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CYPRUS GOLD CANADA LTD.

TOODOGGONE PROJECT

Report of Diamond Drilling Program 1989

Cassidy Claim Group No. 1

Toodoggone Gold - Silver District

Ominica Mining Division, British Columbia

N.T.S. 94 E/6

Lat. 57 23' N., Long. 127 10' W

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,481

Willard D. Thompson

October 25, 1989

Willard D. Thompson, Consulting Geologist

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SUMMARY OF CONCLUSIONS  
AND RECOMMENDATIONS

Diamond drill hole 89-6 intersected the Moosehorn East vein system at a depth of 70 meters, confirming its north-northwesterly strike. The mineralized interval has quartz stockworks and is silicified over a width of 50 meters, but gold and silver values are relatively low. It is recommended that the zone be explored along its strike to the north and to the south, to depths of about 200 meters.

The Moosehorn West zone was not tested in 1989, but previous drilling intersected promising values in gold and silver over widths of 1 to 3 meters. It is recommended that the zone be tested at greater depth and that the clay-alunite zone, which lies on-strike and 200 meters from the nearest drill hole, be tested by diamond drilling.

- 1 -

## Report of Diamond Drilling Program 1989

Cassidy Claim Group No. 1

Toodoggone Gold - Silver Project

Ominica Mining Division, British Columbia

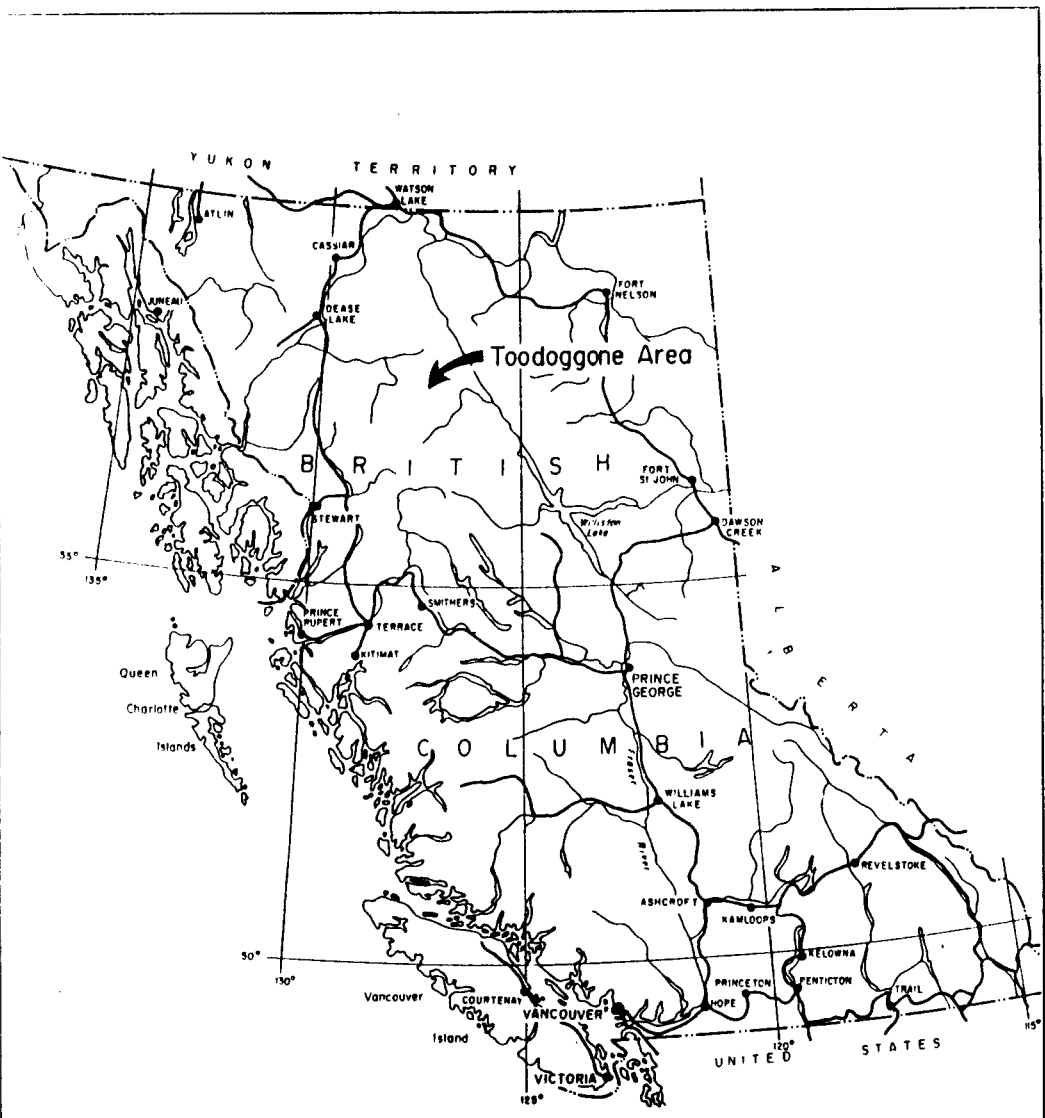
N.T.S. 94 E/6

Lat. 57 23' N., Long. 127 10' W.

INTRODUCTION

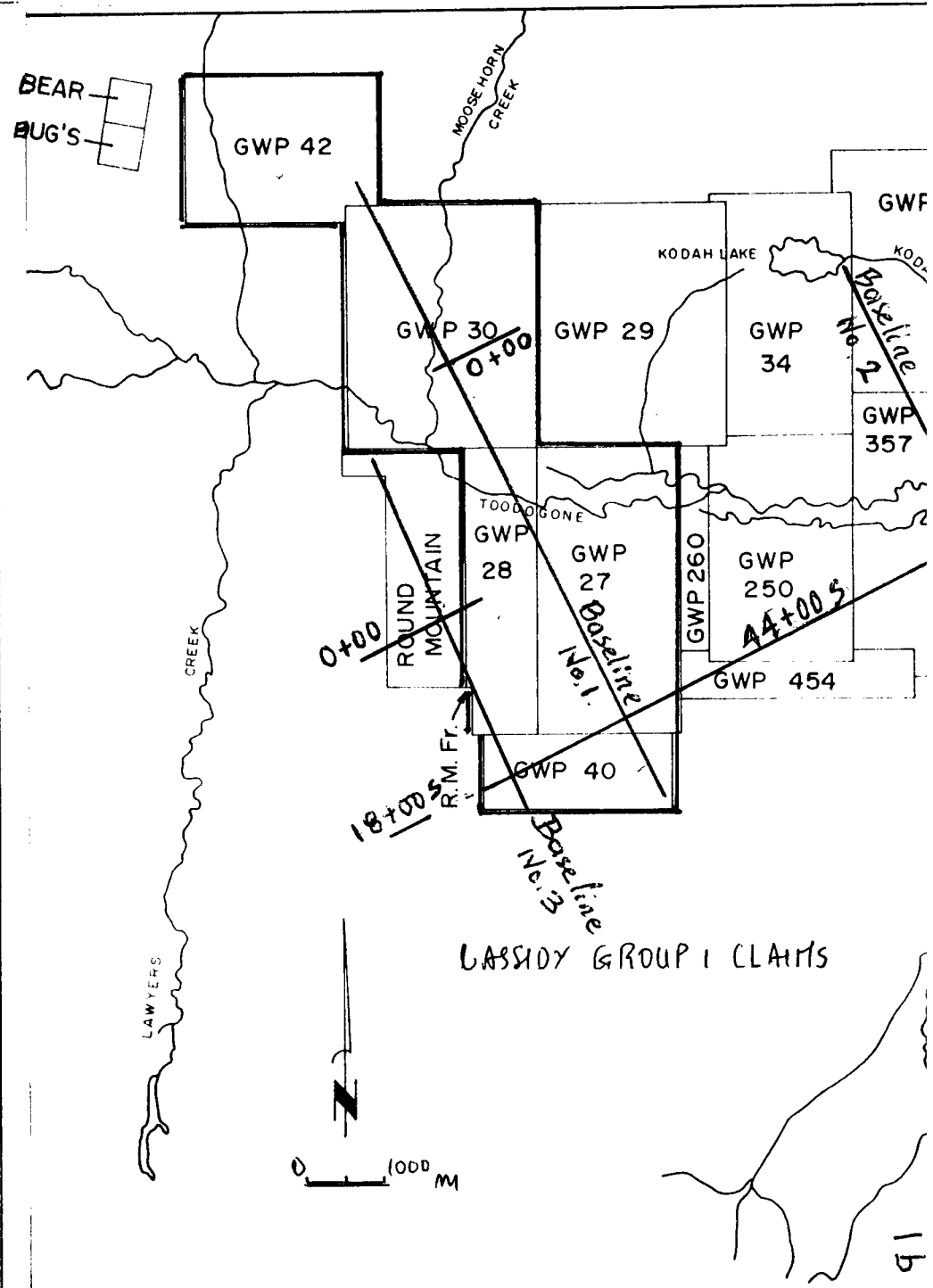
The 1989 field season completed the fourth year of exploration on the Cassidy claim groups by Cyprus Gold Canada Ltd. A description of the work done in 1986 - 1988, as well as a description of the property, geology and history of the exploration of the district are recorded in reports by Tompson (1986, 1987 and 1988). ~~Thus that basic background information need not be repeated here.~~ T.K.

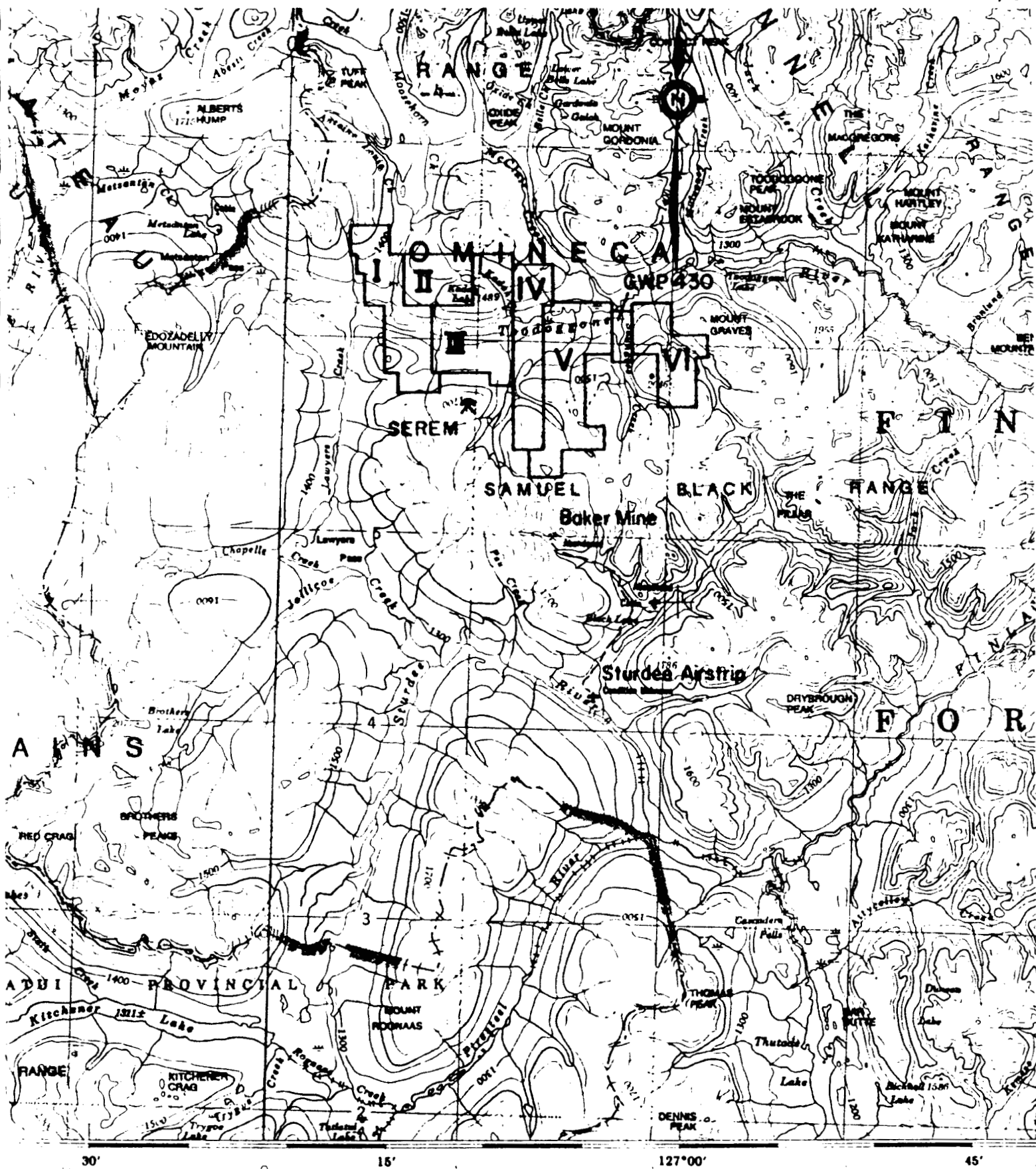
It should be noted however, that only Cyprus Gold Canada Ltd., Homestate Mineral Development Co. and Cheni Gold Mines Ltd. were active in the Toodoggone during 1989.



