885931 NAT

Cattermole, Christy EM:EX

From: Grant, Brian EM:EX
Sent: Friday, September 13, 2002 2:00 PM
To: Grant, Brian EM:EX
Cc: Wilcox, Allan EM:EX; Brian <SHAW> (E-mail); Cattermole, Christy EM:EX; Logan, Claudia EM:EX; Lefebure, Dave EM:EX; Jakobsen, Dorthe SRM:EX; Hermann, Fred EM:EX; German, Gerald EM:EX; McArthur, Gib EM:EX; Houle, Jacques EM:EX; Lewis, Jim E EM:EX; Errington, John EM:EX; Bellefontaine, Kim EM:EX; Passmore, Kim EM:EX; Jones, Larry EM:EX; de Groot, Laura EM:EX; deleted - 020706 - Murphy, Maureen EM:EX; Carter, Michael EM:EX; Cathro, Mike EM:EX; Fournier, Mike EM:EX; Van Oort, Bou EM:EX; Wojdak, Paul EM:EX; Conte, Rick EM:EX; Schmitt, Rolf SRM:EX; Curtis, Ross EM:EX; Ferris, Sharon CSE:EX; Schroeter, Tom EM:EX; Madu, Bruce EM:EX; Bergen, Wally EM:EX; Beswick, Ed EM:EX; Adams, Rick EM:EX; Hall, Ted EM:EX; Whale, Andrew EM:EX; Conte, Rick EM:EX; Lane, Bob EM:EX; Pardy, Jamie EM:EX; Terry, David EM:EX; Wojdak, Paul EM:EX; Stone, Kim EM:EX; McArthur, Gib EM:EX; Chan, Jan EM:EX; EM - GSB DL; Anderson, Duane EM:EX
Subject: RN2002-12: GSB Massive Sulphide Discovery Atlin Area BC

~ JG visited with MM in Victoria (Sept. 25/02) [see notes inside]
– Nice sliced massive cpy+py samples (in basalt)
* Sig. of Fe-Mn chert exhalite!

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British Columbia Ministry of Energy & Mines
Geological Survey Branch
Release Notification 2002-12
September 13, 2002

******* RELEASE OF INFORMATION *******
Friday, September 13th, 2002, 2:00 PM

Geological Setting and Style of Mineralization at the Joss'alun Discovery, Atlin area, British Columbia

NTS mapsheet 104N/2W, UTM 620381E 6544322N, NAD 83

Geofile 2002-6

Powerpoint Presentation, geology description, maps and photos available from the BC Ministry of Energy and Mines website at: www.em.gov.bc.ca/Mining/Geolsurv/WhatsNew/default.htm

by Mitch Mihalynuk, P.Geo., BC Ministry of Energy and Mines

Atlin Targeted Geoscience Initiative Project of the Geological Survey of Canada* and *BC Geological Survey Branch

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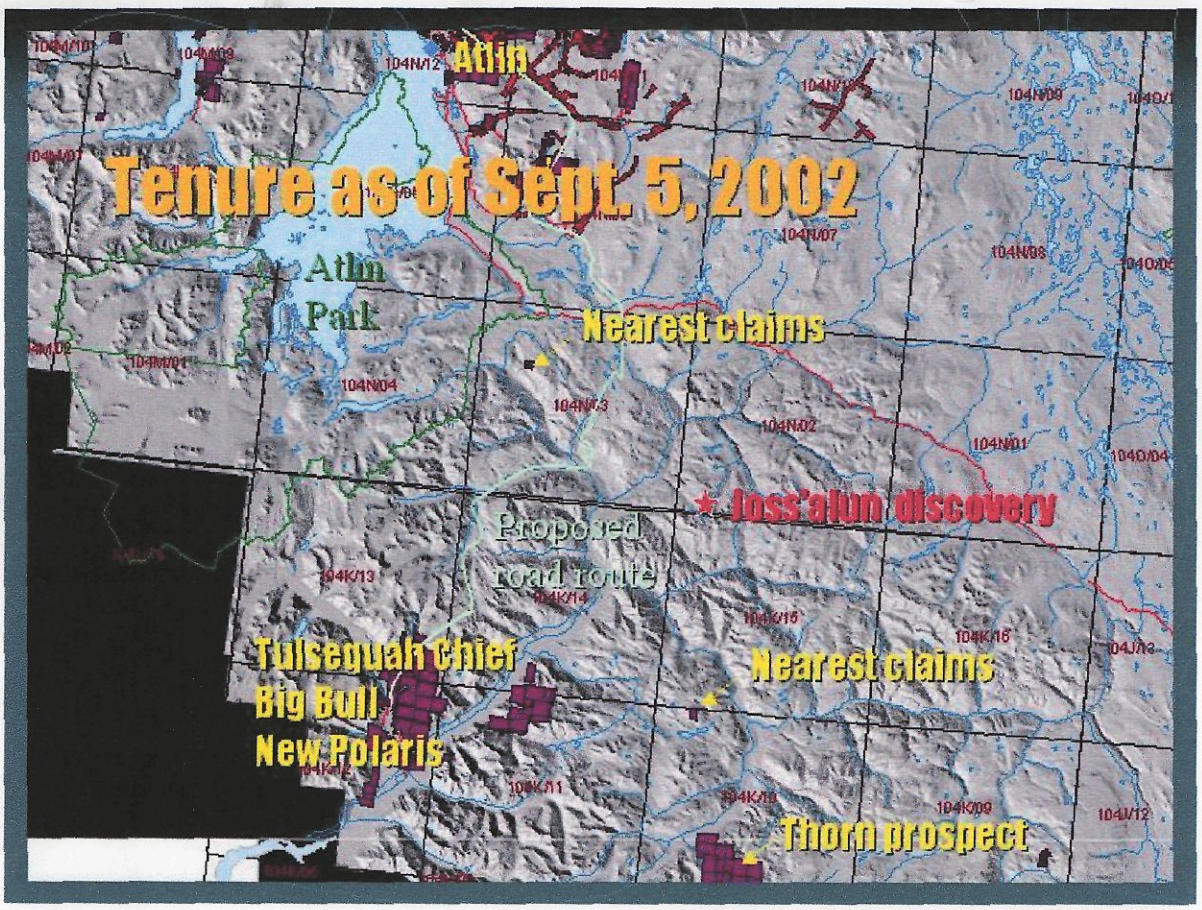

