BLUE VEIN PETROGRAPHIC STUDY
ASSESSMENT REPORT
BLUE CLAIM

Keno Hill Area
Mayo Mining District, Yukon

NTS: 105M/14
Latitude/ Longitude: 63°54' N / 135°19' W
UTM (Zone 8): 7,086,150m N / 484,270m E

Work Period: August 25, 2009

Prepared by
David W. Tupper, P.Geo. (BC)

For (Owner/Operator):
Mega Precious Metals Inc.
Suite 401, 1113 Jade Court, Thunder Bay, Ontario, P7B 6M7

March 3, 2010

SUMMARY

The following report satisfies Yukon mineral property assessment filing requirements for work completed on the Blue Quartz Mining Claim in the historical Keno mining camp of the Mayo Mining District. The Blue claim is owned 100% by Mega Silver Inc.

On August 25, 2009, a total of one man-day field inspection was completed on the property. Sampling was limited to collection of a single specimen from the Blue Vein located in a shallow adit on the south cliff face Lightning Creek. The sample was submitted for ICP and FA analysis and petrographic study at total cost of $729.50. A total of 17 soil samples collected on the property in 2008 and not previous filed are also reported here, but not claimed under this assessment filing. A single 2008 soil sample was anomalous in zinc on the north-centre of the claim block (sample BLU_VE_S012 returned 0.5 ppm Ag and 529 ppm Zn).

Follow-up contour soil sample lines along both sides of the Lightning Creek canyon are suggested to further delineate mineralized veins similar to the Blue vein.

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1.0 INTRODUCTION

1.1 Introduction

The Blue property is located in north-central Yukon in the Mayo Mining District, roughly one kilometre west of the hamlet of Keno City. On August 23, 2008, Mega Precious Metals Inc. ("Mega") completed two man-days of work dedicated to the property performing soil sampling. The purpose of the work was to identify prospective zones for trenching and sampling.

1.2 Location and Access

The Blue property is roughly centered on coordinates 135°19' W, 63°54' N on NTS sheet 105M/14 (484150E, 7086270N; UTM NAD 83 Zone 8). The property is located roughly 1km southwest of the hamlet of Keno City, 40 km northeast of the town of Mayo, and 350 km north of Whitehorse, YT (Figure 1).

Access to the property is via the Klondike highway to Stewart Crossing, and then via the Silver Trail (Hwy. 11) to Mayo. The Silver Trail continues from Mayo 60 km to Keno City on good condition and well-used unpaved gravel. One kilometre from Keno City, Duncan Creek road leads directly to the northern margin of the property.

The property is bisected by Lightning Creek, the majority situated on the northwest flank of Sourdough hill, roughly at an elevation of 900m. Climate is sub-alpine with mixed spruce, poplar, and alder. Permafrost is commonly encountered very near surface (<15 cm).

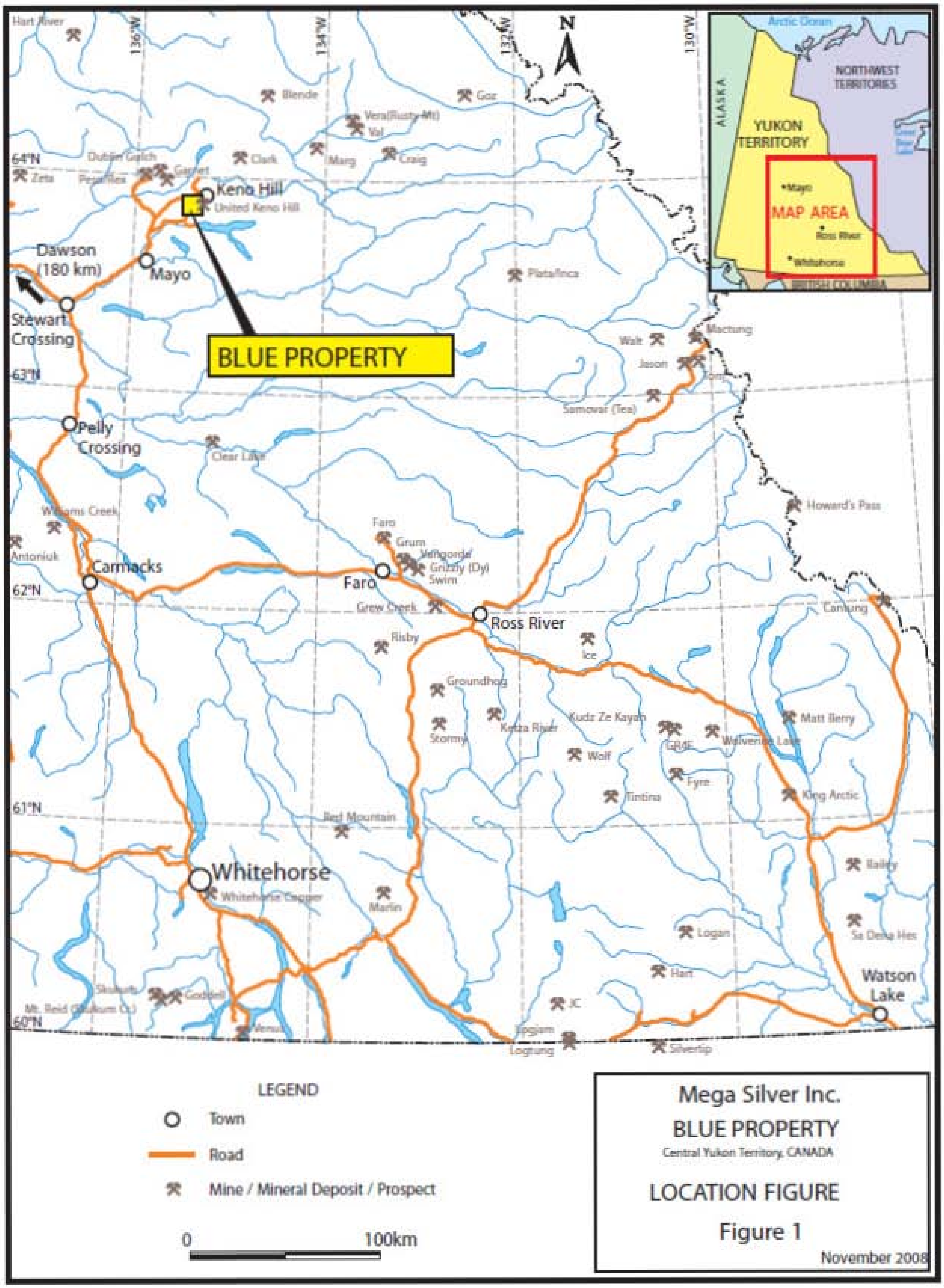
Outcrop exposure is poor, and mainly occurs in the Lightning Creek canyon running roughly east-west through the property. Most of the property is overlain by significant amounts of glacial sediments of unknown thickness.

1.3 Claim Status

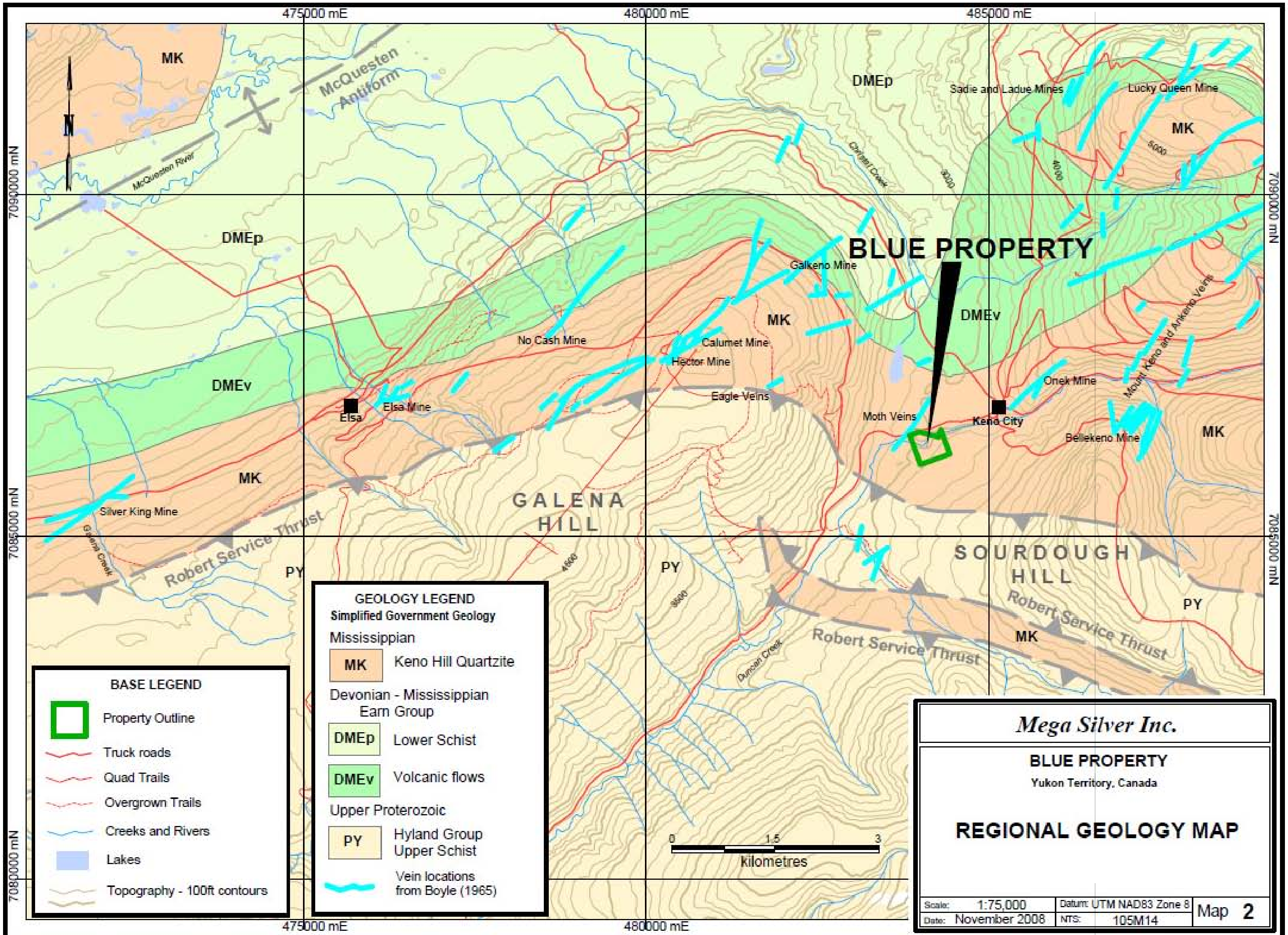
The Blue Quartz Mining claim (Grant Number: YC01993) is located in the Mayo Mining District and is 100% owned by Mega Precious Metals Inc. of Thunder Bay, Ontario (Figures 2 & 3). The claim totals 17.86 hectares and is in good standing until September 10th, 2010. Work described is expected to provide Mega an additional 5 years work credit and adjust the claim expiry date to September 10, 2015.

1.4 Work History

The property was first staked in the 1920s as Blue Jacket (Mann, 2000). A small adit was driven by Thomas Hinton only about 5m into the cliff on the south side of Lightning creek (Mann, 2000). United Keno Hill Mines Ltd. held the ground subsequently but no record is publicly available of their work. The claim lapsed in 1999 and was re-staked by Bill Mann as the Blue claim. Limited geochemical sampling was completed by Bill Mann in that year.



N
136°W
134°W
132°W
130°W
64°N
63°N
62°N
61°N
60°N
Arctic Ocean
NORTHWEST TERRITORIES
ALASKA
YUKON TERRITORY
MAP AREA
Mayo
Ross River
Whitehorse
BRITISH COLUMBIA
Hart River
Blende
Goz
Vera(Rusty Mt)
Val
Clark
Marg
Craig
Dublin Gulch
Zeta
Peso/Rex
Garnet
Keno Hill
United Keno Hill
Dawson
(180 km)
Mayo
Stewart
Crossing
BLUE PROPERTY
Plata/Inca
Mactung
Walt
Jason
Tom
Samovar (Tea)
Pelly
Crossing
Clear Lake
Howard's Pass
Williams Creek
Antoniuk
Carmacks
Faro
Grum
Vangorda
Grizzly (Dy)
Swim
Faro
Grew Creek
Ross River
Risby
Ice
Canlung
Groundhog
Stormy
Ketza River
Kudz Ze Kayah
GRAE
Wolverine Lake
Matt Berry
Wolf
Fyre
Tintina
King Arctic
Red Mountain
Bailey
Whitehorse
Whitehorse Copper
Marlin
Logan
Sa Dena Hes
Hart
Watson
Lake
JC
Goddell
Mt. Reid
Venus
Logjam
Logtung
Silvertip
LEGEND
Town
Road
Mine / Mineral Deposit / Prospect
0
100km
Mega Silver Inc.
BLUE PROPERTY
Central Yukon Territory, CANADA
LOCATION FIGURE
Figure 1
November 2008



BLUE PROPERTY
DMEp
DMEv
MK
PY
McQuesten Antiform
McQuesten River
Sadie and Ladue Mines
Lucky Queen Mine
Galkeno Mine
No Cash Mine
Calumet Mine
Hector Mine
Eagle Veins
Moth Veins
Keno City
Onek Mine
Bellekeno Mine
Mount Keno and Ankeno Veins
Elsa
Elsa Mine
Silver King Mine
Galena Creek
Duncan Creek
Christal Creek
GALENA HILL
SOURDOUGH HILL
Robert Service Thrust
475000 mE
480000 mE
485000 mE
7090000 mN
7085000 mN
7080000 mN
BASE LEGEND
Property Outline
Truck roads
Quad Trails
Overgrown Trails
Creeks and Rivers
Lakes
Topography - 100ft contours
GEOLOGY LEGEND
Simplified Government Geology
Mississippian
MK Keno Hill Quartzite
Devonian - Mississippian Earn Group
DMEp Lower Schist
DMEv Volcanic flows
Upper Proterozoic
PY Hyland Group Upper Schist
Vein locations from Boyle (1965)
0 1.5 3
kilometres
Mega Silver Inc.
BLUE PROPERTY
Yukon Territory, Canada
REGIONAL GEOLOGY MAP
Scale: 1:75,000
Date: November 2008
Datum: UTM NAD83 Zone 8
NTS: 105M14
Map 2

The claim lies less than 100 m southeast from the estimated surface trace of the Flame and Moth vein system (Boyle, 1965). While in limited operation by United Keno Hill Mines Ltd., the Flame and Moth veins produced roughly 1.5t of ore reporting 572 g/t Ag, 1.1 % Pb, and 0.9 % Zn.