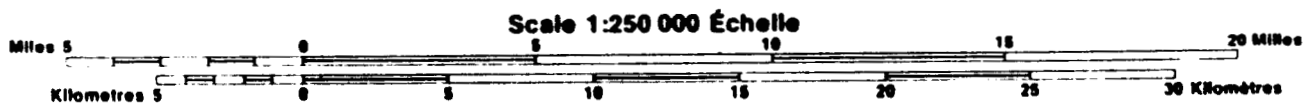
CYPRUS METALS CANADA  
 Toodoggone Project  
 Map of British Columbia  
 showing  
 Location of Toodoggone Area

WILLARD D TOMPSON      November 20, 1986  
 Km 0    100    200    400    600 Km





- Map showing Cassidy groups 1 to 6 and claim, G.W.P. 430.



Cassidy Groups 1 and 2 lie near the center of the Toodoggone gold-silver district in the northern interior of British Columbia (Figures 1 and 2). The Toodoggone area achieved prominence when the Baker gold-silver mine commenced production in 1980.

Toodoggone River (Figures 3 and 4) is the most prominent landmark in the immediate vicinity of the claims, although the surrounding country contains many prominent landmarks, including the beautiful, broad, flat-topped Edozadelly Mountain which lies 11 kilometers westerly from Cassidy Group 1. Toodoggone River rises 7 kilometers west of Cassidy Group 1 and flows easterly. The claims occupy a broad area on both sides of the river, through 4 kilometers of its length.

Near the center of Cassidy Groups 1 and 2, latitude is 57°23' N. and longitude is 127°14' W. Magnetic declination is N.26°30' E.

Cassidy Groups 1 and 2 lie at elevations from 1180 meters in Toodoggone River valley, to 1626 meters at the top of Round Mountain in the south part of mineral claims, Round Mountain and G.W.P. No. 28. Relief is moderate.

Toodoggone district lies 300 kilometers north of Smithers, B.C. Access is by fixed wing aircraft to Sturdee airstrip and thence by helicopter to the Company's base camp at Moosehorn Creek, 23 kilometers northerly from Sturdee.

#### CLAIMS

Cassidy Group No. 1 is made up of 7 claims containing 72 units. Cassidy Group No. 2 has 35 units in 2 claims (Figure 4).

Legal corner posts of the claims which comprise Cassidy Groups 1 and 2 were surveyed during the summer of 1987, by McWilliam, Whyte, Goble and Associates. Trig stations, photo points and legal corner posts were incorporated into the survey which were then plotted on topographic maps at scale 1:10,000 (Plate 1).

#### Cassidy Group No. 1

<u>Claim Name</u>	<u>Record Number</u>	<u>Units</u>
G.W.P. No. 27	3514	18
G.W.P. No. 28	3515	12
G.W.P. No. 30	3517	20
G.W.P. No. 40	3519	8
G.W.P. No. 42	3898	12
Bear	3899	1
Doug's	3897	1

#### OWNERSHIP

The claims are owned by Cyprus Metals (Canada) Ltd., whose address is #1810 - 1055 West Hastings Street, Vancouver, B.C. The work done in 1987 was performed by Cyprus.



The claims of Cassidy Groups 1 and 2 were staked during the winter of 1980-81 by agents for Great Western Petroleum, Ltd., a British Columbia company based at that time in Vancouver, B.C.

During the summer of 1981 Great Western Petroleum, Ltd., conducted extensive geological and geochemical work on all of the claims.

Cassidy Resources, Ltd. owned the claims in 1985 and conducted geological mapping and trenched and sampled silicified outcrops.

The Cassidy claim groups were optioned by Cyprus Metals Canada in 1986 and Cyprus conducted work on the claims during 1986.

First recorded work in the Toodoggone area was for placer gold along the lower portions of Belle Creek near its confluence with Toodoggone River. During the 1930's, a large camp was established near the mouth of Belle Creek and some placer mining was done in the shallow canyon of Belle Creek about 4 or 5 kilometers upstream from the camp.

In 1968, Kennco Explorations (Canada) Ltd. conducted a geochemical survey on the Chapelle property, 15 kilometers southwesterly from Toodoggone Lake. In 1970 they conducted a geochemical survey on their Lawyers property, which lies 12 kilometers west-southwesterly from Toodoggone Lake.

The Chapelle property was optioned to Conwest Exploration Company, Ltd. in 1973 and Conwest drove a 530 foot (161.1 m) adit to the vein. In 1975 the Chapelle property was optioned to DuPont of Canada Exploration Ltd. and they diamond drilled and conducted geophysical surveys (Barr, 1978). The Baker Mine (renamed from Chapelle) went into production in 1980 with reserves of 100,000 tons of ore containing 0.92 ounces of gold and 18.7 ounces of silver per ton. That ore was mined during the ensuing 3 years.

Kennco optioned the Lawyers property to Serem, Ltd., in 1979. From 1979-1985 Serem conducted extensive underground work on the Amethyst Gold Breccia zone and trenched and drilled the Cliff Creek and Dukes Ridge zones. Cheni Gold Mines Ltd. was organized to operate the Lawyers project and during 1987 conducted extensive diamond drilling as well as pre-production clearing and construction. The extension of the Omineca Mining Road reached the camp in October, 1987. Mineable ore reserves are reported to be:

Zone	Tons	Ag(oz/T)	Au(oz/T)
AGB	498,900	7.69	0.243
Cliff Creek	463,300	7.61	0.170
Duke's Ridge	75,400	6.59	0.230

Other major exploration projects in the Toodoggone district during 1987 were conducted by; Canasil Resources, Ltd., Energex Minerals, Ltd., Esso Minerals Canada, Multinational Resources, Inc., St. Joe Canada, Inc. and Western Horizon Resources, Ltd.



## EXPLANATION

### Quaternary

Qda Glacial drift, talus and alluvium

### Cretaceous

K Sustuf group Conglomerate, shale and sandstone

### Lower and Middle Jurassic Toodoggone Volcanics

Jh Hazelton Group

Jt Toodoggone volcanics, undifferentiated

### Triassic

R Takla group

### Permian

P Asitka group

### Jurassic

#### Intrusive Rocks

Ji Dikes, sills and stocks

Faults

CYPRUS METALS CANADA  
Toodoggone Project  
Geologic Map  
of  
Toodoggone Gold-Silver Mining Area  
Modified after Diakow, Panteleyer and Schroeter,  
B.C. Min. E. M.P.R., Preliminary Map 61

Omineca Mining Division, British Columbia

Willard D. Thompson October 24, 1986

Scale: 0 5000 10000 15000 20000 m

DIAMOND DRILLING 1989

Six diamond drill holes (plates 1 to 13) were drilled to further explore the Moosehorn East zone and to test I.P. anomalies south of Toodoggone River:

1. Diamond drill holes 89-1 to 89-3 and 89-6 and 89-7 were drilled to search for mineralization in the Moosehorn East zone; total drilling, 529.5m (1737.2 ft.).
2. Diamond drill holes 89-4 and 89-5 tested I.P. anomalies south of Toodoggone River; total drilling, 216.3m (709.6 ft.).

Drill core was logged on descriptive graphic log forms at scale 1:10 ( 1 inch = 8.3 feet). Argillized, feldspathized and silicified sections were split and sampled, using mostly a one meter sample interval.

DESCRIPTIVE LOGS OF DRILL HOLES

Geological information is summarized in the descriptive logs of diamond drill holes 89 - 1 to 89 -7 which follow.

BQ size core stored at the Moosehorn campsite

TK

Diamond Drill Hole 89-1

Descriptive Log

Coordinates: 9 + 50 South - 1 + 70 East  
 Elevation: 1230 meters  
 Bearing: N. 62 E.  
 Dip: -45  
 Dates: July 12 - 13, 1989  
 Length: 115.8 meters

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
0	3.6	Unconsolidated surface deposits
3.6	29.0	Porphyritic trachyandesite. Rock is brecciated and partly replaced by K-spar and has a prominent red color. Many small quartz veins, mostly 2-5mm. Quartz veins are black and grey. Pyrite occurs in amounts to 0.1 percent, trace of chalcopyrite. Trace of magnetite at 27m. Some pyrite occurs as narrow pyrite films.
29.0	30.5	Zone of change. Alteration and sulfide content diminishes. Rock is slightly argillized, porphyritic trachyandesite. Has a few spots of high K-spar and a few patches of clay.
30.5	57.9	Typical porphyritic trachyandesite with pink feldspars. Scattered calcite veinlets mostly 1 - 3 mm and a trace of disseminated pyrite.
57.9	59.1	Fracture with greenish-grey clay, 2 cm limonite and 40 cm grey quartz veins.
59.1	115.8	Typical porphyritic trachyandesite common to the Toodoggone area. Mostly fresh, but a few area of slight propylitic alteration.

Diamond Drill Hole 89-2

Descriptive Log

Coordinates: 9 + 00 South - 1 + 81 East  
Elevation: 1241 meters  
Bearing: N. 62 E.  
Dip: - 45  
Dates: July 13 - 14, 1989  
Length: 54.7 meters

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
0	3.0	Unconsolidated surface deposits
3.0	33.0	Typical Toodoggone porphyritic trachyandesite with pink feldspars. Has a few scattered calcite patches and a trace of fine grained disseminated magnetite.
33.0	34.0	Rock is pitted for about 1 meter.
34.0	54.7	Clastic rock. Lapilli tuff with composition same as the trachyandesite flows.

Diamond Drill Hole 89-3

Descriptive Log

Coordinates: 10 + 00 South - 1 + 00 East  
Elevation: 1207 meters  
Bearing: N. 32 E.  
Dip: -45  
Dates: July 14 - 15, 1989  
Length: 113.4 meters

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
0	2.1	Overburden
2.1	17.0	Porphyritic trachyandesite flow. Rock is purplish in color and finer grained than normal for "Toodoggone porphyry". Phenocrysts are mostly 2 - 3 mm in section. A few scattered brown jasperoid veinlets occur.
17.0	34.0	Slight change. Phenocrysts become more white in color, otherwise rock is same as above, but no jasperoid veins.
34.0	39.0	Slight propylitic alteration.
39.0	47.9	Rock is strongly silicified with about 1 percent v.f.g. pyrite. Stockworks of narrow grey quartz veins.
47.9	60.0	Typical "Toodoggone porphyry" with pink orthoclase and plagioclase phenocrysts. A few scattered calcite veinlets and a trace of v.f.g. pyrite.
60.0	65.0	Rock is very siliceous with many narrow quartz veins and about 1 percent v.f.g. pyrite.
65.0	72.4	Typical "Toodoggone porphyry".