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Mineralization is exposed at and below tree line in low, rubble-strewn outcrops within and south of a shallowly incised creek valley. Mineralization farthest northwest is a 30 cm wide, copper stained and gossanous zone on the northern side of the creek cut near UTM 620271E 6544371N, EPE: 4m (EPE = estimated position error). Mineralization can be traced across the area with massive sulphide lenses (UTM 620381E 6544322N, EPE: 5m) to a very low, chalcopyrite-veined outcrop amongst the trees and brush. Here, at UTM 620460E 6544252N (EPE: 10m), discordant chalcopyrite veins (3-4 cm thick) crop out in an isolated outcrop, upon which several pieces of fist-sized float of semi-massive sulphide were resting. . South of this point, mineralization disappears beneath valley cover. However, blebs of chalcopyrite occur within mafic breccia at approximately the same stratigraphic level across the valley, about 1 km to the east-southeast.

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Mineralization at the Joss'alun Occurrence

Mineralization consists of a series of stacked lenses of semi-massive chalcopyrite and lesser pyrite, which are hosted by a dominantly mafic volcaniclastic unit interpreted to have formed in a submarine setting. Lens thickness ranges up to approximately 1m. Thicknesses of 30cm are more typical. Lateral extent of the lenses is difficult to determine due to the generally low and rubbly nature of the outcrops. However, some are exposed for more than 3m. Sulphides in the lenses appear brecciated. Bedding within the mafic volcanic unit is not everywhere obvious, but the lenses appear to be concordant. Some thin chalcopyrite veins (up to 5cm thick) are clearly discordant. Deposit type and mode of genesis are undetermined at this time.

Other Mineralization in the Region

According to MINFILE, the nearest known mineralization is more than 10 km to the southeast in the Tulsequah map area. It is a series of galena-sphalerite-chalcopyrite-bearing quartz veins in presumed Late Triassic submarine volcanic rocks of the Stuhini Group (Inklin:Yeth Creek; 104K022). Within the Atlin map area, the nearest mineral occurrences are: an asbestos occurrence (17km; Focus Mountain; 104N071); a magnesite occurrence (19km; Sloko River: Nahlin Fault; 104N 083), and a limestone occurrence (20km; 104N094; Nakina River). There is no obvious sign of previous work at the Joss'alun discovery. The Tulsequah mine is located 50 km to the southwest.

- 'Favourable' zone (stabound?) trends NW-SE and dips to the SW.
- Some specimens exhibit 'banding'/layering.
  → Others exhibit brecciation (± recrystallization)
  → clastic (due to tectonic movements?)

