

2001 ASSESSMENT REPORT ON THE  
**SONORA PROPERTY**

NTS: 115J/9, 115I/12

Latitude: 62°38'N

Longitude: 138°35'W

Whitehorse Mining Division  
YUKON TERRITORY

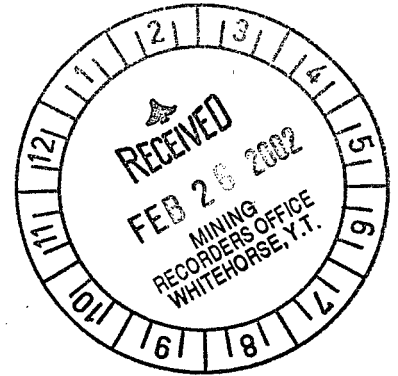
(SWEDE 1-6 YA2779-84; SAM 7-14 YA3875-82; SAM 21-30 YA3889-898; SAM35-44  
YA3907-12; SAM 89-90 YA8277-78; SAM 93-96 YA8281-84; SAM 117-118 YC8341-42;  
STONE 9,11,13 YC14656, 58, 60; S 5-6, 8 YC14636, 37,39)

For  
Swede Martensson  
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Y1A 5M4

**094255**

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February , 2002



This report has been examined by  
the Geological Evaluation Unit  
under Section 53 (4) Yukon Quartz  
Mining Act and is allowed as  
representation work in the amount  
of \$ 4800.00.

*M. Burke*  
for Regional Manager, Exploration and  
Geological Services for Commissioner  
of Yukon Territory.

## SUMMARY

The 48 unit (1,000 hectare) SONORA property, NTS map sheets 115J/9 and 115I/12, is located 110 km west of Carmacks, Yukon Territory in the Whitehorse Mining Division. Latitude and longitude are 62°38'N, 138°35'W. There is all weather road access to within 25 km of the property, winter road access to and good cat road access across the property and a fixed wing airstrip on the property. The claims are held by Swede Martensson and Alan McDiarmid of Whitehorse, Yukon.

The SONORA property is primarily underlain by metavolcanic and lesser metasedimentary rocks of the Yukon-Tanana Terrane, intruded by quartz monzonite and granite of the 100 Ma Dawson Range Batholith. The Dawson Range extends from Mt. Freegold, 45 km NW of Carmacks, to east-central Alaska. The northwesterly trending Big Creek Fault transects the property and is the locus of a well-mineralized belt, with porphyry copper-gold and gold veins and breccia bodies, extending from Freegold to Casino and may be related to the emplacement of a high level late Cretaceous stock of quartz eye feldspar porphyry on the property along the margins of the batholith.

Mineralization on the property occurs as a one km northwest trending zone of narrow mesothermal gold - bismuth - tellurium bearing quartz - sulfide - carbonate vein and breccia mineralization hosted by the older metamorphic rocks and referred to as the Tetradyomite Vein System due to the presence of tetradyomite, a bismuth telluride. The Tetradyomite Vein System lies 1.2 km northeast of the 100 Ma Dawson Range Batholith. Mineralization in the quartz porphyry consists of quartz-arsenopyrite-sphalerite-stibnite veins with up to 10% pyrite and appears to represent a higher level expression of the system.

Work in 2001 consisted of the evaluation of the property for intrusion associated gold potential with emphasis on mesothermal (Pogo-style) gold veins and bulk tonnage gold related to the porphyry (Fort Knox type). The Tetradyomite Vein System and to a lesser degree the porphyry gold style mineralization were re-evaluated and interpreted in terms of recent studies in the Tintina Gold Belt by conducting a detailed examination in conjunction with geochemical sampling.

The 2001 property examination confirmed high-grade gold values within the Tetradyomite Vein System with values up to 66.5 g/t Au (1.94 opt). Previous results included 62 g/t Au over 1.25' and 3.5 g/t Au over 20' from trenching and 18.9 g/t Au over 3' and 5 g/t Au over 10' from drilling. A sample of massive stibnite/jamesonite - pyrite - arsenopyrite veinlets, hosted by the quartz porphyry, returned 12.2 g/t Au.

Previous drill holes on the property averaged <100m in length and work has generally been concentrated above the 2900' elevation. With the degree of low-angle faulting in the area it is possible that the Tetradyomite Vein System may represent the high-angle expression of a larger low-angle mineralized structure, similar to the shallow dipping mesothermal gold

vein(s) at Pogo, at depth. The presence of the old adit near Little Klines Gulch at 2200', with reports of 17.2 g/t Au over 2.4m, and the report of quartz-pyrrhotite float containing 2 opt Au from lower on the hillside near Sonora Gulch provides some basis for the validity of this highly prospective untested target.

Based on the similarities of the property to the Pogo deposit, there is high potential for SONORA to host a Pogo-style mesothermal vein target. Similarities include the geochemical signature (gold - arsenic - bismuth - tungsten - tellurium - copper - molybdenum, with enhanced lead and zinc and distal antimony), host rocks consisting of the metamorphic basement rocks of the Yukon-Tanana Terrane, proximity and possible association with a mid-Cretaceous intrusion and mineralogy (tetradymite, arsenopyrite, pyrrhotite and pyrite and more distally, stibnite and sulphosalts).

The reasonable access to and across the property adds to the economic potential.

An initial surface program of \$50,000 is recommended to expand the geological, geochemical and geophysical coverage on the SONORA property, followed by a \$200,000 diamond drill program targeting a deeper, feeder zone to the Tetradymite Vein System.

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## APPENDICES

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## 1.0 LOCATION AND ACCESS (Figure 1)

The SONORA property, NTS map sheet 115J/9 and 115I/12, is located 110 km west of Carmacks, Yukon Territory in the Whitehorse Mining Division. The property is situated along Hayes Creek with a latitude and longitude of 62°38'N, 138°35'W.

Access in 2001 was by helicopter from Carmacks, Yukon. There is all weather road access to within 25 km of the property and winter road access to and good cat road access across the property. There is also fixed wing access to a gravel airstrip on the property. Helicopter access is generally available from Carmacks, Yukon.

