-				
FI	1.1	AE	D	

LOG NO:	NOV 1	7 1991	RD.	
ACTION.				
				۲,
				{
FILE NO:				

ASSESSMENT REPORT

ON A

GEOLOGICAL SAMPLING PROGRAM

ON THE

LUCKY SHIP PROPERTY

ELES 1 - 4 MINERAL CLAIMS

MORICE LAKE AREA

OMINECA MINING DIVISION, B.C.

GEOLOGICAL BRANCH ASSESSMENT REPORT

1.1

State or

NTS: LATITUDE: LONGITUDE: OWNER: OPERATOR: AUTHORS:

127° 29'00"W W.R. Gilmour Discovery Consultants E.D. Harrington T.H. Carpenter, P.Geo. October 24, 1994

93L/3

54° 01'30"N

DATE:

TABLE OF CONTENTS

1.

ä

SUMMARY	Page	1
LOCATION AND ACCESS	Page	2
TOPOGRAPHY	Page	2
PROPERTY	Page	3
HISTORY	Page	4
GENERAL GEOLOGY	Page	6
EXPLORATION PROGRAM 1. GEOLOGICAL SAMPLING A) PROGRAM PARAMETERS B) PROGRAM RESULTS	Page	8
CONCLUSIONS	Page	11
RECOMMENDATIONS	Page	12
REFERENCES	Page	13
STATEMENT OF COSTS	Page	14
STATEMENTS OF QUALIFICATIONS Page	15 &	16

LIST OF ILLUSTRATIONS

FIGURE	1	Location Map	Following Page 2
FIGURE	2	Claim Map	Following Page 3
FIGURE	3	Rock Sampling - Mo Values (1:5,000)) In Pocket
FIGURE	4	Rock Sampling - Au Values (1:5,000)) In Pocket

APPENDICES

APPENDIX 1Rock and Core Sampling Locations and DescriptionsAPPENDIX 2Rock Geochemical Results with Analytical methods

SUMMARY

Sulphide molybdenum mineralization occurs on the ELES 1 to 4 claims in the Morice Lake area of the Omineca Mining Division, B.C. Intermittent exploration has been carried out since 1957 to the present and has delineated unclassified reserves of 13.6 million tonnes grading 0.17 percent molybdenum.

In 1993 a rock sampling program was carried out on the property using hip-chain and compass for control.

ĩ

The results of the survey are presented and discussed in the following report.

LOCATION AND ACCESS

The Lucky Ship property is centered at latitude 54°01'30"N and longitude 127°29'W (Figure 1).

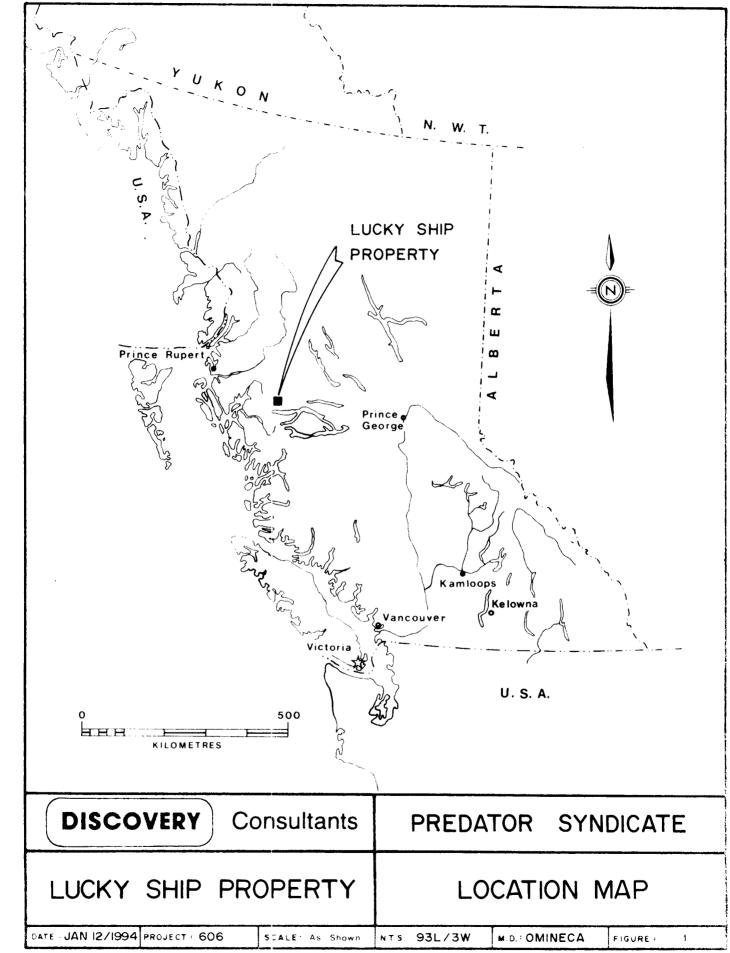
The property is located 85 km south southwest of Smithers, B.C. and lies beside a small unnamed lake on the southeastern flank of a knoll located between Morice Lake and the Nanika River 7.5 km south of the mouth of the Nanika River.

