77

Item 15

4590 0015

NEWMONT EXPLORATION LIMITED
OFFICE OF THE SECRETARY
300 PARK AVENUE
NEW YORK 22, N.Y.

August 4, 1960.

Mr. H. H. Cazier, President,
Nevada Monarch Consol. Mines Corp.,
Wells, Nevada.

Dear Mr. Cazier:

As you have no doubt been advised, this company terminated its exploration work at Spruce Mountain on June 30th following a test of the anomalous zone along the Spence Fault. For your information, I am enclosing a copy of a brief report summarizing our work program and its results together with logs of the two diamond drill holes, one of which was put down on the Nevada Monarch property.

I had hoped to get up your way during a recent swing through eastern Nevada but a change of plans prevented this. I would like to take this opportunity, therefore, to thank you and your Directors for your cooperation in facilitating our program.

Best regards to you and to Mrs. Cazier.

Sincerely yours,

R. B. Fulton

R. B. Fulton

Enclosures
RBF:imd

NEWMONT EXPLORATION LIMITED
Office of the Secretary
300 Park Avenue
New York 22, N. Y.

August 3, 1960.

Exploration Program Spruce Mountain Mining District.

September 24, 1959 to June 30, 1960.

Geological reconnaissance and mapping of the Nevada Monarch and Index-Daley properties, as well as of some adjoining areas, coupled with induced polarization and resistivity surveys of the eastern part of the District, were carried out initially, during the period from October 1st to November 11th. The surface geological relationships are shown on the appended map (1" = 400').

Results of the geophysical work indicated one anomalous zone of possible interest situated on the southeast slope of Banner Hill, and shown on the map referred to above. The interpretation of these results included an estimate of sulphide content ranging from 2½% to 5% by volume, and the prediction, based somewhat on geological inference, that the sulphides occurred in granite porphyry beneath 300' to 600' of sediments. The position of a possible high sulphide content area in porphyry adjacent to the pre-mineral Spence Fault was deemed to be of sufficient interest to merit testing by drilling. An attempt to construct the necessary road to the drill site before the onset of winter was abandoned early in January of this year due to heavy snow. Road construction was resumed during March; and drilling, under contract to Boyles Brothers Drilling Company of Salt Lake City, commenced on April 12th.

Drill hole No. 1 was completed on June 8th at a depth of 786'; and No. 2, located approximately 1100' to the southwest, at 391' on June 23rd. Lithologic, assay and graphic logs of these holes are appended. No mineable section of ore grade material was found in either hole, whereas the geophysical indications of sulphide mineralization were qualitatively confirmed. No further investigation of the properties was believed justified on the basis of these results, and the program was terminated on June 30th.

