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REPORT ON PERCUSSION DRILLING ON THE 523 LEVEL AND CHIP/CHANNEL  
SAMPLING AND GEOLOGICAL MAPPING OF THE 500, 523 & 577 LEVELS  
UNDERGROUND, P.S. CLAIM GROUP  
LUMBY PROJECT - CHAPUT MINE

VERNON MINING DIVISION

LATITUDE 50° 15.9' N. LONGITUDE 118° 56.3' W.

NTS: 82L/7W

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PREPARED FOR OWNER

THE QUINTO MINING CORPORATION  
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SEPTEMBER 20, 1991

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

21,954

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 92.09.20

ASSESSMENT REPORT 21954

MINING DIVISION: Vernon

PROPERTY: Chaput Mine

LOCATION: LAT 50 15 56 LONG 118 56 24  
UTM 11 5569738 361733  
NTS 082L07W

CLAIM(S): BS 2, PS

OPERATOR(S): Quinto Min.

AUTHOR(S): Bradley, M.

REPORT YEAR: 1991, 40 Pages

COMMODITIES

SEARCHED FOR: Gold, Silver, Copper, Lead, Zinc

KEYWORDS: Triassic, Siccamous Formation, Sediments, Plateau Shear Zone, Skarn  
Quartz veins, Sulphides, Galena, Sphalerite, Tetrahedrite

WORK

DONE: Drilling, Geological, Physical, Geochemical  
GEOL 10.0 ha; U/G  
Map(s) - 2; Scale(s) - 1:4000, 1:250  
PERD 149.0 m 9 hole(s)  
SAMP 37 sample(s) ; ME  
UNDV 480.0 m; RHAB

RELATED

REPORTS: 06954, 14469

MINI FILE: 082LSE006

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1. SUMMARY

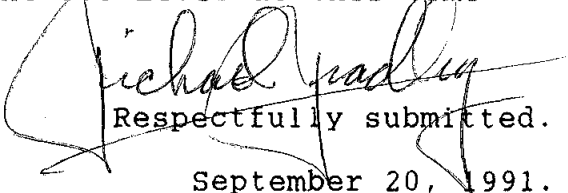
The Lumby Property is underlain by interbedded volcanic and clastic sedimentary rocks of the Sicamous Formation of upper Jurassic age, intruded in the south, by a polyphase hornblende diorite stock of late Cretaceous age. The property is transected by a major west trending fault of regional extent, locally the Plateau Shear Zone. The Shear has an arcuate shape on Saddle Mountain and dips 45° south toward the diorite stock. The western extent of the Shear, below approximately 700m elevation, has been partially explored on 3 levels within the Chaput Mine - a 50 tonne per day, medium-grade Ag, Pb, Zn, Cu, Au shear-vein mine operated sporadically between 1968 and 1981.

In 1984, the Quinto Mining Corporation discovered gold mineralization along the eastern portion of the Plateau Shear Zone, above 800m elevation, by trenching coincident VLF - geochemical anomalies. To date the gold mineralized portion of the Plateau Shear Zone has been defined by 69 drill holes and ten trenches over a 370 m strike, a mineralized width of 1.5 m - 24 m and to a depth of 180 m down dip. The zone is open along strike and to depth. Kuran (1987) has estimated a drill inferred geological reserve of 518,266 tons grading 0.075 oz/ton gold (255,893 tons at 0.115 oz/ton).

The work discussed in this report was completed in September, 1991 and includes rehabilitation of the 500, 523 and 808 Levels underground, percussion drilling on the 523 Level and geological mapping/sampling on the 500 and 523 Levels. Purpose of the program was to locate areas of high-grade Ag, Pb, Zn ore accessible from existing development in the Chaput Mine, for definition and mining.

Two Ag-bearing base-metal mineralized shear zones are indicated in and adjacent to the 523 Level. Recommendations are made for further exploration of the shears in search of high-grade Ag-bearing ore shoots.

No further work is recommended for the 500 Level at this time.

  
Respectfully submitted.

September 20, 1991.

2. INTRODUCTION:

The author first visited the Lumby property in 1986 while employed by BP Resources Canada and examined/sampled trenches along the gold bearing Plateau Shear Zone. I have conducted recce traverses in the Lumby area and am familiar with the property and regional geology. I mapped and sampled portions of the 808 m Level in June 1990.

The 1991 program of underground rehabilitation and exploration in the Chaput Mine portion of the Plateau Shear Zone ran from August 6 to Sept. 19, 1991. The program was designed to locate new high-grade Ag-bearing base metal ore shoots, within shear veins accessible from the existing workings. To this end the following work was completed by Sancold Resources Contractors Inc., employing 2 experienced miners under the direct supervision of Mr. Jerry White, president of Sancold:

500 Level: Portal excavated and timbered for 7m. 41 m of drift scaled, mucked-out and walls washed. Geological control established by chaining and painting 1m intervals on the south wall. South wall was geologically examined for shear-vein zones and 3 channel samples collected of veined zones.

523 Level: North and South drifts scaled and mucked-out where necessary. Six percussion drill hole stations slashed and mucked-out. Six percussion drill holes drilled in the 523S drift, for a total of 100m; sludge sampled continuously over 1.22m intervals and examined by consulting geologist using a binocular microscope. 12 - 1.22m sludge samples high in sulphides, analyzed by 30 element I.C.P. and Au by AA.

280N x-cut mucked-out and raise reladdered.

180N raise partially reladdered.

150N raise reladdered.

125N x-cut mucked-out and contiguous raises partially reladdered.

060N and 090N x-cuts mucked-out.

208, 125S, 090S x-cuts marked-up for control and examined by geologist.

208 x-cut and raise geologically mapped and channel sampled. A total of 16 channel samples were collected from the 523S Level and analyzed by 30 element I.C.P. and for Au by AA.

577 Level: Examined by geologist. Two channel samples collected.

808 Level: Caved portions of the 140E and 190E x-cuts were mucked-out, floors were gravelled and the shear zone areas were timbered.

The author was present on the property during the period September 12 - 16, 1991 by which time all of the work on the 523 S drift, including drilling of percussion holes 91-1 to 91-6 and timbering of the 500 Level was completed. The author logged sludge samples from the percussion holes onsite, marked up the 523S and 500 Level drifts and geologically examined these levels looking for and sampling mineralized shear zones. The 208 x-cut and raise were mapped in detail. Nineteen (19) representative rocks collected from the underground were washed and described in Vancouver.

Location of drill holes and sample results in the 523 and 577 Levels are presented in Figure 5. The survey base map for Figure 5 was prepared by E. Schrank and D. Kuran in 1986 and modified by the author.

Geology and sample results for the 208 x-cut and 208N raise are presented in cross section in Figure 6.

A compass - chain survey plan of the 500 Level drift, showing geological features and chip sample results is presented in Figure 7.

### 3. LOCATION, ACCESS AND INFRASTRUCTURE

The Lumby Project comprises 165 units in 9 claim blocks, located north and east adjacent to Lumby, B.C. The former Chaput 5 claim (now B.S. 2), containing the 500, 523 and 577m levels underground, is sited 2.4 km northeast of Lumby. The town of Lumby is a service center for local logging and agriculture, located 22 km east of Vernon on Highway 6.

Access to the property is by a network of narrow 2 and 4 wheel drive roads, in good condition, which traverse the B.S. 2 claim.

A 3 phase power line extends from Lumby to a 75 ton per day mill located on the former Chaput 20 claim. The mill has a flotation circuit and appears to be in fair condition, requiring the addition of some missing pumps and motors and maintenance on the rest of the plant.

The climate of the area is typical of the Okanagan with long, warm to hot summers and short, moderate winters.

The hill underlying the B.S. 2 claim is essentially dry with only sporadic watercourses in spring. Water for mining operations is available from a drill hole tapping an artesian source below the mill and from Bessette Creek, 150m to the west.

The Chaput Mine, located on the former Chaput 1 & 20 claims is the subject of this report. The 500 and 523m Levels of the Mine are in good condition. The 577m Level and contiguous stopes, ore passes and raises require extensive rehabilitation. The 808m level underground is in very good condition.

Sancold Resources, the underground contractor, has a shop trailer, compressor, scoop tram, mucking machine and powder magazine on site. Muck piles from shot rounds collected in driving the crosscuts beyond the hanging wall shear are stored in the vicinity of the 808 m adit. Approximately 2,650 tons of rock from the shear zone are available for sampling. A wooden building, located above the mill, in fair to good condition, houses a core logging area, storage for reverse circulation drill hole splits and a shop. An adjacent core storage area with covered core racks, is in very good condition and has 500 m excess capacity.

The town of Lumby has a motivated labor pool with many skills suited for work in the mining industry. The community sentiment appears to favor a mining venture in the vicinity.

4. CLAIMS STATUS:

The Lumby Property is located in the Vernon Mining Division and comprises 165 units in 7 contiguous claims. On September 20, 1991 the B.S.2, P.S.2, P.S.7, P.S.4, P.S.3 claims, totalling 95 units, were grouped as the P.S. Group.

This report is submitted in support of \$56,000 in assessment credits applied to this claim group. Applicable work was done on the B.S.2 claim in the period August 6 to September 19, 1991. Two years credit is applied to the P.S. Group.

The following information defines the claims status:

| <u>CLAIM NAME</u> | <u>NO. OF UNITS</u> | <u>PREVIOUS RECORD NO.</u> | <u>NEW TITLE NO.</u> |
|-------------------|---------------------|----------------------------|----------------------|
| B.S.2             | 20                  | 2003                       | 259245               |
| P.S.2             | 20                  | 2007                       | 259249               |
| P.S.3             | 20                  | 2008                       | 259250               |
| P.S.4             | 20                  | 2009                       | 259251               |
| P.S.7             | <u>15</u>           | 2012                       | 259254               |
|                   | 95 UNITS            |                            |                      |

5. HISTORY:

Little is known of the property's history prior to the 1960's but prospecting and hand mining by local residents is said to have occurred in the early 1900's.

Chaput Logging Company exposed silver - lead - zinc veins during logging operations in the 1960's. In 1968 F.K. Explorations started underground development, constructed a 50 tonne per day mill and in the period 1968 - 1970 shipped 1500 tonnes of ore to the Trail smelter. Alberta Gypsum Ltd. purchased the property in 1971 and conducted underground exploration. Coast Interior Ventures purchased and operated the mine between 1974 and 1978, expanding the mill's capacity to 150 tonnes per day. Operations terminated in 1981 and the plant remains dormant.

In 1983 Quinto purchased the Chaput property and added the B.S., P.S., D.K. and Quin claims. The Plateau Shear Zone was exposed during a trenching program testing coincident geochemical and VLF - E.M. anomalies near the top of Saddle Mountain. Encouraging gold & silver results from brecciated quartz veins in the trenches led to an initial 10 hole reverse - circulation drill program and one diamond drill hole in 1985, followed by an additional 1396m diamond drilling in 13 holes later that year.

The property was geological mapped at 1:2,000, ground VLF - E.M. and magnetometer surveys were conducted and 2700 m of NQ diamond drilling was completed over the shear zone in 1986.



In 1987 Quinto filed a Letter of Intent to initiate a mining program with the B.C. Mines Branch and completed 32 reverse circulation and 7 diamond drill holes (3030m). Additional VLF - E.M., magnetometer and geochemical surveys and a metallurgical test program were also carried out in 1987.

In early 1988 Kilborn Engineering constructed a computer generated model of the Plateau Shear mineralized zone based on 21 drill section lines. Quinto entered a joint venture agreement with Golden Seville Resources to mine the shear-related gold deposit. Golden Seville also formed a limited partnership to finance the project, with invested funds to qualify for scientific and experimental development tax credits, based on use of a proprietary column leach concept.

In the period July - November 11, 1988 Sancold Resources Contractors Inc. completed 186 m (610 ft) of exploration drift at a nominal size of 3.05 x 3.66m (10 x 12 ft) in the hanging wall of the shear zone and advanced 105 m (344 ft) in 2 cross cuts, having a nominal size of 2.74 x 3.05 m (9 x 10 ft). At this point Golden Seville had not met cash calls and underground development terminated. The purpose of the underground program was to cross cut the entire width of the shear zone in 3 locations and provide a 10,000 tonne bulk sample. The 190E cross cut was stopped in the shear. The drift was also stopped in the shear zone, well short of the 3rd crosscut location. The 140E crosscut was sampled and the underground was surveyed, however, to author's knowledge, the underground was not mapped.

A prefeasibility study was completed in December of 1988 by Bechtel Canada, Inc.

The property was inactive in 1989. In 1990 the 808m Level was mapped and the 140E and 190E x-cuts were channel sampled. Efforts to obtain exploration funding continue to the present.

#### 6. REGIONAL GEOLOGY (See Figure 3)

The basement rocks in the Lumby area include sedimentary and volcanic rocks and their metamorphic equivalents. The G.S.C. has assigned these to the Sicamous Formation, a part of the Upper Jurassic aged Slokan Assemblage (Okulich, 1979). The Slokan is age correlative with the Nicola Group, located to the west of the area.

