

**SUMMARY REPORT  
ON THE TOM ZONE EXPLORATION PROGRAM  
June 30 to July 14, 2003  
SCHEELITE DOME PROJECT, YUKON**

Located in the Hight Creek Area  
Mayo Mining District  
NTS 115 P/9 and P/16

Centred at  
63° 47' North Latitude  
136° 15' West Longitude

-Prepared by-

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In support of YMIP Project ~~No.~~ 03-023

## SUMMARY

The Scheelite Dome property, comprised of 547 contiguous claims, is located 25 kilometres northwest of Mayo in the Mayo Mining District of central Yukon. Yardley Capital Inc. has an option to earn a 100% interest from Copper Ridge Explorations Inc. During the period June 30 to July 15, 2003, a program of 5.9 km of IP surveying, 7.8 km of ground magnetometer surveying and limited mapping and sampling was carried out over the Tom Zone. In addition, a tractor was used to repair the road to the Tom Zone, with approximately 200 m of additional roadwork.

The history of exploration in the area stretches back to the turn of the century when gold placers were first worked in Hight Creek. Although the first hard rock discoveries were made on the Scheelite Dome property soon after, modern gold exploration was initiated by the discovery of, and modelled after, the large tonnage, low grade Fort Knox deposit near Fairbanks, Alaska. From 1994 to 1999, Kennecott Canada Exploration Inc., La Teko Resources Ltd. and Copper Ridge Explorations Inc. conducted thorough and effective exploration, completing detailed soil geochemical sampling, geological mapping, airborne and ground geophysics, extensive excavator trenching and four drilling campaigns. They discovered that the gold mineralization was related to the Scheelite Dome Stock, a Tombstone Plutonic Suite (TPS) intrusion, but unlike Fort Knox, the greatest potential lay outside of the intrusion within metasediments of the Hyland Group.

The property is underlain by siliciclastics of the Upper Proterozoic to Lower Cambrian Yusezyu Formation that have been intruded by Triassic metadiorite and more importantly, early Late Cretaceous granodiorite, diorite, lamprophyre and monzonite. These latter intrusive units are part of the TPS that forms a narrow belt of east-west trending intrusions stretching 550 kilometres across the north-central Yukon. The TPS intrusions are spatially related to a wide range of base and precious metal occurrences including intrusion-hosted, sheeted gold veins and tungsten skarns at Dublin Gulch, high-grade Pb-Ag veins at Keno Hill and intrusion-hosted Au stringers and disseminations at Brewery Creek.

At Scheelite Dome, Intrusion-Related Gold System (IRGS) mineralization occurs in several different styles that are related to the Cretaceous TPS stocks and smaller intrusions. High-grade sulphide mineralization replaces limy horizons within metasedimentary rocks. Calc-silicate skarns with Au-W±Bi are developed in calcareous horizons adjacent to the Scheelite Dome stock. An extensive zone of discordant structurally-controlled quartz-sulphide veinlets and vein-faults are associated with the 3500 by 1500 metre Au-As-Sb soil anomaly centred over the Harvey-Rudolph Area and was the target of most of the previous drilling on the property. A similar zone of discordant quartz-sulphide veining has received limited drill testing in the Héon Ridge Zone.

The Scheelite Dome property represents one of the better IRGS-type targets in the Yukon on the basis of the large alteration/mineralization system, the multiple controls for mineralization, and significant drill and trench results. A number of structural targets on the Scheelite Dome property still require drill-testing, including the Hawthorne Ridge, Tom Zone, Swede Zone, Big Time Structure and other soil geochemical anomalies. The Tom Zone represents a particularly attractive high-grade target. It consists of a confluence of reactivated and mineralized north-south faulting, auriferous discordant quartz-sulphide veining and concordant replacement and skarnification of a calcareous horizon. This replacement/skarn mineralization has returned grades of up to 32,770 ppb Au from grab samples and over 100,000 ppb Au from select samples. J. Mair (pers. comm., 2003) has indicated that the host calc-silicate horizon continues along strike to the east-northeast towards and under Hawthorne Ridge.

Further work is fully justified on the Scheelite Dome property. The recommended Phase 1 program for 2003 included detailed IP and ground magnetic surveying, geological mapping and access road rehabilitation. This program was successful in defining I.P. chargeability targets that correlate in part with surface mineralization. The chargeability results, combined with the magnetometer survey, will assist in defining drill targets for the Phase 2 drill program.

## TABLE OF CONTENTS

<b>SUMMARY</b> .....	<b>I</b>
<b>INTRODUCTION</b> .....	<b>1</b>
<b>PROPERTY DESCRIPTION AND LOCATION</b> .....	<b>2</b>
<b>ACCESSIBILITY, CLIMATE AND PHYSIOGRAPHY</b> .....	<b>4</b>
<b>HISTORY</b> .....	<b>4</b>
<b>GEOLOGICAL SETTING</b> .....	<b>7</b>
Regional Geology .....	7
Property Geology .....	9
<b>MINERALIZATION</b> .....	<b>10</b>
Concordant Mineralization.....	11
Discordant Mineralization .....	12
Skarn Mineralization.....	12
<b>TOM ZONE</b> .....	<b>12</b>
<b>EXPLORATION PROGRAM</b> .....	<b>14</b>
<b>CONCLUSIONS</b> .....	<b>17</b>

### APPENDICES

Appendix A	References
Appendix B	Statement of Expenditures
Appendix C	Report of Activities – D. Héon
Appendix D	Sample Descriptions
Appendix E	Acme Labs Assay Certificate
Appendix F	Field Report – Scheelite Dome IP Survey – Aurora Geosciences

### LIST OF TABLES

	<u>Page</u>
Table 1	Claim Data..... 3
Table 2	Lode Mineral Exploration History..... 5
Table 3	Geologic History of the Mayo Area..... 8
Table 4	Tom Zone Significant Samples ..... 14

### LIST OF FIGURES

	<u>Page</u>
Figure 1	Location Map. .... 1
Figure 2	Claim Map..... 2
Figure 3	Regional geology ..... 7
Figure 4	Scheelite Dome Property compilation map..... 11
Figure 5	Gold soil geochemistry ..... 13
Figure 6	Tom Zone geology, sampling and geophysics grid ..... 15

## INTRODUCTION

Yardley Capital Inc. optioned the Scheelite Dome property from Copper Ridge Explorations Inc. in June 2003. From June 30 to July 15, 2003, Copper Ridge carried out a program of IP and ground magnetics along with limited mapping, sampling and road work as the first phase of the proposed exploration over the Tom Zone high grade gold target, located at the western end of the Scheelite Dome mineralized trend. Contractors working on the project for Copper Ridge included Aurum Geological Consultants Inc., Aurora Geosciences Ltd., Coureur des Bois Ltd. and (cat work). The following report is prepared in support of YMIP project number 03-023.

The Scheelite Dome property is located 25 kilometres northwest of Mayo in the central Yukon (see Figure 1). The area has seen intermittent exploration since 1916 when the first lode claims were staked. The most recent exploration on the property was conducted by Kennecott Canada Exploration Inc., La Teko Resources Ltd., and Copper Ridge Explorations Inc. This work, from 1994 to 1999, targeted bulk tonnage gold deposits. Widespread Au-As soil anomalies, and low and high grade Au mineralization were identified by systematic exploration by these operators.

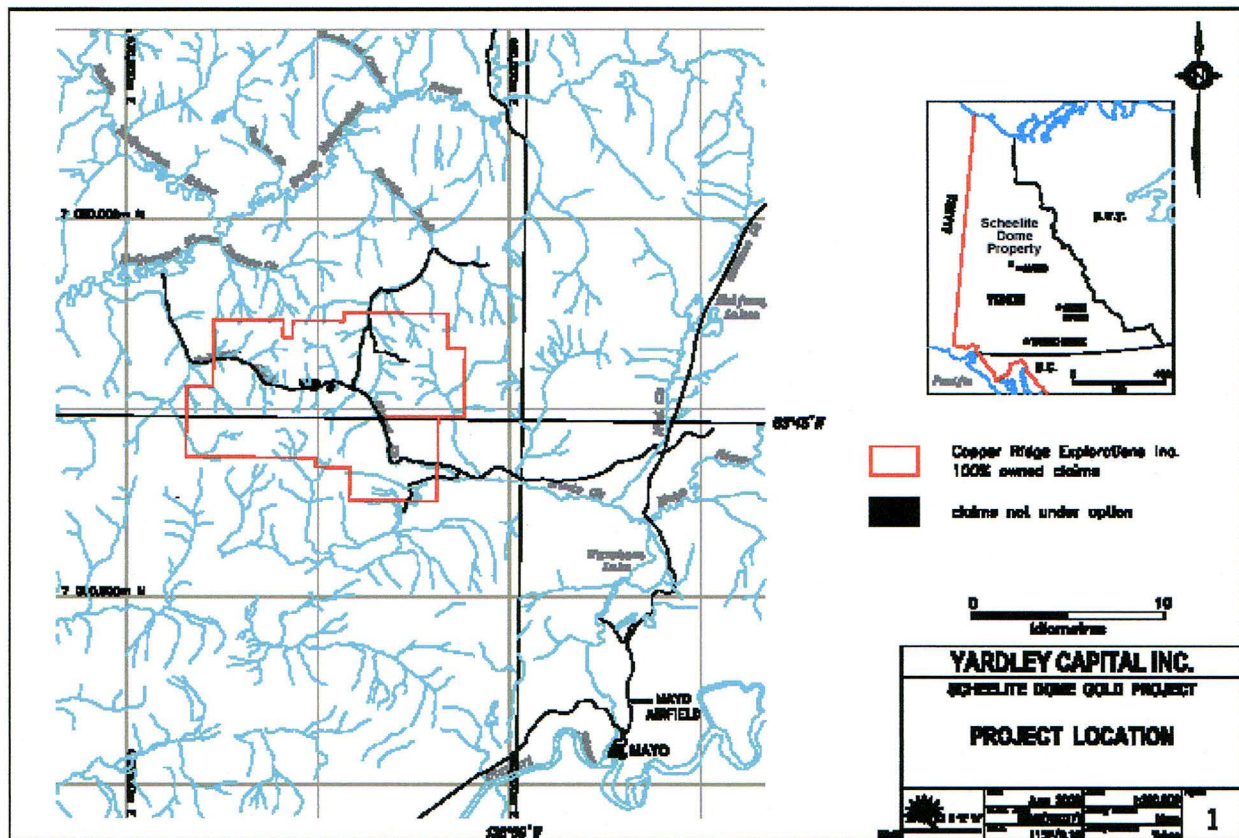


Figure 1. Project location sketch.

Much of the historical and geological project description in this report is taken from a detailed project description by Harris (2003) in a qualifying report prepared for Yardley Capital Inc.

## PROPERTY DESCRIPTION AND LOCATION

The Scheelite Dome property is located 25 kilometres northwest of Mayo in the central Yukon (Figure 1). The property falls within the Mayo Mining District on NTS map sheets 115P/16, 115P/9 and 105M/13 and is centred at 63° 47' north latitude and 136° 15' west longitude. The claims cover Scheelite Dome, a prominent topographic feature, and the upper portions of Hightet and Johnson Creeks. The Scheelite Dome property consists of 547 contiguous quartz claims, including 14 fractional claims (Figure 2), covering approximately 104 km<sup>2</sup> (10,400 hectares) in the Mayo Mining District. The mineral claims are registered in the name of Copper Ridge Explorations Inc. as outlined in Table 3.1.

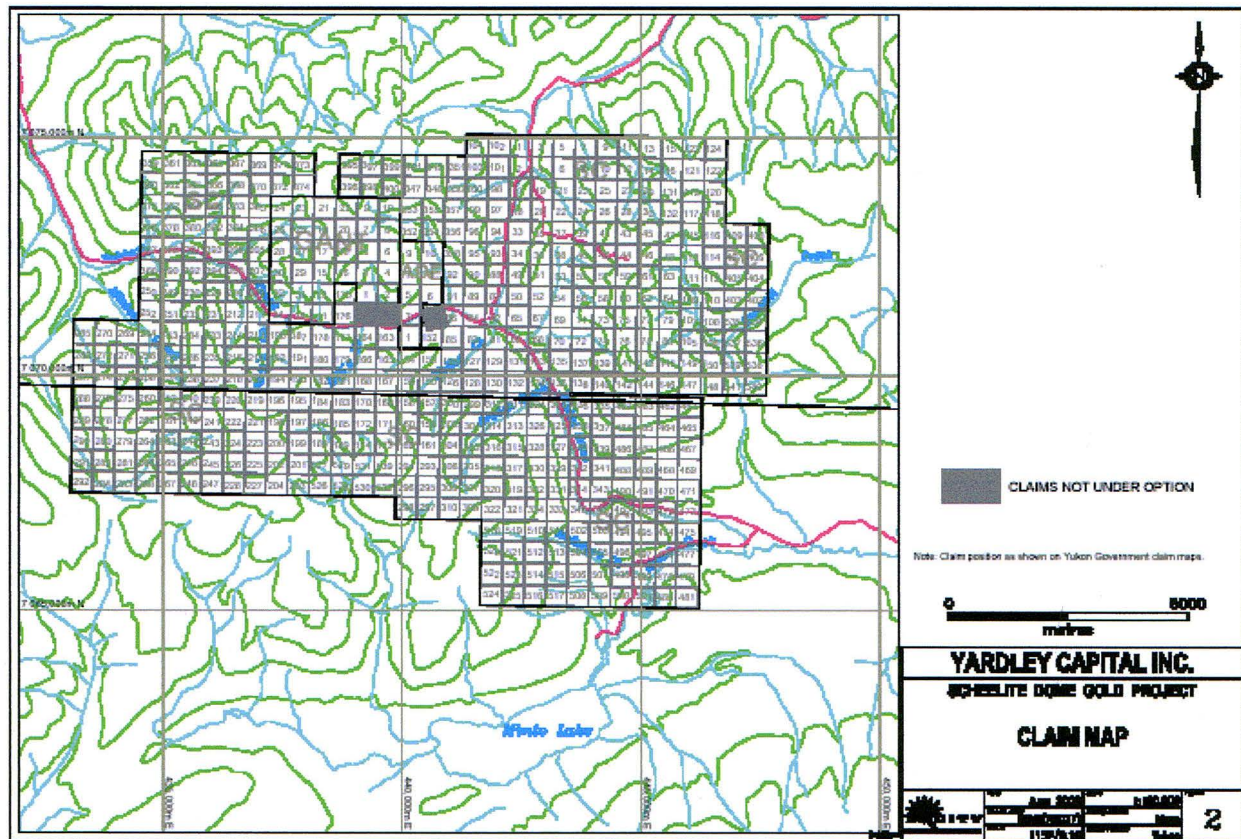


Figure 2. Scheelite Dome Property claim map.

The vendor on the Gant and Ade claims, Mr. Rudy Riepe, retains a 2% net smelter royalty (NSR) that can be purchased for \$2,000,000. Kennecott retains a 2% net smelter return royalty, of which 1% may be purchased for US\$1,000,000 prior to the third anniversary of the agreement (September 12, 2003) or for US\$3,000,000 thereafter. In addition, upon a decision being made to construct a mine Kennecott shall receive a cash payment of US\$1,000,000 if the decision is within five years of the agreement date, the payment increasing by 10% each year thereafter to a maximum of US\$3,000,000. The A and B claims are owned by Mr. Ralph Barchen of Mayo, Yukon and are not part of the Scheelite Dome property. Kennecott surveyed most of the Gant and Ade claims plus a number of the SC claims with differentially corrected GPS (+/- 5 m accuracy). The Tang 1-16Fr claims were staked to cover fractions located by this survey.

Yardley Capital Inc. may earn a 20% interest in the Scheelite Dome property by completing \$1.5 million in exploration expenditures on the property by December 31, 2006,

issuing 200,000 shares of Yardley Capital Inc. and upon regulatory approval of the agreement, making a payment of \$10,000 to Copper Ridge Explorations Inc. Yardley may increase its interest to 51% by making an additional \$1 million in exploration expenditures on the property (for a total of \$2.5 million) and issuing an additional 300,000 shares to Copper Ridge by December 31, 2008. Yardley Capital Inc. shall maintain all claims in good standing.

A Mining Land Use Permit is in force for the Scheelite Dome property until December 31, 2003, and an amendment was filed with the Mining Land Use Division of the Department of Indian Affairs and Northern Development in order to carry out the work described in this report.

**TABLE 1**  
**CLAIM DATA**

Claim Name	Grant Number	No. of Claims	Expiry Date
Gant 1-11	YA83206-216	11	May 31, 2008
Gant 13	YA83217	1	May 31, 2008
Gant 15-34	YA83218-237	20	May 31, 2008
Ade 1-10	YA83747-756	10	May 31, 2008
SC 1-64	YB42504-567	64	May 31, 2012
SC 65-80	YB43132-147	16	May 31, 2012
SC 81-84	YB43175-178	4	May 31, 2010
SC 85-150	YB43319-384	66	May 31, 2012
SC 151	YB43769	1	May 31, 2012
SC 152-188	YB43730-766	37	May 31, 2012
SC 189-204	YB43770-785	16	May 31, 2012
SC 205-208	YB43786-789	4	May 31, 2009
SC 209-210	YB43767-768	2	May 31, 2012
SC 211-292	YB43790- 871	82	May 31, 2009
SC 293-334	YB44537-578	42	May 19, 2008
SC 335-372	YB64197-234	38	May 31, 2008
SC 373-374	YB64392-393	2	May 31, 2008
SC 375-409	YB64235-269	35	May 31, 2008
SC 462-495	YB64673-706	34	May 31, 2006
SC 496	YB64707	1	May 31, 2011
SC 497	YB64708	1	May 31, 2006
SC 498-533	YB64709-744	36	May 31, 2011
SC 534	YC01099	1	June 12, 2005
SC 535	YC01096	1	June 12, 2005
SC 536	YC01097	1	June 12, 2004
SC 537	YC01098	1	June 12, 2005
SC 538	YC01104	1	June 16, 2004
SC 539	YC01105	1	June 16, 2005
SC 540	YC01106	1	June 16, 2004
SC 541	YC01107	1	June 16, 2005
Tang 1-6Fr	YB80826-831	6	May 31, 2008
Tang 7-9Fr	YB80832-834	3	June 9, 2008
Tang 10Fr	YB80835	1	May 31, 2008
Tang 11-12Fr	YB80836-837	2	June 9, 2008
Tang 13-14Fr	YC01093-094	2	June 12, 2005
Tang 15Fr	YC01092	1	June 12, 2005
Tang 16Fr	YC01095	1	June 12, 2005
		547	

## ACCESSIBILITY, CLIMATE AND PHYSIOGRAPHY

Access to the property from Mayo is via the Silver Trail, leading to Elsa and Keno City, and the Minto Lake road, from which the Hight Creek road branches off at 11 kilometres. The Hight Creek road leads to the Morrison Creek and Scheelite Dome roads. Only the Silver Trail is maintained during the winter months. During the summer months, alternate access to the property is by helicopter based in Mayo. The 1994 through 1999 exploration programs were based out of a camp established on the property.

