

QUEENSTON MINING INC.

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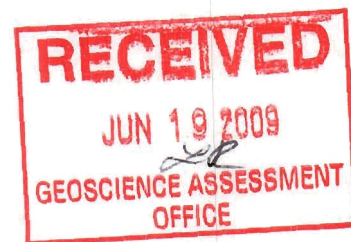
McBEAN PROJECT



2008 DIAMOND DRILLING REPORT  
(May 2008 to December 2008)

GAUTHIER TOWNSHIP  
LARDER LAKE MINING DIVISION  
ONTARIO, CANADA

VOLUME 1



Queenston Mining Inc.  
Kirkland Lake, Ontario

June 2009

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## MCBEAN PROPERTY

### 1) SUMMARY

During the period of May to December 2008, an exploration program consisting of 58 holes including 5 wedges totaling 27266 meters were drilled by Queenston Mining Inc. They were designed to prove and bring the historical resources to the 43-101 standards preparing the deposit for a prefeasibility study. The program also included an exploration phase targeting the deep extension of the Green Carbonate Zones (GCZ) and felsic intrusives below and east the McBean pit area within the Larder Lake Deformation Zone (LLDZ). All the 2008 drilling was done between sections 9000E and 11200E.

The LLDZ is a complex lithological package comprising many discontinuous and sub-parallel gold bearing structures that are variably associated with green carbonate rock, felsitic/ syenitic dikes, ultramafic units and tuffaceous horizons, all of which are affected by 3 to 4 late strike fault structures.

Most holes intersected one or multiple gold bearing zones returning anomalous to economic values. Among the most significant intersections, hole MB08-66 intersected 10.22 g/t Au over 44.6 feet, 10.24 g/t Au over 25 ft in MB08\_54 and MB08-75 which returned a gold intersection of 13.57 g/t Au over 19.80 feet was part of the most significant gold intersection reported in the program (see table 3 for a complete list of 2008 intersections).

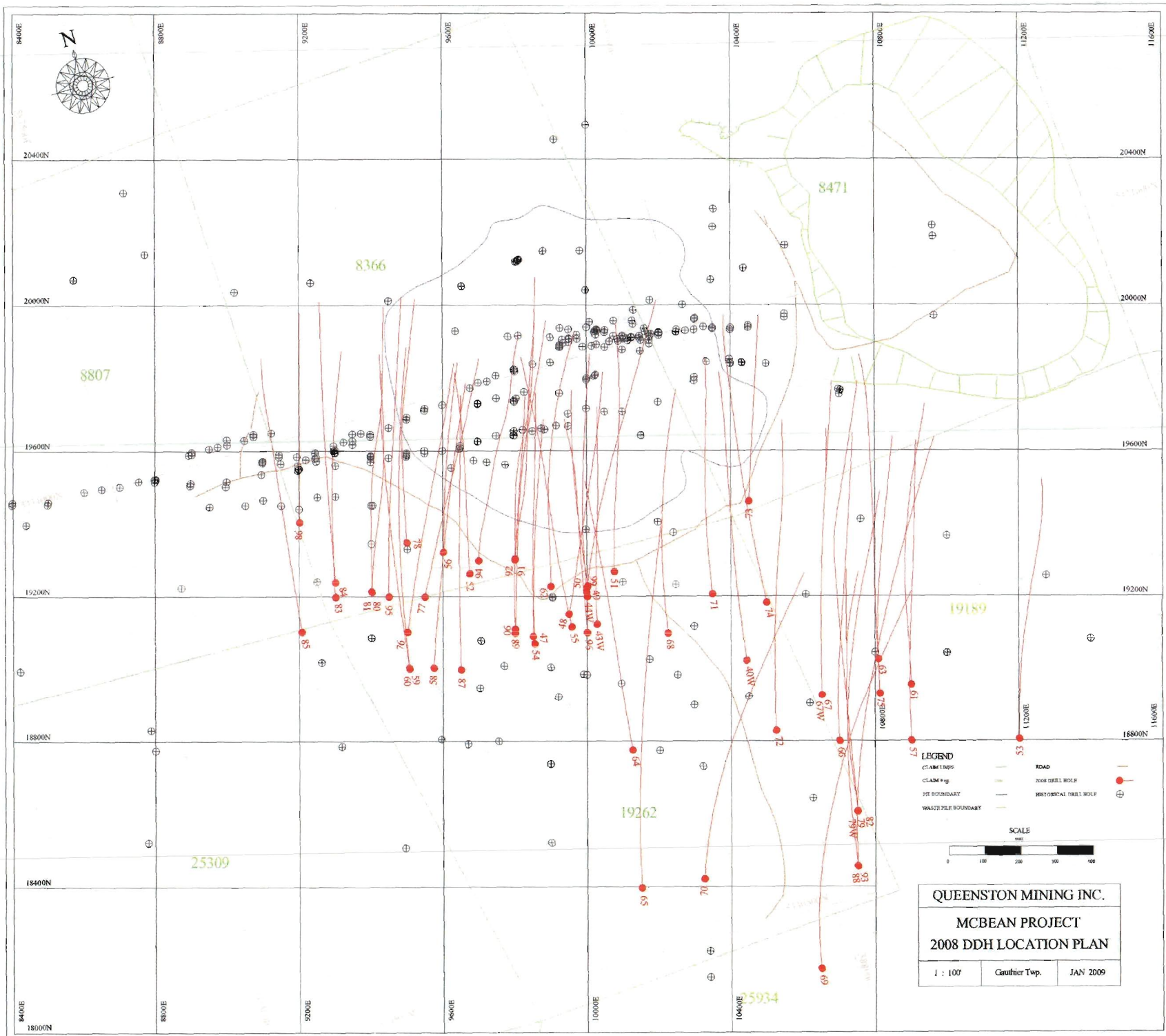


Figure 1

## **2) INTRODUCTION**

In 2008, the McBean property was the focus of a diamond drill program consisting of 58 holes totaling 27266 meters (DDH MB08-47 to MB08-98, Table 2). This drill program was designed to verify the validity of the historical resource hosting the mineralized zones west, below and east of the McBean open pit. A secondary purpose of the drill program was to verify the possible continuity of a possible deep eastern plunging new zone as suggested in historical MB97\_19. Finally, the drill program was used to bring a set of new data into the database advancing the McBean project closer to the prefeasability stage.

## **3) DESCRIPTION, LOCATION and HISTORICAL WORK**

The McBean property is immediately east of the Anoki claims in south central Gauthier Township (Figure 1). The property consists of eleven patented mining claims – both surface and mining rights are patented. A complete listing of the McBean and Anoki claims is found in Table 1. As on the eastern part of the Anoki, the property is covered by north-trending (azimuth 17.5 degrees) grid lines spaced 200 feet apart – baseline azimuth of 17.5 degrees.

The McBean property contains three existing shafts, the #1 or Murphy shaft, #2 and #4. The Anoki shaft was designated as the #3 shaft since the Anoki property was acquired about the same time as the #4 shaft was commissioned. The #1 shaft is capped, the #2 and #4 shafts occur within the limits of the McBean open pit (now flooded). The McBean open pit is roughly 175m by 200m in surface area and extends to a depth of 266 feet (81m) via seven, 38-foot benches. The #1 shaft is 630 feet deep, with one level established at 600 feet; #2 shaft to 272 feet, with levels at 94, 125 and 250 feet, and; the #4 shaft extends to 722 feet with levels at 125, 250, 400, 550 and 700 feet.

**MCBEAN-ANOKI CLAIM LIST**

<b>TWP</b>	<b>CLAIM</b>	<b>PARCEL</b>	<b>ACRES</b>	<b>REMARKS</b>
Gauthier	3893.5	3018T	34.90	
Gauthier	3894	3019TEM	38.45	
Gauthier	4239	3515CST	55.10	
Gauthier	5732	449CST	40.00	
Gauthier	8116	1532CST	43.14	
Gauthier	8366	1674CST*	37.70	McBean Pit
Gauthier	8471	1687CST*	44.94	McBean Pit
Gauthier	8807	1745CST	40.30	
Gauthier	8828	1750CST	51.35	
Gauthier	8979	1772CST	33.11	
Gauthier	8980	5485CST	2.20	
Gauthier	9232	1769CST	43.25	
Gauthier	9433	2101CST	47.95	
Gauthier	9434	2102CST	34.80	
Gauthier	9435	2103CST	49.60	
Gauthier	9505	2153CST	27.74	
Gauthier	9613	2145CST	30.23	
Gauthier	9614	2146CST	44.30	
Gauthier	9615	2147CST	50.57	
Gauthier	19189	2647CST	29.00	
Gauthier	19262	2648CST	30.10	
Gauthier	25309	5411CST	41.70	
Gauthier	31046	5324CST	43.43	

**TABLE 1**

The vast majority of the McBean property was logged in the early 1980's in preparation for the open pit operated by Canadian Nickel Company Ltd (Canico). Today, the vegetation is predominately immature jack pine in fine sandy soils. The existing grid, dating to 2000, was refreshed and used in the 2006 program. Unlike the Anoki claims, the natural topography around the McBean is only in the order of a few meters.

Highway 66 is just west of the southwest corner of the McBean property. An all-weather road from Highway 66 to the open pit readily accesses the claims. The property is within the Corporation of the Township of Gauthier – the townsite of Dobie (population 130) abuts the northern corner of the claims. The property can be operated on a year-round basis.