The Sicamous Formation near Lumby includes carbonaceous argillite, siltstone, sericitic and chloritic tuff and minor phyllite, mainly of greenschist metamorphic grade. Elsewhere in the region, highly metamorphosed equivalents include andalusite-staurolite and kyanite schists.

The sedimentary and volcanic sequence is commonly well bedded, gently folded about a major northwest trending antiformal axis and

crosscut by widely spaced high angle normal faults. The Plateau Shear Zone is a major, possibly regional, west trending fault. The shear is locally arcuate and dips approximately 45° to the south where it transects the B.S.2 claim group.

The Sicamous Formation has been intruded by igneous stocks of three ages: 1. early Jurassic age diorite - located in a small stock intruding a synclinal axis located 6.4 km north of Lumby 2. Late Jurassic age granitic rocks located on a ridge 1.6 km west of Lumby 3. Late Cretaceous age pyritic diorite to granodiorite, comprising the southern half of Saddle Mountain.

The above rocks are unconformably overlain by Tertiary aged, bimodal volcanic rocks of the Kamloops Group.

#### 7. PROPERTY GEOLOGY:

The reader is referred to Kuran's 1987 report for a complete discussion of lithological units on the property. Kuran interprets the mapped lithologies as a sequence of distal marine sediments and felsic to intermediate volcanic tuffs and epiclastics. Structural orientations suggest these units have been folded about an east-west trending, eastward plunging anticlinal axis located in the saddle of Saddle Mountain. The south limb of the anticline has been intruded by a multiphase hornblende diorite stock.

Units 2, 3 and 4 are of particular interest to this study as these contain the lithologies encountered in the 500, 523, 577 and 808m Levels underground. Kuran describes the units as follows:

Unit 2: Contains the Plateau Shear Zone, consisting of poorly laminated black argillite (2c), highly gouged and pyritic, black carbonaceous material containing broken quartz veins (2a) and variably pyritic, white quartz veins ranging in thickness from 0.5 to 3 meters (2b). The unit contains minor iron carbonate (ankerite and siderite), fuchsite and 2-3% fine to medium grained diagenetic pyrite and 2-5%, 1 cm cubed, primary buckshot pyrite.

Unit 3: A complex package of felsic volcanic tuffs and epiclastic rocks. Usually rusty yellow weathering and moderately to highly foliated, therefore original bedding features are difficult to distinguish in outcrop. Distribution of lithologies is probably more complex than shown on Figure 4. The four subunits listed in the Legend are recognizable in the field, but contact relationships are not clearly understood.

Unit 4: A poorly exposed rock type containing three distinct subunits. Units 4a and 4c appear to be fine grained, distal andesitic to ande-dacitic epiclastics and fine tuffs. Unit 4b is a coarse-grained, chaotic package of debris flow-type, turbiditic, high energy rocks. They are matrix supported and heterolithic. Surface exposures are blocky weathering.

8. **MINERALIZATION:**

Precious metals mineralization is known in two areas on the property; the Chaput Mine Zone and the Plateau Shear Zone. Both zones are spatially related to the same structure.

In the Chaput mine at the western end of the shear, silver-lead-zinc mineralization is associated with a system of quartz-sulphide veins arranged in a step-like pattern. The sulphides are fine to medium grained, intergrown with milky white and grey quartz, and include galena, sphalerite, pyrite, tetrahedrite, pyrrhotite, chalcopyrite and argentite. Chlorite, sericite and clay minerals are the typical wallrock alteration minerals. Most mineralization in the Chaput zone is reported to occur below 600 metres elevation.

Gold mineralization occurs in the Plateau Shear Zone about 600 metres east of the Chaput zone and generally lies above 700 metres elevation. The zone ranges from 5 to 30 metres in width, with the enclosed quartz veins having up to about 5 meters aggregate width. In most areas within the zone quartz veins are intensely sheared and brecciated. Gold is associated with disseminated to locally massive pyrite, minor pyrrhotite and chalcopyrite. Sphalerite and galena are generally rare, but carry sporadic silver values. In many parts of the zone the breccia matrix contains a significant amount of carbonaceous (graphitic) material, where many of the highest gold values have been reported.

Kuran has estimated a geological reserve for the Plateau Shear Zone using a polygon method applied to mineralized intervals in 66 holes and 5 trench / pits:

(after Meyers, 1987)

| <u>Cutoff</u> (oz/ton) | <u>Tons</u> | <u>Au Grade</u> |
|------------------------|-------------|-----------------|
| 0.07                   | 281,615     | 0.124 oz/ton    |
| 0.05                   | 319,964     | 0.116           |

Within this reserve the West Pit Zone contains 32,482 tons of 0.158 oz/ton Au, down dip to 45 m. The East Pit Zone may contain 32,615 tons of 0.132 oz/ton Au.

9. **UNDERGROUND SAMPLING/MAPPING PROGRAM - METHODOLOGY**

A 50 m long nylon chain was laid out on the floor of the 523m Level drift and crosscuts, at the base of one wall. The chain was stretched taut and the wall marked at one meter intervals with a vertical line in fluorescent paint, to provide continuous control. Accumulated chainage was marked in fluorescent paint on the wall every 5 meters and the survey tied into existing survey spads. Chip channel wamples were collected at right angles across potentially mineralized structures and the line of sampling marked

by fluorescent paint and by consecutively numbered aluminum tags and flagging tape affixed to the wall by nails. The lithogeochemical samples were obtained by raking and hammering a continuous line on the wall approximately 10 cm wide. The sampled material was collected into consecutively numbered, 30 x 50 cm plastic sample bags held by a sample ring directly below the collection point. An attempt was made to collect an equal proportion of hard and soft material from the wall to reduce sampling bias. The samples were typically large, in the range of 10 - 15 Kg. In this manner a total of 22 channel samples were collected from the underground, then submitted to Acme Analytical Labs of Vancouver, B.C. for 30 element I.C.P. and Au by AA analysis on a 10 gm subsample.

A sketch was made of the salient geological features in each 3m interval utilizing a surveyor's rod for scale, notes were written and a representative rock sample labelled for later examination. The 208N x-cut and raise were mapped in some detail although the x-cut walls were unwashed. The rest of the 500, 523 and 577m Levels underground were rapidly examined for evidence of shear/vein zones and the lithological boundaries indicated on Figures 5 and 7 must be considered provisional pending detailed mapping.

10. DESCRIPTION OF LITHOLOGIES AND SHEAR ZONE OBSERVED IN THE CHAPUT MINE UNDERGROUND

The reader is referred to Figure 4 - D. Kuran's geology map of the Plateau Shear portion of the Lumby Property. Kuran has assigned the area of the 500 to 577m Levels underground to Unit 3d - a felsic, spotted-banded tuff described as calcareous, greenish-gray in colour, with knots of brown biotite and pyrrhotite. This unit probably coincides with the author's Unit 2- Banded Biotite Siltstone, which occurs at intervals throughout the underground. Kuran's Units 2c (argillite) and 4b (lithic tuff), indicated to occur in the eastern portion of the Chaput Mine, were not observed by the author. Units 1 - Foliated Marble and 3 - Garnet-Tremolite Pyrrhotite/Pyrite-Magnetite Skarn, of the current study, may represent metamorphosed calcareous tuffs or sediments of Kuran's Units 3 to 5.

The lithologies within the Chaput Mine are all moderately foliated and of low to moderate metamorphic (garnet-biotite) grade. Contacts between the three mapable units are commonly obscured by fracturing and shearing. Descriptions of lithologies follow:

Unit 1 - Foliated Marble : The unit was observed at the north end of the 208N x-cut and between the 150 and 180 x-cuts in the 523S drift and in a fault breccia adjacent sample 170010 (white bag) in the 577 drift. The unit is light gray to medium gray-green in colour, fine grained granular, moderately to strongly calcareous and weakly to moderately foliated at 110/50S. The marble unit

contains small areas of pink mottles and veinlets accompanied by pyrite and pyrrhotite disseminations and wispy streaks. Black chlorite (?) and white carbonate veins are common on fractures trending 045/50E and on foliation in the 208N x-cut. The unit contains 2-5% fine grained crystalline pyrite disseminations, with local concentrations to 10% by volume. Marble is gradational to Unit 3 skarn in the 208N x-cut and is the likely protolith for skarn elsewhere in the underground.

Unit 2 - Banded Biotite Siltstone: The unit is found interbanded with Unit 3 skarn throughout the 523s Level and due to its hardness and banded nature, it is the most distinctive lithology observed in the underground mapping.

The unit is light to medium gray in colour, comprising alternating bands of very fine grained to aphanitic quartzose, layers coloured very light gray-green and black to dark green bands of fine grained biotite. The banding varies from 0.1 - 10mm thick, appears rhythmic and may be turbiditic, trending 080/40S through much of the underground. The primary banding is overprinted by 0.1mm microlites and rounded flakes of dark brown to black biotite(?) offset 10 degrees to the banding lineation. The siltstone unit contains 1/2-1% fine grained pyrite and pyrrhotite on the banding lineation, is weakly magnetic and very weakly calcareous. It is a relatively hard and chemically unreactive rock and commonly is only weakly fractured. Adjacent to the shear zones, siltstone appears to behave in a brittle manner, forming moderately fractured and brecciated zones containing numerous milk-white quartz-pyrite veins infilling tension fractures on 080/40S.

Unit 3 - Garnet - Tremolite - Pyrrhotite/Pyrite/Magnetite Skarn: Low grade skarn was observed throughout the 500 Level and interbanded with biotite siltstone in the 523S Level. The unit is commonly light gray in colour with white (tremolite, carbonate) and light brown (garnet?) bands and white carbonate and glassy to milk-white quartz veins. Skarn varies to dark gray-green in the shear zones. The unit is commonly foliated and appears to have been a locus for fracturing and shearing on the 523S Level, as these structural zones contain abundant quartz, carbonate, tremolite, pale brown to red and orange-brown garnets, pyrrhotite, pyrite, local concentrations of talc, magnetite and tourmaline and more rarely, wollastonite, chlorite and diopside. External to the shear zones the skarn unit is fine to medium grained, granular, weak to moderately calcareous and magnetic. It is commonly moderately fractured and contains approximately 3% fine grained pyrite and pyrrhotite and 1/2% magnetite.

Mineralized Shear Zones: Mineralized Shear Zones were examined in the 577m drift and on the 523S Level in the 208N x-cut and raise, in the 523S drift just west of the 180SW x-cut, east adjacent to the 060N x-cut and 23m in from the 523 Level portal. The shear zones are readily apparent in the underground as they are marked by enveloping fracture zones migrating into fault breccias,

transitional into a central cataclastic zone containing a flaser structure from 0.3 to 2.0m wide.

The shear zones appear to be developed within skarned marble bands separated by siltstone bands. The shears are sinuous, with a major trend of 110-120/40-80S apparently modified by NE trending flexures; possibly folds or faults.

The cataclastic portion of the shears contain abundant pyrite and pyrrhotite and much boudinage, lensoid and lenticular white quartz, with pyrite as internal aggregates and external rims. These quartz bodies are probably the remnants of large hydrothermal veins following brittle faults in a carbonate unit. On the 523 Level, these veins appear to have been largely dismembered by shear reactivation of the fault zones. The author examined one high grade Ag, Pb, Zn stope on the 577 Level, located 5m south of sample 170010. Here white quartz-sulphide veins are widely drag folded and thickened but only partially dismembered in and adjacent to a shear zone. The Ag-bearing base metal sulphides occur as disseminations and massive clots and pods both within and peripheral to the quartz veins.

The Ag-bearing Pb-Zn, (Cu,Au) occurrences on the 523 Level, at 17-12, 17-14 and 17-20,21 indicate that the economic sulphides are found both as fine disseminations with pyrite in the shear and as massive clots in and adjacent to the white quartz veins.

#### 11. DISCUSSION OF PERCUSSION DRILL PROGRAM:

The purpose of the 1991 percussion drill program was to locate unmined high-grade Ag-bearing base metal sulphide ore shoots accessible from the 523S drift. The shoots were suspected to be down dip extensions of an echelon mineralized shears mined on the 577 Level. Six holes totalling 100m of BQ diameter percussion drilling were completed from drill stations established in the 090S, 125S and 208S x-cuts. Drilling was completed with a jackleg drill powered by compressed air. The length of the holes was limited to a maximum of 17.07m by the capacity of the drill. Continuous sludge samples were collected over 1.22m intervals in each hole. The author panned out approximately 200 gm of each sample to obtain a relatively clean representation of the +80 mesh rock chips and sulphides. The concentrate was placed on a numbered sheet of paper and geologically examined under a 40 - 90 power binocular microscope. Purpose of this exercise was to determine the drilled lithologies and to locate the highest sulphide samples for selected analysis.

Approximately 50 gm of panned concentrate and -80 mesh reject were saved in numbered plastic containers for permanent storage. The rest of the reject and panned concentrate were returned to the sludge sample bag. A total of 12 sludge samples were chosen for analysis and shipped to Acme Analytical Labs in Vancouver, B.C. for 30 element I.C.P and Au by AA on a 10 gm subsample. The remaining sludge samples are stored on the property in the core shack.

