

SUMMARY REPORT

SELWYN PROJECT 1973

Watson Lake and Mayo
Mining Districts,
Yukon Territory

and

Nahanni Mining District
Northwest Territories

N.T.S. 105-I-5 to 16
105-J-8 and 9, and 13 to 16
105-O-1 to 8
105-P-3 and 4

Field Work covering the period
May 17th to September 17th, 1973

By:

Colin I. Godwin, P.Eng. (B.C.)

DYNASTY EXPLORATIONS LIMITED

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DYNASTY EXPLORATIONS LIMITED

330 MARINE BUILDING
355 BURRARD STREET
VANCOUVER 1, B.C.

SUMMARY REPORT SELWYN PROJECT, 1973

INTRODUCTION

General

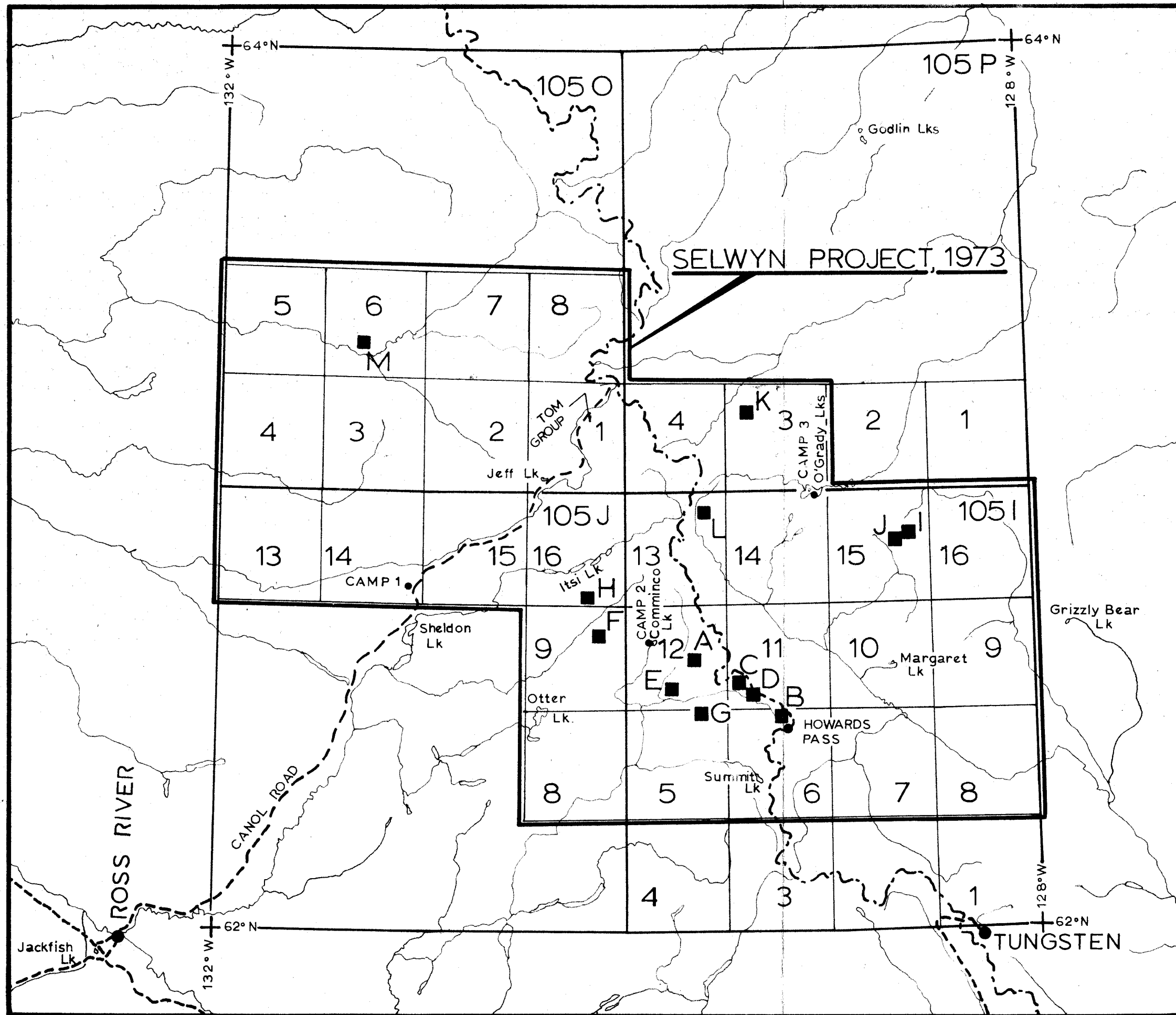
The Selwyn Project (see Figure 1) was selected to explore an area that gained attention in November 1972 from the discovery by Placer Development Limited of a lead-zinc deposit in the Howard's Pass area (see figure 1). Their news release, tantalizing indeed, stated:

"A limited amount of hand trenching has exposed widths of significant mineralization up to 150 feet containing bands ranging from 10 to 30 percent combined lead and zinc, separated by lower grades. Individual five foot samples assay as high as 40 to 50 percent combined lead-zinc."