The area was subjected to Pleistocene glaciation with the exception of ridge and hilltops. Hillsides are covered by talus and scree. Valleys are typically floored with glacial debris and glaciofluvial outwash. Patches of permafrost are found throughout the property, especially on north-facing slopes. Rock outcrops are rare, and largely restricted to ridges, cliffs and creek bottoms. Soils consist of talus fines and glaciofluvial deposits.

Scheelite Dome, at an elevation of 1597 metres, is a prominent hill within the Stewart Plateau. Steep hills with local cliffs and felsenmeer-covered ridges are cut by a dendritic drainage system. Elevations on the property range from approximately 850 to 1597 metres. Most of the Scheelite Dome property lies at approximately 1370 metres. Vegetation in the valley bottoms consists of alder, birch, balsam fir and white and black spruce. Ground cover in areas of thin tree cover consists of alpine plants, 'buck brush' (alder), dwarf willow and moss. The tree line is at about 1525 metres.

The climate is characterized by low precipitation and a wide temperature range. Winters are cold, and temperatures of  $-30^{\circ}\text{C}$  to  $-40^{\circ}\text{C}$  are common. Summers are moderately cool to hot, with daily highs of  $15^{\circ}\text{C}$  to  $30^{\circ}\text{C}$ . Scheelite Dome, being a prominent peak, attracts frequent rain shower activity during the summer months. The property is generally snow-free from early June to mid September.

## HISTORY

The earliest activity in the area consisted of small-scale placer mining following the discovery of placer gold in 1884 on Johnson Creek and later in 1903, by John Hiatt, in Hight Creek. Hight Creek has produced the largest amount of placer gold in the Mayo area and remains active to date. The first recorded lode exploration on the property dates back to 1916 when J.A. Anderson and R. McNeil discovered and located claims over the Hawthorne vein. The reader is referred to Harris (2003) for a detailed description of the exploration history and exploration results.

**TABLE 2**  
**LODE MINERAL EXPLORATION HISTORY**

Year	Company	Program	Sample Type	# of Samples	Analyzed For	Analytical Technique
1916	J.A. Anderson R. McNeil	Staked Hawthorne Vein				
1920's, 1930's	Cantin Family	Hand Trenching				
1933	J. Hawthorne R. Rasmussen	Hand Trenching Hawthorne Vein				
1943	T. McKay	Hand Trenching Cominco Zone				
1948	United Keno Hill Mining Limited	Road construction, Bulldozer Trenching				
1965	A.H. Moisey	Bulldozer Trenching				
1969	G. Elvins	Mapping	Soil			
1969-70	J. Hawthorne	Trenching				
1970(?)	International Minerals and Chemical Corp.	Bulldozer Trenching	Soil			
1979	Cominco Ltd.	Mapping, Bulldozer Trenching  3 ddh's: 271.9 metres	Soil	144	Cu, Pb, Zn, Ag Sn, Au Mo W	Cu, Pb, Zn, Ag: HNO <sub>3</sub> ±A.R./A.A. Sn: XRF, Au: A.R./A.A. Mo: HNO <sub>3</sub> / colourimetric W: dithiol colourimetric
			Silt	26	Cu, Pb, Zn, Ag Sn, Au Mo W	Cu, Pb, Zn, Ag: HNO <sub>3</sub> ±A.R./A.A. Sn: XRF, Au: A.R./A.A. Mo: HNO <sub>3</sub> / colourimetric W: dithiol colourimetric
			Heavy Mineral Concentrate	27	Cu, Pb, Zn, Ag Sn, Au Mo W	Cu, Pb, Zn, Ag: HNO <sub>3</sub> ±A.R./A.A. Sn: XRF, Au: A.R./A.A. Mo: HNO <sub>3</sub> / colourimetric W: dithiol colourimetric
1991	H6000 Holdings Ltd.	Trenching, Road Construction	Grid Soil	734	Au, As	n/a



**TABLE 2**  
**LODE MINERAL EXPLORATION HISTORY**

1994-96	Kennecott Canada Exploration Inc.	Prospecting, Mapping, Road Construction	Traverse, Grid Soil Stream Sediment Rock  Heavy Mineral Concentrate	1994-96 Total: 4075 1994-96 Total: 232 1994-96 Total: 3302 n/a	Au + 32 elements  Au + 32 elements  Au + 32 elements  Au +33 elements	-150# split, Au: FA/AA (30g) 32-element A.R./I.C.P. Au: FA/AA (30g) 32-element A.R./I.C.P. Au: FA/AA (30g) 32-element A.R./I.C.P. Instrumental Neutron Activation
1995	Kennecott	Prospecting, Mapping, Traverse, Grid Soil; Stream Sediment 19 Trenches: 1.23 km  8 NQ ddh's: 1035.0 m	Rock, Core		Au + 32 elements	Au: FA/AA (30g) 32-element A.R./I.C.P.
1995-96	Kennecott	Helicopter-borne EM, VLF, Mag		1275 km		
1996	Kennecott		Grid Soil		Au + 32 elements	-150# split, Au: FA/AA (30g) 32-element A.R./I.C.P.
1997	Kennecott	Mapping, GPS surveying  13 RC Holes: 1052.3 m  8 Trenches: 1757 m	Soil  RC chip  Rock	158  765  760	Au + 32 elements  Au + 32 elements  Au + 32 elements	-150# split, Au: FA/AA (30g) 32-element A.R./I.C.P. Au: FA/AA (30g) 32-element A.R./I.C.P. Au: FA/AA (30g) 32-element A.R./I.C.P.
1998	La Teko Resources Ltd.		Grid Soil  Rock  Core	107  11  934	Au + 32 elements  Au + 32 elements  Au + 32 elements	-80# split, Au: FA/AA (10g) 32-element A.R./I.C.P. Au: FA/AA (30g) 32-element A.R./I.C.P. Au: FA/AA (30g) 32-element A.R./I.C.P.
	IP Resistivity	IP Resistivity		12.4 km		
1999	Copper Ridge Explorations Inc.		Grid Soil  Rock  Core	690  60  54.55 km 994	Au + 34 elements  Au + 34 elements  Au + 32 elements	-150# split, Au: FA/AA (30g) 34-element A.R./I.C.P. Au: FA/AA (30g) 34-element A.R./I.C.P.  Au: FA/AA (30g) 32-element A.R./I.C.P.

## GEOLOGICAL SETTING

### Regional Geology

Rocks of the Scheelite Dome area are part of western Selwyn Basin, the site of Late Proterozoic and Middle Paleozoic basinal clastic sedimentation. The Selwyn Basin was bounded during this time by the Mackenzie-Ogilvie Platform to the north and the Cassiar Platform to the south and west. The regional geology has been recently mapped at 1:50,000 scale by Murphy (1997).

In the Mayo area, Selwyn Basin rocks are imbricated by the Jura-Cretaceous Dawson, Tombstone, and Robert Service thrusts (Murphy and Héon, 1995). The Robert Service thrust typically juxtaposes Upper Proterozoic Hyland Group rocks, including those of the Scheelite Dome area, against Mississippian shelf sedimentary units including the 'Keno Hill Quartzite'. The underlying Tombstone thrust sheet of Selwyn Basin rocks are juxtaposed against an immediate footwall of Devonian (?) to Late Jurassic clastics of the Earn Group (?). An intense strain zone affects much of the Tombstone thrust sheet and extends upward well into the Robert Service thrust sheet. Hyland Group rocks are underlain in the west by Ordovician to Silurian Road River Group basinal sediments.

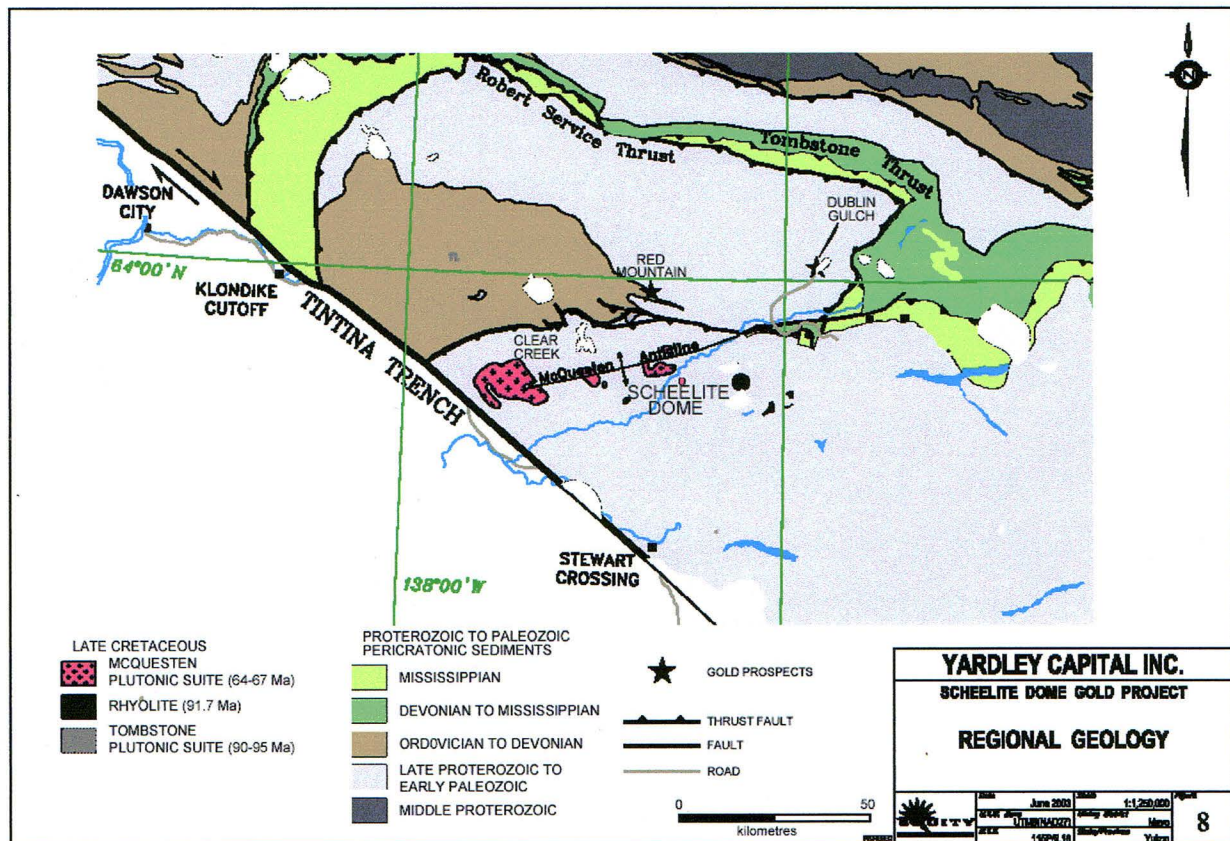


Figure 3. Scheelite Dome property regional geology.

The above rocks and thrust sheets are intruded by the Tombstone Plutonic Suite (TPS) a suite of 92.5-90.5 Ma intermediate to felsic intrusions. Compositionally the TPS range from clinopyroxenite, gabbro, and rare tinguaitite to granite (Mortenson et al., 1997). Most intrusions

are granodiorite, quartz monzonite, monzogranite, monzonite, quartz syenite or syenite. The smaller bodies, such as the Scheelite Dome and Minto Lake intrusions, typically consist of felsic to intermediate compositions and are metaluminous (Murphy, 1997). Porphyritic, aplitic and lamprophyre dikes cut both intrusions and the host rocks.

The TPS forms a narrow (50 km wide), east-west trending belt, 550 kilometres long, across north-central Yukon from Dawson City to the Yukon-Northwest Territories border (Mortenson et al., 1997). The TPS is truncated in the west by the Tintina Fault Zone, a Cretaceous-Tertiary dextral strike slip fault with an estimated 450 kilometres of displacement. Restoration of this displacement aligns a similar suite of intrusions, including the Fort Knox intrusion (host to the Fort Knox deposit) in the Fairbanks area, on the west side of the fault zone.

The TPS intrusions are spatially associated with a wide range of base and precious metal occurrences, which in some cases are genetically related to the magmatism. Types and styles of mineralization include the following: sheeted vein systems hosted within the intrusions (Fort Knox, Dublin Gulch, Sheeted Zone at Scheelite Dome), sheeted veins within metasediments (Harvey-Rudolph area at Scheelite Dome), disseminations and stringers in intrusions (Brewery Creek), skarns adjacent to intrusions (Marn, Cominco Zone, Tom Zone at Scheelite Dome), quartz-sulphide veins within hornfels zones (Hawthorne Vein at Scheelite Dome), sediment-hosted stratabound sulphide replacement (Tom Zone at Scheelite Dome), and disseminated, stringer and breccia-hosted mineralization external to the hornfels zone (Hight Creek zone at Scheelite Dome). The characteristic metal assemblage of TPS related deposits is Au-W-Bi-As-Sb-Te-Mo±Cu±Pb±Sn. With a few exceptions, tin-silver bearing breccias, veins and skarns are spatially associated with younger (64-67) Ma McQuesten two-mica granites, while tungsten-gold bearing skarns and sheeted veins are associated with the TPS (Emond, 1992; Murphy, 1997).

Regionally, placer gold deposits draining the topographic highs formed by the Tombstone intrusions include Dublin Gulch and Haggert Creek, draining the Dublin Gulch gold deposit; Clear and Left Clear Creek draining the Clear Creek intrusions; Hight, Sabbath and Johnson Creeks draining Scheelite Dome; Duncan and Lightning Creeks draining the Keno Hill area and Arizona and Gem Creeks draining Red Mountain.

A tabulated geologic history of the Mayo area with associated mineralization is presented below.

**TABLE 3**  
**GEOLOGIC HISTORY OF THE MAYO AREA**  
**(Modified from Hulstein and Zuran, 1997b)**

Age	Event/Lithology	Mineralization
Quaternary	Alluvium/colluvium, glacial till	Placer gold deposits
Tertiary	450 km dextral movement on the Tintina Fault/warping; volcanics & hypabyssal intrusives, volcanoclastics & clastics	Au in veins & stockworks (Grew Creek)
Earliest Tertiary-Latest Cretaceous (67-64 Ma)	McQuesten Plutonic Suite; two mica granite, quartz monzonite, rhyolite flows and intrusives: faulting and brecciation, clastic sedimentation	Sn-Ag in veins, breccias (Oliver Creek, Zeta)

Cretaceous (92.5-90.5 Ma)	Tombstone Plutonic Suite; biotite-hornblende quartz monzonite, granodiorite, quartz diorite, rhyolite dykes: faulting	Au+/-W+/-Bi in veins, stockworks & breccias, rhyolites (Dublin Gulch, Brewery Creek) Pb-Zn-Ag in veins (Keno Hill), Au in calc silicates (Wayne), U, REE in veins, stockworks & disseminations (Tombstone Mtn), Sn-Mo in stockwork (Two Buttes), W in skarns (Dublin Gulch)
Jurassic-Cretaceous	Faulting; Dawson, Tombstone & Robert Service Thrusts; Tombstone Strain Zone	
Triassic	Gabbro, diorite	
Mississippian	Keno Hill quartzite	
Devonian-Mississippian	Earn Group; shales, conglomerates	Stratiform Pb-Zn-Ag-Ba, VMS (Marg)
Unconformity		
Ordovician-Devonian	Road River Group; limestone and shale	Stratiform Pb-Zn
Unconformity		
Upper Proterozoic - Lower Paleozoic	Hyland Group; 'grit', arenite, phyllite, greenstone	

Source: Murphy and Héon, 1995; Emond, 1992, Hart et al, 2000.

### **Property Geology**

The property is underlain by the Yusezyu Formation, a siliciclastic unit of the Upper Proterozoic-Lower Cambrian Hyland Group (Figure 3). The metasedimentary rocks include highly foliated, interlayered muscovite-chlorite phyllites, quartzo-feldspathic and micaceous psammites ('dirty quartzites'), and gritty psammites that locally form massive outcrops. Recrystallized limestone and calc-silicate (chlorite, actinolite, calcite, quartz, and diopside) outcrops are best exposed on the north side of the property although pods and boudins of marble and limy psammites can be found throughout the property.

The most prominent intrusive rocks on the property are three quartz monzonite and granodiorite stocks - the Scheelite Dome, Morrison Creek and Minto Lake stocks. The level of exposure varies but the compositionally similar stocks are comprised largely of medium- to coarse-grained, hornblende- and biotite-bearing granodiorite. These rocks are massive, blocky and weather grey with rare chloritized fracture surfaces. Fresh surfaces show hypidiomorphic texture and are unfoliated with the exception of local, weakly developed flow banding. These igneous rocks form part of the early Late Cretaceous (92.5 to 90.5 Ma, Hart et al, 2000) TPS suite of intrusions. These stocks are enveloped by thermal metamorphic aureoles that are apparent in the helicopter-borne magnetic surveys and characterized by the development of andalusite, biotite, recrystallized quartz and pyrrhotite.

Older foliated 'diorite' bodies as intersected in drill hole SH98-09 are likely Triassic in age. They also outcrop as a series of resistant, east-west trending, discordant dykes on the Héon grid. One such diorite dyke in this area displays a weak foliation that is subparallel to foliation in the enclosing metasediments.

