

REPORT  
ON THE  
1996 and 1997 EXPLORATION PROGRAM  
ON THE  
NEW POLARIS MINE SITE  
North Western British Columbia  
NTS: 104 K 12

Latitude: 58°42'N

Longitude: 133°37'W

Atlin Mining Division

For  
Canarc Resource Corp.  
800 – 850 West Hastings Street  
Vancouver, British Columbia  
V6C 1T1

**By:** Godfrey Walton, P. Geo  
G. J. Walton & Associates Ltd  
5463 Cortez Crescent  
North Vancouver, British Columbia

V7R 4R1

June 20<sup>th</sup>, 2002

## SUMMARY

New Polaris (formerly Polaris-Taku) is an early Tertiary mesothermal gold mineralized body located in northwestern British Columbia about 60 miles south of Atlin B.C. and 40 miles northeast of Juneau, Alaska. The nearest roads in the area terminate five miles due south of Atlin and six miles southeast of Juneau. Access at the present time is by aircraft. A short airstrip for light aircraft exists on the property but there is a larger strip along the Tulsequah River six miles away that can accommodate DC-3 planes if it is rehabilitated. The gold property consists of 61 contiguous Crown-granted mineral claims and one modified grid claim covering 2,100 acres. All claims are 100% owned and held by New Polaris Gold Mines, a wholly owned subsidiary of Canarc Resource Corp. subject to a 15% net profit interest held by Rembrandt Gold Mines Limited. Canarc can reduce this net profit interest to a 10 percent net profit.

The deposit is composed of three sets of veins (quartz-carbonate stringers in altered rock), the "A-B" veins northwest striking and southwest dipping, the "Y" veins north striking and dipping steeply east and finally the "C" veins east-west striking and dipping to the south to southeast at 65° to vertical. The "C" veins appear to hook around to the north and south into the other two sets of veins so that their junctions form an arc. The gold is occluded in finely disseminated arsenopyrite grains that permeate the altered wallrock and stockwork veins. The next most abundant mineral is pyrite, followed by minor stibnite and a trace of sphalerite. The zones of mineralization range from 50 to 800 feet in length and 1 to 45 feet in width. The gold values in the veins show remarkable continuity and uniformity.

Several consulting groups have estimated a mineral inventory for the property. Gary Giroux of Montgomery Consultants completed the last in 1995 in which he estimated 450,000 tons grading 0.365 oz/ton Au in a probable resource and 2,509,000 tons grading 0.365 oz/ton Au as a probable resource. Under the current guidelines of 43-101, this resource would be categorized as 450,000 tons grading 0.365 oz/ton Au as an indicated resource and 2,509,000 tons grading 0.365 oz/ton Au as an inferred resource. More recently, Canarc completed an in house mineral inventory estimate showing a larger resource but it need to be updated to follow Policy 43-101 with regard to resource estimation.

Canarc carried out programs in 1996 and 1997 following McKay's recommendation of further drilling from surface and underground. A total of 44 drill holes were completed with 60 new intersections. The underground was dewatered, cleaned, mapped and sampled. The complete database was re-evaluated and modeled to identify extensions and new zones, which could be targeted by drilling.

The property warrants further work and it is recommended that Canarc Resource Corp commission two independent reviews; one to look at the metallurgy and the other to look at incorporating the new data into an updated mineral inventory. The goal is to move the property closer to a revised prefeasibility study. Further drilling will be required to define reserves along strike and at depth.

## TABLE OF CONTENTS

<b>SUMMARY.....</b>	<b>III</b>
<b>TABLE OF CONTENTS.....</b>	<b>IV</b>
<b>LIST OF FIGURES.....</b>	<b>V</b>
<b>LIST OF TABLES .....</b>	<b>V</b>
<b>APPENDICES .....</b>	<b>V</b>
<b>1.0 INTRODUCTION, TERMS OF REFERENCE AND DISCLAIMER .....</b>	<b>1</b>
<b>2.0 PROPERTY DESCRIPTION AND LOCATION.....</b>	<b>1</b>
<b>3.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY .....</b>	<b>3</b>
<b>5.0 HISTORY .....</b>	<b>4</b>
<b>6.0 MINE DEVELOPMENT - HISTORICAL.....</b>	<b>5</b>
<b>7.0 1988 TO 1995 DIAMOND DRILLING.....</b>	<b>6</b>
<b>8.0 GEOLOGY .....</b>	<b>7</b>
<b>8.1 Regional.....</b>	<b>7</b>
<b>8.2 Property .....</b>	<b>7</b>
<b>9.0 1996 TO 1997 DIAMOND DRILLING AND GEOLOGICAL MODELLING .....</b>	<b>10</b>
<b>10.0 MINERALIZATION.....</b>	<b>16</b>
<b>11.0 MINERAL RESOURCES - HISTORICAL .....</b>	<b>16</b>

<b>12.0 SAMPLING , CORE HANDLING AND DATA VERIFICATION .....</b>	<b>19</b>
<b>12.1 Procedure .....</b>	<b>19</b>
<b>13.0 CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>20</b>
<b>APPENDIX I - SELECTED REFERENCES .....</b>	<b>22</b>
<b>APPENDIX 2 - LONGITUDINAL SECTIONS .....</b>	<b>23</b>
<b>APPENDIX 3 - LEVEL PLANS .....</b>	<b>24</b>
<b>APPENDIX 4 - DRILL HOLE LOGS .....</b>	<b>25</b>

## LIST OF FIGURES

Figure 1	Location Map (1:6,000,000) .....	1
Figure 2	Crown Grant Map .....	3
Figure 3	Regional Geology Map showing claims .....	8
Figure 4	Property Geology Map showing claims .....	9
Figure 5	3D Model of the Veins .....	16

## LIST OF TABLES

TABLE 1 - LIST OF CLAIMS .....	2
TABLE 2 - DEVELOPMENT 1938-1951 .....	5
TABLE 3 - PRODUCTION 1938-1951 .....	6
TABLE 4 - 1988-1995 DRILLING .....	7
TABLE 6 - DIAMOND DRILL HOLES FOR 1996 TO 1997 .....	12
TABLE 7 – 1996 DRILL HOLE INTERSECTIONS .....	14
TABLE 8 – 1997 DRILL HOLE INTERSECTIONS .....	14
TABLE 9 – UNDERGROUND SAMPLING .....	16
TABLE 10 - BEACON HILL RESOURCES (1988) WITHIN MINE WORKINGS .....	17
TABLE 11 - POLARIS-TAKU GEOSTATISTICAL RESOURCES .....	18

## APPENDICES

Appendix I	Selected References
Appendix 2	Longitudinal Sections
Appendix 3	Level plans
Appendix 4	Drill Hole Logs

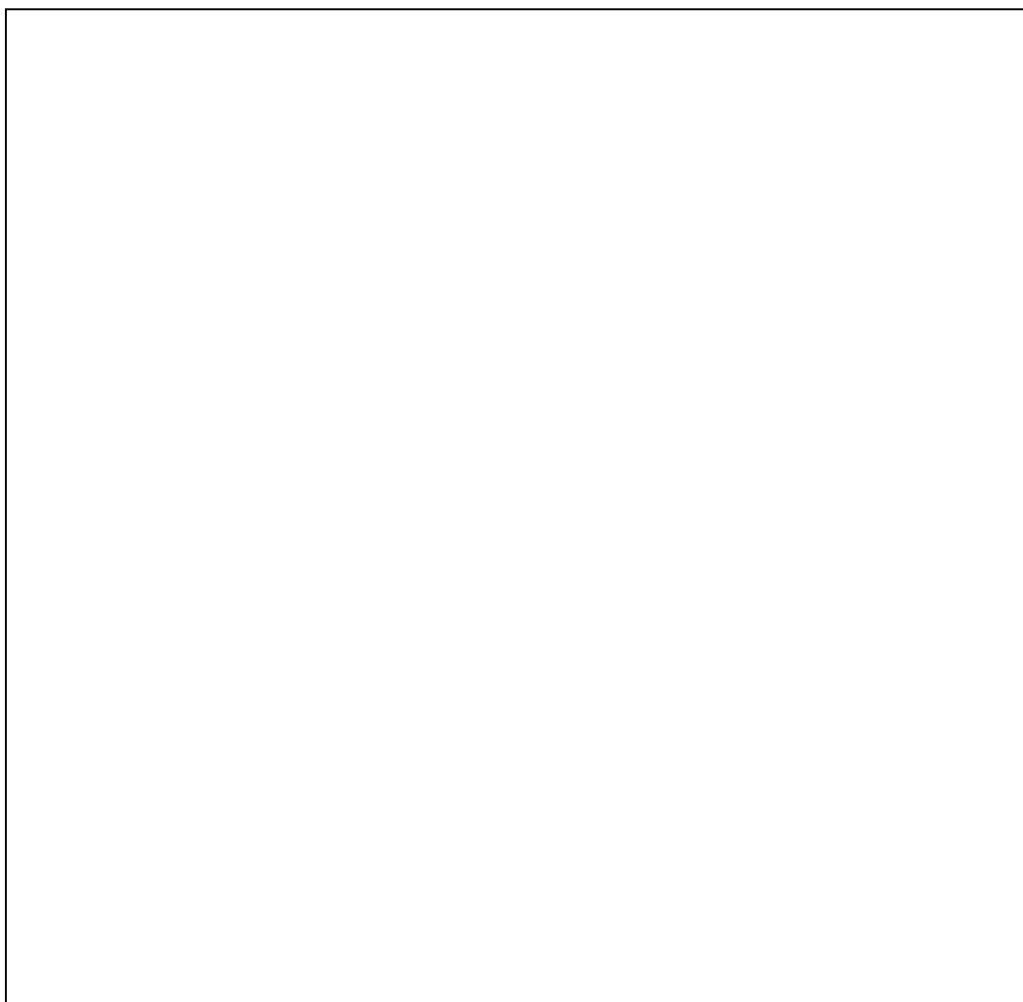
## **1.0 INTRODUCTION, TERMS OF REFERENCE and DISCLAIMER**

Mr. Bradford Cooke, President of Canarc Resource Corp, commissioned this report in June 2002 to provide a summary of the exploration activity during 1996 and 1997. The report will be used to file an Annual Information Report (AIF) with the TSX Exchange. The author is familiar with the project having visited it on numerous occasions over the last 20 years, one of which was during the exploration program when an underground visit was made to evaluate the veins, review the drilling, core logging, sampling and handling of data. In addition, the author has reviewed the drill hole database, drill hole information on sections and plans.

The data from this report is based upon Canarc's exploration program in 1996 and 1997, in which 73 diamond drilling holes were completed. The author reviewed the data on site and later in looking through the sections, level plans and digital database.

The author has not verified the legal surveying of the crown grants and mineral claim. The author has not verified the old resource estimates and has only made comments about the historic resource estimates and how they will compile with 43-101.

## **2.0 PROPERTY DESCRIPTION AND LOCATION**



The New Polaris (formerly the Polaris-Taku mine) property consisting of a group of 61 contiguous

crown grants and one modified grid claim totaling 2,956 acres located 60 miles south of Atlin, B.C and 40 miles northeast of Juneau, Alaska is 100% owned by New Polaris Gold Mines, a wholly-owned subsidiary of Canarc Resource Corp of Vancouver B.C. Located at approximately 133°37'W Longitude and 58°42'N Latitude, the deposit lies in close proximity to the "Tulsequah Chief" property of Redcorp on the eastern flank of the Tulsequah River Valley (Figure 1).

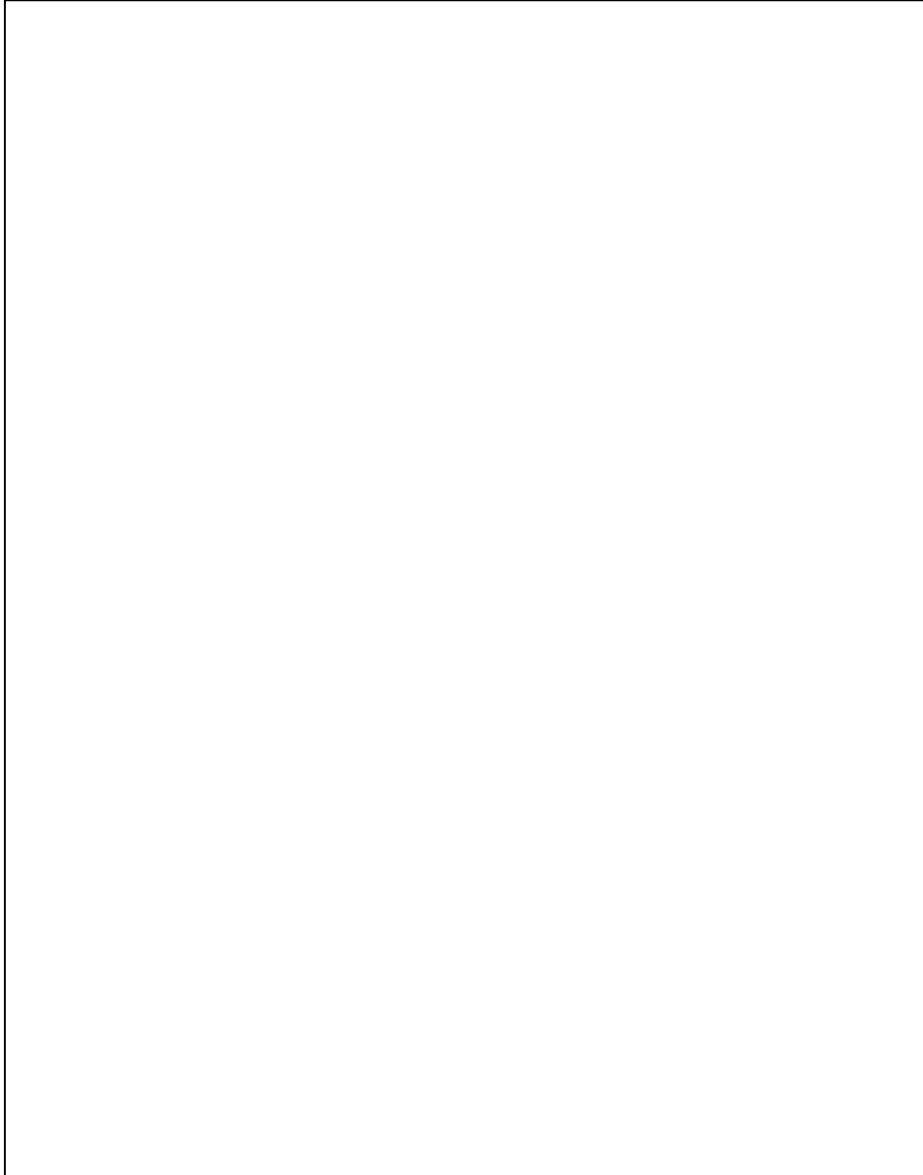
The claims are 100% owned and held by New Polaris Gold Mines, a wholly owned subsidiary of Canarc Resource Corp. subject to a 15% net profit interest held by Rembrandt Gold Mines Limited which Canarc has the right to reduce to 10%. The claims locations are shown on Figure 2 while Table 1 summarizes the claims shown on Figure 2. The author has not ascertained if the property has been legally surveyed. The mineralized areas are shown on Figure 4, which shows the geology of the property and the mineral showings. Notice of work for the program will be required before work on the property can start.

Table 1 - LIST OF CLAIMS

Claim Name	Lot No.	Folio #	Claim Name	Lot No.	Folio #
Polaris No.1	6109	4472	Snow	3497	4545
Polaris No.2	6140	4223	Snow #2	3495	5088
Polaris No.3	6141	4223	Snow #3	3494	5495
Polaris No.4	3498	4545	Snow #4	3499	5495
Polaris No.5	6143	5223	Snow #5	6105	4472
Polaris No.6	6144	5223	Snow #8	6107	4472
Polaris No.7	6145	5223	Snow #7	3500	4472
Polaris No.8	6146	5223	Snow #6	6106	4472
Polaris No.9	6147	5223	Snow #9	6108	4472
Polaris No.10	6148	5290	Black Diamond	3491	4472
Polaris No.11	6149	5290	Black Diamond No.3	6030	4944
Polaris No.12 Fr	6150	5290	Blue Bird No.1	5708	4545
Polaris No.13 Fr	6151	5290	Blue Bird No.2	5707	4545
Polaris No.14	6152	5290	Lloyd	6035	5010
Polaris No.15	6153	5290	Lloyd No.2	6036	5010
Silver King No.1	5489	4804	Rand No.1	6039	5010
Silver King No.2	5490	4804	Rand No.2	6040	5010
Silver King No.3	5493	4804	Minto No.2	6033	4944
Silver King No.4	5494	4804	Minto No.3	6034	4944
Silver King No.5	5491	4804	Jumbo No.5	6031	4944
Silver King No.6	5492	4804	Ready Bullion	6032	4944
Silver King No.7	5495	4804	Roy	6042	5088
Silver King No.8	5717	4545	Frances	6041	5010
Sliver Queen No 1	6026	4545	Eve Fraction	6170	5494
Sliver Queen No 2	6027	4545	Eve No.1 Fraction	6171	5495
Sliver Queen No 3	6028	4944	P.T. Fraction	3493	5495
Sliver Queen No 4	6029	4944	Ant Fraction	3492	5088
Silver Strand	6037	5010	Atlin Fraction	3496	5088
Silver Strand No.2	6038	5010	Powder Fraction	6043	5088
F.M Fraction	6044	5088	Jay Fraction	6045	5088
Par Fraction	6154	5290			

### **3.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

The New Polaris project area, lies on the eastern flank of the steep, rugged, Coast Range Mountains. Relief is one of extreme with elevations ranging from sea level to 8,500 feet. It has the same physical features characteristic of the coastal section of the Alaska Panhandle.



Extensive glaciation of recent age has been the dominant factor in topographic development. The Taku and Tulsequah Rivers, which dissect the area, provide its most striking features, with their broad valleys bounded by steep mountains. Numerous tributary streams flow from valleys filled with glaciers. The majority of the glaciers are fingers branching from the extensive Muir ice cap, lying to the northwest of the Taku River. The Tulsequah glacier, which terminates in the Tulsequah valley about ten miles north of the New Polaris mine site, is one of the largest glaciers in the immediate area. It forms a dam causing a large lake in a tributary valley that breaks through the ice barrier (Jökulhlaup) during the spring thaw every year, flooding the Tulsequah and Taku valleys below for three to five days.



Small aircraft provides access from Atlin or Juneau. Ocean-going barges have been used in the past to access the site when heavier equipment is required. Redfern has applied to complete a road to their project site, which could change the infrastructure to the site. The property can be operated year round. Access would be difficult during break up and freeze up.

The climate is very characteristic of this section of the British Columbia coast, with heavy rainfall prevailing during the late summer and fall months, and comparatively heavy snowfall, interspersed with rain during the winter. The annual precipitation is approximately seventy-five inches of which twenty-eight inches occurs as rainfall. The snow seldom accumulates to a depth greater than five feet on the level. Winter temperatures are not severe and rarely fall below 10 degrees below zero Fahrenheit. Summer temperatures in July average 60°F with daytime temperatures reaching the high 80's on occasion. The vegetation is typical of northern temperate rain forest, consisting primarily of fir, hemlock, spruce and cedar forest on the hillsides and aspen and alder groves in the river valley.

## **5.0 HISTORY**

From 1923 to 1925 the Big Bull and Tulsequah Chief properties were discovered along the east side of the Tulsequah River and opened up the Taku River district. In 1930, Noah A. Timmins Corporation optioned some of the claims that make up the New Polaris property and conducted trenching and diamond drilling in 1931. The trenching exposed a number of veins of which 10 showed promising grades. A short exploration adit (about 30 feet long) was also driven into the side of the hill and Timmins drilled 19 holes for a total of 5297 feet but was unable to correlate the intersections and elected to drop the option in September 1932.

The Alaska Juneau Gold Mining Company then optioned the property and conducted underground exploration from the "AJ" (Alaska Juneau) adit. Alaska Juneau drove a total of 625 feet of drifting and, although they intersected "ore grade" mineralization, they too had problems with correlation and dropped the property in the fall of 1934.

H. Townsend and M.H. Gidel of the Anaconda Corporation examined the property in 1934 carefully mapping the showings. They came to the conclusion that commercial ore bodies existed even though these showed irregularity due to faulting. Samples were sent to Geo G Griswold in Butte Montana who obtained gold recoveries from flotation tests in the order of 88 percent.

D.C. Sharpstone then secured an option on the property on behalf of Edward C. Congdon and Associates of Duluth, Minnesota. Congdon conducted 775 feet of underground exploration in the "AJ" tunnel and collared 85 feet into the Canyon adit. The Polaris-Taku Mining Company was then incorporated in 1936 to take over the property from Congdon. Polaris-Taku erected a 150-ton per day flotation mill in 1937 and mined underground continuously until it was closed down in April 1942 due to labour restrictions brought on by the Second World War. Mining Operations resumed in April 1946 and continued until 1951 when the mine was closed due to high operating costs, a fixed gold price and the sinking of a concentrate barge shipment during a storm in March 1951.

An Edwards roaster and a cyanide plant to produce bullion were installed and tested in 1949 in order to improve recovery and reduce shipping cost of concentrates to the Tacoma smelter. The addition of the roaster helped improve milling economics, but its capacity was somewhat limited as it could treat only about 45% of the concentrates produced from the flotation plant. After closure the mill was leased to Tulsequah Mines Ltd. (owned by Cominco) who modified it to process 600 TPD of massive sulphide polymetallic ore (containing gold, silver copper, lead and zinc) from the

Tulsequah Chief and Big Bull Mines. Tulsequah Mines Ltd used the mill from 1953 to 1957.

Numalake Mines acquired the property in 1953, changed their name to New Taku Mines Ltd and undertook rehabilitation work of the mine's plant. A negative feasibility study in 1973 halted this work. New Taku changed its name to Rembrandt Gold Mines Ltd in 1974. The property lay idle until Suntac Minerals Corp. optioned the property in 1988 and started surface exploration. Canarc merged with Suntac in 1992 and bought out Rembrandt's interest in 1994 and has continued exploration up to the present. The Canarc's subsidiary New Polaris Gold Mines (formerly Golden Angus Mines Ltd.) currently operates the property.

## 6.0 MINE DEVELOPMENT - HISTORICAL

The upper areas of the mine were developed on five levels: Canyon (elev. 580 feet. ASL), C (elev. 482 feet ASL), B (elev. 364 feet ASL), AJ (elev. 246 feet ASL), and Polaris (elev. 136 ASL). All levels except C level have been developed by adits. A vertical, three compartment timbered shaft, measuring 16-10" x 6-2", was sunk in 1940 from the AJ level to a depth of 900 feet, from which the 150, 300, 450, 600, and 750 levels were driven to provide access to the lower portion of the deposit. The 750 Level shaft station was cut; however, the level remains undeveloped. The annual development and diamond drilling statistics are summarized in Table 2. The dewatering completed in 1996 and 1997 provided access down to the 300 level.

The Polaris Level was used as the main access and haulage way. Ore was directed to the Polaris level via chutes from the upper levels and hoisted from the lower levels. An Ingersoll Rand 48 x 36 inch double drum hoist equipped with a 125 HP motor hoisted men and materials at 580 feet per minute using a skip over cage arrangement. The hoist was located on the AJ level and was connected to the shaft via a horizontal ropeway. Past mining consisted primarily of conventional shrinkage stope methods although some cut and fill and open stopping methods were used where appropriate. Ground conditions are reported to be good, with little timbering required. This was verified when the dewatering was completed in 1997.

Table 2 - Development 1938-1951

Year	Drift Footage	Raise Footage	Shaft Footage	Diamond Drill Footage
1931	30			
1934	625			5297
1936	1478	27		
1937		No Data		
1938	5544	1482		4828
1939	8171	2446		18891
1940	8463	4650	521	19247
1941	8758	3232		13708
194	1175	1242		2463

2				
1946	928		300	
1947	5646	781		7671
1948	3942	1250		17975
1949	3981	1986		17987
1950	3004	2196		17733
1951	80			
Total	51825	12292	821	125800

A summary of historical annual production statistics is shown in Table 3 where the grades on the second start up appear to be higher in general than the earlier mining which may reflect higher grades at depth, or high cutoff grades or better metallurgical recoveries.

Table 3 - PRODUCTION 1938-1951

Year	Tons Mined	Tons Milled	Recovered Gold Ounces	Recovered Grade (oz/ton)
1938	52678	58759	12765	0.22
1939	69044	68967	16995	0.25
1940	80320	80364	22954	0.29
1941	89684	86609	19091	0.21
1942	30966	31335	17506	0.56
1946	25724	25724	3267	0.13
1947	92039	92039	22714	0.25
1948	102622	102622	29156	0.28
1949	93806	93806	39345	0.42
1950	95666	95666	33228	0.35
1951	20700	20700	14583	0.7
Total	753249	759600	231604	0.3

## 7.0 1988 to 1995 DIAMOND DRILLING

Exploration drilling from 1988 to 1995 consisted of 104,380 feet in 129 holes. The first holes tested the "Y" vein system either down dip or along strike from old workings. The discovery of the "C" Vein system in 1989 resulted in a refocusing of efforts towards defining these veins. Drilling in 1994 and 1995 was designed to test the North Zone and the downward continuity of the "C" Zone. The "C" veins received the bulk of exploration attention during this phase. These "C" veins may represent a structural knot discovered on the lower levels immediately prior to cessation of operations in 1951. It exhibits good grade over significant widths approaching 45 feet in places and reportedly appears to be more consistently mineralized than the other veins. Table 4 summarizes the drilling completed from 1988 to 1995 and outlines the targets for these holes.

Table 4 - 1988-1995 Drilling

Year	Zone	# Holes	Footage
1988	Y VEIN	8	3373
1989	Y VEIN	19	13378
1990	C VEIN	10	9391
1991	Y VEIN	4	4205
1991	C VEIN	7	6729
1992	Y VEIN	5	5262
1992	C VEIN	18	15662
1993	C VEIN	8	4270
1994	C VEIN	9	7729
1994	Y VEIN	5	5044
1994	NORTH ZONE	16	4403
1995	NORTH ZONE	14	11596
1995	C VEIN	6	13338
	TOTAL	129	104,380

Drilling on the “Y” Vein system has confirmed its existence and continuity at depth and, although it is high grade in places, its character is generally narrow and consists of at least 12 different “lenses”.

## 8.0 GEOLOGY

The geology has been taken from regional reports, company reports and the author’s trips to the project over the last 20 years. The author worked in the area from 1980 to 1986 on a continuous basis and on an infrequent basis to the present time.

### 8.1 Regional

The New Polaris Mine lies on the western edge of a large body of Upper Triassic Stuhini Group volcanic rocks, which has been intruded by a Jurassic-Cretaceous granodiorite body north of the mine. Older Triassic volcanic rocks and earlier sediments underlie the Stuhini volcanic rocks. The granodiorite is part of the Coast Plutonic Complex (see Figure 3).

The structural trend in the area is northwest-southeast, paralleling major faults and folds to the east and the intrusive alignment to the west. The Triassic volcanic rocks and older sedimentary rocks have been folded and sheared with the Stuhini Group rocks being deformed into broad to isoclinal, doubly plunging symmetrical folds with large amplitudes.

### 8.2 Property

The gold deposit is hosted within an assemblage of mafic (basalt and andesite units) volcanic rocks altered to greenschist metamorphic facies (see Figure 4). The orientation of these units is inconclusive because there are no marker beds in the sequence. It is thought that the units are steeply dipping (70° to 80°) to the north based on the orientation of the limestone/basalt interface at the southern portion of the property.

A serpentinite unit is located to the northeast, which was identified in recent (996/97) drilling and underground mapping. This unit appears to form the eastern extent of the mineralization. The age relationship is unclear, but it is assumed that the serpentinite is a later stage feature possibly associated with the tectonism in the area.

The 'vein' zones are structurally controlled shear zones and are typified by silicification and carbonitization cross cutting actual quartz-carbonate veins. These zones have sharp contacts with the wall rock and form anastomosing ribbons and dilations. These zones have been deformed several times, which makes original textures difficult to determine. The zones are generally tabular in geometry forming en-echelon sheets within the more competent host lithologies.

All of the strata within the property have been subjected to compression, rotation, and subsequent extension. The plunge of folds appears to be variable though generally shallow. Small-scale isoclinal folds strike north-northwesterly and plunge moderately to the north. Numerous faults are found on the property, the more significant of which are discussed later.

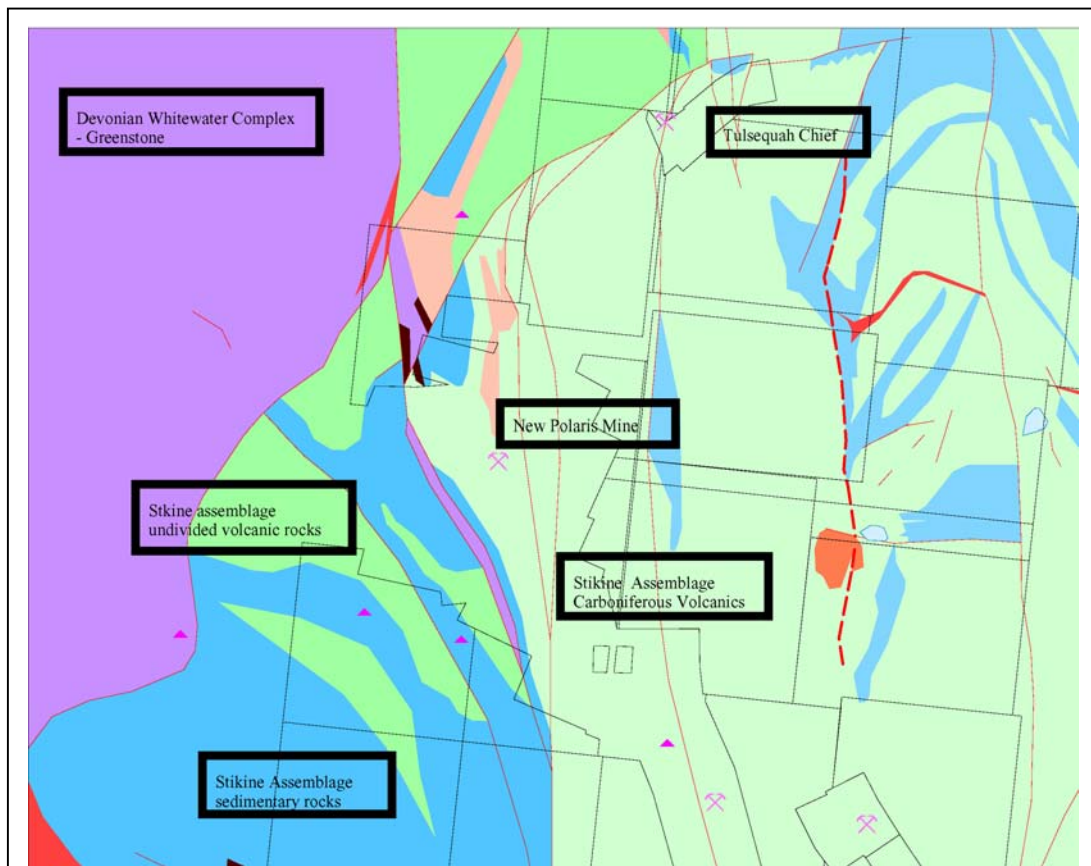
The possible extension of the Llewellyn fault, termed the South Llewellyn fault, continues south from the Chief Cross fault along mine grid coordinate 4400 East. Slightly north of Whitewater Creek it is offset to the west by an east-west fault, the 101 fault, to continue in a more southeast orientation on the opposite side of Whitewater Creek. This northwest-southeast oriented structure

**Figure 3 - Regional Geology Map**



was named the Limestone Fault due to its bedding parallel attitude within a discontinuous limestone/marble horizon. It marks the southwest boundary of the “mine wedge”; the wedge shaped package of rock within which all past production took place. The northern boundary of the “mine wedge” is further defined as mentioned above by the Whitewater Creek Schist Zone, a zone of schistose chlorite-amphibolite-serpentinite less than 300 feet thick. A complex network of brittle faults is also found within this zone.