The subsequent staking rush involved many companies during which Dynasty Explorations Limited and Atlas Explorations Limited staked 160 claims as three groups (Prevo, Pas, Gull) in the Howard's Pass area.

The project area was defined by: the Howard's Pass discovery and concomitant geological considerations, the important stratiform Tom Group lead-zinc deposit held by Hudson Bay Mining and Smelting Corporation (see Figure 1) since 1951, numerous showings and previous data collected by Dynasty Explorations Limited.

Exploration targets apparently spanned a wide range of geological ages and environments and included a variety of deposit types. The approach for the first year, consequently, emphasized regional geochemical coverage and, within



DYNASTY EXPLORATIONS

SELWYN PROJECT-1973

CLAIM GROUPS:

- A: Prevo ✓
- B: Pas ✓
- C: Gull and Dyn ✓
- D: Dea
- E: Tam
- F: Joy and Ajax
- G: Tap
- H: Ms
- I: Sand ✓
- J: Gun ✓
- K: Kee
- L: Will
- M: Scot

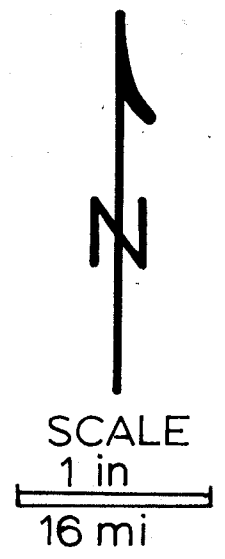


FIGURE 1:
Index Map
Claim Groups

established claim groups, detailed geochemical sampling and geological mapping.

During the on-going regional exploration any areas of strong follow-up interest were immediately staked (several groups were optioned) due to the competitive element in the area. Evaluation of this ground varied in detail depending mainly upon the time available during the field season.

The portfolio of properties held in the Selwyn Project area are shown in Tables I to III. Table I is the data on those claims acquired prior to 1973 field season, while Table II is the data on those claims obtained during the 1973 field season. Table III is a summary of all claims held, work that has been done, and follow-up recommendations. Follow-up is recommended for the following claim groups (see also Table III): Gull, Pas, Tam, Tap, MS, Sand and Gun, and Kee (for general locations see Figure 1). Exploration of these groups and continued investigation of areas defined by the regional work provides an exciting basis for exploration in the 1974 field season.

Location and Access

The centre of the 7,680 square mile Selwyn Project Area, 1973, is about 100 miles northeast of Ross River, Y.T., which was the major point of supply in 1973. The town of Tungsten, N.W.T., is about 85 miles southeast from the centre of the project (see Figure 1).

Very few lakes in the project area are suitable for float-equipped aircraft. Summit Lake, Otter Lake, Itsi Lakes and O'Grady Lakes are suitable for full loads with an Otter or Beaver. Jeff Lake, Cominco Lake, Dyn Lake (on Dyn Group), Wye Lake (five miles north-northwest of the Dyn Group),

TABLE I: STAKING DATA ON CLAIMS ACQUIRED PRIOR TO 1973 FIELD SEASON

COMPANY DYNASTY CLAIM PREVO AREA Pelly River LOCATION N.T.S. 105-I-12

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-8	Y70635-Y70642	8	R. B. Cameron	November 20/72	Dynasty	Jan. 31/73	Nov. 20/73 *	*Northern Mineral Grant
9-16	Y70643-Y70650	8	Ron Dennett	"	"	"	Nov. 20/73 *	Assess. work filed:
17-24	Y70651-Y70658	8	B.C. Fulcher	"	"	"	Nov. 20/73 *	Date: Nov. 16, 1973
25-32	Y70659-Y70666	8	Evon Stout	"	"	"	Nov. 20/73 *	Amount: \$9,429.17
33-40	Y70667-Y70674	8	Barbara Stout	"	"	"	Nov. 20/73 *	Type: Geology Geochem
41-42	Y70675-Y70676	2	K. R. Jones	"	"	"	Nov. 20/73 *	(Cert. of work not rec'd.)