The historical work of the McBean property is summarized as:

- 1928: Murphy Mines, #1 shaft to 630 feet with 610m lateral development on the 600-foot level; #2 shaft to 100 ft with 45 m of lateral development on the 94-ft level; 10 surface drill holes.
- 1941: Queenston acquires Murphy claims; 4 surface drill holes (716m); #2 shaft to 272 ft, 228m of lateral development on 125 and 250 levels, 846 m of underground drilling in 41 holes; bulk sample shipped to Upper Canada Mine – 956 tonnes at 5.74 gms.
- 1946-47: #4 shaft to 267 ft, level established at 250 ft, and, 496 m lateral development at #2 shaft.
- 1947-51: #4 shaft to 722 ft, levels at 125, 250, 400, 550, and 700 ft; extensive surface and underground drilling, and, lateral development; mine closed in 1951.
- 1976: agreement signed with Canico, April 28; surface drilling
- 1984-86: open pit by Canico in #2 and #4 shaft areas.
- 1996-2001: start of joint venture with Franco-Nevada; 22,698 m drilled in 29 holes.
- 2002: Queenston terminated JV by purchasing Franco-Nevada (then Newmont Mining Corp) interest; completed 1389.8 m diamond drilling in 4 surface holes.
- 2005: Queenston Mining drilled two (2) surface diamond drill holes (MB05-34 and MB05-35) totaling 916 meters.

The historical production and resources on the McBean property are addressed in the 2003 Annual Information Form by Queenston Mining as:

*In 1983, Queenston and Inco extracted by open pit, the upper portion of the McBean deposit to a depth of 81 m. A total of 505,866 tonnes were mined producing 48,513 ounces of gold, yielding a recovered grade of 3.0 gms/tonne. Between 1996 and 1998, Queenston and joint venture partner Franco-Nevada Mining Corporation completed a program of deep drilling below the McBean deposit, discovering the McBean Green Carbonate Zone.*

*The McBean Green Carbonate Zone represents a system containing three gold zones located beneath the upper McBean at depths of 300 to 600 m below*



*surface. The zones plunge to the east, average 3.1 m thick and represent highly deformed units of komatiite that have been altered to green carbonate. The gold mineralization is associated with silicified, carbonated and veined sections containing pyrite, ankerite, fuchsite, sericite and locally, visible gold.*

*In 1985, Inco and Queenston calculated a combined measured and indicated mineral resource of 835,520 t grading 5.1 g/t and an inferred mineral resource of 723,934 t grading 4.8 g/t. These resources were calculated using a cutoff grade of 1.7 g/t over a minimum true width of 1.5 m. Although the resources were calculated prior to 2001 and National Policy 43-101 Standards of Disclosure for Mineral Projects, they have been audited by Roscoe Postle Associates Inc. in a technical report entitled "Report on the Kirkland Lake Project for Queenston Mining Inc." dated July 19, 1996 and comply with the resource/reserve classification adopted by the CIM.*

*In 1997, Queenston calculated an inferred mineral resource of 1,111,303 t grading 7.5 g/t for the McBean Green Carbonate Zone. This resource was calculated using a cutoff grade of 3.4 g/t over a true width of 1.5 m and complies with the resource classification adopted by the CIM.*

#### **4) PROPERTY GEOLOGY and MINERALIZATION:**

The dominant feature on the McBean claims is the Cadillac-Larder Lake Break. The break/deformation zone hosts the McBean Deposit.

In this area, the deformation zone is 100 to 150 m thick, dips 70 to 75 degrees south, and is localized within ultramafic to mafic volcanics of the Tisdale assemblage. Tisdale assemblage rocks continue southward from the deformation zone although the hanging-wall system is dominated by a 1-km diameter gabbro complex. Footwall to the deformation zone is a 300-m package of variably sheared and altered tuffs, volcanoclastics and mafic to ultramafic units (the North Break environment) before more typical Timiskaming sediments are encountered. The North Break environment is in a

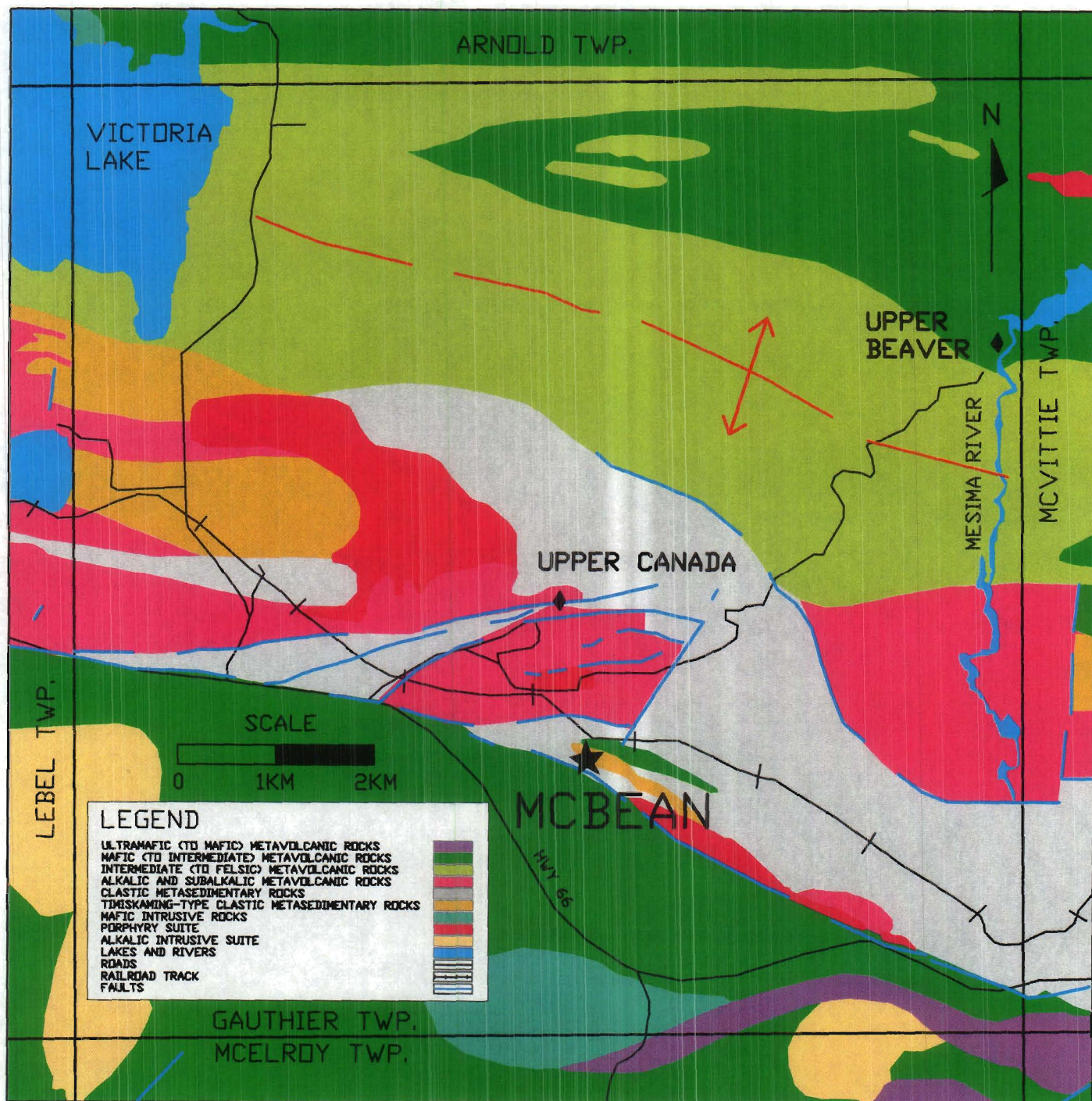


Figure 2 Regional Geology - Gauthier Township

similar physical position to the 40 East Zone on the Anoki property some 1.2 to 1.8 kms west.

The deformation zone is variably sheared to gouged, altered, and, cut by mafic to felsic and alkalic dykes. Mineralized zones are intimately associated with the felsic to alkalic intrusives and related carbonate to fuchsitic carbonate alteration. The carb alteration is slightly discordant in both plan and section to the overall geometry of the deformation zone.

All of the mineralized zones generally have some component of sericitic to fuchsitic carb alteration of the ultramafic protolith. The carb zones are typically stockworks with up to 60% quartz-ankerite and quartz veining. Siliceous to sericitic remnants of potential felsic intrusives are common in the better mineralized sections along with erratic felsite and syenite dykes. The intrusive remnants are normally mineralized with 3-5% disseminated pyrite, while the carb rocks contain minimal sulphides. Fine flecks of native gold are often present in the higher-grade corridors, and, tend to be associated with the quartz rather than the quartz-ankerite veins.

Similar to the flat South Splay feature on the Anoki property, a flatly dipping structure is noted in the west part of the McBean property within Tisdale assemblage rocks near the flank of the gabbro intrusive. Geological data are very limited on this structure which may be related to emplacement of the gabbro body.

