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REPORT ON THE 2001 GROUND EXPLORATION PROGRAM ON THE LAC ARSENAULT PROSPECT

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**REPORT ON THE 2001 GROUND EXPLORATION PROGRAM
ON THE LAC ARSENAULT PROSPECT
SCORPIO MINING CORPORATION
NTS 22 A/6, WEIR & HONORAT TOWNSHIPS,
BONAVENTURE COUNTY, GASPE REGION OF EASTERN QUEBEC**

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INTRODUCTION

Between August and November 2001, a ground exploration program was performed on the Lac Arsenault Prospect of Scorpio Mining Corporation in Weir and Honorat Townships, Quebec. First the size of the Lac Arsenault Prospect was expanded by staking claims to the east and south followed by reconnaissance prospecting, geological mapping and rock sampling in the easily accessed parts of these new claims. Programs of stripping, trenching, mapping and sampling were then carried out over selected mineralized veins and geochemical/geophysical anomalous zones.

Past work has proven that the Lac Arsenault Prospect hosts 5 major vein systems, Baker, Mersereau, Line 4W, Marleau and Greek and related breccias. Since the original discovery of mineralized boulders north of Lac Arsenault in 1946, the area containing the prospect has been explored by programs of prospecting, geophysical and geochemical surveying, mapping, trenching, stripping diamond drilling and sampling.

Before the involvement of Scorpio Mining Corporation the results of this work was inconclusive in defining what the controls were with respect to the mineralization encountered. Due to lack of understanding the amount and type of mineralization discovered was handicapped and in only two years with limited exploration budgets Scorpio has uncovered more mineralization than most of the previous work.

Prior to 1979, the Baker, Mersereau, Line 4W and Greek Veins were partially exposed on surface, the Marleau Vein was discovered in 2 drill holes in 1986 and in 2001 the Baker, Mersereau, Greek and Marleau Veins were stripped. It appears that the veins are open along strike and at depth and the sources of numerous mineralized boulders, geochemical Au and As anomalies and geophysical conductors remain undefined on the Lac Arsenault Prospect.

Using exploration results obtained between 1973 and 1978, Esso Resources proved that the original three veins (the Baker, Mersereau and Line 4W) contained geological reserves of 40,000 tonnes, grading 15.43 g/t Au, 197.00 g/t Ag, 6.6 % Pb and 3.5 % Zn (DV-85-08 page 7). This reserve was based on the surface expression of the three veins only. Calculations of the reserves for all four vein systems were performed by Peter Smith, Ph.D., in his report of Oct. 1995, concluding that these known vein systems contain geological reserves totaling 135,510 tons of 0.35 oz/ton Au. Peter J. Hawley reevaluated and recalculated the geological reserves in a report dated Feb. 7, 1996, stating that the Arsenault Prospect contains 220,042.52 short tons at 0.307 oz/ton Au.

It must be noted that prior to Scorpio Mining Corporation's exploration on the Lac Arsenault property work performed by the previous companies was done with respect to mineralization trending in a north-south direction. In other words the established grid was east-west (parallel to the bedding), all geophysics was east-west to outline north-south conductors and drilling was designed to test only north-south conductors and vein trends. As shown below Scorpio has shown that mineralization not only trends north-south but northeast, northwest and in an east-west direction. This being the case previous work done only did not evaluate the true mineralization over the now known structural-mineralized trends.

Because of the positive results obtained in the year 2000 exploration program by Scorpio Mining Corporation and the success of the prospecting, stripping/excavating, power washing and comprehensive chip sampling in delineating mineralized quartz veins containing precious and base metals, additional claims were staked in 2000 and 2001. The 2001 program used these proven exploration techniques to better define and extend the limits of previously explored veins and to outline new vein systems on surface on the pre 2001 claims and on the newly staked claims.

In 2001, areas logged in 2000 over newly staked claims and the area between the Line 4W and Marleau Veins were prospected, the Sheared/Brecciated Marleau Vein was sampled and three separate programs of stripping/excavation performed. New quartz veining and rubble (up to 0.068 oz/ton Au) was found and it was proven that a 26.5 ft. (8.08 m.) section of the sheared/brecciated Marleau Vein averaged 0.088 oz/ton Au (3.02 g/tonne). Only a small amount of the proposed stripping/excavation was completed due to inexperienced backhoe operators and poorly maintained equipment in August and September and poor weather conditions in November. The stripped areas were not washed due to the unavailability of suitable equipment. Even so, the strike of the Mersereau Vein was extended to the north, three sections of the Line 4W Vein were exposed, the large pieces of the Blue Vein uncovered, the Sheared/Brecciated Marleau Vein was trenched to the south and the newly discovered Donat and Donat West Zones were partially exposed.

The numerous mineralized quartz vein systems uncovered in 2000 and 2001 contain: high grade polymetallic concentrations (the Baker, Mersereau, NE Extension of the Mersereau and Blue Veins); high amounts of Au (the Main and Sheared/Brecciated Marleau Veins); lower grade Au with Zn and Cu (the Line 4W Vein, Greek Vein, the Donat West Zone and the vein located at 13N/10W); and low grade Ag (the Derber Vein).

The economic potential of the Lac Arsenault Prospect was greatly enhanced after the 2000 and 2001 exploration was completed. Results of the comprehensive chip sampling of the stripped mineralized veins defined the average grades and widths, along and across the exposed sections, including:

Vein	Exposed Length		Sample Width		Au		Ag		Pb (%)	Zn (%)
	feet	meters	feet	meters	oz/ton	g/tonne	oz/ton	g/tonne		
Baker	136	41.46	2.35	0.72	0.395	13.54	13.24	453.94	13.87	0.427
Mersereau	163	49.70	1.74	0.53	0.302	10.35	3.88	133.03	5.52	0.253
Mersereau (NE Ext.)	21	6.40	0.28	0.09	0.660	22.83	2.43	80.23	3.68	0.081
Marleau (Main)	248	75.61	1.61	0.49	0.163	5.59	----	----	----	----
Line 4W	141	42.99	1.51	0.46	0.043	1.47	----	----	----	----
Greek	35	10.67	8.28	2.52	0.019	0.65	----	----	----	----

After a careful review of the Scorpio work plus previous work performed it is proposed that the mineralization found to date represents telescoping mineralized veins and breccias caused by an underlain mineralized intrusion. This being the case the discovered mineralized found should have depth extension and the economic potential for a large mineralized deposit. This model will be discussed in detail in this report under the heading "Geological Model" and the evidence to support this assumption will be presented.

A 2 phase \$ 500,000 program of exploration is recommended for 2002, designed to increase the size of the property, outline further mineralization that increases the reserves on the property and to outline the potential origin and type of deposit as proposed by the geological model. This program includes claim acquisition, prospecting, geochemical soil sampling, geophysical surveying, stripping/excavating, power washing, rock sampling, geological mapping, diamond drilling and bulk sampling.

PROPERTY DESCRIPTION, LOCATION AND ACCESS

In 1992, nine claims were staked north of Lac Arsenault covering the Baker, Mersereau, Line 4W and Marleau Veins. Two years later the size of the property was expanded to 14 claims by staking 5 claims along the Grand Pabos Fault in the north. In 2000 and 2001 4 and 12 additional claims were acquired to the west, south and east, respectively, forming a 30claim rectangle surrounding the original 9 claims. Presently the Lac Arsenault Prospect covers approximately 1220 acres (480 hectares) in Bonaventure County, the Gaspé Region of Eastern Quebec. Approximately 84 % of the property is located in the northwestern part of Weir Township with the township boundary between Weir and Honorat Townships crossing the western part of the project in a north-northwest direction. The property is situated on NTS MAP 22A/6, at latitude of 48 degrees, 22 minutes and 38 seconds and at a longitude of 65 degrees and 13 minutes. The original 14 claims are registered in the name of Robert Campbell and have been optioned to Scorpio Mining Corporation and the claims staked in 2000 and 2001 are registered to Scorpio Mining Corporation. The claim numbers and expiration dates are listed in Appendix 1 (See Figure 1).

The 30 claims are located 22.5 miles north of the town of Paspébiac on the south coast of the peninsula of Gaspé (See Figure 2). The property is easily accessed by truck by traveling on a paved highway to the village of St. Jorges, 10 miles inland from Paspébiac, then taking an unpaved logging road for 16 miles to the central part of the southern boundary. Access can also be obtained from New Richmond via the Bonaventure road north-northeast of New Richmond

SCORPIO MINING CORPORATION PROPERTY LOCATION



LAC ARSENEAULT PROPERTY

Figure - 2

SCORPIO MINING CORPORATION LAC ARSENAULT PROPERTY CLAIM GROUP

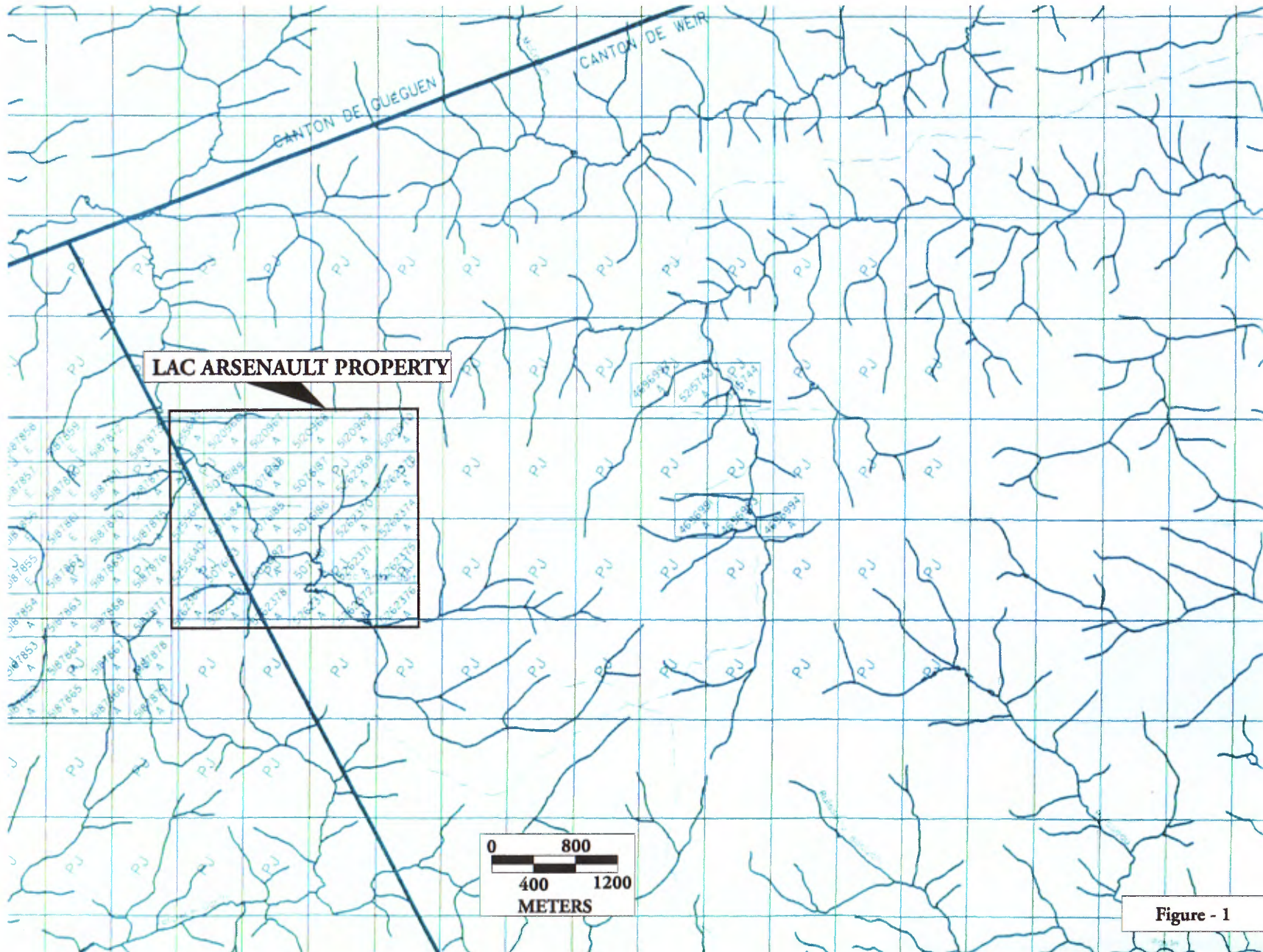


Figure - 1

and via a new logging road eastward for 17 miles, that follows the old Ministry of Energy and Resources road, joining the road from St. Jorges 0.25 miles south of the property. This new road crosses the southwestern boundary 0.50 miles west of this junction. New logging roads established in 1996 and late 2000 extend cross the eastern claims. Numerous old bulldozed drill roads and year 2000 and 2001 back hoed roads also cross the property. These roads provide very good access to the property , crossing 21 of the 30 claims.

Most of the claims are forest covered with spruce, except in the northwestern corner the property and parts of the 6 southeastern claims, where the areas were logged in 1996 and 2000. In the area logged in 1996 traversing is extremely difficult due to the abundance of second growth poplar and felled trees left by the loggers. Lac Arsenault lies in the southeastern corner of the property and the Arsenault River flows west and north-northwest from the north end of the lake, crossing the western part of the claim group. Numerous creeks flow into the Arsenault River and small intermittent creeks were observed on the property. Topographical relief varies, with most of the property exhibiting moderate relief. The ground generally rises from south to between lines 12 to 16N, forming an east-northeast trending hill between these two lines. In the extreme northern regions, north of the Grand Pabos Fault, the claims are on a flat plateau. Cliffs lie along the banks of Arsenault River in the south and topographical relief increases west of the river in the southwestern claims.

Supplies, services and manpower are readily available in the communities along the southern shore of the Gaspesie, primarily in the towns of Paspébiac, New Carlisle and New Richmond.

PREVIOUS WORK

Prospector Walter Baker was the first person to discover mineralization in the area. In 1946, while moose hunting in the vicinity of Lac Arsenault, he found boulders containing gold, silver, sphalerite, galena, chalcopyrite, arsenopyrite and pyrite, approximately 2000 feet north of the lake. Exploration work has been conducted on the prospect between 1966 and 2000. Before 2000 most of the work was performed from 1973 to 1987 by Aggressive Mining Ltd. (1973), Imperial Oil Enterprises - Esso Minerals Canada (1975 to 1978) and Mondor Explorations Inc. (1986 and 1987). This work includes linecutting, prospecting, trenching, stripping, mapping, sampling, geophysical and geological surveying and the drilling of 70 holes (18,966.7 feet). It should be noted that a large percentage of the past drilling was either drilled the wrong way to intersect the target veins or drilled down dip of the veins thus not possible to hit the vein structures. Most of the diamond drilling was concentrated in the areas containing the Baker, Mersereau and Line 4W vein systems. Between 1993 and 1997, linecutting, geophysical surveying and reconnaissance prospecting and mapping was completed on parts of the 14 claims.

Scorpio Mining Corp. performed a comprehensive ground exploration program in 2000 to extend known vein systems and to discover new veins using the data obtained in previous exploration programs. Summaries of past exploration are presented below:

1966 - Vesper Mines Ltd. explored the area, conducting geological mapping, geochemical sampling and magnetic surveying.

1973 - Aggressive Mining Ltd. mapped the vein systems north of Lac Arsenault & performed geo-

chemical and geophysical surveying over the southern part of the present day claims. One hole (AM-1) was drilled to a depth of 439.5 feet, intersecting the Baker Vein over a true width of 1.3 feet, assaying 0.28 oz/ton Au, 2.94 oz/ton Ag and 5.81 % Zn.

1975 - Imperial Oil Enterprises conducted programs of mapping, geochemical soil sampling and & trenching of anomalous areas and diamond drilling (1941.2 ft. in 19 drill holes, A-2 to 1976 A-20 on Map 4). Many geochemical soil samples (B horizon) were collected, defining the positions of numerous anomalous zones. Small parts of the Baker, Mersereau and Line 4W Veins were excavated where possible, then mapped and tested by the drilling of 9, 5, and 5 holes, respectively. It was proven that the Baker Vein had an average grade of 0.53 oz/ton Au, 9.15 oz/ton Ag, 9.74 % Pb and 0.61 % Zn, across an average width of 2.75 feet and along a length of 122 feet. Good drill intersections, of up to 1.40 oz/ton Au., 0.95 oz/ton Ag, 1.40 % Pb and 2.00 % Zn over a true width of 2.8 feet and 0.164 oz/ton Au, 1.10 oz/ton Ag, 0.02 % Pb and 0.05 % Zn were also reported cutting the Mersereau (hole A-19) and the Line 4W (hole A-18) Veins, respectively.

1977 - Esso Minerals Canada drilled 9 holes (A-21 to A-29), with holes A-21 to A-24 and holes A-26 to A-28 (see Map 4) testing the Mersereau and the Line 4W Veins, respectively. Drill holes A-25 and A-29 were collared 300 and 800 feet south of the Mersereau Vein. No assessment report was found describing these 1977 results.

1978 - Esso Minerals Canada completed a gravity survey and drilled 5 holes (4277 feet) on the present-day 30 claims (see Map 4). Two deep holes were drilled, hole A-30 of 2026 feet in length and hole A-35 of 1452 in length, testing a gravity low and a gravity low/Baker Vein, respectively. The results of drill hole A-30 have not been recorded with the Ministry of Quebec whereas hole A-35, drilled vertically near the Baker Vein, was stopped prematurely because of deviation and broken rods, intersecting chloritized greywacke and assaying 0.02 to 0.08 oz/ton Au in all 16 samples collected (no logs were found) and averaging 0.03 and 0.04 oz/ton Au across 9 and 16 feet, respectively. It appears that this mineralization is related to quartz veining. The gravity low was thought to define a possible buried intrusive Murdockville type ore body but no intrusive material was encountered. Holes A-31 & A-32 tested vein 76-18, located in the northern part of the Lac Arsenault Prospect, while hole A-36 was drilled to intersect the Mersereau Vein and was stopped due to poor weather conditions. Chlorite alteration, faulting and mineralization were intersected.

1985 - DsOro Resources performed limited (5 miles) magnetic & VLF-electromagnetic surveying over the Lac Arsenault Prospect and collected 113 stream and soil samples. Anomalous Au, Ag, Pb and Zn soil results were obtained, indicating that the Pb and Zn results were the best pathfinders.

1986 - Mondor Explorations Inc. completed an exploration program, comprised of linecutting,

geophysical and geochemical surveying and drilling on their 33 claims, covering approximately 95 % of the Lac Arsenault Prospect. A total of 10,742 feet was drilled in 36 holes (86-1 to 86-20, 86-20A, 86-20B, 86-22 to 86-24, 86-24A, 86-25, 86-26, 86-26A, 86-27 to 86-33 and 86-35) that were collared on the present-day Lac Arsenault Prospect (see Map 4). Numerous electromagnetic anomalies, representing fault/shear zones, and southeast trending dispersion zones of trace metals zones were delineated. The positions of 8 labeled Au and 15 As geochemical anomalous zones were defined on the 30 claims (see Map 4). Many of the Au and As anomalous zones had coincident VLF-EM anomalies and were located over, or along strike from, known mineralization. Twenty-eight of the 36 holes were drilled to intersect the Baker (holes 86-3, 4, 5, 13, 29, 31, & 32), Mersereau (holes 86-9, 11, 14, 15, 25, 26, 26A, 27 & 28) and Line 4W (holes 86-6, 7, 8, 10, 12, 18, 19, 20, 20A, 20B, 22 & 23) Veins. Only 9 holes (86-1, 2, 16, 17, 24, 24A, 30, 33 & 35) were drilled to test geophysical/geochemical targets, intersecting 3 fault zones and a new vein system, the Marleau Vein. The Marleau Vein was discovered while testing coincident geophysical and geochemical anomalies. Drill holes 86-24 and 86-24A intersecting the Marleau Vein over core lengths of 5.2 and 1.1 feet, assaying 0.36 and 0.272 oz/ton Au, respectively. A total of 22 geophysical-geochemical anomalous zones lying on the present-day claims, were targeted for additional exploration work, including prospecting, mapping, trenching, geochemical sampling, induced polarization, drilling and compilation. Eight of these anomalous zones, 6 representing the 4 known vein systems and 2 other anomalies were drilled in 1986, so 14 of these zones are still untested by diamond drilling.

1987 - Mondor Explorations Inc. contracted Sagax Geophysique Inc. to perform detailed induced polarization over an area covering approximately 75 % of the 30 claims. The surveying delineated the locations of the axes of nineteen definite I. P. anomalies, with 14 definite anomalies (A, B, C, I, J, K, L, M, N, O, P, Q, R & S) trending north to north-northeast across the present-day Lac Arsenault Prospect (see Map 4). Geophysical compilation also defined the positions of 21 probable and 37 possible anomalies on the property. Definite anomalies I, J, K, L, M, N, O, P & S, the northern anomalies of A, B, C & R and all of the probable and possible I. P. anomalies haven't been tested by drilling. Geophysicist P. Lortie studied the results of the I. P. and the previous conducted magnetic and VLF-electromagnetic surveys and suggested that 3 systems of faults (east-west, northeast-southwest and northwest-southeast trending) cross the property. The drilling of 9 definite holes and 6 possible holes were recommended but Mondor Explorations carried out no further work before they lost the claims. Thirteen of these drill collars lie on the present-day claims, including:

<u>Priority</u>	<u>Anomaly</u>	<u>Drill Collar Location</u>
<u>Definite</u>		
1	A	Line 6N - 12+50E
2	B	Line 8N - 18+50E
3	C	Line 10S - 4+25W
4	Q	Line 10N - 7+75E
5	M	Line 0 - 29+25E
6	O	Line 0 - 40+25E

	<u>Priority</u>	<u>Anomaly</u>	<u>Drill Collar Location</u>
<u>Definite</u>	7	J	Line 6S - 2+00W
	8	L	Line 8N - 14+75E
	9	R	Line 0 - 21+75E
<u>Possible</u>	10	I	Line 12N - 19+25N
	12	N	Line 8N - 32+75E
	13	K	Line 16N - 12+50E
	14	S	Line 4N - 38+25E

A study of the past drill hole locations and the positions of the I. P. anomalies shows that only small parts of definite anomalies A (Baker Vein), B (Mersereau Vein), C (Line 4W), Q (Marleau) and R (hole 86-17) and the possible anomaly representing the southern extension of anomaly R (hole 86-2) have been tested by diamond drilling.

Reinterpretation of the metal factor and apparent chargeability data in 2000 indicates that 162 metal factor highs are situated on the property. This type of detailed pole-pole I. P. surveying, employing only n-1 single electrode configuration, delineated the locations of a great number of anomalies but provided little information needed to classify and discriminate between background variations and true sources. Because of the high density of the highs, at an average of one anomaly every for every 450 ft. surveyed, it was determined that the best method was to prospect each individual high, not trying to form axes of anomalous zones.

1992 - The ground covering the Lac Arsenault Prospect came open and 9 claims (5076181 to 5076189) were staked, covering the 4 veins forming the original showings.

1993 - R. Campbell and G. Henriksen performed a limited program of linecutting (9.18 miles), magnetic and VLF-EM surveying (8.61 miles), reconnaissance geological mapping and prospecting on an area that covered the central two-thirds of the 9 claims. The old Esso Resources-Mondor Explorations lines were recut, chaining and picketed. The locations of the axes of eight VLF-EM conductive zones (see Map 4) and a possible east-southeast striking fault zone were delineated. The Baker, Mersereau and Line 4W Veins were found on surface, exposed over total strike lengths of 65, 30 and 270 feet, respectively. Anomalous to high Au, Ag, Pb and Zn assay results were obtained in the 8 samples collected. Further exploration work, including detailed compilation of past results, prospecting, linecutting, geophysical surveying, stripping, trenching, geological mapping and sampling, followed by diamond drilling, was recommended.

1994 - 5 more claims were staked (5120966 to 5120970) due north of and contiguous with the original 9 claims, covering the Grand Pabos Fault. R. Campbell and G. Henriksen performed reconnaissance geophysical surveying and prospecting on open ground, contiguous to the south of the original claims, but results didn't warrant staking this area.

1995 - A preliminary compilation map of past exploration work was produced.

- 1995 - Peter H. Smith Ph.D. & P.Eng., visited the property and wrote a qualification report, prior to optioning the claims to Penn Gold Resources. Geological reserves of 135,510 tons at 0.35 oz/ton Au were indicated within the 4 vein systems. A three phase exploration program was recommended. The recommended Phase 1 program (\$ 395,000) included trenching, prospecting, geophysical surveying and diamond drilling. Phase 2 was designed to establish grades and tonnage's through detailed diamond drilling, totaling \$ 345,000. Phase 3, contingent on the results of the previous 2 phases, was to consist of test mining of 100,000 tons of vein material, costing approximately \$ 4,700,000.
- 1996 - Peter Hawley completed a report for Penn Gold Resources, summarizing the past results, recalculating ore reserve tonnages and recommending further work. Reevaluation and calculation of the proven, probable and possible ore reserves for the 4 vein systems shows a total ore reserve category estimate of 220,042.52 short tons of 0.307 oz/ton Au. All vein systems are open to increased tonnage's and Mr. Hawley indicates that there are at least 30 unexplored geophysical/geochemical targets on the 14 claims, which may be caused by extensions of the known vein systems or new mineralized zones. A three phase program of further exploration, comprised of infill drilling, linecutting, prospecting, geophysical surveying, trenching, exploration drilling, and the completion of a feasible study on the mining potential of the prospect was recommended. The budget for this work program was \$ 444,700. Penn Gold Resources then defaulted on the option agreement.
- 1997 - R. Campbell and G. Henriksen cut 8.9 miles of lines on the northern 3 claims of the originally staked 9 claims and the southern regions of the 5 additional claims staked in 1994. Where possible the old Esso Minerals-Mondor Explorations grid references were used. 8.4 miles of magnetic and VLF-electromagnetic surveying was completed over the newly cut lines and reconnaissance prospecting, mapping and rock sampling (3 samples) was performed. Twelve old trenches were found and 3 electromagnetic anomalies and numerous magnetic anomalous zones were delineated (see Map 4). A \$ 93,000 Phase 1 exploration program of linecutting, geophysical surveying, prospecting, mapping, stripping, trenching, washing, sampling, compilation and report preparation, and a \$ 330,000 Phase 2 program of diamond drilling, were recommended by geologist G.N. Henriksen.
- 2000 - Scorpio Mining Corporation completed a program of ground exploration designed to better define and extend the limits of the mineralized vein systems and to discover new polymetallic and Au/Ag bearing veins and quartz rubble/float by: studying the previously obtained exploration results, especially the 1987 I. P. data; completing the linecutting (20.19 miles), total field magnetic (3.93 miles), VLF-EM (3.8 miles) and HLEM (13.32 miles) surveying, geochemical soil (72 samples) and rock (190 samples) sampling, prospecting and geological mapping on selected areas in order to provide total coverage across the property; stripping/excavating, power washing and chip sampling the exposed mineralized quartz veins (Baker, Marleau Mersereau and Greek); and trenching areas containing quartz float/rubble and geophysical anomalies (24 trenches).

The magnetic signature underlying the property was defined and the locations of 9 VLF-

EM conductive zones, formed from 17 in-phase crossovers (frequency 24.0 kHz.), 7 very weak to weak HLEM anomalies and 5 geochemical soil anomalous zones (2 As, 2 Pb and 1 Zn) were delineated (see Map 4). Prospecting uncovered at least 80 examples of quartz float/rubble, 18 samples of mineralization and altered rubble/float were collected and 3 new vein quartz veins were found in outcrop. The positions of the 3 mineralized vein systems (Baker, Mersereau and Line 4W) previously outlined on surface were relocated, the drill intersected Marleau Vein was found in outcrop and the Greek Vein delineated and sampled. Twenty-four trenches were dug by a backhoe along the old drill roads and set-ups that cross geophysical-geochemical anomalies and areas containing quartz rubble/float and that lie along strike from the Baker, Mersereau and Greek Veins. The Baker, Mersereau, Marleau and Greek Veins were stripped/excavated, power washed and chip sampled, exposing previously undiscovered sections of mineralized veining on surface. The Baker and Mersereau Veins contain high concentrations of Au, Ag, Pb and Zn and the Marleau and Greek Veins are Au bearing.

2000 - Scorpio Mining Corporation staked 4 claims (5255640 to 5255643) contiguous with the eastern 5 claims of the 14 acquired in 1992 and 1994. These 4 claims cover I.P. and geochemical anomalies and an old trench.

2001 - Scorpio Mining Corporation staked an additional 12 claims (5262369 to 5262380), contiguous to the east and to the south, forming a 30 claim rectangular shaped block.

GEOLOGY AND MINERALIZATION

The geology underlying the Lac Arsenault Prospect is presented on the Quebec Ministry of Energy and Resources geology maps ET88-01 and 1000. The data shown on these maps indicates that the 30 claims are underlain by a sequence of Paleozoic metasedimentary rocks located near the eastern end of the Aroostook-Matapedia Anticlinorium. Sediments of the Ordovician age Arsenault and Garin Formations of the Honorat Group are shown to underlie the southern 85 % of the property, in contact with White Head Formation sediments of the Matapedia Group to the north. A contact between Arsenault Formation greywacke, claystone, shale, tuffs and sandstones and Garin Formation mudstone, siltstone, wacke, conglomerate and sandstone trends east-northeast from the southwest corner of the property crossing the newly staked southern claims. These Honorat Formation sediments strike east-northeast to northeast and are steeply dipping. The major Grand Pabos Fault Zone trends east to east-northeast through the southern parts of the northern 6 claims. Limestone, shale and siltstone of the White Head Formation lie north of the fault. A second fault, is thought to trend approximately 110 degrees from the Grand Pabos Fault zone near the western boundary, through the central part of the property near the Baker and Mersereau Vein systems.

Outcrop exposure on the 14 claims prospected and mapped in 2000 varies from poor to good and overburden cover is thin. Good exposures are found: in the central part of the property (claims 5076184 to 5076189); along the river in the south and west; and along the haul road and a trail in the northeastern 2 claims (5120969 and 5120970). Greywacke, shale and breccia of the Upper

Ordovician Arsenault Formation and intermediate to mafic intrusive rocks were mapped on the 14 claims staked in 1992 and 1994. Medium and fine-grained greywacke or siltstone is the most common rock type found on the property. Few distinct contacts were observed, with most of the contacts between the greywacke and shale being gradational. Most of the greywacke is unaltered and undeformed, but limonite alteration, minor fracturing, lineation and shearing- faulting were observed in a few outcrops. Numerous shale exposures exhibited lineation, shearing, faulting, fracturing and limonite alteration. The fabric of these sediments strikes 045 to 090 degrees, with the direction swinging from eastward in the south to the northeast in the north region near the Grand Pabos Fault. In the central part of these claims, where most of the exposures are concentrated, the sediments strike 75 to 80 degrees, dipping steeply to the north and south. Breccia zones were mapped after stripping and washing the Baker and Mersereau Veins and at the outcropping of the Grand Pabos Fault Zone crossing the road in the north. The breccia near the 2 quartz veins is comprised of large quartz and shale fragments in a gossened matrix while along the Grand Pabos Fault Zone, shale fragments are contained in a quartz-carbonate matrix. Intermediate to mafic intrusive rocks were exposed in outcrop of fine-grained gabbro on the main haul road, near line 20N, and in a small outcrop of fine to medium-grained diorite found in the vicinity of trenches, near line 18N. Both outcrops lie close to the Grand Pabos Fault Zone in the northern part of the property. The gabbro is fractured and quartz rich and mineralized with 2 to 5 % sulphides. Sampling in 1997 indicated that the gabbro hosts undetectable concentrations of Au and Ag.