Access to the eastern bank of the Nanika River by logging road from Houston is excellent. An overgrown road leads from the west bank of the Nanika River to the property. However, to date, a planned bridge across the Nanika River has not been completed. An earlier bridge across the river has been washed out. At present, access to the property is by helicopter from either Smithers, Houston or by foot after crossing the Nanika River.

TOPOGRAPHY

The four ELES (Lucky Ship) claims extend from an elevation of 1250 m on the ridge crest between Morice Lake and the Nanika River to 900 m downslope to the southeast towards the Nanika River.

Ground cover is generally mature spruce, fir and pine. The old logging and drill roads on the claims are almost completely overgrown with alder.



DWG-606-001

<u>a</u>

PROPERTY

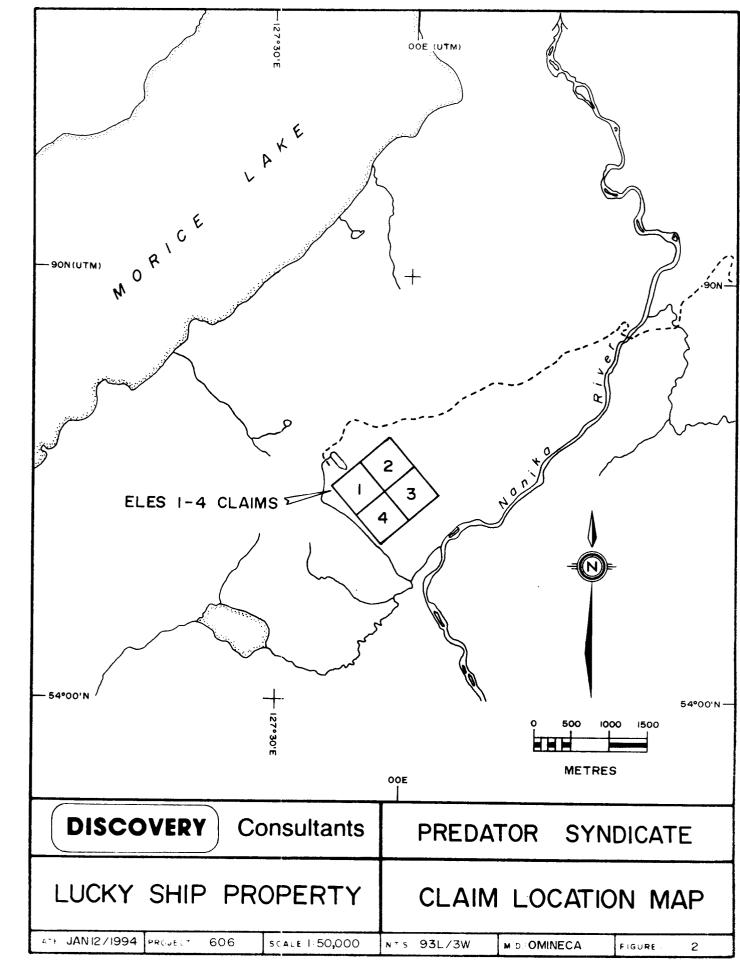
The Lucky Ship property consists of four two-post claims designated ELES 1-4 inclusive (Figure 2), located by R. Wymer on August 24, 1993, and recorded in Vernon, B.C. on September 1, 1993.

<u>Claim Name</u>	Record No.	<u>Owner of Record</u>	<u>Anniversary Date</u>
ELES 1	320610	W.R. Gilmour	August 24, 1994
ELES 2	320611	W.R. Gilmour	August 24, 1994
ELES 3	320612	W.R. Gilmour	August 24, 1994
ELES 4	320613	W.R. Gilmour	August 24, 1994

The claims are owned by W.R. Gilmour on behalf of the Predator Syndicate.

3

* Pending acceptance of this report.



DWG-606-002

•

<u>HISTORY</u>

Work on the Lucky Ship property began in 1957 and consisted of 203 lineal feet (62 metres) of trenching.

In 1963, programs including geological mapping, trench sampling, geochemical and magnetometer surveys and 103 feet (31.4 metres) of diamond drilling were carried out.

A survey grid was established in 1965 and detailed geochemical surveys, induced polarization and magnetometer surveys and 16,885 feet (5146.5 metres) of diamond drilling were undertaken.

In 1966, geological, geophysical and geochemical surveys were completed, 2000 lineal feet (610 metres) of trenching was done with a small bulldozer and 7,783 feet (2372.3 metres) of diamond drilling in seven holes were drilled.

One BQ hole was drilled in 1967 to a depth of 3284 feet (1000.9 metres). In addition some surface trenching and blasting was done.

In 1968, two holes totalling 2718 feet (828.4 metres) were diamond drilled. Some detailed geological mapping was done and three acres of bedrock was stripped by bulldozer and hydraulicing.

