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GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.,

YEAR END REPORT TAN CLAIMS, BRITISH COLUMBIA

New Westminster Mining Division

N.T.S. 92-H-4 W.

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A. SUMMARY

The 1975 field program on the Tan claims was carried out between May 22nd and August 30th, 1975. This work was geared to follow up the previous exploration work of Cominco Ltd., and to stratigraphically correlate the geology of the Main Showing area with the rest of the property. This work was done with the objective of delineating mineralized horizons and discovering their mode of occurrence.

Diamond drilling was carried out on induced polarization and coincident geochemical anomalies outlined by Cominco. It was discovered that these anomalies are due to vein and fracture filling systems extruding from a dacite sill and that the mineralization associated with this system is weak and sporadic.

At the same time, the Main Showing area was mapped at a scale of 1 inch to 100 feet and this area was then correlated with the remainder of the property geology by means of several selected traverses. It was found that a mineralized horizon of silicified, brecciated and altered tuffs is generally continuous across the property. On the basis of a high geochemical silt sample obtained by Cominco (which had apparently not been followed up) and also from the extrapolation of the mineralized horizon, it was decided to run a reconnaissance geochemical survey in the valley defined by Fumarole Creek. Several high values were obtained in soil samples over a considerable and continuous length and a follow up soil sample grid was put over the area. This grid outlined a large anomalous zone and subsequent reconnaissance and grid geochemical sampling was carried out over the known and projected outcroping of the mineralized horizon in an attempt to locate any undiscovered mineralization. In all, four geochemical anomalies were located. These are:

(a) Fumarole Creek
(b) Main Showing
(c) Pyrite Show
(d) Above the large Slide Area on Tamihi Creek (LA-22)

An electromagnetic survey was performed over the Main Showing area as well as on Cominco Ltd. Grid 4 - Line 8E and Grid 2 - Line 4E. This survey failed to return any anomalous results in the Main Showing area, and weak anomalies were located by the EM-16 on Grids two and four.

It was concluded that the geological setting on the Tan claims is favourable for hosting a massive sulphide deposit. The geochemical surveys outlined good anomalies which probably represent concentrations of mineralization.

A program of further geochemical soil sampling to better delineate the anomalous areas, followed by a geophysical survey and contingent short hole diamond drilling is recommended to evaluate the potential of the Tan claim group. It is also suggested that further geological mapping and prospecting be carried out on the property to add data on areas where little work has been done.

B. INTRODUCTION

1. History

One of the showings on the Tan property has been known since the early 1960's, but, as far as is known, no work had been performed on the property prior to 1972. The claims were staked by the present owners in the Spring of 1972 after prospecting turned up several additional showings of zinc and copper mineralization. The owners carried out minor stripping and trenching on the Main Showing and the Pyrite Showing in early 1972.

Cominco secured an option on the property and carried out geological mapping and soil and stream silt geochemical sampling during the period August to November, 1972. In 1973, Cominco carried out an Induced Polarization survey and road construction during July to October. Cominco terminated the option agreement at the end of 1973.

The owners approached Great Plains in the Spring of 1974 with the property and it was felt that the property had considerable merit as a volcanogenic type prospect. An option agreement was entered into in June, 1974.

During the 1975 field season, Great Plains Development Company of Canada, Ltd., carried out a program consisting of diamond drilling, soil and stream silt sampling, geological mapping and an orientation electromagnetic survey.

2. Ownership

The Tan claim group, consisting of the TAN, AX, SO and Dane claims, are owned by M. McClaren, O'Bryne Road, RR#3, Sardis, B.C., G. Stapley, 23 Bell Acres Road, RR#3, Sardis, B.C., and W.A. Bell, 975 Chilliwack Lake Road, RR #3, Sardis, B.C.

The property was optioned in June, 1974 from the owners by Great Plains Development Company of Canada, Ltd.

The claim group consists of sixty-one contigous claims, two fractional claims and one new claim consisting of nine units. The pertinent data on these claims is as follows:

Claim	Record No.	Due Date for Assessment
Tan 1-14, 17-30	25284-25295, 27521-27536	April 5, 1976.
Tan 31-38	27623-30	April 17, 1976
Tan 39-44	27742-47	May 9, 1976.
Tan 45-46	27748-49	May 18, 1976

Tan 47-48	27792-93	May 29, 1976
Tan 49, 50	27892-93	June 20, 1976
AX 1-6	28200-05	November 14, 1975
SO 1-9	28184-92	October 17, 1975
DANE 1 (9 units)		April 25, 1976

Assessment credit will be applied for on all claims to put them in good standing until 1977.

3. Location

The Tan claim group is located in Southwestern British Columbia, on Tamihi Creek adjacent to the U.S. - Canada International Boundary at the coordinates of 49 degrees 01 minute latitude and 121 degrees, 47 minutes longitude. The property is in N.T.S. 92-H-4 W and falls within the New Westminster Mining Division. Access is by a gravel logging road, 5 miles from the Chilliwack River road which is a paved road approximately 10 miles south from the town of Chilliwack and the Trans-Canada Highway. Chilliwack is located 67 miles by road east of Vancouver.

4. Economic Considerations

The Tan property is within fifteen road miles of major highway and rail connections leading to Vancouver, which is 67 miles further distant. The property is within five miles of power lines and ample water supplies can be found on the property. The topography is rugged with elevations ranging from 1,000 feet to 4,800 feet on the claim group. A small part of the property has been logged and the remainder is heavily timbered up to the 4,500 foot elevation where alpine vegetation takes over. The property is in an area of moderately high annual precipitation and experiences an annual snow fall of approximately 3 feet.

5. Previous Exploration

The following is a summary of all exploration work carried out on the Tan claim group prior to 1975.

1972: Minor trenching by the owners.

1972: Falconbridge - geological mapping and soil sampling prior to making an option decision.

1972: Cominco - soil and stream silt sampling and geological mapping.

1973: Cominco - induced polarization survey, road building and drill site preparation.

6. Objectives

The 1975 field program was designed to test by diamond drilling the geophysical and coincident geochemical anomalies outlined by Cominco Ltd., in previous exploration, and to examine the geological contact as a potential environment for Kuroko-type deposits. Detailed mapping was also carried out on the main showing with the purpose of correlating the stratigraphic section which carries known mineralization with the rest of the property. Several selected traverses were mapped to aid this objective. Reconnaissance and grid soil sampling were undertaken in an effort to delineate any unknown areas of mineralization on the property.

C. EXPLORATION AND DEVELOPMENT

1. Reconnaissance and Research

The reports and maps produced by Cominco Ltd., covering their exploration work on the Tan group, were evaluated with a view to establishing the potential for economic mineralization on the property. It was felt after examination that the property had some merit as a volcanogenic massive sulphide prospect.

Regional geological reports and maps were reviewed with the goal of placing the Tan property into a regional geologic perspective.

Reports consulted were:

G.S.C. Paper 69-47
Hope Map Area, West Half, British Columbia by J.W.H. Monger, (1970).

State of Washington - Division of Mines and Geology
Bulletin No. 50 - Geology and Mineral Deposits of the North Half of the Van Zandt Quadrangle, Whatcom County, Wash. by W.S. Moen, (1962).
Bulletin No. 57 - Mines and Mineral Deposits of Whatcom County, Wash. by W.S. Moen, (1969).

2. Geological Mapping

The Main Showing Area was mapped at a scale of 1 inch equal to 100 feet with the aim of:

i. determining a correlative geologic section that could be extrapolated to the rest of the property.

ii. determining the mode of occurrence and stratigraphic location of known mineralization within the area.

The area mapped was approximately 1800 feet by 1000 feet in areal extent. Control in locating outcrops was obtained by chaining and compassing a logging road that cut through the area; chaining and compassing selected lines across the area; and by the use of a 1 inch to ½ mile air photograph.

This mapping resulted in the defining of a mineralized horizon that could be placed in a stratigraphic section and the determination of the structural deformation in the area.

The detailed mapping was followed by reconnaissance mapping over the rest of the property on selected traverses at a scale of 1 inch equal to 1,000 feet, using altimeters, topographic maps and air photos for location control. From this mapping the horizon which carried the mineralization was traced out and located wherever overburden cover permitted. This work laid the basis for a geochemical survey.

3. Geochemical Surveys

Based on the geological mapping, diamond drilling and the geochemical surveys carried out by Cominco, it seemed apparent that the area around Fumarole Creek held good potential and had been overlooked by previous exploration. A reconnaissance soil and stream silt sampling survey using air photograph control at a scale of 1 inch equal to ½ mile was implemented. The samples were taken approximately 1000 feet apart over a two mile length. Several very high values were obtained in copper and zinc from soil samples and it was decided to run a soil grid over the anomalous area. This grid was located using a topographic map and an air photograph and the sample spacing was 100 feet with the lines spaced approximately 200 feet apart. Ten lines were run and 78 soil samples taken. This grid traced a large anomaly but failed to define its extent. At this point it was determined that as well as extending the above grid to better outline the anomaly, a reconnaissance scale geochemical survey using selected traverses which sampled the favorable horizon should be implemented.

The follow-up geochemical survey employed five men and was carried out between August 11 and August 20. Ten lines were added to the grid on Fumarole Creek with samples taken at 100 foot intervals along the lines. The reconnaissance scale geochemical sampling

was done using selected traverses across topography with lines approximately 400 feet apart and sample intervals of 200 feet. Thirty-nine reconnaissance lines were sampled.

Stream silt samples were collected from various drainage systems on the property and eight rock chip samples were taken in areas of poor soil development.

A total of 370 samples were collected. A soil profile was taken at locality D1,and is diagrammed in the attachments. The profile consists of a top six inch layer, Ao, with a high humus content, which grades into a two inch layer, A1, of compact fine textured material with streaks of humus. Below Ao and A1, at a depth of approximately eight inches, lies the B1 horizon consisting of generally fine textured, unstratified, yellow brown soil material with little or no humus and carrying thirty percent rock rubble with 100 to 200 mm diameters.

For the survey the B1 horizon was sampled using a plastic scoop and transferred into kraft paper sample bags. The samples were then tied, recorded, and shipped to Chemex Labs Ltd., in Vancouver, B.C. where they were assayed for copper and zinc.

The procedure used for laboratory processing and analysis of soil samples is as follows:

1. Samples are sorted, recorded and dried at 60 degrees centigrade.

2. Dried samples are sieved to minus 80 mesh fraction with a nylon and stainless steel sieve.

3. 0.5 gram of minus 80 mesh sample fraction is weighed into a test tube and digested with hot 70% perchloric and concentrated nitric acid. Samples are digested until all organic material is oxidized (approx. 4 hrs.).

4. Digested samples are diluted to 25 ml volume with demineralized H2O and mixed throughly. Solutions are settled until clear.

5. Copper and zinc were analyzed in aqueous solution with Techtron A-A-3 Atomic Absorption Unit - Detection limit in soils and stream sediments for copper and zinc is 1 ppm.

(i) Results of Geochemical Survey

An anomalous zone, with zinc values greater than 500 ppm and copper values greater than 100 ppm, was traced for approximately 3,000 feet in length on the west side of Fumarole Creek. The maximum values for zinc and copper were 3,200 ppm and 910 ppm respectively. This anomaly appears to have a continuation 600 feet to the north, where line A-32 crossed an anomaly which peaks at 1,220 ppm zinc and 405 ppm copper.

Other anomalous areas denoted by the geochemical survey are:

(a) Main showing: maximum values for zinc and copper are 600 ppm, and 222 ppm, respectively.

(b) Pyrite Show: over a strike length of 1,200 feet with maximum values of 175 ppm copper and 960 ppm zinc.

(c) Line A-22: at the east-central part of the map sheet, one sample returned 587 ppm copper and 1,616 ppm zinc.

The Fumarole Creek anomaly appears to show down slope as well as down-valley dispersion. It seems apparent that a dispersion, down and across topography, of up to 1,000 feet would not be unlikely.

By applying the possible effect of the dispersion to the contoured geochemical results, it can be interpolated that the Fumarole Creek anomaly would have a minimum strike length of 800 feet. This length could be increased after further sampling delineates the anomaly crossed by line A-32, 800 feet to the north which is on strike with the main Fumarole Creek anomaly.

The strength of this anomaly is quite significant in that it is in an area of overburden cover and can be compared to the Main Showing where zinc and copper mineralization can be traced on surface. At the main showing, soil samples ran as high as 600 ppm zinc and 222 ppm copper, indicative of rock chip and selective grab samples that ran from less than 1% zinc to 22% zinc. The Fumarole Creek anomaly, in comparison, showed several values over 1,000 ppm zinc and 300 ppm copper.

The Fumarole Creek geochemical anomaly appears to be the largest and strongest on the property. However, anomalies (b) and (c), above, are also indicative of good copper-zinc mineralization. It is apparent that follow up work must be done on all of

these anomalous areas. This work would involve further geochemical sampling to fill in areas around the geochemical anomalies as well as areas where geochemical sampling has not provided adequate coverage. This work would be followed by line cutting and geophysical surveys consisting of EM and IP Dependent upon the results of the geophysics, short hole diamond drill testing of the anomalous areas would be recommended. This program is outlined in greather detail under the heading Recommen tions, later in this report.

4. Geophysical Surveys

(a) Introduction

Two orientation electromagnetic surveys were conducted on the property. The first was performed on Cominco Grid 4, Line 8 E from Station 4 S to 10 S and Grid 2, Lines 4 E from station 1 + 50 S to 4+50 N and line 0 from baseline to 5N. These lines were surveyed with both a Geonics EM-16 and EM-17 in order to determine I.P. anoma detectabilities with a horizontal loop and VLF-EM configurations. The second survey was carried out over the Main Showing area with a Geor EM-16 to determine the response given by known mineralization in this area. The Main Showing survey was conducted on ten compassed and chained lines that were 100 feet apart and readings were taken every 5 feet for a total of approximately 1.5 line miles.

(b) Survey Procedures and Results

(a) General

Selected I.P. anomalies on Grid 2, line 4 E and Grid 4 lin 8E were surveyed. It was felt that EM-16 and EM-17 anomalies over selected I.P: anomalies would reinforce the probability of massive sulphides, better define drill targets and possibly establish the applicabil ity of utilizing further E.M. methods for massive sulphide exploration in the Tan group area.

(b) Grid 2 - EM-17

Procedure: A 100 foot and 200 foot cable survey was completed over the I.P. anomaly on line 4 E as well as a 200 foot cable over line 0 to test for strike extensions to the west.

Results: No anomalies were noted.

(c) Grid 2 - EM-16

Procedure: Lines 4E and 0 were surveyed using VLF transmitting station NBA: Panama - Frequency 24.0 KHz. Transmitting stations at Seattle, Washington (NPG) and Cutter, Maine (NAA) were not used due to unfavourable primary field operation relative to the survey lines and postulated strike of the I.P. anomalies. The dip angle values are treated using the Fraser technique. The sum of the values of two adjacent stations minus the sum of the next two adjacent stations present a value which is contourable. This filtering technique tends to smooth and accentuate anomalies and compensate for elevation inequalities.

