

## **MACTUSH PROPERTY EXPLORATION HISTORY**

**1968** – Amax Exploration Inc. discovered a pyritic alteration zone 250 m. wide by 1.35 km long containing molybdenite in quartz stringers and chalcopyrite-bearing float at the Rex showing (MINFILE 092F221) in the central part of the property (Fox, P.E. and Allan, J.F. 1968).

**1976** – Cous Creek Copper Mines completed a ground magnetic survey over 4 km. long zone of copper-magnetite skarn mineralization, the Cous Creek prospect (MINFILE 092F360) discovered in 1972 in the north-central part of the property (Vollo, N.B. 1976).

**1977** – Bethlehem Copper Corporation completed geological mapping and sampling, pulse electromagnetic surveys, and two percussion drill holes with negative results on the Cous Creek prospect (Anderson, R.E. and Nethery, R.J. 1977).

**1981** – W.G. Timmins Exploration and Development Ltd. completed airborne magnetic geophysical surveys for two companies with separate properties covering what is now the northwestern part of the property, covering several MINFILE copper occurrences Kola 092F103, Cous Creek 092F360, Summit 092F361, Buck 1 092F362, Creek 092F553 and Sky 2 092F555, plus the Sproat Lake 092F412 limestone showing (Timmins, W.G. and Rolston, T. 1981).

**1982-1983** - W.G. Timmins and subsequently Trans-Arctic Explorations Ltd. completed geological, geochemical, prospecting and ground geophysical surveys for Pacific Seadrift Resources Ltd. over the northwest part of the property including the Kola and Sky 2 occurrences. At the Kola MINFILE 092F103 prospect, trench sampling of massive sulphides yielded an average of 7.7% Cu, 124 g/t Ag and 6.5 g/t Au across 0.6 metres width along 4.5 metres length (Wing, B.J. and Timmins, W.G. 1982).

**1984-1985** – Cous Creek Copper Mines completed geological work outlining the skarn potential at the Cous Creek MINFILE 092F360 prospect (De La Mothe, D. 1984; and Krueckl, G.P. 1985). There is anecdotal evidence of bulk sampling of copper, silver and gold mineralized rock from surface trenches and trucking to Kamloops, B.C. completed by Lornex Mines during this period (personal communication – McMaster, H. 2012).

**1981-1986** - Herbert McMaster and Sylvester Tresierra performed work including prospecting, trenching and sampling over the Mactush occurrence (MINFILE 092F012) in what is now the mid/southern central part of the property (Houle, J. 2007).

**1985-1986** - Amstar Venture Corporation completed a 221 sample geochemistry program, and a 22 hole drill program totaling 1,308m over the MC/KOLA (MINFILE 092F103) prospect in centre of the northwest part of the property. The program was aimed at investigating and defining the series of shear related zones of massive chalcopyrite and pyrite pods and lenses which comprise the KOLA prospect, the main one of which is exposed for approximately 10m along strike. Highlights of the program include a grab sample that returned 7.27% Cu, 23 g/t Ag and 2.8 g/t Au, a 70 metre long gold anomaly in soil extending over the main sulphide zone, and definition of the main sulphide zone to a depth of 40 metres, open at depth, with returned values as high as 3.01% Cu, 37 g/t Ag, and 2.5 g/t Au (Marks, D.G. 1985; Sookochoff, L. 1986).

**1986** – Trans-Arctic Explorations Ltd. completed geological mapping for United Chieftain Resources Ltd. in the northeast portion of the property covering five MINFILE occurrences Holk 092F155, Dauntless 092F168, Bell 092F383, Stamp 3 092F549 and Devils Den 092F551 (Royer, G.A. 1986).

**1986** – Trans-Arctic Explorations Ltd. completed extensive geological mapping and limited rock and/or soil geochemistry for three companies on separate adjacent properties covering five MINFILE occurrences Cous Creek 092F360, Summit 092F361, Buck 1 092F362, Creek 092F553 and Sky 2 092F555 in the north-central part of the property (Royer, G.A. 1986).

