PHYSICAL PROPERTIES LABORATORY REPORT ON

PACIFIC NICKEL SPECIMENS

009243

P.P. Lab No	Footage	Rock Type	% Sulfides Apparent	LABORATORY Pulse Response millisec.	LABORATORY Resistivity ohm-meters	FIELD Surface Pulse Response millisec
DDH S-1						
21	0- 25	S-1 is all in the quartz-mica-garnet schist with 12' cover.	<0.1% fine	18	4,700	70
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	
				Av 71		
DDH S-2						
33	0- 25	Hornblendic Pyroxenite	<0.1% very fine	12	2,100	80
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	

NEWMONT EXPLORATION LIMITED

BOX 366

JEROME, ARIZONA

February 4, 1954

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.

P.P. Lab.	Footage	Rock Type	% Sulfides Apparent	LABORATORY Pulse Response millisec.	LABORATORY Resistivity ohm-meters	FIELD Surface Pulse Response millisec.
43	275-284	Quartz,mica,garnet schist	0.1% (?) very fine	200	1,900	
				Av 77		
DDH S-3						
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 siliceous 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	
				Av 38		
DDH S-4						
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	
				Av 68		
DDH S-5						
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	% Sulfides Apparent	LABORATORY Pulse Response millisec.	LABORATORY Resistivity ohm-meters	FIELD 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	190	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)		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.

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