Results: Two weak to moderate anomalies are detected at 0+50 N and 3+50 N on line 4E and at 4+00 N on line 0. The anomalies on line 4 E may represent multiple conductors.

(d) Grid 4 - EM-17

Procedure: A 200 foot cable survey was carried out over the I.P. anomaly and drill site on line 8 E.

Results: No anomalies are discernible. The positive in phase build-up at 6 + 00 S is probably due to a significant error in coil separation. Due to the fact that the transmitter was hanging over a cliff for the 6 + 00 S readings, the distance between transmitter and receiver was shorter than 200 feet - probably about 175 to 185 feet - and a positive in phase error was introduced.

(e) Grid 4 - EM-16

Procedure: Same as Grid 2.

Results: A weak conductor occurs at BL 6+00 S and within the area of the I.P. anomaly.

(f) Main Showing

Procedure: An eight line grid was surveyed using VLF transmitting station NBA: Panama-Frequency 24.0 KHz..

Results: No anomalies were discernible.

(c) Summary of EM Survey

1. No anomalies were detected with the EM-17. Due to high relief and lush vegetation on the Tan property, any horizontal loop surveys should be discouraged in the future since proper cable separations cannot be practically maintained. A VLF-EM or vertical loop survey would be preferred in order to detect sulphide bodies fairly confidently combined with field survey facility.

2. Errors while using the EM-17 were primarily due to a "short" cable separation, and thus resulted in positive in-phase errors.

   Errors due to coil orientation were minimal owing to careful survey techniques.

3. The EM-16 anomalies may be due to sulphides and/or graphite. However since zinc, lead and iron sulphides have been mapped near these anomalies then sulphides seem more probable as the conductors.

4. For optimal operating results with the EM-16, the strike of the conductor should point to the transmitter station. Since the trend of the I.P. and geochemical anomalies is generally northwest, then the best transmitting station for the Tan group is NBA-Panama Frequency 24.0 KHz. The author knows of no other "ideal" transmitting station that could be used on the Tan property. Possibly NAA - Annapolis, Maryland Frequency 21.4 KHz., would suffice if the Panama signal decreased in intensity and an alternate station was required.

5. The failure of the EM-16 survey over the Main Showing area to define any anomalous zones can only be explained subjectively. The most probable explanation is that sphalerite responds poorly to geophysical surveying and that the total sulphide content of the rock is too low to give a good response. Total sulphides in the order of 20-40% are apparently needed to give an anomalous response. At the Tan, the known sulphide concentrations are of the order of 5% to 20%.

5. Drilling

(a) Introduction

The diamond drilling program was employed to test the I.P. and coincident geochemical anomalies that resulted from Cominco's work. To this end the program was successful, however no sections of economic mineralization were found. Seven holes were drilled for a total footage of 1,301 feet. The first three holes were drilled on the same location with a Morex 350. Unfortunately this machine was incapable of reaching the desired depth and a modified BBS-1 was employed to drill the anomaly on Grid 4. A Winkie pack sack drill was used to drill T-75-4 on Grid 2 but was unable to complete the job due to heavy overburden cover and the limited casing capabilities of the drill. Pertinent data on the drilling is in table I and the drill logs are located under Attachments.

TABLE I

DIAMOND DRILLING DATA ON THE TAN PROPERTY - 1975

Drill Holes	Location	Depth	Dip Degrees	Azimuth Degrees	Machine
T-75-1	Grid 4 Line 8 E Stat. 6+50 S	43 ft.	-90	-	Morex 350
T-75-2	Grid 4 Line 8 E Stat. 6+50 S	57 ft.	-90	-	Morex 350
T-75-3	Grid 4 Line 8 E Stat. 6+50 S	45 ft.	-90	-	Morex 350
T-75-4	Grid 2 BL + 4 E	34 ft.	-90	-	Winkie
T-75-5	Grid 4 Line 6 E Stat. 7 S	417 ft.	-45	105	BBS-1
T-75-6	Grid 4 Line 4 E Stat. 8+20 S	288 ft.	-80	35	BBS-1
T-75-7	Grid 4 Line 4 E Stat. 8+20 S	417 ft.	-45	128	BBS-1

(b) Drilling Results

The drill program on Grid 4 resulted in determining the cause of the geochemical and geophysical anomalies outlined by Cominco Ltd. I.P. responses can be related to zones of heavy pyritization of a disseminated character. The geochemical anomaly can be related to weak vein-type zinc-copper mineralization associated with a dacite-rhyolite sill.

The stratigraphy intersected is detailed in cross-sectional diagrams which can be found under Attachments. The section generally consists of massive andesite and amygdaloidal flows, altered tuffs, cherts and dacite-rhyolite sills. This fits in well with the "Lower Series" in the stratigraphic pile as outlined under Geology.

The mineralization intersected reached a maximum value of 3.8% zinc over one foot. The potential of finding massive sulphide mineralization in this area is considered poor due to the type and mode of mineralization noted and the geology.

D. GEOLOGY

1. General Geology

(a) Regional Geology

The Tan property is located in the southwestern portion of the Hope map area. This area is within the Cascade Mountains which consist of a north-northwest trending gneissic and granitic core flanked by belts of sedimentary and volcanic rocks.

Stratified rocks range in age from probable pre-Middle Devonian to Recent. The oldest rocks are pre-Middle Devonian amphibolites and schists that form small fault slices in an area to the north and west of the Tan group.

Upper Paleozoic altered basic volcanic rocks, chert, pelite, limestone and minor sandstone are widespread in the Cascade Mountains. Above these are Upper Triassic, Lower and Middle Jurassic pelites and fine-grained sandstones; local Middle Jurassic acid to intermediate volcanics; Upper Jurassic and Lower Cretaceous sandstones, pelites and conglomerates; and local Lower Cretaceous intermediate volcanic rocks. All of these rocks are marine, with the exception of uppermost Lower Cretaceous rocks found in the easternmost part of the map-area. Above these, in places, there are coarse grained, continental Lower Tertiary clastic rocks and acid to basic volcanic rocks. Thick Pleistocene to Recent deposits locally fill major valleys.

Orogeny took place in the map-area in mid-Cretaceous to Early Tertiary time. Uplift is recorded by coarse clastic rocks in Permo-Pennsylvanian time and hiatuses between Lower Permian and Upper Triassic rocks and in Upper Jurassic and Lower Cretaceous rocks. The present structural pattern was established in mid-Cretaceous to Early Tertiary time. Sedimentary and volcanic rocks on the west side of the Cascades were folded and thrust to the northwest and west. Normal and strike-slip faulting in Early Tertiary time and uplift in Pliocene-Pleistocene time completed the structural evolution of the area.

Regional Geology of the Chilliwack Group

The Upper Paleozoic Chilliwack Group and its tectono-stratigraphic correlatives represent a eugeosynclinal assemblage of volcanics that range in composition from basalt to rhyolite. Abundant pyroclastics and volcanic sandstones, carbonates and pelites make up the remainder of the assemblage.

Acid volcanics occur locally as in central British Columbia (Asitka); southern British Columbia (Chilliwack); northwestern Washington (Glacier); northwestern Nevada (Koipato) and northcentral California (Shasta).

In southern British Columbia the Chilliwack Group ranges in age from Lower Pennsylvannian to Lower Permian. It is comprised of a sequence of argillites, fine to coarse-grained volcanic arenites, rare conglomerates, large and small limestone bodies and a volcanic unit of altered acid to basic flows, tuffs and silicified tuffs and cherts. The base of this succession is not exposed.

In the Chilliwack area the maximum total thickness of the Chilliwack group is estimated to be about 5,700 feet with a maximum thickness of 1,500 feet of volcanics.

In northwestern Washington the Chilliwack Group ranges in age from Middle Devonian to Late Permian. The Chilliwack Group in northwestern Washington consists of Devonian coral-bearing limestone; lower Pennsylvanian crinoidal limestone; lower Permian fusilinid limestone and a sequence of acid to basic flows. Lithic tuffs, volcanic breccias and a sequence of argillites, greywacke, siltstone, conglomerate and chert make up the remainder of the assemblage.

(b) Local Geology

The Tan claim group is located on a portion of the Chilliwack Group that represents a volcanic knoll which began development in Early Permian time. Within the area covered by the Tan claim group a shallow marine volcanic pile accumulated. The sequence is characterized by rapid lateral facies changes and a wide range of lithologies.

The mapping of the Tan claim group has shown that the volcanics can be divided into a lower acid series and an upper series of limestone, tuffs, cherts and acid to basic flows.

(i) Lower Series

The lower series consists primarily of a sill-like body of porphyritic dacite. These rocks are dense, compact and fine-grained, usually pale green in colour and have portions with feldspar or quartz phenocrysts that make the rock distinctly porphyritic.

Acid fragmentals are found to occur on the north side of Tamihi Creek. These fragmentals are composed of light green, angular to sub-rounded acid porphyry fragments set in a finer ash matrix of the same composition.

Cherts and thin bedded acid tuffs are locally developed on both the north and south sides of Tamihi Creek.

On the northwestern portion of the property and on the south side of Tamihi Creek the porphyritic dacite shows brecciated areas and inclusions of blocks of andesitic volcanics. The brecciated portions of the dacite are distinctly different texturally from the acid fragmentals found on the north side of Tamihi Creek and are probably genetically related to the intrusion of the dacite sill.

(ii) Upper Series

The upper series consists of a sequence of acid to basic flows; water-lain tuffs, volcanic breccias; red and green cherts and limestones.

The andesites and basalts found in the lower portion of the upper series are red and green mottled rocks, with rare quartz and chlorite filled vesicles. Pillow structures have been noted on the north side of Tamihi Creek on Mount McGuire.

Volcanic breccias overlie the intermediate to basic flows and are characterized by their diversity of fragments. Angular to sub-angular fragments of red andesite, chert and granite characterize the fragment components. The fragments are set in a purple matrix of finer volcanic debris. The granitic fragments are considered to be of pre Devonian age.

A thick repetitive sequence of green and red radiolarian bearing cherts directly overlie the volcanic breccias. In thin section the green cherts are comprised of a mass of radiolaria set in a matrix of volcanic ash. The tests of the radiolaria have been filled with chlorite. In thin section the red cherts show clasts of tuffaceous material intermixed with radiolaria. Both the tuffaceous material and radiolaria have been silicified.

A section of limestones stratigraphically overlie the chert sequence. These limestones vary from recrystallized quartz-grain limestone (calcarenite) to a partially recrystallized fossiliferous limestone.

The quartz-grain limestone contains shell fragments and sub-angular to angular quartz grains. This limestone is most probably of Permian age and formed in a shallow beach environment that surrounded the volcanic island.

The fossiliferous limestone contains the fusulinid belonging to the genus Parafusulina. This fossil has been dated by Dr. W.R. Danner as being of Middle Permian age. The formative environment of this limestone is shallow waters (less than 100 feet) and a sub-tropical climate.

Overlying the limestones are volcanic breccias and flows of andesitic composition. The volcanic breccias are characterized by purple fragments set in a green chloritic matrix. The fragments show reaction rims and textures that suggest that they may be welded. Rocks that are probably correlative to this unit outcrop on the southeastern side of Church Mountain and also in Liumchen Creek approximately two miles west of Liumchen Mountain. It has been shown that these rocks are subaqueous pyroclastic flows that were formed by the sloughing of debris from the flanks of active underwater volcanoes during and after pyroclastic eruptions.

A widespread sequence of water-lain tuffs overlies the lower volcanic assemblage. It is this horizon that hosts the mineralization that is seen in the upper sequence. In thin section it can be seen that the tuffs have been broken up and redeposited with minor amounts of argillite. These water-lain tuffs have been subjected to

widespread silicification which has resulted in total replacement of the tuffs locally, such that they resemble cherts. In areas of intense silicification it is difficult to determine whether these "cherts" are chemical precipitates or completely replaced tuffs. Intercalated with this unit are coarse lithic tuffs and acid to intermediate volcanic breccias. These rocks are particularly well developed along Fumarole Creek, where andesitic blocks up to five inches in diameter occur.

Red to black siliceous dacite flows occur in this portion of the section. The flows show areas of autogeneous brecciation with quartz containing hematite dust surrounding the broken dacite blocks. These flows are best exposed along Fumarole Creek. The flows are most probably genetically related to the dacite found in the lower series except that it has broken through to the then existant surface.

Andesite flows comprise the bulk of the remaining portion of the upper series. These flows are comprised primarily of a dark green andesite with chlorite-calcite filled amygdules up to 1 mm in diameter. Minor hornblende andesite flows are found in this sequence on the southeastern side of Lihumitson Mountain. These flows may correlate with the basic volcanic rocks found on United States' Church Mountain.

The upper portion of southern Lihumitson Mountain is comprised of Lower Pennsylvanian crinoidal limestone. These limestones have been thrust over the younger underlying rocks.

It appears that the succession of the volcanic and sedimentary lithologies began with the extrusion of basic to intermediate flows in a submarine environment. This was followed by deposition of volcanic breccias of limited areal extent. Following this period of volcanism there was general quiescence with the deposition of red and green cherts and shallow water limestones.

Another period of volcanism resumed with the extrusion of andesitic flows and deposition of volcanic breccias and submarine pyroclastic flows. Within this same period of volcanism an acid volcanic sequence was developed. Dacitic volcanics were emplaced as sill-like bodies and extruded as flows. Accompanying the acidic volcanism was the deposition of dacite tuffs and coarser acidic fragmentals. The dacite tuffs form an extensive sheet that are found as far as seven miles away from their source. Much of the acidic fragmentals were deposited in a subaqueous environment.

In areas distant from the volcanic activity both limestones and dacite tuffs were being simultaneously deposited.

Water-lain tuffs covered much of the volcanic pile in the Tamihi Creek area and the close of volcanism is marked by the extrusion of andesitic flows.

The Tan property covers volcanic rocks that represent a volcanic knoll. This volcanic knoll was the centre of volcanism during the Permian. The centre is characterized by a diverse assemblage of volcanics and an assemblage of coarse volcanic breccias. The knoll was surrounded by shallow water as proved by fossil evidence and the water-lain tuffs. The lithologies change rapidly into basinal facies which are characterized by volcanic arenites and subaqueous pyroclastic flows.

(c) Metamorphism

The Chilliwack Group has been involved in at least two episodes of deformation. The rocks belong to the lowest part of the greenschist facies. Feldspars in volcanic rocks are sausseritized, chlorite is ubiquitous and pumpellyite is present locally. Some feldspars in the dacite tuffs are altered to fine grained lawsonite, a mineral that characterizes the glaucophane schist facies (blueschist metamorphism). It has not been possible to relate this metamorphism to any period of deformation and it is suggested that this metamorphism is related to a short lived event such as rapid burial in a low geothermal environment followed by rapid uplift or by high pore pressures during overthrusting.