## 2.0 LEGAL DESCRIPTION (Figure 2)

The SONORA property consists of 48 contiguous claims covering an area of approximately 1,000 hectares. The claims are held by Swede Martensson and Alan McDiarmid of Whitehorse, Yukon. One year of work has been filed and, based on the acceptance of this report, will validate the claims to October 28, 2002 and September 1, 2002. A table showing pertinent claim data follows:

CLAIM NAME	GRANT NUMBERS	NUMBER OF CLAIMS	EXPIRY DATE
SWEDE 1-6	YA03779-YA03784	6	*OCT. 28, 2002
SAM 7-14	YA03875-YA03882	8	*OCT. 28, 2002
SAM 21-30	YA03889-YA03898	10	*OCT. 28, 2002
SAM 35-44	YA03907-YA03912	10	*OCT. 28, 2002
SAM 89-90	YA08277-YA08278	2	*OCT. 28, 2002
SAM 93-96	YA08281-YA08284	4	*OCT. 28, 2002
SAM 117-118	YC08341-YC08342	2	*OCT. 14, 2002
STONE 9, 11, 13	YC14656, 58, 60	3	*SEPT 1, 2002
S 5, 6, 8	YC14636, 37, 39	3	*SEPT 1, 2002

\*NB: Expiry date based on acceptance of this report

## 3.0 PHYSIOGRAPHY

The claims lie within the unglaciated Dawson Range, southwestern Yukon. The topography is moderate with long sinuous ridges incised by narrow valleys heading down to larger swampy creek valleys. Outcrop is sparse with the best exposures along ridgelines, knolls and along creeks. Vegetation consists of moss, birch, poplar, and spruce with thickets of alder and buck brush. Elevations range from 760m (2500') to 1280m (4200').

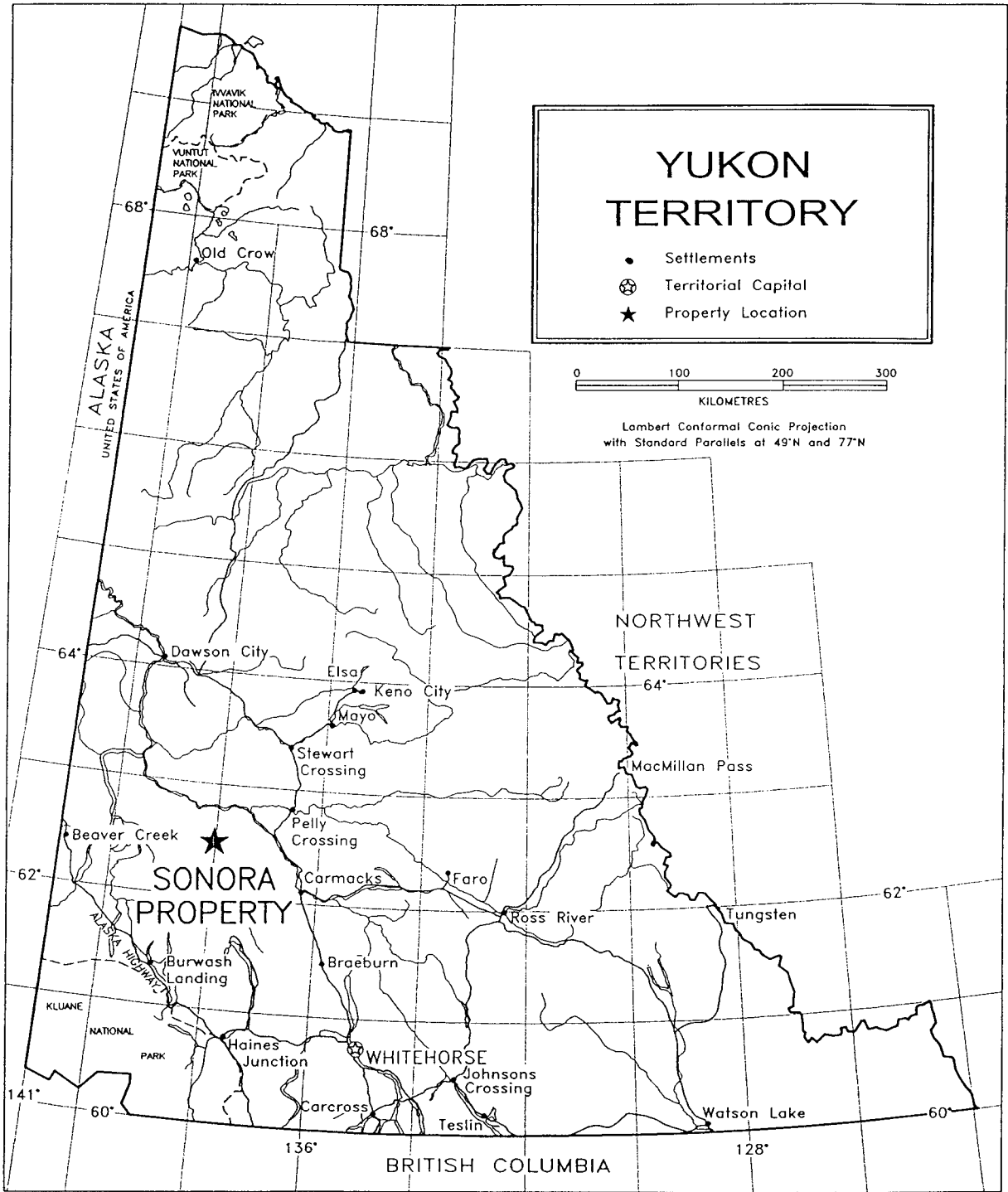
#### 4.0 HISTORY (Figures 4 and 5)

- 1896 Placer gold was discovered on Klines Gulch. (Heavy concentrates include galena, sphalerite, tetradymite (Bi, Te), gold nuggets and scheelite).
- 1899 An adit near the mouth of Little Klines Gulch (at 2200' on the property) intersected a 2.4m quartz vein grading up to 17.2 g/t Au (Minfile, 1998).
- 1899-1977 Placer production (from Klines and Sonora Gulches on the property) and lode gold exploration, including geochemical, geophysical and 1946-51 trenching, was completed by various operators.
- 1977-1985 Completion of 7877' of drilling in 26 holes, 71 trenches, geochemical and geophysical surveys. Work was primarily completed by Hudson Bay Mining and Smelting. Abundant significant gold values were obtained over narrow widths from the Tetradymite Vein System and include 62 g/t Au over 1.25' and 3.5 g/t Au over 20' from trenching and 18.9 g/t Au over 3' and 5 g/t Au over 10' from drilling. Quartz-pyrrhotite float containing 2 opt Au was reported from lower on the hillside near Sonora Gulch. Mineralization was also outlined in a quartz porphyry stock with values of 2.4 g/t Au over 2.5'.
- A strong untested gold - silver - arsenic - tellurium - bismuth - antimony geochemical anomaly was identified along trend to the east of the Tetradymite Vein System and remains open to the east. This anomaly correlates with the hanging wall contact of an ultramafic sill and a deep magnetic low.
- 1996-2001 Minor mapping and sampling programs were completed.

