

NEWMONT EXPLORATION LIMITED

BOX 366

JEROME, ARIZONA
February 4, 1954

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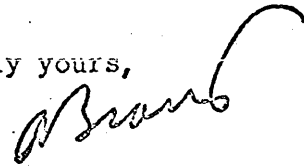
Mr. Plato Malozemoff
Newmont Exploration Limited
1501, 14 Wall Street
New York 5, N. Y.

Dear Plato:

I enclose results of our lab studies on core specimens from Pacific Nickel drill holes S1 to S6. The summary and conclusions on the last page tell the story.

There is no doubt that the schist has a high normal of around 50, even though near the contact it contains around 1% fine sulfides by volume. There is sufficient sulfide in the intrusives to explain the field values obtained.

Sincerely yours,



Arthur A. Brant

AAB:lu
Encl.

cc: R. Sheldon ✓
Western Nickel Ltd.
Hope, B. C.

PHYSICAL PROPERTIES LABORATORY REPORT ON

PACIFIC NICKEL SPECIMENS

P.P. Lab No	Footage	Rock Type	% Sulfides Apparent	LABORATORY		FIELD	
				Pulse Response millisec.	Resistivity ohm-meters	Surface Pulse Response millisec	
<u>DDH S-1</u>							
21	0- 25	S-1 is all in the quartz-mica-garnet schist with 12' cover.	<0.1% fine	18	4,700	70 T	
22	25- 50		0.1% fine	45	13,000		
23	50- 75		0.1% fine	56	12,000		
24	75-100		<0.1% fine	49	8,500		
25	100-125		<0.1% fine	107	7,200		
26	125-150		0.1% very fine	38	12,000		
27	150-175		<0.1% fine	99	6,300		
28	175-200		<0.1% fine	128	5,000		
29	200-225	0.1% fine	73	13,000			
30	225-250	<0.1% fine	94	18,000			
31	250-275	0.1% fine	80	4,100			
32	275-300	0.1% fine	67	7,200			
				<u>Av 71</u>			
<u>DDH S-2</u>							
33	0- 25	Hornblendic Pyroxenite	<0.1% very fine	12	2,100	86	
34	25- 50	Hornblendic Pyroxenite	<0.1% very fine	14	2,600		
35	50- 75	Hornblendic Pyroxenite with biotite talc alteration	0.1% medium fine	37	2,300		
36	75-100	Hornblendic Pyroxenite	0.5% medium fine	51	5,000		
37	100-125	Metamorphosed and altered schist	0-0.5% medium fine, very uneven	26	2,800		
38	125-150	Metamorphosed and altered schist	0.5-1.0% fine medium	72	2,200		
39	150-175	Metamorphosed and altered schist (core broke, two pieces)	0.1% fine	21 17	3,800 4,100		
39A	175-200	Altered schist and quartz, mica, garnet schist (core broke, two pieces)	<0.1% fine	13 150	1,900 50	Ferromagnesium Schist	
40	200-225	Quartz, mica, garnet schist	<0.1% fine	220	530		
41	225-250	Quartz, mica, garnet schist	<0.1% very fine	24	2,500		
42	250-275	Quartz, mica, garnet schist	No sulfides	220	1,800		

P.P. Lab.	Footage	Rock Type	% Sulfides Apparent	LABORATORY		FIELD	
				Pulse Response millisec.	Resistivity ohm-meters	Pulse Response millisec.	Surface Pulse Response millisec.
43	275-284	Quartz, mica, garnet schist	0.1% (?) very fine	200	1,900		
				<u>AV 77</u>			
<u>DDH S-3</u>							
44	0- 25	Hornblendic Pyroxenite	2% fine-med. & blebs	91	1,700		90
45	25- 50	Hornblendic diorite banded in about equal amount.	No sulfides	15	5,000		
46	50--75	Hornblendic Pyroxenite.	1% medium & blebs	20	180,000		
47	75-100	Hornblendic Pyroxenite with some biotite alteration	1% fine to coarse	19	130,000		
48	100-125	Hornblendic Pyroxenite with some biotite alteration	1% fine-med. and blebs		Too high for pulse reading		
49	125-150	Hornblendic Pyroxenite with some biotite alteration	0.1% very fine	35	4,300		
50	150-175	Diorite with some Pyroxenite inclusions	<0.1% very fine	19	2,100		
51	175-200	Hornblendic Pyroxenite with silicious bands	<0.1% fine with some blebs	45	2,000		
52	200-225	Fine grained hornblendic pyroxenite	0.1% very fine	66	500		
53	225-254	Quartz, mica, garnet schist	0.5% very fine	29	6,300		
				<u>AV 38</u>			
<u>DDH S-4</u>							
54	0- 25	Quartz-mica-garnet schist for all of S-4	<0.1% very fine	53	7,500		80
55	25- 50		No sulfides?	44	3,800		
56	50- 75		No sulfides?	130	2,600		
57	75-100		No sulfides	62	3,800		
58	100-125		No sulfides	89	4,700		
59	125-148		0.5-1.0% fine	31	6,000		
				<u>AV 68</u>			
<u>DDH S-5</u>							
60	0- 25	Hornblendic Pyroxenite	2%+fine-med. blebs	200	2,500		80
61	25- 50	Hornblendic Pyroxenite	2%+fine-med. blebs	190	2,900		
61A	50- 75	Hornblendic Pyroxenite	1% fine-med.	120	2,400		