NEWMONT EXPLORATION LIMITED

By R. B. Fulton

RBF:imd

NEWMONT EXPLORATION LIMITED
SPRUCE MT., NEVADA

(77)
Item 15

HOLE No. 1
DEPTH 786 feet on June 8, 1960
ELEV. 8547

Feet	
0 - 223	Limestone
223 - 229	Conglomerate with limestone fragments
229 - 333	Limestone
333 - 337	Quartzite
337 - 362	Limestone
362 - 422	Shale, carbonaceous and calciferous
422 - 488	Limestone
488 - 490	Conglomerate with limestone fragments
490 - 556	Limestone
556 - 606	Granite porphyry with numerous calcite veins. Sparse pyrite occuring as cubes and small clusters. Pyrite also occuring in thin gougy seams showing slickensides.
606 - 624	Granite porphyry with numerous calcite veins and well developed feldspars and quartz phenocrysts. Some biotite also present. Sulphide minerals includes pyrite, occisional blebs of chalcopyrite and narrow veinlets, mostly transverse to core, containing molybdenite. Total sulphide content less than 1%.
624 - 652	Same as 606 - 624 except sulphide mineralization very sparse.
652 - 652½	Granite porphyry, well mineralized fractures containing chiefly pyrite and some chalcopyrite.
652½ - 655	Same as 606 - 624. At 654, 1/8" veinlet containing pyrite, galena and molybdenite.
655 - 659	Same as 606 - 624 except quartz phenocrysts are larger, up to 1/8". At 659 a 2½" section containing an estimated 8% sulphides consisting of pyrite and chalcopyrite intimately associated in cross veinlets and disseminations.
659 - 671	Same as 606 - 624. At 671 approximately ½" massive pyrite with associated chalcopryite and galena.
671 - 694	Same as 606 - 624. Sparse mineralization consisting of blebs of chalcopyrite and gelena more frequently noted. Also more numerous quartz veinlets containing pyrite and occisional molybdenite.
694 - 719½	Same as 671 - 694 except occisional short sections of increased mineralization, chiefly pyrite. Total sulphide content below 1%. At 719½, 1/16" quartz veinlet containing considerable molybdenite.
719½ - 720	2 to 3% sulphides, chiefly pyrite, in granite porphyry
720 - 725	Same as 606 - 624, sparse mineralization.
725 - 732	Numerous veinlets, in granit porphyry, well mineralized with molybdenite.
732 - 738	Same as 606 - 624, sparse mineralization.
738 - 740	Numerous veinlets, in granite porphyry, well mineralized with molybdenite.
740 - 758½	Same as 606 - 624, sparse mineralization. At 758½, 2" veinlet, 4 to 5% sulphide, much chalcopyrite.
758½ - 786	Numerous quartz veinlets, in granite porphyry, maximum 1/8" wide, containing molybdenite.

NEWMONT EXPLORATION LIMITED, SPRUCE MT., NEVADA; HOLE No. 1

Samp. No.	From	To	Ft.	Feet recov. split core samp.	Au ozs. per ton	Ag ozs. per ton	Pb % per ton wet	Cu % per ton	Mo % per ton	Zn % per ton
101	556	565	9	0.3	0.010	0.4	0.05	0.057	None	1.273
	565	585	20	0	No sample					
102	585	595	10	0.8	Trace	0.3	0.23	0.025	None	
103	595	603	8	5.2	0.010	0.3	0.04	0.029	None	
104	603	606	3	0.7	Trace	0.3	0.03	0.025	None	
105	606	615	9	2.0	Trace	0.3	0.07	0.100	None	
106	615	619	4	3.0	Trace	0.2	0.06	0.029	None	0.645
107	619	626	7	6.0	Trace	0.3	0.04	0.037	None	
108	626	629	3	2.7	Trace	0.3	0.05	0.050	None	
109	629	635	6	3.1	Trace	0.2	0.19	0.037	0.004	
110	635	641	6	3.6	Trace	None	0.04	0.029	0.001	
111	641	646	5	5.0	Trace	0.1	0.10	0.042	0.002	0.817
112	646	650½	4½	3.5	Trace	0.3	0.09	0.084	0.004	
113	650½	653	2½	2.0	Trace	0.4	0.05	0.277	0.008	
114	653	656	3	3.0	Trace	0.4	0.17	0.079	None	
115	656	658	2	1.0	Trace	0.1	0.02	0.029	None	
116	658	665	7	2.0	Trace	0.2	0.04	0.264	None	0.728
117	665	668½	3½	1.0	Trace	0.2	0.03	0.042	0.002	
118	668½	671	2½	2.0	Trace	0.1	0.05	0.035	0.002	
119	671	679	8	2.0	Trace	3.0	0.53	0.117	0.005	
120	679	689	10	6.0	Trace	0.1	0.06	0.033	0.001	
121	689	694	5	4.5	Trace	0.3	0.08	0.025	0.004	0.527
122	694	698	4	4.0	Trace	0.2	0.04	0.025	0.017	
123	698	702	4	3.7	Trace	0.1	0.04	0.029	0.002	
124	702	706	4	4.0	Trace	0.1	0.06	0.025	0.002	
125	706	710	4	3.8	0.005	0.3	0.04	0.046	None	
126	710	712	2	2.0	Trace	0.4	0.04	0.037	None	0.240
127	712	714	2	2.0	Trace	0.3	0.05	0.029	0.007	
128	714	719½	5½	2.0	Trace	0.1	0.04	0.037	0.007	
129	719½	725½	6	6.0	Trace	0.3	0.03	0.071	0.014	
130	725½	732	6½	3.0	Trace	0.2	0.06	0.053	0.021	
131	732	735	3	2.0	Trace	0.3	0.06	0.063	0.018	0.640
132	735	738	3	2.8	Trace	0.2	0.03	0.038	0.015	
133	738	743	5	3.8	Trace	0.2	0.05	0.050	0.006	
134	743	750	7	4.0	Trace	0.2	0.05	0.046	0.027	
135	750	754	4	3.0	Trace	0.4	0.05	0.025	0.004	
136	754	758½	4½	4.3	Trace	0.4	0.06	0.073	None	0.687
137	758½	762½	4	4.0	Trace	0.3	0.06	0.088	0.007	
138	762½	767½	5	4.0	Trace	0.4	0.04	0.035	0.005	
139	767½	774½	7	6.0	Trace	0.2	0.03	0.037	0.015	
140	774½	778	3½	3.5	Trace	0.3	0.05	0.029	0.014	
141	778	781	3	2.8	Trace	0.2	0.06	0.084	0.004	0.552
142	781	783	2	2.0	Trace	0.6	0.07	0.197	0.012	
143	783	786	3	2.0	Trace	0.1	0.06	0.033	0.012	