Diamond Drill Hole 89-3 (Continued)

Descriptive Log

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
72.4	85.0	Rock becomes locally brecciated with several strong quartz veins up to 30cm. Pyrite in veins and as disseminated grains.
85.0	101.8	"Toodoggone porphyry" with large pink feldspar phenocrysts up to 1cm in section. Quartz veins scattered thru interval.
101.8	113.4	Same rock type but no more quartz veins. Just a few scattered calcite veins.

Diamond Drill Hole 89-4

Descriptive Log

Coordinates: Baseline No. 3; L.13 North - 2 + 00 East  
Elevation: 1289 meters  
Bearing: S. 62 W.  
Dip: -45  
Dates: July 15 - 16, 1989  
Length: 100.5 meters

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
0	2.7	Overburden
2.7	100.5	Porphyritic trachyandesite with large, pink feldspar phenocrysts. No rock alteration or mineralization. A few calcite veinlets scattered through core.



Diamond Drill Hole 89-5

Descriptive Log

Coordinates: Baseline No. 3; L. 18 South - 2 + 50 East  
Elevation: 1232 meters  
Bearing: S. 62 W.  
Dip: -45  
Dates: July 16 - 17, 1989  
Length: 115.8 meters

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
0	19.8	Overburden
19.8	27.3	Porphyritic trachyandesite with large (3-8mm) feldspar phenocrysts. Rock is generally a brownish color.
27.3	35.0	Zone of change. Rock becoming greenish due to propylitic alteration.
35.0	39.5	Matrix is argillized. Slight brecciation of porphyry.
39.5	60.0	Propylitic alteration of porphyritic trachyandesite. A few narrow quartz veins occur with v.f.g. pyrite.
60.0	92.5	Porphyry is argillized with much replacement by clay. Rock is grey and pitted. Contains local masses of quartz and pyrite. Locally a few gypsum veins.
92.5	100.3	Rock changes on fault, 20cm dark grey sheared clay and pyrite. In this interval rock is a breccia. May be a flow breccia or tuff. Is much fractured and argillized. Some dark grey quartz veins from 98 - 100.
100.3	115.8	Grey, green and maroon tuffs with much clay and calcite as alteration products.

Diamond Drill Hole 89 -6

Descriptive Log

Coordinates: 11 + 00 South - 1 + 35 East  
Elevation: 1200 meters  
Bearing: N. 32 E.  
Dip: - 45  
Dates: July 17 - 18, 1989  
Length: 128.0 meters

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
0	1.5	Overburden
1.5	29.0	Porphyritic trachyandesite with prominent pink orthoclase and plagioclase phenocrysts. Rock is dark color, becoming purplish. A few narrow calcite stringers are scattered through interval.
29.0	36.0	At 29.0 there is a subtle and gradual change as rock becomes slightly greenish in color, denoting propylitic alteration. Some pyrite is scattered through rock as tiny, disseminated grains. Some calcite occurs as small veins and irregular masses.
36.0	49.7	Rock becoming slightly brecciated. Composition of rock is about same as above i.e. porphyritic trachyandesite with a subtle breccia texture. Some scattered calcite veinlets and small masses up to 3 cm diameter.
49.7	64.5	Volcanic breccia with composition of porphyritic trachyandesite. Texture varies from prominently clastic to subtly clastic. Some bleaching and argillization from 53.8 - 54.2.
64.5	67.2	Heavy clay and gouge zone. Mostly grey clay, but top 40cm and bottom 20cm are hematitic red clay. Pyrite occurs in amount of about 2 percent.

Diamond Drill Hole 89-6 (Continued)

Descriptive Log

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
67.2	84.1	General silicification and quartz veining of porphyry. Quartz veins and silicified masses comprise about 10 percent of rock. Pyrite occurs in amounts of about one percent.
84.1	85.9	Dark grey medium - grained dike. Probably a lamprophyre dike.
85.9	90.9	Strongly altered argillized porphyritic trachyandesite with many narrow pyrite streaks through rock. Some disseminated pyrite in amounts of about 1/2 percent and grey quartz veins in amounts up to 10 percent of rock.
90.9	92.6	Grey clay and fault breccia.
92.6	95.6	Porphyritic trachyandesite, argillized.
95.6	98.3	Grey clay and fault gouge. Pyrite in amount of 1/2 percent. Many grey quartz fragments.
98.3	123.8	Replacement quartz and grey vein quartz occur in silicified trachyandesite (?). Quartz makes up about 50 percent of rock. Pyrite occurs in amounts 1 - 2 percent throughout and locally up to 10 percent.
123.8	---	Fault contact at 123.8
123.8	128.0	Medium grained red lapilli tuff.

Diamond Drill Hole 89-7

Descriptive Log

Coordinates: 11 + 17 South - 2 + 08 East  
Elevation: 1220 meters  
Bearing: N. 32 E.  
Dip: -45  
Dates: July 18 - 19, 1989  
Length: 117.6 meters

<u>Interval</u>		<u>Description of Rocks</u>
<u>From</u>	<u>To</u>	
0	2.7	Unconsolidated surface deposits
2.7	55.7	Porphyritic trachyandesite; "Toodoggone porphyry"
55.7	59.9	Slight brecciation and K - spar alteration.
59.9	117.6	Typical Toodoggone porphyritic trachyandesite with pink feldspar phenocrysts. A few small calcite veinlets scattered through interval.

### Geology of the Drill Holes

Geology of the drill holes is summarized in the geological sections of the 7 holes, plates 1 to 7.

Four rock types are recognized in the drill core;

1. Unconsolidated surface deposits of talus, alluvium and glacial drift.
2. Porphyritic trachyandesite with pink feldspar phenocrysts. Both orthoclase and plagioclase are commonly bright pink to orange in color.
3. Lapilli tuff. Mostly red, but may be maroon to greenish.
4. Lamprophyre dike.

Drill holes 89-1, 89-3 and 89-6 display areas of strong alteration with some mineralization. Core from 89-1 is strongly feldspathized with stockworks of quartz veins and pyrite from 3.6 to 29.0 meters.

Drill hole 89-3 is strongly silicified and has stockworks of grey quartz veins and about one percent pyrite from 39.0 to 47.9 meters.

The widest interval of silicification found so far on the Cassidy groups of claims is in D.D.H. 89-6. A heavy clay and fault gouge zone occurs from 64.5 to 67.2 meters. Below the fault from 67.2 to 123.8 meters nearly the entire interval is silicified and veined with quartz. Replacement quartz and vein quartz make up 10 to 50 percent of the rock. Pyrite occurs throughout in amounts of about one percent.

Mineralization Encountered in Drill Holes

Diamond drill holes 89-1, 89-3 and 89-6 intersected low grade gold - silver mineralization of significant widths. Assays are shown on drill sections, plates 8 to 11.

Mineralized Intersections in Drill Holes in 1989

Drill Hole Number	Intersection		Width m	Assays	
	From	To		Au (g/T.)	Ag (g/T.)
89-1	57.9	62.0	4.1	0.29	13.8
89-3	61.0	62.0	1.0	0.10	11.9
89-3	76.0	77.0	1.0	0.24	70.0
89-3	98.0	99.0	1.0	0.10	24.0
89-6	77.0	80.0	3.0	0.01	22.3
89-6	109.0	122.0	13.0	0.15	9.4
89-6	122.0	123.8	1.8	0.63	66.3

Plates 12 and 13 show the locations of drill holes on the Moosehorn zone.

### CONCLUSIONS

Two distinct vein systems occur in a broad zone of alteration which is exposed only in the walls of Moosehorn Canyon about one kilometer north of the confluence of Moosehorn Creek and Toodoggone River (Tompson, 1988, pp. 19-25 and 29-57). The vein systems are about 130 meters apart, strike north - northwesterly and dip westerly. They are, for purposes of convenience referred to as, "Moosehorn East vein" and "Moosehorn West vein".

Work during the current year (1989) was confined to Moosehorn East vein. Only diamond drill hole 89-6 intersected the zone. The intersection is oblique to the strike of the zone and is not entirely perpendicular with the dip, but the interval of silicification, quartz veining and pyrite mineralization is 55 meters long. The intersection is 50 meters south of the intersection in DDH 88-12 (Tompson, 1988, p.53) and is about 50 meters lower in elevation.

The mineralized zone in the current drilling (DDH 89-6) lacks the broad K-spar alteration and molybdenite mineralization of previous intersections in DDH 87-5 and DDH 88-12, but instead has a broad zone of silicification. The intersection confirms the north - northwesterly strike of the zone, being about N. 15 W.

CONCLUSIONS (Continued)

As shown above and on plate 11, assay values in the silicified zone are low. However, through the entire 55-meter interval, gold and silver values are distinctly anomalous:

Au = 0.09 ppm (90ppb)

Ag = 9.2 ppm.

In drill hole 89-6 the mineralized zone is terminated on a post - mineral fault near the bottom of the hole. Here, a subaerial, red lapilli tuff unit is down faulted against the mineralized zone (plate 6).



RECOMMENDATIONS

Moosehorn East Zone

The Moosehorn East zone makes no outcrops and has been intersected in only three diamond drill holes over a length of 75 meters. The deepest intersection of the zone is at 120 meters (plate 6).

It is recommended that the Moosehorn East zone be tested at greater depth and be explored along its strike to the north and to the south. The gravel deposits of the upper terrace of Toodoggone River lie only 60 meters south of DDH 89-6, so the southward extension of the Moosehorn East zone may exist in the river valley. Nevertheless, the zone is an extension of the very strong Attorney fault system, possesses classic epithermal rock alteration, is mineralized with gold and silver wherever it is encountered and is up to 25 meters wide.

To the north, the zone is covered by 1 to 3 meters of glacial drift.

At least 3 drill holes should attempt to test the zone at a depth of 200 to 250 meters.

Moosehorn West Zone

The Moosehorn West zone was tested by trenching in 1986 and 1987, and by diamond drilling in 1986, 1987 and 1988 (Tompson 1986 1987 and 1988). The zone occurs along the western margin of the Attorney fault system where the fault traverses mineral claim, G.W.P. No. 30. The vein is parallel to the fault, striking N. 30 W. with a dip of about 80 degrees west. It is known to occur over a length of 400 meters, from grid 6 + 00 south to 10 + 00 south.

The zone was intersected by drill holes over a vertical range of 100 meters, from elevation 1,107 to 1,207 meters. Best intersections are from the northern half of the vein.

<u>DDH No.</u>	<u>Grid</u>	<u>Elevation of Intersection</u>	<u>True Width</u>	<u>Assay (g/T)</u>	
				<u>Au</u>	<u>Ag</u>
88-11	6+00S.	1,135m	1.1m	2.48	275.0
88-9	7+00S.	1,178	2.1	0.83	86.1
86-8	7+50S.	1,207	2.1	1.59	339.0
87-2	7+50S.	1,132	0.6	9.0	251.0
86-12	7+50S.	1,107	3.5	0.93	42.6
88-7	8+00S.	1,162	0.7	1.12	22.3
87-4	8+50S.	1,160	2.1	0.86	44.2
86-7	8+50S.	1,130	2.8	0.71	20.2
88-6	10+00S.	1,168	8.0	0.07	0.26

Moosehorn West Zone (Continued)

It is noted that the intersection of the Moosehorn West vein in drill hole 88-6 on grid 10+00 south was at the paleosurface, immediately beneath the alluvial gravels of Tooodoggone River. The vein system here is about 8 meters wide with strong quartz veins.

Mineralization in the Moosehorn West zone occurs in grey quartz veins in areas of broader silicification which are up to 10 meters wide. The quartz veins are accompanied by potassic alteration of the host rocks, although in some intersections as in drill hole 87-2, good values are obtained from a zone of quartz veins in rocks with propylitic alteration.

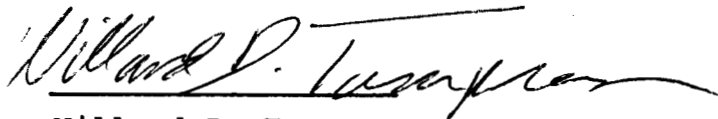
In 1986, two hand-dug trenches were cut through overburden into a zone of creamy colored to grey clay and alunite. The exposures show the zone to be at least 11 meters wide (Tompson, 1986, p. 61) and lying on the western margin of a prominent topographic lineament which strikes N. 32 W. This area is on-strike of the Moosehorn West zone and 200 meters north of the nearest drill hole.