COMPANY DYNASTY CLAIM GULL AREA Pelly River LOCATION N.T.S. 105-I-11

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-8	Y70509-Y70516	8	Allen Carlos	November 20/72	Dynasty	Jan. 31/73	Nov. 20/73 *	*Northern Mineral Grant
9-16	Y70517-Y70524	8	Mack Ladue	"	"	"	Nov. 20/73 *	Assess. Work Filed:
17-24	Y70525-Y70532	8	Charlie Ollie	"	"	"	Nov. 20/73 *	Date: November 16/73
25-32	Y70533-Y70540	8	George Johnny	"	"	"	Nov. 20/73 *	Amount: \$10,344.13
33-40	Y70541-Y70548	8	Scott Williams	"	"	"	Nov. 20/73 *	Type: Geology Geochem
41-48	Y70549-Y70556	8	Andrew G. Harman	"	"	"	Nov. 20/73 *	
49-54	Y70557-Y70562	6	Don Plaster	"	"	"	Nov. 20/73 *	(Cert. of work not received)

COMPANY DYNASTY EXPLORATIONS CLAIM DYN AREA Pelly River LOCATION N.T.S. 105-I-11

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-8	Y71139-Y71146	8	A. H. Thomas	Dec. 18, 1972	Dynasty	May 22/73	Dec. 18, 1973	Assess. Work filed:
9-16	Y71147-Y71154	8	Alice John	Dec. 18, 1972	"	"	Dec. 18, 1973	Date: November 28/73
17-24	Y71155-Y71162	8	Liza Dickson	Dec. 18, 1972	"	"	Dec. 18, 1973	Amount: \$5,264.75
								Type: Geology Geochem
								(Cert. of work not rec'd.)

COMPANY DYNASTY CLAIM PAS AREA Summit Lake LOCATION N.T.S. 105-I-6

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-8	Y70563-Y70570	8	R.B. Cameron	November 20/72	Dynasty	Jan. 31/73	Nov. 20/73 *	* Northern Mineral Grant
9-16	Y70571-Y70578	8	Ron Dennett	"	"	"	Nov. 20/73 *	Assess. Work Filed:
17-24	Y70579-Y70586	8	B.C. Fulcher	"	"	"	Nov. 20/73 *	Date: Nov. 16, 1973
25-32	Y70587-Y70594	8	Evon Stout	"	"	"	Nov. 20/73 *	Amount: \$10,344.91
33F-40F	Y74082-Y74089	8	Steven Earle	August 24/73			Aug. 24/74	Type: Geology Geochem
41F-48F	Y74090-Y74097	8	Gerry May	August 24/73			Aug. 24/74	(Cert. of work not received)
49-50	A73011-A73012	1	John Curry	Aug. 23/73	Dynasty	Aug. 23/73	Aug. 23, 1974	

COMPANY DYNASTY EXPLORATIONS CLAIM TAM & DEA AREA LOCATION N.T.S.

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
	<u>OPTION AGREEMENT WITH WELCOME NORTH MINES</u>							
	<u>TAM - N.T.S. 105-I-12</u>							
1-48	Y71437-Y71484	48		Dec. 18, 1972			Dec. 18, 1973	Amount: \$9,193.12
	<u>DEA - N.T.S. 105-I-11</u>							
1-20	Y71163-Y71182	20		Dec. 18, 1972			Dec. 18, 1973	Amount: \$2,500 - Yukon
21-34	A49901-A49914	13		Dec. 18, 1972			Dec. 18, 1973	\$2,800 - N.W.T.
								(Total filed \$ 5,332.18)
								(Cert. of work not rec'd.)

COMPANY DYNASTY EXPLORATIONS CLAIM WIL AREA LOCATION N.W.T. 105-I-13

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-10	49851-49860	10	A. Harmon	Jan. 15/73			Jan. 15/74	
15-18	49865-49868	4	A. Harmon	Jan. 15/73			Jan. 15/74	
23-26	49873-49876	4	A. Harmon	Jan. 15/73			Jan. 15/74	
31-32	49881-49882	2	A. Harmon	Jan. 15/73			Jan. 15/74	

TABLE II: STAKING DATA ON CLAIMS ACQUIRED DURING 1973 FIELD SEASON

COMPANY DYNASTY CLAIM TAP AREA N.E. Pelly River LOCATION N.T.S. 105-I-5

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
21-28	Y73806-Y73813	8	D. R. McCune	July 25, 1973			July 25, 1974	
29-34	Y73814-Y73819	6	S. Morris	July 25, 1973			July 25, 1974	
35-42	Y73820-Y73827	8	D.R. Kwill	July 25, 1973			July 25, 1974	
43-48	Y73828-Y73833	6	John Curry	July 25, 1973			July 25, 1974	
49-56	Y73834-Y73841	8	Steven Earle	July 25, 1973			July 25, 1974	
57-62	Y73842-Y73847	6	Gerry May	July 25, 1973			July 25, 1974	
63-70	Y73848-Y73855	8	C. Godwin	July 25, 1973			July 25, 1974	
71-76	Y73856-Y73861	6	R. Morris	July 25, 1973			July 25, 1974	
100-107	Y74036-Y74043	8	Gunter Lishy	Aug. 24, 1973			Aug. 24, 1974	
108-109	Y74044-Y74045	2	Bob Morris	Aug. 24, 1973			Aug. 24, 1974	
110-111	Y74046-Y74047	2	Gerry May	Aug. 24, 1973			Aug. 24, 1974	
112-113	Y74048-Y74049	2	John Curry	Aug. 24, 1973			Aug. 24, 1974	
200-207	Y74050-Y74057	8	L. G. Dellow	Aug. 24, 1973			Aug. 24, 1974	
208-215	Y74058-Y74065	8	Patricia Burkitt	Aug. 24, 1973			Aug. 24, 1974	
216-223	Y74066-Y74073	8	W.D. Tompson	Aug. 24, 1973			Aug. 24, 1974	
224-231	Y74074-Y74081	8	S. L. Scoffam	Aug. 24, 1973			Aug. 24, 1974	

