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MEMORANDUM REPORT

FILE
462

July 19, 1970

Mr. M. O. Johnston,
Box 133,
Tahoe City,
California.

Re: Howard Turley Antimony
Properties, Bernice Can-
yon, Churchill County,
Nevada.

Dear Mr. Johnston:

The captioned properties were visited on July 9, 1970, in company with Mr. Chuck Conway. In view of the short seven hours of reconnaissance, observations must be considered preliminary and incomplete.

Using the customary report format, comments are limited to details, gathered from hurried surface and underground observations, supported in part by the precise topography of "air-photoed" government maps. Lack of detail necessitates the "memorandum" category and not "final appraisal".

We submit three plates which should assist in following the text.

SUMMARY:

Antimony mineralization exists for a distance of $3\frac{1}{2}$ miles, up Bernice Canyon; of this, Mr. Turley controls 15,000 feet. Occurrences consist of narrow 6 inch to 2 feet veins of stibnite (Sb_2S_3), cutting through shales, sandstone and limestones, which can be mined by "high-grading"; and as veins and disseminations in thick dikes and sills of an intrusive latite, six to 20 feet thick, which offer good tonnages of lower grade ores, which might be economic through shrink stoping and milling.

Continued interest in Turley properties is tied to (1) an estimate of tonnage and grade possibilities, (2) a favorable lease and option agreement for all 15 claims and (3) assurance that properties can be mined and milled economically on the basis of a price per pound, lower than today's high market.

This memorandum considers of interest only the lower grade-larger tonnage potential.

Conclusions:

We conclude that:

1. The best and immediate possibility lies at the north end, at the Arrance mine. From the north adit level, 1,045,000 tons, more or less, of mineralized latite are indicated, which may contain sufficient stibnite to back a low grade operation;
2. above the Solomon mine adit, 25,000 tons, more or less, are indicated;
3. one cannot be too sure that the Arrance latite mass can be extended 3000 feet to the Antimony King; if so, such would provide 5,500 feet of possibly-mineralized trend; nor can one be sure that the King Solomon and I.M.K. mines can be tied together over a possible 2,500 feet;
4. future detailed studies, assuming a fair deal, should be confined to the north end; with a substantial reserve assured, efforts to tie trends through, regionally, another 6,000 feet to the Marguerite mines, would be in order;
5. all fifteen Turley claims must be included in an agreement.

Recommendations:

We recommend as follows:

1. Concurrence is expressed with the recent approach to Mr. Turley, proposing a \$5,000 payment for a 60 day option, to be followed by a lease and option, accepting his \$500,000 asking price, with payments on the basis of 10% on net sales;

2. Turley's insistence on a \$100,000 cash payment at the start of an immediate lease and option, and \$400,000 to be paid from a 10% royalty on, I assume, the gross from production, be not considered;
3. Lessees, controlling the two or three claims on the Arrance property, be completely eliminated, with these claims placed in an option, free and clear;
4. the 60 day option period include that time needed for sampling, detailed surveying and geological mapping, metallurgical testing and an analysis of the antimony market.

Location:

Turley claims fall in sections 23, 24 and 25, Township 22 North, Churchill County, Nevada. Clan Alpine is the mining district, with claims following Bernice Canyon, which lies on the east flank of Dixie Valley.

With reference to Plate A, the distance from Reno, Nevada, via U. S. highways 80 and 50, and a gravel road, running north from the Frenchman Station area, is 160 miles.

Legal Title:

Mr. Howard Turley of Dixie Valley offers fifteen standard mining claims, with extent covering 10 claim lengths (15,000 feet), all unpatented and held by annual assessment work. No property map has been provided.

History of Property and District:

Antimony was discovered in the district in 1885 and first produced in 1892, with shipments continuing to 1896. Some production was recorded during World War I, and again during World War II and the Korean War. Turley tenure appears to start about 1960.

The district has produced in excess of 300 tons of antimony metal.

Recent history is without detail. Suffice it to say that Earth Engineering Company (Santa Ana, California), lessee on the Arrance, has been shipping mill-grade ore to a small mill at Gabbs, Nevada, at an indicated loss; and that Turley has been shipping high grade to rail head at a profit; this still to be investigated, since figures are "astronomic" and hear-say.

Also "hear-say" is the assertion that six other mining groups are interested in acquiring Turley properties, including National Lead and the Lemnway group from San Francisco.

General and Limiting Conditions:

Access is good, via pavement on U.S. 50, followed by 53 miles of gravelled and desert roads; water supply, from Bernice underflow, should support a small mill; power does not exist; climate, hot and dry, with probably less than 7 inches precipitation per year, is favorable; labor supply is adequate, mill sites exist, and tailings disposal presents no problem.

Geology (refer to Plate B)

Reference is made to "Summary". Antimony is contained in stibnite (antimony sulphide) at surface and depth, and in yellowish antimony oxides, in surface and near-surface leached zones.

The latite sills are two in number, separated by about 300 feet, striking about N25W, with steep westerly dips, and widths of from 6 to 20 feet. Mineralization occurs throughout sills, as even disseminations to traces, averaging about 2% antimony, and in streaks of one inch to as thick as two feet, carrying massive antimony sulphides and oxides. Our one estimate in a good exposure indicated 92% by volume for the former

and 8% for the latter.