During the 2008 field season, 17 GPS-located soil samples were collected on the Blue claim be Mega staff. Samples were preferentially collected from the B and C horizons using a soil auger at a nominal grid spacing of 100m by 100m, however widespread shallow permafrost impeded sampling. Samples were submitted for aqua-regia multi-element ICP-MS at Teck Cominco Global Discovery Labs in Vancouver, British Columbia. Analytical results are presented in Appendix III.

In June to September 2009, the Blue claim has been the site of a 15 person exploration tent camp operated by Mega as a base for its 2009 drill program on the nearby Spiderman, Eagle and Fisher properties located on the southeast flank of Galena Hill. The camp is operated according to Mega Silver's Class 3 Multiple Land Use Permit LQ00254.

1.5 2009 Work Program

On August 25, 2009, a total of one man-day field inspection was completed on the property. Sampling was limited to collection of a single specimen (from the Blue Vein located in a shallow adit on the south cliff face Lightning Creek (Figure 3). The sample was a 0.3m thick mineralized section of the quartz vein. The portal of Blue Vein adit is located at UTM 0484004mE and 7086333mN (Zone 8) at an approximate elevation of 893m. Chip sample 76459 was collected across a 0.23m width of the vein collected from the backs of the adit, about 1m from the portal. The sample was submitted to Acme Analytical Labs Ltd. in Vancouver, BC for 36 element ICP-ES and gold fire assay analysis (Analytical procedures and results presented in Appendices II & III respectively). A petrographic study was conducted on the sample by Micron Geological Ltd of North Vancouver, BC. Petrographic specimen preparation was completed by Vancouver Petrographics in Langley, BC. Total cost of the 2009 work was $729.00.

2.0 GEOLOGY AND MINERALIZATION

2.1 Regional Geology

The Blue claim is located within the Selwyn Basin of the northern Cordillera. The Cordillera is comprised of the North American miogeocline, a series of North American foreland basins, and a suite of allocthonous terranes which formed independently prior to collision with the North American platform (see review by Nelson and Colpron, 2007). The Selwyn basin was a deep-marine embayment related to a failed rift system which persisted throughout the Paleozoic (some authors indicate cessation during the Devonian – see Roots, 1997), and was in-filled from the weathering products of the high-standing Cassiar and McEvoy platforms (Nelson and Colpron, 2007). As the basin was uplifted and shallowed, a stable shelf environment was developed during the Devonian to Mississippian (Roots, 1997).

The major stratigraphic units making up the Selwyn Basin in the McQuestern River area are the Late Proterozoic to Cambrian Hyland Group, the Devonian to Mississippian Earn Group and the

Mississippian Keno Hill Quartzite (Murphy, 1997; Mair et al., 2006). The Earn Group and Keno Hill Quartzite were in turn intruded by a number of originally laterally-continuous mafic sills of metre-scale to hundred-metre-scale thickness (Murphy, 1997 and sources therein). Murphy (1997) estimates the age of these sills to be contemporaneous with the mid-Triassic Ogilvie Mountain sills of Mortensen and Thompson (1990) (Figure 2).

All stratigraphic units and the mafic sills have been significantly deformed by a number of major structures in the area of Keno Hill. One of these structures is the Jurassic to Cretaceous Robert Service thrust, which is more the 350 km wide with the uppermost strata being displaced by at least 150 km to the north (Thompson et al., 1990), although others argue the displacement is not completely northerly, and offset is limited to less than 100 km (Mair et al., 2006). This thrust sheet moved the Late Proterozoic Hyland Group rocks over top of the Mississippian Keno Hill Quartzite and the underlying Devonian-Mississippian Earn Group rocks (Murphy, 1997). The base of the thrust sheet separating these units is described by Murphy (1997) as "a discrete near-planar fault surface along most of its trace." (p. 56).

North of the Robert Service thrust but of roughly the same age, the Tombstone thrust sheet was thrust northward, and protrudes structurally beneath the Robert Service thrust (Roots, 1997; McTaggart, 1960). Both these structures were in turn folded by a period of transpressional deformation creating the McQuestern Antiform, which plunges to the southwest (Mair et al., 2006; Murphy, 1997). It has been suggested that all these thrust and folding events are genetically related to a common fold-and-thrust regime which produced the current structural configuration (Murphy, 1997).

All stratigraphic units have been intruded by a post-deformation suite of intrusive rocks related to the Tombstone suite of early- to late-Cretaceous age (Murphy, 1997). A second suite of intrusive rocks, the McQuestern intrusions (64-67 Ma, U-Pb zircon and monazite; Murphy, 1997), locally exploited the existing structural weakness in the axis of the McQuestern antiform (Murphy, 1997)

2.2 Keno Hill Geology

In the Keno Hill area, the stratigraphic units have been assigned local nomenclature due to the long history of the camp. In the Keno Hill area, the Hyland Group sedimentary package is represented by a package of quartz-mica schist, quartzite, graphitic schist, and minor limestone collectively referred to as the Upper Schist (Boyle, 1965). This unit lies atop, and in thrust fault contact with, the Keno Hill Quartzite which is dominantly comprised of thick- and thin-bedded quartzites (Boyle, 1965). Boyle (1965) has further sub-divided the Keno Hill Quartzite into 7 units or variable thickness. Three of these distinct sub-units are important with respect to mineralization and are 100m to 200m in thickness (Silver King member, Hector-Calumet member, and Galkeno member). These three members are dominantly massive to thick-bedded quartzite, which makes them good structural hosts to brittle fracturing and dilation.

The Keno Hill Quartzite in turn lies conformably atop the Lower Schist, which is the local expression of the Earn Group rocks. Some workers have recognized a distinct unit at the top of the Lower Schist composed of a chlorite-muscovite green-weathering phyllite subunit, believed to be a greenschist-grade felsic to intermediate metavolcanic rock (Boyle, 1957; Murphy, 1997). Other workers however did not separate this unit from the other rocks of the Earn Group sedimentary package at Keno Hill (MacTaggart, 1950; Boyle 1965). Without separating this unit, Boyle (1965) describes the package of Lower Schist rocks as an assemblage of graphitic, calcareous, and sericite schists, argillite, thin-bedded quartzite, phyllite, and slate, a description coinciding with those of other workers (Roots, 1997; Murphy, 1997). Locally Triassic greenschist-facies metamorphosed gabbro sills intrude the strata below the Robert Service thrust sheet, and typically exhibit lenticular shapes due to post-intrusion deformation (Roots, 1997).

2.3 Regional Metallogeny

The Selwyn Basin hosts the Elsa-Keno mining camp, which has been a major worldwide producer of silver. Between 1913 and 1989, the camp produced over 6600t of silver, 322 000t of lead, and 198 000t of zinc (Murphy, 1997; Cathro, 2006) from a series of sulphide-rich veins or vein-faults exploiting dilational zones related to sinistral deformation within the local strata. Productive veins occur dominantly within the Keno Hill Quartzite and to a lesser extent in the underlying Lower Schist (discussed below). Dominant ore minerals are galena, sphalerite, and tetrahedrite with quartz and/or siderite as gangue material (Boyle, 1965). Dominant orientation of the mineralized veins is roughly northeast-southwest, with a smaller number of cross-oriented vein faults roughly perpendicular to the dominant structures (Boyle, 1965). Some of the more well-known past producers in the area include Elsa, Silver King, No Cash, Hector, Calumet, Galkeno, Onek, Bellekeno, Sadie, Ladue, and Lucky Queen (Map 2).

2.4 Property Geology and Mineralization

2.4.1 Property Geology

The Blue claim roughly straddles the contact between the Keno Hill Quartzite to the north and the overthrust Upper Schist unit to the south. The canyon walls of Lightning Creek provide good exposures of phyllitic schist, chlorite-sericite schist and minor graphitic quartzite. Near the top of the south canyon wall, buff weathering phyllites observed at a distance may represent sediments of the Yusezyu Formation of the late Proterozoic to Cambrian Hyland Group. The upper slope areas are overlain by deep overburden.

2.4.2 Mineralization

The 0.4m wide, quartz-siderite Blue Vein follows a 017^{o} striking, 64^{o} east dipping fault extending approximately 25m up the south canyon wall of Lightning Creek. A low, 4m adit exposes the best part of the vein mineralization of comprised of 0.23m of quartz hosted para-magnetic pyrite, arsenopyrite, galena, sphalerite and chalcopyrite with 0.20m of siderite gangue in the footwall. A select grab reported by Mann (2000) assayed 6.44% Pb and 220.8 g/t Ag (sample: Blue-015). The vein is hosted in chlorite-sericite schist with a strong foliation striking 093^{o} and dipping south 32^{o}.

Photo 1: Blue Vein specimen

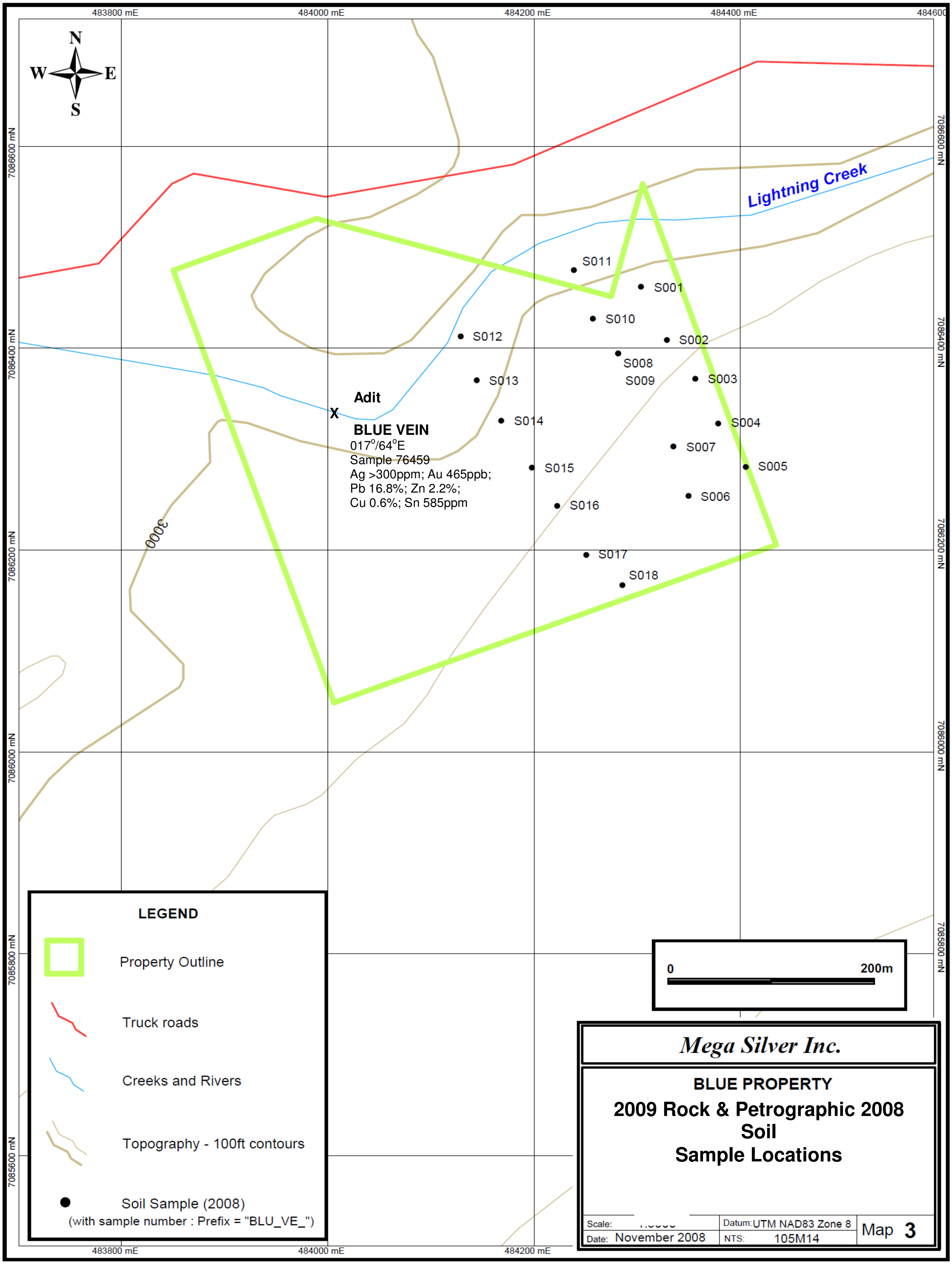

Photo 2: Orange weathering traces the Blue Vein extending above from the adit, above and left of sampler.

3.0 RESULTS

Chip sample 76459 taken from a 0.23m width of the Blue Vein assayed 465 ppb Au, 16.85% Pb, 2.25% Zn, 5,784 ppm Cu and 585 Sn. Silver was analyzed to a maximum of 300 g/t.(no over-limit analysis was completed).