In 1990, a regional survey of the Lamprey Creek area was carried out by the British Columbia Geological Survey. The area was mapped and geochemical samples taken of silt (analysed for twenty-two elements) and rock (analysed for twenty elements). One rock sample taken at Lucky Ship from the rhyolite-quartz

stockwork in breccia returned 385 ppb Au and 406 ppm Mo. Another rock sample taken in breccia returned elevated values of 243 ppm Cu, 113 ppm Zn and 1932 ppm Mn. A silt sample taken from the juncture of a creek, draining the west side of the Lucky Ship property and the Nanika River returned 75 ppm Zn and 2 ppb Au.

The British Columbia Mineral Inventory File (Minfile) states that the property contains unclassified reserves of 13.6 million tonnes grading 0.17 per cent molybdenum.

GENERAL GEOLOGY

The Lucky Ship property lies in and about a rhyolite porphyry plug of the Eocene Nanika Intrusions measuring 600 m by 900 m, which cuts and to some extent is composed of the Lower-Middle Jurassic Telkwa Formation (Hazelton Group). The present structural attitude locally uniformly strikes 000°-020° and dips 30°-45°E. The stock is a multiphase body and has two porphyry and two breccia phases (Figure 3). The following description is paraphrased from the Annual Report of the Minister of Mines and Petroleum Resources, 1965 - pages 84-87.

The majority of the plug is a white aphanitic rock when fresh, with sparse phenocrysts of bi-pyramidal quartz and feldspar which have been variably silicified and kaolinized (P1). The other porphyry phase (P2), when unaltered is light-grey with abundant (greater than 25%) feldspar, quartz and biotite phenocrysts in an inconspicuous aphanitic matrix. One breccia (B1) is composed largely of fragments of the P1 porphyry but includes a considerable amount of exotic fragments which can show a marked preferred orientation. The other breccia (B2) is homogeneously composed of fragments greatly varying in size of the P1 porphyry. These four phases do not necessarily represent separate and unique intrusions. Age relationships are not certain. Assuming P1 is of one age only, then the simplest case of time sequence is: B1 oldest, P1 next, B2 closely similar, and P2 youngest.

Diamond drilling indicated that the P2 porphyry is surrounded by a thin sheath of hornfels even where it is essentially in contact with P1. Secondly, there is more B2 breccia at depth than is evident on surface. Thirdly, dykes of pyroxene porphyry and post-ore andesite were noted in the vicinity of the plug.

The hornfels of the wallrocks includes altered argillite and lapilli tuffs. The fragments of the tuffs include a large proportion of trachytic textured intermediate volcanic rocks and many that are similar to the rhyolites of the plug.

Alteration includes silicification, carbonatization, pyritization, talcose alteration and potash metasomatism. Silicification is most intense and can completely obscure the origin of the rock. It is most abundant in an annular zone around the periphery of the P2 plug and is intimately connected with a stockwork of fractures and veins. The intensity of silicification and abundance of quartz veinlets decreases both downward and outward from the centre of the plug. The veinlets appear to be due both to replacement and dilation. The quartz veins contain a small percentage of potash feldspar and may also contain carbonate, pyrite or molybdenite. The latter occurs in fine hexagonal plates commonly concentrated along reopened fractures in the quartz veins, but also disseminated throughout the vein.

Pyrite occurs predominantly in an irregular annular halo peripheral to the silicification. It is rarely intense, but

concentrations may approach 2-3 percent in some hornfels. Potash metasomatism particularly affects B2 breccia (pinkish coloration) but is widely distributed in less prominent form. Talcose alteration is associated with minor shearing. Carbonatization is widely distributed but rarely intense.

The Lucky Ship occurrence is marked by an extensive gossanous zone resulting from the oxidation and carbonatization of pyrite and chalcopyrite, which tend to be preferentially concentrated in the more mafic phases of the rhyolite breccia. Molybdenite mineralization is associated with the initial porphyry but has been overprinted by a later unmineralized rhyolite porphyry phase.

A mercury halo is associated with the mineralized zone and with the whole plug.

EXPLORATION PROGRAM

The work done on the property consisted of sampling the property rock types in outcrop as well as from available diamond drill core.

1. Rock Sampling

a). Program Parameters

The program was designed to test the various rock types already mapped for gold association as well as for twenty-seven other elements (Appendix 2). Due to time constraints, hip-chain and compass as well as a previously published geology map were used for control.

Diamond drill hole 65-14 was chosen for resampling because it undercuts an area of primary interest. Approximately every fifth core box was sampled down to 202 m (662 feet) after which every tenth box was sampled.

Since no core splitting equipment was on hand a representative sample was taken from each box (a piece of core was taken at one-foot intervals and combined to form one sample per box). Rock and core sample descriptions are contained in Appendix 1.

The samples were shipped to Bondar-Clegg and Company Ltd. in North Vancouver, B.C., for gold (30g, fire assay/AA) and 27element ICP analysis.

