REPORT ON THE

SILVER QUEEN MINE

OMINECA MINING DIVISION, BRITISH COLUMBIA

- FOR -

HOUSTON METALS CORPORATION

910-800 WEST PENDER STREET

VANCOUVER, B.C. V6C 2V6

by W. W. Cummings

March, 1987

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HOUSTON METALS CORP.

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OWEN LAKE PROPERTY

Scale: 1 cm.= 87 km.	Feb. 1987
Dr.: W.W.C.	Figure 1

INTRODUCTION

The Silver Queen mine at Owen Lake, south of Houston B.C. was staked in 1912 and explored at intervals, mainly in the late 20's and early 40's. Nadina Explorations Ltd. acquired the Crown-granted claims under an option with Canadian Exploration Ltd. and began exploration with an agreement in 1971 with Bralorne Can-Fer Resources and Pacific Petroleum. As the Bradina Joint Venture, the property was put into production with a 500 ton concentrator in 1972. Due to problems in both mine and mill, the operation was not profitable and closed in September 1973.

Programs carried out by New Nadina since 1973 began to show precious metal content of the ore increasing at depth and to the south, and that there was considerable ore to be explored in other veins on the property. During these later years, Frontier Explorations and its successor, Bulkley Silver explored the Cole Lake series of veins. In 1986, gallium and germanium were found in samples from the veins and a sampling program confirmed the first results. This led to a major exploration program which was funded by the First Exploration Fund 1986, starting in November 1986. The program was initiated after an agreement between Houston Metals Corporation (successor to Bulkley Silver) and New Nadina Exploration combined the two properties into one for the first time.

SUMMARY

The program met its objectives, with the exception of diamond drilling. Drilling was planned for No. 2 Vein, the Switchback Vein, the NG3 Vein, No. 5 Vein and the 84-15 Area (a diamond drill indicated zone south west of the mine). Development in ore in the No. 2 Vein, No. 5 Vein and the Footwall Vein puts this ore into the proven category, and has also supplied fresh unoxidized ore for metallurgical testing.

With regard to the distribution of Ga-Ge, assays to date indicate that all known types of ore carry Ga-Ge, including the high pyrite veins found in the south end of the mine. It is highly possible that the NG3 Vein which is the target for the 2600 South Crosscut will also carry Ga-Ge.

Drilling will be the prime objective of the next program, with some changes in emphasis as a result of this present program. Many of the operating problems such as ventilation, haulage locomotives and equipment were solved quite late in this program, but will be a great advantage for the next program.

Phase I of the program at the Owen Lake Project of Houston Metals corporation, consisting of underground exploration at the Silver Queen Mine, was carried out between November 1986 and 28 February 1987. The objectives of developing new ore and particularly, sources of precious metals and gallium and germanium, were met.

Three veins not previously developed were opened by drifting and samples for metallurgical testing were obtained. These were: the No. 2 Vein - a high tonnage but low grade source of silver, and germanium (plus zinc), the No. 5 Vein - a high grade source of all the metals - copper, zinc, silver, gallium, germanium and indium and Footwall Vein - a good source of gallium and germanium. In addition, the "Ruby" Vein, opened on the 2750 sub-level carries much higher silver than expected, and may be on a branch vein previously undeveloped. Development to the southeast toward the NG3 Vein cut a pyrite vein which carried very high gallium and germanium.

Preliminary metallurgical testing of these new sources of ore proved that recovery of the precious metals and gallium-germanium-indium is possible, by making a combined copper-lead concentrate and a zinc concentrate.

The next phase of the program should outline tonnage in the new areas and continue metallurgical studies.

PROPERTY DESCRIPTION

The property consists of seventeen Crown-granted claims held by New Nadina Exploration under an option with Placer Development, and Claims held by location by New Nadina and Houston Metals. A list of claims is attached with expiry dates and ownership.

The property is in open rolling ranch land east of Owen Lake. Sufficient water is available from Wrinch Creek for mining, and from Owen Lake for operating a concentrator. Maximum relief from Owen Lake to the top of the Mine Hill is about 500 feet.

The mine workings involved in this program are all on the Crown-granted mineral claims optioned by New Nadina to just north of the Alimak raise at about Section 28000. From this point south, the 2600 level is on New Nadina claims held by location. The claims involved are shown on the 1:2400 scale plan in the pocket.

ACCESS

The property is 43 Km from Highway 16 just west of Houston on an all-weather gravel road. The road follows the Morice River for 27 Km, then branches off southeasterly to Owen Lake and eventually to Francois Lake. The road is maintained for heavy logging traffic.

HISTORY

The development of the Silver Queen mine has been a slow process, starting with discovery of the main vein in Wrinch Creek canyon in 1912. Other veins were found, such as the Chisholm group of veins southwest of the Silver Queen mine and the Cole vein system at Cole Lake east of the mine. These veins were explored near surface before 1924, and in 1928 the Owen Lake Mining and Development Co., sank the Cole shaft and drove the Earl Adit - now the main haulage crosscut to intercept the main veins known as No. 1, No. 2 and No. 3 over 2500 feet from the portal. This level is at 2600 feet elevation, about 280 feet below the levels collared in Wrinch canyon, or about 500 feet below the outcrop of the No. 3 Vein on top of the hill.

Canadian Exploration Ltd. acquired the Crown-granted claims covering the Silver Queen and Chisholm veins in 1941 and carried out exploration until 1947. In 1963 an option was granted to Nadina Explorations and the company or its successors have held and explored the property to this date. There were several exploration programs carried out by Nadina, Kennco and Northgate, up until the Bradina Joint Venture was formed in 1971. This group, consisting of Nadina Explorations, Bralorne Can-Fer Resources and Pacific Petroleum took the property into production in 1972 with a 500 ton per day concentrator. Due to poor production, mining and concentrator problems, the operation shut down in 1973.