12.           DISCUSSION OF RESULTS:

The program of geological mapping has recognized three shear zones on the 523S Level; each is characterized by a flaser structured core with enveloping sheared fault breccias and peripheral fracture zones. These structures appear identical to two shears containing high-grade Ag, Pb, Zn sulphides examined by the author on the 577 Level.

Two of the 523S Level shears were sampled and were found to be highly anomalous in Cu, Pb, Zn, Ag, As, Sb, and Au at three sample sites (17-12, 14, 20/21). One of the 577 Level shears was sampled (17-10 white bag) and is also anomalous in these elements. The reader is directed to Appendix 2 for a listing of analytical results for underground lithogeochemical sampling.

The shear zone which cuts through the 180 x-cut contains high grade Ag, Pb, Zn sulphides in the floor of the 523S drift suggesting potential for high grade pods down dip to the south. This same(?) shear appears to continue through the 208N x-cut and raise. Detailed channel sampling of the shear in this area (17-1 to 4,7) indicates it is anomalous in Au (120 - 990 ppb) but not in base metals. This fact may suggest that this area has low potential for ore shoots. The author saw much boudinage white quartz in the raise but no large intact or fold thickened quartz-sulphide veins such as occur on the 577 Level.

The shear zone which cuts through the 060 x-cut was sampled by 17-12,14 and is anomalous in base and precious metals. The shear has good potential for ore shoots in both the up and down dip extensions within this area.

The reader is directed to Appendix 3 and 4 for analytical results and sample logs for the six percussion up-holes drilled south from the 090S, 125S and 208S x-cuts. The descriptive log suggests that the area south of the x-cuts is occupied by variably skarned, quartz veined, pyritized and faulted lithology assigned to Unit 3. No economic sulphides were observed in the panned concentrates and the analytical results obtained from the highest sulphide and magnetite rich samples, while showing good contrast and weakly anomalous intervals, do not indicate base metal ore potential in the tested up-hole areas. Potential for an echelon shear-related ore shoots vertically above and below the x-cuts, remains untested. Additional untested potential is to be found above and below the 523N drift.

13.           CONCLUSIONS:

Ag-bearing base metal ore shoots, extensively stoped contiguous to the 577 Level, are associated with drag folded and thickened white quartz-sulphide veins, occurring in and adjacent to large flaser structure/ breccia zones. The ore shoots have been variably

comminuted in the flaser core of the shears. The shear zones trend 110-120/40-80S with apparent NE directed flexures related either to faulting or folding. These flexures, if real, may be important controls for high grade shoots, as they represent dilatant areas favorable for deposition of sulphides.

Two Ag-base metal mineralized, flaser structure/breccia zones are recognized within the 523S Level. The eastern zone is rich in white quartz-sulphide boudinage veins and has immediate potential for ore shoots both up and down dip of the 180 x-cut area. The western zone is located in the 060 x-cut and is quartz rich in this area. The base metal anomalous samples in this structure come from mylonite, perhaps suggesting the ore shoots have been sheared out; nevertheless, this zone has potential both on-strike and up and down dip.

The shear zones appear to have been developed within skarned marble sandwiched between siltstone (felsic tuff?) bands. The siltstone unit, although apparently not mineralized, may have acted as a permeability barrier, restricting mineralizing solutions to the structurally and chemically favourable marble unit. If the siltstone played a passive role in the localization of ore minerals, its structure may be important to exploration in the mine.

The percussion drill program of six up-holes directed south from the 090S, 125S and 208S x-cuts has eliminated the economic potential of the tested area. Additional potential for an echelon shear-related ore shoots remains vertically above and below these areas and adjacent to the 523N drift

The 500 Level contains narrow shear zones with low base and precious metal values and does not appear to have economic potential in the immediate area.

14. RECOMMENDATIONS:

- a. Wash all walls in the 523 Level and geologically map in detail paying particular attention to structural elements such as fold orientations in the shear.
- b. Muck-out and map the 180 x-cut to determine the orientation of the shear in this area.
- c. Slash-out drill stations along the x-cuts adjacent to the 523S and 523N drifts at 25m intervals and drill percussion holes directed 000/-40 and 180/+40 to test for an echelon shear related ore shoots. Orientation and location of drilling may be subject to change based on the results of the mapping program in (a) above.

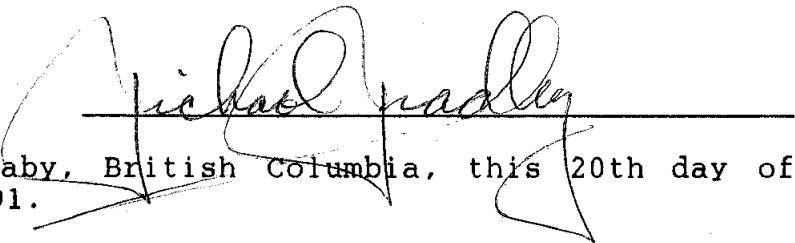


15.

STATEMENT OF QUALIFICATIONS

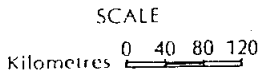
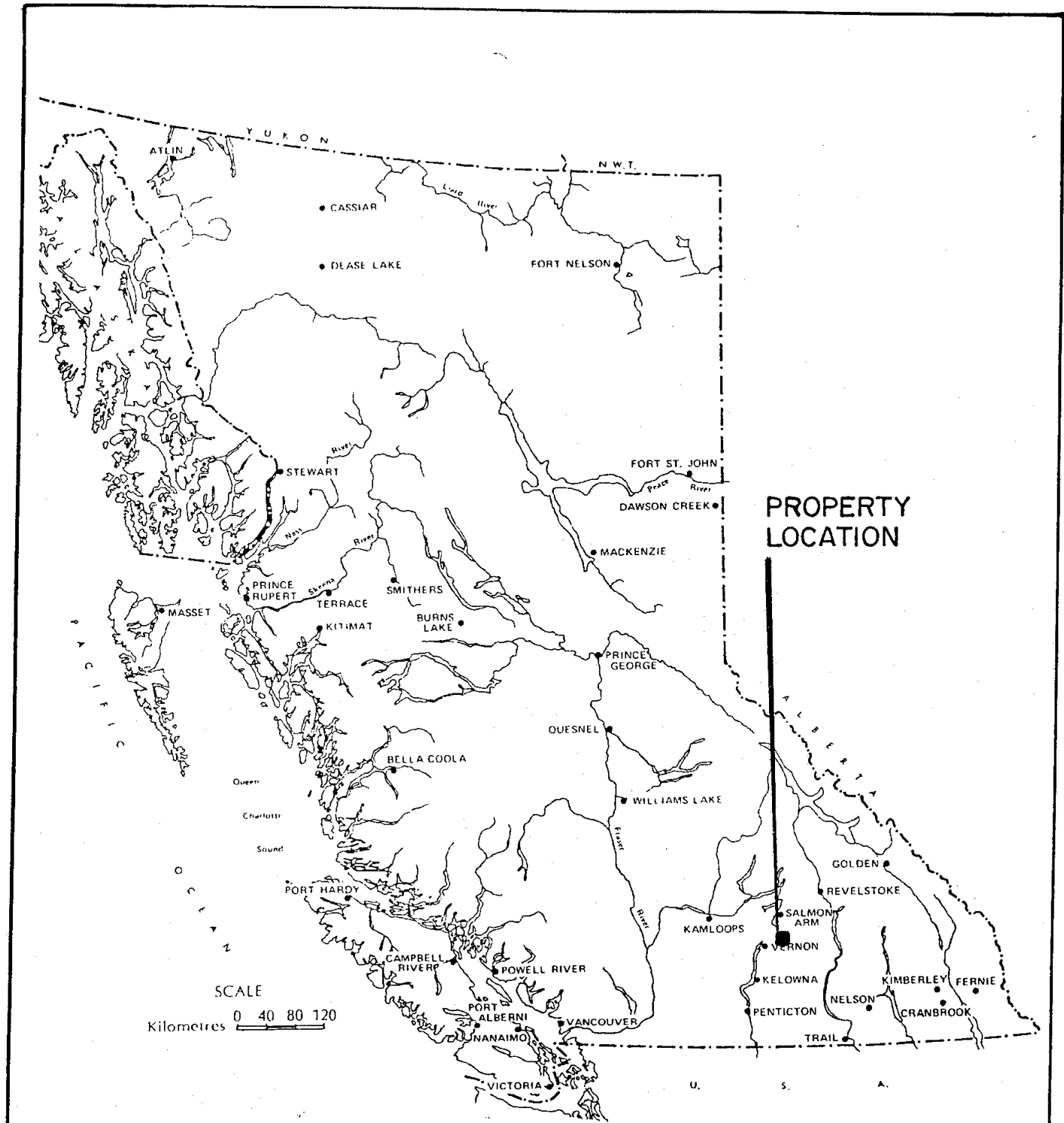
I, Michael D. Bradley of Mike Bradley & Associates with an office at 4750 Westlawn Drive, Burnaby, B.C., V5C 3R3, do hereby state as follows:

1. I am a graduate of the University of British Columbia, Vancouver, B.C., where I received a B.Sc. degree in Physics-Geology in 1973.
2. I received an M. Sc. degree in 1975 from Scripps Institute, of Oceanography, La Jolla, California.
3. I have been continuously employed as an exploration geologist from 1976 to present; as an employee of B P Resources Canada and since 1989 as a full time consultant.
4. I am a voting member of the Association of Exploration Geochemists since 1989.
5. I am a member of the Canadian Institute of Mining and Metallurgy.
6. I am a member of the Cordilleran Section of the G.A.C.
7. I am a member of the B.C. and Yukon Chamber of Mines.
8. I am a past chairman of the Vancouver M.E.G. and currently am publisher of the M.E.G. Directory.
9. I have no interest, either directly or indirectly in the Lumby Mine, or any property or securities of the Quinto Mining Corporation, nor do I expect to receive any.
10. I hereby grant my permission for Quinto Mining Corporation to use this report, or any portion of it, for any legal purposes normal to the business of that firm, so long as excerpts used do not materially deviate from the intent of this report, as set out in the whole.

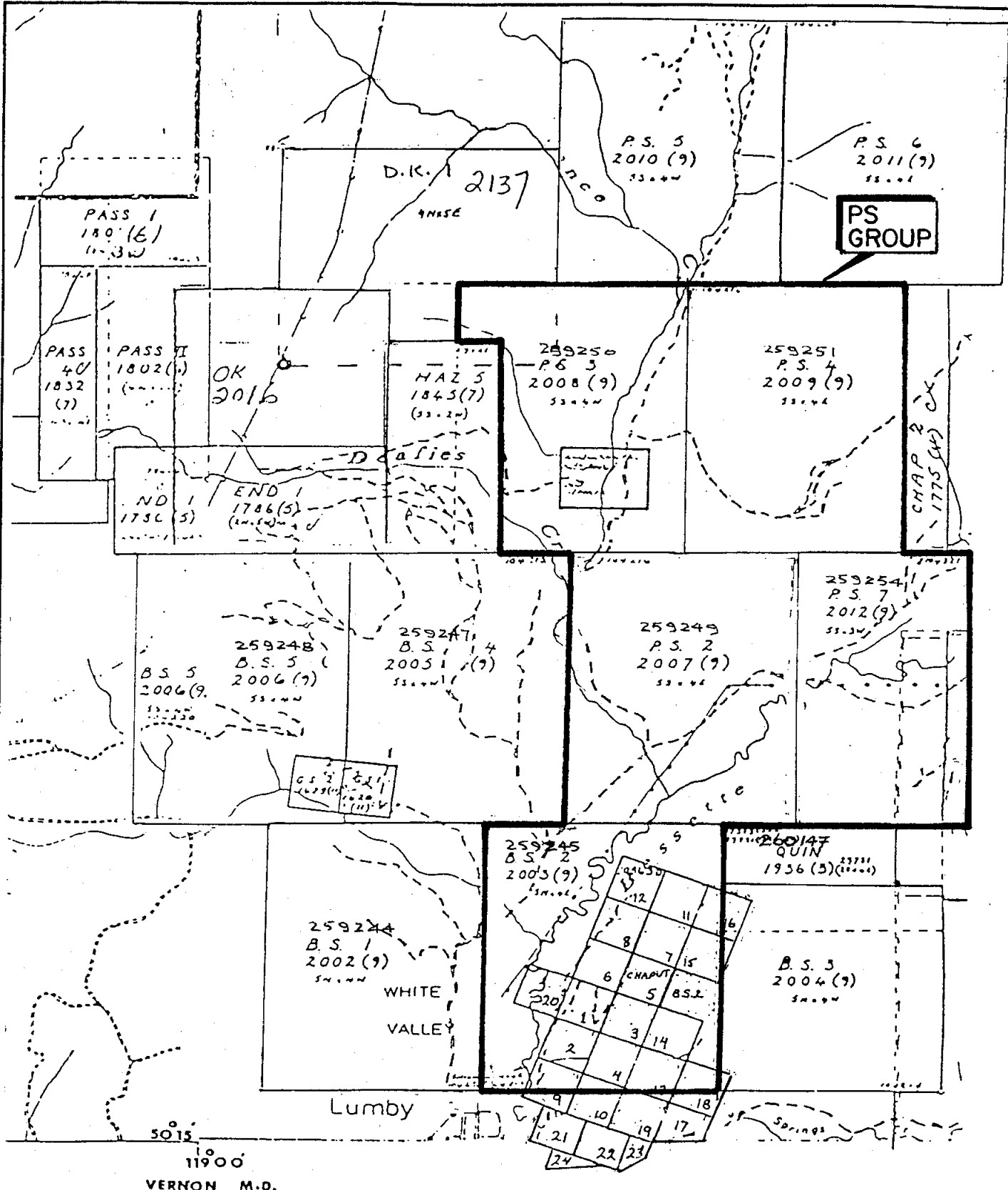
  
Dated At Burnaby, British Columbia, this 20th day of September, 1991.

