KERR ADDISON MINES LIMITED
405 - 1112 WEST PENDER STREET
VANCOUVER 1, B.C.

C 12 1972

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G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.
E.C.J.

94 E

Kennco Chapelle Property
Thutade Lake area B.C

- 1972

Mr. D. A. Barr,
Vice-President,
Kennco Explorat
One Bentall Cen
Suite 730 - 505
Vancouver 1, B

Dear Dave:

Re: Chappelle Creek Property

Prompted by your letter of November 27, 1972 we submit herewith, our revised proposal for work on the Chappelle Creek property.

Basically we envision a first year programme which would enable us to determine by diamond drilling, whether or not the vein structure and ore grade mineralization persist to a vertical depth of 500 feet. We believe that such a depth is necessary for a viable operation, and we estimate the cost of this drilling to be $30,000.00.

At the completion of this drilling (but still within the first year), Kerr Addison would have the right to terminate the option or proceed to do such work as may be necessary before deciding to go underground. This work could consist of additional drilling, bulldozer work, construction of an air strip etc., but we would want the nature of this work and the total expenditure to be left to our discretion.

The second phase of the work would be to drive an adit or a decline to explore the vein at elevation 5,200 or lower. During this phase it would probably be desirable to test the vein at depth by diamond drilling from cross cuts.

Our revised proposal is summarized as follows :-

1. Kerr Addison would commit to expend a minimum of $30,000.00 on the property during the first year of option.

2. Kerr Addison would commit to a cumulative expenditure of $200,000.00 by the end of the second year of option if desiring to continue the agreement into a second 12 month period.

KERR ADDISON MINES LIMITED
405 - 1112 WEST PENDER STREET
VANCOUVER 1, B.C.

COPY

December 8, 1972

9M E

Please attach to previous correspondence

Mr. D. A. Barr,
Vice-President,
Kennco Explorations (Canada) Limited,
One Bentall Centre,
Suite 730 - 505 Burrard Street,
Vancouver 1, B.C.

Dear Dave:

Re: Chappelle Creek Property

Prompted by your letter of November 27, 1972 we submit herewith, our revised proposal for work on the Chappelle Creek property.

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KERR ADDISON MINES LIMITED
405 - 1112 WEST PENDER STREET
VANCOUVER 1, B.C.

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3. Kerr Addison would commit to a cumulative expenditure of $350,000.00 by the end of the third year of option if desiring to continue the agreement into a third 12 month period.

4. Kerr Addison would commit to a cumulative expenditure of $500,000.00 by the end of the fourth year if desiring to continue the option into a fourth 12 month period.

5. At the end of the fourth year or before, if the $500,000.00 expenditure has been made, Kerr Addison will have the right to form a new company capitallized at 3 million shares to acquire and develop the property further. Of the primary issue of 750,000 shares, Kennco would receive 300,000 shares (10% of total) and Kerr Addison 450,000 shares. Thereafter share issues would be made at the discretion of the board of directors to finance development, and Kennco will have the right to participate to the level of 35% of any financing issue, providing that it will not be able to participate in any succeeding issue to a greater percentage than in the immediately preceding issue.

6. Clauses such as reporting on work, representation on the boards of the new company, keeping claims in good standing etc. are pretty well standard, and would be included in any agreement.

Many thanks Dave for the additional technical data we received recently and for the opportunity of re-submitting our proposal.

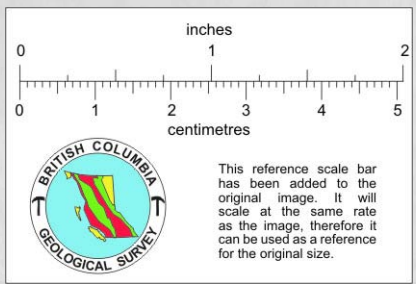
Best regards.

Yours very truly,

W. M. Sirola

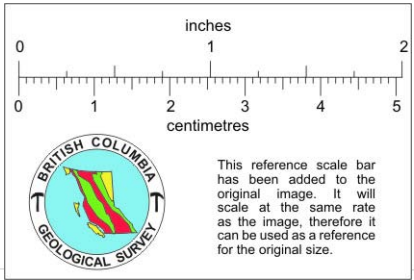
WMS/ah

cc P.M. KAVANAGH
G.M. HOGG



Dec 21/12

Option taken by
Consent at 250,000
1st yr. expenditure with
+/million total over 3 yrs
for 50% after payout.



KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

94 E

To G. M. Hogg **From** W. M. Sirola attach to previous

Subject KENNCO EXPLORATION - CHAPPELLE CLAIMS
TOODOGGONE RIVER AREA, B.C. (94-E) **Date** December 28, 1972 1972

J.U.S. ✓
P.M.K. ✓
G.M.H. ✓
R.D.S.
I.D.B.
M.D.R.
E.C.J.

Herewith a copy of Dave Barr's letter of December 20, 1972 re Chappelle Creek.

The deal with Conwest is an unusually generous one as far as Kennco is concerned. I disagree with the first year's committal of $250,000. because it implies driving an adit on the vein as stage one of Conwest's effort. Secondly I disagree with carrying Kennco's 50% interest through production and I further disagree with sharing the cash flow equally after Conwest has got back its capital investment. It seems to me that this arrangement is an effort to recover all of Kennco's exploration in that area, quite apart from the $300,000. or so that they may have spent on Chappelle Creek in three seasons.

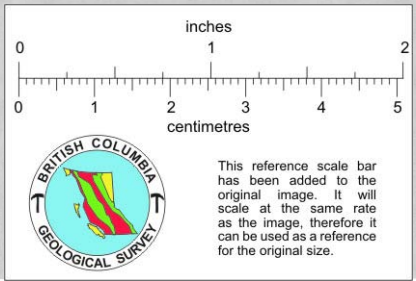
Much as I would have liked to see Kerr Addison involved in this situation I would first like to know that there is some possibility of mineable tonnage before committing to this type of deal.

Bill

WMS/ah W. M. Sirola

The terms of this deal are very stiff for Conwest considering the probable nature of the prospect.

Thos Jan 2/73.



KENNCO EXPLORATIONS,(WESTERN) LIMITED
ONE BENTALL CENTRE
SUITE 730-505 BURRARD STREET
VANCOUVER 1, B.C.

December 20th, 1972

Mr. W. M. Sirola,
Kerr Addison Mines Limited,
405-1112 West Pender St.,
Vancouver 1, B. C.

Dear Bill: Re: Chappelle Claims, B.C.

This will acknowledge and thank you for your letter of December 8, 1972 stating terms of Kerr Addison Mines Limited's proposal to further explore our Chappelle claims.

Following careful analysis of your proposal and six other offers recently submitted for our consideration, we have decided to accept a proposal from Conwest Exploration Company Limited.

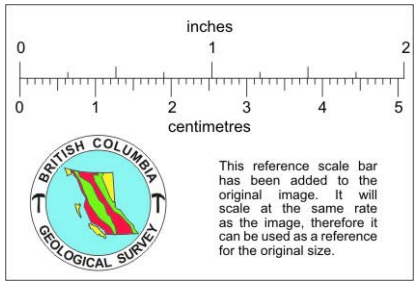
The principal terms of the Conwest proposal are that Conwest commits to spend $250,000 within 12 months of signing an agreement and has the right to spend a further $750,000 within 30 months of signing. At any time within 30 months of signing Conwest may give notice of a production decision. Upon having spent an aggregate of $1,000,000 and elected to commence production it will acquire a 50% interest. Kennco's 50% interest is carried through production and Conwest recovers its financing costs as a first charge against 80% of cash flow. The remaining 20% of cash flow will be paid in equal portions to Kennco and Conwest until costs are repaid, at which time the cash flow will be shared equally.

We very much appreciate the time and effort which you have devoted to submitting a proposal.

Sincerely,

D. A. Barr
Vice-President

DAB/fh



KENNCO EXPLORATIONS,(WESTERN) LIMITED
ONE BENTALL CENTRE
SUITE 730-505 BURRARD STREET
VANCOUVER 1, B.C.

October 4, 1972

Mr. G.M. Hogg,
Chief Geologist - Exploration,
Kerr Addison Mines Limited,
P.O. Box 91 - Commerce Court West,
Toronto, Ontario

Dear Glen: Re: Chappelle Property, B.C.

This will acknowledge and thank you for Kerr Addison's offer as expressed in your letter of September 26 to participate with Kennco in further development of our Chappelle claims in British Columbia.

After considerable deliberation we have decided to accept another offer and I have notified Bill Sirola of our decision today.

I would like to take this opportunity of expressing my appreciation for the time and effort involved in Kerr Addison's evaluation of our data, both on and off the property.

Sincerely,

D.A. Barr

DAB/cm

KERR ADDISON MINES LIMITED
405 - 1112 WEST PENDER STREET
VANCOUVER 1, B.C.

DEC 12 1972

COPY

Glen. Do you have the file on this?

December 8, 1972

J.H.S.
P.M.K.
G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.D.R.
I.H.F.
E.G.M.

Mr. D. A. Barr,
Vice-President,
Kennco Explorations (Canada) Limited,
One Bentall Centre,
Suite 730 - 505 Burrard Street,
Vancouver 1, B.C.

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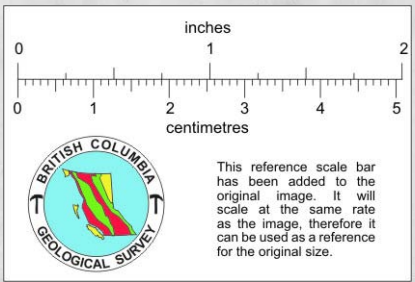
W. M. Sirola

WMS/ah

cc. P.M. Kavanagh
G.M. Hogg



KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

To G. M. Hogg **From** P. M. Kavanagh

Subject Kennco Chappelle Property, Toodoggone River Area, B.C. **Date** December 5, 1972

During a telephone conversation with him this afternoon, Bill Sirola said that he would recommend that we resubmit a proposal slightly modified from yours dated September 26th. The change Bill had in mind was a willingness at the beginning of the second year to commit to a cumulative expenditure by the end of the second year of $200,000 rather than the $100,000 commitment in your proposal. It would follow that the commitment at the beginning of the third year would be for a cumulative expenditure of $350,000 by the end of that year instead of the $250,000 commitment in your proposal.

When he assured me that our minimum initial commitment of $30,000 could be spent early enough in the first year so that if we wished to we could spend more money during the first year before having to make a sizeable second year commitment, I agreed to his modifications and instructed him to submit a revised proposal to Kennco with just those two revisions.

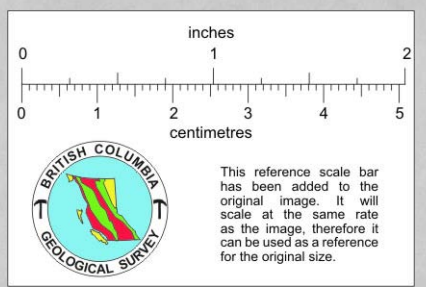
The $500,000 commitment at the beginning of the 4th year would remain as is.

Paul

PMK:lfr

Paul M. Kavanagh

cc: W. M. Sirola



DEC - 1 1972

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

J.H.S.
P.M.K. ✓
G.M.H. ✓
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.
E.C.J.

To P. M. Kavanagh **From** W. M. Sirola

Subject KENNCO CHAPPELLE PROPERTY
TOODOGGONE RIVER AREA, B.C. 94-E **Date** November 29, 1972

Would you please correct my memorandum of November 23, 1972 which showed only "Toodoggone, B.C. 94-E" as the subject. Please write above this "Kennco Chappelle Property".

I enclose an up to date summary of the work on this property together with three geological maps and a report on metallurgical testing of the Chappelle Creek ore. These came from Dave Barr a few days ago.

The metallurgy was done at Kennecott's Salt Lake laboratory and indicates that a combination of flotation and cyanidation provides recoveries of 98% of the gold and 95% of the silver.

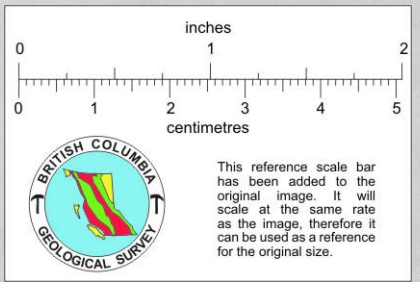
I mentioned in my last memorandum that I would modify Clause 2 of the Kerr submission to Kennco in such a way as to permit a reasonable underground look at the mineralization. My original estimate of the cost of this phase (which included surface diamond drilling), was $400,000.00. I now think that by reducing the length of the exploratory drift to 800 feet, both the drilling and the drifting could be done for approximately $200,000.00.

If it is of any interest at all, the Discovery mine in the Yellowknife district operated a 100 ton mill for seven years with a grade of 1.2 to 1.5 oz of Au per ton. The gross value of this ore would be $42.00 to $52.50 @ $35.00 gold. The Chappelle grade is 18 oz of Ag and 1 oz of Au, for a gross value of $92.40 using $1.80 oz for Ag and $60.00 oz for Au. Such a grade should provide a cushion for errors in cost estimation and for escalations in mining costs. This assumes of course that the grade would persist in depth.

Bill

WMS/ah

W. M. Sirola



KENNCO EXPLORATIONS, (CANADA) LIMITED
ONE BENTALL CENTRE
SUITE 730-505 BURRARD STREET
VANCOUVER 1, B.C.

November 27, 1972

Mr. W.M. Sirola,
Kerr Addison Mines,
1112 West Pender Street,
Vancouver, B.C.

Dear Bill: Re: Chappelle, B.C.

Further to our previous discussions concerning our Chappelle claims, this is to notify you that a total of 170 claims, as depicted in the accompanying sketch map are included in the participation proposal.

We are anxious to select a partner for this venture in order to allow the participant sufficient time to prepare for the 1973 program at the property. Consequently we are asking that all offers be submitted in writing to our Vancouver office on or before December 15, 1972.

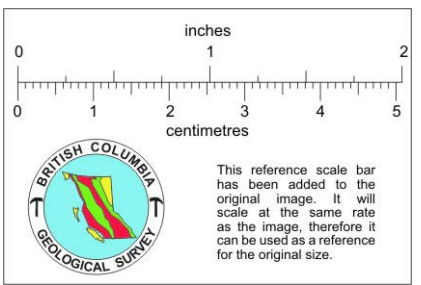
Also enclosed for your background information are the following data:

1) Geology Chappelle District 1" = 2640' Plate No. C-1
2) Geology Chappelle Claims 1" = 800' Plate No. C-2
3) Geology Chappelle Vein 'A' Area 1" = 100' Plate No. 11
4) Technical Report 71-07, Amenability Testing Sample from Kennco's Chappelle Prospect, March 17, 1971.
5) Extract from Progress Report July 1 - September 30, 1972, prepared by K.A. Grace.

Yours very truly

D.A. Barr

Encl.
DAB/cm



II CHAPPELLE VEIN AREA

(i) General

The main Chappelle vein area encompasses the Vein A, "Vein B", Vein C, Vein D, West Chappelle and North Quartz Zone mineral occurrences. The deposits consist essentially of silver-gold mineralized vein quartz intruded into Takla volcanics (Triassic-Jurassic) in close proximity to granitic intrusives of the Hogem Batholith (Cretaceous).

