

GEM 82K/8W

883269

→ GEM

**Gem Molybdenum Deposit**  
**A MULTI-STAGE, TERTIARY, Mo-W (+/- Cu-Au) SYSTEM**  
**Harrison Lake Area, British Columbia.**

**Latitude: 49°42'41"/Longitude: 121°43'16"**  
**(NTS 92H/12E), 92H.072**

M. McClaren P. Geo.  
April 2007.

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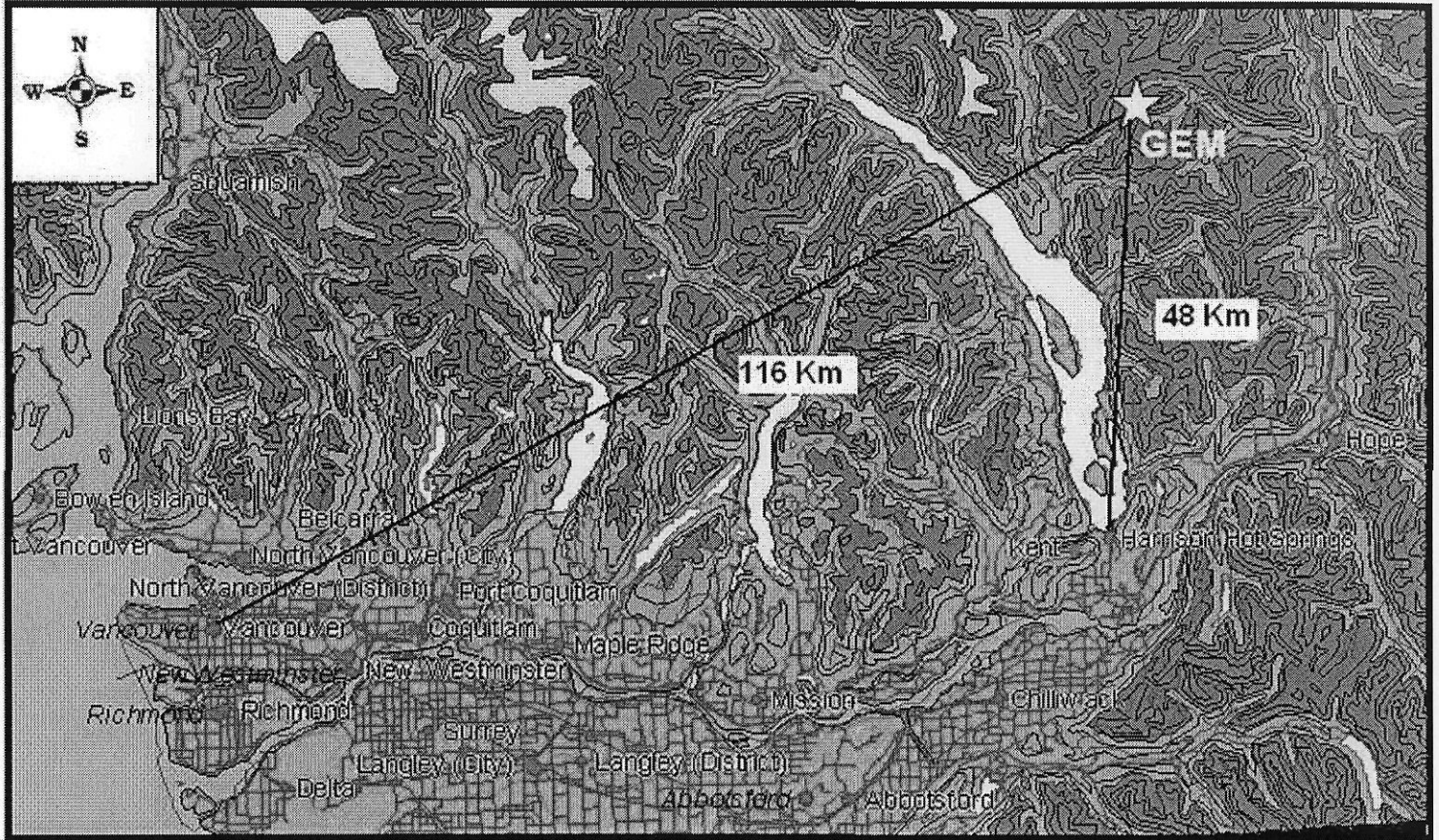