Three major faults, Numbers 1 and 5, and an unnamed fault, lie within the mine wedge. The No.1 and No.5 faults strike northwest-southeast, dipping approximately  $45^{\circ}$  to the northeast, and are sub parallel to the unnamed fault, which dips steeply to the southwest. The No.1 fault has reverse displacement of up to 100 feet while the displacement of the No. 5 fault is poorly defined. The southwest dipping, unnamed fault shows no displacement, as it apparently parallels the A-B vein system. The mined-out areas indicate the wedge shape, the predominant orientations and continuity of the zones, and the overall plunge of the system to the southeast. An early interpretation of the structure shows that various veins appear to meet and form “junction arcs” where both thickness and grade improve.



The most predominant vein orientations are: northwest striking and southwest dipping, the “A-B” veins; north striking and east dipping, the “Y” veins; and the less extensive but economically important east to northeast striking and south dipping zones at the intersection of the previously mentioned vein sets. These zones were accordingly termed “junction arcs” and are known as the “C” veins. Up to 80% of total past production came from within 300 feet to either side of these junction arc centerlines.

## 9.0 1996 to 1997 DIAMOND DRILLING AND GEOLOGICAL MODELLING

The program included geological modeling using the Gemcom software to properly understand the historical data and put it into perspective. This was followed up by approximately 39,000 feet of diamond drilling from underground to test the targets identified by the modeling.

Table 5 outlines the intersections identified during the modeling which are open and have not been added to any mineral inventory estimate in the past. No mineral estimation has been calculated utilizing these intersections. They are an example of what can be found in many old mines when the assay data is carefully evaluated and combined with geological data.

Table 5 - Additional Underground and Surface Intersections Identified from Historic data.

LEVEL	VEIN	SAMPLE TYPE	WIDTH(FT.)	GRADE(OPT.)	DRIFT LENGTH(FT.)
Surface	101	O/C	10.0	0.87	
		O/C	12.0	0.78	
	102	O/C	4.1	0.98	
		O/C	7.0	0.64	
		O/C	14.6	0.40	
	103	O/C	3.0	1.14	
		O/C	3.5	1.00	
	A	O/C	14.0	0.46	
		O/C	14.5	0.37	
		O/C	13.5	0.50	
Timmins	101	UG	8.0	0.66	
		UG	3.1	0.60	
		DDH 5	5.8	1.70	
Canyon	102	DDH 1	15.0	0.44	
		DDH 2	10.0	0.35	

		DDH 3	9.0	0.63	
		UG	6.1	0.40	77
C	22	DDH 325	5.5	0.44	
		DDH 390	3.3	0.62	
		DDH 355	5.4	0.70	
	A	UG	4.4	0.41	23
B	45	DDH 475	12.0	0.87	
		UG	12.0	0.48	23
Polaris/AJ	3	UG	6.0	0.40	
		UG	7.2	0.43	65
		DDH 19	12.5	0.36	
	4	DDH 158	7.1	0.36	
		DDH 135	2.2	0.93	
		DDH 137	5.0	0.52	
	5	UG	4.0	0.48	
<b>LEVEL</b>	<b>VEIN</b>	<b>SAMPLE TYPE</b>	<b>WIDTH(FT.)</b>	<b>GRADE(OPT.)</b>	<b>DRIFT LENGTH(FT.)</b>
		UG	6.0	0.64	
		UG	5.5	0.41	85
		UG	4.0	0.52	
	A	UG	7.0	0.40	89
		UG	4.6	0.51	56
		UG	4.7	0.36	39
		DDH 116	4.5	0.55	
150	A	UG	3.5	0.42	75
		UG	4.2	0.41	51
300	B	DDH L54	6.5	0.42	
		DDH L60	3.5	0.45	
		UG	7.4	0.77	76
	328	DDH L50	7.5	0.47	
	324	UG	5.7	0.70	66
		DDH L56	19.5	0.39	
		DDH L66	4.5	0.45	
		DDH L51	11.0	0.46	
		UG	9.0	0.40	
		UG	8.0	0.24	
450	B	DDH 541	3.4	0.50	
		UG	3.8	0.49	300.5
		UG	5.4	0.39	37
	468	UG	4.6	0.54	210
	477	DDH 617	19.0	0.63	
		UG	4.2	0.50	65
		DDH 470	4.5	0.46	
600	Y	DDH L69	4.0	0.76	
		UG	3.2	0.79	38
		UG	3.5	0.56	169
	B	DDH L82	4.0	0.46	
		UG	5.1	0.51	
		DDH L72	6.3	0.34	
		DDH 636	4.0	0.88	
		DDH 635	5.0	0.34	
		UG	6.7	0.50	70



			5.1	0.41	140
750	B?	DDH L84	10.0	0.32	
		DDH L84	2.0	0.46	
		DDH L84	1.3	0.72	

The drilling planned for 1996 and 1997 was carried out from underground. It initially started in the upper levels of the mine following up some of the intersections and areas outlined in Table 5. A complete list of all the diamond drill holes completed during this phase is shown in Table 6. A total of 73 holes were drilled over the two years with a total footage of 39,611.5 feet. The drilling was carefully planned to increase the knowledge and confidence of parts of the past mineral estimations. The lower price of gold caused the program to finish prior to all of the targets could be tested.

Dewatering of the lower levels from the Polaris haulage way down was undertaken during the early drilling. It was completed in approximately 6 months. Each level was evaluated as it was dewatered and if necessary, rehabilitated. In many cases the ground was in excellent condition and very little rehabilitation was required prior to washing down the walls. Mapping and sampling of the levels was completed.

Table 6 - Diamond Drill Holes for 1996 to 1997

Hole Identification	Northing	Easting	Elevation	Hole Length	Collar Azimuth	Collar Dip
PT9601	4738.39	4524.46	259.66	348	79	-36
PT9602	4728.39	4524.46	259.66	395	79	-51
PT9603	4728.42	4523.36	259.66	335	96	-36
PT9604	4728.42	4523.36	259.66	429	96	-51
PT9605	4727.98	4525.47	259.66	334	68	-49
PT9606	4728.78	4521.95	259.66	380	110	-38
PT9607	4714.32	4528.64	259.66	143	291	21.5
PT9608	4714.3	4529.6	259.66	59	299	21.5
PT9609	4714.64	4529.93	259.66	392	304	21.5
PT9610	4714.64	4529.94	259.66	392	304	-4.5
PT9611	4714.27	4529.6	259.66	413	299	-22
PT-9612	4232.2	4133.6	253.31	573	119	-35
PT9613	4231.5	4132.9	253.31	489	134	-41
PT9614	4230.4	4130.2	253.31	397	164	-52
PT9615	4231.5	4132.9	253.31	484	134	-52
PT9616	4232.2	4133.6	253.31	580	119	-46
PT9617	4228.5	4145.8	253.31	499	15	0
PT9618	3463	5069	264.75	479	88	18
PT9619	3463	5069	264.75	418	108	18
PT9620	3463	5069	264.75	570	118	-10
PT9621	3463	5069	264.75	464	80	-8.5
PT9622	3463	5069	264.75	499	108	22
PT9623	3463	5069	264.75	549	110	-14
PT9624	3463	5069	264.75	893	52	-10
PT9701	3463	5069	264.75	32	52	-5
PT9702	3463	5069	264.75	944	52	-7
PT9703	3463	5069	264.75	722	60	-13
PT9704	3463	5069	264.75	674	60	-10

P9705A	3463	5069	264.75	759	52	-21
PT9706	3463	5069	264.75	838	49	-9.5
PT9707	3463	5069	264.75	788	52	10
PT9708	3442	5061	264.75	474	242	0
PT9709	3994	4268.5	253	229	0	-22
PT9710	3996	4269	253	228	340	-22
PT9711	3999	4268.5	253	536	78	-15.5
PT9712	3999	4268.5	253	562	60	4
PT9713	4009.5	4265	258	923	90	-15
PT9714	4000	4258	257	156	0	-42
PT9715	3999	4268.5	257	196	330	-46
PT9716	3993	4254	258	444	270	-15
PT9717	3993	4254	257	508	270	-30
PT9718	3993	4254	258	388	249	-18
PT9719	4235	4651	142	369	90	-5
PT9720	4235	4651	142	439	90	-35
Hole Identification	Northing	Easting	Elevation	Hole Length	Collar Azimuth	Collar Dip
PT9721	4234	4651	142	505	71	-44
PT9722	4230	4653	144.5	719	270	-5
PT9723	4324	4083	142	59	195	-32
PT23A	4324	4083	142	678	195	-32
PT9724	4324	4083	142	633	217	-30
PT9725	4324	4083	142	801	218	-47
PT9726	4324	4083	142	409	334	-10
PT9727	4324	4083	142	362	351	-12
PT9728	4324	4083	142	750	351	-31
PT29A	4324	4083	142	1068	134	-31
PT30A	4324	4083	142	918	90	-15
PT9731	4377	4780	143.5	63	20	0
PT31A	4378	4780	143.5	1333	20	0
PT9732	5232.9	3618.4	-150.6	753	26.5	-22
PT9733	5231.8	3616.4	-152.4	894	23.5	-52
PT9734	5233.7	3614.7	-150.2	509	50	-32
PT9735	5232.8	3618.2	-149.4	652	26	-10
PT9736	5232.5	3618.6	-151	778	24	-29
PT37B	5233.1	3615.5	-150.8	589	45	-52
PT9738	5234.1	3600.7	-151.2	47	124	-35
PT38A	5234	3600.7	-151.2	854	124	-35
PT9739	5232.8	3600.5	-152.2	671	136	-29
PT9740	5231.4	3599.9	-151.5	593	146	-34
PT9741	5232.7	3601.5	-152.9	509	130	-42
PT9742	5227.9	3598.7	-152.7	812.5	188	-37
PT9743	5226.1	3598.6	-152.7	809	210	-36
PT9744	5232	3600.4	-152.2	952	134	-38
PT9744A	5232	3600.4	-152.2	448	141.5	-35.5
PT9745	5226.7	3598.6	-151.5	720	193	-26

Diamond drilling in 1996 was focused on the AJ level in the mine targeting the “A - B” veins and the “Y” veins. This drilling was targeted at extension of known shoots defined from mining and earlier

drilling. A total of 21 intersections were obtained from these 24 drill holes. These intersections are included in the company database and are shown on the attached level plans and longitudinal sections. The mineralization intersected by these holes is typical of the A-B Vein sets.

Table 7 – 1996 Drill Hole Intersections

Drill Hole Number	From (feet)	To (feet)	Core Length (feet)	Gold Grade (oz/ton)
96-1	177.40	182.60	5.2	0.37
96-2	87.80	97.00	9.2	0.34
		incl.	4.2	0.51
	239.00	241.70	2.7	1.48
96-3	242.70	249.30	6.6	0.23
96-4	275.95	283.95	8.0	0.37
		incl.	3.85	0.52
	300.55	304.00	3.45	0.29
	318.40	325.80	7.4	0.32
96-6	93.50	97.00	3.5	0.29
96-7	38.35	42.95	4.6	0.34
Drill Hole Number	From (feet)	To (feet)	Core Length (feet)	Gold Grade (oz/ton)
96-9	186.50	189.95	3.45	1.43
96-10	199.80	204.80	5.0	0.41
96-13	169.85	199.20	29.4	0.21
	274.85	278.95	4.1	1.29
96-15	380.10	386.05	5.9	0.37
96-16	368.40	373.50	5.1	0.25
96-17	183.30	202.95	19.7	0.23
96-18	408.60	418.60	10.0	0.36
		incl.	5.0	0.42
96-19	414.90	418.00	3.1	0.60
96-22	392.20	397.20	5.0	0.70
	457.00	462.00	5.0	0.21
96-24	549.80	567.20	17.4	0.49
		incl.	4.35	1.05

In 1997, another 49 diamond drill holes were completed for a total footage of 29,097 feet. The intersections for this drill program are outlined in Table 8 and make up 48 separate vein intersections. These holes as can be seen on Table 6 are in the lower portion of the mine from the AJ, Polaris and 150 levels. The best intersection from the drilling program was obtained in the second last hole 97-44 where 112.2 feet grading 0.42 oz/ton Au was intersected. This intersection was on the “C” vein system where the grades appear to be higher and more consistent. The thickest intercepts have been obtained from the “C” veins. These holes and intersections are all in the database for the project.

Table 8 – 1997 Drill Hole Intersections

Drill Hole Number	From (feet)	To (feet)	Core Length (feet.)	Gold Grade (oz/ton)
97-03	468.6	473.6	5.0	0.21
97-04	371.4	376.4	5.0	0.21
	641.7	651.0	9.3	0.25
97-05a	731.8	735.0	3.2	0.53
97-06	565.0	567.2	2.2	0.76
	626.9	632.0	5.1	0.49
97-07	33.9	42.6	8.7	0.30
97-08	68.4	71.8	3.4	0.49
97-09	171.7	176.7	5.0	0.32

97-10	144.6	149.6	5.0	0.52
	176.7	197.3	20.6	0.24
incl.	191.7	197.3	5.6	0.48
96-17	183.3	203.0	19.7	0.23
97-11	300.8	303.9	3.1	0.48
	441.3	446.6	5.3	0.54
	492.1	502.1	10.0	0.38
97-12	435.1	442.1	7.0	0.44
97-13	199.1	206.9	7.8	0.40
	218.7	244.7	26.0	0.26
incl.	228.7	238.7	10.0	0.39
	787.6	792.6	5.0	0.36
	837.6	842.9	5.3	0.24
97-16	34.6	44.6	10.0	0.23
	312.0	327.0	15.0	0.23
<b>Drill Hole Number</b>	<b>From (feet)</b>	<b>To (feet)</b>	<b>Core Length (feet.)</b>	<b>Gold Grade (oz/ton)</b>
	incl 322.0	327.0	5.0	0.37
97-18	17.8	27.8	10.0	0.28
	inc. 17.8	22.8	5.0	0.42
97-23A	86.3	90.0	3.7	0.40
97-26	234.8	239.6	4.8	0.35
97-29A	758.8	761.2	2.4	0.63
	982.6	993.5	10.9	0.20
	incl 982.6	985.6	3.0	0.40
97-30	333.4	338.4	5.0	0.20
	891.4	896.4	5.0	0.80
97-32	401.6	429.8	28.2	0.14
	697.3	702.3	5.0	0.30
97-33	2.5	7.5	5.0	0.34
	845.9	850.9	5.0	0.26
97-34	0.0	5.0	5.0	0.33
	9.6	13.8	4.2	0.49
	308.7	313.7	5.0	0.70
97-35	4.2	10.3	6.1	0.33
	417.5	438.0	20.5	0.20
97-36	744.3	749.3	5.0	0.21
97-37	5.0	10.0	5.0	0.18
97-39	413.8	417.0	3.2	0.39
	449.5	454.5	5.0	0.22
	475.4	480.4	5.0	0.23
	550.6	560.6	10.0	0.34
	652.0	657.0	5.0	0.30
97-43	23.2	31.2	8.0	0.38
	529.1	547.5	18.4	0.24
97-44	819.8	932.0	112.2	0.42

Table 9 lists the underground sampling that was completed on the AJ level during the mapping and sampling program. Since the program was cut short in 1997 some of the levels were not mapped and sampled. It is obvious from these few samples that more sampling could be beneficial to providing additional data points in any future estimation. The lower levels cannot be reached again until the mine is dewatered.

Table 9 – Underground Sampling

Mine Level	Zone Type	Drift Length (ft.)	Gold Grade (oz./ton)
AJ	Y?	26.0	0.24
		62.0	0.29
		32.0	0.46
	C?	11.0	0.53
		10.0	0.37
		21.0	0.43
	A	16.0	0.36
		71.0	0.41
		15.0	0.22

These samples have been added to the database for future estimations of the mineral resource.

## 10.0 MINERALIZATION

Mineralization of the New Polaris deposit bears strong similarities to many Archean Lode gold deposits such as the arsenical gold camp of Red Lake, Ontario where the gold-bearing arsenopyrite is disseminated in the altered rock and in quartz-carbonate stringers.

The vein mineralization consists of arsenopyrite, pyrite, stibnite, and gold in a gangue of quartz and carbonates. The sulphide content is up to 10%, with arsenopyrite the most abundant, and pyrite the next important. Stibnite is fairly abundant in some specimens but overall comprises less than one-tenth of 1% of the vein matter. Alteration minerals include fuchsite, silica, pyrite, sericite carbonate and albite.

In general, the zones of mineralization ranging from 50 to 800 feet in length with widths up to 45 feet appear to have been deposited only on the larger and stronger shears. Their walls pinch and swell showing considerable irregularity both vertically and horizontally. Gold values in the veins show remarkable continuity and uniformity, and are usually directly associated with the amount of arsenopyrite present. The prominent strike directions are north-south and northwest-southeast with weaker control of the vein systems, which is interpreted to be within a major shear zone. Up to 80% of the mine productions was from “structural knots” or what is now known as “C” zones. In detail, the C zones are arcuate and lensoid structures, while the A-B zones are regular and planar and the Y zones are irregular and planar. Figure 5 shows a 3-D view of the veins.

## 11.0 MINERAL RESOURCES - HISTORICAL

The previous resource calculations were reviewed to identify the order of magnitude of the “resource”. Although all of the estimations were made prior to Policy 43-101 being implemented, the estimations are useful as a guide to an order of magnitude for the resource.

An estimate of New Polaris reserves was made prior to closure in 1951, where i) “reasonably assured” ore was projected 25 feet in the plane of the vein above and below sampled drift sections of minable grade, ii) while “possible” ore was projected an additional 25 feet beyond these confines (Parliament 1949). These reserves were based solely on underground sampling. The “remaining reserves” at the time of closure were 105,000 tons grading 0.42 ounces of gold per ton including 17% dilution. Estimates after this have included parts of this estimate. No other information is

available about this estimation.

Adtec Mining Consultants (1972) recalculated these “reserves”. These were recalculated to be 148,000 tons of 0.29 oz/ton Au based on similar definitions and existing mine drawings and assay plans. Adtec Consultants (1983) recalculated the remaining “reserves” within the mine workings and defined these to be in the order of 223,000 tons grading 0.32 oz/ton Au (diluted) based on a 0.15 oz/ton Au cutoff and a minimum mining width of 4 feet. These reserves were subdivided into 151,000 tons of “assured” and 72,000 tons of “reasonably assured” reserves.

The resources were recalculated by Beacon Hill in 1988 for Suntac Minerals Corporation using a minimum mining width of 5 feet (instead of 4 feet) with similar results. Their resource estimate was “limited to those areas where continuous sampling data was available along drifts, raises and stope backs, etc and where it appears that minimal development work would be required to access the resource”. That calculation showed a total probable and possible resource of 244,420 tons grading 0.33 oz/ton Au with 132,210 tons grading 0.33 oz/ton Au classed as probable and 112,210 tons at 0.32 oz/ton Au classed as possible. In 1989, Beacon Hill added further probable and possible mining resource from 27 drill holes completed by Suntac. They estimated that the drilling had increased the resource by 380,000 tons grading 0.39 opt (probable) and 820,000 tons grading 0.39 opt (possible) which, added to their previously calculated resource, brought the overall resource potential up to 1,450,000 tons grading 0.38 opt (diluted) above the lowest worked level of the mine (600 level at elevation – 462 feet Below Sea Level ‘BSL’). Table 10 summarizes these estimations.

Montgomery Consultants were commissioned to conduct a geostatistical estimation of the geological resource for the Polaris-Taku Deposit in 1991. G.H. Giroux carried out this review and calculated a total resource of 2,225,000 tons grading 0.433 oz/ton based on a geostatistical approach using a cut-off grade of 0.25 oz/ton Au (Table 11). These resources were divided into 333,000 tons grading 0.437 oz/ton Au (probable) and 1,892,000 tons grading 0.432 oz/ton (possible). The calculation discounted much of the reserves around the old workings and did not include dilution and minimum mining width provisions. These calculations were based on both old and new drilling and extended the resource base down to roughly 1200 feet BSL.

**Table 10 - BEACON HILL RESOURCES (1988) WITHIN MINE WORKINGS**

Level	PROBABLE RESOURCES				POSSIBLE RESOURCES			
	In-Situ		Diluted		In-Situ		Diluted	
	Tons (SDT)	Grade (oz/SDT)	Tons (SDT)	Grade (oz/SDT)	Tons (SDT)	Grade (oz/SDT)	Tons (SDT)	Grade (oz/SDT)
Above Polaris Adit								
Canyon	8,120	0.50	10,650	0.38	2,380	0.47	3,340	0.33
C	9,700	0.31	11,840	0.25	5,170	0.33	6,700	0.25
B	16,930	0.36	20,120	0.30	16,930	0.36	20,120	0.30
AJ	6,020	0.28	8,470	0.20	6,630	0.29	9,210	0.21
Polaris	12,670	0.37	16,720	0.28	10,450	0.36	14,080	0.27
Sub- Total	53,440	0.37	67,800	0.29	41,560	0.35	53,450	0.27
Below Polaris Adit								

150	310							
300	19,010	0.52	570	0.28	400	0.52	740	0.28
450	120,60	0.51	23,830	0.40	14,640	0.51	18,870	0.39
600	0	0.46	27,080	0.35	18,910	0.45	25,080	0.34
	<u>10,050</u>	<u>0.51</u>	<u>12,930</u>	<u>0.40</u>	<u>11,050</u>	<u>0.51</u>	<u>14,070</u>	<u>0.40</u>
Sub-Total	50,170	0.50	64,410	0.39	45,000	0.48	58,760	0.37
TOTAL	103,610	0.43	132,210	0.33	85,560	0.42	112,210	0.32

Watts, Griffis, and McOuat were contracted to review the previous resources in August 1992. Their review incorporated the residual resources within the mine workings, as calculated by Beacon Hill in 1989, into their overall estimate of a total (diluted) mineral resource of 1,600,000 tons at 0.46 oz/ton Au. Their calculations were based upon a minimum mining width of 5 feet or 15% dilution and a cut-off grade of 0.25 oz/ton Au. The improvement in grade stems from the inclusion of new deeper holes that extend the known mineralization to a depth of 1200 feet BSL and exclusion of lower grade material previously included in the Montgomery estimate.

Giroux was further contracted to provide resource updates throughout 1992 and in February 1995 he recalculated the resources for the deeper drilled portions of the "C" Zone. The total resources calculated by Giroux are summarized on Table 11. His calculations are based on an in-situ estimation with a 0.25 oz/ton Au cut-off. He did not include any of the North zone drilling.

The Giroux estimate outlined in Table 11 is the most up to date mineral inventory estimation, which includes what was left in the mine when it was closed and the new areas identified in drilling up to 1995. Although these estimations were completed prior to the implementation of National Policy 43-101 they can conform with the Probable Resource used by Giroux being called an Indicated Resource and the Possible Resource would be an Inferred Resource. This was confirmed by a telephone conversation between the author and Gary Giroux during the preparation of this report.

Table 11 - POLARIS-TAKU GEOSTATISTICAL RESOURCES

	PROBABLE RESOURCES				POSSIBLE RESOURCES			
Zone	In-Situ		Diluted		In-Situ		Diluted	
	Tons (SDT)	Grade (oz/SDT)	Tons (SDT)	Grade (oz/SDT)	Tons (SDT)	Grade (oz/SDT)	Tons (SDT)	Grade (oz/SDT)
GIROUX (1995)								
Y Zone	210,00	0.461	262,500	0.369	987,000	0.469	1,234,000	0.375
AB Zone	78,000	0.403	89,700	0.350	508,000	0.387	584,000	0.337
C Zone	<u>85,700</u>	<u>0.426</u>	<u>98,500</u>	<u>0.370</u>	<u>595,000</u>	<u>0.425</u>	<u>684,000</u>	<u>0.370</u>
Sub-Total	373,000	0.441	450,700	0.365	2,090,000	0.437	2,502,000	0.365
BEACON HILL (1988)								

Upper Levs.	<u>53,440</u>	0.37	67,800	0.29	41,560	0.35	53,450	0.27
Lower Levs.	<u>50,170</u>							
Sub-Total	103,610	0.43	132,210	0.33	85,560	0.42	112,210	0.32
<b>TOTAL</b>	476,610	0.439	582,910	0.359	2,175,560	0.436	2,614,210	0.363

A new mineral inventory is warranted to add in the additional intersections identified in the geological modeling, the new intersections obtained during the 1996 and 1997 diamond drilling programs. At this time it would be beneficial for the project to re-classify the resource estimates so that they conform to National Policy 43-101.

Although the vein intersection require significant modeling and drilling to confirm vein continuity there are many vein intersections both in the old drilling and underground sampling and the new drilling that supports continuity. The stopes from the earlier mining also suggest good continuity of the vein systems even though they appear to have focused on mining the higher grades as evidenced by what was left on the edge of some of the stopes. The C zone is an area where significant widths have been obtained in drill holes and underground, which could develop tons quickly if continuity is demonstrated.

## 12.0 SAMPLING , CORE HANDLING AND DATA VERIFICATION

### 12.1 Procedure

The core was logged and stored in the camp. Access to the core was only available to the geologists and the core sampler. The core was brought from the drill set up to the logging facility by the drill helper at the end of each shift. The core was geologically and geotechnically logged, recoveries calculated, and samples marked out. The core was passed to the sample cutter who cut with a regular core splitter each sample individually, wrapped them in plastic bags for shipment. The sample intervals were easily identified and correlate well with the drill logs. In the opinion of the author the sampling was properly done and every care taken to protect the secure the core but also make it clear where every sample originated. As a result when assays were received it was very easy to see why a sample had a particular value.

The samples were shipped out on the back-haul by supply planes to Atlin and sent by truck to Whitehorse to Northern Analytical based in Whitehorse. Northern Analytical is a reputable laboratory that the author has used on many occasions for assaying of core and rock samples from other projects. The author has found that check assays completed in the past are reliable within 5%.

Samples were analysed for gold (Au) by Fire Assay (FA) with an Atomic Adsorption analysis to provide an actual value for the sample. Although no sample blanks or standards were submitted during the project, the laboratory routinely checked every 20<sup>th</sup> sample and automatically re-analysed every assay over 0.2 oz/ton Au. The sampling and analysis was being done at industry normal standards for the date when the program was running. The laboratory was fully certified and accredited for gold analysis.

Assay sheets have been evaluated by the author and compared with the database and were accurately transposed into the database. The core-logging sheets have been compared to the digital



logs to check for accuracy. All sampling in the core was carefully laid out using geological parameters. The author talked to Peter Karelse and David Watkinson who supervised the drilling program and were responsible for all of the work completed at the New Polaris property.

### 13.0 CONCLUSIONS AND RECOMMENDATIONS

The New Polaris project has been on hold since 1997 pending an increase in the gold price and a resolution of the permitting of Redcorp's "Tulsequah Chief" project. This high grade past producer has had a significant amount of work since the mine closed including additional drilling from surface and underground that outlined further resources, last calculated in 1995. Subsequent work in 1996 and 1997 obtained 65 new vein intersections and modelling identified over 69 intersections, which have not been included in a resource estimate. Although the program stopped before all of the drilling could be completed, in the authors opinion the program was successful in identifying more mineralised intercepts within the previously mined area. The program fell short before it could clearly demonstrate continuity to depth of the mineralization on the C zone. In the opinion of the author, the next phase of drilling should focus on connecting the deeper drilling with the near surface drilling and demonstrate continuity. The mineralization in the "C" veins appears to have significant width potential as evidenced by the second last drill hole in 1997 which obtained an intersection of 112.2 feet grading 0.42 oz/ton Au.

The style of mineralization and the gold association at Polaris appears to be similar to the reported mineralization in the Red Lake camp in Ontario. Gold is associated with arsenopyrite, pyrite, stibnite and rare sphalerite. The mineralization appears to be refractory, with gold occluded in arsenopyrite.

In the current climate of increasing gold price above \$300/ounce, it is worth activating the project.

The author recommends that further metallurgical testing be completed to evaluate the potential for enhanced recoveries of gold, further drilling to test the continuity of the "C" zone mineralization at depth and tie this deeper mineralization with the upper portion of the mine and an updated mineral inventory to re-calculate the resource under Policy 43-101 guidelines. The drilling should be completed from surface with a large drill rig. It is recommended that approximately 8 holes be completed for approximately 12,000 feet, this would provide an indication of the continuity and if successful then further drilling would be warranted to upgrade the resource in this area.

An estimate of the costs of the first phase is as follows:

Metallurgical testing	\$20,000
Mineral Estimation	\$30,000
Surface Drilling	\$500,000
Total	\$550,000

A second phase of drilling would be recommended if the first phase is successful. It is suggested that approximately \$2 million be available for this drilling program so that a higher confidence level for the mineral estimation can be attained.

The author is of the opinion that these phased programs are justified on the property because they will enhance the level of confidence of the next mineral estimation and provide valuable data about the amenability of the mineralization to various mineral extraction methods. The extraction

methods will impact the economic viability of the mineralization and is required to assist in further evaluations of this property.

---

Godfrey Walton P. Geo.

Dated June 20<sup>th</sup> 2002

## **APPENDIX I - Selected References**

Beacon Hill Consultants Ltd

1989 Suntac Minerals Corporation – Polaris-Taku Atlin BC. Conceptual Study by RJ Morris MSc, BM Briggs Peng, and WR Stokes Peng.

Montgomery Consultants Ltd

1991 Geostatistical Study of the Geological Resource contained within the Polaris-Taku Gold Deposit by GH Giroux Peng

1995 Update of Resource Estimate for Polaris-Taku C Vein System and NI Vein system by GH Giroux P. Eng

McKay D. L. 1996 Technical and Economic Review of the Polaris-Taku Project

McKay D. L. 1997 Update report on the New Polaris Project

Canarc Resource Corp.

News Release from Canarc Resource Corp 1996 and 1997.

New Polaris drill hole database.

