

Snowbird Property
Chronological Reference Summary

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Nov 1980, Drilling Report - Snowbird Group, Prism Res., B. Dewonck
Aug 1974, Report on Diamond Drilling - Stuart Lake Prop., Westwind, J.R. Poloni

Snowbird Property
Drilling Summary

Westwind (1974)

5 holes: W1 to W5

Prism (1980)

10 holes: P1 to P10

X-Cal (1986)

10 holes: 86-1 to 86-10

X-Cal (1987)

57 percussion holes: P(ER)1 to P(ER)57

X-Cal (1987)

25 holes: 87-1 to 87-25

X-Cal (1988)

10 holes: 88-1 to 88-15 (not inclusive)

X-Cal (1989 Phase I)

13 holes: 89-1 to 89-13

X-Cal (1989 Phase II)

10 holes: 89-14 to 89-23

feet to 219½ feet is almost certainly the Main Vein zone since it fits in with 50° dips measured on surface. The remaining two intervals are considered to be in the Peg Leg Vein. Hole 3 apparently failed to intersect the Main Vein, as the interval 220'-258' is considered to be an intersection of the Peg Leg Vein. Holes 4 and 5 intersected their intended targets, although the zone in hole 5 is somewhat deeper than anticipated.

Significant gold assays were obtained as follows:

<u>Hole No.</u>	<u>Intervals</u> <u>From To</u> <u>(ft.)</u>	<u>Footage</u>	<u>Au</u> <u>oz/ton</u>
8-6 -60°	135 138	3	0.698
8-7 -60°	131 139	8	0.539 (wt.av.)
8-10 -63°	280 283	3	0.167

Hole 6 has the southeastern most intersection of the Main Vein, while hole 10 represents the deepest and northwestern most interesting intersection. Hole 1, 8 and 9 further northwest along the zone produce no values of interest. Hole 7 is centrally located along the trend of the zone with respect to old drill hole locations from which significant values were reported to have been obtained. Its intersection is also quite close to underground workings related to an old head frame beside the access road.

The significant interval in hole 6 is preceded by 5 feet of well banded, silicified rock with strong pyrite and moderate to strong mariposite, while the interval itself (3 feet) has neither pyrite or mariposite in the last foot. This last portion appears to be serpentized material which carries on into the next assay interval (5 feet) where minor silica flooding

DRILLING RESULTS

Ten holes were drilled from ten sites over the course of two and one-half weeks. A skid-mounted Acker 44 drill coring NQ diameter was used; an International TD-15c tractor prepared drill sites and access roads and performed drill moves.

The objective of the 1986 diamond drilling program was extended along both strike and dip, the Main Vein, previously outlined by Prism Resources Ltd. in 1980, and to test down dip extensions of the smaller Peg Leg Vein. See Figure 3 for a plan of the grid and work area.

Inspection of the cross sections (Figures ^{4 to 13}) indicates that all ten holes (X(86-1 to 10)) did intersect the Main Vein and/or a silica-mariposite zone related to it. However, there does not appear to be any discernible evidence of the Peg Leg Vein or alteration zone associated with it in the holes. Hole 3 intersected what is believed to be a stope in the old mine workings at approximately 121 feet to 128 feet along the antimony vein. However, the hole continued on to intersect the silica-mariposite zone at 188 feet.

Significant gold assays occurred as follows:

<u>Hole #</u>	<u>Intervals</u>		<u>Footage</u>	<u>Au</u> <u>oz/ton</u>	
	<u>From</u>	<u>To</u>			
✓ 86-2	211	224.9	13.9	0.317 (wt. av.)	
✓ 86-6	211	211.5	0.50	147.292	incl. 0.637/3' incl. 0.605/0.8' 45° CA + Sb
✓ 86-7	90	93.3	3.3	0.715	
✓ 86-7	213	215	2.0	0.211	30° CA + Sb

It appears as if all ten holes did indeed intersect the Main Vein, or the silica-mariposite zone associated with

SUMMARY AND CONCLUSIONS

Programmes of geochemical soil sampling and trenching with Caterpillar 225 backhoe were carried out on the Snowbird property by X-Cal Resources Ltd. in October 1986. The property is situated 15 kms due west of Fort St. James, B.C. and is held by X-Cal under an option agreement with Pipawa Exploration.