Cable Address: Nikrip

Lucius Pitkin, Inc.

ESTABLISHED 1880

METALLURGICAL CHEMISTS AND CONSULTANTS

Weighers - Samplers - Assayers - Analysts

Mineralogists - Metallograpers - Spectroscopists

Main Office and Laboratories

47 FULTON STREET PITKIN BUILDING NEW YORK 38, N. Y.

SPECTROGRAPHIC ESTIMATES

Report No. 591937

Date July 1, 1960
"Our 45th Year"

The result as indicated by our analysis of 1 sample(s) of Ores
from Newmont Exploration Limited

Marked: Client's letter June 23, 1960

and submitted to us, is as follows:

BY QUALITATIVE SPECTROGRAPHIC ANALYSIS

Silicon	Major
Aluminum	Major
Calcium	Major
Iron	Minor
Magnesium	0.X
Titanium	0.X
Barium	0.X
Sodium	0.0X
Strontium	0.0X
Potassium	0.0X
Copper	0.0X
Manganese	0.0X(High)
Lithium	0.00X
Nickel	0.00X
Lead	0.00X
Beryllium	0.00X(low)
Tin	0.00X(low)

Spruce not composite
drill core sample pulps from Drill hole No. 1.

Elements checked but not found: Tungsten, Molybdenum, Zinc, Cadmium, Indium, Chromium, Arsenic, Antimony, Bismuth, Gallium, Germanium.

Copies: 3- Newmont Exploration Limited
360 Park Avenue
New York 22, N.Y.
Att: Mr. R. B. Fulton

LUCIUS PITKIN, INC.

In

By

Per R. H. Bell

NOTE: Major = above 5% estimated. Minor = 1-5% estimated. .X, .0X, .00X, etc. = concentration of the element estimated to the nearest decimal place — e.g. .0X = .01-.09% estimated.
The numbers in parenthesis indicate the estimated relative concentration of the element among the various samples.
The determinability varies considerably among the elements and also depends upon the amount and nature of the sample. "Not Found" therefore means not detected in the particular sample by the technique employed. 0 = Less than.

Form 106 3-59 5M

NEWMONT EXPLORATION LIMITED
P. O. BOX 90
MONTROSE, COLORADO

Grand Junction, Colo.
July 8, 1960

Mr. R. B. Fulton
300 Park Avenue
19th Floor
New York 22, New York

Re: Drilling, Spruce Mt., Nev.

Dear Bob:

Following is a record of Hole No. 2. The log will follow in a later letter.

