

18 October, 1966

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Mr. Harry Yen,
President,
Mega Mineral Ltd.,
Suite 424, 718 Granville St.,
Vancouver 2, B. C.

Dear Sir,

As requested by you, I have prepared a report on the 98- claim copper property of your Company near Winlaw, in Slocan and Nelson Mining Divisions, Province of British Columbia.

The report is based on my examinations of the property on July 4 and September 17, 1966 and on study of several of the items listed in its Bibliography.

The report, including my recommendations, is submitted herewith.

Yours respectfully,

Harold A. Quinn

HAQ/mem
Enclosure

SUMMARY

Mega Mineral Ltd. holds a large group of mineral claims extending southeasterly for $4\frac{1}{2}$ miles from Winlaw, B. C. A few of the 98 claims in the group are invalid because of overstaking.

The property is underlain by granite containing a few mineralized inclusions of older rocks. Small amounts of copper have been found in *Omudie* the property, both in the granite and in the inclusions. Because of this and because of its proximity to the former high grade copper ore-bodies of the old Queen Victoria mine, it is recommended that the sum of \$15,000 be spent for prospecting and other primary exploration of the property.

INTRODUCTION

On July 4, 1966 I flew to the property from Nelson, B. C. in Hiller SI4 helicopter CF-UVC of Okanagan Helicopters Ltd. Piloted by Don MacKenzie. Mr. Jack Howard of Slocan (City) guided me to a copper showing at elevation of about 5,600 feet on or near the common boundary of mineral claims H.Y. 13 and 14 and about 500 feet northwest of the common initial post of these 2 claims. I examined and sampled this showing and inspected the rocks in its vicinity.

On September 17, 1966, after some helicopter landing pads had been cut, I flew to the property with Jack Howard from Jones' store, Winlaw, in Hiller (12E7) helicopter of Okanagan Helicopters Ltd., from Nelson, B. C., piloted by Don MacKenzie. Guided by Mr. Howard, I inspected and sampled 2 mineral showings, one of them at 4,900 feet elevation, about 200 feet west of a small lake on or near mineral claim M20, the other at 5,550 feet elevation, just north of group of tiny lakes on top of the mountain, about 550 feet N. 35° W.* of the initial post common to mineral claims H.Y. 15 and 16.

THE PROPERTY

The Winlaw copper property of Mega Mineral Limited comprises a rectangular group of 98 adjoining mineral claims held by location, just south-east of the hamlet of Winlaw, on the Slocan River. The larger northern part of the group is in Slocan Mining Division, while the southern part is in Nelson Mining Division.

I visited the office of the Mining Recorder in Nelson on July 4, 1966 and obtained the following information from affidavits (Mineral Act, form G) filed by the stakers of those claims staked in Nelson Mining Division:

<u>Claim</u>	<u>Tag</u>	<u>Record</u>	<u>Staked</u>	<u>Recorded</u>
S.G. 5	712065	8660	May 21, 1966	June 2, 1966
to 14	to712074	to8669	"	"
H.Y. 13	712033	8670	"	"
to 20	to712040	to8677	"	"
M 1	712001	8680	"	"
to M 10	to712010	to8689	"	"
V.M. 1	712041	8678	"	"
V.M. 2	712042	8679	"	"

I did not visit the Mining Recorder at Kaslo to obtain information on the claims staked in Slocan Mining Division, but Mr. G. N. Munro of Forrest, Gray & Munro, solicitors for Mega Mineral Ltd., has kindly supplied the following data (15)*:

<u>Claim</u>	<u>Record</u>
S.G. 1	9098
to 4	to 9101
S.G. 15	9102
to 20	to 9107
H.Y. 1	9108
to 12	to 9119
M 11	9120
to 20	to 9129
V.M. 3	9082
to 10	to 9089
V.M. 13	9090
to 20	to 9097
H 1	9130
to 20	to 9149

The claims listed above, for both mining divisions, were staked by Harry Yen (H.Y.), Stan Gibson (S.G.), Victor Mar (V.M.) and Mundy McRae (M) of Vancouver and Jack Howard (H) of Slocan.

When I inspected the initial post of claim H.Y. 13 on July 4, 1966 its metal claim tag has been torn off, probably by means of an axe.