OWEN LAKE, B.C.
CLAIMS LIST - JUNE 24, 1986

laim name	R. NBR.	units	TYPE	NEW EXPIRY	OWNER
STA FRACTION	Lot #7543	1	CG	Taxes Paid	PLACER DEVELOP
BELL #1	24929	1	L	06/15/88	BULKLEY SILVER
BELL #1 FR.	24932	1	L	06/15/88	BULKLEY SILVER
BELL #2	24930	1	L	06/15/88	BULKLEY SILVER
BELL #2 FR.	24933	1	L	06/15/88	BULKLEY SILVER
BELL #3	24931	1	L	06/15/88	BULKLEY SILVER
BELL #3 FR.	24934	1	L	06/15/88	BULKLEY SILVER
BELL #4 FR.	24935	1	L	06/15/88	BULKLEY SILVER
BELL #5 FR.	24936	1	L	06/15/88	BULKLEY SILVER
BLACK BEAR	1685	1	L	07/02/88	BULKLEY SILVER
COLE #1	636	2	L	07/08/89	NEW NADINA EXP
DIAMOND BELLE	1684	1	L	07/02/88	BULKLEY SILVER
EARL NO 1	Lot #7399	1	CG	Taxes Paid	CANEX
EARL NO 1 FR	Lot #7401	1	CG	Taxes Paid	CANEX
EARL NO. 2	Lot #7400	1	CG	Taxes Paid	PLACER DEVELOP
EARL NO. 3	Lot #7402	1	CG	Taxes Paid	PLACER DEVELOP
ETHEL	7363	1	L	07/04/88	BULKLEY SILVER
I X L	Lot #6551	1	CG	Taxes Paid	PLACER DEVELOP
I X L NO. 3	Lot #7403	1	CG	Taxes Paid	PLACER DEVELOP
IVAN FR	40867	1	L	06/20/88	BULKLEY SILVER
LILY FRACTION	Lot #7541	1	CG	Taxes Paid	PLACER DEVELOP
LUCY	Lot #7404	1	CG	Taxes Paid	PLACER DEVELOP
MAE	Lot #7545	1	CG	Taxes Paid	PLACER DEVELOP
MAE NO. 1	Lot #7544	1	CG	Taxes Paid	PLACER DEVELOP
ARY	Lot #7540	1	CG	Taxes Paid	PLACER DEVELOP
ARY FRACTION	Lot #7542	1	CG	Taxes Paid	PLACER DEVELOP
ILVER #2	637	10	L	07/08/89	NEW NADINA EXP
SILVER #3	106	18	L	08/25/90	NEW NADINA EXP
SILVER #4	107	12	L	08/26/89	NEW NADINA EXP
SILVER 1	104	20	L	08/25/90	NEW NADINA EXP
SILVER 5 M.C.	108	20	L	08/26/90	NEW NADINA EXP
SILVER 6	101	12	L	09/02/89	NEW NADINA EXP
SILVER 7	102	2	L	09/02/89	NEW NADINA EXP
SILVER KING	Lot #6547	1	CG	Taxes Paid	CANEX
SILVER QUEEN	Lot #6549	1	CG	Taxes Paid	PLACER DEVELOP
SILVER TIP	Lot #6550	1	CG	Taxes Paid	PLACER DEVELOP
TIP TOP #1	635	8	L	07/08/89	NEW NADINA EXP
TYEE	Lot #6548	1	CG	Taxes paid	CANEX
VAN #1 FR	35244	1	L	02/23/89	BULKLEY SILVER
VAN #1.	35245	1	L	02/23/89	BULKLEY SILVER
VAN #2	35246	1	L	02/23/89	BULKLEY SILVER
VAN #3	35247	1	L	02/23/89	BULKLEY SILVER
VAN #4	35248	1	L	02/23/89	BULKLEY SILVER
VAN #5	35249	1	L	02/23/89	BULKLEY SILVER
VAN #6	35250	1	L	02/23/89	BULKLEY SILVER
VAN #7	35251	1	L	02/23/89	BULKLEY SILVER
VAN #8	35252	1	L	02/23/89	BULKLEY SILVER
VAN #9	35253	1	L	02/23/89	BULKLEY SILVER
VAN 2 FR	87987	1	L	06/08/88	BULKLEY SILVER

Record count = 49

Frontier Exploration Ltd. acquired the Cole Lake property in 1960 and carried out surface programs at intervals, proving up a series of veins very much like the veins north of Wrinch Creek in the Silver Queen property. This company was succeeded in 1977 by New Frontier Petroleum Ltd. and in 1980 by Bulkley Silver Resources Ltd. This latter company optioned the New Nadina property and, after reorganization as Houston Metals Corporation, began the present program in November 1986.

The B.C. Ministry of Energy, Mines and Petroleum Resources mapped the area in 1969 and the report by B. N. Church forms part of the Annual Report in 1969.

GEOLOGY AND MINERALIZATION

The property is underlain by a series of late Mesozoic to early Tertiary volcanic flows and pyroclastics, cut by a sill-like body of micro-diorite. Dykes cut the older rocks and are both pre and post-ore. The older volcanic rocks and the microdiorite sill are mainly exposed in the "Mine Hill" area north and south of Wrinch Creek and extending east to Cole Lake. Younger volcanics outcrop north and south of the mine area.

Mineralization is extensive over an area 2½ miles long by 2 miles wide. Most of the explored occurrences are polymetallic veins in northwesterly fractures, sometimes combined with replacement in northerly striking shear zones. Alteration is intense in some areas, and as envelopes around veins, and some disseminated sulphide areas have been found by geophysical and geochemical surveys. Zoning is now known to occur: base metals increase toward the north-west and precious metals to the southeast (higher temperature). In addition, precious metals increase with depth.

Geology and mineralization are thoroughly covered in reports by Church (1960) and Dawson (1985).

ORE RESERVES

No attempt was made in this phase to revise ore reserve estimates, which have been made in several reports since the Bradina operation closed. The report by Dawson (1985) includes a good summary of mineralization and ore reserves. Ore reserves will be re-estimated in the next phase.

Ore reserves (for the No. 3 Vein only) as quoted by Dawson: 577,590 tons proven and probable, grading 0.108 oz Au/ton, 7.51 oz Ag/ton, 0.49% Cu, 1.49% Pb and 6.53% Zn. The grade is above the average Bradina production grade, due to the low grade development stockpile which was treated at that time, and the higher grade precious metals found since.

PROGRAM OBJECTIVES

The program as outlined in the report by myself to Bulkley Silver Resources Inc. - June 1986 - was aimed at a production decision in three phases, with appraisal in between phases. The program objectives were:

1) to bring as much possible ore into proven or probable categories as possible.

2) to emphasize the precious metal potential of the ore bodies.

3) to advance the metallurgical studies for the recovery of precious metals, gallium and germanium.

PROGRAM REPORT

a) Rehabilitation

Reorganization of Bulkley Silver Resources Ltd. as Houston Metals Corporation delayed the financing arrangements, which were not completed until the end of October 1986. The contractor, Vicore Mining Development Ltd., moved to the property in early November and began repairing the camp and plant. By the third week of November, the camp was useable and rehabilitation of the 2600 Level began. With the need to build a new roof over the bunkhouse complex and put in new wells, the camp rehabilitation cost was higher than expected but the camp is winterized and in good condition now.

Mine rehabilitation was also more costly than anticipated, due to major caves in timbered areas. Rehabilitation involved mucking spill and rotten timber, replacing rail, pipe, timber and ditching. In total, 4100 feet of the 2600 feet drift north and South was rehabilitated, with replacement of 2100 feet of two inch water line and 1440 feet of four-inch air line. In addition, three raises were rehabilitated, replacing ladders, pipe, and timber as required, a total of over 800 feet. Rehabilitation was delayed by the Christmas shutdown (December 20, 1986 to January 4, 1987). The face of the 2600 feet level south drift was reached January 10th, 1987.

b) Diamond Drilling

Diamond drilling was recommended in the initial report for the No. 2 Vein, No. 5 Vein, Switchback Vein and NG3 Vein areas. Due to time and access restrictions, none of this drilling was done, and development was substituted, where possible, to prove ore and produce samples for metallurgy.

Diamond drilling was limited to wall testing of the No. 2 Vein sub drift, where the zone was wider than the sub-drift, and testing of pyrite-sphalerite veins cut at the start of 2600 feet south crosscut. Results are shown on the No. 2 Vein Plan:

Location	No. of Holes	Total Footage
2600 South Crosscut	2	80 feet
No. 2 Sub Drift	11	246 feet
	Total	326 feet

c) Development

Summary of Advance

Heading	Drift-Ft. Ore	Drift-Ft. Waste	Sub-Drift Ore	Sub-Drift Waste	Raise Ore	Raise Waste
No. 5 Vein - adit	80					
No. 2 Vein - crosscut		190				
No. 2 Vein - muck drift		30				
No. 2 Vein - raise					59	20
No. 2 Vein - slash		40.5				
No. 2 Vein - sub drift			115	53		
Footwall Vein - drift	43	25				
2600S crosscut		554.5				
2600S -2-D.D. Sta.		72				
2750 sub drift				120.5		
2870 adit		55				
Sub Totals:	123	967.0	115	173.5	59	20
Total:	1090		288.5		79	

All development was surveyed, mapped geologically and sampled. Results are plotted on 1 inch = 20 feet, plans are attached, with the location of development areas shown on plan at 1 inch = 200 feet (in pocket). A total of about 2000 lbs ore was taken from four sources: No. 5 Vein, No. 2 Vein, Footwall Vein and 2750 Sub-Drift ("Ruby" Vein) for metallurgical study by Bacon, Donaldson & Associates Ltd.