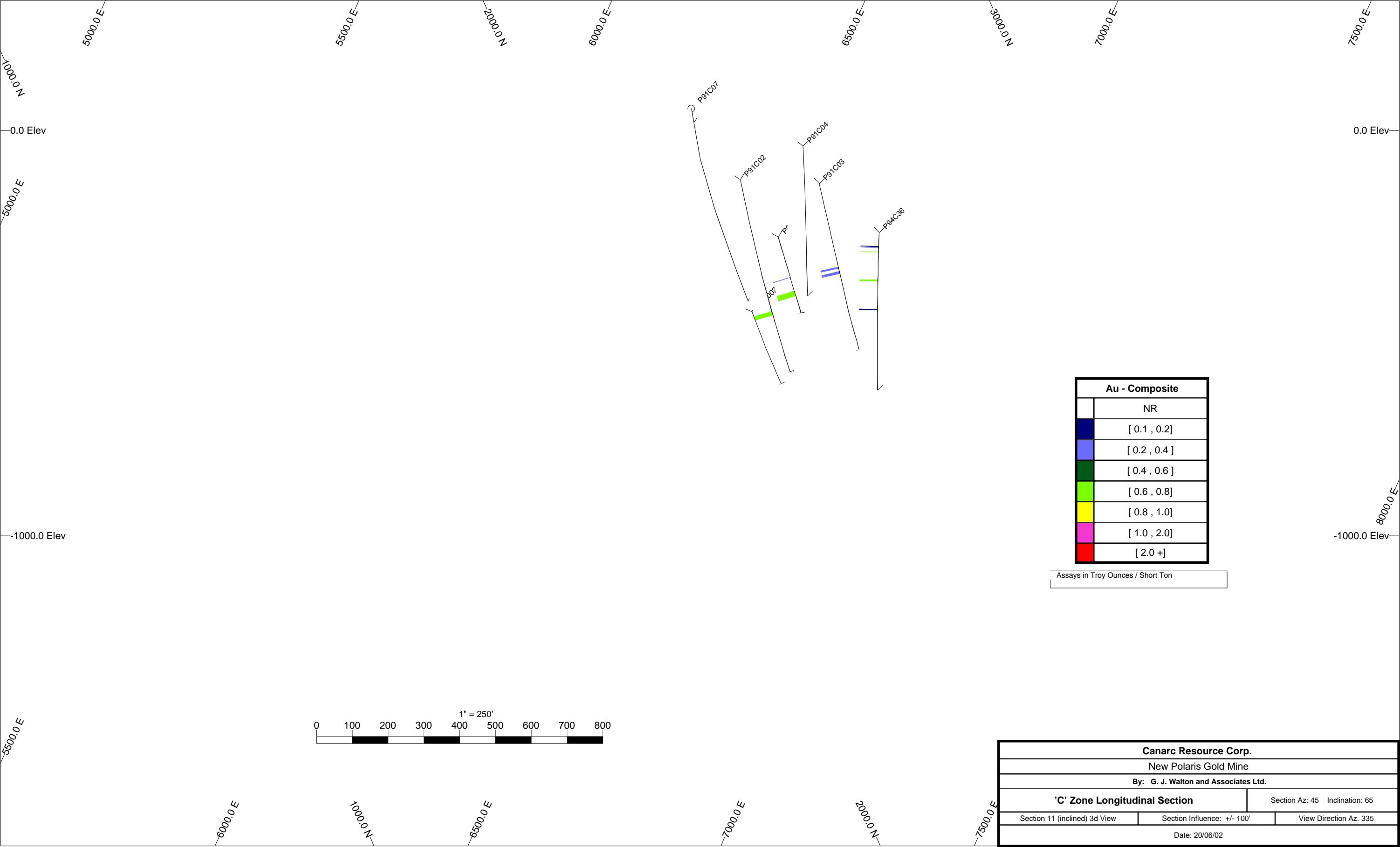
New Polaris Gold Mines Ltd – Technical Overview by David Watkinson V.P. Mine Development May 30 1997

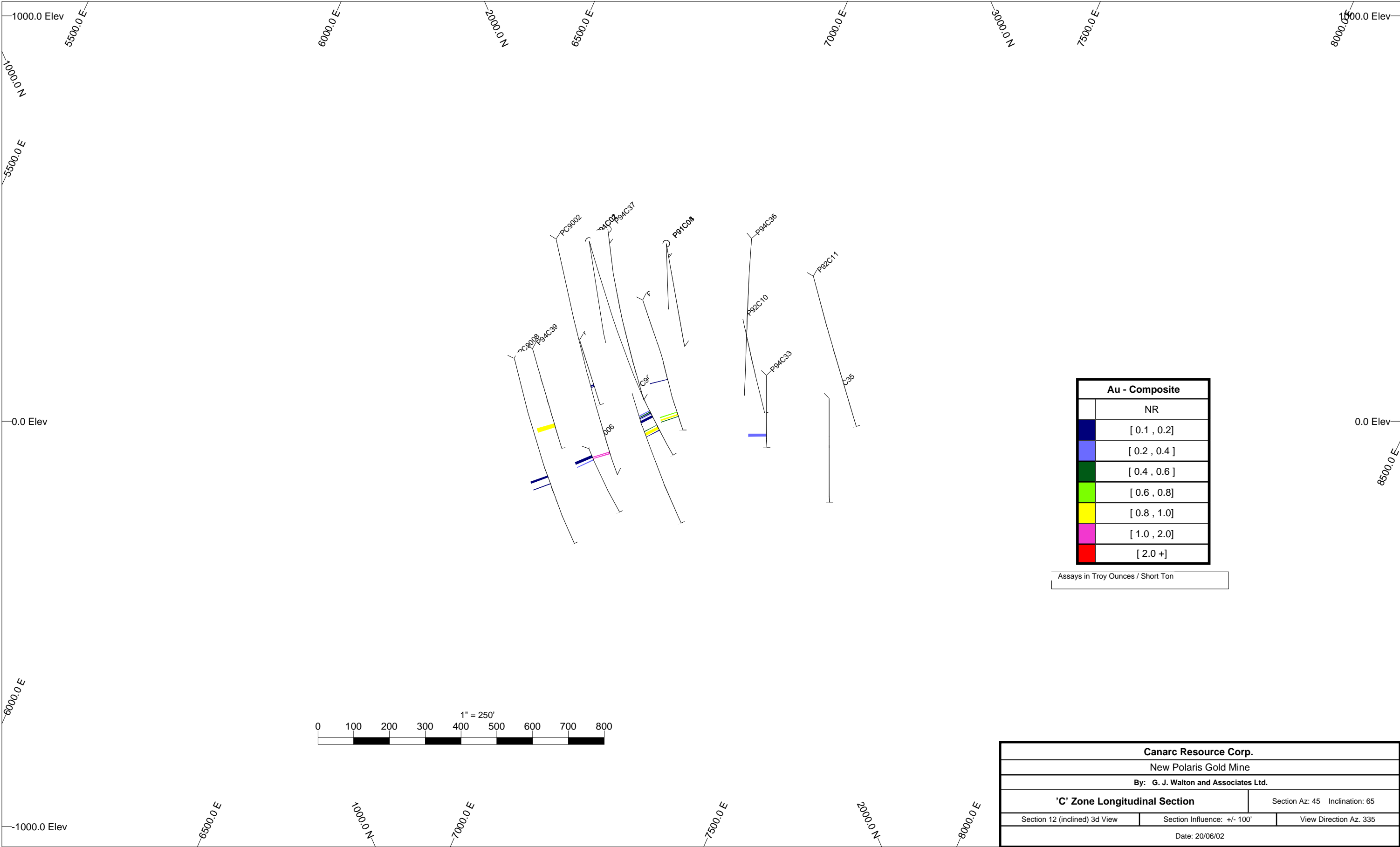
B.C. Ministry of Mines Annual Reports 1936 to 1953

## **Appendix 2 - Longitudinal Sections**

## **Appendix 3 - Level plans**

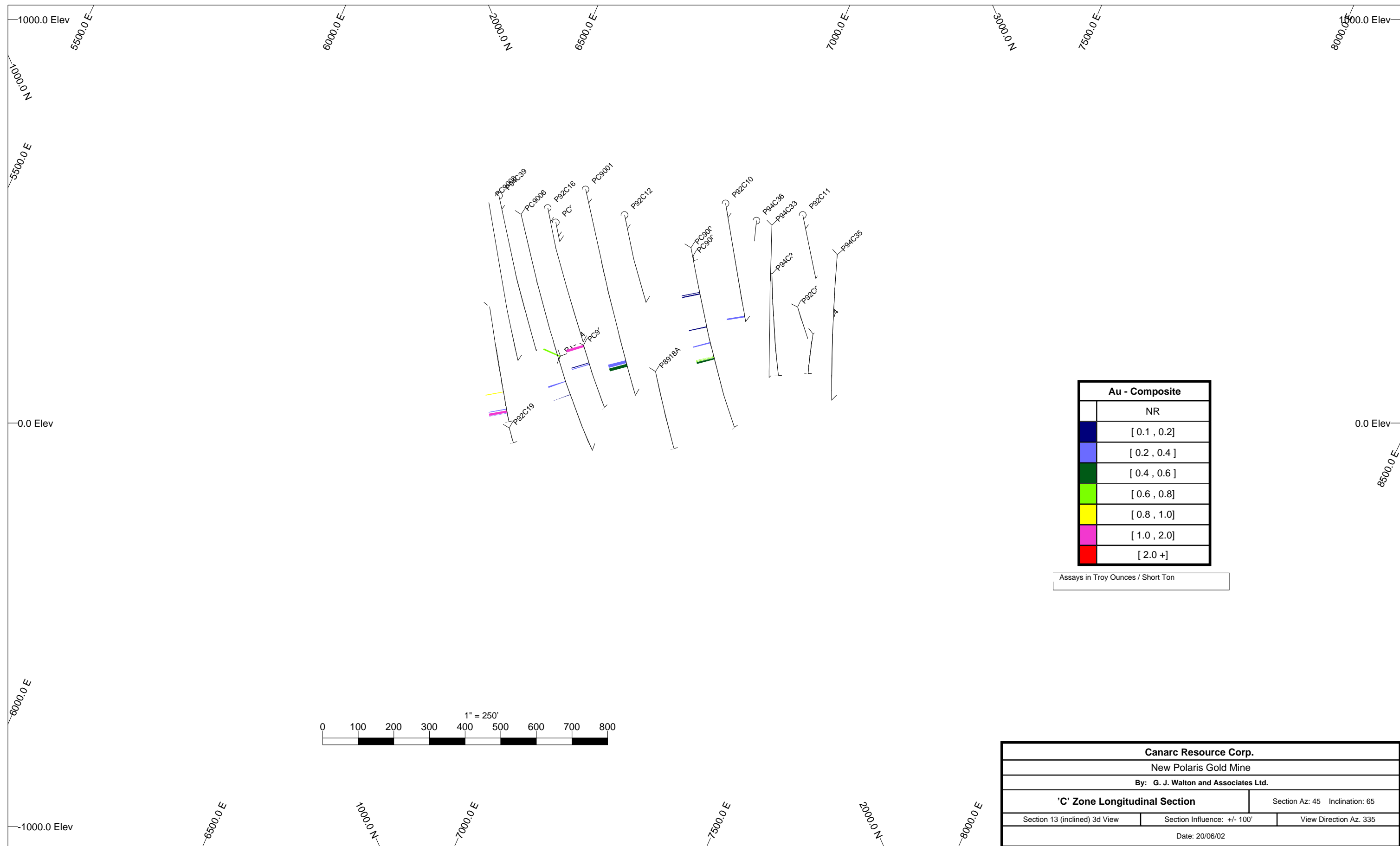
**Appendix 4 - Drill Hole Logs**

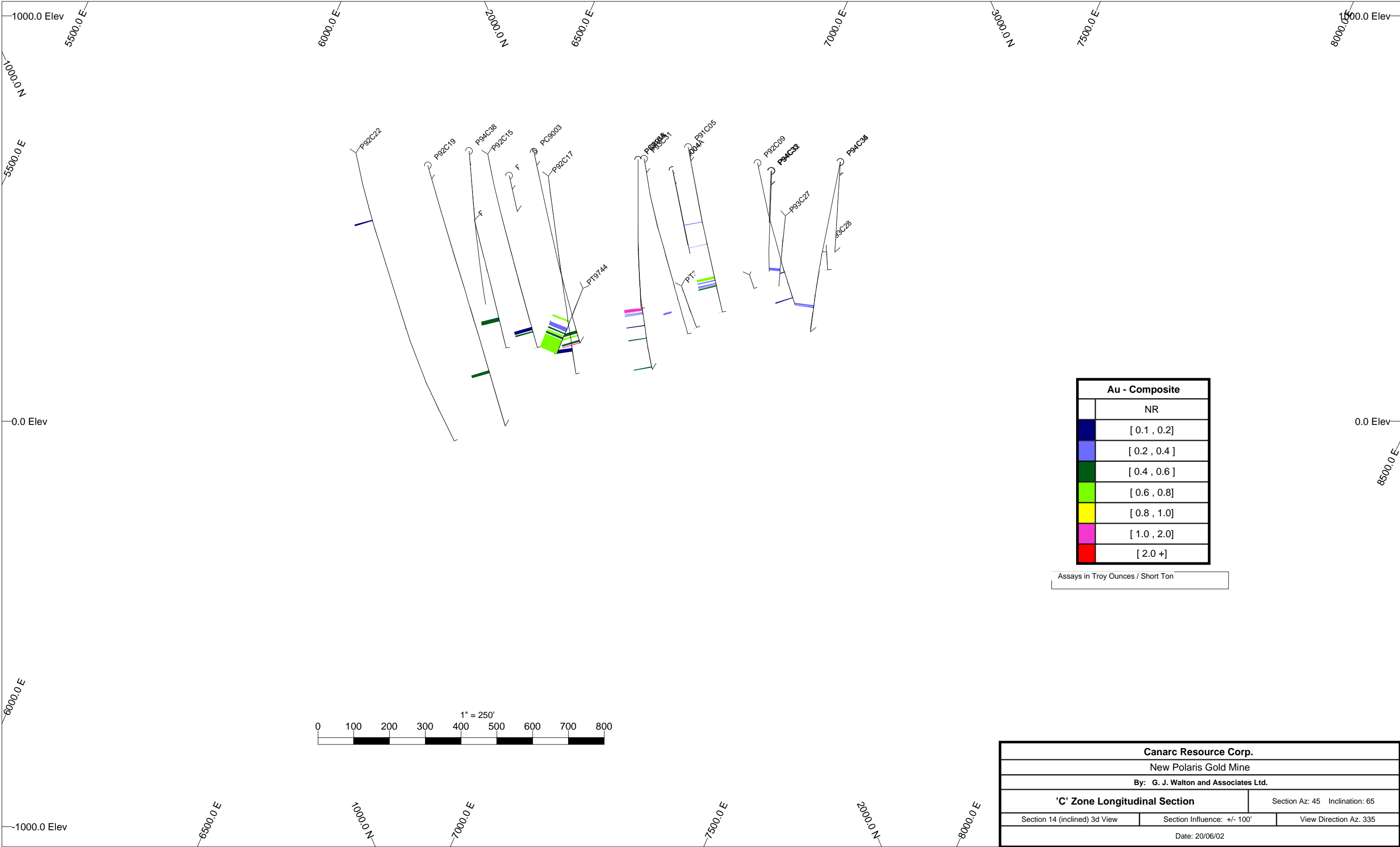




Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'C' Zone Longitudinal Section		Section Az: 45    Inclination: 65
Section 12 (inclined) 3d View	Section Influence: +/- 100'	View Direction Az. 335
Date: 20/06/02		



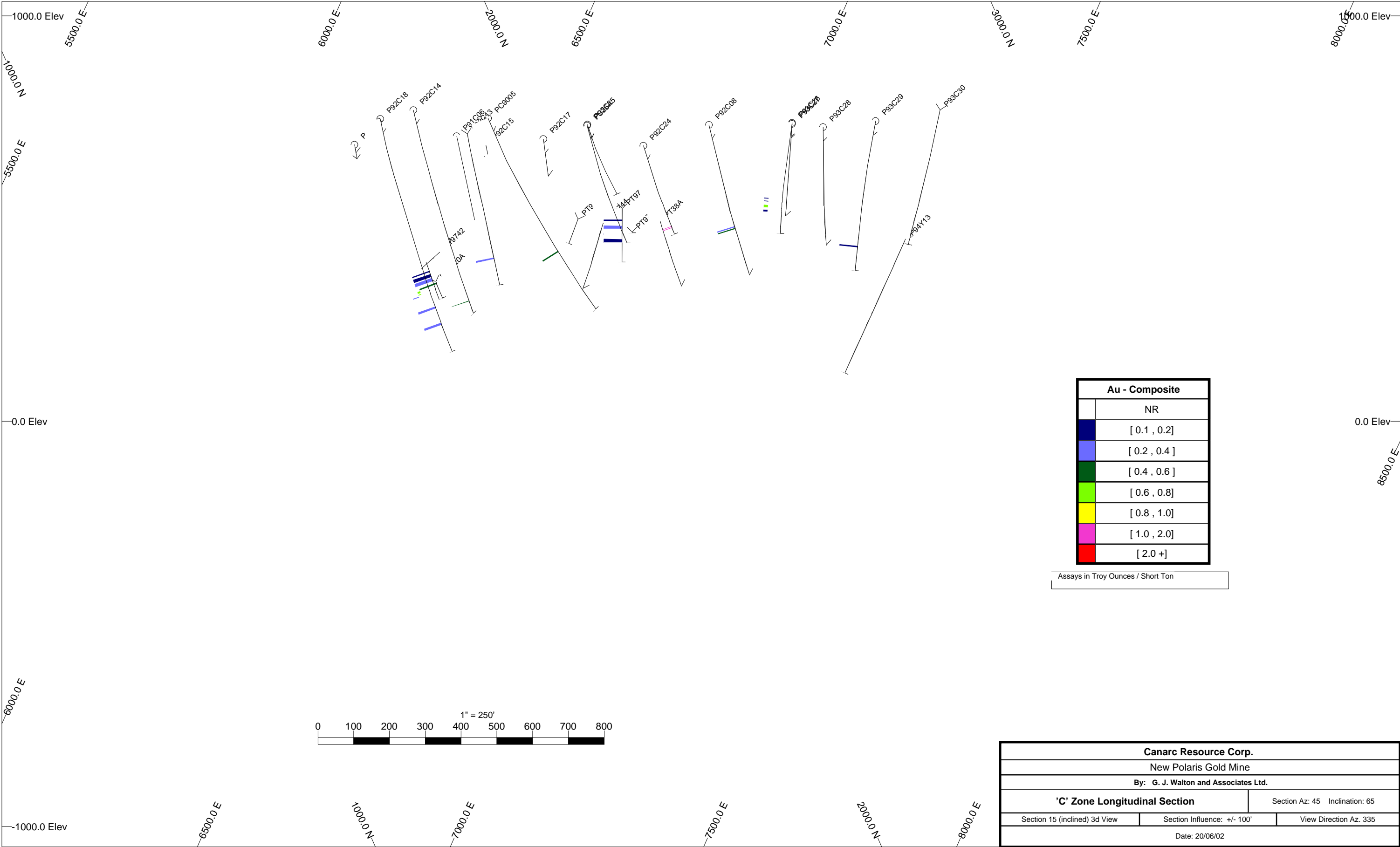




Au - Composite	
	NR
	[ 0.1 , 0.2 ]
	[ 0.2 , 0.4 ]
	[ 0.4 , 0.6 ]
	[ 0.6 , 0.8 ]
	[ 0.8 , 1.0 ]
	[ 1.0 , 2.0 ]
	[ 2.0 +]

Assays in Troy Ounces / Short Ton

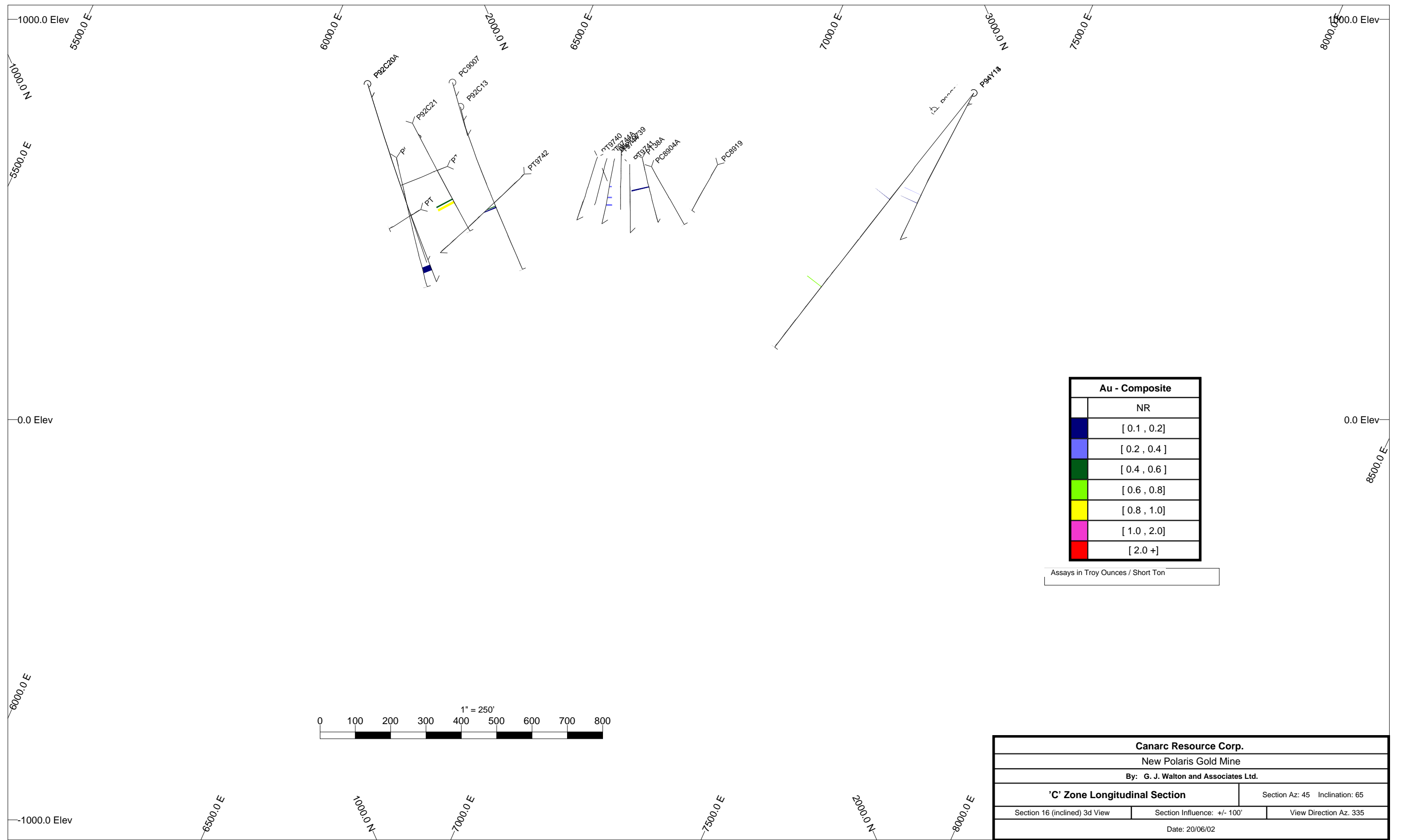
Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'C' Zone Longitudinal Section		Section Az: 45    Inclination: 65
Section 14 (inclined) 3d View	Section Influence: +/- 100'	View Direction Az. 335
Date: 20/06/02		

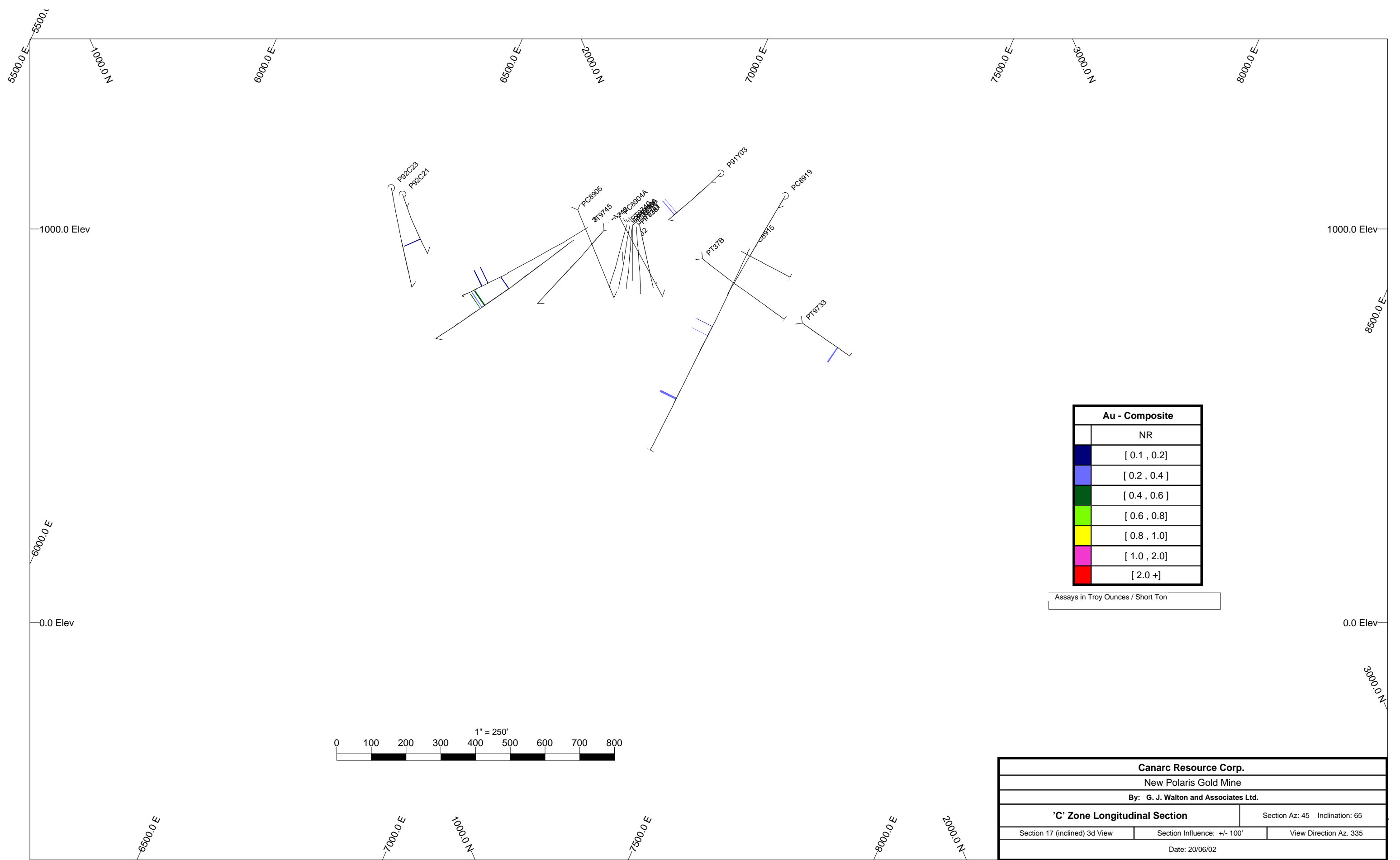


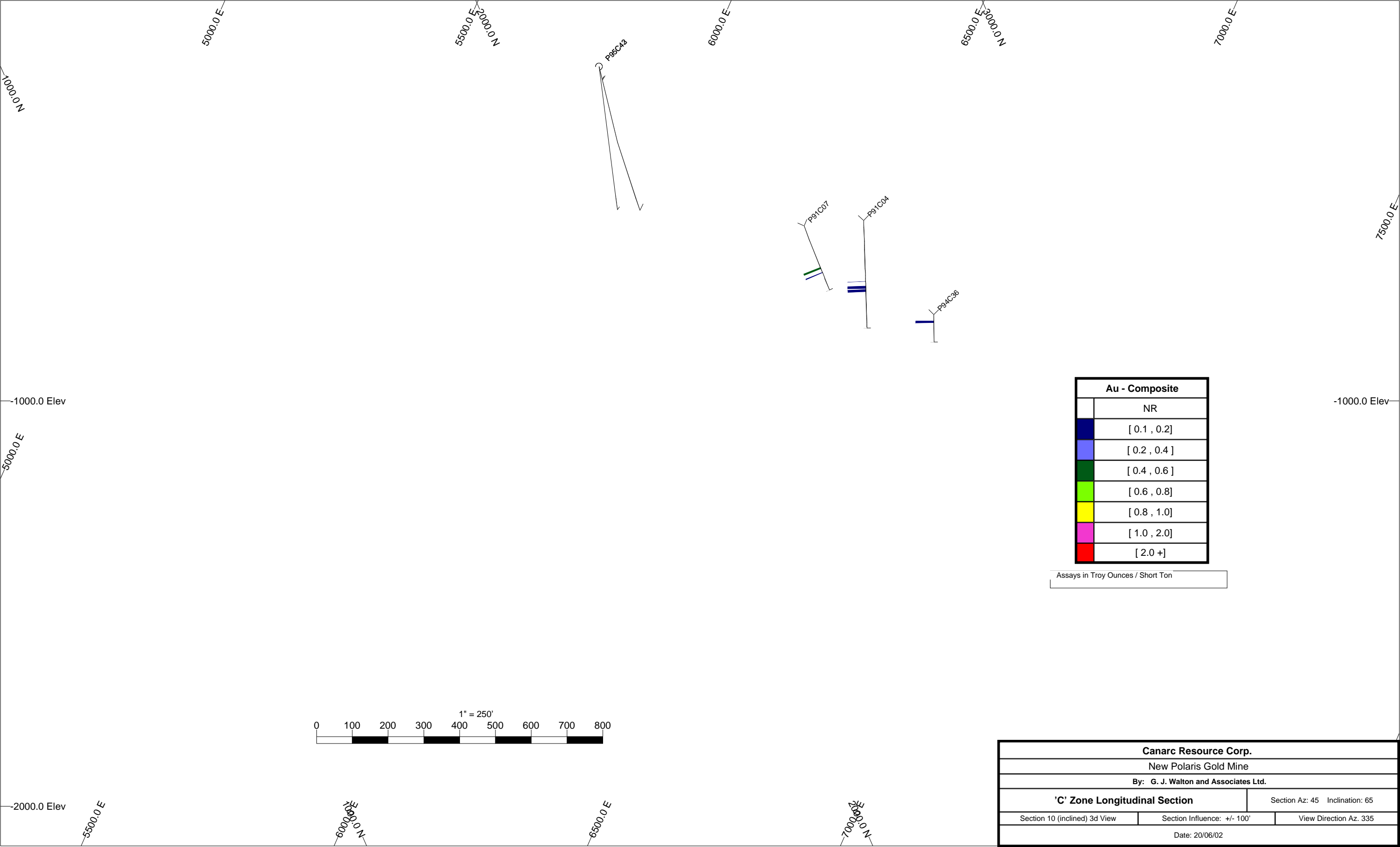
Au - Composite	
	NR
	[ 0.1 , 0.2 ]
	[ 0.2 , 0.4 ]
	[ 0.4 , 0.6 ]
	[ 0.6 , 0.8 ]
	[ 0.8 , 1.0 ]
	[ 1.0 , 2.0 ]
	[ 2.0 +]