#### 5.0 2001 WORK

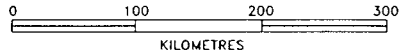
A total of 3 man days were spent on the SONORA property on August 22, 2001. The property was evaluated for intrusion associated gold potential with emphasis on mesothermal (Pogo-style) gold veins and, to a lesser degree, the bulk tonnage gold potential related to the porphyry (Fort Knox type). The Pogo deposit, near Delta Junction, Alaska, consists of two or more large, gently dipping quartz veins that contain a resource of 5.6 million ounces of gold with a grade of 0.52 opt Au (Smith et al, 2000).

Work on the SONORA property consisted of re-interpreting the Tetradymite Vein System and to a lesser extent, the porphyry gold style mineralization in light of recent studies in the Tintina Gold Belt by conducting a detailed examination in conjunction with geochemical sampling. The Tintina Gold Belt constitutes an arcuate belt extending from Donlin Creek in Alaska, through the Fairbanks District, Pogo and across the Yukon border where it



## YUKON TERRITORY

- Settlements
- ⊗ Territorial Capital
- ★ Property Location



Lambert Conformal Conic Projection  
with Standard Parallels at 49°N and 77°N



<b>ENGINEER MINING CORP.</b>		
<b>SONORA PROPERTY LOCATION MAP</b>		
<i>Graham Davidson, Consulting Geologist</i>		
SCALE: 1 : 6,000,000		DATE: 2000.02.15
NTS: 115 I/12, 115 J/9	DRAWN:	FIGURE 1



incorporates such deposits as Brewery Creek, Dublin Gulch, Scheelite Dome and Longline. Deposits within the belt are associated with mid to late Cretaceous intrusions hosted by the older metamorphosed basement complex of the Yukon-Tanana Terrane.

## 6.0 GEOLOGY

### 6.1 Regional (Figure 3)

The SONORA property occurs within the Dawson Range portion of the Yukon-Tanana Terrane. The Dawson Range extends from Mt. Freegold, 45 km NW of Carmacks, to east-central Alaska and is characterized by plutonic rocks of the Cretaceous Dawson Range Batholith (100Ma) intruding metavolcanic and metasedimentary rocks of the Yukon-Tanana Terrane. The Big Creek Fault, generally trending WNW, is the locus of a well-mineralized belt, with porphyry copper-gold and gold veins and breccia bodies, extending from Freegold to Casino.

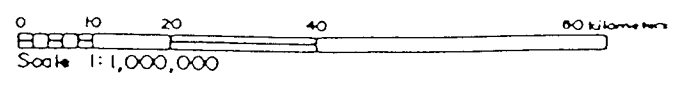
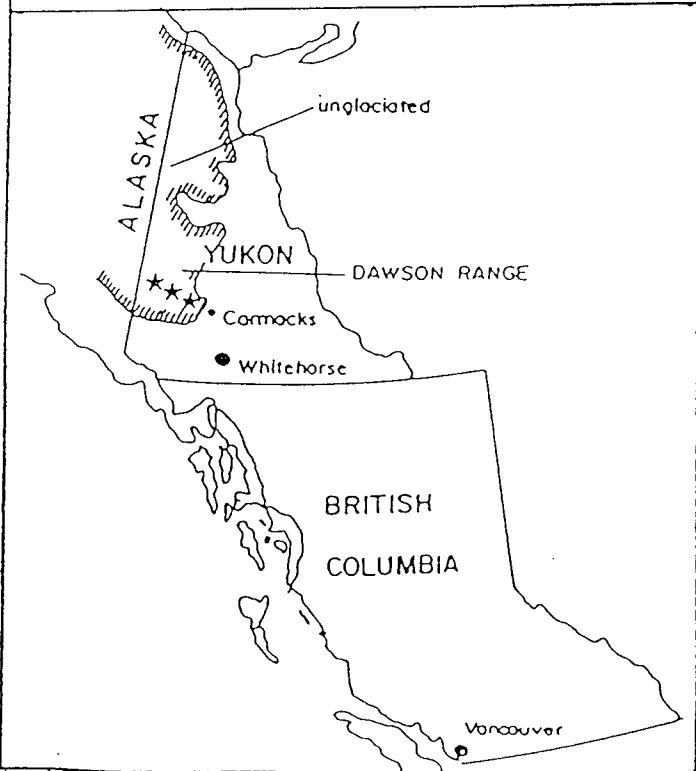
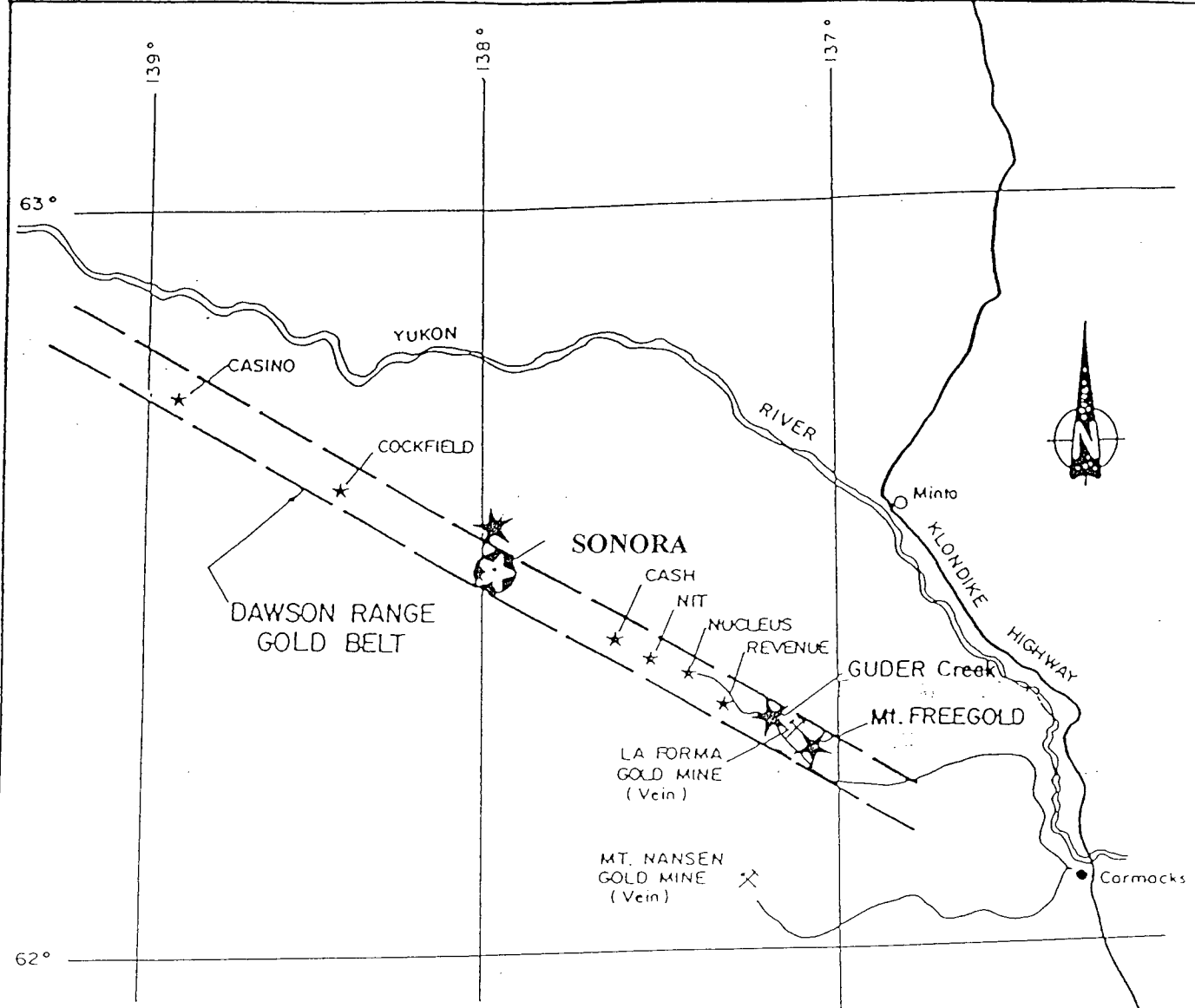
### 6.2 Property (Figures 4 and 5)