(d) Structural Geology

Regional deformation of the Chilliwack Group took place primarily during Mid-Cretaceous time. Paleozoic and Mesozoic rocks were initially deformed into northeast trending folds. As deformation continued, the northeast trending folds become overturned to the northwest, thrusting took place, and the Liumchen Nappe and the Mount McGuire Nappe were formed. Rocks of the McGuire Nappe were initially thrust over the Liumchen Nappe and became a recumbent anticline whose lower limb was partly removed by thrust faulting. With continuing deformation, the greater competancy of the thick volcanic sequence of the Liumchen Nappe resulted in this underlying Nappe being moved relatively further resulting in a drag fold (see diagram).

Minor structures indicative of the regional structural imprint are most notably visible in the north and north-west end of the property.

North-east trending tight isoclinal recumbent drag folds plunging gently to the northeast and complicated by imbricate thrusting to the northwest and normal faulting are well noted in the main showing area. Similar structures were noted in the northwest portion of the property on the southwest side of Tamihi Creek.

Stratigraphic sections in Tamihi Creek as well as in Fumarole Creek appear to be gently dipping to the southwest and are relatively undisturbed. As the thrust fault, marking the Chilliwack Group - Cultus Formation boundary, is approached from the southeast, structural deformation gains intensity resulting in the above named structures. Thrust faults generally strike northeasterly and normal faulting appears to trend northwesterly. Older Pennsylvanian limestones have been thrust over Permian volcanics and form a klippe on Lihumitson Mountain. This klippe extends southwesterly into Washington State.

Generally, open northeasterly trending gentle folds were thrust and overturned to the northwest, with the competency of the rock units determining thrust boundaries. At the nose of the thrust sheet, more intense infolding of units and imbricate thrusting occurred. Minor north and northwest trending normal faulting complicates this picture in the main showing area. The main showing area appears to be bound by major faults which have north and northwest traces and give the impression of a graben structure.

2. Mineralization

Mineralization occurs in both the upper and lower series. The mode of occurrence of mineralization in the lower series can be contrasted with the mode of occurrence of mineralization in the upper series.

(a) Mineralization in the Upper Series

Silicification and pyritization of the water-lain tuff unit yields a black to grey chert which has been denoted as the mineralized horizon. This horizon is best developed at the northwestern portion of the property and it is at the main showing area where sphalerite, chalcopyrite and pyrite have been found to concentrate. This horizon sub-outcrops again along Fumarole Creek and is outlined by a zinc-copper geochemical anomaly.

At the main showing the sulphide mineralogy is comprised of an assemblage of pyrite, sphalerite and chalcopyrite and minor galena. Sphalerite predominates over chalcopyrite and only rarely does chalcopyrite occur without sphalerite. Sphalerite and chalcopyrite are observed as open space fillings where they occur as small (up to 5 mm) crustiform

crystals on drusy quartz crystals. Within the chert breccia, sphalerite is observed to rim euhedral pyrite crystals and replace portions of the breccia fragments. It also occurs with and is brecciated and healed by black quartz veinlets. Chalcopyrite is found to rim and replace sphalerite and enclose pyrite. It also replaces portions of the breccia fragments. Pyrite is found as euhedral to anhedral grains up to 2 mm in diameter accompanying sphalerite and chalcopyrite. It also occurs as disseminations within the breccia fragments and accompanying the black quartz veinlets. The general sequence of deposition of sulphide minerals is pyrite followed by sphalerite which is followed by chalcopyrite.

(b) Mineralization in the Lower Series

The dacite sill-like body has caused replacement of tuffs and the formation of small mineralized zones. Areas of shearing have also been the locus for mineralizing solutions and has localized vein networks of pyrite, chalcopyrite and sphalerite.

In the shear zone mineralization, pyrite predominates and occurs in veinlets following the shear direction. Chalcopyrite occurs as subhedral grains within the zones and is found concentrated as pockets rather than as a continuous distribution of mineralization. Sphalerite occurs to a lesser extent and is rare or absent in shear zone mineralization.

In the replacement mineralization, sphalerite predominates over chalcopyrite. This type of mineralization occurs as disseminations within pyrite (as in D.D.H. #5 @ 293' to 300' and D.D.H. #6 @ 200' to 203'). In these sections fine grained acid tuffs and fragmented andesites have been selectively replaced. In drill hole #6 @ 175' to 188', an acid fragmental is cut by stringers of sphalerite and chalcopyrite and the fragments and matrix are partially replaced by these minerals. Pyrite is ubiquitous throughout the replacement zones and occurs as fine disseminations (grain size < 1 mm in diameter) and as euhedral crystals up to 1.5 mm in diameter.

(c) Alteration

1. Replacement of tuffs in Upper Series

Alteration associated with the mineralized horizon in the upper series consists of the following types.

(i) Silicification

Silicification is widespread in the water-lain tuff unit and results in the total replacement of the tuffs such that they resemble cherts. In areas

of intense silicification it is difficult to ascertain the origin of the cherts (i.e. chemical precipitates or completely replaced tuffs). Associated with the silicification is a black alteration product which may be organic carbon. This alteration product appears at the main showing area and in float along Fumarole Creek.

In localized areas the silicification is particularly intense and forms "beds" over twenty feet thick and several hundreds of feet in length.

Silicification of the tuff unit may have occurred during its deposition resulting in the selective replacement of that unit - an alternate explanation is that a chemical precipitation of chert has occurred around areas of vent activity.

(ii) Chloritization

Chloritization is particularly noticeable in the tuffaceous units adjacent to the areas of silicification. In partially silicified rocks, chloritized lithic fragments are present. Chloritization may be accompanied by minor talcose alteration.

(iii) Pyritization

Pyrite found associated with the mineralized horizon has several modes of occurrence. Pyrite is found most commonly as fracture fillings cutting silicified tuffaceous rocks. It is also found as disseminations within the silicified rocks replacing lithic fragments.

Pyrite has been noted as nodules within the water-lain tuffs as well as lenses parallel to bedding. The nodules show a concentric structure suggesting formation in a marine environment.

(iv) Clay Alteration

No well developed clay minerals can be readily discerned in the rocks associated with the mineralized horizon. However, thin section work is needed to clarify whether or not these minerals exist in any amounts.

2. Replacement zones in the Lower Series

Alteration associated with the dacite sill is found as zones which cross-cut several different lithologies.

(a) Silicification

Silicification is much more weakly developed in the lower series than in the upper series. It is best developed in areas where quartz

veins and veinlets have been emplaced. This alteration is noted in drill hole #3 at 300' to 383' and drill hole #6 at 217½' to 260'.

(b) Chloritization

Chloritic alteration is particularly well developed in the northwest portion of the property. The chloritic alteration may be accompanied by sericitization and talcose alteration.

Chloritic alteration is generally widespread throughout the property and may be due in part to lower greenschist metamorphism.

(c) Pyritization

Pyritization is widespread in the lower series and pyrite is found to replace tuff units adjacent to the dacite sill as well as being developed in shear zones within and adjacent to the dacite sill.

(d) Clay Alteration

Sericite has been noted to occur with pyrite in areas of shearing within the dacite sill. Also it has been noted in drill hole #5 at 293' to 300' and drill hole #6 at 200' to 203' where tuffs and volcanics have been replaced.

3. Summary of Alteration

Alteration is best developed in the upper series where it is localized and forms distinct zones confined to one particular rock unit. Alteration in the lower series is widespread and forms zones overlying the dacite sill. The alteration in the lower series is not confined to any one particular lithology and is most often related to shear and fault/fracture zones.

(a) Controls on Mineralization

1. Mineralization in the Upper Series

The mineralized horizon is confined to a sequence of water-lain tuffs that can be correlated from the main showing area to Fumarole Creek. Alteration and mineralization are restricted to the tuff sequence and vary in intensity of development. At the main showing the mineralized horizon has an apparent maximum thickness of 100 feet within a tuff unit of 300 feet maximum thickness. The apparent strike length of the mineralized horizon here is a minimum of 1,000 feet and follows the regional bedding attitudes.

As previously mentioned, the mineralization occurs in a water-lain tuff that in thin-section shows a reworked nature of the constituents.

The tuffs have been altered to a chert.

If alteration of this unit occurred while it was being deposited it would be expected that there would be replacement of this lithology as well as a precipitation of silica in areas of vent activity. At present this appears to be the most reasonable explanation for the selective replacement of this particular lithology.

2. Mineralization in Lower Series

Mineralization found in the lower sequence is confined to areas of shearing and fracturing or those areas in close proximity to the dacite sill. The shear and fracture zones are widespread throughout the property and can be found to occur both within or outside of the dacite sill. Within the shear and fracture zones pyrite and chalcopyrite are the predominate sulphides with sphalerite rare or absent. In the rocks that have been replaced, sphalerite is more abundant than chalcopyrite. The areas of replacement are best developed in tuffaceous rocks though there is no particular preference for rock type.

E. CONCLUSIONS

1. The best known mineralization occurs in a unit of altered brecciated, and silicified cherty tuffs.

2. A 3,000 foot long, strong zinc-copper geochemical anomaly occurs on the west slope of Fumarole Creek and appears to outline the "mineralized horizon". In total, three anomalous areas have been defined by geochemistry.

3. There appears to be a correlation between intensity of silicification and mineralization and this may reflect proximity to dacite-rhyolite extrusions.

4. The dacite-rhyolite extrusive bodies are believed to be the sources of mineralization although this has not been confirmed by field observation.

5. Dacite-rhyolite sills occur in the lower section of the stratigraphic column and have weakly mineralized vein systems associated with them.

6. The geological environment is indicated to be shallow marine consistent with island arc development during Paleozoic time.

F. RECOMMENDATIONS

A program that would evaluate the potential of the mineral deposits on the Tan Group is detailed below:

1. Line cutting in the areas of the geochemical anomalies to facilitate geophysical surveying. The Fumarole Creek area, the Pyrite Show area, and the area around line A-22 would have to be cut.

2. Contingent upon the results of the geophysical surveys, fence diamond drilling across geochemical and geophysical anomalies would be recommended.

Report by:

G.L. Garratt
M. McClaren

Under the Supervision of M.D. McInnis, Regional Geologist

APPENDIX I

STATEMENTS OF QUALIFICATION

STATEMENT OF QUALIFICATIONS

I, Michael D. McInnis, with residence at 6550 Silver Springs Way, N.W. in the city of Calgary, Alberta, declare

1. that I graduated from the University of British Columbia in 1969 with an Honours B.Sc., in geology.

2. that since graduation I have been employed as an exploration geologist in British Columbia, Yukon and the Arctic Islands,

3. that I am presently Regional Geologist for Great Plains Development Company of Canada, Ltd.,

4. that I have successfully passed the exams necessary for entrance into the Professional Engineers Society of B.C. and have applied for membership in that society.

Michael D. McInnis
September, 1975.

STATEMENT OF QUALIFICATIONS

I, Glen L. Garratt, am a qualified Geologist having graduated from the University of British Columbia in 1972 with a Bachelor of Science degree majoring in Geology. I have worked in the mineral exploration industry in British Columbia since 1969 and am presently employed by Great Plains Development Company of Canada, Ltd., as a geologist.

G.L. Garratt
September, 1975.

DIAMOND DRILL HOLE ASSAYS

Hole T-75-5	Cu	Zn	Ag	Au
T-5-1: from 222.5 to 230.5 (8 feet)	.01	0.02	0.01	.003
T-5-2: from 230.5 to 242.5 (12.5 feet)	.01	0.02	0.01	.003
T-5-3: from 242.5 to 255.5 (13.0 feet)	.01	0.03	0.01	.003
T-5-4: from 255.5 to 265.0 (10.5 feet)	.01	0.01	0.01	.003
T-5-5: from 265.0 to 275.0 (10.0 feet)	.01	0.02	0.01	.003
T-5-6: from 275.0 to 285.0 (10 feet)	.01	0.03	0.01	.003
T-5-7: from 285.0 to 288.0 (3 feet)	.01	0.01	0.02	.003
T-5-8: from 288.0 to 293.0 (5 feet)	.01	0.01	0.03	.003
T-5-9: from 293.0 to 300.0 (7 feet)	.07	0.81	0.01	.003
T-5-10: from 300.0 to 307.0 (7 feet)	.04	0.43	0.01	.003
T-5-11: from 307.0 to 312.0 (5 feet)	.02	0.05	0.03	.003
T-5-12: from 312.0 to 317.0 (5 feet)	.01	0.04	0.04	.003
T-5-13: from 317.0 to 327.0 (10 feet)	.03	0.37	0.02	.003
T-5-14: from 327.0 to 337.0 (10 feet)	.06	0.11	0.04	.003
T-5-15: from 337.0 to 347.0 (10 feet)	.01	0.02	0.04	.003
T-5-16: from 347.0 to 357.0 (10 feet)	.01	0.01	0.01	.003
T-5-17: from 357.0 to 367.0 (10 feet)	.01	0.01	0.01	.003
T-5-18: from 367.0 to 370.5 (3.5 feet)	.01	0.01	0.01	.003
T-5-19: from 370.5 to 377.5 (7.0 feet)	.01	0.04	0.01	.003
T-5-20: from 377.5 to 383.0 (5.5 feet)	.01	0.24	0.01	.003
T-5-21: from 383.0 to 389.5 (6.5 feet)	.01	0.02	0.01	.003
T-5-22: from 389.5 to 397.0 (7.5 feet)	.01	0.02	0.01	.003
Hole T-75-6				
T-7-1: from 186.0 to 187.0 (1.0 feet)	.30	3.18	0.02	.003
T-6-2: from 187.5 to 191.0 (3.5 feet)	.01	0.24	0.01	.003
T-6-3: from 191.0 to 200.0 (9.0 feet)	.01	0.05	0.01	.003
T-6-4: from 200.0 to 203.0 (3.0 feet)	.52	0.14	0.04	.003

Diamond Drill holes numbered T-75-1 to 3, which were all drilled vertically on the same location, did not reach any mineralized zones and were, therefore, not sampled for assaying.

Diamond Drill hole T-75-4, done by the Winkie drill, failed to reach bedrock and therefore the core (boulders in overburden) was not sampled for assaying.

