TELEPHONE MUTUAL 4-7734

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616 CREDIT FONCIER BLDG. 850 WEST HASTINGS STREET VANCOUVER 1, B.C.

REPORT

on the

GEOCHEMICAL SURVEY

of the

MS CLAIMS

NEW INDIAN MINES LTD.

ENDAKO, B.C.

June 30, 1964.

F.J. Hemsworth, P.Eng., Consulting Mining Engineer.

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Department of

Mines and Petroleum Resources

ASSESSMENT REPORT

NO. 557 MAP.

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## INTRODUCTION

A geochemical survey for molybdenum was carried out on the MS group of mineral claims, Endako, B.C., for New Indian Mines Limited, during May and June of 1964. Geochemistry or soil testing was done as part of an exploration program aimed at finding bodies of molybdenite mineralization. Soil samples were tested at a laboratory at the University of British Columbia, and the results reported in parts per million of molybdenum.

This report on the soil testing survey and the accompanying map are submitted in compliance with the Mineral Act claiming geochemical work for assessment purposes on the group of claims outlined in the text of the report.

### LOCATION AND PROPERTY

The MS claims are situated in the Omineca Mining Division, adjacent to Highway No. 16, four miles west of Endako, B.C. The geographical position is latitude N 54° 08°, longitude W 125° 03°.

The MS Nos. 1-9 claims were staked in 1962 by Murray Swetz of Vancouver, B.C. Particulars of the claims are as follows:-

Tag No.	Record No.					
453957	14685					
453958	14686					
453959	14687					
453960	14688					
453961	14689					
	14690					
	14691					
	14692					
453965	14693					
	453957 453958 453959 453960 453961 453962 453963 453964					

#### GENERAL

In the spring of 1962, interest in molybdenum in the Endako area was sparked by the favorable results of diamond drilling, carried out on the old Stella molybdenite property, by Endako Mines Ltd. The drilling showed that the surface values had been impoverished by weathering, and that better grade could be expected at depth. Canadian Exploration Company concluded a financing arrangement with Endako Mines, whereby the funds were provided for exploration and production. During the last two years Canex has spent over a million dollars on development of the property. Diamond drilling, surface stripping, and underground work has proved a multi-million ton deposit of molybdenite of low but consistent grade. Production on a basis of 10,000 tons per day is scheduled for mid-summer of 1965.

The MS group adjoins the northwest corner of the Endako Mines property.

#### TOPOGRAPHY

The most northerly MS claims, MS Nos. 1-5, are situated in the Endako River valley, and consist of flat-lying, marshy, grazing land. The depth of overburden is indeterminate. Soil sampling is assumed to be effective to a depth of 30 feet of overburden. In places the depth of overburden in the valley floor may be greater, making soil sampling ineffective in these areas. The southerly four claims MS Nos. 6-9, are on the hillside where depth of overburden is only a few feet.

Elevations on the claims vary from 2,250 feet at the road to 2.600 feet at the south end.

### GEOLOGY

The government geological survey map 631A shows the MS claims to be underlain by Topley granite. The Topley intrusives are acidic granitic rocks of probable Jurassic age. These are the host rocks for molybdenite at the Endako mine.

There are no rock outcrops, but trenches were dug to bedrock by Murray Swetz in 1963. The rock exposed by the trenches is a granitic rock, grey to pink in color, and made up of pink and white feldspar, quartz, biotite, and hornblende.

### GEOCHEMICAL SURVEY

#### Survey of Grid

The location line of the claims, which runs in a southerly direction, was surveyed by Brunton compass and chain, and used as a baseline. Stations were marked at 400-foot intervals along the baseline. From these stations lines were run east and west to the claim boundaries. Soil samples were taken at 200-foot intervals along these east-west sidelines. The grid thus formed at 400-200 foot intervals as shown on the attached plan.

## Soil Sampling Method

The field crew consisted of two men. At the sample intervals, (200 feet), a shallow hole was dug with a garden trowel. The hole was deep enough to get below the surface humus. The soil samples were taken at a regular depth of six inches. Two tablespoons of soil were placed in a small plastic bag, sealed with scotch tape, labelled, rolled up and secured with an elastic band. Samples were carried back to camp in a small packsack.