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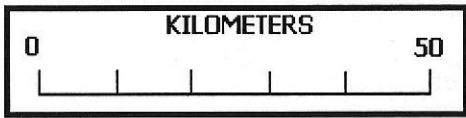
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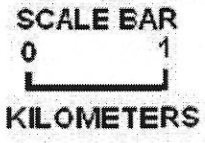
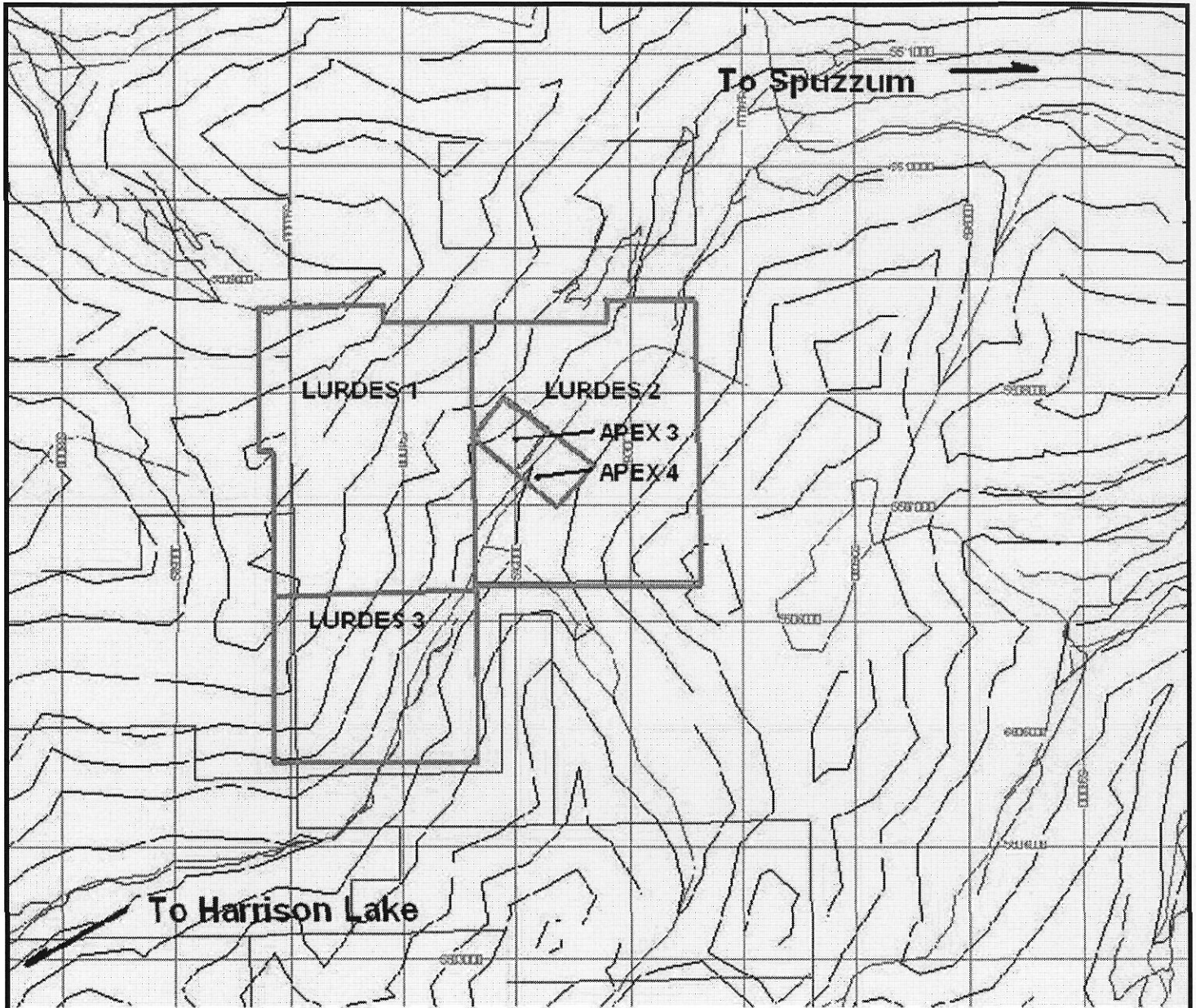
#### 2005 Sample List and Analytical Results