From	To	Feet	Core recovered at plug price	Formation	Remarks
0	30	30	2.0 ft. of NX	Limestone	Overburden - Check to 30 ft.
30	32	2	2.0 ft. of NX	"	
32	70	38	32.0 ft. of NX	"	
70	122	52	32.0 ft. of NX	"	
122	157	35	12.0 ft. of NX	"	
157	169	12	1.5 ft. of NX	"	
169	185	16	None		Drilled with tri-cone
185	191	6	0.0 ft. of NX		Cemented at 191
191	197	6	3.0 ft. of NX	Limestone	
197	211	14	2.5 ft. of NX	"	
211	243	32	None		Drilled with tri-cone
243	258	15	None		Drilled with tri-cone
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
258	266	8	6.0 ft. of NX	Porphyry	Recovered core split for assay
266	271	5	3.0 ft. of NX	"	"
271	275	4	1.5 ft. of NX	"	"
275	282	7	3.0 ft. of NX	"	"
282	285	3	3.0 ft. of NX	"	"
285	292	7	7.0 ft. of NX	"	"
292	299	7	6.0 ft. of NX	"	"
299	302	3	3.0 ft. of NX	"	"
302	311	9	4.5 ft. of NX	"	"
311	316	5	4.0 ft. of NX	"	"
316	321	5	1.0 ft. of NX	"	"
321	331	10	4.0 ft. of NX	"	"
331	332	1	1.0 ft. of NX	"	"
332	336	4	4.0 ft. of NX	"	"
336	339	3	2.6 ft. of NX	"	"
339	349	10	3.0 ft. of NX	"	"
349	359	10	3.0 ft. of NX	"	"
359	362	3	0.0		
362	367	5	4.0 ft. of NX	Porphyry	Recovered core split for assay
367	372	5	3.0 ft. of NX	"	"
372	376	4	4.0 ft. of NX	"	"
376	379	3	3.0 ft. of NX	"	"
379	385	6	6.0 ft. of NX	"	"
385	391	6	2.5 ft. of NX	"	"

Rods stuck at 385, all rods recovered, core barrel in hole. Reamed NX from 30 to 321 & then hole stopped. Hole cemented at 285 during reaming