Moosehorn West Zone (Continued)

It is recommended that a diamond drill hole test the area about 100 meters below outcrops of the clay- alunite zone.

It is also recommended that two drill holes test the Moosehorn West vein system at depths of about 200 meters below outcrop.

Respectively submitted

A handwritten signature in dark ink, appearing to read "Willard D. Thompson", with a long, sweeping horizontal line extending to the right.

Willard D. Thompson

REFERENCES CITED

Tompson, W.D., 1986; Exploration of Cassidy claim groups 1 and 2, Toodoggone gold-silver district: private report for Cyprus Gold Canada Ltd.

Tompson, W.D., 1987; Exploration of Cassidy claim groups 1 and 2, and mineral claims, Round Mountain and R. M. Fraction, Toodoggone gold-silver district: private report for Cyprus Gold Canada Ltd.

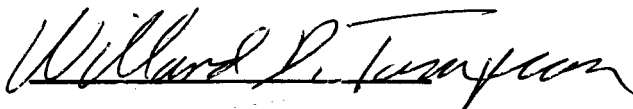
Tompson, W.D., 1988; Exploration of Cassidy claim groups 1 and 2 and 3, Toodoggone gold-silver district: private report for Cyprus Gold Canada Ltd.

CERTIFICATE

I, Willard D. Tompson, of Smithers, British Columbia, do hereby certify:

1. THAT I am a consulting geologist residing at Van Gaalen Road, Smithers, British Columbia;
2. THAT I hold a Master of Science Degree (Geology) from Montana State University;
3. THAT I am a Fellow of the Geological Association of Canada;
4. THAT I have practiced my profession for more than 30 years;
5. THAT I managed the field exploration program which is described in this report and that I planned the work described herein in consultation with Company management personnel and that I supervised the work in the field;
6. THAT I have not received, directly or indirectly, nor do I expect to receive any interest, direct or indirect, in the property of the Company nor any affiliate of the Company, nor do I beneficially own, directly or indirectly any securities of the Company or any affiliate of the Company;
7. THAT this report may be used for any corporate purpose the Company deems necessary.

Dated at Smithers, British Columbia this 25th day of October, 1989.



Willard D. Tompson  
Consulting Geologist

-22-

APPENDIX

Assay Certificate

9S-0189-RA1

Company: CYPRUS GOLD CANADA LTD.

Project:

Attn: A.JACKSON/W.TOMPSON

Date: SEP-09-89

Copy 1. CYPRUS GOLD CANADA, VANCOUVER, B.C.

2. W.D.TOMPSON, SMITHERS, B.C.

3. CYPRUS GOLD CANADA, C/O MIN-EN LABS.

We hereby certify the following Assay of 30 ROCK samples submitted SEP-05-89 by W.D.TOMPSON.

Sample Number	AU G/TONNE	AU OZ/TON	AG G/TONNE	AG OZ/TON	CU %
34051	.13	.004	2.3	.07	.002
34052	.11	.003	2.2	.06	.001
34053	.22	.006	4.3	.13	.003
34054	.08	.002	3.9	.11	.003
34055	.04	.001	3.8	.11	.001
34056	.03	.001	2.9	.08	.001
34057	.07	.002	1.7	.05	.001
34058	.06	.002	6.8	.20	.001
34059	.05	.001	4.2	.12	.002
34060	.04	.001	3.9	.11	.002
34061	.02	.001	3.6	.11	.001
34062	.02	.001	3.5	.10	.001
34063	.03	.001	1.7	.05	.002
34064	.01	.001	1.0	.03	.001
34065	.03	.001	1.6	.05	.001
34066	.05	.001	4.0	.12	.002
34067	.04	.001	4.1	.12	.002
34068	.02	.001	3.8	.11	.001
34069	.01	.001	1.6	.05	.001
34070	.02	.001	1.8	.05	.001
34071	.03	.001	4.0	.12	.001
34072	.03	.001	1.5	.04	.001
34073	.07	.002	3.4	.10	.002
34074	.05	.001	2.6	.08	.002
34075	.02	.001	2.1	.06	.006
34076	.03	.001	1.3	.04	.001
34077	.02	.001	0.6	.02	.002
34078	.01	.001	1.7	.05	.002
34079	.18	.005	4.2	.12	.002
34080	.25	.007	8.1	.24	.001

DPH 89-1

Certified by

*[Signature]*

MIN-EN LABORATORIES



Assay Certificate

9S-0189-RA2

Company: CYPRUS GOLD CANADA LTD.

Project:

Attn: A.JACKSON/W.TOMPSON

Date: SEP-09-89

Copy 1. CYPRUS GOLD CANADA, VANCOUVER, B.C.

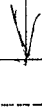
2. W.D.TOMPSON, SMITHERS, B.C.

3. CYPRUS GOLD CANADA, C/O MIN-EN LABS.

We hereby certify the following Assay of 30 ROCK samples  
submitted SEP-05-89 by W.D.TOMPSON.

Sample Number	AU G/TONNE	AU OZ/TON	AG G/TONNE	AG OZ/TON	CU %
34081	.33	.010	3.9	.11	.002
34082	.01	.001	1.8	.05	.004
34083	.10	.003	1.4	.04	.002
34084	.03	.001	1.9	.06	.001
34085	.02	.001	0.8	.02	.001
34086	.07	.002	0.5	.01	.002
34087	.20	.006	9.7	.28	.002
34088	.77	.022	45.6	1.33	.002
34089	.06	.002	2.2	.06	.001
34090	.17	.005	15.0	.44	.004
34091	.45	.013	10.2	.30	.001
34092	.03	.001	0.3	.01	.001
34093	.05	.001	3.6	.11	.002
34094	.12	.004	7.8	.23	.001
34095	.04	.001	1.8	.05	.002
34096	.06	.002	1.6	.05	.004
34097	.15	.004	1.2	.04	.002
34098	.06	.002	0.5	.01	.002
34099	.02	.001	1.7	.05	.001
34100	.01	.001	0.6	.02	.001
34101	.04	.001	2.4	.07	.001
34102	.03	.001	2.0	.06	.001
34103	.01	.001	1.7	.05	.001
34104	.05	.001	1.9	.06	.001
34105	.02	.001	3.5	.10	.002
34106	.02	.001	6.2	.18	.002
34107	.03	.001	5.8	.17	.002
34108	.07	.002	5.7	.17	.001
34109	.04	.001	0.7	.02	.002
34110	.01	.001	1.5	.04	.002

DPH B9-1



DPH B9-3

Certified by

*[Signature]*

MIN-EN LABORATORIES

Assay Certificate

9S-0189-RA3

Company: CYPRUS GOLD CANADA LTD.

Project:

Attn: A.JACKSON/W.TOMPSON

Date: SEP-09-89

Copy 1. CYPRUS GOLD CANADA, VANCOUVER, B.C.

2. W.D.TOMPSON, SMITHERS, B.C.

3. CYPRUS GOLD CANADA, C/O MIN-EN LABS.

We hereby certify the following Assay of 30 ROCK samples  
submitted SEP-05-89 by W.D.TOMPSON.

Sample Number	AU G/TONNE	AU OZ/TON	AG G/TONNE	AG OZ/TON	CU %
34111	.03	.001	0.4	.01	.001
34112	.02	.001	1.3	.04	.001
34113	.01	.001	0.3	.01	.002
34114	.03	.001	0.4	.01	.003
34115	.02	.001	1.8	.05	.002
34116	.04	.001	0.7	.02	.002
34117	.02	.001	8.0	.23	.001
34118	.05	.001	12.3	.36	.002
34119	.02	.001	0.4	.01	.001
34120	.02	.001	1.9	.06	.002
34121	.04	.001	6.0	.18	.002
34122	.10	.003	11.9	.35	.001
34124	.02	.001	4.1	.12	.002
34125	.01	.001	3.4	.10	.001
34126	.02	.001	0.8	.02	.002
34127	.04	.001	0.3	.01	.001
34128	.02	.001	2.2	.06	.002
34129	.01	.001	0.3	.01	.002
34130	.01	.001	0.2	.01	.001
34131	.03	.001	0.9	.03	.002
34132	.02	.001	0.5	.01	.001
34133	.02	.001	3.7	.11	.001
34134	.01	.001	2.2	.06	.006
34135	.01	.001	7.6	.22	.001
34136	.02	.001	10.0	.29	.001
34137	.24	.007	70.0	2.04	.002
34138	.01	.001	2.4	.07	.002
34139	.01	.001	1.2	.04	.001
34140	.01	.001	1.8	.05	.001
34141	.01	.001	2.1	.06	.001

224 B9-3

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MIN-EN LABORATORIES

Assay Certificate

9S-0189-RA4

Company: CYPRUS GOLD CANADA LTD.

Project:

Attn: A.JACKSON/W.TOMPSON

Date: SEP-09-89

Copy 1. CYPRUS GOLD CANADA, VANCOUVER, B.C.

2. W.D.TOMPSON, SMITHERS, B.C.

3. CYPRUS GOLD CANADA, C/O MIN-EN LABS.

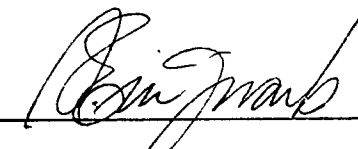
 We hereby certify the following Assay of 30 ROCK samples  
 submitted SEP-05-89 by W.D.TOMPSON.

Sample Number	AU G/TONNE	AU OZ/TON	AG G/TONNE	AG OZ/TON	CU %
54142	.02	.001	2.9	.08	.001
54143	.04	.001	2.0	.06	.001
54144	.01	.001	1.8	.05	.002
54145	.01	.001	1.7	.05	.001
54146	.01	.001	3.6	.11	.002
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54147	.01	.001	8.0	.23	.001
54148	.01	.001	0.4	.01	.002
54149	.01	.001	1.1	.03	.001
54150	.01	.001	1.9	.06	.001
54151	.02	.001	0.5	.01	.001
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54152	.02	.001	0.3	.01	.002
54153	.01	.001	0.6	.02	.001
54154	.03	.001	0.5	.01	.002
54155	.02	.001	1.3	.04	.001
54156	.01	.001	2.7	.08	.001
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54157	.01	.001	2.2	.06	.002
54158	.02	.001	1.5	.04	.002
54159	.10	.003	24.0	.70	.006
54160	.01	.001	2.0	.06	.002
54161	.01	.001	1.6	.05	.002
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54162	.01	.001	1.7	.05	.004
54163	.02	.001	1.8	.05	.002
54164	.01	.001	1.6	.05	.002
54165	.01	.001	1.2	.04	.003
54166	.01	.001	1.9	.06	.002
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54167	.03	.001	0.6	.02	.004
54168	.02	.001	2.1	.06	.002
54169	.01	.001	0.4	.01	.003
54170	.02	.001	0.2	.01	.002
54171	.01	.001	0.4	.01	.002

DDH 89-3

DDH 89-5

Certified by



MIN-EN LABORATORIES

Assay Certificate

9S-0189-RA5

Company: CYPRUS GOLD CANADA LTD.

Date: SEP-09-89

Project:

Copy 1. CYPRUS GOLD CANADA, VANCOUVER, B.C.

Attn: A. JACKSON/W. TOMPSON

2. W.D. TOMPSON, SMITHERS, B.C.

3. CYPRUS GOLD CANADA, C/O MIN-EN LABS.

 We hereby certify the following Assay of 30 ROCK samples  
 submitted SEP-05-89 by W.D. TOMPSON.