Previous work showed Vein A to have a strike length of about 725 feet with the mineralized sections indicating 416 tons/vert. ft. grading 1 oz/ton Au and 18 ozs/ton Ag.

Trenching on Vein A extended the mineralized strike length for about 20 feet to the northeast with no increase in indicated ore tonnage. Minor trenching exposed zones of alteration with quartz veinlets in the "Vein B" area; Vein C was exposed by hydraulic trenching for 320 feet, mapped and sampled. Vein D was exposed for about 150 feet, mapped and sampled. West Chappelle Vein was further exposed by trenching for a total of about 100 feet, mapped and sampled; and the North Quartz Zone was mapped and sampled. Although some high metal values were obtained from the above sampling, these are isolated and erratic, and no ore is indicated for any vein other than Vein A.

Field work during the third quarter was carried out under the supervision of Stephen Gower.

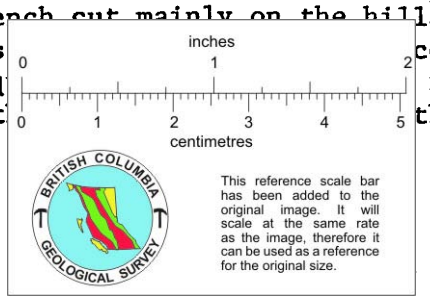
(ii) Vein A

Hydraulic trenching was used to investigate Vein A northeast of the end of the known exposure. Approximately 20 feet of quartz was exposed before the vein terminated against a series of major faults. Best assay values obtained in the new exposure were as follows:

Sample No.	Width	Ag oz/ton	Au oz/ton
KX22089	5.0'	1.37	0.031
KX22090	5.0'	6.30	0.29
KX22093	4.0'	1.82	0.088

These samples represent a surface area of approximately 50 square feet surrounded by quartz with less than 1 oz/ton Ag and 0.1 oz/ton Au.

A 400-foot long trench cut mainly on the hillside above Vein A in the search for other veins ce geochemical values, exposed no new significant q intersected Vein A within its known strike lengt theast of its



most southwesterly exposure. Approximately 15 feet of vein width was sampled and assayed as follows:

Sample No.	Width	Ag oz/ton	Au oz/ton
KX18522	2.0'	2.1	0.140
KX18523	4.5'	0.25	0.006
KX18524	3.5'	4.00	0.570
KX18525	5.0'	1.3	0.043

A further 700 feet of trenching in the Vein A area failed to expose any new quartz veining.

No changes were made in the indicated ore reserve figures calculated from 1971 surface sampling, which remained at 416 tons/vert. ft. at 18.0 oz/ton Ag and 1.0 oz/ton Au.

(iii) "Vein B"

Limited hydraulic trenching late in the field season exposed metavolcanics similar to the Vein A area. No major quartz veins were exposed, but a 75-foot wide zone of altered rock veined throughout by subparallel thin (1/16"-1/8") quartz veinlets was sampled and assayed with negative results for base and precious metals.

The "Vein B" area, with similar soil geochemical anomalies to Vein A, is still largely untested.

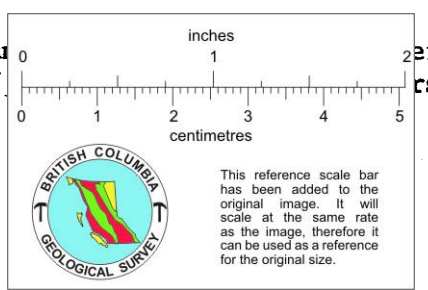
(iv) Vein C

The position of this vein was located in 1971 by the discovery of high grade quartz float in a valley about 3000 feet west-northwest of the camp and Vein A area.

The vein has been exposed by hydraulic trenching, and traverses a steep talus slope between 5800 feet and 6000 feet a.s.l. Mapping and calculations provide the following data:

Strike direction: 065°
Stike length exposed: 320'
Dip: ± Vert.
Average Width: 5 feet
% Exposure: 70%
Exposed tons/vert. foot of quartz: 85]
Inferred tons/vert.foot between trenches: 45] 130 t/v.ft

Although cut by nu[illegible]ersists as a mineable block for at least 260' of [illegible]rs to lens



out west of the exposed portions, but no data are available as to extensions under heavy talus to the east. Approximately 1000 feet are available for any extension in this direction before a major inferred fault is encountered.

Mineralization observed consists of pyrite, manganese oxides, limonite, barite, chalcopyrite and molybdenite.

Detailed channel sampling results are disappointing, all samples containing less than an ounce of silver per ton, and only two samples containing more than 1.0 ppm gold. Best assays are as follows:

Sample No.	Width	Ag oz/ton	Au oz/ton
KX21564	6.0'	0.43	.029
KX21587	2.3'	0.63	.013
KX21588	1.6'	0.75	.026
KX21592	5.3'	0.72	.036
KX21595	3.7'	0.69	.009

(v) Vein D

Vein D is located at elevation 5700 feet, some 2000 feet north-northeast of Vein A, on the west side of the pass between the camp area and the west fork of North Black Creek. The position of the vein was previously suspected from quartz float. A geochemical survey confirmed anomalous gold values in the area.

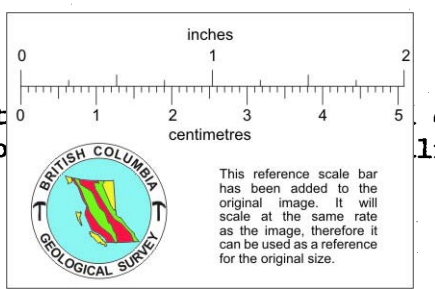
Hydraulic trenching over 150 feet of vein length exposed two en echelon quartz veins about 20 feet apart. Average width is 4 feet each. Strike direction is roughly parallel to Vein A. The veins are cut at the center of the exposure by a rotational fault, which turned the vein system through 70°, changing the dip from west in the northern part to east in the south.

Mineralization noted consists of pyrite, manganese oxides, and limonite. Silicification extends about 10 feet to either side of the veins.

The veins appear to be faulted off at the northernmost exposure, but could continue under cover to the south. Detailed mapping and channel sampling were completed, with nothing of economic interest being discovered. Gold values are anomalous ($\geq$ 0.04 ppm), best values being about 0.1 ppm. Silver assays are equivalent to background values ($<$ 2 ppm) for the Chappelle district.

(vi) West Chappelle

Work in 1971 locat outcrop of quartz vein in an area of silver/go lies about



5000 feet southwest of Chappelle Vein A.

This showing was exposed by hydraulic trenching, mapped, and sampled in detail. The occurrence is located in Takla andesitic volcanics (Triassic-Jurassic) within a few hundred feet of a faulted contact with Paleozoic limestone. Hydraulic trenching exposed a 5-foot wide limestone "bed" with quartz veining up to 10" in width mainly along the contacts with the andesite. The volcanics are silicified, with some minor quartz veining.

Details of the exposure are as follows:

Limestone "bed":	Length Exposed:	90'
	Strike:	090°
	Dip:	Vertical
	Width:	5'
Quartz Veining:	Length Exposed:	80'
	Strike:	090°
	Dip:	Vertical
	Width of Zone:	8' average

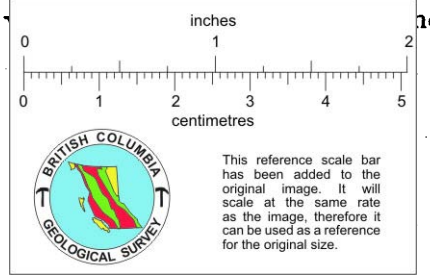
The limestone and quartz veining were channel sampled at 10-foot intervals (KX28020-28050, KX28101), and best results were:

Sample No.	Width	Ag oz/ton	Au oz/ton
KX28043	5'	0.94	.004
KX28044	3'	0.53	.003
KX28045	3'	0.59	.003
KX28046	6'	2.35	.094
KX28047	6'	0.35	.006

(vii) North Quartz Zone

This zone of numerous closely spaced quartz veins located 3000' northeast of Vein A, was previously discovered and randomly sampled. Although the zone has a strong soil and silt geochemical expression, rock assay values had been low.

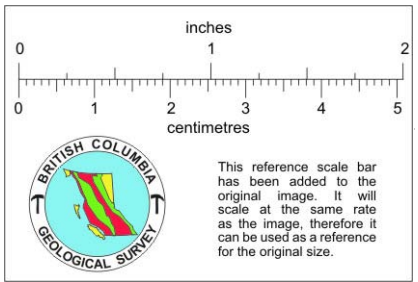
During the past quarter the zone was examined in detail, including extensive rock sampling on talus slopes over a wide area, and detailed mapping and sampling of the individual quartz veins. This showed an east-west trending quartz-veined zone, about 1000 feet x 300 feet, in siliceous, pyritic, andesitic volcanics. The veins vary in width from 1' to 10', with some strike exposures up to 40 feet in length; maximum strike length determined from a series of intermittent exposures is 140 feet. There are three dominant strike directions, 130° (115°-150°), 090°, and 070°. Best assay [illegible]ne 090°



direction, mainly in a series of closely spaced veins, as follows:

Sample No.	Vein Width	% Cu	% Zn	% Pb	oz/ton Ag	oz/ton Au
KX28009	1.5'	Tr	Tr	0.12	0.65	Tr
KX28010	1.5'	Tr	0.90	1.80	1.32	Tr
KX28011	4.0'	Tr	0.22	0.46	0.75	Tr
KX28018	2.0'	0.24	0.60	0.76	0.44	Tr

The mineralization appears to be of a different type to that of Vein A.



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TECHNICAL REPORT 71-07
AMENABILITY TESTING OF SAMPLE FROM KENNCO'S CHAPPELLE PROSPECT

March 17, 1971

BY

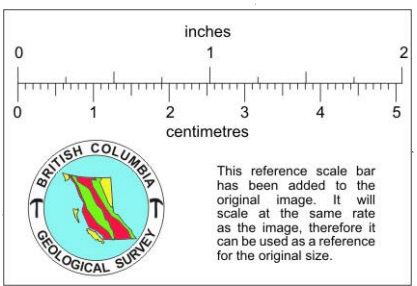
J. N. ROCO
A. W. LAST

034-0112

KENNECOTT RESEARCH CENTER -- METAL MINING DIVISION
KENNECOTT COPPER CORPORATION

Salt Lake City, Utah
H. R. Spedden, Director

C. S. Ney (5)
D. A. Barr
S. D. Michaelson (2)
L. B. Moon



KENNECOTT COPPER CORPORATION
METAL MINING DIVISION - RESEARCH DEPARTMENT
1515 MINERAL SQUARE
SALT LAKE CITY, UTAH

H. R. SPEDDEN
RESEARCH DIRECTOR

March 17, 1971

ADDRESS REPLY TO:
P.O. BOX 11299
SALT LAKE CITY, UTAH 84111

Mr. C. S. Ney
Kennco Explorations, (Western) Limited Canada
1 Bentall Centre
505 Burrard Street
Vancouver, B. C., Canada

Dear Mr. Ney:

The attached report presents the results of laboratory amenability tests made on a sample from the Chappelle Prospect.

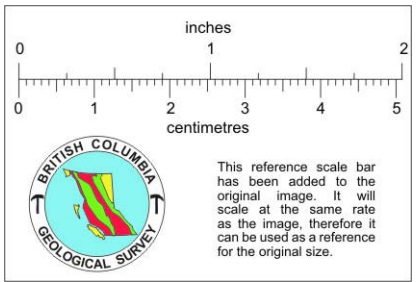
The sample submitted by Kennco assayed 2.37 ounces of gold per ton and 29.58 ounces of silver per ton. By straight-forward flotation, 87.8 percent of the gold and 86.4 percent of the silver was recovered; the ratio-of-concentration was 56.8 to 1. By conventional cyanide leaching, 98.4 percent of the gold and 96.3 percent of the silver was extracted from the sample.

Insufficient work was done to establish details of the two processes, flotation and cyanidation. The studies were sufficient, however, to establish that, for the sample tested, there exist no mineralogical or chemical factors which would pose a problem or problems in processing the ore. With a moderate amount of additional laboratory study, parameters for either flotation or cyanidation processing could be determined and a flowsheet for a production facility established.

Very truly yours,

H. R. Spedden

HRS/cp



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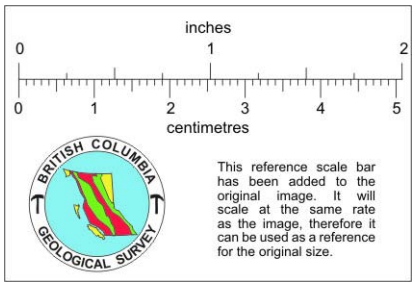
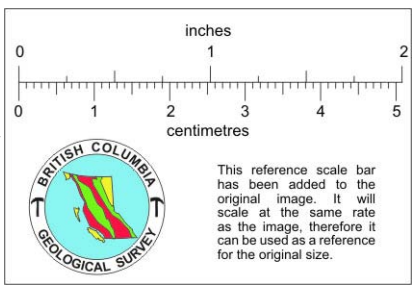
This report contains 10 pages.



I. INTRODUCTION

Amenability testing has been completed on a sample of gold-silver ore from the Chappelle property. The sample was submitted by Kennco Explorations (Western) Limited. This work was requested by C. J. Sullivan in a letter to Dr. A. W. Last, dated September 25, 1970. The laboratory test program was limited to determining the recoveries of gold and silver that might be obtained by flotation and by cyanide leaching. No projections of plant performance from laboratory test data have been prepared.



II. SUMMARY

Reasonable liberation of the gold and silver minerals for subsequent flotation recovery was achieved by grinding the sample to approximately 5 percent plus 200 mesh. Grindability of the ore sample was not quantified; however, the long times required to reduce the ore in a laboratory mill were indicative of a hard, difficult-to-grind, rock.

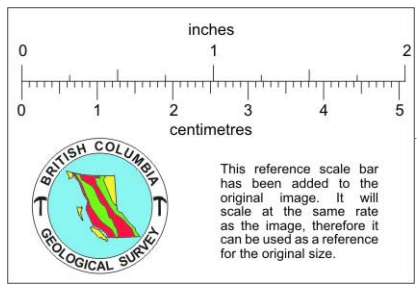
Three different approaches to recovering the gold and silver were investigated: (1) flotation, (2) cyanidation, (3) flotation with subsequent cyanidation of the flotation tailings. The gold and silver minerals were found to be amenable both to flotation and to cyanidation.

Flotation of the ore sample was simple and straight forward. A locked-cycle flotation test with one stage of cleaning yielded gold and silver recoveries of 87.78 percent and 86.38 percent respectively, in the form of a concentrate assaying 120.92 oz Au/T and 1453.35 oz Ag/T.

By cyanidation, 98.00 percent of the gold and 95.00 percent of the silver were extracted within 48 hours. Precipitation of gold and silver from the pregnant solution was not attempted.

A 24-hour leaching of flotation tailing recovered 86.30 percent of the gold and 72.56 percent of the silver from the tailings; this is equivalent to 9.4 percent of the gold and 4.9 percent of the silver in the flotation feed. The combination of flotation and cyanidation yielded an overall recovery of 98.50 percent of the gold and 98.14 percent of the silver.