Table of Analyses of samples from near UTM 620381E 6544322N

From ACME ANALYTICAL LABORATORIES LTD.											
Analysis: GROUP 1F15 - 15.00 GM											
			ASSAY DATA								
ELEMENT	sample	Cu	Cu	Mo	Pb	Zn	Ag	Ni	Co	Mn	Fe
SAMPLES	type	ppm	%	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%
MMI02-33-15	grab	68830.70	7.34	4.19	9.42	629.1	3279	24.7	578.7	996	17.68
MMI02-34-6	grab	97698.56	10.15	2.65	6.22	276	983	11	287.1	1065	17.22
MMI02-34-9	grab	74502.47	7.66	4.09	8.3	293.3	1032	17.2	272.1	821	14.71
MMI02-34-10-1	90cm chip	33509.12	3.35	3.65	4	165.1	841	17.1	320.5	1257	18.62
MMI02-34-10-2	35cm chip	66465.67	7.33	3	2.72	241.7	1391	32.1	641.2	1338	20.83
	sample	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	type	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	grab	50.4	< .1	153.3	< .1	0.5	0.73	2.32	2.19	104	0.02
	grab	5.6	< .1	191.4	< .1	1	0.98	0.15	1.75	154	0.06
	grab	14.2	< .1	114.4	< .1	8	0.67	0.76	0.49	106	0.33
	90cm chip	28.9	< .1	95.1	< .1	0.6	0.16	0.94	0.65	229	0.04
	35cm chip	39	0.1	111.5	< .1	0.5	0.29	0.68	0.92	206	0.03
	sample	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K
	type	%	ppm	ppm	%	ppm	%	ppm	%	%	%
	grab	0.014	< .5	27.7	1.62	1.7	0.014	< 1	2.56	0.003	< .01
	grab	0.018	< .5	7.3	2.23	12.5	0.058	< 1	3.39	0.001	0.01
	grab	0.013	0.6	14.1	1.2	7.1	0.079	< 1	2.38	0.001	< .01
	90cm chip	0.022	0.6	19.4	3.06	5.2	0.036	< 1	4.31	0.001	< .01
	35cm chip	0.024	< .5	94.9	3.76	10	0.033	< 1	4.65	0.001	< .01
	sample	W	Sc	Tl	S	Hg	Se	Te	Ga	Sample	
	type	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	gm	
	grab	2.8	8.9	0.2	7.24	471	169.8	6.61	9.2	15	
	grab	1.3	8.5	0.02	2.8	108	44.2	2.02	10.8	15	
	grab	2.5	4.9	0.17	3.5	435	204.9	12.46	7.9	15	
	90cm chip	0.5	12.6	0.06	3.4	369	102.3	3.9	18.7	15	
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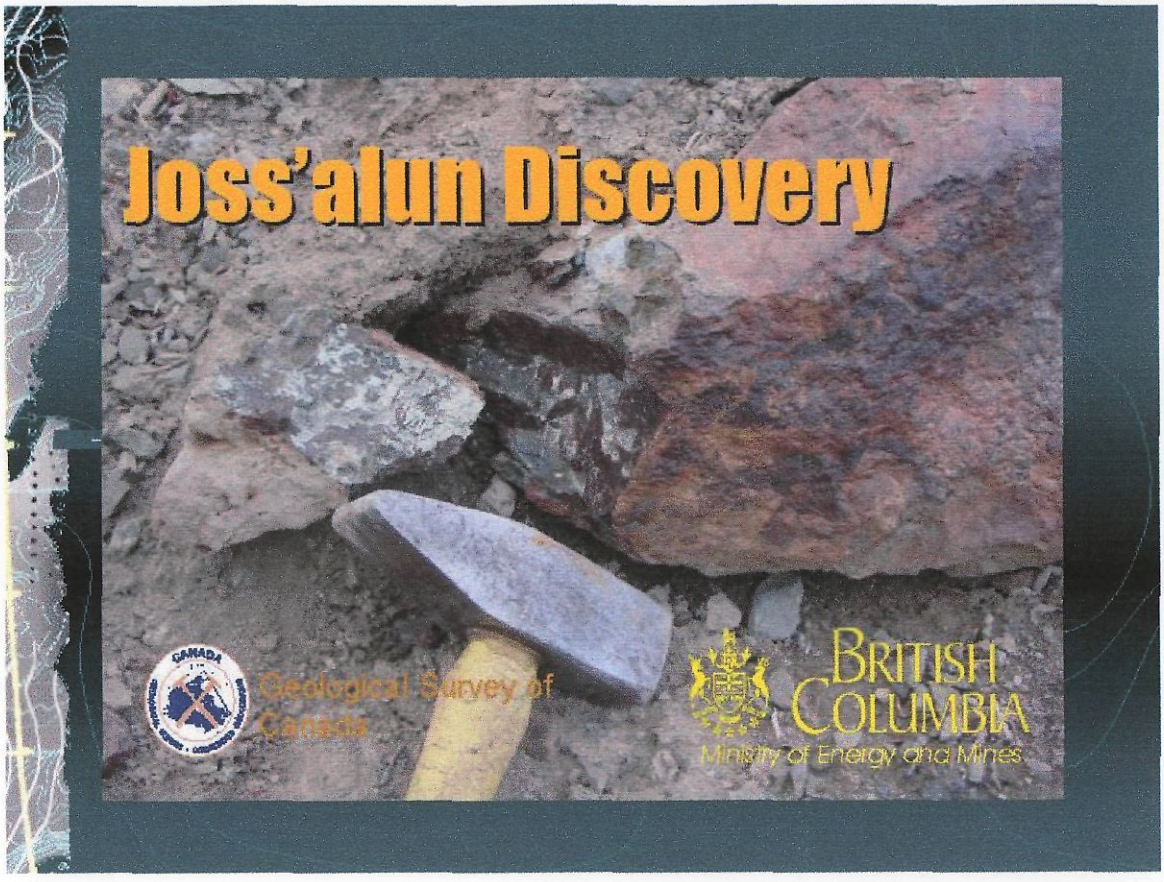