## Analyses

The samples were shipped to the University of British Columbia where they were analysed for parts per million of molybdenum. The procedure used was the thiocyanate, stannous chloride method. The results of the analyses of the 234 samples are shown on the plan and are listed in the appendix.

## Interpretation of Results

In order to clarify the results of the survey, samples carrying greater than 2 parts per million but less than 20 parts have been colored orange on the plan; and samples carrying more than 20 parts per million have been colored red. Seven samples showed 20 parts or greater, which can be considered anomalous. However, the ground where these samples were taken, is a flat-lying marshy area, and it is probable that the molybdenum was carried down by drainage from the adjoining hillside and concentrated on the valley floor.

Isolated highs were found, but no pattern of anomalous values which could be contoured rationally. The results were patchy with a few isolated highs showing up. Haloes or anomalous conditions which might reflect or suggest the presence of large orebodies were not evident.

It is recommended that additional samples be taken at 100-foot intervals around the anomalous highs. If the results of these extra samples show anomalous results, one diamond drill hole in the best area is recommended.

Respectfully submitted,

June 30, 1964.

F.J. Hemsworth, P.Eng., Consulting Mining Engineer.

## **APPENDIX**

# University of British Columbia - Hut M-12 Soil Samples Received from New Indian Mines Ltd.

## Analysis for Mo in parts per million

# Hot H<sub>2</sub>SO<sub>4</sub> Attack

Sample No.	Mo (ppm)	Sample No.	Mo (ppm)	Sample No.	Mo (ppm)
N1001	0.8	N1038	0.8	N1075	4.0
N1002	<i>f</i> 0.8	N1039	<b>₹ 0.8</b>	N1076	10.0
N1003	7 0.8	N1040	<i>f</i> 0.8	N1077	8.0
N1004	7 0.8	N1041	0.8	N1078	0.8
N1005	0.8	N1042	0.8	N1079	0.8
N1006	7 0.8	N1043	160.0	N1080	0.8
N1007	2.0	N1044	4.0	nlogi	0.8
N1008	8.0	N1045	4.0	N1082	0.8
N1009	2.0	N1046	20.0	N1083	0.8
N1010	0.8	N1047	20.0	N1084	0.8
N1011	0.8	N1048	0.8	N1085	0.8
N1012	<b>≠ 0.8</b>	N1049	0.8	N1086	0.8
N1013	0.8	N1050	0.8	N1087	0.8
N1014	<b>≠ 0.8</b>	N1051	0.8	N1088	0.8
N1015	0.8	N1052	£ 0.8	N1089	0.8
N1016	2.0	N1053	<i>f</i> 0.8	N1090	6.0
N1017	56.0	N1054	<i>f</i> 0.8	N1091	0.8
N1018	0.8	N1055	0.8	N1092	0.8
N1019	0.8	N1056	£ 0.8	N1093	0.8
N1020	0,8	N1057	<b>₹ 0.8</b>	N1094	0.8
N1021	0.8	N1058	£ 0.8	N1095	2.0
N1022	0.8	N1059	<b>≠ 0.8</b>	N1096	0.8
N1023	0.8	N1060	0.8	N1097	2.0
N1024	0.8	N1061	<b>≠ 0.8</b>	N1098	4.0
N1025	<b>≠ 0.8</b>	N1062	0.8	N1099	2.0
N1026	0.8	N1063	0.8	N1100	0.8
N1027	0.8	N1064	2.0	N1101	0.8
N1028	6.0	N1065	2.0	N1102	240.0
N1029	16.0	N1066	2.0	N1103	110.0
N1030	6.0	N1067	3.0	N1104	4.0
N1031	0.8	N1068	3.0	N1105	0.8
N1032	2.0	N1069	40.0	N1106	0.8
N1033	12.0	N1070	£ 0.8	N1107	1 0.8
N1034	2.0	N1071	2.0	N1108	2.0
N1035	0.8	N1072	2.0	N1109	4.0
N1036	0.8	N1073	0.8	N1110	10.0
N1037	£ 0.8	N1074	2.0	N1111	4.0

