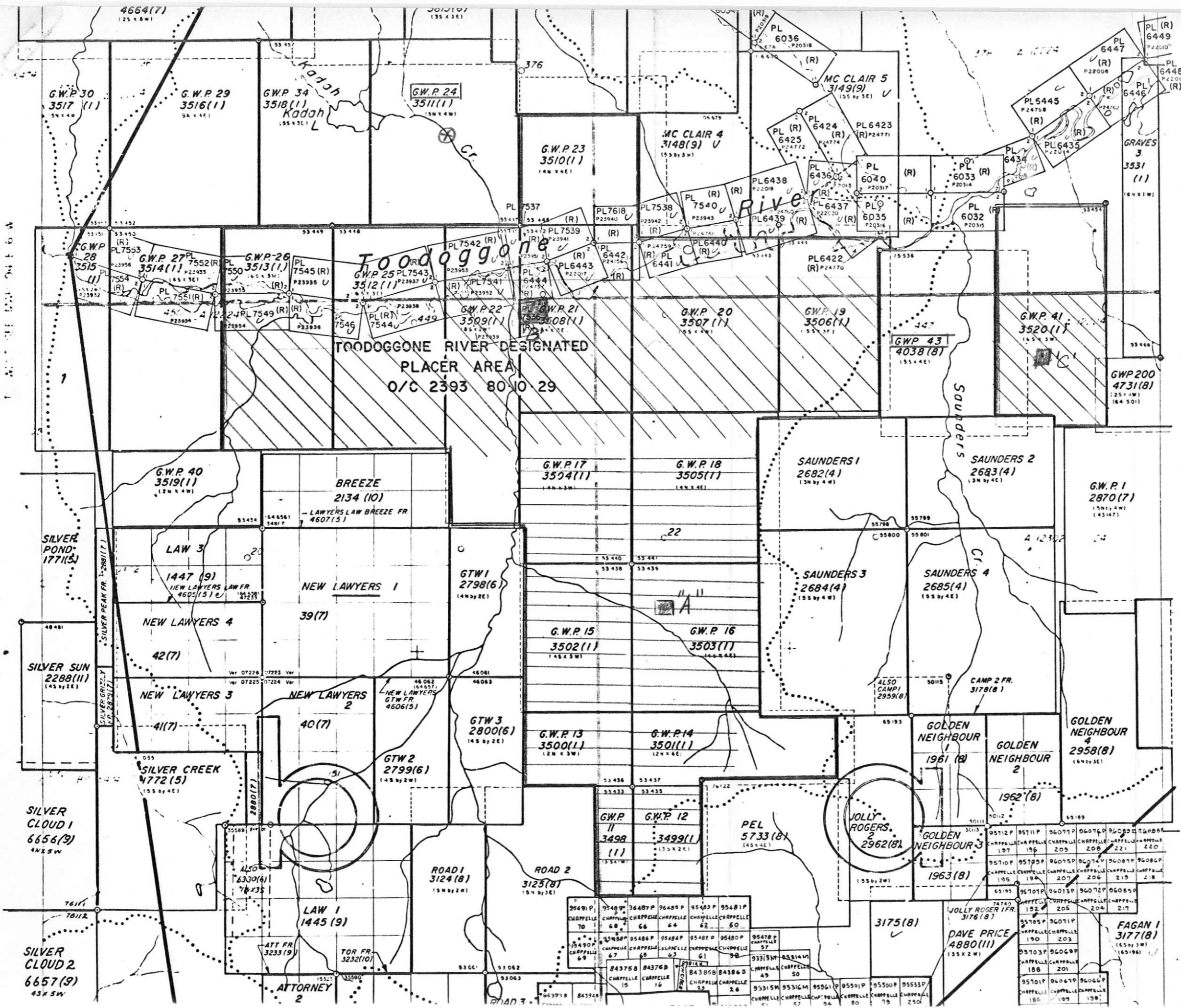
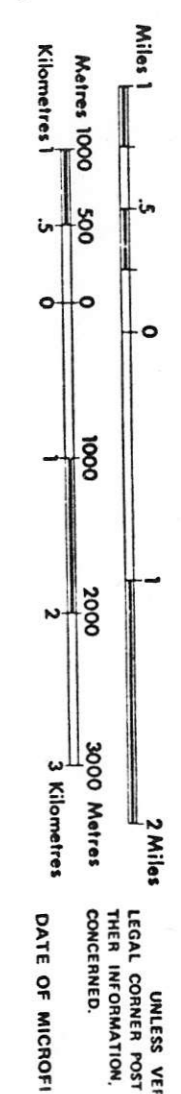


FIGURE 2 - GWP CLAIMS



TO EAST SEE MAP 94-E-7-W

LEGEND  
 CROWN-GRANTED MINERAL CLAIM  
 REVERTED C.G. MINERAL CLAIM  
 FORFEITED MINERAL CLAIM  
 VERIFIED LEGAL CORNER POST  
 LEGAL SURVEY  
 LEGAL CORNER POST & TAG NUMBER 0-3288



Province of British Columbia  
 Ministry of Energy, Mines and Petroleum Resources



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