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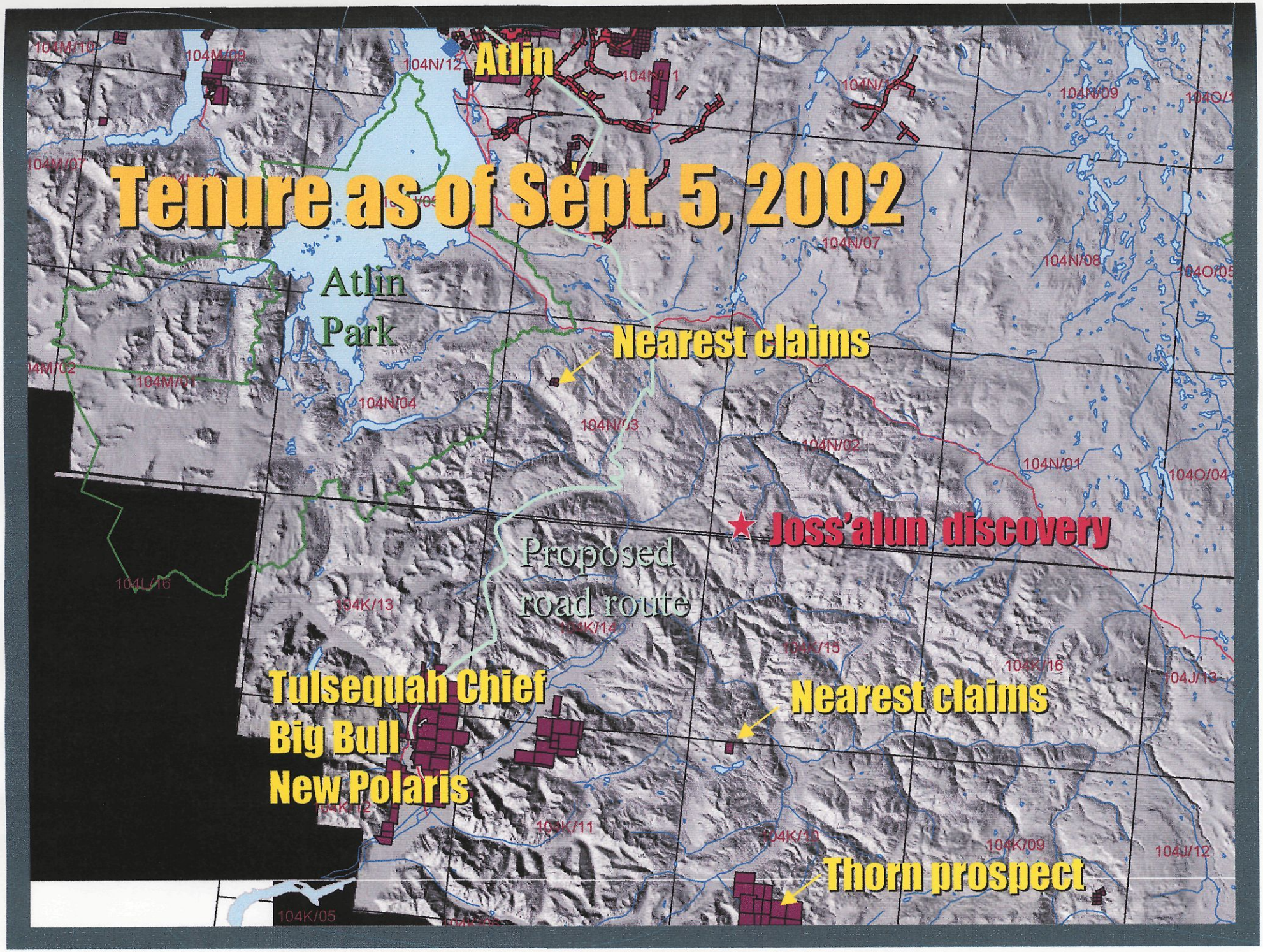
Tenure as of Sept. 5, 2002
Atlin
Atlin Park
Nearest claims
Joss'alun discovery
Proposed road route
Tulsequah Chief
Big Bull
New Polaris
Nearest claims
Thorn prospect
104M/10
104M/09
104N/12
104N/11
104N/10
104N/09
104O/
104M/07
104N/07
104N/08
104O/05
104M/02
104M/01
104N/04
104N/03
104N/02
104N/01
104O/04
104L/16
104K/13
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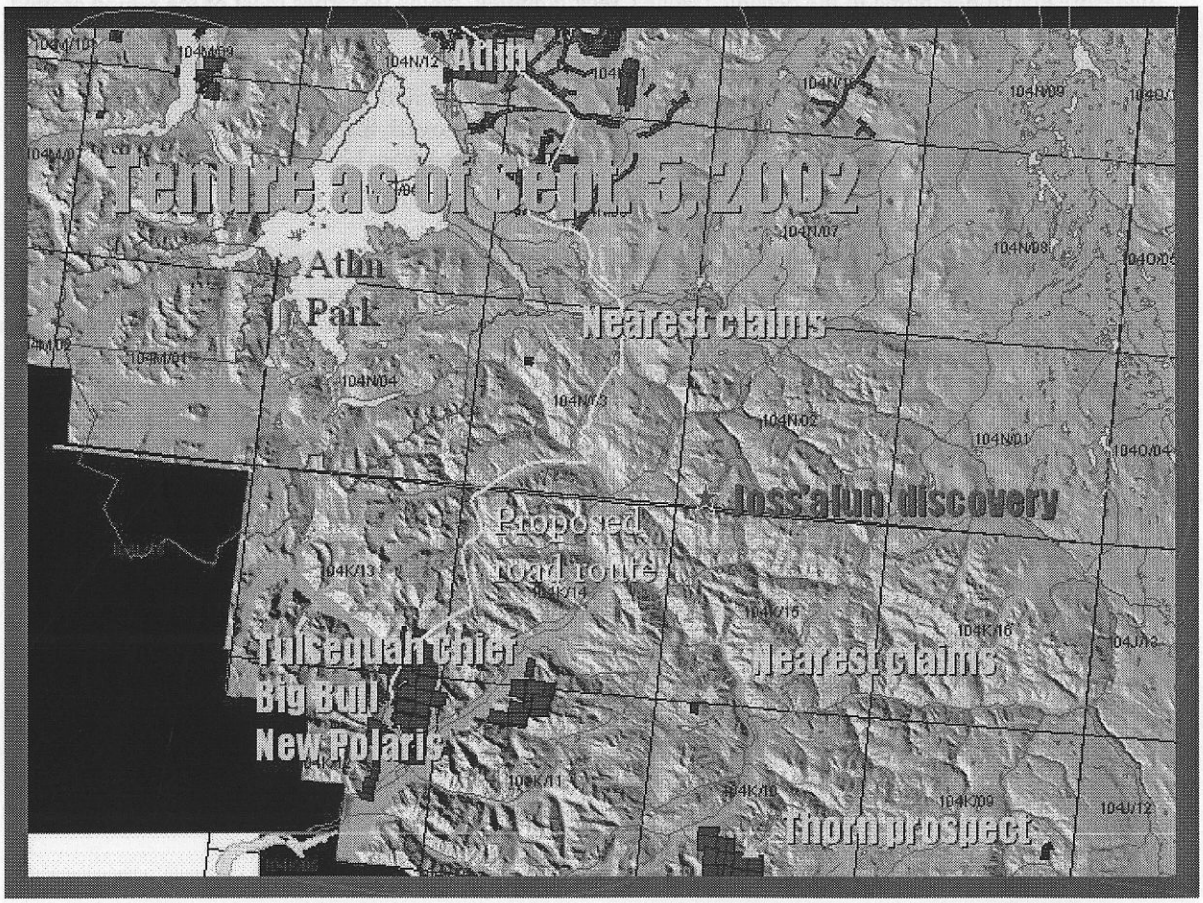