<sup>/</sup> less than

Sample No.	Mo (ppm)	Sample No.	Mo (ppm)	Sample No.	Mo (ppm)
N1112	3.2	N1153	0.8	N1194	0.8
N1113	8.0	1873 7 57	, 2.0	N1195	2.0
N1114	10.0	N1155	4.0	N1196	0.8
N1115	8.0	N1156	£ 0.8	N1197	3.0
N1116	6.0	N1157	2.0	N1198	2.0
N1117	2.0	N1158	0.8	N1199	4.0
N1118	2.0	N1159	0.8	N1200	2.0
N1119	3.0	N1160	0.8	N1201	2.0
N1120	4.0	N1161	0.8	N1202	3.0
N1121	0.8	N1162	0.8	N1203	0.8
N1122	2.0	N1163	3.0	N1204	2.0
N1123	3.0	N1164	4.0	N1205	3.0
N1124	18.0	N1165	2.0	N1206	3.0
N1125	14.0	N1166	0.8	N1207	2.0
N1126	3.0	N1167	3.0	N1208	2.0
N1127	11.0	N1168	18.0	N1209	4.0
N1128	0.8	N1169	2.0	N1210	2.0
N1129	3.0	N1170	2.0	M1211	<i>f</i> 0.8
N1130	18.0	N1171	2.0	N1212	4.0
N1131	6.0	N1172	2.0	N1213	3.0
N1132	2.0	N1173	4.0	N1214	0.8
N1133	4.0	N1174	2.0	N1215	2.0
N1134	0.8	N1175	3.0	N1216	0.8
N1135	0.8	N1176	10.0	N1217	0.8
N1136	0.8	W1177	0.8	N1218	4.0
N1137	6.0	N1178	3.0	N1219	6.0
N1138	4.0	N1179	4.0	N1220	4.0
N1139	3.0	N1180	2.0	N1221	2.0
N1140	2.0	N1181	0.8	N1222	0.8
N1141	<b>≠ 0.8</b>	N1182	2.0	N1223	2.0
N1142	£ 0.8	N1183	2.0	N1224	0.8
N1143	0.8	N1184	2.0	N1225	0,8
N1144	2.0	N1185	0.8	N1226	2.0
N1145	2.0	N1186	0.8	N1227	4.0
N1146	4.0	N1187	2.0	N1228	0.8
N1147	3.0	N1188	2.0	N1229	0.8
N1148	0.8	N1189	0.8	N1230	3.0
N1149	2.0	N1190	0.8	N1231	2.0
N1150	£ 0.8	N1191	0.8	N1232	0.8
N1151	£ 0.8	N1192	2.0	N1233	4.0
N1152	0.8	N1193	0.8	N1234	2.0

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DOMINION OF CANADA:

PROVINCE OF BRITISH COLUMBIA.

To Wit:

In the Matter of The Geochemical Survey of the MS Nos. 1-9 Mineral Claims, Endako, B.C., Omineca Mining Division.

F.J. Hemsworth,

of 616-850 West Hastings St., VANCOUVER 1, B.C.

in the Province of British Columbia, do solemnly declare that the following is a true statement of expenditures

D.R. Foster - M.Sc May 19-31 @ \$500.00/Month209.68
June 1-11/1964183.33
D. Franks - Helper - June 1-11/1964 @\$2.00/hour144.00
F.J. Hemsworth - P.Eng May 19-31 -
13 days \$35.00/day455.00
Cost of Analyses234.00
Total \$1,226.01

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

I Kembworts

Declared before me at the

of Vancouver

, in the

Province of British Columbia, this

3rd

day of

July, 1964.

, A.D.

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

Sub-mining Recorder

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GEOCHEMICAL SURYEY

MS CLAIMS, ENDAKO, B.C.

A00 feet to I inch JUNE 30, 1964

NUMBERS INDICATE PARTS PER MILLION OF MOLYBOEN OF

TO ACCOMPANY REPORT BY F. J. HEMSWORTH P. ENG.

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J.J. Nemsworth.

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