Rock sample locations with gold & molybdenum values are shown on Figures 3 and 4.

a). Program Results

The highest gold values returned were 170 ppb, 173 ppb and 181 ppb in samples LS-1, LS-2 and LS-22 respectively. Sample LS-1 also exhibits relatively elevated values in silver, copper, lead, zinc, molybdenum, arsenic, antimony, bismuth and manganese. All of these samples were taken from the P1 porphyry at different locations. The overburden surrounding LS-1, LS-15 and LS-16 has been previously stripped and the bedrock hydrauliced, revealing P1 porphyry carrying \leq 1% disseminated pyrite which for the most part has been hematized.

Copper staining was noted in only one location at (LS-25).

This sample was from B1 breccia with disseminated pyrite and returned the highest values obtained for both copper and zinc with 666 ppm and 792 ppm respectively.

Sample LSDH-14-01, taken from available diamond drill core, was P1 porphyry with quartz veining and traces of molybdenite and pyrite. Although gold values were low (38 ppb) this sample exhibited the highest values returned for silver (34.6 ppm), lead (778 ppm) and cadmium (17.6 ppm) as well as elevated values for copper (324 ppm), zinc (775 ppm) molybdenum (1633 ppm) and bismuth (57 ppm).

Samples LSDH-14-02 to 04 tested the contact between P1 and P2 porphyries and exhibited only weakly to moderately elevated values for molybdenum ranging from 1311 to 3086 ppm.

The highest molybdenum value, of 5166 ppm, was returned from sample LSDH-15-03 taken at the contact of P2 porphyry with a hornfelsed argillite unit. The core showed 3-4% quartz stringers which carried disseminated molybdenite and trace pyrite. Mineralization was also found on fracture surfaces.

Carbonate, both as a rock component and fracture filling, is found in varying degrees throughout all rock types and does not appear to concentrate in a particular rock type.

CONCLUSIONS

Pyrite is found disseminated in varying amounts through all rock types on the property but is found in concentrations approaching 2-3 percent, in an annular halo peripheral to the zone of silicification. Molybdenite and to a lesser extent, chalcopyrite, are concentrated in the areas of increased silicification and guartz healed brecciation.

Based on the limited sampling conducted it is difficult to associate elevated gold values with any particular mineralizing event or rock type.

RECOMMENDATIONS

At present there are 8,291 feet of accessible core (core that is intact with locations plotted on a geology map) on the property (DDHs 65-10, 65-11 to 15 and 65-17). This core should be re-logged and sampled.

A control grid should be established and programs of soil sampling and mapping carried out. Magnetometer and IP surveys would aid in locating sulphide bearing areas and zones of alteration with possible enhanced metal values.

submatted, Respec tón, B.Sc. Harřáň ARPFN P.Geo.

Vernon, B.C. October 24, 1994

REFERENCES

British Columbia Ministry of Energy, Mines and Petroleum Resources (BCMEMPR).

1957	Annual	Report	p.12
1963	Annual	Report	p.28
1964	Annual	Report	p.53
1965	Annual	Report	pp.84-87
1966	Annual	Report	pp.104-105
1967	Annual	Report	pp.109-110
1968	Annual	Report	pp.139-140

ş.

;

British Columbia Geological Survey Branch Open File 1991-1 Geology of the Lamprey Creek Area, Dejardins, P. and Anksey, R.

STATEMENT OF COSTS

ş

1.	Professional Services E.D. Harrington, geologist: Rock sampling, core sampling field Work (Aug 24-25, 1993) 1.5 days @ \$279.20 data compilation, report writing 1.5 days @ \$279.20	\$ 418.80 418.80	·
	T.H. Carpenter, P.Geo. data compilation, report writing 1 day @ \$400.00	400.00	\$ 1237.60
2.	Field Personnel R.E. Wymer: Rock sampling (Aug 24-25, 1993) 1.5 days @ \$240.00		360.00
3.	Transportation (4x4 vehicle) a) vehicle rental, gas b) helicopter	369.39 746.67	1116.06
4.	Lodging & Meals		269.46
5.	Geochemical Analysis Au (30g, fire assay - A.A.) 27-element aqua regia - ICP 43 samples @ \$16.35/sample		703.05
6.	Drafting		250.00
7.	Data compilation, secretarial		300.00
8.	Field Supplies, equipment rental		140.00
9.	Printing, data processing, telephone, shipping		250.00
		sub total	4626.97
10.	7% G.S.T.		323.83
		Total	<u>\$4950.00</u>

STATEMENT OF QUALIFICATIONS

I, EDWARD D. HARRINGTON, of 3476 DARTMOOR PLACE, VANCOUVER, BRITISH COLUMBIA, do hereby certify that,

1. I am a geologist in mineral exploration.

ĩ

- 2. I have been practising my profession for thirteen years in Canada and the Sultanate of Oman.
- 3. I am a graduate of Acadia University, Wolfville, Nova Scotia with a Bachelor of Science degree in Geology.
- 4. This report is based upon knowledge of the Lucky Ship property gained from field examination, mapping and sampling of the property, from the study of reports on the area, and from the conduct of the work herein described.
- 5. I hold no beneficial interest in the Lucky Ship property.