Major shearing and faulting, striking 060 to 080 and dipping 50 to 70 degrees south, was observed on the property, including the Grand Pabos Fault Zone, in the north, the shearing cutting the Marleau Vein and the shearing and faulting in outcrop near the Arsenault River. A cross-cutting fault strikes 100 degrees and dips 75 degrees west, through shale at 3S near the western boundary of the property. Many other examples of shearing were also mapped in the central region of the Lac Arsenault Prospect, mostly associated with the quartz vein systems (Baker, Mersereau, Marleau, Line 4W, Greek and Derber) and smaller individual veins. The shearing in the vicinities of these veins trends in two general directions, 070 to 095 degrees, roughly parallel to the sedimentary fabric and the strike of the Grand Pabos Fault Zone and 020 to 045 along the edges of the Baker, Mersereau and Line 4W Veins.

Past work delineated systems of mineralized quartz veins, containing Au-Ag-Zn-Pb and Au. The Baker, Mersereau, Marleau and Line 4W mineralized veins strike 006 degrees to 040 degrees across the northeast side of the Arsenault River Valley and the mineralized Greek Vein strikes 110 to 130 degrees southwest of the river. The vein systems contain trace to 80 % arsenopyrite, galena, pyrite, sphalerite and argentite, within carbonatized, silicified and sericite rich metasediments. Bedrock in the vicinities of the vein systems is within a few feet of surface and is rusty and weathered within large aureoles, representing possible pervasive hydrothermal alteration. The veins exhibit boudinage and zoning parallel to the walls, with the rusty zoning extending for several feet on either side of the veins.

T. G. Mersereau, in his report of 1987 (GM 45384) on the 1986 Mondor exploration program, states that the claims underlain by Whitehead Formation limestones, north of the Grand Pabos Fault, have the potential to contain a Carlin type gold deposit with micron sized Au grains in

silicified limestones hosting minor arsenic and antimony minerals. No holes have been drilled or any trenching or bulldozing has been completed north of the Grand Pabos Fault.

The 5 most prominent mineralized vein systems found to date: the Baker, Mersereau, Mar-leau, Line 4W and Greek are described in the following pages.

Baker Vein & Vicinity

The Baker Vein lies along the south side of hill, sloping southward at an angle of 11 to 18 degrees. Roads extend to the northern and southern ends of the vein. In 2000, the Baker Vein was stripped and was exposed in sections of 17, 90 and 25 feet, along a total strike length of 146 feet. The vein varies in true width from 0.42 to 6 feet and is folded and offset, with an overall azimuth of 32 degrees. Local strike varies from 345 to 50 degrees, dipping 80 degrees northwest to vertical in the north and 70 to 85 degrees northeast in the south. The original northern and southern exposures that were sampled in 1993 lie 56 and 122 feet from the north end of the vein. The strike of the northern exposure is 06 degrees and it appears that Imperial Oil Enterprises used this strike direction in planning the angle of the baseline. A second (Auxiliary) vein, 0.67 to 4 ft. in width is exposed along 40 ft., striking 40 to 10 degrees from a fold at the north end of the Baker Vein (See Photo's 1A, B).

These veins are within well lineated and limonite rich shale and minor greywacke. In the south, the Baker Vein ends in a shear zone cutting shale and 2 other shears were mapped in the shale. Quartz and shale breccia in a gossened matrix cuts-off a 10 ft. section of the Baker Vein and 4 similar breccia zones were also delineated near the vein. Sulphide mineralization was observed throughout the exposed vein, except for the southern 6 feet where the vein was limonite rich. Sections of the Baker Vein are totally weathered and altered, forming zones of earthy minerals, fractured and brecciated quartz and weathered massive sulphide mineralization. Where the vein is relatively fresh, combined pyrite, arsenopyrite, galena and sphalerite content of up to 85 % was observed.

Comprehensive sampling was performed across the Baker Vein in 2000, with thirty chip samples collected at intervals, averaging 5 ft., along the strike of the vein. The Baker Vein has a total exposed strike length of 146 feet, separated into two lengths of 111 and 25 feet by the 10 feet of breccia (111 to 121 ft. from the north end). The Baker Vein can be divided into 9 sections, according to sulphide content and amount of weathering and alteration. Using the average grades of each section of vein, the 136 ft. (41.46 meters) of exposed Baker Vein averages 0.395 oz/ton (13.54 g/tonne) Au, 13.24 oz/ton (453.94 g/tonne) Ag, 13.79 % Pb and 0.427 % Zn across an average chip sample width of 2.35 feet (0.72 meters). This compares to an average grade 0.53 oz/ton (18.17 g/tonne) Au, 9.15 oz/ton (333.94 g/tonne) Ag, 9.74 % Pb and 0.61 % Zn over a sample width of 2.75 feet and a sample length of 122 feet (37.20 meters) reported by P. J. Hannon in 1975.

The results from the 13 holes drilled to test the Baker Vein, indicate that the vein extends

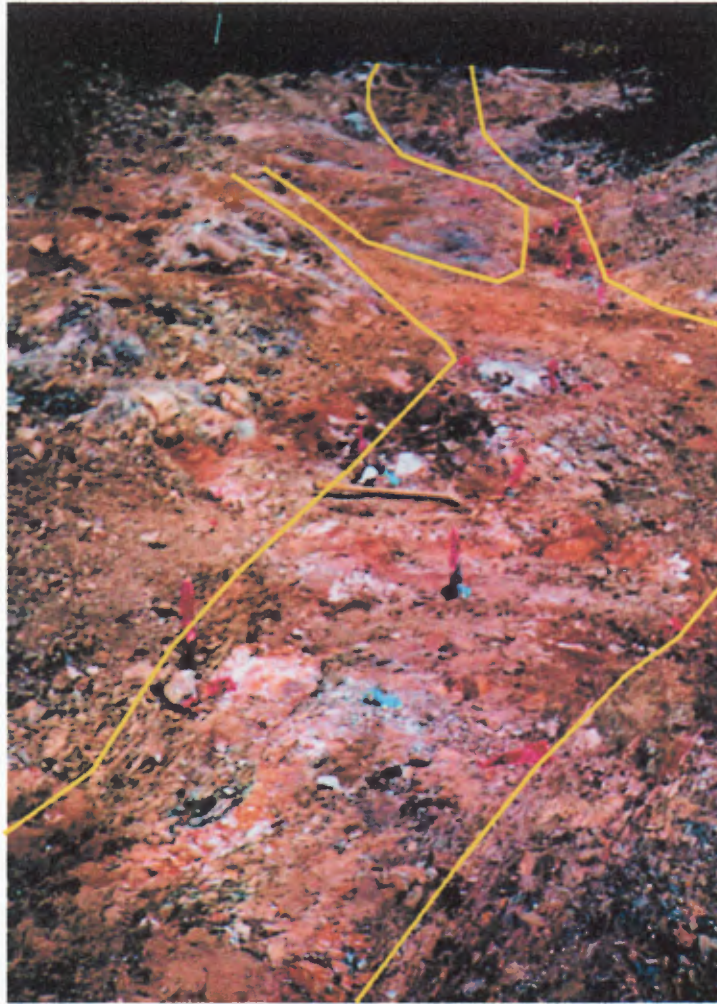


PHOTO 1A - Baker Vein, Central Area With Vein Splay

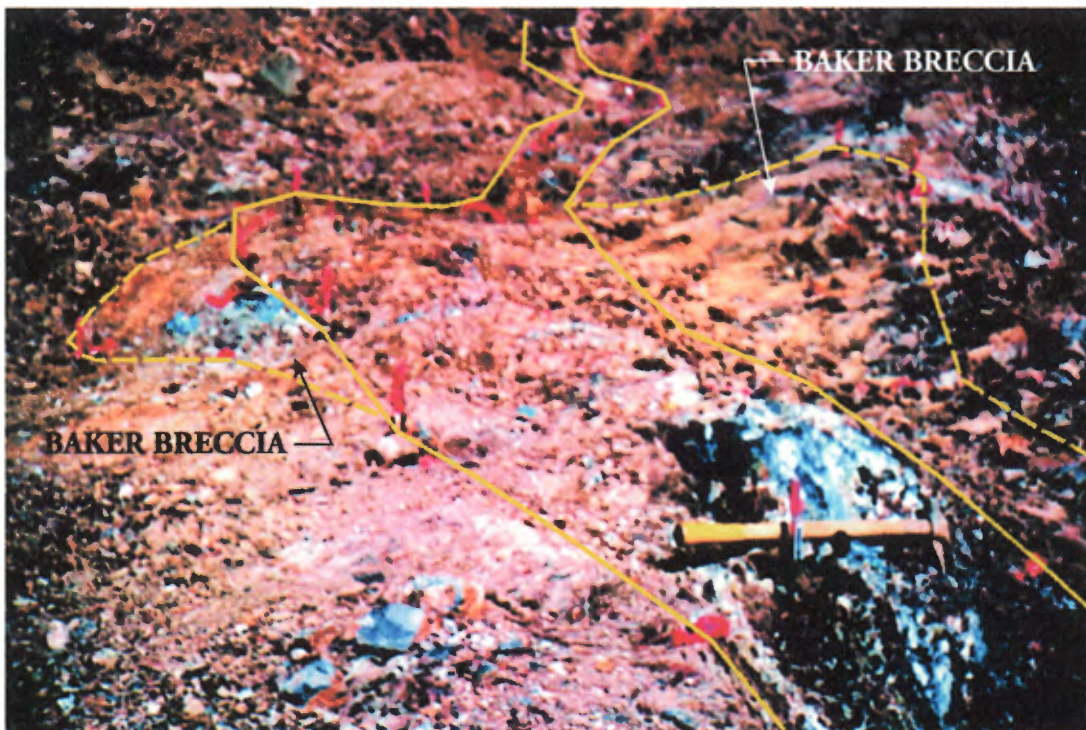


PHOTO 1B - Baker Vein, North Area With Well Developed Breccia Zone Adjacent To Vein

for at least 200 feet at the shallow depths of less than 200 feet. Hole A-12 was drilled to test the northern extension of the Baker Vein. The best drill intersections were reported by Imperial Oil Ltd. in the 1975 program of diamond drilling, including:

Hole	Footage's	True Width in Feet	Au oz/ton	Ag oz/ton	Pb %	Zn %	Cu %
AM-1	376.9-378.6	1.30	0.28	2.94	---	5.81	---
A-2	69.9-74.6	3.30	0.32	4.275	7.10	14.36	0.15
A-3	97.0-107.6	4.50	0.116	0.393	0.163	0.67	---
A-6	70.0-72.2	1.55	0.30	3.73	6.10	10.95	0.10
A-7	103.5-118.5	6.36	0.11	0.70	0.40	3.14	0.01
A-13	221.0-222.1	0.78	0.31	1.61	1.48	3.00	---
A-12	48.5-50.8	1.60	0.38	1.49	6.59	2.21	---

Mondor Explorations drilled holes intersecting the Baker Vein below holes A-2, A-3 and A-13, but the reported assay results were low. A deep drilling program, to test the vein at vertical depths of 400 feet, was recommended by Mondor Explorations in their report of 1987, but no further drilling was carried out.

The Baker Vein system is located along I. P. anomaly A. This anomaly is comprised of 2 definite anomalous zones of 400 and 1200 ft. in length. Including possible anomalies, anomaly A has a total length of 3400 feet, striking roughly north-northeast from line 10S to line 24N. The Baker Vein lies along the northern end of the southern definite anomaly. Twelve (AM-1, A-2 to A-7, A-13, 86-3, 86-29, 86-31 and 86-32) drill holes appear to have been drilled across definite anomaly A. The middle conductor of zone A-1, outlined in the 1993 VLF-electromagnetic survey and horizontal loop-electromagnetic anomaly B cross the north end of the Baker Vein. This vein lies in As geochemical anomaly 1, between two zones of Au geochemical anomaly 1.

The Auxiliary Vein, east of the north end of the Baker Vein, is mineralized with up to 5 % sulphides and appears to be open to the north. It contains elevated concentrations of Au, Ag, Pb and Zn, with 31 feet (9.45 meters) chip sampled, grading 0.015 oz/ton (0.514 g/tonne) Au, 0.24 oz/ton (8.22 g/tonne) Ag, 0.278 % Pb and 0.164 % Zn across an average sample width of 1.47 ft. (0.45 meters).

The quartz-sediment breccia is also mineralized with the quartz fragments and the gossened matrix containing sulphide mineralization and slightly elevated Au and Ag content and anomalous amounts of Pb and Zn, averaging 0.022 oz/ton (0.75 g/tonne) Au, 0.44 oz/ton (15.09 g/tonne) Ag, 1.64 % Pb and 0.370 % Zn in the 5 grab samples collected, including sample 27170, assaying 0.090 oz/ton Au, (15.09 g/tonne) Ag, 1.64 % Pb and 0.370 % Zn.

Area of the Mersereau Vein

The Mersereau Vein is exposed in 3 sections, in the southern stripped area, across 3 ft. a

small old pit and across 5 ft. in a trench to the north. It lies along 117 ft. on southern side of a moderately steep hill, 265 ft. due east of the northern end of the Baker Vein. The area is easily accessed from the south and north through the old drill roads. This vein has an azimuth of 26 degrees, dipping 80 degrees to the east, is open at both ends and appears to fold/bend to the east in the south. Widths vary from 0.75 feet to 4 ft., increasing to the north. In the south, 2 breccia zones cut the vein. This breccia is of similar composition to the breccia exposed while stripping the Baker Vein. Breccia, sheared shale and greywacke lie along the margins of the vein (See Photo's 2A, B).

The Mersereau Vein is comprised of unaltered quartz containing up to 70 % pyrite and galena, semi-massive to massive sulphide seams, 4 to 10 inches wide and altered and weathered zones of massive sulphides. In 2000, 14 chip samples were taken at right angles across the vein at 4 to 6 ft. intervals. The 50 ft. (15.24 meters) of exposed Mersereau Vein has an average grade of 0.325 oz/ ton (11.14 g/tonne) Au, 7.44 oz/ton (255.09 g/tonne) Ag, 11.70 % Pb and 0.301 % Zn, across an average sample width of 1.86 ft. (0.57 meters). In the southeast corner of the stripped area, a 0.33 ft. wide vein assayed 0.182 oz/ton Au, 0.44 oz/ton Ag, 0.103 % Pb and 0.052 % Zn and a grab sample (27185) of mineralized quartz rubble in the bottom of the southern part of the stripped area contained high concentrations of Au (0.543 oz/ton), Ag (6.03 oz/ton), Pb (13.92 %) and Zn (1.26 %), indicating that it is probably part of the Mersereau Vein. Two chip samples of the breccia across 0.83 and 2.00 ft., averaged 0.015 oz/ton Au, 0.13 oz/ton Ag 0.392 % Pb and 0.145 % Zn, slightly less than found in the grab samples of breccia near the Baker Vein.

Drilling results indicate that the Mersereau Vein lies 300 to 400 feet east to east-northeast of the Baker Vein, striking 025 to 040 across the extreme northeastern corner of claim 5076185. Eighteen holes have been drilled testing the vein and its strike length has been traced for over 325 feet. The best drill hole intersections are:

Hole	Footage's	True Width (feet)	Au oz/ton	Ag oz/ton	Pb (%)	Zn (%)
A-9	128.3-129.0	0.30	0.104	0.49	0.45	0.95
A-10	39.5-43.2	3.04	0.054	0.72	1.80	2.50
A-19	28.0-32.0	2.80	1.40	0.95	1.40	2.00

The drill intersections of the vein are at shallow depths, 50 to 175 feet. T. G. Mersereau of Mondor Explorations states that the mineralization and quartz vein width is erratic and narrow, but intersections prove that the vein can be locally high grade with free gold (hole A-19) and that the vein width can thicken (hole 86-26A). Mondor Explorations concluded that it is possible that the vein system extends to the north and south beyond the limits of past drilling. Further exploration work was recommended to test the vein system, including a drill program, to intersect the northern, southern and vertical (400 feet) extensions of the vein, trenching, mapping, surveying and limited I. P. to better understand the geology and to trace the vein on or near surface.

MERSEREAU BRECCIA



PHOTO 2A - Mersereau vein with hangingwall breccia



PHOTO 2B- Close Up OF Mersereau Breccia - Massive Sulphide Clasts

Definite I. P. anomaly B strikes north-northeast from line 4S, along the Mersereau Vein, cut off near line 10N and continuing until line 21N. At line 21N the anomaly is cut by the Grand Pabos Fault and then becomes a possible anomaly striking north for 400 more feet. The anomaly has a total strike length of 2900 feet. The 800 foot length of the southern definite anomaly appears to have been cut by 19 of the holes drilled to test the Baker and Mersereau Veins. The remaining 2100 feet of strike length of anomaly B hasn't been explored by drilling or trenching. A Fraser filtered VLF-electromagnetic lies along the northern part of the southern definite anomaly, north of the drill holes testing the Mersereau Vein. The results of the I. P. survey suggest that the Baker and Mersereau Veins are two separate vein systems, but geological observations do not rule out the possibility that these 2 veins are the same vein, displaced by faulting. The Mersereau Vein located over the northern ends of coincident As and Au geochemical anomaly 1.

Three narrow (0.25 to 0.33 ft. wide) exposures of the Northeast Extension of the Mersereau Vein were uncovered in a trench dug in 2000. These 3 exposures lie along strike from each other, 231 to 252 ft., at an azimuth of 45 degrees, from the south end of the Mersereau Vein. The quartz vein is mineralized with 5 to 30 % sulphides and altered/weathered massive sulphide/earthy minerals, striking 50 to 70 degrees and dipping vertically along sheared a shale-greywacke contact. The east end of the vein is cut by a shear zone, striking 10 degrees and dipping 60 degrees, with both ends of the mineralized vein appearing to be open. If the vein is presumed to be continuous along the 21 feet (6.40 meters) of strike length it contains average grades of 0.666 oz/ton (22.83 g/tonne) Au, 2.34 oz/ton (80.23 g/tonne) Ag, 3.68 % Pb and 0.081 % Zn, across an average sample width of 0.28 ft. (0.09 meters). These quartz zones lie in As geochemical anomaly 5 along the axis of I.P. anomaly B.

Marleau Veins

Originally, the Marleau Vein was discovered at the end of the 1986 program of drilling conducted by Mondor Explorations while testing coincident geochemical and geophysical anomalies located in the eastern part of present day claim 5076189. Hole 86-24 intersected the vein over a core length of 7.8 feet at a vertical depth of 200 feet. A high gold intersection of 0.36 oz/ton was obtained over 5.2 feet, including a 1 foot section assaying 1.088 oz/ton Au. A second hole, 86-24A, was then drilled to test the vein at depth. This hole cut the vein at a vertical depth of 400 feet, assaying 0.272 oz/ton Au over 1.1 feet. A third hole, 86-33, was drilled, but because of drill size and topography the hole could only be drilled in the wrong direction and no significant mineralization was encountered. This was the last hole drilled on the Marleau Vein because of approaching winter. Mondor Explorations recommended further drilling and a program of trenching, mapping and geophysics, to better delineate and extend limits of the vein system. The south end of definite I.P. anomaly Q overlies the drill intersections of this vein in holes 86-24 and 86-23A at the intersection of the geochemical and VLF-electromagnetic anomalies. This I. P. anomaly strikes north to north-northeast, for a total strike length of 900 feet.

In 2000, the Marleau Vein was discovered on surface while prospecting and then uncovered by stripping. The vein is exposed along a total length of 409 ft. on the south side of the hill that contains the Baker and Mersereau Veins, 700 ft. at an azimuth from the north end of the Baker Vein. Two types of quartz veining was uncovered by the stripping and washing, the narrow Au bearing Main Marleau Vein that exposed in 5 sections along a total length of 409 ft. and the wider, complex and lower grade Sheared/Brecciated Marleau Vein exposed near line 6N. The Main Vein has a width of 0.42 to 3.50 ft. in 5 sections of lengths of 143, 47, 18, 18 and 60 feet, for a total exposed length of 286 ft. at an overall azimuth of 198 degrees. This Au bearing vein is 0.42 ft. (0.13 m.) to 6.00 ft. (1.83 m.) wide and strikes 330 to 40 degrees in shale and greywacke. It is open at both ends and is folded and offset by shearing that trends 42 to 70 degrees. The sample widths and sulphide (less than 8 %) and Au (0.075 to 0.2 oz/ton) contents in the mineralized Main Marleau Vein are relatively constant and there is also good correlation between the amounts of sulphide mineralization and the Au content. The Ag, Zn and Pb concentrations in the vein were low. Using the Au grades obtained for the 5 exposed sections of the mineralized Main Marleau Vein it was determined that the total exposed length of 248 ft. (75.61 m.) averages 0.163 oz/ton (5.59 g/tonne) Au across an average sample width of 1.61 ft. (0.49 m.), (See Photos 3A, B, 4A, B).

The Sheared/Brecciated Marleau Vein was partially stripped over an area 20 ft. north and 40 ft. south of line 6N, near the north end of southern section of the Main Marleau Vein. The underlying quartz was uncovered intermittently across areas up to 25 feet, open to the west and south. It appears that there is a wide section of quartz in the north part and possibly at least 3 south to south-southeast trending veins in the south. The quartz was highly fractured, sheared, brecciated and uneven with the mineralized zones covered by a layer of compacted red alteration. The fractured, sheared and brecciated quartz is limonite stained, containing 0 to 7 % disseminated sulphides. Because no definite strike directions were determined, 22 chip samples were collected at different directions across the quartz veining. Fourteen samples contained > 0.01 oz/ton Au with 5 of these samples assaying between 0.148 and 0.347 oz/ton across widths of 0.5 to 4.0 feet (see below).

Sheared/Brecciated Marleau Vein

No.	<u>> 0.100 oz/ton Au</u>						No.	<u>0.010 to 0.100 oz/ton Au</u>					
	Position		Width		Au			Position		Width		Au	
	(from N end)							(from N end)					
	ft.	m.	ft.	m.	oz/ton	g/tonne		ft.	m.	ft.	m.	oz/ton	g/tonne
27091	348	106.10	3.00	0.91	0.295	10.11	27085	328	100.00	2.50	0.76	0.025	0.86
27093	358	109.15	1.25	0.38	0.175	6.00	27086	339	103.35	4.50	1.37	0.044	1.51
27096	346	105.49	0.50	0.15	0.188	6.45	27087	338	103.05	1.67	0.51	0.040	1.37
27097	349	106.40	1.67	0.51	0.347	11.90	27089	344	104.88	2.00	0.61	0.027	0.93
27115	350	106.71	4.00	1.22	0.148	5.07	27090	341	103.96	1.00	0.30	0.066	2.26
							27092	348	106.10	4.00	1.22	0.024	0.82
							27094	347	105.79	7.00	2.13	0.020	0.69
							27095	349	106.40	1.59	0.46	0.022	0.75



PHOTO 3A - Marleau Breccia With Quartz Carbonate Stringers Within Sheared, Brecciated Zone.



PHOTO 3B - Marleau Vein With Mineralized Footwall And Hanging Walls



PHOTO 4A - Close Up Marleau Vein



PHOTO 4B - North Area Marleau Vein Exhibiting Large Iron Oxide Alteration Zone

No.	> 0.100 oz/ton Au				No.	0.010 to 0.100 oz/ton Au						
	Position		Width			Au		Au				
	(from N end)											
	ft.	m.	ft.	m.	oz/ton	g/tonne	ft.	m.	ft.	m.	oz/ton	g/tonne
					27101	369	112.50	2.00	0.61	0.025	0.86	

The Marleau Veins overlie Au geochemical anomaly 3 and As geochemical anomaly 3, with the As anomaly extending 200 ft. to the north and 600 ft. to the southwest. A VLF-electromagnetic crossover (Annapolis) is situated 60 ft. west of the vein on line 6N.

Line 4W Vein

In 1993 and 2000 exposures of the line 4W Vein were uncovered in 4 old small pits and on an old drill road, 1600 west of the Baker Vein. These exposures indicate that the vein extends for at least 420 feet, striking 24 to 30 degrees between 1S at 4W and 3N at 2+50W. Two other small pits, one in the south and 1 in the north, were found filled with overburden. The exposed vein is 0.75 to 3 feet wide, lying along a shear zone in altered greywacke and dipping 85 degrees northwest to 80 degrees southeast. The southern and two northern exposures lie along strike from each other, while the other 2 exposures, 130 and 250 from the south end, are positioned 50 to 60 feet to the east. This suggests that there are 2 veins or the Line 4W Vein is folded or faulted at two locations.

The Line 4W Vein contains 3 to 60 % sulphides and trace to 20 % galena and the 3 chip samples across 3 ft. assayed 0.033 to 0.089 oz/ton Au, 0.34 to 0.47 oz/ton Ag, < 0.010 to 0.174 % Pb and < 0.010 to 0.073 % Zn and 2 grab samples contained 0.33 oz/ton Au, 1.93 oz/ton Ag, 3.558 % Pb and 2.372 Zn and 0.06 oz/ton Au, 0.07 oz/ton Ag, 0.016 % Pb and 0.002 % Zn.

North of line 0 (samples 27007, 27008 & 27009), the Line 4W Vein lies in As geochemical soil anomaly 2 that extends northward joining anomaly 18 south of the Grand Pabos Fault Zone. Anomaly 2 folds to the west on line 0, across the western boundary. I. P. metal factor highs lie on line 0 at 4W, between exposures and on line 2S at 4+50W, 100 feet south, along strike from the southern most exposure. A VLF-electromagnetic crossover, using Annapolis, lies along strike 100 to 600 ft. to the north.

The 20 holes drilled in the line 4W Vein have extended the strike length of the vein to 700 feet. Drill hole intersections indicate that the vein structure is sporadically mineralized with pyrite. The best gold values obtained were in Imperial Oil's hole A-18 (0.164 oz/ton Au over a true width of 1.4 feet) and in Mondor's hole 86-6 (0.158 oz/ton Au over a true width of 0.7 feet). The Line 4W Vein System appears to be open at depth and along strike to the north.

Mondor Explorations drilled eleven of the 20 holes drilled to test this vein in 1986. Dr.

Peter Smith, in his 1995 reevaluation of the drill sections, indicates that only 2 of these 11 holes, 86-6 and 86-20A appear to have been drilled correctly to intersect the Line 4W Vein. Five holes, 86-8, 86-10, 86-18, 86-19, 86-23 and 86-23, were drilled down dip of the vein system and did not intersect the vein and 3 holes, 86-12, 86-20B and 86-28, were stopped short of the projected intersection of the vein. Even so, Mondor Explorations in 1987 recommended that further exploration work, including prospecting, trenching and mapping, be completed along strike of the vein to the north-northeast to determine the continuity and to better define structural controls. Deeper drilling was also recommended, to test the grades and widths of the vein at depth.

The position of I. P. definite anomaly C coincides with the locations of the drill intersections and the exposures of the Line 4W Vein in the small pits. This anomaly was defined as definite across 7 lines, with a possible anomaly joining the definite anomalies between lines 4S and 6S. Anomaly C has a total strike length of 1600 feet, separated by 200 feet of non-conductive material in the vicinity of line 4N. It appears that only 12 drill holes (A-14, A-15, A-16, A-17, A-26, A-27, 86-6, 86-7, 86-10, 86-19, 86-20 and 86-20A) had the potential to intersect the I. P. anomaly. The I. P. data indicates that the vein could slightly folded at the intersection and may continue for 700 ft. to the south. Five Mondor Fraser filtered VLF-electromagnetic anomalies are located near the vein. Only 2 holes, 86-18 and 86-19 cross these VLF anomalies, with hole 86-19 intersecting quartz vein-ing near line 6N, at the intersection with a geochemical Au anomalous zone.

Greek Vein

The Greek Vein is exposed along 38 feet, at the top of a hill, located across the Arsenault River valley at an azimuth of 60 degrees and distance of 2200 ft., from the north end of the Marleau Vein. The north end of the stripped Marleau Vein can be seen across the valley at a higher elevation. It lies along a gentle slope that angles down to the southeast, 10 ft. south of the top of the hill that drops off steeply to the northwest. The vein was accessed via an old bulldozed road and 200 ft. of newly backhoed road.

The Greek Vein is uncovered for a total length of 38 ft. at widths of 3 to 13 feet. The vein drops off to the southeast, narrowing where the overburden depth increases. It strikes 110 to 135 degrees, dips 75 to 80 degrees to the southwest and appears to be open at both ends. The vein cuts fractured and sheared shale and a fragment of shale lies within the southern part of the vein. The Greek Vein is located 800 feet at an azimuth of 240 degrees from the southern exposure of the Line 4W Vein. The margins of the vein contained the up to 8 % pyrite and arsenopyrite in narrow seams and dissemination's. The middle sections were less mineralized, with up to 1 % pyrite and were limonite stained. Chip samples collected at 5 ft. intervals averaged 0.019 oz/ton (0.65 g/tonne) Au along 35 feet (10.67 meters) and across an average sample width of 8.28 feet (2.52 meters). The Ag, Pb and Zn concentrations in the northern 10 feet of the vein were undetectable while in the southern 25 feet small amounts of Ag and Pb were detected, (See Photo's 5A, B, 6A, B).



PHOTO 5A - Greek Vein Quartz Carbonate Breccia



PHOTO 5B - Greek Vein Quartz Carbonate Breccia



PHOTO 5C - Greek Vein With Iron Oxide Alteration



PHOTO 6A- Close Up Of Greek Vein With Ribbons Of Mineralization



PHOTO 6B - Close Up Of Greek Vein And The Greek Vein Breccia

As geochemical anomaly 2A is located 100 ft. to the northeast and the south end of an unlabelled As anomaly lies 100 ft to the east. VLF-EM crossover 9 (Cutler) is positioned 100 ft. south of the vein.

Other Veins

Numerous examples of limonite rich and slightly mineralized quartz veins have been discovered on the property. Two veins that lie near the boundary between claims 5076189 and 5120966 and a vein in old trenches at the west end of line 0 assayed 0.001 oz/ton Au. The Derber Vein, anomalous in Ag, is comprised of a series of veins/stringers and areas of quartz rubble striking 080 degrees for 700 ft., 500 ft. north of the Baker Vein. In outcrop the vein is 1 to 3 ft. in width and lies within or near shear zones in shale and greywacke. Anomalous amounts of Ag (0.20 to 1.25 oz/ton) were obtained in 5 grab and 2 chip samples.