APPENDIX II

DIAMOND DRILL LOGS AND ASSAYS

GREA[illegible] LAT[illegible] DEVE[illegible]MENT [illegible]MPAN[illegible] OF C[illegible]A,

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-1

SHEET NUMBER 1 of 1 SECTION FROM 6' - 43' STARTED

LATITUDE Line 8 E (Grid 4) DATUM COMPLETED

DEPARTURE Stat. 6.5 S BEARING ULTIMATE DEPTH 43'

ELEVATION DIP -90 degrees PROPOSED DEPTH 200+

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
6-8'	Green f.g. andesite w.		Chl., calcite	1%	70%					
	black angular mafic clots			minor py						
8-12'	Green qtz.eye, fldsp.porph.			minor py	80%					
	andesite - may have been		Chl.,calcite							
	altered by andesite dyke									
12-30'	Purple porphyritic ande-	85° & 45° fractures	Chl.,calcite		75%					
	site fldsp lathes to ¼"	chl.-qtz on 85°								
	length. Abundant hematite	fracts & qtz chl.-calc								
	- Color varies @ 23' to	on 45° fracts. minor								
	grey w. less hematite.	slickensides on 45°								
	- Qtz veins to ¼" @ 45°	fractures. Fractures								
	at 28'	from 15°+45° hem.chl.								
30-38'	Green v.f.g. to f.g.	filled w. -(1) qtz,			80%					
	andesite.	fldsp chl. (2) hema-								
		tite pervading surr-								
		ounding rx.								
38-41'	Porphyritic rhyodacite	Qtz. veins to ¼" at		-	70%					
	- light green	various angles	Chl. alteration		20%					

41-43' Purple andesite (porphyritic) Very broken
- END - (caving in hole)

LOGGED BY G.L. Garratt DRILLED BY Coates D.D. (Don Lyons) CORE STORED

GRE[illegible] PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-2

SHEET NUMBER 1 of 1 SECTION FROM 4'-57' STARTED

LATITUDE Grid 4 - Line 8E DATUM COMPLETED

DEPARTURE Stat. 6.5 S BEARING ULTIMATE DEPTH 57'

ELEVATION DIP -90° PROPOSED DEPTH 200'+

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
4-12'	f.g. to med. grained	Calcite in 45° fracts.	Chl.,	½"py	80%					
	andesite mafic anhedral			clasts @						
	grains to ¼"			>1% py						
	Green color w. black ang.									
	phenos.									
12-14'	above w. calcite amygdules									
	to ¼" - ovular and rimmed		as above	-	90%					
14-30'	grey-green to purple									
	porphyritic andesite.									
	50°-70° fractures w. qtz.,									
	and chl. - calcite. Some									
	hematite w. qtz eyes			-	110%					
30-41'	Green v.f.g. andesite	80° 1/8" veinlets								
		w. anhydrite, some		-	80%					
		hematite pervading	5%	-	90%?					
41-42'	Green porph. rhyodacite		qtz & carb. veins	-	80%					
42-57'	grey to purple porph.		at 45° and 80°							
	andesite.									

- END OF HOLE @ 57' -

LOGGED BY G.L. Garratt DRILLED BY Coates Ent., (D.Lyons) CORE STORED On property.

GRE[illegible] LAI[illegible] DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-3

SHEET NUMBER 1 of 1 SECTION FROM 4' - 45' STARTED

LATITUDE Grid 4 - Line 8 E DATUM COMPLETED

DEPARTURE Stat. 6.5 S BEARING ULTIMATE DEPTH 45'

ELEVATION DIP -90° PROPOSED DEPTH 200'+ (stopped due to caving etc.)

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
4'-11'	Green andesite w. anhedral		Qtz.chl.veins	-	50%					
	mafics to ¼"		Chl. altn.							
11-16'	As in Holes #1 & 2			-	80%					
	porphyritic (green)									
	andesite.									
16-30'	grey to purple porphyritic	45° calcite vein-	Hematite, chl.	-	25%					
	andesite (dyke?)	lets to ¼" w. chl.	calc.anhydrite							
		along borders.								
30-40'	v.f.g. green andesite	70° x ¼" veinlets	chl.,	-	80%					
		carb. w. hematite								
		staining.								
40-45'	purple porph.andesite	pervasive altn		-	60%					
		along veinlets chl.,								
	- END OF HOLE @ 45'- (caving, slow drilling)									

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DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-5

SHEET NUMBER 1 SECTION FROM _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING 105° ULTIMATE DEPTH _____

ELEVATION _____ DIP -45° PROPOSED DEPTH _____

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
0'-12'	Overburden									
12'-16'	purple, porphyritic andesite - dacite (?)		Pervasive hematite							
			chl. on fractures							
16'-44'	light green very fine grained rhyolite (dacite?) w.									
	1/4" fldsp. phenos. & a few hard to distinguish									
	qtz. eyes. Qtz. veining (2/ft.) bound by chl. alt'n.									
44'-52'	as above but a fragmental w. frags. to 5" of									
	grey-green andesite flow - mafics starting to									
	appear (dacite?)									
52'-56'	porphyritic, green andesitic flow - 1-4 mm		mod-strong chl.							
	mafics - subhedral. 1/4" fldsp. phenos		alt'n & hemalite in							
			qtz. veins							
56'-60'	alt'd. andesite flow - not porphyritic but otherwise									
	as above									

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GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-5

SHEET NUMBER 2 SECTION FROM _____ STARTED _____

LATITUDE _____ DATUM _____ COMPLETED _____

DEPARTURE _____ BEARING 105° ULTIMATE DEPTH 417'

ELEVATION _____ DIP -45° PROPOSED DEPTH _____

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
60'-67'	flow breccias w. andesite frags.	- deformed	Chl., hematite	1% py -						
	some frags. have reaction rims.		extensively replaces hematite							
			py.							
67'-74'	same fine grained andesite flow	- green								
74'-80'	ditto only brecciated w. intense	qtz. - calcite	Hem. replacing, py.	minor py.						
	(sericite) veining. pervasive hematite		chl. rich							
80'-92'	same f.g. green andesite flow -	qtz. - calc-hem								
	filled gashes. More calc. than	higher								
92 - 99.5'	ditto - except slightly amygdaloidal									
99.5'	Siliceous breccia - rhyolitic frags. to 1"			Diss py 1%						
105.5'				Minor py						
				along random fractures.						

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DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-5

SHEET NUMBER 3 SECTION FROM 105.5' - 138' STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH 417'

ELEVATION DIP -45° PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
105.5 -	weak to moderately brecciated & intensely		'clay' chl.							
112'	al'td. andesite		pervasive							
112'-	andesite - green as before									
121'										
121' -	weakly brecciated andesite as above			Minor diss.						
123'				cpy. & py.						
123'-	siliceous breccia as @ 100'		greay brown 'clay'	1-3% py.						
128'			altn. on veinlets							
128'-	weakly brecciated andesite as before.									
132'										
132'-	qtz. calc. amygdaloidal andesite as above									
138'										

LOGGED BY G. L. Garratt DRILLED BY Coates CORE STORED On Site

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-5

SHEET NUMBER 4 SECTION FROM STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH

ELEVATION DIP PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
138'-	amygd. andesite - some amygs. rimmed by mafics									
147'										
147'-	coarse andesite flow breccia -	sections of		Minor py.						
188'	pervasive hematite alt'n. Chlorite alt 'n									
	throughout. Frags. are 1. fine grained andesite									
	2. amygd. (more hematitic) andesite. Minor qtz. veining									
188' -	f.g. amyg. andesite - Calc.-qtz. filled amygs -									
199'	Pervasive hematite alt'n from 194'198'									
199'-	weak to mod. brecciated amygdaloidal andesite.									
214'	Heavy chl. & hem. along fractures. Chlorite pervasive									
214' -	fine grained amygd. andesite as above.		Pervasive chl. -							
222'	Qtz. - calcite veinlets & amygs.		hem.							
	45° (horiz.)		hem. replacing py.							

LOGGED BY G. L. Garratt DRILLED BY Coates CORE STORED On Site

[redacted]GRE[redacted]LAI[redacted]DEVE[redacted]MENT[redacted]MPA[redacted]F C[redacted]A,

DIAMOND DRILL RECO[redacted]

PROPERTY TAN HOLE NO. T-75-5

SHEET NUMBER 5 SECTION FROM STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH

ELEVATION DIP PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
222 -	Fine grained amygdaloidal andesite									
293	Pyrite disseminations up to 1%									
	occasional epidote.									
293 -	Banded and "fragmental" section									
300	with pyrite, sphalerite and chalcopyrite									
	rimming highly silicified "fragments and									
	as bands. Sericite and talcose alteration									
	along banding.									
300 -	Fine grained light green andesite flow.									
335	Pyritization and chloritization. Quartz									
	stringers with accompanying pyrite and Sphalerite.									
335 -	Highly chloritized and pyritized andesite flow.									
371 1/2	Minor quartz stringers with sphalerite - chalcopyrite									
	Chlorite spots occasionally noted.									

LOGGED BY M. McClaren DRILLED BY Coates CORE STORED On Site

[redacted] DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-5

SHEET NUMBER 6 SECTION FROM STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH

ELEVATION DIP PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
371 1/2	Altered andesite flow.									
- 383	Bleached appearance causes									
	host rock to change to a light									
	brown coloration. Pyritization 1%									
	Occasional sphalerite - chalcopyrite -									
	quartz stringers.									
383 -	Bedded siliceious cherts and tuffs.									
397	Alternating pyrite bands and argillaceous									
	bands.									
397 -	Light pale green chloritic tuff.									
417										

LOGGED BY M. McClaren DRILLED BY Coates CORE STORED On Site

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-6

SHEET NUMBER 1 SECTION FROM 8' - 77' STARTED

LATITUDE DATUM Station 8 + 20 on Line 4E COMPLETED

Grid 4

DEPARTURE BEARING 35° ULTIMATE DEPTH 288'

ELEVATION DIP -80° PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
8'-41'	amygdaloidal andesite flow -	qtz. - calcite	hematite alt'n &							
	filled amygs. Amygdules are py	filled for 1' @ 20'	replacement of py is							
	Some amygs. rimmed w. mafics -	Minor brecciation	pervasive from 30'							
	chl. along siliceous veinlets.		intermittent chl.							
			alt'n							
41'-42.5'	Siliceous fragmental - frags	stretched as in flow	grey-brown 'clay'	1% py -						
	30% of frags. are composed of	py.	alt'n - moderate	diss.						
42.5'-	amyd. andesite as from 8'-41'	Minor fragmental (6")	Hematite increases	1 - 3% py						
63'	@ 53'. Get short sections of	weak to moderate	w. py - 1 - 3%	Hematite						
	brecciation - chlorite rich &	very little hematite								
63'-77'	grey porphyritic andesite -	w. appearance of	minor chl.	minor diss						
	more chl. towards 77' the rx	turns green. Amygs.		py.						
	start appearing & phenocrysts	disappear @ 77'								
	Minor qtz. veining									

LOGGED BY G. L. Garratt DRILLED BY COATES ENTERPRISES. CORE STORED on Site

[redacted] DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-6

SHEET NUMBER 2 SECTION FROM 77' - 107' STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH 288'

ELEVATION DIP PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
77'-94'	contact area - much hematite in qtz. veinlets &		some chl. along							
	replacing py - continues from 80' back to		veinlets.							
	same amyg. andesite as before - finer grained									
	& fewer amygs. - more qtz. veining									
	Minor brecciation - @ 89' w. qtz. veining									
94'-97'	grey, fine grained porphyritic andesite		weak	Min. py along						
				qtz. veins						
97'98'	as from 94' only brecciated									
98'-102'	color changes to green w.chl. alt'n. A few qtz.		chl. pervasive	Increase in						
	eyes visible		& altering mafics	diss py.						
102'-107'	weakly brecciated grey - brown andesite flow		intense alt'n of							
			mafics - chl.							

LOGGED BY G. Garratt DRILLED BY Coates CORE STORED on site

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-6

SHEET NUMBER 4 SECTION FROM STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH 288'

ELEVATION DIP PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
175 -	Acid rhyolite pyroclastic.									
188	Fragments up to 2" in diameter.									
	Fine grained, pyrite rims fragments									
	and forms up to 10% of the groundmass.									
	Sphalerite and chalcopyrite occur as									
	stringers and replacement of									
	fragments.									
188 -	grey - brown andesite									
198	Sphalerite stringers 1/4" maximum width									
	occur sporadically through section.									
198 -	Coarse pyroclastic - fragments are pink-white (up to 1 1/2")									
200	siliceous felsic volcanic. Matrix is green -									
	brown and chlorite rich.									

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GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-6

SHEET NUMBER 5 SECTION FROM STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH

ELEVATION DIP PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
200 -	Banded, fine sulplide bearing tuff.									
203	Siliceious shards up to 2 cm. in diameter									
	Pyrite; chalcopyrite and minor sphalerite									
	follow banded layers and rim									
	fragments.									
203 -	Course pyroclastic - fragments are pink									
217 1/2	- white (up to 1 1/2") siliceious felsic									
	volcanic. Matrix is green - brown and									
	chlorite rich.									
217 1/2	grey brown andesite									
260	Massive green with chlorite rimmed									
	amygdules. Quartz stringers are									
	abundant (1/ft.) Alteration of									
	host rock has changed it to a									
	bleached light brown coloration.									

LOGGED BY G. L. Garratt DRILLED BY Coates CORE STORED On Site

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-6

SHEET NUMBER 6 SECTION FROM STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH

ELEVATION DIP PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
260 -	Porphyritic rhyolite									
288	Cut by quartz veinlets and contain minor pyrite.									

LOGGED BY G. L. Garratt DRILLED BY Coates CORE STORED On SITE

GRE... PLAI... DEVEL...MENT COMP... OF C...A, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-7

SHEET NUMBER 1 SECTION FROM 0-48' STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING 128° ULTIMATE DEPTH 417'

ELEVATION DIP -45° PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
0'-7'	Overburden									
7-16'	amygdaloidal andesite									
16-										
29.5'	brecciated andesite									
29.5-										
30'	fault - gauge - broken									
	rx. - andesite?									
30-46'	amygd. andesite - minor									
	qtz veining % of amygs.									
	varies . Color green -									
	purple.									
46-48'	andesite breccia - qtz calc									
	filled - sheared pyritized			Minor cpy,						
				py.						
48-56'	Solid amygd. andesite w.									
	py replacing amygs.									
56-63'	Andesite breccia - frags			Minor py &						
	to 2½"			hem.replacing						
				py.						

LOGGED BY G.L. Garratt DRILLED BY Coates Enterprises CORE STORED On Site.

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-7

SHEET NUMBER 2 SECTION FROM 48' STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING 127° ULTIMATE DEPTH 417'

ELEVATION DIP -45° PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
63-72'	Solid amygd. andesite			3% py.						
	considerable py in amygs.									
72-78'	Purple hematitic andesite									
	Increase in qtz veining									
	and fewer amygs.									
78-										
96.5'	Green porphyritic andesite									
	Gets hematitic near 96'									
96.5-	Purple hematitic amyg.			py-hem.						
108'	andesite w. hem. repl.py			1-3%						
108-	Massive green andesite		Minor to mod.							
122'	amygdaloidal in places		chl.							
	(qtz filled) Brecciated									
	in places.									
122-	Brown andesite breccia.			incr.in py						
123'	Still get chl. Much more									
	altered. 'Bleached'									
	appearance.									

