

5966

CANADIAN SUPERIOR EXPLORATION LIMITED

REPORT ON PERCUSSION AND
DIAMOND DRILLING PROGRAMS JB, JC,
ON THE BIG ONION PROPERTY JF

93L/15W

September 3, 1976 5966

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 5966 MAP

CANADIAN SUPERIOR EXPLORATION LIMITED

REPORT ON PERCUSSION AND
DIAMOND DRILLING PROGRAMS
ON THE BIG ONION PROPERTY

LOCATION: On Astlais Mtn., 10 miles east of Smithers, B.C.

Lat. $54^{\circ}47'$

Long. $126^{\circ}54'$

CLAIM NAMES: JA, JB, JC, JD, JE, JF, JG, and JH

WORK PERIOD: May 3 - August 23, 1976

G. Stock B.App.Sc.
Smithers, British Columbia
September 3, 1976

endorsed by J. Baker B.Sc.
Exploration Manager
Northern B.C.

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SUMMARY

LOCATION MAP

STATEMENT OF EXPENDITURES

#1 DRILL HOLE LOCATION MAP

(showing overburden depth and length of hole)

DRILL LOGS (IN POCKETS) pp. 1 to 47

SUMMARY

The Big Onion porphyry copper prospect is situated on Astlais Mountain, 10 miles east of Smithers, B.C., and has been explored in the past by Noranda, Texas Gulf Sulfur and Blue Rock Mining Corporation.

Previous work has included soil geochemical, IP and magnetometer surveys, geological mapping, trenching and approximately 38,000 feet of drilling.

Canadian Superior Exploration Limited presently holds 8 mineral claims containing 87 units in the Astlais Mountain area (see Claim Map). During the 1976 field season a "BQ" diamond drilling program totalling 7,645 feet in 15 vertical holes and a percussion program of 2,610 feet in 9 vertical holes was completed along Astlais Creek. The diamond drilling program was contracted to J.T. Thomas Diamond Drilling Ltd. of Smithers with the percussion program again contracted to L & L Drilling Ltd. of Cache Creek. Supervision of the project was done by G. Stock, a geologist for C.S.E.

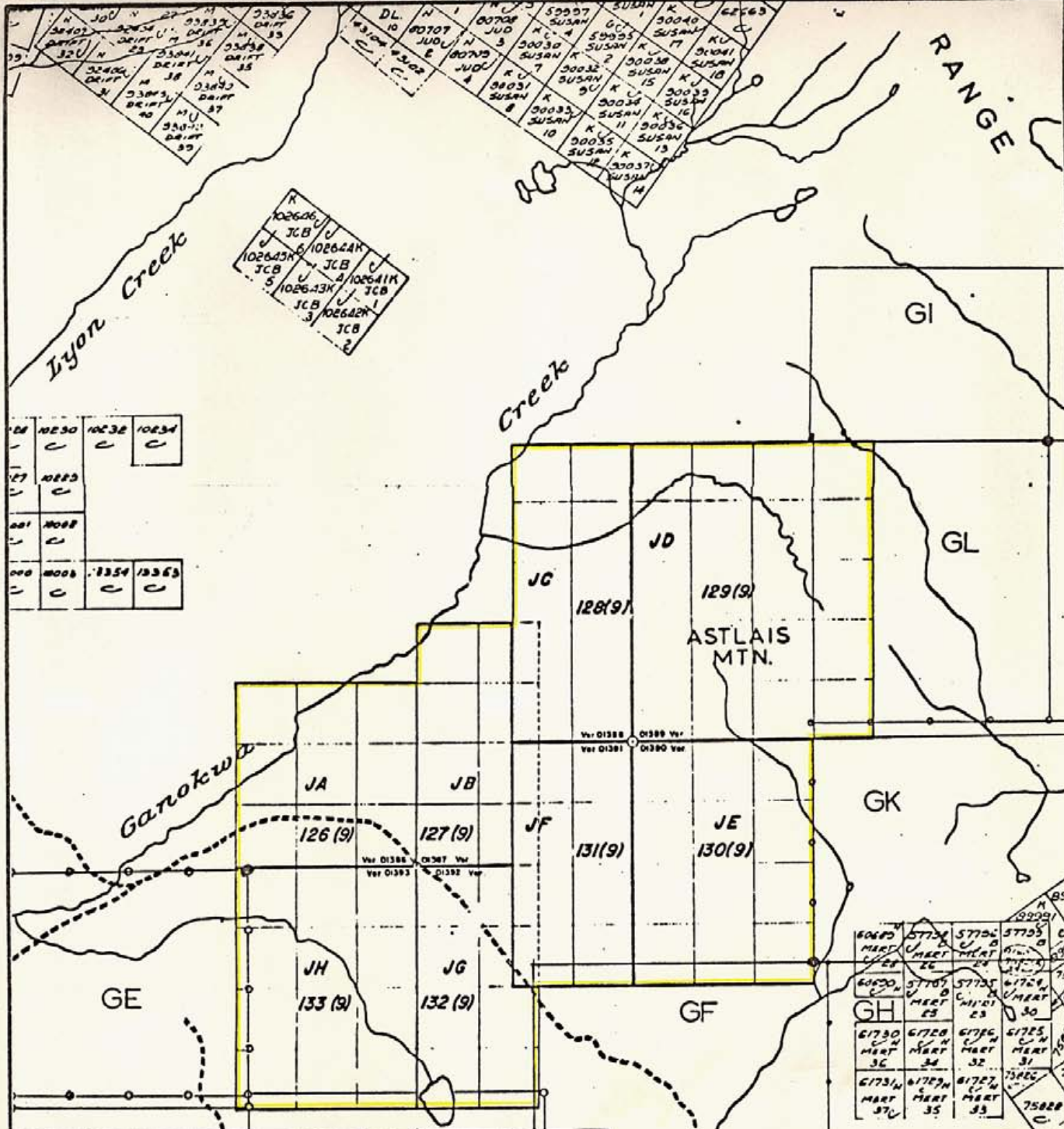
Past and present exploration activity has focused on an elongate altered and pyritised zone along Astlais Creek developed in and around two dike-like masses of quartz diorite porphyry which nearly coalesce at approximately 4500' elevation. The quartz diorite is largely enveloped by leucocratic quartz feldspar porphyry and both intrusives cut Hazelton Jurassic andesites.

Copper and molybdenum mineralization is intimately associated with the quartz diorite porphyry and is best developed along the sheared Southeastern contact with andesite. Leaching is locally intense such that mineralized zones often have little or no surface expression.

The 1976 Drilling program undertook to define more precisely known areas of better mineralization and to explore areas previously untested by drilling.

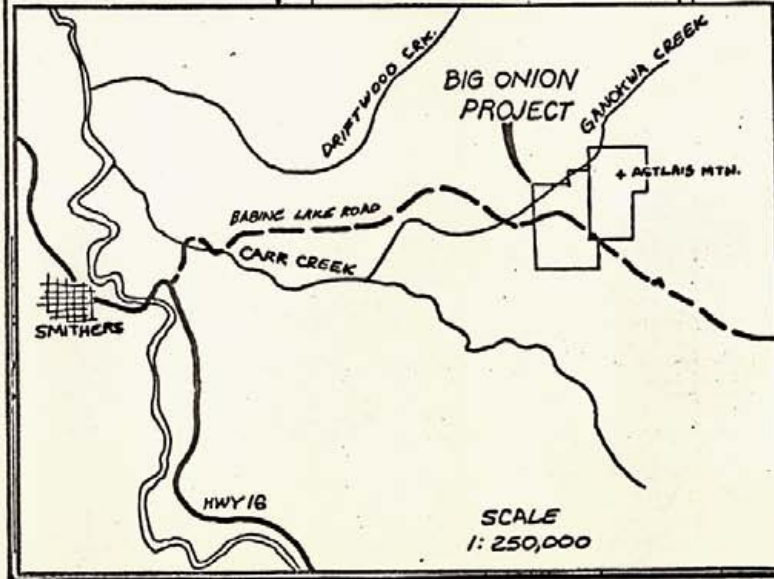
Total cost of the project was approximately \$150,000.00 however assessment credits have been applied for only on the basis of part of the direct drilling costs totalling \$106,562.00 .

Geoff Stock
Jan Baker



10250	10232	10234
C	C	C
10223		
C		
1008		
C		
1000	10354	10353
C	C	C

6060	5728	5726	5725
MERT	MERT	MERT	MERT
28	28	28	28
6050	5717	5715	6172
MERT	MERT	MERT	MERT
23	23	23	30
6170	6172	6172	6172
MERT	MERT	MERT	MERT
32	32	32	31
6173	6172	6172	7582
MERT	MERT	MERT	C
35	35	35	



112475	BC 2
112474	BC 1
51864	
112480	

CANADIAN SUPERIOR EXPLORATION LIMITED
 SMITHERS REGIONAL OFFICE

BIG ONION PROJECT

CLAIM MAP

OR AUGHTSMAN: G.S. SCALE: 1:50,000 DATE: AUGUST/76

SCALE
 1: 250,000

STATEMENT OF COSTS

In support of Affidavits on Application to Record Work on
the Big Onion groups of Mineral Claims.