Quartz Float/Rubble

At least 80 examples of quartz float/rubble have been discovered while prospecting. The origins of 12 mineralized float/rubble samples with > 0.01 oz/ton Au remain unexplained, including:

#	Location	Description	Au (oz/t)	Ag (oz/t)	Pb (%)	Zn (%)
Esso	original sample 1000 ft. south of the Mersereau Vein in As Anomaly 1E, south of Ag Anomaly 1	float, pyrite, galena, argentite & sphalerite rich	0.018	22.15	39.50	2.80
Mon-dor	southwest corner of 5076182, near the Arsenault River and As Anomaly 19	float	0.21			
27010	along the main road, 400 ft from original mineralized float	float - 0.25 ft in diameter, 5 to 8 % sulphides	0.081	0.31	0.047	< 0.010
27011	on road/trail 250 ft. north of the original mineralized float, at As & Au geochemical Anomaly 1E & near an I. P. metal factor high	float - 0.75 ft. in diameter, up to 11 % sulphides	0.126	0.43	0.449	< 0.010

<u>#</u>	<u>Location</u>	<u>Description</u>	<u>Au (oz/t)</u>	<u>Ag (oz/t)</u>	<u>Pb (%)</u>	<u>Zn (%)</u>
27015	on the N side of a drill road 175 ft. NE of the Mersereau Vein, in As geochemical Anomaly 5	rubble - 0.3 ft. in diameter 4 % sulphides	0.026	0.20	0.084	< 0.010
27025	in a trench at the west end of line 0 in a geochemical As anomaly	rubble - 1 ft. in diameter, 8 to 13 % sulphides	0.067	1.36	3.40	2.71
27027	500 ft. west of the S end of the Baker Vein, within 200 ft. of a drill road	rubble - 1 ft. in diameter, up to 6 % sulphides	0.220	0.40	0.020	< 0.010
27029	along strike 400 ft. S of the Mersereau Vein, in As anomaly 1, 50 ft. S of Au Anomaly 1	rubble - 1 ft. in diameter, up to 1 % pyrite	0.023	0.59	< 0.010	< 0.010
27040	in old drill site/stripped area near the Grand Pabos Fault, & VLF-EM & HLEM Anomalies 1 & A	rubble - 0.75 ft. in diameter, 2 to 3 % sulphides	0.021	< 0.03	< 0.010	< 0.010
27041	in the Arsenault River, 125 ft. from a VLF-EM anomaly	float - 0.7 ft. in diameter, 2 to 4 % sulphides	0.088	< 0.03	0.038	0.020
27042	on the side of the main road	float - 0.33 ft. in diameter, 3 to 5 % sulphides	0.030	< 0.03	< 0.01	< 0.01
27043	in tributary of the river, near Mondor mineralized float	float - 0.8 ft. in diameter, 6 to 9 % sulphides	0.034	0.10	0.061	0.208

WORK PERFORMED AND METHODS USED

Reconnaissance Prospecting

The numerous trails and roads and the areas logged in 2000 on the 14 claims staked in 2001 were prospected in August 2001, using GPS units, the claim lines and the roads and trails as references. During the reconnaissance prospecting, particular attention was paid to the areas containing geochemical and induced polarization anomalies. The locations of outcrop exposures, quartz veining, quartz float/rubble, claim posts, roads, trails, the areas of recent logging, Lac Arsenault, creeks, swamps and claim lines were noted. The information collected during

prospecting is presented on the enclosed Map 1.

Detailed Stripping/Excavating

Areas surrounding the north part of the Mersereau Vein, the Line 4 West and Blue Veins were stripped and partially excavated, 17 trenches were excavated and approximately 1400 feet of new road was made. The wood knocked down in these areas was cut and stacked along the roads. Three large backhoes were employed over 3 different periods in August, September and November. A large water truck was transported to the property in August, but this truck was too large to negotiate the roads accessing the veins. Stripping was performed over most of the veining with pits being excavated where the rocks were less competent or overburden thickness increased. After the mineralized veins were stripped the remaining thin cover of overburden was removed using shovels and brooms.

The excavated trenches were 5 to 6 feet wide and 4 feet deep. Three separate program of trenching, stripping and/or road building was performed in 2001, including trenching, stripping and road building in August and September and trenching and road building in November. In August, 5 trenches were excavated and the north end of the Mersereau vein and three sections of the Line 4W Vein were stripped. Because of the unavailability of wood cutters in August most of the trenching and stripping was confined to old drill roads and set-ups, so road building and tree destruction was kept to a minimum. The operator quit prematurely due to concerns about his machinery. These 5 trenches lie along strike of the Derber Vein and along geochemical and geophysical anomalies. Only 400 feet of new road had to be made in August, between lines 0 and 2S at 6 to 10E exposing a trench north of a mineralized boulder found in 2000. Approximately 1000 ft. of road was made in September, connecting the north end of the Line 4 West Vein and the southern exposure of the Marleau Vein, one trench was dug and the northern section of the Line 4W Vein was stripped. This program was terminated after 1 day due to the inexperience of the backhoe operator. In November, 11 trenches were dug south of the Marleau Vein and over geochemical and geophysical anomalies between the Marleau and Line 4W Veins. This excavating in November was only partially successful due to the poor weather conditions so late in the year. Because of heavy snowfall the trenches kept filling up with snow and water collapsing inwards.

The locations of the trenching, excavating and road building are shown on Map 1 and are detailed on Maps 2a, 2b, 2c and 3.

Geological Mapping and Sampling Program

All outcrop found while prospecting the eastern claims staked in 2001 were mapped and 4 grab samples (61721 to 61724) of quartz were collected. Sample 61722 was from quartz veining and 3 remaining samples were examples of quartz rubble/float. Flagging tape and aluminum tags, noting the sample numbers, were attached to trees at each sample location.

After stripping and trenching was performed, outcrop, veining and deformation was mapped and chip samples were collected at regular intervals. Snow cover and flooding in November made mapping and sampling difficult. Because of the high degree of fracturing and alteration the chip

samples were taken using hammers and chisels. Sampling was also performed across the brecciated Marleau Vein that was uncovered in 2000. A total of 112 rock samples of quartz veining/rubble and alteration were taken in the excavated areas, with 110 from outcrop and 2 (61794 and 29620) from quartz rubble/float. Two of the bedrock samples were grab samples (61789 and 29618) and the remaining 108 were chip samples. Aluminum tags, showing the sample number, were attached to spray painted small rocks left at each sample location. Flagging tape, wrapped around small pieces of rubble, defined the limits of the chip samples.

The rock samples were transported to Val d'Or, where samples 61721 to 61793 and 29601 to 29620 were taken to the Bourlamaque Assay Laboratories Ltd. in Val d'Or and samples 61794 to 61800 and 27201 to 27212 were taken to XRAL Laboratories in Rouyn-Noranda. These Samples were assayed for Au, Ag, Zn and Pb, with Cu amounts also being determined for samples 29601 to 61620. The fire assay/instrumental finish method was used for the Au and Ag assays, the atomic absorption method for Zn, Pb and Cu determinations. The concentrations of Au, Ag, Pb and Zn in samples 61748 to 61752 were checked by assaying these 5 samples at both laboratories. The Au and Ag results are reported in oz/ton and Zn, Pb and Cu in % and the Certificates of Analyses are included in Appendix 2.

The results of the geological mapping and sampling in the areas prospected are shown on Map 1. Detailed geology and sampling results over the stripped veins are presented on Maps 2a (Mersereau Vein), 2b (Line 4W Vein), 2c (Blue Vein) and 2d (Marleau Vein). The area between the Line 4W and Marleau is detailed on Map 3. These maps define the extents of the veins, stripped areas and roads and show the underlying geology, assay and analytical results for Au, Ag, Zn, Pb and Cu, sample locations, numbers, type and widths.

Whole rock analyses were performed on 17 rock samples (61805 to 61813 and 29157 to 29164) of faulted and sheared sedimentary rocks. The samples were transported to the Chimitec-Bondar Clegg Laboratory in Val d'Or where the concentrations of 37 elements (Au, Ag, Cu, Pb, Zn, Mo, Ni, Co, Cd, Bi, As, Sb, Hg, Fe, Mn, Te, Ba, Cr, V, Sn, W, La, Al, Mg, Ca, Na, K, Sr, Y, Ga, Li, Nb, Sc, Ta, Ti, Zr, S) were determined by fire assaying for Au, Cold Vapor AA. for Hg and ICP for the rest. The Geochemical Lab Reports for these determinations are included in Appendix 3. The locations where these samples were collected are shown on Maps 1, 2a, 2b, 2c and 3.

Nine composite multi-piece rock samples (29151 to 29156 and 29165 to 29167) were taken from the mineralized veins and the breccia zone at the Baker Vein. Parts of these samples were assayed for Au, Ag, Pb, Zn and Cu at the Bourlamaque Assay Lab. (see Appendix 2 - Certificates of Analysis) and the remaining pieces were examined by David Carson of Carson GeoMin to determine the mineralogy and predictive metallurgy.. Thin sections were made at the University of Toronto and these sections were examined and scanned by optical microscope. Two composite samples were sent to AMTEL laboratory in London, Ontario for SIMS ion microprobe and several grains were analyzed by scanning electron microscope/energy dispersive x-ray (SEM/EDS) at the OGS Lab in Sudbury. The results and interpretation of the mineralogy by David Carson is included in Appendix 4.

RESULTS AND INTERPRETATION

Prospecting, Mapping & Sampling

While prospecting along the claim lines of the 12 claims staked in 2001, 22 of the 23 posts were found, with the claim lines being well blazed and easy to follow. A small part of the east end of original claim 5076181 and approximately 30 hectares of the southeastern claims staked in 2001 was logged in the fall of 2000. Numerous new logging roads were established in these slashed areas, providing good access. The north end of Lac Arsenault lies on claims 5262372 and 5262377 and old trails are located along the eastern and western shores. An old hunting cabin was found at the end of a trail near the southeast property boundary.

Outcrop exposure in the logged areas and along the roads and trails traversed is fair to good with a thin layer of overburden covering most of the property. All the exposures found while prospecting were sediments of the Ordovician age Arsenault and Garin Formations of the Honorat Group. Most of these outcrops are greywacke and shale, but small exposures of quartz-feldspar conglomerate were found in claims 5262378 and 5262376. The light brown shale exposures are well lineated and highly fractured and in most cases contain limonite alteration. The fabric of these sediments strikes 045 to 070 degrees, dipping vertically to 70 degrees southeast. The shale grades into and is in contact with medium- and fine-grained greywacke or siltstone. Most of the greywacke is unaltered and undeformed, but limonite alteration and minor fracturing was observed in a few outcrops. Small outcrops of fine- to medium-grained quartz-feldspar conglomerate of the Garin Formation are in contact with shale and surrounded by shale exposures in the southwest and northeast corners of claims 5262378 and 5262376, respectively.

Examples of quartz rubble were discovered at 8 different locations and a 0.5 ft. wide limonite rich quartz vein strikes 320 degrees in limonite stained shale. The vein and three examples of rubble that are fractured, limonite stained and/or slightly mineralized in claims 5262370 and 5262374 were sampled. Rubble samples 61723 and 61724 lie along the west edge of a As geochemical soil anomaly. Brief descriptions of these samples and the assay results are shown below, showing that the quartz contains low or undetectable amounts of Au, Ag, Pb & Zn.

Sample	Type	Description	Size	Au(opt)	Ag(opt)	Pb %	Zn %
61721	grab	quartz rubble, fractured with < 1 % sulphides	0.50 ft.	< 0.003	< 0.02	< 0.001	0.002
61722	grab	quartz vein, 50 ft long limonite rich, < 1 % py.	0.50 ft.	< 0.003	< 0.02	< 0.001	< 0.001
61723	grab	quartz rubble, 3 to 5 % limonite	0.50 ft.	< 0.003	< 0.02	< 0.001	< 0.001
61724	grab	quartz stringers-shale rubble, limonite stained	0.50 ft.	0.003	< 0.02	0.003	0.011

The north edge of a pit/trench excavated in 2000, across 24 ft. the Sheared/Brecciated Marleau Vein and 2.5 ft. across the north end of the southern section of the Main Vein, 10 ft. south of line 6N was sampled. Nine chip samples of sheared shale and quartz veining across a 26.5 ft. section, along an azimuth of 110 degrees, were collected, see Map 2b and the descriptions below.

Sample	Description	Width	Au(opt)	Ag(opt)	Pb %	Zn %
27204	10 % quartz stringers, 10 % sheared shale & trace sulphides	3.50 ft.	0.010	0.21	0.018	< 0.01
27205	quartz vein & up to 5 % sulphides	2.00 ft.	0.027	0.10	< 0.01	< 0.01
27206	sheared and fractured shale, trace sulphides	1.50 ft.	0.011	0.14	0.016	< 0.01
27207	quartz vein & 1 to 3 % sulphides	3.00 ft.	0.033	< 0.10	< 0.01	< 0.01
27208	quartz vein with 0.25 ft. of 10 % sulphides	4.00 ft.	0.277	0.12	< 0.01	< 0.01
27209	limonite stained quartz vein, 2 to 5 % sulphides	3.00 ft.	0.023	0.20	< 0.01	< 0.01
27210	90 % quartz vein, 10 % sheared shale & trace to 5 % sulphides	5.00 ft.	0.034	0.23	0.012	< 0.01
27211	50 % limonite stained quartz vein, 50 % sheared shale trace sulphides	2.00 ft.	0.018	0.15	0.013	< 0.01
27212	Main Quartz Vein 1.33 ft south of sample 27098, 3 % sulphides	2.50 ft.	0.048	0.11	< 0.01	< 0.01

At this location the Sheared/Brecciated Marleau Vein is comprised of quartz and sheared/fractured limonite rich shale that contains trace to 5 % sulphides and a 0.25 ft. section of 10 % sulphides. The vein strikes 05 to 15 degrees, dipping steeply to the east and the sheared shale strikes 55 degrees, roughly parallel to the Grand Pabos Fault and the major shearing and faulting mapped in 2000. The eastern 2.5 ft. section (sample 27212) is of the Main Marleau Vein containing 3 % sulphides. The assay results show that this 26.5 ft. (8.08 meters) section contains an average Au grade of 0.088 oz/ton 93.02 g/tonne), anomalous amounts of Ag and undetectable to very low concentrations of Pb and Zn. The highest Au concentration (0.277 oz/ton) was obtained in sample 27208 in a 4 ft section of vein containing the 0.25 ft. band of 10 % sulphides.

Stripping/Excavating Program

Initially, the stripping, trenching and road building program was designed to trench 17 of the targets recommended in the April 2001 report and to strip the northern extension of the Mersereau Vein, the south part of the Main and Brecciated Marleau Veins, the Line 4W Vein and the area of the trenches on line 0 at 12W (Blue Vein). Because of equipment concerns and operator inexperience in August and September and the poor weather conditions in November, this program wasn't completed.

The exploration targets of the 6 trenches dug in August and September were mostly along old roads where excavation was easily performed. Descriptions of these 6 trenches are listed below:

- along 300 ft on the road between lines 12 & 10N across a VLF-EM (Cutler) anomaly & a small As soil anomaly
- on the road for 300 ft. between lines 8 & 6N, across the east end of the Derber Vein and the intersection of 2 VLF-EM anomalies
- across the road on line 2N at 18E for 100 ft., over a small Au soil anomaly
- along part of a new road for 200 ft., 75 ft. south of line 0 at 7E, along strike 125 ft. north of mineralized quartz rubble (0.22 oz/ton Au)
- along a road for 550 ft. north of the Line 4W Vein, across As soil anomaly 2 and a VLF-

EM anomaly (Annapolis)

- for 400 ft. along the Main Haul Road on new claim (5262370) across As soil anomaly 1E, a small Au soil anomaly and IP anomaly M

Shale and wacke was exposed in the trenches, with limonite rich quartz stringers and a narrow vein along a shear being uncovered in the trench over the Derber Vein and the trench in the newly staked eastern claim, respectively. The northern extension of the Line 4W Vein and narrow barren veins were discovered at the east and west ends of the trench north of the Line 4W Vein. Three of these trenches, except for the trench near the Line 4W Vein and the one near line 0, were filled in by the backhoe after mapping in order to keep the roads open. Only one sample was collected in the trenches, sample 61725 of a 0.5 to 0.67 ft. zone of quartz veining and stringers along an altered shear zone in shale, at the intersection of Au and As soil anomalies in claim 5262370. It appears that the quartz strikes 012 and 326 degrees with rusty patches and no visible sulphides and contained < 0.003 and < 0.02 oz/ton Au and Ag, respectively, and 0.002 % Pb and 0.001 % Zn.

While building the road from the north end of the Line 4W Vein to the south end of the Marleau Vein, quartz rubble was uncovered 300 ft. east-southeast of the Line 4W Vein. Pieces of angular mineralized quartz rubble, 0.25 to 0.42 ft. in diameter, was sampled (61794). This sample contained 3 to 5 % sulphides, 0.068 oz/ton Au, 0.21 oz/ton Ag and < 0.01 % Pb and Zn. It appears that the source of this quartz with anomalous Au isn't far from the sample location.

Area Between Line 4W Vein and Marleau Vein

In November 2000, 11 trenches and a pit were excavated between the Line 4W and Marleau Veins. A road was constructed from the end of the trench between lines 2N and 4N, eastward for 600 along the base of the hill hosting the Marleau then northeast and north up the hill till the south end of the Sheared/Brecciated Marleau Vein. Four east-west trenches were dug 40 to 170 ft. south of the Sheared/Brecciated Vein. In 2 trenches, 40 and 78 ft. south of the southern year 2000 exposure, this vein was uncovered cutting carbonate rich sediments. In the northern trench two parallel trending quartz veins 6.3 and 2.2 ft. were exposed and in the trench 78 ft. south a the vein continues across a 4.8 ft. section. In a third trench a further 50 ft. south no vein was uncovered. Nine chip samples (29601 to 29609) were collected in these 2 trenches. The sample descriptions and assay results shown below, indicating that the vein contains < 0.002 to 0.047 oz/ton Au and low amounts of Ag, Pb, Zn and Cu. The northern trench lies at the south end of corresponding As and Au soil anomalies (Anomaly 3) that bends to the west joining As Anomaly 2A near line 4N at 6E, 10 to 50 ft. west of the west ends of the southern 3 trenches.

#	Trench	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)	Cu(%)
29601	40 ft S of line 6N	sheared sediment	6.0 ft.	0.002	< 0.02	0.002	0.002	0.003
29602	40 ft S of line 6N	sheared/carbonate sed.	5.0 ft.	0.002	< 0.02	0.001	0.003	0.002
29603	40 ft S of line 6N	Brecciated Vein	6.3 ft.	< 0.002	< 0.02	< 0.001	0.001	0.001
29604	40 ft S of line 6N	carbonate rich sed.	14.6 ft.	0.002	< 0.02	0.002	0.009	0.002
29605	40 ft S of line 6N	Brecciated Vein	2.2 ft.	0.047	0.04	0.001	0.001	0.001
29606	78 ft. S of line 6N	carbonate rich sed.	5.0 ft.	0.002	< 0.02	0.002	0.009	0.004

#	Trench	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)	Cu(%)
29607	78 ft. S of line 6N	Brecciated Vein	4.8 ft.	0.007	< 0.02	0.001	0.001	0.001
29608	78 ft. S of line 6N	carbonate/fract. sed.	5.0 ft.	< 0.002	< 0.02	0.001	0.007	0.003
29609	78 ft. S of line 6N	fractured sediment	4.2 ft.	< 0.002	< 0.02	0.002	0.009	0.003

Four 300 to 400 ft. long trenches were also dug, trending east and northwest across As soil Anomaly 2E, a small Au soil anomaly to the west and the location of quartz rubble sample (61794) with 0.068 oz/ton Au. No veining was exposed and the source of sample 61794 wasn't found. Two samples, 29612 of carbonate sediment in the western most northwest trending trench and 29619 of sediments with carbonate-limonite rich quartz stringers, contain undetectable to low amounts of precious and base metals (see below).

#	Trench	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)	Cu(%)
29612	85 ft SE of 6N	carbonate/rusty sed.	10.0 ft.	< 0.002	< 0.02	0.002	0.006	0.002
29619	line 4N at 5E	carbonate sed.-qtz. str.	10.0 ft.	< 0.002	< 0.02	0.001	0.006	0.001

While prospecting near line 6N, between the Line 4W and Marleau Veins a quartz rich zone striking north-northwest and dipping sub-vertically was discovered. This quartz-carbonate-chlorite complex (Donat Zone) in a carbonate rich sediment lies along a contact with a sheared chloritic sediment. The quartz vein is fractured and broken within a muddy oxidized zone approximately 5 ft. in width and contains trace amounts of chalcopyrite, galena, sphalerite and malachite. It was originally found in a pit (sample 29610) and traced 10 ft. northwest (sample 29620) and 20 ft. to the southeast (sample 29611). The vein lies 20 ft. west of the north end of very weak horizontal loop-electromagnetic Anomaly F, between 2 As soil anomalies. It wasn't uncovered in a trench 40 ft to the west-northwest (samples 29613 to 29617). Undetectable amounts of Au, undetectable to low Ag content, and low concentrations of Pb, Zn and Cu were obtained in the samples of vein and sheared/carbonate rich sediment (see below).

#	Trench	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)	Cu(%)
29610	Donat Discovery	fractured quartz vein	grab	< 0.002	< 0.02	0.009	0.021	0.007
29611	20 ft E of Donat	crushed quartz vein	5.4 ft.	< 0.002	< 0.02	0.003	0.010	0.005
29613	40 ft wnw Donat	sheared/carbonate sed.	10.0 ft.	< 0.002	< 0.02	0.003	0.011	0.005
29614	40 ft wnw Donat	sheared/carbonate sed.	10.0 ft.	< 0.002	< 0.02	0.003	0.012	0.006
29615	40 ft wnw Donat	chloritic sheared sed.	10.0 ft.	< 0.002	< 0.02	0.002	0.009	0.004
29616	40 ft wnw Donat	shear	10.0 ft.	< 0.002	< 0.02	0.002	0.010	0.006
29617	40 ft wnw Donat	chloritic shear	10.0 ft.	< 0.002	< 0.02	0.003	0.010	0.005
29620	Donat Discovery	rubble fract. qtz. vein	grab	< 0.002	0.04	0.349	0.032	0.008

Approximately 25 ft. to the west-northwest, the Donat West Vein was discovered in a trench dug near line 4N, overlying the intersection of As soil Anomalies 2 and 18. The Donat West Vein is at least 4 ft. wide in a strong chloritic shear and is slightly mineralized. Because of the lateness of the season only one trench was excavated. A grab sample (29618) of the vein assayed 0.017 oz/ton Au, < 0.02 oz/ton Ag, 0.011 % Pb, 0.008 % Zn and 0.005 % Cu. The author notes that due to the weather conditions and the

pervasive alteration and oxidation of the Donat area it is suspected that the area trenched was not deep enough to intersect fresh sulphides (See Photos 7A, B).

Mersereau Vein

The north end of the Mersereau Vein was stripped to the north-northeast at an azimuth of 045 degrees up the hill for 118 feet from the 5 ft. long exposure discovered in the year 2000 trench dug the drill road. The north end of this stripping lies 20 ft. from the southwest end of the year 2000 trench exposing the Northeast Extension of the Mersereau Vein. Including the 5 ft. sampled in the 2000 trench (samples 27186 and 27187) the north end of the Mersereau is exposed in 5 sections for a total length of 118 ft., at an overall azimuth of 40 degrees. Between these sections the rock is highly altered and the overburden thickness appears to increase, but without power washing the rubble couldn't be removed and bedrock wasn't exposed. This vein is 0.23 to 5.33 in width, narrowing to the north, with the northern 6 ft. bending to the east and disappearing into the side of the hill. The northern 81 ft. of vein lies in a limonite rich zone of sheared shale that strikes 020 to 045 degrees and dips sub-vertically, mostly to the southeast, in contact with wacke to the east. In the south, wacke was exposed along the hanging wall. A major shear zone cuts the vein near line 2N, striking 065 to 075 degrees and dipping 80 to 85 degrees to the south. This shear trends towards and is parallel to the Northeast Extension of the Mersereau Vein, 45 ft to the east-northeast. The shear may be part of the Northern Extension, (See Photo's 2A, B).

The vein is comprised of mineralized quartz and red alteration. Sulphide content varies from < 1 % pyrite to semi-massive amounts of pyrite, arsenopyrite and galena, with most of the vein containing 15 to 30 % pyrite and arsenopyrite. In 2001, a total of 28 chip samples (61726 to 617530) were collected. Descriptions and assay results for each are described as follows.

#	Loc.	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)
61726	02 ft.	55 % vein, 40 % red alteration, 5 % asp.	0.25 ft.	0.176	0.16	0.143	0.043
61727	07 ft.	60 % vein, 40 % red alteration, < 1 % py.	0.25 ft.	0.303	1.36	1.07	0.168
61728	11 ft.	55 % vein, 20 % red alt. 25 % asp/py.	0.50 ft.	0.168	0.38	0.268	0.014
61729	14 ft.	55 % vein, 25 % red alt. 20 % asp/py.	0.33 ft.	0.572	2.55	2.06	0.015
61730	17 ft.	60 % vein, 15 % red alt. 25 % asp/py.	0.58 ft.	0.158	1.35	1.56	0.044
61731	21 ft.	65 % vein, 20 % red alt. 15 % asp.	0.42 ft.	0.639	3.77	1.16	0.172
61732	23 ft.	red alt. sheared & fractured quartz	0.50 ft.	0.341	3.28	1.95	0.166
61733	24 ft.	60 % vein, 20 % red alt. 18 % py/asp. & 2 % galena, minor leaching	0.67 ft.	0.328	0.92	1.94	0.037



PHOTO 7A - Close Up Of Donat Carbonate, Chlorite, Shear With Oxidized Sulphide Clasts

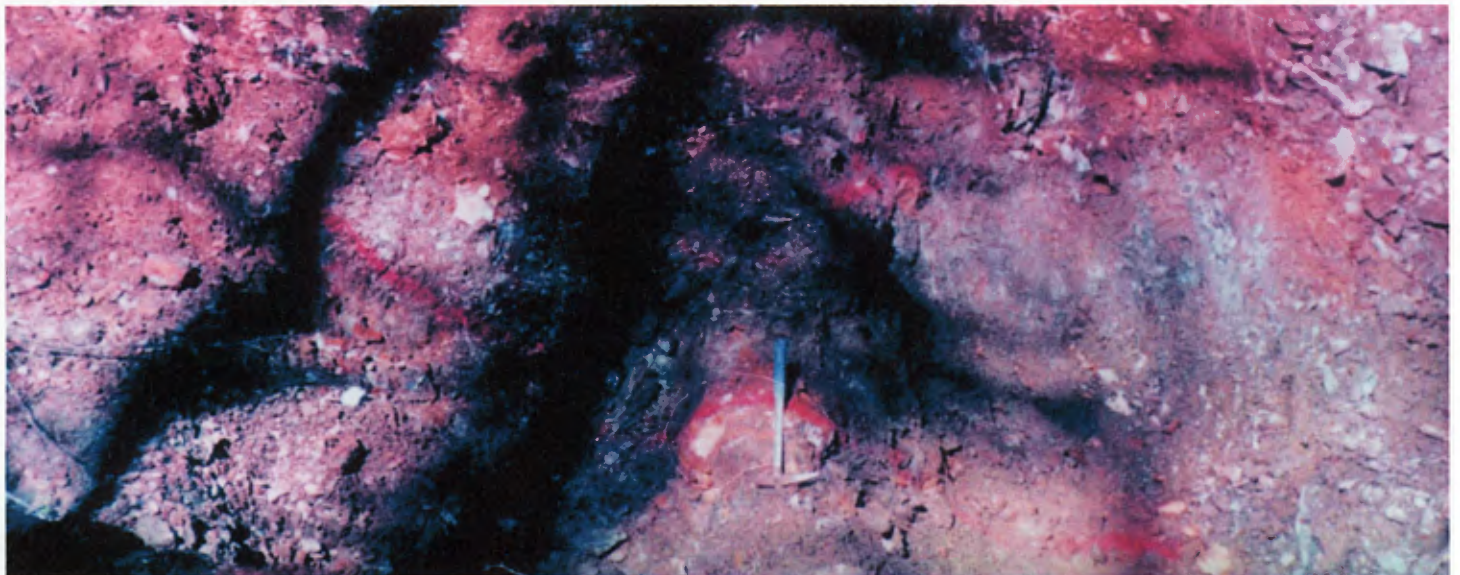


PHOTO 7B - Donat West Zone, Carbonate, Chlorite Shear With Sulphide Clasts And Vein Material

<u>#</u>	<u>Loc.</u>	<u>Description</u>	<u>Width</u>	<u>Au(opt)</u>	<u>Ag(opt)</u>	<u>Pb(%)</u>	<u>Zn(%)</u>
61734	28 ft.	65 % vein, 15 % red alt. 18 % py/asp. & 2 % galena, minor leaching	1.08 ft	0.617	4.73	7.09	0.091
61735	32 ft.	45 % vein, 30 % red alt. 18 % py/asp. & 2 % galena	0.83 ft.	0.730	5.62	10.19	0.067
61736	35 ft.	40 % vein, 30 % red alt. 20 % py. & jarosite	0.83 ft.	0.166	0.83	0.415	0.436
61737	38 ft.	65 % vein, 20 % red alt. 7 % py/asp. & 8 % galena	1.00 ft.	0.138	6.25	5.48	0.354
61738	39 ft.	altered and limonite rich shale	0.83 ft.	0.020	0.27	0.353	0.287
61739	45 ft.	60 % vein, 20 % red alt. 16 % py/asp. & 4 % galena	0.75 ft.	0.278	2.24	2.13	0.701
61740	49 ft.	70 % vein, 20 % red alt. 10 % py/asp. and galena	0.83 ft.	0.454	3.08	5.85	0.126
61741	53 ft.	65 % vein, 20 % red alt. 15 % py/asp.	2.33 ft.	0.065	0.33	0.293	0.047
61742	57 ft.	60 % vein, 20 % red alt. 10 % py. & 10 % asp. and galena	1.33 ft.	0.256	5.02	7.96	0.086
61743	61 ft.	65 % vein, 25 % red alt. 10 % py/asp. and galena	1.67 ft.	0.239	2.52	3.55	0.288
61744	65 ft.	20 % vein, 80 % red alt. massive py. & asp. along the hanging wall	2.50 ft.	0.074	1.24	2.42	0.146
61745	69 ft.	0.67 ft. vein with semi-massive sulphides 1 ft. of massive py. & galena, 0.33 ft. of altered quartz on margins	2.00 ft.	0.479	6.29	8.59	0.104
61753	73 ft.	1.50 ft. vein with semi-massive sulphides, 0.50 ft. of altered quartz on margins	2.00 ft.	0.394	1.76	1.15	0.073
61746	75 ft.	0.33 ft. vein with semi-massive sulphides, 1 ft. of massive py. & galena, 0.17 ft. of altered quartz on the margins	1.50 ft.	0.187	1.52	2.40	0.067
61747	80 ft.	1.33 ft. vein with semi-massive sulphides, 0.34 ft. of altered quartz on margins	1.67 ft.	0.176	1.36	0.459	0.820
61748	91 ft.	65 % vein, 5 % red alt. 30 % py/asp.	2.50 ft.	0.288	2.83	2.08	0.103

#	Loc.	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)
61749	95 ft.	75 % vein, 5 % red alt. 20 % py/asp.	5.33 ft.	0.257	0.53	0.272	0.101
61750	98 ft.	75 % vein, 10 % red alt. 15 % py/asp.	4.83 ft.	0.113	0.31	0.56	0.129
61751	105 ft.	80 % vein, 5 % red alt. 15 % py/asp.	4.00 ft.	0.293	0.58	1.21	1.02
61752	110 ft.	80 % vein, 5 % red alt. 15 % py/asp.	5.00 ft.	0.143	0.17	0.124	0.301

Year 2000 chip samples 27186 and 27187, each across 4 ft., lie 113 and 116 ft. south of the north end of the vein, assayed 0.186 oz/ton Au, 19.30 oz/ton Ag, 17.78 % Pb, and 0.086 % Zn and 0.259 oz/ton Au, 11.36 oz/ton Ag, 12.46 % Pb and 0.035 % Zn, respectively. Including these 2 year 2000 samples, the northern part of the Mersereau Vein is exposed in 5 sections of 6, 31, 39, 7 and 15 feet, from north to south along a total length of 118 ft., separated by patches of rubble and/or altered/sheared shale sections of 1, 4, 10 and 5 feet. Sample 61738 was collected of altered shale between 2 sections of mineralized vein. The average grade for each section of mineralized vein shown below:

Section feet	Length		Width		Au		Ag		Pb	Zn
	ft.	m.	ft.	m.	oz/ton	g/tonne	oz/ton	g/tonne	%	%
00 to 06	06	0.20	0.25	0.08	0.176	6.03	0.16	5.49	0.143	0.043
07 to 38	31	9.45	0.64	0.20	0.401	13.75	2.76	96.63	3.21	0.125
42 to 81	39	11.89	1.66	0.51	0.260	8.91	2.58	88.46	2.83	0.257
91 to 98	07	2.13	4.22	1.29	0.235	8.06	1.14	39.09	0.850	0.108
103 to 118	15	4.57	4.25	1.30	0.224	7.68	6.73	230.74	6.86	0.412

These averages indicate that the 98 ft. (29.88 m.) of exposed vein has a grade of 0.292 oz/ton (10.01 g/tonne) Au, 3.02 oz/ton (103.54 g/tonne) Ag, 3.26 % Pb and 0.215 % Zn at an average sample width of 1.84 ft. (0.56 m.) for the 29 samples collected. Ten samples contain > 0.3 oz/ton Au with the highest Au content (0.401 oz/ton) is in the 31 ft. section in the north, where 7 of these high grade samples were found. The vein widens to an average sample width of 4.24 ft. in the southern 2 sections exposing 22 ft. of vein and the Ag and Pb concentrations increase dramatically at the south end.