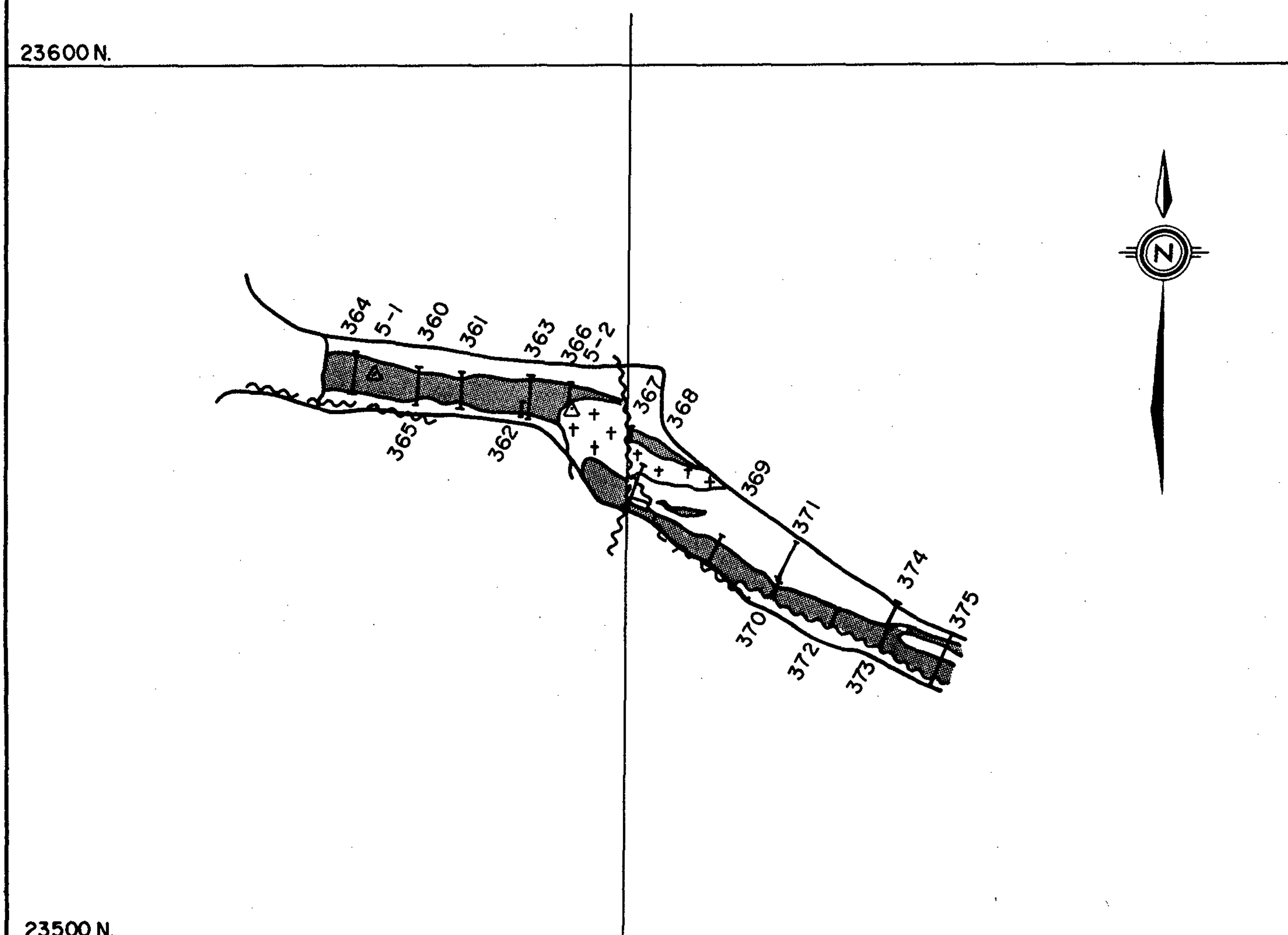
1) No. 5 Vein - known previously from surface trenching and several diamond drill intersections. The adit (80 feet) confirmed the surface assays - high zinc, fair copper-grading to high copper - fair zinc, good silver and low gold. Gallium is low, germanium is erratic with an average of 51 ppm, and indium is erratic,but very high in the high zinc areas. This adit is 15 feet above the 2600 portal elevation. The vein would provide an easily accessible source of high-grade ore, and is part of a set of veins known as the Portal Veins. Diamond drilling is planned to establish tonnage here which could be easily developed.

   The average grade for chip samples in the drift was:

   Width - 3.64 feet - 0.034 oz Au/ton, 9.72 oz Ag/ton, 1.13% Cu, 0.40% Pb, 11.12% Zn, 0.07% Cd, 1.25 ppm Ga, 51 ppm Ge and 294 ppm In.

2) No. 2 Vein - this vein outcrops or has been trenched for about 1000 feet and showed good Ga-Ge values in samples taken during the sampling program in May 1986. Due to the delay caused by late start and slow rehabilitation, it was decided to open up the No. 2 Vein by development and a crosscut was started in December. The vein was reached about 150 feet from the No. 3 Vein, and consisted of a stringer zone with several strong banded rhodochrosite veins near the Footwall. Over a total width of 18.5 feet, the vein complex assayed: 0.04 oz Au/ton, 2.62 oz Ag/ton, 0.07% Cu, 1.50% Pb, 12.43% Zn, 0.06% Cd and 9.8 ppm Ga, 86.5 ppm Ge, 1 ppm In.

Sample No.	Width(ft)	Au(oz/T)	Ag(oz/T)	Cu %	Pb %	Zn %	Cd %	Ga(ppm)	Ge(ppm)	In(ppm)
M360	4.0	0.036	14.64	2.00	0.35	19.80	0.102	1	38	895
M361	3.0	0.034	15.43	0.73	0.50	27.40	0.230	2	130	320
M362	1.0	0.090	35.58	4.95	0.23	34.90	0.172	2	86	2010
M363	4.0	0.014	7.06	1.12	0.12	12.50	0.063	1	32	500
M364	3.5	0.113	35.00	2.98	0.57	28.90	0.162	2	36	1080
M365	4.0	0.047	10.73	1.52	0.21	22.30	0.122	1	100	720
M366	1.5	0.024	13.13	1.52	0.31	34.95	0.310	1	16	–
M367	1.0	0.263	27.71	3.64	0.36	2.43	0.012	2	42	–
M368	4.0	0.075	14.58	1.61	0.40	2.42	0.014	2	111	73
M369	3.0	0.018	3.03	0.96	0.44	7.90	0.038	1	69	6
M370	1.0	0.007	2.68	0.245	2.18	4.17	0.023	1	79	2
M371	4.0	0.007	0.43	0.046	0.15	0.74	0.004	1	63	1
M370-371	5.0	0.007	0.88	0.086	0.56	1.42	0.008	1	66	–
M372	1.5	0.025	5.80	0.423	0.57	8.10	0.040	2	74	149
M373	2.0	0.120	29.17	4.19	0.70	5.41	0.033	3	18	131
M374	3.0	0.008	1.02	0.28	0.09	1.03	0.006	1	24	18
M373-374	5.0	0.049	12.28	1.84	0.33	2.78	0.02	1.8	22	–
M375	5.5	0.025	4.43	1.10	1.00	5.90	0.035	2	69	18
AVERAGE	3.64	0.034	9.72	1.13	0.40	11.12	0.07	1.25	51	294
Metallurgical Sample-	200 lb	0.088	16.34	1.66	0.67	4.37	–	2	34	56



FEET
0 20 40

16600 E.

HOUSTON METALS CORP.