Due to depth of overburden, only 3 trenches reached bedrock, but some elevated values in precious metals were encountered in the limited areas of bedrock basal till exposed. It had been expected that since mercury and antimony are very mobile in the secondary geochemical environment, analysis for these two elements in soil samples might indicate anomalies, but geochemical soil results showed little apart from a concentration of antimony and mercury values around the area disturbed by mining and occasional scattered one station anomalies.

A drilling programme of 3062 ft (933 m) of 10 NQ diamond holes - 18 November - 4 December 1986 - was done to extend areas of gold mineralization originally discovered by Cominco 1943, Westwind 1974 and Prism 1980.

The 1986 drilling, combined with results from previous drilling, outlined two areas of good grade gold mineralization:

a) Around the inclined shaft in holes:

✓ P10	0.167 oz/ton	3.0 ft.	
✓ C-4	0.24 oz/ton	5.0 ft.	C holes by Cominco 1943
✓ W-4	0.12 oz/ton	4.0 ft.	W holes by Westwind 1974
✓ C-3	0.35 oz/ton	5.0 ft.	P holes by Prism 1980
✓ P-7	0.584 oz/ton	8.0 ft.	X holes by X-Cal 1986
✓ X86-2	0.27 oz/ton	13.94 ft.	
	(includes 0.637 oz/ton	3.23 ft.)	
✓ C-1	0.27 oz/ton	2.5 ft.	
✓ C-2	0.35 oz/ton	5.0 ft.	

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In particular X-Cal hole X86-2 showed that good grade gold mineralization extends down dip. X86-2 and Prism P-10 are the deepest intersections on the vein system to date at 220 and 180 ft. below surface respectively.

- b) The area approx. 400 ft. grid south of the inclined shaft is shown by holes:

✓ P-6	0.698 oz/ton	3 ft.
✓ X86-6	248.16 oz/ton	0.5 ft.
✓ X86-7	0.715 oz/ton	3.3 ft.

The intersection in hole X86-6 (248.16 oz/t Au, 84.58 oz/t Ag, 0.03% Sb) although narrow (0.5 ft.) is significant as it represents the first intersection of high grade visible gold encountered in exploration programmes on the Snowbird property and indicates that high grade shoots probably occur within the vein system.

RECOMMENDATIONS AND COST ESTIMATES

1. Diamond Drilling

A programme of 15 NQ diameter diamond drill holes totalling 5,400 ft. (1646m) is planned to investigate the two areas of gold mineralization outlined above and further explore the northern end of the grid in the vicinity of the Argillite Vein:

LOCATION OF PROPOSED DRILL HOLES

Section	Location	Dip	Length ft.	Comments
200S	0+100W	60°	250	(A) Cominco C-7 intersected 0.52 oz/t over 4 ft. Westwind Holes W1,2 unreliable due to poor recovery. Prism P-9 and C-7 are sole reliable holes in this area.
400S	0+50W	60°	300	(B) To intersect junction of Argillite and Main vein.

SUMMARY AND CONCLUSIONS

During a three week period in August 1987, a percussion drilling programme of 5020 feet (1530 m) in 57 holes was carried out on the Snowbird property by X-Cal Resources Ltd. The property is situated 15 kms due west of Fort St. James, B.C. and is held by X-Cal under an option agreement with Pipawa Exploration.

Purpose of the 1987 percussion drilling programme was to sample the basaltill and top 5 - 10 feet of bedrock overlying the strike extension of the main quartz - ankerite - mariposite zone and investigate, in a similar manner, various geophysical anomalies outlined during February - March, 1987.