A.	Direct Diamond Drilling Costs including road building and maintenance 15 holes totalling 7645 feet @ \$13.00/ft. May 6 - May 31 and June 28 - July 21, 1976 (J.T. Thomas Diamond Drilling - Contractor)	\$99,385.00
B.	Direct Percussion Drilling Costs 9 holes totalling 2610 feet @ \$2.75/ft. August 15 - August 23, 1976 (L & L Drilling Ltd. - Contractor)	\$ 7,177.50
	TOTAL EXPENDITURES	\$106,562.50

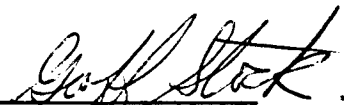
CERTIFICATE

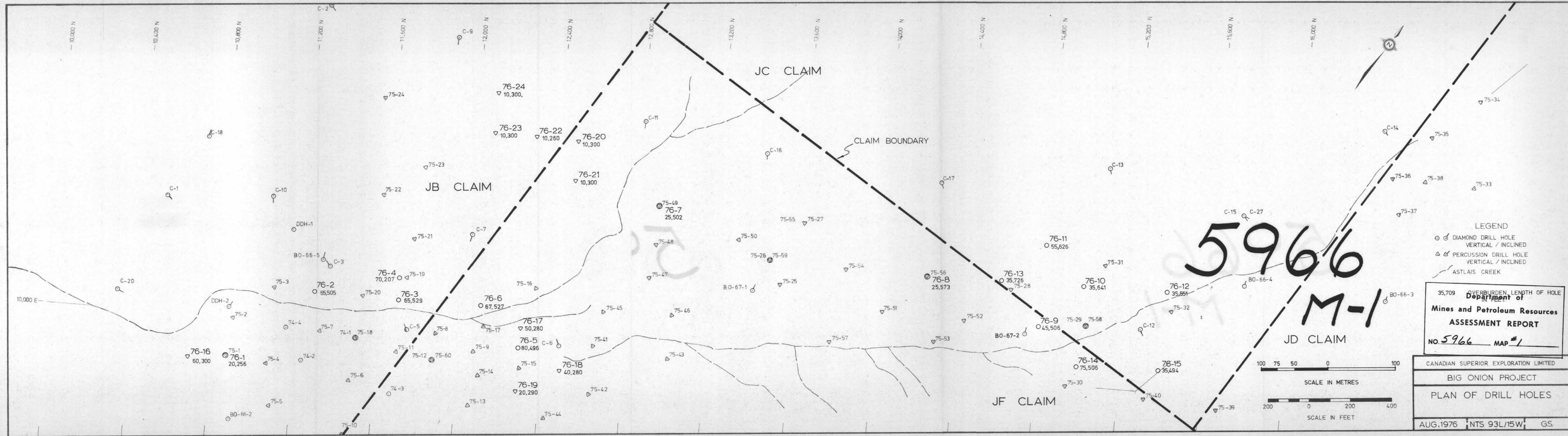
I, GEOFF C. STOCK, of the town of Smithers, Province of British Columbia, do hereby certify that:

1. I am a geologist resident at 3864 North 2nd Avenue, Smithers, British Columbia.
2. I am a graduate of the University of British Columbia 1974 with a B.App.Sc. in Geological Engineering.
3. I have been practicing my profession for two years.
4. I am enrolled as an engineer in-training with the B.C. Association of Professional Engineers.

Dated at Smithers B.C.

This 3rd day of Sept. 1976.


GEOFF C. STOCK



LEGEND
 ○ DIAMOND DRILL HOLE
 VERTICAL / INCLINED
 △ PERCUSSION DRILL HOLE
 VERTICAL / INCLINED
 --- ASTLAIS CREEK

35,709 OVERBURDEN, LENGTH OF HOLE
 IN FEET
 Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 5966 MAP #1

CANADIAN SUPERIOR EXPLORATION LIMITED

BIG ONION PROJECT

PLAN OF DRILL HOLES

AUG, 1976 NTS 93L/15W GS.

100 75 50 0 100
 SCALE IN METRES

200 0 200 400
 SCALE IN FEET

CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 10,890 N
EAST 10,190 E
AZIM: 0° DIP: _____
COLLAR ELEVATION: 3,645
LENGTH: 256' CORE SIZE: BQ

DATE OF DRILLING: START May 6, 1976
COMPLETED May 8, 1976
DIP TESTS: _____

PROJECT: Big Onion
CLAIM NO.: _____
LOGGED BY: G. Stock DATE: May 15, 1976
CORE STORED AT: CSE OFFICE (Smithers)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS			
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
0	20	ØVB												MoS ₂	Ø					
20	51.5	QFP	lt. gray green to white	QZ PF	Gran	3-4	Ø-1	80°-40°-50°-10°	Ser Sauss QZ Chl	H-X	Ser 5 Silicic 9	Cpy Cc	.7 Ø	Ca nat Cu Py	Ø 2	2				
<p>Alteration primarily Sericitic but with varying amounts of qz veining & very minor qz flooding. Alteration is apparently saussauritic with some chl developed between 25' and 32'. as observed by the color change.</p> <p>Contact obs'd @ ~20' to C.A. well defined & sharp.</p>																				
51.5	67	Ands	dark green	Volc.		1-2	Ø	80°-60°-45°-10°	Ser Sauss Chl Cal qz	H-X	Ser 5 Ø qz	Cpy Cc	1 Ø	MoS ₂ Py	3	2				
67	76	Ands/QFP	whiter gray grn	Volc/ gran		1-3	Ø-1	70°-45°-30°	Ser Chl qz Cal	H-X	Ser 5	Cpy Cc	.6 Ø	Ca nat MoS ₂ Py	Ø 2	2				
76	129	QFP	H gray	QZ PF	Gran	3-4	Ø-2	80°-45°-30°-10°	QZ Cal (T) Ser Sauss	A-X	qz Ø Ser 5	Cpy Cc	1.5 Ø	MoS ₂ Py	Ø 1	4-5				
<p>relict PF lathes visible locally MoS₂ as disseminations as well as along fractures. Cu grades could be higher than estimated</p> <p>Silicic alt'n primarily as veins but locally becoming flooding</p>																				
129	256	Ands	H brn green to lt green	Volc		1	2 locally	20°-30°-45°-80°	chl Cal qz Ser	H-X	Ser 5 qz local	Cpy MoS ₂	.9 Ø	Py	2	2				
<p>some BTO? noted @ 134.5' Cu grade & no Cc obs'd MoS₂ obs'd locally usually with QFP Veinlets Cpy is apply related to these as well.</p> <p>ANDS is x-cut by QFP veins + veinlets from 1/4" to 2' in width</p> <p>QFP oriented commonly @ 20°-30° + @ minor scale is quite random.</p> <p>@ 183' fault mylonitic textures developed @ 171'</p> <p>Calcite veinlets oriented 20° increase with depth. Calcite also apply assoc with QFP veinlets?? QFP at 207' top cont at 80° belt at 209' + 20° with ANDS silicified around it. @ 232'-234' @ 45° + 235-235.5 @ 45° ANDS sil'd py 11 + py 1 in these zones.</p>																				

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 11,300 N
EAST 9840 E
AZIM: 0° DIP: -90°
COLLAR ELEVATION: 3,710
LENGTH: 505' CORE SIZE: BQ

DATE OF DRILLING: START May 9, 1976
COMPLETED May 12, 1976
DIP TESTS: ---

PROJECT: Big Onion
CLAIM NO.: ---
LOGGED BY: G. Stock DATE: May 20, 1976
CORE STORED AT: C.S.E. SMITHERS OFFICE

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
0	65	QVB		Leached	Cap to 125' (60')				Ser Sauss Qz	H-X	Ser 5									
65	111	QFP	cream to lt grey	Qz PF	Gran	4-5	2	50°-20°-80°	Ser Sauss Qz	H-X	Ser 5	Cpy Cc	.3 .8	mos Py	1	Cc 6 Cpy 2				
locally has general appearance of QDP but has Qz eyes + mafics(?) apparently all Chalcocite. Qz eyes are quite apparent. weakly brecciated 4" @ ~30° @ contact.																				
111	170	QDP	lt grey	Qz PF	Gran	3-4	2	0°-20°-45°-70°	chl cal ser Qz	H	Ser 5	Cpy Cc	1.2 .5	50 Py	1	Cpy 3 Cpy 3				
134' 4" Ands duke app oriented 45° QDP is weakly silicified near QFP contact Calcite primarily as vein mat @ 123' 120-130 protore grade improving but 2 nd y becoming more + more as a tarnish. Native Cu @ 136 + 140.5 - 144' and 153 - 154 Supergene fading sharply @ 160-170 end of Super? 2 nd y Bio?																				
170	280	QDP	lt grey	Qz	Gran	3-4	2	80°-45°-20°	Ser chl gyps Qz	A-H	Ser 5	Cpy Py	.9 2	mos Py	1	Cpy 3 Py 3				
170-180 Py/cpy ratio reverse Py > Cpy Cpy common to almost all sheared fracts Mdy becoming disseminated past 210. 1% Gypsum very prob from 240' oriented prim @ 45°-60°																				

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS						
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
280	297	QDP																				
									becoming pervasively + intensely silicified from 283-296 locally mylonitic textures developed @ 60° 285-294 rare local thick 1-2" calcite veinlets @ 292' contact @ 297' sharp oriented @ 45°													
297	337	QFP	with grey to white	QZ PF	Gran	5	Ø	0°-30°-45°-60°	Qz ser gyps	H	Qz 9 Ser 5	cpy Py	.3% 3%	MoS ₂	Ø	5,5,6						
311	316	FLT							locally to greenish calcite resulting from scuss Chl developed around blebby to rare qz eyes contact @ 45° Qz as veins primarily but peru Ser'n min'l'n primarily related to Qz veining infilling fractures qz flooding from but patchy moly diss in QFP as well as qz veins.													
337	353	QDP	with grey green	PF QZ	Gran	5-6	Ø-2	30°-60°	ser ms qz Cal gyps	H-X	Ser 5	cpy Py	.5 2	MoS ₂	Ø	4,4,2						
									QFP 341-342 oriented @ 20°-10° + 6" @ 351 @ 30° calcite only as trace contact is indistinct but occurs over approx. 3"													
353	361	QFP	with grey	QZ PF	Gran	5-6	Ø	0°-30°-45°-60°	Qz Ser	H	Qz 9	cpy Py	.3 1.5	MoS ₂	Ø	4,4,5						
									contact @ 20°													
361	371	QDP	with grey	PF QZ	Gran			0°-30°-45°-80°	Ser Qz ms Cal	H	Ser 5	cpy Py	.3 2	MoS ₂	Ø	4,4,2						
									contact @ 20°													