##### **5) PERSONNEL and CONTRACTOR**

The complete list of Queenston Mining personnel and contractor involved in the different aspects of the Mcbean 2006 drilling program are listed as below:

**Michel Leblanc** (Consultant geologist)  
1051, chemin Raymond  
Canton-Tremblay (Saguenay), Qc  
G7H 5B2

**Frank Ploeger** (Queenston Project Geologist)  
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P0K 1X0

**Terry Playford** (Queenston Chief core shack technician)  
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Kirkland Lake, On  
P2N 2X7

**Shawn Playford** (Queenston Core shack technician)  
33 Dixon Avenue  
Kirkland Lake, On  
P2N 1W5

**Matthew Lawrence** (Queenston Core shack technician)  
53, McCamus Apt.1  
Kirkland Lake, On  
P2N 2J8

**Aaron Demers** (Independent Drafting technician)  
72 McCamus Avenue, Apt. 13  
Kirkland Lake, On  
P2N 2J9

**Steven Gingras** (Core shack technician)  
18 Reddick Avenue  
Virginiatown, On  
P0K 1X0

## **6) 2008 DRILLING PROGRAM**

In 2008, the diamond-drilling program on the McBean property totaled 27265.8 m (89454.8 feet) in 58 drill holes, MB08-47 to MB08-98 inclusive (Table 2). Hole MB06-62A (abandoned) was not included with the present descriptions but was included in the total footage. The holes were drilled between May 15 and December 20, 2008 using Benoît Diamond Drilling Ltd from Val-d'Or, Québec as the drill contractor. All of the coring was done using NQ sized piping and the core stored at the Queenston exploration office at the former Upper Canada mine site in Dobie, Ontario. Occasional BQ coring was done to allowed continuation of holes experiencing technical problems.

Drill holes were spotted by Northland Technical Surveys using a Fokkia Static GPS. They were also checked for dip and azimuth once the drill rig was onsite and leveled.

## Mcbean 2008 DDH STATUS

Hole ID	East	North	Elev.	AZ	Dip	Depth (ft)	Target
MB08_40W	10450	19000	10275	17	-61	944.9	Wedge of MB-06-40 at 800 feet. Gain offset of 55 feet.
MB08-43W	10050	19100	10250	17	-67	1555.0	Wedge of MB-06-43 at 800 feet. Gain offset of 30 feet.
MB08-44W	10050	19200	10350	17	-65	1170.0	Wedge of MB-06-44 at 700 feet. Gain offset of 70 feet.
MB08_47	9850	19100	11000	34	-66	1564.9	Filling gap along plunge between historical values.
MB08_48	9950	19150	11000	34	-60	1397.6	Fill the gap in data and help interpret continuity of units.
MB08_49	10000	19225	11000	34	-53	866.1	Check values below pit and correlate old and new lithology.
MB08_50	10000	19225	11000	17	-53	1289.4	Check values below pit and correlate old and new lithology.
MB08_51	10075	19265	11000	17	-53	1122.0	Check A and B carb zone below pit.
MB08_52	9675	19290	11000	17	-63	1279.5	Infill drilling
MB08_53	11200	18800	11000	17	-73	2520.0	Testing 200-250 ft east of MB-97-19
MB08_54	9850	19080	11000	17	-62	1476.4	Restarted of previous MB08-47 at right azimuth
MB08_55	9950	19130	11000	17	-59	1499.0	Restarted of previous MB08-48 at right azimuth
MB08_56	9600	19320	11000	17	-63	1168.0	Check possible horizontal plundge west of pit and correlate old and new geology.
MB08_57	10900	18800	11000	17	-70	2273.6	Follow up of values in MB97-19 to the east
MB08_58	9575	19000	11000	17	-55	1397.6	Extend new info to west of working to intercept 200 feet below the working. It will also help to tie the under ground and surface drilling together.
MB08_59	9500	19000	11000	17	-61	1600.5	Infill drilling
MB08_60	9500	19000	11000	17	-45	1306.0	Checking extension of zones to west.
MB08_61	10900	18950	11000	17	-68	2145.0	Follow up of values in MB97-19 updip and east
MB08_62	9900	19230	11000	17	-54	1279.5	Check main carb zone below pit
MB08_62a	9900	19240	11000	17	-55	285.4	Check main carb zone below pit
MB08_63	10800	19000	11000	17	-65	1935.2	Exploration hole.
MB08_64	10125	18775	11000	17	-67	1700.0	Test the bottom of the plunge of the mineralized zones. If this run, fan a hole 200-300 feet below.
MB08_65	10150	18400	11000	17	-67	2408.3	Check depth potential for all zones
MB08_66	10700	18800	11000	17	-70	2224.0	Testing 250 feet west of MB-97-19. Optional to O
MB08_67	10650	18925	11000	17	-67	1735.8	C-19 follow up
MB08_67W	10650	18925	10175	17	-66	1009.2	C-19 follow up
MB08_68	10225	19100	11000	17	-67	1688.0	To fill gap and aid in interpretation
MB08_69	10650	18150	11000	17	-67	2825.0	Drill below and east of MB96-05 testing that area down plunge on 106+50E
MB08_70	10325	18420	11000	17	-67	2360.0	Testing west of DDH MB-96-02 zones CDE.
MB08_71	10350	19200	11000	17	-60	1430.0	Check C zone values below pit

## Mcbean 2008 DDH STATUS

Hole ID	East	North	Elev.	AZ	Dip	Depth (ft)	Target
MB08_72	10525	18830	11000	17	-69	2270.7	Test CDE zone east of MB-96-02
MB08_73	10450	19460	11000	17	-65	1210.6	Filling gap in data and check all 4 carb zones.
MB08_74	10500	19200	11000	17	-63	1500.0	Check C zone values below pit east of MB-06-38
MB08_75	10800	18900	11000	17	-73	2211.2	Testing downdip MB08_63 possible presence of Green carb rocks
MB08_76	9500	19100	11000	17	-58	1450.0	Check A and B zone downdip MB08_60
MB08_77	9550	19200	11000	17	-55	1194.0	Testing updip of MB08_58 and 60.
MB08_78	9500	19350	11000	17	-48	1353.1	Testing historical values updip of MB08_60.
MB08_79	10750	18610	11000	17	-70	2060.0	C-19 follow up
MB08_79W	10750	18610	11000	17	-70	459.7	Wedge at 500 meters (about 1640 ft) into previous MB08_79
MB08_80	9400	19200	11000	17	-48	1200.8	Testing historical values west of pit.
MB08_81	9400	19200	11000	17	-56	1192.0	testing historical value downplunge of DDH 57386.
MB08_82	10750	18610	11000	17	-60	2301.8	C-19 follow up
MB08_83	9300	19200	11000	17	-55	1161.4	Testing downdip of historical underground work in vicinity of DDH 57385.
MB08_84	9300	19220	11000	17	-43	1072.8	Infill drilling
MB08_85	9200	19100	11000	17	-50	1181.1	Testing downdip of DDH 57593
MB08_86	9200	19400	11000	17	-50	915.3	Testing historical values between DDH 57393 and DDH 57392. (West of pit).
MB08_87	9650	19000	11000	17	-59	1461.5	Testing historical valued intersected in underground DDH 432_0 (5.82/102.5 ft)
MB08_88	10750	18460	11000	17	-66	2541.6	New C zone in vicinity of MB08_66, 75 and 82.
MB08_89	9800	19100	11000	17	-61	1377.9	Testing area updip of MB06_41.
MB08_90	9800	19100	11000	17	-52	1315.5	Testing underground historical values
MB08_91	9800	19300	11000	17	-54	1148.0	Testing historical values between underground levels 10450 ft and 10300 ft.
MB08_92	9800	19300	11000	17	-43	1023.6	Testing historical value between drift
MB08_93	10750	18460	11000	17		2581.4	Testing between MB08_79 and MB08_88 on 10750 E section. Follow up of new zone C19.
MB08_94	9700	19300	11000	17	-58	1151.6	Testing updip of MB05-34 and between drifts.
MB08_95	9450	19200	11000	17	-45	1151.6	testing historical value updip of DDH 57387
MB08_96	10000	19100	11000	17	-72	1712.6	Testing downdip and east of MB08-47.
MB08_97	10600	18775	11000	17	-70	2401.5	C-19 follow up
MB08_98	10150	19200	11000	17	-55	1397.6	Infill drilling
						<b>89454.8 ft</b>	<b>27265.8 meters</b>

Table 2

The drill contractors used metric rods. Wooden blocks were placed at three-meter intervals to differentiate 'runs'. The historic database for the McBean property is in imperial units such that the wooden blocks were converted to feet (and tenths of feet). The core was logged directly onto the computer using a Microsoft Excel format that could be loaded into the SURPAC software in CSV format files – Elevations were estimated from section topographic information including previously surveyed drill holes.

The 2008 drilling was designed to infill and follow up historical drill hole intersections on the McBean Green Carbonate/ felsic intrusive mineralization between sections L90+00E and L112+00E, west, below and east of the pit. All fifty eight (58) including 5 wedges of the drill holes in the program (MB06-47 to 98 inclusive) intersected the deformation corridor within the mafic-ultramafic- felsitic/ syenitic package that dips 65 to 75 degrees south. Most holes tested the different green carbonate zones/ felsic intrusive horizons as expected, returning anomalous to economic gold values. Assay composites are presented in a format of grams gold per tonne over a width in feet.

The highlights of the 2008 McBean drilling are tabulated in Table 3

## **7) GEOLOGICAL OBSERVATIONS AND INTERPRETATION**

All the 2008 drill holes were designed to perpendicularly intersect the main deformation corridor (LLDZ). Inside the McBean property, the LLDZ is characterized by a sequence of rocks (100-150 meters thick) dominated by strongly altered and deformed ultramafic units. These ultramafic rocks appears more of extrusive nature but very little evidence (spinifex or other primary textures) have been preserved, overprinted by variable levels of ankerite, talc and fuchsite alteration. The main ultramafic rock package includes about 20-25% of intercalated sedimentary and/or tuffaceous units affected by variable types and degrees of alterations (Ak, Sr, Hm). About 10-15% of felsic, syenitic and mafic intrusives are inserted sub-parallel to the main fabric. Some syenitic dykes present discordant contacts with main foliation.