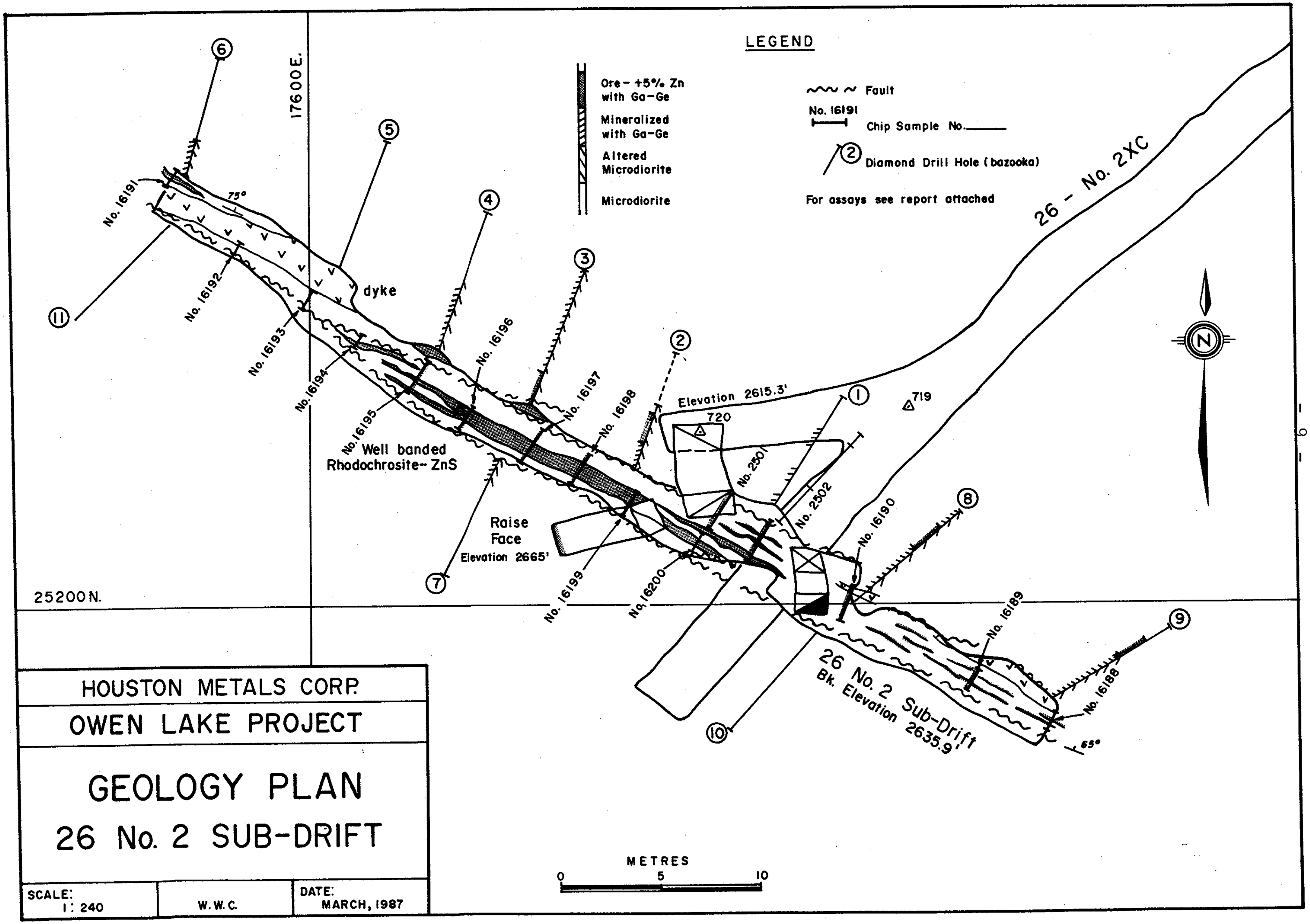
OWEN LAKE PROJECT

ASSAY PLAN
ADIT No. 5 VEIN

SCALE: 1" = 20'

W.W.C.

DATE: MARCH, 1987



HOUSTON METALS CORP.

OWEN LAKE PROJECT

GEOLOGY PLAN
26 No. 2 SUB-DRIFT

SCALE: 1: 240	W. W. C.	DATE: MARCH, 1987

ASSAYS - 26 - NO. 2 VEIN DEVELOPMENT JAN-FEB 1987

Location	Sample No. (and type)	Length (ft)	Au oz/ton	Ag oz/ton	Cu %	Pb %	Zn %	Cd %	Ga ppm	Ge ppm	In ppm	Remarks (ppm=gm/tonne)
26 No. 2 Sub Drift	16191-Chip	3	0.017	10.06	0.432	0.33	1.79	0.01	1	22	4	North face
	16192-Chip	2	0.001	0.01	0.001	0.02	0.28	0.001	1	28	1	Stringers-no vein
	16193-Chip	3	0.001	0.06	0.05	0.08	0.3	0.001	1	12	1	Stringers-no vein
	16194-Chip	1.8	0.011	0.29	0.118	0.29	0.82	0.004	2	29	1	Stringers-no vein
	16195-Chip	6.5	0.086	0.97	0.044	0.63	6.4	0.037	1	34	1	Start of vein
	16196-Chip	5	0.039	1.93	0.1	4.65	11.6	0.067	1	156	2	Strong vein
	16197-Chip	7.5	0.018	1.64	0.034	2.62	9	0.047	2	82	2	Strong vein
	16198-Chip	6.5	0.029	1.04	0.063	2.33	7.1	0.041	1	11	1	Strong vein
	16199-Chip	4	0.035	4.64	0.061	3.81	16.2	0.069	50	442	9	Strong vein
	16200-Chip	3	0.001	0.12	0.002	0.21	0.47	0.002	3	40	1	Strong stringers
	2501-Chip	8.5	0.022	1.18	0.093	2.02	6.7	0.037	1	6	1	Strong vein
	2502-Chip	8	0.026	1.52	0.091	1.7	11.95	0.07	2	19	1	Strong vein
	16190-Chip	8	0.011	0.71	0.025	0.5	5.35	0.03	1	60	6	Narrow veins
	16189-Chip	4	0.024	0.99	0.051	0.4	5.4	0.029	2	26	1	Narrow veins
	16188-Chip	3.5	0.008	0.31	0.02	0.29	1.3	0.006	1	29	1	South face
26 No.2 Sub Drift Raise at 30'	16175-Chip	5	0.026	1.58	0.118	2.13	10.5	0.059	2	23	2	
Bazooka DDH												
No.1	2507	14-17	0.001	0.01	0.027	0.01	0.54	0.003	1	69	1	
No.2	2508	0-4	0.001	0.08	0.008	0.02	0.15	0.001	2	98	1	
	2509	4-10	0.025	0.29	0.043	0.22	4.71	0.029	2	33	1	
	2510	10-13	0.001	0.01	0.005	0.01	0.5	0.002	1	75	1	
No.3	2505	0-5	0.022	0.71	0.119	1.27	5.79	0.037	5	58	1	
No.4	2506	0-5	0.01	0.33	0.021	0.41	2.03	0.011	2	55	1	
No.8	2513	6-12	0.007	0.41	0.008	0.21	1.42	0.008	2	67	1	
	2514	12-18	0.041	1.36	0.05	0.4	4.85	0.029	1	95	1	
	2515	18-24	0.006	0.14	0.021	0.1	3.44	0.021	4	53	1	
No.9	2516	0-7	0.001	0.35	0.004	0.22	0.65	0.003	1	88	1	
	2517	7-12	0.006	0.25	0.023	0.11	1.89	0.011	1	51	1	
	2518	12-17	0.022	1.69	0.15	3.8	10.85	0.067	3	67	1	
Metallurgical Sample		lb. 1000	0.068	2.21	0.13	4.13	10.99	0	4	36	4	

After driving two raises, a subdrift followed the structure for 168 feet,followed by a 30 foot raise on the Footwall Vein and series of short holes to test the total width. As shown on the subdrift plan and the list of assays attached, the zone has been defined over at least a 15 foot width for about 120 feet. The diamond drill results confirm the presence of germanium in the stringer zone where metallic values fall below ore grade. The value of this zone depends on the recovery of germanium, since the silver values are under two ounces per ton.

Proven tonnage resulting from this development is estimated at 30,000 tons at metallurgical head grade.