**1987-1988** – Ashworth Explorations Ltd. completed extensive geological mapping, rock and soil geochemistry and ground magnetic surveys for two companies on separate adjacent properties covering three MINFILE occurrences Cous Creek 092F360, Summit 092F361, and Sky 2 092F555 in the north-central part of the property (Laanela, H. 1987, 1988). The geological setting and target areas for both known and new Cu skarn mineralization were established.

**1987** - SYMC Resources Ltd. purchased the 'Macktush' property, then much more limited in size, from Herbert McMaster and Sylvester Tresierra (SYMC Resources Limited (1998) Prospectus). Work included some photo-lineament interpretation, extensive trenching and rehabilitation, and sampling on a series of northeast trending quartz-calcite-sulphide veins in the southern part of the Mactush property known as the Fred, David, Sy and Jack Veins (Wilson, J.R. 1991). Ten short holes were drilled on the Fred Vein as well, three of which totaling 279.5m depth were logged and sampled under the supervision of John R. Wilson, P. Geo (Wilson, J. R. 1991). Core from the remaining seven holes was spilled on the ground and subsequently disposed of (personal communication from H. McMaster). This work occurred in the southeast part of the property. Highlights of the drill program are displayed in Table 3 below.

**1988** - SYMC Resources Ltd. completed one short drill hole (DDH88-05) on the Fred Vein, in the southeastern part of the Mactush property (see Table 3 below) (Houle, J. 2007).

**Table 3 - Drill Intercept Highlights from SYMC Resources 1987-1988**

Hole	Interval (m)	Length(m)	Au (g/t)	Ag (g/t)	Cu (%)
DDH87-01	109.58-110.72	1.14	5.97	2.06	0.03
DDH87-03	33.50-34.29	0.79	3.84	16.46	0.80
	36.59-40.39	3.81	44.23	172.80	0.95
DDH87-08	71.63-72.88	1.25	9.94	1.71	0.03
DDH88-05	47.22-48.80	1.58	0.21	3.09	0.02

**1988** – Napier Explorations Inc. conducted geological mapping and geochemical sampling on the northeast part of the property covering the MINFILE occurrences Holk 092F155, Dauntless 092F168 and Devils Den 092F551. Soil sampling identified two copper-zinc+/-gold anomalies, and rock samples from quartz-sulphide veins yielded up to 4.15 g/t Au from the Holk, and 1.7% Cu from Dauntless (Stritychuk Hopkins, J.M. and Leriche, P.D.)

**1989** - Brockton Resources Inc. conducted geological mapping, grid layout, claim staking, soil sampling, trench blasting and VLF- EM and magnetometer geophysics over the northeastern quadrant of the Mactush property. The combined soil sampling and geophysics highlighted nine possibly targets on the property, most corresponding to anomalous gold or copper soil values or coincident mag-VLF-EM liniments (Kidlark, R.G. 1989).

**1993** - SYMC conducted limited rock sampling over the Dauntless Vein, a northeasterly trending quartz-sulphide vein exposed on the Dauntless claims, in the northeast part of the property. The vein is believed to extend over a strike length of 400m and varies between 1.5m to 0.5m thick. Highlights of the program included 24 grab samples of vein material contained 17.5 to 27.2% copper, up to 37.7 g/t silver, and up to 0.89 g/t gold (SYMC news release December 7, 1998).

**1996** - SYMC conducted a trenching and chip sampling program over the Fred and David Showings and the Beach Road mineral occurrence. A limited program of geological mapping was also conducted. This work covered a limited area in the southeastern portion of the property.

**1999** - SYMC contracted Canadian Environmental and Metallurgical Inc. (CEMI) who conducted preliminary metallurgical testing of a 25km composite sample from the Dauntless North vein, composed of vein material. Results returned a head grade of 17.61% copper, 0.24 g/t gold, 36.69 g/t silver and 21.11% sulphur and showed recoveries of 99.73% copper, 85.09% gold, 98.72% silver and 99.8% sulphur in the flotation concentrate. CEMI advised that high metal recoveries could be obtained using simple, conventional grinding and flotation circuits (Houle, J. 2007).