Using the data obtained in 2000 and 2001, the Mersereau vein has a total length of 230 ft. in 8 sections of 22, 20, 3, 15, 7, 39, 31 and 6 ft., from south to north, collected in the area stripped in 2000, the old pit, the year 2000 trench and the area stripped in 2001. The average grade for the 163 ft. (49.70 meters) of exposed Mersereau Quartz Vein is 0.302 oz/ton (10.35 g/tonne) Au, 3.88 oz/ton (133.03 g/tonne) Ag, 5.52 % Pb and 0.253 % Zn at an average sample width of 1.74 ft. (0.53 meters). The vein is still open to the south and the east-southeast shearing could offset the strike of the vein to the north.

Line 4W Vein

The Line 4W Vein was uncovered in three stripped areas along a total strike length of 369

feet at an overall azimuth of 035 degrees. These exposures are located along the bottom of the hill hosting the Marleau Vein, 900 ft. east-northeast of the north end of the vein. The topographical relief along the stripped areas is relatively gentle, sloping upward from the Arsenault River, but north and east of the northern exposure the relief increases towards the Marleau Vein. Access to the Line 4W Vein was via the drill roads south and west of the Baker Vein. The southern exposure was stripped southward for 132 ft., along an old drill road, from the old pit 30 ft. south of line 2N. The middle section is 33 ft. in length across 2 old pits, 113 ft. to the north-northeast from the north end of the southern section. The northern exposure is located a further 61 ft to the east-northeast, uncovered while trenching along the drill road over As soil anomaly 2.

In the south, the Line 4W Vein is uncovered in 10 sections along a total length of 132 ft. at an overall strike of 028 degrees. The vein is limonite rich, fractured, strikes 018 to 042 degrees, dips vertically and is offset and folded. Most of the shearing lies along the walls of the vein in the shale and wacke, but minor shearing was observed striking 60 degrees across northern parts of the vein. The shale and wacke surrounding the vein in the north is highly brecciated. The discontinuous sections of the vein pinch out in the brecciated shale and wacke or are covered by piles of rubble/overburden. To the north, towards the middle exposure, and south for 110 to 150 ft., towards the old pits, the strike of the vein is open. Up to 8 % arsenopyrite was observed in the 27 chip samples, 0.16 to 2.16 ft. in width, that were collected at intervals of 5 ft. or less along the 91 ft. of exposed quartz vein. Descriptions and assay results for each sample are presented in the following table.

#	Loc.	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)
61762	00 ft.	vein with 5 % arsenopyrite (old pit)	0.83 ft.	0.065	0.02	0.001	< 0.001
61763	08 ft.	limonite rich vein with 5 % arsenopyrite	1.50 ft.	0.033	< 0.02	0.001	0.001
61764	13 ft.	limonite rich vein with 5 % arsenopyrite	1.00 ft.	0.020	< 0.02	0.001	0.001
61765	18 ft.	limonite rich vein, trace arsenopyrite	1.83 ft.	0.026	< 0.02	0.001	0.001
61766	23 ft.	limonite rich vein with 5 % arsenopyrite	1.83 ft.	0.030	0.02	0.002	0.001
61767	28 ft.	limonite rich vein, with 5 % arsenopyrite	1.33 ft.	0.037	< 0.02	0.001	0.001
61768	33 ft.	limonite rich vein with 5 % arsenopyrite	1.08 ft.	0.027	< 0.02	0.001	0.001
61769	38 ft.	limonite rich & fractured vein	0.50 ft.	0.046	< 0.02	0.002	0.002
61770	40 ft.	limonite rich vein with up to 5 % asp.	2.16 ft.	0.053	< 0.02	0.004	0.001
61771	45 ft.	limonite rich vein with 3 % arsenopyrite	1.42 ft.	0.058	0.03	0.012	0.003
61772	47 ft.	limonite rich & altered vein	0.42 ft.	0.070	0.04	0.013	0.005

#	Loc.	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)
61773	52 ft.	limonite rich vein with trace to 3 % asp.	1.50 ft.	0.072	0.02	0.002	0.003
61774	57 ft.	limonite rich vein, with trace to 5 % asp	1.08 ft.	0.048	< 0.02	0.002	0.002
61775	62 ft.	limonite rich vein, with 3 % arsenopyrite	0.75 ft.	0.047	< 0.02	0.001	0.001
61776	67 ft.	limonite rich vein with 6 % arsenopyrite	0.67 ft.	0.071	< 0.02	0.002	0.003
61777	65 ft.	limonite rich vein with up to 5 % asp.	0.83 ft.	0.021	< 0.02	< 0.001	0.001
61778	70 ft.	limonite rich vein with 3 % arsenopyrite	0.83 ft.	0.025	0.07	0.037	0.002
61779	75 ft.	limonite rich vein, trace arsenopyrite	0.42 ft.	0.144	0.08	0.005	0.003
61780	79 ft.	limonite rich & brecciated vein, tr. asp.	0.83 ft.	0.026	< 0.02	0.003	0.002
61781	82 ft.	limonite rich vein, with 4 % arsenopyrite	0.42 ft.	0.056	< 0.02	0.003	0.002
61782	86 ft.	50 % vein, 3% asp, & 47 % alt./shale	0.92 ft.	0.020	< 0.02	0.001	0.003
61783	95 ft.	limonite rich vein, with 5 % arsenopyrite	0.50 ft.	0.078	0.06	0.002	0.003
61784	100 ft.	limonite rich vein, with 6 % arsenopyrite	0.42 ft.	0.126	0.10	0.003	0.003
61785	115 ft.	limonite rich vein, with 1 % arsenopyrite	0.83 ft.	0.034	0.02	0.002	0.004
61786	119 ft.	limonite vein & sheared shale, 5 % asp.	0.67 ft.	0.023	< 0.02	0.001	0.001
61787	125 ft.	limonite vein & sheared shale, 8 % asp.	0.83 ft.	0.031	< 0.02	0.001	0.002
61788	132 ft.	limonite rich vein, with 12 % asp.	0.16 ft.	0.082	0.03	0.003	0.002

Year 2000 sample 27007 was collected on the drill road at 122 ft. from the northern end, between samples 61786 and 61787. Low to anomalous amounts of Au (0.020 to 0.144 oz/ton) were found in the vein, with 2 samples (61779 and 61784) assaying 0.144 and 0.126 oz/ton Au, respectively. The Ag, Pb and Zn concentrations are undetectable to low. The average grades and widths for each of the 10 sections of exposed vein in the southern stripped area are shown below.

Position feet	Length		Ave. Width		No. of Samples	Au	
	ft.	m.	feet	m.		oz/ton	g/tonne
0 to 4	4	1.22	0.83	0.25	1	0.065	2.23

Position feet	Length ft. m.	Ave. Width feet m.	No. of Samples	Au oz/ton g/tonne
8 to 34	26 7.93	1.43 0.44	6	0.029 0.99
38 to 45	7 2.13	1.36 0.42	3	0.054 1.85
47 to 48	1 0.31	0.42 0.13	1	0.070 2.40
52 to 67	15 4.57	1.00 0.31	4	0.056 1.92
65 to 79	14 4.27	0.73 0.22	4	0.067 2.30
81 to 87	6 1.83	0.67 0.20	2	0.038 1.30
95 to 101	6 1.83	0.46 0.14	2	0.106 3.63
115 to 126	11 3.35	0.78 0.24	3	0.028 0.96
132 to 133	1 0.31	0.16 0.05	1	0.082 2.81

The middle stripped area exposes the Line 4W Vein in one section of 33 ft., along a shear zone in shale, that is 139 ft. at an azimuth of 027 degrees from the northern end of the southern exposure. The shear and vein strike 017 to 045 degrees, dip 70 to 75 degrees east and have an overall trend of 032 degrees. The vein is open to the south and the north end is cut by major shearing that strikes 060 to 070 degrees and dips steeply to the southeast. At intervals of 3 to 5 ft., 8 chip samples of limonite rich quartz vein with 5 to 15 % arsenopyrite and red alteration were collected at widths of 1.33 to 2.50 feet. Trace amounts of galena and chalcopyrite mineralization were observed in sample 61756. Anomalous and low Au, Ag, Pb and Zn were reported in the 8 samples. Year 2000 samples, 27009 and 27008, in the two old pits were collected at locations 10 and 29 ft. from the south end. Sample descriptions and assay results are shown below.

#	Position	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)
61754	01 ft.	fractured vein with limonite, 5 % asp.	2.00 ft.	0.028	0.02	0.044	0.015
61755	06 ft.	70 % vein, 15 % red alt. 15 % py/asp.	2.08 ft.	0.070	0.03	0.021	0.012
61756	11 ft.	75 % vein, 20 % red alt. 5 % asp. and trace galena & chalcopyrite	2.50 ft.	0.020	0.31	0.502	0.153
61757	16 ft.	75 % vein, 20 % red alt. 5 % asp.	1.33 ft.	0.027	0.10	0.177	0.063
61758	21 ft.	50 % vein, 45 % red alt. 5 % asp.	2.33 ft.	0.030	< 0.02	0.005	0.003
61759	25 ft.	85 % limonite stained vein, 10 % red alteration, 5 % asp	1.67 ft.	0.031	< 0.02	0.003	0.002

#	Position	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)
61760	30 ft.	75 % limonite stained vein, 20 % red alteration, 5 % asp	1.50 ft.	0.056	0.02	0.005	0.003
61761	33 ft.	77 % vein, 20 % red alt. 5 % asp.	1.67 ft.	0.047	<0.02	0.010	0.006

The northern section of the stripped Line 4W Vein is located at an azimuth of 070 degrees, 61 ft from the north of the middle exposure. The vein here has an overall strike of 42 degrees along 25 ft., widening from 1 ft. in the southwest to 7 ft. near the north end. The shale and wacke surrounding the vein is highly sheared and the ends are cutoff by shearing striking 060 to 070 degrees. The south end appears to be offset approximately 35 ft. to the southeast by the cross-cutting shear that lies between the middle and northern sections of the stripped vein. Seven chip samples were collected across 6 sections at 5 ft. intervals of mineralized (up to 10 % pyrite and arsenopyrite) vein and altered and fractured quartz. At a section 15 ft. from the south end, sheared shale and limonite rich stringers and vein were also sampled. Descriptions and the low to anomalous Au and low Ag, Pb and Zn concentrations for each sample are indicated below.

#	Loc.	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)
61795	00 ft.	60 % vein, 1 % py., 39 % alt./fract. qtz.	1.00 ft.	0.007	0.15	0.015	0.010
61796	05 ft.	35 % vein, 2 % asp., 63 % alt./fract. qtz.	1.33 ft.	0.003	0.14	0.025	0.016
61797	10 ft.	65 % vein, 2 % asp., 33 % alt./fract. qtz.	3.00 ft.	0.024	0.26	0.099	<0.01
61798	15 ft.	60 % vein, 7 % asp., 33 % alt./sh. qtz.	4.50 ft.	0.057	0.17	0.067	0.013
61799	15 ft.	sheared shale & limonite quartz stringers	2.50 ft.	0.012	0.10	0.020	<0.01
61800	15 ft.	limonite rich vein, trace sulphides	0.33 ft.	0.015	0.14	0.025	<0.01
27201	20 ft.	70 % vein, 10 % py. & asp., 20 % alt. and sheared quartz, 0.25 ft. of py/asp.	4.00 ft.	0.071	0.25	0.106	0.022
27202	20 ft.	65 % vein, 3 % py. & asp., 20 % alt-ered quartz	3.00 ft.	0.020	0.11	<0.01	<0.01
27203	25 ft.	limonite rich vein, 1 to 2 % sulphides	4.50 ft.	0.028	0.25	0.016	0.022

The calculated average Au grades, widths and lengths for the exposed vein in each stripped area (see following page) indicate that the Line 4W Vein averages 0.043 oz/ton (1.47 g/tonne) Au and along the 141 ft. (42.99 m.) of exposure across an average sample width of 1.51 ft. (0.46 meters). The total length of the vein is 369 ft. (112.50 m.) at an azimuth of 035 degrees in the 3 stripped areas. Shearing cuts and offsets the vein and it

pinches out at various locations. The Au content decreases and the vein widens to the north.

Stripped Area	Length		Width		Au	
	ft.	m.	feet	m.	(oz/ton)	g/tonne
Southern	91	27.74	0.95	0.29	0.050	1.71
Middle	33	10.06	1.89	0.58	0.038	1.30
Northern	25	7.63	3.56	1.09	0.028	0.96

The exposures of the Line 4W Vein lie in the center of north trending As soil Anomaly 2 that joins Anomaly 18 near line 6N. The south end of Anomaly 2 bends to the west on line 0. The drill pad for Mondor drill hole 86-12 was found 60 to 90 ft southwest of line 4N. This hole drilled to the northwest would have missed the vein, intersecting the cross-cutting shear zone, between the middle and northern stripped sections.

Blue Vein

A system of old connected trenches, located on line 0 in claim 5255642, that were sampled in 2000 were stripped and excavated in 2001. One foot diameter pieces of mineralized (8 to 13 % sulphides) quartz rubble were sampled in 2001, assaying 0.067 oz/ton Au, 1.36 oz/ton Ag, 3.40 % Pb and 2.71 % Zn (sample 27025). These old trenches lie in a As geochemical soil anomaly (60 ppm), 150 ft west of the west end of geochemical As Anomaly 2, that overlies part of the line 4W Vein. The skidder/bulldozed road that passes near the Greek Vein, leads to these old trenches. In 2001, this road was upgraded and the area of the old trenches was excavated to a depth of 10 feet. Sheared shale and wacke and large pieces of mineralized quartz was exposed. The shearing and shale-wacke contacts strike 035 to 50 degrees. Three large pieces of mineralized quartz, representing 2 possibly flat lying veins or vein pieces that have been displaced by shearing and/or faulting that contain massive pyrite, galena and sphalerite were sampled. The 2 flat lying or displaced veins are separated by 1.33 ft. of sheared shale. Also, a grab sample (61789) was taken from a 1 ft. piece of vein containing 5 % pyrite and galena. Descriptions and assay results are shown below.

Sample	Type	Description	Width	Au(opt)	Ag(opt)	Pb(%)	Zn(%)
61789	grab	1.0 ft. piece of quartz, 5 % py. & galena	-----	0.007	< 0.02	0.293	0.006
61790	chip	flat vein, altered with massive sulphides	0.33 ft.	0.467	1.84	5.05	4.02
61791	chip	flat vein, altered with massive sulphides	0.25 ft.	0.606	2.18	2.22	12.77
61792	chip	flat vein, altered, massive sulphides	0.25 ft.	0.230	2.88	5.76	5.57
61793	chip	flat vein, altered, massive sulphides	0.33 ft.	0.100	0.43	1.01	0.038

It appears that samples 61790, 61791 and 61792 were collected in the same flat vein, 0.25

to 0.33 ft. thick. Sample 61791 is located 3.5 ft. east of 61790 and sample 61792 lies 2.5 ft. north of 61791. These samples contain high concentrations of Au (0.230 to 0.606 oz/ton) and moderate to high amounts of Ag, Pb and Zn. The lower 0.25 ft. thick vein contains moderate amounts of Au, Ag, Pb and Zn (sample 61792). The fourth sample (61789) was a grab of the 1 ft. piece of slightly mineralized quartz in the bottom of the excavation, assaying low in Au, Pb and Zn.

Whole Rock Sampling and Analyses

Examples of sheared and faulted sediments were collected in 12 composite samples (61805 to 61813 and 29165 to 29159) and submitted for whole rock analysis. Five samples were taken along the Grand Pabos Fault, 5 samples were of shearing cutting the mineralized vein systems and 2 samples were examples of barren shearing/faulting near the Arsenault River. Most of these faults/shears strike east-northeast, parallel to the Grand Pabos Fault, with only one sample (61811) taken in an east-west trending shear. The purpose of the whole rock sampling was to determine if a common signature exists between the structural components with respect to the mineralization and the time of mineral emplacement. Descriptions of these samples are described below.

Sample	Soil Geochemistry	Description	Anomalous Results
61805	in As Anomaly 5	sheared shale at N end of the Mesereau Vein (065 to 070 degrees)	Au-58 ppb, Zn-381 ppm, Cd-8.6 ppm, As-633 ppm
61806	in As Anomaly 2	sheared shale at N end of the Line 4W Vein (065 to 070 degrees)	
61807	in As Anomaly 1	sheared shale at south end of the Baker Vein (065 to 070 degrees)	Au-13 ppb, Ag-1.0 ppm, Cu-196 ppm, Pb-1996 ppm, Zn-2562 ppm, Cd-39.8 ppm, As-1116 ppm, Hg-0.133 ppm, Fe->10.00 %
61808	in As Anomaly 3 in Au Anomaly 3	sheared shale at Sheared/Brecciated Marleau Vein (40-60 degrees)	Au-79 ppb, Cd-4.9 ppm, As-610 ppm
61809	in As Anomaly 3 in Au Anomaly 3	sheared shale-S end of N trench of Marleau Vein (40-60 degrees)	As-151 ppm
61810	in As Anomaly 4	Grand Pabos Fault (65-75 degrees)	Hg-0.382 ppm
61811		shear/fault in shale along the river (110 degrees)	Hg-0.173 ppm
61812		shear/fault in shale along the river (62 degrees)	

Sample	Soil Geochemistry	Description	Anomalous Results
61813	in As anomaly	sheared shale between flat lying Blue Veins (55 degrees)	Au-18 ppb, Pb-296 ppm, Zn-383 ppm, Cd-11.8 ppm, As-292 ppm, Hg-0.138 Ppm
29157	in As Anomaly 4	Grand Pabos Fault (65-75 degrees)	
29158	Au anomaly	Grand Pabos Fault (65-75 degrees)	Ag-1.4 ppm
29159		Grand Pabos Fault (65-75 degrees)	Ag-1.3 ppm
29160		shale in the trench 125 ft. south of the Marleau Veins	
29161	in As Anomaly 3 Au Anomaly 3	sediment in trench near S end of Sheared/Brecciated Marleau Vein	Au-86 ppb, As-619 ppm
29162	intersection of As Anomalies 2 & 18	chlorite sediment from the Donat West Vein	Au-244 ppb, Hg-0.117 ppm
29163		sediment from the Donat Vein	Ag-2.5 ppm, Cu-414 ppm, Pb-2245 ppm, Zn-9383 ppm, Cd-32.6 ppm Hg-5.318 ppm
29164		sediment from the Donat Vein	Ag-2.6 ppm, Pb-4886 ppm, Zn-5496 ppm, Cd-18.4 ppm, Hg-3.214 ppm

As expected, there is good correlation between the Au and As concentrations, with sheared shale at the Baker and Blue Veins containing elevated amounts of Au, Ag, Pb, Zn and As and the shears cutting the Sheared/Brecciated Marleau Vein hosts anomalous amounts of Au and As. It is a surprise that the sediments surrounding the Donat Vein also contain high levels of Pb and Zn. Anomalous Cd concentrations were also obtained at the Mersereau, Baker, Sheared/Brecciated Marleau, Blue and Donat Veins. Generally, the Grand Pabos Fault and the shears near the Arsenault River contained low amounts of precious and base metals, with 2 samples of the Grand Pabos Fault and the 100 degree shear near the river exhibiting elevated Ag and As values, respectively. Anomalous Hg was found at the Baker, Grand Pabos Fault, the 100 degree shear near the river, Donat West Zone and the Blue Vein, while high concentrations of this element were obtained at the Donat Vein. The shear at the Baker Vein also contained over 10 % Fe.

Mineralogy

The assay and mineralogical results, interpretation of the ore-types and predictive metallurgy for the 9 samples are described in the 2 reports included in Appendix 4.

LAC ARSENAULT GEOLOGICAL MODEL

The regional airborne geophysics total field magnetics survey of the Gaspé area shows the Lac Arsenault deposit as very pronounced weak magnetic low. This signature corresponds with the location of Esso Minerals surface gravity geophysical low. The magnetic low and gravity low anomalies are interpreted to represent either a large volume of silica as represented by the numerous silica rich veins, alteration zones and breccias or a deep seated intrusive (See Figure 5). Approximately three miles (5 kilometers) to the east – northeast of the eastern boundary of the property a prominent large-scale airborne total field magnetic anomaly is present. Topographic features reflect the outline of the anomaly as seen by a circular drainage pattern around the outer limits of the magnetic anomaly (See Figure 4). Previous geochemical sampling work in the area of the large magnetic high has shown the area to be highly anomalous in arsenic. It is interpreted that this anomaly represents an intrusive, which is more competent than the surrounding country rock as reflected in the river system drainage pattern.

The author proposes that both anomalies are related to buried mineralized intrusive with the Lac Arsenault deposit being a satellite of the larger intrusive. At the time of the emplacement of the intrusive the overlying less competent sediments were bowed upwards creating a radial fault/fracture pattern. This corresponds to the multi directional mineralized fracture patterns viewed on the Lac Arsenault Property (See Figure 5). The deep seated mineralized intrusive then telescoped multi mineralizing events along the created fracture patterns. As a result of the force and the speed of the mineralized emplacements wall rock was torn off and incorporated as breccias as seen on the property. This model corresponds with some of the veins and breccias, which have an Ag/Au ratio of 10/1 (high temperature). Reactivation of the fluids at a lower temperature resulted in veins and breccias with an Ag/Au ratio of 1/1. A third activation resulted with lower Au values with zinc and copper values as seen on the property.

If this model holds true than the larger intrusive should have telescoped a greater volume of mineralization in the overlying units. In addition the vein systems and breccias should have depth extension to the intrusive. The two areas together would have a large enough volume to support a potential economic deposit along with the establishment of a new exploration model in the Gaspé area. If this model is true the potential for the regional area to hold addition deposits will have to be evaluated.

The 2002 Exploration program has been designed to test and evaluated this model including the ultimate test surface diamond drilling.

CONCLUSIONS AND RECOMMENDATIONS

During the 2001 program of work the easily accessed new claims to the east and southeast and the area between the Line 4W and Marleau Veins were prospected. The positions of new roads and slashed areas were determined, outcrop mapped, examples of quartz rubble and veining sampled and chip samples were collected across the Sheared/Brecciated Marleau Vein. Most of quartz rubble and veining was barren, but mineralized quartz rubble along the new backhoed

REGIONAL AIRBORNE TOTAL FIELD MAGNETICS OF THE GASPE AREA

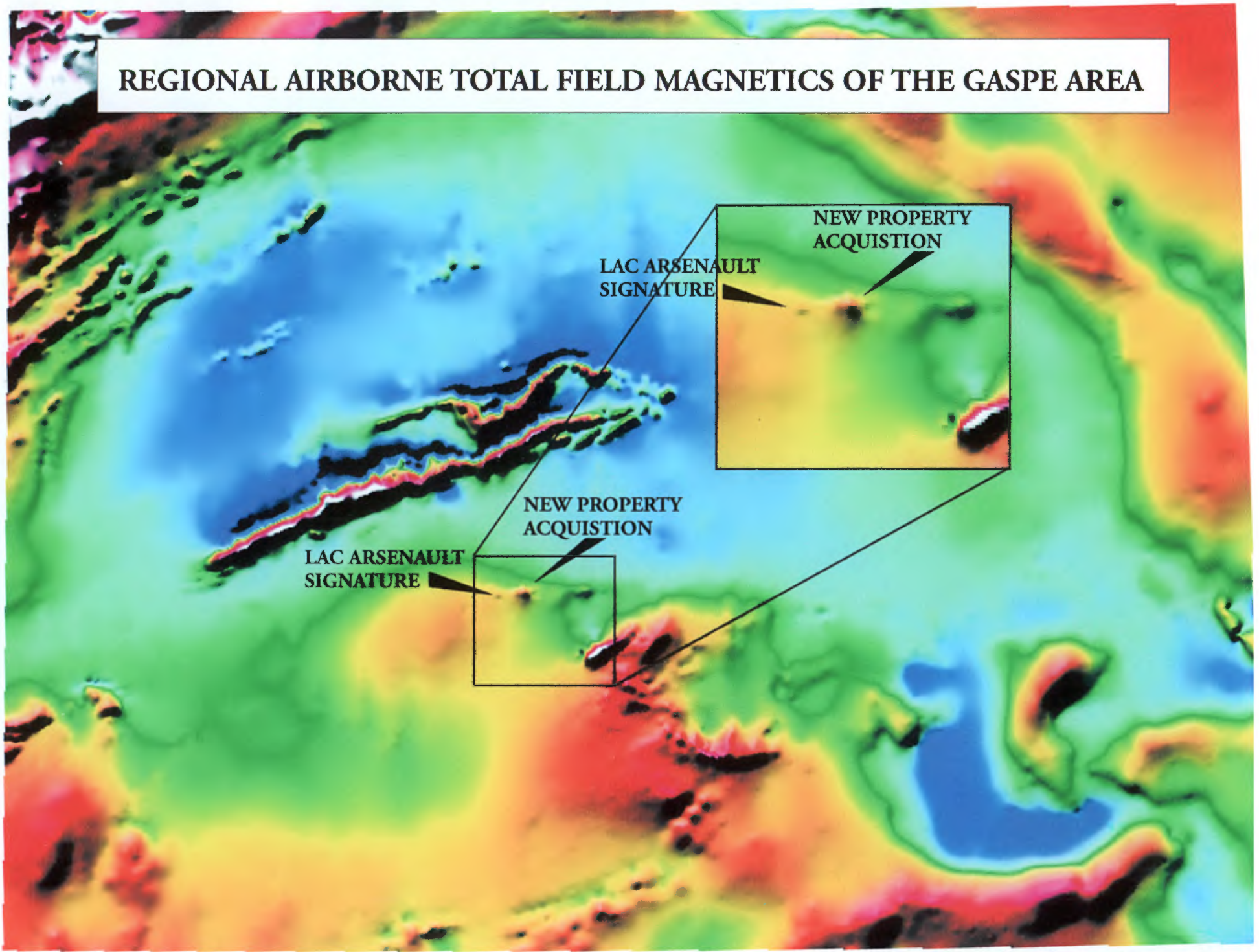
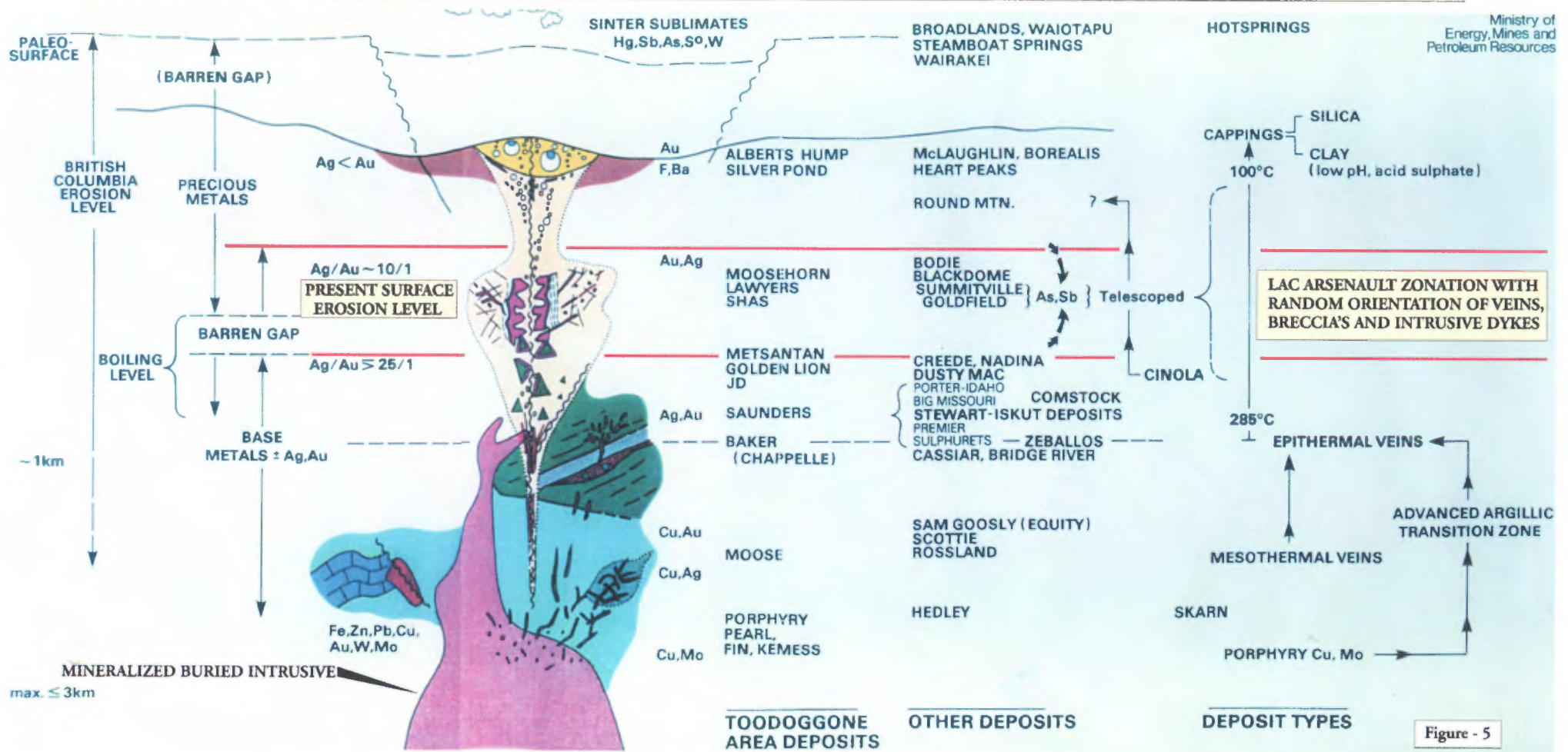


Figure - 4

SCORPIO MINING CORPORATION, LAC ARSENAULT PROJECT - GEOLOGICAL MODEL

Ministry of Energy, Mines and Petroleum Resources



road between the Line 4W and Marleau Veins assayed 0.068 oz/ton Au. The chip sampling across the quartz and shale forming the Sheared/Brecciated Marleau Vein proved that this vein contains a moderate amount of Au (0.088 oz/ton - 3.02 gram/tonne) across a wide width of 26.5 ft. (8.08 meters).