3) 2600 South - Footwall Vein - this vein, 60' west, or toward the Footwall side, from NO. 3 Vein, was drilled in 1973 as the Bradina operation was closing down. Footwall intersections had been obtained in various areas, but never developed. This development was undertaken to prove the diamond drill grade and to obtain a sample for metallurgical testing.

Drifting on the vein for 43 feet indicates a good mining width of 5 to 6 feet, fair silver and gold, good zinc, and fair to good germanium values. A 500 lb metallurgical sample was taken. Results of sampling are shown on the plan attached. The average of chip samples taken is as follows:

0.48 Au (oz/ton), 20.71 Ag (oz/ton), 0.25% Cu, 2.84% Pb, 4.60% Zn, 0.02% Cd, 3 ppm Ga, 182 ppm Ge, 1 ppm In

The mineralogy (high black and red sphalerite, high pyrite) is quite different in this vein from the nearby No. 3 Vein, where a chip sample was taken, with the assays shown. This vein is much high in Au-Ag content.

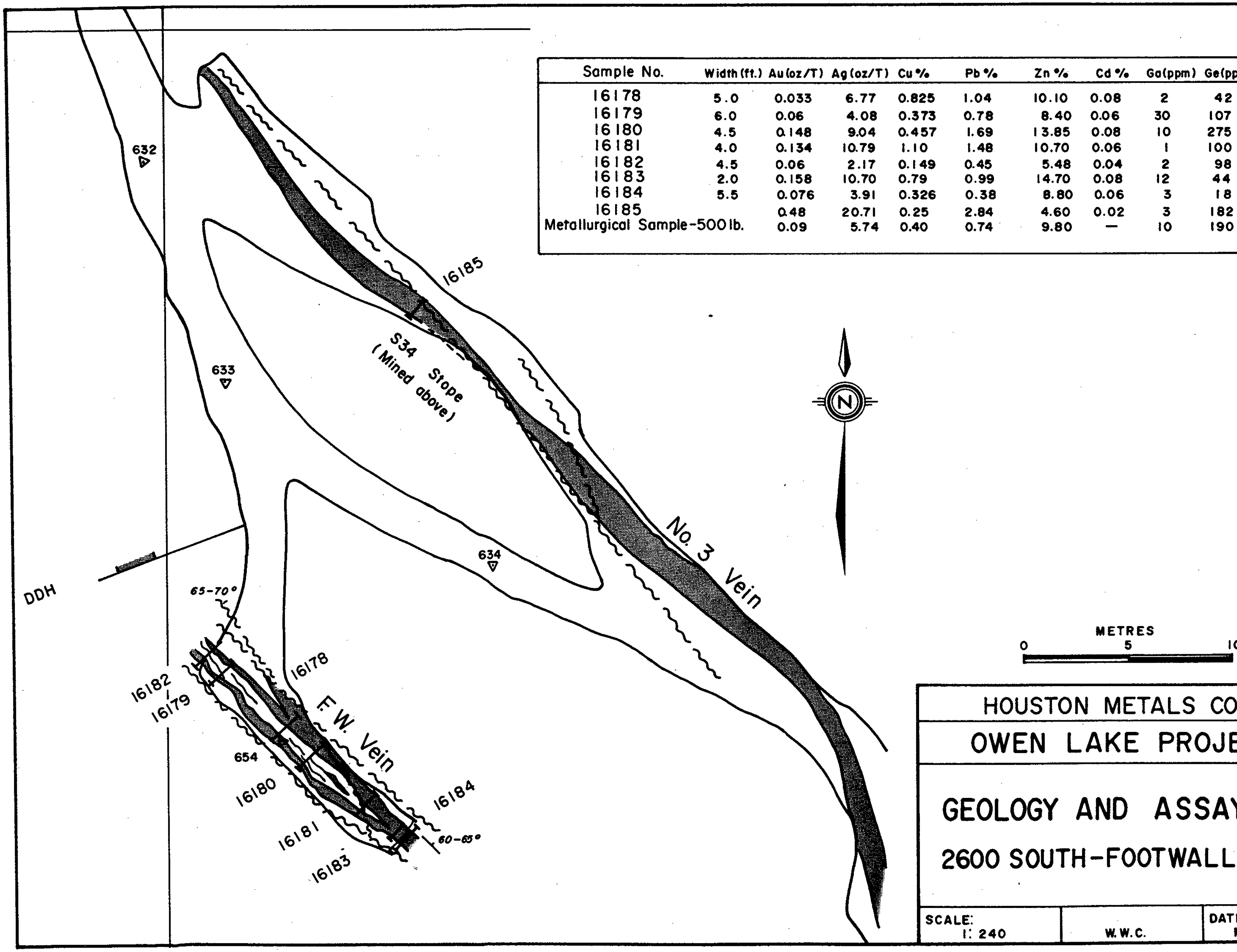
This limited development produces a proven tonnage of about 10000 tons, but diamond drilling could increase the tonnage rapidly.

4) 2600 South Crosscut - this heading was laid out to advance toward the NG3 Vein, a vein indicated entirely by surface diamond drilling. The vein is roughly parallel to the No. 3 Vein and lies about 1000 feet southeast of the Alimak raise. The crosscut advanced just under 600 feet and two drill stations were cut. Drilling from these stations will check the position of the NG3 Vein for extension of the development and check other veins in the area.

The NG3 Vein is a high pyrite - high precious metal vein, with values increasing below the 2600 Level. In the first diamond drill station, a 12 inch pyrite-sphalerite vein ran 15 oz Ag/ton with 72 ppm gallium and 379 ppm germanium. This vein indicates that the NG3 Vein, with similar mineralization, may also carry good Ga-Ge, and if metallurgical results are good, the area is very promising.

5) 2750 Sub-Level - "Ruby" Vein - this vein, as intersected in D.D.H. BU 13 ran 9.6 oz Ag/ton and 5.43% Zn over 6.5 feet, and was assumed to be the main vein in the Alimak raise area. A crosscut was driven to open up the vein and begin re-development of the No. 3 Vein for mining above this elevation. As shown on the plan attached, the actual values are much higher over a good mining width of 6 feet

Sample No.	Width (ft.)	Au (oz/T)	Ag (oz/T)	Cu %	Pb %	Zn %	Cd %	Ga (ppm)	Ge (ppm)	In (ppm)
16178	5.0	0.033	6.77	0.825	1.04	10.10	0.08	2	42	20
16179	6.0	0.06	4.08	0.373	0.78	8.40	0.06	30	107	7
16180	4.5	0.148	9.04	0.457	1.69	13.85	0.08	10	275	15
16181	4.0	0.134	10.79	1.10	1.48	10.70	0.06	1	100	1
16182	4.5	0.06	2.17	0.149	0.45	5.48	0.04	2	98	5
16183	2.0	0.158	10.70	0.79	0.99	14.70	0.08	12	44	9
16184	5.5	0.076	3.91	0.326	0.38	8.80	0.06	3	18	12
16185		0.48	20.71	0.25	2.84	4.60	0.02	3	182	1
Metallurgical Sample-500 lb.		0.09	5.74	0.40	0.74	9.80	—	10	190	18