LOCATION MAP GEM PROPERTY



M. McClaren, P. Geo..  
 April, 2007.



**CLAIM MAP - GEM PROPERTY**

**M.McClaren, April, 2007**

## HIGHLIGHTS

- **Historical resource: Inferred 15,874,250 tonnes (17,500,000 tons) @ 0.125 % MoS<sub>2</sub> at a 0.10 % MoS<sub>2</sub> cutoff. (Not N.I. 43-101 Compliant).  
Within resource a higher grade tonnage is indicated. (see page 6 and DDH 6)  
Resource is open at depth.  
Historic and recent silt sampling indicates additional areas of molybdenum and tungsten potential. Anomalous molybdenum values found in areas peripheral to quartz monzonite breccia.**
- **Significant values of tungsten obtained from grab samples. Best values obtained from limited sampling range from 0.11 % WO<sub>3</sub> to 0.43 % WO<sub>3</sub>.**
- **Geological fieldwork identified structural controls to mineralization and areas of previously unidentified mineralization.**
- **Previous exploration focused primarily on intrusive-country rock contact and did not recognize structural control of mineralization. Area of quartz monzonite breccia has not been explored.**
- **Deposit type is “Porphyry Mo (Low-F-type)” with characteristics of the Reduced Cascade Porphyry Type Deposits which include:**
  - **Multiple breccias.**
  - **Stockwork and sheeted vein systems.**
  - **Strong structural control.**
  - **Sulphur deficient system.**
  - **Pyrrhotite occurs significantly in place of pyrite.**
  - **Widespread occurrence of scheelite.**
  - **Orbicular and comb structures.**

All of the features listed have been noted on the Gem Property. Mineralization consists of molybdenite, scheelite and powellite in eastern portion of deposit. Molybdenite, scheelite, powellite, pyrite, pyrrhotite and chalcopyrite along with minor native gold and tellurides have been identified in the western portion of the Gem Property. Powellite was not previously identified in past exploration work.

Values of greater than 3 grams/ton gold and 50 grams/ton silver obtained from select grab samples from western portion of Gem Property. Massive pyrrhotite vein noted on Lurdes 3 mineral tenure may indicate potential for peripheral mineral deposit types (Rowins, S.M., 2000).

- **5 Claims covering a total of 1,300 Ha**

Claim Name	Tenure No.	Good To Date
Apex 3	300576	June 18 <sup>th</sup> /2016
Apex 4	300577	June 18 <sup>th</sup> /2016
Lurdes 1	406265	Oct. 27 <sup>th</sup> /2009
Lurdes 2	406266	Oct. 27 <sup>th</sup> /2009
Lurdes 3	406267	Oct. 27 <sup>th</sup> /2009

## **SUMMARY**

**The claims are located at the headwaters of Clear and Spuzzum Creeks approximately 48km north of Harrison Hot Springs and 116km northeast of Vancouver. Access is by four-wheel drive logging roads to the edge of the claim group.**

**The general area is underlain by Coast Plutonic Complex and younger intrusives cutting schists and gneisses. The GEM stock is mainly comprised of Oligocene to Miocene granite and granodiorite that encompass an area of roughly 4,000 by 1,800 feet in surface plan.**

**The GEM stock is intruded by a smaller "pipe" of quartz monzonite porphyry breccia. A mixed breccia outcrops along the northeast edge of the quartz monzonite porphyry breccia.**

**The area of most intense known molybdenite mineralization is arcuate in shape located around the northeast edge of the quartz monzonite porphyry breccia.**

**Rough mineral inventory estimates by Utah personnel using surface diamond drilling results (up to 1968) is approximately 17,500,000 tons averaging 0.125% MoS<sub>2</sub> with a 0.10% MoS<sub>2</sub> cutoff. This estimate is historical and not compliant to N.I. 43-101 standards.**

**The results of a 2005 work program refined the exploration targets toward molybdenum–tungsten targets with a better understanding of the structural setting of the area.**

**The Apex 3 and 4 mineral tenures are subject to an underlying option agreement that consists of the following terms:**

- 1. To earn 49% in the Apex 3 and Apex 4 mineral tenures Saturn Minerals Inc. must pay to the property vendor 230,000 shares of Saturn Minerals Inc., \$35,000 in cash payments and expend \$45,000 on field work.**
- 2. To earn a further 51% in the Apex 3 and Apex 4 mineral tenures Saturn Minerals Inc. must pay to the property vendor 100,000 shares of Saturn Minerals Inc., \$35,000 in cash payments and expend \$30,000 on field work.**
- 3. Apex 3 and Apex 4 mineral tenures are subject to a 2% NSR of which 1.0 % can be purchased for \$1.0 million CDN.**

**The Lurdes 1 to 3 mineral tenures are held 100% by Pacific Nickel Syndicate and are not subject to any underlying terms.**

## SELECT HISTORIC DIAMOND DRILL HOLE RESULTS

- Drill hole intercepts include the following intervals take from Utah Construction Database:

**DDH 6: 515 feet @ 0.134% MoS<sub>2</sub>.**  
(380 feet to 845 feet)

Consists of the following intervals:

330-430 feet (100 feet) @ 0.108% MoS<sub>2</sub>.