* All bearings and directions given in this report are astronomic. The present magnetic declination on the property is about 21°50' east.

* Numbers in parentheses refer to Bibliography at end of report.

Inspection of Mineral Claim Map 82F/12E (M) appears to indicate that several of the claims of Mega's Winlaw property were staked over parts of the earlier RAM and MAR groups of claims of Tony Semeniuk of Nelson, B.C. The claims of these two groups were staked by Cliff Presley and Doug Pretty of Kamloops, B.C. on March 24 and 25, 1966 and recorded at Nelson and Kaslo on April 4, 1966. Mr. Stan Gibson of Mega Mineral Ltd. estimates that 8 to 10 of Mega's southwestern claims may be invalid because of this overstaking.

LOCATION AND ACCESS

The rectangular Winlaw property of the Company extends southeasterly from the highway (No.6) at the hamlet of Winlaw for about $4\frac{1}{2}$ miles, along the mountain-ridge between Pedro and Winlaw creeks. Throughout most of its length (N.W.-S.E.) the property is 6 claims wide (N.E.-S.W.). Its central part is at latitude $49^{\circ}34'N.$ and longitude $117^{\circ}32'W.$, 12 miles northwest of the town of Nelson. Elevation of its surface varies from 2700 to about 5,700 feet above sea-level. See Location Map in this report.

Access to the property is difficult. At present it can be reached only on foot or by helicopter. A logging road extends southeasterly up the valley of Pedro Creek, southwest of the property. Another logging road extends northwesterly from Beasley nearly to Falls Creek and the southeasterly end of the property.

HISTORY

As far as I know, the property has practically no history. As mentioned earlier, it was staked late in May, 1966 by Messrs. Yen, Gibson, Mar, McRae and Howard.

Two old rock trenches which I saw in the southern part of the property indicate that some prospecting was done there in past years. At the trench 550 feet N. $35^{\circ}W.$ of the initial post of claim H.Y. 15 there is an old claim post bearing metal tag No. 443727, indicating that former claim Copper No. 2 was located here by Nick Strebchuck on January 12, 1965. A still older metal tag on the same post bears the No. 384065 and is marked "Final Post" (or "No.2"?).

Since May, 1966 Mega Mineral Ltd. has prospected part of the property, cut a helicopter landing pad on or near claim M20 and drilled and blasted several small rock trenches 200 to 300 feet or so west of the small lake on or near claim M20.

GEOLOGY

Map 1090A, by Dr. H. W. Little of the Geological Survey of Canada, shows the geology of the area (Nelson $W\frac{1}{2}$) at scale of 4 miles to 1 inch (2). This map indicates that all of the property, except its northwestern corner, is underlain by granite and granodiorite of the Nelson batholith of the Cretaceous period. Except for a few small inclusions of older rocks and hybrid rocks found here and there, my limited observations confirm the above.

Map 1090A indicates that the northwestern corner of the property is occupied by various gneisses, with minor crystalline limestone and skarn. Southeasterly from the property, near Beasley and Taghum, the batholith (granite, etc.) contains some inclusions of older rocks up to 2 miles long. These, and most of the other smaller inclusions to the north and northwest, toward Mega's property, contain substantial amounts of chalcopyrite.

MINERALIZATION

As mentioned above, the xenolithic inclusions of older rocks in the granite contain substantial amounts of the copper mineral, chalcopyrite, with lesser bornite. There appears to be a rude zoning of copper in the batholith and its inclusions, with the amount of copper increasing southeasterly from Winlaw to the old Queen Victoria Copper mine near Beasley on Highways 3A and 6, where bodies of high grade copper ore were found and mined (2, 6, 7, 8, 9, 10, 11, 12, 13, 16). These bodies of copper ore were in and adjacent to a large inclusion of older rocks 4 miles southeast of the property of Mega Mineral Ltd. Undiscovered additional bodies of copper ore probably exist at the Queen Victoria mine. Other

inclusions in the Nelson batholith of the region.