The property is underlain by metavolcanic and lesser metasedimentary rocks of the Wolverine Creek Metamorphic Suite, including ultramafic sills, intruded by quartz monzonite and granite of the Dawson Range Batholith. The Big Creek Fault (which transects the property) may be related to the emplacement of a high level late Cretaceous stock of quartz eye feldspar porphyry along the margins of the batholith.

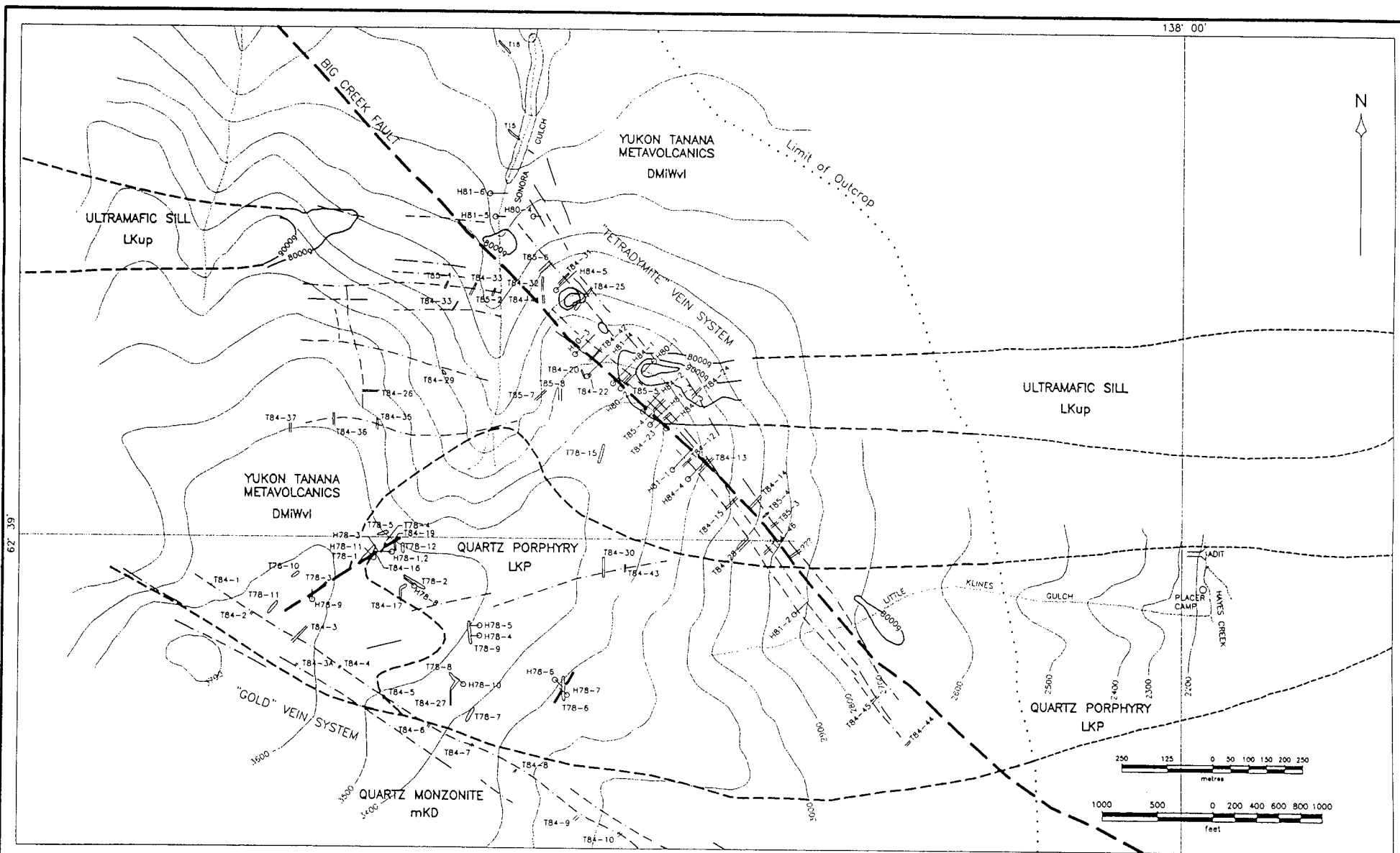
### 6.3 Mineralization:

Mineralization occurs within the quartz porphyry body and as a one km northwest trending zone hosted by the older metamorphic rocks and referred to as the Tetradymite Vein System due to the presence of tetradymite, a bismuth telluride. The Tetradymite Vein System lies 1.2 km to the northeast of the 100 Ma Dawson Range Batholith. Tetradymite is a significant mineral that occurs in the Pogo deposit and mineralization at Pogo is thought to be related to a phase of the Goodpaster Batholith (dated at 106 Ma - Mortenson, personal communication) approximately 2 km away from the Pogo deposit. The gold mineralization at Pogo has been dated at 104 Ma (Selby et al, 2001).