D. Harrington, B.Sc.

STATEMENT OF QUALIFICATIONS

I, THOMAS H. CARPENTER of 3902 14th Street, Vernon, B.C., V1T 3V2, DO HEREBY CERTIFY that:

- 1. I am a consulting geologist in mineral exploration associated with Discovery Consultants, Vernon, B.C.
- 2. I have been practising my profession for 23 years.
- 3. I am a graduate of the Memorial University of Newfoundland with a Bachelor of Science degree in geology.
- 4. I am a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia.
- 5. This report is based upon knowledge of the Lucky Ship property gained from supervision.
- 6. I hold no interest either directly or indirectly in the Lucky Ship property.

Nerson. HCarpenter, P.Geo. Τ. BRITIS

Vernon, B.C. October 24, 1994

APPENDIX 1

ĩ

ĩ

ROCK AND CORE SAMPLING LOCATIONS AND DESCRIPTIONS

.

.

Sample No.	Description
LS1	P ₁ with disseminated pyrite. Gossanous zone.
LS2	P, with quartz stringers. Disseminated Moly, chalco and pyrite <<5%.
LS3	P ₁ with no visible mineralization.
LS4	P ₁ brecciated with no visible mineralization.
LS5	P_1 breccia (B_2) with trace Mo.
LS6	P ₁ breccia with no visible mineralization.
LS7	Hornfels argillite, trace pyrite, leached surrounding fractures, rusty.
LS8	B_2 breccia with trace disseminated pyrite, very rusty.
LS9	P ₁ porphyry with no visible mineralization.
LS10	P ₁ breccia, pink coloured with no visible mineralization.
LS11	B_2 breccia with quartz infilling, no visible mineralization.
LS12	P ₂ brecciated, weakly rusty.
LS13	P ₂ weakly brecciated, rusty.
LS14	P ₁ porphyry, buff coloured slightly rusty.
LS15	P ₁ porphyry, very rusty, with trace disseminated pyrite.
LS16	P ₁ porphyry, disseminated pyrite ≤1% extremely rusty and hematized.
LS17	P ₁ porphyry, with trace disseminated pyrite, some rusty fractures.
LS18	B_2 breccia with minor pyrite altered to hematite.
LS19	B, breccia with no visible mineralization, weak Fe stain.
LS20	B1 breccia with no visible mineralization, weak Fe stain.

.

5

LS21	B ₁ breccia with trace pyrite and minor biotite/chlorite.
LS22	P ₂ porphyry buff coloured with disseminated pyrite ≤5% mostly hematized.
LS23	P ₁ porphyry, buff coloured, minor pyrite.
LS24	B ₂ breccia with no visible mineralization.
LS25	B_2 breccia, Cu stain, blebs of hematite scattered throughout.
LS26	B ₁ breccia with blebs of hematite.
LS27	P, porphyry with hematized fractures and blebs.
LS28	B, breccia with trace disseminated pyrite and moderate hematite stain.

Core Sampling

5

DDH No.	Sample No.	Box No.	Interval Feet Description
65-14	LSDH 14-1 2	30-55	P, with quartz veining with trace Moly and Py.
	LSDH 14-2 4	78-100	P ₁ breccia with quartz infilling with trace Moly and Py. Weak to moderate carbonate on fractures.
	LSDH 14-3 8	169-189	P ₂ quartz stringers not as numerous, trace Moly and Py., 2-3 ft. of strong gouge @ 180'.
	LSDH 14-4 13	274-295	P_2 weak to moderate carbonate.
	LSDH 14-5 18	388-410	P_2 with strong gouge from 400-410.
	LSDH 14-6 24	522-545	P_2 core moderately to well gouged pyrite \leq 5% with trace moly.
	LSDH 14-7 29	638-662	P_2 with trace Pyrite and Moly.
	LSDH 14-8 39	873-896	P ₂ quartz in filling with minor moly and pyrite.

LSDH	14-9	49	1036-1109	P ₂ with quartz comprising ≤10% of core. Minor moly and pyrite in quartz ≤ .1%. Weak carbonate.
LSDH	14-10	59	1312-1335	P_2 with quartz comprising \leq 30% of core with trace moly and pyrite. Weak carbonate.
LSDH	14-11	67	1489-1511	P_2 quartz stringers comprise $\leq 10\%$ of core. Moly on fracture surfaces with trace pyrite.
LSDH	14-12	79	1718-1738	P ₂ with no quartz veining trace pyrite and moly on fractures. Weak to moderate carbonate.
LSDH	15-1 7		159-161	Hornfels contact with P ₁ with quartz stringers 1- 2%, trace pyrite.
LSDH	15-2 7		161-163	P ₁ contact with hornfels, with quartz stringers ≤ 5% trace. Moly on fracture surfaces.
LSDH	15-3 11		245-247	P ₂ contact with hornfels, quartz stringers 3-4%. Moly on fractures and disseminated in quartz trace pyrite

