

3474

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3474 MAP

A REPORT

ON

GROUND MAGNETIC & ELECTROMAGNETIC SURVEYS

Port Hardy Area  
Vancouver Island, B.C.

92 L / 11W, 12E

FOR

GORDON MILBOURNE

Vancouver, British Columbia

BY

PETER E. WALCOTT & ASSOCIATES LIMITED

Vancouver, British Columbia

NOVEMBER 1971

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Scale 1" = 200'	

INTRODUCTION

Between October 15th and 19th, 1971, Peter E. Walcott & Associates Ltd. carried out limited ground magnetic and electromagnetic surveys over part of a property, located in the Port Hardy Area of Vancouver Island, British Columbia, held by Gordon Milbourne.

The surveys were carried out over two grids, the lines of which were turned off at right angles from east-west baselines and chained and picketed at 100 foot intervals, as well as along access logging roads.

The results are shown on plan maps of the line grids, Maps W-145-1 to -3 that accompany this report, with the data being presented in contoured form in the case of the magnetic survey except on the road survey, and in profile form in the case of the E.M. work.

PROPERTY, LOCATION AND ACCESS

The property is located in the Nanaimo Mining District of British Columbia, and consists of the following claims:

<u>Claim Name</u>	<u>Record Number</u>
RIB 1 - 2	24256 - 57
RIB 3 - 14	24310 - 321
RIB Fr's 1 - 2	24258 - 59
RIB Fr's 3 - 8	24322 - 327
REEF 35 - 36	37781 - 82

The claims are situated about 1½ miles north north-west of the Island Copper deposit and some 5 miles south of the town of Port Hardy, British Columbia.

Access can be obtained from Port Hardy by means of the logging roads that cross the property.

PURPOSE

The purpose of the survey was to investigate the possible occurrence of economic sulphide deposit (s) that could conceivably occur on the property as a result of the favourable geology.

GEOLOGY

The reader is referred to the 1968 report by K. Northcote of the B.C. Ministry of Mines and to unpublished reports held by G. Milbourne.

Briefly the property is underlain by Triassic Karmutsen basic volcanics, Lower Jurassic Bonanza intermediate volcanics and Upper Triassic and Lower Jurassic sedimentary rocks which have been intruded by Late Jurassic to Tertiary intrusions as shown on the geology map (Map W-145-1).

### SURVEY SPECIFICATIONS

The basic principle of any electromagnetic survey is that when conductors are subjected to primary alternating fields secondary magnetic fields are induced in them. Measurements of these secondary fields give indications as to the size, shape and conductivity of conductors. In the absence of conductors no secondary fields are obtained.

The electromagnetic survey was carried out using a Crone J.E.M. unit. This system utilizes the "shoot back" technique, which requires a receiver and transmitter in each unit. Each unit measures the direction of the total magnetic field (in degrees from the horizontal) in turn while the other unit acts as the transmitter. On addition of the two measured angles the resultant reading obtained is independent of substantial differences in elevation, and is plotted midway between the two coils.

Readings with this instrument were taken every 100 feet along the lines using 200 and 300 feet coil separations and frequencies of 480 and 1800 c.p.s. respectively.

The magnetometer survey was carried out using a McPhar M-700 fluxgate magnetometer. This instrument makes measurements of the vertical component of the earth's magnetic field to an accuracy of + 10 gammas. Corrections for diurnal variations were made by tying-in to previously established base stations at intervals not exceeding two hours.

Readings with this instrument were taken every 100 feet along the lines with additional closer spaced readings in areas of steep magnetic gradients.

DISCUSSION OF RESULTS

The magnetometer survey (map W-145-2), as carried out in the vicinity of the intrusive-limestone-volcanic contact, was in general insufficient in coverage, particularly on Grid 1 and on the road traverses, to properly obtain correlation with the known geology (Map W-145-1).

It did however show Grid 2 to be underlain by at least two magnetically different rock units, units M<sub>1</sub> and M<sub>2</sub>, above which two magnetic highs were clearly discernible.

These highs, the larger and more intense of which is undefined, are located near the mapped intrusive-limestone-volcanic contact, are most probably caused by magnetite mineralization, and could be indicative of a pyrometasomatic deposit.

Another magnetic high was obtained on Line E, a road traverse. This high lies some 1600 feet east of the stronger magnetic high on Grid 2 and could conceivably be part of the latter.

The E.M. survey, as performed with a 200 foot coil separation except over Lines 13 E, 14 E and 15 E respectively where a 300 foot coil separation was used over the magnetic high, gave good signal strength and sharp clear nulls throughout, indicating little or no overburden and no out of phase component, and failed to locate the presence of any anomalies.



SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Between October 15th and 19th, 1971, Peter E. Walcott & Associates Ltd. carried out limited ground magnetic and electromagnetic surveys over part of a property held by Gordon Milbourne.

The property, the Rib and Reef claims, lies about 1½ miles north of the Island Copper Mine on Vancouver Island.

The magnetic survey cover was insufficient to obtain proper correlation with the known geology, but did indicate the presence of three magnetic anomalies which lie near the intrusive-limestone-volcanic contact.

The E.M. survey failed to locate the presence of any anomalies.

As a result of the above surveys the writer concludes:

- (1) No significant massive sulphide mineralization exists within 100 feet of surface over the area surveyed, and within 150 feet of surface over the main magnetic anomaly.
- (2) The magnetic anomalies are most probably caused by magnetite and could be indicative of a pyrometasomatic deposit.

He therefore recommends that further work be done on the property to explore this possibility.

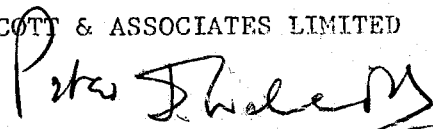
This work should consist of:

- (1) Magnetic surveying to properly define and qualitatively and quantitatively investigate the main magnetic anomaly.
- (2) Soil sampling over and around the magnetic anomaly.
- (3) Turam, i.e. deep penetration E.M., and limited I.P. surveys over the area of interest. It should be borne in mind here that a high I.P. background response would be expected due to the pyrite content of the volcanics.

Should this work prove encouraging it should be followed by further investigation using borehole techniques.

Respectfully submitted,

PETER E. WALCOTT & ASSOCIATES LIMITED

  
Peter E. Walcott, P.Eng.  
Geophysicist

Vancouver, B.C.  
November 1971

A P P E N D I X

(i)

COST OF SURVEY

Peter E. Walcott & Associates Limited undertook the E.M. and magnetic surveys on a line mile basis. Draughting and mobilization costs were extra so that the total cost of services provided by Peter E. Walcott & Associates Limited was \$1,304.60.

Gordon Milbourne carried out the linecutting, acted as helper on the E.M. and magnetic surveys, and provided local transportation and room and board for the crew. A breakdown of the costs are as follows:

Linecutting -		
12 days at \$30.00 per day		\$360.00
Geophysical survey -		
5 days at \$30.00 per day		\$150.00
Vehicle cost -		
17 days at \$15.00 per day		\$225.00
Room and board -		
22 man days at \$12.50 per day		<u>\$275.00</u>
		<u>\$1,010.00</u>
		=====

Therefore the total cost of the survey was \$2,314.60.