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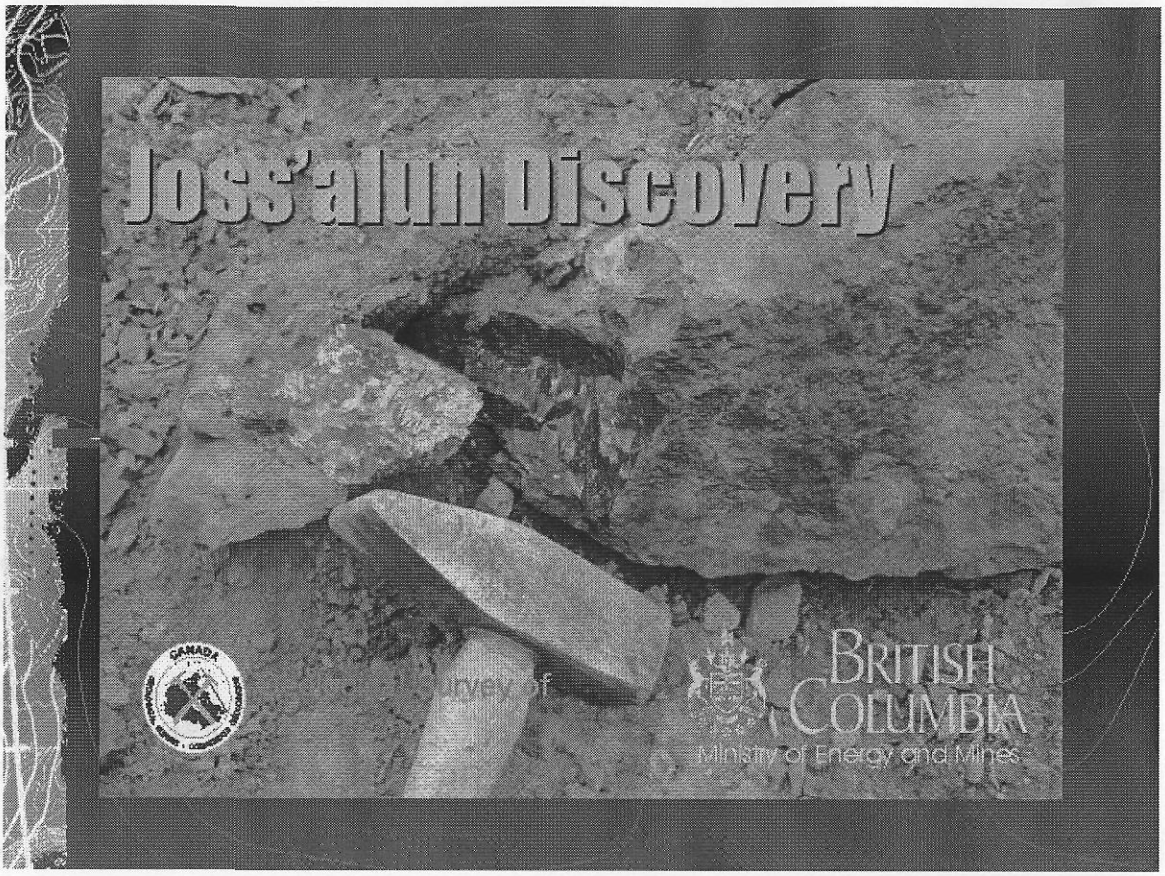