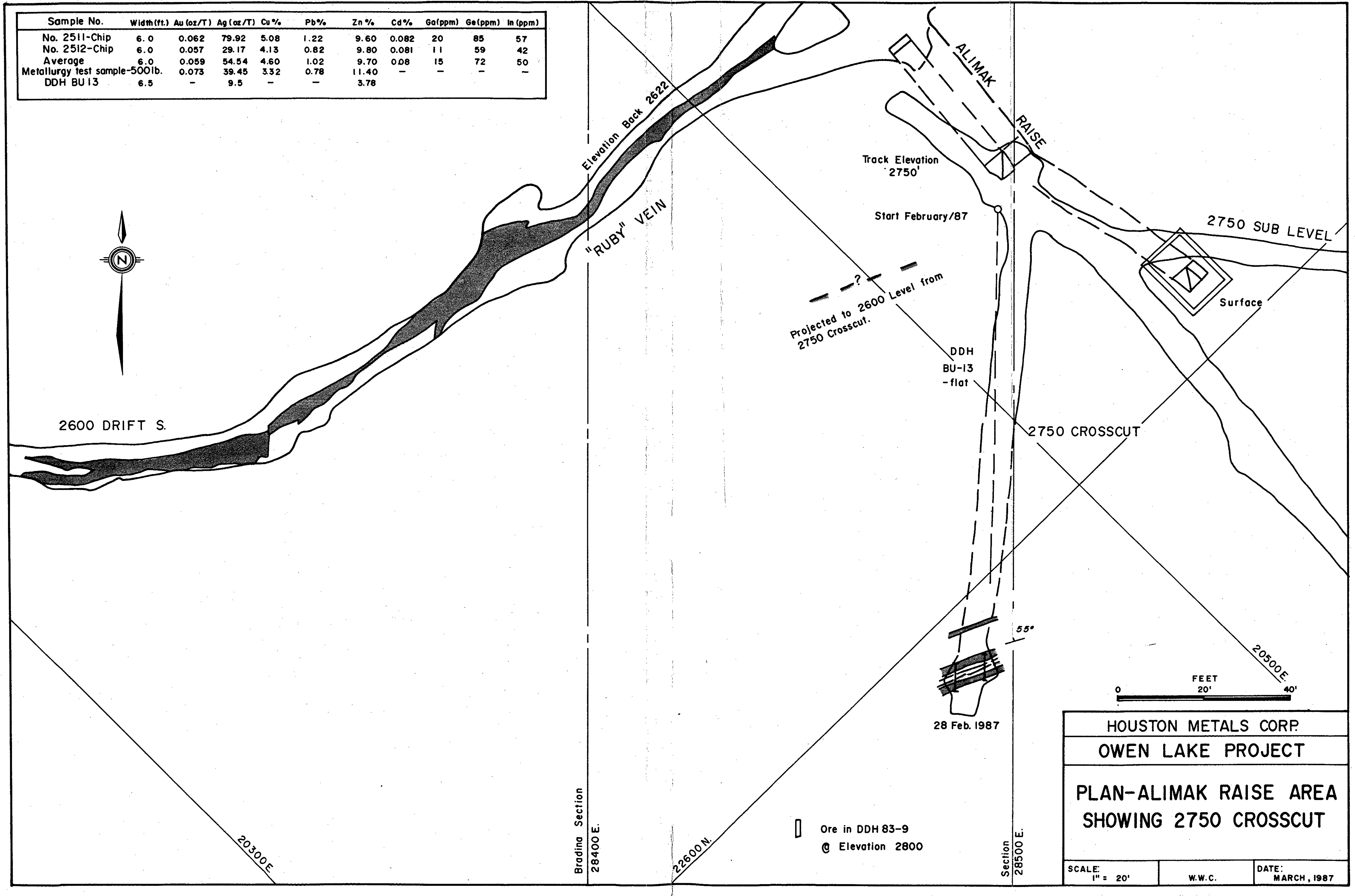
HOUSTON METALS CORP.

OWEN LAKE PROJECT

GEOLOGY AND ASSAY PLAN
2600 SOUTH-FOOTWALL DRIFT

SCALE: 1: 240 | W.W.C. | DATE: MARCH, 1987

Sample No.	Width (ft.)	Au (oz/T)	Ag (oz/T)	Cu %	Pb %	Zn %	Cd %	Ga (ppm)	Ge (ppm)	In (ppm)
No. 2511-Chip	6.0	0.062	79.92	5.08	1.22	9.60	0.082	20	85	57
No. 2512-Chip	6.0	0.057	29.17	4.13	0.82	9.80	0.081	11	59	42
Average	6.0	0.059	54.54	4.60	1.02	9.70	0.08	15	72	50
Metallurgy test sample-500lb.		0.073	39.45	3.32	0.78	11.40	—	—	—	—
DDH BU13	6.5	—	9.5	—	—	3.78				



HOUSTON METALS CORP.

OWEN LAKE PROJECT

PLAN-ALIMAK RAISE AREA SHOWING 2750 CROSSCUT

SCALE: 1" = 20'	W.W.C.	DATE: MARCH, 1987

The average of two chip samples is:
0.059 Au oz/ton, 54.54 Ag oz/ton, 4.60% Cu, 1.02% Pb, 9.70% Zn, 15 ppm Ga, 72 ppm Ge and 50 ppm In.

The silver is probably associated with tennantite - a copper-lead mineral. Surface diamond drill holes indicate at least two veins in this area, and the vein in the crosscut may represent a branch, rather than the vein followed south-easterly from the Alimak raise-and mined part way up to the 2750 elevation.

Diamond drilling is required in this area to sort out the multiple vein structure. The extensive drilling program which outlined about 150,000 tons of good precious-metal ore below 2600 level in this area did not reach the Footwall Vein structure. Correlation of the diamond drill intersections could increase the tonnage available, both above and below the level, and influence the choice of entry and development for the south end of the mine.

6) 2870 Adit (Switchback Vein) - this vein is known from surface trenching and limited diamond drilling. It may be a continuation of the No. 5 Vein, and showed good Ga-Ge in the May 1986 sampling program. The elevation will permit a trackless heading to be driven at a grade of plus 0.5% and connect eventually with the 2880 mine level.

The adit was collared as a crosscut below the lowest trench exposure of the vein and had not reached good vein at the end of the program. Further drifting is included in the next program.

d) Metallurgical Testing

Samples were taken from development headings and shipped to Bacon, Donaldson & Associates Ltd. of Vancouver. Under the supervision of Dr. W.G. Bacon, preliminary metallurgical testing was done on four types of ore. The objectives were:

1) efficient recovery of the precious metals.
2) location of Ga-Ge in the concentrates.
3) recovery of the base metals.

Rougher concentrates were produced and extensive analysis was done. A report was produced and the "General Conclusions" are attached as an appendix to this report. The full report is available from Houston Metals Corporation in Vancouver.

The grade of the samples shipped, representative of the ore developed, is as follows:

Location	Sample Weight	Au (oz/ton)	Ag (oz/ton)	Cu (%)	Pb (%)	Zn (%)	Ga (ppm)	Ge (ppm)	In (ppm)	Fe %
No. 2 Vein	800 lb	0.068	2.208	0.13	4.13	10.99	4	36	4	7.04
No. 5 Vein	200 lb	0.088	16.338	1.66	0.67	4.37	2	34	56	7.17
Footwall Vein	500 lb	0.090	5.738	0.40	0.74	9.80	10	190	18	10.74
Ruby Vein	500 lb	0.073	39.445	3.32	0.78	11.40	19	48	38	20.53

These grades agree with sampling results in the headings, except for No. 5 Vein, where the zinc grade is probably too low.

From the preliminary studies, the following conclusions are drawn by Dr. Bacon:

1) The pyrite does not carry enough of the gold and silver to warrant making a pyrite concentrate.

2) The zinc concentrates will concentrate the gallium and indium in all ore types. The germanium recovery was poor in the No. 2 and No. 5 Veins, but increased to 57.5% in the Footwall Vein (referred to in the report as "High Zn - High pyrite").

3) Due to the variation in ore composition, it will be impossible to produce separate copper and lead concentrates, and a combined copper-lead concentrate should be produced. This conclusion is supported by the operating experience gained during the Bradina period. The difference between now and then is that a combined concentrate will be marketable due in part to its high precious metal content.

Results of the studies to date are very encouraging and the tests will be continued in the next program. Recovery of the Au-Ag content is good, varying from 73 to 95% for gold and 89 to 98% for Ag. Cleaning of the concentrates will produce better separation of the zinc from the copper-lead, and thus increase precious metal recovery in the copper-lead concentrate. Further work will also be done to isolate the gallium-germanium-minerals and improve their recovery. Concentrates produced at the next stage will be used for marketing studies.