Declared before me at the city  
Vancouver, in the  
Province of British Columbia, this 10  
of January 1971, A.D.

*Gordon Milbourne*

*Joan Turner*  
A Commissioner for taking Affidavits within British Columbia  
A Notary Public in and for the Province of British Columbia

Sub-Mining Recorder

(ii)

PERSONNEL EMPLOYED ON SURVEY

<u>Name</u>	<u>Occupation</u>	<u>Address</u>	<u>Dates</u>
Peter E. Walcott	Geophysicist	Peter E. Walcott & Assoc. 605 Rutland Court, Coquitlam, B.C.	Nov. 2nd & 3rd, 1971
Leo Perreault	Geophysical Operator	" "	Oct. 15th - 19th, 1971
V. Pashniak	Draughting	" "	Nov. 4th - 24th, 1971.
J. Walcott	Typing	" "	Nov. 16th, 1971
G. Milbourne	Prospector	201 - 569 Howe St., Vancouver, B.C.	Oct. 1st - 21st, 1971

Declared before me at the City  
of Vancouver, in the  
Province of British Columbia, this 10  
day of January 1972, A.D.

*Gordon Milbourne*

*Jan Sime*

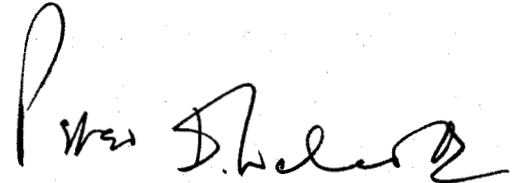
Commissioner for taking Affidavits within British Columbia  
Notary Public in and for the Province of British Columbia

Sub-Mining Recorder

CERTIFICATION

I, Peter E. Walcott, of the Municipality of Coquitlam, British Columbia, hereby certify that:

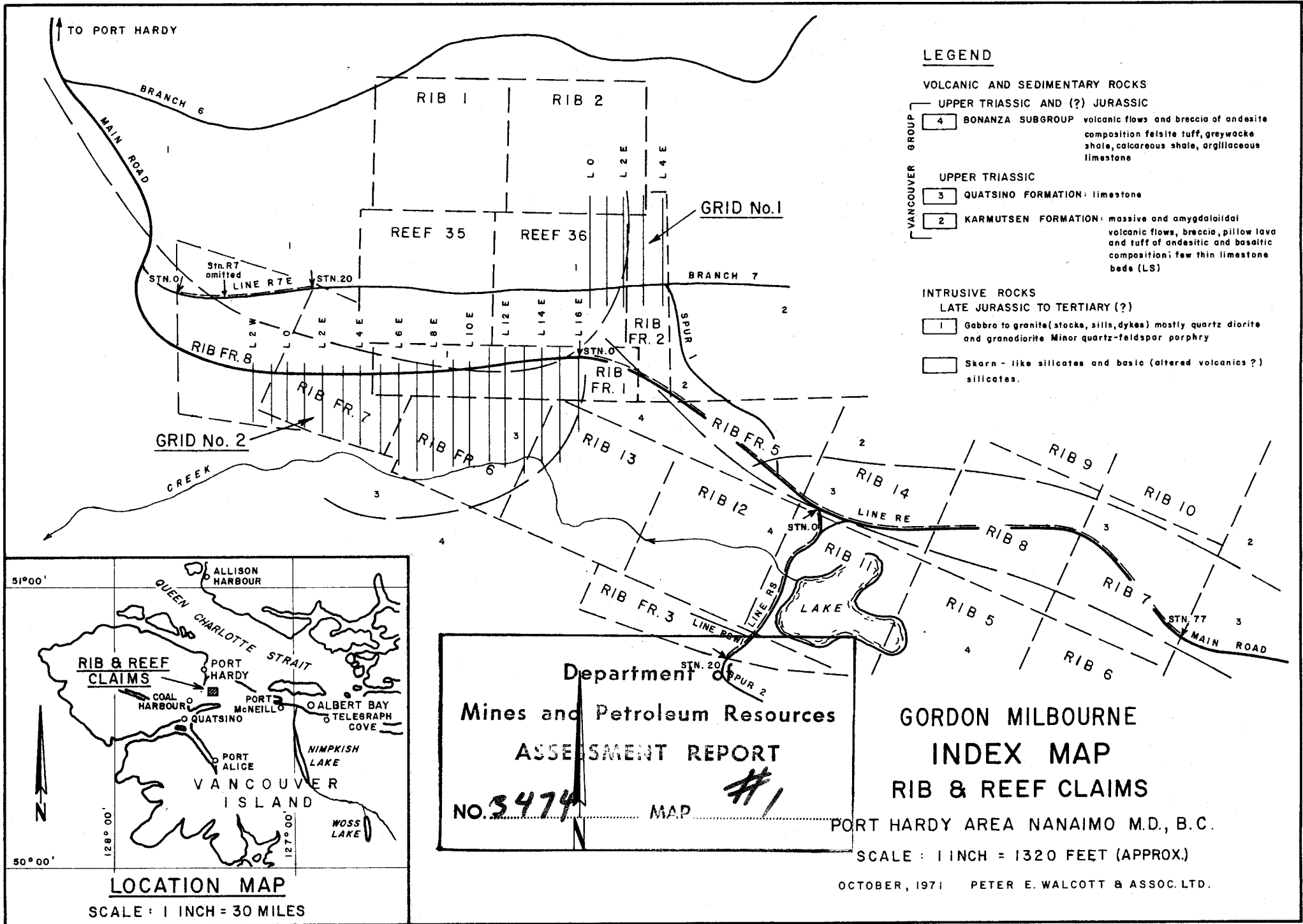
1. I am a Graduate of the University of Toronto in 1962 with a B.A.Sc. in Engineering Physics, Geophysics Option.
2. I have been practising my profession for the last nine years.
3. I am a member of the Association of Professional Engineers of British Columbia, Ontario and the Yukon Territory.
4. I hold no interest, direct or indirect, in the Rib or Reef claims.



Peter E. Walcott, P.Eng.