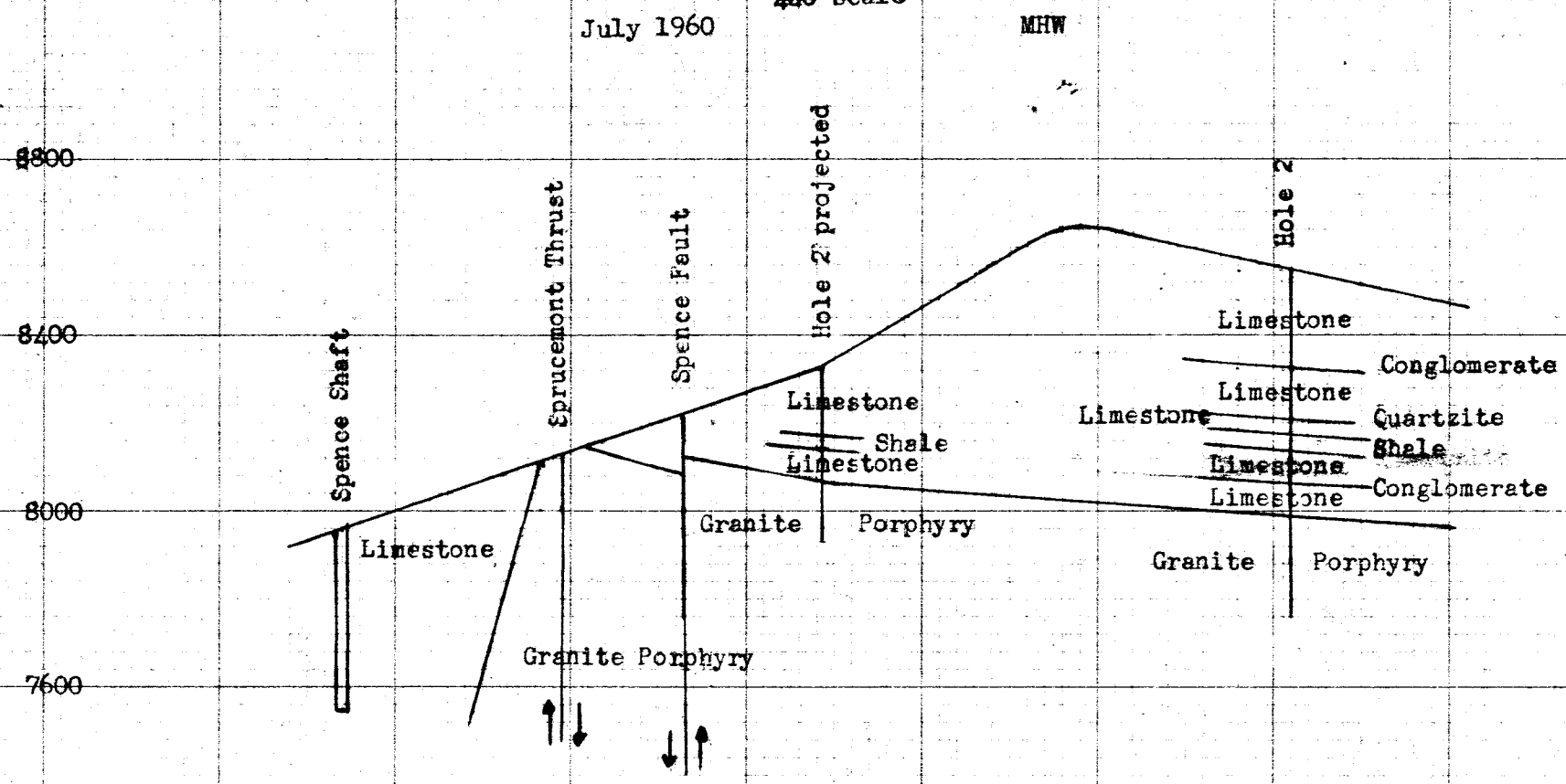
NEWMONT EXPLORATION LIMITED, SPRUCE MT., NEVADA, HOLE No. 2

Samp. No.	From	To	Ft.	Feet recov. split core samp.	Au ozs. per ton	Ag ozs. per ton	Pb % per ton wet	Cu % per ton	Mo % per ton	Zn % per ton
144	258	266	8	6.0	Trace	0.1	0.06	0.075	0.016	0.736
145	266	271	5	3.0	Trace	0.1	0.04	0.054	0.048	
146	271	275	4	1.5	Trace	0.1	0.04	0.050	0.041	
147	275	282	7	3.0	None	0.1	0.05	0.058	0.016	
148	282	285	3	3.0	None	0.2	0.06	0.058	0.028	
149	285	288	3	3.0	Trace	0.3	0.04	0.054	0.016	0.634
150	288	289½	1½	1.5	Trace	1.0	1.00	0.160	0.299	
151	289½	292	2½	2.5	Trace	0.2	0.09	0.037	0.154	
152	292	299	7	6.8	Trace	0.4	0.15	0.054	0.038	
153	299	302	3	3.0	Trace	0.3	0.12	0.033	0.032	
154	302	311	9	4.5	Trace	None	0.05	0.025	0.062	0.601
155	311	316	5	4.8	Trace	None	0.05	0.029	0.060	
156	316	321	5	1.0	Trace	None	0.03	0.029	0.197	
157	321	331	10	4.0	Trace	None	0.08	0.033	0.052	
158	331	332	1	1.0	Trace	0.1	0.05	0.029	0.056	
159	332	336	4	4.0	Trace	0.1	0.04	0.033	0.052	0.401
160	336	339	3	2.6	None	None	0.04	0.021	0.018	
161	339	349	10	3.0	Trace	0.1	0.04	0.037	0.034	
162	349	359	10	3.0	Trace	0.2	0.06	0.033	0.127	
	359	362	3	0.0	No sample					
163	362	367	5	4.0	Trace	0.1	0.04	0.025	0.020	
164	367	372	5	3.0	None	0.1	0.04	0.021	0.022	0.093
165	372	376	4	4.0	Trace	0.1	0.03	0.025	0.030	
166	376	379	3	3.0	Trace	0.1	0.06	0.021	0.029	
167	379	385	6	6.0	Trace	0.1	0.06	0.021	0.050	
168	385	391	6	2.5	Trace	0.3	0.10	0.037	0.238	

NEWMONT EXPLORATION LIMITED
SPRUCE MOUNTAIN, NEVADA
SECTION X-X'

Through Spence Shaft, Hole 2 projected and Hole 1
Bearing North 24 degrees East
Looking Northwesterly
400 scale