Of the 57 holes drilled, 51 encountered bedrock, with 25 of the holes showing weak to very strong traces of quartz - ankerite - mariposite altered rock. Significantly, altered rock was encountered approximately 500 metres north and as much as 500 metres south of where it had previously been encountered by diamond drilling. As well, altered rock and elevated gold values confirm the possibility of a parallel structure, east of the known zone.

The 1987 percussion drilling outlined several areas of good gold mineralization:

a) Around the inclined shaft in holes:

<i>Percussion</i>	87-23	407 ppb Au	10.0	feet
	87-26	796 ppb Au	5.0	feet
		539 ppb Au	5.0	feet
		471 ppb Au	5.0	feet
		2227 ppb Au	5.0	feet

Percussion

b) The area 550 - 700 m northwest of the inclined shaft as shown in holes:

87-29	465 ppb Au	5.0	feet	
	13934 ppb Au	5.0	feet	0.41 oz/t
87-37	7708 ppb Au	3.0	feet	
	316 ppb Au	5.0	feet	0.22 oz/t

c) The area approximately 300 metres east of the inclined shaft shown in hole:

87-50	420 ppb Au	10.0	feet
	644 ppb Au	5.0	feet

A programme of short diamond drill holes is recommended as a follow-up to investigate the origin of gold values encountered by the percussion drilling.

Hole #	Depth from (ft/m) to (ft/m)		Footage (ft/m)	Au oz/ton	Ag ppm	Sb ppm	
X 88-6	272.49(83.05)	281.18(87.5)	8.69(2.65)	0.226	7.3	83	
	<i>incl.</i> 274.62(83.70)	277.90(84.7)	3.28(1.0)	0.251	1.4	56	<i>350 CA</i>
	<i>incl.</i> 277.90(84.70)	281.18(85.7)	3.28(1.0)	0.287	1.4	80	
	309.00(94.18)	318.85(97.18)	9.85(3.0)	0.109	1.6	78	
	309.00(94.18)	312.28(95.18)	3.29(1.0)	0.143	1.6	68	
	312.28(95.18)	315.56(96.18)	3.28(1.0)	0.142	2.0	97	
X 88-9	272.65(83.10)	275.93(84.10)	3.28(1.0)	0.298	1.2	75	
X 88-13	333.35(101.60)	337.12(102.75)	3.77(1.15)	0.110	1.8	1375	
	356.15(108.55)	376.23(114.76)	20.08(6.12)	0.319	3.6	502	<i>20-40 CA</i>
	359.99(109.72)	363.27(110.72)	3.28(1.0)	1.412	3.6	92	
	363.27(110.72)	366.55(111.72)	3.28(1.0)	0.280	5.6	82	
	369.83(112.72)	372.95(113.67)	3.12(0.95)	0.134	2.4	2830	
X 88-14	281.12(85.68)	291.29(88.78)	10.17(3.10)	0.0897	0.7	64	<i>300 CA</i>
	287.94(87.76)	291.29(88.78)	3.35(1.02)	0.252	0.7	9	

As previously stated, drill holes 88-6,7 and 88-9 to 88-14 all successfully intersected the main alteration zone which has thus been extended along strike to grid north by in excess of 450 m. (1500 ft.), and to grid south by 60 m. (200 ft.). Significantly, the gold bearing intersections from holes 88-6, 9, 13 & 14 represent a strike length of 370 m. (1200 ft.) along the main zone.

Of the two intersections in hole 88-6, the upper intersection (0.226 oz/ton Au) is in altered rock with quartz veining, mariposite, and disseminated fine-grained pyrite and stibnite. The lower intersection (0.109 oz/ton Au) is in serpentinized andesite with quartz veining, and fine-grained pyrite with minor fine-grained stibnite.

The gold bearing intersection in hole 88-9 occurs immediately on the contact of the hanging wall cherty argillite and the altered argillite. The 1.0 m. (3.28 ft.) section contains mariposite, quartz veining, and very fine-grained pyrite and stibnite, assaying 0.298 oz/ton Au.