P.P. Lab.	Footage	Rock Type	%	LABORATORY		FIELD	
				Sulfides Apparent	Pulse Response millisec.	Resistivity ohm-meters	Surface Pulse Response millisec.
62	75-100	Hornblendic Pyroxenite	2% fine-med.	29	2,600		
63	100-125	Hornblendic Pyroxenite	1% fine-med.	26	1,900		
64	125-150	Hornblendic Pyroxenite	2% fine-med.	40	1,600		
65	150-175	Hornblendic Pyroxenite	2% fine-med.	54	2,300		
66	175-200	Transitional to Hornblendic Peridotite	2-4% fine-med.	110	13,000		
67	200-225	Hornblendic Peridotite-medium to coarse grained	2% fine-coarse and blebs	90	1,800		
68	225-250	Transitional to Hornblendic Pyroxenite	2% med. and blebs	63	6,100		
69	250-275	Hornblendic Pyroxenite-altered in part	1% med. and blebs	41	540		
70	275-296	Hornblendic Pyroxenite, altered and bleached in part	5% coarse and blebs	80	970		

Av 94

DDH S-6

71	0- 25	Hornblendic Pyroxenite	0.1% fine	66	220,000		70
72	25- 50	Hornblende Diorite	<0.1% fine	7	530		
73	50- 75	Hornblendic Pyroxenite	0.1% fine	27	20,000		
74	75-100	" "	0.1%-med. few blebs		Too high for pulse reading		
75	100-125	Hornblende Diorite	<0.1% fine	36	30,000		
76	125-150	Hornblendic Pyroxenite	0.5% fine-med.	40	48,000		
77	150-175	" "	0.1-0.5% fine medium	25	2,100		
78	175-200	" "	<0.1% fine	15	6,100		
78A	200-225	" "	1% fine-med. & blebs	76	14,000		
79	225-250	" "	<0.1% fine	6	560		
80	250-275	Hornblende Diorite	<0.1% very fine	14	2,000		
81	275-300	" "	0.2% very fine	11	2,100		
		(core broke-two pieces)	fine	11	2,200		
82	300-305	Hornblende Diorite	0.1%-0.2% fine	9	8,600		

Av 27.

COMMENTS

- (1) The estimate of apparent percent sulfides was done by means of a hand lens and may be on the low side. There is considerable variation of sulfide particle size and the dissemination of the sulfides is very irregular in many of the specimens.
- (2) The high response specimens from holes S-3, S-5 and S-6 probably have a sufficient small particle sulfide content to account for the response.
- (3) The responses of the quartz-mica-garnet schist specimens from holes S-1, S-2, S-3 and S-4 vary from low to very high. There appears to be more of the pink quartz or garnet in the higher response specimens.
- (4) To determine more accurately sulfide content and constituent rock minerals, the following specimens have been sent for sulfur assay and thin section analysis.

<u>P. P. Lab. No.</u>	<u>Thin Section No.</u>	<u>Assay No.</u>
28	1	1
39A (The high response piece)	2A	
43	2	2
46	3	3
58	4	4
60	5	5
81	6	6

Drill Hole # & Footage	Physical Property Lab #	Rock Type & Estimated Sulfides	% Sulphur Assay	% Pyrite by Volume	(1) Response due to Sulfides content alone @ 20 per %	(2) response of drill hole	(2)-(1)	(3) field response at Hole	(3)-(1)
S-1 175-200'	28	Schist with 0.1% fine sulfides	0.74	1	20	71	51	70	50
S-2 275-284'	43	Schist -0.1% very fine sulfides	0.83	1	20	77	57	80	60
S-4 100-125'	58	Schist-No visible sulfides	0.60	0.8	16	68	52	80	64
S-3 50-75'	46	Pyroxenite-1% medium & blebs	1.42	1.9	38	38	0	90	52
S-5 0-25'	60	Pyroxenite-2% fine medium & blebs	3.20	4.3	86	94	6	80	-6
S-6 275-300'	81	Hornblende Diorite 0.2% very fine	1.19	1.6	32	27	-5	70	38

Av. for Schist

= 53

Av. for Int = 0

Av. for S

58

Av. for

28

CONCLUSIONS

The schist has a high normal 50-60, say.

The intrusive has a normal of around 20 which is about that encountered at Lynn Lake.

Sulfides are present in both the schists and intrusive but are fewer and finer in the schists.

There would seem to be enough sulfides in the intrusive to account for the responses over the intrusive, but there is no doubt that the schist has a high normal. The reason, therefore, we hope, will eventually become apparent from Mayper's work.

February 4, 1954

Arthur A. Brant

cc: P. Malozemoff

R. Sheldon, Western Nickel Ltd. ✓