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HOLE NO.: 76-2

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____

EAST _____

AZIM: _____ DIP: _____

COLLAR ELEVATION: _____

LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____

COMPLETED _____

DIP TESTS: _____

PROJECT: _____

CLAIM NO.: _____

LOGGED BY: _____ DATE: _____

CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS						
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
371	388	QFP	lt. grey	Qz PF	Gran	4	∅	0°-30°-45°-80°	Qz Ser	H	Ser 5 Qz a	cpy py	.3 1	Mos ₂	∅	3,2,5						
									Qz as veins + veinlets as well as perovsives. contact @ ~ 70°													
388	475	QDP	gr. grey	PF Qz	Gran	5	∅-2	60°-20°-45°	Ser M ₂ az Cal Sines	H-X	Ser 5	cpy py	.3-4 1-2	Mos ₂	∅	2,2,1						
									cal weakly perov. + also as veins commonly with cpy qz as veinlets 447-449 QFP dyke oriented ~ 25° 458-464 ~ 45° top 30° batt.													
475	505	QFP	H. white grey	Qz PF	Gran	4	∅	30°-45°-60°-80°	Qz Ser	H-X	Ser 5	cpy py	.35 1.5	Mos ₂	∅	3,3,3						
									a bundant intensely sericitized QDP frag? obs'd.													

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 11,700 N
EAST 9,840 E
AZIM: 0° DIP: -90°
COLLAR ELEVATION: 3,765
LENGTH: 529° CORE SIZE: BQ

DATE OF DRILLING: START May 13, 1976
COMPLETED May 19, 1976
DIP TESTS: _____

PROJECT: Big Onion
CLAIM NO.: _____
LOGGED BY: G. Stock DATE: May 25, 1976
CORE STORED AT: C.S.E. Smithers Office

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
0	65	ØVB							Leached Cap to 82'											
65	97	QDP	H. grey qz	PF Qz	Gran	4-5	Ø-2	70°-45°-20°	Ser chl Qz	Cal	H-X Ser 5	Cpy Ca	.5	Mos ₂ Py	Ø	2				
									Fp Ppy AND Duke 1' thick @ 81-82 attitude? Frags of QDP in it. Contact is a change of Alt'n from Ser → Propylitic 2 nd Bio developed alongside min'l'd qz veinlets oriented 20°-45° to C.A. good example @ 83' Cc intimately assoc. w/ Sulphides which are primarily Cc Spotty veinlets.											
97	158	QDP	H. grn. to grn	PF Qz	Gran	4-5	Ø-1	60°-80°-45°-20°	Ser Ep chl ms Qz	Cal	A-H Propylitic	Cpy Ca	.4	Mos ₂ Py	Ø	3.1-2.3				
									QDP becoming f.g. from 135-142 end of Cc @ 125? Cp becoming weakly dissem. locally 120-130											
	158	FLT							well developed mylonite textures 158-159 Hematitic limonite bounding Fl.											
158	164	QDP	H. grey	PF Qz	Gran	4-5	Ø-1	45°-20°-0°	Ser chl qz Cal		A-H Ser 5	Cpy Mos ₂	.3	Py	1	4, 1, 3				
									bottom contact @ 45°											
164	173	ANES	magn.		Volc.	3	Ø-2	45°-60°-80°	Ser Cal Qz		A 1+5	Cpy	.8	Py	1	6, 3				
									large Cal vein @ 173' w/ 4" bott. contact App 45° contact is Cal vein. Cal veining very prom commonly w/ cpy Cpy also as dissem.											

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PAGE 2 OF 4
HOLE NO.: 76-3

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
173	188	QOP	m. grey green	PF QZ	Gran	4-5	Ø-1	45°-30°-80°	QZ Ser Cal	H	Sil q	cpy	.4			2						
									Cal along shears w QZ.		Relict moderately			Silicified		PF ppy's						
188	235	ANDS	grey grn to grn.		Volc.	3	Ø-1		Ser. chl. Cal.	M-A	Prop-1	cpy	1.0	MoS ₂	Ø	5-6						
												Py	2	Ca		1-2						
									upper contact distinct ± 1-2" but no att. lower Cont n 20° Cc + Calc coating Py/cpy @ 194' persisting in vugs tr bn on 1 shear n 206 MoS ₂ ↑ sharply 210'-220'													
235	244	ANDS	lt. brn. green		Volc	3-4	Ø		ms Ser chl QZ	A-H	Ser 5	cpy		MoS ₂	Ø	4,4,1						
									Ands which has been x cut by QZ/cal. Py/cal veinlets that have sericitically altered the host chloritized mafics alter. to Muscovite + Ep alt - Ser. Chl → Ms giving rock a blebby texture due to porosity difference?													
244	367	ANDS	grn to brn. green		Volc.	3-4	Ø-1	20°-30°-60°-45°-80°	Ser QZ chl Cal Ep May	B-M	Prop-1	cpy	2-3	MoS ₂	Ø	4,4,1						
									QFP veins @ 260-280 up to 10' wide adjacent ANDS is fairly well min'l'd Ep 280-323 decreasing w depth. QZ cal veinlets. Mafics clotted - 282' + Fresh Magnetite. 305 to 307 assoc. w ep + higher grades. 2ndy Bis 288 around min'l'd. az/cpy vein + esp good @ 304'. Hbl Ppy Ands from 305-318. 320-330 very splashy as blebs vein + dissd becoming altered 337' intensely Ser'd. Hole marking water @ 337'													
353		FLT																				

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
367	381	QFP	lt. grey	QF PF	Gran	3-4	Ø-	20°-45°-80°	Ser Qz	H	Ser S	cpy Py	.3 1-2	mos ₂	Ø-1	3,3,1						
381	384	ANDS	lt. brn. grn.		Volc.	2	Ø-1	45°-70°-20°	Ser Qz Cal chl.	H	Ser S	cpy Py	.6 1-2			3,3						
384	434	QDP	m-lt m green	PF QZ	Gran	1-5	Ø-1	0-45°-60°-80°	Ser Qz Cal chl	B-M	Prop 1	cpy Py	.5 2	mos ₂	Ø	4,3,1						
<p>QDP is highly variable in grade size but all apparently having qz in ground mass + app. having ANDS frags w in. becoming moderately sericitized between 415' + 420' Mylonitic @ 430'-434' Red Micaceous min'l evident @ 388 Min'l'n ↑ w sericite mostly as Py/qz/cpy veins</p>																						
434	440	QFP	lt grey to white	QZ PF	Gran	3-4	Ø	20°-30°-70°	Ser Qz	A	Ser S	cpy Py	.6 2	mos ₂	Ø	5,5,2						
440	504	ANDS	med. grn.		Volc.	2	Ø-1	70°-45°-20°	Ser chl qz Cal	M-A	Prop-1	cpy Py	.6 1	mos ₂	Ø	5,4,1						
<p>Ep prom 460-473 Highly sheared @ 493'</p>																						
																			*5966			

CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 4 OF 4
HOLE NO.: 76-3

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
504	529	QDP	gru to grn.	PF Qz	Gran	2-4	Ø-2	45°-80°-60°	Ser Chl Qz Cal	F	Prop-1	cp py	.5 2	MoS ₂	Ø	2,3,1						
rock is only weakly altered moderately to weakly chloritized + sericitized maybe weakly silicified QFP dyke ~ 2' oriented @ 45° forms contact.																						
*5966																						

CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,300 N
EAST 10,040 E
AZIM: 0° DIP: -90°
COLLAR ELEVATION: 3880
LENGTH: 496' CORE SIZE: BQ

DATE OF DRILLING: START May 22, 1976
COMPLETED May 26, 1976
DIP TESTS: _____

PROJECT: Big Onion
CLAIM NO.: _____
LOGGED BY: G. Stock DATE: May 27, 1976
CORE STORED AT: C.S.E. Smithers Office

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS			
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.
0	80	ØVB																		
80	162	QFP	H. grey	Qz PF	Gran	4-5	Ø-1	20°-80°-45°-60°	Ser Qz	X	Ser 5									
												Cpy	.3-.5	Cu	Ø	6				
												Ce	1.0	MoS ₂	Ø	1				
162	182	QDP	med grn	PF Qz	Gran	3-5	Ø	80°-20°	Ser Qz chl	H-X	Ser 5	Cpy	.5-1	Cu	.5-1	6,1-2				
												Py	1	MoS ₂	Ø					
182	205	ANDS	dk. grn		Volc	2	Ø-1	60°-80°	Ser Qz mag Bio	H-X	Ser 5	Cpy	1-2	MoS ₂	Ø	5-6				
												Cpy	1-2							
205	219	QDP	dk. green	PF Qz	Gran	3-4	Ø-2	60°-80°	Ser Qz chl	H-X	Ser 5	Cpy	1-1.5	MoS ₂	Ø	1				
												Py	1							
219	238	ANDS	green	1	Volc.	2	Ø-1	20°-45°-60°-80°	Ser Qz Ep chl	H-X	Prop 1	Cpy	1-0	Bn Cu	Ø	1				
												Py	1	MoS ₂	Ø	1				

fault

130-132 highly sericitized QDP? due to oriented 60° to CA. becoming silicified or QDP?
Contact @ 45° Qz eyes decreasing in size + dissem'd
cerim + coating on Cpy + dissem'd