Cyanide consumptions were high in the laboratory tests because the optimum alkalinity requirement to prevent cyanide hydrolysis was not established. In all the tests conducted and reported, no attempts were made to optimize the levels of the process variables involved.



III. SAMPLE DESCRIPTION AND PREPARATION

A sample of ore from the Chappelle property was submitted by Kennco Explorations (Western) Limited, to MMD-RD for amenability testing. The sample was a portion of a bulk sample taken from Trench number 2, vein A. The sample weighed about 60 pounds.

The sample was staged-crushed to minus 10 mesh. After careful and thorough mixing, four heading samples were taken--three of which were submitted for gold and silver assays and the fourth for chemical determinations of other elements. The remainder of the sample was fed to a splitter to prepare 500-gram batches of ore for amenability testing.

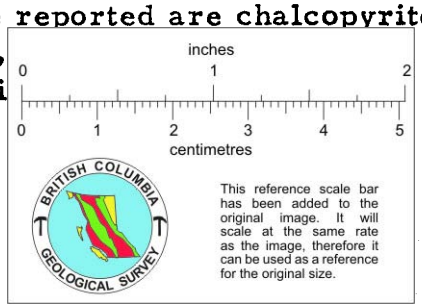
Table I shows the assays of the different heading sample splits.

TABLE I

ANALYSES OF CHAPPELLE ORE SAMPLE

Heading Sample No.	Au	Ag	Cu	Fe	Sb	As	S
1	2.39	29.50					
2	2.39	29.88					
3	2.33	29.36					
Average:	2.37	29.58					
4			0.029	1.20	0.014	0.04	0.57

According to mineralogical reports, the sample consisted, primarily, of quartz gangue. The principal sulfide mineral present is pyrite; the other minerals of interest that are reported are chalcopyrite, polybasite $8(Ag, Cu)_2S \cdot (As, Sb)_2S_3$, argentite ($Ag_2S$), gold was reported to occur as electrum, a gold-si



IV. AMENABILITY TEST PROCEDURES AND RESULTS

A. Flotation

Batch flotation tests were conducted to establish grinding and flotation time requirements of the ore sample. The effect of grinding fineness upon flotation recovery of values is shown in Table II. Aerofloat 208 and Aero Xanthate 301 were used as collectors for the gold and silver minerals. A 50:50 mixture of Aerofroth 65 and Aerofroth 77 was used as frother. Soda ash was added in the ball mill during grinding to obtain a flotation pulp pH of 8.6.

On the basis of the batch test metallurgical results, a locked-cycle flotation test, with one stage of cleaning, was conducted. The locked-cycle flotation test conditions and results are presented in Table III.

The test data indicated that the gold and silver minerals could be recovered with reasonably high effectiveness by flotation. From the locked-cycle test, gold and silver recoveries of 87.78 percent and 86.38 percent respectively were obtained in a cleaner concentrate assaying 120.92 ounces gold per ton and 1453.35 ounces silver per ton.

B. Cyanidation

The cyanide leaching tests were conducted on ore samples ground to 2 percent plus 200 mesh. Two leaching times and two levels of cyanide strength were investigated. Lime was used to obtain a pulp pH of 10 for each leach test. The required amounts of NaCN were added to the pulp. The pulps were agitated by stirrers. Cyanide strengths of the solution were periodically checked and maintained throughout the leaching period. Alkalinity was monitored by pH measurements and no attempt was made to maintain any fixed level of CaO concentration in the solution. At the end of the leaching period the pulp samples were filtered and washed by water displacement to obtain a pregnant solution. The cake was then repulped with fresh water, agitated for 20 minutes and refiltered. The pregnant solution, wash solution and dried filter cake were submitted for assay. The results and test conditions are presented in Table IV.

The cyanidation tests yielded very high extractions of gold and silver at cyanide strength levels of 5 pounds and 8 pounds NaCN per ton of solution. Gold and silver extractions of 98 percent and 95 percent respectively, were obtained after 48 hours of leaching at 8 pounds per ton cyanide strength. For 72 hours leaching at 5 pounds cyanide per ton 98.4 percent of the gold and 96.3 percent of the silver wer[illegible]n at 8 pounds cyanide

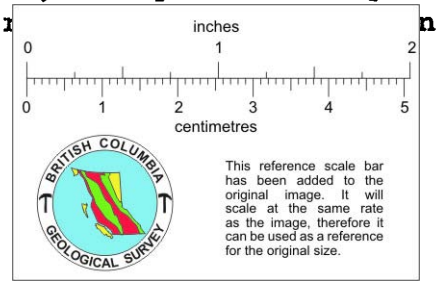


TABLE II

EFFECT OF FINENESS OF GRIND UPON FLOTATION RECOVERY OF GOLD AND SILVER

Grind, Percent Plus 200 Mesh	Assay, Ounces Per Ton				Recovery, Percent	
	Tailing		Rougher Concentrate			
	Au	Ag	Au	Ag	Au	Ag
39.70	0.39	4.69	39.48	461.45	85.17	84.69
18.60	.34	4.34	35.42	420.28	87.13	86.60
4.70	.29	2.01	35.66	419.42	89.06	93.24

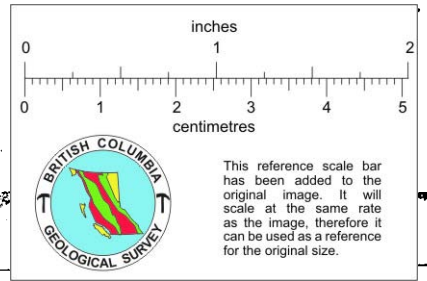
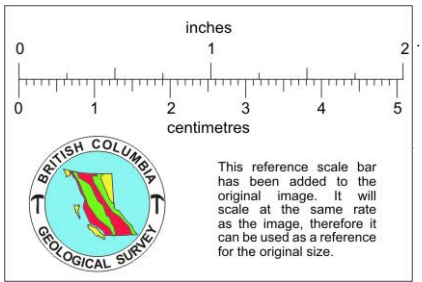


TABLE III

LOCKED-CYCLE FLOTATION TEST PROCEDURE

Grind:	2-500 grams sample per cycle 35 minutes at 50% solids with 6 kg. balls for each 500 gram sample .8 pound Na_2CO_3 per ton 5.0 percent plus 200 mesh
Rougher Flotation:	1000 gram Denver cell @ 2100 rpm .20 pound AF-208 per ton .20 pound AX-301 per ton .05 pound Aerofroth 65 per ton .05 pound Aerofroth 77 per ton 17 minutes at pH = 8.6
Cleaner Flotation:	250 gram Denver cell @ 1200 rpm .01 pound AF-208 per ton .01 pound AX-301 per ton 6 minutes at pH = 8.3 Cleaner tails were recycled to next following rougher flotation stage
Metallurgical Results:	(Cycles 3 and 4 of 4 cycle test)

Products	Weight Percent	Assays, Ounces Per Ton		Distribution, Percent	
		Au	Ag	Au	Ag
Cleaner Concentrate	1.76	120.92	1453.35	87.78	86.38
Tailing	98.24	.30	4.13	12.22	13.62
Calculated Feed	100.00	2.44	29.80	100.00	100.00



per ton for longer than 48 hours did not show any advantage. The consumptions of cyanide were higher than anticipated due to uncontrolled cyanide hydrolysis and athmospheric losses due to the intensity of mechanical agitation. The presence of high sulfide silver content necessitated the addition of lead acetate to precipitate the sulfide ions present which otherwise could have resulted in re-precipitation of silver sulfide.

C. Flotation and Cyanidation of Flotation Tailings

In this test, two 500-gram samples of ore were ground to 5 percent plus 200 mesh. Each sample was floated separately for 17 minutes with reagents AF-208, AX-301, Aerofroth 65 and Aerofroth 77. The flotation tailings were filtered and repulped with cyanide solutions (5 lbs. NaCN per ton solution) at approximately 4 to 1 liquid to solid ratio. Leaching was conducted for a period of 24 hours. The cyanide strength of 5 pounds per ton solution was maintained throughout the leach period. The pH of the solution was monitored and maintained with lime. At the end of the 24-hour period the pulps were filtered. The filtrate, filter cake and the flotation concentrate were assayed for gold and silver.

The averaged results of the duplicate tests are presented in Table V. The rougher flotation step recovered 89.06 percent of the gold and 93.24 percent of the silver in a rougher concentrate assaying 35.66 ounces of gold per ton and 419.42 ounces of silver per ton. The cyanide leaching of the flotation tails recovered an additional 9.44 percentage points of gold and an additional 4.90 percentage points of silver. The cyanide extraction efficiencies from the tailings were 86.30 percent for the gold and 72.56 percent for the silver. The combined treatment represented gold and silver recoveries of 98.5 percent and 98.14 percent, respectively.

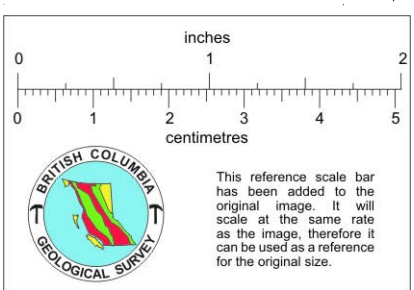


TABLE IV

CYANIDATION TEST RESULTS OF CHAPPELLE ORE SAMPLE

	Test RJ-376-1	Test RJ-376-2	Test RJ-376-3
Tailing			
Gold, ounces per ton	0.05	0.04	0.055
Silver, ounces per ton	1.40	1.00	.96
Gold distribution percent	2.00	1.62	2.19
Silver distribution percent	5.02	3.70	3.45
Grind, percent plus 200 mesh	2.00	2.00	2.00
Wash Solution			
Volume, milliliters	1045.0	1000.0	1160.0
Gold, ounces per ton	.0003	.0002	.003
Silver, ounces per ton	.006	.006	.029
Gold distribution percent	.02	.01	.22
Silver distribution percent	.20	.22	1.16
Pregnant Solution			
Volume, milliliters	3720.0	3730.0	3730.0
Gold, ounces per ton	.327	. 327	.335
Silver, ounces per ton	3.600	3.550	3.650
Gold distribution percent	97.98	98.37	97.58
Silver distribution percent	94.78	96.30	96.55
Calculated Feed			
Gold, ounces per ton	2.454	2.446	2.524
Silver, ounces per ton	27.920	27.110	27.890
Test Conditions			
NaCN strength, pounds per ton solution	8	5	8
Leaching period, hours	48	72	72
Lead acetate, pounds per ton ore	3	3	3
Lime, pounds per ton ore	.4	.4	.4
Liquid to solids ratio	4:1	4:1	4:1
Cyanide consumption, pounds per ton	24.8	14.0	36.4

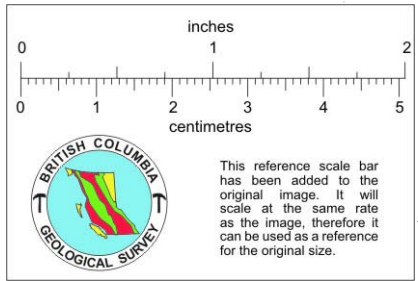
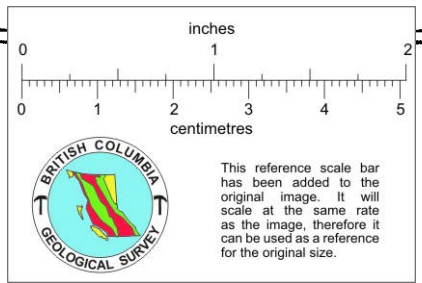


TABLE V

FLOTATION AND CYANIDATION OF FLOTATION TAILING - CHAPPELLE ORE SAMPLE

	Test RJ-378
Cyanidation Tailing	
Weight, percent	93.79
Gold, ounces per ton	.04
Silver, ounces per ton	.55
Gold distribution, percent	1.50
Silver distribution, percent	1.86
Grind, percent plus 200 mesh	4.70
Pregnant Solution	
Volume, milliliters	4341.0
Gold, ounces per ton	.055
Silver, ounces per ton	.32
Gold, recovery percent	9.44
Silver, recovery percent	4.90
Calculated Flotation Tailing	
Weight, percent	93.79
Gold, ounces per ton	.29
Silver, ounces per ton	2.01
Gold distribution, percent	10.94
Silver distribution, percent	6.76
Rougher Concentrate	
Weight, percent	6.21
Gold, ounces per ton	35.66
Silver, ounces per ton	419.42
Gold, recovery percent	89.06
Silver, recovery percent	93.24
Calculated Feed	
Gold, ounces per ton	2.486
Silver, ounces per ton	27.936

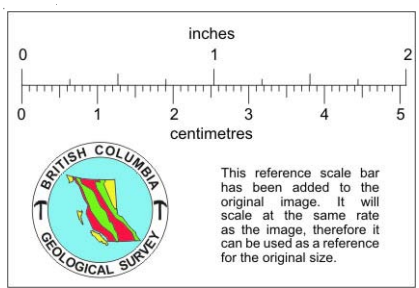


V. CONCLUSION

The laboratory amenability test indicated that the gold and silver minerals are present in Chappelle ore in a form and nature that they can be recovered by flotation and/or cyanidation. In terms of precious metal recoveries, cyanidation was definitely more effective than flotation alone. However, for a small scale operation, subject to process interruptions and lack of supervisory technical personnel, flotation offers the advantages of a simpler process to apply and operate.

With all the extreme care during sample preparation and testing, a lack of reproducibility of assay data was observed. This appears to be due to the segregation of gold and silver minerals of varying nature and sizes in sample charges despite the precautions that were taken.

Technically, more extensive testing will be required to define the best process to employ for this ore. Some areas to be studied are: inclusion of gravity concentration steps in the processing, inclusion of a unit cell flotation of grinding mill discharge, and optimizing of process variables. These factors could not be investigated in the current study because of the small amount of sample available for test work.



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KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

J.H.S.
G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.
E.C.J.

To P. M. Kavanagh **From** W. M. Sirola

Subject KENNCO CHAPPELLE PROPERTY
TOODOGGONE, B.C. 94-E **Date** November 23, 1972

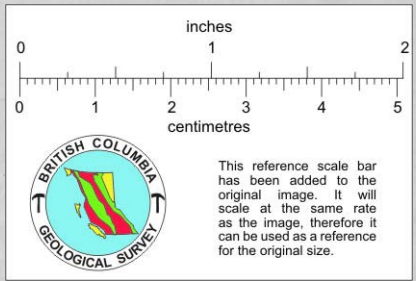
Dave Barr telephoned yesterday to advise that their intended deal with some unnamed Toronto company had fallen through and he simply wanted us to know that they would have to re-evaluate the offers which had been made by other companies such as Kerr Addison Mines. He intimated however, that the Kerr offer needed upgrading in the light of some of the submissions by other companies.

Should there be any room for flexibility in the Kerr Addison offer, I would modify Clause two in such a way as to permit a reasonable underground look at this mineralization. This of course would involve expenditure in excess of the $70,000.00 provided in that clause.

Bill

WMS/ah W. M. Sirola

cc: G. M. Hogg



KERR ADDISON MINES LIMITED
P.O. BOX 91 - COMMERCE COURT WEST
TORONTO, ONTARIO
TELEPHONE 867-7270

J.H.S.
F.M.K.
G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.
E.C.J.