2008 DRILLING HIGHLIGHT

DDH no	Zone	From (ft)	To (ft)	From (m.)	To (m.)	Width (ft)	Assay (g/t Au)
MB08_44W	A	838.0	883.2	255.4	269.2	45.20	3.33
MB08_44W	A	877.9	883.2	267.6	269.2	5.30	13.08
MB08_47	B2	1226.0	1285.4	373.7	391.8	59.40	5.66
MB08_47	B2	1226.0	1239.0	373.7	377.6	13.00	8.86
MB08_47	C2	1338.0	1341.0	407.8	408.7	3.00	12.64
MB08_47	D	1349.5	1363.0	411.3	415.4	13.50	3.19
MB08_47	D	1358.0	1360.1	413.9	414.6	2.10	15.07
MB08_48	B1	1016.0	1026.3	309.7	312.8	10.30	2.74
MB08_48	B1	1022.0	1026.3	311.5	312.8	4.30	4.91
MB08_48	C1	1201.0	1204.0	366.1	367.0	3.00	12.17
MB08_50	A	730.0	753.9	222.5	229.8	23.90	2.25
MB08_50	A	730.0	733.2	222.5	223.5	3.20	10.44
MB08_52	B1	825.0	836.6	251.5	255.0	11.60	7.32
MB08_54	B, B1	1018.0	1070.4	310.3	326.3	52.40	7.43
MB08_54	B1	1025.0	1050.0	312.4	320.0	25.00	10.24
MB08_57	A	1847.0	1859.0	563.0	566.6	12.00	7.46
MB08_58	A	906.0	929.9	276.1	283.4	23.90	7.80
MB08_58	A	906.0	919.9	276.1	280.4	13.90	12.04
MB08_58	B	937.0	977.4	285.6	297.9	40.40	7.29
MB08_58	B	958.0	969.0	292.0	295.4	11.00	10.27
MB08_58	B	999.0	1003.6	304.5	305.9	4.60	11.79
MB08_60	A	817.1	838.0	249.1	255.4	20.90	4.81
MB08_60	A	822.0	828.6	250.5	252.6	6.60	9.31
MB08_60	B	841.1	860.7	256.4	262.3	19.60	4.48
MB08_60	B	841.1	853.0	256.4	260.0	11.90	5.89
MB08_60	B1	897.5	938.0	273.6	285.9	40.50	4.92
MB08_60	B1	900.0	907.0	274.3	276.5	7.00	7.50
MB08_60	B1	915.0	920.0	278.9	280.4	5.00	7.59
MB08_61	B	1642.0	1654.0	500.5	504.1	12.00	1.91
MB08_61	B	1645.0	1648.0	501.4	502.3	3.00	4.32
MB08_61	D1	1757.0	1762.7	535.5	537.3	5.70	4.13
MB08_61	D1	1759.9	1762.7	536.4	537.3	2.80	7.67
MB08_62	A	731.5	741.0	223.0	225.9	9.50	17.22
MB08_62	B1	815.5	846.0	248.6	257.9	30.50	6.60
MB08_62	B1	815.5	826.0	248.6	251.8	10.50	12.35
MB08_64	B1	1664.2	1676.0	507.2	510.8	11.80	5.03
MB08_64	B1	1664.2	1676.6	507.2	511.0	6.40	7.79
MB08_65	B	2027.0	2039.1	617.8	621.5	12.10	7.88
MB08_65	B	2031.0	2037.2	619.0	620.9	6.10	13.79
MB08_66	C	1826.4	1871.0	556.7	570.3	44.60	10.22
MB08_75	C2	1753.2	1773.0	534.4	540.4	19.80	13.57
MB08_77	B1	783.0	806.0	238.7	245.7	22.70	3.56
MB08_77	B1	786.0	795.0	239.6	242.3	9.00	5.86
MB08_77	B2	879.0	894.0	267.9	272.5	15.00	4.08
MB08_77	B2	888.1	891.0	270.7	271.6	2.90	12.81
MB08_78	A,B	489.8	506.0	149.3	154.2	16.20	8.00
MB08_80	A	575.0	628.0	175.3	191.4	53.00	3.78
MB08_80	A	594.0	601.0	181.1	183.2	7.00	9.10
MB08_81	A	669.0	697.2	203.9	212.5	28.20	2.90
MB08_81	A	669.0	672.0	203.9	204.8	3.00	8.30
MB08_84	A	453.0	473.0	138.1	144.2	20.00	4.40
MB08_84	A	453.0	456.0	138.1	139.0	3.00	10.53
MB08_84	B	494.0	500.0	150.6	152.4	6.00	23.70



**2008 DRILLING HIGHLIGHT**

DDH no	Zone	From (ft)	To (ft)	From (m.)	To (m.)	Width (ft)	Assay (g/t Au)
MB08_84	B	494.0	497.0	150.6	151.5	3.00	42.90
MB08_87	A	937.9	1028.0	285.9	313.3	90.10	5.46
MB08_87	A	953.0	967.8	290.47	294.99	14.80	13.95
MB08_87	A	1026.0	1028.0	312.72	313.33	5.00	10.97
MB08_89	B1	972.0	1000.0	296.27	304.80	28.00	3.41
MB08_89	B1	975.0	987.0	297.18	300.84	12.00	5.84
MB08_89	?	1013.8	1016.8	309.01	309.92	3.00	16.92
MB08_90	B1	898.2	919.5	273.8	280.3	21.30	5.68
MB08_90	B1	905.0	913.0	275.8	278.3	8.00	9.13
MB08_90	C	971.1	1004.0	296.0	306.0	32.90	5.21
MB08_90	C	980.3	986.0	298.8	300.5	5.70	15.66
MB08_92	B	674.7	683.7	205.6	208.4	9.00	12.70
MB08_93	C?	2116.7	2129.0	645.2	648.9	9.30	10.07
MB08_96	B1	1283.0	1300.0	391.1	396.2	17.00	9.82

Table 3

The LLDZ is bound to the south by an EW kilometer-scale (hanging wall) gabbroic intrusion locally injected by many variably hematized felsic dyke intrusions. These felsic dykes become more abundant approaching the Princeton property to the East. Along the northern boundary, the LLDZ fade progressively into a felsic intermediate rock package dominated by sediments and tuffaceous rocks which are interpreted to be part of the regional Temiskaming formation.

The 2008 drilling program have confirmed the presence of many low to high grade gold intersections varying from metric to decametric in thickness. These gold bearing zones are typically observed inside the ultramafic and sedimentary sequences often associated with numerous syenitic and felsic units suggesting that these felsic rocks have played an important function in the gold deposition. In effect, a large proportion of the best gold intersections encountered along the 2008 drilling program are observed into heterogenous sections presenting a strong proportion of these sericitic, hematized felsic rocks included into moderate to strongly carbonated and fuchsitic ultramafic host units. The felsic rock component appears to be of both intrusive and sedimentary origin. Both types of rock are characterized by a higher pyritic background (up to 5% locally mostly in disseminated form). The best gold bearing intervals typically presents moderate to strong Qz-Ak veining at variable core angles. These observations suggested that the felsic rocks (dyke and felsites (sediments)) are an important factor in gold deposition. Visible gold has not frequently been observed frequently inside the McBean gold bearing zones but locally, visible gold appears inside Qz-Ak veins as nugget form, mostly inside green carbonated ultramafic rock.

The general stratigraphy inside the LLDZ is oriented NNW-SSE dipping typically south (65-70 degrees). Most of the felsic and syenitic intrusions are transposed sub-parallelly to the main fabric as well as most of the other stratigraphic components. Strongly ankeritized and Fu zones overprint part of the ultramafic rocks along metric to decametric sections sub-concordant to stratigraphy. These strongly altered corridors plunge moderately towards the east. Along these Ak-Fu altered zones, ore grade shoots are present along zones seemingly oriented along sub-horizontal fold axes. These sub-horizontal ore shoots are typically tens meters thick and strike along 100-150 meters. So far, 3 of these sub-horizontal ore shoots have been recognized within the Mcbean property limits. The shallowest one has mostly been extracted from the main

open pit. Outside these 3 main ore shoots, The Mcbean stratigraphy host numerous narrow sub-parallel gold zones pinching and swelling along the main corridor fabric.

Along the recognized Ak-Fu altered zones, the different rock types have variably reacted to the alteration fluids. The ultramafic rocks are affected by a pervasive and vein controlled Fu-Ak alteration giving the typical emerald green color to these rocks. The sediments and/or volcano-clastics rocks are often affected by a moderate to strong pervasive sericitic alteration looking like felsic dykes with well developed foliation (these units were often called as felsite 1F by historical geologists). Finally, the syenitic dykes are also sericitized but with associated hematization and can be differentiated from the altered sediments by their poorly developed foliation and locally by their non concordant contacts with the main fabric.

Follow up drilling in vicinity of historical MB97\_19 revealed the presence of a new high grade gold zone into a deeper Green carb Zone (GCZ) alteration shoot. The new gold zone (named C19) have returned many interesting high grade intersections inside a strongly altered felsic host rock associated with disseminated Py and Qz-Ak veins. Inside that new gold zone, MB08\_66 returned an intersection of 10.22 g/t Au over 44.6 ft. The same ore shoot returned 13.57 g/t Au over 19.8 ft in MB08\_75 (table 3). The new C19 zone is part of a AK-Fu alteration shoot, 60-70 meters diameter plunging east inside the LLDZ. A wide intersection of the eastern extension of the Green carbonate alteration zone is reported in historical MB97\_25W (Section 114+00E). No significant gold value were intersected but there is enough room above and below that hole for a significant ore grade gold bearing shoot. That GCZ alteration zone remain open to east and at depth.