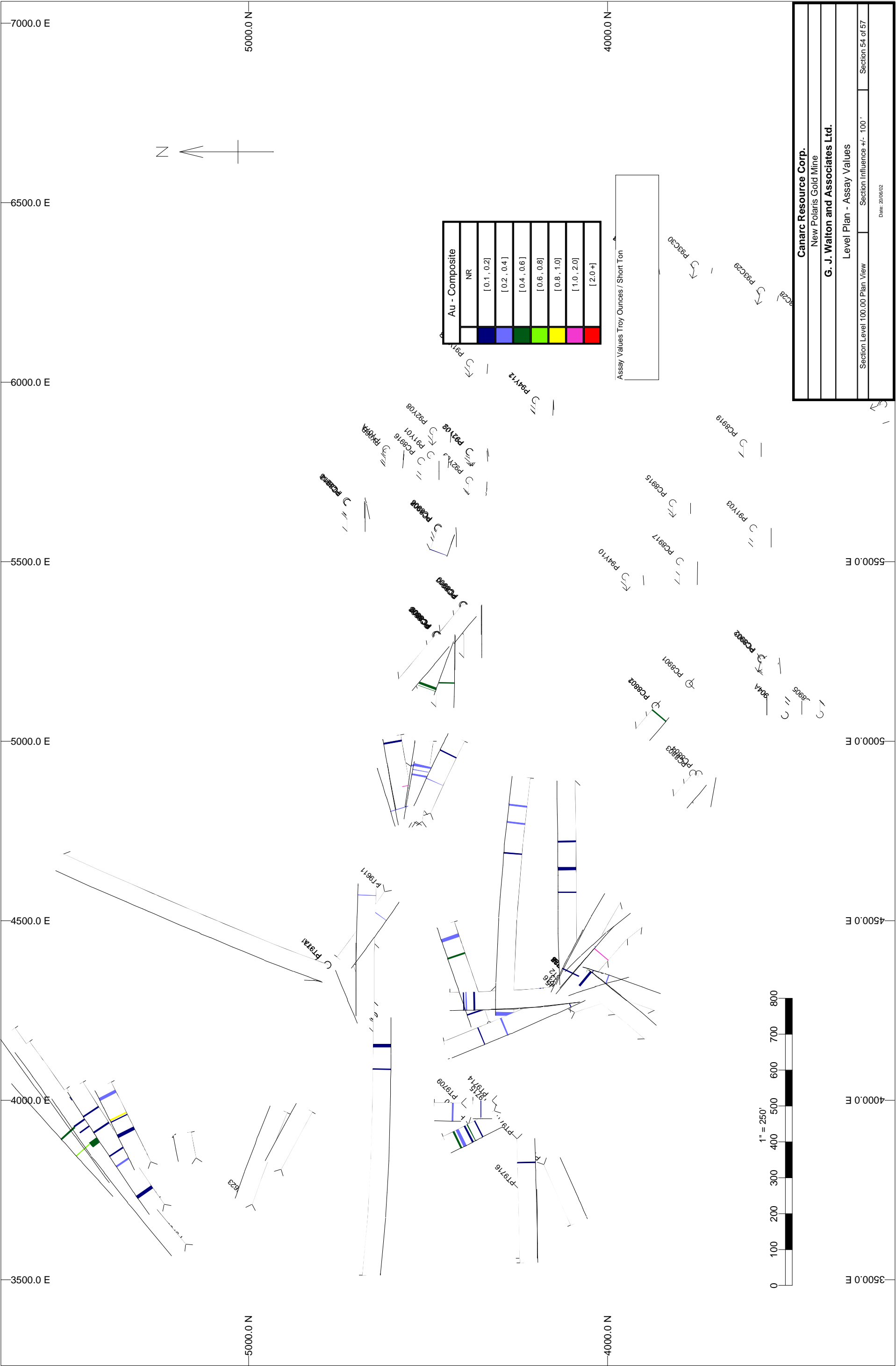
Assays in Troy Ounces / Short Ton

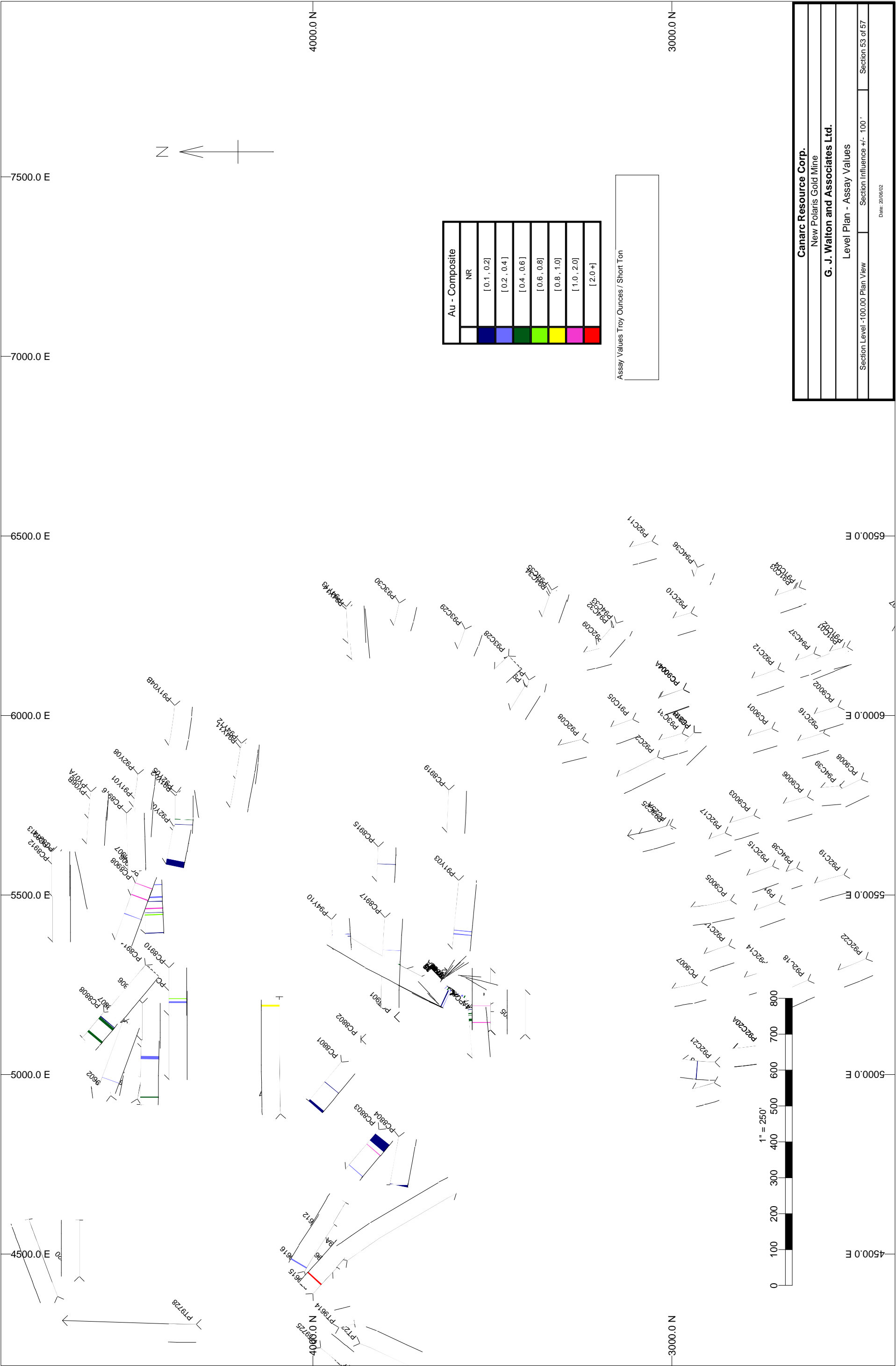
Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'C' Zone Longitudinal Section		Section Az: 45    Inclination: 65
Section 15 (inclined) 3d View	Section Influence: +/- 100'	View Direction Az. 335
Date: 20/06/02		