430-650 feet (220 feet) @ 0.221% MoS<sub>2</sub>.

650-845 feet (195 feet) @ 0.070% MoS<sub>2</sub>.

**DDH 9: 191 feet @ 0.91% MoS<sub>2</sub> \* and**  
220 feet @ 0.136% MoS<sub>2</sub>.

**DDH 7: 170 feet @ 0.191% MoS<sub>2</sub> and**  
110 feet @ 0.242% MoS<sub>2</sub> and  
30 feet @ 0.193% MoS<sub>2</sub>.

**GC-10: 60 feet @ 0.214 % MoS<sub>2</sub> and**  
40 feet @ 0.163% MoS<sub>2</sub>.

**DDH 3: 165 feet @ 0.153% MoS<sub>2</sub>.**  
(50 feet to 215 feet)

Consists of the following intervals:

50-300 feet (250 feet) @ 0.116% MoS<sub>2</sub>.

50-100 feet (50 feet) @ 0.223% MoS<sub>2</sub>.

100-195 feet (95 feet) @ 0.051% MoS<sub>2</sub>.

195-215 feet (20 feet) @ 0.288% MoS<sub>2</sub>.

215-300 feet (85 feet) @ 0.057% MoS<sub>2</sub>.

**DDH 4: 169 feet @ 0.100% MoS<sub>2</sub>.**

Consists of the following intervals:

90-250 feet (160 feet) @ 0.104% MoS<sub>2</sub>.

90-215 feet (125 feet) @ 0.108% MoS<sub>2</sub>.

215-250 feet (35 feet) @ 0.093% MoS<sub>2</sub>.

**DDH 20: 110 feet @ 0.117% MoS<sub>2</sub>.**

**DDH 8: 70 feet @ 0.164% MoS<sub>2</sub> and**  
70 feet @ 0.160% MoS<sub>2</sub> and  
60 feet @ 0.148% MoS<sub>2</sub>.

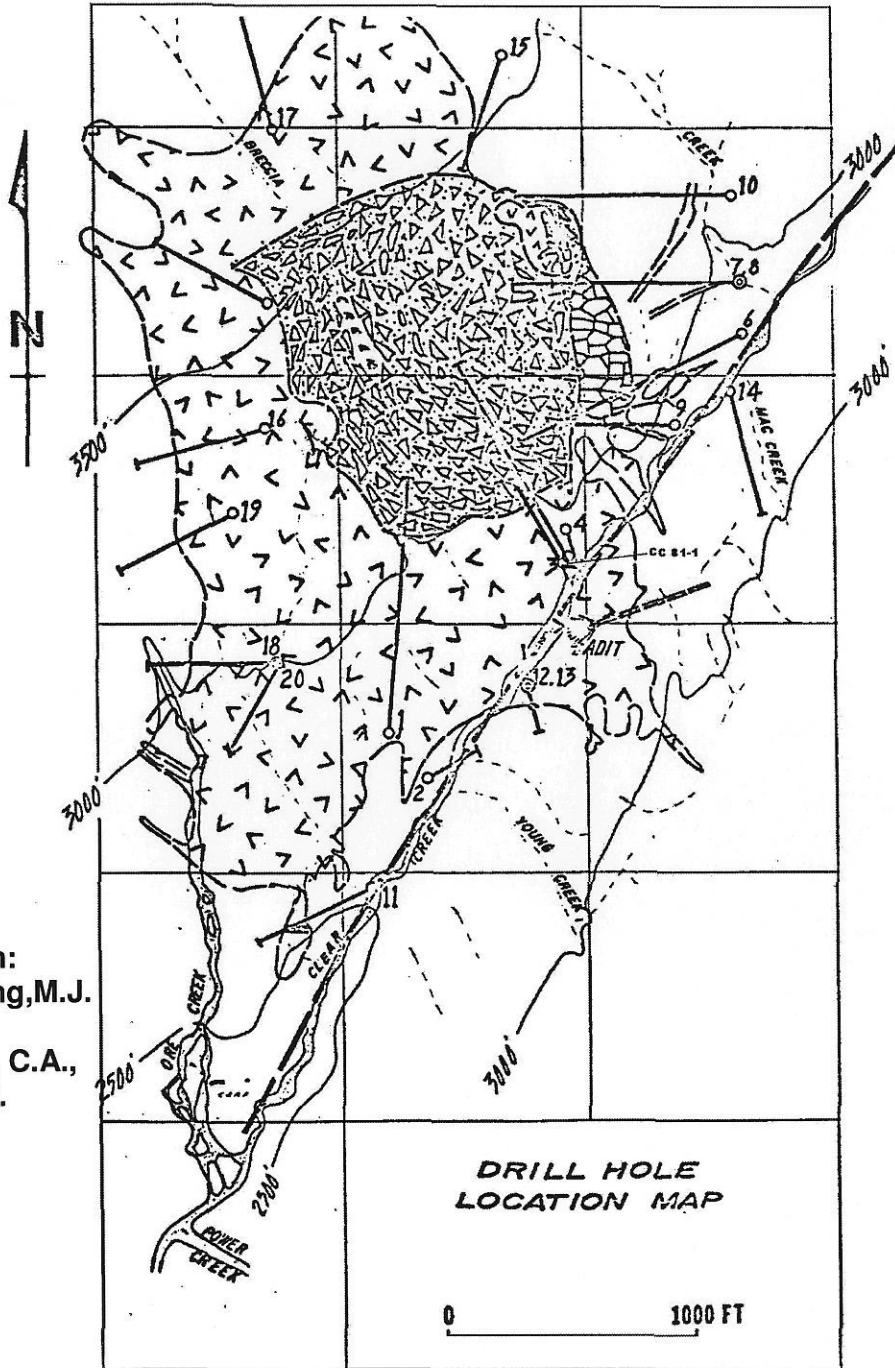
**Drill holes assayed for Molybdenum (molybdenite equivalent) content only.**