Narrow lamprophyre dykes are present throughout the property and tend to occupy fracture and fault zones. They are calcareous and weather brown to light grey with dark brown fresh surfaces. The lamprophyre dykes commonly contain fine-grained biotite and minor

pyrrhotite. Felsic dykes of very fine-grained to aphanitic aplite, rhyodacite, porphyritic trachyte and quartz monzonite are also present and may be related to the TPS intrusions.

### **Ductile Deformation:**

The property is located on the south-dipping limb of the southwest-trending McQuesten Antiform, within the Tombstone Strain Zone (Murphy, 1997). This package of rocks lies above the northeast-directed Tombstone Thrust. Jura-Cretaceous  $S_2$  foliation developed along axial planes to isoclinal folds of  $S_1$  foliation, which appears parallel to compositional layering. These  $F_2$  folds are southwest striking, shallowly plunging, northwest verging and tight to isoclinal and have produced a strong, southwest-trending, moderately southeast-dipping foliation. This fabric affects the metasedimentary rocks, and is the most prominent ductile fabric on the property. The poles to this  $S_2$  foliation form a single cluster with an average orientation of  $054^\circ/41^\circ\text{SE}$ . The southeast dip of the foliation reflects the property's position on the southern limb of the McQuesten Antiform, a broad, open fold that postdates the main deformation and intrusion of the Tombstone Intrusions.

### **Brittle Deformation:**

The above foliation is crosscut by three sets of moderate- to steeply-dipping fault, shear, fracture and joint structures that trend east-west to east-northeast, northwest and north-south.

- Steeply dipping, north-south faults are the earliest set of brittle structures and are associated with coarse, massive, barren bull quartz. These regularly spaced faults (Rudolph, Harvey, Swede, and Tom Faults) appear to form a radial pattern that emanates from the Minto Lake Stock to the south.
- A period of east-west compression and north-south extension produced a series of northwest faults, east-striking vein sets and north-south crenulations. The set of northwest faults are closely spaced, left lateral and moderately to steeply dipping, and are particularly well-developed in the Harvey - Rudolph and Héon - Bennett areas. The best surface example of one of these faults is the Hawthorne Structure, striking  $318^\circ/56^\circ\text{NE}$ .
- The east-west compressional event acting upon the northwest faults created a tensional environment that resulted in the formation of east-west striking, shallowly to moderately dipping veins, centred on  $274^\circ/39^\circ\text{N}$ . The lamprophyre and monzonite dykes were also largely emplaced along this orientation. Fracturing at a similar orientation is present throughout the property. Almost all of the quartz+arsenopyrite veins are discordant to foliation and planar, even though folded, lenticular, folioform quartz veining is probably more abundant. In addition, some planar concordant veins were noted in outcrop, roughly following foliation, as noted in the bluffs above the Tom Zone, but clearly post-dating ductile deformation.
- Steeply dipping north-south veins are rare, although discordant fracturing is common in this orientation. These veins and fractures are particularly prevalent along steep, north-south kinks and crenulations in the  $S_2$  foliation, which may have developed during east-west shortening along axial planes.

## **MINERALIZATION**

Geological and geochemical evidence indicates that gold occurrences on the Scheelite Dome property are of many styles related to the intrusion of the Scheelite Dome Stock. These occurrences range from discordant sheeted quartz veins hosted in the intrusion and the

thermally metamorphosed metasediments, Au±W skarns, concordant sulphide replacements of metasedimentary horizons and auriferous disseminated sulphides within intrusions. These mineralization styles are characteristic of a recently recognized class of Intrusion Related Gold Deposits (IRGS).

IRGS deposits are important producers of Au in Canada, Alaska and worldwide. Significant deposits include the large tonnage, low grade Fort Knox Mine and Donlin Creek deposit in Alaska, the Brewery Creek Mine and Dublin Gulch deposit in Yukon, Kidston and Timbarra in Australia, and Vasilkovskoe in Kazakhstan. The Pogo deposit in east-central Alaska may be a high-grade example of an IRGS deposit. Mineralization styles at these deposits vary greatly in response to, among other factors, structural environment, host rocks and crustal level of development. The unifying link between these deposits involves the combination of moderately reduced I- and S-type intrusions with lithophile elemental associations, in particular associated with Au-Bi-W-As-Te-Mo±Sn±Cu±Pb±Sb anomalies and occurrences. IRGS deposits in Yukon and Alaska are invariably associated with Cretaceous intrusions.

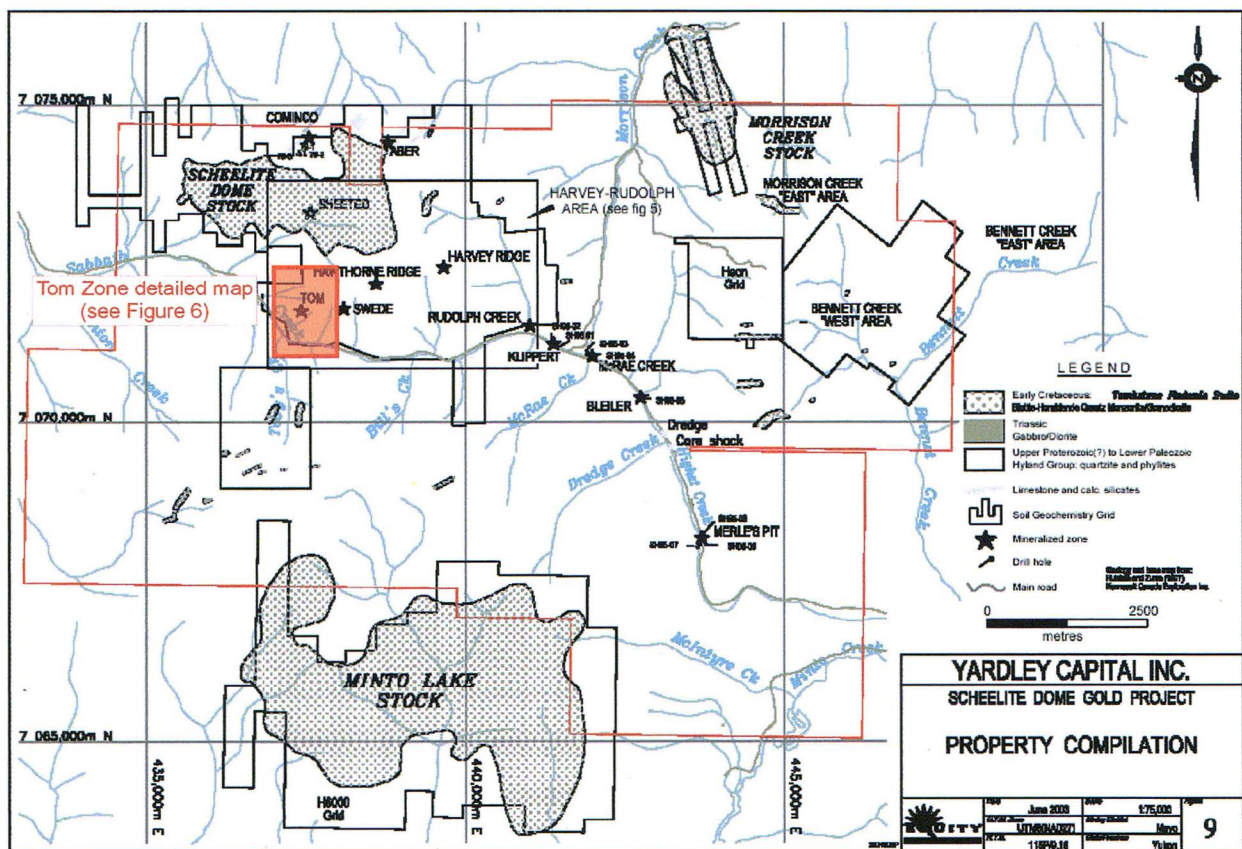


Figure 4. Scheelite Dome Property compilation map; Tom Zone grid location.

Alteration and mineralization on the Scheelite Dome property is related to the Tombstone Plutonic Suite stocks and smaller intrusive bodies. Auriferous zones related to the TPS occur in several different styles and lithologies and can be separated into three categories, concordant, discordant and skarn mineralization.

### Concordant Mineralization

Sulphide minerals including arsenopyrite and locally pyrite, marcasite and pyrrhotite are found as concordant replacements in several zones. Limy horizons within the metasedimentary

package are particularly receptive hosts for this style of mineralization. Concordant, undeformed quartz±arsenopyrite±pyrite veins have been noted in the Tom Zone and Toby's Creek area. These structurally controlled veins occur where the S<sub>2</sub> foliation has opened under a tensional environment. This veining is commonly accompanied by sulphides, principally arsenopyrite, disseminated along the S<sub>2</sub> foliation.

### **Discordant Mineralization**

The most prevalent discordant mineralization consists of structurally controlled quartz-sulphide veinlets that are the main source of the Au-As-Sb soil anomaly and comprise the bulk of the gold mineralization intersected in the drilling. The veins crosscut both the metasediments and the Scheelite Dome stock, and occur within and external to the contact metamorphic aureole surrounding the Scheelite Dome Stock. Alteration envelopes and selvages associated with this mineralization include sericite, silica, biotite and tourmaline. Coarser quartz-sulphide fault-veins and disseminated mineralization hosted in intrusive and metasedimentary rocks are also significant styles of discordant mineralization.

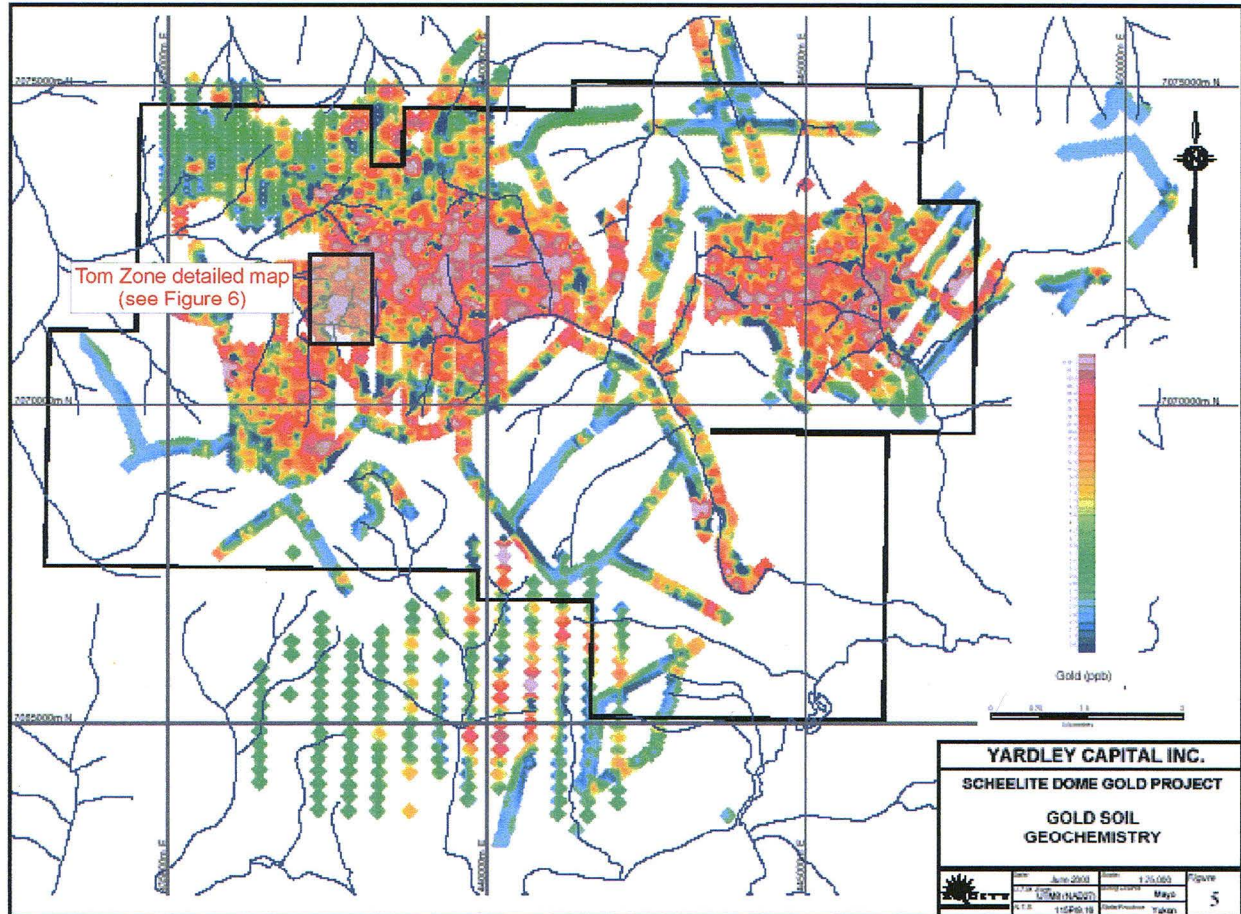
### **Skarn Mineralization**

Zones of auriferous garnet-wollastonite-quartz-tremolite skarn with disseminations and blebs of pyrrhotite, scheelite and chalcopyrite are found on the north side of the Scheelite Dome Stock. Contact skarn mineralization consisting of calc-silicate (diopside), biotite, and chlorite is also found associated with biotite lamprophyre dykes. Skarn mineralization at the Tom Zone is described below.

In addition to the mineralization styles noted above, early synmetamorphic quartz-chlorite-pyrrhotite±chalcopyrite veins are prevalent throughout the property. These veins are easily identified by the presence of chlorite and are distinguished by their irregular pinch and swell foliation-parallel habit. In any of the core drilling to date, the percentage of folioform veins far exceeds that of the later, gold-bearing, discordant veins. These early quartz veins are not thought to be auriferous. It was apparent from the drilling that late stage calcite and iron-carbonate veining crosscuts all earlier vein types. This veining tends to occupy microfractures and as it does not contain any sulphide minerals, it is not expected to be gold-bearing.

## **TOM ZONE**

The Tom Zone concordant mineralization consists of exposures of a lens of calcareous rocks along a road cut over 100 metres. The zone occurs within one of the strongest individual gold soils anomalies, at the western end of a gold geochemical anomaly that is over 8 km long and up to 2 km wide (see Figure 5). Mineralization varies from disseminated and semi-massive sulphides within limy quartzites to coarse-grained sulphide mineralization in calc-silicate skarn. J. Mair has examined the skarn mineralization and recognized two main assemblages. The first is an actinolite-plagioclase skarn with pyrrhotite, pyrite, arsenopyrite, chalcopyrite and native bismuth and a strong Au-Bi-Te±As-Cu association. The second is a later assemblage of phlogopite with arsenopyrite, lesser pyrrhotite and pyrite and high W, Bi, Te and Au grades. Mair also suggests that the second assemblage may overprint an earlier sulphide-poor W skarn that is characterized by diopside and plagioclase. A medium-grained monzonitic intrusion immediately north of this zone is likely related to this mineralization.



**Figure 5.** Scheelite Dome property – gold geochemistry in soils.

Kennecott sampled a number of discordant quartz-arsenopyrite veins up to 10 cm wide from the Tom Zone. These veins are similar to those encountered in the Rudolph Gulch to Hawthorne Ridge area and locally returned excellent Au grades and visible Au. A sample collected from an area where these veins exceeded 1/m in density returned 585 ppb Au. J. Mair (pers. comm., 2003) has reported results of up to 32,770 ppb Au from grab samples and over 100,000 ppb Au from select samples of this replacement/skarn mineralization. Mapping by Mair has suggested that the host calc-silicate horizon continues along strike to the east-northeast towards and under Hawthorne Ridge.