So far, 2 main areas comprise most of the McBean gold resource. The first area is located below the pit between 10700 ft and 9800 ft elevation and between 9400E and 10300E, the second area has been recognized in the 2008 program and is the host of the newly discovered C19 zone which returned among the highest gold grades intersected so far into the McBean property. That zone is starting around Section 106+00E and has been recognized up to 111+00E. This zone remains open in its deep east extension.

Most significant gold bearing zones are associated with felsic units in the Ak-Fu alteration corridors (shoot). It is also noted that most of the gold occurrences observed outside the alteration corridors are narrow, discontinuous and usually of low to medium grade.

So far, only the Ak-Fu alteration corridor shows the presence of economically significant and consistent gold bearing zones and future exploration program should be focus on the discovery of new fuchsitic alteration corridors. Future exploration efforts should also include a systematic exploration of the known Ak-Fu alteration zones including a follow up the new C19 ore shoot to the east and at depth. Kerr Adison flow ore type mineralization has not yet been clearly recognized in the McBean property but, the possibility of that type of mineralization commands a deep drilling program which could bring that possibility to life.

#### **8) 2008 DRILLING PROGRAM, HIGHLIGHTS**

A complete list of every significant 2008 new gold intersection is included in table 3. Among the 187 new intersections recognized, about 50% are lower than 3 g/t Au, 15.4% presents values between 3 and 7 g/t Au. Finally, 21.8% of new intersections reported returned values higher than 7 g/t Au including 12.8% of intersections greater than 10 g/t Au.

Among the best 2008 intersections presents in table 3 we noted:

- 1) 10.22 g/t Au over 44.6 ft (MB08\_66 in zone C-19)
- 2) 10.24 g/t Au over 25.0 ft (MB08\_54),
- 3) 12.04 g/t Au over 13.9 ft (MB08\_58),
- 4) 13.57 g/t Au over 19.8 ft (MB08\_75 in zone C-19)
- 5) 13.95 g/t Au over 14.8 ft (MB08\_87)

Many of the most significant mineralized zones are reported inside sub-horizontal ore shoots elongated along apparent fold axes. A significant portion of the new gold intersections are comprised into wide Ak-Fu altered envelopes plunging moderately towards the east into the LLDZ.

So far, at least four (4) green carbonate zone (B, C, D and E GCZ) have been recognized below the McBean pit and there is a strong possibility of other unknown GCZ shoots hidden along deep portions of the McBean deformation corridor.

## **9) QUALITY CONTROL**

For quality control purposes, Blank and standard samples has been inserted into the sampling sequence at every 25 samples by Queenston geologists. Swastika laboratory did the same exercise every 20 samples. The list of standards and blanks used in this exploration program is included in table 7.

Also for quality control purposes, a total of **352** samples, **171** pulps and **181** rejects, of a total of **8365** collected during the 2008 drilling program were submit to "Polymet Laboratory " in Cobalt for a second analysis representing about 4.2% of the total samples collected during the 2008 drill campaign.

The criteria for selecting the samples for check assaying was based on the selection of 36 different gold intersections higher than 1 gram gold per ton over a width greater than 5 feet. These gold intersections were selected from the 2008 holes list, between holes MB08\_47 and MB08\_72. All Polymet check assays were then compared with the original values obtained from the corresponding pulps or rejects produced by Swastika Laboratory.

### **A) Comparison of gold values in pulps and rejects (Table 4, 5, 6 and 7)**

Table 4, 5 and 6 highlight observations as followed:

1) The Polymet Laboratory results revealed a slight overstating of gold values compared to Swastika Lab in both pulps and rejects by an average of 4.15%. Variability was higher in the reject ranging from +37.08% to – 62.59%. In absolute numbers, average variability was 11.94% (see table 4)

2008 McBean variability (PULPS)						
HOLE NUMBER	SWASTIKA		POLYMET		VARIATION (%)	VARIATION (ABS)
	Length	Au g/t	Length	Au g/t		
MB08_50	23.90	2.52	23.90	3.10	22.80	22.80
MB08_44W	45.20	3.33	45.20	3.31	-0.49	0.49
MB08_47	13.50	3.20	13.50	3.46	8.27	8.27
MB08_52	11.60	7.31	11.60	7.37	0.72	0.72
MB08_54	52.40	7.43	52.40	6.95	-6.48	6.48
MB08_55	5.00	3.26	5.00	2.51	-23.01	23.01
MB08_58	23.90	7.80	23.90	7.72	-1.14	1.14
MB08_58	4.60	11.79	4.60	10.56	-10.47	10.47
MB08_60	18.90	5.02	18.90	5.20	3.52	3.52
MB08_60	40.50	4.92	40.50	6.02	22.34	22.34
MB08_62	9.50	17.22	9.50	16.63	-3.43	3.43
MB08_64	44.80	3.67	44.80	4.52	23.29	23.29
MB08_68	22.00	1.89	22.00	1.74	-7.85	7.85
MB08_66	44.6	10.22	44.6	10.72	4.85	4.85
MB08_67W	15.5	3.10	15.5	3.57	15.19	15.19
MB08_72	9.0	3.12	9.0	2.88	-7.95	7.95
2008 McBean variability (REJECTS)						
MB08_44W	6.90	8.36	6.90	7.72	-7.68	7.68
MB08_57	44.8	2.66	44.8	3.38	26.85	26.85
MB08_47	59.40	5.66	59.40	5.47	-3.37	3.37
MB08_48	10.30	2.74	10.30	3.14	14.66	14.66
MB08_52	14.40	2.00	14.40	2.33	16.82	16.82
MB08_56	28.00	3.33	28.00	3.52	5.65	5.65
MB08_58	8.70	5.57	8.70	5.40	-3.13	3.13
MB08_58	28.40	7.63	28.40	7.93	3.98	3.98
MB08_58	31.30	3.57	31.30	3.67	2.74	2.74
MB08_60	19.60	4.48	19.60	4.72	5.39	5.39
MB08_60	10.60	1.58	10.60	1.95	23.15	23.15
MB08_62	10.50	2.46	10.50	2.60	5.45	5.45
MB08_62	30.50	6.60	30.50	2.47	-62.59	62.59
MB08_43W	24.70	1.50	24.70	1.90	27.00	27.00
MB08_65	12.10	7.88	12.10	8.24	4.66	4.66
MB08_70	10.00	4.71	10.00	5.18	9.86	9.86
MB08_67	27.2	2.17	27.2	2.22	2.20	2.20
MB08_67	15.3	1.44	15.3	1.40	-2.65	2.65
MB08_67W	38.7	2.61	38.7	3.58	37.08	37.08
MB08_72	23.6	2.81	23.6	2.90	3.15	3.15
Table 4					4.15 %	11.94 %

2) The variability observed in Pulps ranged from +23.29% to -23.01%. On average, the Polymet Laboratory overstated the Swastika pulps values by 2.77%. An absolute average variability of 9.99% is observed from the pulp rechecks. (See table 5).

<b>PULPS</b>						
<b>HOLE NUMBER</b>	<b>SWASTIKA</b>		<b>POLYMET</b>		<b>VARIATION (%)</b>	<b>VARIATION (ABS) %</b>
	<b>Length</b>	<b>Au g/t</b>	<b>Length</b>	<b>Au g/t</b>		
MB08_50	23.90	2.52	23.90	3.10	22.80	22.80
MB08_44W	45.20	3.33	45.20	3.31	-0.49	0.49
MB08_47	13.50	3.20	13.50	3.46	8.27	8.27
MB08_52	11.60	7.31	11.60	7.37	0.72	0.72
MB08_54	52.40	7.43	52.40	6.95	-6.48	6.48
MB08_55	5.00	3.26	5.00	2.51	-23.01	23.01
MB08_58	23.90	7.80	23.90	7.72	-1.14	1.14
MB08_58	4.60	11.79	4.60	10.56	-10.47	10.47
MB08_60	18.90	5.02	18.90	5.20	3.52	3.52
MB08_60	40.50	4.92	40.50	6.02	22.34	22.34
MB08_62	9.50	17.22	9.50	16.63	-3.43	3.43
MB08_64	44.80	3.67	44.80	4.52	23.29	23.29
MB08_68	22.00	1.89	22.00	1.74	-7.85	7.85
MB08_66	44.6	10.22	44.6	10.72	4.85	4.85
MB08_67W	15.5	3.10	15.5	3.57	15.19	15.19
MB08_72	9.0	3.12	9.0	2.88	-7.95	7.95
<b>Table 5</b>					<b>2.77 %</b>	<b>9.99 %</b>

3) Table 6, which groups all the rejects together, reveals an average absolute variability of 7.45% with extreme values ranging between +37.08% to -62.59%. On average, the Polymet Laboratory overstated the Swastika gold values from the rejects by 3.03%, including an extreme understatement on a 30.5 ft in MB08\_62 intersection by -62.59%.