LOGGED BY G.L. Garratt, M. McClaren DRILLED BY Coates Enterprises CORE STORED On Site

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-7

SHEET NUMBER 3 SECTION FROM 96.5' STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING 105° ULTIMATE DEPTH 417'

ELEVATION DIP -45° PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineral-ization	Core Recov.	Assay #	Assay			
123-124'	Qtz. filled breccia of above.		Py in qtz calcite							
124-154'	Same as 122'-123'. Less noticeable chlorite @ 129' - qtz, minor-sph-py-chl. for 6"			Minor sph-py						
154-155'	Qtz - cpy-py-chl			Diss. cpy, py						
155-177'	as from 123'									
177-253'	Same only brecciated - coarse. Variations in chl., py and coarseness of frags.									
253-270.5'	Pyritized, qtz-carb. filled breccia w. brown alt'd andesitic [illegible].									
270.5-324'	Coarse andesitic breccia as before									

LOGGED BY M.McClaren/G.Garratt DRILLED BY Coates Ent. CORE STORED On Site

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

DIAMOND DRILL RECORD

PROPERTY TAN HOLE NO. T-75-7

SHEET NUMBER 4 SECTION FROM STARTED

LATITUDE DATUM COMPLETED

DEPARTURE BEARING ULTIMATE DEPTH

ELEVATION DIP PROPOSED DEPTH

Depth (in ')	Lithology	Structure	Alteration	Mineralization	Core Recov.	Assay #	Assay			
324'-	grey-white banded rx. w. qtz.			Minor sph.,						
335'	rich frags. f.g. py - cpy-sph			py, py						
	minor 326.5'-327' - siliceous									
	frags w. cpy and py.									
335'-	Breccia-light green to grey		Chl. alt'n for	Py on fracts.						
372'	- black w. increase in black		1st 3"							
	vein alt'n. Very fine									
	grained. Coarser frags @									
	351'-2'.									
372'-	Same as above only not brecc-									
343.5'	iated and not alt'd light									
	green, v.f.g. siliceous.									
393.5'-	Siliceous fldsp.-qtz. tuff									
397.5'	moderate to well bedded.									
397.5'-	Light green porphyritic			Minor py						
417'	rhyolite w. sections			1%						
	of black veined alt'n. Pervasive									
	diss. py. Phenocrysts increase									
	in size away from tuff. (i.e. chill margin)									

- END OF HOLE 417' -

LOGGED BY G.L. Garratt/M.McClaren DRILLED BY Coates Enterprises CORE STORED On Site

APPENDIX III

CREW BREAKDOWN AND CONTRACTORS

CREW BREAKDOWN AND CONTRACTORS

Property Geologists:	G.L. Garratt, M. McClaren
Geological Assistant:	E. Reimer
Property Supervisor:	M.D. McInnis
Diamond Drilling:	Morex 350 and BBS-1: Coates Enterprises Limited, Vancouver, B.C. Winkie Drill: A. Woolsey, West Vancouver, B.C.
Geophysics:	Cominco Grid Survey: operating and interpretation: D. Sawyer Main Showing: E. Reimer
Geochemical Sampling:	E. Reimer M. McClaren G. Stapley J. Van der Lee D. Blackadar B. Edmonson R. Santos

APPENDIX IV

REFERENCES

REFERENCES

1. G.S.C. Paper 69-47: Hope Map Area, West Half, British Columbia by J.W.H. Monger (1970).

2. State of Washington - Division of Mines and Geology - Bulletin No. 50 Geology and Mineral Deposits of the North Half of the Van Zandt Quadrangle, Whatcom County, Wash. by W.S. Moen, (1962).

3. State of Washington - Division of Mines and Geology - Bulletin No. 57 Mines and Mineral Deposits of Whatcom County, Wash. by W.S. Moen (1969).

4. Washington State - Department of Natural Resources - Geologic Map of Washington State (Scale: 1:500,000).

5. Danner, W.R. - Professor, University of British Columbia - personal communication.

6. Sawyer, D.A. - Geophysical Interpretation of the orientation E.M. survey conducted on the Cominco Grids Two and Four. Included in the text.

APPENDIX V

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

The following is a summary of expenditures incurred during the exploration program carried out on the Tan Claims between May 22nd and October 10th, 1975.

Salaries

Geologists	G.L. Garratt* - 100 days @ $40/day	$4,000.00
	M. McClaren* - 54 days @ $40/day	$2,160.00
Geological Assistants:		
	E. Reimer 64 days @ $40/day	$2,560.00
	J. Van der Lee 11 days @ $40/day	$ 440.00
	R. Santos 10 days @ $40/day	$ 400.00
	B. Edmonson 12 days @ $40/day	$ 480.00
	D. Blackadar 5 days @ $40/day	$ 200.00
	G. Stapley 5 days @ $40/day	$ 200.00
Supervision		
	M.D. McInnis 4 days @ $90/day	$ 360.00
	L.R. Golemba 6 days @ $70/day	$ 420.00
	D.A. Sawyer 2 days @ $90/day	$ 180.00
Driller		
	A. Woolsey 12 days @ $50/day	$ 600.00
	Sub-Total	$12,000.00

Rentals

Truck	$2,168.16
All Terrain Vehicle	$ 641.00
Winkie Drill 34 ft @ $3.00/foot	$ 102.00
EM-16, EM-17 2 days @ $25/day	$ 50.00
Sub-Total	$2,961.16

* includes time for report preparation.

Diamond Drilling	
Contract by Coates Enterprises (Contracts enclosed)	$16,736.00
Winkie Drill: Equipment costs	$ 394.54
Sub-Total	$17,130.54
Room & Board	
290 man-days @ $20/man/day	$ 5,800.00
Travel & Expenses	$ 2,063.01
Helicopter Charter	
6.7 hours @ $285.00/hour + fuel	$ 2,051.57
Geochemical Assaying	$ 2,376.07
Road Clearing	$ 130.00
Miscellaneous Expenses	$ 721.89
Stokes Consulting	$ 391.00
	$45,625.24
+ 10% Overhead	$ 4,462.52
	$50,187.76

LEGEND

Alteration

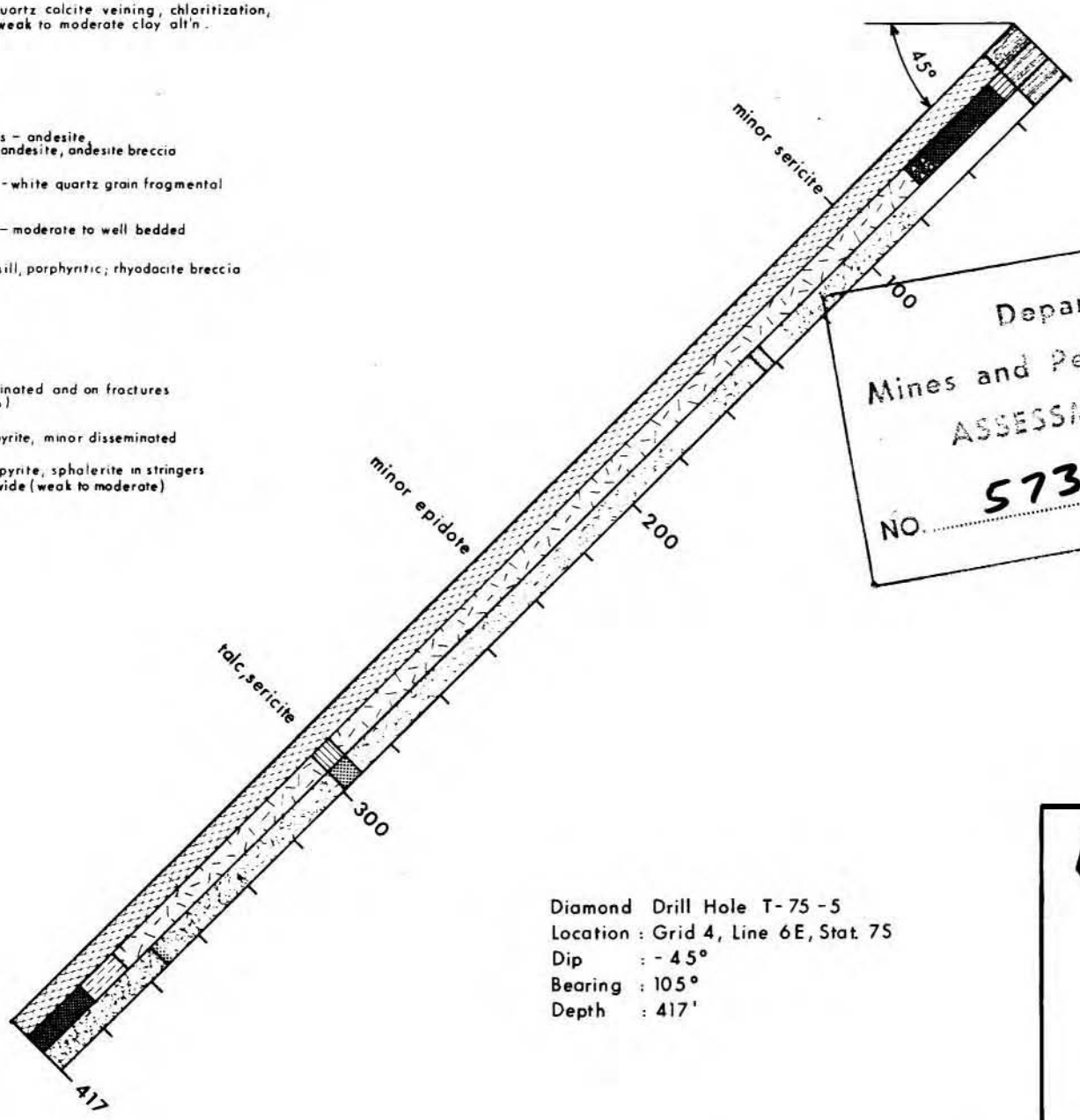
- Quartz and quartz calcite veining, chloritization, pyritization, weak to moderate clay alt'n.

Geology

- Overburden
- Volcanic flows – andesite, amygdaloidal andesite, andesite breccia
- Sheared, grey-white quartz grain fragmental
- Silicified tuffs – moderate to well bedded
- Rhyodacite - sill, porphyritic; rhyodacite breccia

Mineralization

- Pyrite, disseminated and on fractures (minor to 3%)
- Pynte, chalcopyrite, minor disseminated
- Pyrite, chalcopyrite, sphalerite in stringers to 1/4 inch wide (weak to moderate)



Diamond Drill Hole T-75-5
Location : Grid 4, Line 6E, Stat. 75
Dip : -45°
Bearing : 105°
Depth : 417'

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

BRITISH COLUMBIA

TAN CLAIMS

DRILL SECTION GEOLOGY

Hole T-75-5

0 50 100 ft.

Scale : 1" = 50'

New Westminster M.D.
G.L. Garratt

NTS 92H/4W
September, 1975

LEGEND

Alteration

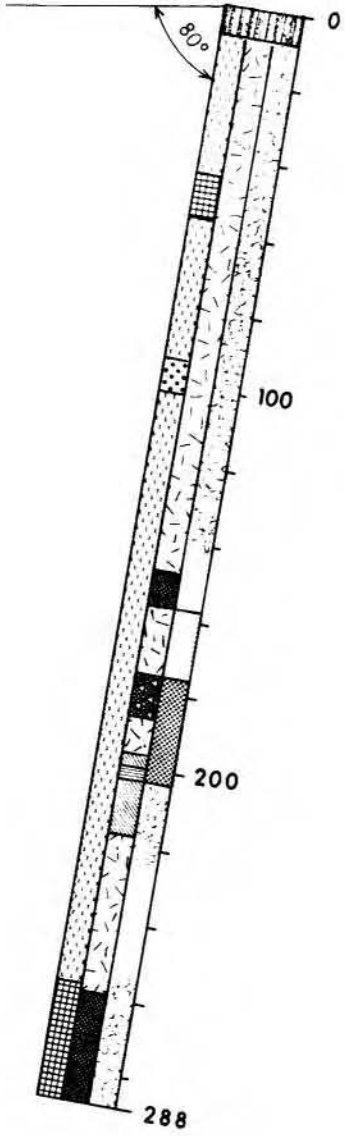
- Quartz and quartz calcite veining, chloritization, pyritization, week to moderate clay alt'n.
- Weak quartz veining, weak chloritization, pyritization
- Minor quartz veining, weak alteration

Geology

- Overburden
- Volcanic flows – andesite amygdaloidal andesite, andesite breccia
- Sheared, gray-white, quartz grain fragmental
- Silicified tuffs moderate to well bedded
- Rhyodacite – sill, porphyrite; rhyodacite breccia
- Coarse, siliceous pyroclastic

Mineralization

- Pyrite, disseminated and on fractures (minor to 3%)
- Pyrite, chalcopyrite, minor disseminated
- Pyrite, chalcopyrite, sphalerite in stringers to 1/4 inch wide (weak to moderate)



Diamond Drill Hole T-75-6
Location : Grid 4, Line 4E, Stat. 8+20S
Dip : -80°
Bearing : 35°
Depth : 288'

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

BRITISH COLUMBIA
TAN CLAIMS
DRILL SECTION GEOLOGY
Hole T-75-6

0 50 100ft.
Scale: 1" = 50'