**2000** - SYMC drilled four short holes to test the down-dip continuity of the Fred Vein. The holes were drilled northeast along the strike of Fred Vein from the 1987-88 holes. Core samples from these holes were destroyed during analyses, and no re-sampling was possible. Core log records however, suggest down-dip continuity of the Fred Vein structure. (documented communication between Mr. J. Houle, P.Eng. and Mr. R. Davey, P. Eng.).

**2001** - SYMC conducted a moderate exploration program in the southwest portion of the property and discovered an extension of the Fred Vein. This extended the total known strike length of the Fred Vein to 1000m, leaving it open at both ends. In 2001 a representative sample of Fred Vein material was metallurgically tested by CEMI. The sample returned a head grade of 14.57 g/t gold, 59.66 g/t silver, 0.05% copper, and 3.134% zinc. It produced a flotation concentrate grading 131.31 g/t gold, 349.29 g/t silver, 0.36% copper and 28.50% zinc. It was determined by CEMI that this mineralized vein material would be relatively simple to process (SYMC news release June 7, 2001).

**2002** - SYMC took samples of hanging wall and footwall material from the Dauntless North and Fred Vein and contracted CEMI to perform acid-base accounting on them. Acid-base accounting returned neutralizing to acid potential ratios of 4.2 and 4.8, respectively on the material taken from the Dauntless North Vein, indicating that the material sampled had contained neutralizing potential and is not acid generating. Acid-base accounting completed in 2002 on hanging wall and footwall material from the Fred Vein yielded neutralizing to acid potential ratios of 47.6 and undefined, respectively. The undefined value was due to the sulphur content of the sample being

less than the analytical detection limit of 0.01%. These results indicated that the material sampled contained strong neutralizing potential and was not acid generating. SYMC also constructed a 1400m excavator road from the shore of Port Alberni Inlet to the dauntless vein, in the northeast portion of the property.

**2003-2004** - SYMC linked the excavator road to the local network of logging roads in the northeast portion of the property, uncovering 5-10 sulphidic shear hosted veins running paralleling the road. These 5cm -10cm sulphidic veins were oriented at 150° to 205°, dipping 60° to 80° east. Individual shear veins contained up to 75% sulphides, mainly chalcopyrite, bornite, pyrite and possibly trace amounts of sphalerite, tetrahedrite, native copper and covellite, and the zone was named the Tasha Zone. Four select grab samples were taken in 2003 of these veins. These samples returned an average grade of 5.58% copper, 0.095% zinc, 8.70 g/tonne Ag and 0.146 g/tonne Au over an average thickness of 0.2 metres (SYMC December 7, 2004 Technical Report). SYMC suggested that the mineralogy and geochemistry found at the Tasha Zone suggested that the property may host Volcanic Redbed copper-silver deposits as well as copper-silver quartz-sulphide stockwork veins (Houle, J. 2007).

**2005** - In the spring of 2005, SYMC conducted limited rock sampling and trenching of the Dauntless South adit, which follows a vein oriented at 130/70, and the Herbert Jr. vein, oriented at 080/80. Ten select grab samples were taken from a rock dump and vein mineralization of the Dauntless vein. These samples yielded an average of 10.7% copper, 0.523% zinc, 27.9 grams of silver per tonne and 0.262 grams of gold per tonne over an average thickness of 0.6 metres (SYMC February 7, 2005 press release). Ten chip samples from trenching the Herbert Jr. vein yielded an average of 13.7% copper, 14.8 grams of silver per tonne and 0.294 grams of gold per tonne over an average of 1 metre. (SYMC March 16, 2005 press release).

SYMC also conducted preliminary prospecting in the Bowl Zone in 2005, a copper- molybdenum-gold-silver stockwork vein or disseminated porphyry occurrence located about 1,000 metres northwest of the Fred and David veins. Mapping and chip sampling of the Bowl zone failed to detect any significant in situ mineralization, though mineralized float samples were located in topographically lower areas, suggesting that there may be mineralization under cover, and future drilling to test the Bowl Zone was advised (Houle, J. 2006).