REJECTS						
HOLE NUMBER	SWASTIKA		POLYMET		VARIATION (%)	VARIATION (ABS) %
	Length	Au g/t	Length	Au g/t		
MB08_44W	6.90	8.36	6.90	7.72	-7.68	7.68
MB08_57	44.8	2.66	44.8	3.38	26.85	26.85
MB08_47	59.40	5.66	59.40	5.47	-3.37	3.37
MB08_48	10.30	2.74	10.30	3.14	14.66	14.66
MB08_52	14.40	2.00	14.40	2.33	16.82	16.82
MB08_56	28.00	3.33	28.00	3.52	5.65	5.65
MB08_58	8.70	5.57	8.70	5.40	-3.13	3.13
MB08_58	28.40	7.63	28.40	7.93	3.98	3.98
MB08_58	31.30	3.57	31.30	3.67	2.74	2.74
MB08_60	19.60	4.48	19.60	4.72	5.39	5.39
MB08_60	10.60	1.58	10.60	1.95	23.15	23.15
MB08_62	10.50	2.46	10.50	2.60	5.45	5.45
MB08_62	30.50	6.60	30.50	2.47	-62.59	62.59
MB08_43W	24.70	1.50	24.70	1.90	27.00	27.00
MB08_65	12.10	7.88	12.10	8.24	4.66	4.66
MB08_70	10.00	4.71	10.00	5.18	9.86	9.86
MB08_67	27.2	2.17	27.2	2.22	2.20	2.20
MB08_67	15.3	1.44	15.3	1.40	-2.65	2.65
MB08_67W	38.7	2.61	38.7	3.58	37.08	37.08
MB08_72	23.6	2.81	23.6	2.90	3.15	3.15
Table 6					3.03 %	7.45 %

Overall, Polymet Laboratory slightly overstated the previous Swastika intersections by an average of 4.15%. Considering the size of the sample population that variation is considered acceptable. The biggest individual variability is observed in MB08\_62 where Swastika laboratory returned an intersection of 6.6 g/t Au over 30.5 ft. The same interval analyzed by Polymet returned only 2.47 g/t Au. Within that intersection many Swastika highgrade values weren't confirmed by Polymet. To determine the correct result, this intersection was submitted to Labo-Expert in Rouyn which returned an intersection of 2.44 g/t Au confirming the polymet results. For an unknown reason affecting that specific interval, Swastika laboratory seems to have overstated the grade of many samples. (see table 7)



## MB08\_62 grade comparison

Sample no	length	Swastika (Au g/t)	Polymet (Au g/t)	Labo-Espert (Au g/t)
31389	1.80	11.68	0.000	0.044
31390	2.10	1.57	0.274	0.281
31391	2.00	9.53	0.137	0.219
31392	1.30	28.47	30.515	27.705
31393	3.30	14.95	6.583	7.68
31394	3.00	1.87	0.754	0.7
31395	2.90	4.78	0.823	0.589
31396	2.80	1.60	0.754	0.763
31397	2.40	7.26	0.343	0.418
31398	2.60	3.22	2.126	1.885
31399	2.80	4.66	0.000	0.015
31402	3.50	2.57	0.000	0.011
	30.50	6.60	2.470	2.44
		Grade 1	Grade 2	Grade 3

**Table 7**

### B) Blank and Standards procedures

For Laboratory quality control purposes, blanks were inserted by geologists every 25 samples collected from the core. Following the blanks two (2) reference materials (Rocklabs standards (New Zeland), SG 31 and SL 46) were alternately inserted. The Swastika Laboratory was using it's own standards (OXJ47 and OXJ64) as an in-house quality control exercise. Details of the Reference material used and their characteristics are described into Table 8.

Queenston implements their own in house blank using basaltic barren core of BQ size coming from an abandoned historical project located in Quebec (Abitibi Project)

STANDARDS MCBEAN 2008			
Refer. material	Matrix Type	Gold (ppm)	Error margin
SG 31	Sulfides (2.8%)	0.996	(+/-0.011)
SL 46	Sulfides (3.3%)	5.867	(+/-0.066)
OxJ47	Oxides	2.384	(+/-0.020)
OxJ64	Oxides	2.366	(+/-0.031)
Blank QMI	Queenston in house blank standard		
Blank Swastika	Laboratory in house blank standard		

**Table 8**

The observations of figures 3 to 8 didn't reveal significant variability problems. Only a few standards and blanks returned values outside the acceptable range suggesting an overall good labo reliability.