COMPANY DYNASTY CLAIM MS AREA S. of Itai Lakes LOCATION N.T.S. 105-J-16

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
10-17	Y73710-Y73717	8	G. Lishy	July 25, 1973			July 25, 1974	
18-21	Y73718-Y73721	4	S. Morris	July 25, 1973			July 25, 1974	
30-37	Y73722-Y73729	8	Steven Earle	July 25, 1973			July 25, 1974	
38-41	Y73730-Y73733	4	D. McCune	July 25, 1973			July 25, 1974	
60-67	Y73734-Y73741	8	Les Dellow	July 25, 1973			July 25, 1974	
68-73	Y73742-Y73747	6	Gerry May	July 25, 1973			July 25, 1974	
90-97	Y73748-Y73755	8	R. Morris	July 25, 1973			July 25, 1974	
98-101	Y73756-Y73759	4	W. D. Tompson	July 25, 1973			July 25, 1974	

COMPANY DYNASTY EXPLORATIONS CLAIM AREA LOCATION N.T.S. 105-J-9

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
HELD UNDER OPTION FROM J. CARSON								
AJAX CLAIMS - 105-J-9								
1-4	Y73760-Y73763	4	D. McCune	July 25, 1973			July 25/74	
5-8	Y73764-Y73767	4	W. D. Tompson	July 25, 1973			July 25/74	
9-12	Y73768-Y73771	4	S. Morris	July 25, 1973			July 25/74	
13-14	Y73772-Y73773	2	Gerry May	July 25, 1973			July 25/74	
JOY CLAIMS - 105-J-9								
17-24	Y73774-Y73781	8	C. Godwin	July 25, 1973			July 25/74	
25-32	Y73782-Y73789	8	J.D. Curry	July 25, 1973			July 25/74	
33-40	Y73790-Y73797	8	D. R. Kwill	July 25, 1973			July 25/74	
41-48	Y73798-Y73805	8	G. Davis	July 25, 1973			July 25/74	
1	Y64580	1		July 25/72				
2-16	Y72678-Y72692	15		March 26/73				

N.W.T.

COMPANY DYNASTY EXPLORATIONS CLAIM SAND AREA LOCATION N.T.S. 105-I-15 & 16

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
1-16	A75001-A75016	16	Colin Godwin	Sept. 19/73	Dynasty	Sept. 19/73	Sept. 19/74	
21-44	A73021-A73044	24	Colin Godwin	Aug. 23, 1973	Dynasty	Aug. 23/73	Aug. 23/74	
45-68	A73045-A73068							

COMPANY DYNASTY CLAIM GUN AREA LOCATION N.T.S. 105-I-15 N.W.T.

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
17-23	A75017-A75023	7	Robert Morris	Sept. 19/73	Dynasty	Sept. 19/73	Sept. 19/74	
33-68	A72933-A72968	36	John Curry	Sept. 19/73	"	"	Sept. 19/74	
69-104	A72969-A73004	36	Peter Dean	Sept. 19/73	"	"	Sept. 19/74	
105	A73005	1	R. Morris	Sept. 19/73	"	"	Sept. 19/74	
106-110	A73074-A73078	5	R. Morris	Sept. 19/73	"	"	Sept. 19/74	

COMPANY DYNASTY CLAIM KEE AREA LOCATION N.T.S. 105-P-3 N.W.T.

Claim No.	Grant No.	No. of Claims	Staked by	Recording Date	Transfer Information		Due Date	Assessment Work and Remarks
					To	Date		
24-59	A75024-A75059	36	Robert Morris	Sept. 19, 1973	Dynasty	Sept. 19/73	Sept. 19/74	
60-83	A75060-A75083	24	Colin Godwin	Sept. 19, 1973	"	"	Sept. 19/74	