The first intersection in hole 88-13 (0.110 oz/ton Au) occurs in a 1.15 m. (3.77 ft.) white quartz vein within intensely altered argillite. The vein contains disseminated fine-grained pyrite and disseminated 'platey' stibnite. The lower intersection (0.319 oz/ton Au), over 6.12 m. (20.08 ft.) occurs within a zone of mixed altered rock and ultra mafic on the footwall contact

previously elevated gold values from trenches and percussion holes on the Peninsula to the east of the main zone. Inclined at 45°, these shallow holes cut quartz-carbonate-mariposite altered rock and a mineralized felsic dyke but returned only low gold values.

Core recovery was excellent, in most cases 95-100%. The core was logged and stored in the former mine office building.

Significant intersections were as follows:

Hole #	Depth from (ft/m) to (ft/m)		Footage (ft/m)	Au oz/ton	Ag ppm	As ppm	Sb ppm	
✓ X 89-2	192.56(58.69)	195.84(59.69)	3.28 (1.0)	0.114	1.1	886	590	
	212.15(64.66)	217.99(66.44)	5.84 (1.78)	0.351	0.6	5704	136	Sb
	213.99(65.22)	215.99(65.82)	2.00 (0.60)	0.820	0.8	10788	117	
	215.99(65.82)	217.99(66.44)	2.00 (0.62)	0.146	0.5	4928	199	
✓ X 89-3	325.51(99.21)	335.58(102.28)	10.07 (3.07)	0.264	1.0	4047	77	
	325.51(99.21)	328.46(100.11)	2.95 (0.90)	0.116	1.1	1624	58	Sb
	328.46(100.11)	330.00(100.58)	1.54 (0.47)	0.872	0.9	14396	55	
	330.00(100.58)	332.30(101.28)	2.30 (0.70)	0.225	1.2	2975	66	
	332.30(101.28)	335.58(102.28)	3.28 (1.0)	0.139	0.8	2115	111	
✓ X 89-4	263.96(80.45)	271.50(82.75)	7.54 (2.30)	0.189	1.2	1111	832	
	263.96(80.45)	264.46(80.60)	0.50 (0.15)	1.450	3.2	2863	4657	50° CA Sb
	267.72(81.60)	271.50(82.75)	3.78 (1.15)	0.151	1.1	1166	430	
✓ X 89-9B	362.55(110.50)	365.17(111.30)	2.62 (0.80)	0.128	1.6	1914	548	
	496.71(151.39)	504.48(153.79)	7.87 (2.40)	0.124	1.7	1020	39	70-80° CA Sb
	499.99(152.39)	501.99(152.99)	2.00 (0.60)	0.436	3.3	3471	52	
✓ X 89-10	514.30(156.75)	520.99(158.79)	6.69 (2.04)	0.152	5.9	929	1016	
	517.45(157.71)	520.99(158.79)	3.54 (1.08)	0.274	10.0	1741	1590	
	527.94(160.91)	537.43(163.80)	9.49 (2.91)	0.204	1.8	2284	60	70-80° CA Sb
	530.70(161.75)	533.98(162.75)	3.28 (1.0)	0.160	1.0	944	63	
	533.98(162.75)	537.43(163.80)	3.45 (1.05)	0.401	3.2	4981	64	
✓ X 89-11	506.52(154.38)	521.58(158.97)	15.06 (4.59)	0.136	18	1104	3967	
	509.47(155.28)	512.75(156.28)	3.28 (1.0)	0.127	77.2	903	904	80° CA Sb
	516.03(157.28)	519.61(158.37)	3.58 (1.09)	0.105	3.2	1004	14711	
	519.61(158.37)	521.58(158.97)	1.97 (0.60)	0.518	0.8	3214	1311	

Drill holes 89-2, 3, 4 and 89-9B, 10, 11 all successfully intersected good grade mineralization in the North Zone. These holes, combined with the 1988 diamond drilling, provide nine significant intersections along a strike length of approximately 150 m. (500 ft.) and approximately 120 m. (400 ft.) downdip length. A reserve calculation based on these nine widely spaced holes indicates a possible reserve of approximately 215,000 tons, grading 0.206 oz per ton gold.