The mineralogy of the Blue Vein is significantly more siliceous than typical veins in the Keno camp. The petrographic study of the Blue Vein specimen established three paragenetic sequences as interpreted by LeCouteur (2009). Minerals precipitated in the earlier sequence include quartz and siderite, which are the principal gangue minerals. They occur as mosaic aggregates with major minerals pyrite, arsenopyrite and sphalerite. Minor early stage constituents include pyrrhotite and cassiterite. Galena and chalcopyrite are likely intermediate stage minerals, as both are found as veinlets cutting arsenopyrite and pyrite. Marcasite replaces first generation pyrite and is therefore later. The latest stage is represented by siderite veinlets, which cut all minerals except late generation pyrite. The late pyrite is commonly euhedral, undeformed and unaltered.

The 2008 soils samples produced a low geochemical response across the sampled portion of the property (Figure 3). One multi-element anomaly was observed on the north-centre of the claim block, from a thin layer of soil atop the outcropping cliff above Lightning Creek. Sample BLU_VE_S012 (484129E, 7086412N; UTM NAD 83 Zone 8) returned 0.5 ppm Ag, 38.6 ppm As, 50.5 ppm Pb, and 529 ppm Zn.



483800 mE
484000 mE
484200 mE
484400 mE
7086600 mN
7086400 mN
7086200 mN
7086000 mN
7085800 mN
7085600 mN
N
W
E
S
Lightning Creek
S011
S001
S010
S002
S012
S008
S009
S003
S013
Adit
X
S014
S004
BLUE VEIN
017°/64°E
Sample 76459
Ag >300ppm; Au 465ppb;
Pb 16.8%; Zn 2.2%;
Cu 0.6%; Sn 585ppm
S007
S015
S005
S006
S016
3000
S017
S018
LEGEND
Property Outline
Truck roads
Creeks and Rivers
Topography - 100ft contours
Soil Sample (2008)
(with sample number : Prefix = "BLU_VE_")
0
200m
Mega Silver Inc.
BLUE PROPERTY
2009 Rock & Petrographic 2008
Soil
Sample Locations
Scale:
Datum: UTM NAD83 Zone 8
Date: November 2008
NTS: 105M14
Map 3

4.0 CONCLUSIONS AND RECOMMENDATIONS

Results from the 2008 soil sampling program were inconclusive. The single soil anomaly remains unexplained, and potentially open to the west and north. Exposure in the creek walls should also be explored and assessed based of reports from locals who describe an exposed quartz vein along the south bank of the creek roughly in the location of the Blue claim.

A limited follow-up program of detailed contour soil sampling, prospecting and geological mapping is recommended along the banks of Lighting Creek to identify additional exposed vein fault structures. Four to six man-days would be required to complete this work.

5.0 SUMMARY OF EXPENDITURES

Pertinent expenditures for the Blue claim total $729.00 and are summarized in Appendix I. Work on the property was conducted on August 25, 2009. This work included a total of one man-day. Additional costs incurred include mobilization and de-mobilization, field expenses, geochemical assay costs, vehicles, and report writing.

6.0 REFERENCES

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Thompson, R.I., Roots, C.F., and Mustard, P.S., 1990, Repeated Proterozoic passive margin extension influences Late Cretaceous folding and thrusting in southern Ogilvie Mountains, Yukon. *In* Geological Association of Canada/Mineralogical Association of Canada, Program with Abstracts, v. 15, p. A131

7.0 STATEMENTS OF QUALIFICATIONS

7.1 David W. Tupper

I, David W. Tupper of 1040 Aubeneau Crescent, West Vancouver, British Columbia, do hereby certify that:

1) I am a Professional Geologist working under contract to Mega Precious Metals Inc. of 401 Jade Court, Thunder Bay, Ontario, P7B 6M7.

2) I am a registered member in good standing of the Association of Professional engineers and Geoscientists of BC (No. 121813).

3) I am a 1985 graduate of University of British Columbia with a Bachelor of Science degree in Geology.

4) I have practised my profession continually since graduation, concentrating in mineral property exploration and Quaternary geology throughout British Columbia, the Yukon and Ontario, Nevada, Alaska, Mexico, South America and Asia.

5) I visited the Blue claim August 25, 2009 and wrote this report entitled "Blue Vein Petrographic Study, Assessment Report, Blue Claim", dated March 2, 2010.

6) I have spent several days in the field on the Blue property from April through August, 2009.

7) I do not own, or expect to receive any interest (direct, indirect or contingent) in the property described herein for the services rendered in the preparation of this report.

Respectfully Submitted,

PROFESSIONAL GEOSCIENTIST
PROVINCE OF BRITISH COLUMBIA
D. W. TUPPER

David W. Tupper, P/Geo.

March 3, 2010

APPENDIX I

Expenditures

Blue Claim
Statement of Expenses
March 3, 2010

Labour	**Mandays**	**Rate**	**Cost**
D.Tupper, P.Geo.	0.5	$600.00	$300.00
B.Peters, Geologist	0.5	$325.00	$162.50
			$462.50
Analytical (Acme Analytical Labs Ltd.)	**Units**	**Rate**	**Cost**
Rock	1	$32.50	$32.50
			$32.50
Petrographic Study			
Sample Prep (Vancouver Petrographics)	1	$45	$45.00
Petrographics (Micron Geological Ltd.)	1	$125	$125.00
			$170.00
Expense	**Mandays**		
Meals/Accom.	1.0	$100.00	$100.00
			$100.00
Reporting			
D.Tupper, P.Geo.	1.0	$600.00	$600.00
Total Expenses			**$1,329.00**

APPENDIX II

Sample and Analytical Procedures

2009 Sample Procedures

Rock samples were placed in plastic bags with the second duplicate sample tag, sealed with zap-straps, bagged in rice bags and shipped via Small's Expediting to Whitehorse and then Canadian Freightways to Acme Analytical Laboratories Ltd. in Vancouver. Samples were under the constant supervision of Mega field geologists.

Description	Process Details	Lab Code
All samples receive the same primary screen		
Sample Prep	Crush, split and pulverize rock to 200 mesh	R200
Pulp Splits	Mix pulps	MIXP
Standard Au (<1g)	Fire assay fusion Au by ICP-ES (30 g.wgt.)	3B
36 Element ICP	4 Acid digestion ICP-ES analysis (0.25 g.wgt.)	1E
Over-limits for Au, Ag, Pb, Zn and Cu were reanalyzed		
>200 g/t Ag	4 Acid digestion ICP-ES analysis. (0.5 g.wgt.)	7TD
>10,000 Pb, Zn, Cu	" " " " " " "	"

Sample UTM grid locations were fixed using a Garmin GPSmap 60CSx GPS unit.

2008 Soil Sample Procedures

The 2008 soil samples were collected using a hand auger and targeted "B" horizon soil. Samples were placed in a labelled Kraft geochemical paper envelope. Samples were dried and screened (-80 mesh) for analysis. All 2008 samples were collected and shipped to Global Discovery Labs in Vancouver, British Columbia, for analysis. Samples were dried, screened and analysed for 36 elements by ICP-MS with Au assay and re-analysis for over-limits samples.

Most samples were labelled to indicate the property location, sampler, and sample media. The designations for:

Location: Fisher-FIS; Blue-BLU; One-ONE; Spider-SPI ; Man-MAN; Eagle-EAG
Samplers: OS-Owain Shave, VE-Vashti Etzel,
Media: R-Rock, S-Soil and L-Silt.

Examples

BLU_VE_L004 Location [Blue]_Sampler [Vashti Etzel]_Media [soil] sample #

APPENDIX III

Assay Certificates

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.

1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: **Mega Precious Metals Inc.**
401 - 1113 Jade Court
Thunder Bay ON P7B 6M7 Canada

Submitted By:	Gord Yule
Receiving Lab:	Canada-Vancouver
Received:	September 21, 2009
Report Date:	October 26, 2009
Page:	1 of 4

CERTIFICATE OF ANALYSIS VAN09004371.1

CLIENT JOB INFORMATION

Project:	Eagle
Shipment ID:	8
P.O. Number	
Number of Samples:	70

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
7TD	27	4-acid Digestion ICP-ES Finish	0.5	Completed	VAN
7TD.1	1	4 Acid digestion ICP-ES analysis	0.1	Completed	VAN
R200	68	Crush split and pulverize 250g drill core to 200 mesh			VAN
XWSH	5	Extra Wash with Glass between each sample			VAN
3B	70	Fire assay fusion Au by ICP-ES	30	Completed	VAN
1E	70	4 Acid digestion ICP-ES analysis	0.25	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Mega Precious Metals Inc.
401 - 1113 Jade Court
Thunder Bay ON P7B 6M7
Canada

CC: David W. Tupper
Rory Ritchie
Brad Peters

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.
All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716

www.acmelab.com

Client: Mega Precious Metals Inc.
401 - 1113 Jade Court
Thunder Bay ON P7B 6M7 Canada

Project: Eagle
Report Date: October 26, 2009

CERTIFICATE OF ANALYSIS VAN09004371.1

	Method	7TD	7TD	7TD	7TD.1	WGHT	3B	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E
	Analyte	Pb	Zn	Ag	Pb	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr
	Unit	%	%	gm/mt	%	kg	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	MDL	0.02	0.01	2	0.02	0.01	2	2	2	5	2	0.5	2	2	5	0.01	5	20	4	2	2
75958	Drill Core					3.35	3	<2	16	822	4497	2.6	2	<2	2690	1.41	8	<20	<4	<2	<2
75959	Drill Core					2.02	5	<2	14	60	1716	0.7	14	3	652	1.35	13	<20	<4	4	21
75960	Drill Core					1.31	<2	<2	154	17	783	1.4	127	42	1172	8.67	13	<20	<4	<2	5
75961	Drill Core	0.26	11.23	44		1.01	186	<2	257	2682	>10000	45.4	38	21	5826	23.08	689	<20	<4	<2	4
75962	Drill Core					0.70	4	<2	11	<5	924	<0.5	8	<2	2026	2.16	6	<20	<4	<2	10
75963	Drill Core					0.57	54	4	33	26	7616	1.8	30	3	198	2.88	15	<20	<4	6	20
75964	Drill Core					0.50	<2	3	20	14	532	0.7	21	2	143	1.97	<5	<20	<4	7	21
75965	Rock					0.71	<2	<2	<2	<5	32	<0.5	4	<2	56	0.83	<5	<20	<4	<2	<2
75966	Drill Core					1.77	<2	<2	12	14	2032	0.6	9	<2	671	1.13	19	<20	<4	3	11
76459	Rock	>10	2.25	>300	16.95	2.07	465	<2	5784	>10000	>10000	>200	26	208	433	21.46	>10000	<20	<4	5	3

AcmeLabs

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www.acmelab.com

Client: **Mega Precious Metals Inc.**
401 - 1113 Jade Court
Thunder Bay ON P7B 6M7 Canada

Project: Eagle
Report Date: October 26, 2009

CERTIFICATE OF ANALYSIS VAN09004371.1

	Method	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E	1E
	Analyte	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	Al	Na	K	W	Zr	Sn	Y	Nb	Be
	Unit	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm
	MDL	0.4	5	5	2	0.01	0.002	2	2	0.01	1	0.01	0.01	0.01	0.01	4	2	2	2	2	1
75958	Drill Core	46.7	<5	<5	5	0.06	0.018	4	30	0.04	30	0.03	0.25	<0.01	0.08	<4	14	8	2	<2	<1
75959	Drill Core	17.8	5	<5	38	0.10	0.044	16	45	0.17	364	0.11	1.80	0.08	0.75	<4	29	6	4	3	<1
75960	Drill Core	7.2	12	<5	328	0.18	0.065	7	173	4.08	196	0.80	8.40	<0.01	1.01	95	50	11	17	8	1
75961	Drill Core	1682	33	48	20	0.14	0.026	6	26	0.16	85	0.05	0.90	0.02	0.21	<4	17	35	6	<2	<1
75962	Drill Core	8.2	<5	<5	20	0.11	0.036	10	30	0.13	236	0.09	1.01	0.03	0.33	<4	22	8	5	2	<1
75963	Drill Core	85.9	8	<5	81	0.17	0.079	20	74	0.66	111	0.23	3.36	0.06	1.19	<4	26	11	11	6	1
75964	Drill Core	5.2	8	<5	79	0.17	0.076	19	61	0.63	1070	0.22	3.32	0.06	1.21	<4	25	10	8	6	1
75965	Rock	<0.4	7	<5	4	0.13	0.011	3	11	0.10	4	0.03	0.31	<0.01	<0.01	<4	6	<2	<2	<2	<1
75966	Drill Core	24.4	<5	<5	21	0.07	0.029	10	34	0.07	175	0.05	1.11	0.03	0.41	<4	18	<2	3	<2	<1
76459	Rock	299.3	521	175	7	0.05	0.002	16	5	0.07	7	<0.01	0.24	<0.01	0.06	<4	4	585	<2	<2	1

CERTIFICATE OF ANALYSIS

VAN09004371.1

	Method	1E	1E
	Analyte	Sc	S
	Unit	ppm	%
	MDL	1	0.1
75958	Drill Core	<1	0.5
75959	Drill Core	3	0.9
75960	Drill Core	38	0.3
75961	Drill Core	2	20.3
75962	Drill Core	2	0.8
75963	Drill Core	7	1.5
75964	Drill Core	7	0.5
75965	Rock	<1	<0.1
75966	Drill Core	2	0.7
76459	Rock	<1	16.9