**TABLE 4**  
**TOM ZONE SIGNIFICANT HISTORICAL SAMPLES**

Sample Number	Sample Type	True Width (metres)	Au (ppb)	As (ppm)	Bi (ppm)	Sb (ppm)	W (ppm)	Te (ppm)
<i>Concordant</i>	<i>Replacement</i>	<i>Mineralization:</i>						
82598*	Grab	n/a	12.2 g/t	>10,000	292	36	2890	n/a
82599*	Grab	n/a	5580	>10,000	106	136	4370	n/a
82600*	Chip	0.6	11.8 g/t	>10,000	288	8	2120	n/a
82235*	Chip	2.0	1135	5580	32	28	110	n/a
312033+	Float	n/a	32.8 g/t	>10,000	746	136	2710	n/a
312161+	Select	n/a	17.1 g/t	>10,000	526	454	460	n/a
TZL1# <sup>1</sup>	Select	n/a	57,285	>99,999	1576	102	2236	43.41
TZ-T2A# <sup>2</sup>	Select	n/a	>99,999	4623	3641	22.4	10	113.43
<i>Discordant</i>	<i>Mineralization</i>	:						
12650*	Chip	0.5	585	>10,000	46	38	60	n/a
12659*	Grab	n/a	7380	8460	90	224	<10	n/a
42403*	Grab	n/a	22.5 g/t	9430	158	700	<10	n/a
312162+	Float	n/a	660	1560	<2	10	<10	n/a
312163+	Chip	1.0	370	490	2	12	<10	n/a
<i>Concordant</i>	<i>Vein</i>	<i>Mineralization:</i>						
312036+	Select	n/a	7.26 g/t	270	232	30	<10	n/a
312043+	Grab	0.1	3.22 g/t	>10,000	338	140	250	n/a

\* Kennecott sample

+ Copper Ridge sample

# J. Mair sample collected for post-graduate thesis with Centre for Strategic Mineral Deposits, University of Western Australia

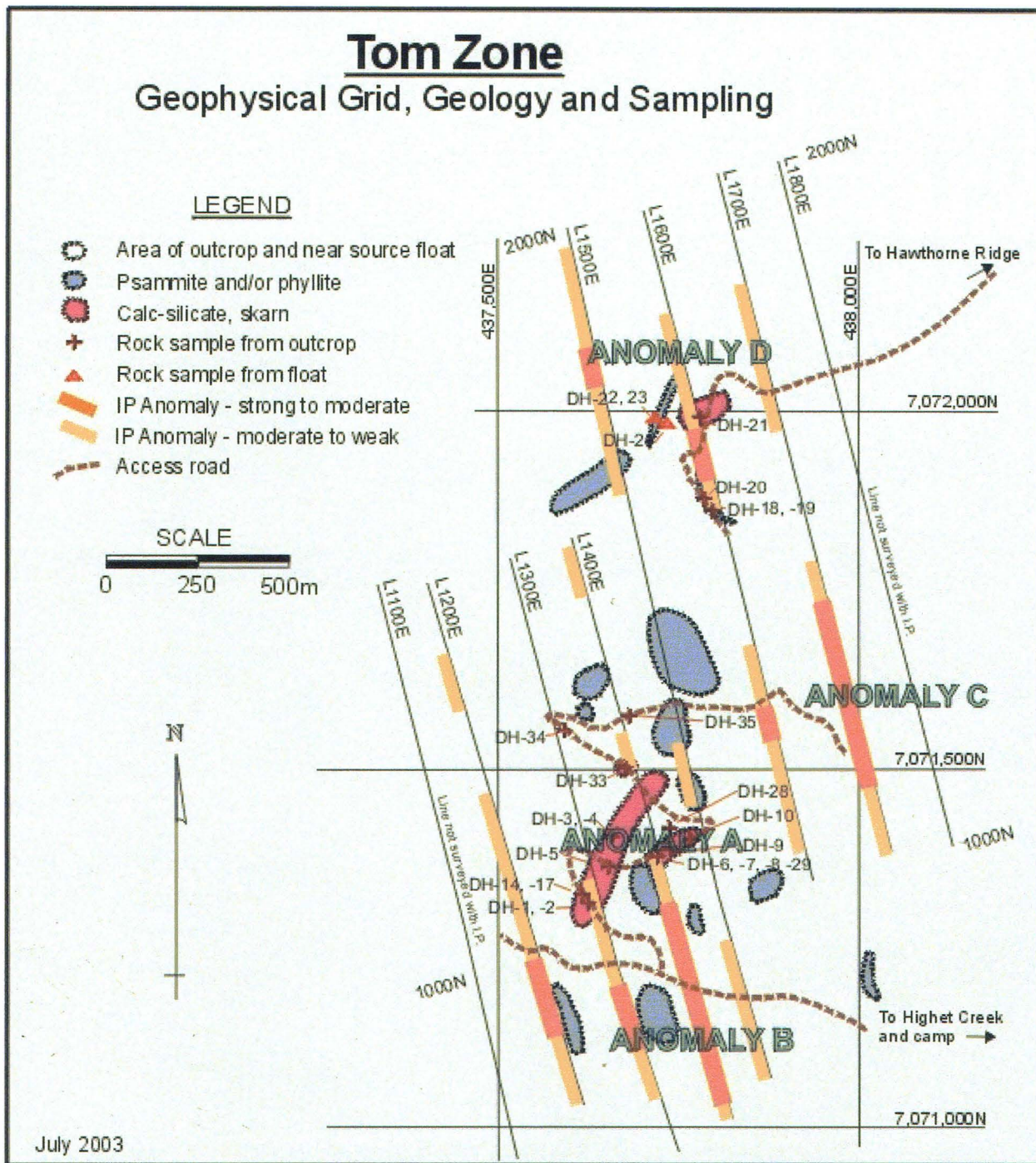
<sup>1</sup> Select sample collected from phlogopite skarn<sup>2</sup> Select sample collected from actinolite-plagioclase skarn

## EXPLORATION PROGRAM

The objective of the current exploration program over the Tom Zone, completed during the period July 1 to July 15, 2003, was to define specific targets for drill testing in the Phase II program, anticipated for September 2003. The primary focus of the program included 5.9 line km of IP surveying and 7.8 line km of ground magnetometer surveying. In addition, a minor amount of sampling and mapping was carried out and a tractor was used to repair the access road to the Tom Zone, both from Sabbath Creek below the Tom Zone and from Hawthorne Ridge above. The lower road that criss-crosses upwards across the zone was extended a total of 200 m. See Appendix C for a copy of the field report by Daniele Heon, project manager from Aurum Geological, that provides complete details of the field program.

A total of 7.8 km of line grid was cut with 100 m spaced lines at a 345° orientation, designed to cut the stratigraphy at right angles. The lines were turned off from positions on the access road using GPS and therefore no baseline was required. The grid covers most of the known exposures and the gold geochemical anomaly that define the Tom Zone (see Figure 6).

During the program, most rock exposures, either outcrop, which is scarce, or float occurrences, that are believed to be close to outcrop source, were mapped. A total of 32 rock samples were collected from surface exposures for geochemical analysis.



**Figure 6.** Tom Zone grid, geology, sampling and I.P. compilation.

Aurora Geosciences completed 5.9 km of pole-dipole I.P. surveying over the central portion of the grid. This technique was chosen to detect the typically disseminated sulphide mineralization that has so far been observed with the mineralization at the Tom Zone. A magnetometer survey was also completed to distinguish areas of pyrrhotite mineralization. The Aurora field report is included as Appendix D to this report.

During the course of the current sampling program, several grab samples were collected from known mineralized zones as well as other outcrop and near outcrop areas. Table 5 provides a summary of the results of this sampling and the full assay certificate is included as

Appendix D. The sampling confirms the high grade nature of gold mineralization in the vicinity of the original Kennecott trenches (now collapsed) with the highest gold grades reporting to skarn samples with high sulphide content, particularly pyrrhotite and arsenopyrite.

**TABLE 5**  
**TOM ZONE SIGNIFICANT SAMPLES**

Sample Number	Sample Type	Au (ppb)	As (ppm)	Bi (ppm)	Sb (ppm)	W (ppm)
03DH-1	Float	12674	9364.5	329.5	9.4	>200
03DH-2	Float	59	518.8	2.8	4.5	1.1
03DH-3	Outcrop	13	41.3	0.6	0.4	0.8
03DH-4	Float	24	88.6	1.0	7.6	0.7
03DH-5	Float	10	530.9	0.4	10.5	0.7
03DH-6	Float	100	158.0	2.2	2.2	1.0
03DH-7	Float	17	33.7	0.7	0.7	2.3
03DH-8	Float	7	73.2	0.2	2.4	0.7
03DH-9	Float	59	47.9	3.1	0.7	1.0
03DH-10	Float	5	297.1	0.5	5.7	0.6
03DH-11	Float	5752	182.3	209.7	1.2	>200
03DH-12	Float	21713	>9999	1138.8	94.9	>200
03DH-13	Float	13561	>9999	390.0	43.0	>200
03DH-14	Float	25235	>9999	424.2	263.0	>200
03DH-15	Float	105	328.5	3.7	1.0	7.0
03DH-16	Float	59	141.1	1.1	2.3	3.7
03DH-17	Float	21497	>9999	763.0	69.1	>200
03DH-18	Float	2028	>9999	10.7	24.0	10.9
03DH-19	Outcrop	55	132.6	1.6	0.7	3.3
03DH-20	Float	48	299.8	0.5	3.0	1.1
03DH-21	Float	65	37.3	2.0	0.4	19.2
03DH-22	Float	15	49.0	0.7	0.9	0.9
03DH-23	Float	37	15.5	2.6	0.4	1.1
03DH-24	Float	9	15.4	0.9	0.3	2.4
03DH-25	Outcrop	151	184.6	8.1	8.2	132.0
03DH-26	Outcrop	101	110.0	2.3	2.2	18.4
03DH-27	Outcrop	724	7424.8	3.9	691.3	1.1
03DH-29	Float	24	63.3	0.6	3.3	0.7
03DH-31	Outcrop	26142	>9999	531.7	87.4	>200
03DH-32	Outcrop	46	90.6	1.3	3.0	3.2
03DH-34	Float	1289	929.5	0.3	23.6	0.9
03DH-35	Outcrop	52	89.3	0.7	5.2	1.2

See Appendix D for complete sample descriptions and Appendix E for complete analytical results.

## CONCLUSIONS

The Scheelite Dome property lies within a metallogenic province that hosts a diverse suite of genetically related mineral deposits, including the Fort Knox and Brewery Creek Mines and the Donlin Creek and Dublin Gulch deposits in Alaska and Yukon. These deposits are representatives of a newly recognized class of Intrusion-Related Gold Deposits. Styles of mineralization vary greatly among these deposits but they share associations with moderately reduced Cretaceous intrusions and a lithophile suite of metals.

The Scheelite Dome property is largely underlain by Upper Proterozoic to Lower Paleozoic metasediments of the Yusezyu Formation, which is a constituent of the Hyland Group in the Yukon Tanana Terrane (YTT). The YTT hosts the IRGS deposits in Alaska and Yukon. The metasediments are comprised of a spectrum of phyllitic to quartzitic rocks with lesser metaconglomerate, grits, calcareous and metavolcanic rocks. The metasediments are intruded by a number of mid-Cretaceous felsic stocks and intrusions of the Tombstone Plutonic Suite; paramount among them is the Scheelite Dome Stock.

Exploration to date on the Scheelite Dome property has outlined several significantly mineralized zones. The Tom Zone represents a particularly attractive high-grade target. It consists of a confluence of reactivated and mineralized north-south faulting, auriferous discordant quartz-sulphide veining and concordant replacement and skarnification of a calcareous horizon. This replacement/skarn mineralization has returned grades of up to 32,770 ppb Au from grab samples and over 100,000 ppb Au from select samples. J. Mair (pers. comm., 2003) has indicated that the host calc-silicate horizon continues along strike to the east-northeast towards and under Hawthorne Ridge.

The 2003 Phase I program was successful in outlining a number of areas of anomalous chargeability that appear to follow the stratigraphy within the Tom Zone and correlate in part with known skarn mineralization (see Figure 6). Weak to moderate chargeability, with little or no associated conductivity, would be expected from the type of lightly disseminated sulphide mineralization associated with the known gold mineralization. The trends appear to continue towards Hawthorne Ridge, as predicted by J. Mair. In addition, the magnetometer survey indicates subtle, low magnitude magnetic trends that correlate with the I.P. trends and could indicate lightly disseminated pyrrhotite mineralization.

Sampling from the current program shows a good correlation with previous high grade samples collected from previous programs in the area of the Tom Zone trenches, although multi-ounce gold values were not obtained. Although many samples are from float, this material is typically angular and believed in all cases to be from nearby bedrock. This is particularly true of the Kennecott trenches. The trenches are now sloughed in, but rock material extracted from the original trenches is evident on the flanks of the trench areas.

A number of drill targets are suggested by the geophysical results, both over the areas of known mineralization (Anomaly "A") and along geophysical trends (Anomalies "B", "C" and "D"). It is suggested that the 550 m drill program recommended by Harris (2003) include two to three core holes on each of these targets. The holes would be relatively shallow, from 60 to 100 m each. The holes would be collared on or near existing road access, so little or no new tractor work will be required.

**APPENDIX A**  
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**APPENDIX B**

**STATEMENT OF EXPENDITURES**

The following expenditures were incurred in carrying out the field program on the Tom Zone of the Scheelite Dome property during the period June 30 to July 15, 2003:

Aurum Geological	
- project supervision, geological mapping and rock sampling, magnetometer survey	\$18,072
- miscellaneous expenses	\$1,725
Aurora Geosciences	
- IP survey, magnetometer rental	\$17,527
Coureur des Bois	
- Linecutting	\$8,430
KGE Management Ltd.	
- Project supervision, report preparation	\$3,237
Acme Analytical	
- Geochemical analysis, assay	<u>\$689</u>
Total	\$49,680

## APPENDIX C

### **Scheelite Dome July 2003 Report of activities By Danièle Héon, geologist**

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July 16, 2003

A seven-person crew was mobilized on Copper Ridge's Scheelite Dome property during the first half of July 2003. The exploration work focused on the Tom zone, a zone of calc-silicate replacement and skarn hosting high-grade gold mineralization, located in the contact aureole of the Scheelite Dome and Minto stocks. The work program consisted of establishing a cut grid at 100m spacing, conducting an IP and resistivity survey, a magnetometer survey and mapping and prospecting in the grid area. Some cleaning up and extension of existing roads was done using a D-8 bulldozer.

Denis Jacobs was contracted for the line-cutting, Gerry Cousins and Larry Smith did the work. Aurora Geosciences was contracted for the IP survey, Will Thompson was hired by Aurum Geological as an IP helper. A D-8 bulldozer was hired from Wilf Tuck, contractor in Mayo, Heiko Nyland was the operator.

Base maps for the property were available from earlier work; these were NAD 27 datum, and a magnetic declination of 27° was used.

#### **Schedule**

The two line cutters, the helper and the author mobilized to the property on June 30 2003. Line cutting began the following day, on July 1<sup>st</sup>. Geophysicists from Aurora Geosciences mobilized to the property on July 3<sup>rd</sup> 2003 and started work on July 4<sup>th</sup>. Line-cutters demobilized on July 11, and the geology and geophysics crew demobilized on July 15.

#### **Line-cutting**

A total of 7.8 km of grid lines were cut between July 1<sup>st</sup> and July 11. The lines were chained, picketed and marked at every 25m, with metal tags at every 50m station. Lines were purposely not slope corrected, as required for the IP survey. Grid lines were spaced at 100m intervals and were oriented at 345°. Line 1600 was started at the end of an existing cat road, at an arbitrary northing of 1300N. All other lines were started from existing roads, and were spotted by measuring the GPS coordinates for where the ideal grid would cross the roads. No baseline was cut. GPS coordinates were taken at the starting point of each line, and at each end. Lines numbered from 1100 E to 1800 from SW to NE, and ranged from Station 700N to 2000N. Of the original planned grid, only L1000 was not cut, due to time constraints. See attached table (Tom Grid) for grid coordinates.

The terrain was generally steep and heavily forested; the tree line was at about 1500 m.

Initial IP results on lines 1600, 1500 and 1400 outlined chargeability anomalies both at



the northern and southern end of those lines. In order to constrain these anomalies, lines 1100, 1300, 1400 and 1500 were extended by line-cutting to the south by about 300m to station 700N. Line 1500 was also extended to the north by 300m from station 1700N to 2000N.

A labelling error on line 1600 remains uncorrected, and should be corrected when work resumes on the property. The following sequence of pickets is in place from south to north: stations 1475N, 1500, 1600, 1525, 1550, etc. The actual station 1525 is therefore labelled 1600, and the subsequent stations are offset by 25m. The line is therefore 1025m long and the last station should read 2025 instead of 2000.

### **Road building**

A D-8 bulldozer was hired from Wilf Tuck, contractor in Mayo. Cat work was needed to rehabilitate the existing access road to the grid (Hight Ck/ Sabbath Ck road) as well as the cat road crossing the Tom zone. Five trenches dug by Kennecott were filled-in to make the road passable to the four-wheeler needed for the geophysical survey.

The existing cat road was extended to the southeast, past L1600, 1300N, in order to try to create access to the top of the ridge for potential drill pads. Due to the steepness of terrain and forest cover, it became clear that this would be a major undertaking, needing several switchbacks, and that this would go beyond the scope and the budget of this project. An existing cat road, accessed from the flank of Hawthorne Ridge, also provided access to the top of the ridge. This cat road led to a trench that roughly parallels L 1600 (from about 1550 to 1650 N). This trench was cleared to provide access, and was extended to the south for about 100m till it intersected L1600.

The bulldozer was also used to clean up the area around the camp.

The contractor charged 18 hours of machine time, which is a bit excessive by an hour or two. The operator (Heiko Nyland) accompanied the author to verify access to the top of the ridge; we should be billed for his time, not for the machine time.

### **Geophysics**

#### **IP and resistivity survey**

A total of 5.9 km of lines were surveyed between July 4<sup>th</sup> and July 14<sup>th</sup>, interrupted by a 2.5 days equipment breakdown, for which the IP crew returned to Whitehorse. The entire grid except L1100 was surveyed.

Productivity averaged one line/day. Surveys conducted on the relatively short line extensions required much setting up time for a short length of line, and had to be overlapped with portions of lines already surveyed, which decreased productivity.

Only three pseudo-sections (Lines 1600, 1500 and 1400) were plotted out in the field, and two of these were run through modelling (1600 and 1500). Based on chargeability anomalies on these lines, the grid was extended to the north and south as outlined in the line-cutting section above.

Field geophysicists highlighted a broad chargeability anomaly at the southern end of the grid. Field checking did not explain this anomaly. Psammite outcrops show local phyllitic horizons; perhaps the micas can build an electrical charge. No sulphides were observed. That portion of the grid covers a north-facing slope on the south side of Sabbath Creek; the vegetation consists of sparse spruce on thick moss cover. This

area is probably underlain by discontinuous permafrost.

Another set of anomalous chargeability highs occurs (at depth) on L 1500 and 1600 around 1100N. No outcrop was found in the area of the anomaly, only non-mineralized psammite float.

The strongest chargeability anomaly, coupled with a resistivity anomaly, was outlined at the north end of L1500 on the last day of the program. This anomaly was not field checked.

#### **Magnetometer survey**

The author surveyed the entire grid with a proton magnetometer, taking readings at every 12.5 meters. Aurora Geosciences will process and present the data.

#### **Geology**

Some prospecting and mapping was conducted on the Tom grid. Four of the 5 trenches located on the cat road were inspected before being buried by the bulldozer work. The trenches, averaging about 10m in length, had sloughed in and showed no bedrock exposure. The top (northernmost) trench was not examined.

The area is characterized by poor outcrop exposure, and geology is inferred by some outcrops, talus, and loose material on the cat road.

#### **Rock types**

Four main rock types are recognized: psammite (dirty metamorphosed sandstone, loc gritty (w quartz eyes) with mica on crenulation cleavage), phyllitic psammite (same as above but with more prominent micaceous horizons; also seen as quartz-sericite schist), phyllite (rarely observed) and calc-silicate rock (hornfels).

Some loose blocks of minor granitic and lamprophyre dyke rocks have been observed on the cat road.

#### **Structure**

Compositional layering has generally been transposed parallel to main foliation except in more resistant quartz-dominated horizons, where the dominant foliation is a crenulation foliation but where compositional layering can be at high angles to it. These highly siliceous bands, more resistant, outline parasitic folds.

The limy rocks are interpreted to be part of one same band displaying either minor folds or an en echelon series of boudins, stretched and dismembered by regional shearing.