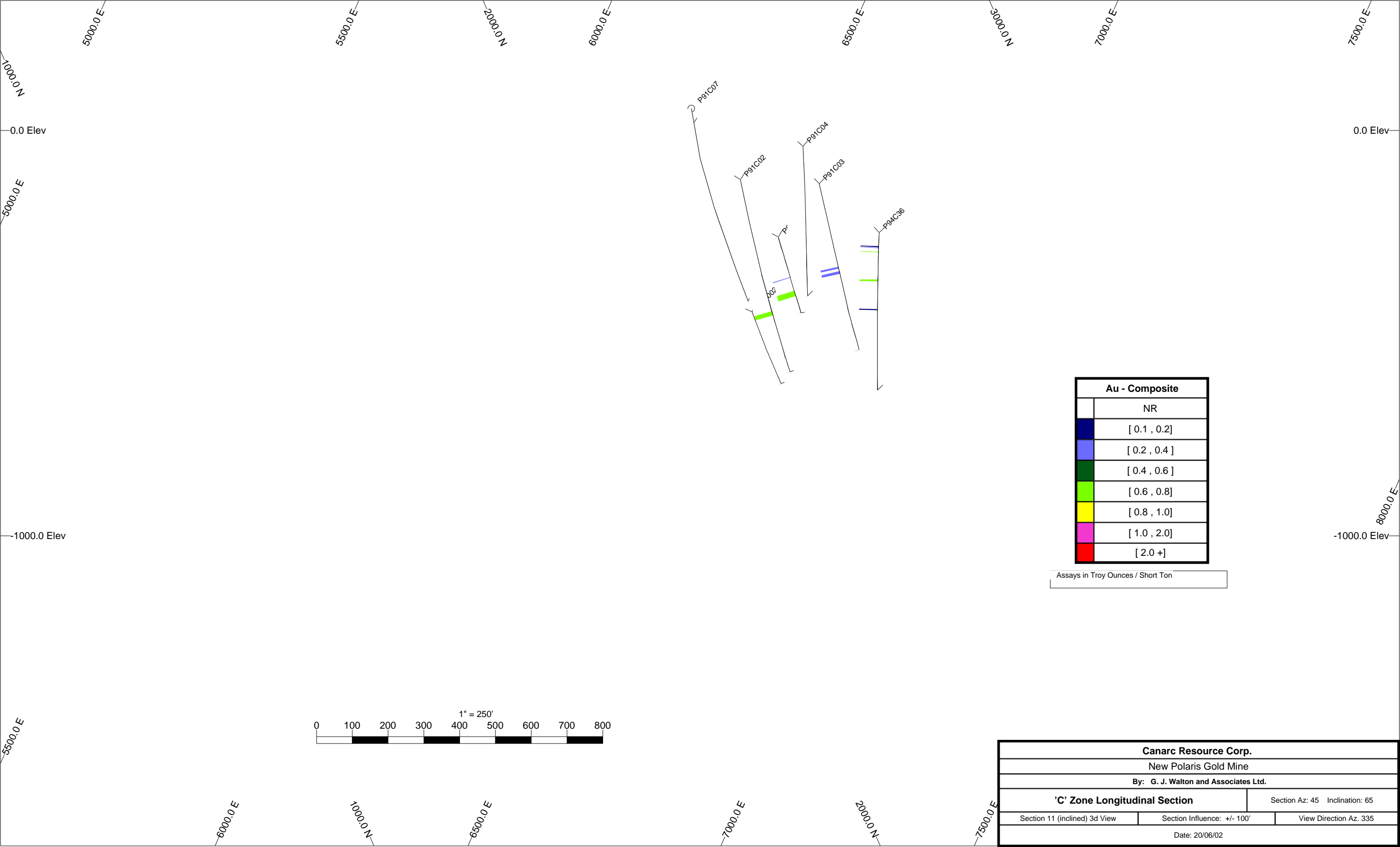


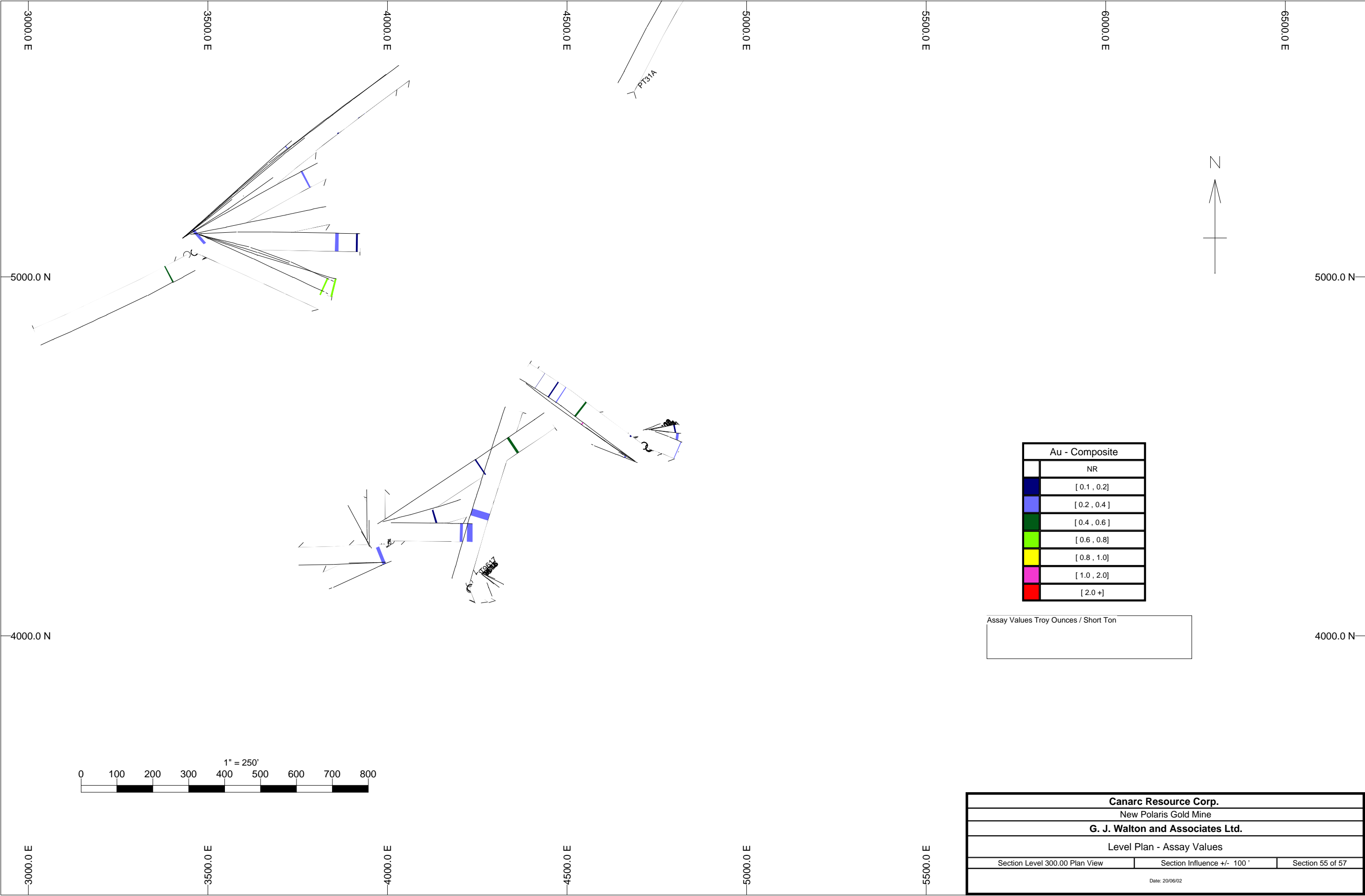




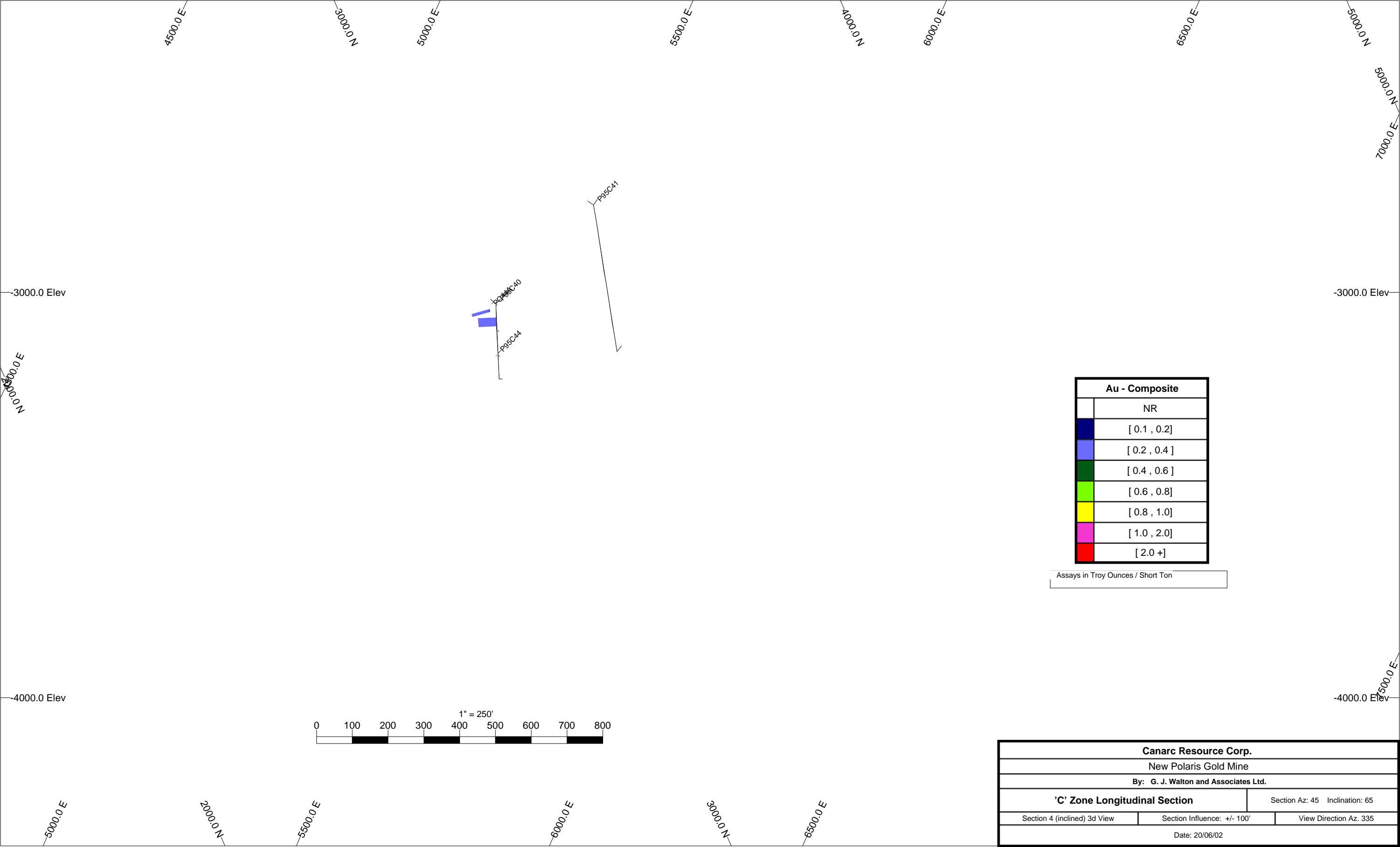


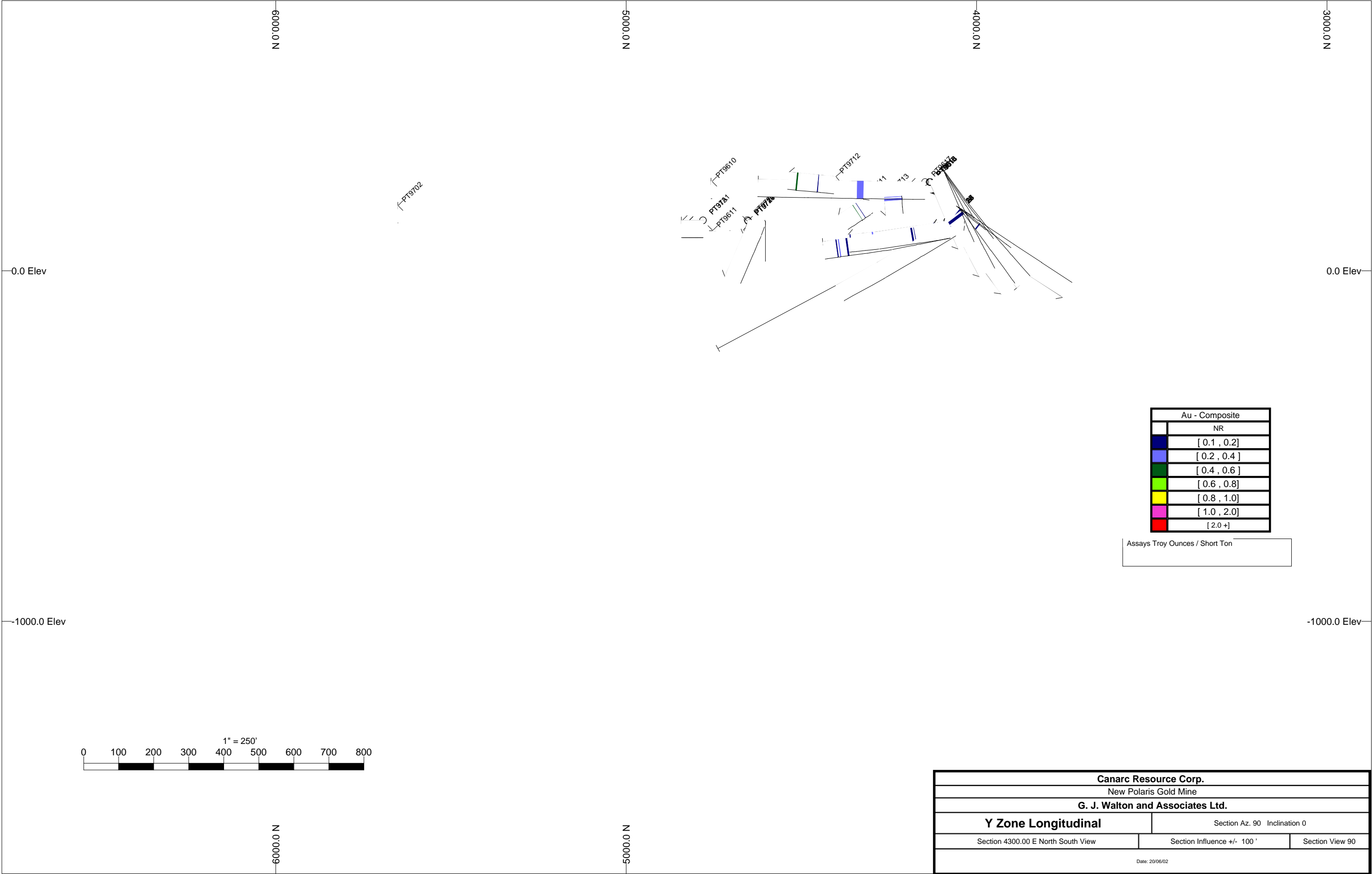


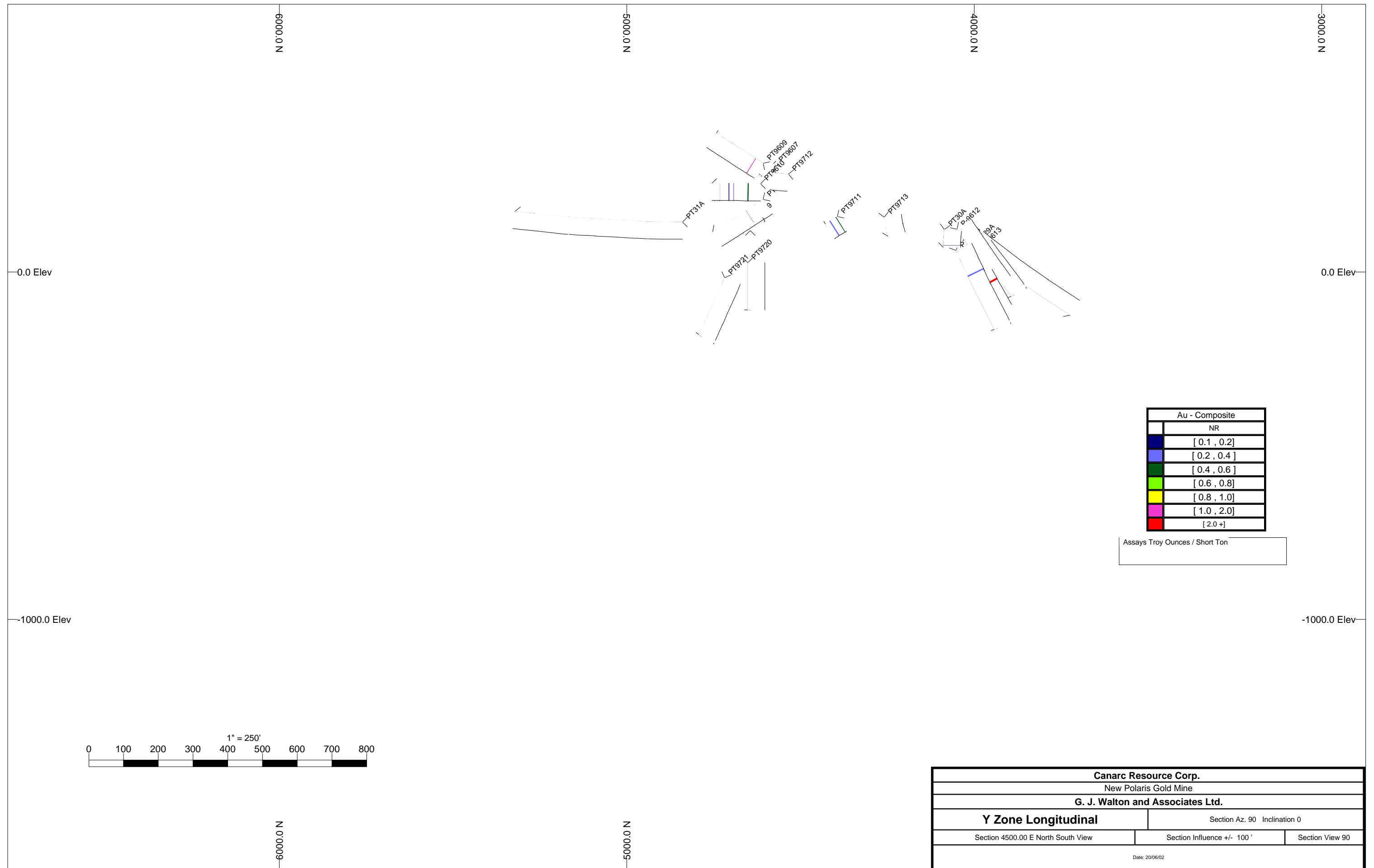


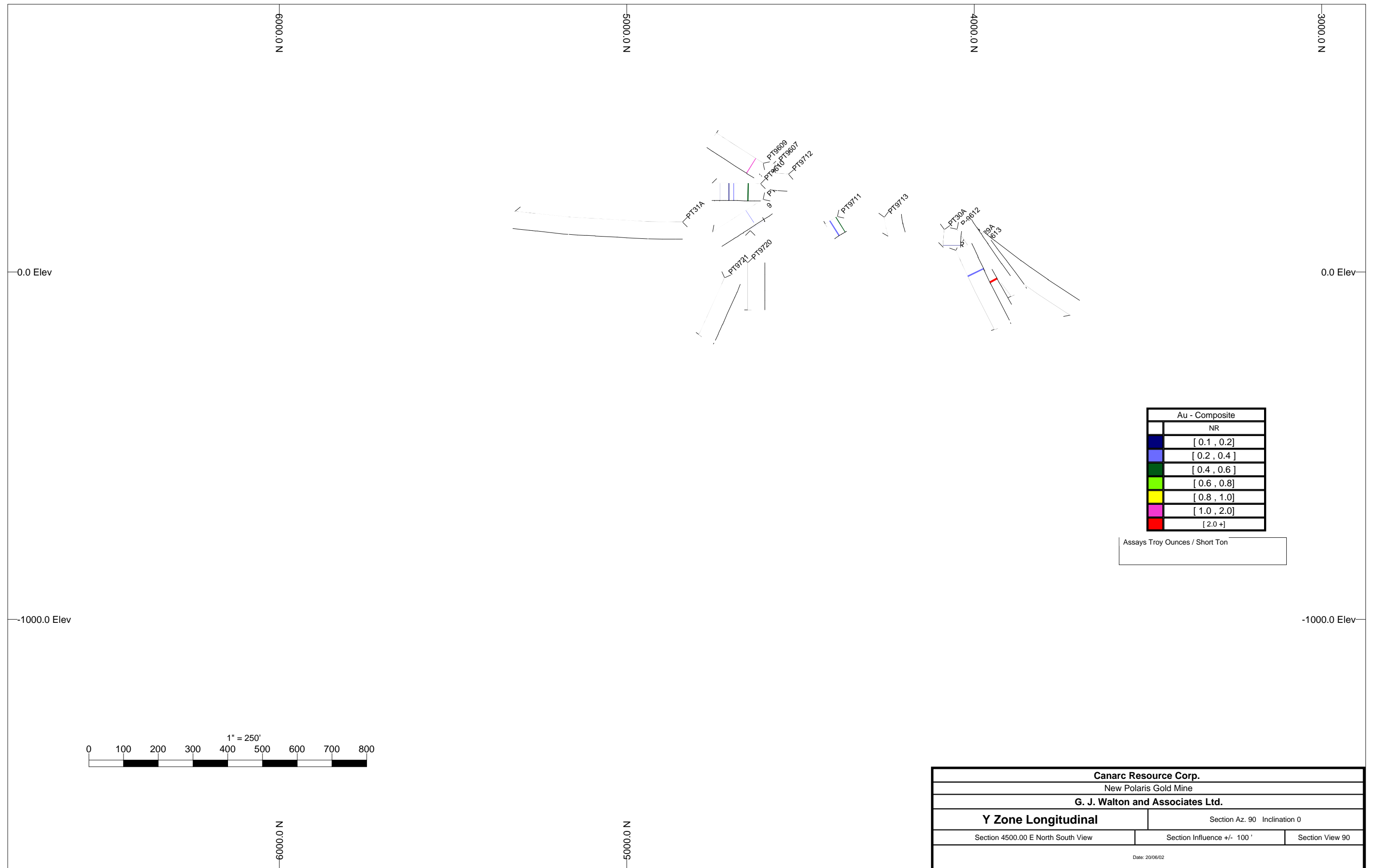


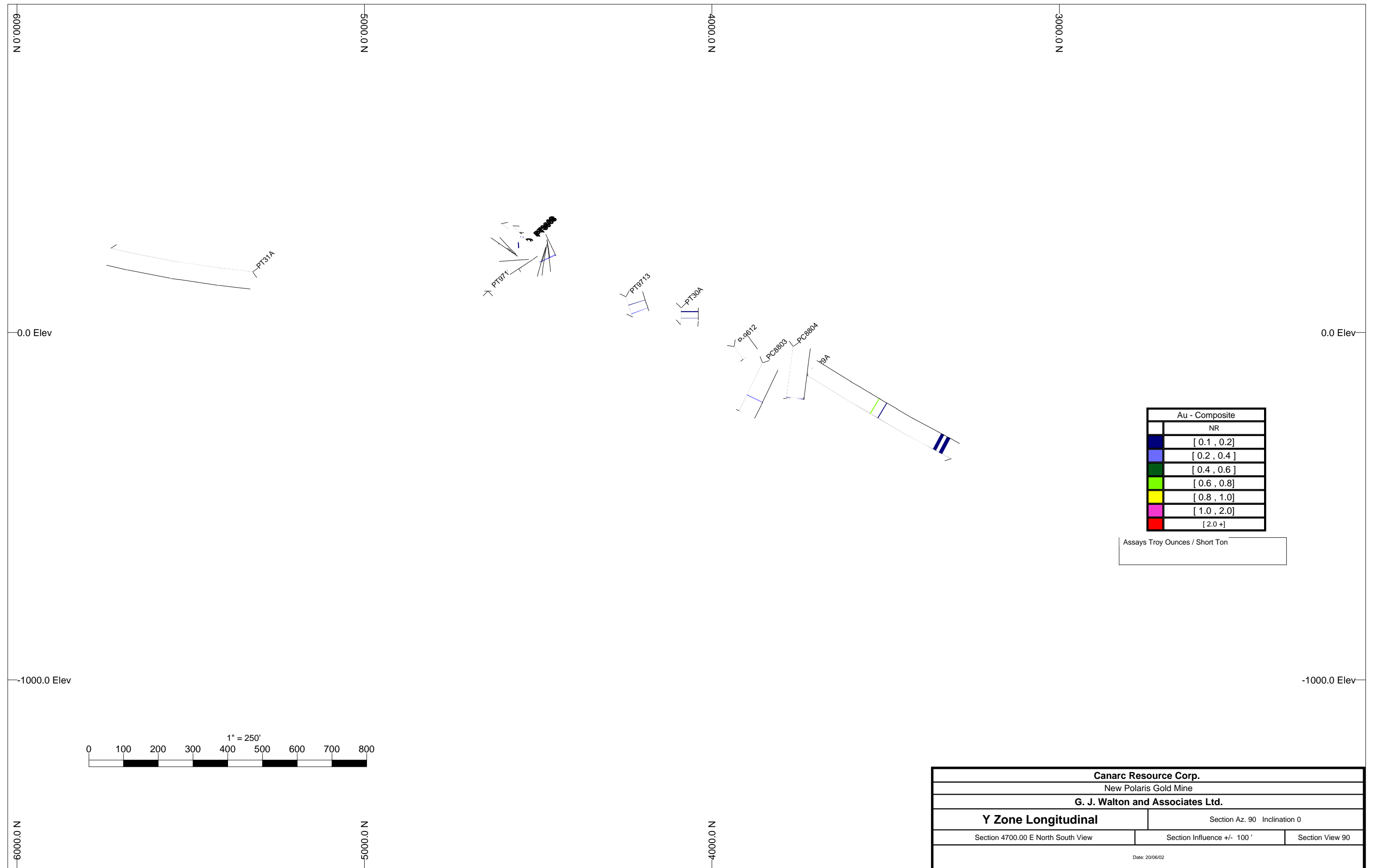




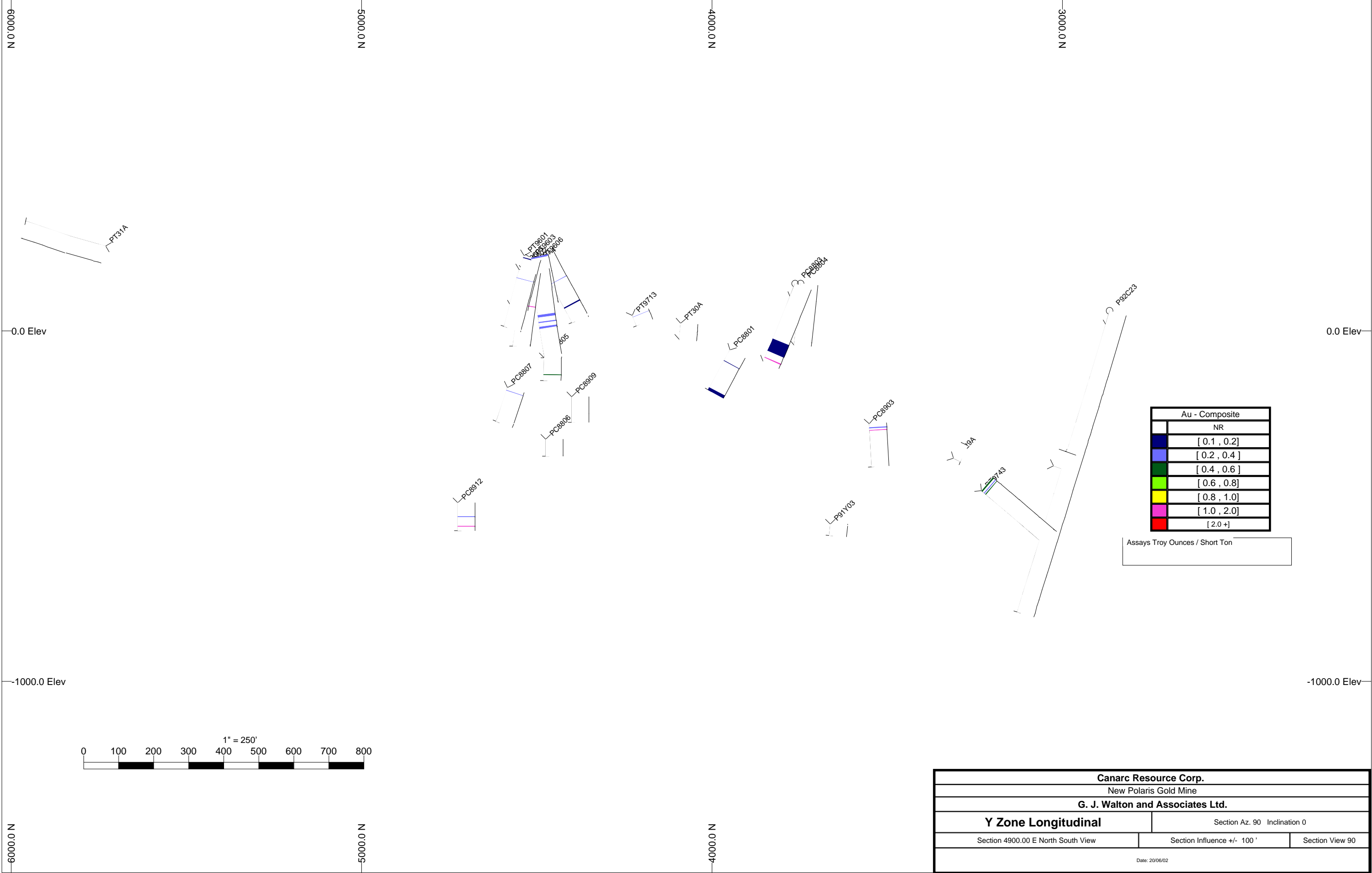


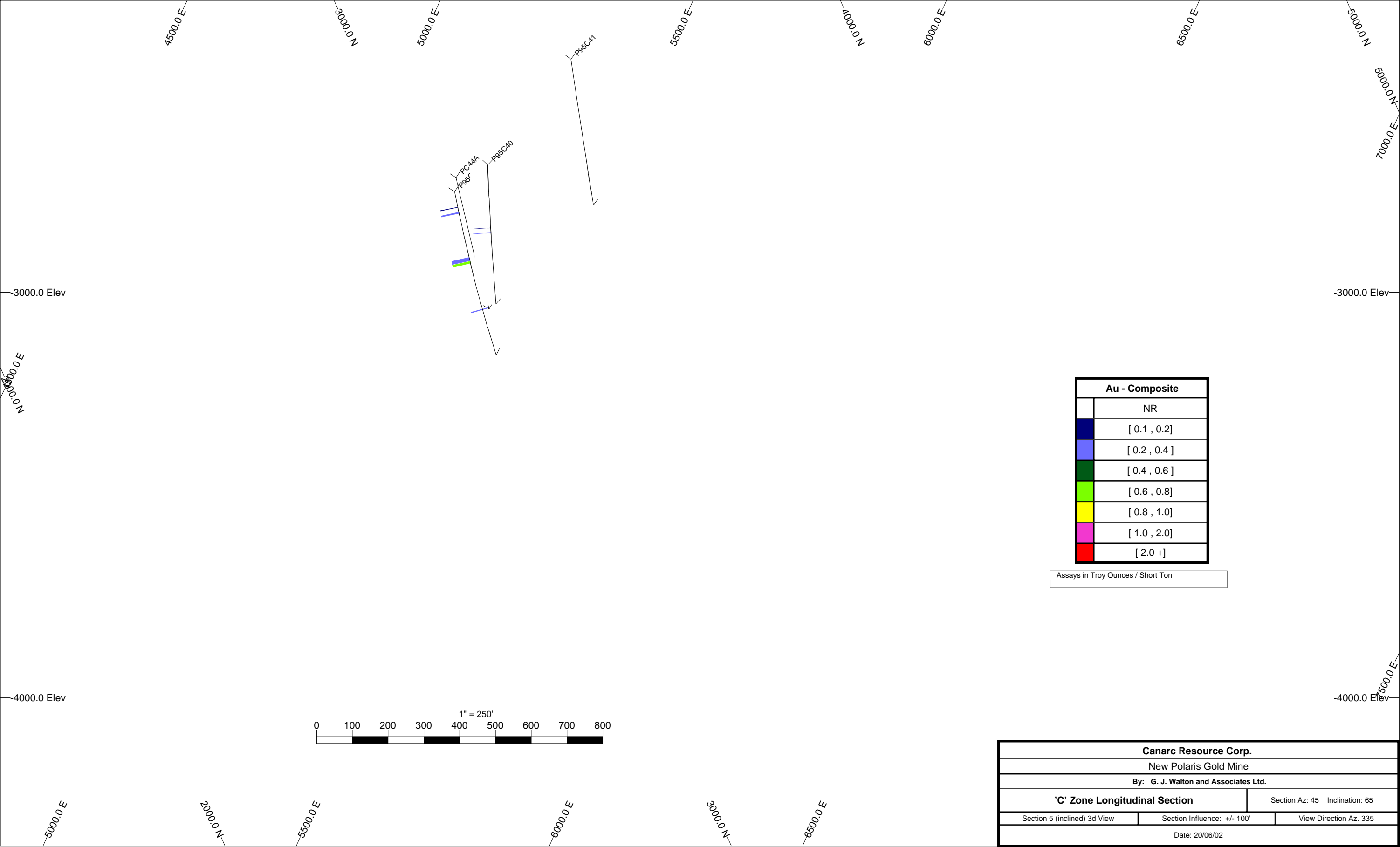


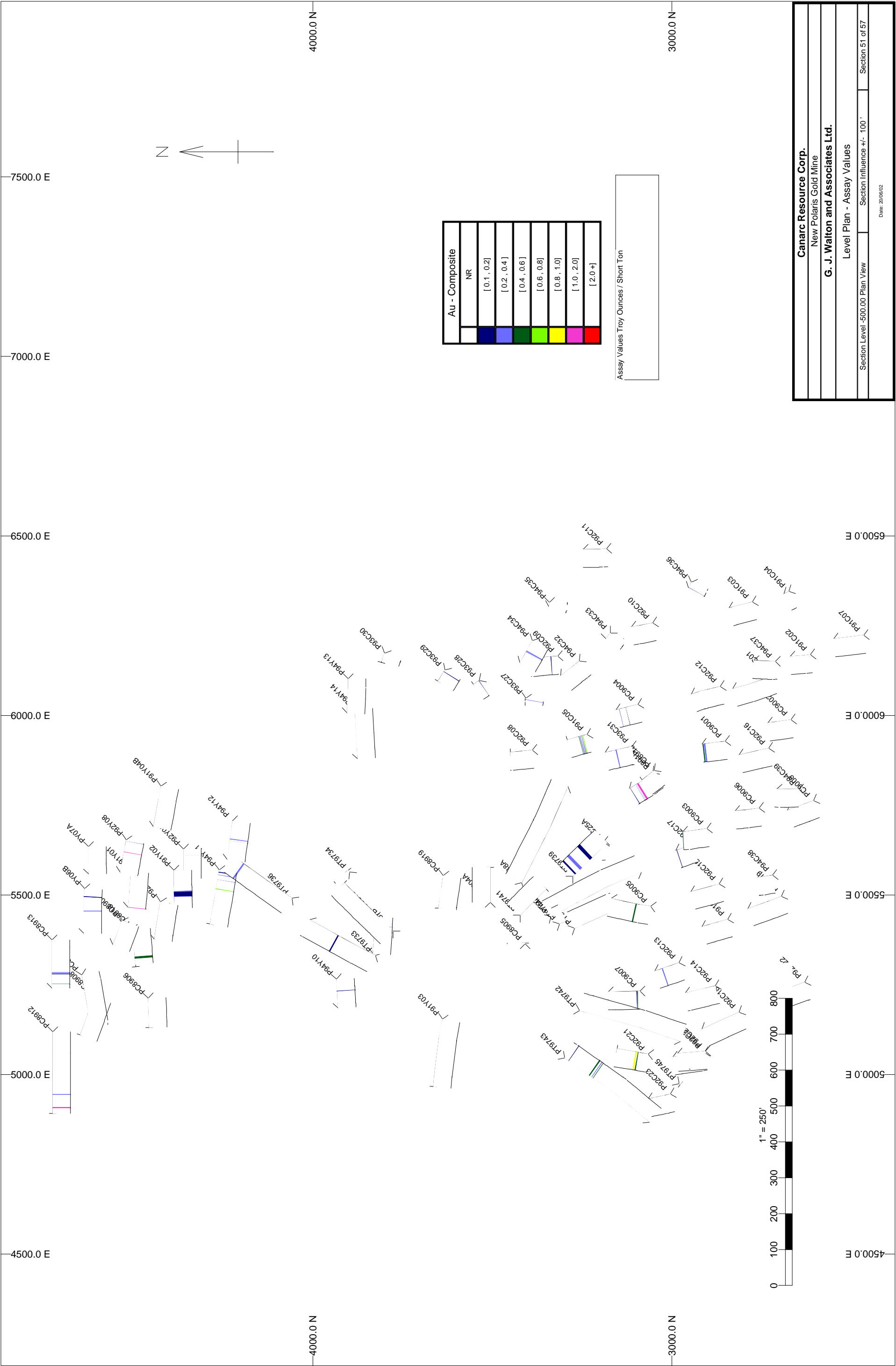


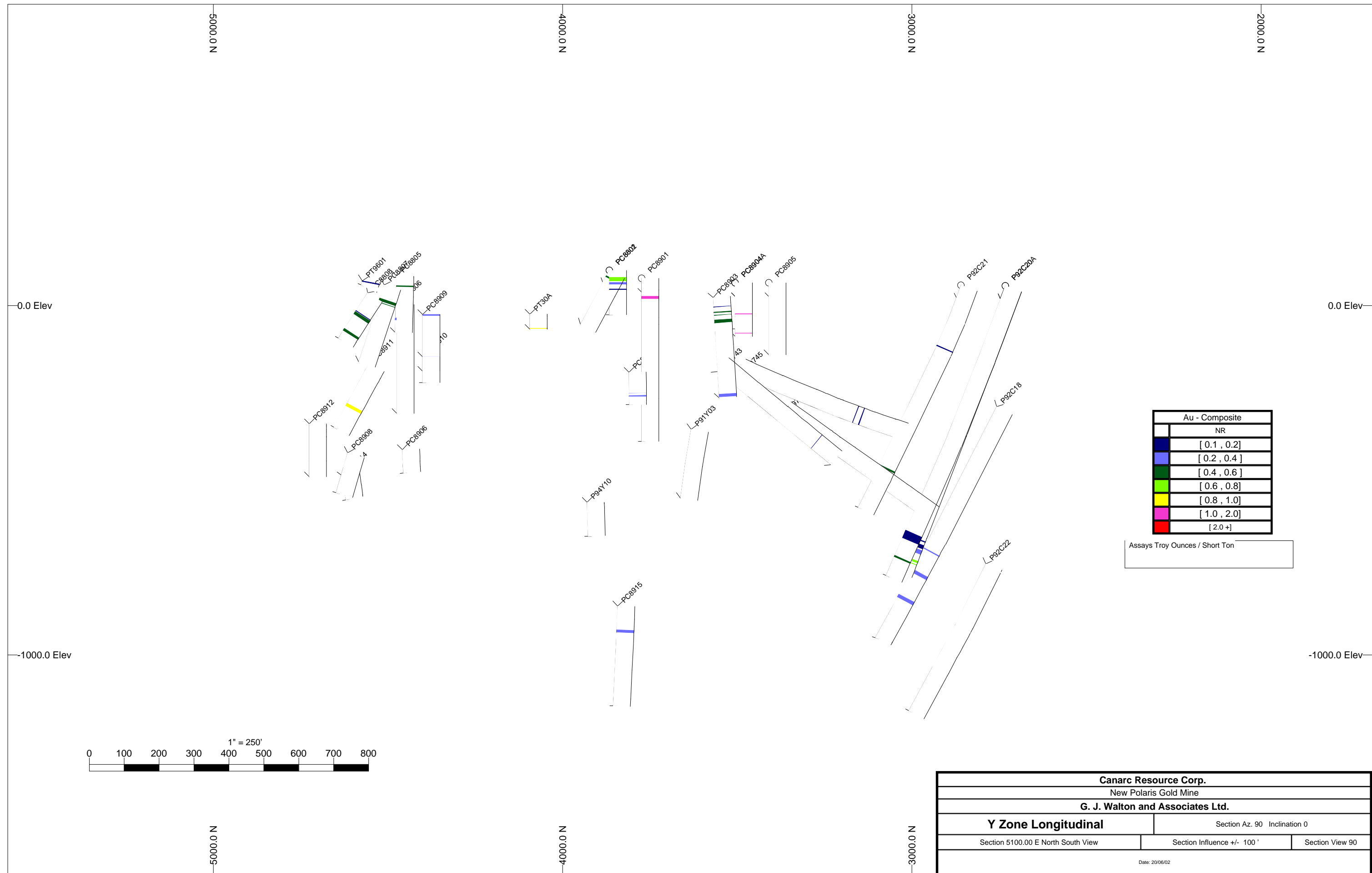


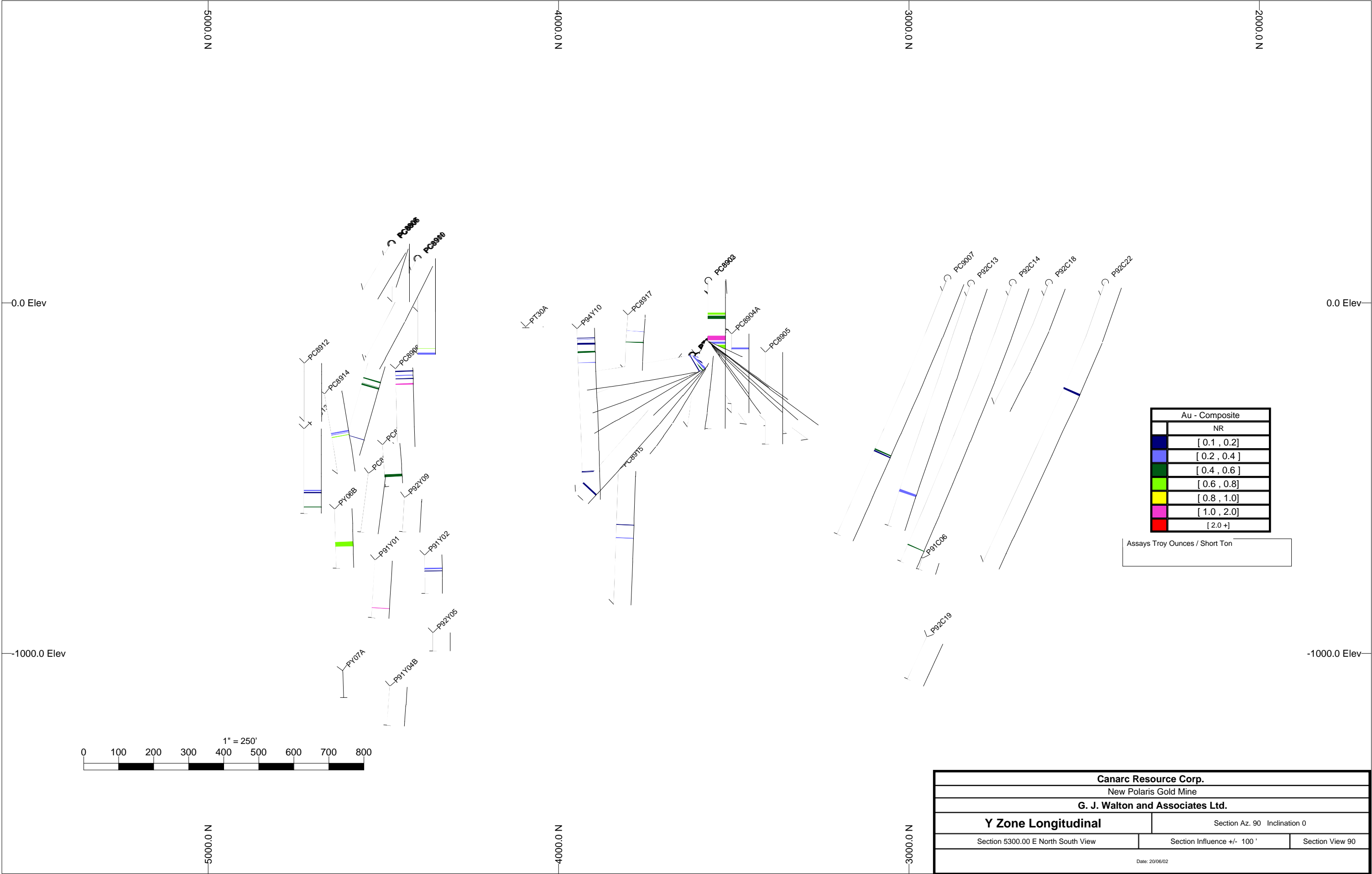


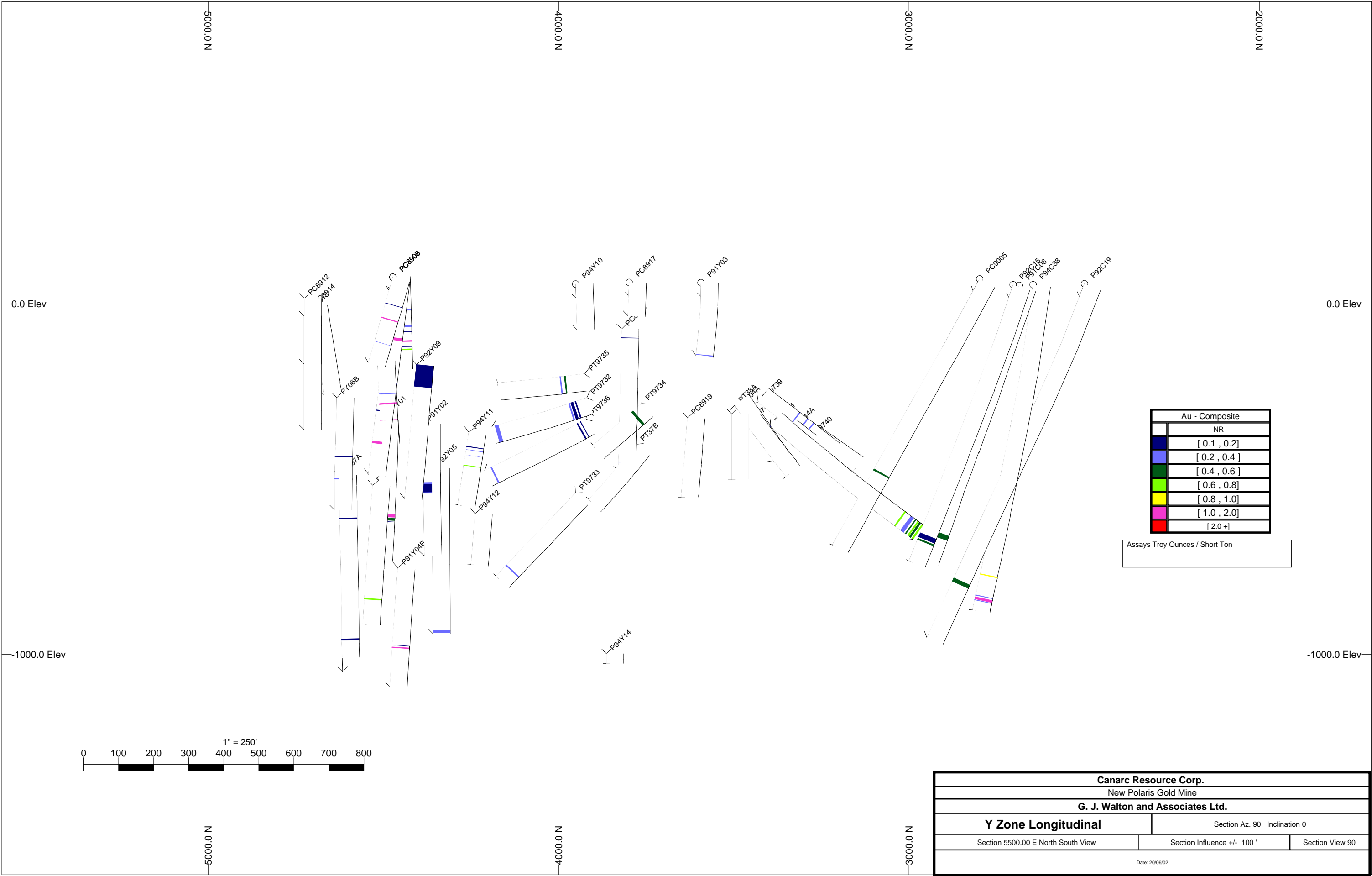


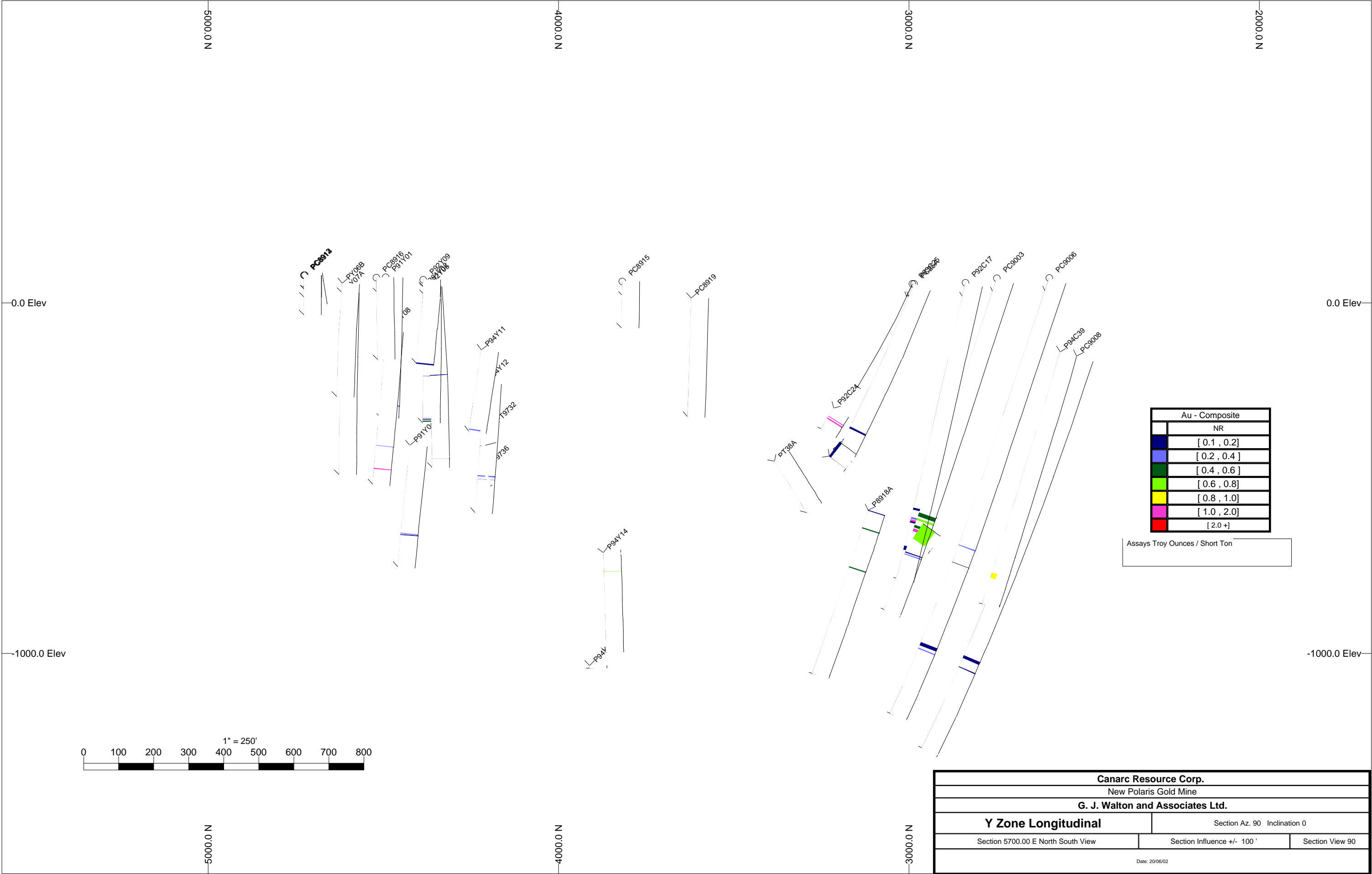








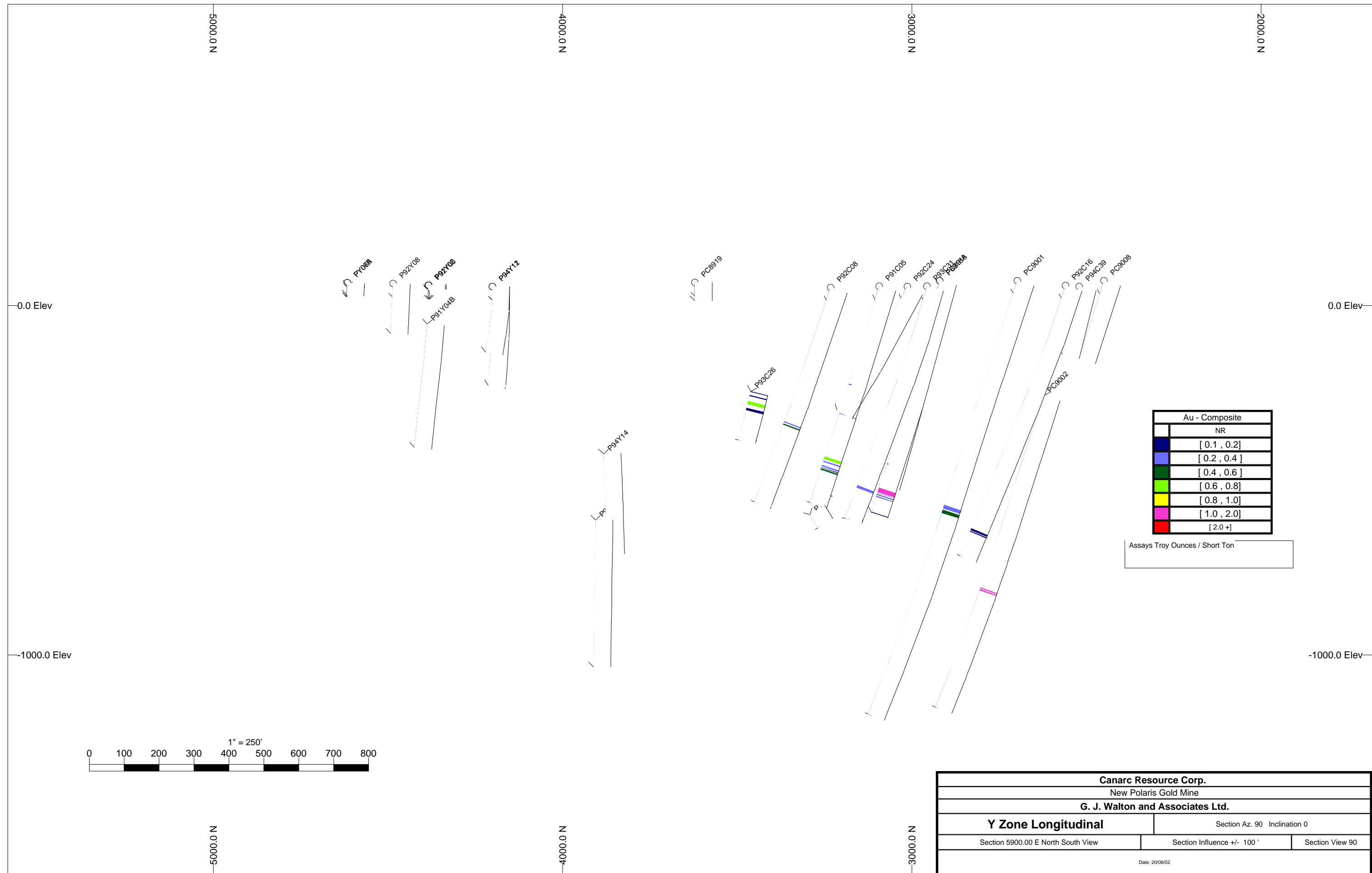




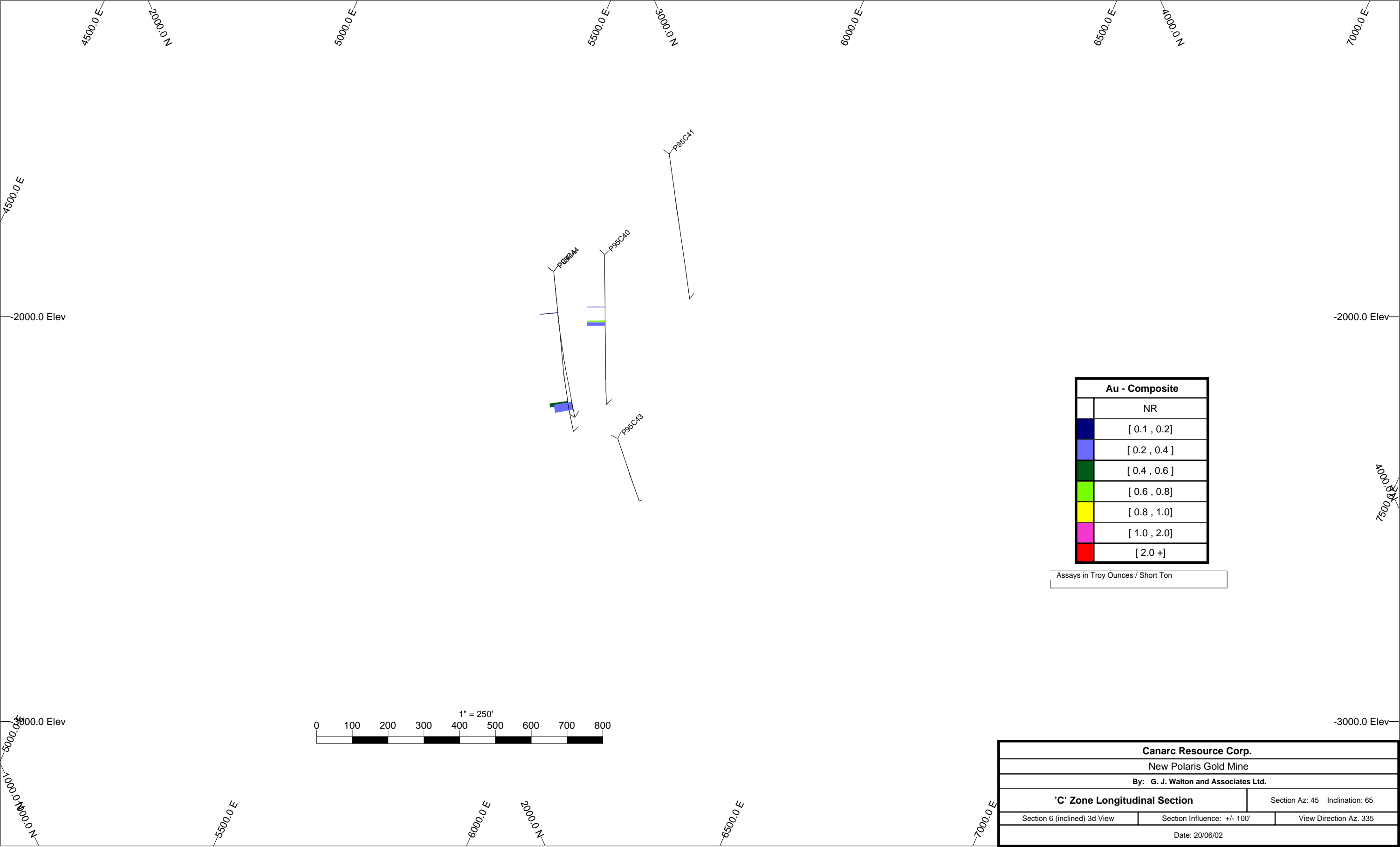
Au - Composite	
	NR
	[ 0.1 , 0.2 ]