It is also recommended in the next stage that studies be initiated by another firm, since the metallurgical results are vital to the successful operation of the Silver Queen Mine.

CONCLUSION AND RECOMMENDATIONS

The first phase of the Owen Lake Project has met its objectives and the next phase is recommended. For various reasons, the methods used had to be changed and development was substituted for diamond drilling. This meant that the "probable tonnage" estimates could not be increased, but that "proven tonnage" figures can be produced where development has taken place. It also provided large samples for metallurgical testing which would not have been available from a diamond drilling program.

The cost of rehabilitation of camp and underground was higher than expected, but this will result in lower costs in the next phase.

The conclusions drawn from this phase are:

1) The veins previously not developed by the Silver Queen Mine are good sources of precious metals, as well as gallium, germanium and indium.

2) Concentrates can be produced which will recover the precious metals and acceptable amounts of the exotic metals-gallium, germanium and indium.

3) The program should continue into the second phase,with a third phase leading to a feasibility study.

The recommendations for the next phase are:

1) Diamond drill - to determine tonnage in the areas opened by development in Phase I
   a) NG3 Vein area
   b) Footwall Vein - 2750 (Ruby) vein area
   c) No. 5 Portal Vein area.
   d) No. 2 Vein area - low priority

2) Development - to follow up on drilling in the NG3 area and to open up the Switchback Vein.

3) Metallurgical studies - to produce marketable concentrates and to improve the recovery of gallium-germanium-indium.

4) Produce recommendations for Phase III - a major development program aimed at outlining ore reserves in the Silver Queen Mine and Cole Lake area sufficient for a feasibility study.

5) Cost of the next phase are estimated at:

Mob/Demob	$2,600
Estimated Survey Costs	$22,500
Support Costs	$8,600
Equipment Rental	$26,400
Drifting	$180,000
Drilling	$148,000
Assays	$6,000
Report Writing	$1,900
Metallurgical Investigation, Mine Maintenance and Contingency	$104,000
	$500,000

RESPECTFULLY SUBMITTED

W. W. CUMMINGS, P. ENG.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
W. W. CUMMINGS

APPENDIX I

CERTIFICATE

I. W. W. CUMMINGS, of New Denver, in the Province of British Columbia, hereby certify that:

1) I am a geological engineer with office and residence at New Denver, B.C., with mailing address of P.O.Box 57.

2) I am a graduate of Queen's University, Kingston, Ontario with a B.Sc. in geology and mineralogy,1949.

3) I am a member of the Association of Professional Engineers, Province of British Columbia.

4) This report is based on published and unpublished reports and personal knowledge from working on the properties involved.

5) I have no direct or indirect interest in the property or securities of New Nadina Explorations Ltd., or Houston Metals Corporation, nor do I expect to receive any interest.

6) I hereby consent to the use of this report by Houston Metals Corporation in connection with the Prospectus or Statement of Material Facts relating to the raising of funds.

W. W. Cummings

W. W. CUMMINGS, P. ENG.

PROFESSIONAL PROVINCE OF W. W. CUMMINGS BRITISH COLUMBIA ENGINEER

New Denver, B.C.

March 24, 1987

APPENDIX II

BACON, DONALDSON & ASSOCIATES LTD.

2036 COLUMBIA STREET
VANCOUVER, B.C., CANADA V5Y 3E1
TELEPHONE (604) 879-8461
TELEX 04-53437

PRELIMINARY METALLURGICAL RESULTS - OWEN LAKE MINE ORE SAMPLES PROGRESS REPORT NO. 1

Prepared for:

HOUSTON METALS CORPORATION
910 - 800 West Pender Street
Vancouver, B.C.
V6C 2V6

Attention: Mr. Web Cummings
Project Engineer

File Number: 6891
March 12, 1987

W. G. Bacon
Dr. W. G. Bacon, P.Eng.

1.0 SUMMARY

1.1 GENERAL CONCLUSIONS

Our general conclusions are:

1. None of the ore types warrant the production of a pyrite concentrate. The following pyrite concentrates show there is not enough grade or recovery for either gold or silver in the pyrite concentrate.

Ore Type	Pyrite Concentrate Weight %	Assay Au oz/ton	Assay Ag oz/ton	Distribution Au %	Distribution Ag %
Vein No. 2	9.4	.122	2.12	15.0	9.0
Vein No. 5	6.8	.013	0.59	1.1	0.3
High Zn-High FeS_2	14.6	.14	3.62	23.9	9.3
Ruby Vein	5.1	.03	9.16	2.7	1.2

2. The zinc concentrates will concentrate the gallium and indium. The germanium does not concentrate significantly except for the "high zinc - high pyrite" ore.

Ore Type	Zinc Concentrate Weight %	Assay Ga ppm	Assay Ge ppm	Assay In ppm	Distribution Ga %	Distribution Ge %	Distribution In %
Vein No. 2	20.2	20	35	9	68.6	20.3	69.4
Vein No. 5	15.1	2	35	337	15.2	28.2	68.8
High Zn - High FeS_2	32.9	35	222	56	82.2	57.5	86.0

3. It is most likely that with the high variation in copper and lead ore grades between the veins that it will be impossible to produce on grade copper or lead concentrates on an ongoing basis. Consideration should be given to producing a clean copper-lead concentrate for marketing.

1.2 ORE TYPES

For each ore type we draw the following conclusions:

1.2.1 Vein No. 2

The rougher concentrates that can be produced are shown on the next page.

The head grade is:

Element		Assay
copper	%	0.13
lead	%	4.13
zinc	%	10.99
iron	%	7.04
sulphur	%	8.70
gold	oz/ton	0.068
silver	oz/ton	2.208
gallium	ppm	4
germanium	ppm	36
indium	ppm	4

The only cleaning test has demonstrated that producing an on-grade copper concentrate may be impossible.

Vein No. 2

Product	Weight %	Assay Au oz/ton	Assay Ag oz/ton	Assay Cu %	Assay Pb %	Assay Zn %	Distribution Au %	Distribution Ag %	Distribution Cu %	Distribution Pb %	Distribution Zn %
Cu/Pb rougher	10.2	.455	14.1	.95	39.0	13.6	60.6	65.0	71.8	96.9	12.3
Zn rougher	18.8	.057	2.9	.11	.23	51.2	14.0	24.1	15.4	1.1	85.5
TOTAL	29.0						74.6	89.1	87.2	98.0	97.8

1.2.2 **Vein No. 5**

The rougher concentrates that can be produced are shown on the next page.

This ore will not result in an on-grade copper product due to the low copper in the head:

Element		Test No. 2F1
copper	%	1.658
lead	%	0.665
zinc	%	4.369
iron	%	7.171
sulphur	%	7.107
gold	oz/ton	0.08
silver	oz/ton	16.338
gallium	ppm	2
germanium	ppm	34
indium	ppm	56

Vein No. 5

Product	Weight	Assay					Distribution				
	%	Au oz/ton	Ag oz/ton	Cu %	Pb %	Zn %	Au %	Ag %	Cu %	Pb %	Zn %
Cu/Pb Rougher	14.0	.555	112.06	11.4	4.5	8.8	88.8	96.2	96.5	94.8	28.3
Zinc Rougher	16.8	.041	2.83	.2	.11	20.4	7.1	2.6	1.8	2.5	70.7
TOTAL	30.8						95.9	98.8	98.3	97.3	99.0

1.2.3 High Zinc - High Pyrite Ore

The rougher concentrates that can be produced are shown on the next page.