Cpy becoming very uniformly + finely dissem'd. lower contact app fault @ 60°
Weak mylonite texts developed in ANDS. (w open space fillings)

magnetite blebs assoc w cpy commonly dissem. as blebs as well
some 2nd Bio obs'd on fractures
Also chond frags

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*Copper coloured Mica @ 232-3 mag developed locally
Supergene min'l'n becoming more imp't. again MoS₂ ↑
lower contact @ 45°

CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: Big Onion
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
238	293	QDP	lt. grey	PF Qz	Gran	3-4	∅	10°-30°-45°-60°-80°	Ser Qz	H-X	Sil 9	Cpy Pyl	1.2	Cc Moly	∅	33,3,2				
<p>Highly silicified QDP can see some relict Fp phenos but no Qz eyes, extreme near the margins. Qz as veins as well w/ py/cpy w/ some Cc app always assoc. w/ other sulphides now as coatings + rims. moly seen locally diss'd. Moly ↑ 270-280 Vugs present w/ Qz x'tals. yellowy brown grunge (ser veins) obs'd. lower cont. N45°(?)</p>																				
293	315	ANDS	dkgrn		Volc	2	∅	45-30-60-80	Ser Cal qz chl Ep	B	Ser S-1	Cpy Pyl	1.2	Cc Moly	∅	6,5,224				
<p>Ser'd Fp - Ser as veins looks like grunge above qz + cal as veins diss'd blebs cpy + py abundant Cc + Bn on fract. abundant mag as blebs veins etc. lower contact with dyke N 80°-85° Prop'd then Ser'd. obs'd 2nd dyke on fract. + locally riming blebs + in some vugs cpy w/ some cal.</p>																				
315	319	QDP	lt. grey	PF Qz	Gran	3-4	∅	60°-45°-20°-80°	Qz Ser	H-X	Sil 9	Cpy Pyl	1.6	Cc Moly	∅	4433				
<p>lower contact @ 45°</p>																				
319	360	ANDS	dkgrn		Volc	2	∅-2	0-30-60-45	Ser Qz Cal Ep	B	Ser B/ prop	Cpy Pyl	1.8	Cc Moly	∅	53221				
<p>excellent log of open space filling abundant mag as blebs etc. app some 2nd dyke Bio. on fract. weakly silicified @ bottom contact inversion Pyl >> Cpy 330-340 abundant mag assoc. Cpy ↑ 340-350 lower contact @ core shattered can't tell.</p>																				

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 2 OF 3
HOLE NO.: 76-6

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS			
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
324.5		ANDS	257-	324'	ess	gravel														
						mag/cpy veinlet 260														
						Fault 268-273														
						297-306.5 QFP dyke min'l'd ANDS (Cpy)														
						above dyke Mag in vugs @ 308'														
						80% recovery from 280-310														
						6" QFP dyke Tet @ 312 v 80°														
324.5	374	QFP	white	Qz	Gran	4	Ø	0-20-30-45-60-80	Qz Ser	H-X	9	Py	1.5	Mass	Ø	4,2,2,1,1				
												Cpy	.4	Bn						
						Bn/Calc 356-359 as tarnish														
						Supergene product of rK type rather than perc of @W														
						most rK has ability to allow movement of supergene fluids but it														
						requirement for Supergene deposition														
						Chl @ 368 on fract. locally w Qz x'fals in vugs														
						lower CNT @ 70° Qz superimposed on sericitic alt'n which is locally visible														
374	493	ANDS	lt.-m green		Volc.	2	Ø-2	0-20-30-45-60-70-80	Ser Qz Cal Ep Chl	A-H	1	Py	1.10	Mass	Ø	4,2,2				
						Silicified to 380' Mag as diss + as blotchy irreg. blebs, commonly w Cpy + as veinlets														
						Qz/Cal in veinlets. Some w cpy less w cpy + py, becoming diss'd 390-400														
						also mag more abund. Min'l'd QFP dyke @ 433-438' 70° top 30° bottom w magnetite														
						FLI @ 411 QFP Dyke min'l'd w diss py + cpy + blebby mag as before from 445-447														
						lower contact @ 80° margins of ANDS are Above red silicified Calcite veinlets w ANDS frags 430-450														

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,910
EAST 9,290
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 4,210
LENGTH: 502 CORE SIZE: BQ

DATE OF DRILLING: START June 28 1976
COMPLETED June 30 1976
DIP TESTS: _____

PROJECT: Big Onion (P-109)
CLAIM NO.: _____
LOGGED BY: G. Stock DATE: July 1, 1976
CORE STORED AT: C.S.E. Smithers Office

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
0	25	QUB																				
25	266	Leached Cap		Limonite	essentially	Jarosite ± Hematite			Goethite	only locally	int to 64'											
25	64	QDP	Brown Orange	PF Qz	Gran	5	Ø-1	45-30-80-20	Ser Ms Qz	X	5				? limonitized							
				Faults @ 44, 55.5 + 64					locally	vugular	Qz x'tals											
				Mafics altered to Ms					PF completely	Ser'd.												
63	64	Fault																				
64	75	QFP	buff	Qz PF	Gran	5	Ø-2	30-45-80	Qz Ser Ms	H-X	9	Cpy .2 Py .7	cc	Ø	6,5,2							
				lower contact @ 60°					locally well developed	Ms x'tals												
75	184	QDP	grey to grey green	PF Qz	Gran	4-5	Ø-2	0, 20-30, 60-80	Ser chl Ms Qz Cal	B-M	5	Py .4 Cpy .2	cc	Ø								
				vugular 90-104					black Oxide Tenorite	locally vugular thereafter												
				Trace calcite					only Qz as veins + veinlets	Chl → Ser + Ms												
				Chalcotrichite ??					@ 100 w Tenorite?	Cpy becoming >.1 @ 160												
				3' fault 105-108'					alt'n decreasing 120-130 (F)	just variable FM												
				ANDS (barren, unaltered)					dyke @ 45° 139-141													
				sheared @ 182 @ 75°																		
				Fault @ 184' @ 70°					3" Fine gauge													

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 2 OF 3
HOLE NO.: 76-7

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS		MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
184	192	QFP	white	Qz PF	Gran	4	Ø	30-45-60-80		Ser Qz Ms	H M	5 9	Py Cpy	.8 .4	Cc Mos ₂	Ø	4,5,2,3				
				good Cc as coatings on pyrite in lug above fault. Alt'n is high seric w/ mosq mod Sil'd Some relict PF phenos obs'd Qz veinlets as well. lower contact sharp but obliterated app'ly high &?																	
192	250	ANDS	dk. md green		Volc	2	Ø	0-90	30-60 dom	Ser Qz Cal chl Ep	H B-M-A	1 5	Py Cpy	.7 .6	Cc Mos ₂	Ø	4,5,2,1				
				Prop'd Ands w/ ser'd superimposed Qz + Cal in veinlets from 237 becoming incr Ser'd from 210' 213-218 QFP dykelets apparently feathered ends magnetite 234-236 240-250 diss'd blebs Cpy w/ chl (and/or Bix?) blebs lower contact fault n 40°																	
250	305	QDP	H grey white	PF Qz	Gran	4	Ø	Gravel Core Rec 90%		Qz Ser Ms	H-X H-X	5 9	Py Cpy	.5 .6	Cc Mos ₂	Ø	3,6,4,4,4				
				relict X Ser'd PF Mos ₂ much higher especially around 267 w/ brk frags. sil ↑ w/ depth Recovery 50% 290-300 3' fault 297.5 making 1000 gals water/min. incr Sil ↓ Super hypo consl Mos ₂ ↑ QDP .22 300-305 contact gravel.																	
305	382	ANDS	m green		Volc	2	Ø	Gravel Core Rec 92%		Ser chl Ep	H B-A	1 5	Py Cpy	1.5-2 1.5-2.5	Mos ₂	Ø	3,5,1				
				Magnetite Sporadic 390-340 Py ↑ Cpy ↓ 3' fault @ 353' becoming Ser'd 350 Cpy as blebby masses py as veins + locally diss'd 2' fault @ 256'																	

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 3 OF 3
HOLE NO.: 76-7

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
	382	ANDS	m grn		VOLC	2	∅	20-30, 45, 60-80	Ser Chl Ep Gyps Qz Cal	H B	Prop ser's	Py Cpy	1-2 4	MoS ₂		4,3,1						
				Gypsum veinlets abundant cutting Ser'd Andesite (B-A) otherwise same rock Cpy w Py in veinlets locally mag + them commonly w Cpy Shear @ 409 @ 50° Ep 400-407 + 410-457 2" QFP dykelet @ 45° + 410 450-452 QFP? dykes @ 55° w hornfelsed ANDS frags relict PF phenos lower contact w 40° @ 458																		
458	475	QFP/Horn	white to brn	Qz PF Bio meta gran		3-4	∅	45, 80	chl Bio Ms Ser		Hornfelsed Py Cpy											
				mylonite texts developed 473-477 Gauge 465 472																		
475	502	QFP	white to green	Qz PF Gran		4-5	∅-2	45-60	Ser Qz	A-H	Ser S	Py Cpy	1.5 2.5			3,4						
				Sild as veins + fractures Cpy assoc w Py in veins.																		
				#5966																		

CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 1 OF 4
HOLE NO.: 76-8

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 14,240
EAST 9,525
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 4,635
LENGTH: 573' CORE SIZE: B.Q