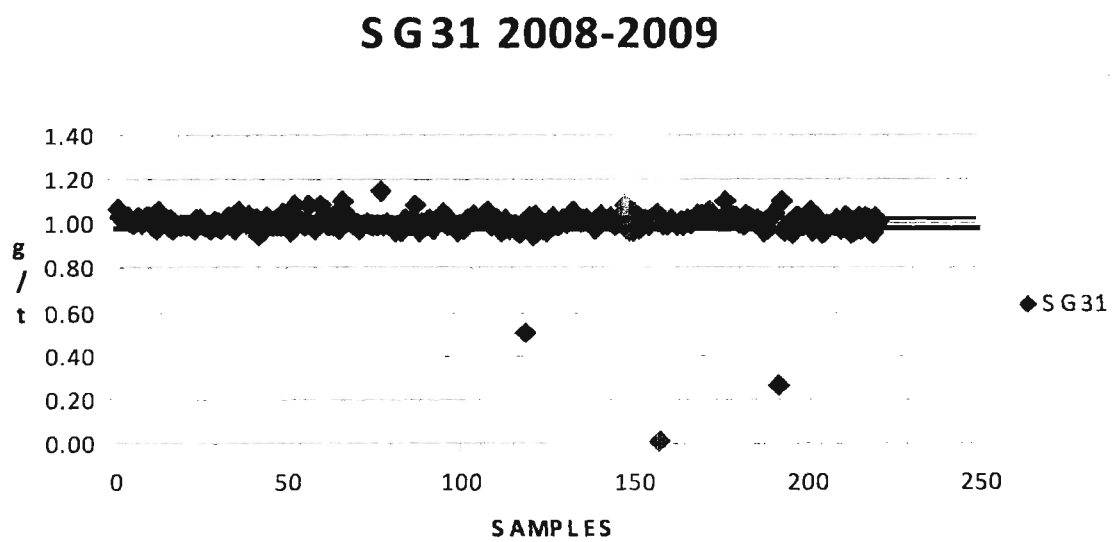


Figure 3

### SL46 2008-2009

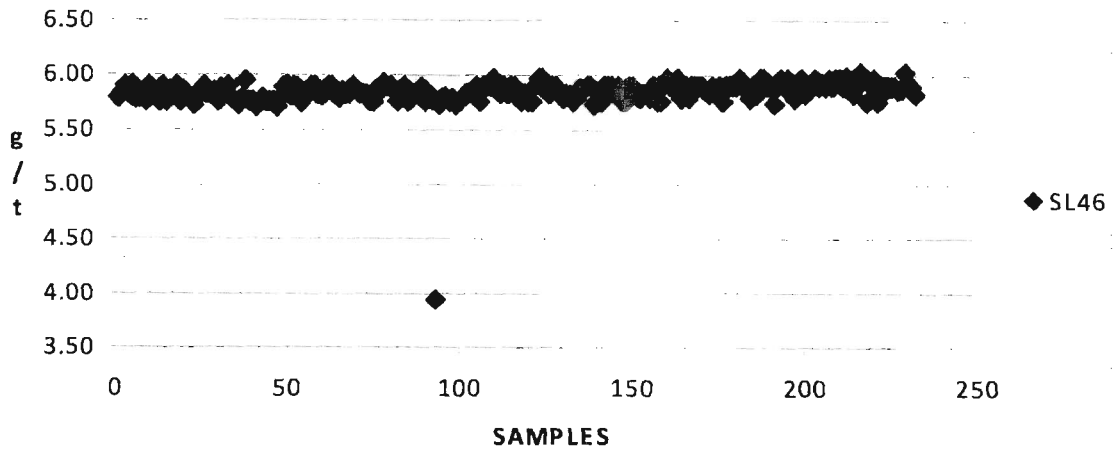


Figure 4

### BLANK 2008-2009

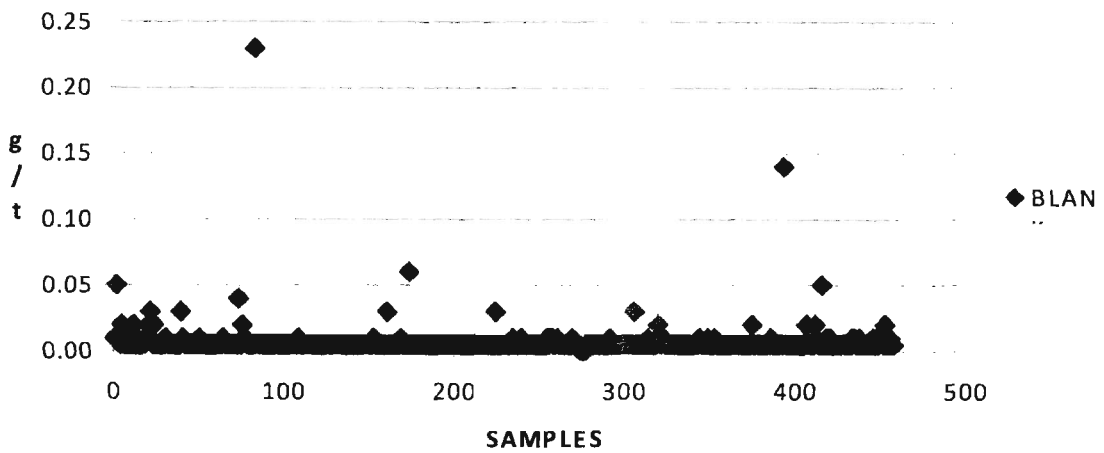


Figure 5

# LAB BLANK 2008-2009

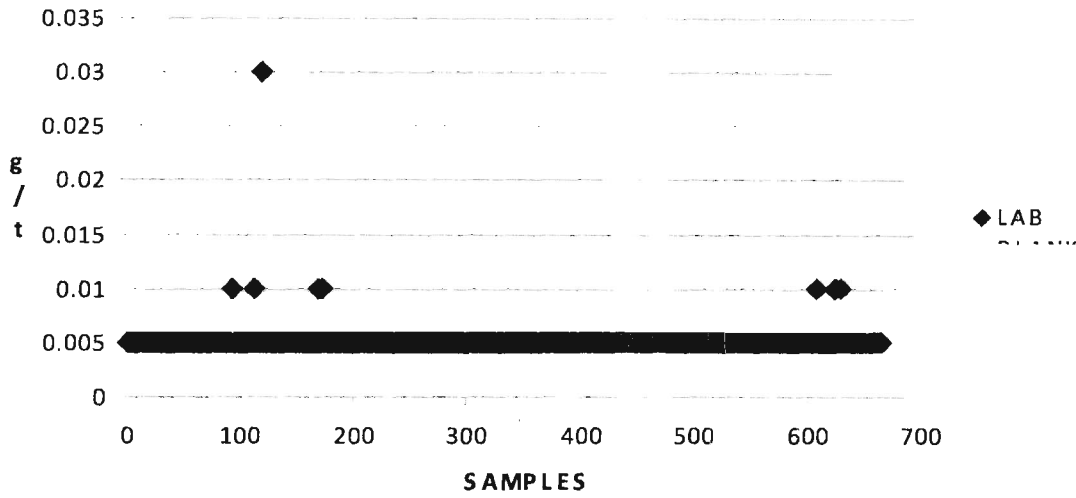


Figure 6

# LAB OxJ 47 2008-2009

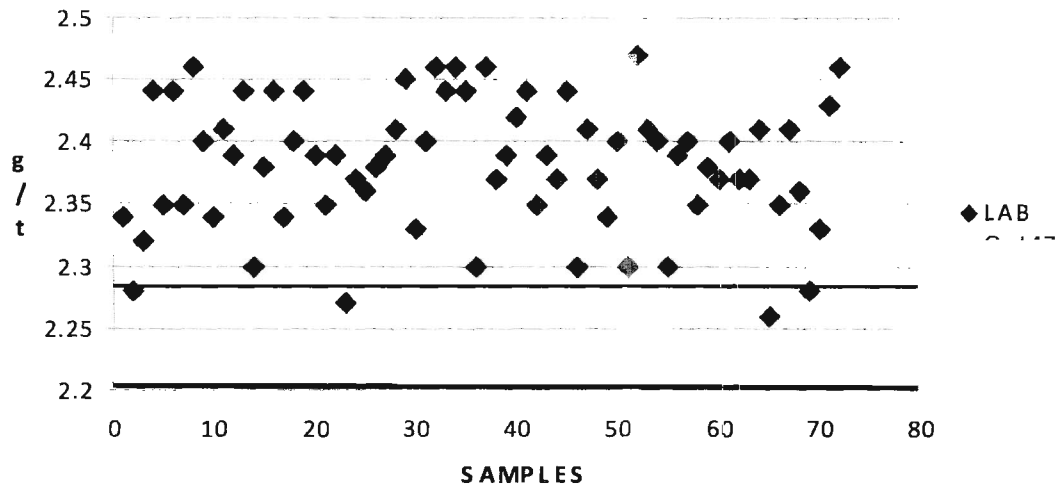


Figure 7

## LAB OxJ 64 2008-2009

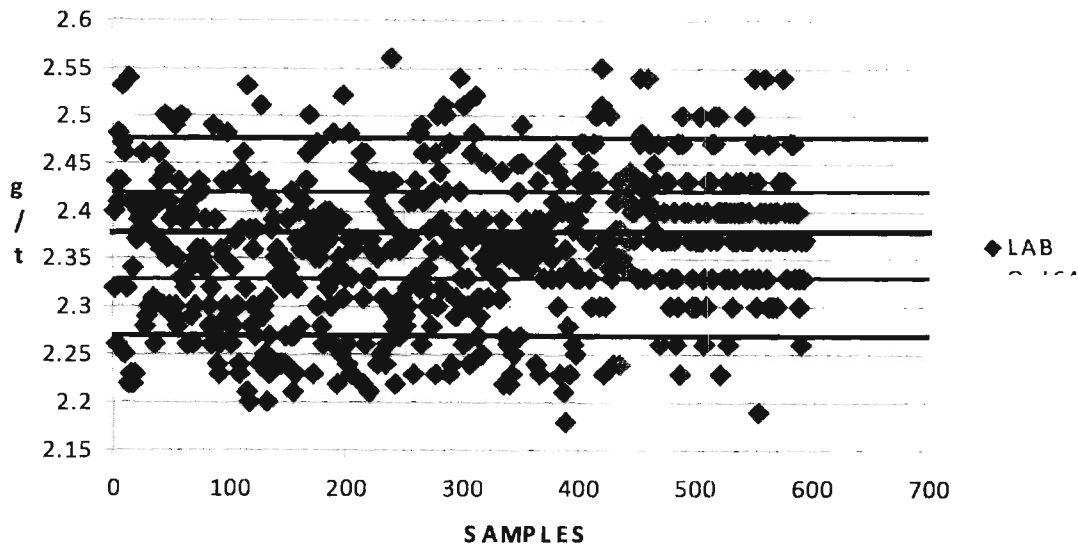


Figure 8

### 10) CONCLUSIONS

The 2008 drilling program and new geological interpretation revealed a more complex geology and gold distribution than previously recognized. Within the McBean deposit, the gold mineralization seems to be associated with a number of altered felsitic intrusives and green carbonate horizons in which the intensity of the alteration varies both vertically and laterally. Not all of the zones were intersected in every drill hole, some are better defined in the western portion of the deposit while others were better developed in the eastern sections of the McBean deposit. The gold distribution along these structures appears to be discontinuous in both grade and thickness aspects. The presence of late strike faults and folding add to the geological complexity, probably dislocating and folding at least some of the gold zones. It was observed that the gold distribution of in a number of the zones, particularly those mined in the open pit, appear to be oriented with a shallow to horizontal plunge.

## 11) RECOMMENDATIONS

It is recommended that follow up diamond drilling be focused on better defining the more consistent zones and attempting to extend some of the newer, higher grade ones within the framework of the possible flat plunge model of the mineralized horizons.

1) For better grade control in the know zones, more infill drilling is recommended in 2009. About 15 000 meters of drilling is proposed to meet that objective.

2) To allow better definition of shallow historical values, a 4000 meter drill program is proposed on the ice (south edge) of the McBean pit lake

3) In an attempt to find potential new gold bearing zones, a deep drilling exploration program is proposed below 9100 foot level where very little exploration work has been done so far. Possibility of regularity in space of actual gold bearing zone should be tested.

4) Some historical holes which intersected thick green carbonate sections should be wedged updip and/or downdip to test the possibility of proximal highgrade ore shoots missed by these holes. MB97\_20, MB97\_25W and MB08\_53 are potential candidates.

5) Deep drilling is proposed to test deep lateral extension of Anoki deposit.

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## STATEMENT OF QUALIFICATION

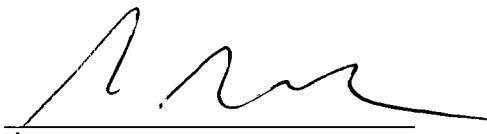
**MICHEL LEBLANC**

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**Canton-Tremblay, (Saguenay), Qc**

I, Michel Leblanc, of the Town of Chicoutimi, Province of Quebec do hereby certify that:

1. I am a professional geologist residing at 1051 – route Raymond, Canton-Tremblay, Quebec. G7H 5B2
2. I am a graduate of the Universite du Quebec a Chicoutimi with a B.Sc (1991) degree in Geological Sciences.
3. I am a Professional Geologist registered with the Ordre des geologues du Quebec (OGQ, reg, no. 613 ).
4. I have practiced my profession as a geologist for over 15 years. I have prepared reports, conducted, supervised and managed programs for a number of major and junior companies. I have been operating as consulting contract geologist since 2002.
5. As author I am familiar with the material covered in this report having been directly involved in all aspects of the exploration programs conducted on the McBean Property in 2008.
6. I own shares and share options of Queenston Mining Inc, a publicly traded securities listed on the Toronto Stock Exchange.
7. Permission is granted for use of this report, in whole or in part, for assessment and qualification requirements, but not for advertising purposes.



Michel Leblanc, BSc, PGeo.

DATED at Chicoutimi, Quebec

This 15 day of January, 2008.

June, 2009

M.L



**APPENDIX 1**

**SECTIONS  
AND  
PLAN MAPS**

**APPENDIX 2**

**ASSAY  
PREPARATION  
PROTOCOLE**

# Swastika Laboratories Ltd.

## Pulp & Metallic Assay Procedures

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**Department:** Sample Preparation

**Product/Process:** Pulp and metallic assays for gold

**Document Owner:** Swastika Laboratories Ltd.

Version	Date	Author	Change Description
PM-1	3.24.08	D. Chartre	
		P. Chartre	

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### **Purpose:**

Sample preparation and assay procedures to overcome sampling and pulverizing difficulties caused by coarse particles of gold.