The low copper and lead assays in the Cu/Pb rougher will probably preclude successful production of separate copper and lead concentrates. Cleaning of this rougher concentrate will lower the zinc content and improve the Cu/Pb total assay. The head grade is:

Element		Assay
Copper	%	0.40
Lead	%	0.74
Zinc	%	9.80
Iron	%	10.74
Sulphur	%	16.88
Gold	oz/ton	.090
Silver	oz/ton	5.738
Gallium	ppm	10
Germanium	ppm	190
Indium	ppm	18
Acid Insol	%	

High Zinc - High Pyrite

Product	Weight	Assay					Distribution				
	%	Au oz/ton	Ag oz/ton	Cu %	Pb %	Zn %	Au %	Ag %	Cu %	Pb %	Zn %
Cu/Pb Rougher	19.7	.223	20.81	1.86	3.65	13.3	50.0	72.4	84.3	93.1	25.5
Zinc Rougher	20.9	.10	4.62	.20	.13	36.4	23.0	17.0	9.6	3.5	74.2
TOTAL	40.6						73.0	89.4	93.9	96.6	99.7

1.2.4 Ruby Vein Ore

The rougher concentrates that can be produced are shown on the next page.

The low lead content in the ore will preclude production of an on-grade lead concentrate. The head grade is:

Element		Assay
Copper	%	3.32
Lead	%	0.78
Zinc	%	11.40
Iron	%	20.53
Sulphur	%	56.18
Gold	oz/ton	0.073
Silver	oz/ton	39.445
Gallium	ppm	
Germanium	ppm	
Indium	ppm	
Acid Insol	%	

Ruby Vein Ore

Product	Weight %	Assay Au oz/ton	Assay Ag oz/ton	Assay Cu %	Assay Pb %	Assay Zn %	Distribution Au %	Distribution Ag %	Distribution Cu %	Distribution Pb %	Distribution Zn %
Cu/Pb Rougher	32.8	.117	109.96	9.4	2.0	9.3	61.6	89.8	93.1	81.3	26.0
Zinc Rougher	34.6	.061	9.83	.47	.30	24.8	33.9	8.5	4.9	12.8	73.4
TOTAL	67.4						95.5	98.3	98.0	94.1	99.4

2.0 INTRODUCTION

A preliminary metallurgical investigation of ore samples from the Owen Lake mine was requested by Mr. W. W. Cummings (see Appendix 1).

Initially, two samples were received February 10, 1987. These samples were in 20 l sealed plastic pails. Eight pails (No.'s 1 to 8 inclusive) were identified as containing ore from the Number 2 view. The other two pails were identified as containing ore from the Number 5 vein.

Approximately two weeks later, five 20 l sealed plastic pails of ore was received. These pails contained ore identified as "high zinc - high pyrite".

February 4, 1987, five 20 l sealed plastic pails containing ore from the "Ruby vein" were received.

Mr. Dave Gunn who had been the consulting metallurgist during the 1972 - 1973 operation of the mine by the Bradina Joint Venture was contacted. Mr. Gunn provided the flowsheet presenting the operating parameters for the plant. However, he was unable to find the report of the metallurgical testwork upon which the flowsheet was based.

APPENDIX III

REFERENCES

Church, B. N. (1969):

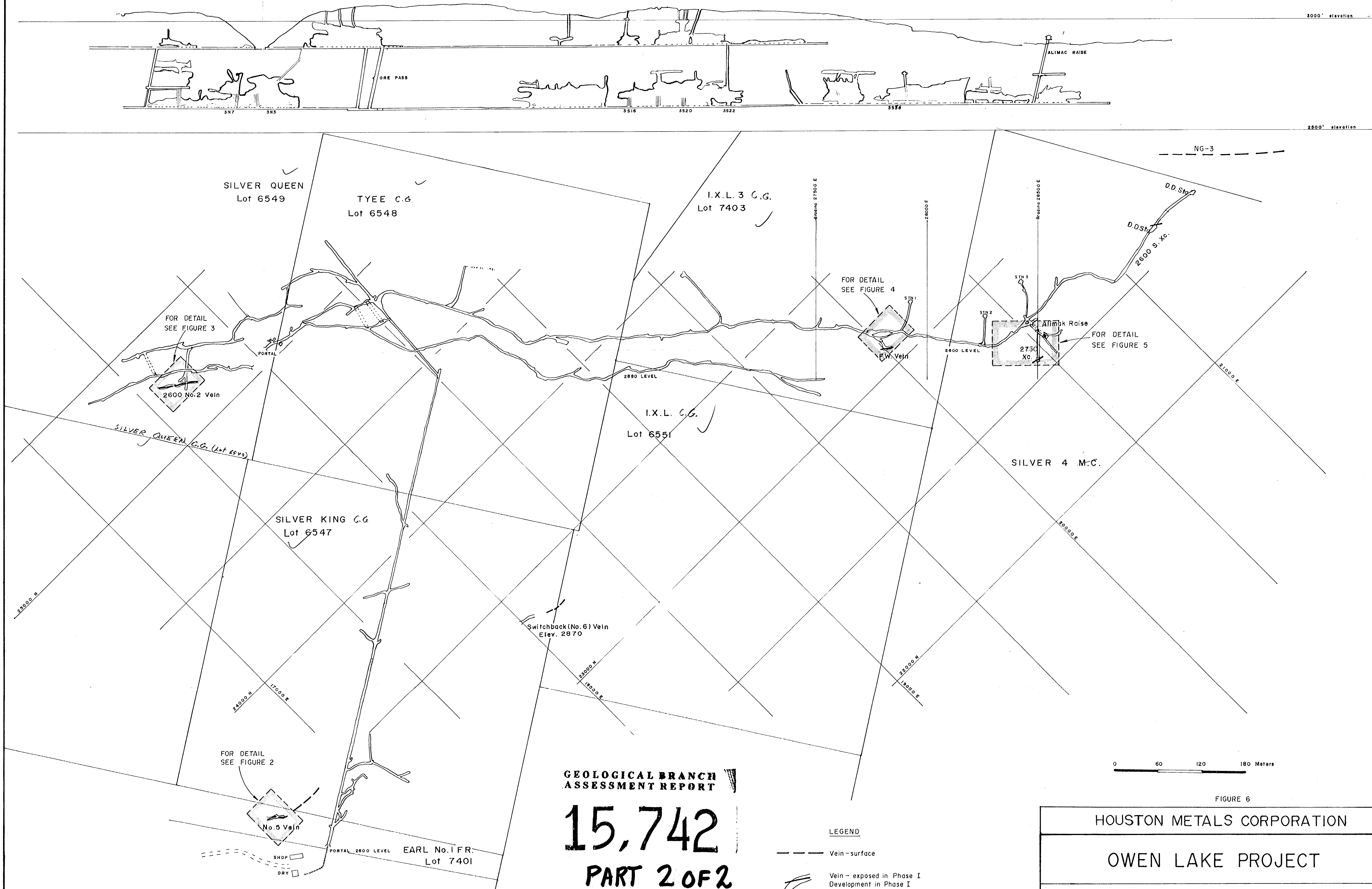
Geology of the Owen Lake Area and Report on the Silver Queen Mine - Geology Exploration and Mining in B.C. 1979 - B.C. Ministry of Energy, Mines and Petroleum Resources.

Cummings, W. W. (1986):

Report on the Owen Lake Property - for Bulkley Silver Resources Inc.

Bacon, Donaldson & Associates Ltd.:

Preliminary Metallurgical Results - Owen Lake Mine - for Houston Metals Corporation.



GEOLOGICAL BRANCH ASSESSMENT REPORT

15,742

PART 2 OF 2

LEGEND

Vein - surface

Vein - exposed in Phase I Development in Phase I (Nov. 1986 to Feb. 1987)

FIGURE 6

HOUSTON METALS CORPORATION

OWEN LAKE PROJECT

SILVER QUEEN MINE — OWEN LAKE, B.C.

MINE PLAN

DRN. BY ÷ R.E.R.	DATE ÷
REV - W.W.C.	FEB. 1987
N.T.S. ÷ 93L2	SCALE ÷ 1:2400 (1" = 200')

12 = 7 11
16 - 9 1