Sample Number	AU G/TONNE	AU OZ/TON	AG G/TONNE	AG OZ/TON	CU %
34172	.04	.001	0.6	.02	.002
34173	.02	.001	0.2	.01	.002
34174	.03	.001	0.2	.01	.002
34175	.06	.002	0.3	.01	.002
34176	.01	.001	0.4	.01	.003
34177	.01	.001	0.2	.01	.001
34178	.01	.001	1.5	.04	.002
34179	.02	.001	1.2	.04	.001
34180	.05	.001	0.4	.01	.001
34181	.01	.001	0.5	.01	.001
34182	.01	.001	0.2	.01	.002
34183	.01	.001	0.4	.01	.002
34184	.01	.001	0.6	.02	.001
34185	.01	.001	0.7	.02	.002
34186	.01	.001	0.8	.02	.004
34187	.05	.001	1.4	.04	.003
34188	.02	.001	1.2	.04	.003
34189	.03	.001	1.8	.05	.002
34190	.02	.001	0.8	.02	.001
34191	.04	.001	0.7	.02	.001
34192	.02	.001	0.4	.01	.002
34193	.04	.001	0.7	.02	.002
34194	.02	.001	0.3	.01	.001
34195	.04	.001	0.5	.01	.001
34196	.02	.001	0.2	.01	.001
34197	.02	.001	0.5	.01	.001
34198	.01	.001	0.8	.02	.002
34199	.01	.001	0.2	.01	.002
34200	.01	.001	1.0	.03	.002
34201	.01	.001	0.4	.01	.001

DVH 89-5

Certified by



MIN-EN LABORATORIES

Assay Certificate

9S-0189-RA6

Company: CYPRUS GOLD CANADA

Project:

Attn: A.JACKSON/W.TOMPSON

Date: SEP-09-89

Copy 1. CYPRUS GOLD CANADA, VANCOUVER, B.C.

2. W.D.TOMPSON, SMITHERS, B.C.

3. CYPRUS GOLD CANADA, C/O MIN-EN LABS.

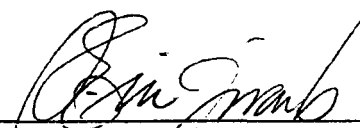
We hereby certify the following Assay of 30 ROCK samples  
submitted SEP-05-89 by W.D.TOMPSON.

Sample Number	AU G/TONNE	AU OZ/TON	AG G/TONNE	AG OZ/TON	CU %
34202	.04	.001	0.2	.01	.002
34203	.01	.001	0.9	.03	.002
34204	.01	.001	1.7	.05	.002
34205	.03	.001	1.3	.04	.002
34206	.02	.001	1.4	.04	.002
34207	.02	.001	1.8	.05	.002
34208	.02	.001	1.9	.06	.001
34209	.01	.001	2.0	.06	.001
34210	.01	.001	1.9	.06	.001
34211	.05	.001	1.8	.05	.002
34212	.02	.001	1.3	.04	.002
34213	.01	.001	0.7	.02	.004
34214	.01	.001	1.5	.04	.002
34215	.03	.001	1.2	.04	.002
34216	.02	.001	3.9	.11	.002
34217	.03	.001	4.2	.12	.001
34218	.15	.004	6.6	.19	.001
34219	.01	.001	2.0	.06	.001
34220	.02	.001	2.0	.06	.002
34221	.02	.001	2.4	.07	.002
34222	.01	.001	3.3	.10	.001
34223	.03	.001	3.6	.11	.001
34224	.01	.001	3.9	.11	.001
34225	.02	.001	1.9	.06	.001
34226	.02	.001	5.8	.17	.001
34227	.02	.001	22.0	.64	.001
34228	.01	.001	20.0	.58	.001
34229	.01	.001	25.6	.75	.001
34230	.01	.001	1.9	.06	.002
34231	.02	.001	1.0	.03	.001

DPH 89-5

DPH 89-6

Certified by



MIN-EN LABORATORIES

Assay Certificate

9S-0189-RA7

Company: CYPRUS GOLD CANADA

Project:

Attn: A.JACKSON/W.TOMPSON

Date: SEP-09-89

Copy 1. CYPRUS GOLD CANADA, VANCOUVER, B.C.

2. W.D.TOMPSON, SMITHERS, B.C.

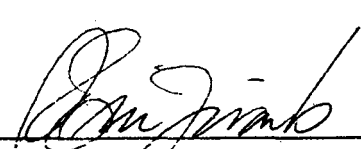
3. CYPRUS GOLD CANADA, C/O MIN-EN LABS.

We hereby certify the following Assay of 30 ROCK samples  
submitted SEP-05-89 by W.D.TOMPSON.

Sample Number	AU G/TONNE	AU OZ/TON	AG G/TONNE	AG OZ/TON	CU %
34232	.01	.001	4.1	.12	.001
34233	.03	.001	7.9	.23	.001
34234	.01	.001	6.2	.18	.003
34235	.02	.001	7.8	.23	.002
34236	.02	.001	4.2	.12	.001
34237	.01	.001	3.9	.11	.001
34238	.02	.001	5.8	.17	.001
34239	.02	.001	2.0	.06	.001
34240	.02	.001	2.2	.06	.002
34241	.03	.001	0.6	.02	.001
34242	.02	.001	0.2	.01	.001
34243	.03	.001	0.3	.01	.001
34244	.03	.001	0.2	.01	.001
34245	.04	.001	0.1	.01	.002
34246	.01	.001	0.2	.01	.002
34247	.02	.001	0.2	.01	.002
34248	.01	.001	5.4	.16	.002
34249	.02	.001	13.2	.39	.002
34250	.02	.001	9.8	.29	.002
34251	.03	.001	6.0	.18	.001
34252	.05	.001	12.1	.35	.002
34253	.12	.004	7.4	.22	.001
34254	.14	.004	12.0	.35	.001
34255	.02	.001	8.3	.24	.001
34256	.10	.003	8.0	.23	.002
34257	.06	.002	6.2	.18	.001
34258	.03	.001	8.4	.25	.001
34259	.22	.006	12.1	.35	.002
34260	.05	.001	4.3	.13	.001
34261	.06	.002	7.4	.22	.001

DDH B9-6

Certified by



MIN-EN LABORATORIES

Assay Certificate

9S-0189-RA8

Company: CYPRUS GOLD CANADA

Date: SEP-09-89

Project:

Copy 1: CYPRUS GOLD CANADA, VANCOUVER, B.C.

Attn: A.JACKSON/W.TOMPSON

2. W.D.TOMPSON, SMITHERS, B.C.

3. CYPRUS GOLD CANADA, C/O MIN-EN LABS.

We hereby certify the following Assay of 12 ROCK samples  
submitted SEP-05-89 by W.D.TOMPSON.

Sample Number	AU G/TONNE	AU OZ/TON	AG G/TONNE	AG OZ/TON	CU %
34262	.24	.007	9.7	.28	.001
34263	.06	.002	9.8	.29	.002
34264	.39	.011	12.4	.36	.001
34265	.19	.006	11.9	.35	.001
34266	.21	.006	13.9	.41	.001
34267	.21	.006	12.1	.35	.002
34268	.13	.004	9.8	.29	.001
34269	.17	.005	7.7	.22	.001
34270	.03	.001	6.1	.18	.001
34271	.01	.001	5.9	.17	.001
34272	.66	.019	71.4	2.08	.001
34273	.61	.018	60.0	1.75	.002

D.D.H. 89-6

✓

Certified by

*[Signature]*

MIN-EN LABORATORIES

-23-

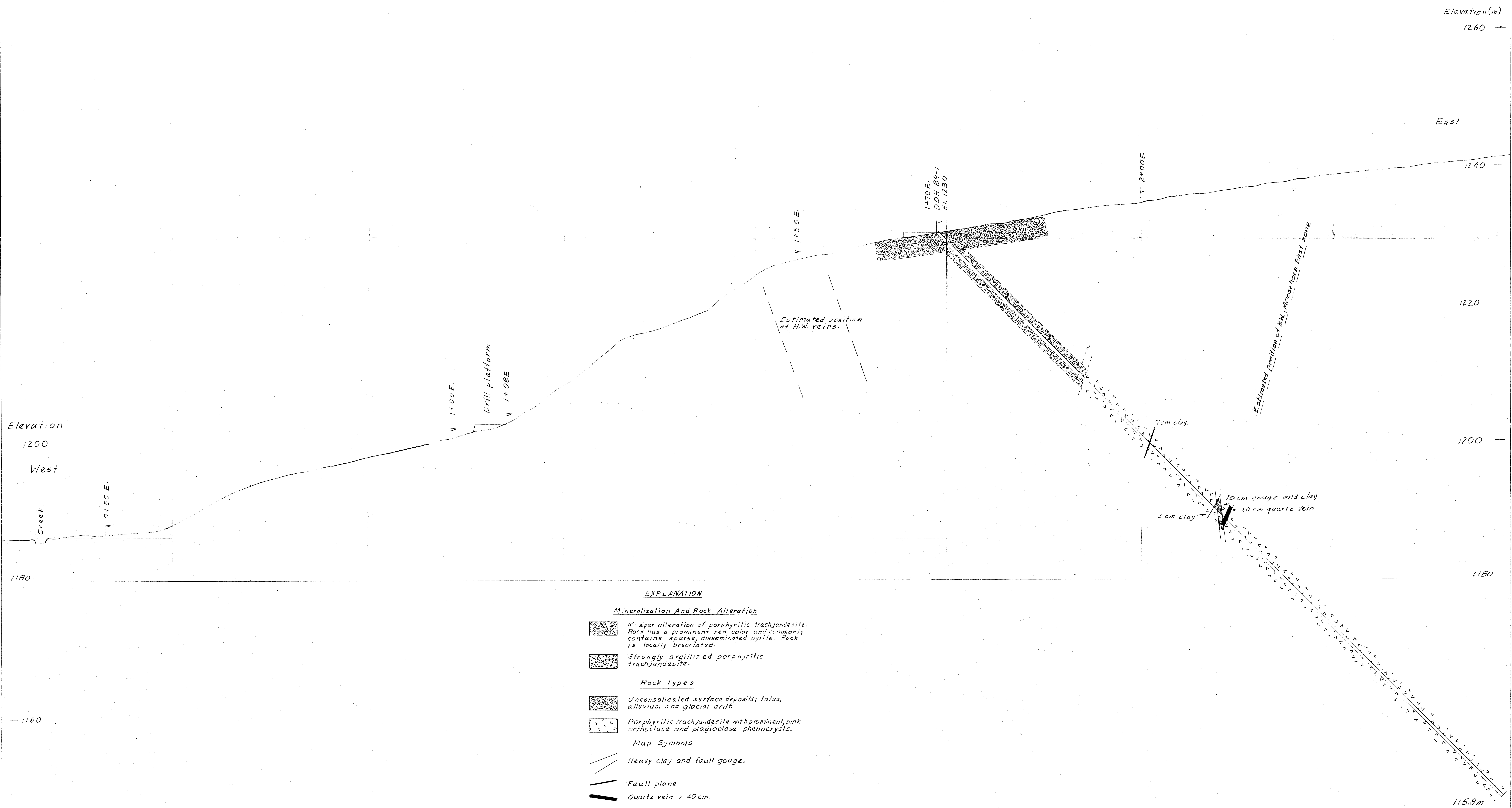
APPENDIX II



COSTS INCURRED IN 1989 EXPLORATION PROGRAM

Wages:

<u>Employee</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Total</u>
Jack Hemelspeck	\$ 390.00	\$ 4,192.50	\$ 4,192.50	\$ 8,775.00
Alan Burrows	401.25	4,680.00	4,290.00	9,371.25
Maryann Nelson	364.00	3,913.00	3,821.00	8,098.00
Douglas Cameron		1,932.84	2,319.41	4,252.25
Marc Varga		497.01	1,492.06	1,989.07
Rachel Tompson			1,564.21	1,564.21
Norma Aikins		364.00	546.00	910.00
				<u>34,959.78</u>
Consulting fees				24,300.00
Telephone				319.80
Repairs				64.95
Supplies				2,092.91
Travel expense				727.00
Freight and hauling				2,525.45
Maps				22.92
Mini-storage				741.75
Radio license				116.00
Groceries				6,918.42
Helicopter charter				33,110.33
Drilling contract				60,402.30
Rental of generator				614.80
Expediting				1,587.12
Assays				5,499.00
Drafting & copies				543.95
Report preparation and typing				<u>1,892.53</u>
Total expenses				<u>\$ 176,439.01</u>