65-15

1

;

APPENDIX 2

5

ROCK GEOCHEMICAL RESULTS AND ANALYTICAL METHODS

Date of Report: 93.09.20

Lucky Ship

File: ROCK_93.WK3

Rock Sampling Results

Reference: v93-00906.0

Sample ID	Mo	Au	Cu	Ag	Pb	Zn	Cd	As	Sb	Bi	Ni	Co	Cr	Fe	Mn
	ppm	ppb	ppm	ppm	ppa 	ppm	ppm	ppm	ppa	pp n	ppm.	ppm	pp#	χ	ppm
LS-01	2121	170	145	6.0	43	133	1.8	66	21	28	12	5	97	4.51	2162
LS-02	1334	173	28	1.1	13	28	<1.0	17	<5	<5	4	<1	142	0.47	340
LS-03	23	<5	33	<0.2	13	35	<1.0	6	8	<5	5	1	255	0.54	202
LS-04	29	<5	17	<0.2	6	12	<1.0	<5	5	<5	5	<1 *	292	0.42	113
LS-05	3429	<5	40	<0.2	<2	19	<1.0	<5	<5	<5	9	<1	196	0.74	161
LS-06	158	<5	97	<0.2	4	31	<1.0	<5	5	<5	6	4	102	1.10	212
LS-07	64	<5	137	<0.2	4	37	<1.0	<5	<5	<5	4	9	58	2,94	565
LS-08	94	<5	53	<0.2	8	21	<1.0	<5	<5	<5	3	1	75	1.50	74
LS-09	118	5	30	<0.2	8	21	<1.0	<5	<5	<5	3	<1	120	0.42	41
LS-10	160	<5	12	<0.2	4	8	<1.0	<5	<5	<5	2	<1	142	0.26	32
LS-11	139	<5	13	<0.2	3	10	<1.0	<5	(5	<5	3	<1	180	0.37	79
LS-12	37	<5	23	<0.2	2	26	<1.0	<5	<5	<5	4	(1	269	0.56	89
LS-13	15	<5	14	0.3	20		<1.0	<5	<5	<5	7	1	484	0.59	86
LS-14	79	<5	14	<0.2	7	21	<1.0	<5	<5	<5	3	3	168	0.57	76
LS-15	8	6	13	0.4	6	3	<1.0	<5	<5	5	2	<1	103	0.59	14
LS-16	61	22	56	<0.2	7	46	<1.0	6	6	<5	4	4	127	2.66	50
LS-17	9	14	44	0.5	5	109	<1.0	<5	<5	<5	2	2	120	0.68	276
LS-18	<1	<5	16	<0.2	8	739	3.1	5	<5	<5	9	3	184	1.28	1944
LS-19	5	25	44	0.3	13	107	(1.0	12	<5	<5	14	8	104	2.88	3090
LS-20	<1	<5	17	<0.2	4	370	1.8	<5	<5	<5	8	2	140	0.97	1506
LS-21	<1	<5	34	<0.2	8	84	<1.0	6	8	<5	9	4	132	1.49	1569
LS-22	(1	181	26	<0.2	3	22	<1.0	11	<5	<5	2	1	100	0.36	423
LS-23	4	7	34	<0.2	4	13	<1.0	11	(5	(5	2	4	91	0.61	9(
LS-24	9	14	158	0.7	7	68	<1.0	6	<5	<5	12	2	78	3.06	538
LS-25	<1	18	666	2.2	10	792	1.2	12	7	(5	7	16	125	1.19	151
LS-26	5	<5	70	<0.2	6	31	<1.0	6	6	<5	2	<1	86	0.78	479
LS-27	7	<5	37	<0.2	3	68	<1.0	<5	-	<5	2	1	59	0.41	331
LS-28	<1	25	547	<0.2	7	98	<1.0	6	5	<5	16	25	48	3.07	227
LSDH-14-01	1633	38	324	34.6	778	775	17.6	15	<5	57	6	15	81	2.43	31
LSDH-14-02	3086	<5	41	0.5	19	27	<1.0	<5	<5	<5	5	2	128	1.45	23
LSDH-14-03	1536	<5	39	0.7	31	60	1.5	5	<5	6	4	<1	211	0.58	6
LSDH-14-04	1311	7	22	0.2	12	14	<1.0	6	<5	<5	3	<1	222	0.83	4
LSDH-14-05	234	<5	37	<0.2	7	13	<1.0	<5	<5	<5	3	1	180	0.38	9
LSDH-14-06	470	<5	46	<0.2	10	22	<1.0	۲5	5	<5	9	2	550	1.08	29
LSDH-14-07	104	<5	25	<0.2	7	16	<1.0	6	<5	<5	3	1	181	0.59	14
LSDH-14-08	1963	<5	33	0.3	9	12	<1.0	15	<5	<5	3	<1	176	0.37	15
LSDH-14-09	836	23	58	0.5	16	21	<1.0	14	<5	<5	3	<1	172		7
LSDH-14-10	138	~ 5	20	<0.2	10	9	<1.0	<5	<5	<5	3	<1	168	0.29	7
LSDH-14-11	659	47	17	1.2	56	54	2.4	(5	(5	<5	2	<1	143		15