New Westminster M.D
G.L. Garratt

NTS 92H/4W
September, 1975

LEGEND

Alteration

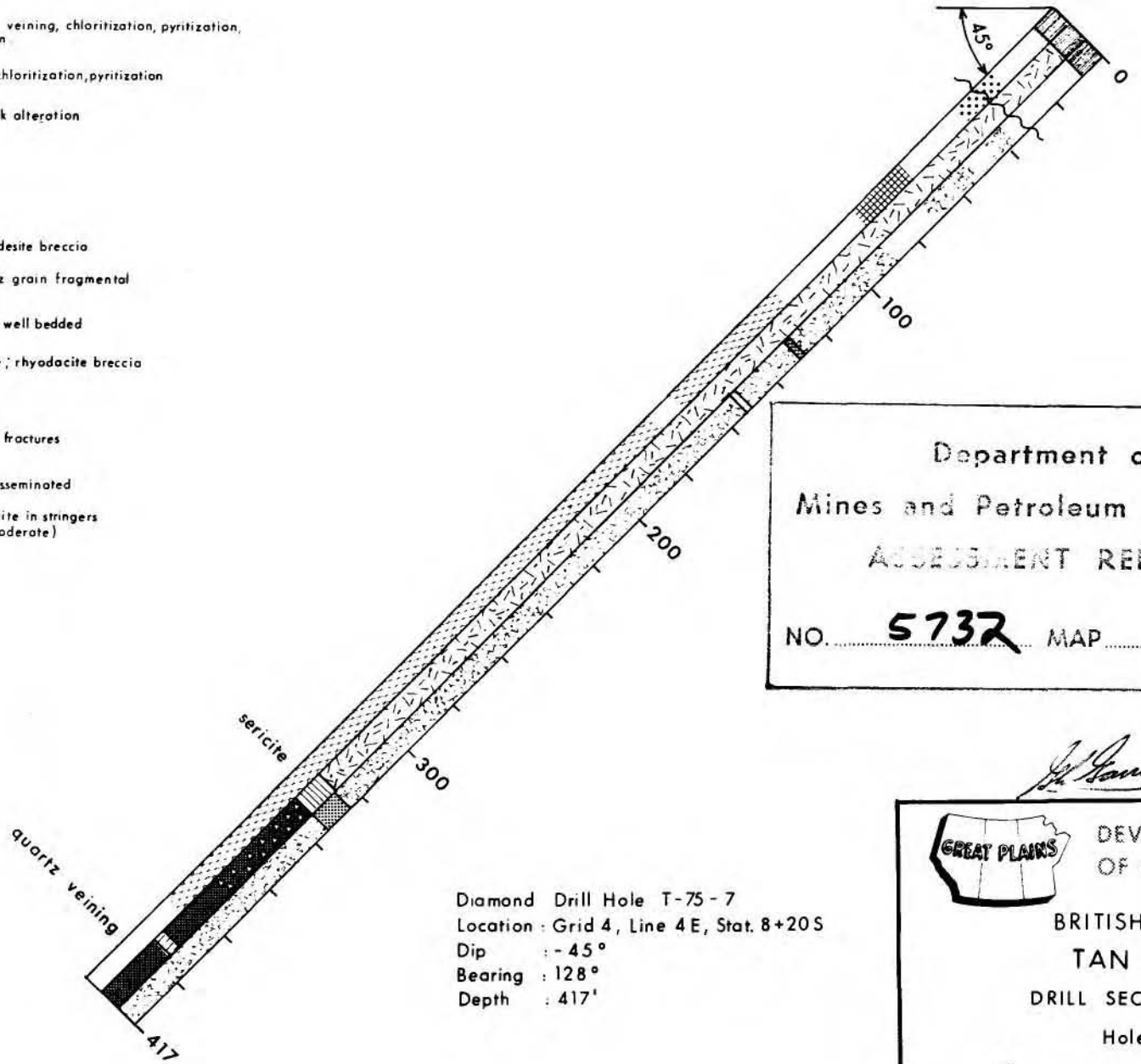
- Quartz and quartz calcite veining, chloritization, pyritization, weak to moderate clay alt'n
- Weak quartz veining, weak chloritization, pyritization
- Minor quartz veining, weak alteration

Geology

- Overburden
- Volcanic flows - andesite, amygdaloidal andesite, andesite breccia
- Sheared, gray-white, quartz grain fragmental
- Silicified tuffs moderate to well bedded
- Rhyodacite - sill, porphyrite; rhyodacite breccia

Mineralization

- Pyrite, disseminated and on fractures (minor to 3%)
- Pyrite, chalcopyrite, minor disseminated
- Pyrite, chalcopyrite, sphalerite in stringers to 1/4 inch wide (weak to moderate)



Diamond Drill Hole T-75-7
Location : Grid 4, Line 4E, Stat. 8+20S
Dip : -45°
Bearing : 128°
Depth : 417'

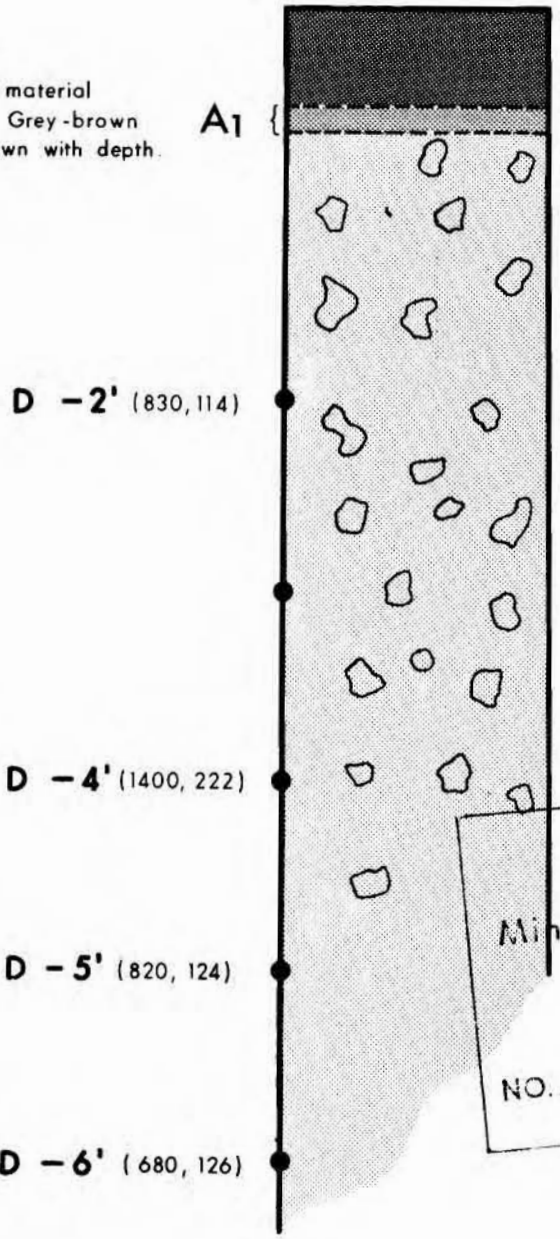
GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

BRITISH COLUMBIA
TAN CLAIMS
DRILL SECTION GEOLOGY
Hole T-75-7

0 50 100 ft
Scale : 1" = 50'

New Westminster M.D
G.L. Garratt

NTS 92H/4W
September, 1975



Compact fine tectured material with streaks of humus. Grey-brown grading into yellow.-brown with depth.

A_1

A_0

Black porous aggregate of fine grained materials; high humus. The black colour grades into grey and greyish brown in depth.

B_1

Generally fine-tectured, unstratified, yellow-brown with little or no humus. Medium sized rock rubble (100-250 mm in diameter) makes up 30% of volume.

D -2' (830, 114)

D -4' (1400, 222)

D -5' (820, 124)

D -6' (680, 126)

LEGEND

● ..... Soil sample location

(680, 126) ... Zinc, Copper assays in ppm

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

BRITISH COLUMBIA

TAN CLAIMS

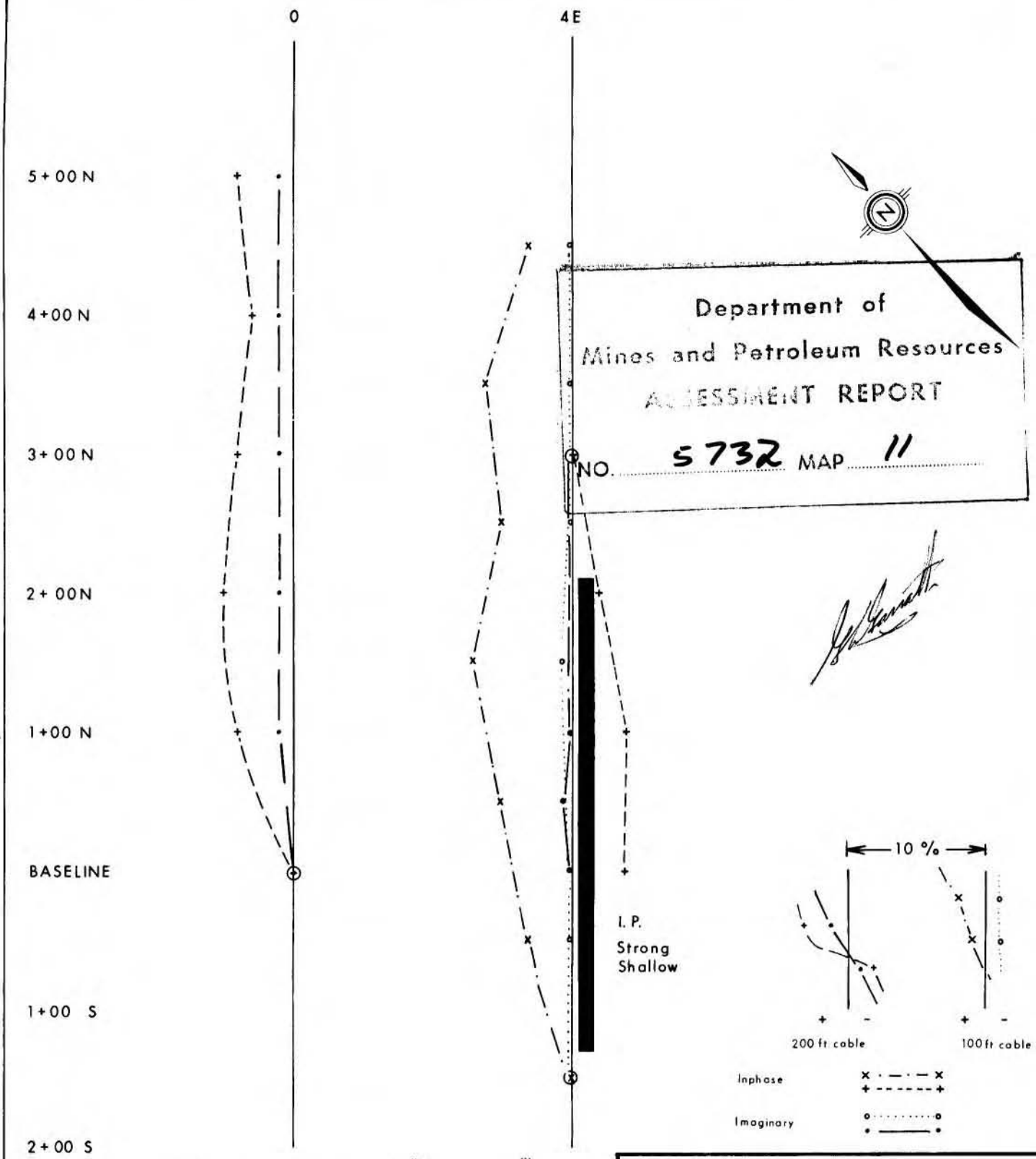
SOIL PROFILE D1

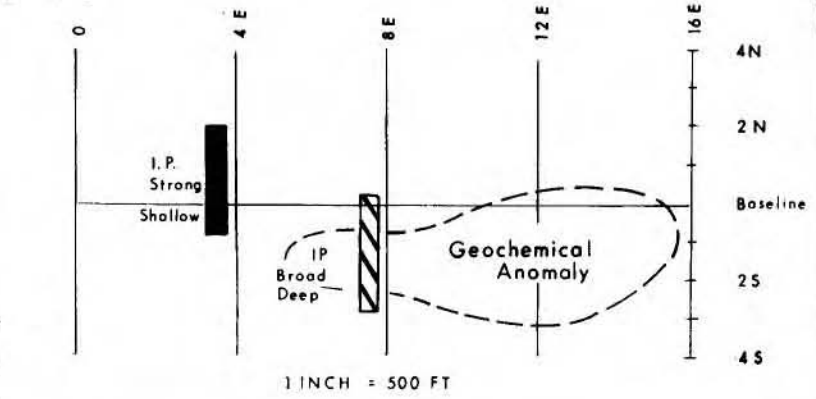
0 1/2 1 2ft

Scale: 1" = 1'

New Westminster M.D
M. McClaren

NTS 92H/4W
September, 1975





GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

BRITISH COLUMBIA

TAN CLAIMS

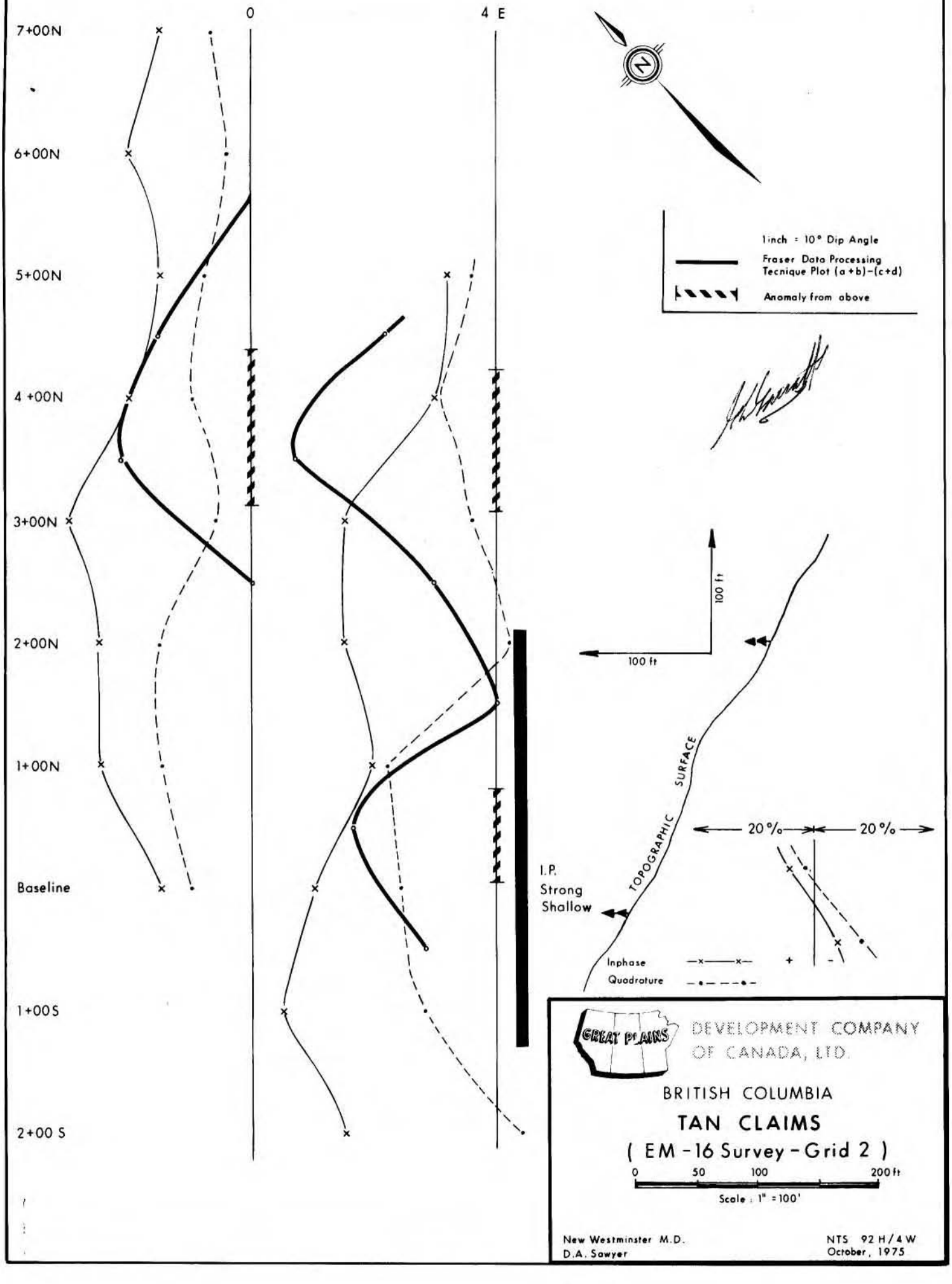
(EM - 17 Survey - Grid 2)