There are two styles of gold bearing mineralization at SONORA; quartz-carbonate-sulfide veins hosted by the quartz porphyry and by metamorphic rocks within the Tetradymite Vein System, and oxide and sulfide mineralization, including limonite and hematite, associated with northwest faults and northeast shears in the quartz porphyry. The underlying hypogene zone consists of quartz-arsenopyrite-sphalerite-stibnite veins with up to 10% pyrite in the



<b>ENGINEER MINING CORP.</b>	
<b>SONORA PROPERTY REGIONAL PLAN</b>	
<i>Graham Davidson, Consulting Geologist</i>	
	Date: 2000.02.11
DRAWN: G.D.	FIGURE 3

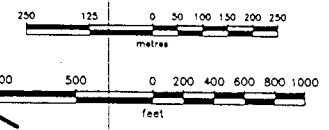


**LEGEND**

- contact approximate
- - - - - contact assumed
- fault approximate
- EM-16 Conductor Axis
- Magnetic High (1000 gamma interval)
- T78-9 bulldozer trench, trench no.
- H78-4 diamond drill hole, hole no.
- mKD QUARTZ MONZONITE
- LKP QUARTZ PORPHYRY
- LKup ULTRAMAFIC SILL
- DMiWv YUKON TANANA METAVOLCANICS

Modified after Doherty, R.A., 1997.

Elevations in feet, contour interval 100 feet.



<b>ENGINEER MINING CORP.</b>		
<b>SONORA PROPERTY</b>		
COMPILATION & GEOLOGY, SWEDE & SAM CLAIMS		
<i>Graham Davidson, Consulting Geologist</i>		
SCALE: 1 : 15,000	PROJ: UTM NAD 27	DATE: 2000.02.15
NTS: 115 I/12, 115 J/9	DRAWN:	FIGURE 4

quartz porphyry and alteration zones. The gold content increases with sulfide content and depth (Davidson, 2000).

More substantial quartz vein mineralization has been reported at lower elevations on the property. The quartz-pyrrhotite float was discovered in 1983 and is believed to be from approximately 2980' on the eastern slope above Sonora Gulch (personal knowledge). Pyrrhotite is commonly associated with the gold mineralization at Pogo. The 1896 adit, which reportedly intersected a 2.4m wide quartz vein, is located near Little Klimes Gulch at 2200', but is no longer accessible.

## 7.0 GEOCHEMISTRY (Figure 5)

### 7.1 Procedure

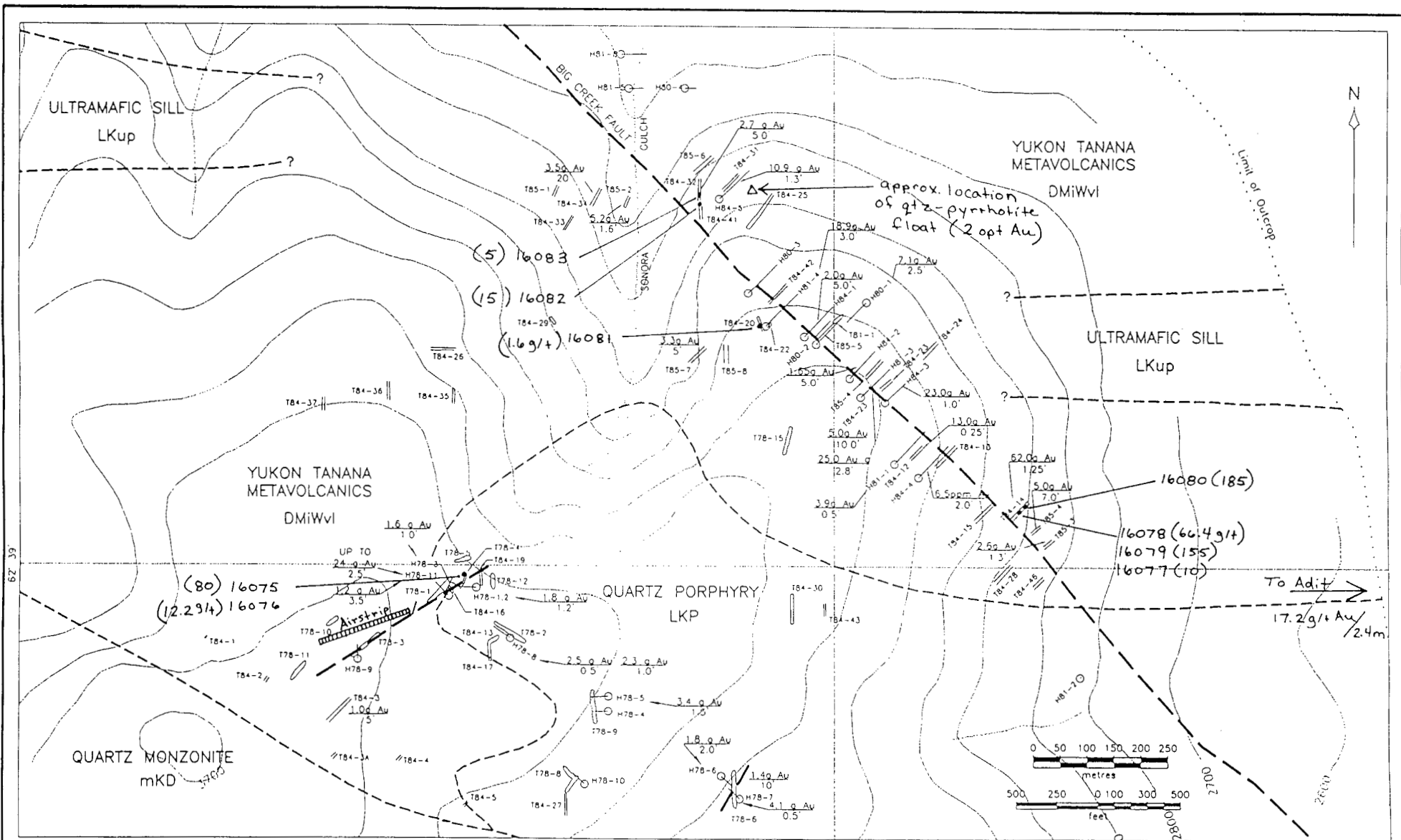
A total of 9 rock samples were collected from the property. The samples were sent to Chemex Labs and analyzed for Al, Sb, As, Ba, Bi, Cd, Ca, Cr, Co, Cu, Fe, La, Pb, Mg, Mn, Hg, Mo, Na, Ni, P, Ag, Sr, Ti, Sn, W, U, V and Zn using a 32 element ICP package which involves a nitric-aqua regia digestion. Au was analyzed by fire assay pre-concentration with an atomic absorption finish. The individual samples are described in Appendix II and sample locations with gold results are plotted on Figure 5. Lab results are outlined in Appendix III.