Project 606

Lucky Ship

Rock Sampling Results 1993 (Part 2)

Sample ID	Ba	¥	Sr	Y	La	Te	Sn	¥	Al	Mg	Ca	Na	
	pp#	ppm 	ppm	ppn	ppm	ppn 	ppm 	ppm 	7	χ	7.	% 	
LS-01	24	(1	6	2	4	<10	<20	<20	0.18	0.02	0.02	<0.01	0.
LS-02	196	<1	6	1	4	<10	<20	く20	0.15	0.02	0.04	0.02	٥.
LS-03	50	<1	3	4	7	<10	<20	<20	0.29	0.14	0.04	0.02	0.
LS-04	69	<1	5	2	2	<10	<20	<20	0.30	0.04	0.04	0.01	0.
LS-05	68	58	4	4	2	<10	<20	<20	0.84	0.93	0.09	0.03	0
LS-06	32	46	67	12	14	<10	<20	<20	1.29	0.93	0.22	0.13	0
LS-07	174	59	9	2	6	<10	<20	<20	2.03	0.77	0.05	0.06	1
LS-08	34	21	6	2	5	<10	<20	<20	0.84	0.41	0.02	0.05	0
LS-09	51	<1	5	3	19	<10	<20	<20	0.53	0.10	0.04	0.05	0
LS-10	56	2	3	<1	<1	<10	<20	<20	0.44	0.05	0.02	0.05	0
LS-11	78	<1	5	3	9	<10	<20	<20	0.27	0.03	0.14	0.02	0
LS-12	28	<1	3	2	3	<10	<20	<20	0.16	0.02	<0.01	<0.01	0
LS-13	36	<1	3	1	3	<10	<20	<20	0.12	<0.01	0.01	<0.01	0
LS-14	151	<1	9	5	15	<10	<20	<20	0.44	0.07	0.06	0.07	0
LS-15	88	<1	3	<1	3	<10	<20	<20	0.33	0.01	<0.01	0.01	C
LS-16	28	3	7	2	6	<10	<20	<20	0.39	0.06	0.01	0.02	0
LS-17	46	<1	3	3	14	<10	<20	<20	0.41	0.02	0.02	0.06	C
LS-18	174	7	12	7	12	<10	<20	<20	1.19	0.31	0.35	0.06	0
LS-19	53	27	5	5	12	<10	<20	<20	1.52	0.63	0.13	0.05	Ċ
LS-20	185	1	12	6	11	(10	<20	<20	0.95	0.22	0.42	0.06	0
LS-21	148	9	9	5	7	<10	<20	(20	1.28	0.40	0.47	0.06	(
LS-22	131	<1	3	3	10	<10	<20	<20	0.71	0.05	0.04	0.04	0
LS-23	37	<1	2	2	3	<10	<20	<20	0.56	0.06	0.02	0.05	(
LS-24	30	47	5	3	6	<10	<20	<20	1.23	0.74	0.09	0.08	0
LS-25	59	<1	2	4	8	<10	<20	<20	1.15	0.22	0.14	0.03	C
LS-26	53	<1	2	4	2	<10	<20	<20	0.69	0.02	0.03	0.05	0
LS-27	33	(1	1	2	5	<10	<20	<20	0.86	0.05	0.03	0.04	C
LS-28	131	43	27	7	8	<10	<20	<20	1.14	0.41	1.88	0.05	(
LSDH-14-01	28	30	14	6	1	<10	<20	<20	0.60	0.15	2.38	0.03	(
LSDH-14-02	46	15	26	8	4		<20	<20	0.67	0.29	2.67	0.03	Q
LSDH-14-03	79	<1	13	3	3	<10	<20	<20	0.37	0.05	0.62	0.01	(
LSDH-14-04	18	<1	4	2	5	<10	<20	<20	0.14	0.02	0.47	<0.01	(
LSDH-14-05	31	<1	22	4	8	<10	<20	<20	0.39	0.09	3.59	<0.01	(
LSDH-14-06	236	4	55	5	12	<10	<20	<20	1.52	0.22	4.97	0.05	(
LSDH-14-07	186	1	52	5	11	<10	<20	<20	0.55	0.23	0.87		(
LSDH-14-08	27	<1	51	3	4	<10	<20	<20	0.22	0.04	6.42		(
LSDH-14-09	314	<1	31	4	9	<10	<20	<20	0.36	0.07	0.87		(
LSDH-14-10	16	(1	16	2	6	<10	<20	<20	0.17	0.04	1.85		(
LSDH-14-11	159	<1	32	-3	5	<10	<20	<20	0.31	0.05	1.02		(