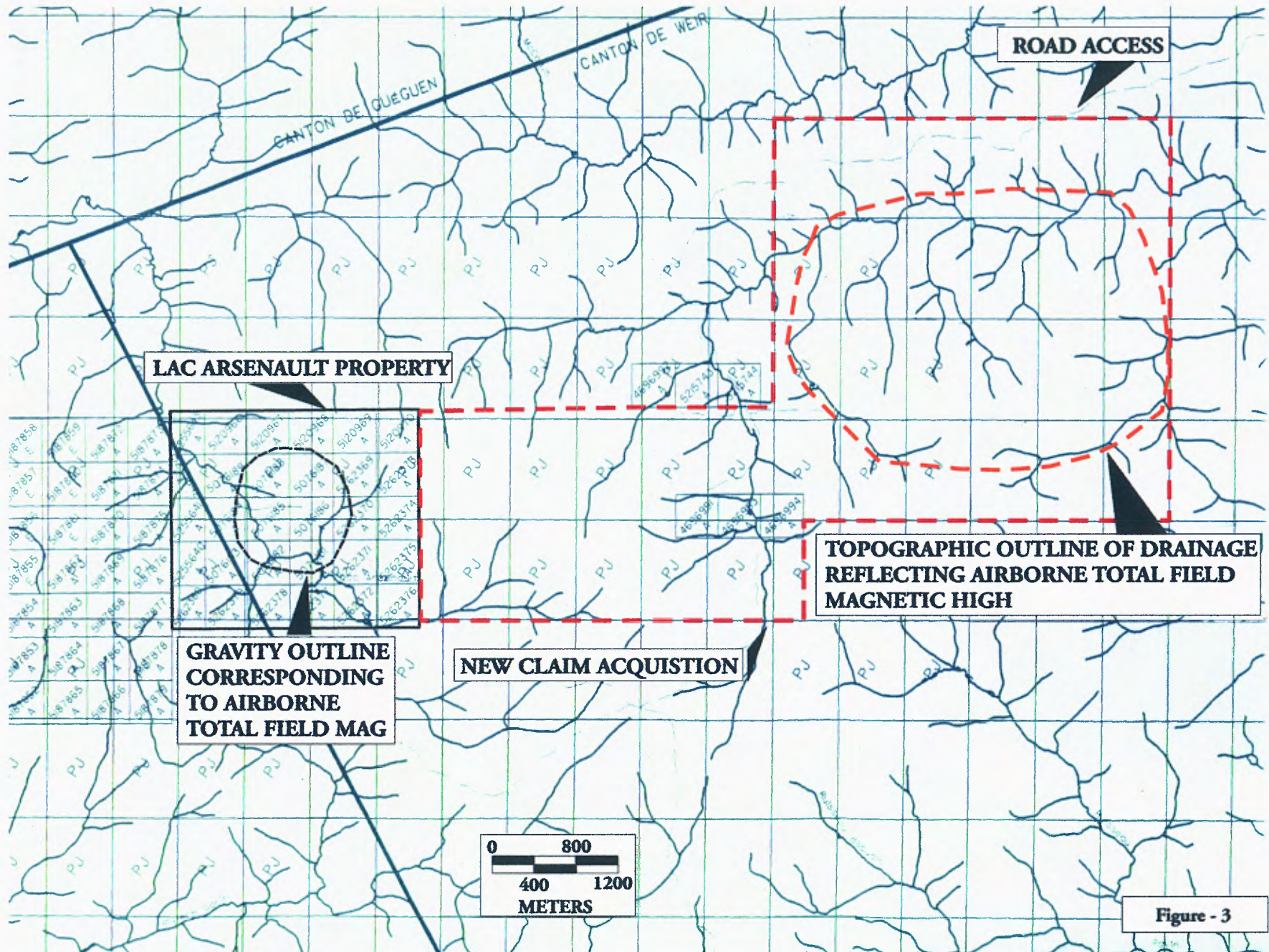
The stripping/excavation program performed in August, September and November, with 3 different backhoes and operators, was only partially successful, due to the difficulty in obtaining the proper equipment for power washing, the inexperience of the operators and poor maintenance of the backhoes in August and September and the poor weather conditions encountered in November. Only a small amount of the proposed program of stripping and excavating was completed in 2001, with a total of 17 trenches and 1 pit dug and parts of the Mersereau, Line 4W and Blue Veins stripped. None of these trenches or stripped areas were power washed.

Most of the shale and wacke exposed in the 6 trenches excavated over geochemical- geophysical anomalies and/or near mineralized quartz rubble and in the 11 trenches and one pit were dug over or near geochemical anomalies between the Line 4W and Marleau Veins was barren of mineralized quartz veining. In August and September examples of limonite rich and sheared veins, with little or no Au were discovered. Trenching in November extended the strike of the Sheared/Brecciated Marleau Vein 78 ft. to the south and uncovered 2 new veins, the Donat and Donat West (0.017 oz/ton Au) Zones. These 2 newly discovered quartz rich zones were only partially exposed due to flooding, snow cover and caving in November. A major achievement was completed in November, the completion of the road from the Line 4W Vein to the Marleau Vein. This road, along and up a hill, crossed geochemical anomalies, uncovered a piece of mineralized quartz rubble (0.068 oz/ton Au) and provided access to the southern end of the Main and Sheared/Brecciated Marleau Veins.

Stripping in 2001 extended the length of the polymetallic Mersereau Vein a further 118 ft. along strike to the northeast, uncovered the Line 4W Vein in three sections along old drill roads and setups, for a length of 369 ft. and excavated pieces of the newly discovered polymetallic Blue Vein. The 98 ft. (29.88 m.) of exposed Mersereau Vein contained anomalous to high concentrations of Au, Ag, Pb and Zn, averaging 0.292 oz/ton (10.01 g/tonne) Au, 3.02 oz/ton (103.54 g/tonne) Ag, 3.26 % Pb and 0.215 % Zn across an average sample width of 1.84 ft. (0.56 meters). Lower grade Au results were obtained in the 3 sections of Line 4W Vein, with this vein averaging 0.043 oz/ton (1.47 g/tonne) Au along the 141 ft. (42.99 m.) of exposed vein across an average sample width of 1.51 ft. (0.46 meters). Large pieces of series of possibly flat lying high grade Au, Ag, Pb and Zn Blue Quartz Vein were exposed. No power washing was completed on these stripped areas. Further stripping could be performed along the strike of these veins: the north end of the Mersereau vein is cut by shearing, possibly offsetting the northern extension; the ends of the Line 4W Vein are open and wooded areas between the exposures in the stripped sections and old pits haven't been uncovered; and the attitude of the pieces of mineralized quartz in the Blue Vein hasn't been totally explained.

The results of the whole rock analyses on the 12 composite samples of sheared/faulted sediments, collected at the mineralized veins, Grand Pabos Fault and west of the Arsenault River, show that the sediments at the Baker, Sheared/Brecciated Marleau Veins and Donat Zone contain

SCORPIO MINING CORPORATION NEW ACQUISITION AND ANOMALIES



anomalous concentrations of Au-Ag-As-Pb-Zn, Au-As and Pb-Zn, respectively. Anomalous to high amounts of Hg were also found in 1/2 of the samples collected.

The interpretation of the results of the mineralogical studies included in Appendix 4, states that microscopic Au grains were observed in the samples of pyrite-arsenopyrite bearing quartz veins that were submitted for analysis. It was decided that Au-Pb-Ag-Zn concentrate from the mineralized vein systems could be produced by flotation or gravity and shipped to the Gaspe or Brunswick smelters for processing.

Work to date indicates that the exposed sections of mineralized quartz veins contains significant amounts of Au-Ag-Pb (Baker, Mersereau, Mersereau Extension and Blue Veins) and Au (Marleau Main Vein) and lower concentrations of Au (Line 4W, Greek and Donat West) across narrow to mineable widths and relatively long strike lengths. There is a good chance that these veins are open along strike. Average grades and sample widths and exposed lengths of the veins that have been stripped along strike are listed below.

Vein	Exposed Length		Sample Width		Au		Ag		Pb (%)	Zn (%)
	feet	meters	feet	meters	oz/ton	g/tonne	oz/ton	g/tonne		
Baker	136	41.46	2.35	0.72	0.395	13.54	13.24	453.94	13.87	0.427
Mersereau	163	49.70	1.74	0.53	0.302	10.35	3.88	133.03	5.52	0.253
Mersereau (NE Ext.)	21	6.40	0.28	0.09	0.660	22.83	2.43	80.23	3.68	0.081
Marleau (Main)	248	75.61	1.61	0.49	0.163	5.59	----	----	----	----
Line 4W	141	42.99	1.51	0.46	0.043	1.47	----	----	----	----
Greek	35	10.67	8.28	2.52	0.019	0.65	----	----	----	----

Quartz veining on the Lac Arsenault Prospect strikes in 4 general directions: north to northeast, as in the mineralized Baker, Mersereau, Main Marleau and Line 4W Veins, located within 2000 ft. of each other in the central part of the property; northeast to east-northeast, as in the mineralized narrow NE Extension of the Mersereau Vein; north-northwest as in the lower Au grade Greek Vein, the low grade Donat Zone, the vein at 13N and the numerous smaller limonite rich veins; and east-northeast in the Derber Vein, anomalous in Ag. The strike of the mineralized Sheared/Brecciated Marleau Vein and the Donat West Zone haven't been determined due to only being partially uncovered and the mineralized Blue Vein may be a series of narrow flat high grade veins. Slightly mineralized and low grade polymetallic breccia zones cut the Baker and Mersereau Veins and numerous limonite rich veins with small amounts of Au were found near or bifurcating from the Baker, Mersereau and Marleau Veins. The vein systems outlined on the property lie in or are cut and offset by major shearing or faulting. Most of the shearing and faulting cross-cutting the mineralized veins strikes east-north east, parallel to the Grand Pabos Fault, but deformation trending east was also observed. To better define the vein systems, shearing, faulting and fabric of the sediments a new grid should be established on the property, with the crosslines cut at an azimuth of 06 degrees, perpendicular to the 096 degree lines presently on the property.

The Quebec Ministry of Energy and Resources Aeromagnetic Map 22A defines the position of a large relatively weak and roughly circular shaped magnetic high centered in the northern part of Honorat Twp. The Lac Arsenault Prospect lies in this anomaly, near the eastern boundary.

Approximately 1.25 to 2.5 miles east of the property, along the east edge of this large high, a slightly elongated smaller and higher amplitude airborne magnetic high was delineated. Because of this aeromagnetic data, the results of the gravity survey completed by Esso Minerals, the presence of the various random telescoping directions of the vein systems and deformation on the property and discovery of intermediate to mafic intrusive rocks near the Grand Pabos Fault, there exists the possibility that the mineralization may be caused by a buried intrusive body underlying the area. Esso Minerals drill hole data (hole A30) indicates that the intrusive would be deeper than 2026 feet. The stronger smaller high to the east may define the intrusive at a shallower depth.

Most of the mineralization on the property has been discovered while prospecting, stripping/excavating, power washing and diamond drilling over areas containing geochemical soil anomalies. Geophysical surveying (magnetics, very low frequency-electromagnetics, horizontal loop-electromagnetics, gravity and $n=1$ pole-pole induced polarization) has been only partially successful in delineating mineralization, but there is a good chance that the mise a la masse or dipole-dipole methods of I.P. surveying may be successfully employed in tracing the sulphide mineralization in the quartz veins. Presently, there are 13 examples of mineralized quartz rubble containing > 0.01 oz/ton Au scattered throughout the project, whose sources remain undiscovered. All the mineralized veins on the Lac Arsenault Prospect, except the Greek Vein, lie in As and/or Au geochemical soil anomalies. The Greek Vein is located within 100 ft. of As soil anomalies. Eight labeled Au and 15 labeled As anomalies and numerous smaller Au-As anomalies exist on the Lac Arsenault Prospect. Stripping performed, after prospecting in 2000 and 2001, exposed the mineralized Baker, Mersereau, Main Marleau, Sheared/Brecciated Marleau, Line 4W, Greek, Blue and Donat West Veins. In order to better expose and define the vein systems, prior to mapping and sampling, the stripped areas should be power washed. The diamond drilling performed by Aggressive Mining, Imperial Oil, Esso Minerals and Mondor Explorations intersected the Baker, Mersereau, Mondor and Line 4W Veins at shallow depths.

There are numerous targets on the Lac Arsenault that should be stripped/excavated and power washed, including: the major vein systems; areas containing geochemical-geophysical anomalies and/or mineralized quartz rubble; and across anomalous zones along selected old roads. The major veins to be stripped are listed below and on the following page.

- 1) Sheared/Brecciated Marleau Vein
 - more work to the west and south, including re-excavating 2001 trenches
- 2) Main Marleau Vein
 - along strike to the north and south
 -
- 3) Mersereau Vein
 - in the southeast along strike of the bend/fold
 - over breccia zones
 - along strike between the stripped areas
 - along strike to the north-northeast and northeast from the area striped in 2001 and the Northeast Extension of the Vein

- 4) Baker Vein
 - along strike to the north
 - over the breccia zones and the Auxiliary Vein in the east
- 5) Line 4W Vein
 - along the 520 ft. strike between old trenches and the 2001 stripped areas
 - along strike to the north-northeast and south-southwest
- 6) Blue Vein
 - better define the vein
- 7) Area of the Donat Zone
 - re-excavate areas of quartz veining flooded in Nov. 2001
- 8) Greek Vein
 - along strike to the north-northwest on top and along the side of the hill

A total of 18 second priority trenching targets are listed below, overlying the unexplained geochemical and geophysical anomalies and/or areas containing mineralized quartz rubble.

<u>Locations</u>	<u>Targets</u>
1 - Line 10S, 14E to 16E	As soil Anomaly 18 (14+50E - 16E) Au anomaly (14+50E - 15+50E)
2 - Line 8S, 17E to 18+50E	Au/As soil Anomaly 1 (17E - 18+50E) mineralized quartz rubble (17E)
3 - 7+00S, 16E to 22 +70E	I.P. metal factor high (17E) Au soil Anomaly 1E (17E - 18+50E & 19E - 21E) As soil Anomaly 1E (17E -21E) rubble samples 27011 (22+65E) & 27010 (7+20E) I.P. metal factor highs - line 6N (17E & 20+50E) - line 8N (17E & 19E)
4 - Line 6S, 22E to 28E	Au soil Anomaly 1E (24+50E - 25+50E & 26+50E - 27+50E) Au anomaly (23E) As soil Anomaly 1E (23+50E - 28E) quartz rubble (24E)
5 - Line 6S, 19E to 20+50E	I.P. metal factor highs (23E - 26E & 27E) Au/As soil Anomaly 1E (19E - 20+50E) quartz rubble (20E)
6 - Line 4S, 19E to 27E	I.P. metal factor high (20+50E) As soil Anomaly 1E (19E - 24E)

Au soil anomalies (19E - 20+50E & 25E - 27E)
quartz rubble (22+50E & 23+50E)

<u>Locations</u>	<u>Targets</u>
7 - 1+75S to 4S, 11E to 17E	Au soil Anomaly 1 (11E - 12E & 14E - 17E) As soil Anomaly 1 (11E - 17E) mineralized rubble sample 27029 (3+30S/13+75E) I.P. metal factor highs - line 2S (11+80E, 13+20E & 15+25E) - line 4S (10+50E - 12E & 15E)
8 - Along boundary of claims 5262370 & 5262374	As soil anomaly area of quartz rubble samples 61723 & 61724
9 - Claim 5262376	As & Au soil anomalies
10 - Claim 5262377 near lake	Au soil anomaly
11 - 1+75N - 2+25N, 8E to 9E	As soil Anomaly 1 (8E - 9E) I.P. metal factor high (9E)
12 - Line 2N, 5E to 7+50E	Au soil anomaly (6+50E - 7+50E)
13 - Line 16N, 13+50E to 16E	Au soil anomaly (13+50E - 15+50E) I.P. metal factor high (15E)
14 - Line 6N, 3W to 1E	intersection of As soil anomalies 2 & 18 (1W - 1E) Au soil anomaly (3W - 2W) Annapolis VLF-EM anomaly (1W) Line 4W Vein (2+20W) Donat West Zone (0+50E)
15 - Line 10N, 2W to 1E	As soil Anomaly 18 (2W - 0+50W) Au soil anomaly (0+50W - 0+50E) I.P. metal factor highs (2W & 0 - 1E)
16 - Line 2N, 21+50E to 24E	As soil Anomaly 6 (21+50E - 24E) VLF-EM Anomaly 4 (22+20E)
17 - Line 4S, 9W to 6W	As soil Anomaly 2A (9W - 6W)
18 - Line 0, 9W to 6W	As soil anomaly 2 (9W - 6W)

Finally, if the time permits there is still money left in the budget long trenches should be dug along selected roads over geochemical and geophysical anomalies and areas of quartz float/rubble. These roads and targets are listed below, in order of decreasing priority.

<u>Location</u>	<u>Targets</u>
1 - Main road 10S/18E to 4S/27+50E	Au/As soil Anomaly 1E & 4 Au/As anomalies rubble sample 2710 & near original mineralized float over numerous examples of quartz rubble/float 2 I. P. metal factor highs
<u>Locations</u>	<u>Targets</u>
2 - Drill road between lines 2N & 4N from the baseline to the eastern boundary	Au soil Anomalies 6 & 5 HLEM Anomaly E VLF-EM Anomaly 4 2 I.P. metal factor highs
3 - Drill road between lines 1S & 2S from 15E to 13E and 9E to 11E	Au & As soil Anomaly 1 quartz rubble along strike from the Baker Vein
4 - Drill road between line 0 & 1+75N from 1+50E to 5W	As soil Anomaly 2 along the strike of the Line 4W Vein
5 - Drill road along line 0 from 12E	As soil Anomalies 2E (south end) & 18 quartz rubble
6 - Drill road between lines 16N & 18N from the baseline to 10E	Au & As soil Anomaly 4 mineralized quartz rubble (sample 27040)
7 - Drill road between lines 8N & 10N from 16E to 8E	As soil Anomaly 3 northern extension of the Marleau Vein 3 I.P. metal factor highs
8 - Main road near line 18N from 30E to the baseline	As soil Anomaly 4 quartz rubble VLF-EM Anomaly I HLEM Anomaly A 6 I.P. metal factor highs

A proposed 2 phase multifaceted \$ 500,000 program of exploration should be performed on the Lac Arsenault Prospect in 2002. This program is designed: to provide a comprehensive compilation of work previously performed on the property and a detailed plan for the summer exploration; to stake and explore property contiguous to the east; to increase the geological reserves on the prospect; and to test the theory that the mineralization may be the result of an underlying intrusive body. In the Phase 1 program: the property to the east, over the airborne anomaly, will be acquired and reconnaissance exploration performed on this ground; detailed exploration across the total area forming the present day 30 claims will be completed; followed by stripping/excavating and power washing selected targets. A Phase 2 program of diamond drilling and bulk sampling will then be performed, depending on the results obtained in Phase 1.

In 2002, the ground position of Scorpio Mining Corp. should be increased by acquiring a block, 1.25 miles wide by 2.75 miles long (880 hectares), contiguous to the east that covers the eastern edge of the large aeromagnetic high containing the smaller higher amplitude high. In

order to test the potential of this ground to host mineralized quartz veining or rubble, reconnaissance prospecting, magnetic surveying and geochemical soil sampling will be performed.

Detailed exploration should then be completed over the 30 claims forming the present day Lac Arsenault Prospect, providing total coverage across the claims. The original crosslines at 096 degrees will be extended over the claims staked in 2000 and 2001, followed by detailed magnetic and very low frequency-electromagnetic surveying and prospecting. Soil sampling will be completed along the lines not covered by past Esso Minerals and Mondor Explorations sampling. Because of the random strike directions of the quartz veins and shearing/faulting and the trend of the underlying sediments, a new grid, with crosslines at 006 degrees, perpendicular to the old lines, will be cut. These lines will provide better control for detailed prospecting and magnetic and VLF-electromagnetic surveying that will then performed along these lines. There is a good possibility that the sulphide mineralization in the vein systems could be traced using dipole-dipole or mise a la masse methods of induced polarization surveying. Field tests should be performed over the known vein systems to determine the feasibility of this type of geophysical surveying. If these tests prove successful I.P. surveying should be conducted over the central area containing the veins. A land surveyor should be employed to survey the positions and elevations of the mineralized veins and old drill hole collars, in order to provide information needed to complete the Phase 2 program.

After this detailed exploration is completed on the Lac Arsenault Prospect, the targets previously described in this report, areas of mineralized veins or rubble, geophysical and geochemical anomalies found in the 2002 field season and the trenches excavated in November 2001, will then be stripped/excavated, power washed and chip sampled. This work will be supervised by a geologist and the exposed veins and geology mapped.

The Phase 2 exploration is contingent on the results obtained during Phase 1. A 5000 ft. program of diamond drilling is recommended in order to test the vein systems at shallow depths and a 2000 ton bulk sample will be collected to determine the grades and the feasibility of metallurgical processing.

The proposed 2 Phase exploration budget of \$ 500,000 for 2002 and a breakdown of the type of work is presented on the following pages.

Phase 1

Work on New Claims to East Over the Aeromagnetic High

Claim Acquisition	\$ 7,000.00
Mob/demob of Field Crew (prorated)	\$ 2,000.00
Truck Mileage (prorated)	\$ 2,000.00
Reconnaissance Prospecting (30 days @ \$200/day)	\$ 6,000.00
Reconnaissance Geochemical Soil Sampling (10 days @ \$200/day)	\$ 2,000.00
Reconnaissance Geophysical Surveying (5 days @ \$175/day)	\$ 875.00

Geochemical Soil Sample Analyses (200 samples @ \$15/sample)	\$ 3000.00
Rock Sample Assays (50 samples @ \$20/sample)	\$ 1000.00
Food, Lodging, Expenses, etc. (45 days @ \$50/day)	<u>\$ 2,250.00</u>
sub-total	\$ 26,125.00

Detailed Work On the 30 Claims

Compilation of Past Results/ Planning	\$ 10,000.00
Mob/Demob of the Field Crew (prorated)	\$ 2,000.00
Truck Mileage (prorated)	\$ 2,500.00
Linecutting - finish east-west grid (30 miles @ \$550/mile)	\$ 16,500.00
Linecutting - north-south grid (50 miles @ \$550/mile)	\$ 27,500.00
Magnetics & VLF-EM Surveying on New Lines (80 miles @ \$240/mi.)	\$ 19,200.00
Detailed Prospecting (50 days @ \$200/day)	\$ 10,000.00
Geochemical Soil Sampling (20 days @ \$200/day)	\$ 4,000.00
Soil Sample Analyses (500 samples @ \$15/sample)	\$ 7,500.00
Food/Accommodation, Expenses etc. (70 days @ \$50/day)	\$ 3,500.00
I.P. Surveying (10 d @ \$1100/d & mob/demob - \$4000)	<u>\$ 15,000.00</u>
sub-total	\$ 117,700.00

Stripping/Sampling

Backhoe Rental (160 hours @ \$110/hr)	\$ 17,600.00
Water Truck & Pump Rentals (160 hours @ \$80/hour)	\$ 12,800.00
Mob/Demob Backhoe & Water Truck	\$ 3,000.00
Wood Cutting	\$ 10,000.00
Mob/Demob of the Field Crew (prorated)	\$ 2,000.00
Forestry Permit	\$ 275.00
Truck Mileage	\$ 2,000.00
Washing & Sampling (60 days @ \$200/day)	\$ 12,000.00
Rock Sample Assays (400 samples @ \$20/sample)	\$ 8,000.00
Geological Supervision & Mapping (30 days @ \$350/day)	\$ 10,500.00
Surveying Stripped Veins, Old Drill Sites, etc.	\$ 5,000.00
Camp Setup, Expenses, Cook, Food, etc.	<u>\$ 8,000.00</u>
sub-total	\$ 91,175.00

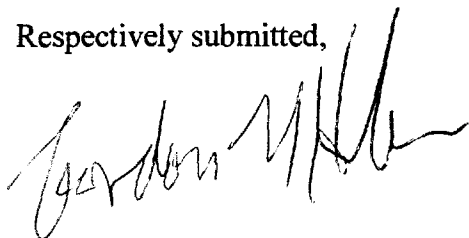
Map & Report Preparation

Compilation & Report	\$ 10,000.00
Drafting	<u>\$ 5,000.00</u>
sub-total	\$ 15,000.00
Total Phase 1	\$ 250,000.00

Phase 2

Diamond Drilling (5000 ft. @ \$35/ft., all inclusive)	\$ 175,000.00
Bulk Sampling (2000 tons)	\$ 50,000.00
Contingencies	<u>\$ 25,000.00</u>
Total Phase 2	\$ 250,000.00
TOTAL - PHASES 1 & 2	\$ 500,000.00

Respectively submitted,



February 20, 2002
Bellecombe, Quebec

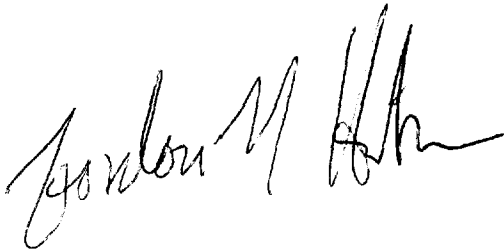


G. N. Henriksen
B.Sc., APGGQ,
Geologist

CERTIFICATE OF QUALIFICATIONS

I, Gordon N. Henriksen of 850 Route des Pionniers, Bellecombe, Quebec hereby certify:

1. I am a graduate of Concordia University (1986) and hold a degree in Specialization Geology
2. I have been employed in my profession by various mining companies since graduation.
3. I am a member of the Association of Professional Geologists and Geophysicists of Quebec, (No. 1075).
4. I have worked extensively in Quebec and Ontario for the past 15 years in exploration
5. The Information contained in this report was obtained from the list of the data listed in the bibliography, in addition to an extensive knowledge of the area and I have worked on the Lac Arsenault Property.
6. I do not have or expect to receive direct or indirect interest neither in the Lac Arsenault Property nor in the securities of Scorpio Mining Corporation related to this property.
7. I consent to and authorize the translation of this report to French providing the report is used in its entirety or any summary thereof is approved by the author.



G. N. Henriksen, B. Sc., A.P.G.G.Q.
Geologist

Dated at Val D'Or, Quebec, this 20th day of February, 2002.



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Aeromagnetic Map of the Gaspésie, NTS 22A

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APPENDIX 1

CLAIM LIST

<u>Claim</u>	<u>Date of Expiration</u>
5076181	May 28, 2002
5076182	May 28, 2002
5076183	May 28, 2002
5076184	May 28, 2002
5076185	May 28, 2002
5076186	May 28, 2002
5076187	May 28, 2002
5076188	May 28, 2002
5076189	May 28, 2002
5120966	Oct. 26, 2002
5120967	Oct. 26, 2002
5120968	Oct. 26, 2002
5120969	Oct. 26, 2002
5120970	Oct. 26, 2002
5255640	Sept. 27, 2002
5255641	Sept. 27, 2002
5255642	Sept. 27, 2002
5255643	Sept. 27, 2002
5262369	Sept. 09, 2003
5262370	Sept. 09, 2003
5262371	Sept. 09, 2003
5262372	Sept. 09, 2003
5262373	Sept. 09, 2003
5262374	Sept. 09, 2003
5262375	Sept. 09, 2003
5262376	Sept. 09, 2003
5262377	Sept. 09, 2003
5262378	Sept. 09, 2003
5262379	Sept. 09, 2003
5262380	Sept. 09, 2003

APPENDIX 2
Certificates of Analyses



LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE

BOURLAMAQUE ASSAY LABORATORIES LTD.