According to the records of the B. C. Dept. of Mines & Petroleum Resources, the Queen Victoria mine produced 44,423 tons of ore from 1907 to 1927. From this ore were obtained 1,404,884 pounds of copper, 19,993 ounces of silver and 168 ounces of gold (16). In 1960 Swift Copper Mines Ltd. acquired the mine and made a trial shipment of 60 tons of ore to the A. S. & R. smelter at Tacoma, Washington in 1961. This ore contained 4.35% copper and 1.3 oz. silver per ton (12,13). Some 3,500 tons of ore treated by the 150-ton Kenville mill at Taghum in 1961 or early 1962 is reported to have contained 0.9% copper (12). Manager of the mine in 1961 was E. Derrough (13) (or Harold Darragh? H.A.Q.). Some trenching, surveying and mapping was done in summer of 1966 for the present owner, Great West Mining Corporation Ltd. of Vancouver (Wolfen, Shulman et al).

In a rock cut I inspected at north side of Highways 6 and 3A, just east of Bonnington Falls, there are traces of chalcopyrite disseminated in a massive grey syenitic "granodiorite". Slight amounts of chalcopyrite, bornite and pyrite occur in fractures here and in small veinlets of quartz and of quartz-feldspar. According to Jack Howard, an occurrence of molybdenite, now under water, was reported by Van Dulkan (sp) along the north bank of Kootenay River about $\frac{1}{4}$ mile south east of here.

Two trenches which I examined on a logging skid road near the head of Smallwood Creek, between 2 and 3 miles southeast of the Winlaw property of Mega Mineral Ltd., expose heavy pyrite and magnetite mineralization in an unmapped inclusion of dark grey plagioclase - hornblende gneiss of unknown size. Substantial amounts of chalcopyrite occur in and associated with the magnetite. A selected sample which I took here contained 0.39% copper, 38.8% iron, and 0.1 oz. and trace of silver and gold per ton, respectively.

From all of the above, it can be seen that copper is quite widely distributed in the Nelson batholith and its inclusions in the area northwest of the Kootenay River. Because of this, there are quite reasonable chances of finding copper deposits of commercial size and grade, especially in inclusions of substantial size.

Mineral Showings

A few details are given here about the 3 mineral showings examined by me on the property:

(1) 500' N.W. of I.P. of H.Y. 13 & 14

On the steep eastern slope of the mountain here, at elevation of about 5,600 feet, and only 500 feet from the southeastern end of the property, I examined a small rock cut on July 4, 1966 (17). This cut, probably made by about 2 holes blasted 10 years or more ago into the rocky side of the mountain, is 5 feet long (N-S), 5 feet deep (W) and 4 feet high. It exposes a small inclusion of dark gray, fine-grained gneissic older rocks 5 to 7 feet wide and 30 to 40 feet long trending northwesterly in light grey, massive, granitic host rock.

Looking westerly at the face of this cut one sees what appears to be 3 zones of heavy sulphide mineralization, with associated impressive oxidation and green copper stains. Closer inspection, however, reveals only one band of massive, fine-grained pyrite 1 to 2 inches wide which has been offset 12 inches by one fault and 18 inches by another fault. These faults trend northerly to northeasterly and dip steeply. The band of pyrite trends westerly to northwesterly and dips steeply. It and the xenolithic rock immediately adjacent to it contain 2 to 5% of chalcopyrite.

The granite at this mineral occurrence is much-fractured. One set of fractures, 1 to 4 inches apart, trends northeasterly and dips northwest at 75°. A weaker set, 3 feet or so apart, trends northwesterly and dips northeast at 50°.

A selected sample of the best mineralized material here contained 1.67% copper and 0.9 and 0.01 ounce per ton, respectively, of silver and gold (14).

(2) 200' W. of Small Lake on or Near Claim M20

Near a helicopter landing pad cut here in fairly thick forest at 4,900 feet elevation there are six or more newly-made rock trenches. I inspected 4 of these, all within 150 feet or so of the landing pad. They expose pink, massive, medium-grained syenite, with no visible sulphide mineralization. One of them contains a small inclusion of (volcanics?). Another shows 1-2% magnetite disseminated in porphyritic syenite. Still another contains a few, small, pale green stains. No sample was taken for assay from any of the trenches.