#### **Calc-silicate rocks and sulphide mineralization**

The calcareous content of the calc-silicate exposures vary along strike, if indeed they belong to one same band or zone. The calc-silicate rock exposure at the southwesternmost end of the zone (Trench 1 and 2 on the cat road) is the most calcareous. Loose float of marble shows interlayering with more siliceous horizons. The marble consists of white coarsely crystalline calcite, and appears in places totally oxidized.

Elsewhere, calc-silicate rocks are generally banded, hard and consist of interlayered white, greenish and maroon bands, with occasional pyrrhotite blebs and string of blebs

disseminated parallel to the banding. Disseminated pyrite, arsenopyrite and chalcopyrite are also observed. Sulphide mineralization appears heterogeneous, poddy and discontinuous.

Banded siliceous-looking rocks which displayed fine-grained green minerals were considered calc-silicate rocks. Under magnification, light green, fine grained, massive-looking rocks, also display very fine compositional banding due to shearing. These more massive rocks are frequently mineralized and are interpreted to represent more intense and pervasive mineralogical recrystallization than the banded calc-silicate rocks, and have been called diopside “skarn”.

Sample 03DH-1, located between Tr-1 and 2, contains semi-massive sulphides (arsenopyrite and pyrrhotite?) in what appears like discordant replacement mineralization. This area may correspond to a high mag spike. The limey content of the rock decreases along strike to the northeast.

The calc-silicate rocks reported from Trench 4 could be float from unexposed bedrock occurrence further up the slope. Outcrop in that area is very poor and the calc-silicate lithology could not be traced away from the road.

The mapping traced the calc-silicate band(s) in outcrop and in float up the hill, and a different strike orientation than what was originally interpreted is proposed.

Calc-silicate rocks were traced in float from TR-1+2 to TR-3. One good calc-silicate horizon, at the base of an outcrop (near 03 DH-3, 4), is interbanded with siliceous and phyllitic psammite, uphill from Tr-3. A siliceous horizon outlines a south-verging parasitic fold. The top of this outcrop is very siliceous and forms the cliffy lip of a little ridge. This ridge (of resistant rocks, but with no other outcrop) was followed up the hill to another calc-silicate occurrence on the road (03DH-25 to 27). This would give a more northerly strike to the calc-silicate horizon (if all part of the same) than the previous interpretation.

A new occurrence of calc-silicate rock (03DH-21), with some sulphide mineralization, was found at the top of the hill/grid, in the access road to the upper trench that was cleaned up by the bulldozer (L1600E, ~1700N). This occurrence was traced uphill (to the northeast) in float for a few 10's of meters. To the southwest, a large gully funnels float occurrences but no significant bedrock exposure was found. The IP crew reports that rocks at end of L1500 are very hard.

Float of quartz veining is abundant on the grid. Some of it has been sampled but not all vein occurrences. Some float of fault breccia and fault gouge has been observed and sampled; the significance of the displacement along these faults is unclear. Graphitic schist has been observed around TR-3; this rock type may have an IP response.

A total of 32 assay samples were sent to Acme Analytical Labs in Vancouver. Representative pieces of assay samples were collected and kept.

## APPENDIX D

Sample Descriptions

Sample	Location	GPS E	GPS N	Description	Au ppb
03DH-1	between Tr 1 and 2	437630	7071308	float; strongly oxidized limonitic, loc calcareous m.g. skarn? Roughly banded, w pods or bands of dk grey platy sulph (asp?). Disc to foln, w some possible concord. replacement. 4cm min width. Cp 1%, py asp up to 30%.	12674
03DH-2	between Tr 1 and 2	437630	7071308	float; pink+green banded calc-silicate w discontinuous stringers of fg asp+ga in pink weathering white marble layer, adjacent to foliaform qtz pod, <1% sulphides	59
03DH-3	uphill from Tr 3	437667	7071395	o/c; banded calc-silicate rock w <1 to 2% po diss and in pods, interbanded w pelitic and siliceous psammite	13
03DH-4	uphill from Tr 3	437660	7071406	float; lens of foliaform qtz, 1-4cm, vuggy w limonite +vfg tan needle-shaped mineral; in crenulated pelitic + calc-silic schist.	24
03DH-5	Tr-4	437705	7071378	float; phyllitic psammite cut by 2-3 cm rusty drusy discord. qtz vein, w vfg earthy lim in vugs	10
03DH-6	Tr-4	437721	7071391	compos. float sample; poddy rusty qtz (cc), w vugs w fg dk material, replaced by net text py	100
03DH-7	Tr-4	437733	7071397	float; 3-4cm white qtz vein w lim (sulph?) spots, both // and discontinuous to foln	17
03DH-8	Tr-4	437733	7071397	float; 2-5cm folded vuggy qtz vein in calc-silic/pelitic hfls w lim vug filling+dk grey sulph?	7
03DH-9	Tr-4	437420	7071408	float; banded calc-silic hfls w stringers of diss po (1%)	59
03DH-10	Tr-4	437719	7071392	sl rusty, vuggy drusy qtz w patches of white +lt green (skarny?) material and patches of vfg grey sulphides (<1%)	5
03DH-11	Tr-3	437659	7071368	float; massive, vfg lt green diops skarn or calc silic hfls (?) w 1-3% diss blebby po, tr cp, and <1% fg dk grey sulphide (asp?)	5752
03DH-12	Tr-3	437659	7071368	float; rounded piece of dk marron oxidized fault breccia. Very light.	21713
03DH-13	Tr-3	437659	7071368	float; very crumbly schistose fg rx w silicate minerals, sl ight scor alt and asp smell.	13561
03DH-14	Tr-2	437606	7071319	float; strongly oxidized, punky, granular limonite altered rx (marble?)	25235
03DH-15	Tr-2	437606	7071319	float; banded lt green calc marble/calc-silic w 1-2% py in blebs, stringers and finely diss.	105
03DH-16	Tr-2	437606	7071319	float; vfg lt green massive diops skarn or calc-silic hfls w diss po (py) <1%	59
03DH-17	Tr-2	437606	7071319	float; rusty limonitic marble?	21497
03DH-18	upper trench	437793	7071864	float qtz-asp stockwork, sulph 2%	2028
03DH-19	Tr-2	437615	7071314	banded calc-silic hfls/skarn, w po diss and in train of blebs // to foln, inhomogeneous distribution in all colour layers. Sulph tr-1% (some vfg dk grey sulphide (asp?))	55

03DH-20	upper trench	437784	7071872	float; large piece of white qtz w rusty fractures and chloritic inclusions	48
03DH-21	upper trench down (W) of	437784	7071993	float; banded grey, lt green + maroon calc-silic hfls cut by concordant and disc qtz veins and thin dk veinlets, patches of dk green mafics (act?) and tr sulph in clots. Composite	65
03DH-22	upper Tr down (W) of	437733	7071983	float; banded silic/calc-silic hfls w tr diss sulph (po?) w pervasive weath (ox) w unaltered cores	15
03DH-23	upper Tr down (W) of	437724	7071990	float; rusty weath, v finely banded (sheared) calc-silic w diss po (1-2%) in blebs + stringers	37
03DH-24	upper Tr	437732	7071985	float; same as -23, more massive (less banded) w one disc qtz pod w vfg sulphides (asp?)	9
03DH-25	mid calc-silic lens	437700	7071465	o/c; banded calc-silic hfls	151
03DH-26	mid calc-silic lens	437700	7071465	o/c; massive (very fine banded) fg lt green diopside skarn; tr py, po, cp. Py rims.	101
03DH-27	mid calc-silic lens	437700	7071465	fg sugary qtz w sl vuggy texture + scor alteration and rusty fractures qtz-actinolite lensoid 3cm vein w tr sulph (py) pods in banded calc-silic hfls	724
03DH-31	Tr-1	437626	7071299	pervasively lim rx w some fg frothy qtz-sulph blebs. Composite sample. Vein or alt psam?	26142
03DH-32	Tr-1	437626	7071299	banded calc-silic hfls w oxidized pods or blebs of diss po (// to foln)	46
03DH-34	cat road	437594	7071550	float; rusty and white weathering bleached fractured rx chips. Includes fine sugary drusy qtz, loc brecciated, w sl scor alt + strongly limonitized and silicified rx in area of qtz-sericite schist. Vein fault? Composite sample.	1289
03DH-35	cat road	437676	7071573	banded (calc-) silicate rx, (few green specks) w tr diss sulph?	52

## APPENDIX E

Acme Labs Assay Certificates

From ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER BC V6A  
1R6 PHONE(604)253-3158 FAX(604)253-1716 @ CSV TEXT FORMAT

To Aurum Geological Consultants Inc. PROJECT KRX Scheelite Dome

Acme file # A302860 Received: JUL 25 2003 \* 34 samples in this disk file.

Analysis: GROUP 1DX - 0.50 GM

AU\*\* GROUP 3B - 30.00 GM SAMPLE ANALYSIS BY FA/ICP.

ELEMENT SAMPLES	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm
SI	0.1	3.4	0.9	3	< .1	0.7	0.1	4
03DH-1	2.8	2217.7	11	43	3.2	23.7	48.9	997
03DH-2	22.8	45.5	628.1	155	1.9	15.1	5.8	4053
03DH-3	0.6	101.5	5.6	38	0.1	34.4	15.3	364
03DH-4	0.5	53.1	4.8	37	0.1	29.5	10.4	381
03DH-5	0.5	40.7	2.5	18	0.1	10	4.5	219
03DH-6	3	132.4	6.6	43	0.2	44.1	16.7	511
03DH-7	0.4	24.1	13.2	40	0.1	26.8	9.8	451
03DH-8	0.4	77.5	2.2	29	0.1	30.1	14.7	239
03DH-9	9	104.2	6.5	63	0.2	35.9	13.2	680
03DH-10	1	94.7	1.5	19	0.2	17.8	4	156
03DH-11	4.6	568.7	2.1	15	1	26.5	23.5	316
03DH-12	1	512.4	425	28	91.7	25.7	135	277
03DH-13	30.8	900.3	16.8	12	3.3	20.1	57.5	118
03DH-14	11.7	583.5	178	33	65.3	12	10.1	587
03DH-15	3.2	94.6	4.9	10	0.2	10.2	8.3	527
03DH-16	2.9	145.7	3.4	33	0.1	10.4	11	496
03DH-17	6.2	761.6	16.7	22	5.2	4.8	43.8	461
03DH-18	0.3	12.3	17.3	6	1.7	1.6	0.8	14
RE 03DH-18	0.3	12.2	16.1	5	1.7	1.7	0.8	16
03DH-19	18	27	3.2	21	0.1	16.4	6.2	483
03DH-20	0.4	5.6	1.1	3	0.1	2	0.5	14
03DH-21	17.7	20.8	2.8	8	0.1	10.5	2.2	117
03DH-22	0.3	22.8	3.2	20	0.1	6	2	395
03DH-23	0.5	178.1	5.2	23	0.2	28.4	12.1	198
03DH-24	0.4	135.9	5.7	41	0.2	40.3	14.4	349
03DH-25	5.5	45.1	5.2	135	0.1	23.9	9.3	680
03DH-26	8.5	39.6	3.5	16	0.1	15.8	4.8	296
03DH-27	1.1	13.3	43.8	17	3.5	1.5	0.6	27
03DH-29	0.3	30.5	4.8	50	0.1	40.7	14.9	605
03DH-31	7.6	258.3	8	16	4.5	1.4	3.1	168
03DH-32	39.5	77.8	4.4	32	0.1	29.5	7.9	239
03DH-34	1.4	11.4	2.4	18	1.1	3.8	1	22
03DH-35	0.3	53.5	2.9	20	0.1	9.7	5.3	194
STANDARD DS5/AU-R	12.6	138	25.3	139	0.3	24.1	11.7	740

Tom Zone Report – Appendix E

ELEMENT SAMPLES	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm
SI	0.05	< .5	< .1	< .5	< .1	3	< .1	0.1
03DH-1	19.46	9364.5	3.9	12720.1	3.3	33	0.5	9.4
03DH-2	0.87	518.8	3.9	54.5	7.8	363	3	4.5
03DH-3	2.31	41.3	0.7	10	11.9	349	0.1	0.4
03DH-4	1.89	88.6	0.5	16.7	8.8	132	0.1	7.6
03DH-5	1.35	530.9	1.1	16	6.6	8	0.1	10.5
03DH-6	3.36	158	1.5	99.5	12.7	247	0.1	2.2
03DH-7	1.51	33.7	0.7	20.2	10.1	250	< .1	0.7
03DH-8	2.12	73.2	0.4	7.4	8	179	0.1	2.4
03DH-9	3.78	47.9	1.8	63	14.7	212	< .1	0.7
03DH-10	2.55	297.1	0.4	6.2	0.7	18	0.1	5.7
03DH-11	5	182.3	2.7	4953.5	3.9	39	0.1	1.2
03DH-12	17.9	>9999	16.8	24966.9	6.1	569	4.7	94.9
03DH-13	12.2	>9999	7.8	15056.9	6.3	88	0.2	43
03DH-14	25.98	>9999	4.8	18353.2	6.4	133	1.3	263
03DH-15	0.95	328.5	3.7	155	7.2	488	0.2	1
03DH-16	1.14	141.1	2.3	73	7.9	181	0.2	2.3
03DH-17	21.18	>9999	3.8	23089.9	7	144	0.1	69.1
03DH-18	2.16	>9999	0.2	927.5	2.7	5	0.1	24
RE 03DH-18	2.12	>9999	0.2	811.8	2.5	5	0.2	22.8
03DH-19	1.11	132.6	4.2	37	10.7	500	0.2	0.7
03DH-20	0.52	299.8	0.1	42.9	1.3	4	< .1	3
03DH-21	0.42	37.3	4.1	123.2	15.1	326	< .1	0.4
03DH-22	1.16	49	0.5	12.9	7.5	26	0.1	0.9
03DH-23	1.95	15.5	1	37.4	14.4	361	0.1	0.4
03DH-24	2.01	15.4	0.6	11.2	16.3	237	< .1	0.3
03DH-25	1.59	184.6	1.7	137.5	12.4	405	13.4	8.2
03DH-26	0.93	110	1.9	47.9	10.8	416	0.6	2.2
03DH-27	1.46	7424.8	0.4	747.8	4.1	13	0.4	691.3
03DH-29	2.85	63.3	0.4	63.3	14.1	229	< .1	3.3
03DH-31	12.98	>9999	3.9	26748.3	4.2	67	2.5	87.4
03DH-32	1.57	90.6	6.3	29	12.9	249	0.1	3
03DH-34	1.93	929.5	0.6	833	6.2	9	0.1	23.6
03DH-35	1.32	89.3	0.5	43	8.4	58	< .1	5.2
STANDARD DS5/AU-R	2.85	17	6.3	43.7	2.7	49	5.3	3.4

Tom Zone Report – Appendix E

ELEMENT SAMPLES	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm
SI	< .1	< 1	0.14	< .001	< 1	2.1	0.01	3
03DH-1	329.5	50	2.7	0.03	6	18	1.73	7
03DH-2	2.8	33	14.03	0.034	15	14.8	0.65	23
03DH-3	0.6	30	2.93	0.061	22	31.7	0.96	93
03DH-4	1	27	1.4	0.044	17	22.9	0.78	117
03DH-5	0.4	3	0.05	0.014	10	9.7	0.09	22
03DH-6	2.2	69	1.95	0.047	20	47	1.33	222
03DH-7	0.7	148	1.9	0.039	16	51.6	1.18	80
03DH-8	0.2	22	1.51	0.023	19	27.6	0.8	143
03DH-9	3.1	112	2.55	0.053	18	73.2	1.76	185
03DH-10	0.5	10	0.13	0.009	2	11.2	0.63	34
03DH-11	209.7	20	0.92	0.048	9	5.1	0.21	32
03DH-12	1138.8	74	4.32	0.203	16	25.9	2.4	43
03DH-13	390	23	1.04	0.041	8	7.6	0.21	30
03DH-14	424.2	47	0.6	0.037	19	14.2	0.34	11
03DH-15	3.7	3	15.99	0.039	16	3.3	0.21	46
03DH-16	1.1	13	3.97	0.047	19	10.2	0.56	69
03DH-17	763	77	0.81	0.039	12	32.6	0.68	9
03DH-18	10.7	2	0.02	0.005	6	4.1	0.02	162
RE 03DH-18	10	1	0.02	0.005	6	3.5	0.02	151
03DH-19	1.6	33	12.6	0.049	18	19.5	0.88	78
03DH-20	0.5	1	0.06	0.005	4	5.5	0.01	15
03DH-21	2	46	5.37	0.057	38	13.7	0.16	34
03DH-22	0.7	11	0.31	0.007	11	14.8	0.24	109
03DH-23	2.6	35	3.04	0.06	29	25.1	0.48	133
03DH-24	0.9	32	2.27	0.078	33	41.6	0.96	82
03DH-25	8.1	38	3.84	0.051	21	27.2	0.72	102
03DH-26	2.3	13	4.53	0.055	22	8.7	0.28	108
03DH-27	3.9	< 1	0.05	0.016	8	4	0.02	72
03DH-29	0.6	44	2.27	0.06	21	44.4	1.68	277
03DH-31	531.7	30	0.48	0.029	5	12.4	0.21	17
03DH-32	1.3	82	3.81	0.057	22	29.3	0.97	38
03DH-34	0.3	3	0.03	0.016	21	5.8	0.03	49
03DH-35	0.7	16	0.69	0.009	12	20.1	0.21	65
STANDARD DS5/AU-R	5.9	58	0.73	0.09	11	178.1	0.65	134