16. REFERENCES

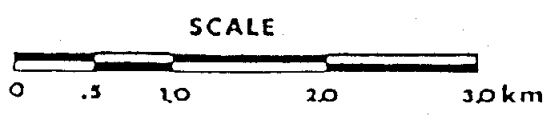
- Bradley, M.D. (1990): Report on chip/channel sampling and geological mapping of 140E and 190E crosscuts, 808m level underground, Chaput 5 claim. Unpublished company report.
- Jones, A.G. (1959): Vernon Map Area, B.C., Geological Survey of Canada Memoir 296.
- Kuran, D.L. (1986): Report on the Lumby Project (Phase I Exploration) for the Quinto Mining Corporation, February 3rd, 1986, Unpublished Company Report.
- Kuran, D.L. (1986): Report on the Lumby Project - Phase II Exploration Program for the Quinto Mining Corporation, September 5th, 1986, Unpublished Company Report.
- Meyers, R.E. (1987): Lumby Project (Chaput), Exploration in British Columbia, Mineral Resources Division, Geological Survey Branch, B.C. Ministry of Energy, Mines and Petroleum Resources, p. B23.
- Okulitch, A.V. (1979): Geological Survey of Canada, Open File 637
- Richards, R.H. (1988): Preliminary Feasibility Study For Lumby Gold Project, Bechtel Canada Inc. December, 1988, Unpublished Consultants Report.
- Unknown Author, (1988): Geological Cross Sections 1 to 21, Kilborn Engineering Computer Study without Report of Plan Map, unpublished Consultant's Work.



|                               |                           |
|-------------------------------|---------------------------|
| MIKE BRADLEY & ASSOCIATES     |                           |
| QUINTO MINING CORP.           |                           |
| LUMBY PROJECT - PLATEAU ZONE  |                           |
| REGIONAL<br>LOCATION MAP      |                           |
| N.T.S. 82L-7W                 |                           |
| VERNON M.D., B.C.             |                           |
| SCALE : AS SHOWN              | DATE : SEPT. 1991         |
| PROJECT N <sup>o</sup> . 9139 | FIGURE N <sup>o</sup> . 1 |



50°15'  
119°00'  
VERNON M.O.



|                              |                   |
|------------------------------|-------------------|
| MIKE BRADLEY & ASSOCIATES    |                   |
| QUINTO MINING CORP.          |                   |
| LUMBY PROJECT - PLATEAU ZONE |                   |
| CLAIM LOCATION MAP           |                   |
| N.T.S. 82L-7W                | VERNON M.D., B.C. |
| SCALE: 1:50,000              | DATE: SEPT. 1991  |
| PROJECT NO. 9139             | FIGURE NO. 2      |

# LEGEND

## MESOZOIC

### CRETACEOUS

**Kg** GRANITE, GRANODIORITE; LESSER QUARTZ MONZONITE AND QUARTZ DIORITE.

BALDY BATHOLITH AND SATELLITIC STOCKS.

**Kqm** QUARTZ MONZONITE, GRANODIORITE; MINOR PEGMATITE.

### EARLY CRETACEOUS


SALMON ARM, DEEP CREEK, MISCONLITH AND SCOTCH CREEK PLUTONS.

**EKgd** GRANODIORITE, GRANITE, QUARTZ MONZONITE; MINOR DIORITE, GABBRO, QUARTZ, DIORITE.

RAFI BATHOLITH

**EKqm** QUARTZ MONZONITE, GRANODIORITE; MINOR PEGMATITE AND DIORITE.

### JURASSIC OR CRETACEOUS

 SYENITE AND FELSITE DYKES.

### JURASSIC

**Jgn** MASSIVE AND FOLIATED, SYNTECTONIC PEGMATITE, APLITE, LEUCOCRATIC GRANITE AND QUARTZ MONZONITE BORDERING AND WITHIN SHUSHAP METAMORPHIC COMPLEX AND OKANAGAN PLUTONIC AND METAMORPHIC COMPLEX; SILVER STAR INTRUSIONS: (MAY INCLUDE ORTHOGNEISS OF PALAEOZOIC AND PROTEROZOIC AGES).

### LATE JURASSIC

VALMALLA PLUTONIC ROCKS

**lJgd** GRANODIORITE, GRANITE; MINOR GABBRO, DIORITE, QUARTZ DIORITE.

### EARLY JURASSIC

LONG RIDGE PLUTON

**eJg** FOLIATED, LIMEATED GRANITE (MAY INCLUDE PALAEOZOIC PLUTONIC ROCKS).

NELSON PLUTONIC ROCKS: THUYA BATHOLITH AND SATELLITIC STOCKS.

**eJgd** QUARTZ DIORITE, GRANODIORITE; MINOR DIORITE, GRANITE, AMPHIBOLITE, GABBRO AND ULTRAMAFIC ROCKS.

**eJdi** DIORITE; MINOR QUARTZ DIORITE AND GABBRO.

**eJy** SYENITE AND MONZONITE.

### INTRUSIVE CONTACT

### TRIASSIC AND JURASSIC

UPPER TRIASSIC AND LOWER JURASSIC

NICOLA GROUP (POSSIBLY INCLUDES SLOCAN GROUP NEAR SOUTHEAST EDGE OF AREA).

**lJnv** ANDESITE AND BASALT FLOW ROCKS, PORPHYRITIC AUGITE ANDESITE, BRECCIA, TUFF, AGGLOMERATE, GREENSTONE, CHLORITIC PHYLLITE; MINOR ARGILLITE, LIMESTONE, SERICITIC SCHIST.

### UPPER TRIASSIC

KARMIAN AND KORMAN

NICOLA GROUP

**uRns** BLACK SHALE, ARGILLITE, CONGLOMERATE, LIMESTONE, SILTSTONE; MINOR TUFF AND PHYLLITE.

**uRnc** LIMESTONE

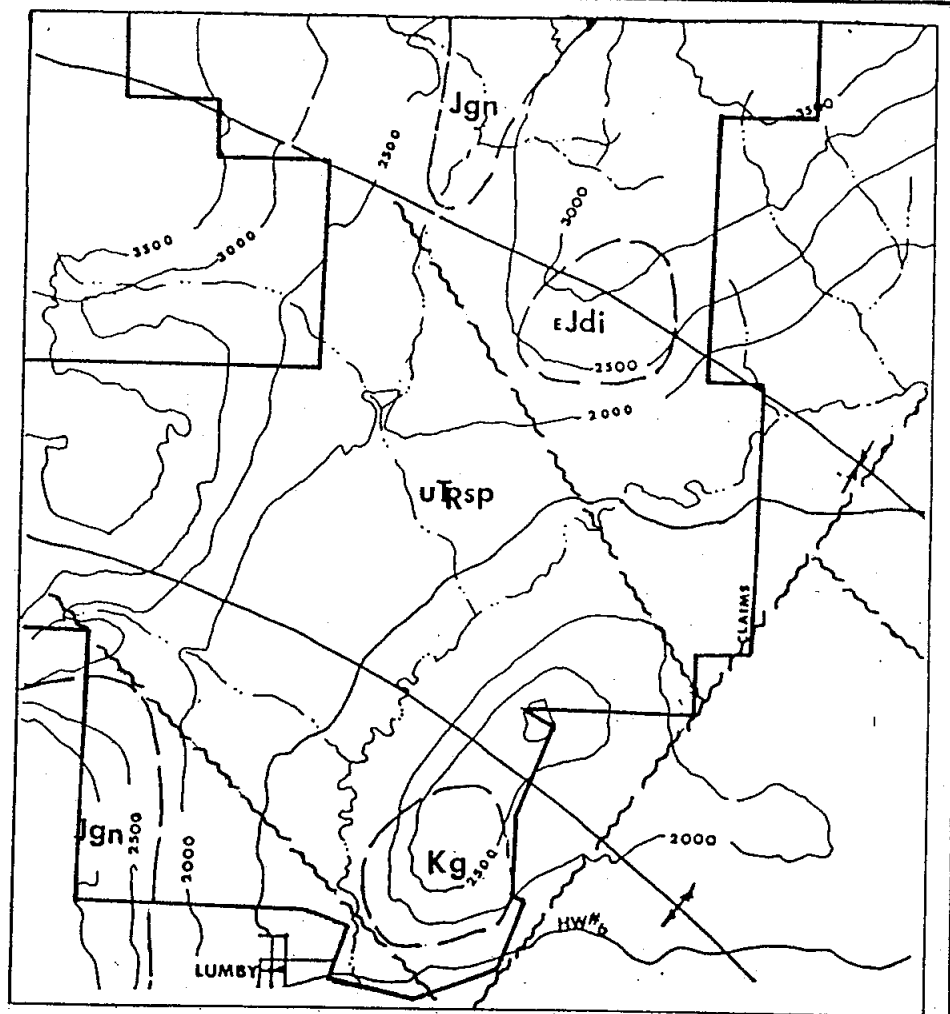
### SLOCAN GROUP

SICAMOUS FORMATION

**uRsc** SERICITIC, GRAPHITIC AND ARGILLACEOUS LIMESTONE; CALCAREOUS PHYLLITE, ARGILLITE.

**uRsp** SHALE, ARGILLITE, MASSIVE SILTSTONE, PHYLLITE, TUFF AND CALCAREOUS PELITE; MINOR CONGLOMERATE, LIMESTONE, GREENSTONE, CHLORITIC PHYLLITE AND ANDALUCITE - STAUROLITE - AND KYANITE - BEARING SCHIST.

**uRscg** CONGLOMERATE.



MIKE BRADLEY & ASSOCIATES

QUINTO MINING CORP.

LUMBY PROJECT - PLATEAU ZONE

REGIONAL GEOLOGY

N.T.S. 82L-7W

VERNON M.D., B.C.

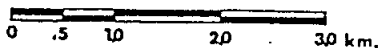
SCALE: 1:70,000 (approx.)

DATE: SEPT. 1991

PROJECT NO. 9139

FIGURE NO. 3

SCALE



After A.V. Okulitch, 1979, GSC 637  
A.G. Jones, 1959, GSC Memoir 290



APPENDIX 1

STATEMENT OF COSTS

STATEMENT OF COSTS

August 6th, 1991 to September 23rd, 1991.

Mucking out 3 drifts (silver deposit)  
2 cross-cuts (gold deposit)  
9 percussion drill holes approx 54' each  
Reclamation work on old portals  
Timbering cross-cuts, portal, 2 doors on portal  
Re-laddering, stopes.

|     |   |             |
|-----|---|-------------|
| 1.  | 2 Miners 38 days @ \$250 each per day                           | \$ 16,000   |
| 2.  | 1 Man casual labour 16 days @ \$100 per day                     | 1,600       |
| 3.  | Timber  | 12,000      |
| 4.  | Cat work  | 950         |
| 5.  | Geologist, sampling drift, stopes, logging core<br>and reports  | 4,850       |
| 6.  | Assistant to geologist  | 600         |
| 7.  | Rental 4x4 truck and pickup 40 days @ \$55 p.d.                 | 4,400       |
| 8.  | Fuel and oil  | 1,600       |
| 9.  | Food and Hotels   | 6,450       |
| 10. | Management and Supervision                                      | 4,800       |
| 11. | Travelling  | 1,225       |
| 12. | Assays  | 900         |
| 13. | Air pipes, pump, plastic water pipe, boots,<br>gloves and locks | 1,400       |
| 14. | Rental of Equipment   | 27,825      |
|     |   | <hr/>       |
|     |   | \$ 84,600   |
|     |   | <hr/> <hr/> |

1860 East 22nd Avenue, Vancouver, B C V5N 2R1

Telephone: (604) 872-1435 or 685-2219

### INVOICE

October 8, 1991

Quinto Mining Corporation  
#606 - 626 West Pender Street  
Vancouver, B.C. V6B 1V9