This procedure covers additional sample preparation measures required to separate the coarse particles in the pulp sample, subsequent to crushing and pulverizing. These measures result in the production of 2 pulp fractions, + 100 mesh materials and – 100 mesh materials, which are individually assayed for gold. The assay results for the two fractions are incorporated in the final calculation

Crushing, splitting, pulverizing, fire assay, gravimetric and atomic absorption procedures are referred to in their specific versions.

### **Applications:**

Samples that are known to or are suspected of containing coarse gold.

## **Materials & Equipment:**

Mechanical sieve shaker  
100 mesh screen and pan

## **Procedure:**

The entire sample is crushed and pulverized as much as possible.

The pulp sample is placed onto a 100 mesh screen and mechanically shaken until it is visually apparent that all fine material has passed through the screen.

The + 100 mesh material on the screen is removed and placed in one envelope and the – 100 mesh material is placed in another envelope. Each fraction is separately assayed.

## **Precautions:**

- All material remaining on the 100 mesh screen, including particles trapped in the screen, must be removed and placed in the envelope for that fraction
- Mechanical shaking times may have to be extended until any form of clumping is eliminated.

# Swastika Laboratories Ltd.

## Gold Assay Procedures

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**Department:** Wet Chemistry & Instrument Laboratories

**Product/Process:** Gold assays

**Document Owner:** Swastika Laboratories Ltd.

Version	Date	Author	Change Description
GA-1	3.24.08	D. Chartre	
		P. Chartre	

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### Purpose:

Assay of precious metal beads from the cupel furnace for gold content using atomic absorption spectrometry or gravimetric techniques.

### Applications:

Drill core and rock samples said to contain gold and other precious metals

### Materials:

Porcelain cups  
Watch glasses  
Aqua regia  
Nitric acid  
Distilled water  
Element standards and blanks

### Procedure:

The gold bead is carefully removed from the cupel and placed in a porcelain cup containing parting acid (7:1 concentration of nitric acid and distilled water). The contents are heated in a hot water bath and the solution is thereafter decanted. The bead is dried in a hot water bath and a visual assessment is made to proceed with either a gravimetric technique or an atomic absorption spectrometry technique.

### **Gravimetric Technique**

1. Gold bead is carefully removed from the porcelain cup and weighed using a micro balance.
2. The gold calculation is based on a sample amount of 29.166g

### **Atomic Absorption Spectrometry Technique**

1. The gold bead is dissolved in 5ml of aqua regia (40% concentration) in a porcelain cup and then allowed to cool to room temperature.
2. The solution is analyzed by an atomic absorption spectrometer and the readings are used to determine the gold content results.

### **Precautions:**

- 10% of samples are re-assayed as part of our internal quality control procedures

# Swastika Laboratories Ltd.

## Sample Preparation & Assay Procedures

**Department:** Fire Assay

**Product/Process:** Sample & flux weighing and fire assay furnace procedures

**Document Owner:** Swastika Laboratories Ltd.

Version	Date	Author	Change Description
FA-1	3.24.08	D. Chartre	

### Purpose:

To produce precious metal beads from prepared drill core and chip samples for analysis.

### Materials:

Pulverized samples of 300 - 400g, 90 – 95% of which passes through 100 mesh screen.

Pre-mixed fire assay flux with silver sulphate (inquart)

Flour, silica and borax

30g crucibles

Size 6A cupels

### Procedure:

1. A one (1) assay ton sample is drawn from the envelope containing pulverized material using a clean metal spatula, weighed and placed into 30g crucible containing flux. Crucibles are marked with the customer name, sample number and certificate number.
2. Depending on rock type, varying amounts of flour, silica and borax may be added to ensure a proper fusion and a smooth pour from the crucible
3. The crucible containing the sample, flux and other necessary ingredients are thoroughly mixed in a tumbler prior to fusion in the furnace oven.
4. The crucible is placed in the fusion oven and heated until a proper fusion (reduction) is completed, after which it is removed and the contents poured into a metal mold for cooling/solidification.
5. The solidified material from the mold is hammered to remove the slag and the lead button is placed in a cupel.
6. The cupel containing the lead button is loaded into a furnace until all the lead has been absorbed into the cupel (oxidation)

7. The cupel with the precious metal button is removed from the oven and allowed to cool before being placed onto a tray for gravimetric or AA analysis.

**Precautions:**

- Assays are repeated when there is an improper fusion or the lead button is undersized/oversized
- 10% of samples are re-assayed as part of our internal quality control procedures
- In the case of samples with a high percentage of sulphides or those with a complex matrix, the assayer may elect to re-assay the sample on a reduced assay sample size. This again is based on the assayer's experience and knowledge.
- Copper is added to certain fusions to ensure sample order is maintained



# Swastika Laboratories Ltd.

## Sample Receiving Procedures

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**Department:** Laboratory Receiving Area/ Bus Depot

**Product/Process:** Inspection of Sample Packaging & Corresponding Customer Shipping/Order Documentation

**Document Owner:** Swastika Laboratories Ltd.

Version	Date	Author	Change Description
SR-1	8.22.08	D. Chartre	

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### **Purpose:**

To check the condition and verify the number of customer sample containers on receipt.

### **Materials:**

Various types of customer sample containers, packaging, container seals and analysis instructions.

### **Procedures:**

Upon receiving a sample shipment the Bill of Lading / Manifest is checked for:

1. Count of bags/pails/boxes
2. Condition of packaging
3. Integrity of customer seals
4. Customer's analysis instructions/order

Any damage, evidence of tampering, and/or missing sample containers is noted on the Bill of Lading/Manifest and is immediately reported to the office. The customer is then notified by phone, email or fax. Samples are not processed until further instructions are received from the customer.

Samples will not be processed until a written order/analysis instruction is received from the customer.

- The pulverized material from the bowl, ring and puck is carefully brushed onto a rubber mat from which it is poured back into the labeled manila envelope.

**Precautions:**

- The crushers are cleaned with compressed air after each sample pass. Barren material is crushed subsequent to each customer run to minimize sample contamination.
- Compressed air is used to clean the riffle divider after the final split of each sample.
- Compressed air is used to clean the bowl, ring, puck and rubber mat after each sample is pulverized. Silica sand is pulverized at the completion of each customer order or when there is a sample with apparent visible gold.
- A screen test is performed on a crushed sample and a pulverized sample each day, or more frequently when material hardness is in question. The results are recorded in a screen test book. Jaw plate clearance or pulverizing time is adjusted if necessary to meet prescribed particle size limits.

# Swastika Laboratories Ltd.

## Sample Preparation & Assay Procedures

**Department:** Sample Preparation

**Product/Process:** Sample crushing, splitting and pulverizing

**Document Owner:** Swastika Laboratories Ltd.

Version	Date	Author	Change Description
SP-1	3.24.08	D. Chartre	
	5.29.08	D. Chartre	Recording of screen results
	6.04.08	D. Chartre	Reduction in minimum percentage of crushed material passing 10 mesh screen

### Purpose:

To produce pulp samples from customer drill core and chip samples meeting the following criteria:

- 90 – 95% of pulverized material passes through 100 mesh screen
- Final pulp sample weight of 300-400g

### Applications:

Customer sample sizes up to 5kg. of varying material hardness and moisture content

### Procedure:

- Depending on the moisture content of the customer sample, the entire sample is either air dried or oven dried in a clean metal pan prior to crushing.
- The entire dried sample is passed through a jaw crusher to arrive at a prepared sample, 80% or more of which is passing through a 10 mesh screen. The crushed material is split successively in a riffle divider to arrive at a subsample of 300 – 400g. The subsample is placed in a labeled manila envelope for pulverizing.
- The subsample is pulverized in a ring & puck pulverizer for sufficient time enabling 90 – 95% of the material to pass through a 100 mesh screen. Methyl hydrate is added to the sample prior to pulverizing to prevent clumping.

- The pulverized material from the bowl, ring and puck is carefully brushed onto a rubber mat from which it is poured back into the labeled manila envelope.

**Precautions:**

- The crushers are cleaned with compressed air after each sample pass. Barren material is crushed subsequent to each customer run to minimize sample contamination.
- Compressed air is used to clean the riffle divider after the final split of each sample.
- Compressed air is used to clean the bowl, ring, puck and rubber mat after each sample is pulverized. Silica sand is pulverized at the completion of each customer order or when there is a sample with apparent visible gold.
- A screen test is performed on a crushed sample and a pulverized sample each day, or more frequently when material hardness is in question. The results are recorded in a screen test book. Jaw plate clearance or pulverizing time is adjusted if necessary to meet prescribed particle size limits.

CCRIMP

PTP/MAL

ISO 9001:2000  
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Accredited by  
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**Proficiency Testing Program for Mineral Analysis Laboratories**

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**Swastika Laboratories Ltd.**

Swastika, ON, Canada

has been assessed Satisfactory in both cycles of test samples in  
Program Year 2007-08

for Gold, Palladium, Silver,  
Copper, Lead, Zinc,  
Nickel, Cobalt

by PTP/MAL using criteria for laboratory proficiency established by  
the Mineral Analysis Working Group of the Task Group  
Laboratories of the Standards Council of Canada.

- General description of analytical methods applied
1. Lead collection filter assay with atomic absorption spectrometry measurement
  2. Three acid digestion with atomic absorption spectrometry measurement

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Oct 2, 2008

Date