Tom Zone Report – Appendix E

ELEMENT SAMPLES	Ti %	B ppm	Al %	Na %	K %	W ppm	Hg ppm	Sc ppm
SI	< .001	2	0.01	0.636	0.01	< .1	< .01	< .1
03DH-1	0.017	1	1.6	0.003	0.06	>200	0.01	2.8
03DH-2	0.036	280	3.58	0.169	0.03	1.1	0.03	1.2
03DH-3	0.146	4	4.65	0.225	0.72	0.8	0.01	3.9
03DH-4	0.075	4	2.37	0.102	0.46	0.7	< .01	3.4
03DH-5	0.003	5	0.29	0.005	0.12	0.7	< .01	1.3
03DH-6	0.127	1	4.48	0.19	1	1	0.01	5.6
03DH-7	0.091	< 1	3.49	0.246	0.71	2.3	< .01	4.2
03DH-8	0.096	1	1.82	0.043	0.77	0.7	0.01	2.9
03DH-9	0.178	2	5.56	0.459	1.31	1	< .01	9.4
03DH-10	0.01	1	1.04	0.007	0.16	0.6	0.01	1.1
03DH-11	0.034	2	0.91	0.036	0.01	>200	< .01	0.6
03DH-12	0.061	2	2.07	0.009	0.72	>200	0.1	3.2
03DH-13	0.011	1	1.66	0.024	0.06	>200	< .01	1.2
03DH-14	0.008	5	0.65	0.025	0.1	>200	< .01	2.4
03DH-15	0.029	2	3.34	0.097	0.02	7	< .01	0.6
03DH-16	0.055	5	3.18	0.113	0.03	3.7	0.01	1.2
03DH-17	0.071	2	1.12	0.012	0.14	>200	0.11	2.4
03DH-18	0.001	8	0.15	0.005	0.07	10.9	0.01	0.5
RE 03DH-18	0.003	7	0.15	0.005	0.07	10	0.01	0.4
03DH-19	0.048	3	5.03	0.235	0.28	3.3	< .01	1.5
03DH-20	< .001	6	0.11	0.003	0.05	1.1	< .01	0.3
03DH-21	0.103	2	6.77	0.306	0.02	19.2	< .01	0.8
03DH-22	0.033	1	1.07	0.055	0.1	0.9	0.01	1.3
03DH-23	0.108	3	4.78	0.563	0.23	1.1	< .01	2
03DH-24	0.171	1	4.18	0.42	0.53	2.4	0.01	3.3
03DH-25	0.09	3	5.33	0.324	0.21	132	0.03	2.6
03DH-26	0.067	4	5.51	0.263	0.03	18.4	< .01	0.9
03DH-27	< .001	10	0.24	< .001	0.13	1.1	< .01	1.1
03DH-29	0.154	2	4.78	0.169	1.44	0.7	0.01	6.7
03DH-31	0.04	5	0.44	0.05	0.12	>200	0.04	1.4
03DH-32	0.106	3	5.51	0.348	0.31	3.2	0.01	2.6
03DH-34	< .001	17	0.27	0.004	0.14	0.9	< .01	1.3
03DH-35	0.044	1	1.52	0.116	0.1	1.2	< .01	2.3
STANDARD DS5/AU-R	0.091	17	1.98	0.034	0.13	4.7	0.17	3.5

Tom Zone Report – Appendix E

ELEMENT SAMPLES	Tl ppm	S %	Ga ppm	Se ppm	Au** ppb	Sample gm
SI	< .1	< .05	< 1	< .5	2	0
03DH-1	0.1	10.82	6	70.9	12674	3700
03DH-2	< .1	< .05	10	1.9	59	1400
03DH-3	0.5	0.32	13	2.4	13	500
03DH-4	0.4	< .05	7	1	24	1300
03DH-5	0.1	< .05	1	< .5	10	700
03DH-6	0.7	0.3	13	4	100	1700
03DH-7	0.4	< .05	10	1	17	1200
03DH-8	0.4	< .05	6	0.5	7	1100
03DH-9	1	0.57	18	2.2	59	500
03DH-10	0.2	< .05	3	1.6	5	900
03DH-11	0.1	2.8	4	23.7	5752	1600
03DH-12	1.4	< .05	11	3.4	21713	600
03DH-13	0.2	5.55	10	86.8	13561	900
03DH-14	0.1	0.26	4	25.5	25235	600
03DH-15	< .1	0.31	10	1.4	105	1000
03DH-16	< .1	< .05	9	0.5	59	1000
03DH-17	0.6	0.18	15	36.5	21497	2100
03DH-18	< .1	0.66	< 1	6	2028	1400
RE 03DH-18	< .1	0.64	< 1	5.8	1506	0
03DH-19	0.2	0.14	13	1.1	55	1200
03DH-20	< .1	< .05	< 1	< .5	48	900
03DH-21	< .1	< .05	18	0.7	65	1200
03DH-22	0.1	< .05	3	< .5	15	1300
03DH-23	0.2	0.8	13	5.7	37	1400
03DH-24	0.4	0.5	12	4.1	9	1500
03DH-25	0.2	0.13	14	1.2	151	1700
03DH-26	< .1	0.21	14	1.1	101	1400
03DH-27	0.2	< .05	1	1.2	724	1100
03DH-29	0.9	0.07	13	0.8	24	900
03DH-31	0.3	0.35	5	33.1	26142	1800
03DH-32	0.3	0.18	15	2.2	46	1400
03DH-34	0.2	< .05	1	0.9	1289	1000
03DH-35	0.1	0.11	4	1.2	52	2100
STANDARD DS5/AU-R	1.1	< .05	7	5	489	0

**APPENDIX F**

**Aurora Geosciences Report**

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**MEMORANDUM**

**To:** Gerry Carlson **Date:** 18 July 2003  
**From:** Mike Power  
**Re:** Field Report –Scheelite Dome Property IP survey

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This memorandum is field report describing induced polarization (IP) surveys conducted at the Scheelite Dome Property, near Mayo, Yukon Territory. The survey was designed to locate disseminated sulphide mineralization associated with calc-silicate skarn alteration.

**a. Personnel.** The IP survey was conducted by the following personnel:

Franz Dziuba, Bsc., P. Geoph.	Crew chief	July 4 -14, 2003
Dave Hildes	Technician	July 11 -14, 2003
Erik Martensson	Technician	July 4 – 14, 2003
Bob Stirling	Technician	July 5 – 8, 2003
Susanne Achiele	Technician	July 4 – July 5, 2003

The crew was assisted by Will Tompson from July 4 to July 14. Daniele Heon conducted a total magnetic field survey on the property from July 11 – 13. The complete survey log is attached to the invoice for this work.

**b. Instruments and equipment.** The geophysical crew was equipped with the following instruments and equipment:

**Transmitter:** Iris VIP-4000 / GDD Tx II  
**Receiver:** Iris ELREC IP-6  
**Equipment:** 5 km 16 gauge wire  
3 – Georeels w/spools  
2 – Speedy winders  
4 – Spools / speedy winders

1 - Honda EZ5000 5KW gas generator  
29 – stainless steel electrodes  
5 – VHF radios (1 base station antenna)  
Repair tools (standard & IP set), transmitter tent, salt, tin foil  
Salt & gas jerry cans, fire extinguishers, First aid (BC #2), bear repellent, tent heater, propane

Data processing: 1 – P3 laptop computer  
HP inkjet colour printer

Other: GMC 1 ton 4WD truck  
Honda Foreman ATV  
GlobalStar SAT phone

**c. Survey line locations.** The coordinates of the ends of the survey lines were determined from position measurements taken with a non-differential GPS receiver and provided by Daniele Heon, Project Geologist.

**d. Survey specifications.** The surveys were performed according to the following specifications:

Array: Pole – dipole

Electrode arrangement: Current electrode grid south of potential electrodes

Dipole spacing: 25 m

Separations read: n=1 to 6

Decay curve sampling: Semi-logarithmic sampling of the decay curve  
10 time windows  
Delay prior to reading: 80 ms  
T1=80-160 ms / T2=160-240 ms / T3=240-320 ms  
T4=320-400 ms / T5=400-560 ms / T6=560-720 ms  
T7=720-880 ms / T8=880-1200 ms / T9=1200-1520 ms  
T10=1520-1840ms  
Mt is the weighted average of the chargeability in each Time window.

Parameters read: Vp – primary voltage in mV  
Mt – total chargeability in msec  
Mi – chargeability in each time window (i=1,2,3..10)  
Sp – spontaneous (self) potential  
Rs – contact resistance between electrodes  
Ro – apparent half space resistivity  
I – current in mA

Readings: 15 stacks minimum per reading

**e. Survey notes.** A dipole-dipole array was attempted on the first day of surveying however

signals were of poor quality with low repeatability. This was attributed to the rocky conditions not allowing sufficient current to be injected into the ground and to telluric noise though that was not confirmed. Upon switching to a pole-dipole array readings were of good quality with lower errors. The transmitter setup was then left at one location for the whole survey. Electrical storms were common, and had to be closely monitored for the quality of the data and the safety of the crew and equipment.

The total magnetic field survey was directed by the Aurora geophysical crew, who also corrected the data for diurnal variations.

**f. Data formats.** The following raw IP dump files are attached:

IP0705.dmp
IP0706.dmp
IP0707.dmp
IP0711.dmp

IP0712.dmp  
IP0713.dmp  
IP0714.dmp

The file names specify the date (month/day) on which they were dumped. The dump files are ASCII files generated by the Iris ELREC 6 receiver and these files are unedited.

Total field magnetic data, corrected for diurnal variations are attached as:

M0711.xyz  
M0712.xyz  
M0713.xyz

The final corrected data is appended to this report in Geosoft database format (.gdb) files. These include:

ScheeliteDome\_IP.gdb  
ScheeliteDome\_mag.gdb

All data is referenced to grid coordinates in these preliminary products. The attached file "GridCoords.xls" contains the GPS positions of the ends of the survey lines.

**g. Preliminary data processing.** The IP data was processed and plotted in pseudosection format using Geosoft Oasis Montaj IP software package. UBC's DCIP2D inversion modelling was performed on each survey line of data. These models incorporate surface topography into the data inversion and display the distribution of resistivity and chargeability sources which generate a response matching the observed response, within the bounds of measurement error. The preliminary models indicate the location of resistivity and chargeability features which may be of economic interest. The results should be reviewed carefully and those features of the resistivity or chargeability models which are greater than approximately 150 m should be discounted as being beyond the likely detection depth of the array (175 m nominal). In more resistive ground the survey can "see" deeper than in

conductive ground because of the absence of screening.

**h. Results.** Preliminary inversion results and a draft total magnetic field map are appended to this report. For each line and for each of the resistivity and chargeability properties, the plots show a comparison of the observed and model generated results; a plot of the best fit model; and a plot showing the convergence behaviour of the inversion. A good model should replicate all the essential features of the observed data and can be qualitatively assessed by comparing the observed and predicted chargeability or resistivity. The resistivity or chargeability model for each line is shown in section. The model consists of a number of rectangular cells with a finite resistivity and chargeability which is determined by the program in the course of generating a best fit to the field data. The cell sizes vary with the smallest cells being in the centre of the model beneath the reading array where the physical properties are most sensitive to the field readings. The minimum cell size for all models was 12 m horizontal (1/2 dipole spacing) by 6.25 m vertical in this central zone. The model plot is a cross section showing the resistivity or chargeability of each cell, scaled according to the colour bar. Note that the data range varies a bit between lines to accommodate varying resistivity / chargeability conditions. The convergence plot shows the behaviour of the inversion as defined by the target misfit (maximum acceptable discrepancy between the predicted data and the field data) and the model norm (difference from the uniform starting model). In general, for a good inversion, the target misfit should be achieved and the model norm should stabilize at a high value.

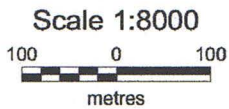
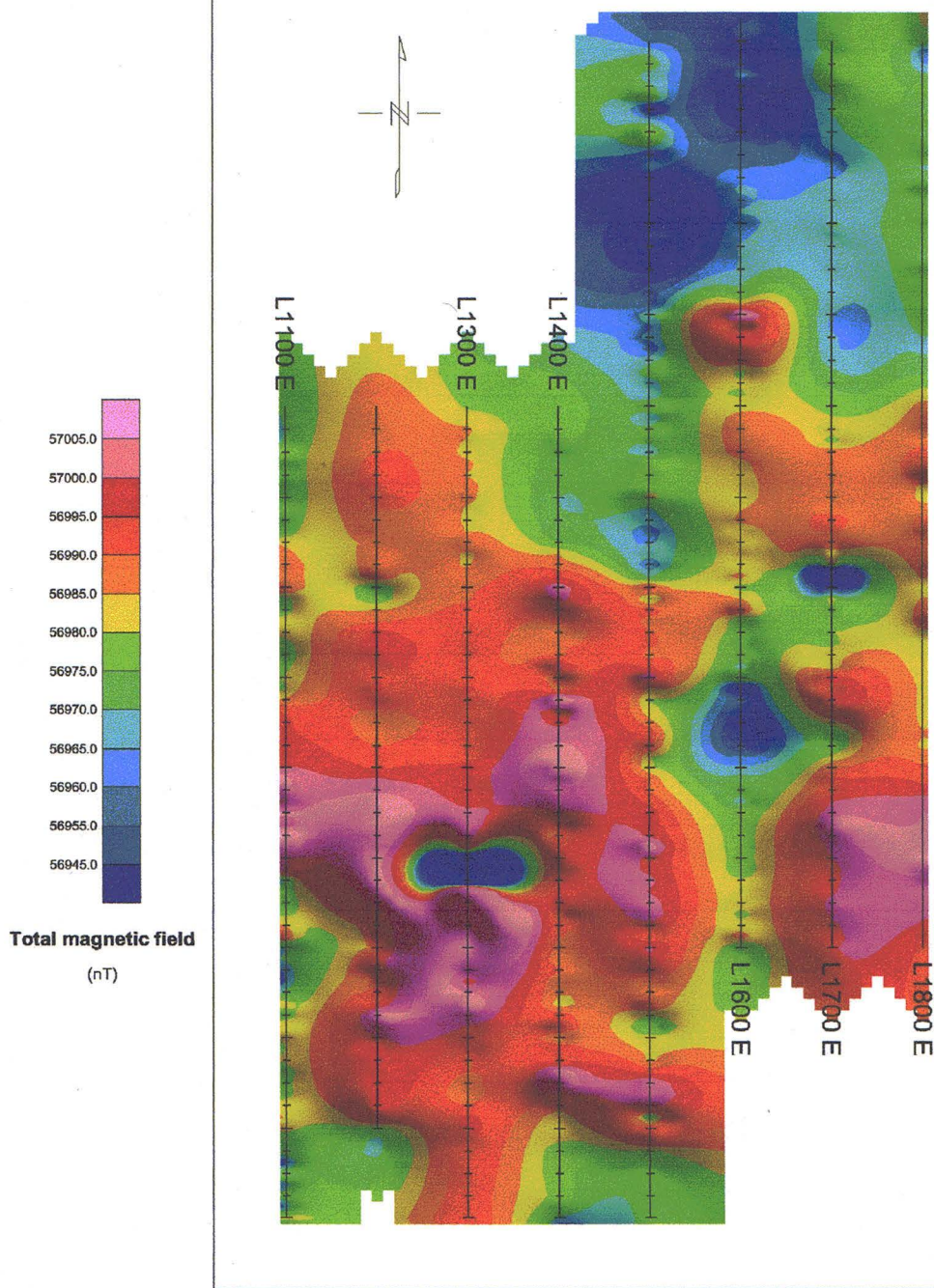
The survey located a number of areas with high resistivity and elevated chargeability which should be correlated with the known geology. It should be noted that the chargeability in general was quite low and that this need not obviate the possibility of economic gold mineralization being present. Also, chargeabilities tend to increase in areas with high resistivities as current paths are constricted and charges are forced to accumulate on grain boundaries.

Thank you for the opportunity to work with you on this interesting project.

Respectfully submitted,  
**AURORA GEOSCIENCES LTD.**

Mike Power M.Sc , P.Geoph.  
Geophysicist

PRELIMINARY



Copper Ridge Explorations Inc.

Scheelite Dome Property  
Total Magnetic Field Survey  
Preliminary Contour Map

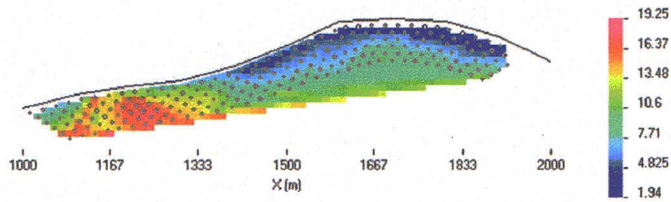
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Datum: Local

Date: 18Jul03  
Projection: UTM

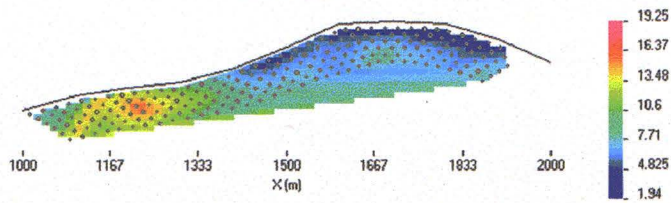
**AURORA GEOSCIENCES LTD.**

# L1700E – CHARGEABILITY

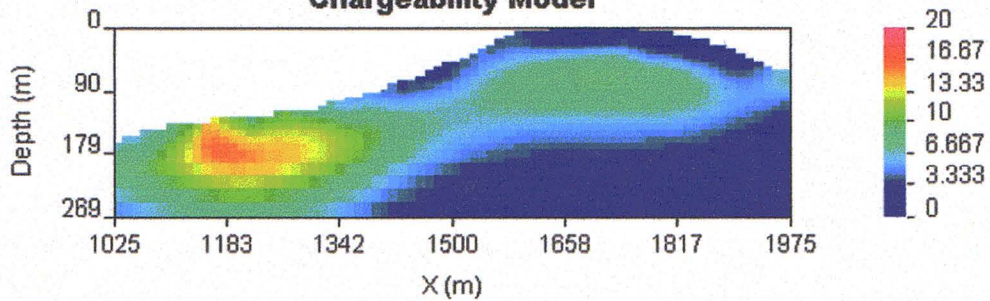
L1700E Chargeabilities : pole-dipole : 216 data  
Observed Apparent Chargeability