INVOICE NUMBER: 1300

August - September, 1991

#### EQUIPMENT RENTALS

| Time         | Item                  | Rate<br>per month | Amount           |
|--------------|-----------------------|-------------------|------------------|
| 1-1/2 months | Scooptram             | \$6,000.00        | \$ 9,000.00      |
| 1-1/2 months | 850 CFM Compressor    | 3,400.00          | 5,100.00         |
| 1-1/2 months | Jackleg Drills        | 400.00            | 600.00           |
| 1-0 months   | 56 KW Power Plant     | 1,800.00          | 1,800.00         |
| 1-1/2 months | Small Tools           | 500.00            | 750.00           |
| 1-0 months   | Electric Fan          | 600.00            | 600.00           |
| 1-1/2 months | Air Fan               | 300.00            | 450.00           |
| 1-1/2 months | Air Receiver          | 250.00            | 375.00           |
| 1-1/2 months | Water Receiver        | 250.00            | 375.00           |
| 1-1/2 months | 6 Lamps and Chargers  | 500.00            | 750.00           |
| 9-0 days     | 4 x 4 truck           | 1,000.00          | 300.00           |
| 1-1/2 months | Hoses and Lubricators | 200.00            | 300.00           |
| 1-1/2 months | Power Saws            | 250.00            | 375.00           |
| 1-1/2 months | Fax Machine           | 100.00            | 150.00           |
|              |                       |                   | <u>20,925.00</u> |

#### CONSULTING

|                            |            |                 |  |
|----------------------------|------------|-----------------|--|
| Jerry White                |            |                 |  |
| August 1 - 30 (8 days)     | 300.00/day | 2,400.00        |  |
| September 1 - 23 (15 days) | 300.00/day | 4,500.00        |  |
|                            |            | <u>6,900.00</u> |  |

Total Due

\$27,825.00



APPENDIX 2

CHANNEL SAMPLE DESCRIPTIONS AND ANALYTICAL  
RESULTS AND PROCEDURES



| SAMPLE#          | Mo<br>ppm | Cu<br>ppm | Pb<br>ppm | Zn<br>ppm | Ag<br>ppm | Ni<br>ppm | Co<br>ppm | Mn<br>ppm | Fe<br>% | As<br>ppm | U<br>ppm | Au<br>ppm | Th<br>ppm | Sr<br>ppm | Cd<br>ppm | Sb<br>ppm | Bi<br>ppm | V<br>ppm | Ca<br>% | P<br>% | La<br>ppm | Cr<br>ppm | Mg<br>% | Ba<br>ppm | Ti<br>% | B<br>ppm | Al<br>% | Na<br>% | K<br>% | M<br>ppm | Au <sup>g</sup><br>ppb |
|------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|--------|-----------|-----------|---------|-----------|---------|----------|---------|---------|--------|----------|------------------------|
| 8191104 170001   | 2         | 76        | 13        | 55        | .8        | 15        | 19        | 485       | 4.91    | 18        | 5        | ND        | 1 337     | 1.4       | 2         | 2         | 82        | 4.77     | .109    | 4      | 13        | 2.04      | 33      | .09       | 2       | 2.00     | .05     | .23     | 1      | 310      |                        |
| 8191104 170002   | 2         | 56        | 8         | 42        | .6        | 18        | 14        | 642       | 5.05    | 50        | 5        | ND        | 1 412     | 1.4       | 2         | 2         | 75        | 6.71     | .110    | 4      | 17        | 1.77      | 37      | .07       | 2       | 1.73     | .07     | .20     | 1      | 140      |                        |
| 8191104 170003   | 2         | 65        | 11        | 38        | .8        | 15        | 13        | 655       | 3.73    | 12        | 5        | ND        | 1 381     | 1.1       | 2         | 2         | 83        | 6.63     | .112    | 4      | 20        | 1.93      | 34      | .08       | 2       | 1.97     | .06     | .22     | 1      | 120      |                        |
| 8191104 170004   | 7         | 156       | 8         | 26        | 4.0       | 19        | 23        | 425       | 6.33    | 30        | 5        | ND        | 2 333     | 1.8       | 2         | 3         | 47        | 4.49     | .102    | 4      | 11        | 1.02      | 31      | .05       | 20      | 1.34     | .07     | .18     | 1      | 990      |                        |
| 8191104 170005   | 1         | 117       | 6         | 25        | .8        | 21        | 20        | 326       | 7.39    | 27        | 5        | ND        | 2 194     | 2.5       | 2         | 2         | 66        | 3.90     | .098    | 3      | 19        | 1.79      | 62      | .09       | 2       | 1.97     | .11     | .35     | 1      | 150      |                        |
| 8191104 170006   | 1         | 186       | 5         | 22        | .6        | 11        | 21        | 601       | 7.13    | 29        | 5        | ND        | 1 213     | 2.3       | 2         | 2         | 56        | 7.24     | .074    | 2      | 8         | .98       | 27      | .10       | 2       | 1.21     | .09     | .10     | 1      | 78       |                        |
| 8191104 170007   | 4         | 89        | 7         | 24        | .8        | 16        | 16        | 518       | 4.25    | 14        | 5        | ND        | 1 413     | 1.7       | 2         | 2         | 61        | 5.42     | .089    | 4      | 12        | 1.17      | 20      | .09       | 4       | 1.67     | .08     | .19     | 1      | 31       |                        |
| 8191104 170008   | 14        | 42        | 12        | 42        | .2        | 4         | 2         | 244       | 3.76    | 43        | 5        | ND        | 4 95      | .4        | 2         | 2         | 35        | .46      | .093    | 10     | 8         | .77       | 35      | .17       | 2       | 1.13     | .07     | .48     | 1      | 22       |                        |
| 8191104 170009   | 7         | 45        | 11        | 44        | .2        | 5         | 5         | 261       | 3.43    | 46        | 5        | ND        | 4 53      | .4        | 2         | 2         | 33        | .44      | .098    | 9      | 10        | .88       | 38      | .16       | 3       | 1.20     | .09     | .51     | 1      | 12       |                        |
| 170012           | 2         | 505       | 408       | 209       | 72.9      | 18        | 16        | 508       | 3.59    | 66        | 5        | ND        | 2 369     | 5.0       | 55        | 2         | 12        | 4.79     | .068    | 2      | 6         | .85       | 36      | .01       | 3       | .71      | .02     | .14     | 1      | 220      |                        |
| 170013           | 1         | 236       | 25        | 40        | 2.5       | 39        | 41        | 449       | 7.02    | 8         | 5        | ND        | 2 280     | 1.7       | 2         | 2         | 30        | 4.81     | .135    | 4      | 13        | 1.04      | 96      | .06       | 2       | 1.17     | .02     | .49     | 1      | 18       |                        |
| 170015           | 1         | 66        | 10        | 14        | 1.2       | 8         | 54        | 436       | 5.28    | 81        | 5        | ND        | 2 298     | 1.1       | 2         | 2         | 5         | 4.29     | .047    | 3      | 4         | .38       | 24      | .01       | 2       | .56      | .04     | .14     | 1      | 43       |                        |
| 170016           | 1         | 116       | 46        | 93        | .9        | 11        | 4         | 450       | 2.81    | 10        | 5        | ND        | 4 264     | 1.7       | 2         | 2         | 32        | 5.23     | .075    | 4      | 15        | .89       | 15      | .01       | 3       | .96      | .06     | .06     | 1      | 11       |                        |
| 170017           | 2         | 206       | 43        | 189       | 1.2       | 61        | 160       | 454       | 9.41    | 169       | 5        | ND        | 2 75      | 3.7       | 2         | 2         | 52        | 3.61     | .071    | 3      | 20        | .96       | 7       | .07       | 2       | .88      | .04     | .03     | 1      | 35       |                        |
| 170018           | 2         | 139       | 82        | 91        | 1.8       | 25        | 22        | 501       | 5.08    | 56        | 5        | ND        | 1 480     | 3.0       | 2         | 2         | 46        | 5.91     | .111    | 5      | 15        | 1.08      | 79      | .02       | 2       | 1.38     | .03     | .40     | 1      | 17       |                        |
| 170019           | 1         | 163       | 53        | 69        | 1.5       | 23        | 17        | 537       | 4.76    | 32        | 5        | ND        | 1 456     | 2.0       | 2         | 2         | 51        | 7.66     | .098    | 5      | 13        | 1.15      | 24      | .01       | 2       | 1.31     | .06     | .13     | 1      | 18       |                        |
| 170020           | 1         | 1639      | 46529     | 26671     | 343.7     | 31        | 17        | 500       | 10.13   | 478       | 5        | ND        | 1 200     | 528.6     | 936       | 3         | 9         | 3.40     | .043    | 2      | 23        | .29       | 21      | .01       | 4       | .38      | .02     | .13     | 1      | 440      |                        |
| 170021           | 1         | 544       | 12562     | 37434     | 120.8     | 24        | 14        | 535       | 8.23    | 231       | 5        | ND        | 2 259     | 748.0     | 119       | 2         | 30        | 3.64     | .088    | 3      | 25        | .99       | 50      | .03       | 2       | 1.16     | .05     | .29     | 2      | 210      |                        |
| 170022           | 1         | 150       | 45        | 222       | 1.3       | 20        | 17        | 579       | 5.98    | 11        | 5        | ND        | 1 324     | 5.3       | 2         | 2         | 43        | 5.64     | .087    | 3      | 9         | .88       | 69      | .07       | 6       | .99      | .03     | .26     | 1      | 130      |                        |
| RE 170019        | 1         | 163       | 53        | 73        | 1.7       | 23        | 18        | 549       | 4.90    | 37        | 5        | ND        | 1 466     | 2.1       | 2         | 2         | 52        | 7.96     | .100    | 5      | 14        | 1.18      | 24      | .01       | 2       | 1.33     | .06     | .13     | 1      | 26       |                        |
| 170023           | 1         | 171       | 13        | 74        | 1.3       | 26        | 22        | 933       | 7.04    | 10        | 5        | ND        | 1 387     | 3.2       | 2         | 2         | 15        | 10.16    | .044    | 2      | 8         | .78       | 10      | .01       | 2       | .66      | .01     | .09     | 1      | 9        |                        |
| 170024           | 1         | 180       | 132       | 85        | 2.9       | 29        | 26        | 657       | 6.02    | 8         | 5        | ND        | 1 227     | 2.8       | 2         | 2         | 43        | 6.03     | .113    | 3      | 16        | .78       | 30      | .09       | 30      | .80      | .04     | .14     | 1      | 8        |                        |
| 170009 WHITE BAG | 1         | 907       | 1835      | 34622     | 96.4      | 22        | 15        | 598       | 5.41    | 95        | 5        | ND        | 1 326     | 686.8     | 156       | 2         | 21        | 4.53     | .101    | 2      | 24        | 1.46      | 40      | .01       | 2       | 1.06     | .05     | .21     | 15     | 29       |                        |
| 170010 WHITE BAG | 1         | 121       | 18        | 280       | 1.3       | 24        | 20        | 496       | 5.61    | 19        | 5        | ND        | 2 247     | 5.1       | 2         | 2         | 97        | 2.70     | .145    | 5      | 23        | 2.70      | 83      | .13       | 2       | 2.42     | .09     | .84     | 1      | 104      |                        |
| STANDARD C/AU-R  | 18        | 59        | 38        | 132       | 6.9       | 70        | 32        | 1043      | 3.97    | 40        | 21       | 7         | 39        | 52        | 18.6      | 16        | 21        | 54       | .49     | .090   | 38        | 58        | .88     | 177       | .09     | 34       | 1.90    | .06     | .15    | 13       | 480                    |

Samples beginning 'RE' are duplicate samples.



Quinto Mining Corp.

FILE # 91-4755

Page 2



OCT-03-1991 13:54

FROM ACME ANALYTICAL

TO QUINTO MINING

P.003

| SAMPLE# | Mo  | Cu   | Pb    | Zn    | Ag    | Ni  | Co  | Mn  | Fe    | As  | U   | Au  | Th  | Sr  | Cd    | Sb  | Bi  | V   | Ca   | P    | La  | Cr  | Mg  | Ba  | Ti  | S   | Al  | Na  | K   | U   |
|---------|-----|------|-------|-------|-------|-----|-----|-----|-------|-----|-----|-----|-----|-----|-------|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|         | ppm | ppm  | ppm   | ppm   | ppm   | ppm | ppm | ppm | %     | ppm | ppm | ppm | ppm | ppm | ppm   | ppm | ppm | ppm | %    | %    | ppm | ppm | %   | ppm | %   | ppm | %   | %   | %   | ppm |
| 170014  | 3   | 2671 | 47175 | 22119 | 629.2 | 15  | 10  | 336 | 10.72 | 278 | 5   | ND  | 3   | 222 | 501.8 | 838 | 2   | 13  | 4.07 | .087 | 4   | 17  | .85 | 21  | .01 | 2   | .81 | .01 | .09 | 1   |

OCT-08-1991 10:47

FROM ACME ANALYTICAL

TO QUINTO MINING

P.002/002

ACME ANALYTICAL LABORATORIES LTD.

634 E. BASTIEN ST. VANCOUVER B.C. V6A 1K0

PHONE (604) 253-3158 FAX (604) 253-1716

AA  
LL

# ASSAY CERTIFICATE

AA  
LL

Quinto Mining Corp.

FILE # 91-4539R

| SAMPLE#          | Pb % | Zn % | Ag** oz/t |
|------------------|------|------|-----------|
| 170012           | .04  | .03  | 2.98      |
| 170020           | 6.94 | 2.36 | 24.04     |
| 170021           | 1.44 | 4.10 | 3.91      |
| 170009 WHITE BAG | .20  | 3.75 | 4.10      |

- 1 GM SAMPLE LEACHED IN 50 ML AQUA - REGIA, ANALYSIS BY ICP.  
 ~ SAMPLE TYPE: ROCK PULP  
 AG\*\* BY FIRE ASSAY FROM 1 A.T. SAMPLE.