### 7.2 Results and Interpretation

The property examination confirmed high-grade gold values within the Tetradyrite Vein System. A value of 66.5 g/t Au (1.94 opt), with 21.2 g/t Ag, 8660 ppm As, 624 ppm Bi, 55 ppm Sb, 36 ppm Te 14.9 ppm W and 43.7 ppm Mo, was obtained from a sample of a narrow gouge zone in Trench 84-14 (Sample 16078). A silicified zone with arsenopyrite, galena, sphalerite and boulangerite from Trench 84-20 returned 1.6 g/t Au, 65 ppm Ag, 10,000 ppm As, 16 ppm Bi, 815 ppm Cu, 13,500 ppm Pb, 91 ppm Sb and 5920 ppm Zn (Sample 16081).

A sample of massive stibnite/jamesonite - pyrite - arsenopyrite veinlets, hosted by the quartz porphyry, returned 12.2 g/t Au with 1890 ppm Ag, >10,000 ppm As, 38 ppm Bi, 6220 ppm Cu, > 10,000 ppm Pb, >10,000 ppm Sb, 11.8 ppm Te and 3040 ppm Zn (Sample 16076).

The trace element geochemistry (arsenic - bismuth - tungsten - tellurium - copper - molybdenum ± lead and zinc) in the Tetradyrite Vein System is similar to that at Pogo in Alaska. At Pogo gold is associated with arsenic - bismuth - tungsten - tellurium - copper -



**LEGEND**

- contact approximate
- - - fault approximate
- ▬ bulldozer trench, trench no.
- diamond drill hole, hole no.
- H78-5 ← 3.4 g Au
- H78-4 ← 1.5
- 178-9 Au, g/ton. width (feet)

- mKD QUARTZ MONZONITE
- LKP QUARTZ PORPHYRY
- LKup ULTRAMAFIC SILL
- DMIWvI YUKON TANANA METAVOLCANICS

16075 (155)  
 Sample No. (Au value in ppb unless otherwise specified)

Modified after Doherty, R.A., 1997.

**ENGINEER MINING CORP.**

**SONORA PROPERTY**

**Sample Locations and Gold Results**

*Graham Davidson, Consulting Geologist*

SCALE: 1 : 10,000	PROJ: UTM NAD 27	DATE: 2000.02.15
NTS: 115 I/12, 115 J/9	DRAWN:	FIGURE 5

molybdenum, with enhanced lead and zinc. The strongest correlation is generally with bismuth (Smith et al, 2000). The presence of antimony in the quartz porphyry may be indicative of a higher level environment, distal to the mesothermal veins in the Tetradyrite Vein System.

## 9.0 CONCLUSIONS AND RECOMMENDATIONS

Results from the 2001 property examination confirmed the high-grade results previously obtained from the Tetradyrite Vein System with values up to 66.5 g/t Au (1.94 opt). Previous results included 62 g/t Au over 1.25' and 3.5 g/t Au over 20' from trenching and 18.9 g/t Au over 3' and 5 g/t Au over 10' from drilling. The Tetradyrite Vein System consists of a zone of narrow mesothermal gold - bismuth - tellurium bearing quartz - sulfide - carbonate vein and breccia mineralization that can be traced for over 1 km across the property. A strong untested gold - silver - arsenic - tellurium - bismuth - antimony geochemical anomaly was identified along trend to the east of the Tetradyrite Vein System and remains open to the east.

The above mineralization is associated with a Cretaceous dyke swarm in greenschist to amphibolite grade metamorphosed sedimentary and volcanic rocks of the Yukon-Tanana Terrane. With the degree of low-angle faulting in the area it is possible the zone may represent the high-angle expression of a larger low-angle mineralized structure similar to the shallow dipping mesothermal gold vein(s) at Pogo.

Previous drill holes on the property averaged <100m in length and work has generally been concentrated above the 2900' elevation. In other words, the work completed to date has been inadequate to test the possibility of a more significant mesothermal vein system at depth. The presence of the old adit near Little Klimes Gulch at 2200', with reports of 17.2 g/t Au over 2.4m, and the report of quartz-pyrrhotite float containing 2 opt Au from lower on the hillside near Sonora Gulch provides some basis for the validity of this highly prospective untested target.

Based on the similarities of the property to the Pogo deposit, there is high potential for SONORA to host a Pogo-style mesothermal vein target. Similarities include the geochemical signature (gold - arsenic - bismuth - tungsten - tellurium - copper - molybdenum, with enhanced lead and zinc and distal antimony), host rocks consisting of the metamorphic basement rocks of the Yukon-Tanana Terrane, proximity and possible association with a mid-Cretaceous intrusion, mineralogy (tetradyrite, arsenopyrite, pyrrhotite and pyrite and more distally, stibnite and sulphosalts).

The reasonable access to and across the property adds to the economic potential.

An initial surface program of \$50,000 is recommended to expand the geological, geochemical and geophysical coverage on the SONORA property, followed by a \$200,000 diamond drill program targeting a deeper, feeder zone to the Tetradyrite Vein System.