Vancouver,  
British Columbia

November 1971



**LEGEND**

**VOLCANIC AND SEDIMENTARY ROCKS**

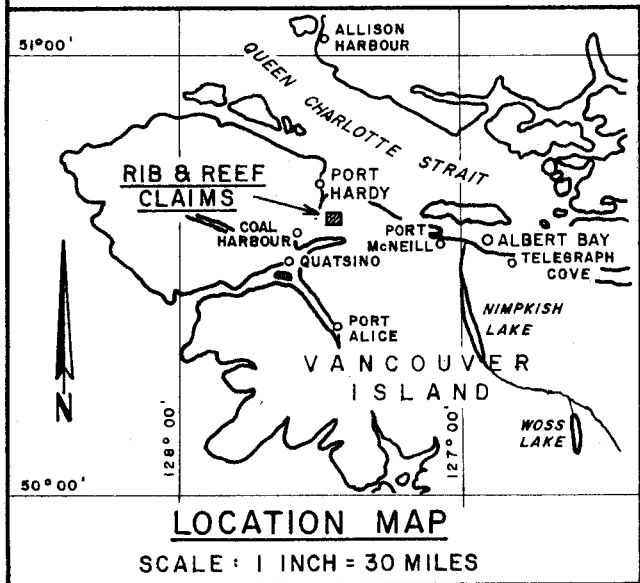
UPPER TRIASSIC AND (?) JURASSIC  
**4** BONANZA SUBGROUP volcanic flows and breccia of andesite composition felsite tuff, greywacke shale, calcareous shale, argillaceous limestone

UPPER TRIASSIC  
**3** QUATSINO FORMATION: limestone

**2** KARMTUSEN FORMATION: massive and amygdaloidal volcanic flows, breccia, pillow lava and tuff of andesitic and basaltic composition; few thin limestone beds (LS)

**INTRUSIVE ROCKS**

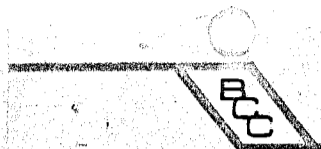
LATE JURASSIC TO TERTIARY (?)  
**1** Gabbro to granite (stocks, sills, dykes) mostly quartz diorite and granodiorite. Minor quartz-feldspar porphyry  
 Skarn-like silicates and basic (altered volcanics?) silicates.



Department of  
**Mines and Petroleum Resources**  
**ASSESSMENT REPORT**  
 No. **3474** MAP **#1**

**GORDON MILBOURNE**  
**INDEX MAP**  
**RIB & REEF CLAIMS**

PORT HARDY AREA NANAIMO M.D., B.C.  
 SCALE: 1 INCH = 1320 FEET (APPROX.)  
 OCTOBER, 1971 PETER E. WALCOTT & ASSOC. LTD.



BONDAR-CLEGG & COMPANY LTD.

geologists • geochemists • analysts

1500 PEMBERTON AVENUE, NORTH VANCOUVER, B.C.

PHONE 988-5315

GEOCHEMICAL LAB REPORT

No. 21-797

Extraction Hot Aqua Regia

From J.S. Vincent & Associates Ltd.

Method Atomic Absorption

Date October 8, 1971

Fraction Used - 80 mesh

Analyst K.B.

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NUMBER	Cu ppm	Mo ppm	REMARKS
0- 6001	22	4	10- 6032	50	5	
6002	18	5	6033	24	6	
6003	7	2	6034	26	3	
6004	8	5	6035	1060	19	
6005	27	4	6036	345	16	
6006	11	4	6037	520	19	
6007	25	2	6038	180	10	
6008	9	4	6039	108	10	
6009	25	2	6040	150	18	
6010	10	2	6041	21	9	
6011	11	4	6042	25	10	
6012	21	2	6043	535	14	
6013	19	2	6044	118	18	
6014	14	2	6045	475	21	
6015	65	3	6046	37	15	
6016	10	4	6047	84	17	
6017	59	4	6048	275	13	
6018	155	8	6049	46	11	
6019	280	6	6050	212	14	
6020	260	7	6051	60	7	
6021	500	6	6052	630	23	
6022	57	5	6053	10	4	
6023	24	5	6054	32	7	
6024	29	4	6055	250	49	
6025	20	3	6056	900	25	
6026	38	3	6057	60	5	
6027	18	4	6058	490	63	
6028	38	2	6059	1120	27	
6029	480	8	6060	49	6	
6030	155	7	6061	15	4	
6031	17	13	6062	56	4	

**GEOCHEMICAL LAB REPORT**

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6063	14	4	0- 6099	72	6	
6064	10	4	6100	46	4	
6065	44	4	6101	94	3	
6066	30	4	6102	14	5	
6067	28	5	6103	33	4	
x 6068	49	4	6104	56	5	
x 6069	49	4	6105	66	7	
6070	158	6	6106	22	5	
6071	100	4	6107	19	5	
6072	60	3	6108	46	7	
6073	17	6	6109	30	5	
6074	30	6	6110	115	4	
6075	20	1	6111	535	21	
6076	25	1	6112	755	39	
6077	23	ND	6113	24	4	
6078	23	5	6114	111	7	
6079	27	3	6115	31	7	
6080	19	1	6116	114	6	
6081	10	2	6117	84	8	
6082	41	11	6118	238	11	
6083	106	7	6119	220	12	
6084	29	3	6120	16	5	
6085	39	3	6121	7	4	
6086	23	3	6122	360	10	
6087	19	2	6123	180	12	
6088	9	3	6124	112	14	
6089	4	1	6125	14	4	
6090	17	3	6126	12	4	
6091	50	3	6127	84	10	
6092	25	5	6128	26	8	
6093	17	2	6129	34	5	
6094	28	4	6130	39	9	
6095	19	5	6131	200	21	
6096	30	2	6132	108	25	
6097	22	3	6133	29	6	
6098	30	3	6134	31	6	



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## GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6135	27	7	0- 6171	10	6	
6136	18	3	6172	7	4	
6137	197	3	6173	11	2	
6138	26	2	6174	9	3	
6139	54	4	6175	20	7	
6140	18	4	6176	36	2	
6141	320	4	6177	15	2	
6142	70	2	6178	14	3	
6143	18	1	6179	8	2	
6144	21	4	6180	15	4	
6145	12	3	6181	33	5	
6146	115	5	6182	20	3	
6147	57	4	6183	36	1	
6148	19	5	6184	30	ND	
6149	190	5	6185	21	3	
6150	320	17	6186	29	2	
✓ 6151	1000	21	6187	40	2	
✓ 6152	1000	21	6188	39	2	
6153	225	7	6189	11	ND	
6154	50	10	6190	29	1	
6155	37	6	6191	69	2	
6156	14	5	6192	21	4	
6157	110	6	6193	16	8	
6158	40	6	6194	27	1	
6159	36	2	6195	17	3	
6160	113	3	6196	21	5	
6161	23	5	6197	320	3	
6162	29	4	6198	72	6	
6163	17	ND	6199	225	6	
6164	24	1	6200	29	8	
6165	16	1	6201	890	9	
6166	26	2	6202	325	11	
6167	20	2	6203	17	3	
6168	22	4	6204	156	16	
6169	21	2	6205	10	4	
6170	29	2	6206	150	16	