September 26, 1972

Mr. D. A. Barr,
Kennco Explorations (Canada) Ltd.,
730 - 505 Burrard Street,
Vancouver, B.C.

Dear Dave,

With regard to the Kennco Chappelle property you are of course aware that we have been studying the matter closely. It is a very interesting situation that Kennco has developed there.

Giving full credit to the remarkable grades in gold and silver present, we feel however, that there remains some question as to the effect of surface enrichment. Values are also erratic, and appear restricted to a relatively narrow zone of limited length. In addition, we are all painfully aware of the consideration which must be given to the very high capital and operating costs which would be necessary in a development in this area, and taxation policies of the new government are unsettled.

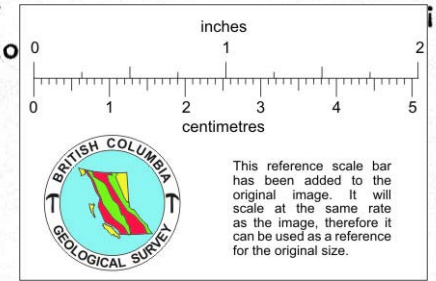
What is required then is a threefold programme to 1) test the known zone as to its character, 2) attempt to extend the known zone, and 3) locate additional zones in the immediate vicinity. What this all means of course, is that while being fully conversant with the considerable effort Kennco has put into the area, we still must consider the property as a promising raw prospect with the usual near-prohibitive risk factor. This is why we felt that any offer we could make to Kennco for option would be too light to be considered seriously. However, Bill Sirola has indicated that you would like to hear what we would be prepared to do.

Kerr Addison then, would consider option of the Chappelle property on the following terms:

1. Kerr Addison would commit to expend a minimum of $30,000 on the property during the first year of option.

2. Kerr Addison would commit to a cumulative expenditure of $100,000 by the end of the second year of option if desiring to continue the agreement into a second 12 month period. — $200,000

3. Kerr Addison would commit to a cumulative expenditure of $250,000 by the end of [illegible] if desiring to continue the agreement into — $350,000



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4. Kerr Addison would commit to a cumulative expenditure of $500,000 by the end of the fourth year if desiring to continue the option into a fourth 12 month period.

5. At the end of the fourth year or before, if the $500,000 expenditure has been made, Kerr Addison will have the right to form a new company capitallized at 3 million shares to acquire and develop the property further. Of the primary issue of 750,000 shares, Kennco would receive 300,000 shares (10% of total) and Kerr Addison 450,000 shares. Thereafter share issues would be made at the discretion of the board of directors to finance development, and Kennco will have the right to participate to the level of 35% of any financing issue, providing that it will not be able to participate in any succeeding issue to a greater percentage than in the immediately preceding issue.

6. Clauses such as reporting on work, representation on the board of the new company, keeping claims in good standing etc. are pretty well standard, and would be included in any agreement.

I have tried to be very frank in outlining the reasons for our lack of enthusiasm Dave, and I sincerely hope that my attempt to give a realistic picture of our reasoning is not found offensive.

Many thanks for the opportunity to consider the Chappelle matter, and who knows, maybe we will have the chance to work with you on it.

With best regards,

Yours very truly,

KERR ADDISON MINES LIMITED

✓ GMH:lmm

G. M. HOGG,
Chief Geologist - Exploration.

c.c. W. M. Sirola

REFERENCE MEMORANDUM

DATE Sept 22 19 72

THE ATTACHED PAPERS ARE REFERRED

TO G.M. Hogg

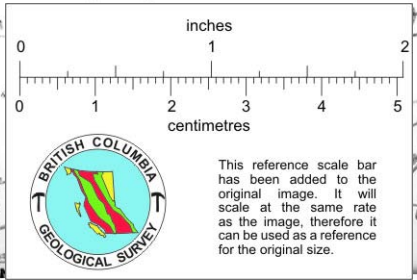
BY J.H. Stovel

W. Sinclair advised Sept 22/72

PLEASE REPLY DIRECT	☐	PLEASE HANDLE	☐
PLEASE SEE ME RE THIS	☐	YOUR COMMENTS	☐
FOR YOUR INFORMATION	☐	FOR APPROVAL	☐
PLEASE RETAIN	☐	PLEASE RETURN	☐

I agree that Bill's cost estimates both opening and c[illegible]y on the law [illegible]ked the claim[illegible] 90%-10% deal[illegible] to go ahe[illegible] notice.

HONEY PRINTI[illegible]



KERR ADDISON MINES LIMITED

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SEP 15 1972

J.H.S. ✓
P.M.K. ✓
G.M.H. ✓
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.
E.C.J.

To Glen Hogg *From* W.M.Sirola

Subject KENNCO CHAPPELLE PROPERTY - Toodoggone River Area, B.C. 94-E *Date* 13 September 1972

I telephoned Kennco's office today and in the absence of Dave Barr I talked with Ken Grace, who is one of the geologists who is familiar with this property.

Grace told me that they had finished assaying most of the samples from veins 'C' and 'D', and the results of this work indicated that although very low values in gold and silver (o.029 oz Au, and 0.05 oz Ag) persisted throughout the samples, these veins are patently not ore grade. Yet to come, are samples of the North Quartz Vein and these results will take from one week to ten days.

My calculations and those of John Lund, indicate that a 100 ton per day operation would be quite profitable if the values persist in the 'A' vein to a depth of 500 feet. Regardless of the fact that profits from such an operation would have to be shared with Kennco, the point is that money invested in the operation would be returned at 12% compound interest or better, and I do not know where we can get a better rate on our money. However, if it can be shown that these calculations are in error, or if the current price of gold be suspect, then the drilling should be put off in favour of bulldozing the unexplored quartz float areas which have heen found within the main pyrite gossan zones. Veins 'A', 'B', 'C' and 'D' occur in this zone and were found by hydraulicking but much of the gossan area remains unexplored.

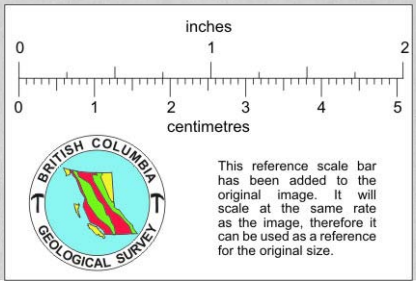
Dave Barr appears to have some optimism for the possibility of a south westerly extension of Vein 'A' beneath the limestone. He refers to it as "an overturned fold or a capping" over the quartz vein. This line of thought could have merit if the limestone is thin, but could be meaningless if the limestone is 500 feet or more in thickness.

In summary, I would like to have a clearer picture of the objections to a 100 ton per day high grade operation, bearing in mind that we already have a 100 ton plant at Adanac.

Whatever the reasons, I think the project deserves some bulldozer work next summer and by that time we will know more about the stability of the current price of gold.

Bill

WMS/fs W.M.Sirola



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To Glen Hogg **From** W.M.Sirola

Subject KENNCO EXPLORATION - Chappelle Creek Property
Toodoggone River Area
94-E

Date 8 September 1972

Herewith a revised memorandum of my September 5th letter. Please replace the whole copy with this one.

I have talked further with Dave Barr over the telephone this morning, (September 5th) and got the distinct impression that they would expect their partners to spend considerably more than Kennco has spent, to earn a 50% interest in this property. By "considerably more" I mean something in the order of four or five times Kennco's $500,000 expenditure. Expressed in a different way, this would probably mean exploration of the Chappelle ground in its entirety and development of Vein A through the feasibility stage.

I think it would be imminently desirable (if some accord could be reached) to do the surface Diamond Drilling this fall, and to put in the air strip and road if drilling results justify this work. We could then look forward to easily completing the underground work by next summer, and would probably know whether or not Vein A would support a 100 ton per day mining operation. The economics of such an operation would be approximately as follows:

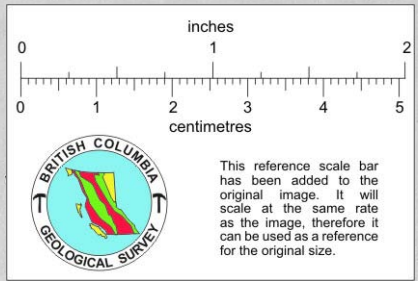
Recoverable value of gold content (1 oz. per ton at 90% recovery. Au at $50.00 per oz)	=	$ 45.00
Recoverable value of silver content (18 oz per ton at 80% recovery. Ag at $1.80 per oz)	=	$ 26.00
Gross recoverable value of ore		$ 71.00

Operating Costs.

Mining	=	$ 30.00
Milling	=	$ 5.00
Administration	=	$ 5.25
Total		$ 40.25

Operating Profit = $ 30.75

Annual Operating Profit



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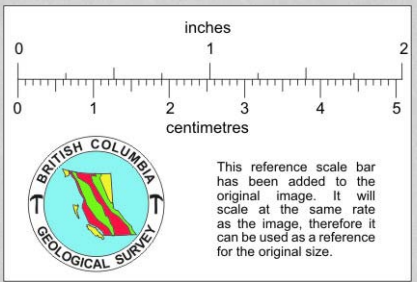
To Glen Hogg *From* W.M.Sirola

Subject KENNCO EXPLORATION *Date* 8 September 1972

Capital cost of 100 ton per day plant (including interest)	= $ 1,000,000
Townsite	= $ 500,000
100 Mile Access Road	= $ 1,250,000
1972 - 1973 Drilling and underground programme	= $ 400,000
Air Strip	= $ 15,000
TOTAL CAPITAL & PRE-PRODUCTION COSTS (exclusive of Kennco costs)	= $ 3,165,000

Should the deposit persist to a depth of 300 feet, this would provide adequate tonnage to return capital and pre-production costs, but would not provide much margin for profit. This could be better achieved if Vein A had a down dip length of 500 feet, in which case, the tonnage would be increased to 215,000 tons. This would provide six years of mill feed and the total operating profit of $7,875,000 which when discounted at ~~20%~~ 12% compound interest and deferred for two years, would have a present value of $4,625,000. The arithmetic here is: 1,312,500 x 4.11 x 0.857 = $4,625,000. If we subtract from this figure a capital cost of $3,165,000 we are left with a balance of $1,460,000. Stated in plain English, this means that our capital outlay would be returned at 12% compound interest and there would be a surplus of $1,460,000.

By keeping the plant size at 100 tons per day, the all too common spectre of excess dilution would probably be avoided and a profitable operation might ensue. I mention this because we have, to a small degree, been involved in such operations as Mount Nansen in the Yukon Territories, where the grades were similar to those of the Chappelle property, but the plant size was 250 tons per day.



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To Glen Hogg **From** W.M.Sirola

Subject KENNCO CHAPPELLE PROPERTY **Date** 8 Sept. 1972

In the light of the above calculations, it might become necessary to drill deeper holes to intersect closer to a 500 foot depth than a 300 foot depth, but the main problem is to find a proposal which would satisfy both Kerr Addison and Kennco. I don't consider the project too attractive at $35.00 gold, but if there is faith in a persistent higher price (say $50,00 or more) within our organization, then I recommend that our mining experts have a close look at capital and operating costs, thereby determining their version of the present value of production from Vein A. This would then be the basis of determining the type of a deal which could be made with Kennco.

In the light of our present encouragement and in order to be reasonably competitive, I suggest that we offer Kennco a 60/40 deal with the understanding that Kerr Addison would finance the property to production, and would receive return of capital from 85% of first production. We could consider making it 50/50 if Kennco was to participate further in the financing.

WS

WMS/fs p.p. W.M.Sirola

Bill Sirola has thought this one out carefully, and is impressed with the prospect. I think the area is of interest, but that ① the prospect has very erratic gold distribution, and surface enrichment could be definitely a factor; ② Veins D and C did not run; ③ Road costs and operating costs would probably be higher than estimated; ④ Kennco's deal is tough – too much so for what is showing so far. [illegible] ...uld be more like it. [illegible] 20/72.

KERR ADDISON MINES LIMITE[D]

MEMO

VANCOUVER OFFICE

DATE: Sept. 5/72

TO: Glen Hogg

FROM: WMS

SUBJECT: CHAPPELLE CR.

Kennco would not contribute any further financing for this project until Kerr had expended four or five times Kennco's expenditures which [illegible] [illegible]esent 500.00[illegible] time.

SEP 11 1972

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To Glen Hogg *From* W.M.Sirola

Subject KENNCO CHAPPELLE PROPERTY - Toodoggone River Area, B.C. 94-E *Date* 7 September 1972

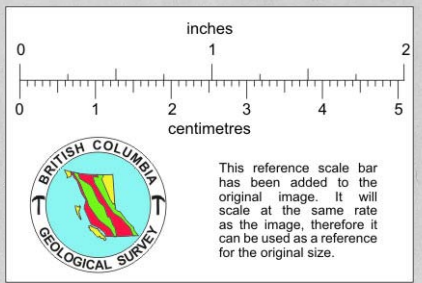
Enclosed is an assay map of D.D. Holes #1 and #2 which were drilled in the plane of the vein. The graphic log of both drill holes indicates that where the gold content increases the silver content does the same, and I would attribute this to structures within the vein, such as fractures or higher grade ribbons which the drill hole would interesect from time to time through its entire length. If there were secondary enrichment of silver, we would expect to see an increase in silver without an accompanying increase in gold. This does not really seem to be the case.

I telephoned Dave Barr, to see if he had given this matter some thought and he said that he had, and it was for this reason the holes had been drilled in the manner in which they were drilled. While two pack-sack drill holes may not be conclusive evidence, they nonetheless do support the thought that there is no appreciable secondary enrichment of silver.

I don't think you have previously been sent a copy of the 1" = 1 mile geologic sheet, and it is enclosed herewith. This map suggests that the veins were discovered as a result of testing stream silts below one of the 6 or 7 gossans found in that area. The veins occur near the contact of the north-westerly trending Jurassic intrusion with the Takla Group of volcanics.

W.M.Sirola

WMS/fs
Enclosures



SEP - 5 1972

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E.C.J.

To Glen Hogg **From** W.M.Sirola

Subject KENNCO EXPLORATIONS - Chappelle Property
Toodoggone River Area
94-E

Date Sept 1, 1972

Herewith John Lund's memorandum on a tentative drilling programme, the results of which indicate whether or not an underground programme was justifiable on Vein A. The work should be done this fall and the cost approximately $30,000 - 35,000 for the five proposed drill holes. The purpose of this work would be to determine the continuity of Vein A to a depth of approximately 300 feet.

An underground programme consists of approximately 300 feet of adit and 750 feet of drift together with 2,000 feet of underground drilling and should be undertaken next summer if drilling results are positive. Such a programme would cost in the neighbourhood of $200,000 and would include a landing strip, and a 10 mile road from the air strip to the property.

The average grade of Vein A is such (Au - 1 oz. and Ag - 18 oz.) as to amply justify such an expenditure if the vein persists to a depth of 350 feet.

Dave Barr of Kennco would like a letter from Kerr Addison expressing our interest in this project and he would also like to have us propose a deal or framework under which we will participate with Kennco. He seems to have in mind a 50/50 type of arrangement or possibly a long-term lease I don't like this type of horse trading with three different companies, but that seems to be the way they have elected to do business.