(3) 550' N.35°W. of I.P. of Claims H.Y. 15 & 16

At 5,550 feet elevation, just north of a group of tiny lakes on top of the mountain, here, I examined an old rock trench about 8 feet long, 5 feet wide and 3 feet deep that trends N.60°W. in massive, light grey, medium-grained hornblende diorite or syenite, containing 1% disseminated small grains of magnetite. The few fractures in the rock display prominent green and bluish green stains a small amount of disseminated chalcopyrite and bornite, especially in and near small clots or indistinct masses of mafic minerals such as biotite, possibly faint relicts of inclusions of older rocks. Assay of my selected composite sample of green-stained, mineralized rock from the trench showed it to contain 0.69% copper and 0.02 oz. gold per ton.

As mentioned earlier under History, the No.1 post of former mineral claim Copper No.2 is 20 feet south of the trench.

PRODUCTION AND ORE RESERVES

There has been no production of ore from the property and no bodies of ore have been found on it.

Most of it was staked for the first time in May of this year and has not yet been adequately prospected.

CONCLUSIONS

- (1) Mega Mineral Ltd. holds a large, rectangular group of mineral claims which extends southeasterly from Winlaw, B.C. for $4\frac{1}{2}$ miles to the headwaters of Falls and Smallwood creeks.
- (2) A few of the 98 claims in the group are probably invalid because of being staked over earlier claims held by others.
- (3) The property is underlain almost entirely by granitic rocks of the Nelson batholith, containing a few small mineralized inclusions.
- (4) Small amounts of copper were found on the property by earlier prospectors, both in the granite and in the inclusions.
- (5) Because copper mineralization is known to occur on the property and because bodies of high grade copper ore were found at the old Queen Victoria mine only 4 miles southeast of the property, the latter is thought to be a favourable place to prospect for copper ores.
- (6) The southeastern part of the property appears to be more favourable for occurrence of copper than are its other parts.
- (7) Because of the above factors, a modest expenditure for prospecting and other primary exploration of the property is warranted.

RECOMMENDATIONS

- (1) Prospect the property, paying particular attention to inclusions, remnants and xenoliths of older rocks. Most of these will be darker in colour than the prevailing light grey to pinkish grey granite of the area.
- (2) Find the posts of the eastern claims of the Ram group and plot both these and the posts of the overstaked and adjacent Mega claims on an enlarged air photograph of the area. If this can be

done successfully, it will indicate exactly what part or parts of Mega's property is invalid because of overstaking.

- (3) Do more drilling and blasting of rock trenches in the area of the old trench found 550 feet N. 35° W. of the initial post of mineral claims H.Yl 15 and 16. Bulldoze, as may be necessary here, to expose more bedrock for the rock trenching.
- (4) Do reconnaissance soil and silt sampling of the property.
- (5) If feasible at low cost, repair the Smallwood Creek logging road so that the southeastern end of the property may be reached more cheaply than by helicopter.
- (6) Have the results of the above work plotted, interpreted and assessed by a qualified and experienced geologist or mining engineer.

ESTIMATE OF COST

(1) Prospecting 2 men for 2 months @\$30/day/man-----	\$ 3,600
(2) Finding and plotting claim posts 2 men for 2 weeks @\$30/man/day-----	840
(3) Rock trenching-----	5,500
(4) Reconnaissance soil & silt sampling 2 men for 1 month @\$30/man/day-----	1,800
(5) Assaying, plus analyses of soil samples-----	1,000
(6) Repair of logging road-----	1,000
(7) Interpretation & plotting of results-----	300
(8) Contingency-----	960
TOTAL ESTIMATED COST-----	<u>\$15,000</u>

BIBLIOGRAPHY

- (1) Cairnes, Clive E. 1934 Slocan Mining Camp, British Columbia; Geological Survey of Canada, memoir 173, pp. 117. Ottawa. (Describes geology and ores of an area north and east of Slocan City, north of property of Mega Mineral Ltd.)
- (2) Little, Heward W. 1960 Nelson Map-Area, West Half, British Columbia (82 F W $\frac{1}{2}$); Geol. Surv. Canada, mem. 308, pp.205, Ottawa. (May 1090A, in pocket, shows geology of the Mega property at scale of 4 miles to 1 inch).
- (3) Dept. Mines & Petroleum Resources 1966 Mineral Claim Maps 82 F/12E (M) and 82F/11W (M); scale 1" = $\frac{1}{2}$ mile, Victoria.
- (4) Dept. Mines & Technical Surveys 1962 NELSON, B. C.; topographic map, sheet 82F, scale 1:250,000 (1"=4 miles, approx), Ottawa.
- (5) Dept. Lands, Forests & Water Resources 1962 SLOCAN, B. C., Kootenay Land District; topographic map, sheet 82F/NW, scale 1:126,720 or 1 inch = 2 miles, contour interval 100 Ft., Victoria.
- (6) O'Grady, B.T. 1928 Queen Victoria Consolidated Mines Ltd.; Minister of Mines B. C., annual report 1928, pp. C319-320. Victoria.
- (7) Price, Franklin L. C. 1962 Private Interim Report on the Queen Victoria property of Great West Mining Corp. Ltd., Vancouver, 9 pages & 2 maps, May 30, 1962, Vancouver.