TABLE III: Claim Group Summary: 1973 Work Done and 1974 Follow-up Recommended

Property (Claim Group)	No. of Claims	Map Sheet	Lat. (N)	Long. (W)	Property Reconnaissance		Property Follow-up		Follow-up
					General Geology	Geochem	Grid Geology	Geochem	
Prevo	42	105-I-12	62°37'	129°40'	Yes	Yes	Local Grids	No	Property retained; no follow-up recommended; see Assessment report
Gull	54	105-I-11	62°34'	129°27'	Yes	Yes	Local Grids	No	1974 follow-up recommended; see assess. report
Dyn	24	105-I-11	62°33'	129°24'	Yes	Yes	Local Grids	No	Property retained; no follow-up recommended; see assessment report
Dea (Welcome North)	34	105-I-11	62°33'	129°23'	Yes	Yes	Local Grids	No	Property retained; no follow-up recommended; see assessment report
Pas	50	105-I-6 & 11	62°29'	129°14'	Yes	Yes	Extensive Grid	Yes	1974 follow-up recommended; see assessment report
Tam (Welcome North)	48	105-I-12	62°34'	129°45'	Yes	Yes	Local Grids	No	Property retained; minimum follow-up recommended; see assess. report
Will	20	105-I-13	62°55'	129°34'	Yes	Yes	No	No	Property dropped; No follow-up recommended
Sub-Total	272 Claims in 7 groups, 2 of which optioned								
Tap	102	105-I-5 & 12	62°28'	129°33'	Yes	No	No	No	1974 follow-up recommended; see assessment report
Gos	32	105-I-11	62°34'	129°06'	Yes	Yes	No	No	Claims not recorded; no follow-up recommended
MS	50	105-J-16	62°45'	130°07'	Yes	No	No	No	1974 follow-up recommended; see assessment report
Joy and Ajax (J. Carson)	(14) (48) 62	105-J-9	62°41'	130°07'	Yes	Yes	Yes	Yes	To be returned to J. Carson; see assessment report
Sand and Gun	(64) (85) 149	105-I-15 & 16	62°53'	128°33'	Very brief	No	Sand incomplete grid; no grid on Gun	No	1974 follow-up recommended; see assessment report
Kee	60	105-P-3	63°11'	129°25'	No	No	No	No	1974 work recommended.
Sub-Total	445 Claims in 8 groups, 2 of which optioned								
TOTAL	717 Claims in 15 groups, 4 of which optioned								

and Margaret Lake are marginal for Otter or Beaver aircraft. Break-up for most of these lakes was about mid-June in 1973, but Dyn Lake did not break up until the beginning of August 1973. Jeff Lake and Sheldon Lake (which is just outside the project area) have the advantage of being on the North Canal Road which was maintained in 1973 from about mid-May to mid-October from Ross River to the Y.T. - N.W.T. boundary. Jeff Lake also has an airstrip. Howard's Pass has a rough airstrip. Tungsten, of course, has an excellent airstrip and is linked by road to Watson Lake, Y.T.

A winter road to Howard's Pass, originating at Tungsten, N.W.T., was used by Placer Development Ltd. during the winter of 1972-73 and construction of an all-weather road over this route was rumoured likely but probably will not be constructed in 1974.

The three base camp locations for the 1973 project are shown in Figure 1. Camp 1 was serviced by truck from Ross River. Camps 2 and 3, on Cominco Lake and O'Grady Lakes, respectively, were serviced mainly by Otter and Beaver float planes from Ross River. Minor staging was done from Jeff Lake, Sheldon Lake and Summit Lake.

Work from the base camps was supported with one Bell 47G-3B-"2" helicopter contracted from Trans North Turbo Air (1971) Limited, P.O. Box 4338, Whitehorse, Y.T. Pilots during the season were: Donald R. Kvill, Gerry Stringer, Steve Harrison and Gordon Oliver. Two accidents were sustained by the chopper, a dinged tail rotor and a chopped off tail boom, but despite these accidents the chopper support was excellent.

Personnel employed by Dynasty are listed in Table IV. Their good spirits and work throughout the summer was exceptional.

TABLE IV: Persons Involved in Selwyn Project Work Program, 1973

<u>Colin I. Godwin</u> (Party Chief)	B.A.Sc., P. Eng.	330-355 Burrard Street, Vancouver 1, B.C. (604) 685-4331 and (604) 939-4274
<u>John D. Curry</u> (Chief Geologist)	B.Sc., P. Geol.	Apt. 904, 9909-104th St., Edmonton, Alberta (403) 429-0785 and (403) 424-9833
<u>Bob Morris</u> (Geologist)	B.Sc.	c/o Tom Stokie, P.O. Box 92, Ferne, B.C. (604) 423-6020 and (604) 879-1067
<u>Doug McCune</u> (Assistant Geologist)	Geol. Student, U.B.C.	4021 W. 13th Avenue, Vancouver, B.C. (604) 224-7335
<u>Steve Earle</u> (Assistant Geologist)	Geol. Student, U.B.C.	2058 W. 8th Avenue, Vancouver 9, B.C. (604) 731-0859
<u>Gerry May</u> (Geochem Sampler)	B.A.	1379 W. 58th Avenue, Vancouver 14, B.C. (604) 266-4490
<u>Les Dellow</u> (Geochem Sampler)	B.A.	1620 E.36th Avenue, Vancouver 15, B.C. (604) 327-7232
<u>Sheridan Morris</u> (Cook)		c/o Tom Stokie, P.O. Box 92, Ferne, B.C. (604) 423-6020 and (604) 879-1067
<u>Gunter Lishy</u> (Prospector)		Atlin, B.C.
<u>Will Thompson</u> (Expediter, Ross River)		208-32161 Tims Crescent, Clearbrook, Abbotsford.
<u>Paul Sihota</u> (Part time Assistant Geologist)		104-2310 W. 2nd Avenue, Vancouver, B.C. (no phone)
<u>Brian Howard</u> (Part time Geochem Sampler)		3201 Capilano Rd., North Vancouver, B.C. (604) 987-5447

Physiography and Climate

The Selwyn Project Area is mainly within the Selwyn Mountains. Topography varies but is generally rugged, especially in the vicinity of granitic intrusions. Elevations are generally above 4,000 feet and reach 8,000 feet at Keele Peak (105-0).