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### GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6207	145	10	0- 6243	65	4	
6208	136	9	6244	49	2	
6209	10	5	6245	38	3	
6210	21	4	6246	27	2	
6211	14	6	6247	174	5	
6212	120	8	6248	215	4	
6213	58	6	6249	500	8	
6214	760	7	6250	100	8	
6215	175	9	6251	39	12	
6216	134	16	6252	94	8	
6217	280	10	6253	24	3	
6218	385	6	6254	25	6	
6219	14	4	6255	120	11	
6220	22	5	6256	29	4	
6221	10	5	6257	12	5	
6222	31	6	6258	10	4	
6223	24	2	6259	30	4	
6224	21	1	6260	40	6	
6225	22	1	6261	19	3	
6226	28	3	6262	126	8	
6227	28	1	6263	252	7	
6228	28	4	6264	280	7	
6229	14	4	6265	164	11	
6230	31	2	6266	27	2	
6231	50	2	6267	17	8	
6232	98	3	6268	39	2	
6233	56	1	6269	13	5	
6234	49	2	6270	305	14	
6235	40	3	6271	26	3	
6236	23	3	6272	10	2	
6237	30	2	6273	99	5	
6238	19	1	6274	350	24	
6239	22	2	6275	37	12	
6240	25	3	6276	48	17	
6241	61	4	6277	20	1	
6242	55	4	6278	16	2	

## GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6279	9	2	0- 6315	470	5	
6280	280	22	6316	104	1	
6281	90	11	6317	23	2	
6282	138	122	6318	27	2	
6283	126	35	6319	10	4	
6284	1520	23	6320	10	5	
6285	580	26	6321	56	5	
6286	420	12	6322	150	32	
6287	1520	7	6323	25	6	
6288	39	1	6324	64	21	
6289	51	2	6325	20	3	
6290	31	2	6326	38	2	
6291	215	2	6327	210	2	
6292	123	5	6328	30	2	
6293	128	3	6329	52	2	
6294	138	2	6330	10	4	
6295	460	8	6331	21	3	
6296	450	6	6332	9	3	
6297	32	6	6333	16	3	
6298	180	6	6334	36	2	
6299	60	5	6335	11	5	
6300	258	5	6336	45	1	
6301	132	3	6337	80	1	
6302	55	2	6338	80	2	
6303	7	1	6339	76	2	
6304	99	4	6340	40	1	
6305	280	9	6341	66	2	
6306	26	5	6342	35	3	
6307	12	1	6343	18	3	
6308	29	6	6344	28	4	
6309	30	4	6345	23	3	
6310	20	4	6346	30	3	
6311	19	3	6347	60	2	
6312	33	5	6348	10	14	
6313	17	5	6349	35	9	
6314	34	1	6350	3375	4	

## GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6351	5200	21	0- 6387	520	50	
6352	185	62	6388	400	65	
6353	3800	56	6389	1420	72	
6354	55	9	6390	128	26	
6355	83	5	6391	100	98	
6356	360	4	6392	1890	36	
6357	12500	34	6393	95	10	
6358	265	4	6394	220	30	
6359	228	31	6395	2200	80	
6360	49	6	6396	25	11	
6361	130	12	6397	110	64	
6362	1280	5	6398	20	3	
6363	2525	19	6399	30	4	
6364	59	4	6400	30	4	
6365	88	4	6401	58	2	
6366	113	7	6402	70	1	
6367	80	2	6403	30	30	
6368	183	2	6404	20	41	
6369	135	4	6405	10	5	
6370	113	3	6406	12	7	
6371	95	4	6407	1635	255	
6372	98	5	6408	590	27	
6373	122	4	6409	170	58	
6374	36	3	6410	259	72	
6375	100	4	6411	1860	9	
6376	280	4	6412	138	70	
6377	155	2	6413	560	63	
6378	315	4	6414	310	49	
6379	390	4	6415	258	240	
6380	490	10	6416	285	18	
6381	115	4	6417	690	23	
6382	25	4	6418	660	35	
6383	760	5	6419	120	11	
6384	128	10	6420	710	15	
6385	680	80	6421	140	4	
6386	940	80*	6422	100	4	

**GEOCHEMICAL LAB REPORT**

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
✓ 0- 6423	230	4	0- 6459	50	6	
✓ 6424	230	4	6460	12	16	
6425	310	4	6461	80	80	
6426	650	8	6462	130	55	
6427	450	5	6463	98	10	
6428	330	4	6464	280	15	
6429	60	1 2	6465	760	43	
6430	90	2	6466	400	2	
6431	270	5	6467	112	3	
6432	60	2	6468	100	3	
6433	1910	24	6469	260	4	
6434	910	24	6470	295	3	
6435	770	35	6471	480	4	
6436	115	16	6472	680	4	
6437	195	42	6473	180	3	
6438	30	80	6474	300	3	
6439	10	14	6475	300	2	
6440	13	16	6476	290	4	
6441	88	8	6477	260	5	
6442	1590	24	6478	140	4	
6443	200	25	6479	255	3	
6444	30	6	6480	115	2	
6445	5	2	6481	65	3	
6446	5	6	6482	175	4	
6447	30	5	6483	98	1	
6448	82	2	6484	120	ND	
6449	35	3	6485	40	ND	
6450	160	24	6486	70	8	
6451	38	31	6487	58	18	
6452	132	66	6488	140	4	
6453	92	32	6489	58	14	
6454	10	6	6490	70	51	
6455	100	5	6491	190	4	
6456	50	33	6492	28	8	
6457	450	4	6493	32	7	
6458	110	4	6494	20	9	

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BONDAR-CLEGG &amp; COMPANY LTD.

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## GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6495	790	94	0- 6658	132	2	
6496	20	15	6659	330	4	
6497	93	22	6660	400	4	
6498	82	71	6661	30	2	
6499	17	6	6662	390	4	
✓ 6500	50	3 X	6663	200	2	
✓ 6628	50	3	6664	20	2	
6629	115	44	6665	55	4	
6630	48	26	6666	330	5	
6631	20	6	6667	210	7	
6632	118	4	6668	70	8	
6633	67	1	6669	110	3	
6634	65	47	6670	50	ND	
6635	20	5	6671	135	6	
6636	65	7	6672	30	6	
6637	165	4	6673	36	7	
6638	135	4	6674	580	67	
6639	128	6	6675	35	31	
6640	108	5	6676	65	30	
6641	60	5	6677	35	67	
6642	460	2	6678	90	47	
6643	90	5	6679	47	76	
6644	70	4	6680	30	15	
6645	388	6	6681	8	10	
6646	540	6	6682	10	19	
6647	700	13	6683	53	10	
6648	150	4	6684	53	4	
6649	238	7	6685	18	5	
6650	278	3	6686	30	4	
6651	340	3	6687	210	4	
6652	270	3	6688	105	2	
6653	90	ND	6689	38	4	
6654	500	1	6690	10	1	
6655	345	2	6691	8	ND	
6656	78	3	6692	16	7	
6657	473	1	6693	13	7	

## GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6694	10	11	0- 6730	1525	17	
6695	11	10	6731	510	11	
6696	20	8	6732	1280	6	
6697	6700	35	6733	450	11	
6698	75	13	6734	175	8	
6699	18	5	6735	165	5	
6700	30	4	6736	140	5	
6701	50	6	6737	90	1	
6702	40	4	6738	5	ND	
6703	88	3	6739	15	2	
6704	145	6	6740	470	22	
6705	160	6	6741	12	5	
6706	550	5	6742	4	ND	
6707	1450	7	6743	25	4	
6708	760	12	6744	25	5	
6709	370	5	6745	50	4	
6710	900	4	6746	50	6	
6711	300	4	6747	10	5	
6712	2100	5	6748	18	3	
6713	1850	1	6749	18	6	
6714	60	3	6750	10	5	
6715	345	1	6751	60	4	
6716	260	2	6752	38	3	
6717	880	4	6753	38	4	
6718	4000	ND	6754	47	2	
6719	1200	ND	6755	45	3	
6720	1080	1	6756	60	5	
6721	138	3	6757	10	5	
6722	475	4	6758	10	4	
6723	740	4	6759	12	4	
6724	140	2	6760	10	3	
6725	660	2	6761	12	5	
6726	1650	11	6762	15	4	
6727	890	9	6763	192	14	
6728	600	5	6764	300	26	
6729	2650	10	6765	210	12	

## GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu PPM	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6766	18	5	0 - 6802	30	2	
6767	75	4	6803	40	1	
6768	100	8	6804	10	ND	
6769	260	22	6805	520	2	
6770	910	19	6806	575	4	
6771	108	18	6807	178	4	
6772	48	8	6808	162	4	
6773	68	3	6809	1685	33	
6774	70	6	6810	1225	59	
6775	158	3	6811	1375	60	
6776	105	3	6812	82	46	
6777	240	2	6813	235	6	
6778	320	4	6814	39	5	
6779	180	2	6815	10	6	
6780	75	2	6816	10	5	
6781	268	2	6817	11	8	
6782	250	2	6818	49	4	
6783	1330	4	6819	20	4	
6784	280	5	6820	11	4	
6785	260	2	6821	38	2	
6786	220	3	6822	15	ND	
6787	620	4	6823	10	11	
6788	80	3	6824	6	5	
6789	40	1	6825	9	5	
6790	180	5	6826	20	5	
6791	100	2	6827	9	5	
6792	95	3	6828	10	5	
6793	135	1	6829	28	5	
6794	15	7	6830	8	ND	
6795	90	1	6831	22	3	
6796	280	6	6832	8	4	
6797	390	7	6833	81	4	
6798	620	7	6834	8	2	
6799	38	4	6835	6	ND	
6800	65	1	6836	420	16	
6801	3200	3	6837	9	6	



## GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0- 6838	12	5	0- 6874	35	6	
6839	11	5	6875	745	8	
6840	39	2	6876	109	7	
6841	19	5	6877	196	5	
6842	18	15	6878	11	2	
6843	320	30	6879	17	8	
6844	33	35	6880	72	2	
6845	40	15	6881	97	3	
6846	7	5	6882	30	5	
6847	83	16	6883	21	4	
✓ 6848	19	8	6884	620	8	
✓ 6849	19	7	6885	239	8	
6850	375	4	6886	21	4	
6851	915	5	6887	11	3	
6852	40	4	6888	62	8	
6853	1525	7	6889	12	4	
6854	68	3	6890	39	2	
6855	34	1	6891	11	4	
6856	28	6	6892	58	2	
6857	146	9	6893	72	2	
6858	150	8	6894	11	4	
6859	157	8	6895	13	4	
6860	208	12	6896	56	3	
6861	272	7	6897	1150	45	
6862	740	6	6898	100	4	
6863	945	9	6899	13	5	
6864	177	7	6900	34	5	
6865	730	10	6901	36	3	
6866	41	3	6902	30	2	
6867	62	3	6903	15	4	
6868	9	4	6904	18	5	
6869	42	2	6905	11	5	
6870	5	5	6906	14	4	
6871	66	3	6907	46	2	
✓ 6872	28	3	6908	18	2	
✓ 6873	29	4	6909	12	4	

## GEOCHEMICAL LAB REPORT

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
0 - 6910	38	3	K-7602	1325	9	
6911	69	3	7603	293	1	
6912	51	3	7604	174	3	
6913	31	2	7605	19	7	
6914	77	2	7606	90	7	
6915	16	4	7607	102	3	
6916	23	3	7608	19	4	
6917	39	2	7609	34	3	
6918	935	27	7610	690	9	
6919	19	4	7611	111	2	
6920	28	4	7612	78	3	
✓ 6921	27	5	7613	950	16	
✓ 6922	26	4	7614	315	12	
6923	17	6	7615	370	8	
6924	129	20	7616	390	6	
6925	110	5	7617	72	14	
6926	28	6	7618	64	9	
6927	128	6	7619	71	7	
6928	57	5	7620	32	6	
6929	35	5	7621	29	3	
6930	50	4	7622	23	4	
6931	48	7	7623	12	5	
6932	4800	9	7624	11	6	
6933	41	4	7625	20	3	
6934	159	8	7626	10	5	
6935	239	18	7627	12	5	
6936	163	3	7628	16	5	
6937	267	15	7629	10	3	
6938	39	5	7630	250	49	
6939	271	12	7631	253	63	
6940	34	3	7632	237	61	
6941	39	4	7633	13	29	
6942	75	9	7634	259	53	
6943	86	3	7635	68	6	
K - 7600	61	2	7636	415	5	
7601	131	3	7637	605	6	

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**GEOCHEMICAL LAB REPORT**

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
K-7638	18	5	K-7674	24	4	
7639	138	21	7675	17	4	
7640	33	6	7676	77	4	
7641	171	19	7677	51	5	
7642	32	8	7678	100	7	
7643	645	38	7679	86	5	
7644	21	8	7680	58	6	
7645	5100	50	7681	26	5	
7646	1660	70	7682	68	3	
7647	153	12	7683	109	4	
7648	76	3	7684	7	5	
7649	69	4	7685	13	5	
7650	1400	5	7686	10	5	
7651	35	4	7687	11	5	
7652	12	3	7688	4	2	
7653	11	5	7689	13	4	
7654	15	5	7690	3	4	
7655	32	5	7691	19	3	
7656	22	5	7692	13	7	
7657	12	2	7693	36	3	
7658	12	5	7694	21	2	
7659	11	3	7695	8	3..	
7660	14	4	7696	13	4	
7661	5	4	7697	43	4	
7662	16	3	7698	111	5	
7663	7	5	7699	109	3	
7664	18	3	7700	31	4	
7665	48	4	7751	64	2	
7666	11	3	7752	263	17	
7667	12	3	7753	58	7	
7668	7	4	7754	249	6	
7669	13	5	7755	254	7	
7670	34	4	7756	455	4	
7671	11	4	7757	8	4	
7672	6	4	7758	725	35	
7673	15	3	7759	1580	16	