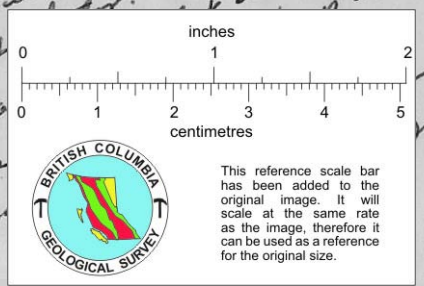
I will write in more detail early next week.

WMS/fs
Encs.

W.M.Sirola

This is Bill Sirola's comment on the Kennco - Chappelle matter, and John Lund's report. Maps are attached. Apparently two packsacks or x-Ray holes were drilled, but no information as this work is included. This is critical since if the packsacks work got reasonable values P.P to depths of 150 feet or so, it would suggest that surface enrichment of gold and silver is not an important [illegible] I recommend that Dave Barr be [illegible] we are interested at this time [illegible] with a proposal [illegible] Sept 5/72.

See attached Surface Area plans.



August 30, 1972

To: W.M.Sirola

From: John C. Lund

Re: KENNCO EXPLORATIONS - CHAPPELLE CREEK PROPERTY

The Chappelle property lies 16 miles NNWest of the north end of Thorne Lake. Six claims have been surveyed - these cover the known vein systems. There are five veins that are at different phases of exploration. These are:

1. Vein A - Most work has been done here. It is about 10 feet wide and extends, or has been traced, for 745 feet. Considerable surface sampling has been done at 5 feet intervals over much of the vein length. Its south western extension is limited by up faulted limestone. The north easterly limit has not been defined. This is the only significant vein found so far. (NE - SW vein)

2. Vein B - Barren quartz vein - of no apparent economic interest. (E - W vein).

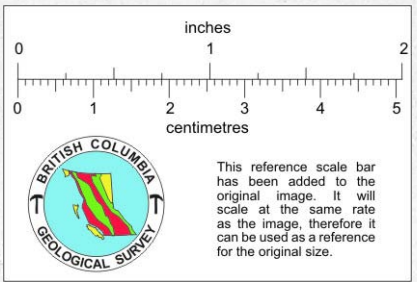
3. Vein C - An E - W vein with some mineralization. Assays are not in. It is narrow, bounded in part by faults.

4. Vein D - Newly found narrow quartz vein striking north easterly. Appears weakly mineralized - no assaying has been done.

Values 0.03 Au 0.05 Ag range.

5. North Quartz vein - This zone has only been explored by soil sampling. Soil anomalies justify further work. No assay values.

Main target is the A vein. Kennco is contemplating the establishment of an air strip and launching a $200,000 underground exploration programme. After visiting the property and examining the maps, I feel that some diamond drilling should be done to establish downward continuity to the vein before any underground work is done. In order of priority, the following is a suggested procedure.



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1. Complete air strip and road from strip to showing.

2. Drill 3 - BQ wireline holes at 300 feet intervals along Vein A to intersect it at elevation 5250 feet. This would give about 120 feet of backs in the south western zone and 180 feet in the north eastern zone. (See plan 1 DDH #1A, 2A, and 3).

   Cost: 700 feet BQ wireline at $22.00 a foot (total costs) = $15,400
   This should be a maximum figure.

3. While drilling is in progress use bulldozer to explore limits of vein A and trench the north quartz zone and other areas which may have potential.

4. If drilling is satisfactory, i.e. continuity of the vein is established, then either (a) additional drilling, or (b) underground work could be considered.

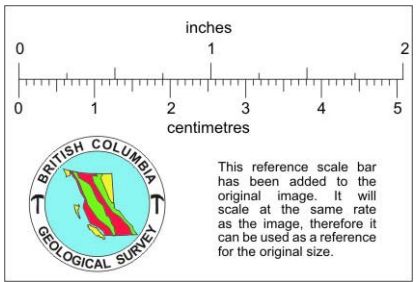
   (a) Additional drilling: Two holes have been laid out to test vein to elevation 5050 feet. These would explore 200 feet below DDH #1A and 2A, giving, if the continuity to vein is established, 270 feet of backs in the south west zone and 340 feet in the north east zone.

   Cost: 2 holes total length 830 feet at cost of $22.00 a foot
   = $18,260

   (b) Underground work: Before any underground work is done, the three holes DDH #1A, 2A, and 3 should be drilled. Phase 2 of drilling could be delayed and completed from underground work.

   If the 5 drill holes were completed as one phase cost/foot might be decreased by possibly $2.00 giving a total cost for 5 holes at about $31,060 as opposed to $32,660.

I have played around with some figures and have come up with probable tonnages and grades.



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August 30, 1972

Tonnage — To the bottom of their X-ray drill hole there is a probable tonnage of 38,696 tons, with a weighted average grade of:-

Au - 1.0 oz.
Ag - 18.0 oz.

or:- tons/vertical foot of ore grade sections = 429.5 tons

$ value of mineralization (gross) = Au = $50.00
Ag = $28.80

$78.80

at 88% recovery - $69.34

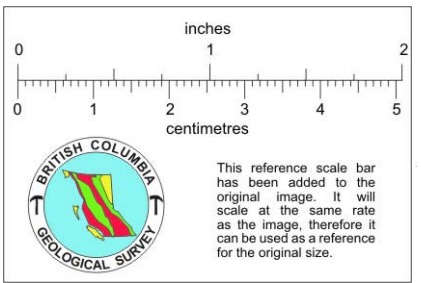
If you consider a minimum of 7 years operation at 100 tons per day, 350 days/year = 35,000 tons/year or 245,000 tons for the 7 year period.
At 430 tons/vertical foot, to achieve 245,000 tons, it would have to extend down to 570 feet.

It might be reasonable to expect continuity to 500 feet; in addition the uneconomic section may carry values lower down which could add 96 tons/vertical foot to the reserves.

I have drawn up 3 sections showing proposed drill holes as well as a possible exploration adit. Attached also are calculation sheets and figures I have been playing with on ore values and costs.

John.
John C. Lund

JCL/fs
Enclosures



Ore Reserve Summary
Chappelle Property Vein A.

Vein is divided into segments for calculation and classified as follows.

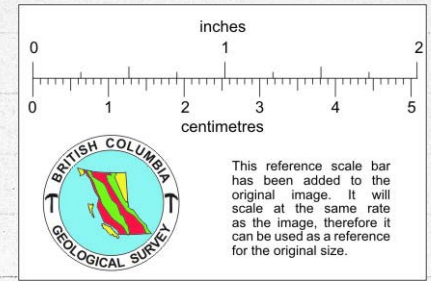
Segment A: SW end of vein; 120' with no assays calculations and grades projected from adjacent assays and 2 assays from central part of segment.

Segment B: Vein well exposed and sampled. sampling done at 5' intervals (channal samples) Average calculated grade probably reliable.

Segment C. NE end of vein as exposed. Exposed Areas wellsampled (5' intervals.) 40' of unexposed vein — grades inferred from adjacent assays.

Dimensions

Width and length are measured. Vertical extent based on exposure, Topography and drill hole information.



Gross value of "ac" to 5250 level.

ie:

38,696 X $78.80 = $3,050,000

Net Value of ore to 5250 elev.

38,696 X 38.80. = $1,501,404.

Mining & Milling costs.

Costs at Echo Bay Mine N.W.T. 100 Ton/day Cap.

Mining - $28.78

Milling $8.23

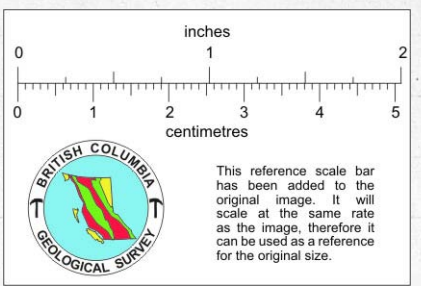
$37.01

Chappelle - use similar costs

- isolated location — have townsite construction & maintainance, labour turnover costs winter road maintainance.

Assume max/ton cost of $40.00

- 100 Ton/day plant cost ~ $600,000.



Ore Reserves in tons/foot.

Segment A. 120 tons/vert. foot. Au = 0.95 oz Ag = 11.4 oz

Segment B. 240 tons/vert. foot. Au = 1.21 oz Ag = 21.7 oz

Segment C. 69.5 tons/vert. foot. Au = 0.6 oz Ag = 17.8 oz.

Total tons/vertical foot all segments = 429.5

Value: Take $50 Au + $1.60 Ag.

Seg. A

Au	= 0.95	× $50	= 47.50
Ag	= 11.9	× 1.6	= 18.24
			65.74

Segment B.

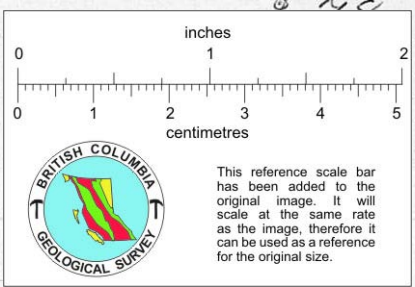
Au	1.21	× $50	= $60.50
Ag	21.7	× 1.60	= $34.72
			$95.22

Seg. C.

Au	0.6	× 50	= 30.00
Ag	17.8	× 1.60	= 28.48
			$58.48

Average value (wt'd) for the 3 segments (38,696 tons)

Au =	1.0	× $50	= $50.00
Ag =	18	× 1.60	= $28.80
			$ 80



Tonnage calc. to approximately the 5250 elev. (Bottom DDH #2)

Dimensions — measured from SW. end of vein.

Segment A: (17.5' to 161.5') L = 144' W = 10' D = 80'

$$\text{Tons} = \frac{144' \times 10' \times 80'}{12 \text{ cu ft/ton}} = \frac{116,200}{12} = 9,683.3 \text{ Tons}$$

Segment B: (161.5' to 389.5') L = 228 W = 11.6' D = 88'

$$\text{Tons.} = \frac{228 \times 11.6' \times 88'}{12} = \frac{232,918.4}{12} = 19,420 \text{ Tons}$$

Segment C: (581.5' to 707.5') L = 126' W = 6.7' D = 138'

$$\text{Tons} = \frac{126' \times 6.7' \times 138'}{12} = \frac{115,119.6'}{12} = 9593.3 \text{ Tons}$$

Total Probable ore Reserves. = 38,696 tons

Average grade for combined blocks. over 508' vein length.

Au Average

9,683	×	0.95	=	9,200	
19,420	×	1.21	=	23,500	$\frac{38,450}{38,696}$ = 0.99 oz Au.
9,593	×	0.60	=	5,750	
38,696				38,450	or. 1.0 oz.

Ag. Average

9,683	×	11.4	=	110,400	
19,420	×	21.7	=	421,000	$\frac{692,100}{38,696}$ = 17.9 oz.
9,593	×	17.8	=	170,700	
38,696				692,100	or. 18 oz Ag

Calculation Sheet. – Values & figures from Kennco Map.

Footage	Gold		Silver		Average Assay		Surface Area	Tons/vert foot.	
	Assay	Assay x L.	Assay	Assay x L.	Au oz	Ag oz			
32.0'	1.97	63.0	15.6	498.0					seg
72.0'	.36	26.3	3.7	270.0	137.6 / 1440	1635.0 / 144	144 x 10' = 1440	1440 / 12 = 120 Tons/ft.	A
40.0	1.21	48.3	21.7	867.0					
1440		137.6		1635.0	0.95	11.4			
228'	1.21		21.7		1.21	21.7	228 x 11.6' = 2644.8'	2645 / 12 = 240.4	Seg B
41.0	0.55	22.5	18.0	738.0					Seg
40.0	0.60	24.0	17.8	712.0	75.3 / 126	2248 / 126	126 x 6.7' = 834.2	834.2 / 12 = 69.5	C.
45.0'	0.64	29.8	17.7	798.0					
126.0'		75.3		2248.0	0.6 oz	17.8 oz			

For 508' of vein with oregrade values. Calculated from surface dimensions

Gold.

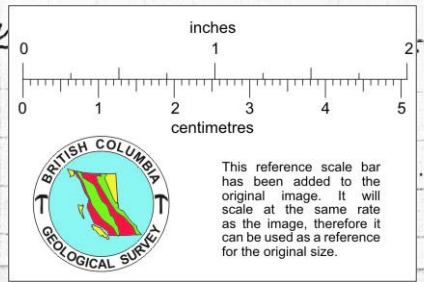
A	144	x 0.95	=	136.8
B	228	x 1.21	=	276.0
C	126	x 0.60	=	75.6.
	508			488.4

Ave. Au = 488.4 / 508 = 0.96 oz Au.

Silver.

A	144	x 11.4	=	1262.0
	228	x 21.7	=	4950.0
	126	x 17.8	=	2241.0
	508			8553.0

Au 16.9 oz Ag.



Note These are ball figures.

Assume.

300 day / year operation.
100 tons / day
7 year operation required to justify expenditure.

Capital Costs.

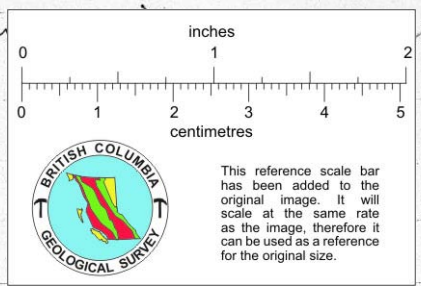
air strip &	—	10000	10,000
Townsite	—	500,000	500,000
Mine & Mill. & Equip.	—	600,000	600,000
Rd. 100 mi at @ 25,000/mile.	=	2,500,000 } assume ½ help from govt	1,250,000
			2,360,000
add 15%			354,000
Total capital costs est.			2,714,000

On 7 yrs at 30,000 tons/year gives total tonnage of 210,000. required.

Net op. value of 210,000 tons = 210,000 × 38.00 = $7,980,000

1680000
630000
7,980,000

out of this pay back capital have net. $5,266,000
(not including i... s.



GHD.

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B.C.B.
I.D.B.
M.D.R.
J.H.F.
E.C.J.

To P. M. Kavanagh *From* G. M. Hogg

Subject Kennco Chapelle Property, Thutade Lake Area, B.C. *Date* August 25, 1972

I spoke to Bill Sirola this morning and he advised that John Lund had just returned from the Thutade Lake area. While in the area he visited our Thor Group crew, and closed this operation down. Results have not been encouraging, and evaluation is considered complete.

While in the area, John Lund visited the Kennco camp on the Chapelle property. Kennco has delimited a quartz vein, associated with an acid intrusive stock on this property, which extends over a length of 745 feet, is 12 feet in width in the central portion, and grades $68.00 in gold (at $35.00/oz. Au) over a 200 foot length. The grade is reportedly lower over the remaining 545 feet. Only two packsack holes have been drilled in the zone. Some other veins are known on the property, but have not been tested. The host rock is highly broken and shattered, and it would seem reasonable to expect gold values to occur throughout, though probably of a very erratic distribution.

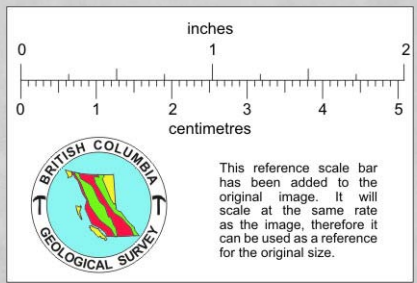
Denison Mines representatives are apparently visiting the property to-day.