DATE OF DRILLING: START July 1, 1976
COMPLETED July 2, 1976
DIP TESTS: —

PROJECT: Big Onion (P-109)
CLAIM NO.:
LOGGED BY: G. Stock DATE: July 3, 1976
CORE STORED AT: C.S.E. Smithers Office

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS								
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.					
0	25	ØVB																							
25	101	Leached Cap				25-35		Extremely Leached																	
25	101	QFP	white to lt grey	Qz PF	Gran	4	Ø	core Rec n 50-65% ess 0-90°	Ser Qz	X A-H-X	Ser 5 Sil 9	Cc Py	4-8 0	Cpy MoS ₂ Cav Pb	0.5 0.2							6,261,66			
			no sulphides obs'd till 35'																						
			Faults 40,45,50,54,57,63,79,85																						
			primary sulphides @ 72'																						
			Sild as veinlets only locally pervasive																						
			Cu is diss'd w Py when present as veins																						
101	251	QFP	white to lt grey	Qz PF	Gran	4	Ø	0-90°	Ser Qz Ka	X A-H	Ser 5 Sil 9	Cc Cpy	6-1 .4	Py MoS ₂											
			Kaolin assoc w faults Qz as veinlets locally mod pervasive																						
			Alt'n change? 115-120 or Ser'd <u>ANDS??</u> 130-140																						
			Cc deposition preferential on cpy rather than py locally relict chl Ands frags? (3") 167'																						
			well sheared throughout on echelon faulting																						
			developing a slight greenish cast alt'n decreasing																						
			Cc + Cpy locally on fracts but normally diss'd although variably																						
			Qz eyes not dominated - Granulated by intense fracturing + shearing																						

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS						
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
101	251	QFP		Alt'n decreasing																		
				Sec'd And's frags.		250-25	0.5(1")	Dykes 6" @ 229' + 25°														
								232' 3" @ 90°														
								240-247 @ 80°?														
								See relict Ep etc. min'l'd														
251	263	QDP	grn grey	PF Qz	Gran	5	Ø	30-60-80	Ser Qz	X	5	Py Cpy	.3 .8	mas C On Cov	Ø	2,4,3 3,3						
				Py → Cpy now low				CNT ~ 30° upper CNT 60°														
263	266	QFP	lt. grey	Qz PF	Gran	3-4	Ø	30-60-80	Ser Qz	X	5	Py Cpy	.8 .9	mas C On Cov	Ø	2,6,1,6 6,6						
				limonite red lower				@ 80 approx. seems sheared.														
266	274	QDP	grn buff	PF	Gran	4-5	1-2	60-80, 30	Ser Chl	A	5	Py Cpy	.7 .6	Cc	Ø	4,4,3						
				limonitized (jasoite)				grade decr ↓ w depth sim alt'n + incr mafics														
				@ 273' see fig. frag. of QDP?				in C.g. QDP sec sample Qz as veinlets														
274	278	Hbl Ppy	lt. grn	Hbl	Ppy	4	2	20-30-45	Ser Chl	A-H	1-5	-	-	-	-							
				lower contact				45° un min'l'd (sec sample) limonitized + red resinous min'l														
278	334	QDP	lt. grey grn	PF	Gran Ppy	5	Ø-1	30-80, 60-45	Ser Chl Qz	A-H	1	Py Cpy	.7 .6	Cc	Ø	5,5,2						
				ANDS @ 45° @ 286.5' - 288'				app'ly recrystallized fragments locally sericitic														
				Strong chalcocite @ 280 along fract's ~ 80°				Qz as veins lower contact ~ 75° sheared														
				ANDS somewhat sheared after emplacement, weak banding //ing contact.																		

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 3 OF 4
HOLE NO.: 76-8

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
334	340	ANDS	dk green		Volc	2			Ser Chl	H	1	Cpy Py	.6 .3	MoS ₂	Ø	3,3,1				
									Cpy as blebs some diss'd mostly on fract.											
341	349	QFP	lt. grn	Qz	Py Green	5	Ø-1	30,80	Ser Chl Saus Ka	B-A	1	Py	.1			4				
									Chl on fract and probably due to some. ass'n Py diss'd on fract. contacts upper 75° lower 65°											
349	394.5	QOP/ANDS	dk-grey grn	PF	Gray Volc	5-2	Ø-1	Ø, 60, 30, 45	Ser Chl Saus Qz	A-H	1	Cpy Py	.9 1.3	Cc Bn Eol	.3 Ø	7,6,2,2				
									Cpy diss'd grains + blebs Ser 1 380-394 worse Bn @ 398 Mag @ 400 high 4											
394.5	411	ANDS	dk grn		Volc	2	Ø-1	0-90	Ser Chl Qz	A-H	1	Cpy Py	.3 .8	Cc Bn	.3 Ø	5,5,4,1				
									becoming slightly bleached + grey last 3' ser'd from lower limit. lower CNT inferred ~ 70°											
411	420	QFP	lt grey	Qz	Gray Py	4	Ø	45, 60, 80	Qz Ser	A	Sil 9	Cpy Cc	.8 .4	Col Cov Moly	Ø	7,7,7,7,6,1				
									lower contact inferred @ 70°-80°											
420	444	ANDS	med grn		Volc	~	Ø	0-90	Ser Qz chl	A	5	Cpy Py	1.0 .8	MoS ₂ Cc	Ø .2	6,5,1,3				

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 14,810
 EAST 9,730
 AZIM: 0° DIP: -90°
 COLLAR ELEVATION: 4,700
 LENGTH: 506' CORE SIZE: BQ

DATE OF DRILLING: START July 3, 1976
 COMPLETED July 4, 1976
 DIP TESTS: _____

PROJECT: Big Onion (P-109)
 CLAIM NO.: _____
 LOGGED BY: G. Stock DATE: July 7, 1976
 CORE STORED AT: CSE Office (Smithers)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
0	45	QVB																				
45	125	Leached Cap Vero-Hem -60 (45-67') JA-GO-Hem (67-90)																				
45	80	QFP	orange yellow	QZ	gray	4	∅	30,45,70-80	Ser Qz	X	Ser S	Cpy	.2	Py	.1	7,7,6						
QZ as veinlets Qz eyes rare granulated by faulting? Py as diss'd blebs others as grains mixed hypo/supergene from 60 mal @ 70'																						
80	126	ANDS/QFP	H. gray brn		Volc	2	∅	0-90	Ser Qz	X	Ser S	Cc	.8	Py	.2	5,7,6,3						
QZ as veins min'l'n is spotty and assoc w QFP veinlets dykes etc. Cpy diss'd as blebs in ANDS as grains in QFP w Cc - locally vuggy 90-113 lower contact sheared no attitude. Small Fault III																						
126	271	QFP	H. gray	QZ			∅	20-60-30-45	Ser Qz	X	Ser S	Cc	.7	Py	.3	7,7,5,3						
Fault 168,170,188 (30°), 195 (45°) 241, 261 (45°) Qz as veins and rarely pervasive Py on fracts and diss'd as blebs w cpy Cpy in vugs as blebs locally w Ser'd chl @ top ass'n? becoming B silicified 150-154 v grade esp Cc Slightly mylonitic @ 170 mal 226? 185-190 241 259 224-226 ser'd ANDS Att w 70?																						

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS			
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
271	385	QFP?	white to grey	Qz	Gran	4	Ø	60-80,80,45	Ser Qz	X	Ser S	Cpy Cc	4 H	Py Mss Bn Ccu	12 Ø	6,7,5,3				
				273-274 ANDS Duke Sericitized + flooded w QFP 70° + 45° Contacts Cc assoc w QFP in dukes abundant Qz Qt = /ser Rock QFP? mal 343' lower contact is gradational ANDS Frags mostly assn locally 2-3' in size + well altered esp 320-360 amount of silic'n increasing w depth																
385	420	QFP	Rusty dk bluish grey	PF Qz	Gran	5	Ø-1	60-80,30,45	Ser Qz	H	Ser S	Cpy Cc		Py Mss		353.1				
				may be alt'n change excell QFP 398-400 small fit @ 420 one good Qz eye obs'd 398-400 Rock appears granular Rust further evid of Fault zones Cc decr rapidly @ 390' effective end of Super.																
420	428	QFP?	med grey	Qz PF	Gran	3	Ø	30,60-80,45	Ser Qz	H-X	Ser S	Cpy Cc		Py Bn Ccu		34,4,11				
				423 mal somewhat granular but less rusty lower contact apparently @ 45° some shearing.																
428	439	ANDS	lt. grey green		Volc	2	Ø-1	30,80-60,45	Ser chl Qz cal	A-H	Ser S	Cpy Mss		Py		3,1,4				
				lower CRT @ 50° somewhat grad atin al Ser'd ANDS X-Cut by QFP? veinlets + altered by nearby intrusion Cpy bn vein Fracts + shears																

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
 EAST _____
 AZIM: _____ DIP: _____
 COLLAR ELEVATION: _____
 LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
 COMPLETED _____
 DIP TESTS: _____

PROJECT: _____
 CLAIM NO.: _____
 LOGGED BY: _____ DATE: _____
 CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS							
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.			
439	506	mylon'd Qz	grn	PF Qz	Grey mylon	3	∅	60, 80, 30	small Qz Gyps	B	Qz Pys	.3											
				introduction of Gypsum @ 443'																			
				Mylonitized @ ~ 40° varying 20°-70°																			

#5966

CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 1 OF 2
HOLE NO.: 76-10

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 15,010
EAST 9,510
AZIM: 0° DIP: -90°
COLLAR ELEVATION: 4825
LENGTH: 641 CORE SIZE: BQ