	[ 0.2 , 0.4 ]
	[ 0.4 , 0.6 ]
	[ 0.6 , 0.8 ]
	[ 0.8 , 1.0 ]
	[ 1.0 , 2.0 ]
	[ 2.0 + ]

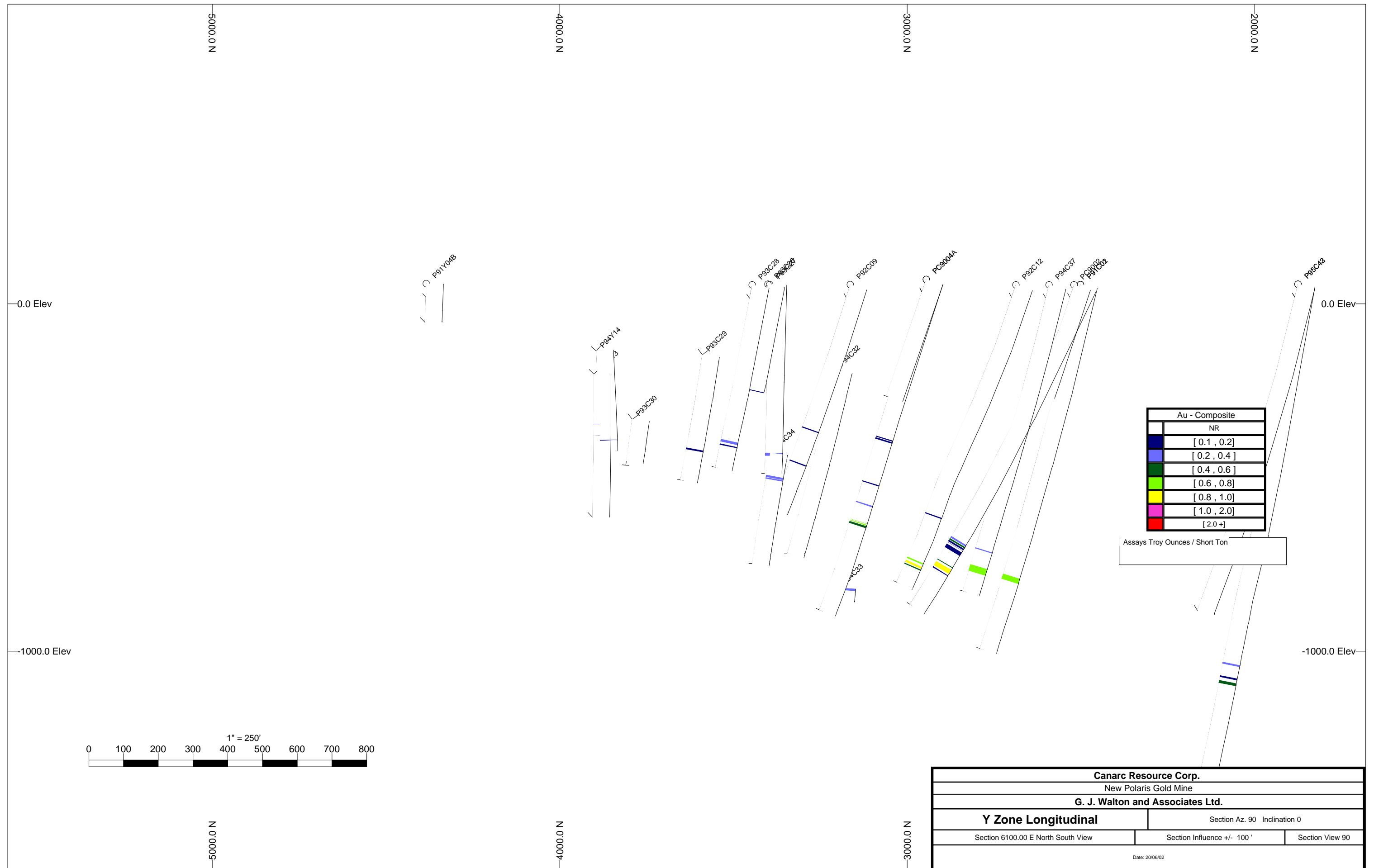
Assays Troy Ounces / Short Ton

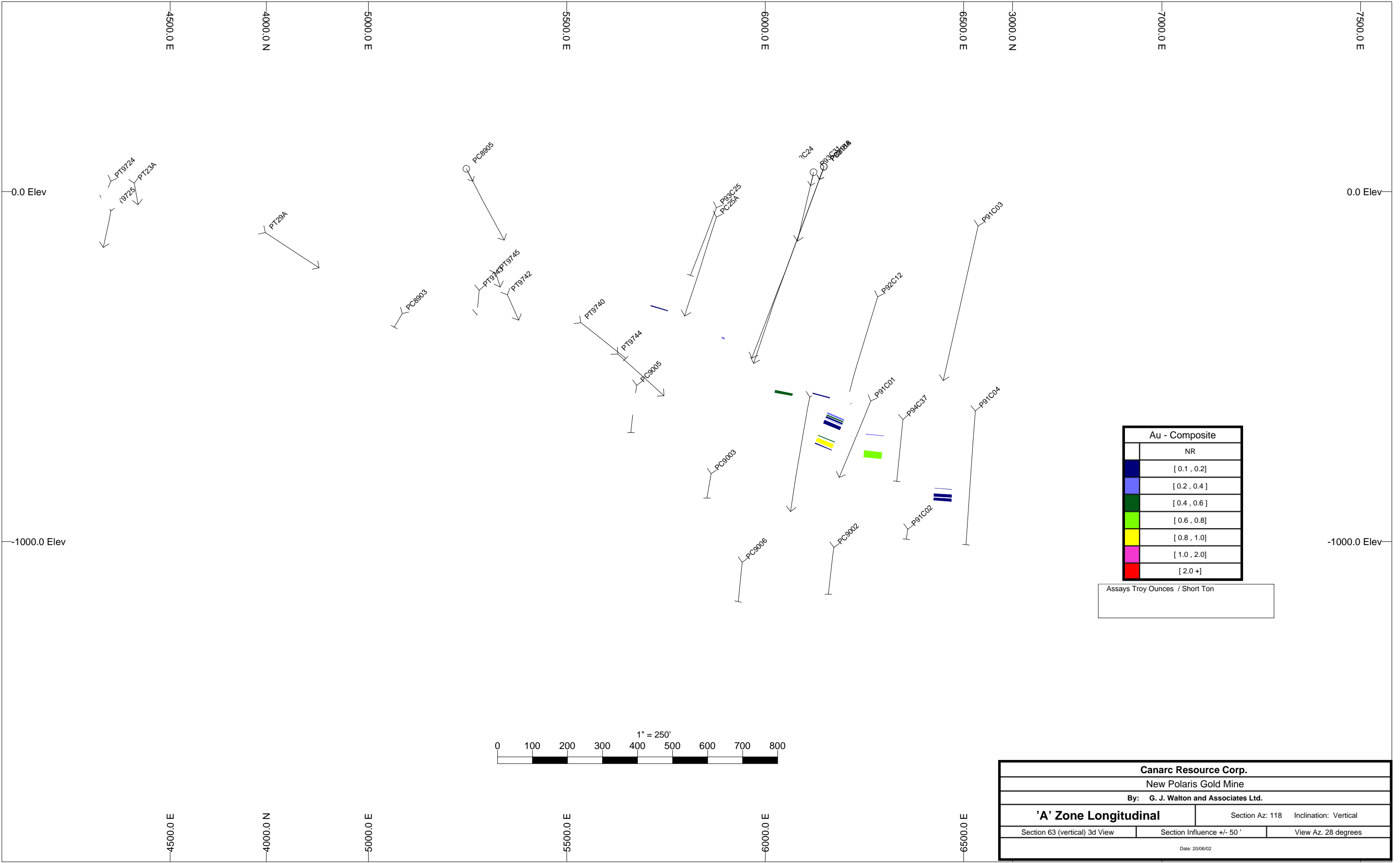
Canarc Resource Corp.		
New Polaris Gold Mine		
G. J. Walton and Associates Ltd.		
Y Zone Longitudinal		Section Az. 90 Inclin. 0
Section 5700.00 E North South View	Section Influence +/- 100'	Section View 90
Date: 20/06/02		

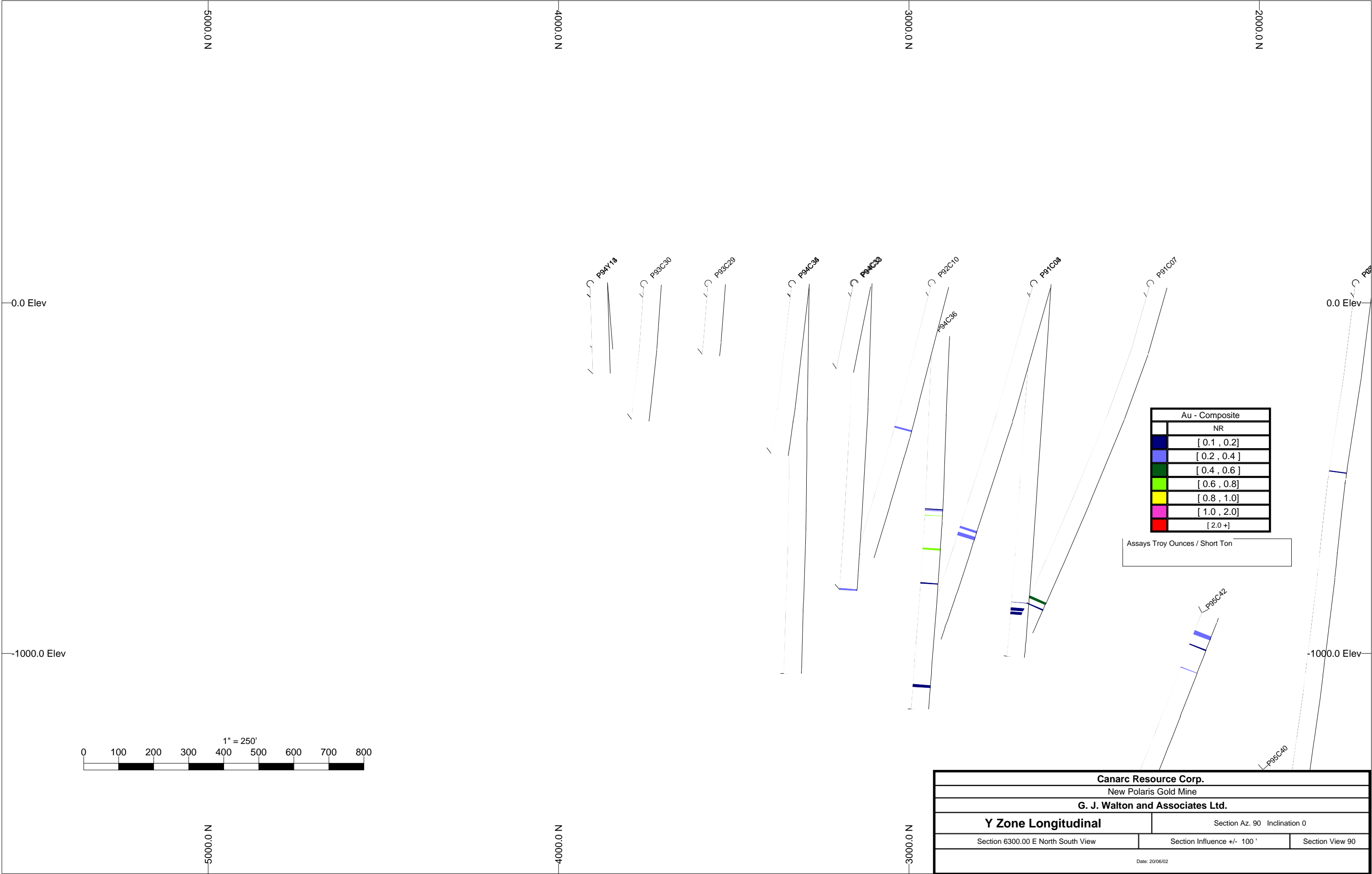








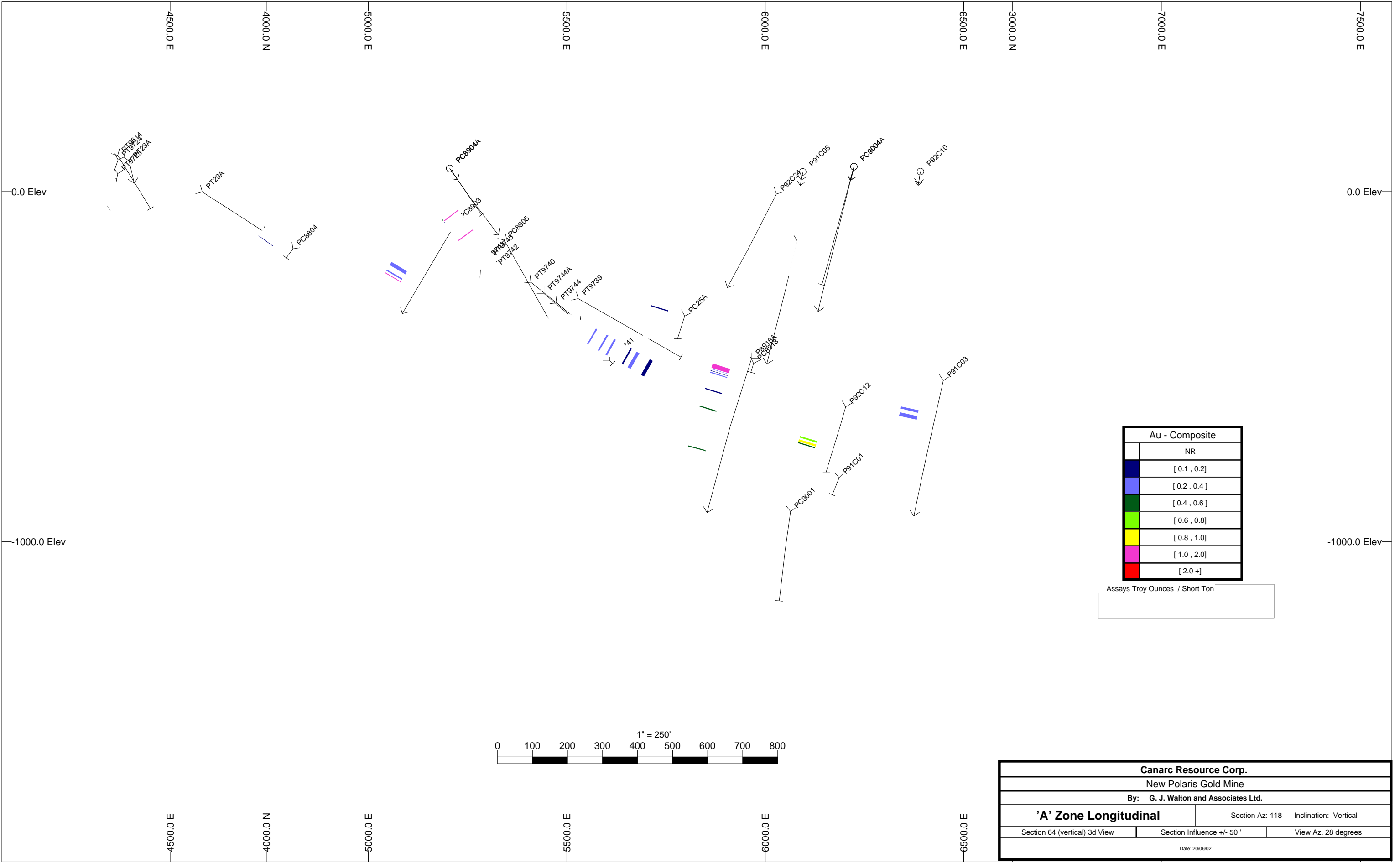


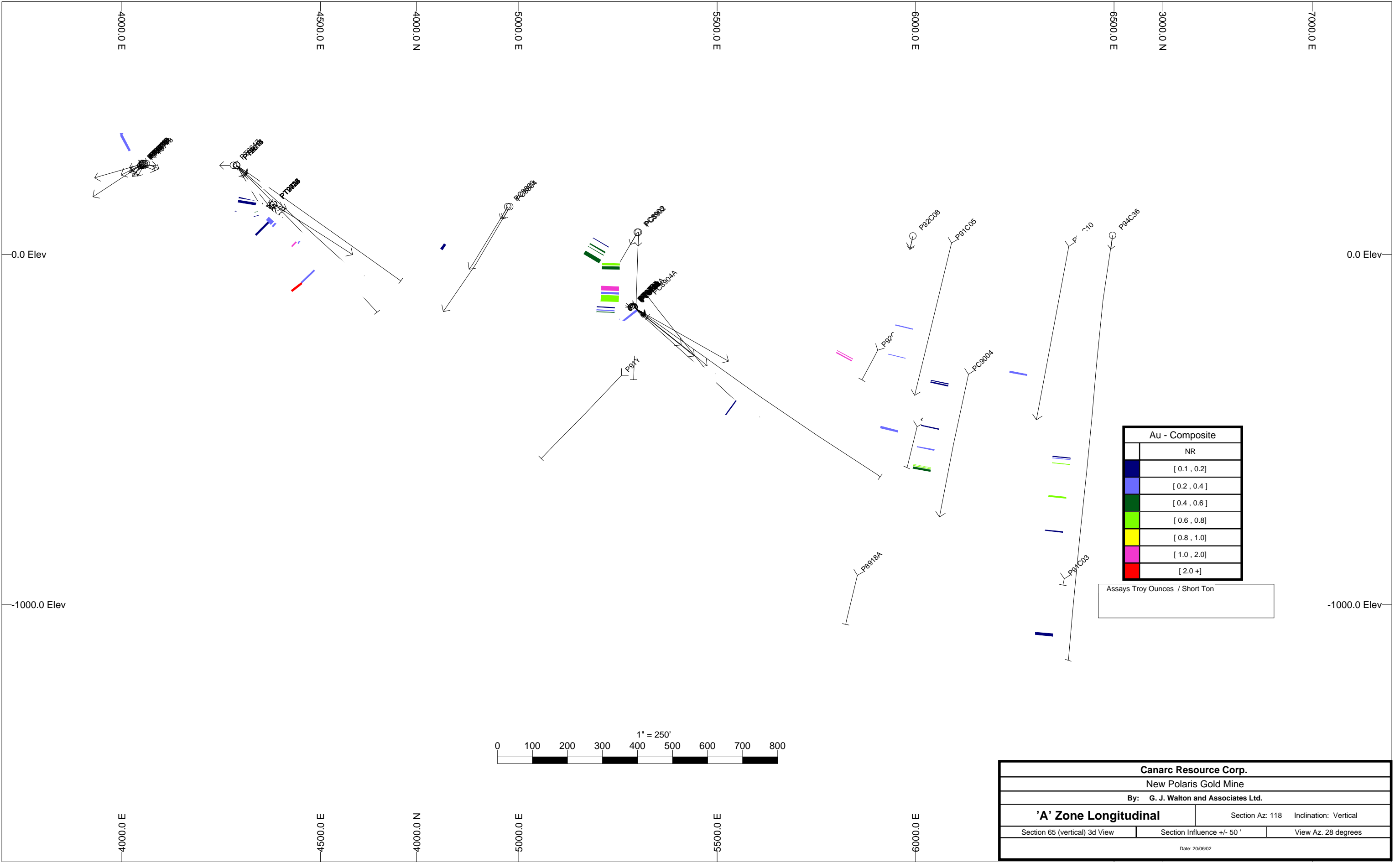


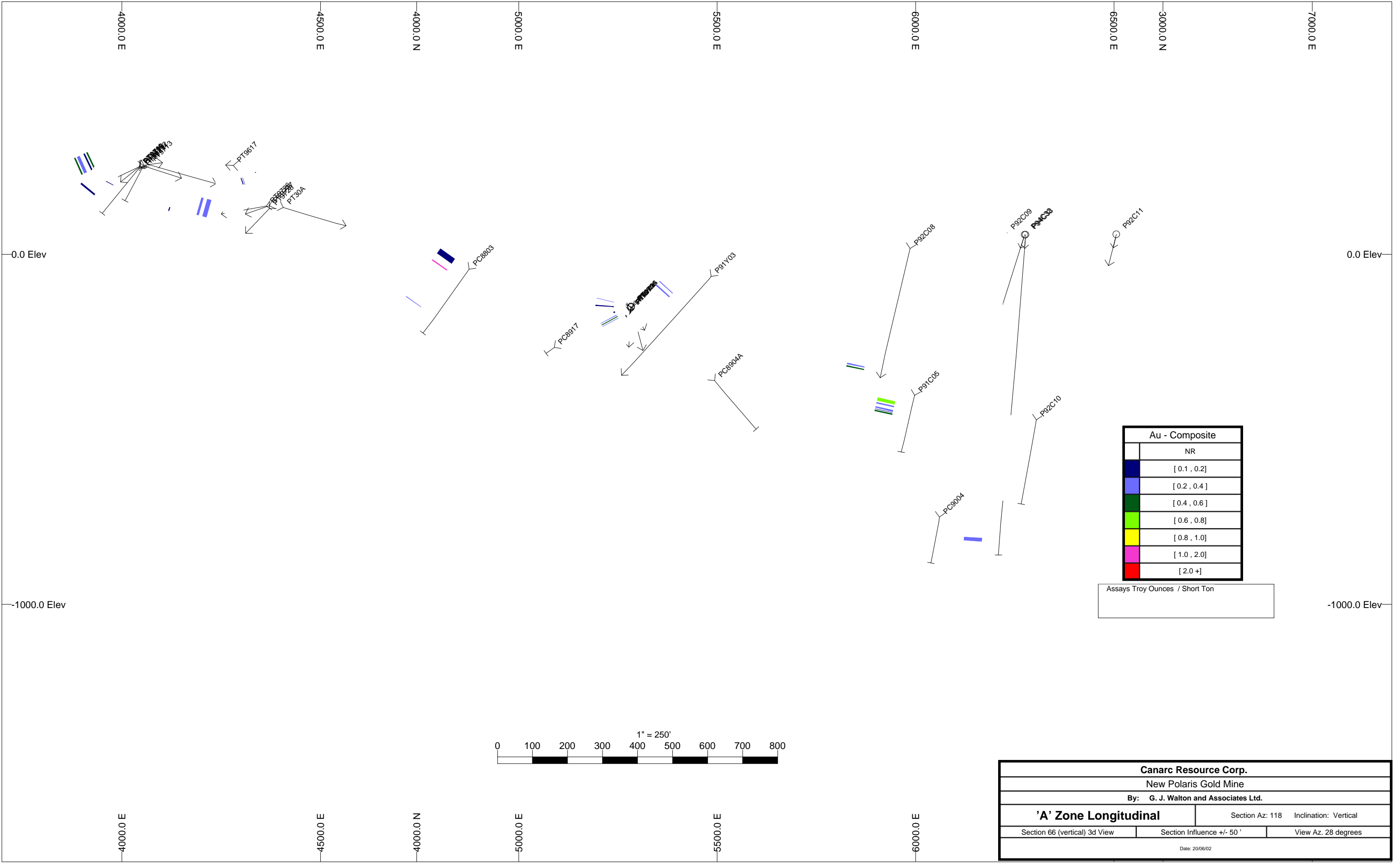
Au - Composite	
	NR
	[ 0.1 , 0.2 ]
	[ 0.2 , 0.4 ]
	[ 0.4 , 0.6 ]
	[ 0.6 , 0.8 ]
	[ 0.8 , 1.0 ]
	[ 1.0 , 2.0 ]
	[ 2.0 + ]