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**GEOCHEMICAL LAB REPORT**

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
K-7760	390	13	K-7796	10	3	
7761	122	8	7801	77	3	
7762	70	6	7802	16	4	
7763	51	6	7803	34	4	
7764	26	6	7804	16	4	
7765	20	9	7805	67	5	
7766	50	15	7806	57	2	
7767	11	11	7807	34	4	
7768	109	19	7808	66	2	
7769	28	4	7809	2900	43	
7770	26	6	7810	58	3	
7771	11	4	7811	155	34	
7772	34	3	7812	960	75	
7773	21	4	7813	110	22	
7774	49	2	7814	61	21	
7775	39	5	7815	75	8	
7776	10	5	7816	5700	76	
7777	16	4	7817	140	8	
7778	23	4	7818	128	8	
7779	6	2	7819	725	15	
7780	51	2	7820	18	4	
7781	100	4	7821	39	4	
7782	7500	10	7822	35	3	
7783	62	12	7823	92	4	
7784	90	4	7824	89	3	
7785	40	3	7825	153	4	
7786	67	4	7826	174	2	
7787	40	4	7827	132	8	
7788	195	4	7828	165	1	
7789	29	5	7829	162	3	
7790	120	5	7830	96	8	
7791	20	3	7831	38	5	
7792	9	4	7832	39	4	
7793	28	3	7833	12	4	
7794	11	4	7834	12	5	
7795	10	3	7835	27	3	

**GEOCHEMICAL LAB REPORT**

SAMPLE NO.	Cu ppm	Mo ppm	SAMPLE NO.	Cu ppm	Mo ppm	REMARKS
K-7836	192	2	K-7872	113	1	
7837	53	12	7873	119	2	
7838	530	12				
7839	187	7				
7840	2600	74				
7841	4900	55				
7842	6500	45				
7843	47	4				
7844	1000	30				
7845	3500	32				
7846	2750	23				
7847	246	18				
7848	43	2				
7849	84	ND				
7850	680	3				
7851	55	4				
7852	20	4				
7853	13	3				
7854	69	3				
7855	21	4				
7856	29	2				
7857	21	2				
7858	29	3				
7859	15	3				
7860	21	2				
7861	39	3				
7862	46	1				
7863	32	2				
7864	18	2				
7865	13	2				
7866	17	4				
7867	20	3				
7868	50	2				
7869	40	2				
7870	39	3				
7871	35	3				















BCC

## BONDAR-CLEGG &amp; COMPANY LTD.

geochemists • assayers • analytical chemists

1500 PEMBERTON AVENUE, NORTH VANCOUVER, B.C.

PHONE: 988-5315

TELEX: 04-54554

## CERTIFICATE OF ASSAY

TO Spartan Explorations Ltd.

303 - 1035 W. Pender St.

Vancouver 1, B.C.

Report No: A21-772

Samples Rec'd: Oct. 14, 1971

Results Completed: Oct. 25, 1971

c.c. J.S. Vincent Ltd.

Project: Eagle Claims

I hereby certify that the following are the results of assays made by us upon the herein described Ore samples.

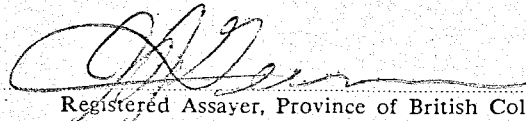
MARKED Ore	GOLD		SILVER	Cu	MoS <sub>2</sub>						TOTAL VALUE PER TON (2000 LBS.)
	Ounces per Ton	Value per Ton	Ounces per Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
1606			0.04	0.04	0.005						
1607			0.12	0.92	0.003						
1608			1.2	3.65	0.003						
1609			Trace	0.76	0.002						
1610			1.6	6.90	0.002						
1611			0.63	2.30	0.001						
1612			0.50	3.35	0.002						
1613			Trace	2.25	Trace						
1614			0.58	3.50	0.002						
1615			0.04	0.04	0.002						
1616			0.04	0.22	Trace						
1617			0.04	0.20	Trace						
1618			0.02	0.01	0.001						
1619			0.02	3.02	0.005						
1620			0.04	0.04	0.004						
1621			0.02	0.08	0.003						
1622			0.02	0.66	Trace						
1623			0.23	1.95	0.022						
1624			Trace	1.40	0.024						
1625			0.02	0.22	0.004						
4331			1.5	4.60	0.001						
4336			Trace	0.60	Trace						