- (8) Fawley, Allan P. 1961 Private Report on the Queen Victoria property of Great West Mining Corp. Ltd., December, 1961, Vancouver.
- (9) Mulligan, Robert 1952 Bonnington Map Area, B. C.; Geol. Surv. Canada, paper 52-13, Ottawa.
- (10) Sirola, John 1962 Geophysical Survey of Great West Mining Corp. Property, Nelson, B. C.; Private report of June 7, 1962, pp. 8, plus 16 drawings (plans & profiles), West Vancouver, (Gives results of survey of the Queen Victoria property by spontaneous polarisation.
- (11) Price, F. L. C. 1962 Geophysical Report on Bell Group, Nelson Mining Division for Great West Mining Corp. Ltd.; pp. 5, May - June, 1962, Vancouver.
- (12) Price F.L.C. 1963 Summary Report of Exploration Work Completed to March 15, 1963 on Copper Property (Queen Victoria) of Great West Mining Corp. Ltd. near Nelson, B. C.; 17 pages, Vancouver.
- (13) Fyles, James T. 1961 Queen Victoria (Swift Copper Mines Ltd.); Minister of Mines B. C., ann. rept. 1961, pp. 66-67, Victoria.
- (14) Coast Eldridge Engineers & Chemists Ltd. 1966 Certificates of Assay of September 21 and about October 19, 1966 of samples 71511 and 71523, respectively, Vancouver.
- (15) Munro, G. Neville 1966 Letter of October 17, 1966 to the author re title of Mega Mineral Limited to the mineral claims of the Winlaw property, North Vancouver.
- (16) Dept. of Mines 1955 Table I - Recorded Lode-Metal Production; Index No. 3 to Publications of the B. C. Dept. of Mines 1937 to 1953 incl., p.209, Victoria.
- (17) Dept. Mines & Tech. Surveys? PASSMORE, B. C.; topographic map, sheet 82F/12E, Scale 1:50,000, Ottawa.

Respectfully submitted,

Harold A. Quinn
B.Sc. Ph.D. P.Eng.

Vancouver, B. C.
October 18, 1966

CERTIFICATE

I, Harold Arthur Quinn, do hereby certify that:

- (1) I am a practicing Consulting Geologist and Mining Engineer with offices and residence at 82 Mayfair Tower, 845 Hornby Street, Vancouver, Province of British Columbia, Canada.
- (2) I have received the following university degrees:
 - (a) B.Sc. (hons.) in Mining Engineering from Queen's University, Kingston, Ontario, 1941.
 - (b) M.Sc. in Geology from Queen's University, 1942.
 - (c) Ph.D. in Geology from Cornell University, Ithaca, New York, U.S.A., 1950
- (3) I have practiced by profession for more than 25 years.
- (4) I am a member, in good standing, of the Association of Professional Engineers of the Province of Ontario and Yukon Territory.
- (5) I am a fellow of the Geological Society of America and of the Geological Association of Canada, and a member of the Canadian Institute of Mining and Metallurgy.

- (6) I am the author of 20 published reports, articles, papers and maps on mining and geological matters in Canada and various other Countries.
- (7) This certificate is part of the attached report on Winlaw Property of Mega Mineral Ltd., Slocan Area, B. C., dated October 18, 1966.
- (8) This report is based on my examinations of the property on July 14 and September 17, 1966 and on study of several of the items listed in its Bibliography.
- (9) I have no direct, indirect or expected interest in the properties or securities of Mega Mineral Ltd.

Harold A. Quinn
B.Sc. Ph.D. P.Eng. (Ont. & Yukon)

Vancouver, B. C.
October 18, 1966

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