MEGASILVER INC.-X08

teckcominco
Global Discovery Labs

Ref/I.D.: KENO: BLU-VE-S1 - 10705
Report date: 30 OCT 2008
GDL Job No: V08-0827S

LAB NO	FIELD NUMBER	Au ppb	Wt Au gram
S0808525	BLU-VE-S001	<10	10
S0808526	BLU-VE-S002	<10	10
S0808527	BLU-VE-S003	<10	10
S0808528	BLU-VE-S004	<10	10
S0808529	BLU-VE-S005	<10	10
S0808529 rpt		<10	10
S0808530	BLU-VE-S006	<10	10
S0808531	BLU-VE-S007	<10	10
S0808532	BLU-VE-S008	<10	10
S0808533	BLU-VE-S009	<10	10
S0808534	BLU-VE-S010	<10	10
S0808535	BLU-VE-S011	<10	10
S0808536	BLU-VE-S012	<10	10
S0808537	BLU-VE-S013	<10	10
S0808538	BLU-VE-S014	<10	10
S0808539	BLU-VE-S015	<10	10
S0808539 rpt		<10	10
S0808540	BLU-VE-S016	<10	10
S0808541	BLU-VE-S017	<10	10
S0808542	BLU-VE-S018	<10	10
STD: ND6		542	10
STD: ND6		496	10
STD: ND6		482	10
STD: ND6		522	10
STD: ND6		554	10
STD: ND6		498	10
STD: ND6		494	10

I=insufficient sample
If requested analyses are not shown, results are to follow

ANALYTICAL METHODS

Au Aqua regia decomposition / solvent extraction / AAS
Wt Au The weight of sample taken to analyse for gold (geochem)

MEGASILVER INC.-X08

Ref/I.D.:	KENO: F1S-JS-S001 to MAN-VE-S052
Report date:	23 OCT 2008
GDL Job No:	V08-0823S

teckcominco
Global Discovery Labs

LAB NO	FIELD NUMBER	Ag ppm	Al %	As ppm	Ba ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm
S0808525	BLU-VE-S001	0.1	0.37	19.9	53	0.1	0.3	0.1	3.1	9.5	8.5	1.07	1.4	25	0.01	5	0.18	72	0.9	0.01	10	460
S0808526	BLU-VE-S002	0.2	0.39	20.9	99	<.1	0.2	0.4	6.2	9.9	25.5	1.27	1.3	<10	0.02	7	0.18	357	1.1	0.01	16	669
S0808527	BLU-VE-S003	0.2	0.33	20.2	51	<.1	0.1	0.2	4.1	8.5	23.6	1.02	1.1	10	0.01	7	0.15	144	0.8	0.01	13	595
S0808527 rpt		0.2	0.34	18.8	52	<.1	0.1	0.2	3.9	8.3	23.7	1.02	1.1	11	0.01	6	0.15	142	0.8	0.01	13	564
S0808528	BLU-VE-S004	0.2	0.92	10.7	285	0.2	0.3	0.5	10.0	22	34.2	1.92	3.3	33	0.04	12	0.34	255	0.7	0.01	24	551
S0808529	BLU-VE-S005	0.3	0.99	9.3	295	0.2	0.6	0.6	9.0	23	31.2	1.83	3.5	35	0.03	11	0.36	211	0.4	0.03	23	557
S0808530	BLU-VE-S006	0.2	0.72	8.5	199	0.2	0.7	0.8	8.1	16	28.7	1.79	2.4	27	0.04	9	0.30	255	0.4	0.01	21	737
S0808531	BLU-VE-S007	0.2	0.96	7.6	244	0.2	0.7	0.4	7.6	20	23	1.83	3.2	37	0.04	10	0.36	182	0.4	0.01	20	624
S0808532	BLU-VE-S008	0.2	0.44	19.3	135	<.1	0.1	0.3	5.7	11	23.5	1.28	1.5	11	0.02	8	0.19	240	0.9	0.01	16	534
S0808533	BLU-VE-S009	0.3	0.56	20.3	184	0.1	0.2	0.3	6.8	14	26.8	1.48	2.0	15	0.03	9	0.24	273	1	0.01	18	566
S0808534	BLU-VE-S010	0.2	0.46	16.5	67	0.1	0.2	0.4	4.9	12	28.8	1.26	1.5	<10	0.02	8	0.22	108	1	0.01	15	643
S0808535	BLU-VE-S011	<.1	0.72	9.5	153	0.1	0.3	0.1	5.2	16	13.3	1.7	2.7	26	0.03	10	0.29	115	0.7	0.01	12	547
S0808535 rpt		0.1	0.74	10.2	157	0.1	0.3	0.2	5.3	16	13.8	1.77	2.8	23	0.03	10	0.30	117	0.8	0.01	13	560
S0808536	BLU-VE-S012	0.5	3.54	38.6	119	0.6	0.3	3.4	85.4	40	303.6	6.33	2.8	59	0.08	64	0.33	880	1.6	0.02	246	856
S0808537	BLU-VE-S013	0.2	0.79	7.7	183	0.2	0.7	0.8	8.0	18	28.5	1.37	2.6	26	0.03	10	0.35	120	0.2	0.01	21	580
S0808538	BLU-VE-S014	0.4	0.74	21	191	0.1	0.6	0.7	10.8	19	32.1	2.2	2.7	26	0.03	9	0.34	1784	1.4	0.01	26	784
S0808539	BLU-VE-S015	0.2	0.72	9.2	201	0.1	0.4	0.5	6.9	17	21.6	1.27	2.5	24	0.02	9	0.29	139	0.7	0.01	18	639
S0808540	BLU-VE-S016	0.3	0.87	12.9	219	0.2	0.7	0.6	7.4	20	27.9	1.81	3.0	31	0.04	9	0.33	397	0.5	0.01	20	624
S0808541	BLU-VE-S017	0.3	1.08	14.1	281	0.2	0.5	1.0	12.9	25	32.7	2.11	3.7	86	0.04	11	0.41	297	0.8	0.02	29	655
S0808542	BLU-VE-S018	0.2	0.85	8.8	224	0.1	0.4	0.4	7.7	19	22.1	1.49	3.1	32	0.03	10	0.32	159	0.5	0.01	18	665
STD: MS2		0.2	2.04	20.4	83	5.5	0.1	0.4	12.5	34	131.5	3.02	7.2	63	0.28	24	0.59	527	12.5	0.03	30	503

I=insufficient sample

If requested analyses are not shown, results are to follow

ANALYTICAL METHODS

GROUP 1BA ICPMS: 36 element package digested in hot reverse aqua regia.

MEGASILVER INC.-X08

Ref/I.D.:	KENO: F1S-JS-S001 to MAN-VE-S052
Report date:	23 OCT 2008
GDL Job No:	V08-0823S

LAB NO	FIELD NUMBER	Pb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sr ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm
S0808525	BLU-VE-S001	13.2	<.05	0.4	1.3	0.9	11	<0.05	1.9	<.01	<.1	0.5	14	0.2	2.0	48
S0808526	BLU-VE-S002	17.3	<.05	0.8	1.7	<.5	7	<0.05	2.4	<.01	<.1	0.2	13	0.3	3.8	60
S0808527	BLU-VE-S003	14	<.05	0.7	1.6	<.5	6	<0.05	2.2	<.01	<.1	0.4	12	0.3	3.6	64
S0808527 rpt		13.8	<.05	0.7	1.5	<.5	6	<0.05	2.1	<.01	<.1	0.3	11	0.1	3.3	58
S0808528	BLU-VE-S004	24.7	<.05	0.4	4.6	0.5	25	<0.05	5.2	<.01	<.1	2.8	33	0.3	8.4	98
S0808529	BLU-VE-S005	34.7	0.12	0.3	4.7	1.4	50	<0.05	5.8	<.01	<.1	3.1	31	0.2	9.0	99
S0808530	BLU-VE-S006	25.2	0.19	0.4	3.6	1.2	47	<0.05	4.5	<.01	<.1	2.9	24	0.3	7.6	101
S0808531	BLU-VE-S007	31.2	0.11	0.3	4.0	1.0	50	<0.05	4.8	<.01	<.1	3.0	27	0.4	6.8	107
S0808532	BLU-VE-S008	14.8	<.05	0.7	2.1	<.5	7	<0.05	2.5	0.01	<.1	0.4	16	0.2	4.7	52
S0808533	BLU-VE-S009	16.9	<.05	0.7	2.6	<.5	8	<0.05	2.9	0.01	<.1	0.4	20	0.2	5.3	59
S0808534	BLU-VE-S010	15.9	<.05	0.7	1.9	0.6	7	<0.05	2.5	<.01	<.1	0.5	15	0.2	4.3	57
S0808535	BLU-VE-S011	10.7	<.05	0.2	2.7	<.5	19	<0.05	3.3	<.01	<.1	0.6	26	0.3	4.4	47
S0808535 rpt		11.2	<.05	0.3	2.7	<.5	19	<0.05	3.4	<.01	<.1	0.6	27	0.6	4.4	46
S0808536	BLU-VE-S012	50.5	0.06	0.8	10.5	1.8	19	<0.05	37.2	<.01	<.1	16.9	19	0.3	32.3	529
S0808537	BLU-VE-S013	25.1	0.10	0.3	3.6	1.4	49	<0.05	4.8	<.01	<.1	1.6	24	0.2	7.2	104
S0808538	BLU-VE-S014	22.6	<.05	0.6	3.5	1.2	37	<0.05	3.9	<.01	<.1	1.4	25	0.3	7.0	96
S0808539	BLU-VE-S015	18.3	0.06	0.4	3.2	0.9	30	<0.05	3.8	<.01	<.1	3.6	25	0.3	6.1	80
S0808540	BLU-VE-S016	28.7	0.10	0.4	4.1	1.6	48	<0.05	4.6	<.01	<.1	2.7	29	0.2	7.0	97
S0808541	BLU-VE-S017	25.6	0.10	0.4	4.5	1.7	39	<0.05	5.2	<.01	<.1	3.4	34	0.2	8.3	131
S0808542	BLU-VE-S018	21.5	<.05	0.3	3.7	<.5	24	<0.05	4.3	<.01	<.1	1.9	28	0.2	6.8	80
STD: MS2		21.9	<.05	0.2	5.9	<.5	10	<0.05	10.6	0.05	0.3	2.7	38	2.3	9.6	122

I=insufficient sample

ANALYTICAL METHODS GROUP 1BA ICPMS: 36 element package digested in hot reverse aqua regia.

APPENDIX IV

2008 Soil Sample Location Summary

Sample ID	Northing	Easting	Elevation
BLU_VE_S001	7086460.95	484303.63	945.1
BLU_VE_S002	7086408.12	484328.83	954.8
BLU_VE_S003	7086369.72	484356.35	964.6
BLU_VE_S004	7086325.4	484378.59	961.9
BLU_VE_S005	7086282.33	484405.34	965.6
BLU_VE_S006	7086253.71	484349.78	968.5
BLU_VE_S007	7086302.66	484335.04	955.4
BLU_VE_S008	7086394.75	484281.58	964.9
BLU_VE_S009	7086394.75	484281.58	964.9
BLU_VE_S010	7086429.31	484257.04	946
BLU_VE_S011	7086477.43	484238.56	938.6
BLU_VE_S012	7086411.67	484128.89	937.7
BLU_VE_S013	7086368.24	484144.4	940.1
BLU_VE_S014	7086328.16	484168.16	950.2
BLU_VE_S015	7086281.67	484197.88	952.8
BLU_VE_S016	7086243.72	484222.41	962.1
BLU_VE_S017	7086195.12	484250.62	945.2
BLU_VE_S018	7086165.18	484285.67	973.2

APPENDIX V

Petrographic Report on Seven Samples from the Eagle Project, Galena Hill, Yukon
P.C. Le Couteur, Ph.D, P.Eng. Micron Geological Ltd. North Vancouver, BC

(Condensed: Blue Vein Specimen Description Only)

PETROGRAPHIC REPORT
on
SEVEN SAMPLES

from the
EAGLE PROJECT
GALENA HILL, YUKON

to

Mega Precious Metals Inc.
401 Jade Court
Thunder Bay, Ontario
P7B 6M7

Summary

Three core samples of the Eagle Vein, one of the Blue Vein, and one core sample of sulphidic schist were examined. Major sulphides include **pyrite**, **marcasite**, **arsenopyrite**, and **sphalerite**, with some samples containing **chalcopyrite** and **galena**, and some contain small amounts of **cassiterite**, **stannite-kesterite** and **pyrrhotite**. Gangue minerals include **siderite**, **quartz**, **sericite**, **rutile** and **limonite**.
Two rock samples were examined, one was confirmed as a slighltly altered **aplite** of approximately granitic composition and another, now a foliated amphibolite, probably originally was a **basic igneous rock**.

by

P.C.Le Couteur, Ph.D, P.Eng

Micron Geological Ltd,
4900 Skyline Dr., North Vancouver,
BC, V7R 3J3
Vancouver, BC
1 December, 2009

INTRODUCTION

This report concerns 5 sulphide-bearing samples from veins and 2 rocks and was requested by D. Tupper, consultant to Mega Precious Metals Inc. The samples are from Mega Precious Metals "Eagle Project", located at Galena Hill, Yukon. The objective of this petrographic study was to identify the minerals present and comment on the paragenesis of the minerals. The samples studied are listed in Table 1.

Polished thin sections of the samples were observed by stereo microscope and transmitted / reflected light microscopes, and minerals of interest analyzed on an AMRAY 1810 scanning electron microscope equipped with an EDAX "Genesis" energy-dispersive X-ray analyzer. As samples were not carbon - coated and standards were not used these analyses are semi-quantitative.

Abbreviations used in photomicrographs are as follows: **PPL**=plane polarized light, **XPL**=crossed polars, **INC**=incident light. **REF**=reflected light, **FOV** = field of view (photo width in mm). Many figures show the same area with different types of images to illuminate different features. The field of view is noted on the lower right of micrographs and the sample no (1 to 7) in the lower left.