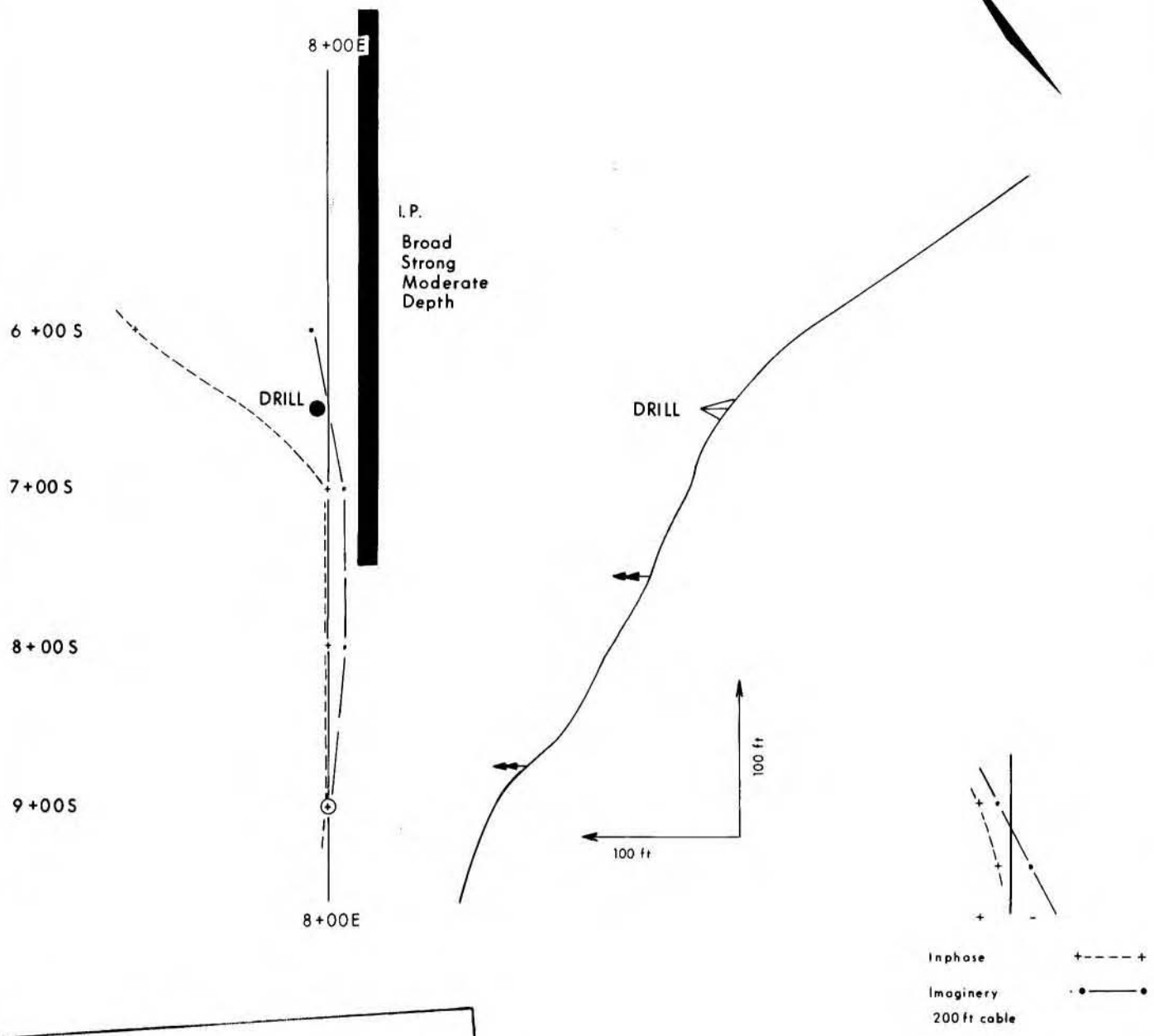
0 50 100 200 ft

Scale : 1" = 100'

New Westminster M.D
D. A. Sawyer

NTS: 92 H/4W
October, 1975


0
4 E
7+00N
6+00N
5+00N
4 +00N
3+00N
2+00N
1+00N
Baseline
1+00S
2+00 S
1 inch = 10° Dip Angle
Fraser Data Processing
Tecnique Plot (a+b)-(c+d)
Anomaly from above
100 ft
100 ft
TOPOGRAPHIC SURFACE
20 %
20 %
I.P.
Strong
Shallow
Inphase
Quadrature
+
-
GREAT PLAINS
DEVELOPMENT COMPANY
OF CANADA, LTD.
BRITISH COLUMBIA
TAN CLAIMS
(EM-16 Survey - Grid 2)
0
50
100
200 ft
Scale : 1" = 100'
New Westminster M.D.
D.A. Sawyer
NTS 92 H/4 W
October, 1975



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5732 MAP 13

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

BRITISH COLUMBIA

TAN CLAIMS

(EM - 17 Survey – Grid 4)

0 50 100 200 ft

Scale : 1" = 100'

New Westminster M.D.
D.A. Sawyer

NTS 92H / 4W
October, 1975

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 5732 MAP 14

8+00E

4+00S
5+00S
6+00S
7+00S
8+00S
9+00S
10+00S

I. P.
Broad
Strong
Moderate
Depth

DRILL

DRILL→

TOPOGRAPHIC SURFACE

100 ft

100 ft

1 inch = 10° Dip Angle
Fraser Data - Processing
Techique Plot.
(a + b) - (c + d)

Anomaly from above

20% 20%

+ −

Inphase
Quadrature

0 4E 8E 12E

2S
4S
6S
8S

Geochemical
Anomaly

I. P
Broad
Strong
Moderate
Depth

1 INCH = 500 ft.

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

BRITISH COLUMBIA

TAN CLAIMS

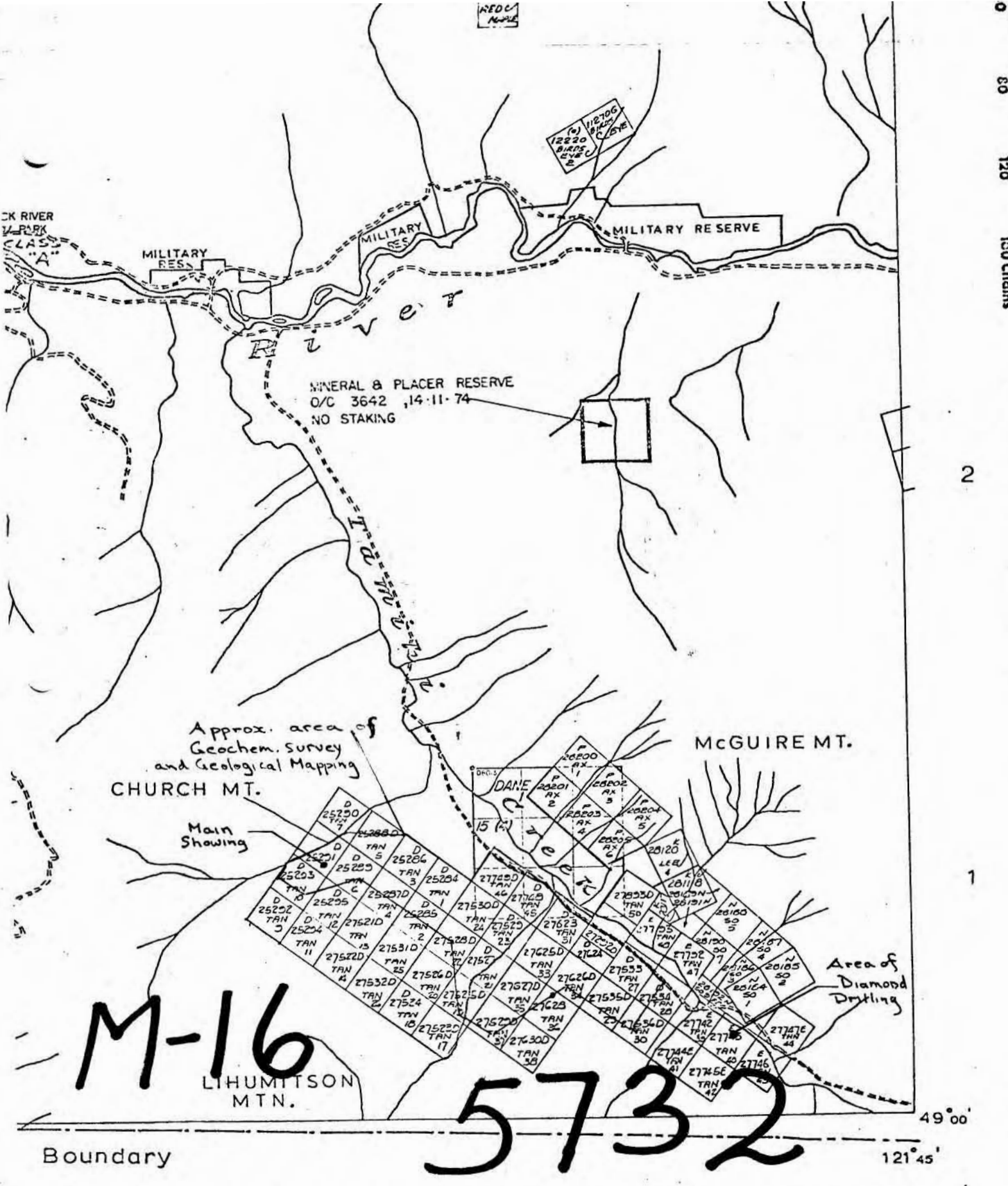
(EM - 16 Survey - Grid 4)

0 50 100 200 ft

Scale : 1" = 100'

New Westminster M.D
D.A. Sawyer

NTS : 92 H / 4W
October 1975



M-16

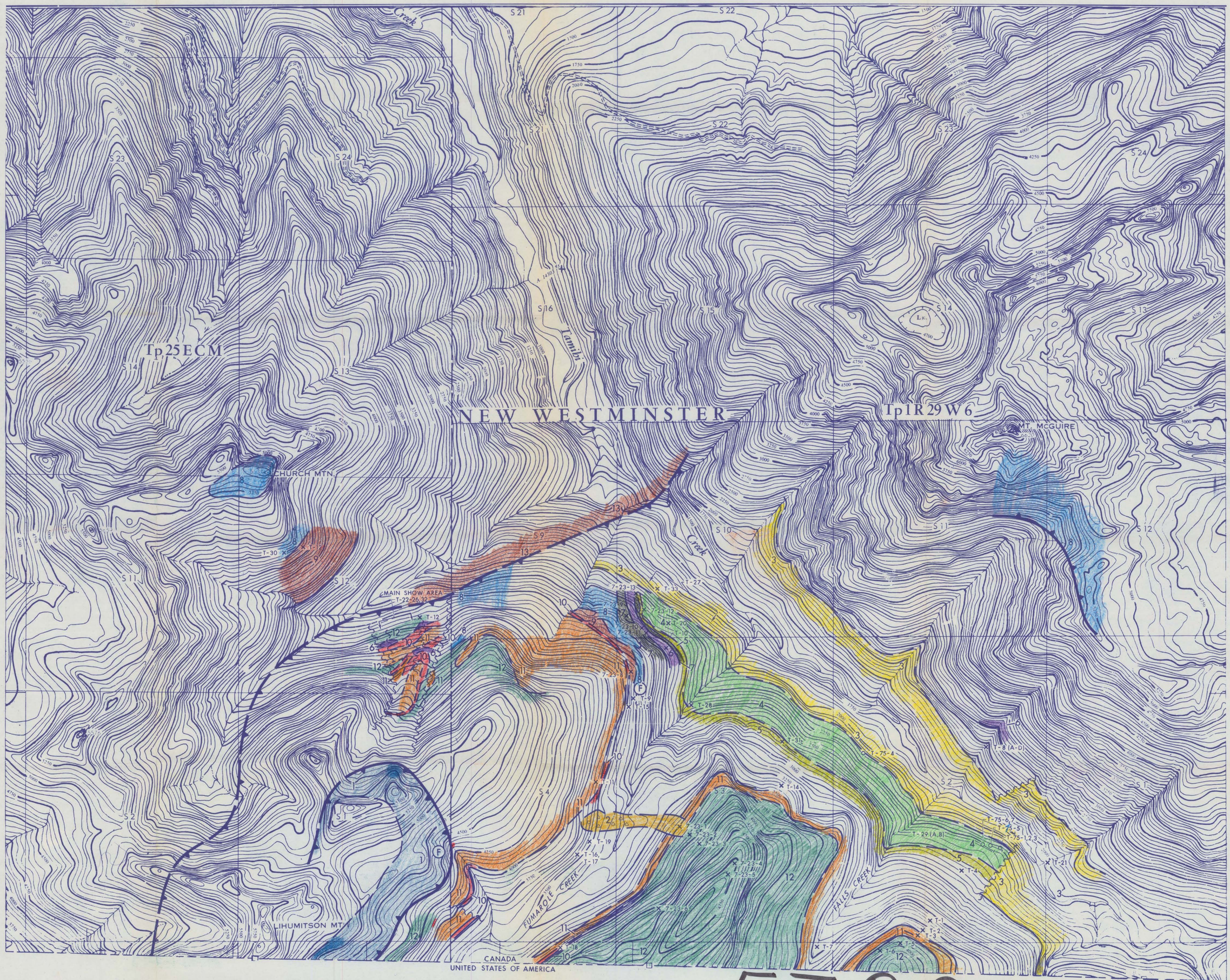
5732

ETROLEUM RESOURCES
A, B.C.

MAP 92H/4W(M)

This map is prepared to serve as a guide to the positions of located mineral claims and Placer Mining Leases only. Unsurveyed claims and leases are plotted from locators' sketches and are not guaranteed. Letters C.G. indicate claim is Crown-Granted. Symbol "C" indicates claim has [illegible]

92 H/4W(M)



CULTUS FM.