In 2005, SYMC conducted a sequential diamond drilling program designed to delineate four of the more advanced exploration targets. SYMC also contracted Fugro Airborne Surveys Corp. (Fugro) who flew a detailed 1,661 line km. magnetic, electromagnetic and radiometric airborne geophysical program over the Mactush property in September. Several targets were identified, and reduced versions of all map products from the survey appear as Figures 3a to 3i, and the anomaly target list appears in Appendix 3. From May to December, 2005 a total of 2,136 metres in 35 holes of diamond drilling was completed on the Herbert Jr. Vein, Tasha Zone, Dauntless North Veins and David Vein (see Table 4 for drill highlights). Along with previous rock chip sample data, this drill data was used to estimate indicated mineral resources for all four zones. Low-angle (5-30 degree) plunge directions were also revealed within the vein systems in the two target areas which were more extensively drilled (the David Vein and Dauntless North Veins) and possibly within Dauntless Herbert Jr. Vein as well, suggesting an orientation which may have property-wide implications (Houle, J. 2006).

**Table 4 - Drill Highlights from SYMC Resources Ltd. 2005**

Hole	Vein	Interval (m)	Length(m)	Cu %	Ag (g/t)	Au (g/t)
DH-05-03	HJV	99.7-100.2	0.5	5.237	8.800	0.142
DT-05-03	Tasha	15.4 – 43.3	27.9	0.139	0.554	0.004
DV-05-09	DNV3	7.0 – 8.4	1.4	3.309	15.000	0.105
And	DNV4	16.2 – 16.7	0.5	4.261	5.000	0.039
MD-05-01	David	9.0 – 10.7	1.7	0.049	16.000	3.282
MD-05-02	David	9.9 – 11.4	1.5	0.061	16.000	3.159

Several indicated resource estimates were reported by SYMC in the 2006 assessment report (see Table 5), updating and replacing prior mineral resource estimates (Houle, 2006).

**Table 5 – Mactush Property Mineral Resource Estimates 2005**

Vein/Zone	Tonnes	Gold g/t	Silver g/t	Copper %	Category
David Vein	16,278	5.65	25.6	0.310	Indicated
North Veins	14,171	0.043	6.16	2.05	Indicated
Herbert Jr. Vein	8,479	0.118	6.66	5.16	Indicated
Tasha Zone	20,423	0.005	0.564	0.160	Indicated

**2006** - SYMC conducted an advanced prospecting program targeting geophysical targets picked out in the 2005 Fugro airborne survey, including 288 select rock grab samples, 26 stream moss mat samples and 66 soil samples. SYMC also completed an 11 hole diamond drilling program totaling 982 m targeting the Zinc, Jack and Moly Veins, as well as the MC 1, 2 and 3 zones (see Table 6 for drill highlights). Prospecting work returned elevated metal values in rock float and stream moss mat samples with selected highlights as follows:

- Sample 343652 from the West cluster yielded 1.37% Cu and 24.7 ppm Mo from a select grab of float sample of massive iron-copper skarn
- Sample 343856 from the Cous cluster yielded 5.55 g/t Au from a select outcrop grab of a rusty quartz-sulphide vein containing 5% pyrite
- Sample 343892 from the Rex cluster yielded 13.9% Cu, 0.126% Zn, 93.4 ppm Mo, 29 g/t Ag and 2.71 g/t Au from a select outcrop grab of a 0.25 m. thick, banded to brecciated sulphide-quartz vein containing chalcopyrite, bornite and pyrite

This work established the Rex cluster as an outstanding exploration target, with elevated mineralization in rock grab samples and stream moss mat samples. Four new targets in the Cous cluster, plus the West cluster were also identified and further prospecting mapping, sampling, trenching and/or drilling was recommended for all three targets (Houle, J. 2007).

**Table 6 - Drill Highlights from SYMC Resources Ltd. 2006**

Hole	Vein	Interval (m)	Length(m)	Cu %	Ag (g/t)	Au (g/t)
MC-06-01	MC2	62.5 – 79.1	16.6	0.164	2.051	0.194
including		70.6 – 71.2	0.6	1.380	15.30	1.193
MC-06-02	MC1	32.5 – 32.8	0.3	1.009	24.00	0.692
MC-06-03	MC-2	70.9 – 72.6	1.7	0.306	4.000	0.218
MJ-06-02	Jack	82.0 – 82.6	0.6	0.020	0.900	2.161

Several indicated resource estimates were reported by SYMC in the 2007 assessment report (see Table 7), updating and replacing prior mineral resource estimates (Houle, 2007).