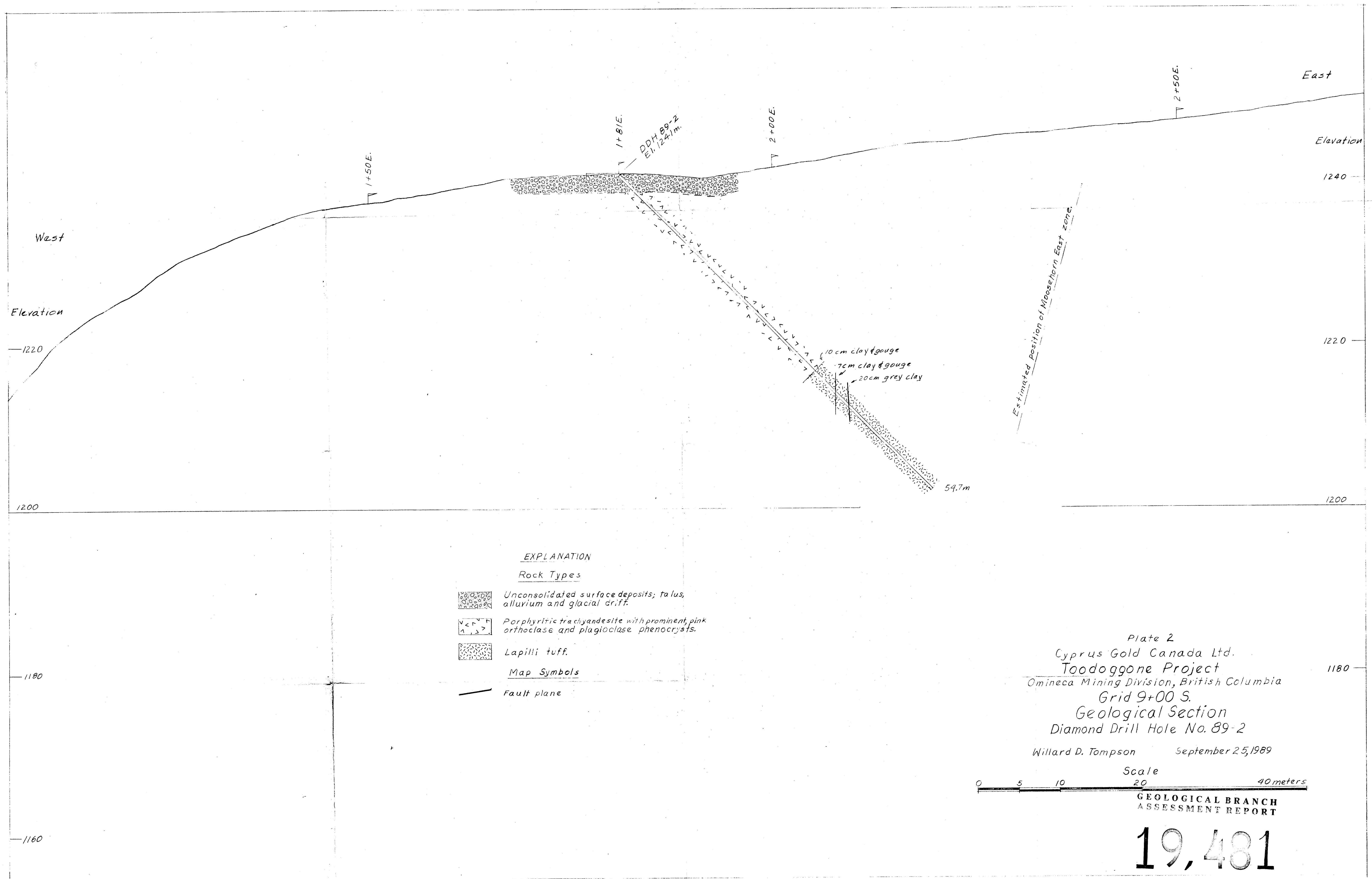
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

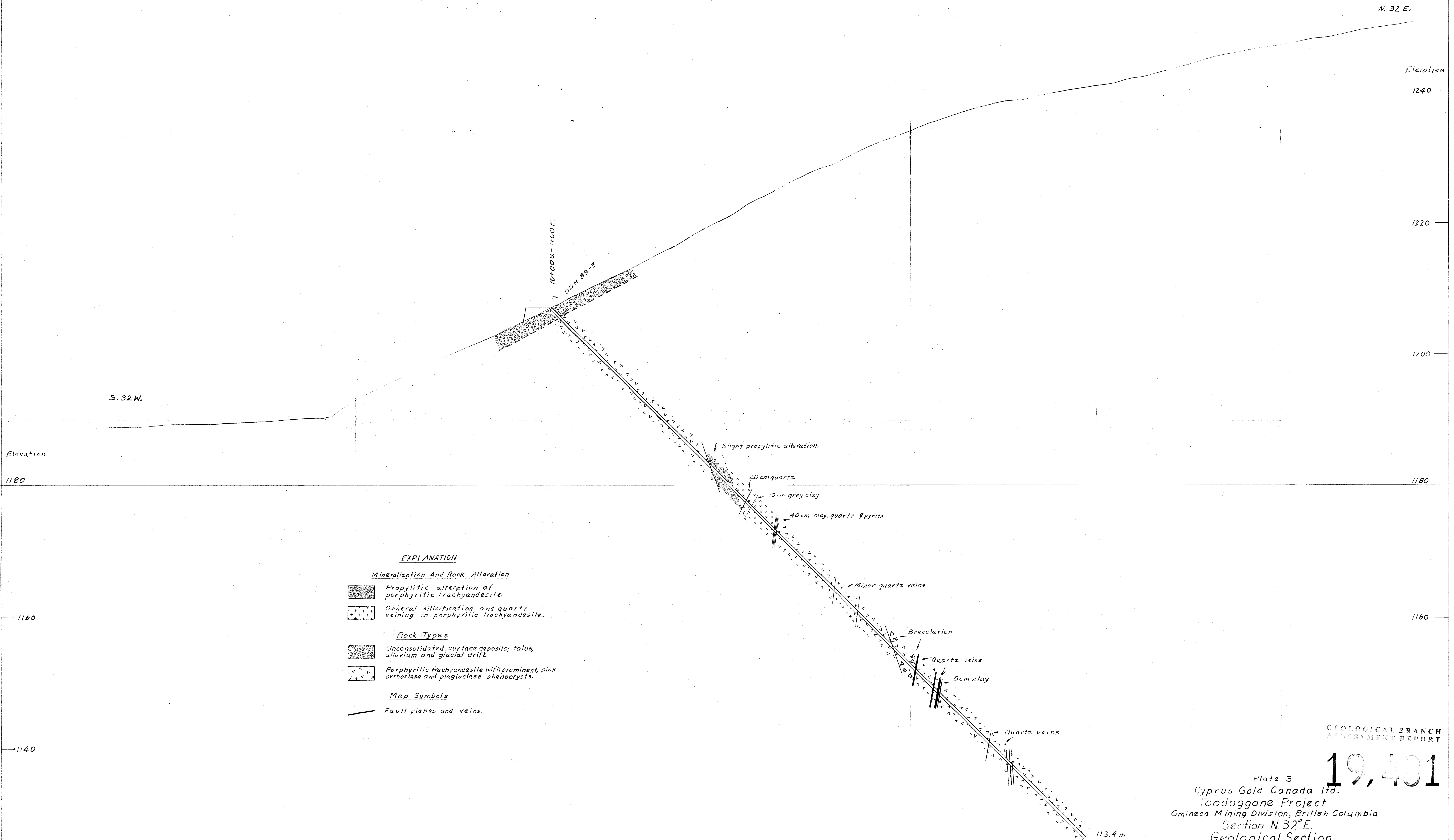
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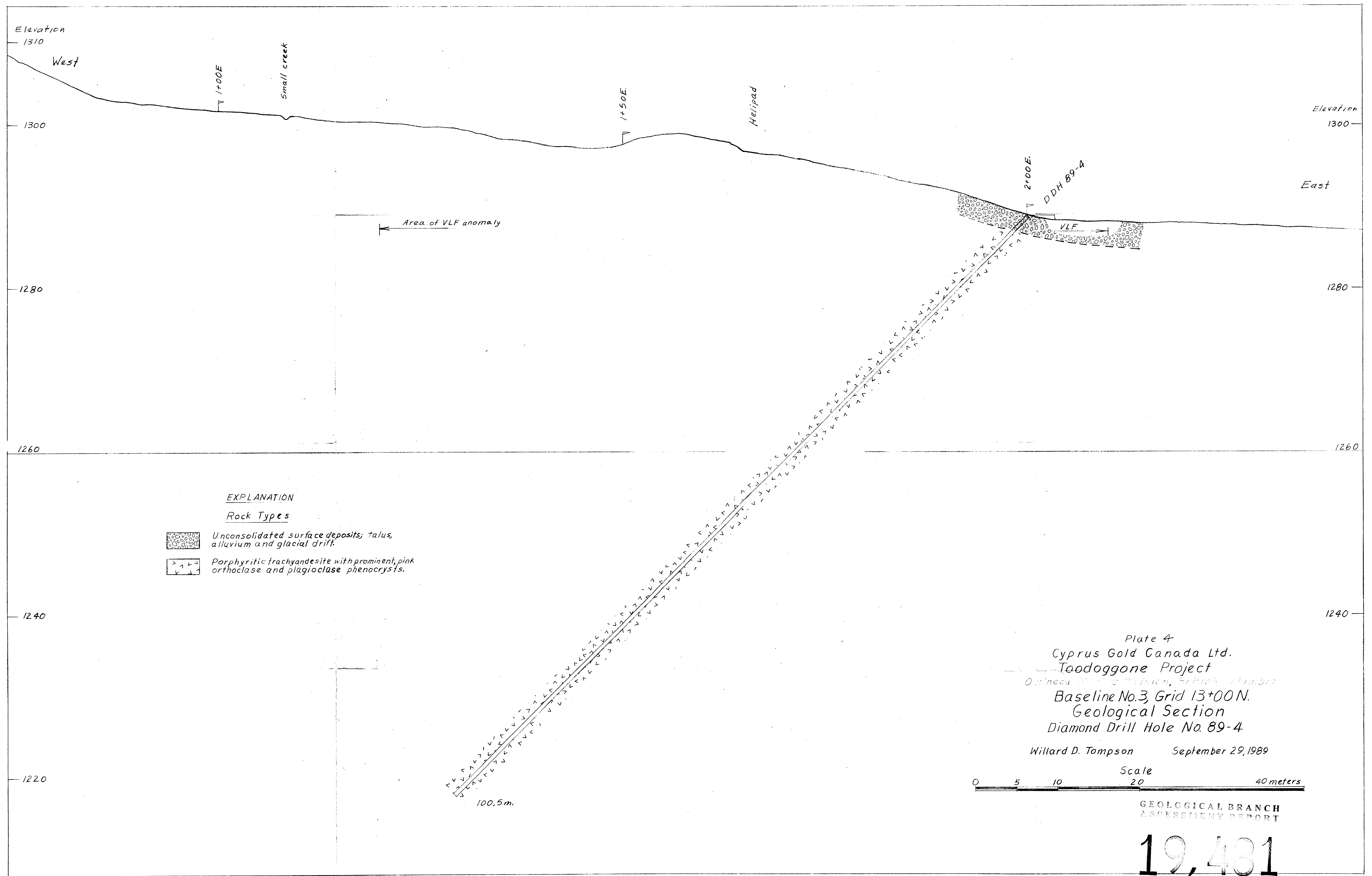
Plate 1  
Cyprus Gold Canada Ltd.  
Toodoggone Project  
Omineca Mining Division, British Columbia  
Grid 9+50 S.  
Geological Section  
Diamond Drill Hole No. 89-1