I have instructed Bill to contact Dave Barr of Kennco on Monday (all personnel are away to-day), and indicate that we are quite interested in the property, and ask what terms Kennco might have in mind. Bill wishes to see additional data in any event. Hopefully this action, seeing as we are the prior visitors, will put us first in line.

Regarding this same area, I spoke to John Sullivan, formerly of Kennco, regarding his holdings in the area. You will remember that he was attempting to get a syndicate together a year or so ago to investigate gold possibilities in the region. We can assume that John Sullivan will be working mainly with ideas, and Bill Sirola's research on the Kennco matter will be most helpful in assessing the potential of Sullivan's approach.

GMH:lfr

G. M. Hogg



AUG 23 1972

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)

94 D

H.S.
P.M.K.
G.M.H.
R.D.S.
B.C.B.
I.D.B.
M.D.R.
J.H.F.

To Glen Hogg **From** W.M.Sirola

Subject Kennco - Chappelle. Todogone River Area, B.C. (94 - C) **Date** 21 August 1972

attach to precon of Aug 12

Dave Barr of Kennco has just invited us to examine the Chappelle property which is that property they would not let us see during the course of the Finlay River project.

Kennco has been on this ground for three years now and has done quite a bit of hydraulic work and sampling, together with a minor amount of packsack drilling.

I gather from Dave that the main purpose of the work on the Chappelle property has been to concentrate on a small high-grade vein deposit and also to investigate the possibilities of open pit gold deposition in the area.

Kennco are at least tentatively prepared to joint-venture further work which would consist of driving an adit for the purpose of more adequately sampling the high-grade vein.

John Lund left this morning for what might be the final examination of the work on the Thor Group, and I have relayed a message to him to examine the Chappelle property when he finishes on the Thor Group.

The situation sounds at least moderately interesting, because of the high-grade nature of the vein type mineralization.

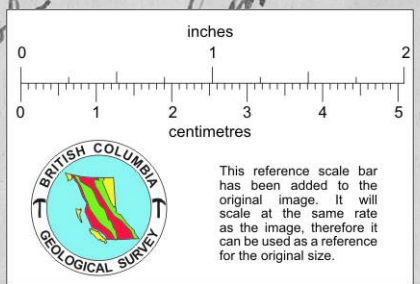
WMS/fs

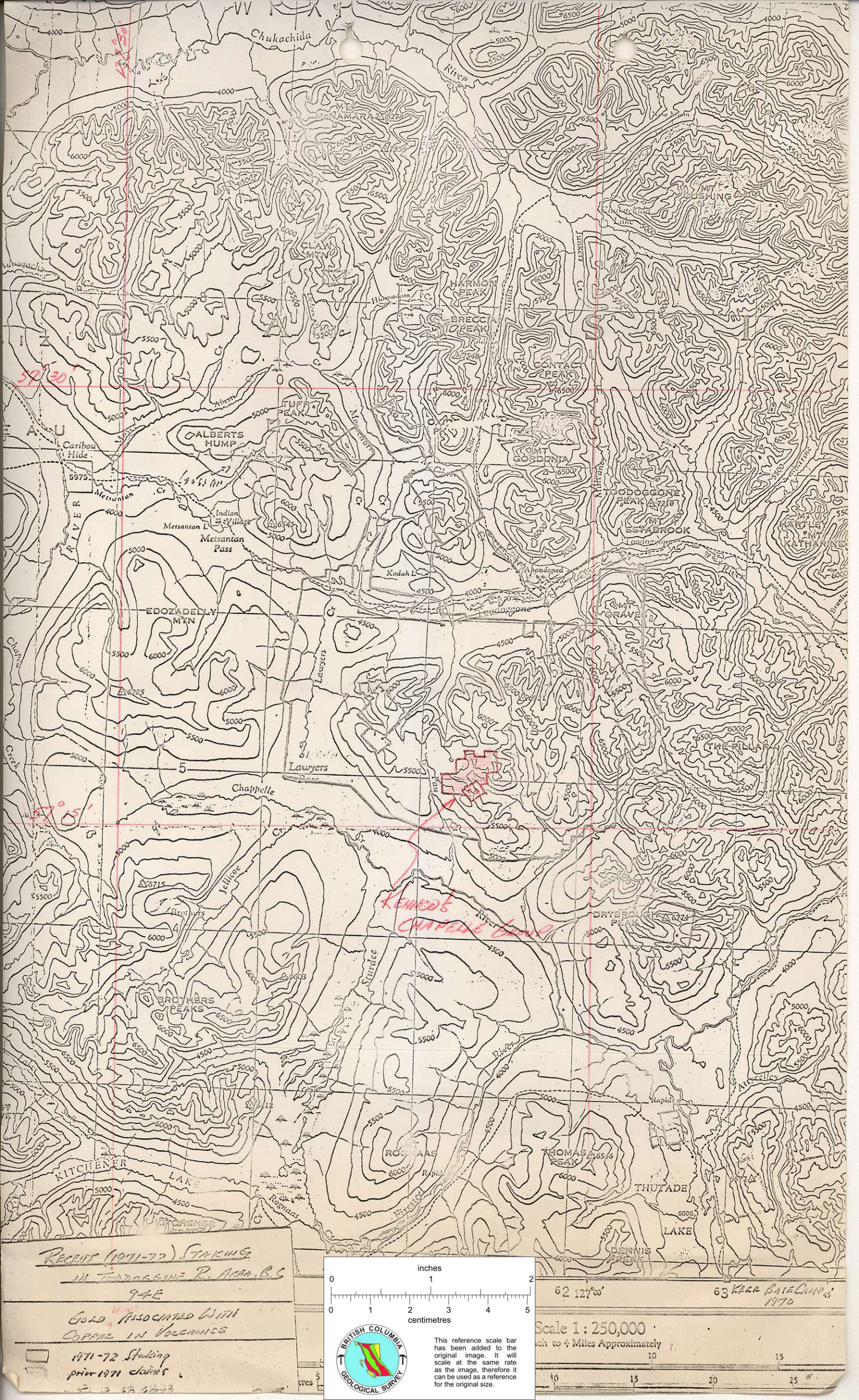
W.M.Sirola

I have recently spoken to John Sullivan regarding his work on gold explorations in the Findlay River Area, and will visit him shortly on the matter. In the meantime I am very pleased at the above mentioned development, and will look forward to Lund's report.

Bill

Aug 23/72.





REGENT (1971-72) STAKING
IN TODAGGUE R. AREA BC
94E

GOLD, WITH ASSOCIATED WITH COPPER IN VOLCANICS

1971-72 Staking
prior 1971 claims

inches
0 1 2
centimetres
0 1 2 3 4 5

BRITISH COLUMBIA GEOLOGICAL SURVEY

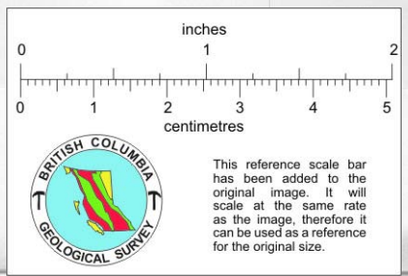
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

Scale 1 : 250,000
ch to 4 Miles Approximately
10 15
10 15 20 25

94 E

Kennco. Chapelle Property Thutade Lake area B.C

Maps & Plans submitted



Toodoggone River

Kodah Claims

Creek

Lawyers

Au, Ag

Lawyers Claims

Au, Ag

Au, Ag

Claim Outline

Au Ag

Saunders

Saunders Claims

Cu

Cu

Cu

Cu

Cu

Cu

Black Claims

Cu

N

Vein 'C'

Vein 'B'

Vein 'A'

N Ott Vein

N Black Gossan

W Chappelle

Chappelle Claims

Au, Ag

Jock Cr.

LEGEND

Recent
Alluvium

Upper Cretaceous & Paleocene
Sustut Group

Cretaceous (?)
Kingsvale Equivalent Volcanics

Jurassic ? (and Younger)
Hogem (Omineca) Intrusives

Lower Jurassic and Older
Takla Group

Paleozoic (Pennsylvanian ?)
Cache Creek Group

Quartz Veins

Au, Ag
Cu
Mineral Showings

LEGEND

Gossan Area

Faults
Defined
Approximate Location

Au/Ag/Cu
Silt/Soil Anomaly

1 1/2 0 1 2
MILES

inches
0 1
0 1 2
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

inches
0 1 2
0 1 2 3 4 5
centimetres

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

KENNCO EXPLORATIONS (WESTERN) LIMITED

Chappelle Property

Toodoggone River Area

Omineca M.D., B.C.

Compilation Map

DATA BY:		N.T.S. 94E	PL. NO.:
DRAWN BY:	DATE: 11/7/72	SCALE:	1" = 1 Mile
TRACED BY:	DATE: -		
REVISIONS:		FILE NO.	

GEOLOGIC RESERVE CALCULATIONS CHAPPELLE VEIN A

Footage Vein A SW-NE (0'-707.5')	Sampled Grade channel samples at 5' spacings Au/Ag oz/ton	Inferred Grade From a Single Line of Samples* or Estimated from Adjacent samples**	Tons/Vert Ft Exposed In Trenches At Sampled Grade (5' spacings)	Tons/Vert Ft Inferred Between Trenches At Inferred Grade
0-17.5" 12.5'*		(.025/1.0)*		
(17.5-49.5') (24.5*)		1.97/15.6*		25 32' x 9.5'
49.5-121.5 (82.5)*		0.36/3.7*		60 72' x 10.2'
121.5-161.5		1.21/21.7**		40 40' x 12.2'
161.5-389.5	1.21/21.7 (includes same 1970 chip samples)		214 228' x 11.6'	
389.5-581.5	.05/1.0			
581.5-622.5	0.55/18.0		20 41' x 6.0'	
622.5'-662.5'		0.60/17.8**		30 40' x 9.0'
662.5'-707.5'	0.64/17.7		27 45' x 7.3'	
17.5-389.5 581.5-707.5	1.1/20.9 Wt.Av.	0.88/13.0 Wt.Av.	(A) 261 Tons/Vert Ft at 1.1 oz/ton Au 20.9 oz/ton Ag	(B) 155 Tons/Vert Ft at 0.88 oz/ton Au 13.0 oz/ton Ag

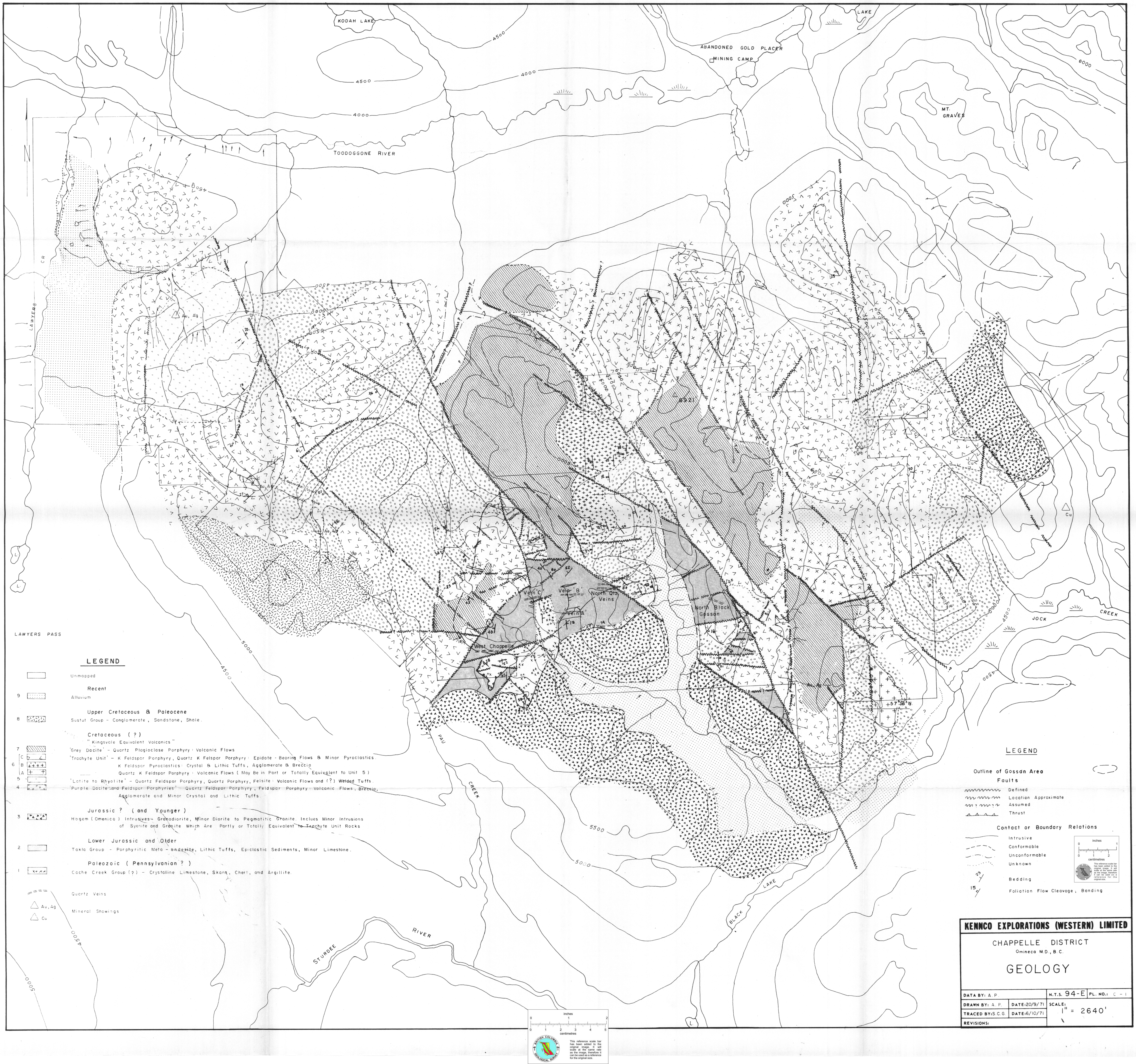
TOTAL EXPOSED AND INFERRED TONS/VERT FT (A) AND (B) = 416 TONS/VERT FT.
AVERAGE GRADE IN QTZ FOR 416 TONS/VERT FT = 1.0 OZ/TON AU 18.0 OZ/TON AG
(GROSS VALUE $60.00)
AG = $ 1.35 OZ U.S. NOV/71
AU = 35.00 OZ