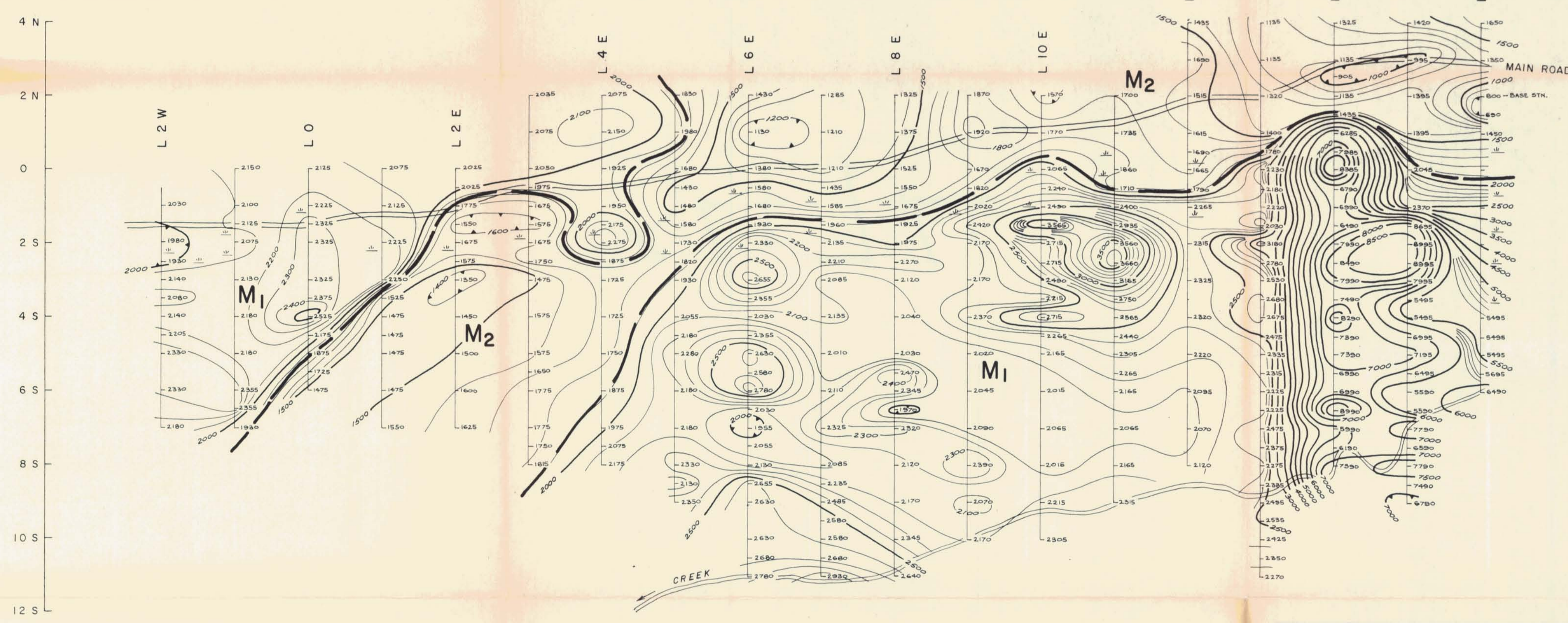
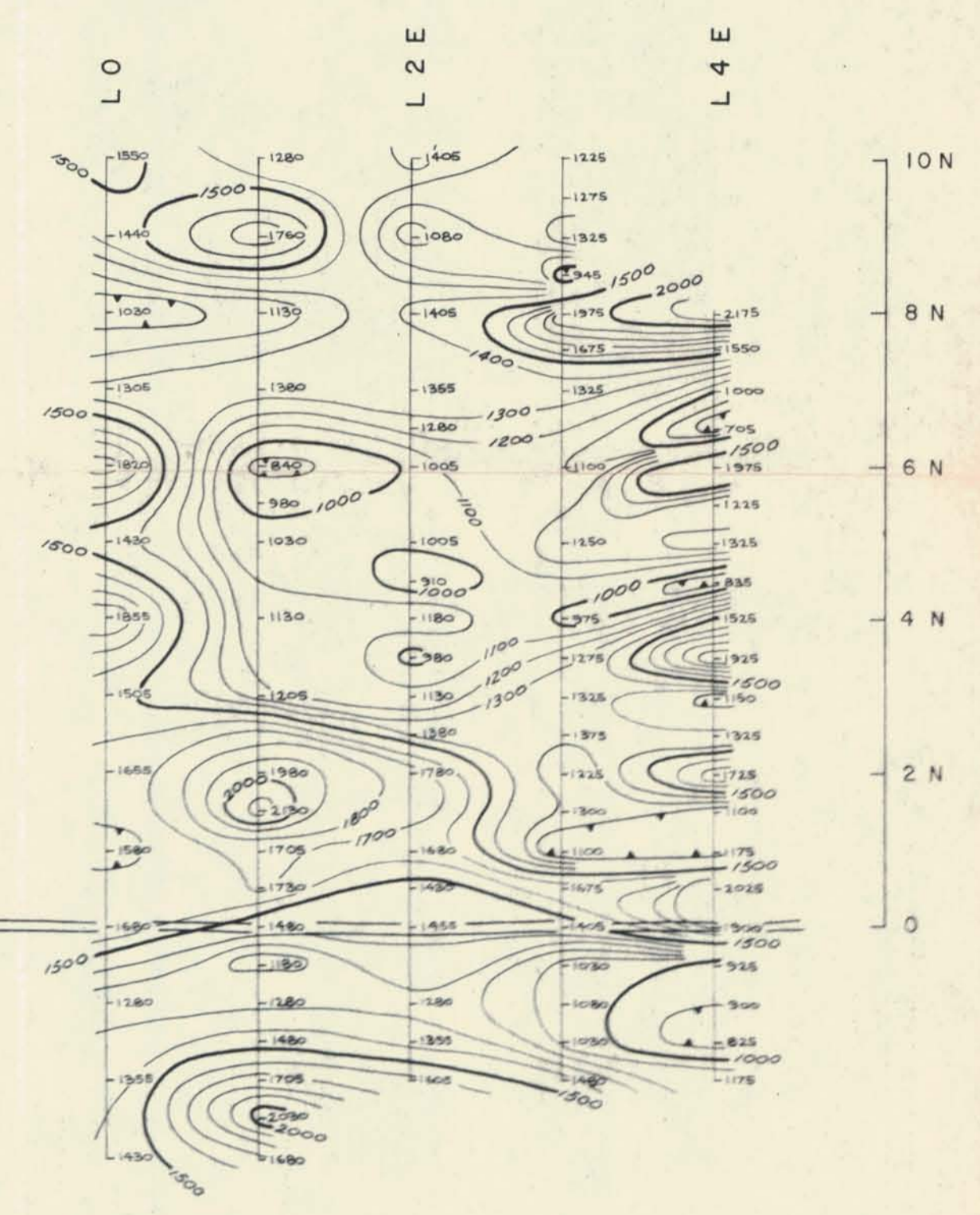
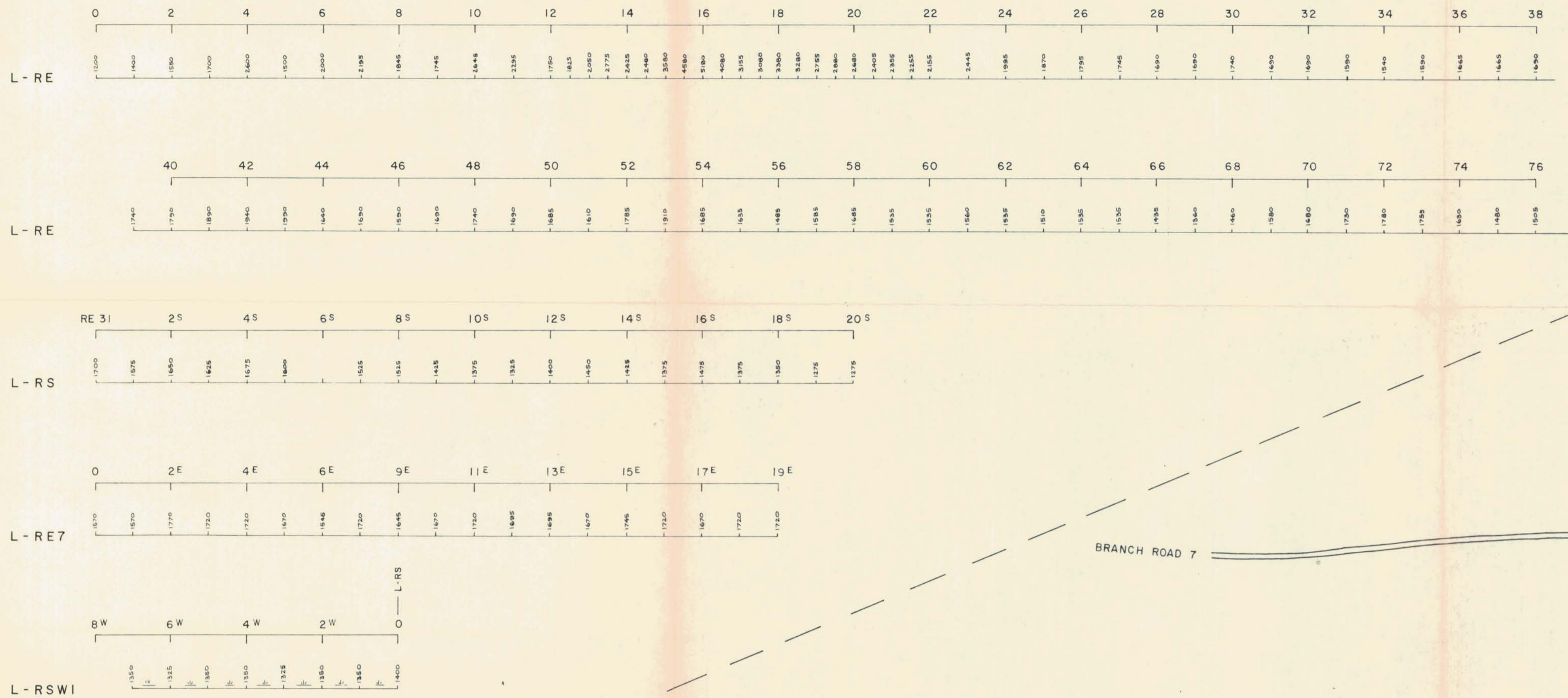
## NOTE:

Rejects retained two weeks  
Pulps retained three months  
unless otherwise arranged.