**Note:  $\frac{\% \text{MoS}_2}{1.67} = \% \text{Mo}$**

**\* May be a drafting error and may  
be 0.091% MoS<sub>2</sub>.**



UTAH CONSTRUCTION LTD. DRILL HOLE LOCATION MAP



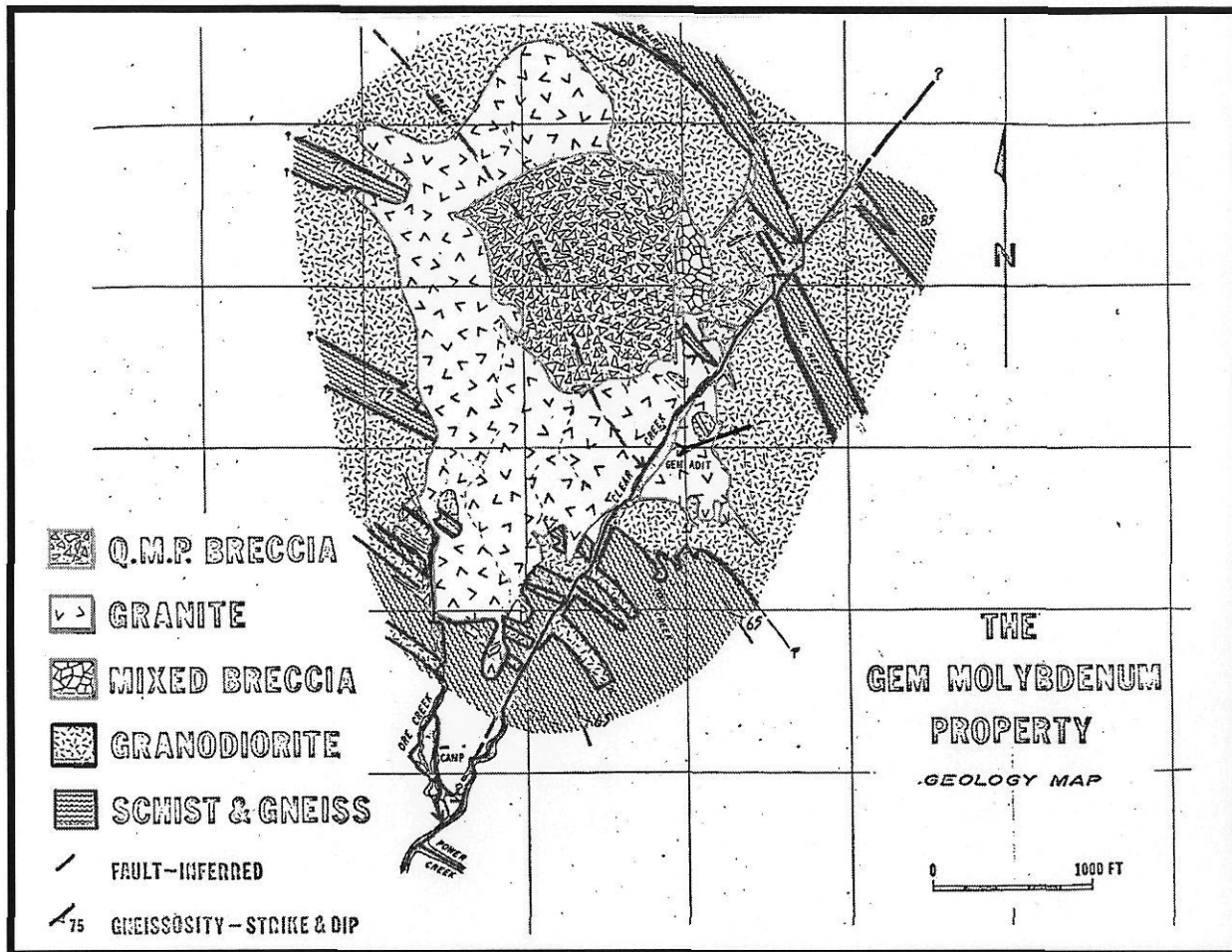
From:  
Young, M.J.  
and  
Aird, C.A.,  
1969.