**Table 7 – Mactush Property Mineral Resource Estimates 2006**

Vein/Zone	Tonnes	Gold g/t	Silver g/t	Copper %	Category
Fred Vein	65,475	13.91	48.1	0.59	Indicated
Zinc Vein	35,710	8.97	44.5	0.57	Indicated
Jack Vein	13,994	2.00	0.8	0.02	Indicated
Moly Vein	504	4.27	1.5	0.01	Indicated
MC1 Zone	21,851	0.26	6.9	0.43	Indicated
MC2 Zone	138,499	0.33	5.2	0.47	Indicated
MC3 Zone	17,618	0.38	1.0	0.05	Indicated

**2011** - G4G Resources conducted a partial grid based soil survey to the west of the REX MINFILE showing, and an extensive contour soil survey covering the majority of drainages on the Property, with 241 soil samples taken in total. Highlights included several samples with over 600ppm Cu and over 0.7ppm Ag proximal to the Rex showing. Reconnaissance geological mapping and rock grab sampling were also completed, with sample result highlights of 6.76% Cu and 18.9 ppm Ag from base metal veins near the Dauntless showing. The program supported the Rex showing as a possible target for a copper porphyry style deposit. A new area to the southwest of the Rex showing was also identified by elevated Cu and Ag values in soil samples (Sanabria, et al. 2011). Geochemistry compilation maps for gold, silver, copper and molybdenum in the Rex, Cous and surrounding area appear as Figures 6a-d.

**2012** – Nahminto Resources engaged Auracle Geospatial Science Inc. who completed a remote sensing analysis including hyper spectral analysis, mineral alteration mapping and fused radar data analyses over the Mactush Property. The analysis yielded six target areas on the Property as follows: Cous/MC, Rex, West, South, Mactush Veins and Dauntless, and appear in various maps products from the analysis shown in Figures 2a-k (McLelland, D, 2012). These remote sensing targets generally corroborate the anomaly clusters from the 2005 airborne geophysical survey, and require additional follow-up ground investigation, yet to be completed.

**2013** – Nahminto Resources engaged Geosci Data Analysis Ltd. who completed geophysical interpretation and inversion of the 2005 airborne magnetic survey data over the Mactush Property. The analysis identified five areas on the Property which warranted detailed 3D Inversion Modeling as follows: Cous, Rex, Fred, Canal and Dauntless. The detailed inversions provided insights into the sub-surface characteristics of these known mineralized areas, and various products and views from the interpretation and 3D inversion are shown in Figures 4a-x (Houle, J. and Pezzot, T., 2013)

**2012 to 2014** - Nahminto Resources completed limited prospecting, rock geochemistry, and geological mapping programs at road-accessible target areas on the Mactush Property. Seven new mineral occurrences were identified and documented during these programs (Houle, J., 2012, 2013 and 2014). At the Canal Main South Zone, a thin vertical quartz-sulphide vein sampled in a road cut by the author in 2012 yielded 0.63% copper and 669 ppm molybdenum. At the West Dauntless Zone a thin quartz-sulphide vein sampled in a road cut by the author in 2013 yielded 0.80% copper and 2.9 g/t silver. At the MC North Zone, a 0.1 m. thick copper skarn zone sampled in a road cut by the author in 2014 yielded 9.5% copper, 90 g/t silver, 6.6 g/t gold and elevated values in cobalt, nickel and zinc. In 2014 the property was reduced from 40 claims covering 17418 hectares to 39 claims covering 16041 hectares, by reducing the northern and southern property limits. This resulted in abandonment of the Devil's Den MINFILE 092F551, and the South Anomaly Cluster from the 2005 airborne survey

**2017** - Paul Saulnier – Soil sampling

**2019** - Andris Kikauka and John Bakus – Soil and rock sampling

**2019** - Andris Kikauka and John Bakus – Rock sampling

**2019** - Andris Kikauka and Paul Saulnier – Soil and rock sampling

**2022** - 1240089 BC Ltd and 1258713 BC Ltd – Rock sampling, magnetometer survey