Table 1 Identification of samples

Sample #	**Type**	**DDH**	**Depth m**	**From**	**logged mineralogy**
DT09-TS-0**1**	Core	D09EE-01	346.9	Eagle Vn	Sph-Py-Aspy-Po?-Ga?
DT09-TS-0**2**	Core	D09EE-01	351.1	Bio schist	Dissem Po-Aspy
DT09-TS-0**3**	Core	D09EE-02	284.6	Eagle Vn	Py-Sph-Ga-Qtzite Bx
DT09-TS-0**4**	Core	D09EE-02	273.6	Eagle Vn	Py-Po
DT09-TS-0**5**	Rock			Blue Vn	Py-Po-Aspy-Cpy-Ga
DT09-TS-0**6**	Rock			Eagle	Aplite?
DT09-TS-0**7**	Core	D09EE-05	48.4	Eagle	Gabbro?

Samples are referred to in this report as samples 1 to 7 .

An overall view of the sulphide samples is shown as Figure 1, and the 2 igneous rocks as Figure 17. Following the descriptions of the sulphide samples the 2 igneous rocks (samples 6 and 7) are briefly described.

Figure 1 . Scan of sulphide-bearing samples to give an overall impression. Glass slides are 46 mm wide. Red patches (eg 3) are sphalerite, yellow (eg 1) is mainly pyrite and marcasite, pale grey (eg 5) is arsenopyrite . Quartz and siderite gangue are colourless and translucent (eg 1). Sericite in 2 is also translucent.

GEOCHEMISTRY

Some analyses provided by Mega Precious Metals of intervals from which the sectioned samples come from are listed in Table 2. It is speculated that the Ag may be mainly in substitution in galena, since no Ag minerals were noted, and from examination of the samples and EDX analyses of various minerals Pb is contained in galena, Zn in sphalerite, Cu mainly in chalcopyrite, Mn in siderite, and As in arsenopyrite. In and Cd rise with Zn levels and are probably both carried in sphalerite, with Cd^{2+} likely in substitution for Zn^{2+}, while In^{3+} and Cu^{+} are likely in coupled substitution for Zn^{2+}. In some EDX spectra small peaks in galena were noted at energies where Ag is expected, and in sphalerite where Cd is located, and probably do reflect the presence of small amounts of these elements, but were not all reported because the peaks are too small to identify.

The geochemistry of Keno Hill Camp is discussed in considerable detail by Boyle (1965) in GSC Bulletin 111.

Table 2 Analyses of intervals that included the petrographic samples . (MegaPrecious Metals analyses)

Section	**no**	DT09-TS-**01**	DT09-TS-**02**	DT09-TS-**03**	DT09-TS-**04**
Hole	no	D09EE-01	D09EE-01	D09EE-02	D09EE-02
From	m	346.3	351.0	284.2	273.3
To	m	346.9	352.5	284.8	273.7
Interval	m	0.6	1.5	0.6	0.4
Au	ppb	993	1263	90	339
Au	g/T	<4	<4	<4	<4
Ag	ppm	53	16	114	>200
Ag	g/T	52		107	>300
Ag	g/T				535
Pb	ppm	2116	138	>10000	>10000
Pb	%	0.21		3.35	6.57
Zn	ppm	>10000	797	>10000	>10000
Zn	%	16.71		9.44	8.67
In	ppm	215	0	54	70
Cu	ppm	298	293	123	421
Mn	ppm	4994	7554	>10000	>10000
As	ppm	6684	3841	247	3691
Cd	ppm	2172	8	1027	1154
Sb	ppm	145	62	100	550

Values of interest are marked in green.

VEIN MINERALOGY

The following minerals were identified in the sulphide-bearing samples, with more abundant minerals shown in bold font.

Sulphides

Pyrite
Marcasite
Arsenopyrite
Sphalerite
Galena
Chalcopyrite
Pyrrhotite
Stannite-kesterite

Oxides

Cassiterite
Rutile
Limonite

Carbonates and silicates

Siderite
Quartz
Sericite
Chlorite

EDX analyses of many of the above minerals are listed in Table 3 and Table 4. Approximate mineral contents of the sections are shown in Table 5.

MINERAL PARAGENESIS

Some comments on paragenesis were requested by D.Tupper, and a crude time division into early, middle and late stages of mineral deposition is attempted below, with some notes on relationships between the minerals illustrated with figures, using especially observations of alteration, deformation and veining . Whether the 3 sections of the Eagle Vein and one of the Blue Vein are sufficiently representative is not known to the writer, but clearly it is a limited sampling from which to deduce a paragenetic sequence. It should also be noted that textural relations can be contradictory and some arbitrary choices on the most likely sequence have been made.

Boyle (1965) has presented a more detailed description of mineral paragenesis in the Keno Hill veins from a much larger sampling and a camp-wide perspective.

Early minerals

Quartz and **siderite** (Figure 2) are the principal gangue minerals, and they occur as mosaic aggregates along with major minerals **pyrite**, **arsenopyrite** and **sphalerite**, and all of these appear to be part of the earliest stage.

The early generation of **pyrite** commonly forms coarse shapeless masses that show a sequence of alteration effects (Figure 3) that begins with small dark specks and discolouration of the pyrite, and advances through development of **marcasite**, often as parallel rows of small cubic grains (Figure 3, 15). This pyrite contrasts with a later generation of pyrite that is typically euhedral, and has an unaltered smooth bright polished surface (Figure 3). **Pyrite** and **arsenopyrite** appear to be approximately contemporaneous, since in some samples the crystals are complexly intergrown (Figure 4), with some arsenopyrite actually enclosed in the pyrite (Figure 4, 5). Boyle (1965) commented that Keno Hill pyrite is generally free of arsenopyrite inclusions but still contains large amounts of As, and he concluded the As substitutes for S in the pyrite lattice. However, as noted above, some Eagle Project pyrites *do* enclose patches of arsenopyrite, and also EDX analyses of inclusion-free pyrite have not shown they contain As. Minor **pyrrhotite** forms small anhedral blebs enclosed in pyrite (Figure 5), arsenopyrite and sphalerite, and is probably also an early mineral. Some **chalcopyrite** (Figure 6, 7) is present as crystallographically-oriented blebs and streaks in sphalerite and may be an early mineral, but if the blebs are of replacement origin chalcopyrite could be part of the intermediate stage. **Cassiterite** occurs as euhedrons in sphalerite (Figure 8) and also as fractured anhedral grains (Figure 11) in quartz and siderite, and therefore appears to be an early mineral.

Intermediate stage minerals.

Some **chalcopyrite** and **galena** may have formed late in the early stage of deposition, but more likely in an intermediate stage, as both are found as veinlets cutting arsenopyrite and pyrite. **Galena** often occurs as interstitial anhedral scraps between other sulphides. In several samples there is evidence of deformation, which particularly shatters early-stage arsenopyrite, fractures early pyrite and to a lesser extent sphalerite (Figure 9), perhaps only reflecting differences in brittleness and capacity to absorb stress. Within these fractures **galena**, **chalcopyrite** and minor **pyrite** are deposited (Figure 10). **Cassiterite** may also be fractured, indicating it was also deposited pre-deformation, and the outer surfaces of cassiterite grains and also the fractures are coated with **stannite** (Figure 11), suggesting stannite is part of the intermediate stage or perhaps the late stage. **Marcasite** replaces first generation pyrite (Figure 3, 12, 15) and is therefore later, but also forms new sulphide within early siderite, often extending across the pyrite-siderite contact (Figure 12), and appears to be an intermediate stage mineral.

Late stage minerals

The latest stage is represented by **pyrite**, and **siderite** veinlets which cut all minerals (Figure 13, 14) except the late generation of pyrite, which is commonly euhedral, undeformed and unaltered. In sample 5 this late pyrite is closely associated with the siderite veins, which are lined by pyrite cubes, each with a surrounding moat of siderite (Figure 13). **Limonite** (Figure 15,16) after altered first generation pyrite is probably due to surface weathering, and is the only supergene mineral observed in these samples.

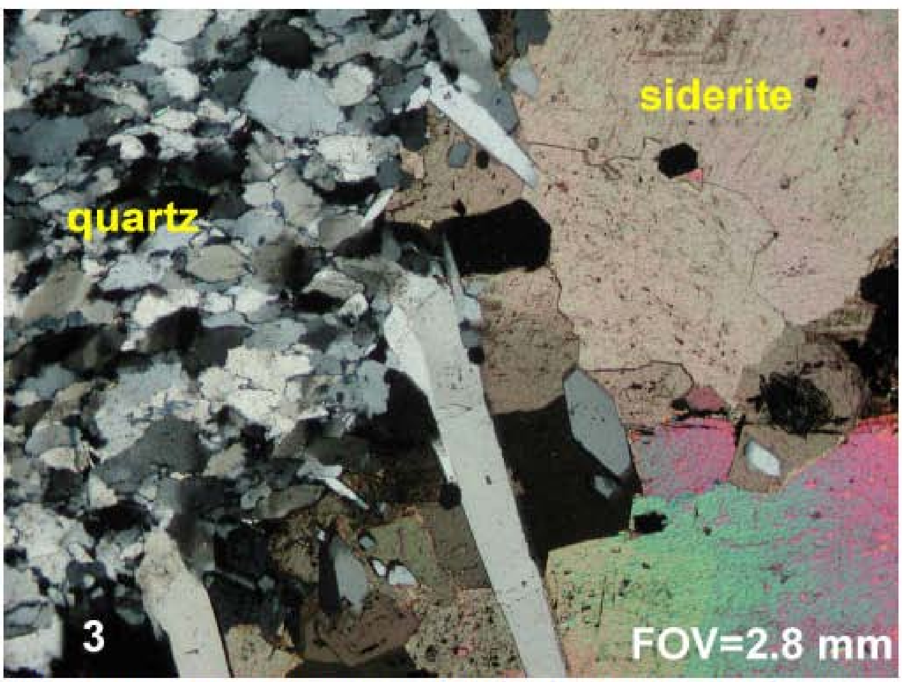

Figure 2. XPL . Fine-grained mosaic of quartz with several prisms extending into (later?) coarser siderite.

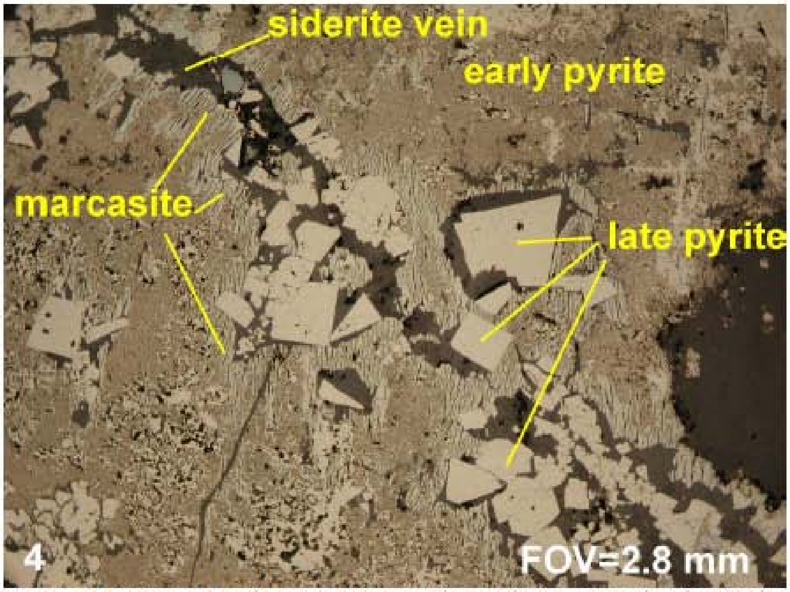

Figure 3 REF. Early altered looking pyrite, partially converted to striated marcasite, is cut by siderite vein with euhedral late pyrite along the margins.

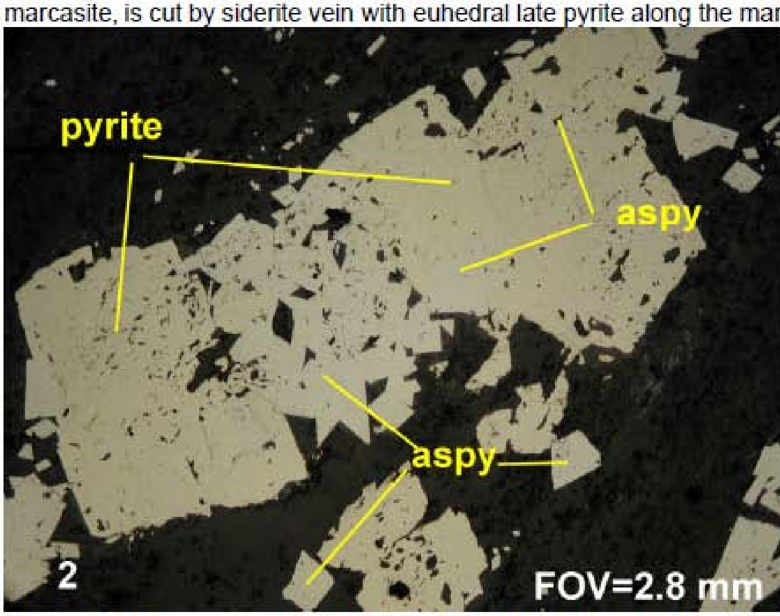

Figure 4. REF. Cubes of early pyrite and rhombic arsenopyrite partly intergrown, with some pale patches of arsenopyrite included within pyrite

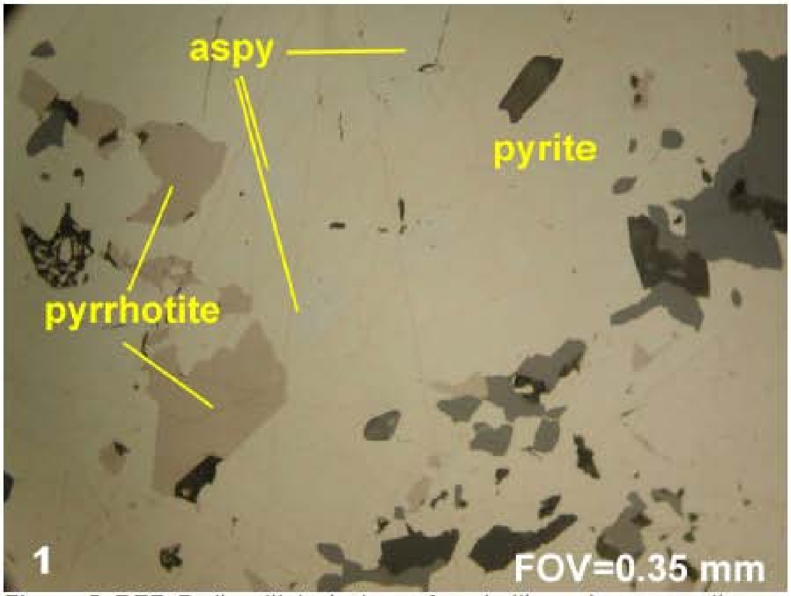

Figure 5. REF. Pyrite with inclusions of pyrrhotite and arsenopyrite.