Assays Troy Ounces / Short Ton

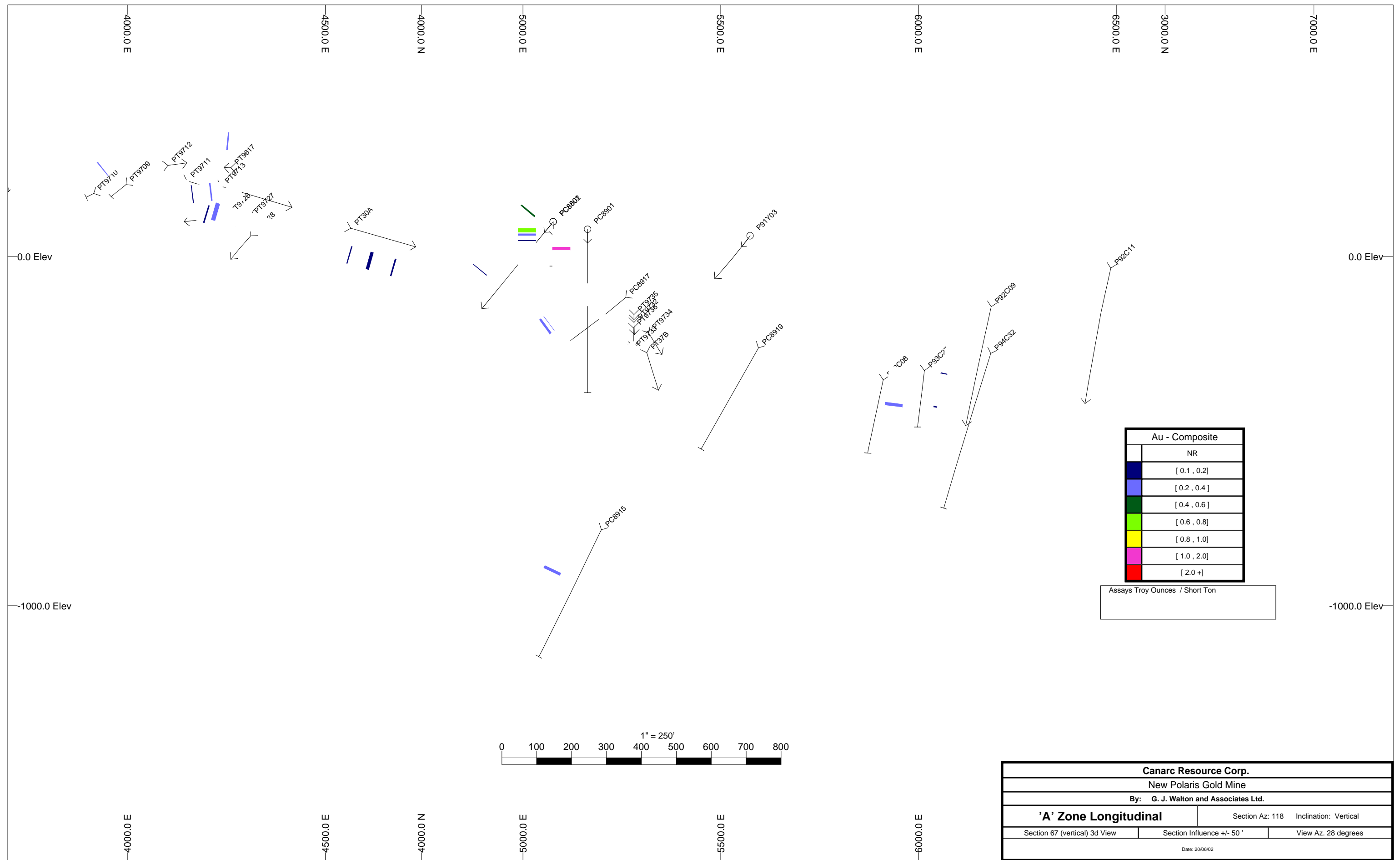
Canarc Resource Corp.		
New Polaris Gold Mine		
G. J. Walton and Associates Ltd.		
Y Zone Longitudinal		Section Az. 90    Inclination 0
Section 6300.00 E North South View	Section Influence +/- 100 '	Section View 90
Date: 20/06/02		



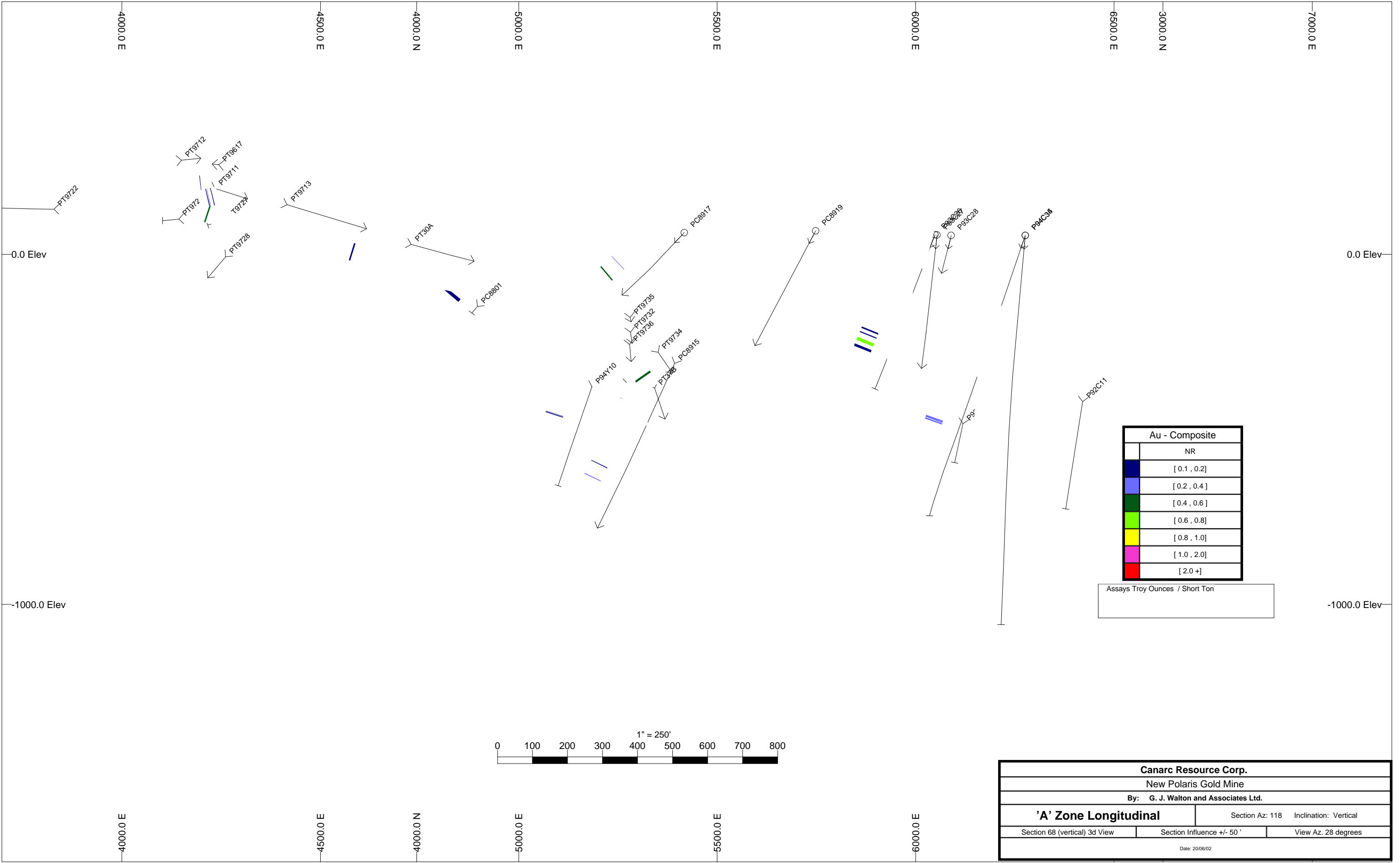




Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'A' Zone Longitudinal	Section Az: 118	Inclination: Vertical
Section 66 (vertical) 3d View	Section Influence +/- 50'	View Az. 28 degrees
Date: 20/06/02		



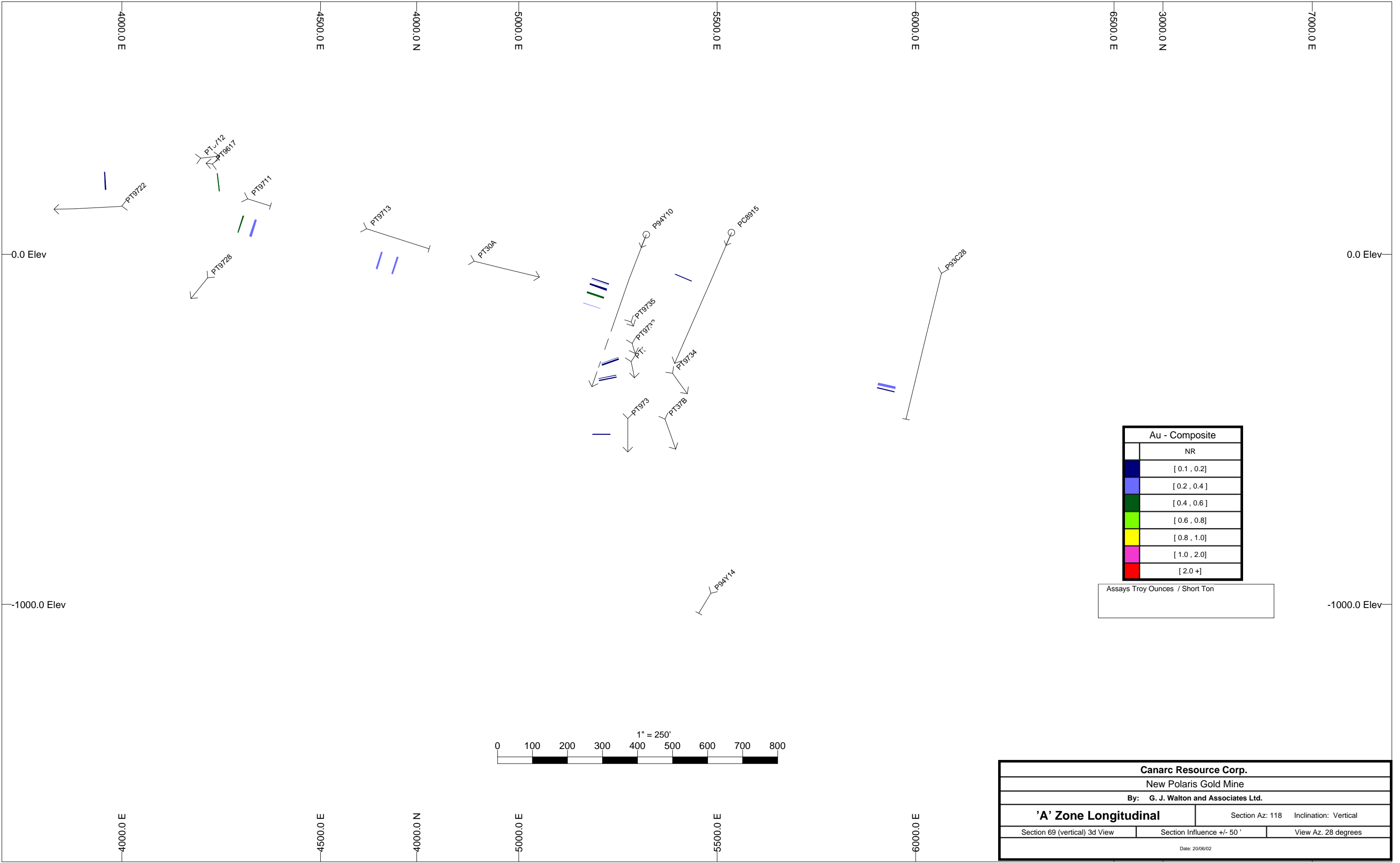




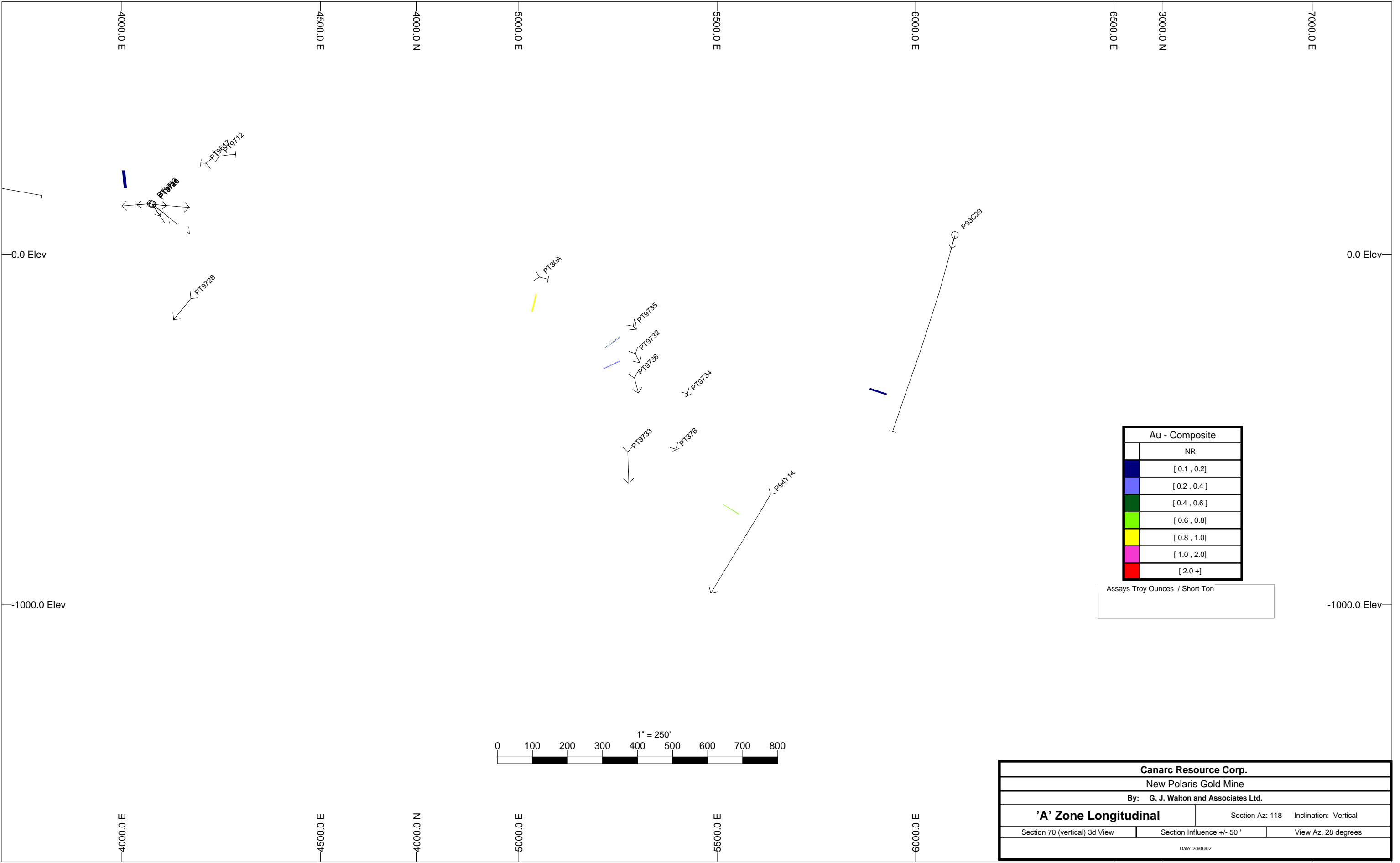
Au - Composite	
	NR
	[ 0.1 , 0.2 ]
	[ 0.2 , 0.4 ]
	[ 0.4 , 0.6 ]
	[ 0.6 , 0.8 ]
	[ 0.8 , 1.0 ]
	[ 1.0 , 2.0 ]
	[ 2.0 + ]

Assays Troy Ounces / Short Ton

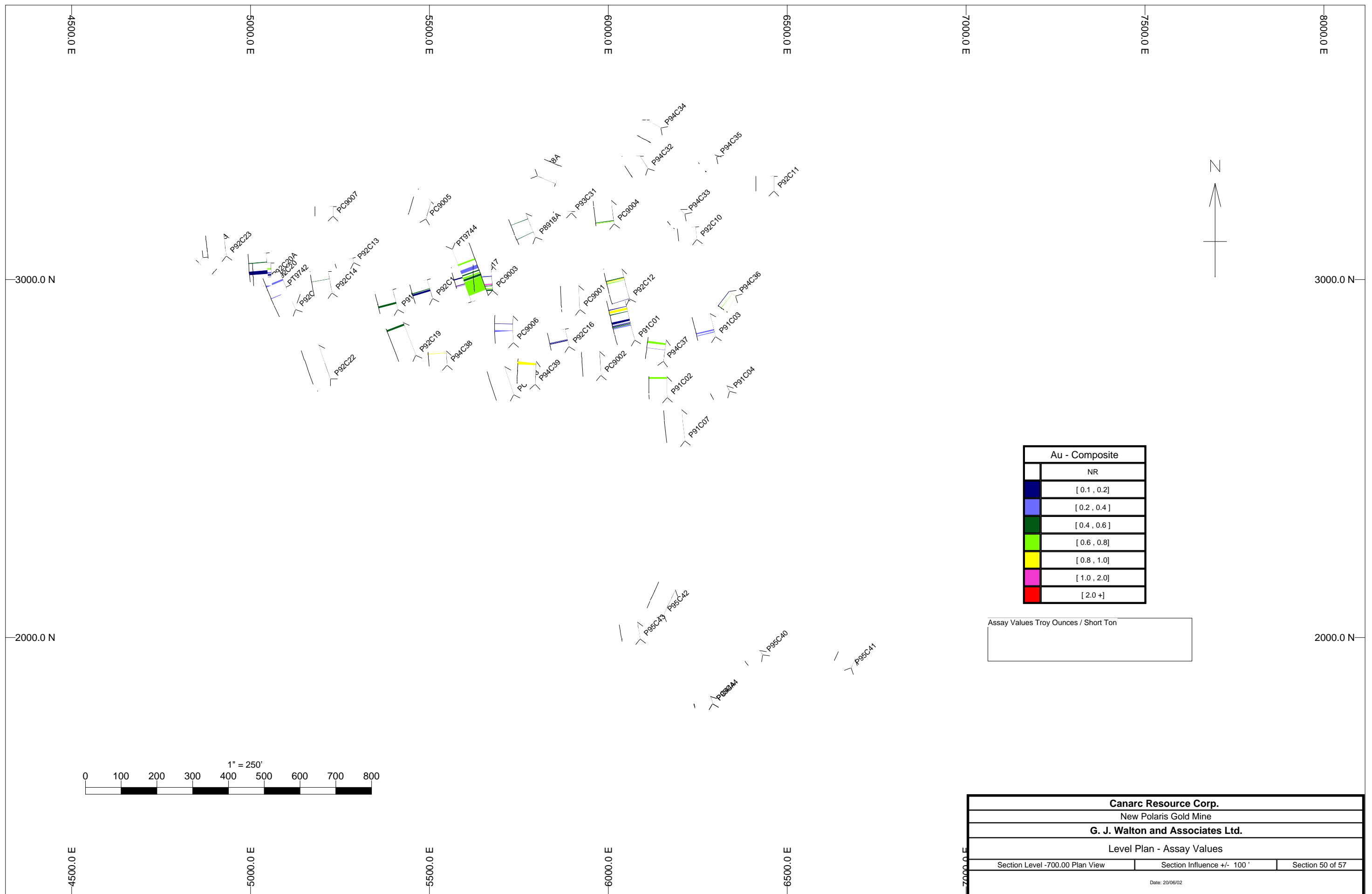
Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'A' Zone Longitudinal	Section Az: 118	Inclination: Vertical
Section 68 (vertical) 3d View	Section Influence +/- 50'	View Az. 28 degrees
Date: 20/06/02		

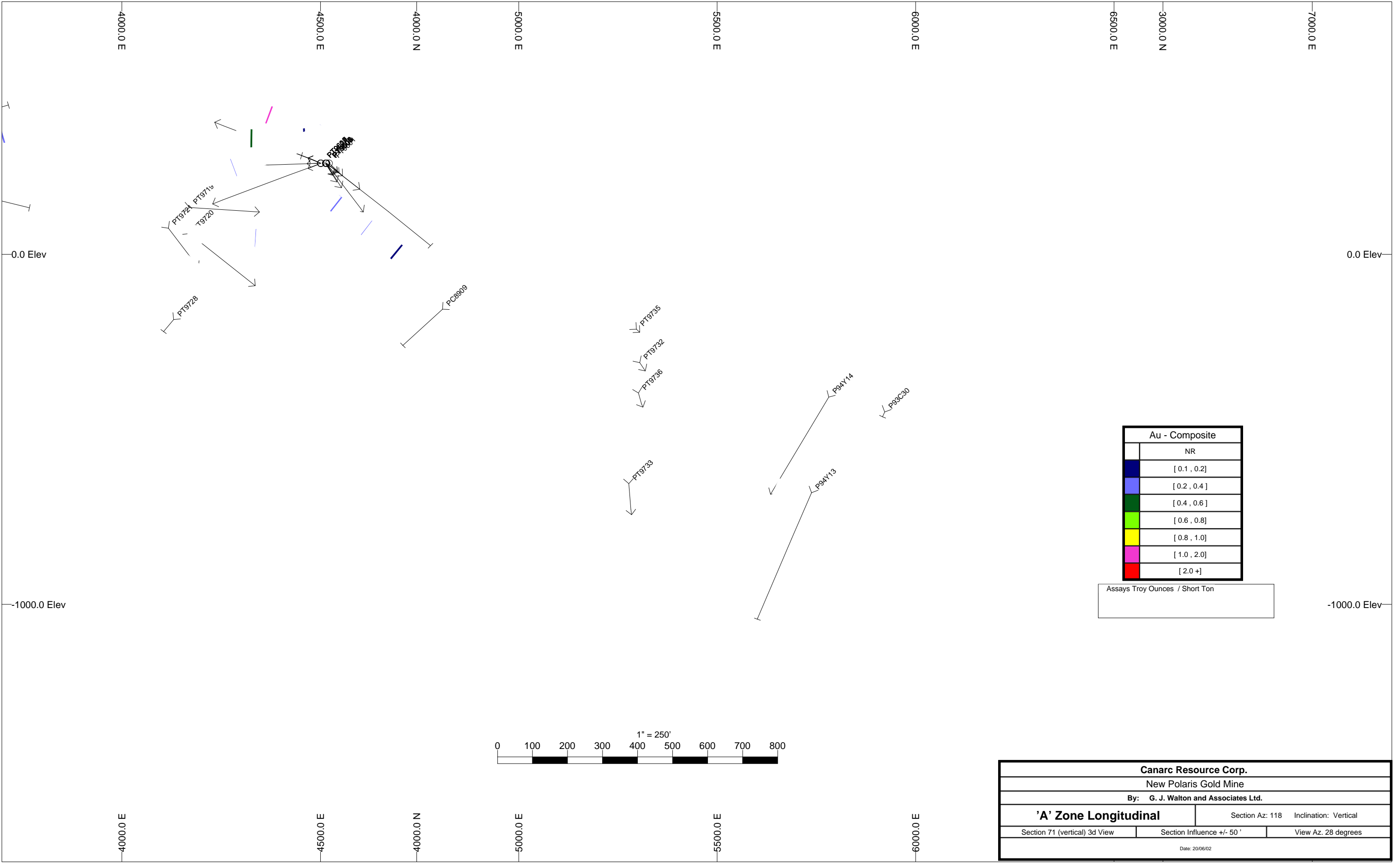


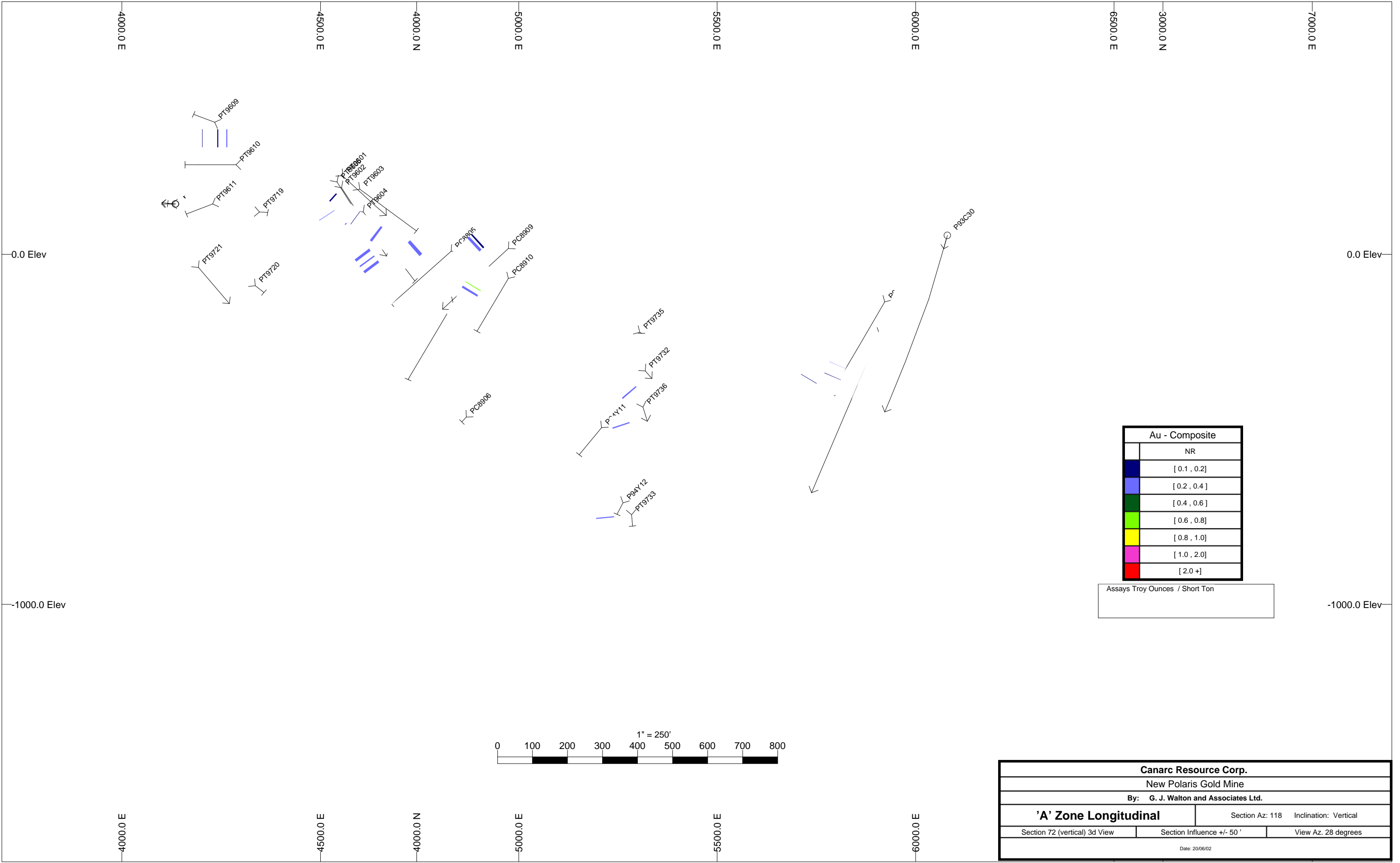
Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'A' Zone Longitudinal	Section Az: 118	Inclination: Vertical
Section 69 (vertical) 3d View	Section Influence +/- 50'	View Az: 28 degrees
Date: 20/06/02		



Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'A' Zone Longitudinal	Section Az: 118	Inclination: Vertical
Section 70 (vertical) 3d View	Section Influence +/- 50'	View Az: 28 degrees
Date: 20/06/02		



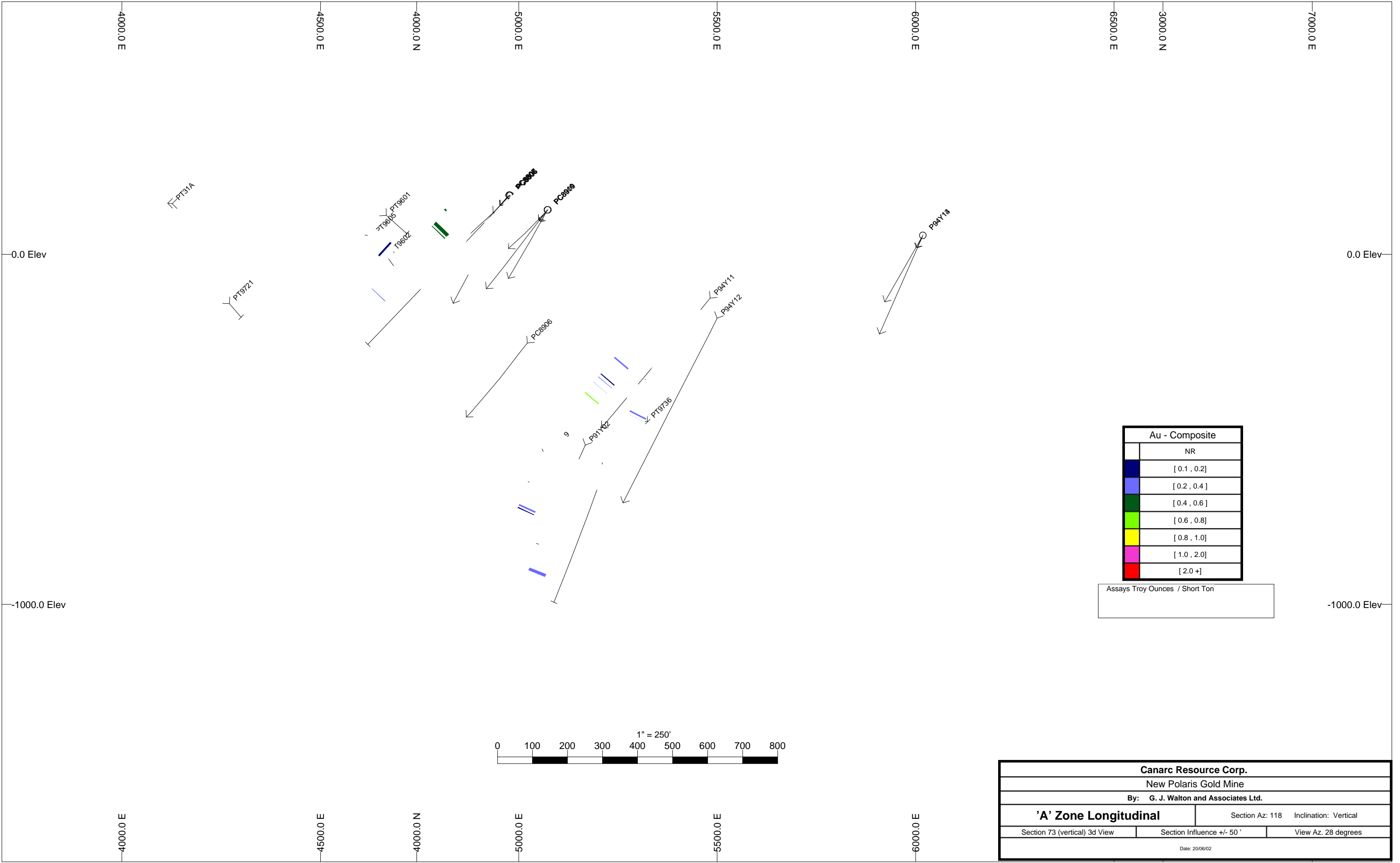


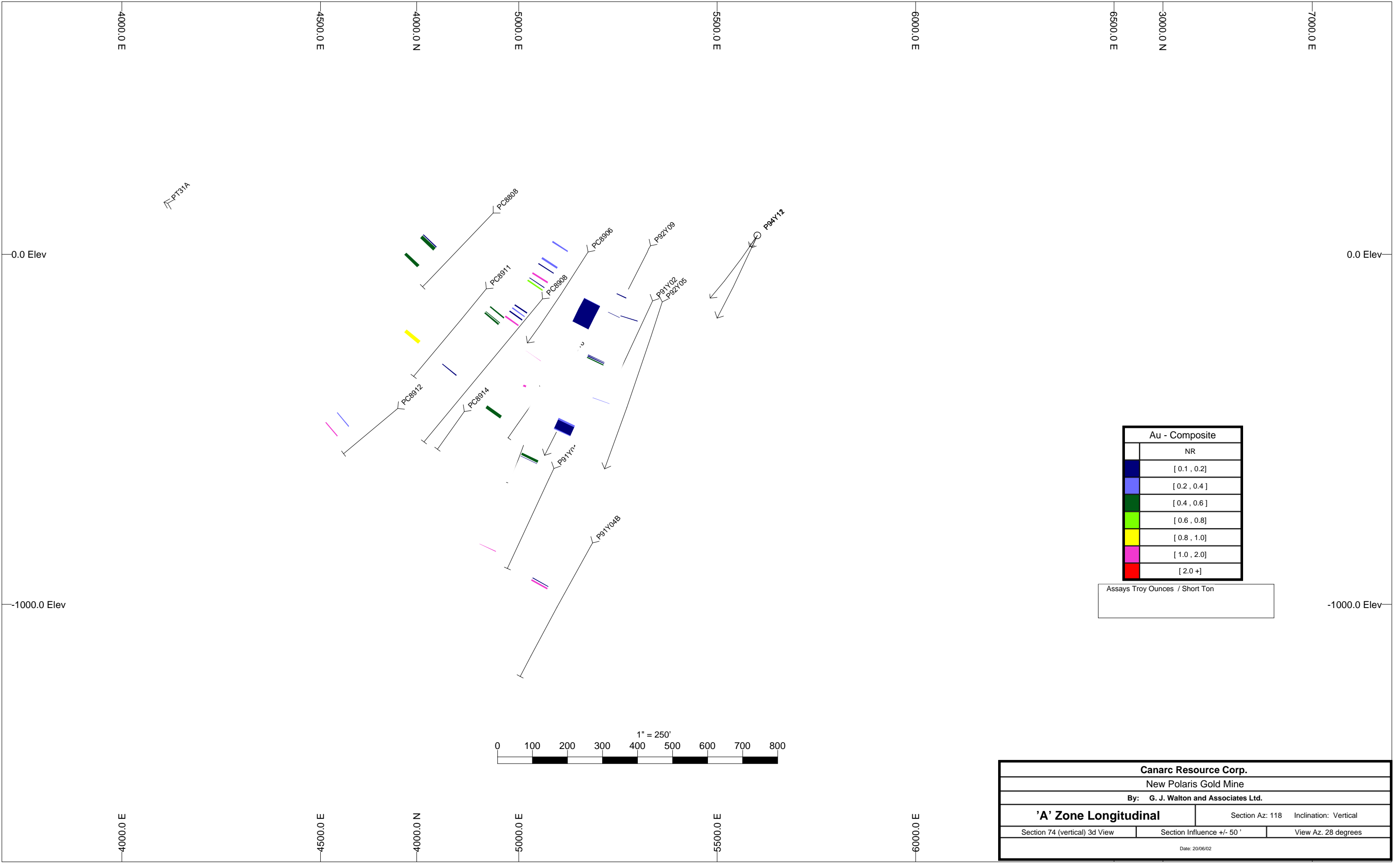


Au - Composite	
	NR
	[ 0.1 , 0.2 ]
	[ 0.2 , 0.4 ]
	[ 0.4 , 0.6 ]
	[ 0.6 , 0.8 ]
	[ 0.8 , 1.0 ]
	[ 1.0 , 2.0 ]
	[ 2.0 + ]