Date of Report: 93.09.20

Lucky Ship

File: ROCK_93.WK3

Rock Sampling Results

Sample ID	Mo ppm	Au ppb	Cu ppm	Ag pp a	Pb ppm	Zn ppm	Cd ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppa	Fe %	Mn ppm
LSDH-14-12	163	<5	26	<0.2	13	36	<1.0	<5	<5	<5	3	2	148	0.53	102
LSDH-15-01	496	8	112	<0.2	<2	18	<1.0	8	<5	<5	5	4	96	1.69	218
LSDH-15-02	559	8	21	<0.2	8	8	<1.0	9	<5	<5	3	<1 ¹	124	0.36	98
LSDH-15-03	5166	<5	18	<0.2	<2	13	<1.0	14	<5	<5	4	<1	231	0.37	97
Duplicate:															
LS-7	67	(5.	137	<0.2	6	39	<1.0	<5	9	<5	4	10	60	2.83	600
LS-24	10	-	161	0.8	8	68	<1.0	<5	6	<5	12	2	80	3.15	546
LSDH-14-2		<5			-			•-	-	••		-	- /		
LSDH-15-3	5135	-	19	<0.2	<2	13	<1.0	18	<5	<5	4	<1	231	0.38	98

page 2

Project 606 Lucky Ship

Rock Sampling Results 1993 (Part 2)

Sample ID	Ba ppm	V ppm	Sr ppan	Y ppma	La pp n	Te ppm	Sn ppm	W ppm	A1 %	Mg X	Ca X	Na Z	K X
		rr		۲۲ ^m	rr=		rr			"			
LSDH-14-12	61	<1	21	4	11	<10	<20	<20	0.47	0.10	0.52	0.05	0.23
LSDH-15-01	38	27	7	6	7	<10	<20	<20	0.89	0.43	0.38	0.06	0.40
LSDH-15-02	57	<1	8	4	6	<10	<20	<20	0.37	0.08	0.83	0.04	0.28
LSDH-15-03	51	3	8	5	3	<10	<20	<20	0.49	0.25	0.54	0.04	0.22
Duplicate:													
LS-7	180	61	9	2	6	<10	<20	<20	2.00	0.84	0.05	0.06	1.15
LS-24 LSDH-14-2	31	48	5	3	6	<10	<20	<20	1.27	0.75	0.09	0.08	0.70
LSDH-15-3	53	4	8	5	4	<10	<20	<20	0.49	0.26	0.55	0.04	0.2

page 2a

Geochemical Analysis

by Bondar-Clegg :

		LOWER		
ELEME	INT	DETECTION LIMIT	EXTRACTION	METHOD
Au	Gold	5.0 ppb	fire-assay	atomic absorption
Ag	Silver	0.2 ppm	HNO3-HCI hot extr	ind. coupled plasma
Al*	Aluminum	0.02 %	HNO3-HCI hot extr	ind. coupled plasma
As	Arsenic	5.0 ppm	HN03-HCI hot extr	ind. coupled plasma
Ba*	Barium	5.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Bi	Bismuth	5.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Ca*	Calcium	0.05 %	HNO3-HCI hot extr	ind. coupled plasma
Cd	Cadmium	1.0 ppm	HN03-HCI hot extr	ind. coupled plasma
Co*	Cobalt	1.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Cr*	Chromium	1.0 ppm	HN03-HCI hot extr	ind. coupled plasma
Cu	Copper	1.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Fe*	Iron	0.01 %	HNO3-HCI hot extr	ind. coupled plasma
Hg∎	Mercury	0.010 ppm	HNO3-HCI leach	cold vapour atomic absorption
K*	Potassium	0.05 %	HNO3-HCI hot extr	ind. coupled plasma
La*	Lanthanum	1.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Mg*	Magnesium	0.05 %	HNO3-HCI hot extr	ind. coupled plasma
Mn*	Manganese	0.01 %	HNO3-HCI hot extr	ind. coupled plasma
Mo*	Molybdenum	1.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Na*	Sodium	0.05 %	HNO3-HCI hot extr	ind. coupled plasma
Ni*	Nickel	1.0 ppm	HN03-HCI hot extr	ind. coupled plasma
Pb	Lead	2.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Sb*	Antimony	5.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Sn*	Tin	20.0 ppm	HN03-HCI hot extr	ind. coupled plasma
Sr*	Strontium	1.0 ppm	HN03-HCI hot extr	ind. coupled plasma
Te*	Tellurium	10.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
V*	Vanadium	1.0 ppm	HN03-HCI hot extr	ind. coupled plasma
W*	Tungsten	10.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Y	Yttrium	1.0 ppm	HNO3-HCI hot extr	ind. coupled plasma
Zn	Zinc	1.0 ppm	HNO3-HCI hot extr	ind. coupled plasma

Please note: certain mineral forms of those elements above marked with an asterisk will not be soluble in the HNO3/HCI extraction. The ICP data will be low biased.

• Please note: Hg will only be analysed upon request.