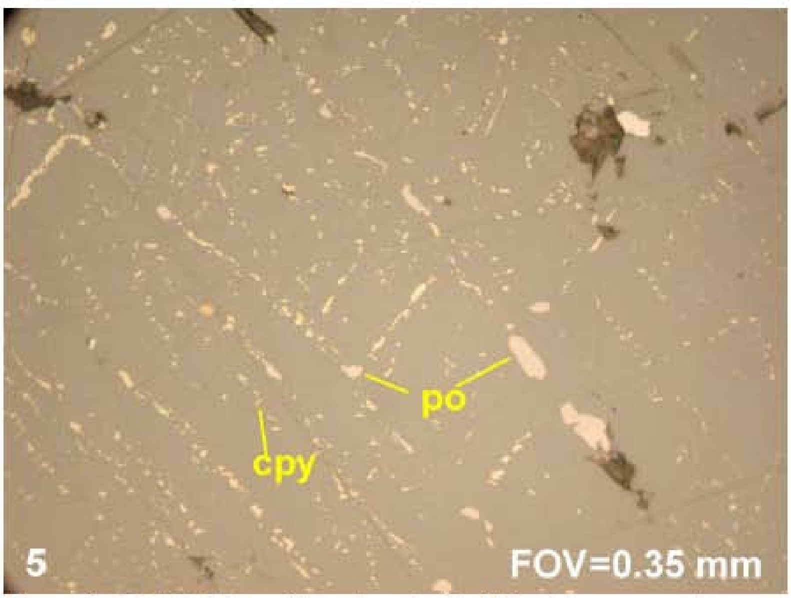

Figure 6. REF. Chalcopyrite and pyrrhotite blebs along several crystallographically-oriented directions in grey sphalerite.

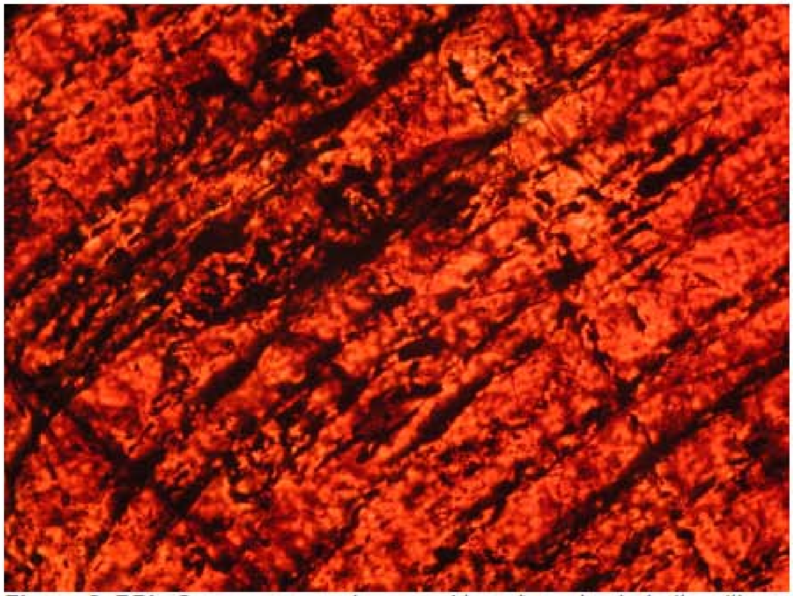

Figure 8. PPL. Same area as above, red translucent sphalerite with opaque inclusion trains of chalcopyrite and pyrrhotite.

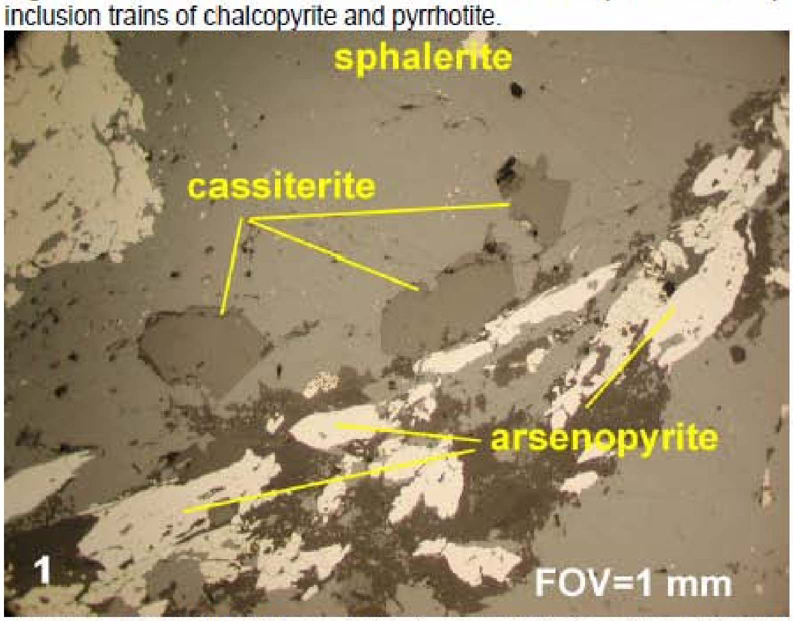

Figure 8 . REF. Euhedral cassiterite in grey sphalerite, with a streak of arsenopyrite crystals.

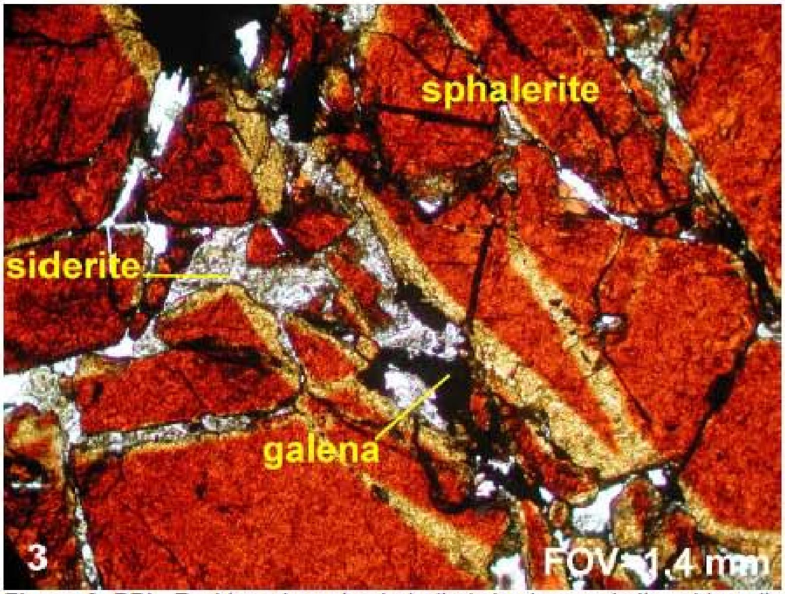

Figure 9. PPL. Red translucent sphalerite is broken and altered to yellow lower-Fe sphalerite along fractures. Siderite and galena occupy the fractures.

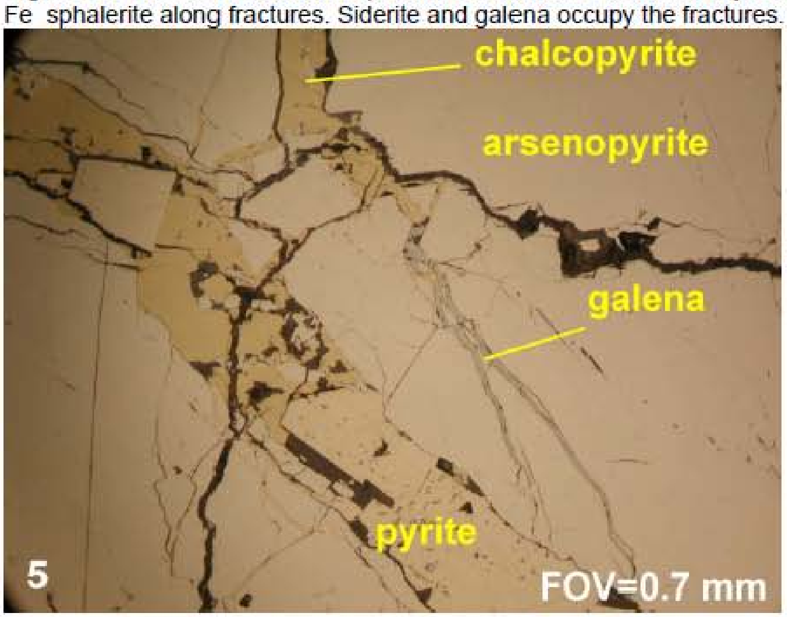

Figure 10. REF. Fractured arsenopyrite with fractures filled by pyrite, chalcopyrite and galena.

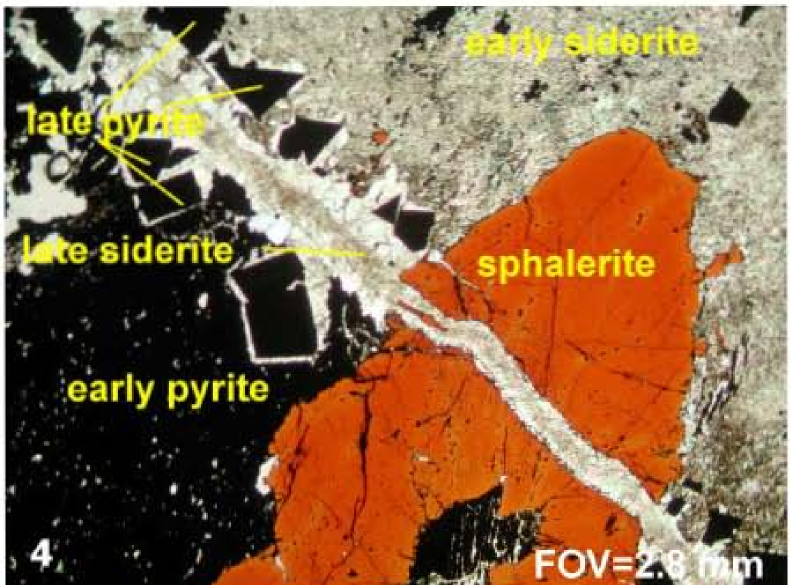

Figure 13. PPL. Early siderite, early pyrite and orange-red sphalerite are cut by a vein of late siderite with late pyrite cubes lining the siderite vein margin.

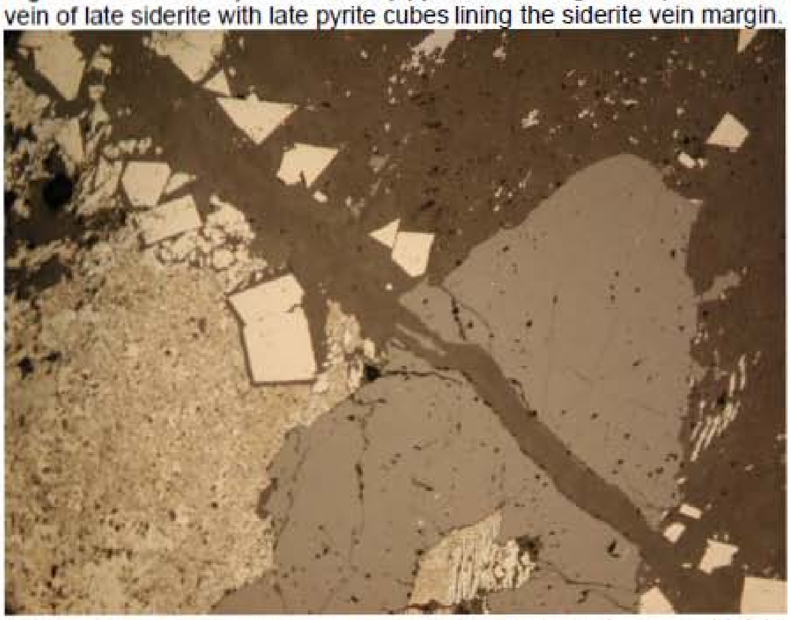

Figure 14. REF. Same area as above figure. Early pyrite shows blotchy alteration to alteration to stringy marcasite.