DATE OF DRILLING: START July 4, 1976
COMPLETED July 7, 1976
DIP TESTS:

PROJECT: Big Onion (P-109)
CLAIM NO.:
LOGGED BY: G. Stock DATE: July 8, 1976
CORE STORED AT: C.S.E. Smithers Office

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.		
0	35	ØVB																				
35	54	Leached	Cap																			
54	138	QFP	white to grey	Qz PF	Gran	3-4	Ø	50,60-80,30	Qz Ser	H-X	Ser 5	Cpy Py	.3 1.2	Cc Mas ₂	.3 Ø	7,7,5,1						
138	188	ANDS/QFP	brn green lt. grey			2-4	Ø	0-30,45,60	Qz Ser	H-X	Ser 5	Cpy Cc	.6 .4	Py	1.2	55,5						
188	202	QFP	white	Qz	Gran	4	Ø	60-80,20,45	Qz Ser	B H	Sil Ser 5	Cpy Cc	Ø .3	Py	1	6,6,5						#5966
202	234	ANDS/QFP	brn green		Gran Vlc	2-4	Ø	0-90	Ser Qz	A-H	Ser 5	Cpy Cc	.1 .5	Py	.8	7,6,5						

CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 2 OF 2
HOLE NO.: 76-10

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS											
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.							
234	617	QFP	H. grey to white	Qz	Gray Ppy	4-5	0-2	60-80, 30, 45	Qz Ser	H-X	Ser/sil st/sil	cpy Ppy	.3-2 1-1.5	cc Masn	.3-7 0	5463											
									H-X Ser'd QFP locally pervasively sil'd and to Sil'd veinlets + veins Qtz/Ser facies																		
									Ser'd Ads + QDP?? frags obs'd 255-257 + 271-272																		
									Faults. 255 (45°) 286 324 330 319 410 @ (50°)																		
									QFP eyes obs'd thru out where low in Silica																		
									abund. Mal/PF (ser'd) 234-278																		
									Py ↑ + Masn in Sil'd zones																		
									veins + veinlets common 40-50°																		
									alt'n decreasing about 495° → H-A PF ^X Sauss'd																		
									570'-580' hypogene incr super almost gone																		
									Mdy ↑ quickly frags + diss'd.																		
									Chalcopyrite open frags only from 580'																		
617	641.5	QFP?	greenish grey	Qz	Gray Ppy	4	1-2	10, 30, 45, 60-80	Qz Ser Gyps	M-H	Ser S	cpy Ppy	.9 1	cc Masn	0	613, 21, 2											
									PF is X sauss'd																		
									#5966																		

CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 1 OF 2
HOLE NO.: 76-11

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 14,810
EAST 9,330
AZIM: 0° DIP: -90°
COLLAR ELEVATION: 4,870'
LENGTH: 626' CORE SIZE: BQ

DATE OF DRILLING: START July 7, 1976
COMPLETED July 10, 1976
DIP TESTS: _____

PROJECT: Big Onion (P-109)
CLAIM NO.: _____
LOGGED BY: G. Stock DATE: July 16, 1976
CORE STORED AT: C.S.E. Smithers Office

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.		
0	55	ØUB																				
55	202	leached cap																				
55	143	QFP	white	Qz PF	Gray/Py	5	Ø-1	0-90°	Ser Qz	H-X	Ser S	Py	.3	cc	7							
				Cc @ 60'																		
				locally pervasive sil'd +																		
				is veins primarily Ser'd																		
				55-102 in 30' = 60% Rec																		
				110-120 = 80%																		
143	154.5	And sm /QFP	lt. brn		Volc.	2	Ø-1	20-30, 45, 60	Ser Qz	X	S-r S											
				Ands x cut w abund QFP																		
				veinlets and highly ser'd																		
				lower contacts @ 25°																		
154.5	380	QFP	white to gray	Qz PF	Gray/Py	5	Q-1	0-90	Ser Qz	H-X	Ser S	cc. Py	.9-2	Cpy	Ø-5	7, 4, 6, 1						
				Cpy becoming consistent																		
				210-220' diss'd blebs																		
				Ands frags 238-242																		
				248-250' fault																		
				Fault 343' @ 45°																		
				becoming highly siliceous																		
				370-380 thus grade																		
				Contact fault @ 55° 3'																		
				moderately mylonitized																		

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.
380	553	QFP	^{buff to magrey} Qz PF	Gran / Ppy		5	∅	70-90, 30, 45°	Ser Qz	H-X	Ser S	Py Cpy	1.6	MoS ₂ Cc	∅	7, 3, 5				
553	626	ANDS	grn		Volc	2	∅ - 1	30, 45-60, 80	Ep chl Ser Qz	A-H	Prop-1	Py Cpy	2.0 1.6	MoS ₂	∅	5, 4, 1				

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 15400 N
 EAST 9500 E
 AZIM: 0° DIP: -90°
 COLLAR ELEVATION: 4865
 LENGTH: 551 CORE SIZE: BQ

DATE OF DRILLING: START July 11, 1976
 COMPLETED July 12, 1976
 DIP TESTS: —

PROJECT: Big Onion (P-109)
 CLAIM NO.: —
 LOGGED BY: G. Stock DATE: Aug 2, 1976
 CORE STORED AT: C.S.E. OFFICE SMITHERS

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS			
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.
0	35	ØVB																		
35	58	Leached Cap																		
35	49	True Gasson Prim QFP										Cc Py	Ø			7,6				
		Ands (minor) + QFP frags cemented w limonite frags are extremely angular And not obs'd til 47' w Ands @ 48-49' Cc/py locally devel presumably rest leached																		
49	75	QFP	white to lt. grey	Qz	Gran/Py	5	Ø	70-80, 30°	Ser Qz = Ka	X	Ser-5	Py Cc	.5 .3	Cpy	Ø	6,7,6-7				
		Ands frag 6-6.2 + locally smaller ~2" fragments Qz commonly as veins + locally + rarely pervasive 2-3" zones [REDACTED] Faults thru out 54, 59, 61, 64 etc apply high 4 60 80 + ~20-30° mal locally																		
75	126	ANDS	lt. green to grey	Nalc		2	Ø-1	30, 45, 60-1	Kal Ser'd ep±Ka Ser Qz Chl	H-X	Ser 5	Cc Py	.5 1.9	Cpy Mal	Ø	6, 5, 5, 1				
		prev. propylitized Ands seritized by QFP empl + QFP/ANDS to 89 mal locally esp toward bottom py diss'd + veins Cpy fracture filling open space + blebs @ intersection of fracts Cc diss'd but blotchy Faults - 84 89 (45°) 94 (60°) 119 (90°) 124 Cpy ↑ w depth as diss'd																		
126	318	QFP	[REDACTED]				Ø	0-90	Ser Qz ± Ka	H-X	Ser 5	Cc Py	.5 .8	Cpy Mal	Ø	7, 5, 6, 3				
		locally silicitized ± mal somewhat Sauss'd locally, Alt'd.? Chl [REDACTED] MoS ₂ becom diss'd w depth QFP is abund C: 170-177 (80° + 80°) 225-233 (70° ~ 70°) 257-261 (fr?) Frags 181-186 234 293-294 QFP veinlets obs'd -245' 1.5' fault																		

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 2 OF 2
HOLE NO.: 76-12

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.		
318	323	QFP/ANDS		contact	ru	70-80°																
323	367	QFP	v. H. yell grey	Qz PF	gray	5	Ø-2	30,60-80 +45	Sauss Ser Qz ± Ka	A-H	Ser 5	Cc Py	Ø 1	Cpy MOS ₂	.3 Ø	7,5,6,2						
				contacts' rel		gradational																
367	525	QFP	lt. v. lt. grey	Qz PF	gray	5	Ø-1	60-80,10,30,45	Ser ± Ka Qz Cal	H-X	Ser 5	Cc Py	.5 1	Cpy MOS ₂	.3 Ø	7,6,6,3						
				initially mixed		Sauss/Ser																
				Faults	365	381	387-45°	404	407-30°	423	441	460	481	487	520	53%						
				faulting appears		20-30°		367-380														
				well sheared		commonly @ 30°		thru out														
				becoming		ruggy		last 50'														
525	535.5	QDP	med dk green	PF Qz	gray	3-5	Ø-1	0-30,45,60	chl Ser Sauss ± Ka Qz Cal	A-H	Ser-5	Py Cpy	.2 1	Cc MOS ₂	.2 Ø	4,3,2,1						
				lower contact @ 45°		locally fq.																
535.5	551	QFP	lt grey	Qz PF	gray	5	Ø-2	20,30,45,60,80	Ser Qz Cal	H	Ser-5	Cc Cpy	.4 .2	Py MOS ₂	1 Ø	7,6,5,2						
				Qz veining		locally x'talline		in good Cc														

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 1 OF 2
HOLE NO.: 76-13

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 14,610
EAST 9,530
AZIM: 0° DIP: -90°
COLLAR ELEVATION: 4725
LENGTH: 726 CORE SIZE: BQ

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: Big Onion (P-109)
CLAIM NO.: _____
LOGGED BY: G. Stock DATE: July 18, 1976
CORE STORED AT: C.S.E. Smithers Office