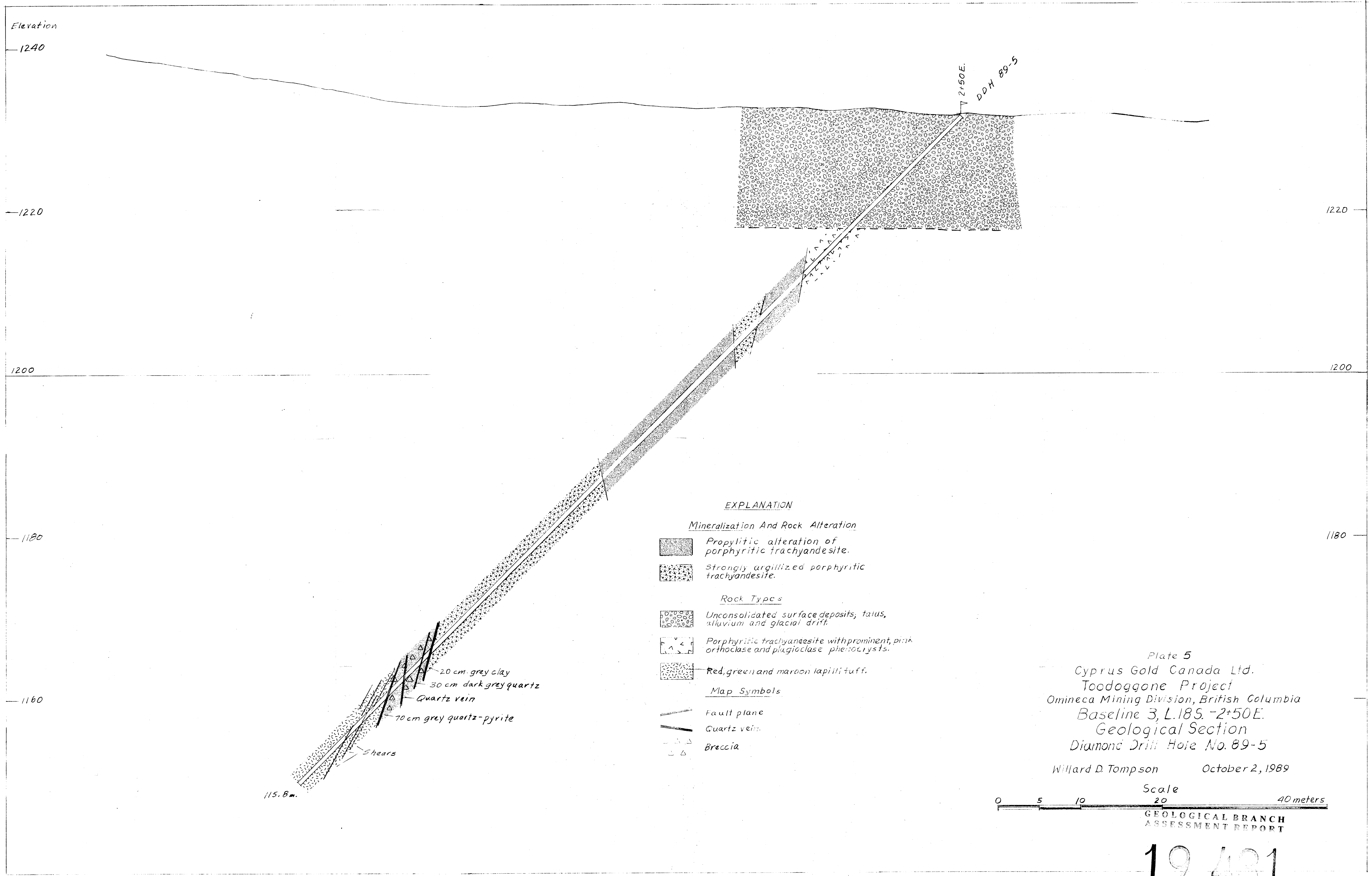
Willard D. Tompson September 22, 1989

Scale  
0 5 10 20 40 meters









EXPLANATION

Mineralization And Rock Alteration

- Propylitic alteration of porphyritic trachyandesite.
- Strongly argillized porphyritic trachyandesite.

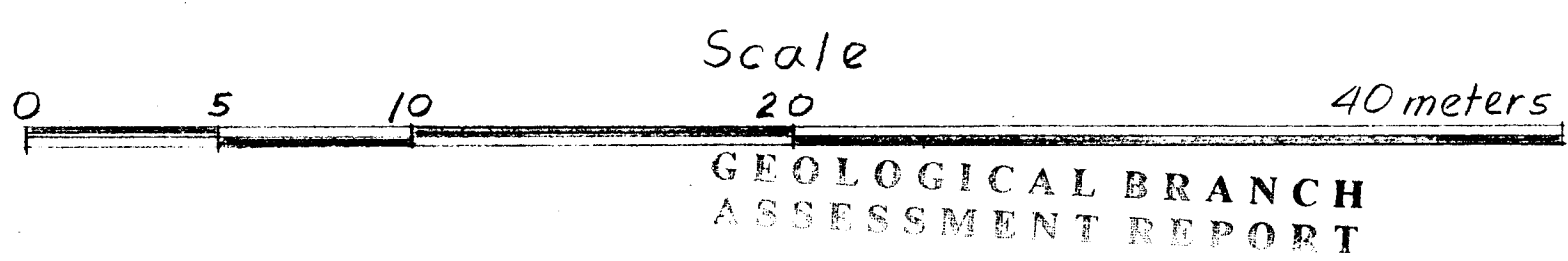
Rock Types

- Unconsolidated surface deposits, talus, alluvium and glacial drift.
- Porphyritic trachyandesite with prominent, pink orthoclase and plagioclase phenocrysts.
- Red, green and maroon lapilli tuff.

Map Symbols

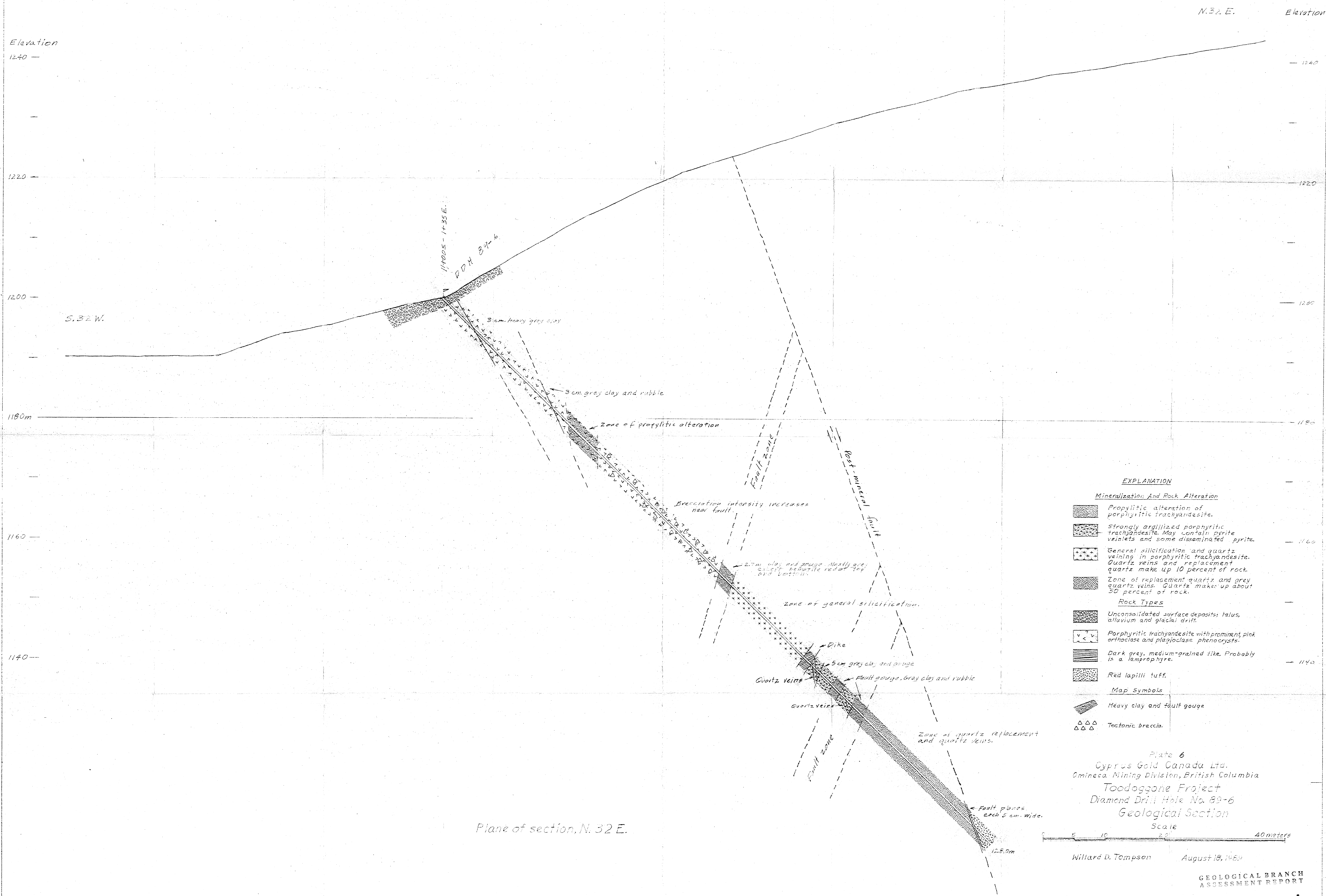
- Fault plane
- Quartz vein
- Breccia

Plate 5  
Cyprus Gold Canada Ltd.  
Toodoggone Project  
Omineca Mining Division, British Columbia  
Baseline 3, L.185, -2+50E.  
Geological Section  
Diamond Drill Hole No. 89-5  
Willard D. Thompson      October 2, 1989



19,431





EXPLANATION

Mineralization And Rock Alteration

- Propylitic alteration of porphyritic trachyandesite.
- Strongly argillized porphyritic trachyandesite. May contain pyrite veinlets and some disseminated pyrite.
- General silicification and quartz veining in porphyritic trachyandesite. Quartz veins and replacement quartz make up 10 percent of rock.
- Zone of replacement quartz and grey quartz veins. Quartz makes up about 50 percent of rock.

Rock Types

- Unconsolidated surface deposits: talus, alluvium and glacial drift.
- Porphyritic trachyandesite with prominent pink orthoclase and plagioclase phenocrysts.
- Dark grey, medium-grained tuff. Probably is a tephrophyre.
- Red lapilli tuff.

Map Symbols

- Heavy clay and fault gouge
- Tectonic breccia.