CERTIFICAT D'ANALYSES CERTIFICATE OF ANALYSIS

Georgia Mining Corporation

N° 76900

ECHANTILLONS / ROCKS
SAMPLES

VAL D'OR (QUÉBEC) November 29 2001

RECU DE / FROM
RECEIVED FROM Iron Cross

ANALYSES / ASSAYS 20 Au, 20 Ag, 20 Cu, 20 Pb, 20 Zn

Sample No.	Au oz/t	Ag oz/t	Cu %	Pb %	Zn %
29601	0.002	0.02	0.003	0.002	0.002
29602	0.002	0.02	0.002	0.001	0.003
29603	0.002	0.02	0.001	0.001	0.001
29604	0.002	0.02	0.002	0.002	0.009
29605	0.047	0.04	0.001	0.001	0.001
29606	0.002	0.02	0.004	0.002	0.009
29607	0.007	0.02	0.001	0.001	0.001
29608	0.002	0.02	0.003	0.001	0.007
29609	0.002	0.02	0.003	0.002	0.009
29610	0.002	0.02	0.007	0.009	0.021
29611	0.002	0.02	0.005	0.003	0.010
29612	0.002	0.02	0.002	0.002	0.006
29613	0.002	0.02	0.005	0.003	0.011
29614	0.002	0.02	0.006	0.002	0.012
29615	0.002	0.02	0.004	0.002	0.009
29616	0.002	0.02	0.006	0.002	0.010
29617	0.002	0.02	0.005	0.003	0.010
29618	0.017	0.02	0.003	0.011	0.008
29619	0.002	0.02	0.001	0.001	0.006
29620	0.002	0.02	0.008	0.009	0.032

Sample No.	Cu %	Pb %	Zn %
29619 dup.	0.007	0.009	0.021
29620 dup.	0.008	0.004	0.032

[Signature]
ANALYSTE / ASSAYER
M.-D. Melnbardis



LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE BOURLAMAQUE ASSAY LABORATORIES LTD.

Scorpio Mining Corporation

PX-Lac Arseneault

ECHANTILLONS Rocks
SAMPLES

REÇU DE RECEIVED FROM

Peter Hawley

CERTIFICAT D'ANALYSES CERTIFICATE OF ANALYSIS

N° 76846

November 15 01

VAL D'OR (QUÉBEC)

ANALYSES
ASSAYS

6 Au, 6 Ag, 6 Cu, 6 Pb, 6 Zn

Sample No.	Au oz/t	Ag oz/t	Cu %	Pb %	Zn %
29151	0.231	0.92	0.033	2.08	0.083
29152	0.201	2.68	0.098	7.82	1.09
29153	0.210	4.05	0.038	14.85	0.464
29154	0.202	0.14	0.001	0.021	0.008
29155	0.205	0.06	0.001	0.024	0.001
29156	0.195	0.92	0.038	3.06	0.418

Sample No.	Cu %	Pb %	Zn %
29156 dup.	0.038	3.07	0.418

[Signature]
ANALYSTE / ASSAYER
L.-D. Melbardis

XRAL**LES LABORATOIRES XRAL LABORATORIES**

UNE DIVISION DE / A DIVISION OF SGS CANADA INC
 129 AVE. MARCEL BARIL - ROUYN-NORANDA - QUÉBEC J9X 7B9
 TÉL.: (819) 764-8108 FAX: (819) 764-4873

CERTIFICAT D'ANALYSE/CERTIFICATE OF ANALYSIS

R20884

Nom de la Compagnie/Company: Scorpio Mining Corporation
 Bon de Commande No/ P.O. No:
 Projet/ Project No : L. Arsenault
 Date Soumis/ Submitted : Sep 26, 2001
 Attention : Peter Hawley

Sep 28, 2001

No. D'Echantillon AU Sample No.	AG OZ/T	PB Z/T	ZN %	ZN %
27201	0.071	0.25	0.106	0.022
27202	0.020	0.11	<0.01	<0.01
27203	0.026	0.17	0.026	<0.01
27204	0.010	0.21	0.018	<0.01
27205	0.027	0.10	<0.01	<0.01
27206	0.011	0.14	0.016	<0.01
27207	0.033	<0.10	<0.01	<0.01
27208	0.277	0.12	<0.01	<0.01
27209	0.023	0.20	<0.01	<0.01
27210	0.034	0.23	0.012	<0.01
27211	0.018	0.15	0.013	<0.01
27212	0.048	0.11	<0.01	<0.01
61794	0.068	0.21	<0.01	<0.01
61795	0.007	0.15	0.015	0.010
61796	0.003	0.14	0.025	0.016
61797	0.024	0.26	0.099	<0.01
61798	0.057	0.17	0.067	0.013
61799	0.012	0.10	0.020	<0.01
61800	0.015	0.14	0.025	<0.01

Certifie par , Certified by :



Membre du Groupe SGS (Société Générale de Surveillance)

*Silver Recherche
Lac Arsenault 2001*



LES LABORATOIRES XRAL LABORATORIES

UNE DIVISION DE / A DIVISION OF SGS CANADA INC.
129 AVE. MARCEL BARIL • ROUYN-NORANDA • QUÉBEC J9X 7B9
TÉL.: (819) 764-9108 FAX: (319) 764-4873

CERTIFICAT D'ANALYSE / CERTIFICATE OF ANALYSIS

R20936

Nom de la Compagnie / Company : Scorpio Mining Corporation

Bon de Commande No / P.O. No :

Projet / Project No : Pulps

Date Soumis / Submitted : OCT 03, 2001

Oct 05, 2001

Attention : M. Henrickson

No. D'Echantillon Sample No.	AU OZ/T	AU OZ/T	AG OZ/T	PB %	ZN %
61748	0.287	0.285	3.25	1.83	0.110
61749	0.247		1.19	0.248	0.108
61750	0.119		0.72	0.430	0.109
61751	0.287		1.08	1.14	0.827
61752	0.152		0.54	0.105	0.258

Certifié par / Certified by :



Membre du Groupe SGS (Société Générale de Surveillance)



LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE.
BOURLAMAQUE ASSAY LABORATORIES LTD.

CLIENT Scorpio Mining Corporation

PROJET PROJECT Lac Arsenault

ÉCHANTILLONS SAMPLES Rocks

REÇU DE RECEIVED FROM Peter Hawley

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No. 76655

Pg 1/3

VAL D'OR (QUÉBEC) September 10, 2001

ANALYSES ASSAYS 73 Au, 73 Ag, 73 Pb, 73 Zn

Sample No.	Au oz/t	Ag oz/t	Pb %	Zn %
61721	<0.003	<0.02	<0.001	0.002
61722	<0.003	<0.02	<0.001	<0.001
61723	<0.003	<0.02	<0.001	<0.001
61724	0.003	<0.02	0.003	0.011
61725	<0.003	<0.02	0.002	0.001
61726	0.176	0.16	0.143	0.043
61727	0.303	1.36	1.07	0.168
61728	0.168	0.38	0.268	0.014
61729	0.572	2.55	2.06	0.015
61730	0.158	1.35	1.56	0.044
61731	0.639	3.77	1.16	0.172
61732	0.341	3.28	1.95	0.166
61733	0.328	0.92	1.94	0.037
61734	0.617	4.73	7.09	0.091
61735	0.730	5.62	10.19	0.067
61736	0.166	0.83	0.415	0.436
61737	0.138	1.25	5.84	0.354
61738	0.020	0.27	1.353	0.287
61739	0.278	2.24	2.13	0.701
61740	0.454	3.08	5.35	0.126
61741	0.065	0.33	0.293	0.047
61742	0.256	5.02	7.96	0.086
61743	0.239	2.52	3.55	0.286
61744	0.074	1.24	2.42	0.146
61745	0.479	6.29	8.59	0.104
61746	0.187	1.52	2.40	0.067

Sample No.	Au oz/t	Ag oz/t	Pb %	Zn %
61730	0.159	1.37	1.55	0.042
61740	0.455	3.08	5.84	0.126


ANALYSTE / ASSAYER

L. D. Melnbardis



LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE.
BOURLAMAQUE ASSAY LABORATORIES LTD.

CLIENT Scorpio Mining Corporation
PROJET PROJECT Lac Arsenault
ÉCHANTILLONS SAMPLES Rocks
REÇU DE RECEIVED FROM Peter Hawley

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No. 75655

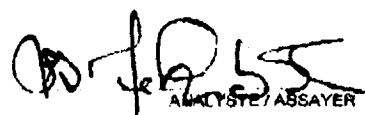
Pg 2/3

VAL D'OR (QUÉBEC) September 10, 2001

ANALYSES ASSAYS 73 Au, 73 Ag, 73 Pb, 73 Zn

Sample No.	Au oz/t	Ag oz/t	Pb %	Zn %
61747	0.176	1.36	0.459	0.820
61748	0.288	2.83	2.08	0.103
61749	0.257	0.53	0.272	0.101
61750	0.113	0.31	0.506	0.129
61751	0.293	0.58	1.21	1.02
61752	0.143	0.17	0.124	0.301
61753	0.394	1.76	1.15	0.073
61754	0.008	0.02	0.044	0.015
61755	0.009	0.03	0.021	0.012
61756	0.021	0.31	0.502	0.153
61757	0.027	0.10	0.177	0.063
61758	0.030	<0.02	0.005	0.003
61759	0.031	<0.02	0.003	0.002
61760	0.056	0.02	0.005	0.003
61761	0.047	<0.02	0.010	0.006
61762	0.065	0.02	0.001	<0.001
61763	0.033	<0.02	0.001	0.001
61764	0.020	<0.02	0.001	0.001
61765	0.026	<0.02	0.001	0.001
61766	0.030	0.02	0.002	0.001
61767	0.037	<0.02	0.001	0.001
61768	0.027	<0.02	0.001	0.001
61769	0.046	<0.02	0.002	0.002
61770	0.053	<0.02	0.004	0.001
61771	0.058	0.03	0.012	0.003
61772	0.070	0.04	0.013	0.005

Sample No.	Au oz/t	Ag oz/t	Pb %	Zn %
61750	0.114	0.32	0.507	0.128
61760	0.056	0.02	0.005	0.003
61770	0.052	<0.02	0.004	0.001


ANALYSTE / ASSAYER
L. - D. Meinbardi



LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE.
BOURLAMAQUE ASSAY LABORATORIES LTD.

CLIENT Scorpio Mining Corporation

PROJET / PROJECT Lac Arsenault

ECHANTILLONS / SAMPLES Rocks

REÇU DE / RECEIVED FROM Peter Hawley

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

No. 75655


Pg 3/3

VAL D'OR (QUÉBEC) September 10, 2001

ANALYSES / ASSAYS 73 Au, 73 Ag, 73 Pb, 73 Zn

Sample No.	Au oz/t	Ag oz/t	Pb %	Zn %
61773	0.072	0.02	0.002	0.003
61774	0.048	<0.02	0.002	0.002
61775	0.047	<0.02	0.001	0.001
61776	0.071	<0.02	0.002	0.003
61777	0.021	<0.02	<0.001	0.001
61778	0.025	0.07	0.037	0.002
61779	0.144	0.08	0.005	0.003
61780	0.026	<0.02	0.003	0.002
61781	0.056	<0.02	0.003	0.002
61782	0.020	<0.02	0.001	0.003
61783	0.078	0.06	0.002	0.003
61784	0.126	0.10	0.003	0.003
61785	0.034	0.02	0.002	0.004
61786	0.023	<0.02	0.001	0.001
61787	0.031	<0.02	0.001	0.002
61788	0.082	0.03	0.003	0.002
61789	0.007	<0.02	0.293	0.006
61790	0.467	1.84	5.08	4.02
61791	0.608	2.18	2.22	12.77
61792	0.230	2.88	5.76	5.57
61793	0.108	0.43	1.01	0.038

Sample No.	Au oz/t	Ag oz/t	Pb %	Zn %
61780	0.025	<0.02	0.002	0.002
61790	0.466	1.84	5.18	4.11


ANALYSEUR / ASSAYER
L. - D. Meibardis



LABORATOIRE D'ANALYSE BOURLAMAQUE LTÉE
BOURLAMAQUE ASSAY LABORATORIES LTD.

CERTIFICAT D'ANALYSES
CERTIFICATE OF ANALYSIS

Scorpio Mining Corporation

N° 77012

ECHANTILLONS
SAMPLES Rocks

VAL D'OR (QUEBEC) December 29 2001

RECU DE
RECEIVED FROM Don Cross

ANALYSES
ASSAYS 3 Au, 3 Ag, 3 Cu, 3 Pb, 3 Zn

<u>Sample No.</u>	<u>Au oz/t</u>	<u>Ag oz/t</u>	<u>Cu %</u>	<u>Pb %</u>	<u>Zn %</u>
29165	<0.002	0.40	1.57	1.88	0.828
29166	0.009	<0.02	0.001	0.005	0.004
29167	<0.002	<0.02	0.004	0.117	0.036

ANALYSTE / ASSAYER

T.-D. Melnhardt

APPENDIX 3
Geochemical Lab Reports
(whole rock)



CHIMITEC
BONDAR CLEGG



Rapport Lab Géochimie Geochemical Lab Report

REPORT: C01-63542.0 (COMPLETE)

REFERENCE:

CLIENT: SCORPIO MINING CORPORATION

SUBMITTED BY: P.J.HAWLWY

PROJECT: LAC ARSENAULT

DATE RECEIVED: 18-DEC-01 DATE PRINTED: 8-JAN-02

DATE APPROVED	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION	EXTRACTION	METHOD	DATE APPROVED	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION	EXTRACTION	METHOD												
011224	1 Au30 Gold	8	1 PPB	Fire Assay of 30g	30g Fire Assay - AA	011224	37 S S - IC01	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA												
011224	2 Ag Ag - IC01	8	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA	<table border="1"> <thead> <tr> <th>SAMPLE TYPES</th> <th>NUMBER</th> <th>SIZE FRACTIONS</th> <th>NUMBER</th> <th>SAMPLE PREPARATIONS</th> <th>NUMBER</th> </tr> </thead> <tbody> <tr> <td>ROCK</td> <td>8</td> <td>-150</td> <td>8</td> <td>CRUSH/SPLIT & PULV.</td> <td>8</td> </tr> </tbody> </table>						SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER	ROCK	8	-150	8	CRUSH/SPLIT & PULV.	8
SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER																		
ROCK	8	-150	8	CRUSH/SPLIT & PULV.	8																		
011224	3 Cu Cu - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	4 Pb Pb - IC01	8	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	5 Zn Zn - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	6 Mo Mo - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	7 Ni Ni - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA	<p>REPORT COPIES TO: MR PETER J. HAWLEY INVOICE TO: MR PETER J. HAWLEY</p> <p>***** This report must not be reproduced except in full. The data presented in this report is specific to those samples identified under "Sample Number" and is applicable only to the samples as received expressed on a dry basis unless otherwise indicated *****</p>																	
011224	8 Co Co - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	9 Cd Cd - IC01	8	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	10 Bi Bi - IC01	8	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	11 As As - IC01	8	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	12 Sb Sb - IC01	8	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	13 Hg Hg - CV01	8	0.010 PPM	HCL:HNO3 (3:1)	COLD VAPOR AA																		
011224	14 Fe Fe - IC01	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	15 Mn Mn - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	16 Te Te - IC01	8	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	17 Ba Ba - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	18 Cr Cr - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	19 V V - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	20 Sn Sn - IC01	8	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	21 W W - IC01	8	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	22 La La - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	23 Al Al - IC01	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	24 Mg Mg - IC01	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	25 Ca Ca - IC01	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	26 Na Na - IC01	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	27 K K - IC01	8	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	28 Sr Sr - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	29 Y Y - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	30 Ga Ga - IC01	8	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	31 Li Li - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	32 Nb Nb - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	33 Sc Sc - IC01	8	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	34 Ta Ta - IC01	8	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	35 Ti Ti - IC01	8	0.010 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		
011224	36 Zr Zr - IC01	8	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA																		



CHIMITEC
BONDAR CLEGG



Rapport Lab Géochimie Geochemical Lab Report

CLIENT: SCORPIO MINING CORPORATION
REPORT: C01-63542.0 (COMPLETE)

DATE RECEIVED: 18-DEC-01

DATE PRINTED: 8-JAN-02

PROJECT: LAC ARSENAULT
PAGE 1 OF 3

SAMPLE NUMBER	ELEMENT	Au30	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Hg	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Hg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	Zr	S
	UNITS	PPB	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PCT	PCT	PCT	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PCT
29157		<5	<2	4	8	54	1	112	12	<0.2	<5	8	<5	0.013	2.96	481	<10	18	248	64	<20	<20	18	1.63	1.31	0.12	0.03	0.03	5	5	<2	29	3	<5	<10	<.010	4	<.01
29158		<5	1.4	5	<2	11	<1	7	2	<0.2	<5	<5	<5	0.019	0.87	201	<10	50	13	3	<20	<20	2	0.13	1.22	>10.00	<.01	0.05	1610	3	<2	2	<1	<5	<10	<.010	1	0.18
29159		<5	1.3	3	<2	8	<1	3	<1	<0.2	<5	<5	<5	<.010	0.58	197	<10	73	10	3	<20	<20	1	0.12	0.51	>10.00	<.01	0.04	1454	2	<2	3	<1	<5	<10	<.010	1	0.18
29160		<5	<2	71	<2	90	<1	56	38	0.3	<5	10	<5	<.010	7.58	1054	<10	56	66	215	<20	<20	3	2.66	2.56	2.21	0.06	0.10	49	20	<2	33	11	14	<10	0.182	<1	0.20
29161		86	<2	4	<2	5	2	27	3	1.8	<5	619	<5	0.011	1.19	462	<10	78	184	11	<20	<20	2	0.14	0.14	0.47	<.01	0.06	116	3	<2	<1	<1	<5	<10	<.010	3	0.02
29162		244	0.2	27	332	210	3	14	3	4.1	<5	19	<5	0.117	1.34	541	<10	24	270	15	<20	<20	4	0.14	0.03	0.13	<.01	0.07	11	3	<2	2	<1	<5	<10	<.010	2	0.01
29163		8	2.5	414	2245	9383	<1	9	6	32.6	<5	11	<5	5.318	0.57	530	<10	14	235	12	<20	<20	<1	0.08	0.20	0.45	<.01	0.05	16	1	<2	<1	<1	<5	<10	<.010	2	0.48
29164		<5	2.6	32	4886	5496	<1	25	5	18.4	<5	14	<5	3.214	1.44	591	<10	18	237	17	<20	<20	3	0.21	0.36	0.63	0.01	0.05	19	3	<2	2	1	<5	<10	<.010	3	0.31



CHIMITEC
BONDAR CLEGG



Rapport Lab Géochimie Geochemical Lab Report

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PROJECT: LAC ARSENAULT
PAGE 2 OF 3

STANDARD NAME	ELEMENT UNITS	Al ₂ O ₃ PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Hg PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT	Zr PPM	S PCT		
ANALYTICAL BLANK		<5	<.2	<1	3	<1	<1	<1	<1	<0.2	<5	<5	<5	<.010	0.01	<1	<10	<1	<1	<1	<20	<20	<1	<.01	<.01	<0.01	<.01	<.01	<1	<1	<2	<1	<1	<5	<10	<.010	<1	<.01		
Number of Analyses		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mean Value		3	0.1	<1	3	<1	<1	<1	<1	0.1	3	3	3	0.005	0.01	<1	5	<1	<1	<1	10	10	<1	<.01	<.01	<0.01	<.01	<.01	<1	<1	1	<1	<1	3	5	0.005	<1	<.01		
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value		5	0.2	1	2	1	1	1	1	1.0	2	5	5	0.005	0.05	1	<1	<1	1	1	<1	<1	<1	<.01	<.01	<0.01	<.01	<.01	<1	<1	<1	<1	<1	<1	<1	<.001	<1	<.01		
OX8		190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Number of Analyses		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Mean Value		190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Accepted Value		186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
CANMET LKSD-2		-	0.4	36	46	204	1	25	16	0.9	<5	9	<5	0.158	3.55	1741	<10	211	27	48	<20	<20	56	1.67	0.61	0.61	0.04	0.28	34	28	<2	17	4	6	<10	0.068	<1	0.17		
Number of Analyses		-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Mean Value		-	0.4	36	46	204	1	25	16	0.9	3	9	3	0.158	3.55	1741	5	211	27	48	10	10	56	1.67	0.61	0.61	0.04	0.28	34	28	1	17	4	6	5	0.068	<1	0.17		
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Accepted Value		-	0.8	36	40	200	2	23	17	0.8	-	9	1	0.160	3.50	1840	-	211	29	48	-	-	58	1.68	0.60	0.58	0.04	0.26	30	29	4	18	6	7	-	-	-	0.16		



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Rapport Lab Géochimie Geochemical Lab Report

CLIENT: SCORPIO MINING CORPORATION
REPORT: C01-63542.0 (COMPLETE)

DATE RECEIVED: 18-DEC-01 DATE PRINTED: 8-JAN-02 PAGE 3 OF 3

PROJECT: LAC ARSENAULT

SAMPLE NUMBER	ELEMENT UNITS	Au30 PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Hg PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sr PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT	Zr PPM	S PCT
29159		<5	1.3	3	<2	8	<1	3	<1	<0.2	<5	<5	<5	<0.010	0.58	197	<10	73	10	3	<20	<20	1	0.12	0.51	>10.00	<0.01	0.04	1454	2	<2	3	<1	<5	<10	<0.010	1	0.18
Duplicate			1.5	3	<2	10	<1	3	<1	<0.2	<5	<5	<5	<0.010	0.59	198	<10	72	9	3	<20	<20	<1	0.12	0.51	>10.00	<0.01	0.04	1432	2	<2	2	<1	<5	<10	<0.010	1	0.18

APPENDIX 4
Mineralogical Reports

**MINERALOGY AND INTERPRETATION
OF GOLD-BEARING SAMPLES
FROM THE BAKER, MERSEREAU, MARLEAU
AND GREEK VEINS, AND THE OXIDIZED BRECCIA,
AT SCORPIO MINING CORPORATION'S
LAC ARSENEAULT PROJECT, GASPE**

David J. T. Carson *Carson GeoMin* January 11, 2002

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SCOPE

Six multi-piece 0.5kg - 3 kg samples from four gold-bearing veins and an oxidized breccia zone at the Lac Arseneault property of Scorpio Mining Corporation were submitted to David Carson by Peter Hawley, President/CEO of Scorpio, for mineralogical examination. No visible gold grains had been reported in the veins or breccia, and the main purpose of the mineralogical examination was to determine the occurrence of the gold. A separate portion of each of these samples had previously been assayed for Scorpion Mining Corporation and gave the results listed below.

#29151, Baker Vein: .231 opt Au, .92 opt Ag, .033% Cu, 2.08% Pb, .083% Zn
#29152, Baker Vein: .381 opt Au, 2.68 opt Ag, .098% Cu, 5.82% Pb, 4.09% Zn
#29153, Mersereau Vein: .118 opt Au, 4.05 opt Ag, .038% Cu, 14.85% Pb, .464% Zn
#29154, Marleau Vein: .202 opt Au, .140 opt Ag, .001% Cu, .021% Pb, .008% Zn
#29155, Greek Vein: .105 opt Au, .06 opt Ag, .001% Cu, .024% Pb, .001% Zn
#29156, Breccia Zone: .103 opt Au, 10.02 opt Ag, .038% Cu, 3.06% Pb, .418% Zn

Sulphide-bearing parts of the vein samples, and three separate parts of the oxidized breccia sample, were marked for thin sectioning. Gold grains are almost always associated with sulphides, but are generally erratically distributed; in order to obtain reliable data during microscopic examination, the largest area possible must be examined. A total of 17 polished thin sections were made from the six samples by the Dept. of Geology at the University of Toronto.

The 17 polished thin sections were examined and scanned systematically for gold grains under the optical microscope at magnifications of 100x to 1000x (magnification of ocular x magnification of eyepiece). Sulphide and gangue mineral relationships were recorded and the mineral percentages were estimated. The occurrence and grain-size (average diameter in microns) of all of the gold grains observed were also recorded. Photomicrographs were taken to illustrate the mineralogy and textures of the sulphide and gangue minerals, and the occurrence of the gold grains.

When it was determined that the size and number of the gold grains observed under the microscope were insufficient to account for the gold grades, two composite samples were assembled and sent to AMTEL laboratory in London, Ontario for SIMS (ion microprobe) analyses of pyrite and arsenopyrite grains for submicroscopic gold (see AMTEL report #01-45). These two samples consisted of several pieces each and were high-gold sample 29152 which contains pyrite and arsenopyrite, and moderately high-gold sample 29154 which has only arsenopyrite.

Several grains of a transparent, high relief mineral that occurs in samples 29151, 29152, and 29153, were highlighted by diamond marker and sent for SEM/EDS analysis and identification at the OGS Geosciences Laboratory in Sudbury, Ontario. SEM/EDS (scanning electron microscope/energy dispersive x-ray analysis) non-quantitatively indicates elements present in mineral grains.

The results of all the above mineralogical work, including 30 photomicrographs and an interpretation of the ore-types and predictive metallurgy of the six samples, are presented below.

SUMMARY

Microscopic gold grains were observed in three pyrite-arsenopyrite-bearing quartz vein samples, but most of the gold in these samples, and all of the gold in the two quartz-arsenopyrite vein samples examined, is sub-microscopic (“invisible”), occurring in the pyrite and arsenopyrite. Following is a summary of the main observations and conclusions of this study:

Sample 29151, Baker Vein (.231 opt Au, .92 opt Ag, .033% Cu, 2.08% Pb, .083% Zn)

Mineralogy: 80.5% quartz, 10.8% pyrite, 3.5% arsenopyrite, 4.0% galena

Gold-silver occurrence: 12 1-10 micron gold inclusions observed in pyrite; most gold almost certainly is sub-microscopic/solid solution in pyrite and arsenopyrite; silver is probably in galena

Predictive metallurgy: Options could be: 1) direct-shipping of Au-bearing silica flux; 2) roasting for Au-Ag recovery (loss of Pb); 3) Pb-Ag(-Cu) and pyrite-arsenopyrite-Au concentrates (flotation or gravity) shipped to, or produced at, Gaspé or Brunswick

Sample 29152, Baker Vein (.381 opt Au, 2.68 opt Ag, .098% Cu, 5.82% Pb, 4.09% Zn)

Mineralogy: 41% quartz, 40% pyrite, 1.7% arsenopyrite, 4.3% galena, 12.3% sphalerite

Gold-silver occurrence: 47 .2-9 micron gold inclusions observed in sulphides, mainly pyrite; SIMS (ion probe) grain analyses average 0.43 opt Au in pyrite and 2.20 opt in arsenopyrite; the bulk of the gold (microscopic + “invisible”) is in pyrite and arsenopyrite; silver is in galena

Predictive metallurgy: flotation of high-grade Pb-Ag(-Cu) concentrate, high-grade Zn concentrate (low recoveries), and pyrite-arsenopyrite-Au concentrate

Sample 29153, Mersereau Vein (.12 opt Au, 4.05 opt Ag, .04% Cu, 14.85% Pb, .46% Zn)

Mineralogy: 81.2% quartz, 2.5% pyrite, 6.0% arsenopyrite, 9.0% galena

Gold-silver occurrence: only 5 2-12 micron gold grains observed, 4 in galena and 1 in pyrite; considering the gold grade, submicroscopic gold must occur in the sulphides

Predictive metallurgy: clean, high-grade Pb-Ag(-Au) concentrate, and pyrite-arsenopyrite-Au concentrate, could be produced

Sample 29154, Marleau Vein (.202 opt Au, .140 opt Ag, .001% Cu, .021% Pb, .008% Zn)

Mineralogy: 88% quartz, 5% arsenopyrite, 5% carbonate

Gold occurrence: no gold observed under the microscope; the gold is in arsenopyrite and SIMS analyses of 12 arsenopyrite grains gave an average of 0.92 opt

Predictive metallurgy: options could be 1) direct-shipping Au-bearing silica flux (.20 opt Au); 2) good-grade arsenopyrite-Au, (gravity?) concentrate

Sample 29155, Greek Vein (.105 opt Au, .06 opt Ag, .001% Cu, .024% Pb, .001% Zn)

Mineralogy: 94% quartz, 6% arsenopyrite

Gold occurrence: as for sample 19154, but no SIMS analyses were done on 29155

Predictive metallurgy: same as sample 29154

Sample 29156, Oxidized Breccia (.10 opt Au, 10.0 opt Ag, .03% Cu, 3.1% Pb, .42% Zn)

Mineralogy: mainly Fe-Pb oxides and clay-mineral; 10% quartz.

Gold-silver occurrence: gold and silver must occur as sub-microscopic grains in the oxides

Predictive metallurgy: high recoveries by cyanide leaching; deeper sulphide breccia will differ

MINERALOGY AND INTERPRETATION

SAMPLE 29151, Baker Vein (see photomicrographs PM: 1-4)
(.231 opt Au, .92 opt Ag, .033% Cu, 2.08% Pb, .083% Zn)

Rock-Type (hand specimen)

Massive unbanded white milky quartz with patches, fine blebs, and irregular veinlets of fine to medium-coarse sulphides, mainly pyrite, with subordinate galena and arsenopyrite.

Mineral Percentage Estimates (volume percent averages for 4 polished thin sections)

pyrite	10.8	sphalerite	0.2	quartz	80.5
arsenopyrite	3.5	tetrahedrite	<.1	Fe,As min.	0.8
chalcopyrite	0.1	covell.-chalcoc.	tr	Fe,Pb Ox	tr
galena	4.0				

Mineral Relationships (see photomicrographs 1-4)

Quartz is fine- to medium-grained and exhibits moderate granulation and strain shadows (PM: 3); some very fine-grained quartz microveinlets cut the coarser quartz grains. Minor amounts of an unidentified fine-grained granular hydrothermal Fe-As oxide(?) (SEM analyses) occur in veinlets, clusters, and separate grains, in the quartz (PM: 3), as strings of fine crystals along quartz grain boundaries, and in finer veinlets that cut pyrite and arsenopyrite

The sulphides, in veinlets and clots, are fine-to coarse-grained and intimately intergrown with one-another. Some pyrite grains contain very fine inclusions and veinlets of galena (PM: 2), but most of the pyrite and galena are relatively coarse and inclusion-free (PM: 1, 2). Fine to coarse, commonly euhedral, arsenopyrite crystals are randomly scattered throughout the sulphides and quartz (PM: 1-4). Minor chalcopyrite, sphalerite and tetrahedrite are closely associated with pyrite (PM: 2, 4).

Occurrence of Gold

A total of 12 gold grains ranging in size from 1 to 10 microns (effective diameters), were observed in the 4 polished thin sections of sample 29151. This quantity of gold (and the quantities of microscopically-visible gold observed in the other vein samples studied) is not sufficient to account for the gold assays. The bulk of the gold is therefore submicroscopic ("invisible") and occurs in the pyrite and arsenopyrite, as was confirmed through ion probe (SIMS) analyses of pyrite and arsenopyrite grains in samples 29152 and 29154 (see SAMPLE 29152, and SAMPLE 29154, for the details and an interpretation of the ion probe analyses).

All 12 gold grains observed in sample 29151 are inclusions in pyrite; many of these gold inclusions have similar-sized attachments of galena, arsenopyrite, or sphalerite (PM: 4). The occurrence and size in microns of the 12 observed gold inclusions in pyrite is as follows:

12 au/py = 1u, 2u, 3u (4), 3.5u, 4u (2), 5u, 7u, 4x15u (=10u effective average diameter)

On the basis of rough calculations utilizing the average SIMS analyses for pyrite and arsenopyrite in samples 29152 and 29154, roughly 50% of the gold in sample 29151 (consisting of both microscopically-visible inclusions and “invisible” gold) may be hosted in the relatively abundant (10.8%) pyrite grains. Arsenopyrite grains constitute about 3.5% of the sample, but being a particularly good host for “invisible” gold, arsenopyrite may nevertheless carry roughly the same amount of the gold as pyrite. Galena is almost certainly the main carrier of the 0.92 opt silver in the sample.