Assays Troy Ounces / Short Ton

Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'A' Zone Longitudinal	Section Az: 118	Inclination: Vertical
Section 72 (vertical) 3d View	Section Influence +/- 50'	View Az: 28 degrees
Date: 20/06/02		

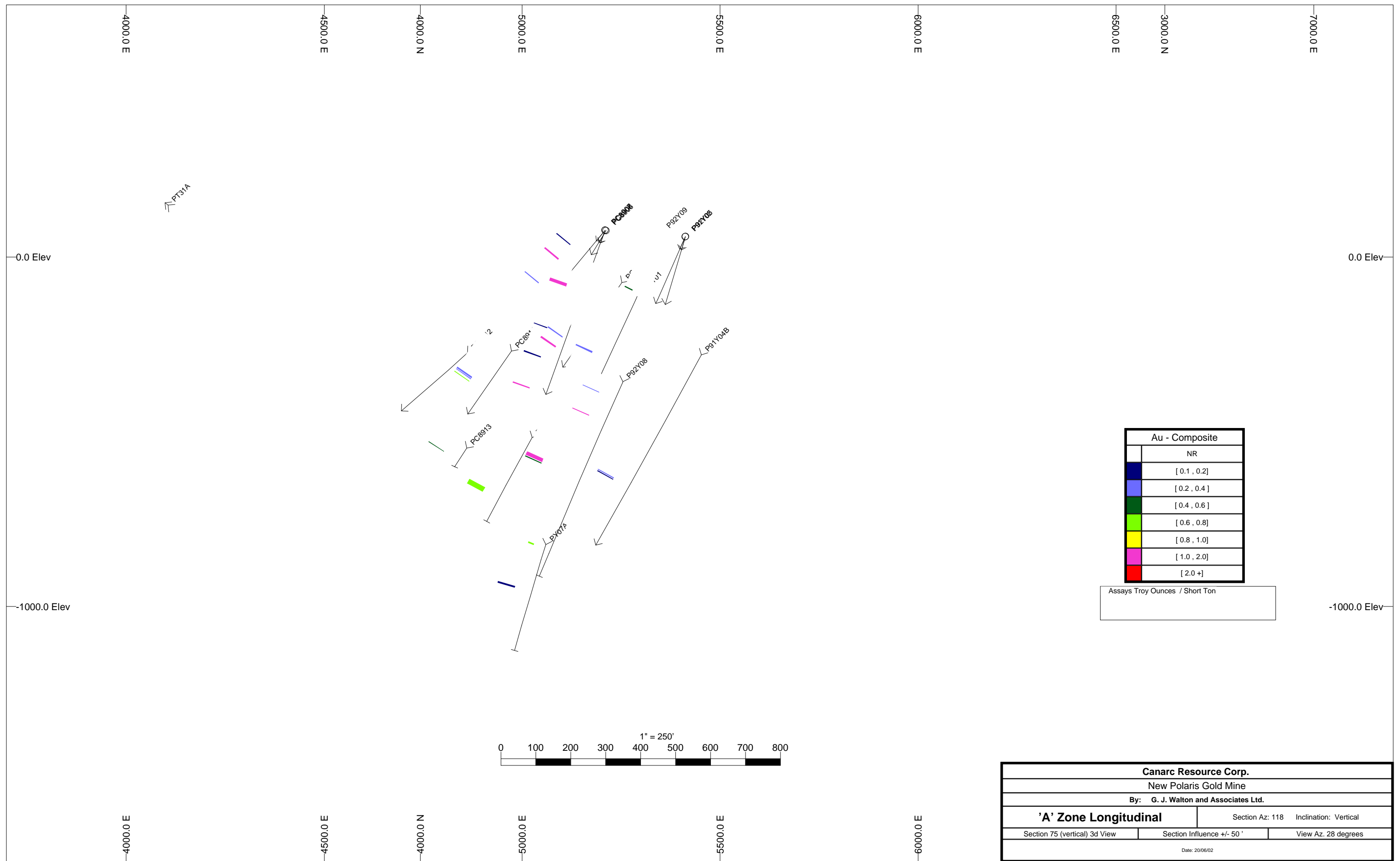


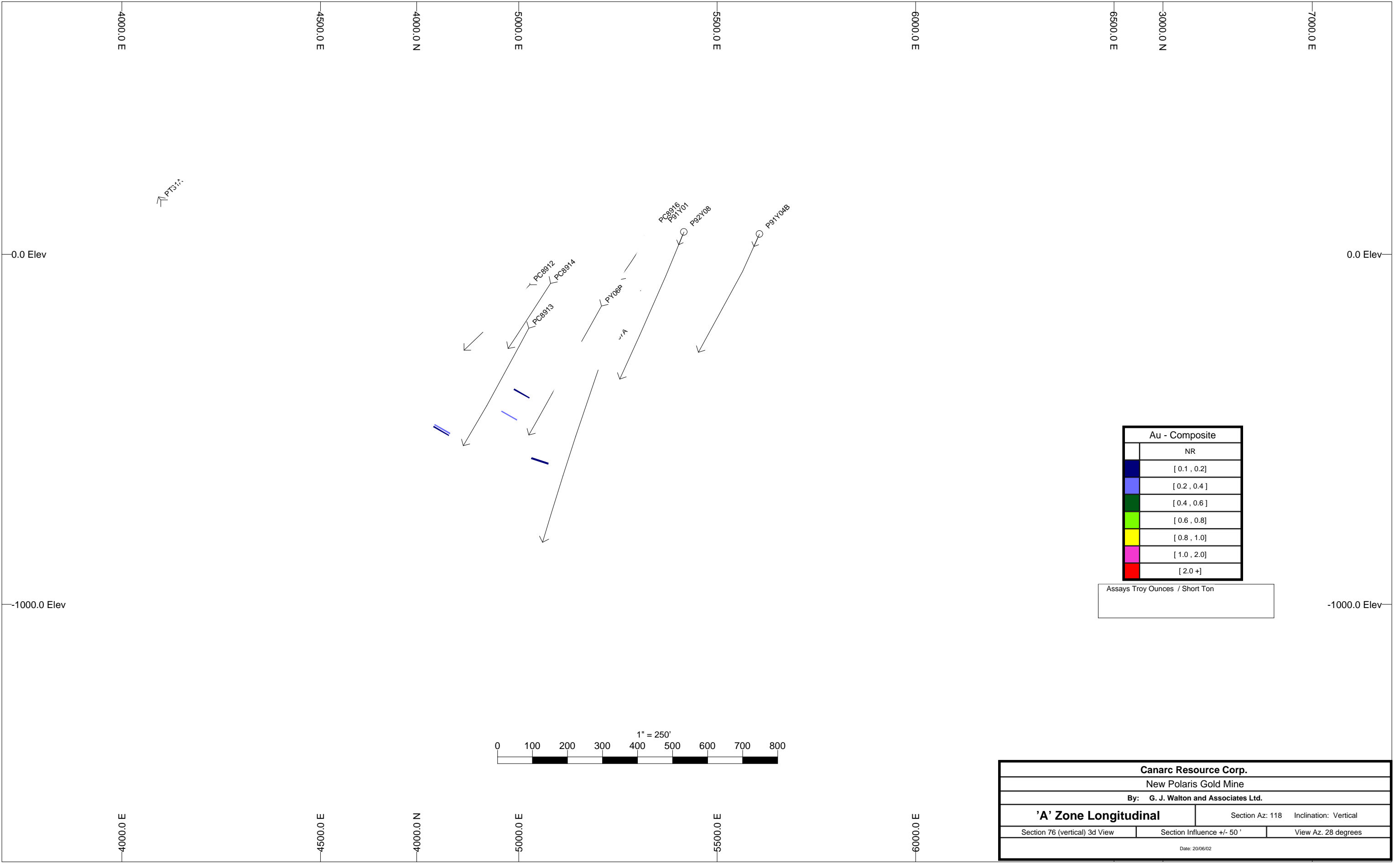


Au - Composite	
	NR
	[ 0.1 , 0.2 ]
	[ 0.2 , 0.4 ]
	[ 0.4 , 0.6 ]
	[ 0.6 , 0.8 ]
	[ 0.8 , 1.0 ]
	[ 1.0 , 2.0 ]
	[ 2.0 + ]

Assays Troy Ounces / Short Ton



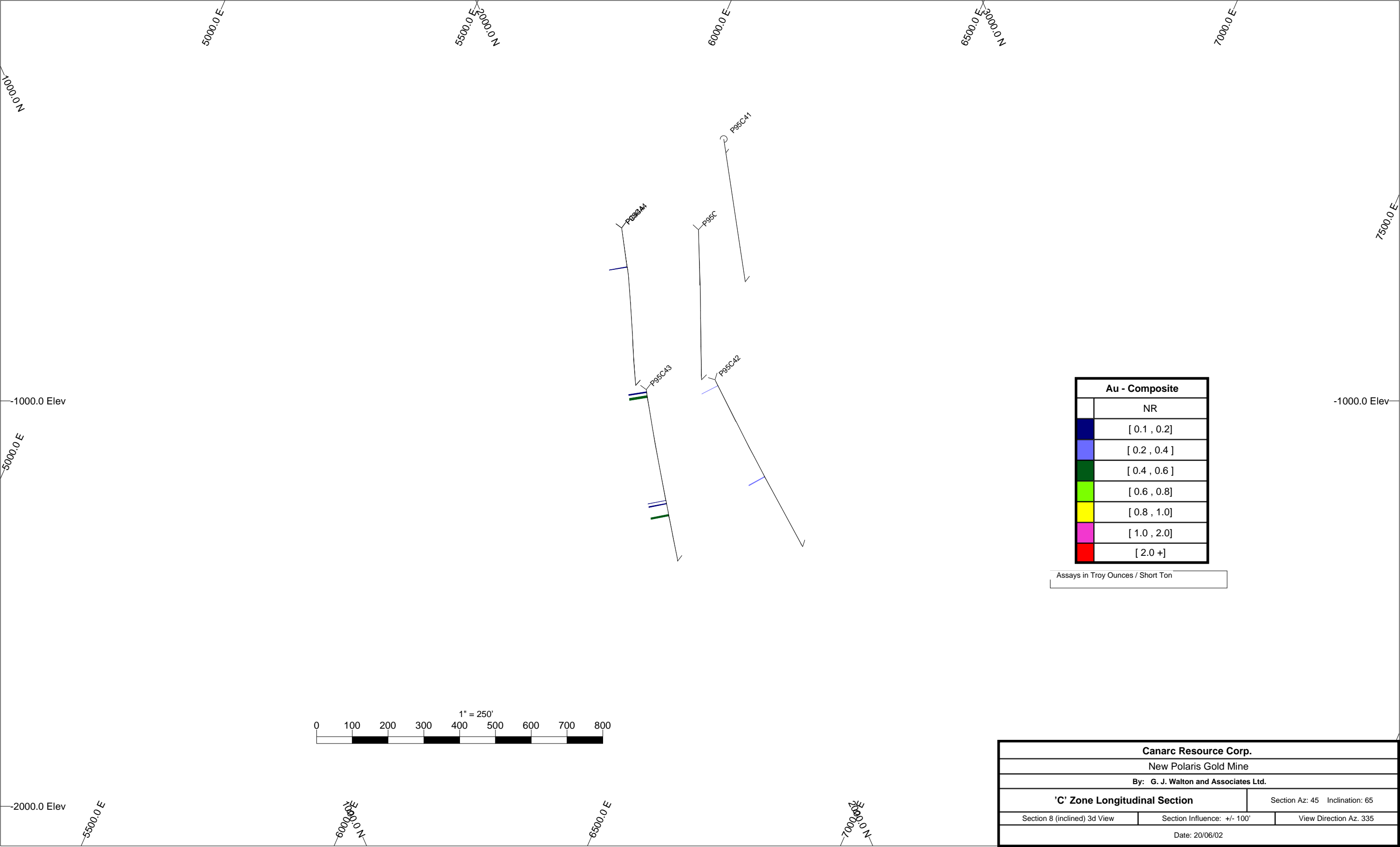


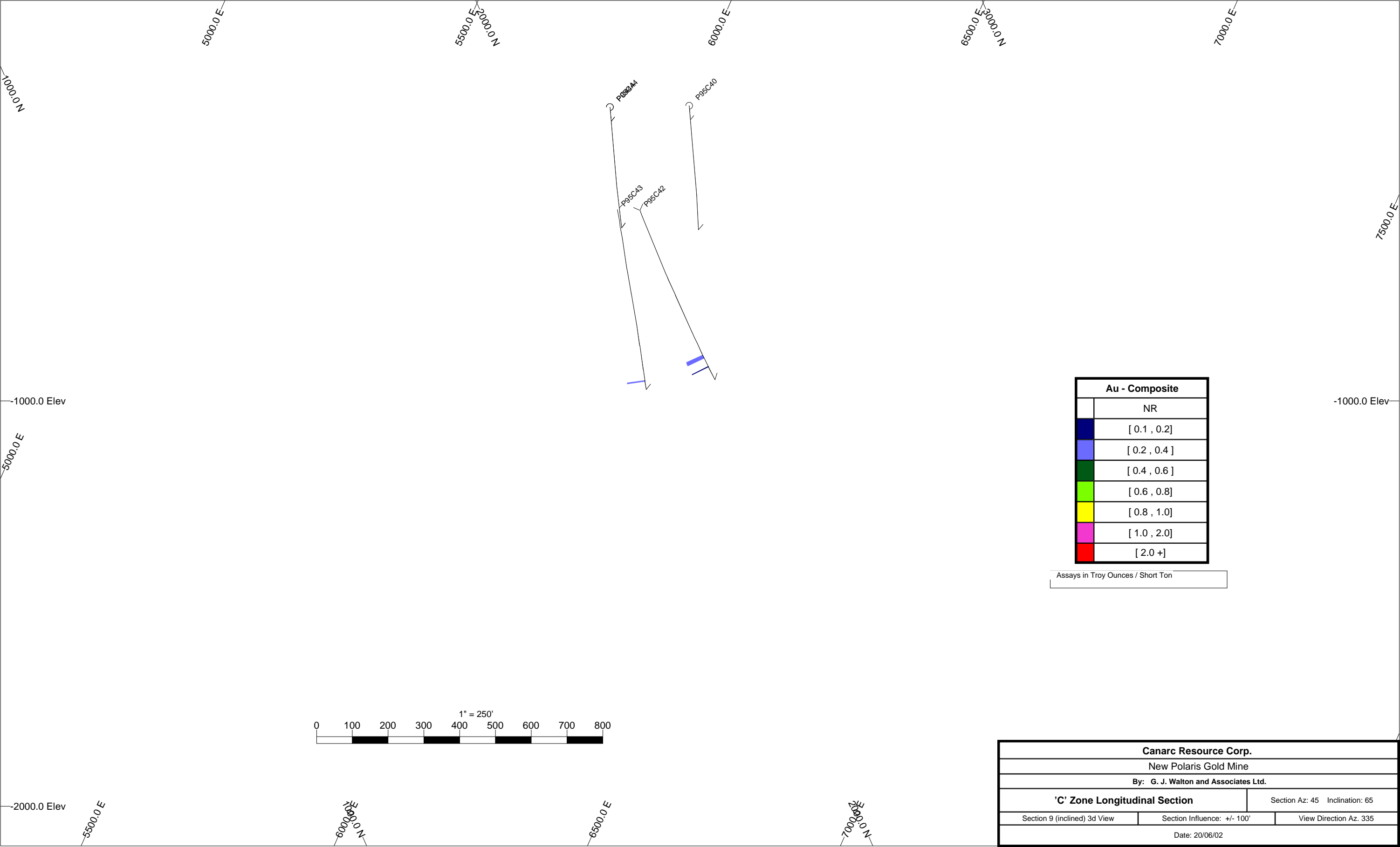


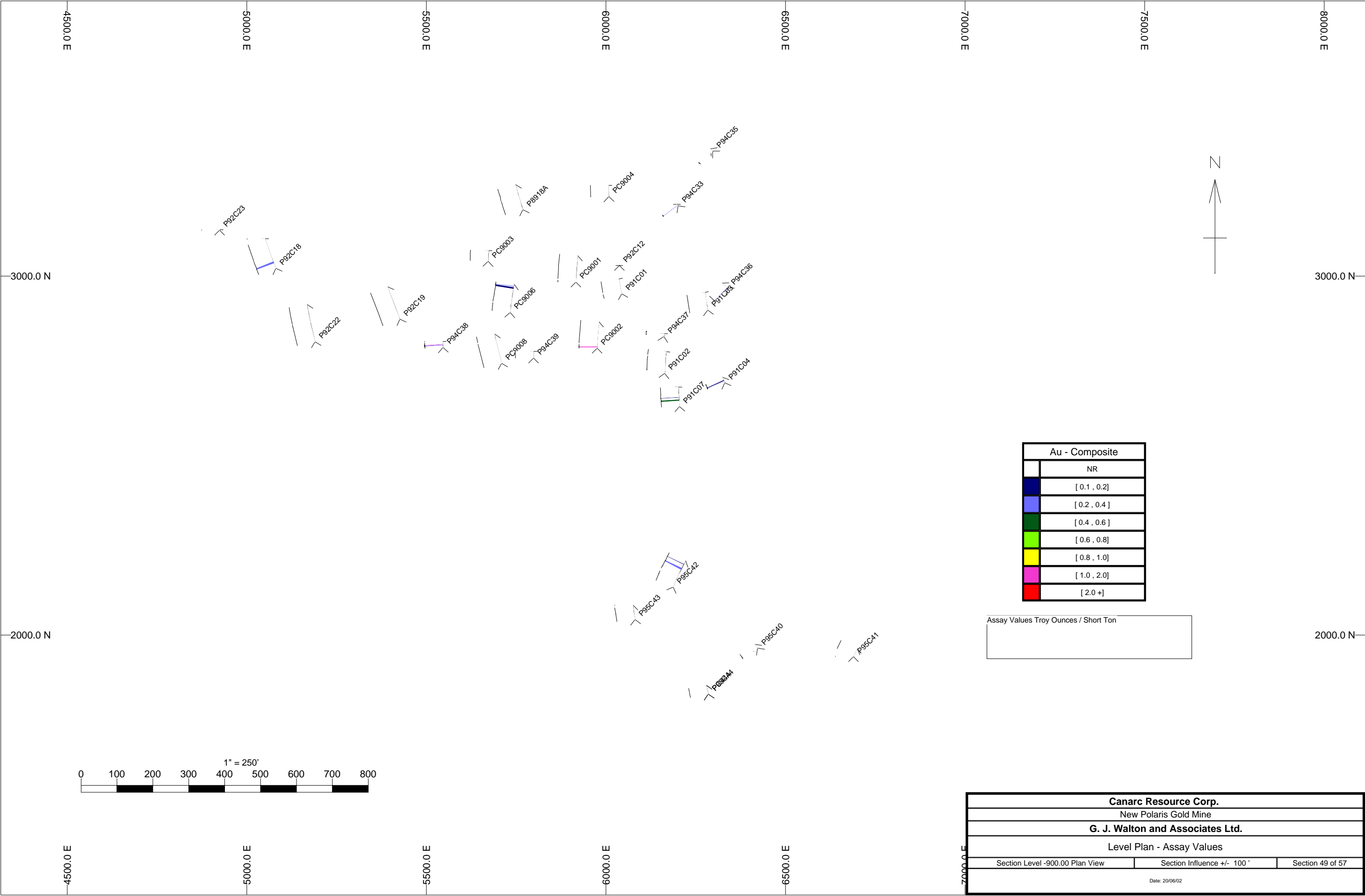
Au - Composite	
	NR
	[ 0.1 , 0.2 ]
	[ 0.2 , 0.4 ]
	[ 0.4 , 0.6 ]
	[ 0.6 , 0.8 ]
	[ 0.8 , 1.0 ]
	[ 1.0 , 2.0 ]
	[ 2.0 + ]

Assays Troy Ounces / Short Ton

Canarc Resource Corp.		
New Polaris Gold Mine		
By: G. J. Walton and Associates Ltd.		
'A' Zone Longitudinal	Section Az: 118	Inclination: Vertical
Section 76 (vertical) 3d View	Section Influence +/- 50'	View Az: 28 degrees
Date: 20/06/02		

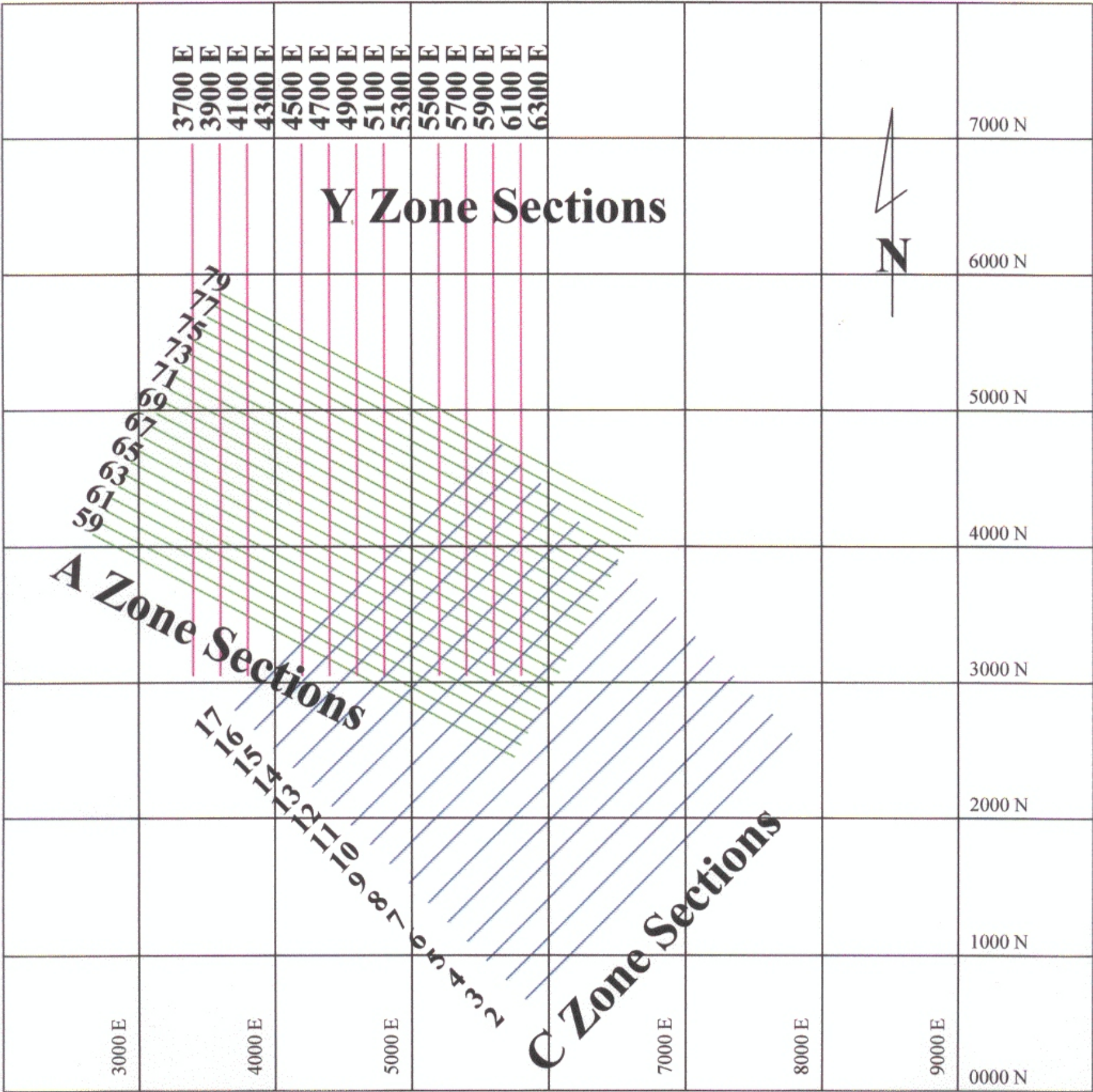






# SECTION INDEX MAP

## New Polaris Gold Mine



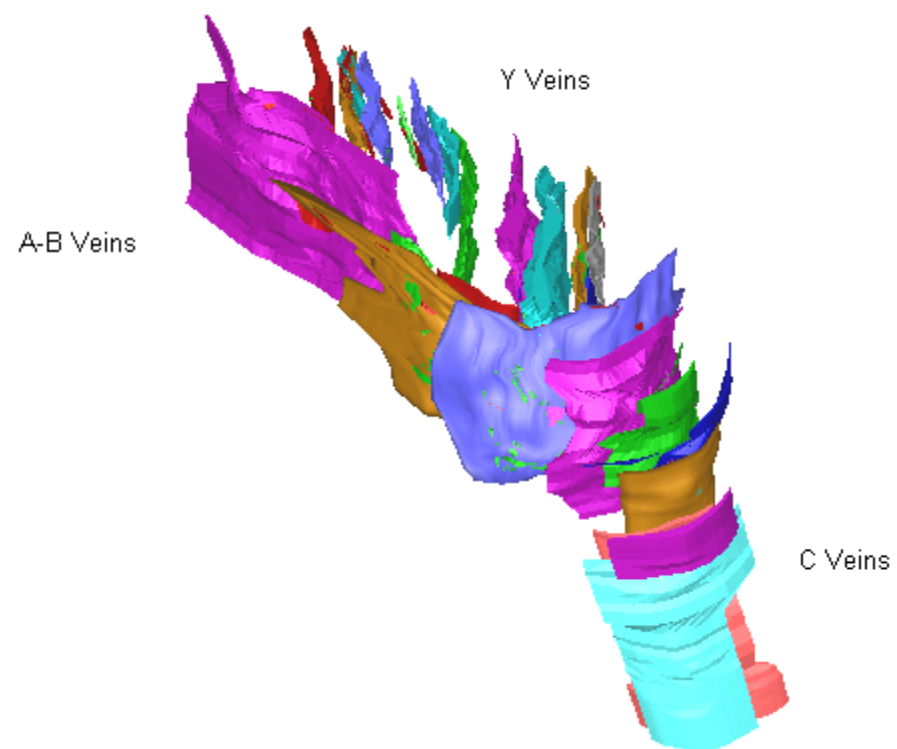


Figure 5 - 3D Model of the Veins

## **Certificate of Author**

I, Godfrey Walton, P.Geo. do hereby certify that:

1. I am currently employed as President by:  
  
G.J Walton and Associates  
5463 Cortez Crescent  
North Vancouver, BC  
V7R 4R1
2. I graduated with a degree in BSc. Hons in Geology from the University of Alberta in 1974. In addition, I have obtained a MSc in specializing in Metamorphic Petrology from Queens University, Kingston in 1978.
3. I am a member of the the Association of Professional Engineers and Geoscientists of the Province of British Columbia as of 1992.
4. I have worked as a geologist for a total of 28 since my graduation from university with my B.Sc.
5. I have read the definition of “qualified person” set out in Nation Instrument 43-101 (“NI 43-101”) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirement to be a “qualified person” for the purposes of NI 43-101.
6. I am responsible for the preparation of all sections of the technical report titled Report on the 1996 and 1997 Exploration Program on the NEW POLARIS MINE SITE and dated June 20<sup>th</sup> 2002 (the “Technical Report”) relating to the New Polaris Mine property. I visited the New Polaris property on February 20 1997 for 3 days.
7. I have had prior involvement with the property that is the subject of the Technical Report. The nature of my prior involvement is numerous visits to the property between 1980 and 1986 when I was exploring the area for Chevron Minerals when Golden Bear (Muddy Lake) was discovered. Since 1986 I have visited the area on numerous occasions for other companies.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am not independent of the issuer when applying all of the tests in section 1.5 of National Instrument 43-101. I was an employee of Canarc Resource Corp and an officer until March 2001. During my employment I was not responsible for any work carried out at the New Polaris mine site.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.



11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report

Dated this 20<sup>th</sup> Day of June 2002.

\_\_\_\_\_ *"Godfrey Walton"* \_\_\_\_\_

Godfrey Walton, P. Geo.