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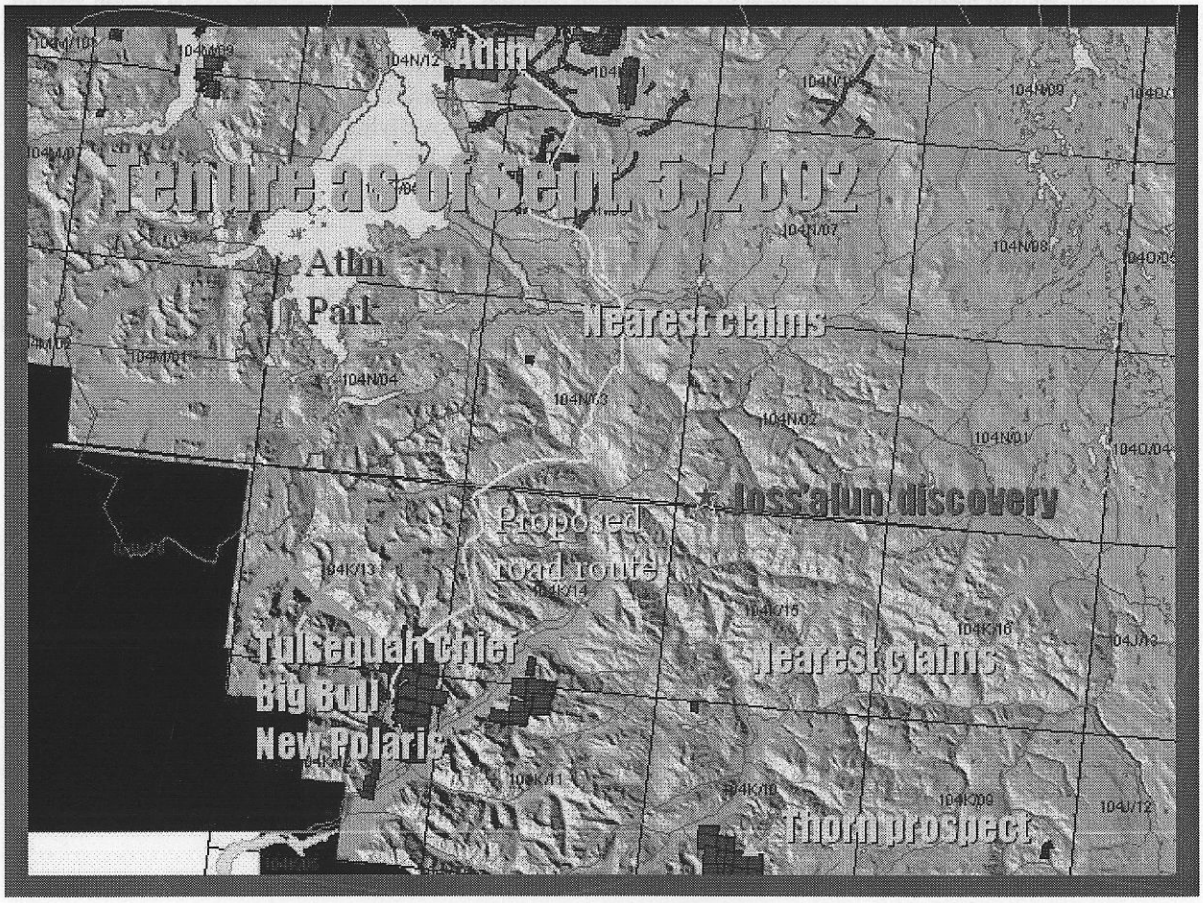
90cm chip: 3.35% Cu
35cm chip: 7.33% Cu (for complete analyses, see table).