DATE RECEIVED: SEP 30 1991

DATE REPORT MAILED: *Oct 8/91.*

SIGNED BY *Chung* .D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

*\$ 72<sup>00</sup> odd*

CHANNEL SAMPLE DESCRIPTIONS

170001: Shear Zone in Skarn - Location end of raise, 23.6m point in 208N x-cut. 1.16m channel perpendicular to dip of shear. includes a) 0.15m of Hanging Wall (H.W.) moderately sheared, fault breccia: consisting of angular to subrounded fragments of med. grey to light gray-brown garnet-tremolite-skarn and grey and white quartz and disseminated fine to medium grained pyrite-pyrrhotite in a moderately calcareous matrix.

b) 0.3m of flaser structure: consisting of gougy clay, chlorite, talc?, carbonate, 5% disseminated pyrite + pyrrhotite (locally 10%), light brown and red-brown garnets and white quartz boudins and lenticles in a fine grained, wispy, dark grey to black matrix. Moderately calcareous.

c) 0.71m of Foot Wall (F.W.) to shear consisting of strongly sheared and moderately to strongly fractured/brecciated skarn. Med. to grey coloured, 3% sulphides. Weakly magnetic. Chlorite on fractures. Moderately calcareous.

170002: Shear Zone in Skarn - Location 21.1m point in raise. 1.56m long channel includes 0.4m H.W. breccia/shear, 0.3m flaser structure and 0.76m F.W. shear/breccia. Descriptions as above.

170003: Shear Zone in Skarn - Location 17.02m point in raise. 1.45m long channel includes 0.40 H.W., 0.3m Flaser, 0.75m F.W.. Descriptions as above.

170004: Shear Zone in Skarn - Location 11.9m point in 208N x-cut, below raise. Center point of 1.1m channel is 1.4m above floor and includes 0.20m H.W., 0.50m flaser and 0.4m F.W.. Descriptions as above.

170007: Shear Zone in Skarn: Location 11.4m point in 208N x-cut below raise. Center point of 0.5m channel is 1.0m above floor and is of flaser structure only. Description as above but py + po mottles and wisps occur in fragments of silicified siltstone or marble here.

170005: Foliated Marble: Location 22-23m in 208N x-cut. 1m channel. Medium to dark grey, granular rock with 2-55 f.g. diss. py. Mod. fractured with a few barren qtz. vnlts. Fracturing on 045/50E, shearing and foliation on 110/80S. Black chlorite on fractures and shears. Numerous carbonate vnlts. Unit is mod-strongly calcareous.

170006: Foliated Marble: Location 17.6-19m in 208N x-cut. 1.4m long channel at top of west wall. Fractured and sheared zone healed by carbonate-py veinlets. Light grey, fine grained, granular, calcareous rock with 3-5% disseminated py, foliated and sheared on 110/80s. Shear zone is light grey-brown to pink in colour, mottled and discontinuously striped with py, po, mt.

170008: Pyritic Feldspar Porphyry Diorite: grab sample from -3mm rock pile at w. Chaput screen plant on B.S.2 claim.

170009: ditto: grab sample of +2cm rock pile same location.

170009 (white bag): Mineralized Shear Zone in Marble: Location is 577 Level in flaser structure. 1.0m channel across 120/50S shear. Qtz. boudins and lenticles with irregular clots and disseminations of crystalline py in fine grained gougy shear matrix and breccia fragments of marble in part skarned. Locally 5-15% fine grained py+galena+sphalerite as whisps in shear matrix.

170010 (white bag): Marble Breccia: Location is 577 Level. 1.9m channel in marble breccia in either H.W. or F.W. to shear with much white qtz - sulphide vein and boudinage.

170011: number not used.

170012: Mineralized Shear Zone in Skarn: Location is 27.4m in from 523 Level portal. A 1m x 0.20m panel sample of white to grey qtz boudins and grey gouge with 1-3% fine grained diss. py, minor galena and sphalerite. Folded qtz vein in shear is upright, axis trends 120. Shear is weakly calcareous, contains light brown fine grained garnets and much tremolite and talc?

170013: Skarn: Location is 30m in from 523 Level portal. 1.0m channel across py/po rich zone in fractured and moderately sheared phyllitic skarn. Rock is friable and qtz veined along 090/65S shear/foliation. Weak to mod. calcareous. 3-5% diss. and folia form seams to 3mm wide of po/py. Lots of red-brown garnets in bands.

170014: Shear Zone in Skarn: Location is 523S drift on S wall s of entrance to 060 x-cut. 1.0m channel across shear gouge with fragments/lenticles of qtz, skarn, clay, chlorite, fine grained pyrite.

170015: Shear Zone in Skarn: Location is 1.0m west of 170014. 1.0m channel across bull qtz vein with clots of py/po and skarn selvedge. veins are flat lying and 5-10 cm thick.

170016: Qtz-py/po vein in Banded Siltstone: Location is 6m west of 090 x-cut on S wall of 523S drift. 1.5m channel across several 1-10cm wide qtz veins containing clots of py/po in zone of orthogonal ladder-like veins.

170017: Ditto: Location is south end of 090S x-cut. 0.6m channel across qtz veined fracture zone in siltstone containing clots of po/py.

170018: Shear Zone in Skarn: Location is 6m west of the 125S x-cut, S wall of the 523S drift. 0.5m channel of flaser structure

including qtz boudins and oxidized sulphides.

170019: Shear Zone in Skarn: Location is 5m south in the 125S x-cut on the west wall. 0.4m long channel through flaser structure including qtz boudins, gouge and oxidized sulphides.

170020: Mineralized Shear Zone in Skarn: Location is 7m west of the 180SW x-cut. 0.40m wide channel across 0.4m wide lenticular white qtz vein containing internal clots and wisps of galena, sphalerite and py.

170021: ditto: Location is 1m E of 170020. 1.5m channel across flaser structure including qtz-py/po boudins and lenticles and gougy, calcareous matrix with fine grained galena, sphalerite and pyrrhotite.

170022: Shear Zone in Skarn: Location is 16m in from 500 Level portal. 0.6m long channel across 1.7m wide shear zone trending 045/55E. Includes shear matrix and qtz-py/po boudins and lenticles.

170023: H.W. Fracture Zone to Shear in skarn: Location is 18.5m in from 500 Level portal. 0.5m channel across qtz-sericite?-py/po sheeted veins trending 105/65S. These veins were raised on in the north wall/back.

170024: Shear Zone in Skarn: Location is SE end of 500 Level. 0.5m long channel across folded qtz-py vein within shear zone of uncertain trend.

APPENDIX 3

ANALYTICAL

RESULTS AND PROCEDURES

FOR UNDERGROUND PERCUSSION DRILL HOLES 91-1 TO 91-6





GEOCHEMICAL ANALYSIS CERTIFICATE

Quinto Mining Corp. File # 91-4539 Page 1

606 - 626 W. Pender St., Vancouver BC V6B 1V9

| SAMPLE#            | Mo  | Cu  | Pb  | Zn  | Ag  | Ni  | Co  | Mn   | Fe    | As  | U   | Au  | Th  | Sr  | Cd   | Sb  | Bi  | V   | Ca   | P    | La  | Cr  | Mg   | Ba  | Ti  | B  | Al   | Na  | K    | M  | Au* |
|--------------------|-----|-----|-----|-----|-----|-----|-----|------|-------|-----|-----|-----|-----|-----|------|-----|-----|-----|------|------|-----|-----|------|-----|-----|----|------|-----|------|----|-----|
|                    | ppm | ppm | ppm | ppm | ppm | ppm | ppm | ppm  | %     | ppm | ppm | ppm | ppm | ppm | ppm  | ppm | ppm | ppm | %    | %    | ppm | ppm | %    | ppm | %   | %  | %    | %   | %    | %  | ppm |
| WELL #3 16'-20'    | 1   | 131 | 53  | 150 | 9.1 | 28  | 21  | 518  | 5.16  | 5   | 5   | ND  | 3   | 202 | 2.7  | 2   | 2   | 50  | 4.42 | .106 | 4   | 22  | 1.51 | 37  | .01 | 2  | 1.48 | .04 | .09  | 1  | 12  |
| WELL #3 28'-32'    | 1   | 146 | 36  | 203 | 2.7 | 39  | 27  | 489  | 6.08  | 9   | 5   | ND  | 3   | 312 | 3.2  | 2   | 2   | 28  | 5.20 | .120 | 5   | 17  | 1.17 | 81  | .01 | 2  | 1.06 | .05 | .16  | 1  | 26  |
| WELL #4 0'-4'      | 1   | 174 | 88  | 228 | 8.3 | 34  | 10  | 806  | 5.49  | 5   | 5   | ND  | 3   | 252 | 2.7  | 2   | 2   | 90  | 6.25 | .115 | 6   | 31  | 1.81 | 30  | .02 | 2  | 1.94 | .04 | .04  | 1  | 89  |
| WELL #4 52'-56'    | 3   | 218 | 30  | 103 | 3.7 | 89  | 41  | 579  | 10.81 | 2   | 5   | ND  | 3   | 212 | 2.5  | 2   | 4   | 18  | 5.17 | .087 | 3   | 22  | .39  | 42  | .01 | 7  | .54  | .03 | .10  | 1  | 38  |
| WELL #5 0'-4'      | 1   | 105 | 33  | 173 | 1.7 | 31  | 20  | 475  | 3.88  | 5   | 5   | ND  | 3   | 170 | 2.3  | 2   | 2   | 66  | 4.51 | .126 | 5   | 35  | 1.52 | 42  | .02 | 2  | 1.66 | .05 | .06  | 1  | 11  |
| WELL #5 4'-8'      | 1   | 133 | 30  | 89  | 2.0 | 25  | 29  | 488  | 5.23  | 8   | 5   | ND  | 3   | 239 | 1.2  | 2   | 2   | 52  | 5.21 | .119 | 5   | 20  | 1.52 | 58  | .01 | 2  | 1.68 | .04 | .11  | 1  | 15  |
| WELL #5 20'-24'    | 1   | 142 | 23  | 144 | 2.2 | 31  | 26  | 483  | 5.48  | 3   | 5   | ND  | 2   | 212 | 2.5  | 2   | 2   | 57  | 4.71 | .101 | 6   | 18  | 1.58 | 36  | .01 | 4  | 1.79 | .03 | .14  | 1  | 6   |
| WELL #5 40'-44'    | 1   | 80  | 37  | 57  | 5.4 | 40  | 24  | 375  | 3.17  | 6   | 5   | ND  | 1   | 196 | 2.0  | 2   | 2   | 61  | 4.40 | .098 | 2   | 34  | 1.24 | 18  | .16 | 2  | 1.15 | .07 | .04  | 1  | 9   |
| WELL #6 40'-44'    | 1   | 144 | 13  | 55  | 1.2 | 33  | 26  | 406  | 6.22  | 4   | 5   | ND  | 1   | 111 | .9   | 2   | 2   | 99  | 2.60 | .141 | 4   | 28  | 1.88 | 95  | .16 | 2  | 2.01 | .04 | 1.08 | 1  | 8   |
| WELL #6 44'-48'    | 1   | 119 | 14  | 89  | 2.3 | 32  | 19  | 386  | 5.00  | 2   | 5   | ND  | 2   | 137 | 1.0  | 2   | 2   | 111 | 3.52 | .141 | 4   | 27  | 1.91 | 130 | .10 | 2  | 2.00 | .05 | .90  | 1  | 35  |
| WELL #6 48'-52'    | 2   | 148 | 19  | 391 | 2.8 | 32  | 26  | 372  | 6.22  | 6   | 5   | ND  | 1   | 102 | 11.8 | 2   | 2   | 115 | 2.95 | .133 | 4   | 31  | 2.08 | 112 | .12 | 2  | 2.30 | .05 | 1.16 | 1  | 4   |
| RE WELL #5 20'-24' | 1   | 152 | 26  | 153 | 2.2 | 31  | 27  | 490  | 5.64  | 5   | 5   | ND  | 2   | 217 | 2.4  | 2   | 2   | 58  | 4.78 | .102 | 5   | 18  | 1.60 | 38  | .01 | 4  | 1.84 | .03 | .16  | 1  | 10  |
| WELL #6 52'-56'    | 1   | 157 | 16  | 80  | 2.9 | 45  | 31  | 320  | 6.59  | 5   | 5   | ND  | 2   | 114 | 1.6  | 2   | 2   | 83  | 2.87 | .113 | 5   | 25  | 1.62 | 86  | .08 | 2  | 1.80 | .04 | .61  | 1  | 5   |
| STANDARD C/AU-R    | 18  | 60  | 40  | 126 | 7.1 | 70  | 32  | 1027 | 3.91  | 42  | 22  | 7   | 41  | 53  | 17.3 | 15  | 20  | 57  | .45  | .090 | 39  | 56  | .85  | 176 | .08 | 33 | 1.92 | .06 | .14  | 11 | 480 |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM. ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB. - SAMPLE TYPE: P1 CUTTING P2 ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE. Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 17 1991 DATE REPORT MAILED: *Sept 24/91* SIGNED BY: *C. Leong* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

APPENDIX 4

PERCUSSION DRILL LOGS FOR

UNDERGROUND HOLES 91-1 TO 91-6

1 ft = 30.5 cm

DRILL LOGS FOR PERCUSSION HOLES 91-1 TO 91-6

## HOLE 91-1:

0 - 4 feet: Skarn - 90% lt grey calcareous with tremolite. 10% dark grey Mt skarn. 5% pale brown to black tourmaline. py-Tr. Mt-2%.