Most of the terrain is above timber line. The alpine areas are spectacularly beautiful; glaciers are common. In the lower valleys there are frequently large swamps. For most areas traversing is reasonably easy.

The Selwyn Mountains mark a belt of relatively high and unpredictable precipitation. With the exception of a pleasant July, few days passed without rain. Snow in late August and early September slowed the final stages of the project. A clear and crisp indian summer started during the last few days of the project and continued for several weeks after field work was terminated.

GEOLOGY

General Geology

The majority of the project area is underlain by the Selwyn Basin. This negative basinal feature was defined during the Cambrian at the same time the positive Mackenzie Arch was defined to the north and east. Basinal sedimentation was mainly of a deeper water facies, namely cherts and shales, with a change in facies to carbonate and reefoid rocks toward the Mackenzie Arch. In a general way this pattern of sedimentation was retained for the remainder of the Paleozoic. Regionally, then, the southwestern two-thirds of Selwyn Project is within the deeper water basinal environment and the northeastern third is in an area of shallowing sedimentation and, consequently, is also a belt marked by facies changes throughout much of the Paleozoic.

The geological history offers a simple division of deposits as follows:

1. Those deposits associated with the Selwyn shale basin, e.g. the Tom Property of Hudson's Bay Mining and Smelting Corporation Ltd. Note that the shales of this basin may be the source area for metals that later migrate to carbonate traps.
2. Those deposits intimately associated with shale-limestone facies changes, e.g. the properties of Placer Development Ltd. at Howard's Pass and the Pas Group of the Selwyn Project.
3. Those deposits formed in carbonate rocks of reefoid or back-reef facies toward the Mackenzie Arch paleo high, e.g. the Gun Group of the Selwyn Project. The metal source for this type of deposit may have been the Selwyn Basin. The drive mechanism for the dewatering and concomitant

deformation of the shales may have been the Jurassic orogeny responsible for the Yukon Metamorphic Complex in western Yukon.

4. Those deposits related to Cretaceous granitic intrusions and related skarn deposits, e.g. the Canada Tungsten Mines Ltd. deposit at Tungsten, and the MS Group of the Selwyn Project. These intrusions carry important amounts of tungsten, molybdenum, copper and, perhaps, gold. The intrusives lie in a zone along the western limit of the belt of facies changes.

Very little regional mapping of geology was done during the 1973 field season. Maps available from the Geological Survey of Canada include:

1. 1:5,000,000 series in Geology and Economic Minerals of Canada (Douglas, 1970).
2. 1:250,000 geological map coverage of the Project area (except 105-0).
3. 1:250,000 and 1:63,360 aeromagnetic coverage for maps 105-0 and 105-J.

Property Geology

The geology for the individual properties is outlined in their respective Assessment Reports and little needs to be added here.

Perhaps the most encouraging mineralization found in the 1973 field season was on the Pas Group. Mineralization on this group is identical in nature to that found on the properties of Placer Development Ltd. at Howard's Pass and on the R-Group 13 miles to the northwest. The significance of this type of mineralization can be closely compared to the important H.Y.C. lead-zinc-silver ore deposit in the MacArthur River district,

Northern Territory, Australia, and to the spectacular Mt. Isa Deposit, Queensland, Australia.

Prospecting for this type of deposit is extremely difficult due to the very fine grained nature of the ore minerals. One aid that is essential in looking for mineralization is the stain test for secondary zinc by the ferricyanide-oxalic acid-diethylaniline method. In this test the solution is merely squirted onto the suspected secondary zinc mineral and, if present, a bright orange-red stain develops immediately. The formula for this test is not widely known so it is reproduced below:

Reagents

Ferricyanide-oxalic acid diethylaniline solution:

Mix 3% potassium ferricyanide solution and 3% oxalic acid solution containing 0.5% diethylaniline in equal volumes. The mixed solution is not stable so should be protected from heat and light and freshly prepared every week or less.

Procedure

Squirt solution on any suspect rock. A red-orange colouration indicates secondary zinc.

GEOCHEMISTRY

General

During the 1973 field season a total of about 14,000 silt and soil samples were taken. Table V classifies the type and number of samples taken on the various claim groups and in the regional survey.