Introduction

Ministry of Energy and Mines personnel discovered new massive sulphide mineralization during regional mapping in the Atlin area. Called the Joss'alun occurrence, it was discovered as part of a mapping program conducted under the joint federal and provincial Atlin Targeted Geoscience Initiative. The following description is based on less than one full day of fieldwork. Accordingly, observations regarding the geological setting and the style of mineralization are preliminary.

Location

The Joss'alun discovery is located approximately 75 kilometres by air, southeast of the placer mining town of Atlin. Access is by helicopter, which can be chartered in Atlin. Closest road access is a very rough, fire abatement road that ends at Kuthai Lake, 30 km northwest of the occurrence. The occurrence is about 22 km from the proposed Tulsequah road route. Atlin is 92 km south of the Alaska Highway, and 182 km from Whitehorse, which is the nearest major center with a national airport. Nearest tidewater is Taku Inlet, about 70 km to the southwest.

Mineralization is exposed at and below tree line in low, rubble-strewn outcrops within and south of a shallowly incised creek valley. Mineralization farthest northwest is a 30 cm wide, copper stained and gossanous zone on the northern side of the creek cut near UTM 620271E 6544371N, EPE: 4m (EPE = estimated position error). Mineralization can be traced across the area with massive sulphide lenses (UTM 620381E 6544322N, EPE: 5m) to a very low, chalcopyrite-veined outcrop amongst the trees and brush. Here, at UTM 620460E 6544252N (EPE: 10m), discordant chalcopyrite veins (3-4 cm thick) crop out in an isolated outcrop, upon which several pieces of fist-sized float of semi-massive sulphide were resting. . South of this point, mineralization disappears beneath valley cover. However, blebs of chalcopyrite occur within mafic breccia at approximately the same stratigraphic level across the valley, about 1 km to the east-southeast.

Geological Setting

Submarine basalt flows, flow breccia, tuffaceous rocks and comagmatic mafic intrusive rocks form the most widespread unit belonging to the oceanic Cache Creek complex, which underlies most of the region around Atlin. Textures displayed by the unit along strike of the Joss'alun occurrence confirm a submarine setting as pillow basalt, radiolarian-bearing Fe-rich chert and laminated interpillow micrite are well displayed. The mafic unit is structurally underlain by very dense and magnetic ultramafic rocks of the Nahlin body, interpreted as part of the ancestral Earth's mantle. Unconformably overlying the basalt is a unit comprised of very immature sedimentary rocks, mainly conglomerates, derived from both local and exotic sources.

Mineralization at the Joss'alun Occurrence

Mineralization consists of a series of stacked lenses of semi-massive chalcopyrite and lesser pyrite, which are hosted by a dominantly mafic volcaniclastic unit interpreted to have formed in a submarine setting. Lens thickness ranges up to approximately 1m. Thicknesses of 30cm are more typical. Lateral extent of the lenses is difficult to determine due to the generally low and rubbly nature of the outcrops. However, some are exposed for more than 3m. Sulphides in the lenses appear brecciated. Bedding within the mafic volcanic unit is not everywhere obvious, but the lenses appear to be concordant. Some thin chalcopyrite veins (up to 5cm thick) are clearly discordant. Deposit type and mode of genesis are undetermined at this time.

Other Mineralization in the Region

According to MINFILE, the nearest known mineralization is more than 10 km to the southeast in the Tulsequah map area. It is a series of galena-sphalerite-chalcopyrite-bearing quartz veins in presumed Late Triassic submarine volcanic rocks of the Stuhini Group (Inklin:Yeth Creek; 104K022). Within the Atlin map area, the nearest mineral occurrences are: an asbestos occurrence (17km; Focus Mountain; 104N071); a magnesite occurrence (19km; Sloko River: Nahlin Fault; 104N 083), and a limestone occurrence (20km; 104N094; Nakina River). There is no obvious sign of previous work at the Joss'alun discovery. The Tulsequah mine is located 50 km to the southwest.

Table of Analyses of samples from near UTM 620381E 6544322N

From ACME ANALYTICAL LABORATORIES LTD.