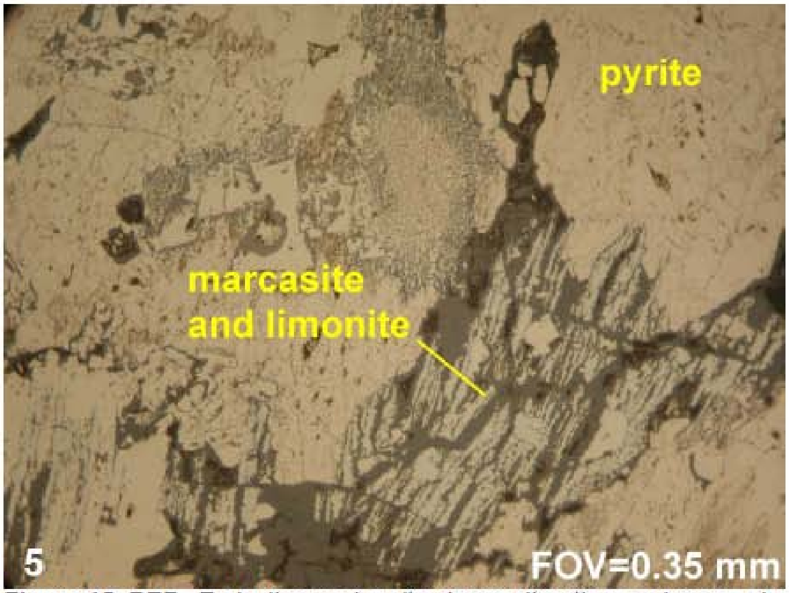

Figure 15. REF. Early diseased pyrite shows alteration, and more advanced alteration to marcasite and limonite.

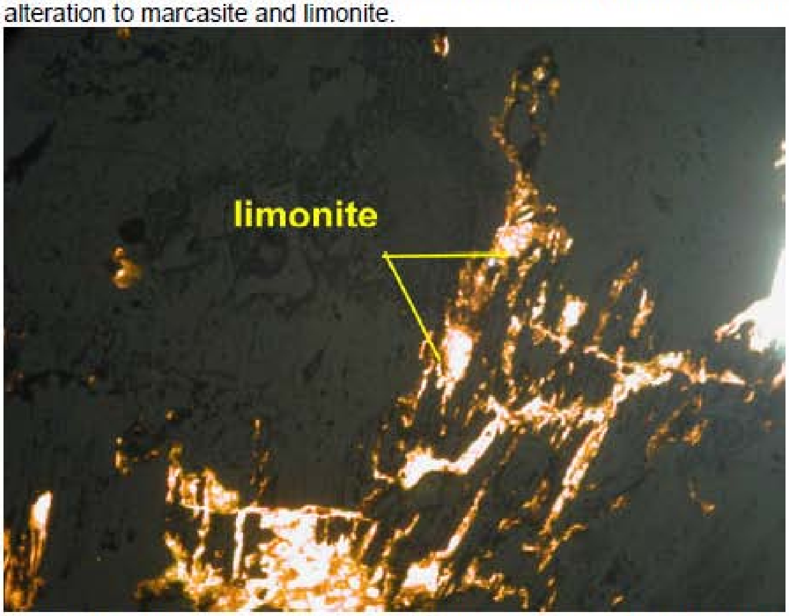

Figure 16. PPL. Same area as above figure. Red-brown limonite after pyrite.

VEIN SAMPLE DESCRIPTIONS

The composition of the 5 vein samples is shown in Table 5. These samples are briefly described separately and various features in them illustrated by micrographs.

Table 5 Visually estimated mineral composition (areal %) of sulphide-bearing samples

Mineral	1	2	3	4	5
pyrite	25	30	10	70	40
marcasite	5			10	5
arsenopyrite	10	15			15
sphalerite	30		25	5	10
galena	<1		15	5	10
chalcopyrite	<<1	<1			5
cassiterite	<1				1
stannite-kesterite	<<1				1
pyrrhotite	<1	<1			1
rutile		2			
chlorite	<1				
siderite	5		20	10	1
quartz	25	2	30		5
sericite		50			
limonite					5
totals	100	99	100	100	99

SAMPLE 5

	%
Pyrite	**40**
Arsenopyrite	**15**
Sphalerite	**10**
Galena	**10**
Chalcopyrite	5
Quartz	5
Limonite	5
Siderite	1
Cassiterite	1
Stannite	1
Pyrrhotite	<1

Pyrite (40 %) Two generations of pyrite (Figure 1 to 3) are present, an early altered-looking discoloured and pitted pyrite covers an area about 20 mm across that includes patches of galena, and shows patchy alteration to marcasite and limonite. A late fresh-looking pyrite forms euhedra, mostly cubes, to about 1.5 mm across.

Arsenopyrite (15 %) Most of the arsenopyrite is present as a single mass 12 mm long, but there are also scattered, often euhedral grains, and associated with pyrite. In places arsenopyrite shows brittle deformation (Figure 4, 5) , with fractures filled by chalcopyrite and lesser galena and pyrite.

Sphalerite (10 %) Dark red sphalerite (Figure 6, 7) with about 12% Fe occurs as shapeless patches to 7 mm long. Sphalerite contains numerous tiny inclusions of pyrrhotite and chalcopyrite, some as linear trains, possibly along cleavages, grain boundaries, twin planes or fractures.

Galena (10 %) Most of the galena in the section is in one tongue about 15 mm long. Galena also forms small patches in early pyrite , and veinlets in broken arsenopyrite.

Chalcopyrite (5 %) Chalcopyrite forms anhedral masses to 4.5 mm across and veinlets to 0.1 mm wide in shattered arsenopyrite (Figure 5).

Quartz (5 %) Quartz occurs as mosaic-textured aggregates of anhedra that are up to 0.8 mm across .

Limonite (5 %) Within the large altered early pyrite mass there are scattered areas of more oxidized marcasite with associated red-brown limonite (Figure 8, 9).

Siderite (1 %) Small anhedral siderite grains are intermingled with early pyrite and also surround late pyrite cubes.

Cassiterite (1 %) Cassiterite (Figure 10 to 13) mostly occurs as irregular high relief grains to 2 mm long that are fractured, with the fractures filled by stannite and siderite. Some grains are coated with stannite and scattered chalcopyrite grains.

Stannite (1 %) Olive stannite (Figure 10 to 13) forms grains to 0.2 mm across and also forms rimes around cassiterite grains and fractures within them, both to about 0.02 mm wide.

Pyrrhotite (<1 %) Minor pyrrhotite occurs as shapeless blebs (Figure 6, 7) to about 0.1 mm across in sphalerite, along with similarly-occurring but less common chalcopyrite.

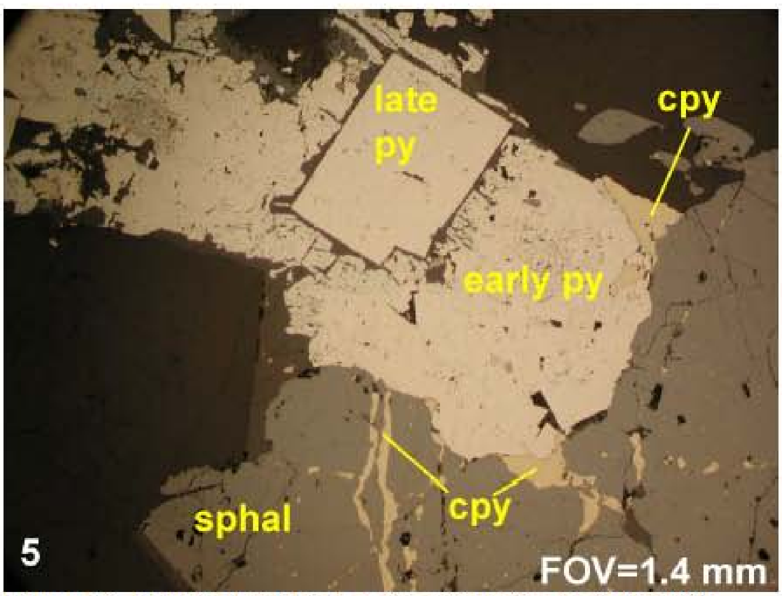

Figure 5-1. REF. Early and late pyrite, sphalerite and chalcopyrite.

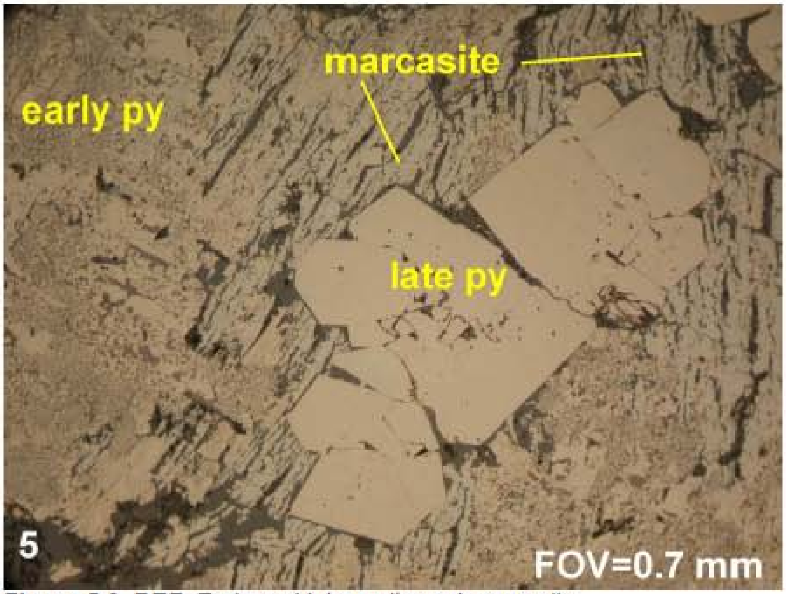

Figure 5-2. REF. Early and late pyrite and marcasite.

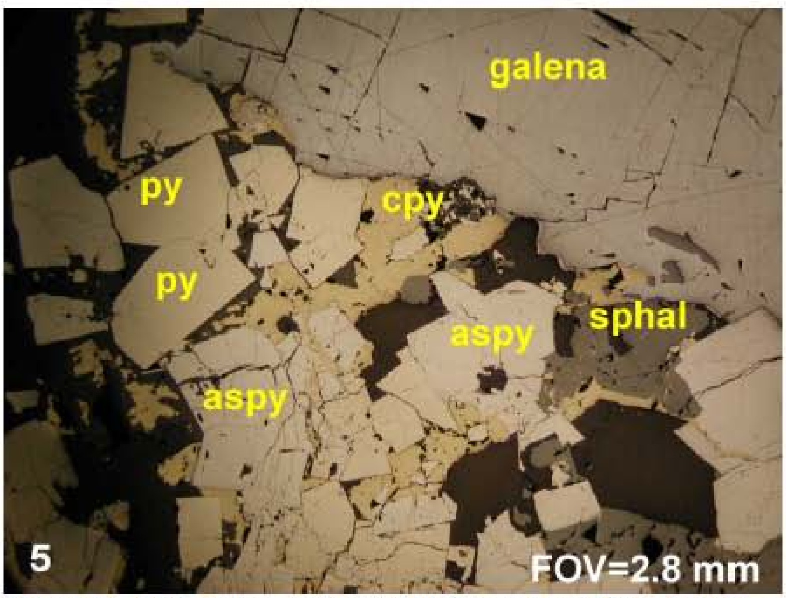

Figure 5-3. REF. Galena, sphalerite, pyrite , arsenopyrite and chalcopyrite.

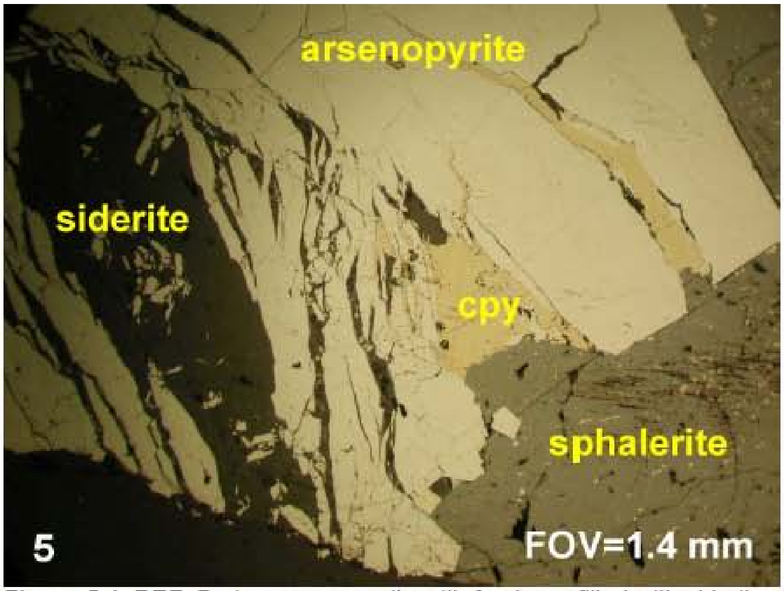

Figure 5-4. REF. Broken arsenopyrite with fractures filled with siderite and chalcopyrite.

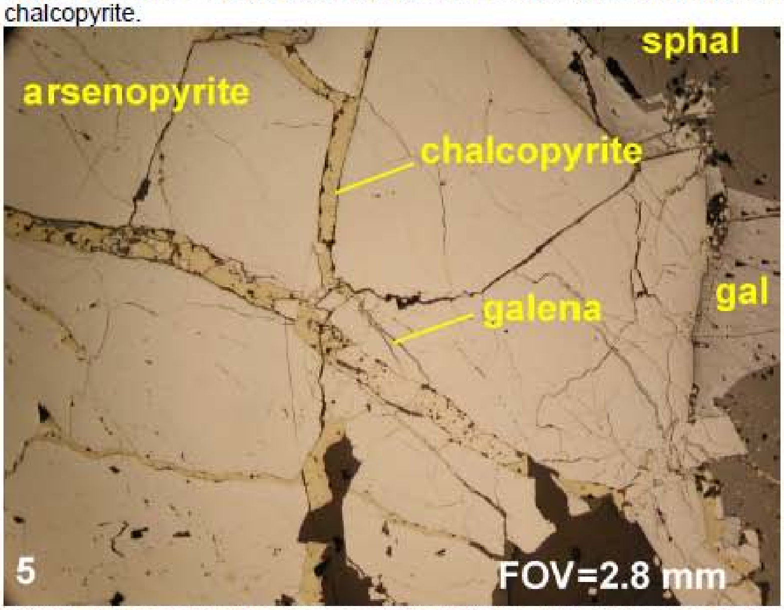

Figure 5-5 REF. Shattered arsenopyrite with fractures filled with chalcopyrite, galena and some pyrite.