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.	
0	35	ØVB																			
35	140	Leached Cap																			
35	240	QFP	white to mag grey	Qz PF	Gran. Py	4-5	Ø	down 30-60, 0-90	Ser Q = Ms	H-X	Ser S / Sil	Cc Py	Cpy	Ms	60, 5, 8						
		Faults 40, 67, 74, 81, 89, 101, app'ly @ 50°, 131, 141, (75°) 167																			
		Trace Cc @ 75' Pyrite is essentially only sulphide of note.																			
		Qz eyes from 1-4mm Still only trace Cpy @ 150', locally get some pink Ms X tals																			
		Top of Supergene @ 108' deposited and further leaching leaving patchy Supergene till 40'																			
		Sil'n down 170-180 See sample 207' ser'd w X'anting Qz veins, Cpy incr. w Silica.																			
240	250	QFP																			
		locally w Ande (ser'd) frags 2-3' thick																			
		mal permeated PF locally																			
		Fault 275 (65°) mylonite 65° @ 283°, Cpy still incr. @ 400																			
240	538	QFP		hydrogona		470-480					Alteration ↓ to A-H	470									
		Gypsum - 504'																			
		35° lower contact																			

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 2 OF 2
HOLE NO.: 76-13

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.	
538	726	ANDS/QFP	Area to grey yf		Vol% Grm	2-5	∅	30,45,65,70-80	ser, Qz, Syps Cal, Chl	A-H	Ser-S	ep Fu	1-2	mos ₂	∅	B, b, l					

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 15,010
EAST 9,910
AZIM: - DIP: -90°
COLLAR ELEVATION: 4,740'
LENGTH: 506' CORE SIZE: BQ

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: Big Onion (P-109)
CLAIM NO.: _____
LOGGED BY: G. Stock DATE: July 1976
CORE STORED AT: C.S.E. Smithers Office

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
0	75	OVB																				
75	107	Leached Cap																				
75	118.5	Hbl PF Ppy	grey/gn	Hbl PF	Gran	5-6	Ø-2	0,20,30,45,60,80	Ser Chl (Serid Ep)	B-A	Ser S	Ppy Cpy	1	Cc	Ø	7,6,4						
<p>locally see occasional Qz eye Cpy assoc w mafics + open frags. Cc as tarnish locally on Ppy and rarely on Cpy Some mylonitic textures 100-103' Containing some Aggs frags 97' Faults 83,93,95, 103 108-112 fault @ 80° @ 118</p>																						
118.5	166	Hbl PF Ppy	gn	Hbl PF	Gran	5	Ø-3	60-80,45,30,20	Ser Chl (Ep Serid)	B-A	Ser S	Ppy Cpy	1	Mos2 Cc	Ø	5,4,3,1						
<p>Matrix is green alt'n change?? amount of PF phenoas is variable + locally w out phenoas. Cc coating Ppy/cpy</p>																						
166	383	QOP	m.g. grey/green	PF Qz	Gran	5	Ø-2	30,45,60-80	Ser Chl Cal Ser'd Ep	B-M	Ser S	Cpy Ppy	1	Cc Mos2 Con	Ø	5,4,6,1,1						
<p>Fault 183-193 + 195 (N 70°?) 256 + 260 Cc in the rock Cpy in vugs locally but mostly as dissem. w mafics min'l'n very sporadic + locally @ least is extremely f.g Cal from 255' alt'n decr color dk may be A Prop-1 locally becom very f.g + not ppy; 240-280 Mylonite 278-279 @ 50°</p>																						

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 2 OF 2
HOLE NO.: 76-14

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.		
166	383	QDP		342-356	ANDS	QDP			highly sericitized, good		Ands	350-	355	w	Cal.		locally hem.					
									Py ↑ Cpy in open spaces + shears on ends of core weakly dissem'd													
									Py as veins incr. Rock is somewhat mylonitic from 345 to 350 @ 45-60													
383	415	QFP / ANDS	m. to dk gy. gn.	PF Qz	Gran	2-5	∅	0-90	Chl. Ser. Qz Cal.	F-B	Ser S	Py Cpy	1-1.5 .9	MoS ₂	∅	4,5,1						
									locally sil'd by Qz veinlets rarely pervasive													
									[REDACTED] cpy diss'd + open space + shears commonly w py.													
415	470	ANDS / QDP	m. gn. brn. gn.		Gran Volc	2-3	∅	0-90°	Ser Chl Qz Cal Ser'd Ep	F-B	Ser-S	Py Cpy	1-1.5 .9	MoS ₂	∅	4,5,1						
									w QFP veins + veinlets 428-433 @ 70°													
									445-448 C.g (S) QDP 450-466 QDP as well													
									locally w hem. locally ser'd Ep													
470	503	ANDS	brn. green		Volc	2	∅ -2	30,45,60-80	Cal Qz Chl Ser Ser'd Ep	F-B	Ser S	Py Cpy	.8	MoS ₂	∅	4,6,1						
									Contact somewhat mylonitic (low?) and highly Ser'd													
									[REDACTED]													
503	505	QDP							Cal Qz Ser Chl	F-B	Ser S	Cpy Py	.6 1	MoS ₂	∅	5,5,1						
505	506	QFP							Qz Ser		Sil 9	Cpy Py	.9 1	MoS ₂	∅	7,5,1						
									[REDACTED]													

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 1 OF 2
HOLE NO.: 76-15

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 15,410
EAST 9,890
AZIM: — DIP: -90°
COLLAR ELEVATION: 4910
LENGTH: 494' CORE SIZE: BQ

DATE OF DRILLING: START — COMPLETED —
DIP TESTS: —

PROJECT: Big Onion (P-109)
CLAIM NO.: —
LOGGED BY: G. Stock DATE: July 31, 1976
CORE STORED AT: C.S.E. Office Smithers

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.	
0	35	ØUB																			
35	70	leached Cap (moderate to weak)																			
35	60	QFP	lt. grn. to white	Qz	Grn Ppy	6	Ø-3	45,30,60-80	Sauss Ser	H-X	Sauss/ser	Py	T	Cc?		2,1					
H-Ser'd to 46' primarily H-saussed to S1 then incr to x-Ser to 58' in Ser T Sil'd to lower fault contact @ 70° Anastase ?? @ 57' 2 nd dy Bio ± Cc @ 60° @ 47'																					
60	92.5	PFP	dk grn.	PF	Grn Ppy	5-6	Ø	ess 0-90	Ser chl (Qz) Qz ± Bio?	A-H	Ser-5	Py	T	Mal	T	3,3					
Plog ppy w fine grained plog matrix + irreg Hbl? blebs or blotches Mal T @ 75' gradational contact																					
92.5	147	QDP	lt. grey	PF Qz	Grn Ppy	5	Ø	30-60+80	Ser Cal Ms chl	X	Ser-5	Py	T			5					
w lim devel'd locally esp 122-134 locally vein sil'd Faults 99,111(50°) 119(30°)																					
147	160	PFP	dk grn	PF	Grn dyke Ppy	5-6	Ø-1	45,30,60-80	Ser chlt) Qz ± Bio?	A	Ser S	Py	T			3,3					
Fault contact (upper) infers @ 70° lower is shattered																					
160	344	QDP	grn grey	PF Qz	Grn Ppy	5-6	Ø-2	30,45,60-80	Ser Ms Qz chl(Sauss) al	M-F	Prop?-1	Py	T	Ms ₂	Ø	3,3,1					
Top 75° but 45° 180-185 Fg QDP dyke Cal as veins ± qz and as pervasive alt'n of P.F. Biotite is orig matrix of QDP. Faults 235'(20°) 239'(70°) 278'(0°) 292(10°) 213'(@70°) 215'(@50° + mlyonite) 276'(20°)																					

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 2 OF 2
HOLE NO.: 76-15

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH _____
EAST _____
AZIM: _____ DIP: _____
COLLAR ELEVATION: _____
LENGTH: _____ CORE SIZE: _____

DATE OF DRILLING: START _____
COMPLETED _____
DIP TESTS: _____

PROJECT: _____
CLAIM NO.: _____
LOGGED BY: _____ DATE: _____
CORE STORED AT: _____

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
	344	QDP		272-273 grn	PF Hbl	Ppy dyke upwards			QDP is sauss'd + more highly ch'd											
				dyke @ 35° att of bot	w Hematite + Cal	intuded along a fault?														
				becoming mylonitic around 309	then 309.5 to 311	dyke as before														
				lower contact @ 70'		mylonitic @ 55°														
				vein @ 20° + 319'																
344	408	Hbl PF Ppy	lt. m. gm.	Hbl PF	dyke	5	Ø-2	45-60, 30, 80	chl Ser Cal + Qz Chl Ser	m-A	Prop Sauss	Ppy Cpy	.4 T			4				
				upper contact @ 60°		QDP is weakly rextalized @ contact														
				QDP frag from 367-371 + @ 379		4" dia														
				becoming bleached from		alt of seriatization + local sil'd														
				@ 404 Cu colored mica Hbl'd		Sericite														
				Robable fault contact gravel.																
408	456	QDP	m. grn grey	PF Qz	grn Ppy	5-6	Ø-1	20-30, 45, 60-80	Ser Sauss Chl Cal Qz	F-B	Prop-1	Ppy Cpy	.5 T			5				
				lower contact @ 20°		is well altered. A-H Ser'd, last 2 feet														
				Qz + Cal in veins		Cal also pen.														
456	494		lt. brn grey	Qz PF	grn Ppy	5-6	Ø-2	60-80, 30 + 45	Cal Qz Sauss Ser	H	Sauss sil?	Ppy	.3			6				
				rounded Qz eyes w relict		Ep phenora														
				Cal in veins.		[QFP sauss'd then Sil'd]														

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CANADIAN SUPERIOR EXPLORATION LIMITED

PAGE 1 OF 2
HOLE NO.: 76-16

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 10,685
EAST 10,215
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 3,595
LENGTH: 300' CORE SIZE: Percussion: 2"