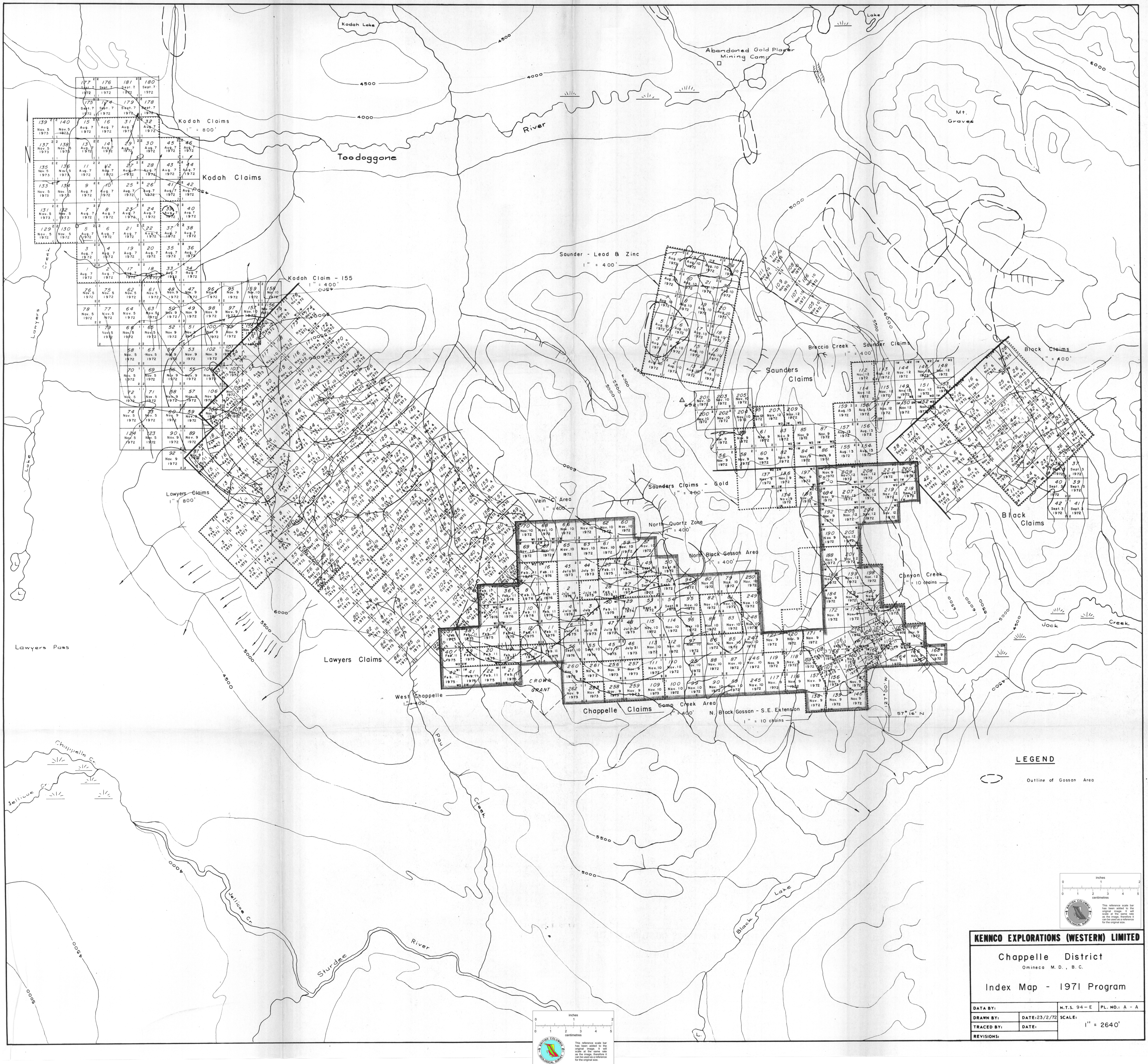
CALCULATED BY S.C. GOWER

KENNCO EXPLORATIONS (WESTERN) LIMITED

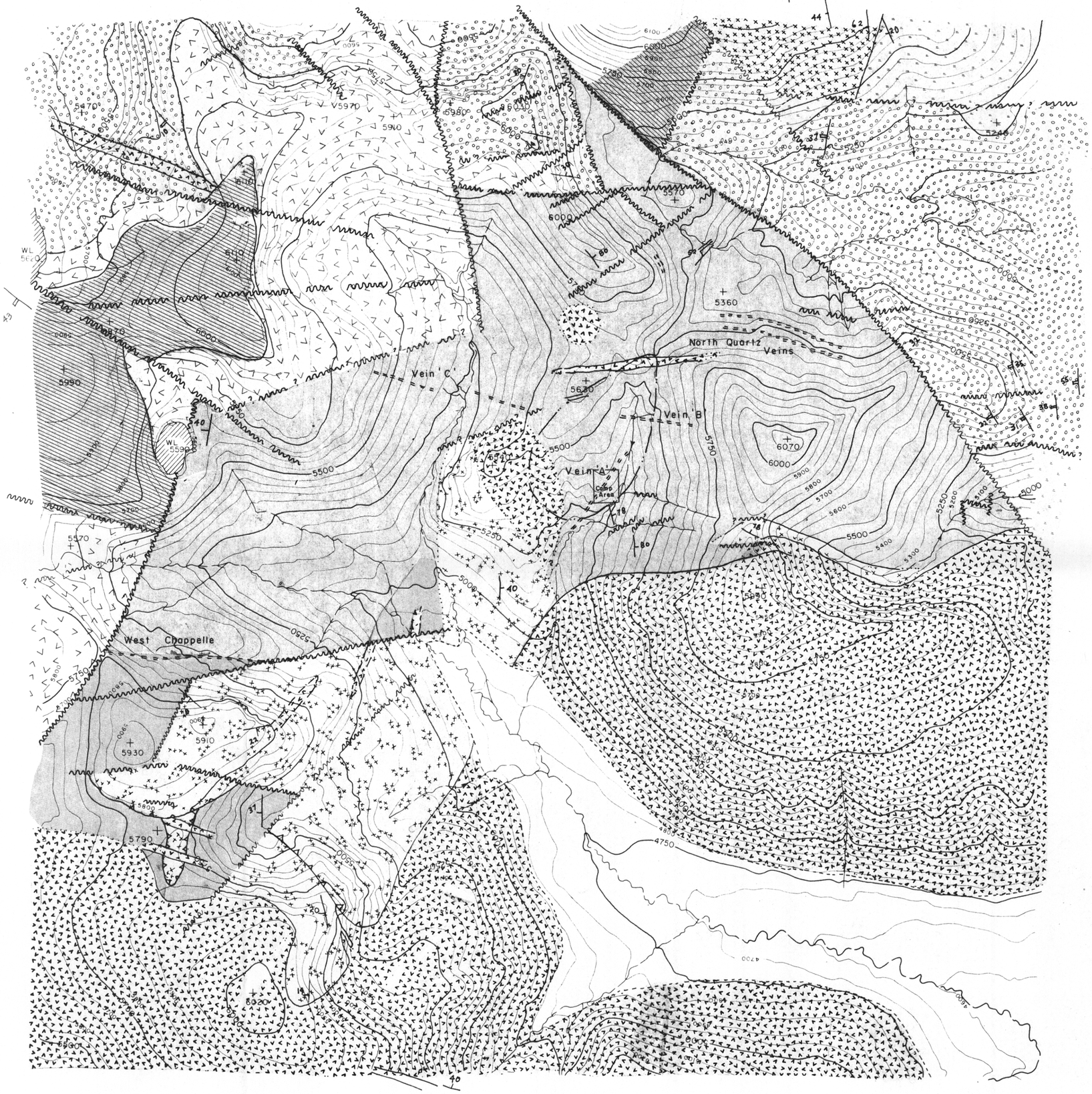
Chappelle W 000145
Vein A, 0—725 Ft.
Assay Plan
& Longitudinal Section

DATA BY: S.C.G.		N.T.S.	PL. NO.:
DRAWN BY: S.C.G.	DATE: 20/9/71	SCALE: 1" = 10'	
TRACED BY:	DATE:		
REVISIONS: P.N.S.Y.			


KODAH LAKE
LAKE
ABANDONED GOLD PLACER
MINING CAMP
4500
4000
6000
MT. GRAVES
N
TOODOGGONE RIVER
LAWYERS CR
6921
Vein 'C'
Vein 'B'
North Qtz. Veins
Vein A
West Chappelle
North Block Gossan
JOCK CREEK
5500
5000
PAU CREEK
BLACK LAKE
STURDEE RIVER
LAWYERS PASS
LEGEND
Unmapped
Recent
9 Alluvium
Upper Cretaceous & Paleocene
8 Sustut Group - Conglomerate, Sandstone, Shale.
Cretaceous (?)
"Kingsvale Equivalent Volcanics"
7 'Grey Dacite' - Quartz Plagioclase Porphyry : Volcanic Flows
6 C 'Trachyte Unit' - K Feldspar Porphyry, Quartz K Felspar Porphyry : Epidote - Bearing Flows & Minor Pyroclastics.
B K Feldspar Pyroclastics : Crystal & Lithic Tuffs, Agglomerate & Breccia
A Quartz K Feldspar Porphyry : Volcanic Flows (May Be in Part or Totally Equivalent to Unit 5)
5 'Latite to Rhyolite' - Quartz Feldspar Porphyry, Quartz Porphyry, Felsite : Volcanic Flows and (?) Welded Tuffs.
4 'Purple Dacite and Feldspar Porphyries' : Quartz Feldspar Porphyry, Feldspar Porphyry : Volcanic Flows, Breccia, Agglomerate and Minor Crystal and Lithic Tuffs.
Jurassic ? (and Younger)
3 Hogem (Omenica) Intrusives - Granodiorite, Minor Diorite to Pegmatitic Granite. Inclues Minor Intrusions of Syenite and Granite Which Are Partly or Totally Equivalent to Trachyte Unit Rocks
Lower Jurassic and Older
2 Takla Group - Porphyritic Meta - andesite, Lithic Tuffs, Epiclastic Sediments, Minor Limestone.
Paleozoic (Pennsylvanian ?)
1 Cache Creek Group (?) - Crystalline Limestone, Skarn, Chert, and Argillite.
Quartz Veins
Au, Ag
Cu
Mineral Showings
LEGEND
Outline of Gossan Area
Faults
Defined
Location Approximate
Assumed
Thrust
Contact or Boundary Relations
Intrusive
Conformable
Unconformable
Unknown
Bedding
Foliation Flow Cleavage, Banding
inches
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.
BRITISH COLUMBIA GEOLOGICAL SURVEY
KENNCO EXPLORATIONS (WESTERN) LIMITED
CHAPPELLE DISTRICT
Omineca M.D., B.C.
GEOLOGY
DATA BY: A. P.
N.T.S. 94-E
PL. NO.: C - 1
DRAWN BY: A. P.
DATE:20/9/71
TRACED BY:S.C.G.
DATE:6/10/71
SCALE:
1" = 2640'
REVISIONS:



Kodah Lake
Abandoned Gold Placer Mining Camp
Lake
Mt. Graves
Toodoggone
River
Kodah Claims
1" = 800'
Kodah Claims
Kodah Claim - 155
1" = 400'
Sounder - Lead & Zinc
1" = 400'
Breccia Creek - Saunder Claims
1" = 400'
Saunders Claims
Black Claims
1" = 400'
Black Claims
Lawyers Claims
1" = 800'
Lawyers Claims
Lawyers Pass
Lawyers Cr.
Lake
Saunders Claims - Gold
1" = 400'
Vein "C" Area
1" = 400'
North Quartz Zone
1" = 400'
North Black Gossan Area
1" = 400'
Canyon Creek
1" = 10 chains
Jock Creek
West Chappelle
1" = 400'
CROWN GRANT
Chappelle Claims
Camp Creek Area
1" = 400'
N. Black Gossan - S.E. Extension
1" = 10 chains
127°00' W
57°16' N
Chappelle Cr.
Jellicoe Cr.
Jellicoe Cr.
Pau Creek
Sturdee River
Black Lake
LEGEND
Outline of Gossan Area
KENNCO EXPLORATIONS (WESTERN) LIMITED
Chappelle District
Omineca M.D., B.C.
Index Map - 1971 Program
DATA BY:
N.T.S. 94-E
PL. NO.: A - A
DRAWN BY:
DATE: 23/2/72
SCALE:
TRACED BY:
DATE:
1" = 2640'
REVISIONS:
inches
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.
BRITISH COLUMBIA GEOLOGICAL SURVEY



LEGEND

GEOLOGY

Recent

5 ▨ Alluvium

Cretaceous or Earlier (Kingsvale Equivalent?)

4 D Quartz Plagioclase Porphyry – 'Grey Dacite'

C₁ Kspar Porphyry, Qtz.-Kspar Porphyry — 'Trachyte, Qtz.-Bearing Trachyte (Rhyolite)'

C₂ Kspar Crystal Tuff, Lithic Tuff, Agglomerate – 'Trachytic Pyroclastics'

B Quartz Felspar Porphyry, Quartz Porphyry, Felsite, Feldspar Porphyry. '(Quartz) Latite' to 'Rhyorite'

A Quartz Felspar Porphyry; Feldspar Porphyry – 'Purple Dacite'

Jurassic ? (and Younger) Hogem Intrusions

3 Granodiorite, Minor Diorite to Granite & Granite Pegmatite Inclused Small Masses of Syenite and Granite Some or All of Which are Younger Kingsvale Trachyte Equivalents

Lower Jurassic and Older (Takla Group)

2 Meta-andesite Porphyry, Lithic Tuffs & Epiclastic Sediments, Minor Limestone.

Paleozoic (Pennsylvanian ?)

1 Crystalline Limestone, Chert & Argillite (Some Limestone is Younger Takla Group)

Quartz Vein Systems

SYMBOL

Fault

Fault (Approximate Location)

Assumed Fault

Thrust (Teeth on Hanging Wall Side)

Conformable Boundary between Map Units or Intrusive Contact

Contact Conditions Uncertain

50 Bedding

31 Flow Cleavage; Banding

KENNCO EXPLORATIONS (WESTERN) LIMITED

CHAPPELLE CLAIMS
OMINECA M.D., B.C.