4 - 8 : As above. 30% Mt skarn. py-1/2%, Mt-5%.

8 -12 : ditto.

12-16 : mostly sand may be fault or marble?

16-20 : Skarn. 20% mt skarn. 5-10% tremolite xtals, 1-2% red-brown garnets. Py=0%, Mt=3-5%

20-24 : ditto. trace tourmaline.

24-28 : ditto. 50% Mt Skarn. Py=1/2%, Mt=10%, 1% r.b. garnets

28-32 : ditto. 60% Mt Skarn. Much tremolite-qtz-carbonate sand. py=1/4%, cpy=Tr, Mt=5%, 5% r.b. garnet, tourmaline=Tr.

32-36 : 70% Sand as above. py=1/4%, mt=5%, 1% r.b. garnets

36-40 : 80% Sand. ditto

40-44 : ditto.

44-48 : ditto.

48-52 : ditto.

52-56 : ditto.

## HOLE 91-2:

0 - 4 feet: Skarn: approx. 50-50 lt grey and dk grey - Mt skarn. py=1/2%, po=1/2%, Mt=3-5%, tourmaline=1%, no garnets.

4 - 8 : Skarn: ditto. Py=1/2%, Mt+3%, r.b. garnets=2%

8 -12 : Skarn: ditto. Py=tr, Mt=1-3%, r.b. garnets=10%, black tourmaline=1%

12-16 : Skarn: ditto. Py= tr, Mt=1-3%, garnet and tour.=tr.

16-20 : Skarn: ditto. py=tr, mt=3-5%, r.b. garnets=1/2%

20-24 : Skarn: ditto

24-28 : Skarn: ditto

28-32 : Skarn: ditto py=1/4%, mt=5%

32-36 : ditto

36-40 : ditto

40-44 : ditto

44-48 : ditto. py=1%, mt=3-5%, r.b. garnets=2%, tour.=tr

48-52 : Sand py=0%, mt=1-3%, r.b.garnets=2%

52-56 : Sand ditto. r.b. garnets=1%. Tour.=tr.

## HOLE 91-3:

0 - 4 feet: Skarn : Lt gray-green granular, carbonate, qtz, mt, tremolite, trace r.b. garnets. Marble to skarn.  
py=tr, mt=1-3%

4 - 8 : Skarn : py=tr, Mt=5%, garnet=0%, tour=3%

8 -12 : Skarn : py=po=tr, mt=3%, pale brown garnets=2%, tour=3%

12-16 : Skarn : py=tr, mt=5%, r.b. garnets = 1%, tour =2%

16-20 :Skarn : py=1/4%, cpy=tr mt=3-5%, garnet=2%, tour=0%  
 20-24 :Skarn : py=tr, mt=1-3%,  
 24-28 :Skarn : py=0%, mt=3-5%, r.b. garnets=5%  
 28-32 :Skarn : py=1/2%, mt=3-5%, pale brown tourm.=1/2%  
 32-36 :Skarn : py=1/2%, cpy=tr, mt=3-5%, garnet=0%  
 36-40 :Sand : py=tr, mt=3-5%, r.b. garnets=1/4%  
 40-44 :Sand ditto  
 44-48 :Sand ditto  
 48-52 :Sand ditto  
 52-56 :Sand py=1/2%, cpy= tr?, mt 1-3%, garnets=1/4%

## HOLE 91-4:

0 - 4 feet:Marble/carbonate: py=1/2%, cpy=tr?, mt=3%  
 4 - 8 :ditto  
 8 -12 :ditto: py=tr, mt=3-5%, r.orange garnet=tr.  
 12-16 :ditto  
 16-20 :ditto  
 20-24 :ditto  
 24-28 :ditto. Fragment of bull qtz. and tremolite-garnet-mt skarn.  
 28-32 :Sand . fault?  
 32-36 :Sand  
 36-40 :Sand py=0%, mt=5-8%  
 40-44 :Sand/Skarn: some garnet-mt skarn frags,py=tr, mt=5%  
 44-48 :Sand/Skarn: py=0%, mt=5%,garnet=1%, tourm.=1/2%  
 48-52 :Sand/Skarn: ditto.  
 52-56 :Sand/Skarn: ditto. mt=8-10%.

## HOLE 91-5:

0 - 4 feet:Marble/Carbonate:py=3-5%, garnets=1/4%  
 4 - 8 :ditto  
 8- 12 :Marble/Skarn: some orange garnet skarn. py=1/2%, mt=1%, garnet=1%  
 12-32 :Marble/Skarn: ditto  
 32-36 :Skarn/Marble: py=1/2%, mt=1%,garnets=1/4%  
 36-40 :Skarn/Marble:calc-silicate + some diopside + carbonate. py=1/2%, mt=5%+  
 40-44 :Skarn:ditto  
 44-48 :Sand/Carbonate rich: ,py=1/4%, mt=5%  
 48-52 :Carbonate/Calc-silicate:ditto

## HOLE 91-6:

0 - 56 feet:Banded Biotite Siltstone: fragments of qtz, biotite, sericite with some carbonate and disseminated f.g. py=1% except 4-12 feet 5+%. Increasing carbonate content 44-56 feet.

24a

APPENDIX 4a

PERCUSSION DRILL LOGS FOR  
UNDERGROUND HOLES 91-7 TO 91-9

## HOLE 91-7:

0 - 4 feet:Black Argillite  
 4 - 8 :Minor Tuff  
 8 -12 :Ash Tuff light grey  
 12-16 :Lime grey Tuff bands  
 16-20 :Minor shearing with Py  
 20-24 :Shearing 5% Py  
 24-28 :Shearing Pyritic Tuff  
 28-32 :Mine vein 15% SP 20% Py  
 32-36 :Poorly bedded Turf  
 36-40 : " " "  
 40-44 :Parytic Argillite  
 44-48 : " "  
 48-52 : " "

## HOLE 91-8:

0 - 4 :Light grey Tuff  
 4 - 8 : " " "  
 8 -12 :Shearing 5% Py  
 12-16 :Mine vein 15% SP 20% Py  
 16-20 :Barren Quartz  
 20-24 :Spott4d Dacitic Tuff  
 24-28 :Banded Tuff  
 28-32 :Banded Tuff dark grey  
 32-36 :Dacitic Ash Tuff  
 36-40 : " " "  
 42-46 :Black Argellite  
 46-50 : " :

## HOLE 91-9:

0 - 4 :Light grey Tuff  
 4 - 8 :Banded Tuff  
 8 -12 :Dacitic Ash Tuff  
 12-16 :Grey Tuff  
 16-20 :Shearing 3% Py  
 20-24 :Mine vein 10% Py  
 24-28 : " " 20% Py  
 28-32 :Dacitic Tuff  
 32-36 :Banded Tuff  
 36-40 :Black Argillite  
 40-42 : " "



## GEOCHEMICAL ANALYSIS CERTIFICATE



Quinto Mining Corp. File # 91-4755 Page 1  
606 - 626 W. Pender St., Vancouver BC V6B 1V9

| SAMPLE#            | Mo<br>ppm | Cu<br>ppm | Pb<br>ppm | Zn<br>ppm | Ag<br>ppm | Ni<br>ppm | Co<br>ppm | Mn<br>ppm | Fe<br>% | As<br>ppm | U<br>ppm | Au<br>ppm | Th<br>ppm | Sr<br>ppm | Cd<br>ppm | Sb<br>ppm | Bi<br>ppm | V<br>ppm | Ca<br>% | P<br>% | La<br>ppm | Cr<br>ppm | Mg<br>% | Ba<br>ppm | Ti<br>% | B<br>ppm | Al<br>% | Na<br>% | K<br>% | W<br>ppm |
|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|--------|-----------|-----------|---------|-----------|---------|----------|---------|---------|--------|----------|
| WELL #7 28'-32'    | 1         | 128       | 17        | 82        | 1.2       | 54        | 20        | 399       | 5.10    | 54        | 5        | ND        | 2         | 281       | 3.1       | 2         | 2         | 25       | 3.85    | .116   | 3         | 20        | 1.36    | 41        | .02     | 2        | 1.17    | .02     | .18    | 1        |
| WELL #8 12'-16'    | 1         | 1820      | 14084     | 8252      | 350.7     | 24        | 13        | 462       | 8.26    | 152       | 5        | ND        | 2         | 90        | 187.4     | 452       | 2         | 41       | 2.06    | .110   | 4         | 28        | 1.43    | 62        | .14     | 2        | 1.58    | .02     | .84    | 4        |
| WELL #9 20'-24'    | 1         | 127       | 34        | 83        | 2.1       | 33        | 26        | 572       | 6.79    | 16        | 5        | ND        | 1         | 91        | 3.2       | 2         | 2         | 97       | 2.02    | .110   | 2         | 21        | 2.00    | 90        | .19     | 2        | 2.06    | .02     | 1.39   | 1        |
| WELL #9 24'-28'    | 1         | 967       | 6821      | 4191      | 165.1     | 40        | 22        | 446       | 7.74    | 80        | 5        | ND        | 1         | 65        | 93.5      | 211       | 2         | 53       | 2.07    | .097   | 2         | 25        | 1.27    | 75        | .14     | 2        | 1.32    | .02     | .91    | 1        |
| RE WELL #7 28'-32' | 1         | 128       | 15        | 75        | 1.2       | 57        | 19        | 400       | 5.17    | 58        | 5        | ND        | 2         | 287       | 2.7       | 2         | 2         | 25       | 4.00    | .114   | 3         | 21        | 1.42    | 39        | .02     | 2        | 1.17    | .01     | .16    | 1        |
| STANDARD C         | 20        | 62        | 41        | 133       | 7.3       | 70        | 31        | 1049      | 3.99    | 42        | 19       | 7         | 39        | 52        | 17.0      | 15        | 22        | 58       | .48     | .090   | 40        | 59        | .89     | 181       | .09     | 34       | 1.91    | .06     | .16    | 11       |

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB  
- SAMPLE TYPE: P1 CUTTING P2 TO P3 ROCK Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 26 1991

DATE REPORT MAILED:

Oct 3/91.

SIGNED BY.....D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

**LEGEND**

**GEOLOGY**

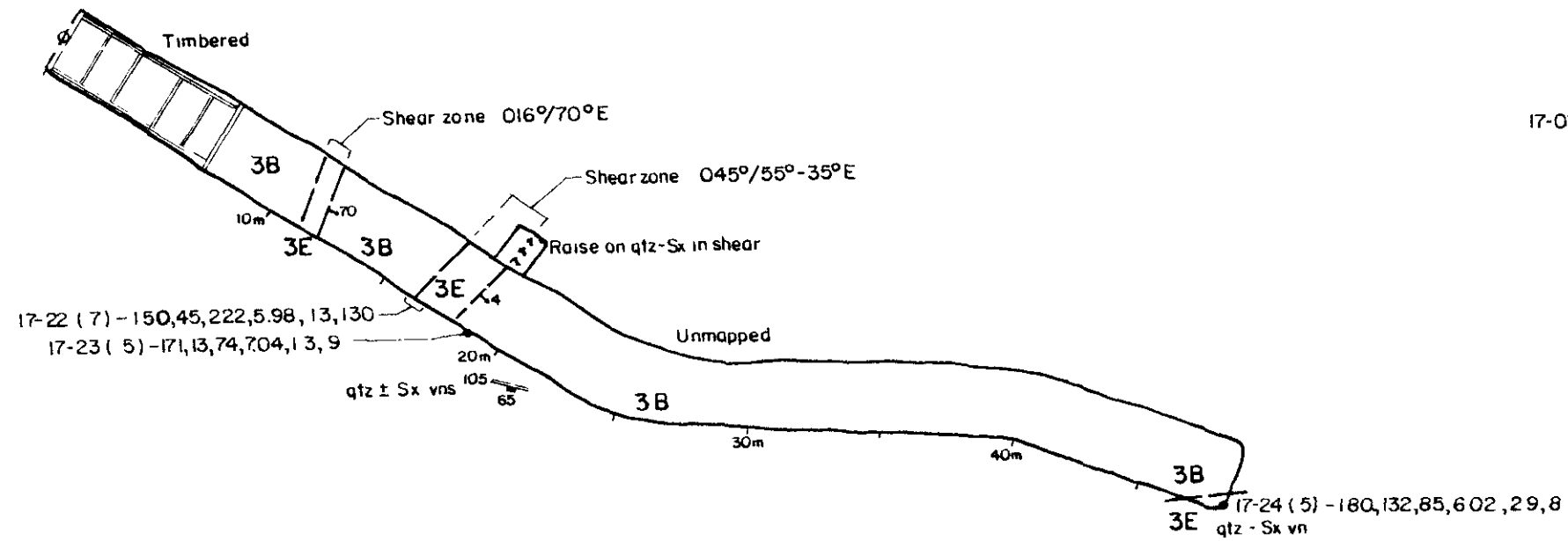
- 3 Garnet-tremolite - po/py ± mt skarn
- 2 Banded biotite siltstone
- 1 Foliated marble, local weak skarning