Predictive Metallurgy

Sample 2915-type ore (.231 opt Au, with some Pb) could be directly roasted to free up the gold; lead would be lost. Alternately, a pyrite-arsenopyrite-Au (\pm galena) concentrate (flotation or gravity), possibly grading .5-1 opt Au could be produced and roasted or shipped to the Gaspé or Brunswick smelter. A separate lead concentrate, possibly with about 10-15 opt Ag, could be produced.

Sample 29152, also from the Baker Vein, has much higher pyrite and sphalerite, and lower arsenopyrite, than sample 29151. The metallurgical process chosen for the Baker Vein will have to be based on representative test samples and must also take into account the mineralogical characteristic of the other Lac Arseneault veins that are to be processed.

SAMPLE 29152, Baker Vein (see photomicrographs PM: 5-18)
(.381 opt Au, 2.68 opt Ag, .098% Cu, 5.82% Pb, 4.09% Zn)

Rock-Type (hand specimen)

Massive medium-to coarse-grained, crudely-banded pyritic sulphides including some sphalerite and galena, with subordinate milky white quartz patches.

Mineral Percentage Estimates (calculated %volume averages for 3 polished thin sections)

pyrite	40	sphalerite	12.3	quartz	41
arsenopyrite	1.7	tetrahedrite	0.0	sericite	tr
chalcopyrite	0.2	covell.-chalcoc.	tr	carbonate	0.5
galena	4.3				

Mineral Relationships (see photomicrographs 5-18)

Massive fine-to coarse-grained pyrite-rich sulphides containing sphalerite patches, quartz clots, subordinate galena, and minor scattered arsenopyrite crystals. Pyrite is mostly massive but some grains contain fine inclusions and veinlets of galena (PM: 11, 12, 14, 15), sphalerite (PM: 18) and chalcopyrite (PM: 14). Much of the sphalerite is riddled with fine inclusions of galena (PM: 5, 6) and chalcopyrite (PM: 7). Scattered arsenopyrite crystals are intimately associated with all the other sulphides and quartz (PM: 5, 6, 8, 10, 13, 18).

Quartz occurs in medium- to coarse-grained white clots and finer inclusions and veinlets in the sulphides. The quartz grains are partly granulated and possess strong strain shadows. Several percent of the quartz occurs as very fine-grained veinlets cutting the coarser quartz grains.

Occurrence of Gold

A total of 47 gold grains ranging in size from .2-10 microns (effective average diameter) were observed in the three polished thin sections of sample 29152, and many of these are shown in PM: 8-18. Most of these grains occur as inclusions in pyrite, but some are present in arsenopyrite, and a few are in the other sulphides. The occurrence of the 47 observed gold grains can be listed as follows:

32 au/py = .2u, .3u, .5u, .7u, 1u(5), 1.5u, 2u(3), 3u(2), 4u(7), 6u(4), 7u, 10u, .3ux4u,
2ux12u, 2ux16u, 4ux14u (ie – inclusions in pyrite)
6 au/aspery = .5u, 1u(2), 2u, 3u, 5u
2 au/py-ga = 1u, 1x7u (grains on pyrite-galena contacts)
3 au/aspery-sp = 2u(2), 3u
1 au/aspery-cp = 1u
2 au/ga = 1u, 2u
1 au/sp = 2u

In this high-pyrite sample, most of the gold (microscopic + “invisible”) occurs in the pyrite, with smaller but still significant quantities (possibly about one-third, using average SIMS analyses) in

arsenopyrite, and negligible amounts in the other sulphides. No gold grains were observed in quartz or on quartz grain boundaries.

The observed gold grains tabulated above are very fine, and their total volume is not nearly sufficient to account for the high gold assay reported for this sample (.381 opt). Because pyrite, and especially arsenopyrite, are the common carriers of sub-microscopic gold ("invisible" gold consists of submicroscopic <.2 micron gold grains and/or solid solution gold), a composite sample consisting of several pieces of sample 29152, and a similar composite sample of sample 29154, were sent to AMTEL laboratory for SIMS (ion probe) analyses of several of the pyrite and arsenopyrite grains (see AMTEL report 01-451). Twelve pyrite grains and 5 arsenopyrite grains were analysed in sample 29152 and they had an average gold content of 9.97 ppm (.29 opt) and 75.4 ppm (2.20 opt Au), respectively, and 12 arsenopyrite grains were analysed in sample 29154 and they averaged 31.38 ppm (.92 opt). These averages are somewhat lower than to be expected on the basis of rough calculations relating back to the sample assays; however, the number of grains analysed was insufficient to obtain true over-all averages for the quantities of gold in the pyrite and arsenopyrite.

The key findings of the microscopic and SIMS analyses are that pyrite and arsenopyrite are the major carriers of the gold. The metallurgical process chosen will be determined by this.

Predictive Metallurgy

Sample 29152 is high grade pyrite-rich Au-Ag-Pb-Zn vein-material with most of the gold occurring in pyrite. Flotation with good recoveries could produce a reasonably good-grade Pb-Ag(-Cu) concentrate (silver is almost certainly in the galena); due to the fine inclusions of galena and chalcopyrite in sphalerite, much zinc would be lost to the Pb-Cu-Ag concentrate, but an acceptable-grade zinc concentrate could be produced from the Cu-Pb-Ag circuit tailings. Based on the SIMS analyses for gold in pyrite and arsenopyrite (which are highly variable and too few to give representative averages), a pyritic concentrate with a few percent arsenopyrite grading about 0.5-1 opt Au could be produced (flotation or gravity) from the zinc tailings.

SAMPLE 29153, Mersereau Vein (see photomicrographs PM: 19-24)
(.118 opt Au, 4.05 opt Ag, .038% Cu, 14.85% Pb, .464% Zn)

Rock-Type (hand specimen)

Massive, fine-to medium-grained milky-white quartz with subordinate bands and blotches of medium- to coarse-grained galena-rich sulphides that include some pyrite and arsenopyrite.

Mineral Percentage Estimates (volume percent averages for 4 polished thin sections)

pyrite	2.5	galena	9.0	quartz	81.2
arsenopyrite	6.0	sphalerite	0.5	sericite	<0.1
chalcopyrite	0.2	tetrahedrite	0.2	apatite(?)	0.1

Mineral Relationships (see photomicrographs 19-24)

All sulphides are medium-to coarse-grained (PM: 19, 21-22, 25), but some galena chalcopyrite, tetrahedrite and sphalerite occur as fine veinlets and irregular inclusions in arsenopyrite and pyrite (PM: 19-23). About 90% of the quartz is coarse and strongly fractured and strained, and about 10% occurs as roughly-aligned very fine-grained veinlets, stringers, and irregular zones in the coarser quartz.

Occurrence of Gold and Silver (see PM: 19-20, 23)

A total of 5 grains of gold having the following sizes and occurrence were observed in the 2 polished thin sections:

1 au/py = 12u; 3 au/ga = 2u, 6u, 8u; 1 au/ga-py = 8u

As is the case for the other samples studied, the amount of microscopic gold observed is insufficient to account for the gold assay (.118 opt) and it is assumed that, like samples 29152 and 29154, appreciable gold is almost certainly present in arsenopyrite and pyrite (though probably at lower levels than in these two higher grade samples).

The relatively high silver assay (4.05 opt) for sample 29153 is probably due to its high content of silver-bearing (in solid solution) galena. Silver is probably also present in the minor tetrahedrite present.

Predictive Metallurgy:

Sample 29153 is mineralogically similar to sample 29151 from the Baker Vein, except that the relative quantities of pyrite and sphalerite have been reversed and there is less gold but more and higher value galena with a higher content of silver. A clean high-grade Pb-Ag (-Cu) concentrate with roughly 10-20 opt Ag, and an arsenopyrite-pyrite-gold concentrate, possibly with more than 1 opt Au, could be produced.

SAMPLE 29154, Marleau Vein (see photomicrographs PM: 25-27)
(.202 opt Au, .140 opt Ag, .001% Cu, .021% Pb, .008% Zn)

Rock-Type (hand specimen)

Medium-grained milky-white quartz with irregular patches of orange-fawn-coloured carbonate, and possessing minor fine arsenopyrite crystals occurring in clusters, veinlets, and irregular accumulations in the quartz.

Mineral Percentage Estimates (volume percent averages for 3 polished thin sections)

pyrite	0	quartz	88	sericite	1.8
arsenopyrite	5	carbonate	5	clay	0.2
galena	tr				

Mineral Relationships (see photomicrographs PM: 25-27)

Very fine- to medium-grained arsenopyrite crystals, generally accompanied by crystalline carbonate and/or sericite-clay, occur in clusters in quartz (PM: 26), as strings along quartz and carbonate grain boundaries (PM: 25), in very fine quartz microveinlets, and in crudely banded crystal agglomerations consisting of both fine and coarser arsenopyrite (PM: 27).

The granular quartz gangue is mainly medium-to coarse-grained and is granulated and strongly strained (PM: 25), but some very fine-grained quartz-arsenopyrite-sericite veinlets cut the coarser quartz.

Occurrence of Gold

Detailed microscope “traversing” of the 3 polished thin sections at magnifications of 100x – 500x failed to detect any microscopically visible gold grains. A composite sample consisting of several chips from sample 29154, including part of the remainder of the pieces used for making the three polished thin sections, was sent to AMTEL laboratory for analyses of arsenopyrite grains. Twelve arsenopyrite grains were analyzed and their average gold content is 0.92 opt Au (see AMTEL Report 01-451). Discussions with AMTEL indicated that their differentiation of “coarse” and “cataclastic” grains was essentially a differentiation of coarse and fine grains; finer grains tend to have higher gold contents.

Rough calculations utilizing the estimated arsenopyrite and quartz contents, and the SIMS grain analyses, gave a calculated grade of 0.10 opt Au for sample 29154, about half the actual value. It is probable that a larger number of analyses would indicate that more grains have much higher gold contents than most of those analyzed.

Predictive Metallurgy:

The ore-type represented by sample 29154 is essentially arsenopyrite and quartz. It could be roasted, or else an arsenopyrite concentrate grading >1 opt could be produced (by gravity?) for roasting or direct shipping. Alternately, the vein-material itself could be shipped directly to the Gaspé smelter as a gold-bearing flux.

SAMPLE 29155, Greek Vein (see photomicrographs PM: 28-29)
(.105 opt Au, .06 opt Ag, .001% Cu, .024% Pb, .001% Zn)

Rock-Type

Massive milky-white fine to coarse quartz with irregularly-shaped sinuous dark grey veinlets, stringers and patches consisting of fine-grained arsenopyrite crystals.

Mineral Percentage Estimates (volume percent averages for 2 polished thin sections)

pyrite	0	quartz	94	Fe,As min.	0.1
arsenopyrite	6	sericite	.3		

Mineral Relationships (see photomicrographs 28-29)

Most quartz grains are medium- to finely-coarse-grained with moderate to strong granulation as indicated by serrated grain boundaries and strain shadows (PM: 28). Fine-grained arsenopyrite crystals occur in veinlets and in some very fine quartz veinlets (PM: 28), and along quartz grain boundaries (PM: 29), commonly with very fine sericite; coarser euhedral arsenopyrite crystals occur in some of the veinlets and are widely scattered throughout the quartz (PM: 28).

Occurrence of Gold

As with quartz-arsenopyrite sample from the mineralogically-similar Marleau Vein (29154), no gold was observed in sample 29155. The gold is undoubtedly "invisible" occurring as submicroscopic inclusions and/or solid solution in the arsenopyrite.

Predictive Metallurgy

Metallurgical treatment of 29155-type ore could be the same as for 29154-type ore, but an arsenopyrite concentrate would be lower grade.

SAMPLE 29156, Oxidized Breccia Zone (see photomicrograph PM: 30)
(.103 opt Au, 10.02 opt Ag, .038% Cu, 3.06% Pb, .418% Zn)

Rock-Type (hand specimen)

Sample 29156 is a medium- to light-yellowish-brown, intensely oxidized and very porous rock composed of closely-packed, slabby to well-rounded, light yellowish-brown and medium-brown fragments of very fine-grained siliceous sediment (?) and a few fine quartz clasts in a sparse, very fine-grained brownish granular matrix.

There is a crude to distinct layering caused by the rough alignment of the elongated slabby fragments. As observed in the hand specimen and confirmed by microscope observations (below), none of the fragments has igneous granitic or porphyritic textures that characterize fragments in breccia pipes or dykes that are related to porphyry intrusive systems. The strong rounding of many of the fragments suggests that the rock may be either a fluidized structurally-controlled breccia (distal to an intrusive source?), or a poorly sorted sedimentary conglomerate/breccia.

Microscope Observations and Mineralogy (see Photomicrograph PM: 30)

All of the mineral components of the rock fragments and matrix, except for quartz (about 10% of the sample) and minor sericite and carbonate, are replaced by an extremely fine-grained mixture that probably consists of iron, lead, and zinc oxides, and subordinate clay (PM: 30). Most of the fragments have oxide selvages. As observed under the microscope, most of the oxidized fragments have extremely fine to fine-grained clastic textures and some show faint bedding; these appear to be sedimentary in origin (PM: 30). There are some highly oxidized extremely fine-grained fragments that could be of sedimentary or volcanic origin.

Occurrence of Gold and Silver

No gold or silver-bearing mineral grains were observed under the microscope. Both gold and silver must occur as sub-microscopic (<0.2 microns) grains in the oxides, having been freed from sulphides during oxidation.

Predictive Metallurgy

For oxidized and porous 29156-type breccia ore, high recoveries of gold and silver should be possible through cyanide leaching. The metallurgical treatment of the deeper unoxidized breccia ore from this zone will be entirely different as it will be determined by the occurrence of the gold and silver in the various primary sulphides and gangue minerals.

PHOTOMICROGRAPHS

Mineral Abbreviations, Formulae, SEM Analyses

py = pyrite = FeS_2

aspy = arsenopyrite = FeAsS

cp = chalcopyrite = CuFeS_2

sp = sphalerite = ZnS

ga = galena = PbS

cv-cc = covellite-chalcocite = $\text{CuS-Cu}_2\text{S}$

tt = tetrahedrite = $(\text{Cu,Fe,Ag})_{12}(\text{As,Sb})_4\text{S}_{13}$

au = native gold and/or electrum = AuAg – some of the noticeably more pale yellow grains observed may be electrum (<90% Au): detailed microanalysis of numerous grains would be required to determine the over-all gold content of the gold grains

qz = quartz

cb = carbonate

ser = sericite

f. g. = fine-grained

m. g. = medium-grained

c. g. = coarse-grained

Magnification Data

Magnifications (37x, 74x, etc) for the 2"x3" photomicrographs in this report:

37x Magnification ----- 1 cm = .260 mm = 260 u (microns) = 57 M (Mesh)

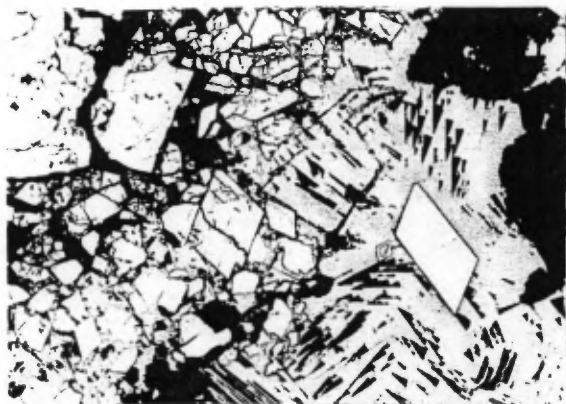
74x Magnification ----- 1 cm = .130 mm = 130 u = 114 M

148x Magnification ----- 1 cm = .065 mm = 65 u = 228 M

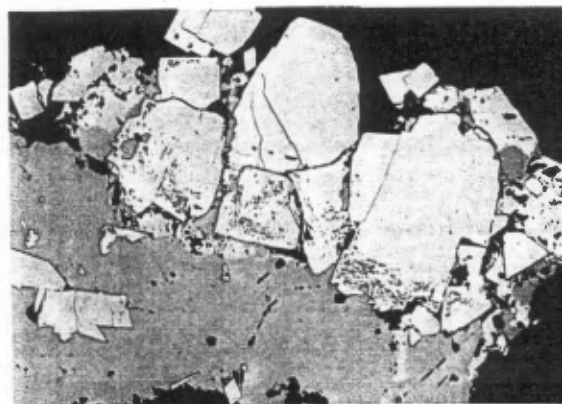
370x Magnification ----- 1 cm = .026 mm = 26 u = 570 M

740x Magnification ----- 1 cm = .013 mm = 13 u = 1140 M

Photomicrographs 1-6



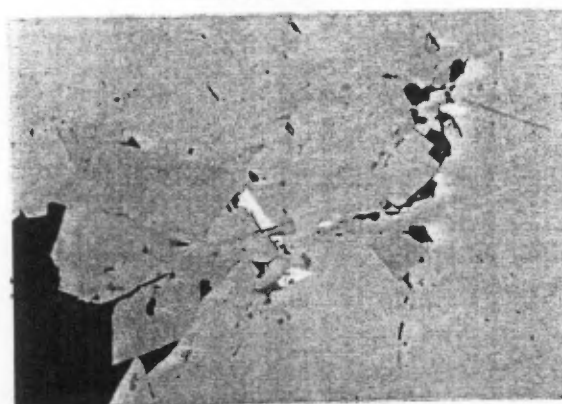
PM: 1



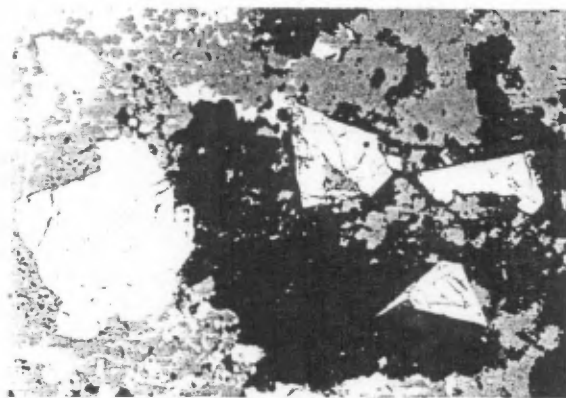
PM: 2



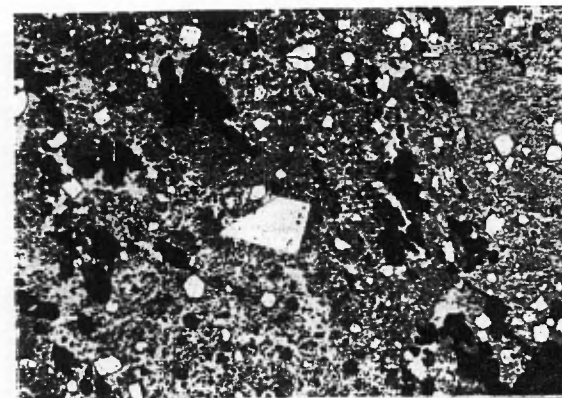
PM: 3



PM: 4



PM: 5



PM: 6

PM: 1, 29151, Baker Vein: ga (silvery-white) with triangular pits with white wedge-shaped inclusions of aspy; py (off-white) in qz (black) in upper-left (37x, refl. lt.)

PM: 2, 29151, Baker Vein: py crystals (top) with some fine ga inclusions; cp (yellow) intergrown with some tt (small light grey grains, right); ga with white aspy crystal inclusions (lower left); qz (black) (74x, refl. lt.)

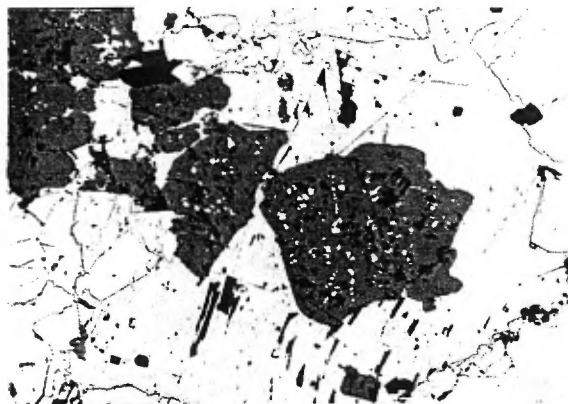
PM: 3, 29151, Baker Vein: veinlet and clots of granular Fe-As mineral (coloured), and wedge-shaped aspy crystals (black, left), both in strained and granulated qz (white/ yellow/blue/black) (74x, X-pol. transm. lt.)

PM: 4, 29151, Baker Vein: 6 au/py = 4x15u, 7u (+ga), 5u, 4u, 3u (2); faint aspy xls (white - left); some small cp (yellow - ie - with aspy on left) and sp (grey - upp. rt., in crack) inclusions in py; qz & pits (black) (370x refl. lt.)

PM: 5, 29152, Baker Vein: sp with inclusions of f. g. ga and c. g. py (left); aspy xls in qz (right) (74x, refl. lt.)

PM: 6, 29152, Baker Vein: sp with inclusions of v.f.g. ga, f.g. py, white aspy xl, and qz (black) (74x, refl. lt.)

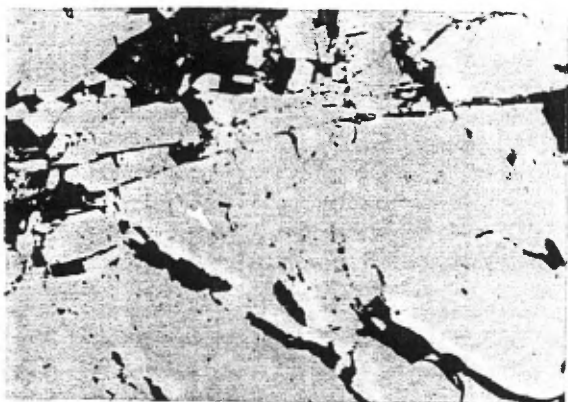
Photomicrographs 7-12



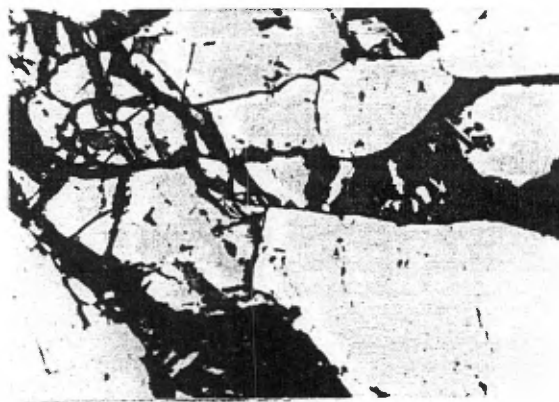
PM: 7



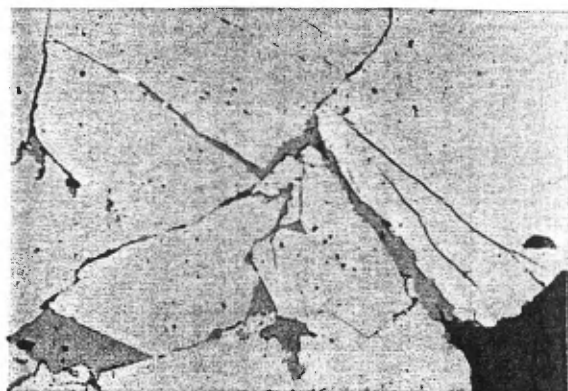
PM: 8



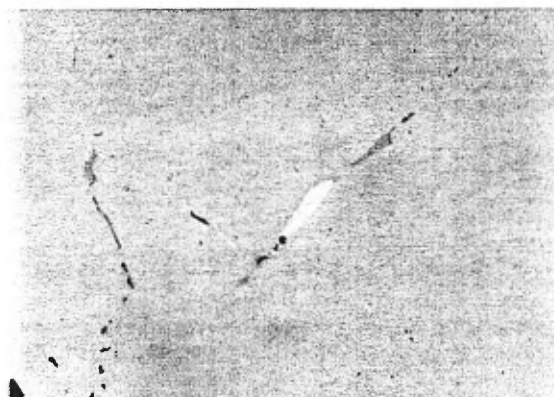
PM: 9



PM: 10



PM: 11



PM: 12

PM: 7, 29152, Baker Vein: sp (grey) with f.g. cp inclusions (chalcopyrite disease); sp is largely enclosed in ga (triangular pits) which is surrounded by py grains; minor qz (black) (74x, refl. lt)

PM: 8, 29152, Baker Vein: sp (grey - top half) with inclusions of cp (yellow), ga (silvery) and qz (black); aspy crystals intergrown with ga (bottom half); 1 au/ga = 2u (370x, refl. lt.)

PM: 9, 29152, Baker Vein: 1 au/py = 6u; black = qz & pits (370x, refl. lt.)

PM: 10, 29152, Baker Vein: 3 au/aspy = 1u, 3u, 5u; aspy (white), py (pale yellow), qz & ox (black) (370x, refl. lt.)

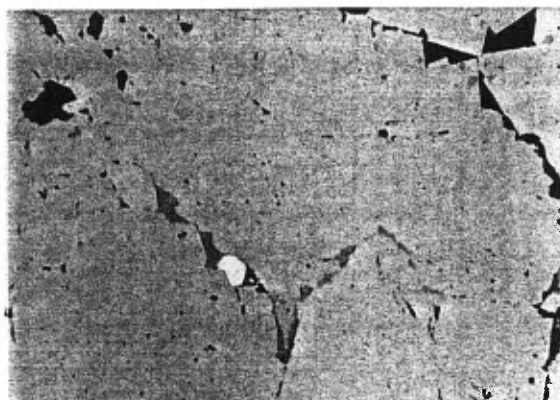
PM: 11, 29152, Baker Vein: ga veinlets in py; 2 au/py+ga = 1x7u, 1u (370x, refl. lt.)

PM: 12, 29152, Baker Vein: 2 au/py = 2x16u, .3x4u; some fine ga inclusions in py (540x, refl. lt.)

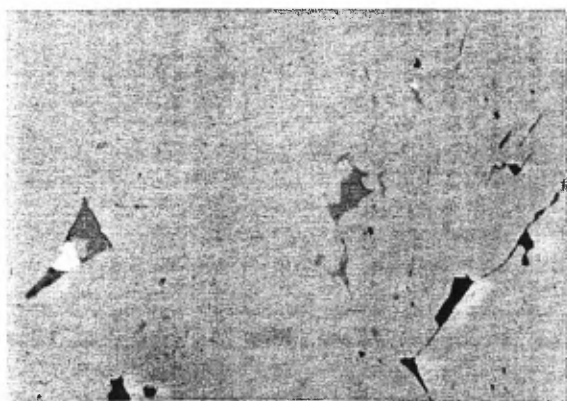
Photomicrographs 13-18



PM: 13



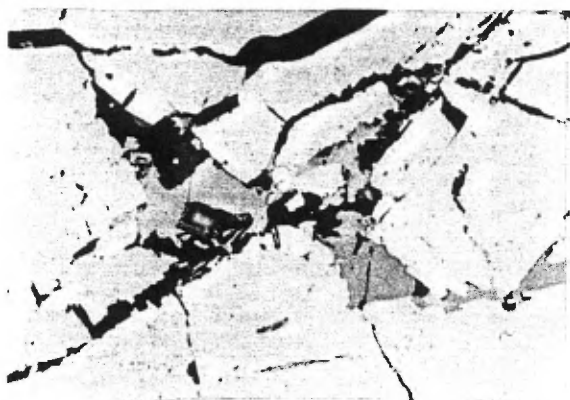
PM: 14



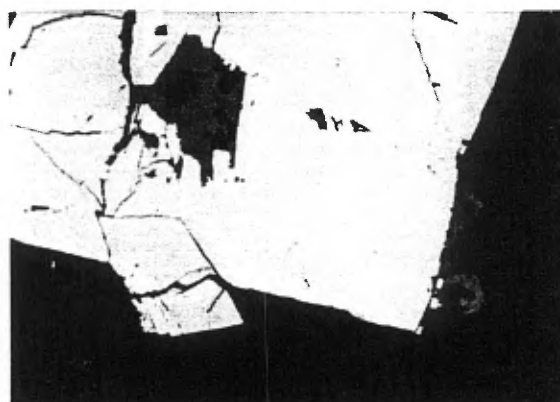
PM: 15



PM: 16



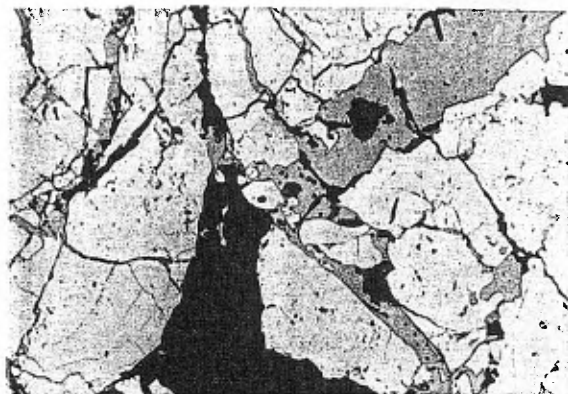
PM: 17



PM: 18

- PM: 13, 29152, Baker Vein:** aspy grains (off-white) possessing cracks filled with qz (dk. grey) and cp (yellow-upper center); gold grains, cv (blue), cp (yellow) and sp (grey) occur along left edge of aspy; the black areas are qz; $1\text{ au}/\text{aspy}+\text{cp}+\text{sp} = 3\text{u}$, $1\text{ au}/\text{aspy}+\text{cp} = 1\text{u}$ (this gold grain is in the aspy and abuts a cp veinlet) (740x, refl. lt.)
- PM: 14, 29152, Baker Vein:** au (=10u), ga (lt. grey), cp (yellow) and qz (black) inclusions in pyrite (370x, refl. lt.)
- PM: 15, 29152, Baker Vein:** 1 au(=4u)-cp-ga inclusion in py; another au/py=.7u; sev. ga inclusions (740x, refl. lt.)
- PM: 16, 29152, Baker Vein:** 6 au/py = 6u (tarnished rim), 3u, 2u, 1.5u, 1u, .5u; ga (grey) inclusions (740x, refl. lt.)
- PM-17, 29152, Baker Vein:** 1 au/sp = 2u; cp (yellow), ga (lt. grey), and qz & ox, all in (370x, refl. lt.)
- PM-18, 29152, Baker Vein:** large aspy grains (white) possessing sp in veinlets, as inclusions, and along its edge; 2 au grains occur in a sp veinlet ($2\text{ au}/\text{aspy}+\text{sp} = 2\text{u}$, 2u); black is qz (370x, refl. lt.)