GEOLOGY

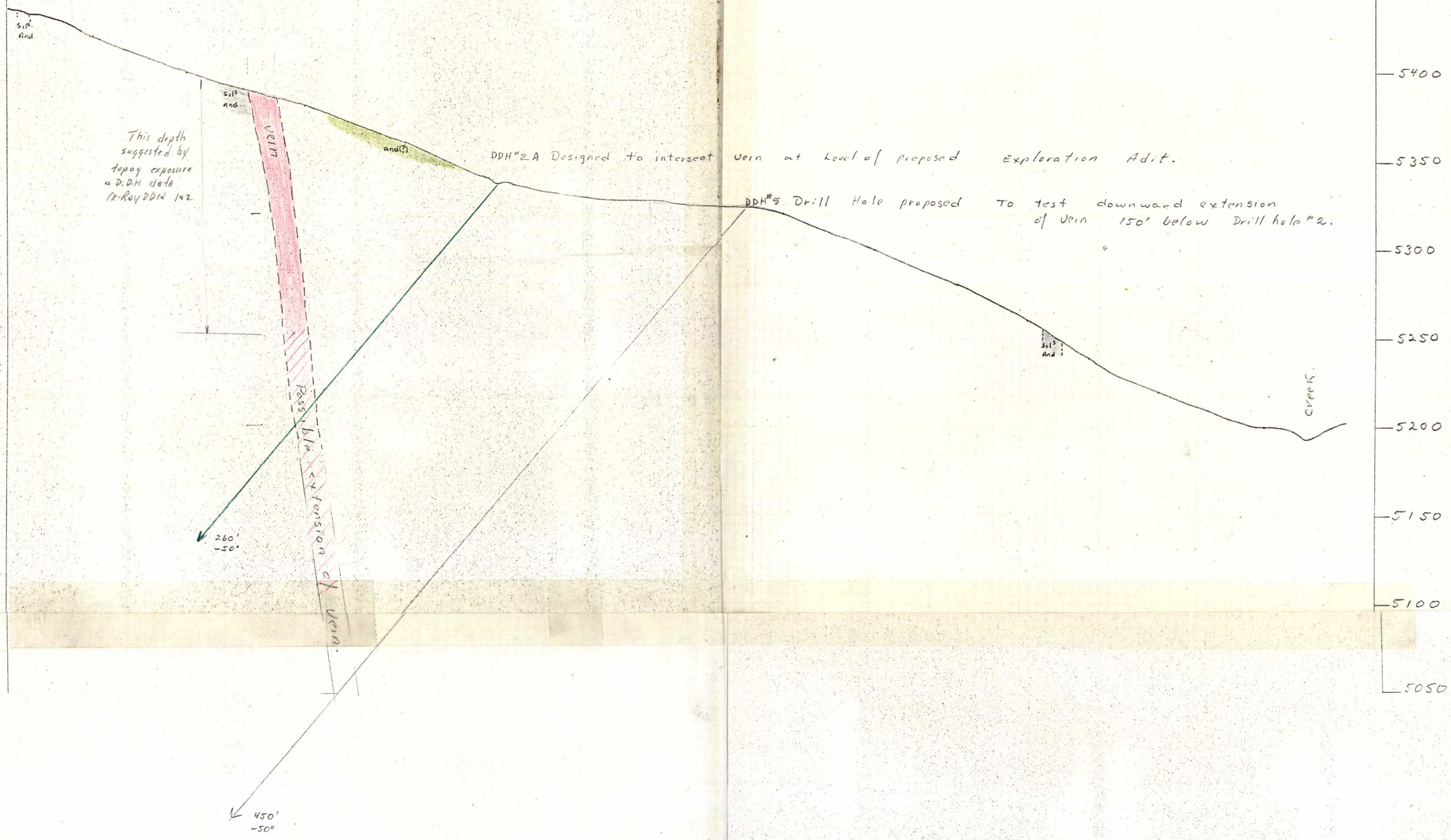
DATA BY A.P.		N.T.S. 94-E	PL. NO.: C-2
DRAWN BY: A. P.	DATE: 14/9/71	SCALE:	
TRACED BY S.C.G.	DATE 8/10/71	1" to 800'	
REVISIONS:			

inches
0 1 2
0 1 2 3 4 5
centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

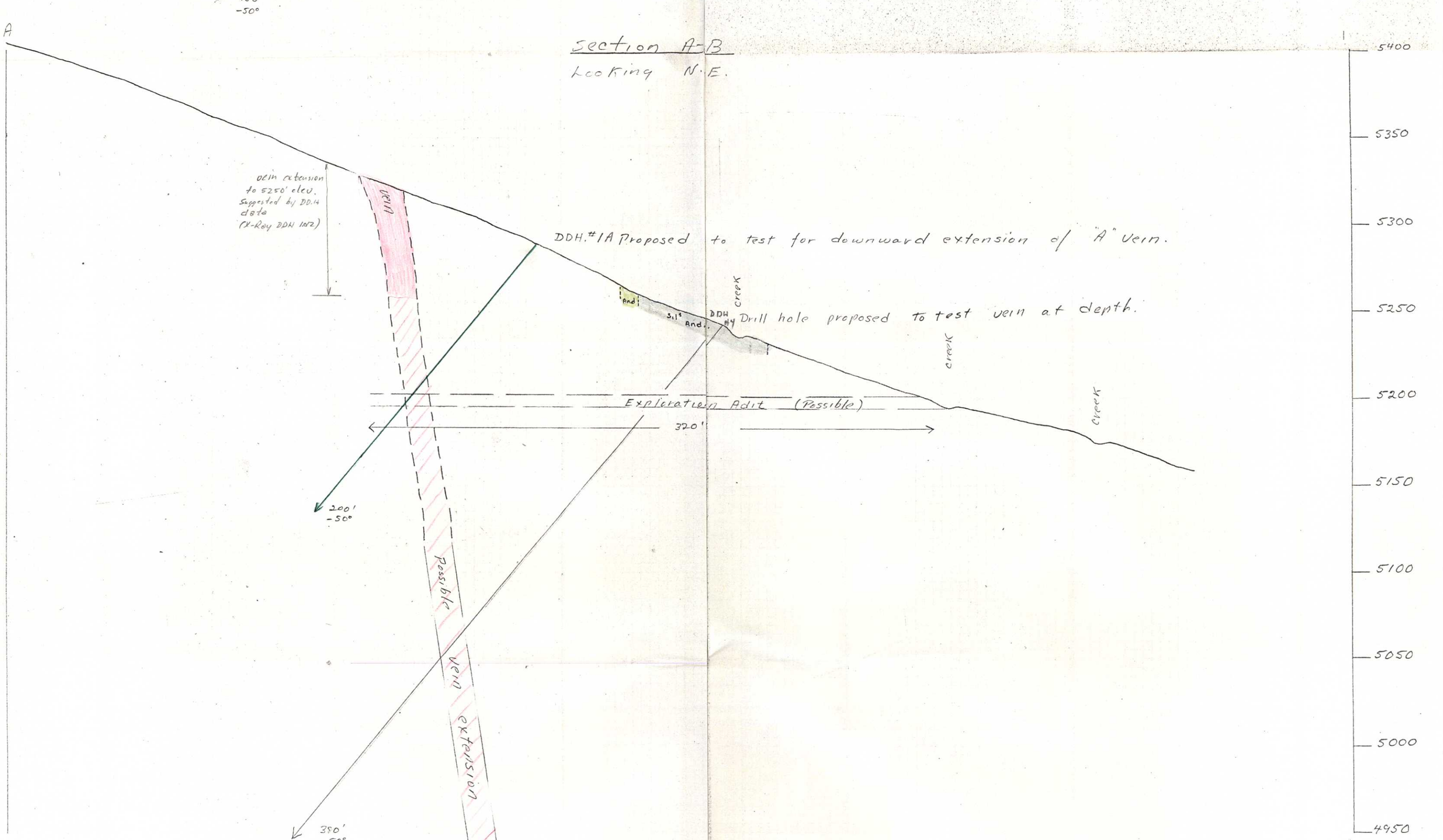
See Assay Plan for Detail 1" = 10'
Vein "A"
Vein "B"
Trench - 1
Trench - 3a
Trench - 3b
Trench - 6
Trench - 7
Trench - 9
Trench - 11
Trench - 12
Trench - 13
Trench - 15
Trench - 16
Trench - 18
Trench - 19
Trench - 20
Trench - 25
Trench - 27
LEGEND
Ferricrete
Quartz Vein.
Silicious Andesite 10 - 80 % SiO2
Syenite Porphyry Intrusive
Tremolite - Metavolcanics
Fine grained Metavolcanics
Quartz Float
Trench
Major Fault
KENNCO EXPLORATIONS (WESTERN) LIMITED
Chappelle
Omineca M.D., B.C.
Vein 'A' Area
Geology
DATA BY S.G.
N.T.S. 94-E
PL. NO. D - 1
DRAWN BY:
DATE: 1971
TRACED BY:
DATE:
SCALE:
1" = 100'
REVISIONS:


5600'
5580'
5560'
5540'
5520'
5500'
5480'
5460'
5440'
5420'
5400'
5380'
5360'
5340'
5320'
5300'
5280'
5260'
5240'
5220'
5200'
5180'
5160'
heli-port
LEGEND
Ferricrete
Quartz Vein
Silicious Andesite (0 - 80% SiO2
Syenite Porphyry Intrusive
Tremolite - Metavolcanics
Fine grained Metavolcanics
Quartz Float
Trench
Major Fault
1" = 50 ft.
KENNCO EXPLORATIONS (WESTERN) LIMITED

Section C - D
Looking N.E.



Section A-B
Looking N.E.



Chappelle Cr. Property
Kennco Explorations

Sections showing possible extensions to vein system and proposed drill holes to test extensions.
Scale 1" = 50'

Aug 29/72 JCL

inches 0 1 2
centimetres 0 1 2 3 4 5
BRITISH COLUMBIA GEOLOGICAL SURVEY
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

Section E-F

Looking N.E.

E

F

5450

5400

5350

5300

5250

5200

5150

5100

Silt & And.

And.

Vein

DDH #3 Proposed. to test downward projection of "A" vein.

And.

And.

Silt & and.

Vein Extension to 5250 elev. suggested by Topog, exposure and DDH #1 & #2 (X-Ray holes)

230'
(-50°)

Chappelle Cr. Property
Kenneo Explorations.
Proposed drill hole to test downward extension of "A vein"

1"=50' Aug 29/72 JCL

inches 0 1
0 1 2 centimetres
BRITISH COLUMBIA GEOLOGICAL SURVEY
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

D. D. H. - 2 SLUDGES

	Au oz./ton	Ag oz./ton
KX 10956	0.16	9.8
	0.004	0.50
	0.51	14.6
	0.23	9.3
KX 10960	0.13	4.2
KX 10962	0.054	4.5
	0.021	2.1
	0.012	1.9
	0.011	0.75
KX 10966	0.009	0.46
	0.006	0.32
	0.007	0.43
	0.016	0.99
	0.047	0.51
	0.021	0.90
	0.025	1.7
KX 10973	0.030	0.49

D. D. H. - 2 CORE

Au oz./ton

0 1 2 oz/ton

D. D. H. - 2 CORE

Ag oz./ton

0 50 100 oz./ton

Core Assays D.D.H. -2

% Rec.	Au,	Ag oz./ton	
	0.63	6.7	Surface Assay
0			
10	0.14	1.9	KX 11184
10	0.15	7.5	
40	0.27	10.3	
0			
20	0.41	20.9	
25	0.22	10.0	KX 11188
	0.02	2.6	
35	0.071	19.4	
40	0.017	2.2	
30	0.011	2.0	
60	0.018	0.76	
15	0.037	1.1	KX 11194
20	0.001	0.24	
30	0.001	0.21	
30	0.010	0.82	
25	0.019	0.50	
60	0.022	1.0	
25	0.019	2.0	KX11200
80			

Surface Assays

6.7 oz/ton Ag, 0.63 oz/ton Au — 4.0 oz/ton Ag, 0.72 oz/ton Au — 5.4 oz/ton Ag, 3.62 oz/ton Au

DDH #2 — DDH #1

END #2

END #1

Core Assays DDH #1

	Au, oz/ton	Ag,	% Rec.
Surface Assay 1.2		14.0	0
KX 10974	4.41	182.0	20
	5.25	67.6	25
	3.06	33.8	15
	1.88	23.5	
	3.00	150.0	30
	1.41	23.5	
KX 10980	.035	3.9	25
	0.44	2.6	60
	.041	.28	
	.028	.52	40
	.017	.70	25
KX 10985	.006	.94	25
	.006	.44	
	.005	.50	40
	.004	.85	
	.006	2.7	
KX 10990	.019	1.9	40
	.007	.88	
	.006	1.9	40
	.007	2.9	
	.042	.90	70
KX 10995	0.39	1.4	40
	4.41	273.5	60
	3.97	238.2	65
	3.12	132.4	
KX 10999	2.29	235.3	35
KX 11174	0.39	25.6	30
	0.044	3.5	20
			30
			40
			40
	0.003	0.29	35
	0.006	0.56	25
			25
	0.005	0.44	20
	0.006	0.72	25
KX 11180	0.004	0.71	40
	0.006	0.56	30
	0.09	1.0	30
KX 11183	0.005	0.17	

D. D. H. - 1 CORE

Ag oz/ton

0 100 200 300

0 100 oz./ton

200 300 oz./ton

D. D. H. - 1 CORE

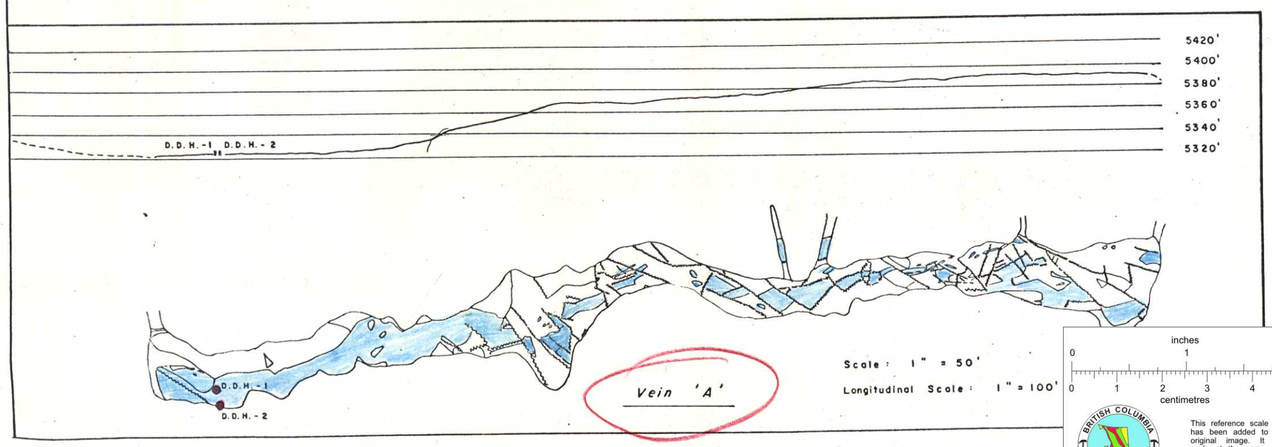
Au, oz/ton

0 1 2 3 4 5 6

0 1 2 3 4 5 6 oz/ton

D. D. H. - 1 SLUDGES

Au,	Ag oz./ton	
4.10	88.2	KX 10171
4.50	88.3	
3.10	35.5	
0.37	5.7	
0.17	2.1	
0.058	1.2	
0.018	1.2	KX 10177
0.021	1.5	
0.029	0.91	
0.055	0.94	
0.030	0.94	
0.009	1.0	
0.013	1.8	
0.082	2.6	
0.017	0.91	
0.014	1.1	
0.011	1.8	
0.015	1.1	
3.40	176.5	KX 10189
4.10	182.3	
2.10	117.6	
2.50	279.4	
0.73	25.6	
0.36	16.9	KX 10194
0.15	8.2	
0.26	7.4	
0.13	5.3	
0.029	1.1	
0.068	2.2	
0.024	1.2	KX 10200
0.024	1.1	KX 10951
0.025	1.6	
0.050	1.8	
0.039	1.9	
0.16	2.3	KX 10955
0.013	0.37	KX 10955 B



> 90 % Quartz

Silicified Wallrock

Metavolcanics

Inferred Fault

inches 0 1 2 — centimetres 0 1 2 3 4 5

BRITISH COLUMBIA GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

KENNCO EXPLORATIONS (WESTERN) LIMITED

CHAPPELLE

OMINECA M. D., B. C.

ASSAY PLAN

D. D. H.'S 1 & 2

inches 0 1 — centimetres 0 1 2

BRITISH COLUMBIA GEOLOGICAL SURVEY

This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.

DATA BY: S. C. G.		N.T.S. PL. NO.:
DRAWN BY: S. C. G.	DATE: 20/9/71	SCALE: 1" = 10'
TRACED BY:	DATE:	
REVISIONS:		FILE NO.