DRILL HOLE  
LOCATION MAP

0 1000 FT



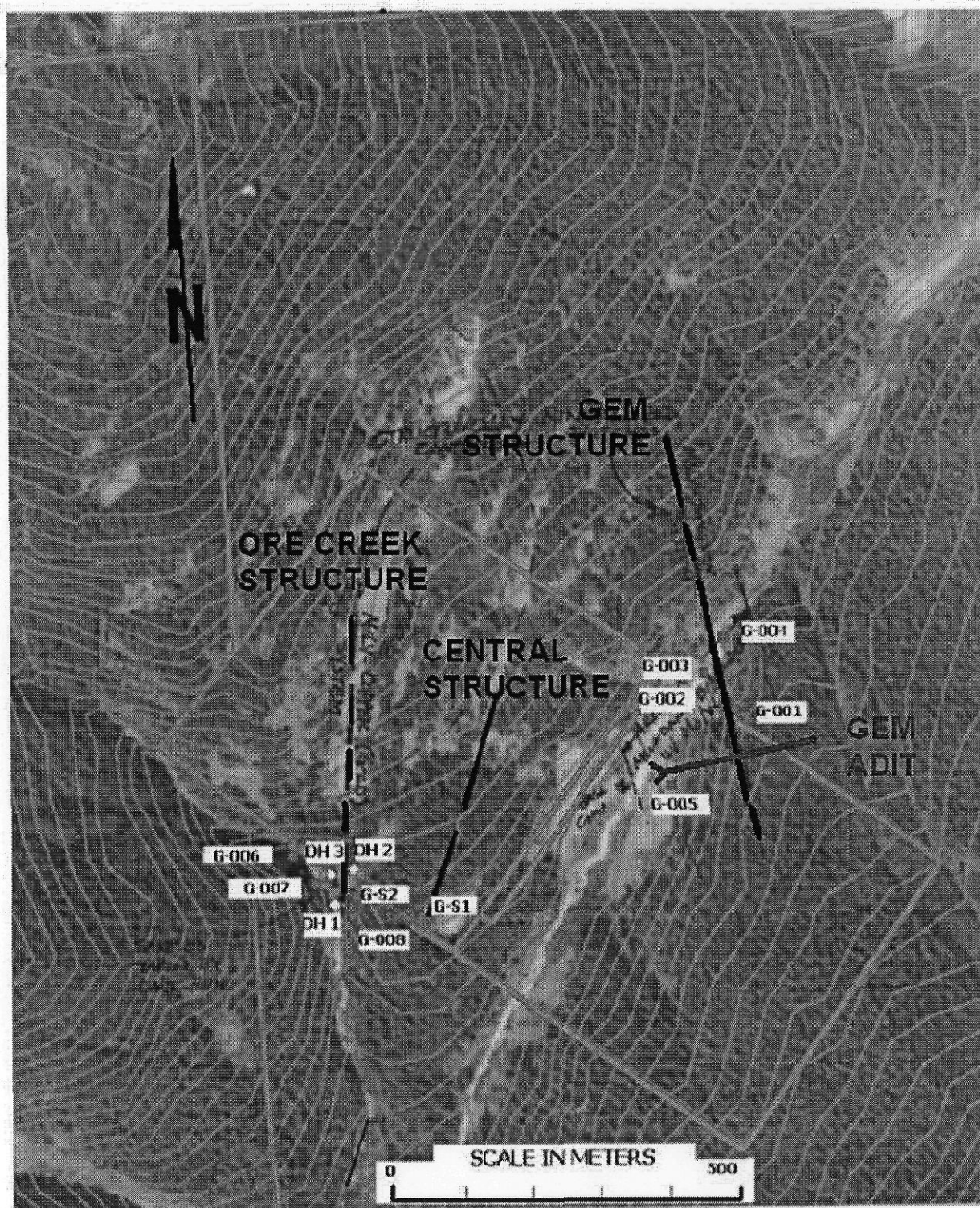
**GEOLOGY MAP OF GEM PROPERTY (LURDES AND APEX MINERAL TENURES).**



**QMP = Quartz Monzonite Porphyry**

**From: Young, M.J., Aird, C.A., 1969.**

# LURDES - APEX MINERAL TENURES 2005 SAMPLE LOCATIONS AND IDENTIFIED STRUCTURES



■ Sample Locations  
See Pages 10-12 for Analytical Results

After: Cardinal, D., 2005

## REFERENCES

Allen, D.G., 1975 : Clear Creek Property, 1975 Assessment Report: Geological Examination and Petrographic Studies, For AMAX Potash Ltd., 1975 B.C.D.M Assess. Report 5850

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Elwell, J.P., 1988 : Gold Mineralization on the Gem Claims, Harrison Lake Area, February 1, 1988; 4pp, Private Report for Foundation Resources Ltd.

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Grant, R.A., 1969 : Chemical and Physical Controls for Base Metal Deposition in the Cascade Range of Washington, State of Washington, Dept. of Natural Res., Division of Mines and Geology, Bulletin No. 58

Hendry, N.W., 1938 : Geologic Map of the H.L.M. Property, Harrison Lake, for Canadian Exploration Ltd. Scale 1 inch = 200 feet.

Hollister, V.F., 1978 : Geology of the Porphyry Copper Deposits of the Western Hemisphere, Society of Mining Engineers, of AIME, 1978, 219 pp.

McClaren, M., Nov. 2005 : Report on the Gem Project; Private Report, Saturn Minerals Inc.

Rowins, S.M. 2000 : A model for the genesis of "reduced" porphyry copper-gold deposits. The Gangué, GAC-MDD Newsletter, v. 67, p. 1-7.

Shearer, J., June 1, 2006 : Technical Summary Report on the Gem Molybdenum Deposit, Report for Saturn Minerals Inc.