DATE OF DRILLING: START August 15 1976
COMPLETED Aug 15 1976
DIP TESTS: _____

PROJECT: Big Onion (P-109)
CLAIM NO.: _____
LOGGED BY: G. STOCK DATE: Aug. 22. 1976.
CORE STORED AT: CSE SMITHERS OFFICE
(Chip Board)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS						
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL.	% Cu.	% Mo.		
0	60	ØVB.																60-70				
																		80				
60	170	QFP																90				
																		100				
																		110				
																		120				
																		130				
170	185	QDP																140				
																		150				
185	215	QFP																160				
																		170				
215	265	QDP																180				
																		190				
265	300	QFP																200				
																		210				
																		220				
																		230				
																		240				
																		250				
																		260				
																		260-276				

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PAGE 1 OF 1
HOLE NO.: 76-17

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,290
EAST 9,950
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 3877
LENGTH: 250' CORE SIZE: Percussion - 2"

DATE OF DRILLING: START Aug 16, 1976
COMPLETED Aug 16, 1976
DIP TESTS: _____

PROJECT: Bic Onion (P-109)
CLAIM NO.: _____
LOGGED BY: G. STOCK DATE: Aug 22, 1976
CORE STORED AT: CSE SMITHERS OFFICE
(Chip Board)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION				ASSAYS				
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
0	50	QVB																50-60		
						leached cap to 115'												70		
50	60	ANDS/QFP																80		
																		90		
60	85	QFP																100		
																		110		
85	130	ANDS																120		
						110-170' Supergene												130		
130	175	QFP																140		
																		150		
175	200	QDP																160		
						170 → strong hypo.												170		
200	250	ANDS																180		
																		190		
						from 170' (END of Supergene) but strong 110-170'.												200		
250	280	ANDS/QFP				Excellent Cpy from 170'. Cpy >> Py.												210		
																		220		
																		230		
																		240		
																		250		
																		260		
																		270		
																		270-280		

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CANADIAN SUPERIOR EXPLORATION LIMITED

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,500
EAST 10,140
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 3942
LENGTH: 280' CORE SIZE: percussion: 2"

DATE OF DRILLING: START Aug 18 1976
COMPLETED Aug 18 1976
DIP TESTS: _____

PROJECT: Big Onion P-109
CLAIM NO.: _____
LOGGED BY: G. Stock DATE: Aug. 22 1976
CORE STORED AT: CSE SMITHERS OFFICE
(CHIP BOARD)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
0	40	ØVB.																40-50				
40	120	QFP		Leach cap.		40-120'												60				
				weak supergene		100-110'												70				
120	135	ANDS (QFP?)																80				
																		90				
135	280	QFP																100				
																		110				
																		120				
																		130				
																		140				
																		150				
																		160				
																		170				
																		180				
																		190				
																		200				
																		210				
																		220				
																		230				
																		240				
																		250				

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PAGE 1 OF 2
HOLE NO.: 76-19

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,290
EAST 10,260
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 3965
LENGTH: 290' CORE SIZE: Percussion 2"

DATE OF DRILLING: START Aug. 18, 1976
COMPLETED Aug. 19 1976
DIP TESTS: _____

PROJECT: Big Onion (P-109)
CLAIM NO.: _____
LOGGED BY: G. STOCK DATE: Aug. 22, 1976
CORE STORED AT: CSE SMITHERS OFFICE
(Chip Board)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION			ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.
0	20	ØVB.																20-30		
						Leach Cap 20-60'												40		
20	290	QFP				Mal/Az 40-80' strong 50-70'												50		
						Supergene environment persists from 60-290'												60		
						[REDACTED] Supergene slightly stronger 110 →												70		
						Grey coatings on lg												80		
						abundant Malz throughout.												90		
						@ 190' Cpu being replaced by [REDACTED]												100		
						[REDACTED]												110		
																		120		
																		130		
																		140		
																		150		
																		160		
																		170		
																		180		
																		190		
																		200		
																		210		
																		220		
																		230		

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PAGE 1 OF 2
HOLE NO.: 76-20

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,500
EAST 8,990
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 4215
LENGTH: 300' CORE SIZE: Percussion: 2"

DATE OF DRILLING: START Aug. 19, 1976
COMPLETED Aug. 19, 1976
DIP TESTS: _____

PROJECT: BIG ONION (P-109)
CLAIM NO.: _____
LOGGED BY: G. STOCK DATE: Aug. 22, 1976
CORE STORED AT: CSE SMITHERS OFFICE
(Chip Board)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS						
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.			
C	10	QVB.																10-20					
																		30					
10	300	QFP.		10-100: leach Cap.														40					
				moly present but not as high grade as previous														50					
				4) [REDACTED]														60					
				[REDACTED] 80 increasing 100-190'														70					
				weak Cc 110-240.														80					
				240-300 Cc incr. steadily [REDACTED]														90					
				[REDACTED] but mineralization														100					
				is significant enough to justify diamond Drilling.														110					
																		120					
																		130					
																		140					
																		150					
																		160					
																		170					
																		180					
																		190					
																		200					
																		210					
																		220					

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PAGE 1 OF 2
HOLE NO.: 76-21

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,500
EAST 9,190
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 4,145
LENGTH: 270' CORE SIZE: Percussion 2"

DATE OF DRILLING: START Aug 22 1976
COMPLETED Aug 22 1976
DIP TESTS: _____

PROJECT: BIG ONION (P-109)
CLAIM NO.: _____
LOGGED BY: G Stock DATE: Aug 27 1976
CORE STORED AT: CSE SMITHERS OFFICE
(Chip Board)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
0	10	ØVB.																20-30				
				10-90 Leach Cap.														46				
10	300	QFP		Py 40-50 →							Extremely fine gr.							50				
				Cc @ 70-80 & Cpx														60				
				Cc repts Py locally														70				
				[REDACTED]														80				
				incr. 150-270														90				
				decr. 270-300 due to [REDACTED]?														100				
				[REDACTED]														110				
				[REDACTED]														120				
				[REDACTED]														130				
				[REDACTED]														140				
				[REDACTED]														150				
				[REDACTED]														160				
				[REDACTED]														170				
				[REDACTED]														180				
				[REDACTED]														190				5966
				[REDACTED]														200				
				[REDACTED]														210				
				[REDACTED]														220				
				[REDACTED]														230				

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HOLE NO.: 76-22

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,300
 EAST 8990
 AZIM: 0 DIP: -90°
 COLLAR ELEVATION: 4,165
 LENGTH: 300' CORE SIZE: Percussion 2"

DATE OF DRILLING: START Aug 22 1976
 COMPLETED Aug 22, 1976
 DIP TESTS: _____

PROJECT: BIG ONION (P-109)
 CLAIM NO.: _____
 LOGGED BY: G. STOCK DATE: Aug 27 1976
 CORE STORED AT: CSE SMITHERS OFFICE
(Chip Board)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
0	10	φVB.																10-20				
																		20-30				
																		40				
0	300	QFP.																50				
																		60				
																		70				
																		80				
																		90				
																		100				
																		110				
																		120				
																		130				
																		140				
																		150				
																		160				
																		170				
																		180				
																		190				
																		200				
																		210				
																		220				
																		230				

10-70 leach Cap.
 malachite 50-60'
 40-50 first wk Cc.
 [REDACTED] 80-190 weak
 MoS₂ quite good 70-
 improving 190-260
 [REDACTED]

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HOLE NO.: 76-23

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,100
 EAST 8,990
 AZIM: 0 DIP: -90°
 COLLAR ELEVATION: 4125
 LENGTH: 200' CORE SIZE: Percussion: 2"

DATE OF DRILLING: START Aug 23 1976
 COMPLETED Aug 23 1976
 DIP TESTS: _____

PROJECT: BIG ONION (R109)
 CLAIM NO.: _____
 LOGGED BY: G Stock DATE: Aug 27 1976
 CORE STORED AT: CSE SMITHERS OFFICE
(Chip Board)

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
0	10	ØVB																10-20				
																		20-30				
																		46				
10	300	QFP.																30				
																		60				
																		70				
																		80				
																		90				
																		100				
																		110				
																		120				
																		130				
																		146				
																		150				
																		160				
																		170				
																		180				
																		190				
																		200				
																		210				
																		220				
																		230				

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PAGE 1 OF 2
HOLE NO.: 76-24

DRILL HOLE LOG

LOCATION: GRID COORD. NORTH 12,100
EAST 8790
AZIM: 0 DIP: -90°
COLLAR ELEVATION: 416.5
LENGTH: 300' CORE SIZE: Perussion 2"

DATE OF DRILLING: START Aug 23 1976
COMPLETED Aug 23 1976
DIP TESTS: _____

PROJECT: Big Onion (P-109)
CLAIM NO.: _____
LOGGED BY: G Stock DATE: Aug 27 1976
CORE STORED AT: CSE SMITHERS OFFICE
(Chip Board).

FOOTAGE		ROCK TYPE					FRACTURES		ALTERATION			MINERALISATION					ASSAYS					
FROM	TO	RX TYPE	COL.	QUAL. MIN.	TEX.	GR. SIZE	DENSITY	ANGLES TO AXIS	MINERALS	INT.	FACIES	MIN.	%	MIN.	%	MODE	SAMPLE No.	INTERVAL	% Cu.	% Mo.		
0	10'	φVB.																10-20				
						10-50 Leach Cap.												20-30				
																		40				
																		50				
10	175	QFP				good. DdS ₂ @ Top												60				
																		70				
175	210	QDP				Cc w Clay from 40												80				
						good cpy 110-120'												90				
210	300	QFP				210-300 Supergene weak												100				
						290-300 Supergene ↑												110				
																		120				
																		130				
																		140				
																		150				
																		160				
																		170				
																		180				
																		190				
																		200				
																		210				
																		220				
																		230				

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