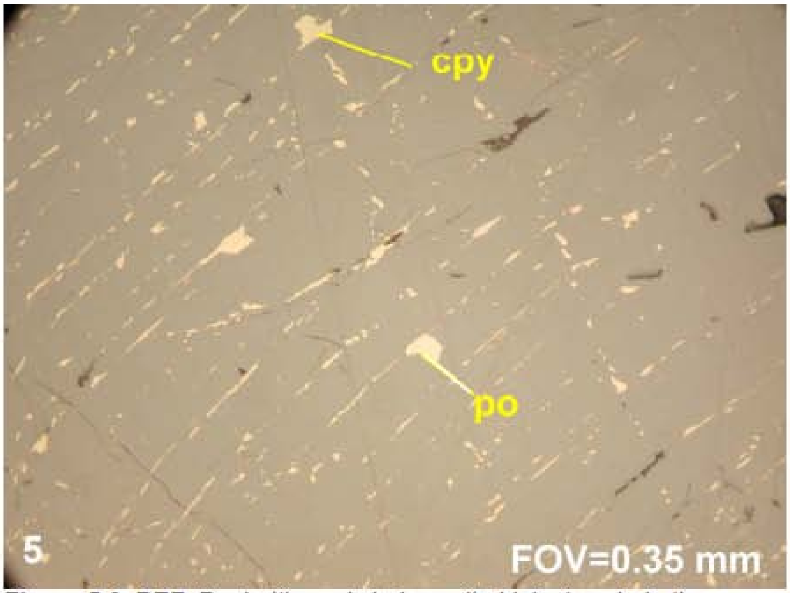

Figure 5-6. REF. Pyrrhotite and chalcopyrite blebs in sphalerite.

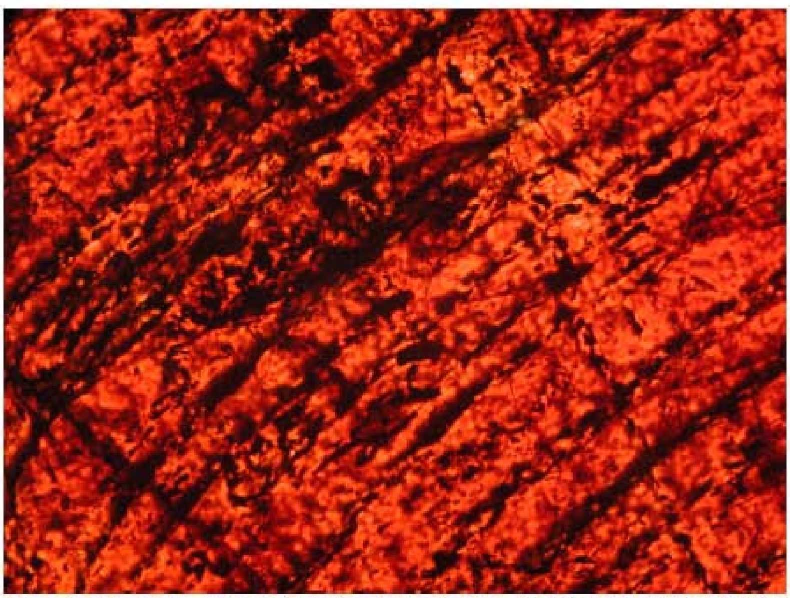

Figure 5-7. PPL . Same area as above figure. Red translucent sphalerite

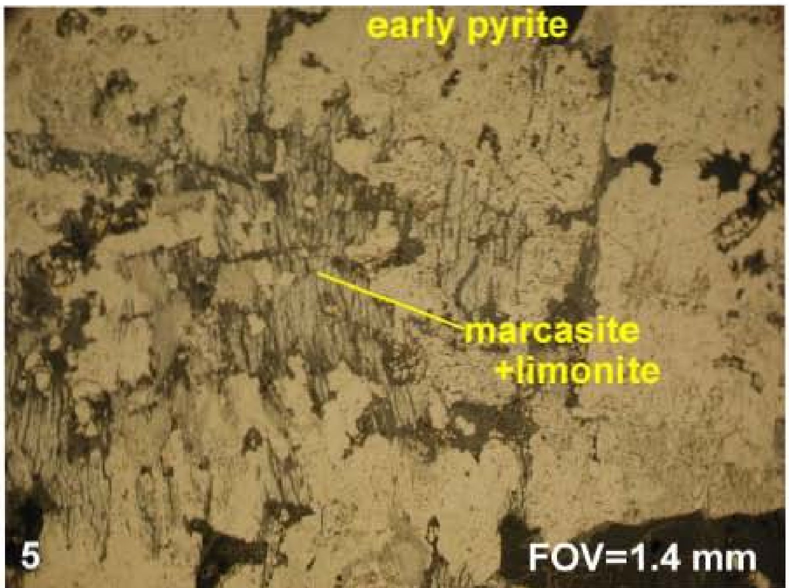

Figure 5-8. REF. Altered early pyrite with marcasite and associated limonite.

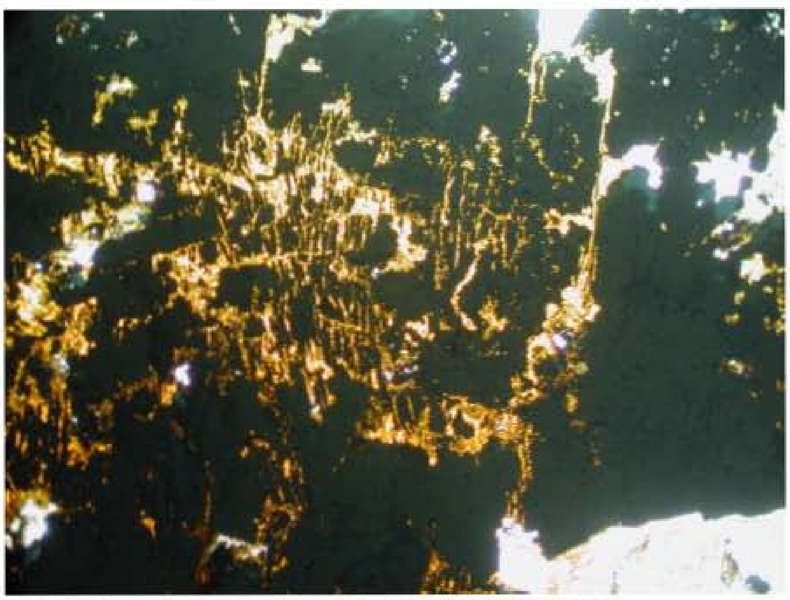

Figure 5-9 PPL. Same area as above . Brown Fe-oxide.

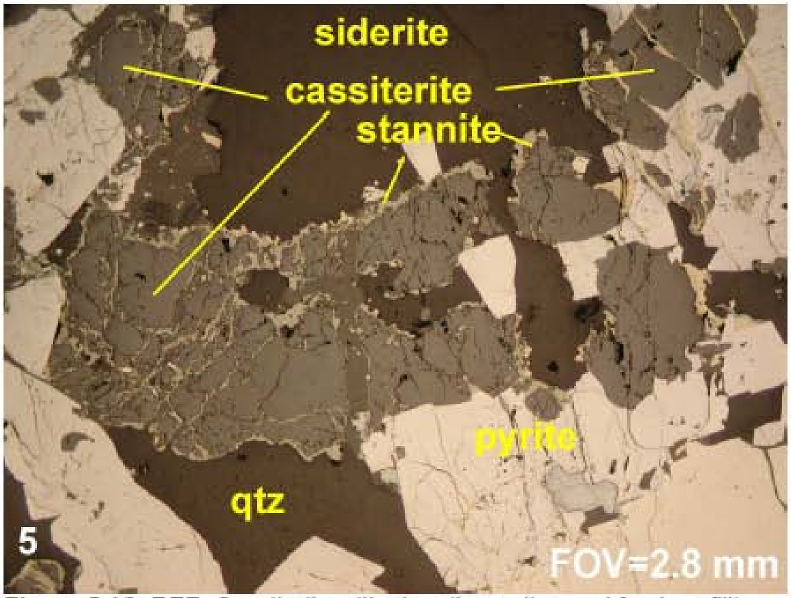

Figure 5-10. REF. Cassiterite with stannite coating and fracture-fillings.

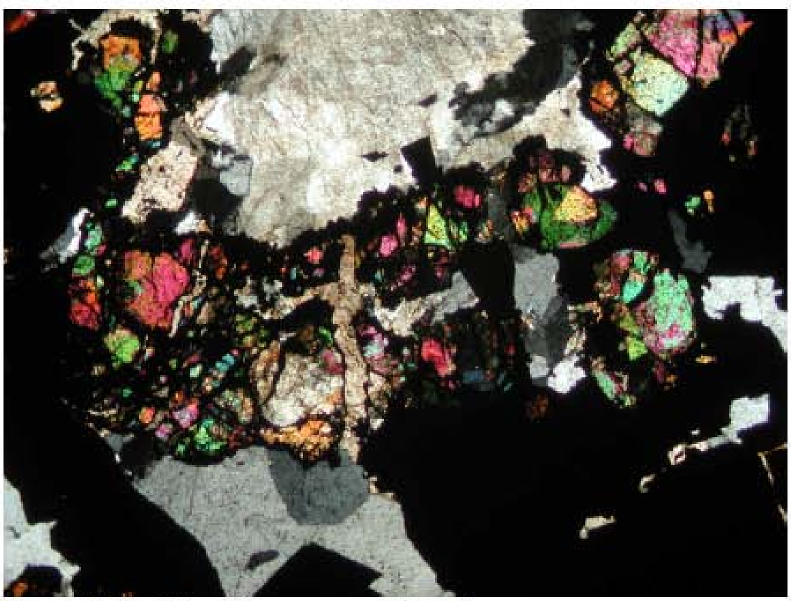

Figure 5-11. XPL. Same area as above figure.

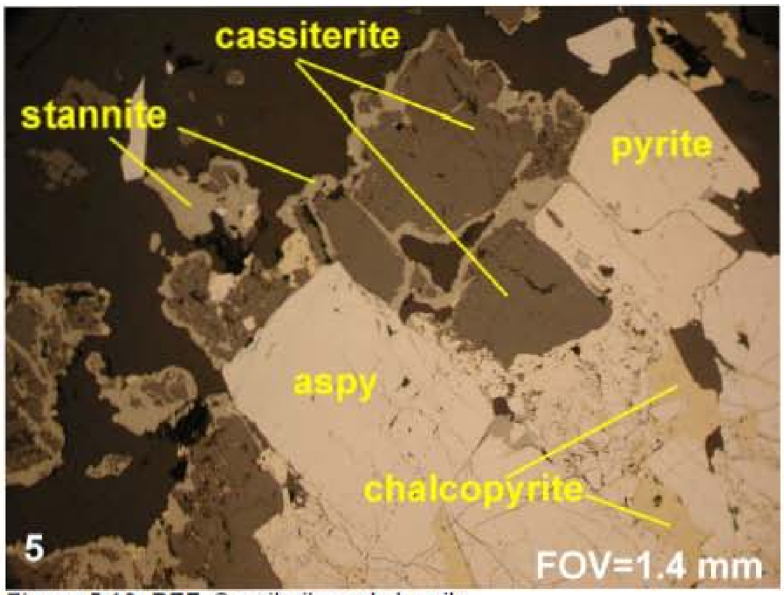

Figure 5-12. REF. Cassiterite and stannite.

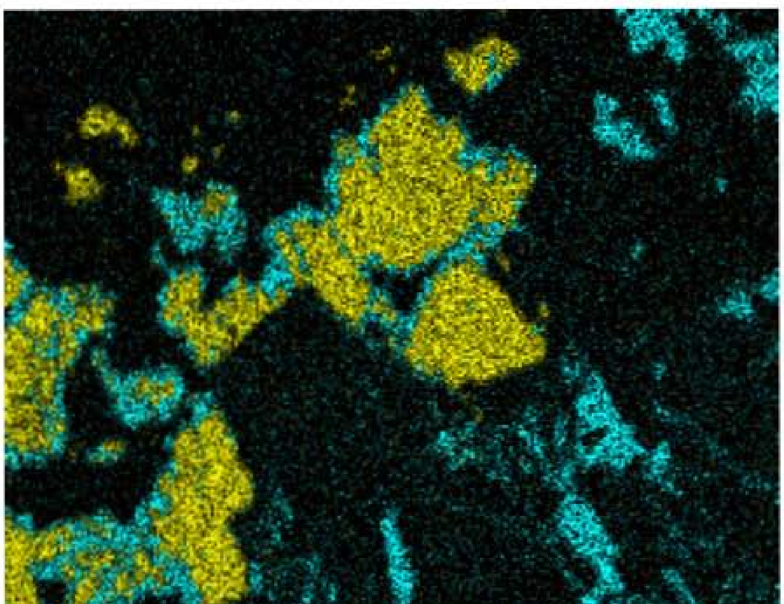

Figure 5-13. Xray map. Same area as above figure. Blue=Cu, Yellow=Sn.