Utah Construction Ltd., 1968 : Cross-Sections and Plan Maps, Gem Property.

Young, M.J., Aird, C.A., 1969 : Geology of the GEM molybdenum Deposit, CIM Bulletin, Vol. 62, No. 68, p. 41-45.

## DISCLAIMER

The author in writing this report used as sources of information those reports and files listed in the bibliography. Most of the reports were prepared by persons holding a university degree in Geological Sciences. Based on the author's assessment, the information in these reports is accurate, however, historical data that is believed to be reliable cannot be verified. The author has examined the property in 2005 for Saturn Minerals Inc. The author is, as a result of professional registration, education and experience a qualified person as defined in N.I. 43-101. The author is not an independent qualified person as defined by N.I. 43-101.

## APPENDIX

### GEM – SAMPLES COLLECTED AND ANALYSED SATURN MINERALS INC. 2005

#### Dan Cardinal Samples

##### G-001 to G-008

001 to 004	Gem Structure	
005	Gem Structure	Outside of adit on adjacent canyon wall
006	Gem structure	
007	Ore Creek	
008	Ore Creek	

G-S1	Silt Sample	Northeast Ore Creek
G-S2	Silt Sample	Northeast Ore Creek

#### David Heino Samples

62922 Ore Creek DH(05) 2  
Assay

62923 Ore Creek DH (05) 3  
Rock Geochem

62924 Ore Creek DH 2  
Assay

62925 Ore Creek DH 1  
Rock Geochem

62926 Ore Creek DH 1  
Rock Geochem

62928 Ore Creek DH 1  
Rock Geochem

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**GEOCHEMICAL ANALYSIS CERTIFICATE**

Saturn Minerals Inc. File # A507408  
 701 - 1838 Burraby St., Vancouver BC V6E 1R8 Submitted by: Ian Cardinal