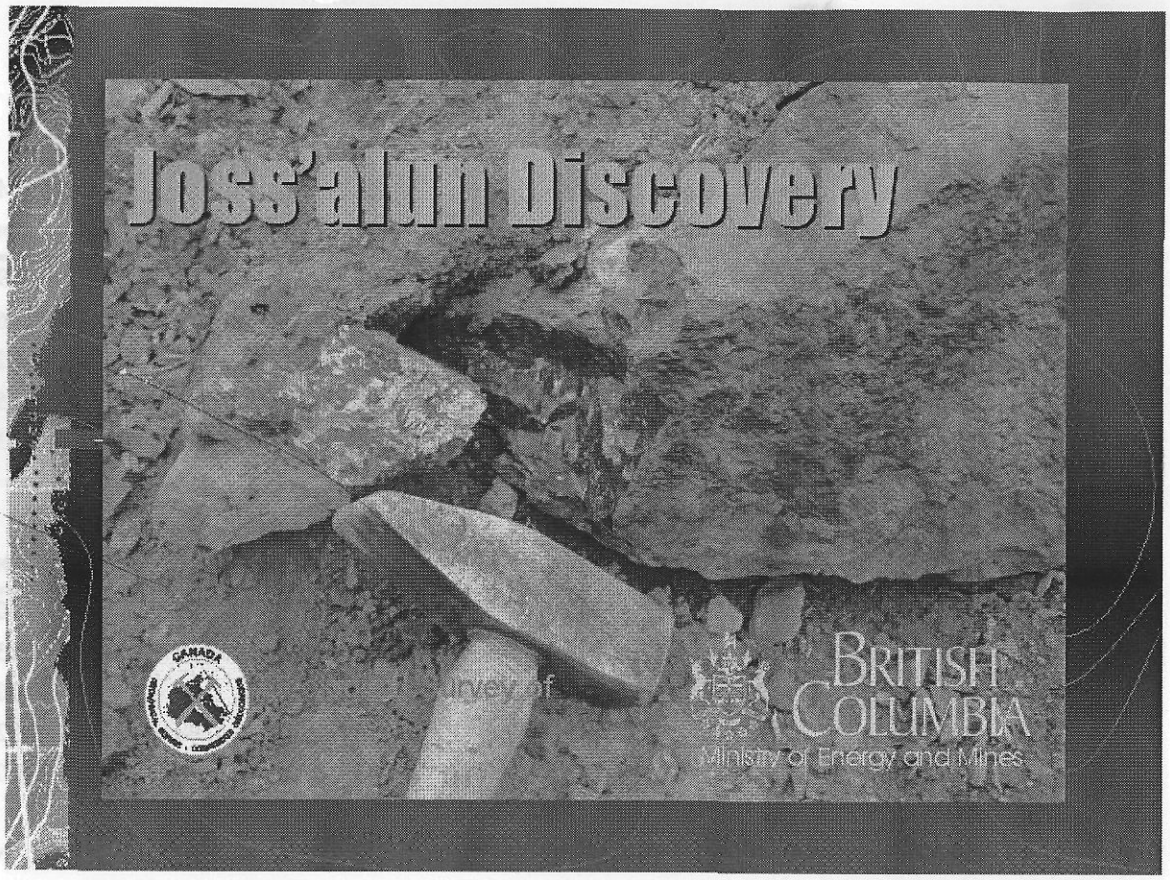
Analysis: GROUP 1F15 - 15.00 GM

ELEMENT	sample	Cu	ASSAY DATA Cu	Mo	Pb	Zn	Ag	Ni	Co	Mn	Fe
SAMPLES	type	ppm	%	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%
MMI02-33-15	grab	**68830.70**	**7.34**	4.19	9.42	629.1	3279	24.7	578.7	996	17.68
MMI02-34-6	grab	**97698.56**	**10.15**	2.65	6.22	276	983	11	287.1	1065	17.22
MMI02-34-9	grab	**74502.47**	**7.66**	4.09	8.3	293.3	1032	17.2	272.1	821	14.71
MMI02-34-10-1	90cm chip	**33509.12**	**3.35**	3.65	4	165.1	841	17.1	320.5	1257	18.62
MMI02-34-10-2	35cm chip	**66465.67**	**7.33**	3	2.72	241.7	1391	32.1	641.2	1338	20.83

sample	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
type	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
grab	50.4	< .1	153.3	< .1	0.5	0.73	2.32	2.19	104	0.02
grab	5.6	< .1	191.4	< .1	1	0.98	0.15	1.75	154	0.06
grab	14.2	< .1	114.4	< .1	8	0.67	0.76	0.49	106	0.33
90cm chip	28.9	< .1	95.1	< .1	0.6	0.16	0.94	0.65	229	0.04
35cm chip	39	0.1	111.5	< .1	0.5	0.29	0.68	0.92	206	0.03

sample	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K
type	%	ppm	ppm	%	ppm	%	ppm	%	%	%
grab	0.014	< .5	27.7	1.62	1.7	0.014	< 1	2.56	0.003	< .01
grab	0.018	< .5	7.3	2.23	12.5	0.058	< 1	3.39	0.001	0.01
grab	0.013	0.6	14.1	1.2	7.1	0.079	< 1	2.38	0.001	< .01
90cm chip	0.022	0.6	19.4	3.06	5.2	0.036	< 1	4.31	0.001	< .01
35cm chip	0.024	< .5	94.9	3.76	10	0.033	< 1	4.65	0.001	< .01

sample	W	Sc	Tl	S	Hg	Se	Te	Ga	Sample
type	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	gm
grab	2.8	8.9	0.2	7.24	471	169.8	6.61	9.2	15
grab	1.3	8.5	0.02	2.8	108	44.2	2.02	10.8	15
grab	2.5	4.9	0.17	3.5	435	204.9	12.46	7.9	15
90cm chip	0.5	12.6	0.06	3.4	369	102.3	3.9	18.7	15
35cm chip	0.3	14.4	0.09	4.3	270	108.5	3.56	18.7	15



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