Photomicrographs 19-24



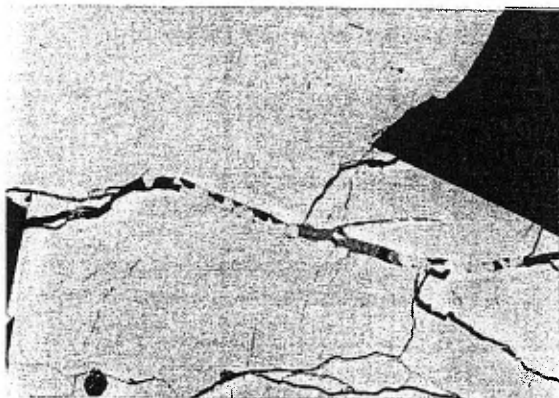
PM: 19



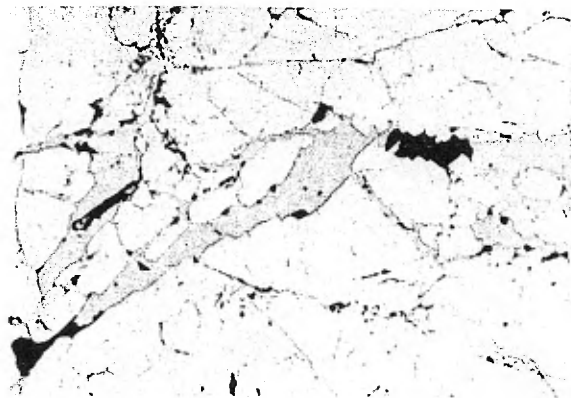
PM: 20



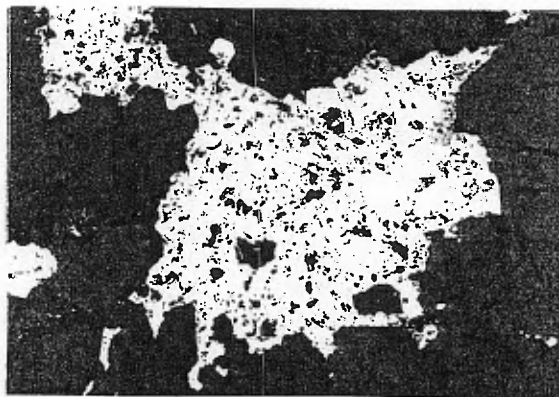
PM: 21



PM: 22



PM: 23



PM: 24

PM: 19, 29153, Mersereau Vein: py with veinlet and interstitial ga & qz; 1 au/py = 10u (148x, refl. lt.)

PM: 20, 29153, Mersereau Vein: au grain shown in PM: 19, magnified; a tt (medium grey)-ga (light grey) inclusion adjoining the top of the au grain is clearly visible (740x, refl. lt.)

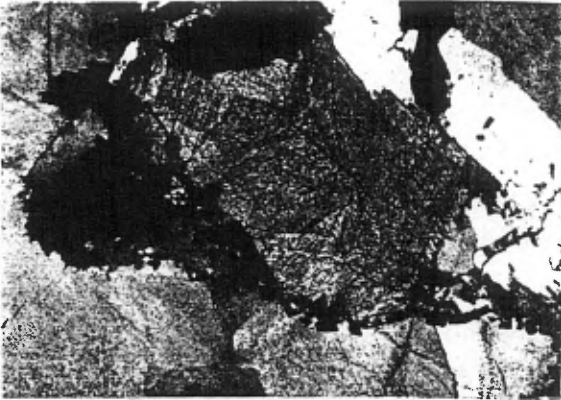
PM: 21, 29153, Mersereau Vein: coarse aspy (wedge-shaped-center, top) and py (off-white), in qz (black); some ga inclusions in py (left); fine tt-cp-qz veinlet in aspy (top, see PM: 22); minor cp (yellow) in qz (148x, refl. lt.)

PM: 22, 29153, Mersereau Vein: cp-tt (grey)-qz (black) veinlet shown in PM: 21, magnified (370x, refl. lt.)

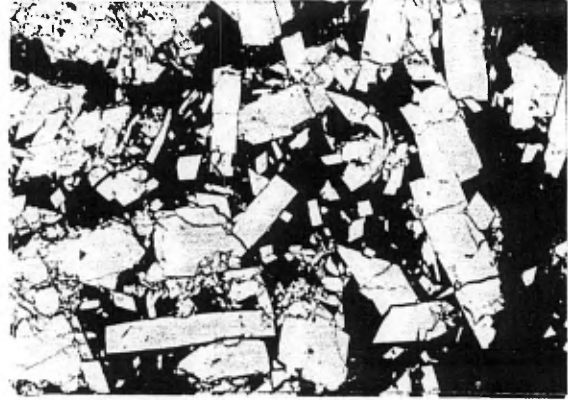
PM: 23, 29153, Mersereau Vein: py (off-white), ga (light grey), and qz (black); au inclusion in py (1 au/ga = 6u) (148x, refl. lt.)

PM: 24, 29153, Mersereau Vein: tt (light grey) and cp (yellow) in qz (dark grey); some sp inclusions (grey) in cp; minor aspy grains (white) in qz (74x, reflected light)

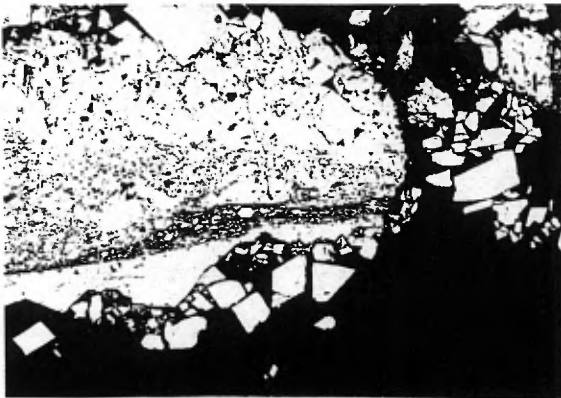
Photomicrographs 25-30



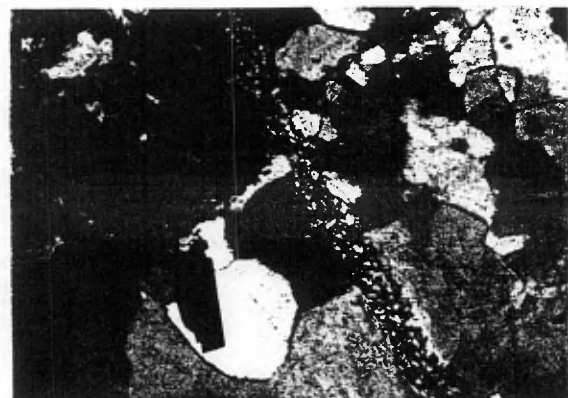
PM: 25



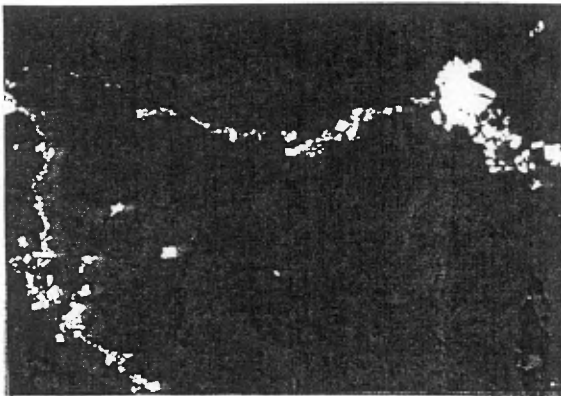
PM: 26



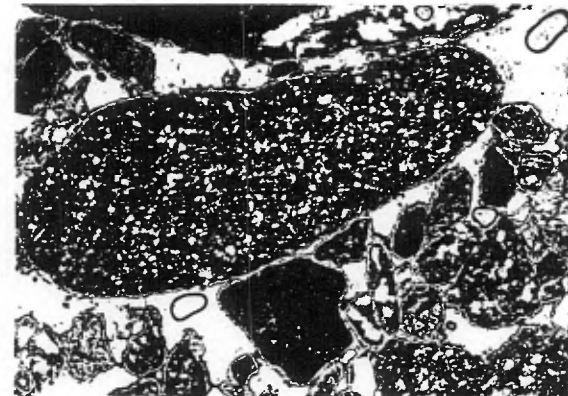
PM: 27



PM: 28



PM: 29



PM: 30

PM: 25, 29154, Marleau Vein: f.g. aspy grains (black) strung out along contacts between coarse cb crystal clots (brownish, center) and the surrounding strained qz grains (white, blues, grey, black) (74x, X-pol. transm. lt.)

PM: 26, 29154, Marleau Vein: aspy crystals in qz (SIMS analyses indicate that the finer grained aspy crystals have higher sub-microscopic gold contents than the coarser grains) (74x, refl. lt.)

PM: 27, 29154, Marleau Vein: aspy crystals, including a roughly-banded multi-stage, partly-fragmental(?) aggregate consisting of both fine and coarse grains, in qz (black); minor Fe oxide (top, grey); as stated, SIMS analyses indicate that the finer grained aspy has a higher gold content than the coarser grains (74x, refl. lt.)

PM: 28, 29155, Greek Vein: f.g. qz veinlet (blue & white) containing v.f.g. aspy (black) cuts f.g. aspy veinlet (NE-SW), in strained quartz grains (white, bluish, brownish, black); coarse aspy xl in (white) qz (37x, X-pol. transm. lt.)

PM: 29, 29155, Greek Vein: f.g. aspy crystals strung out along qz grain boundaries (37x, refl. lt.)

PM: 30, 29156, Breccia Zone: oxidized, porous breccia; rounded+angular clastic fragments (37x, pl. transm. lt.)

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MEMORANDUM

To: Peter Hawley, President/CEO, Scorpio Mining Corporation

From: David Carson, Carson GeoMin

Date: January 19, 2002

**Re: COMMENTS ON AMTEL REPORT 01/45 - REPORT ON
ION MICROPROBE (SIMS) ANALYSES FOR SUB-MICROSCOPIC
GOLD IN PYRITE AND ARSENOPYRITE IN VEIN SAMPLES
FROM THE LAC ARSENEAULT PROPERTY**

Following are the some observations and explanations regarding the ion microprobe analyses given in AMTEL Report 01-45, and how these analyses relate to the mineralogy and over-all occurrence of gold in the vein-samples studied:

- The SIMS gold values are highly variable: 0.53 - 42.3 g/t* (.015 - 1.23 opt*) for the 12 pyrite grains analysed in sample 29152, and 6.11 - 212.6 g/t (0.18 - 6.2 opt) for the 17 arsenopyrite grains analysed in sample 29152 and arsenopyrite-only sample 29154. An even wider range of values would almost certainly be obtained if more grains were analysed.
- There is no doubt that the pyrite and arsenopyrite are major carriers of microscopic gold + sub-microscopic inclusions and/or solid solution gold, in the two vein samples that were analysed by AMTEL. This undoubtedly also applies to the three additional vein samples (929151, 29153, 29155) that were not analysed by AMTEL. All of these samples were studied under the microscope (Carson GeoMin report, Jan 11, 2002), and the size range for the 64 gold grains observed is 0.2 - 12 microns, which is very fine, so that the total volume of gold represented by these grains is much less than would be expected from the assays. No coarser microscopic gold (12 - 80 microns) was observed, and there is reportedly no "visible gold" (>80 microns) in the Lac Arseneault veins

- Because of the high variability in gold content of the pyrite and arsenopyrite, it would be necessary to analyze a large number of grains from samples that are truly representative of each vein to accurately determine the average gold contents of pyrite and arsenopyrite for these veins. However, a cheaper and more accurate method would be to produce and analyze pure pyrite and arsenopyrite concentrates derived from carefully-assembled metallurgical test samples that are representative of the veins, or of different segments of the veins; this would give the average gold content of countless grains, and would include both the sub-microscopic gold (<0.2 micron inclusions + solid solution) and microscopic gold (>0.2 micron inclusions)
- Discussions with AMTEL regarding their observation that “cataclastic” pyrite and arsenopyrite grains possess higher gold than coarser non-“cataclastic” grains have revealed that their term “cataclastic” is probably misleading; the correct observation is simply that the finer grains, including unbroken (non-“cataclastic”) euhedral crystals with the typical wedge-shaped outlines, probably have higher gold contents than coarser grains; however, the coarser grains that were analysed still contain appreciable gold, so that this grain size/gold content difference is probably of little metallurgical importance
- AMTEL Figure 1 showing Time vs Intensity (seconds vs counts/sec.) of the ion beam for two of the grains analysed indicates that there is no change in gold content with depth of penetration of the beam into the pyrite grain (4 - 6 microns depth in 400 seconds @ 10-15 angstroms/sec), and little change with depth in the arsenopyrite grain (5 - 7.5 microns depth). However, the beam is averaging the gold content in a 20-micron diameter area, and each plot in Figure 1 represents only one grain; stronger gold zoning in both pyrite and arsenopyrite is common in other deposits and may therefore be present in other Lac Arseneault grains; however, as for the grain-size/gold content difference noted above, any such gradual zoning that might be present is probably of little metallurgical importance
- The importance of the AMTEL analyses is that they confirm the suspected presence of major amounts of sub-microscopic and/or solid solution gold in the pyrite and arsenopyrite of the Lac Arseneault veins, and that any successful metallurgical process must take this into account

* g/t = grams per tonne; opt = ounces per ton
 the sensitivity of the SIMS method is about 0.2 g/t (= 0.2 ppm = 0.006 opt)

SUBMICROSCOPIC GOLD IN PYRITE AND ARSENOPYRITE

for

David Carson, Carson GeoMin

Attn: David Carson

ABSTRACT

Twenty-nine sulphide particles, 12 pyrites/ 5 arsenopyrites from sample LA-29152 and twelve arsenopyrites from sample LA-29154, were analyzed with the ion microprobe (SIMS) in order to quantify their submicroscopic⁽¹⁾ gold content. Pyrite and arsenopyrite morphological types identified and analyzed are shown in Plate 1 and 2. Gold concentrations for each individual grain and averages per mineral morphological type are tabulated below. In-depth SIMS concentration profiles of pyrite and arsenopyrite are illustrated in Figure 1.

Table 1: Submicroscopic Gold Concentration in Pyrite and Arsenopyrite Crystal Structure

LA-29152					
Pyrite		Arsenopyrite			
Coarse		Cataclastic		Coarse	
Grain ID	Au (ppm)	Grain ID	Au (ppm)	Grain ID	Au (ppm)
60PC01	10.4	60PT08	14.2	60AC25	6.11
60PC02	26.1	60PT09	8.14	60AC26	6.74
60PC03	1.41	60PT10	7.55	60AC27	212.6
60PC04	1.36	60PT11	2.84	60AC28	125.5
60PC05	1.05	60PT12	42.3	60AC29	26.1
60PC06	0.53				
60PC07	3.81				
Average	6.4		15.0		75.4
±	6.5		12.6		73.0

LA-29154			
Arsenopyrite			
Coarse		Cataclastic	
Grain ID	Au (ppm)	Grain ID	Au (ppm)
60AC13	22.7	60AT15	19.1
60AC14	9.99	60AT20	29.1
60AC16	23.3	60AT23	80.1
60AC17	22.9	60AT24	70.7
60AC18	36.7		
60AC19	23.7		
60AC21	27.3		
60AC22	11.0		
Average	22.2		49.7
±	5.7		26.1

Note: the large variation in both pyrite and arsenopyrite gold concentrations, therefore in order to have a statistically meaningful data, more analysis have to be performed.

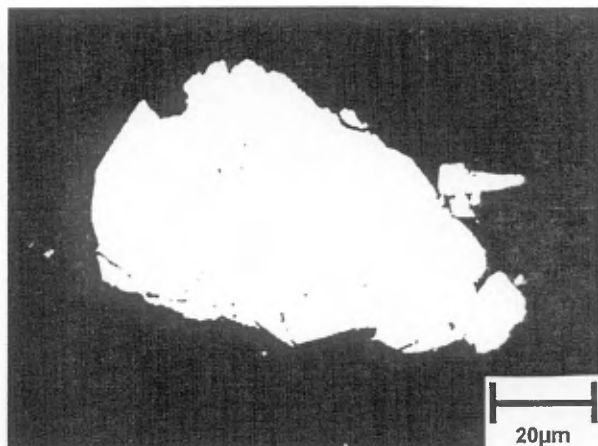
⁽¹⁾ submicroscopic gold = solid solution and colloidal size (<0.5µm) gold
 AMTEL report 01/45
 December, 21, 2001

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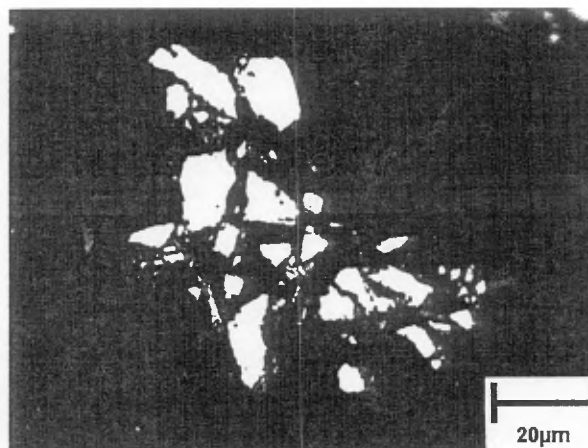
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Plate 1: Morphological types of pyrite

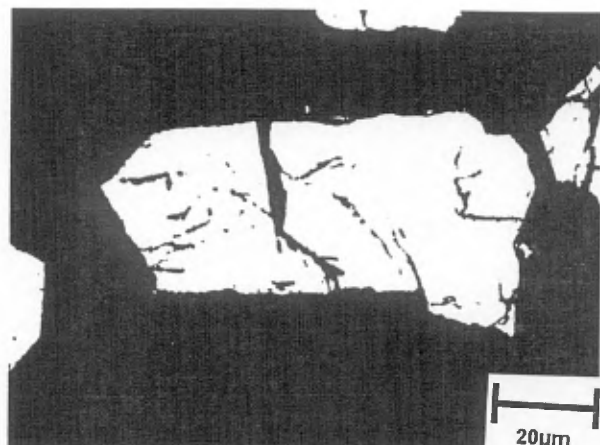


Coarse

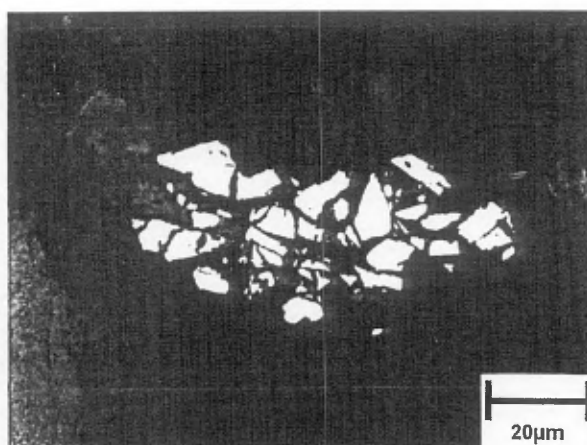


Cataclastic

Plate 2: Morphological types of arsenopyrite

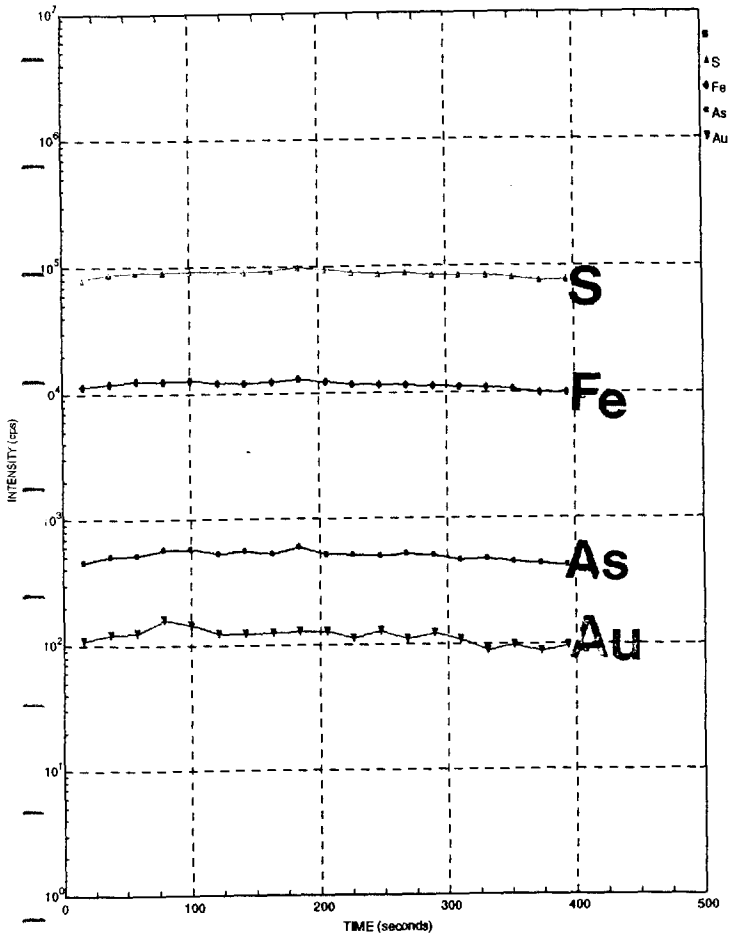


Coarse



Cataclastic

60PT08



60AC16

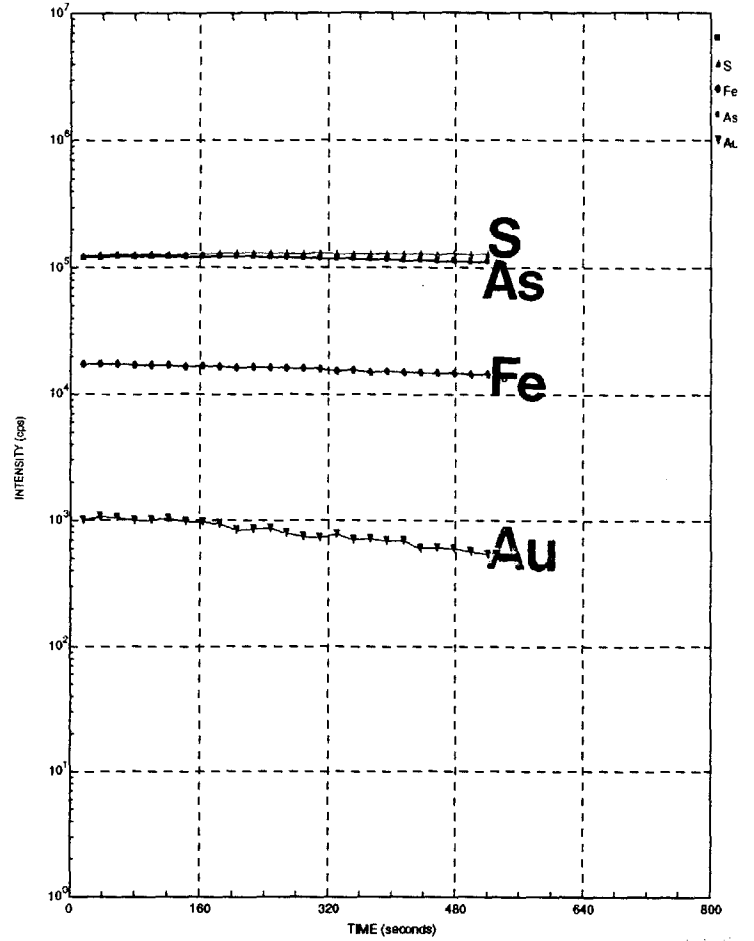


Figure 1: In-depth SIMS concentration profiles in selected pyrite (left) and arsenopyrite (right) particles.

REPORT

MINERALOGY OF SAMPLES FROM DONAT, DONAT WEST, AND LINE 4 WEST VEINS, LAC ARSENEAULT

David J. T. Carson, February 3, 2002

Carson GeoMin

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SCOPE

Three multi-piece 0.5 kg - 1 kg samples from two quartz-sulphide veins at the Lac Arseneault property of Scorpio Mining Corporation were submitted to David Carson by Peter Hawley, President/CEO of Scorpio, for mineralogical examination. A separate portion of each of these samples had previously been assayed for Scorpio Mining Corporation and gave the results listed below.

#29165, Donat Vein: <.002 opt Au, 0.40 opt Ag, 1.57% Cu, 1.88% Pb, .828% Zn
#29166, Line 4 West Vein: .009 opt Au, 0.02 opt Ag, .004% Cu, .005% Pb, .004% Zn
#29167, Donat West Vein: .002 opt Au, 0.02 opt Ag, .004% Cu, 0.117% Pb, .038% Zn)

Sulphide-bearing parts of the samples were marked for thin sectioning. A total of 10 polished thin sections were made from the three samples by the Dept. of Geology at the University of Toronto. The 10 polished thin sections were examined and scanned for gold grains under the optical microscope at magnifications of 50x to 500x (magnification of ocular x magnification of eyepiece). Sulphide and gangue mineral relationships were recorded and the mineral percentages were estimated.

The results of the above mineralogical work are presented below. Reference can be made to the Carson GeoMin report of January 11, 2002 (*Mineralogy and Interpretation of Gold-Bearing Samples from the Baker, Mersereau, Marleau, and Greek Veins, and the Oxidized Breccia, at Scorpio Mining Corporation's Lac Arseneault Project, Gaspé*) for further information on Lac Arseneault veins, and photomicrographs depicting sulphide and quartz textures, some of which are similar to those observed in the samples of this report.

MAIN OBSERVATIONS

Due to the low gold content of the three samples, no gold grains were observed under the microscope. Sample 29165 from the Donat Vein is quartz vein material with moderate amounts of partly oxidized Cu-Pb-Zn sulphides; similar material, if unoxidized, would be readily amenable to flotation; sample 29166 from Line 4 West Vein is a barren quartz vein sample with some arsenopyrite, and sample 29167 from Donat West Vein is strongly oxidized, largely barren quartz vein material.

MINERALOGY OF THE SAMPLES

SAMPLE 29165, DONAT VEIN

Sample Assay: <0.002 opt Au, 0.40 opt Ag, 1.57% Cu, 1.88% Pb, 0.828% Zn

Rock-Type (hand specimen)

The sample consists of massive unbanded white to brownish-yellow-stained fine to coarse quartz possessing clots and parallel sinuous veinlets of partly oxidized medium-grained sulphides (pyrite, chalcopyrite, chalcocite-covellite, galena, and sphalerite), and clots and irregular veinlets of pale yellowish-brown carbonate and deeper yellowish-brown oxides (the oxides also occur as surface coatings).

Mineral Percentage Estimates (volume percent averages for 4 polished thin sections)

pyrite	1.5	galena	2.0	quartz	82.0
arsenopyrite	0.0	sphalerite	2.5	carbonate	4.0
chalcopyrite	2.5	covell-chalcoc	1.5	ser-chlor-clay	0.3
				Fe, Cu, Pb, Zn Oxides	3.0

Mineral Relationships

Quartz is fine- to coarse-grained and exhibits extreme granulation and fine parallel (banded) strain shadows; fine quartz grains are strewn along coarser quartz grain boundaries and some very fine-grained quartz microveinlets cut the coarser quartz grains.

The sulphides, in veinlets and clots, are relatively coarse-grained and intimately intergrown with one-another; some sphalerite grains contain very fine inclusions of chalcopyrite (chalcopyrite disease). Some of the sulphide aggregates are moderately to strongly oxidized; this oxidation includes some hematite after chalcopyrite.

Predictive Metallurgy

Except for minor chalcopyrite disease in sphalerite, unoxidized copper-lead-zinc ore of 29165-type has medium to coarse sulphide intergrowths and would yield good-grade Cu, Pb, and Zn concentrates. Partial oxidation of this type of ore would make Cu-Pb-Zn-Fe separation difficult because of: 1) poor flotation of the metal-bearing oxides and carbonates; 2) Cu-ion activation of sphalerite and pyrite due to the presence of (soluble) covellite.

SAMPLE 29166, LINE 4 WEST VEIN

Sample Assay: 0.009 opt Au, 0.02 opt Ag, 0.004% Cu, 0.005% Pb, 0.004% Zn

Rock-Type (hand specimen)

Medium-grained milky-white fine to coarse quartz with some brownish-orange oxide-coated surfaces; the interior of the sample is largely unoxidized; some thin dark grey strings consisting of very fine arsenopyrite crystals follow quartz grain boundaries; at and near the sample surface the arsenopyrite has been converted to orange-brown oxide.

Mineral Percentage Estimates (volume percent averages for 4 polished thin sections)

pyrite	0	quartz	94	sericite	tr
arsenopyrite	1	carbonate	2	Fe, As Ox	3

Mineral Relationships

The quartz gangue is mainly medium-to coarse-grained, strongly granulated on grain edges, and strongly strained; very fine-grained interstitial quartz is a product of the granulation of coarser grains, and some of this very fine quartz occurs in veinlets cutting the coarser quartz grains.

Thin sinuous veinlets and strings consisting of very fine arsenopyrite crystals occur along quartz grain boundaries, and completely encircle some coarse quartz grains; some very fine arsenopyrite also occurs in microveinlets cutting the quartz, and very minor amounts occur disseminated throughout the finer granular quartz.

The arsenopyrite was precipitated in the vein after the quartz was deformed, along permeable granulated grain boundaries and fractures. However, the arsenopyrite in this sample, unlike the arsenopyrite in the Marleau and Greek vein samples studied previously, does not contain gold (see Carson GeoMin report of Jan. 11/02, including Photomicrographs PM:25, PM:28, PM:29)

Predictive Metallurgy:

The material represented by sample 29166 is essentially quartz with minor arsenopyrite. If there are any gold-bearing (and mineralogically-similar) zones in the Line 4 West Vein, the metallurgical process could be similar to that of the Marleau and Greek veins (Jan. 11 report referred to above).

SAMPLE 29167, DONAT WEST VEIN

Sample Assay: 0.002 opt Au, 0.02 opt Ag, 0.004% Cu, 0.117% Pb, 0.038% Zn

Rock-Type (hand specimen)

Light yellowish-brown rock with abundant yellowish-brown oxide, probably after sulphides, occurring as staining, coatings and fracture-fillings in coarse, yellowish-brown-stained but formerly white, granular quartz.

Mineral Percentage Estimates (volume percent averages for 2 polished thin sections)

pyrite	tr	quartz	93.0	ser-chlor	0.1
arsenopyrite	0	carbonate	0.1	Fe, Cu(?), As(?) Ox	7.0
chalcopyrite	<0.1				

Mineral Relationships

The granular quartz gangue is mainly medium- to coarse-grained and is granulated and strongly strained; there is some very fine-grained quartz in microveinlet networks, and in zones interstitial to the coarser grains. The oxides occur in irregular veinlets and clots.

Predictive Metallurgy

No meaningful interpretations can be made due to the extremely low grade and oxidized nature of the sample.