SAMPLE#	Mo	Cu	Pb	Zn	Ag	W	Co	Ni	Fe	As	U	Au	Th	Sr	Cd	Sb	V	Ca	P	Al	Cr	Mg	Mn	Ti	S	Al	Na	K	Li	B	Si	Sc	Tl	Sr	Se	Sample		
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
5-4	2.1	3.1	2.5	47	4.3	5.8	4.3	555	1.98	4.5	1.6	<0.3	5.66	<1	<1	39	52	0.82	7	79.6	39	274	134	41	94	850	45	14	0.1	2.1	3	<0.05	5	4.5	15.0			
D-1-05-1	28.5	52.1	13.1	87	2	73.6	11.4	446	2.16	89.9	1.9	39.2	9	28	51.3	18.4	35	45	0.82	3	123.8	1.17	269	148	1	71	878	44	10	2	0.6	9	4	<0.04	8	16.3		
D-1-05-2	291.6	113.0	16.5	292	1.0	21.9	4.2	731	1.91	168.0	26.8	1.8	31.5	18.5	2.9	14.5	69	35	0.52	19	65.8	30	126	204	1	98	823	14	31	3	0.5	3.6	5	<0.05	12	17.0		
D-1-05-3	232.7	242.9	87.7	204	3.4	37.4	8.8	996	7.80	175.5	16.7	186	8.9	2	28	4.4	4.6	148.4	34	80	0.67	17	39.8	88	122	0.76	2	2	0.2	0.10	18	41.7	13	6.2	6	<0.06	9	2.8
G-51	227.8	14.5	22.3	16	3	5.2	5.9	1171	1.59	45.0	3.5	1.0	1.1	9	9	1.0	25.5	39	13	0.30	4	13.8	20	41	0.85	1	66	0.99	0.8	30.6	0.7	1.5	1	<0.05	10	8	7.5	
G-12	73.9	59.6	17.7	80	7	11.9	4.7	614	1.12	109.3	10.8	15.4	1.5	12	1.1	1.0	8.4	24	17	0.39	8	15.3	38	40	0.88	1	172	0.10	0.5	24.2	0.9	1.0	8	<0.05	6	1.7	7.5	
STANDARD 000	11.2	104.5	25.3	104	3	24.3	19.0	0.90	1.70	25.0	6.4	44.0	0.5	40	4.2	5.6	5.0	88	86	0.77	32	177.2	37	166	0.76	16	1	0.9	0.12	1.5	3.4	2.2	1.7	<0.05	10	4.3	25.3	

GROUP 10X - 15.00 GR SAMPLE LEACHED WITH 90 ML 2:2:2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR, DILUTED TO 300 ML, ANALYSED BY ICP-MS.  
 (C) CONCENTRATION EXCEEDS UPPER LIMITS. SOME MINERALS MAY BE PARTIALLY ATTACKED. DEFICIENCY AND GRAPHIC SAMPLES CAN LIMIT AU SOLUBILITY.  
 - SAMPLE TYPE: SILT S180 A0C

Data 1 FA \_\_\_\_\_ DATE RECEIVED: NOV 14 2005 DATE REPORT MAILED: Dec 3/05



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**ASSAY CERTIFICATE**

Saturn Minerals Inc. File # A507407 Page 1  
 701 - 1838 Burraby St., Vancouver BC V6E 1R8 Submitted by: Ian Cardinal

SAMPLE#	Mo	Cu	Ag**	Au**	W*	Sample
	%	gm/mt	gm/mt	gm/mt	%	kg
G-1	<.001	.301	<2	<.01	<.01	-
G-001	.342	<.301	2	.22	.34	1.24
G-002	.971	<.301	<2	.40	.12	1.30
G-003	1.681	<.301	2	.98	<.01	1.60
G-004	2.332	<.301	<2	.76	.09	2.44
G-005	.061	.301	<2	.02	.01	4.16
G-006	.965	.305	9	.15	<.01	1.40
G-007A	.165	.105	3	.08	<.01	3.90
G-007B	.041	.283	9	.08	<.01	1.46
STANDARD R-2a/CxL34	.050	.550	152	5.83	.10	-

GROUP 7AR - 1.000 GR SAMPLE, AQA - REG-A (HCL-HNO3-H2O) DIGESTION TO 100 ML, ANALYSED BY ICP-ES.  
 AG\*\* & AU\*\* BY FIRE ASSAY IRON 1 A.T. SAMPLE. W\* GROUP 7CP - 0.500 GR SAMPLE BY PHOSPHORIC ACID LEACHED, ANALYSIS BY ICP-ES.  
 - SAMPLE TYPE: ROCK R150 Samples bearing 'RE' are Returns and 'BE' are BENCH Returns.

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