Plate 6  
Cyprus Gold Canada Ltd.  
Omineca Mining Division, British Columbia  
Toodoggone Project  
Diamond Drill Hole No. 89-6  
Geological Section

Scale 0 5 10 20 40 meters

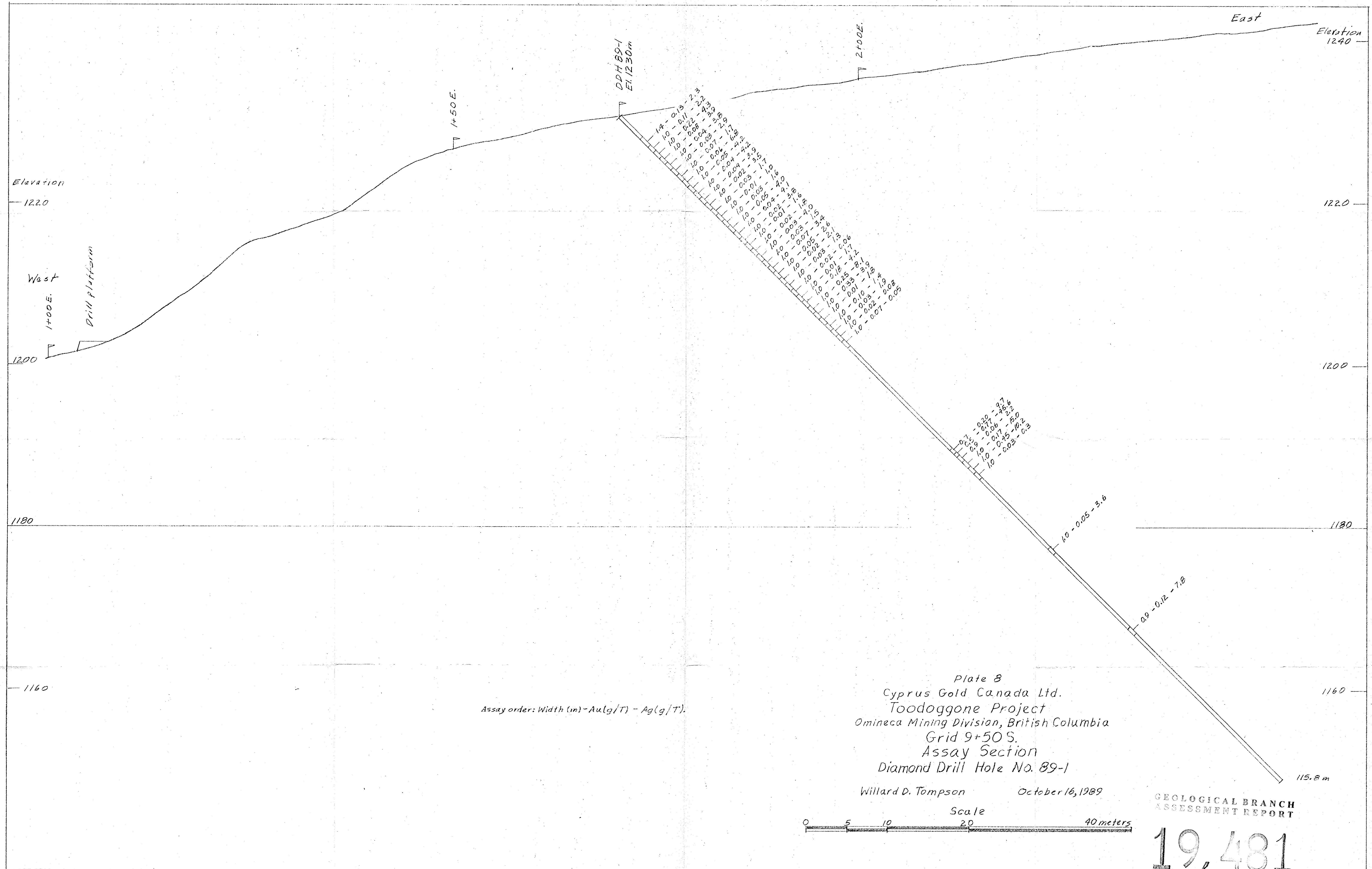
Willard D. Thompson August 18, 1989

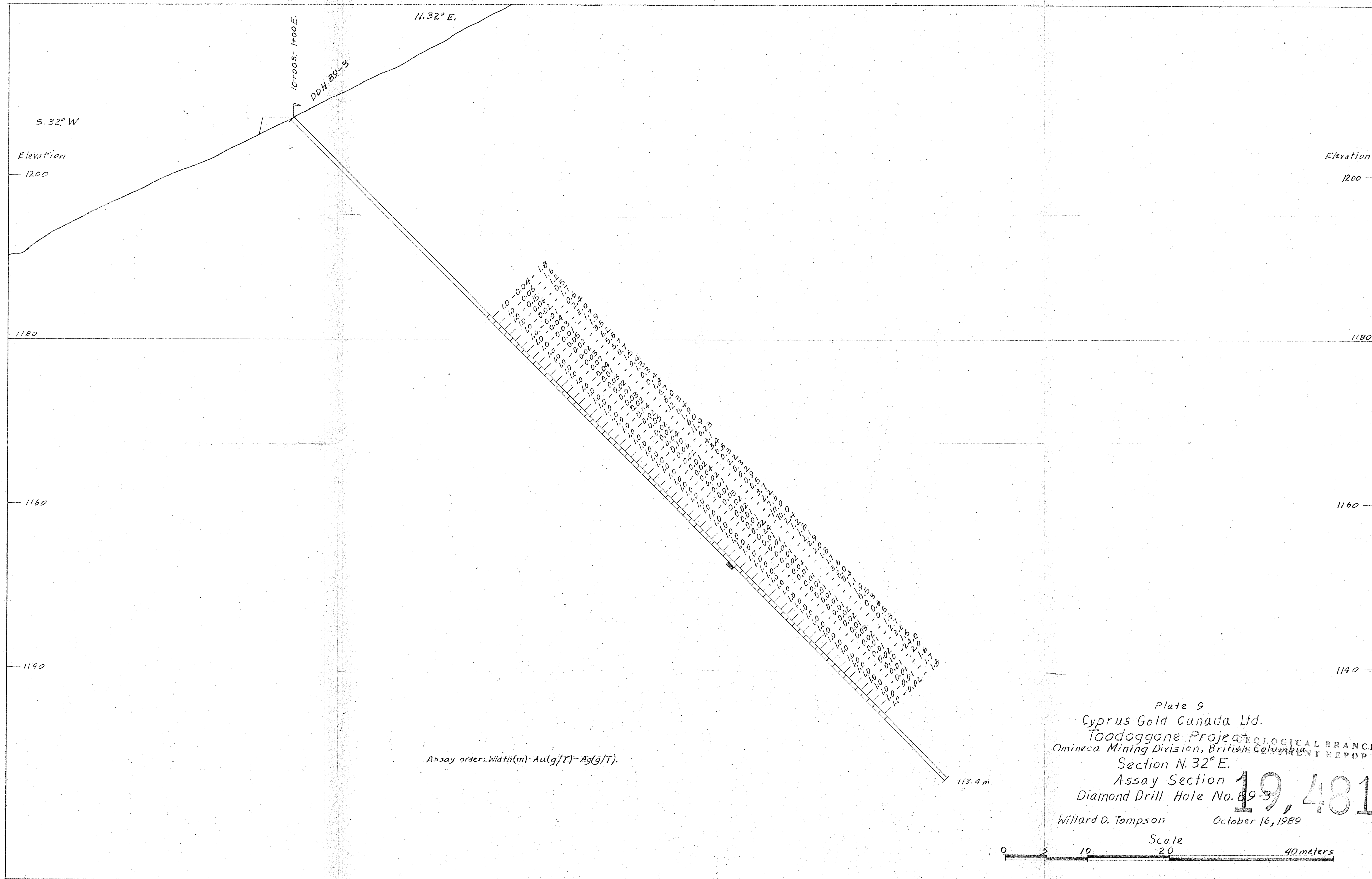
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,481





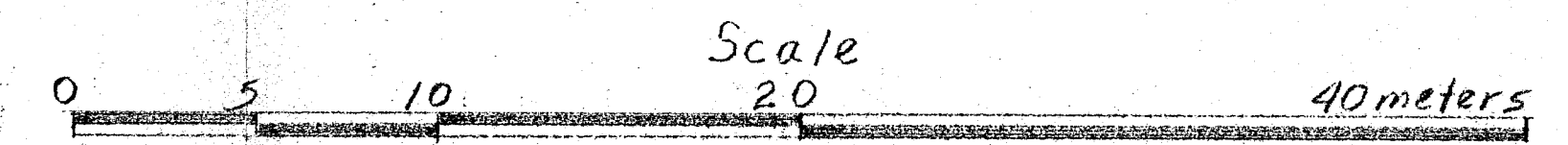




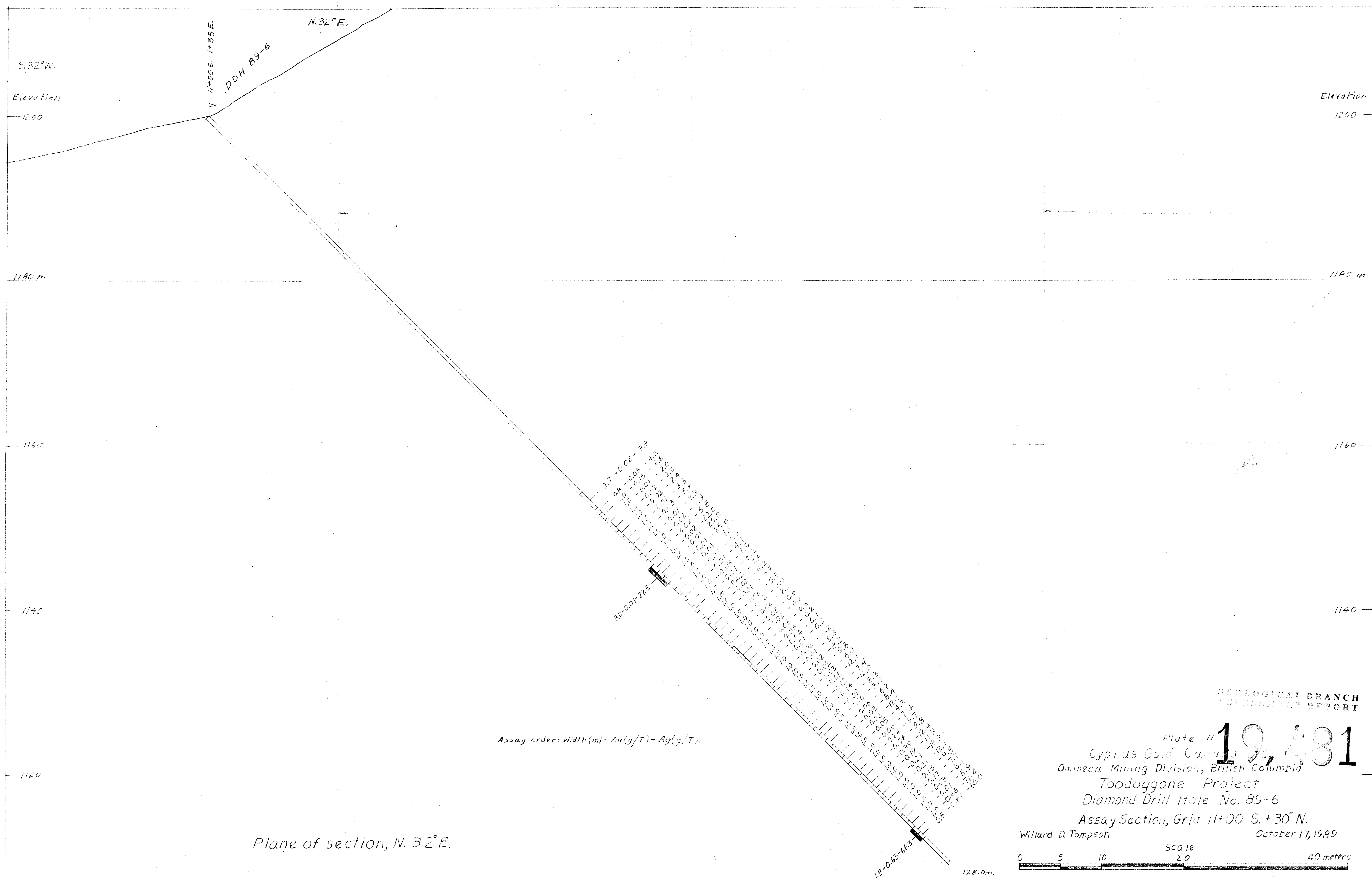
Assay order: Width(m)-Au(g/T)-Ag(g/T).

Plate 9  
Cyprus Gold Canada Ltd.  
Toodoggone Project  
Omineca Mining Division, British Columbia  
Section N. 32° E.  
Assay Section  
Diamond Drill Hole No. 89-3  
Willard D. Thompson  
October 16, 1989

19,481







S 32° W.

Elevation

1200

1180 m

1160

1140

1120

Elevation

1200

1180 m

1160

1140

Assay order: Width(m) - Au(g/T) - Ag(g/T).

Plane of section, N. 32° E.

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

Plate II  
Cyprus Gold Canada Ltd.  
Omineca Mining Division, British Columbia  
Toodoggone Project  
Diamond Drill Hole No. 89-6  
Assay Section, Grid 11+00 S. + 30° N.  
Willard D. Thompson  
October 17, 1989

19,481

Scale  
0 5 10 20 40 meters