The regional sampling was mainly done by chopper hopping and, to a lesser extent, was done by traversing from chopper set-outs and from fly-camps. Table VI gives a rough indication of the coverage for the 33 one-mile map sheets involved in the Selwyn Project.

Analyses for copper, lead and zinc were performed by the Ross River mobile laboratory operated by Acme Laboratories Ltd., 6455 Laurel Street, Burnaby 2, B.C. Analysis was by atomic absorption on perchloric acid digestion of a half gram, minus 80 mesh sample. In areas of local interest additional analyses for tungsten and molybdenum were performed by the Vancouver laboratory of Acme.

Integrated Value

An even number called here the integrated value for copper, lead and zinc is plotted at each sample site with a letter (C for copper, P for lead and Z for zinc) that defines the abundant metal(s) or metal characteristic(s) at the site.

Table VII shows how to calculate an integrated metal value for a site. The purpose of this scheme is to provide a summary map that will ensure that no anomalies from a single or additive geochemical result are lost. Zoning of metals should become apparent from progressions in metal characteristics.

TABLE V: Location, Type and Number of Samples taken in 1973 Selwyn Project (*M = 1000)

Location	Type	Approx. Area	Geochem: Cu, Pb, Zn,		
			Soil	Silt	Rock
PREVO Group	Regional	2.2 sq. miles	96	12	50
	Detail A	6.5 M* sq.ft.	449	0	9
	Detail B	4 M.sq.ft.	240	0	2
Sub-Total			785	12	61
GULL Group	Regional	3.8 sq. miles	296	0	48
	Detail	4.8 M. sq.ft.	291	3	0
Sub-Total			587	3	48
DYN Group	Regional	1.8 sq. miles	188	12	28
	Detail	4 pits	11	2	0
Sub-Total			199	14	28
DEA Group	Regional	2.8 sq. miles	290	6	36
	Detail	26 pits	49	16	0
Sub-Total			339	32	36
PAS Group	Regional	3.5 sq. miles	210	31	58
	Detail	13 M.sq. ft.	751	70	0
Sub-Total			961	101	58
TAM Group	Regional	3.5 sq. miles	378	100	56
	Detail	8 pits	9	0	29
	Detail	16 outcrops	0	0	345
Sub-Total			387	100	430
TAP Group	Regional	12 sq. miles	195	145	0
	Detail	120 M. sq. ft.	238	62	0
Sub-Total			433	207	0
JOY Group	Regional	4.8 sq. miles	40	43	40
	Detail	38 M. sq. ft.	538	0	13
Sub-Total			578	43	53
AJAX Group	Regional	1.2 sq. miles	1	36	1
	Detail	3.5 M. sq. ft.	567	0	10
Sub-Total			568	36	11
MS Group	Detail	112 M. sq. ft.	323	107	22
Sub-Total			323	107	22
SAND & GUN Groups	Regional	48 sq. miles	148	85	27
	Detail, Sand	8.5 M. sq. ft.	358	23	0
Sub-Total			506	108	27
Sub-Total Claim Groups	Regional & Detail	87 sq. miles	5,666	763	774
TOTAL					7,203
Outside Exploration	Mainly regional	5,116-87= 5,029 sq. mi.	Undivided (mainly silt) Total: 6,418		
PROJECT TOTAL			13,621		
Claim Group Sample Density: 82.8 samples/sq. mile					
Outside Exploration Sample Density: 1.3 samples/sq. mile					

TABLE VI: Completion of Regional Geochemical Coverage
Selwyn Project Area, 1973

Map	Hess Data	Selwyn Data-1973		Completion	Area** (sq.mi.) Coverage 1973
		Chopper Hop	Traverse		
105-O-1	80%	-	-	80%	-
105-O-2	50%	-	-	50%	-
105-O-3	20%	-	20%	40%	54
105-O-4	15%	-	80%	95%	216
105-O-5	100%	-	-	100%	-
105-O-6	100%	-	-	100%	-
105-O-7	100%	-	-	100%	-
105-O-8	100%	-	-	100%	-
105-J-8	-	5%	80%	85%	230
105-J-9	-	5%	85%	90%	243
105-J-13	-	-	80%	80%	216
105-J-14	-	-	75%	75%	202
105-J-15	-	-	75%	75%	202
105-J-16	-	30%	5%	35%	95
*105-I-1	-	10%	-	10%	27
*105-I-3	-	20%	-	20%	54
*105-I-4	-	5%	-	95%	13
105-I-5	-	50%	50%	100%	270
105-I-6	-	90%	-	90%	243
105-I-7	-	85%	5%	90%	243
105-I-8	-	90%	-	90%	243
105-I-9	-	100%	-	100%	270
105-I-10	-	80%	5%	85%	230
105-I-11	-	40%	50%	90%	243
105-I-12	-	70%	30%	100%	270
105-I-13	-	60%	35%	95%	257
105-I-14	-	75%	15%	90%	243
105-I-15	-	75%	25%	100%	270
105-I-16	-	90%	10%	100%	270
*105-P-1	-	5%	-	5%	13
*105-P-2	-	10%	5%	15%	40
105-P-3	-	80%	20%	100%	270
105-P-4	-	65%	5%	70%	189
TOTAL					5,116

* Outside Project Area

** Assumes 270 sq. miles per 1-mile map sheet

TABLE VII: CALCULATION OF INTEGRATED VALUE AND METAL CHARACTERISTIC

A geochemical interpretation scheme for a total value representing copper + lead + zinc with pH taken into account.