Gold & Silver values reported on these sheets  
have not been adjusted to compensate losses and  
gains inherent in fire assay methods.

Gold calculated at \$.....per ounce

  
Registered Assayer, Province of British Columbia



- LEGEND**
- 500 GAMMA CONTOUR
  - 100 GAMMA CONTOUR
  - MAGNETIC DEPRESSION
  - SWAMP
  - INTERPRETED MAGNETIC CONTACT
  - INTERPRETED MAGNETIC ROCK UNIT

3474 M-2

**GORDON MILBOURNE**

RIB AND REEF CLAIMS, PORT HARDY AREA, NANAIMO M.D., B.C.

**MAGNETOMETER SURVEY**

CONTOURS OF RELATIVE VERTICAL INTENSITY  
(IN GAMMAS)

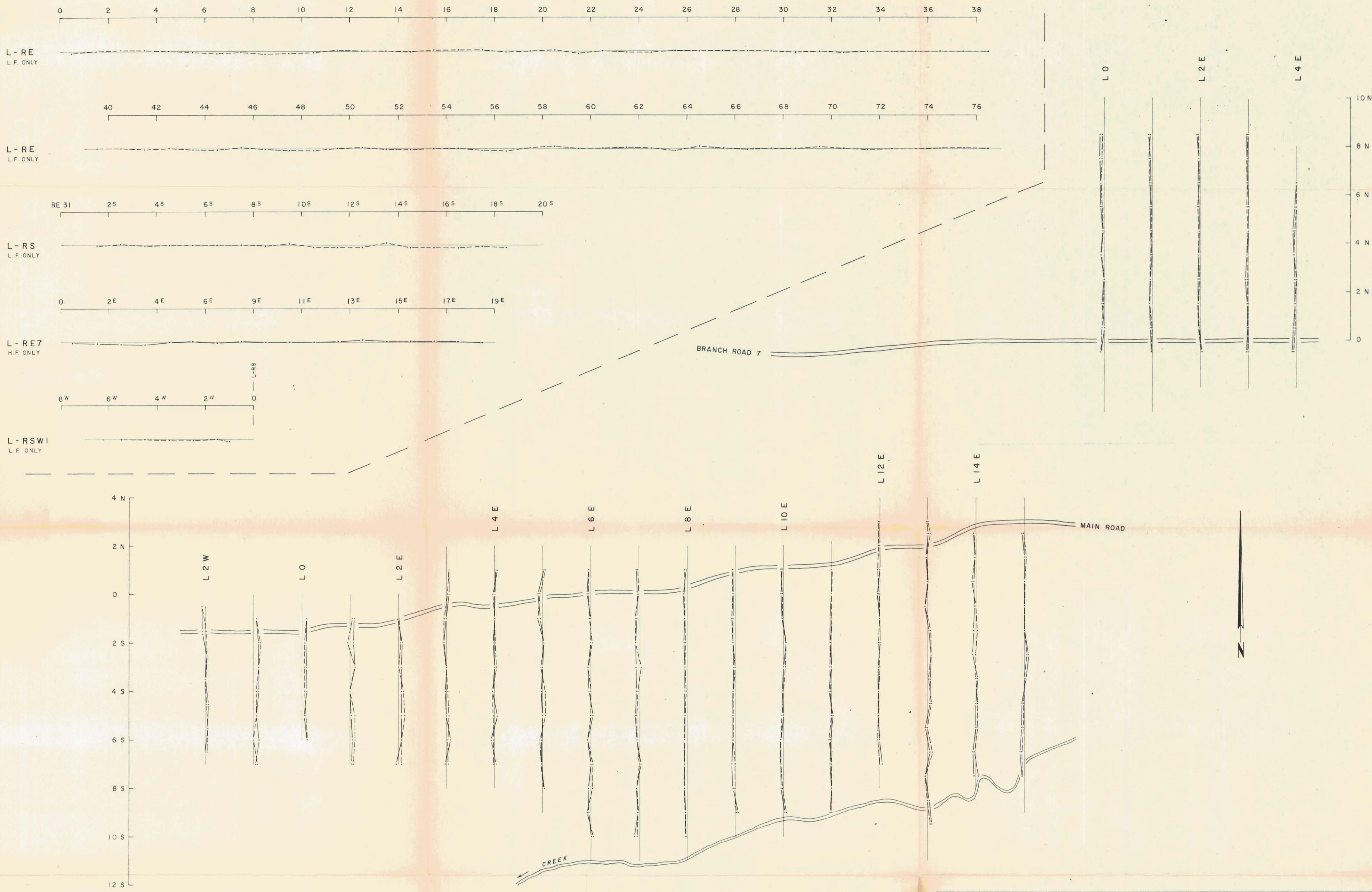
Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 3474 MAP #2

SCALE: 1 INCH = 200 FEET

200 100 0 200 400  
FEET

MAP No. W-145-1  
TO ACCOMPANY A REPORT BY  
PETER E. WALCOTT P. Eng.  
DATED - NOVEMBER 1971

PETER E. WALCOTT & ASSOC. LTD.  
OCTOBER, 1971



**LEGEND**

- +20°
- +10°
- 0 DIP
- 10°
- 20°
- 
- +
- + EAST
- WEST
- LOW FREQUENCY
- HIGH FREQUENCY

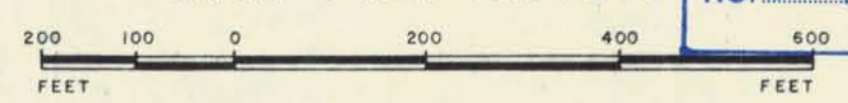
**GORDON MILBOURNE**

RIB AND REEF CLAIMS, PORT HARDY AREA, NANAIMO M.D., B.C.

**CRONE  
ELECTROMAGNETIC SURVEY**

DIP ANGLE PROFILE  
Department of  
Mines and Petroleum Resource  
ASSESSMENT REPORT

SCALE: 1 INCH = 200 FEET  
NO. 3474 MAP AS



MAP No. W-145-2  
TO ACCOMPANY A REPORT  
PETER E. WALCOTT P. Eng.  
DATED - NOVEMBER, 1971



PETER E. WALCOTT & ASSOC. LTD.

OCTOBER, 1971