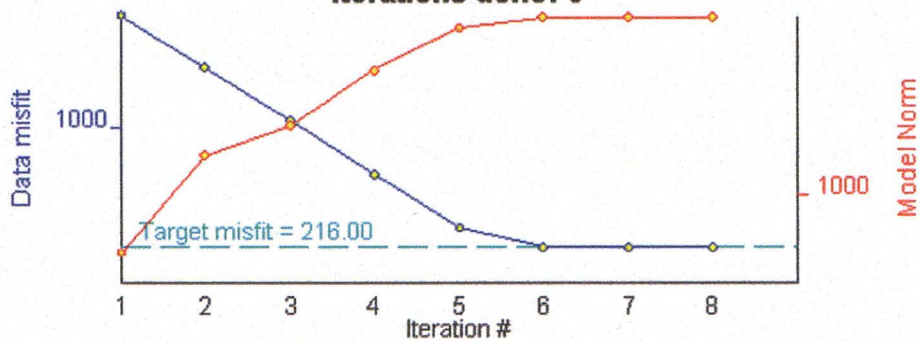
Predicted Data



## Chargeability Model



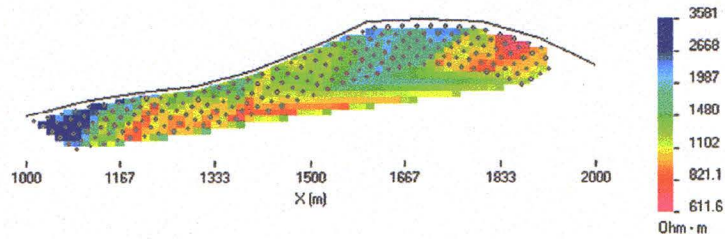
Iterations done: 8



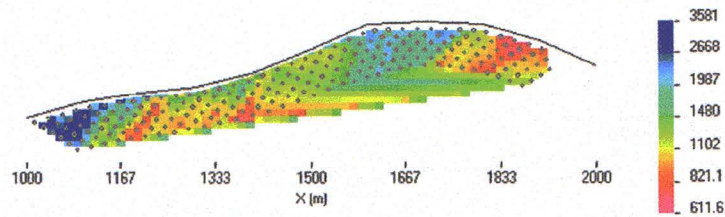


# L1700E – RESISTIVITY

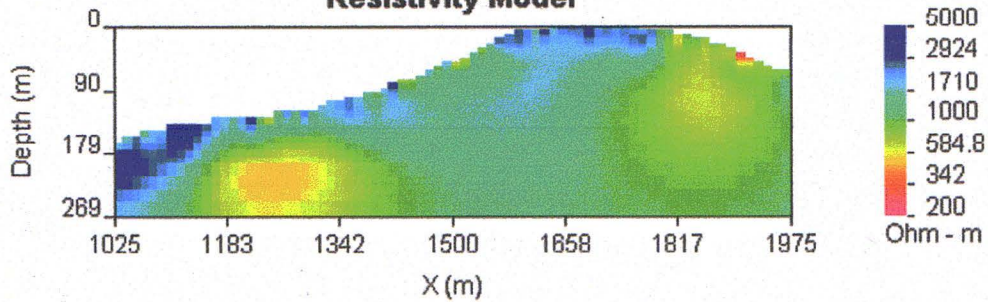
L1700E potentials : pole-dipole : 216 data  
Observed Apparent Resistivity



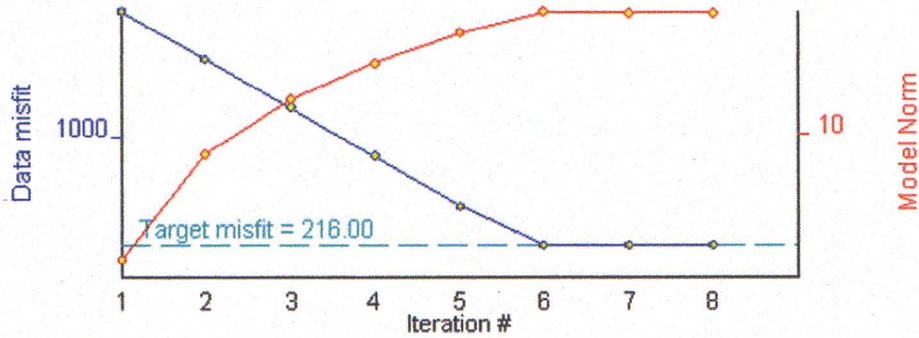
Predicted Data



## Resistivity Model

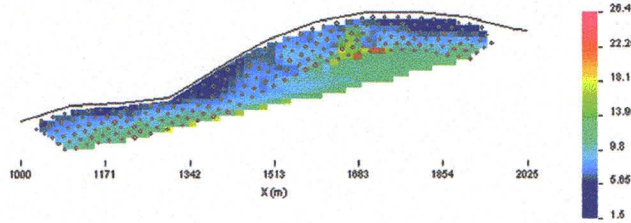


Iterations done: 8

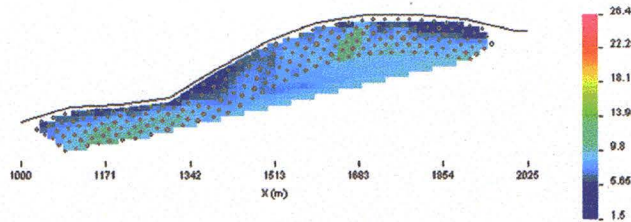


# L1600E – CHARGEABILITY

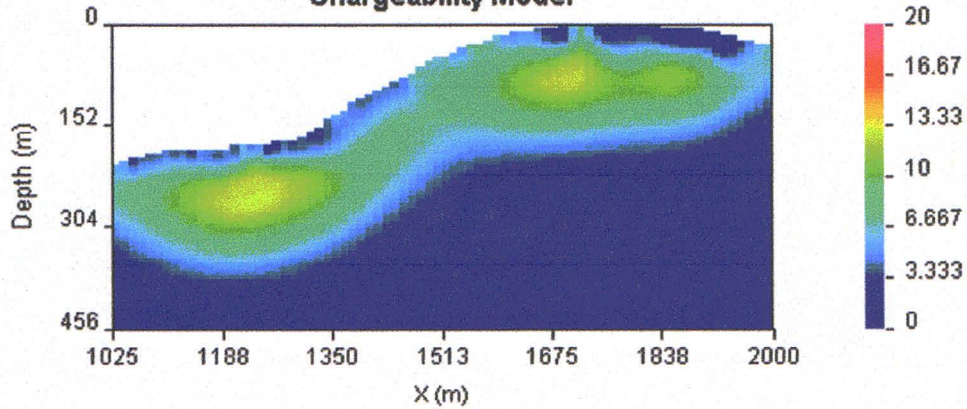
L1600E Chargeabilities : pole-dipole : 221 data  
Observed Apparent Chargeability



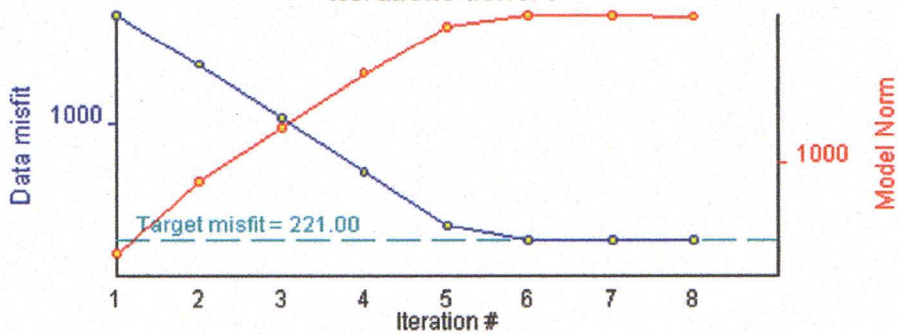
Predicted Data



Chargeability Model

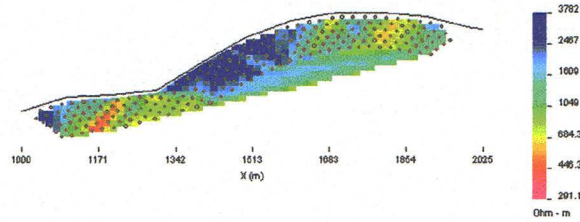


Iterations done: 8

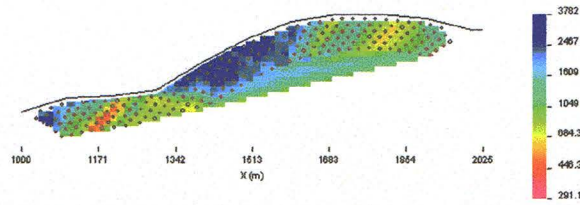


# L1600E – RESISTIVITY

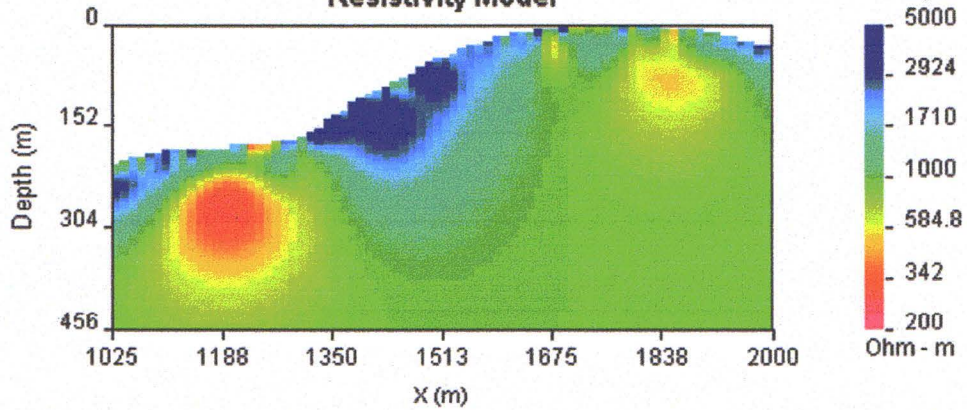
L1600E Potentials : pole-dipole : 221 data  
Observed Apparent Resistivity



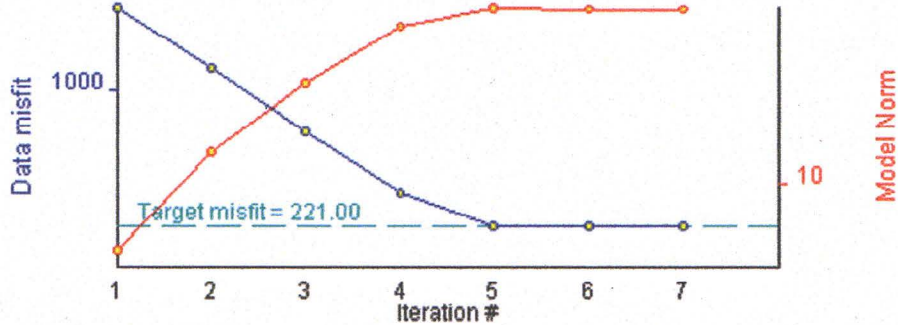
Predicted Data



### Resistivity Model

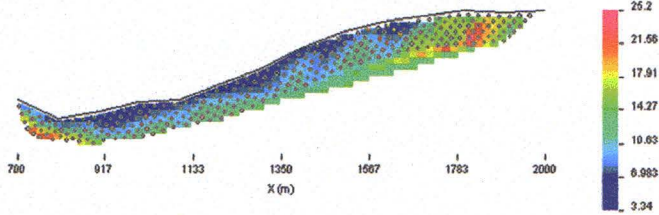


### Iterations done: 7

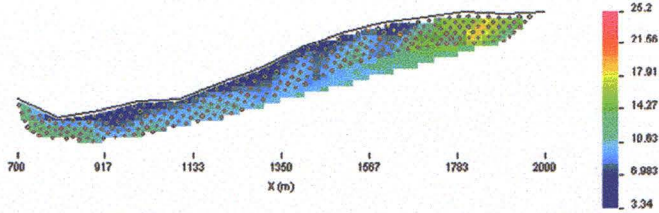


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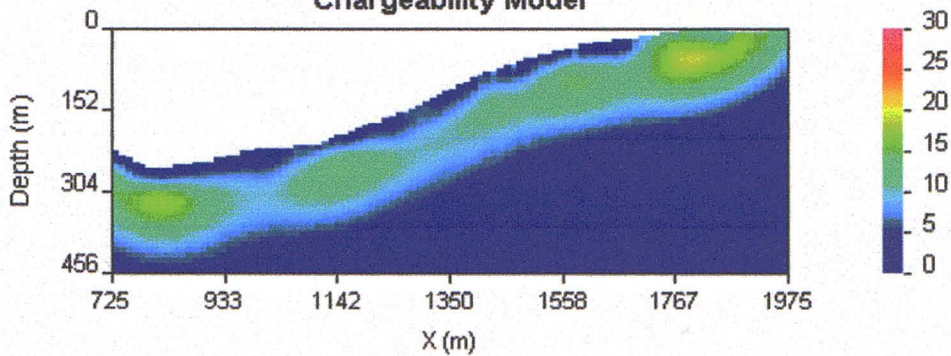
L1500E Chargeabilities : pole-dipole : 299 data  
Observed Apparent Chargeability



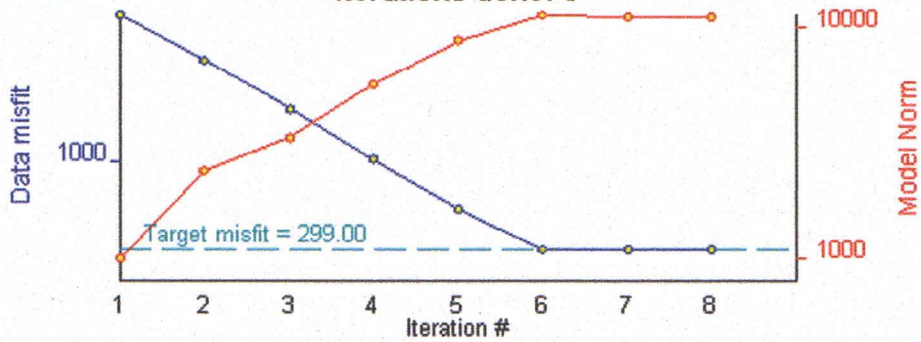
Predicted Data



Chargeability Model

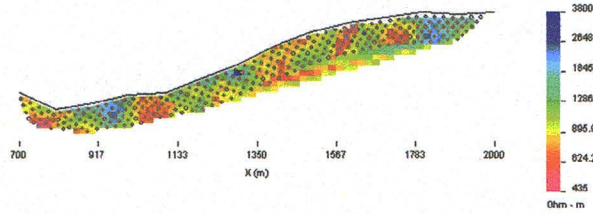


Iterations done: 8

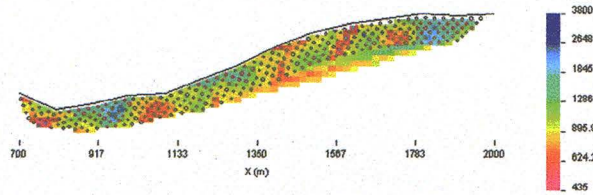


# L1500E – RESISTIVITY

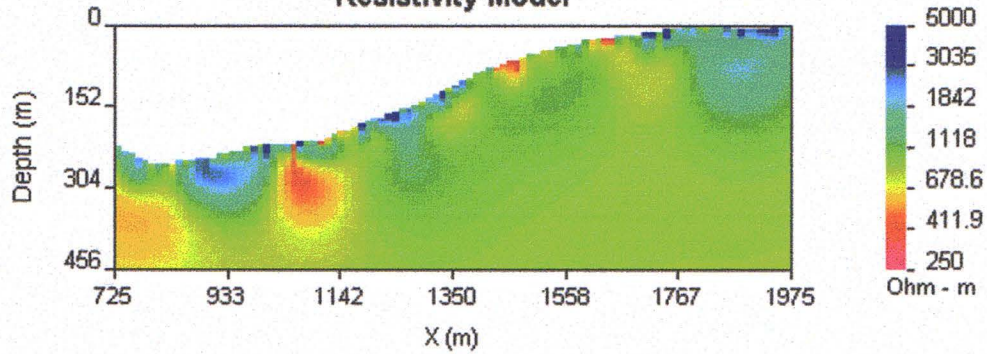
L1500E POTENTIALS : pole-dipole : 299 data  
Observed Apparent Resistivity



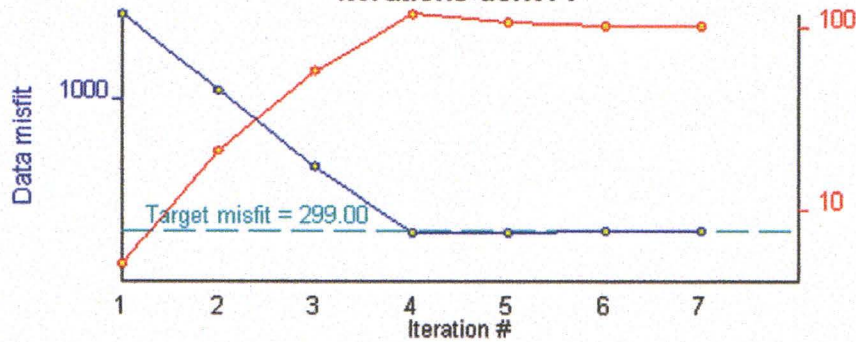
Predicted Data



## Resistivity Model

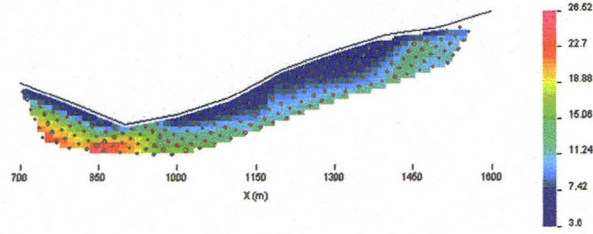


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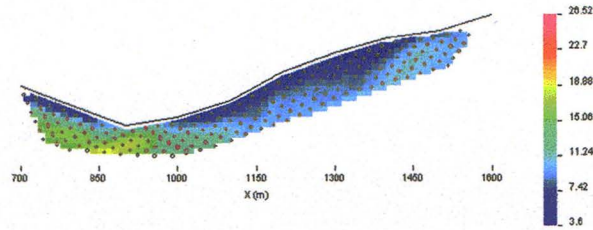