RANGE (PPM) AND COLOUR

<u>Metal</u>	<u>Red (925)</u>	<u>Green (909)</u>	<u>Blue (903)</u>
Copper	≥ 120	90 - 119	70 - 89
Lead	≥ 50	40 - 49	30 - 39
Zinc	≥ 1000	600 - 999	300 - 599
Value	6	4	2

Notes:

(a) Adjustment for pH

if pH ≤ 5.0:

Copper, multiply ppm by 2
 Lead, do not change
 Zinc, multiply ppm by 5

(b) Bonus for High Results

<u>Bonus</u>	<u>Copper</u>	<u>Lead</u>	<u>Zinc</u>
2	240-359	100-149	2000-2999
4	360-479	150-199	3000-3999
6	≥ 480	≥ 200	≥ 4000

(c) Colour code for total value: Copper + Lead + Zinc

<u>Value</u>	<u>Colour</u>	<u>Interpretation</u>
≥ 18	Red (925)	High anomaly
12 to 16	Orange (918)	Intermediate anomaly
8 & 10	Green (909)	Low anomaly
6	Blue (903)	High threshold
4	Purple (931)	Low threshold
2 & 0	Blank	Background

(d) Metal character noted for copper, lead and zinc by: C, P, Z, respectively, only if value for each metal is ≥ 6.

One of the most useful features of this technique occurs during field plotting of the large number of results coming in. Colour coding of sample sites, on the basis of quickly calculated integrated values, plotted on one-mile maps quickly defines follow-up areas on the basis of a number akin to total heavy metal. It is not overwhelmed by zinc geochemistry; it is simpler, quicker and less likely to result in the overlooking of anomalous areas than individual considerations of each metal analyzed. A pH adjustment is incorporated into this scheme. The adjustment is empirically derived as are the intervals for value. Determinations of water pH was made routinely for all silt sample sites with the aid of liquid Fisher Universal pH Indicator and comparison charts. This indicator is extremely rapid and easy to use and covers the pH range 4.0 to 10.0.

Results

Appendices I to IV, to accompany this report, are under separate cover. Each appendix covers a 4-mile map sheet within the project area, consequently, there is one for: 105-O, 105-J, 105-I and 105-P.

The appendix for each map sheet has:

1. A four-mile geological map, with separate legend, upon which is marked:
 - (a) known mineral occurrences;
 - (b) anomalous aeromagnetic features where such coverage is available;
 - (c) claim group outlines current as of fall 1973 and expired claim groups where known;
 - (d) main geochemical anomaly areas from 1973 Selwyn Project, and Hess Project data.
2. The one-mile maps pertaining to the project area; these show drainage, regional geochemical sample sites with pH and "integrated value" associated with the site.
3. A second copy of the one-mile maps in 2 above, showing the site with determined copper, lead and zinc results.
4. Detailed maps pertaining to the one-mile maps of 2 and 3 above. These follow each map sheet where detailed data is available.
5. A one-page listing of follow-up areas for each one-mile map area. This listing, of course, refers to maps in 2, 3 and 4 above.

Mr. Steven Earle, a student geologist during the 1973 field season, has undertaken a computer-based geochemical study of the 2,300 regional silt samples taken in map sheet 105-I during 1973. His study includes:

1. Evaluation of the significance of pH measurements.
2. Relationships of geochemical response to the geological units as mapped by the Geological Survey of Canada.
3. Spectrographic analysis, for a broad spectrum of elements, of 100 randomly selected silt samples.

His results will ultimately be used in a B.Sc. thesis to be completed in spring 1975, but the majority of his data will be available before the 1974 field season.

BUDGET

The costs for the Selwyn Project to December 31, 1973, are summarized in Table VIII.

A detailed budget for 1974 is not submitted here because it will likely be subjected to several revisions. It will be submitted under separate cover as Appendix V.

CONCLUSIONS

The data mainly within the property reports filed for assessment purposes and Appendices I to IV provide an exciting basis for an on-going 1974 field season. Appendix V outlined how monies can be most effectively spent. It is recommended that the majority of the 1974 effort be spent following-up the claim groups held and the areas found to be of interest from regional geochemistry and prospecting.

Personally, the 1973 field season was an exciting and productive experience. I wish to thank not only my field crew and office staff but also the participants in the Selwyn Project.

Respectfully submitted,

Colin I. Godwin, P.Eng.,
Party Chief,

January, 1974.