July 1960



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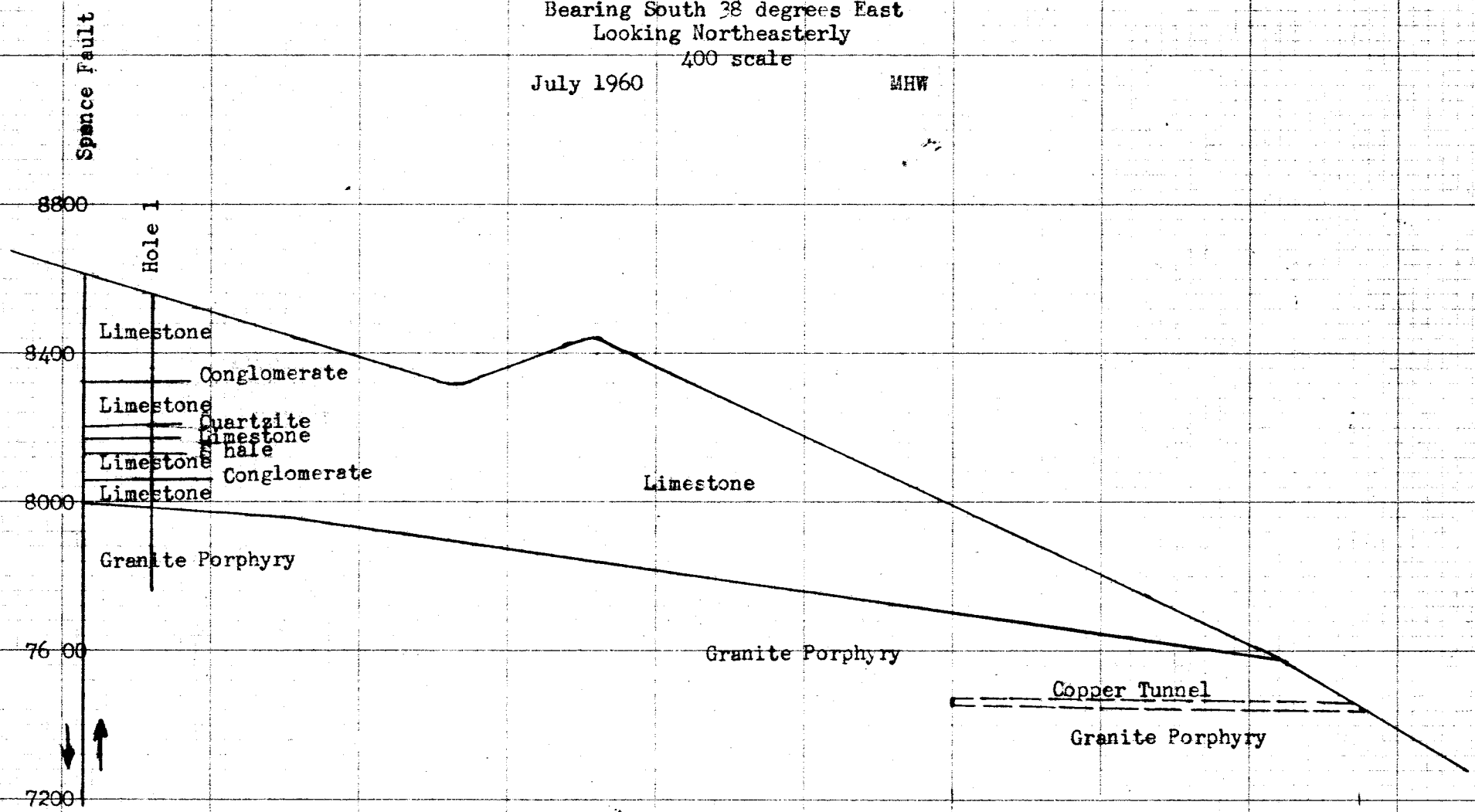
Item 15

NEWMONT EXPLORATION LIMITED
SPRUCE MOUNTAIN, NEVADA
SECTION Y-Y'

Through Copper Tunnel and Hole 1
Bearing South 38 degrees East
Looking Northeasterly
400 scale

July 1960 MHW



77 Item 15

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NEWMONT EXPLORATION LIMITED

SPRUCE MOUNTAIN, NEVADA

GRAPHIC LOG OF HOLES

JULY 1960

50 Scale

LIMESTONE | CONGLOMERATE | QUARTZITE | SHALE | GRANITE PORPHYRY

ELEV.