**STRUCTURAL MODIFIERS**

- A Weakly fractured
- B Moderately fractured to brecciated & quartz ± veined
- C Intensely fractured -brecciated
- D Weak - moderately sheared
- E Intensely sheared

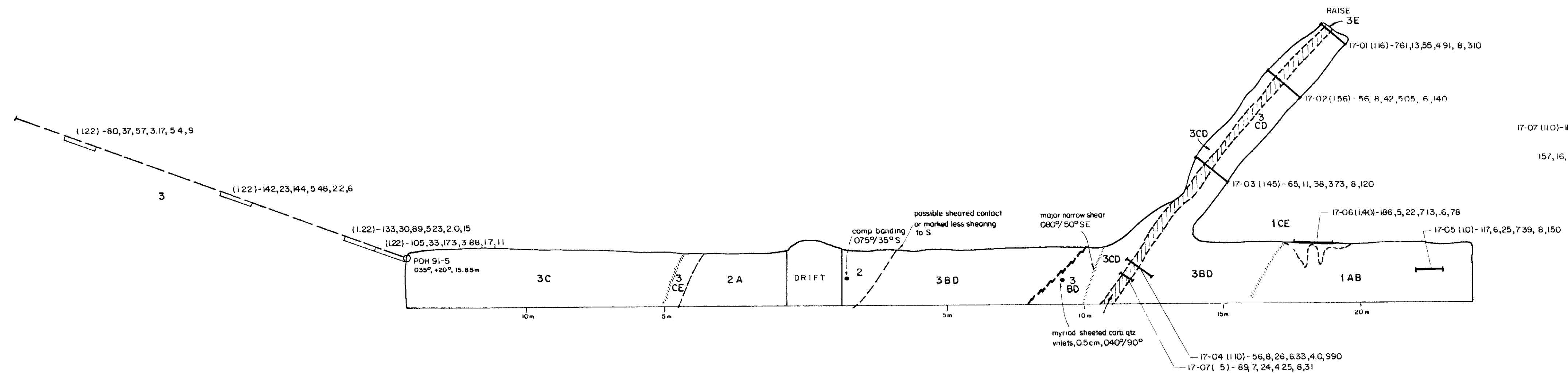
**SYMBOLS**

- Contact - inferred, gradational
- Shear, strike & dip
- Vein, Q = quartz pyrite, strike & dip
- Drill hole - UDH = diamond drilling  
PDH = percussion drilling
- 10°, 10°, 17m Azimuth, inclined dip, length of hole
- 17-07 (11.0)-110,5,22,110, 6,78 Sample N° (length,m) - Cu ppm, Pb ppm, Zn ppm, Fe %, Ag ppm, Au ppb except where mentioned
- 157, 16, 80, 659, 29,5 Drill hole assay - Cu ppm, Pb ppm, Zn ppm, Fe %, Ag ppm, Au ppb except where mentioned



|  |                   |
|--|-------------------|
| MIKE BRADLEY & ASSOCIATES  |                   |
| QUINTO MINING CORP.  |                   |
| LUMBY PROJECT-CHAPUT MINE<br>GEOLOGY, LITHOGEOCHEMISTRY<br>& SURVEY PLAN - 500 m.<br>LEVEL UNDERGROUND |                   |
| N.T.S. 82L-7W  | VERNON M.D., B.C. |
|  |                   |
| SCALE 1:250  | DATE: SEPT. 1991  |
| PROJECT N°. 9139   | FIGURE N°. 7      |





**LEGEND**

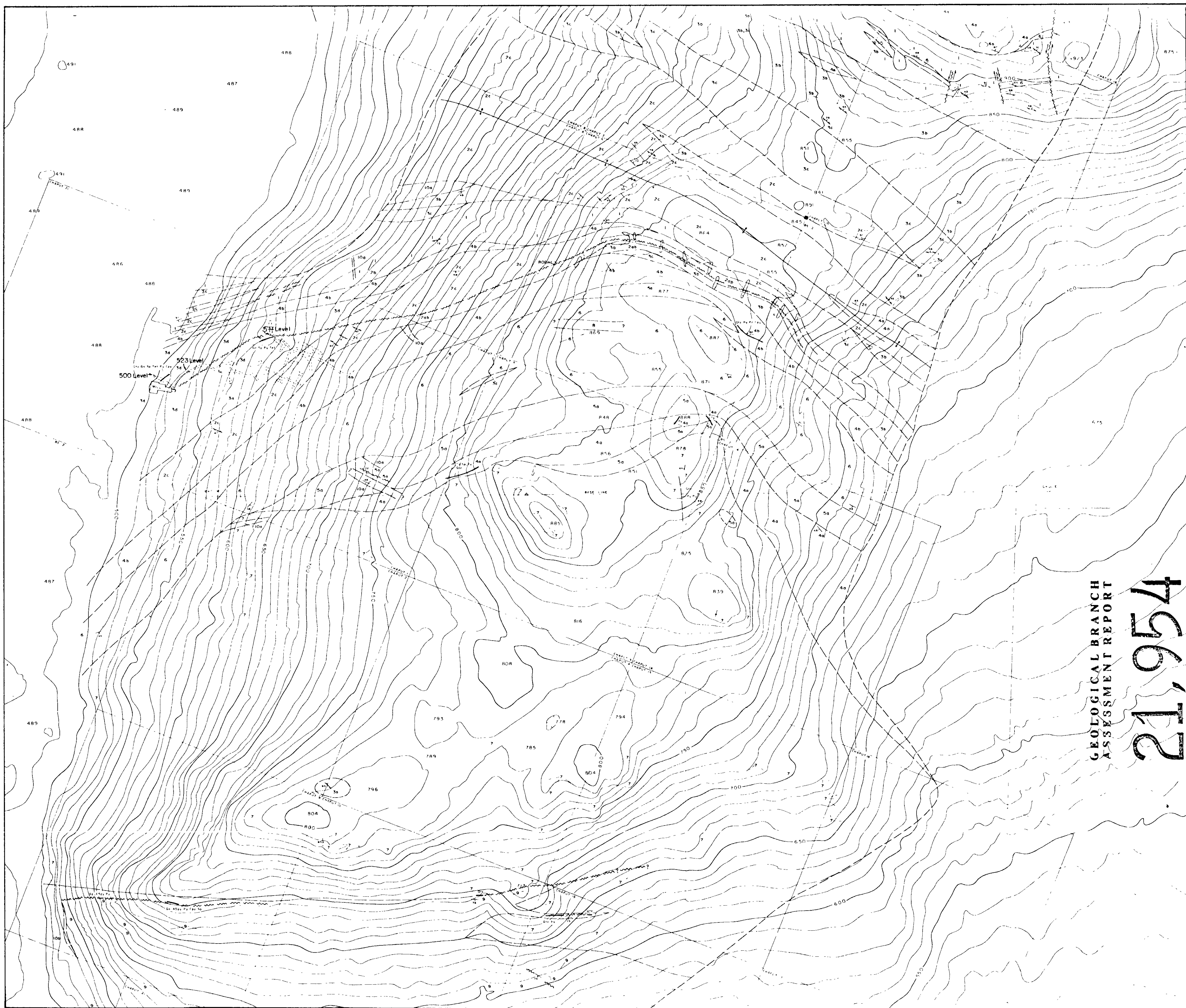
- GEOLOGY**
- 3 Garnet-tremolite - po/py ± mt skarn
  - 2 Banded biotite siltstone
  - 1 Foliated marble, local weak skarning
- STRUCTURAL MODIFIERS**
- A Weakly fractured
  - B Moderately fractured to brecciated & quartz ± veined
  - C Intensely fractured - brecciated
  - D Weak - moderately sheared
  - E Intensely sheared

- SYMBOLS**
- Contact - inferred, gradational
  - Shear, strike & dip
  - Vein, Q = quartz pyrite, strike & dip
  - Drill hole - UDH = diamond drilling
  - PDH = percussion drilling
  - Azimuth, inclined dip, length of hole
  - Sample No (length, m) - Cu ppm, Pb ppm, Zn ppm, Fe %, Ag ppm, Au ppb except where mentioned
  - Drill hole assay - Cu ppm, Pb ppm, Zn ppm, Fe %, Ag ppm, Au ppb except where mentioned

21954

Section looking West  
wall not washed

|  |                   |
|--|-------------------|
| MIKE BRADLEY & ASSOCIATES  |                   |
| QUINTO MINING CORP.  |                   |
| LUMBY PROJECT-CHAPUT MINE<br>GEOLOGICAL STRUCTURE AND<br>SAMPLING X-SECTION OF THE<br>208 X-CUT - 523 m. LEVEL |                   |
| NTS. 82L-7W  | VERNON M.D., B.C. |
| 0 2 4 8 Metres   |                   |
| SCALE 1:100  | DATE: SEPT. 1991  |
| PROJECT No. 9139   | FIGURE No. 6      |

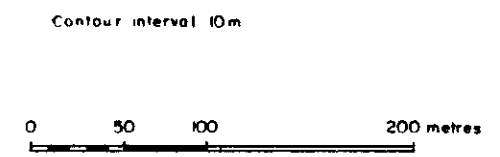


**LEGEND**

- 1a Mafic Dyke
- 1b Hornblende Gabbro, medium to coarse crystalline, granular, dark green
- 1c Hornblende, very fine grain, dark green to black
- 2a Intrusive Contact
- 3a Mafic Granite
- 3b Very fine to fine crystalline, 1-15% fine pyrite, light grey
- 3c Intrusive Contact
- 4a Hornblende Feldspar Porphyry Dyke
- 4b Light grey, fine crystalline, hornblende lathes
- 4c Intrusive Contact
- 5a Polyphase Hornblende Diorite
- 5b Moderately very fine grained to coarse crystalline, hornblende or feldspar porphyrite, weakly foliated, waxy pyrite
- 5c Intrusive Contact
- 6a Argillite
- 6b Well bedded to laminated, black interbeds of fine grey siliceous ash, variably calcareous
- 6c Mafic Siltstone
- 6d Fine grained, moderately to poorly sorted, well bedded, siliceous siltstone, beds of argillite 10-20 cm thick
- 6e Turbiditic cycles, fine siltstone to coarse pebbles, graded into units
- 6f Intermediate Volcanic Tuff
- 6g Ash tuff, fine to medium grain, dark green massive
- 6h Clastic tuff, poorly sorted, subvolcanic tuffaceous, polymictic matrix supported
- 6i Argillaceous ash tuff, fine grained, finely bedded
- 7a Acid Volcanic Tuff
- 7b Ash tuff, fine grain, rare lapilli, light grey, locally vesicular, calcareous and granular, minor disseminated pyrite
- 7c Lapilli-ash tuff, ash to medium lapilli size, dense to and, little composition, variably calcareous
- 7d Crystalline tuff, fine vesicular ash matrix, 10-20 cm rounded fragments of quartz crystals
- 7e Spotted-banded tuff, calcareous, greenish grey, knobs of bone, biotite and pyroxene
- 7f Argillite / Sandstone
- 7g Argillite, moderately to intensely shaly, graphitic zones, pyritic, some quartz nodules
- 7h Quartz veins, sugary to hollow, variably pyritic, up to 50% pyrite, minor calcite, fine calcite and apatite
- 7i Argillite, poorly shaly, 2-15% rounded pyrite cubes
- 8 Acid Volcanic Tuff
- 9a Crystalline tuff, dark grey, fine to medium grain, 10-20 cm rounded fragments of quartz crystals, minor subvolcanic tuffaceous matrix

**SYMBOLS**

- Outcrop
- Geological boundary, assumed
- Shear
- Quartz vein
- Bedding, inclined, vertical
- Foliation, inclined, vertical
- Joints, inclined, vertical
- Minor fold axis
- Anticline axis
- East underground pipe
- Mine shaft
- Py Pyrite
- Pyr Pyroxene
- Qtz Quartz
- Tsp Tetrahedrite
- Qtz Quartz vein
- Chp Chalcopyrite
- Sb Sphalerite
- Asp Arsenopyrite
- Claim boundary, with corner post located
- △ 0+00,0+00 Base line location
- Base line
- Limit of geological mapping
- Trace



**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**  
**21,954**

|                                      |                   |
|--------------------------------------|-------------------|
| MIKE BRADLEY & ASSOCIATES            |                   |
| QUINTO MINING CORP.                  |                   |
| LUMBY PROJECT - PLATEAU ZONE         |                   |
| <b>GEOLOGY &amp; CLAIM LOCATIONS</b> |                   |
| N.T.S. 82L-7W                        | VERNON M.D., B.C. |
| SCALE: 1:4000                        | DATE: SEPT 1991   |
| PROJECT NO. 9139                     | FIGURE NO. 4      |