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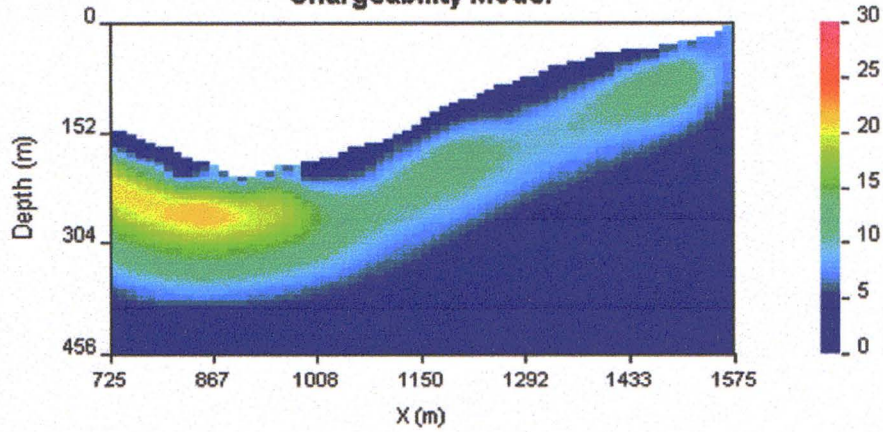
L1400E Chargeabilities : pole-dipole : 206 data  
Observed Apparent Chargeability



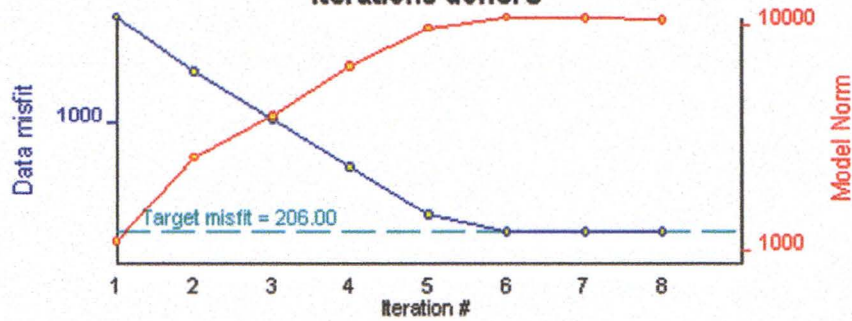
Predicted Data



## Chargeability Model

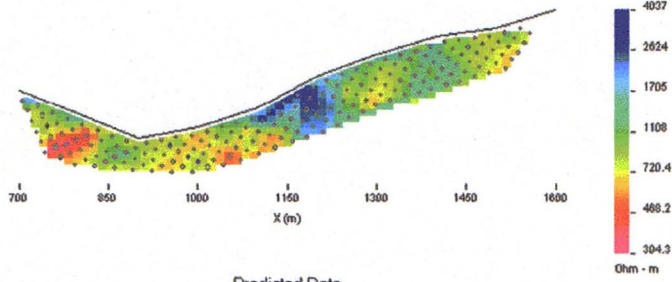


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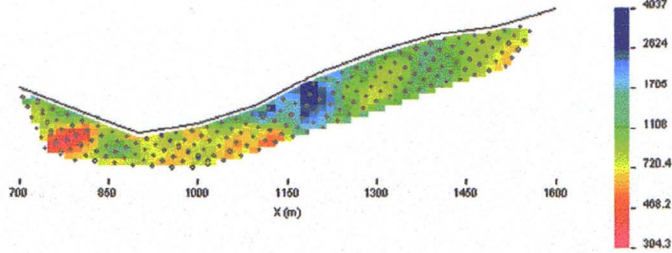


# L1400E – RESISTIVITY

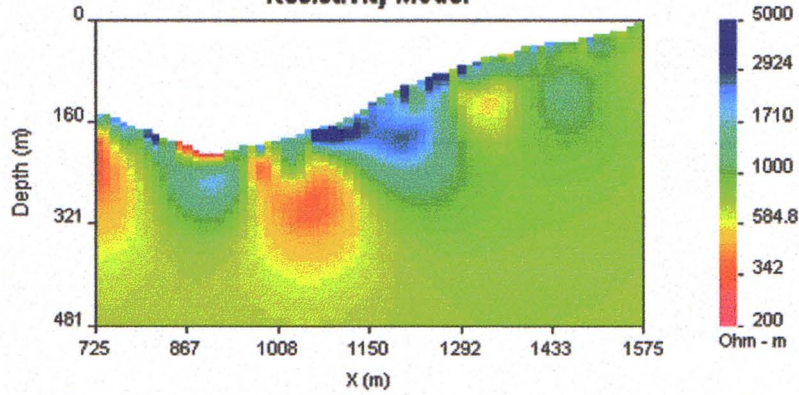
L1400E potentials : pole-dipole : 206 data  
Observed Apparent Resistivity



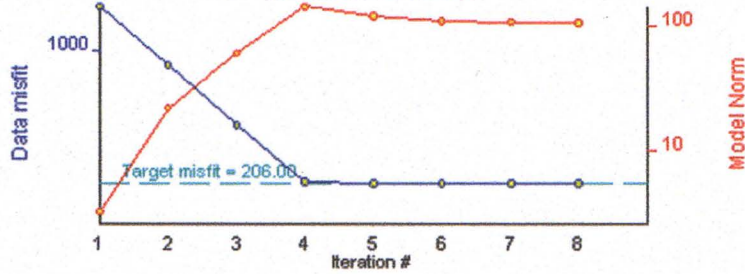
Predicted Data



## Resistivity Model

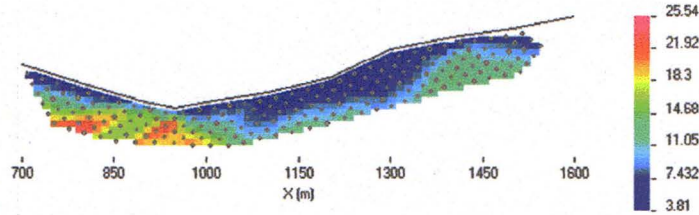


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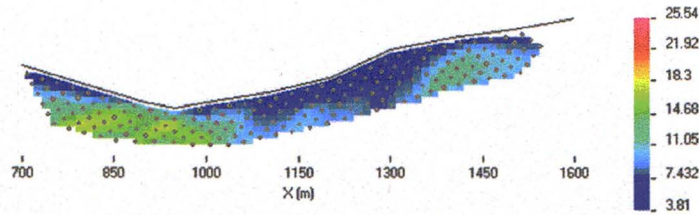


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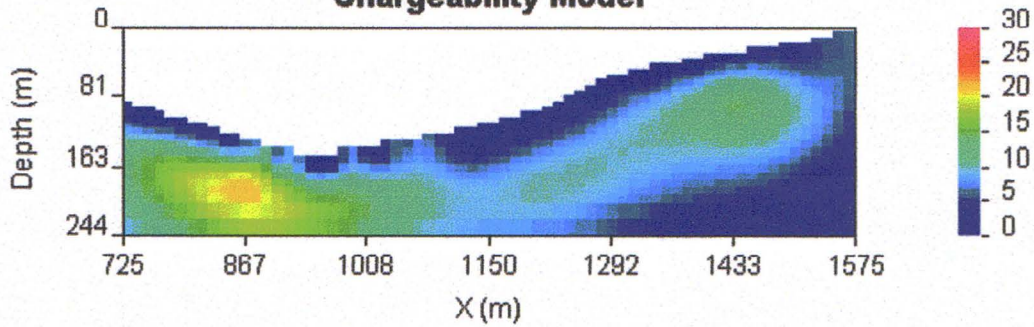
L1300E Chargeabilities : pole-dipole : 192 data  
Observed Apparent Chargeability



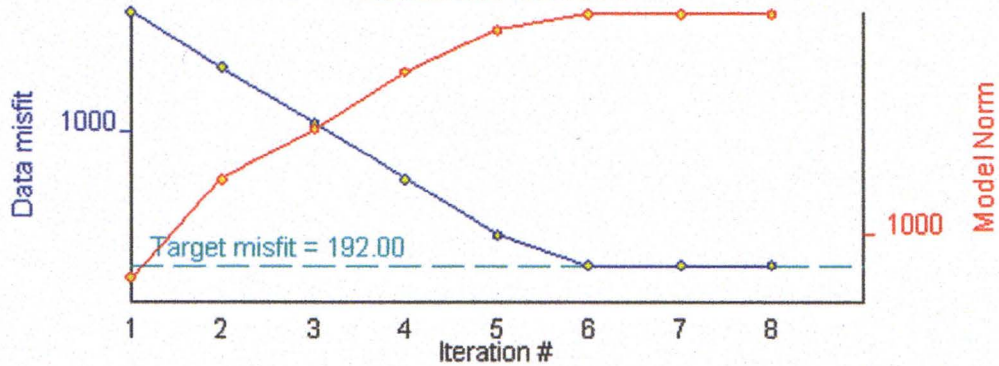
Predicted Data



## Chargeability Model



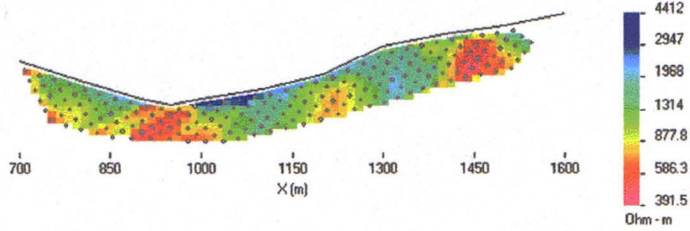
Iterations done: 8



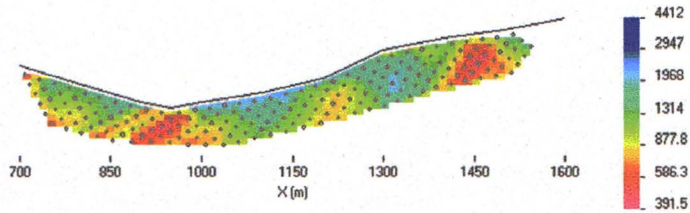


# L1300E - RESISTIVITY

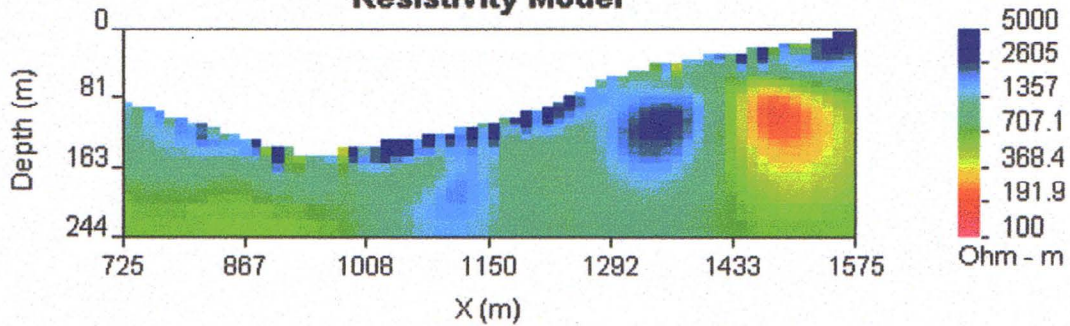
L1300E potentials : pole-dipole : 192 data  
Observed Apparent Resistivity



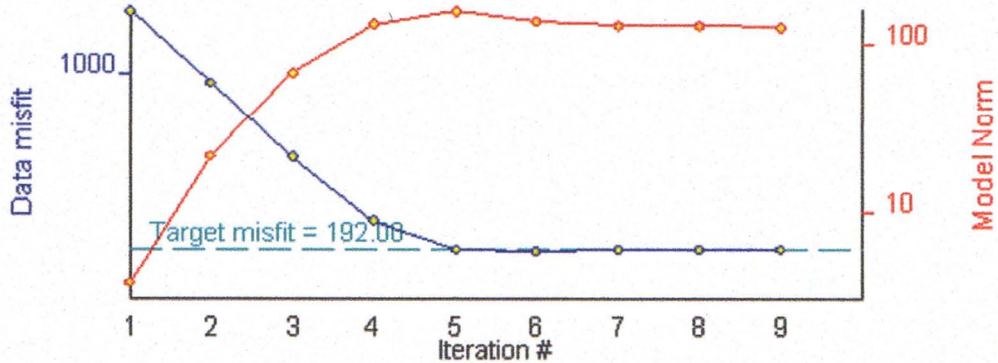
Predicted Data



## Resistivity Model

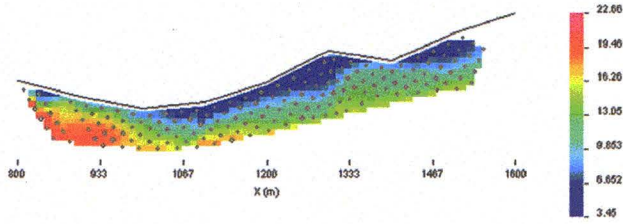


## Iterations done: 9

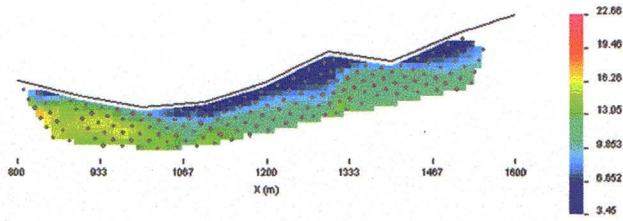


# LINE 1200E - CHARGEABILITY

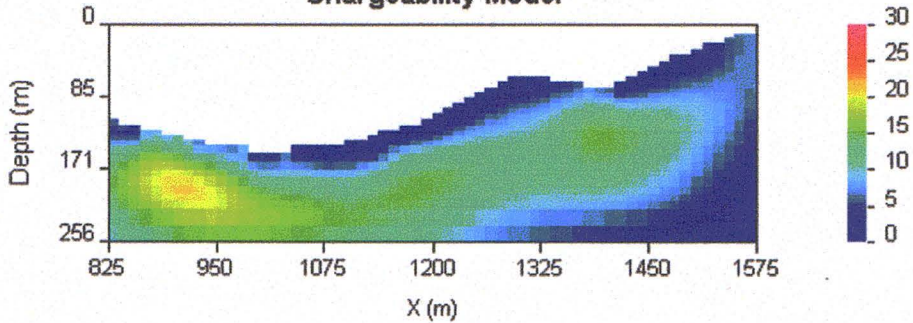
L1200E chargeabilities : pole-dipole : 162 data  
Observed Apparent Chargeability



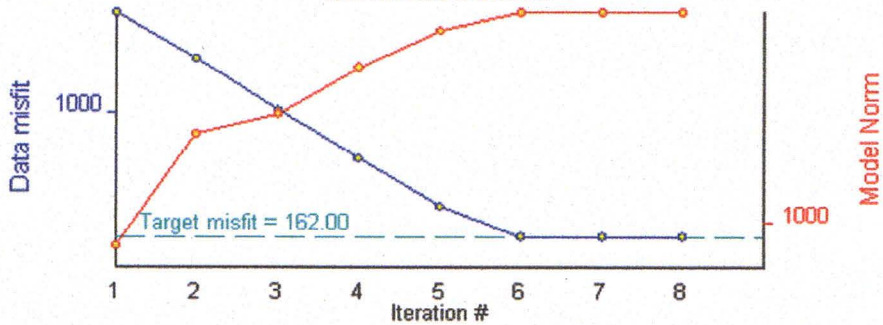
Predicted Data



## Chargeability Model

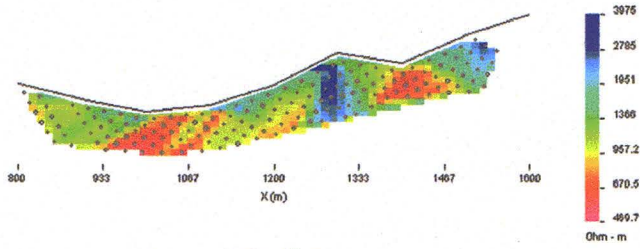


Iterations done: 8

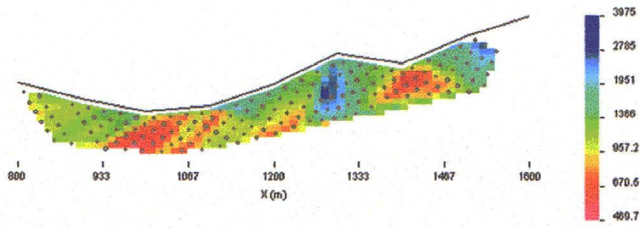


# LINE 1200E - RESISTIVITY

L1200E potentials : pole-dipole : 162 data  
Observed Apparent Resistivity

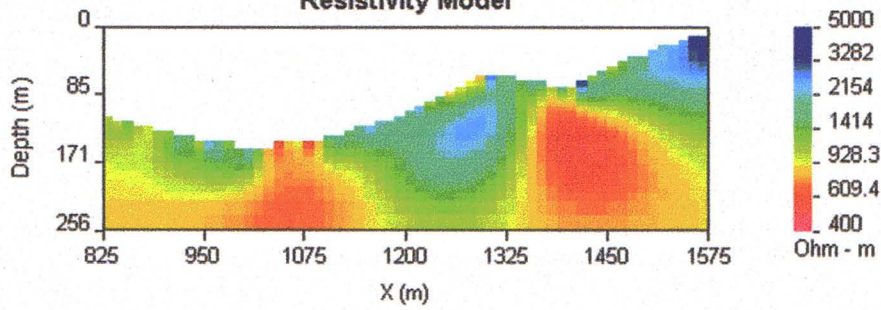


Predicted Data

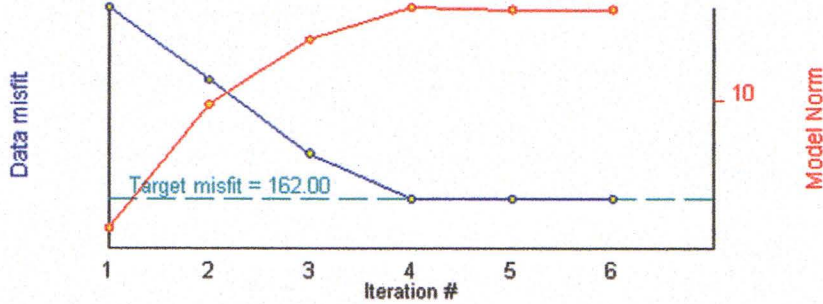


## Observed & model predicted data pseudosections

### Resistivity Model



Iterations done: 6



## Resistivity model and inversion summary

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