JURRASIC UPPER TRIASSIC

UPPER SERIES

- 13 Volcanic Arenites and Argillites
- 12 Green Andesite (Calcite - Chlorite Filled Amygdules) Minor Hornblende Andesite
- 11 Water - Lain Tuffs (Volcanic Arenites) Lithic Tuffs, Acidic to Intermediate Volcanic Breccias
- 10 Mineralized Horizon Chert and Chert Breccia
- 9 Purple and Green Andesitic Volcanic Breccia, Submarine Pyroclastic Flow (?), and Andesitic Flows

UPPER SERIES

- 8 Middle Permian Fusilinid Limestone and Calcarenite
- 7 Radiolarion Bearing Red and Green Cherts
- 6 Volcanic Breccia (Diverse Fragment Composition)
- 5 Red and Green Andesites and Basalts

LOWER SERIES

- 4 Mixed Series: Acid Tuff Breccia, Acid Lapilli Tuff, Acid Porphyry, Intrusives, Acid Tuff, Minor Basic to Intermediate Flows
- 3 Light Green Dacite and Porphyritic Dacite, Intrusive Breccias, Acid Tuff Breccia
- 2 Red Dacite (Autogenous Breccia)
- 1 Lower Pennsylvanian Crinoidal Limestone

Thrust Fault
Geologic Contact
Inferred Geologic Contact
Inferred Fault
(F) Fossil Location
× T-8 Rock Sample Location
T-75-5 Drill Hole Location

5732
M-1

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
BRITISH COLUMBIA

TAN CLAIMS
GENERAL GEOLOGY

1000 500 0 1000 2000
FEET

NEW WESTMINSTER M.D.
G.L. GARRATT
M. McCLAREN

NTS: 92 H-4 W
SEPTEMBER 1975

CULTUS FORMATION

N

A

B

Creek @ 0+00

10+00

15+00

20+00

25+00

30+00

35+00

40+00

45+00

50+00

53+75

59+40

59+90

70+20

Py, Sph, Cpy, Gal

50/12

35/18

27/10

0/20

58+80

70/12

55/76

40/70

40/22

60/74

Py, Sph, Cpy

60/75

55/66

55/40

80/85

43/60

35/45

340/12

35/24

60/85

10/22

9/28

39+75

15/38

10/28

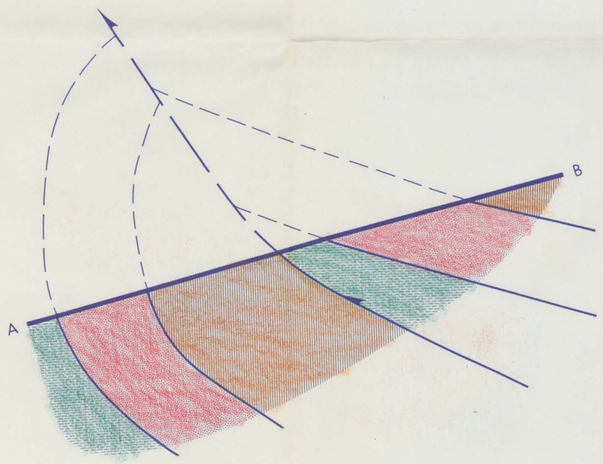
29/75

82

87

REFERENCE

- Green Andesite Flow
- Coarse Andesite Breccia
- Cherts and Chert Breccia
- Lithic Tuff
- Inferred Geologic Contact
- Thrust Fault
- Fault
- 30/65 Bedding - Strike/Dip
- Jointing
- Graded Bedding - Top Direction
- 10+00 Locating Station
- Creek
- Road
- Outcrop
- Recumbent Fold
- Mineral Showing



CROSS - SECTION A-B

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.

BRITISH COLUMBIA

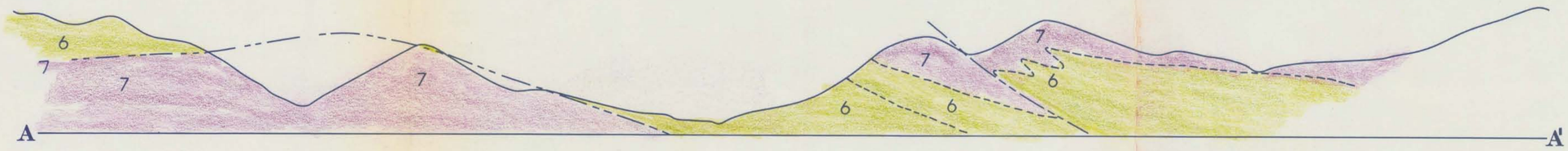
TAN PROJECT

MAIN SHOWING - GEOLOGY

100 50 0 100 200
FEET

N.T.S. : 92 - H - 4
JUNE 1975

G. GARRATT
M. McLAREN



CULTUS FORMATION

JURASSIC UPP TRIASSIC — 7 — Largely fine volcanic arenites and argillites, with minor flows in Ryder Lake area

CHILLIWACK GROUP

PERMIAN VOLCANIC SEQUENCE

LEONARDIAN — 6 — Altered basic to intermediate flow rocks, tuffs and cherts and argillites

PERMIAN LIMESTONE

LEONARDIAN — 5 — Limestone, typically argillaceous

UPPER CLASTIC SEQUENCE

4 — Coarse to medium grained volcanic arenites and argillites, with local conglomerates and tuffs

RED MOUNTAIN LIMESTONE

MORROWAN — 3 — Limestone, typically cherty

LOWER CLASTIC SEQUENCE

MORROWAN — 2 — Largely fine grained volcanic arenites and argillites

UNDIFFERENTIATED CHILLIWACK GROUP?

AGE UNCERTAIN — 1 — Includes quartz-rich phyllitic rocks, and other fine-grained clastic rocks

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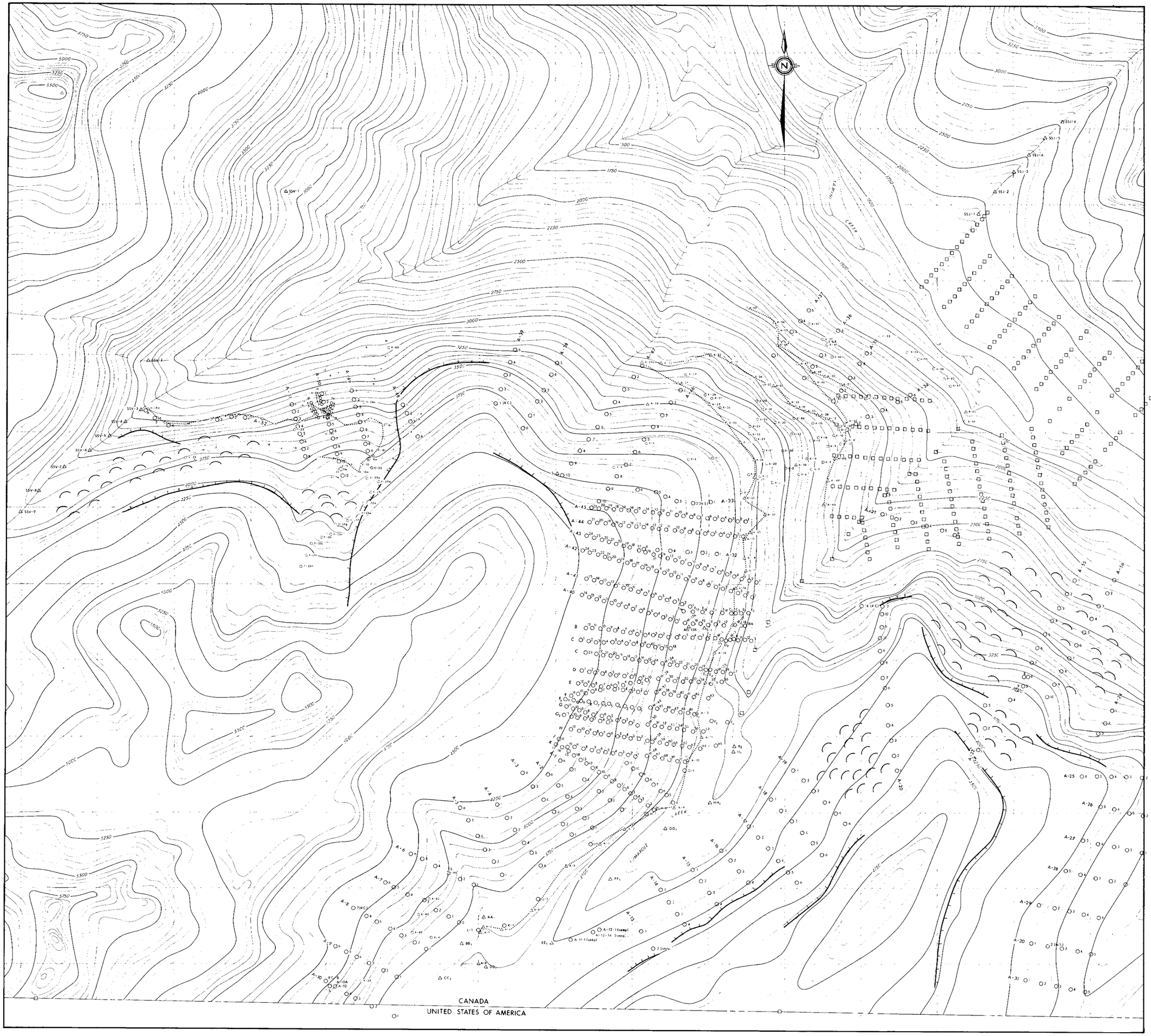
BRITISH COLUMBIA

CHILLIWACK AREA
REGIONAL GEOLOGY

SCALE 1:50,000

NTS. 92 H/4

MARCH, 1975



5732 7

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD
BRITISH COLUMBA

TAN CLAIMS

GEOCHEMICAL SAMPLE LOCATIONS

400 200 0 400 800
FEET

NEW WESTMINSTER M.D.
G. L. BARRATT

NTS 92 H-4 W
SEPTEMBER 1975

LEGEND

- Soil sample
- Stream sediment sample
- Cominco sample
- r.c. Rock chip sample
- Zinc value contours at 200ppm, 500ppm, 1000ppm
- 1900 Zinc value in p.p.m.
- ..... Road

TAN III CREEK

FUMAROLE CREEK

CANADA
UNITED STATES OF AMERICA

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
BRITISH COLUMBIA

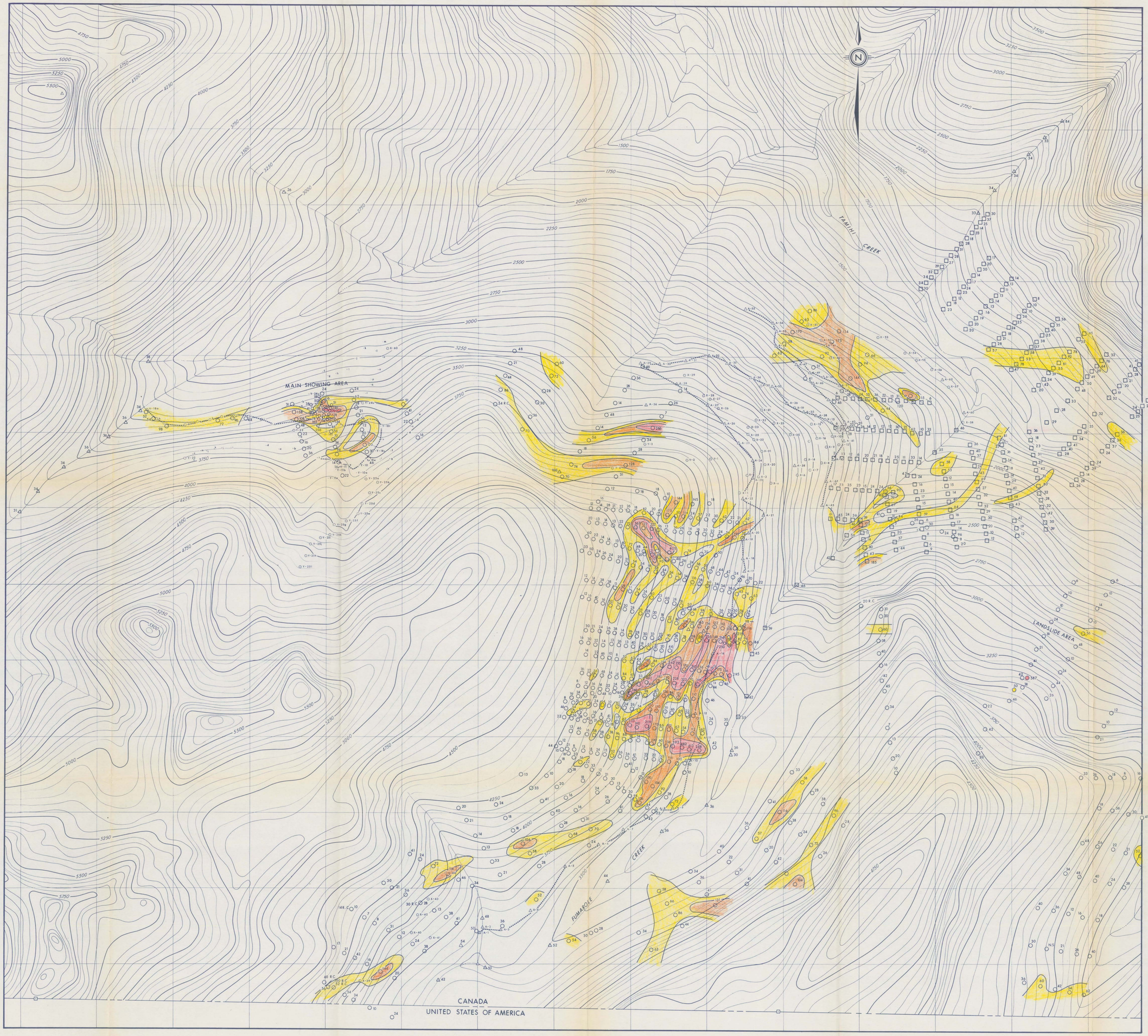
TAN CLAIMS

ZINC GEOCHEMISTRY

400 200 0 400 800
FEET

NEW WESTMINSTER M.D.
G. L. GARRATT

NTS: 92 H-4 W
SEPTEMBER 1975



LEGEND

- ○ Soil sample
- △ Stream sediment sample
- □ Cominco sample
- (R.C.) Rock chip sample
- 541 Cu value in p.p.m
- Copper value contours at 50ppm, 100 & 200 ppm.
- ..... Road

GREAT PLAINS DEVELOPMENT COMPANY OF CANADA, LTD.
BRITISH COLUMBIA

TAN CLAIMS

COPPER GEOCHEMISTRY

400 200 0 400 800
FEET

NEW WESTMINSTER M.D.
G. L. GARRATT

NTS : 92 H-4 W
SEPTEMBER 1975

GREAT PLAINS

DEVELOPMENT COMPANY OF CANADA, LTD.
BRITISH COLUMBIA

TAN CLAIMS

LOCATION MAP

5 0 10 20
MILES

SCALE 1:500,000

NEW WESTMINSTER M.D.
G. GARRATT

NTS: 92 H-4W
NOVEMBER 1975