8550
8500
8450
8400
8350
8300
8250
8200
8150
8100
8050
8000
7950
7900
7850
7800

HOLE 2

Collar elev. 8327

Sulphur assays

258-266	0.736%	per ton
285- 288	0.634%	" "
302-311	0.601%	" "
332-336	0.401%	" "
367-372	0.098%	" "

0-155 Limestone

155-185 Shale, non-calciferous

185-258 Limestone

258-282 Granite porphyry with numerous calcite stringers & well developed feldspars & quartz phenocrysts. Sparse pyrite occuring as cubes, also occisional showing of marcasite & some biotite. Sulphide minerals includes pyrite associated with chalcopyrite & galena, & narrow quartz veinlets containing moly. Total sulphide content less than 1%.

282-288 Same as 258-282 except very gougy & much more calcite.

288-289½ Same as 258-282 except very gougy, much more calcite & heavily mineralized. Massive pyrite with chalcopyrite, galena & moly. Approx. 40% sulphides.

289½-292 Same as 282-288

292-303 Same as 258-282

302-321 Same as 258-282 except less galena

321-332 Same as 258-282 except less galena & less calcite

332-358 Same as 258-282.

358-379 Granite porphyry with numerous calcite stringers. The porphyry is well fractured & much of the pyrite has been altered to limonite. Total sulphide content less than 1% consisting of pyrite, chalcopyrite, galena & moly.

379-387 Same as 358-379 except no calcite

387-391 Same as 358-379.

HOLE 1

Collar elev. 8547

Sulphur assays

556-565	1.273%	per ton
615-619	0.645%	" "
641-646	0.817%	" "
658-665	0.728%	" "
689-694	0.527%	" "
710-712	0.240%	" "
732-735	0.640%	" "
754-758½	0.687%	" "
778-781	0.552%	" "

0-223 Limestone

223-229 Conglomerate with limestone fragments

229-333 Limestone

333-337 Quartzite

337-362 Limestone

362-422 Shale, carbonaceous & calciferous

422-488 Limestone

488-490 Conglomerate with limestone fragments

490-556 Limestone

556-606 Granite porphyry with numerous calcite veins. Sparse pyrite occuring as cubes and small clusters. Pyrite also occuring in thin gougy seams showing slickensides.

606-624 Granite porphyry with numerous calcite veins and well developed feldspars & quartz phenocrysts. Some biotite also present. Sulphide minerals includes pyrite, occisional blebs of chalcopyrite, & narrow veinlets, mostly, transverse to core, containing moly. Total sulphide content less than 1%.

624-652 Same as 606-624 except sulphide mineralization very sparse.

652-652½ Granite porphyry, well mineralized fractures containing chiefly pyrite and some chalcopyrite.

652½-655 Same as 606-624. At 654, 1/8" veinlet containing pyrite, galena & moly.

655-659 Same as 606-624 except quartz phenocrysts are larger, up to 1/8". At 659 a 2½" section containing an est. 8% sulphides consisting of pyrite & chalcopyrite intimately associated in cross veinlets & disseminations.

659-671 Same as 606-624. At 671 approx. ¼" massive pyrite with associated chalcopyrite & galena.

671-694 Same as 606-624. Sparse mineralization consisting of blebs of chalcopyrite and galena more frequently noted. Also more numerous quartz veinlets containing pyrite & occisional moly.

694-719½ Same as 671-694 except occisional short sections of increased mineralization, chiefly pyrite. Total sulphide content below 1%. At 719½ a 1/16" quartz veinlet containing moly.

719½-720 2 to 3% sulphides, chiefly pyrite, in granite porphyry.

720-725 Same as 606-624, sparse mineralization

725-732 Numerous veinlets, in granite porphyry, well mineralized with moly. Total sulphide less than 1%.

732-738 Same as 606-624, sparse mineralization.

738-740 Numerous veinlets, in granite porphyry, well mineralized with moly. Total sulphides less than 1%.

740-758½ Same as 606-624, sparse mineralization. At 758½ a 2" veinlet, 4 to 5% sulphide, much chalcopyrite.

758½-786 Numerous quartz veinlets, in granite porphyry, maximum 1/8" wide, containg moly. Sulphide less than 1%.