## APPENDIX I

### Selected References

- Carlson, G., 1987; Geology of the Mt. Nansen and Stoddard Creek map areas, Dawson Range, central Yukon. Open File 1987-2.
- Doherty, R.A., 1999; Mapping, soil and rock sampling on the Swede and Sam claims. Assessment Report
- Davidson, G.S., 2000; Summary report on the Sonora Gulch property. DIAND Assessment Report.
- Selby, D., Creaser, R.A., Hart, C.J.R., Rombach, C.S., Thompson, J.F.H., Smith, M.T., Bakke, A.A., Goldfarb, R.J., 2001; Absolute timing of sulfide/gold mineralization: a comparison of Re-Os molybdenum and Ar-Ar mica methods from the Tintina Gold Belt. Abstract for presentation at GAC-MAC meeting, St John's, Nfld., May, 2001.
- Smith, M.T., Thompson, J.F.H., Moore, K.H., Bressler, J.R., Mortenson, J.K., Abe, I. and Takaoka, H., 2000; The Liese zone, Pogo property: a new high grade gold deposit in Alaska. In Tucker, T.L. and Smith, M.T., eds: The Tintina Gold Belt: concepts, exploration and discoveries. BC-Yukon Chamber of Mines, Cordilleran Round up Special Volume 2, p 131-144.
- Templeman-Kluit, D., 1984; GSC O.F. 1101.
- Templeman-Kluit, D., 1973, GSC Paper 73-41
- Yukon Minfile (1998): Yukon Geology Program, IMS Ltd., NTS 115/I,J.

## Appendix II Sample Descriptions

### Sonora Gulch Samples

Sample Id.	UTMX	UTMY	Utm Zone	Project	Area	Material	Source	Description	Description_2	Mineralization	Alteration
16075	651,885	6,949,510	7 Recon	Sonora	Sonora	Rock		trace veins	quartz porphyry	trace veins	silica & py
16076	651,906	6,949,546	7 Recon	Sonora	Sonora			veinlets	massive stibnite/jamesonite	veinlets	py, aspy
16077	652,905	6,949,738	7 Recon	Sonora	Sonora		84-14 trench	qtz eye	biotite, vuggy	dissm py, aspy	biotite
16078	652,903	6,949,736	7 Recon	Sonora	Sonora	gouge	84-14 trench	orange red gouge?	trench strikes 070		
16079	652,902	6,949,735	7 Recon	Sonora	Sonora	Rock	trench 14	grey silica clots	around #16078		silica
16080	652,900	6,949,735	7 Recon	Sonora	Sonora	Rock	trench 14	qtz vein	white qtz	qtz	
16081	652,522	6,949,976	7 Recon	Sonora	Sonora	Rock	trench 84-20	qtz silicified zone	outcrop	aspy, ga, sph, bolangerite	silica, qtz
16082	652,391	6,950,250	7 Recon	Sonora	Sonora	Rock		altered ultramafic		Cu stain	qtz magnetite
16083	652,391	6,950,249	7 Recon	Sonora	Sonora	Rock		qtz veins	Cu stained	Cu stain	

### Comments

quartz porphyry-silica and py diss. - trace veins  
 massive stibnite or jamesonite veinlets +/- py +/- arsenopy  
 qtz eye +/- biotite vuggy w/ py, aspy dissem

035 striking qtz vn down trench from 16078-79 - white qtz subparallel to strike of trench - trench=060 - conductor anomaly  
 qtz silicified zone aspy, ga, sph, bolangerite?  
 altered "ultramafic" - qtz magnetite alteration - some Cu stain  
 Cu stained qtz veins at site 16082

SAMPLE	Au_ppb	Au_oz_to	Ag_ppm	Al_%	As	B	Ba	Be	Ga	Ge	Hf	Hg
16075	80			4.82	1.47	72.6	-10	43.6	0.45	7.45	0.1	0.1
16076	12226	0.357		1890	0.12	10000	-10	42.2	0.6	0.75	0.45	0.22
16077	10			6.33	1.44	200	-10	196.8	0.3	7.4	0.1	0.48
16078	66404	1.939		21.2	0.73	8660	-10	326.6	1.2	2.75	0.1	0.1
16079	155			4.18	0.43	706	-10	46.6	0.45	1.1	0.05	0.1
16080	185			1.91	0.11	201	-10	12.4	0.15	0.3	-0.05	0.02
16081	1555			65	1.37	10000	-10	18.4	0.35	10.75	0.35	0.16
16082	15			3.44	0.09	76.8	30	6.4	0.4	1	0.25	0.02
16083	5			1.72	0.04	618	-10	52.6	0.45	0.5	0.05	-0.02

Mo	Na_%	Nb	Ni	P	Pb	Rb	Re	S_%	Sb	Sc	Se	Mn
2.1	0.03	0.15	46.8	770	36.8	11.2	0.001	3.52		2.6	8.2	1.2
1	-0.01	0.45	4.6	310	10000	8.1	-0.001	6.41		10000	1.3	3.2
3.8	0.09	0.25	21.8	720	52.8	19.5	-0.001	0.43		22.3	6.6	1.4
43.65	0.01	0.15	87.5	460	169.7	17	-0.001	0.06		55.25	10.7	1.4
20.2	0.01	0.05	15.6	130	7	11.1	-0.001	0.08		5.4	1.9	0.4
8.4	-0.01	0.05	5.8	10	22	3.4	-0.001	0.01		11.3	0.4	-0.2
3.7	0.03	0.45	20.8	280	13500	23.5	-0.001	4.44		91.45	5.1	5.2
0.2	-0.01	0.05	1385	10	118.6	0.4	-0.001	0.01		1.25	4.6	0.2
0.75	0.01	0.1	267	-10	66.6	2.8	-0.001	0.03		41.15	2.6	0.2

**APPENDIX III**  
**Geochemical Results**

SAMPLE	Au_ppb	Au_g/T_total	Au_g/T_fines	Au_mg_coarse	Wt fines	Wt coarse	Ag_ppm	Al_%	As	B	Ba	Be	Bi	Ca_%	
16075	80						4.82	1.47	72.6		-10	43.6	0.45	29.4	3.39
16076	12226	10.95	10.95	0.017	124	1.55	1890	0.12	10000		-10	42.2	0.6	38.2	1.09
16077	10						6.33	1.44	200		-10	196.8	0.3	0.66	0.46
16078	66404	55.28	54.49	0.678	597	3.74	21.2	0.73	8660		-10	326.6	1.2	624	2.6
16079	155						4.18	0.43	706		-10	46.6	0.45	3.52	0.33
16080	185						1.91	0.11	201		-10	12.4	0.15	3.16	0.03
16081	1555						65	1.37	10000		-10	18.4	0.35	15.8	0.09
16082	15						3.44	0.09	76.8		30	6.4	0.4	0.66	3.02
16083	5						1.72	0.04	618		-10	52.6	0.45	0.77	9.91

SAMPLE	Cd	Ce	Co	Cr	Cs	Cu	Fe_%	Ga	Ge	Hf	Hg	In	K_%	La
16075	21.1	43.8	14.3	98	1.2	645	4.28	7.45	0.1	0.1	0.02	0.97	0.18	26.2
16076	75.6	8.26	2.2	26	2.15	6220	11.5	0.75	0.45	0.22	0.17	0.23	0.12	7
16077	0.43	22.9	9.3	91	1.7	146	2.49	7.4	0.1	0.48	0.01	0.02	0.26	12
16078	4.87	45.5	57.8	86	5.15	348	4.64	2.75	0.1	0.1	0.12	0.085	0.21	22.6
16079	0.58	56.6	9	84	1.15	113	1.81	1.1	0.05	0.1	0.02	0.015	0.21	28
16080	0.57	13.9	2.4	147	0.35	46.4	0.62	0.3	-0.05	0.02	-0.01	0.1	0.07	7
16081	177	26.9	16	73	2.4	815	8.36	10.75	0.35	0.16	0.12	4.345	0.24	20.2
16082	2.42	1.76	107	769	0.35	6.6	3.47	1	0.25	0.02	0.05	0.015	-0.01	1
16083	0.62	1.46	32.8	366	1.3	8.2	2.25	0.5	0.05	-0.02	0.05	0.025	0.03	0.6

SAMPLE	Li	Mg_%	Mn	Mo	Na_%	Nb	Ni	P	Pb	Rb	Re	S_%	Sb	Sc
16075	10.5	1.35	570	2.1	0.03	0.15	46.8	770	36.8	11.2	0.001	3.52	2.6	8.2
16076	0.2	0.03	350	1	-0.01	0.45	4.6	310	10000	8.1	-0.001	6.41	10000	1.3
16077	14.8	1.27	95	3.8	0.09	0.25	21.8	720	52.8	19.5	-0.001	0.43	22.3	6.6
16078	4.3	0.12	635	43.65	0.01	0.15	87.5	460	169.7	17	-0.001	0.06	55.25	10.7
16079	1.7	0.08	170	20.2	0.01	0.05	15.6	130	7	11.1	-0.001	0.08	5.4	1.9
16080	0.3	0.01	30	8.4	-0.01	0.05	5.8	10	22	3.4	-0.001	0.01	11.3	0.4
16081	10.4	0.89	90	3.7	0.03	0.45	20.8	280	13500	23.5	-0.001	4.44	91.45	5.1
16082	25.5	12.6	600	0.2	-0.01	0.05	1385	10	118.6	0.4	-0.001	0.01	1.25	4.6
16083	0.8	6.79	410	0.75	0.01	0.1	267	-10	66.6	2.8	-0.001	0.03	41.15	2.6

SAMPLE	Se	Sn	Sr	Ta	Te	Th	Ti_%	Tl	U	V	W	Y	Zn	Zr
16075	1.2	1.8	68.7	0.04	1.56	7.8	0.01	0.16	2.55	63	0.25	14.55	1095	2
16076	3.2	3.2	42.6	0.03	11.75	5	-0.01	0.48	1	-1	0.2	3.55	3040	6
16077	1.4	1.2	41.4	-0.01	0.08	4.8	0.1	0.22	2.55	60	0.55	7.6	32	11
16078	1.4	1.8	60	0.01	36.3	9	-0.01	0.64	2.75	26	14.85	22.55	264	3
16079	0.4	0.2	9.6	-0.01	0.35	13.2	-0.01	0.24	1.5	6	1.2	9	26	2
16080	-0.2	0.2	2.2	-0.01	0.21	3.6	-0.01	0.04	0.65	-1	0.4	2.7	64	0.5
16081	5.2	2.6	13.8	0.02	0.79	18.4	0.01	0.42	2	30	12.85	6.8	5920	4.5
16082	0.2	-0.2	159.2	-0.01	0.06	2	-0.01	0.1	0.9	8	1.45	0.5	130	0.5
16083	0.2	-0.2	1590	-0.01	0.04	1	-0.01	0.26	0.25	4	0.4	1.4	14	-0.5

**APPENDIX IV - Statement of Expenditures**

<b>Wages:</b>	J. Pautler	1 day @ 400.00/day	\$ 400.00
	A. Morris	1 day @ 500.00/day	500.00
	J. Martensson	1 day @ 400.00/day	400.00
	<b>Total: 3 man-days</b>		<b>\$ 1,100.00</b>
<b>Preparation and Mobilization</b>	(from Watson Lake - time only)		<b>600.00</b>
<b>Helicopter:</b>	Trans North Air, Mayo, Y.T		
	Aug. 22	2.2 hours @ \$ 850.00/hr.	1,870.00
		fuel	120.00
	<b>Applicable Total:</b>		<b>1200.00</b>
<b>Geochemistry:</b>	9 rocks	Au, ICP	
	2 rock assays	Au	
	Shipping:		
	<b>Total:</b>		<b>345.77</b>
<b>Truck:</b>	2days @ 100/day		<b>200.00</b>
<b>Gas:</b>			<b>130.00</b>
<b>Meals, Accommodation:</b>	3 man-days @\$ 120.00/md		<b>360.00</b>
<b>Groceries:</b>			<b>25.50</b>
<b>Field Supplies:</b>	(flagging tape, thread, sample bags)		
	3 man-days @ 15./md		<b>45.00</b>
<b>Communication, Maps &amp; Prints:</b>			<b>52.50</b>
<b>Report &amp; Drafting:</b>			<b><u>800.00</u></b>
<b>GRAND TOTAL:</b>			<b>\$ 4,805.77</b>
<b>Total Amount Applied for Assessment</b>			<b>\$ 4,800.00</b>

APPENDIX V

STATEMENT OF QUALIFICATION

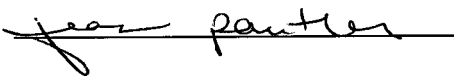
I, Jean Marie Pautler, do hereby certify that:

I am a geologist with more than twenty years of experience.

I am a graduate of Laurentian University, Sudbury, Ontario with an Honours B.Sc. degree in geology (May, 1980).

I am a Professional Geoscientist, registered in the province of British Columbia.

I examined and completed exploration work on the SONORA property on August 22, 2001.



Jean Pautler, P.Ge.  
JP Exploration Services Inc.