With reference to Plate B, "Plan Map", note the parallelism and possibilities for regional continuity. Talus accumulations conceal much of the underlying rock. Continuity offers an unlimited challenge, but can only be established with "dozer" and diamond drilling.

As mentioned above, mineralization is not limited to the latite masses, since it also enters the sedimentary rocks which border the intrusives.

Ore Reserves:

Broken Reserve:

Broken reserves on dumps and in stoped areas may amount to about 3,500 tons of 10% antimony, more or less.

In Place Reserves:

A figure is beyond the scope of this short study.

However, with reference to Plate C, and for properties, currently active, note that:

(1) size of target for the Arrance Block **, above the north adit (about 100 feet of tunnel), is 1,045,000 tons, with grade of estimate requiring sampling;

(2) size of target, for block above the King Solomon tunnel, is 25,000 tons, with sampling required to establish grade.

** efforts by present lessee appears to have opened up about 60,000 tons of undetermined grade.

Economic Considerations:Table A: Price: (as reported by Engineering and Mining Journal)

<u>Year</u>	<u>\$/lb. Sb</u>	<u>60% antimony ore \$ per short ton unit or 20 lbs.</u>	<u>Comments</u>
1965	0.525		Jan. 1
	0.445		Jan. 30
	0.435		July 1
1966	0.500		Average
1967	0.445		February
1968			N. A.
1969	0.645		October
	0.645		November
1970	1.045	38.89 to 40.17	January
	1.765	38.00 to 40.00	May
			July 16*

* quoted San Francisco, with few "takers".

Table B: World Production ("Mining Annual Review" British)

<u>Source</u>	<u>Tons of Metal Produced</u>					<u>1925</u>	<u>1949</u>	<u>Ave.</u>
	<u>1969</u>	<u>1968</u>	<u>1967</u>	<u>1966</u>	<u>1965</u>			
S. Africa**	19,600	18,535	13,597					
U.S.S.R.		7,100						
China		13,200	22,500	25,400	25,400	12,000		
Czecks		2,200	(Total Sino Soviet Block)					
Bolivia		13,600	12,704					
Mexico		3,800	4,199					
Yugo S.avia		2,500	2,400					
Turkey		2,500	2,200	3,400	3,900			
Total Major Producers	64,335	57,600						
Minor Producers	6,965	7,400						
Total World Production	71,300	65,100	68,500	70,500	37,500			

Turn to page 7 for additional comments.

** All South African production from the Consolidated Murchison mine, at Gavelotte in the East Transvaal, as follows:

1968: mining 240,000 tons per year with grade of 7.7% recoverable antimony.

1969: estimated at 264,000 tons per year with grade of 7.4% recoverable antimony.

*** Minor producers as follows:

1000 to 2000 tons of metal: Morocco, Thailand, Australia.

Less than 1000 tons metal: U.S.A., Peru, Canada, Italy, Austria, Burma, France, Spain, and Algeria.

Table C : Consumption, U. S. A. ("Mining Annual Review")

<u>Year</u>	<u>Primary</u>	<u>Secondary</u>	<u>Total</u>
1966	19,681	24,269	43,950
1967	17,350	23,660	41,010
1968	17,350	22,650	40,000

All in short tons.

Forecasts:

The British 1969 MINING ANNUAL REVIEW indicates a growth rate in domestic consumption of 3.4% per annum, for the period of 1968 to 1978; and a world growth rate (including the Sino-Soviet block) of 3.2 to 3.4% per annum, for the five years 1968 to 1973.

MINING ANNUAL REVIEW forecasts:

1. Total world supply will not be able to maintain a growth rate of more than 1.5 to 2.0% per annum;
2. G.S.A. will not sell too much from its strategic stockpile of 24,000 tons; only 3500 tons were sold from 1964 to 1968, with 125 tons in 1968.

MINING ANNUAL REVIEW concludes: "as the market is roughly in equilibrium, at the moment, it may be deduced that demand will be exceeding supply, with a gradual tightening of supplies, over the next five year period."

Recapitulation:

1. We believe that possibly the most interesting figure in the above tables is the reference in Table B to South Africa and its Consolidated Murchison mine.

Significant is the fact that South Africa in 1968 replaced China as the World's No. 1 producer of antimony, entirely on the basis of one mine's efforts. Murchison produces ore, averaging about 7.5% antimony, mining 22,000 tons per month, or 700 tons per day.

2. The mining of low grade ores, in volume, on Turley properties should, therefore, be considered; especially so, since reserves of mineralized latite, at first sight, exceed one million tons.

3. In conformity with this type of thinking, two samples from stockpiles were taken on July 9. Both represented the lower grade of the disseminated type ore; in short, the low grade of the low grade. Results are as follows:

<u>Sample #</u>	<u>% Antimony</u>	<u>Remarks</u>
Bernice A	0.72	King Solomon
Bernice B	0.54	Arrance
Average	0.63	

By averaging the 0.63% with an estimated 3.0% for the higher grade disseminated ore, an average of 1.8% for the low grade portion of the latite mass is suggested. With the unit estimated at 92% of total volume, and the better grade streaks estimated at 8% of volume (and assuming 55% Sb for the latter, a 6% overall average appears to be a possibility.

Such, we believe, justifies continued interest.

Yours very truly,

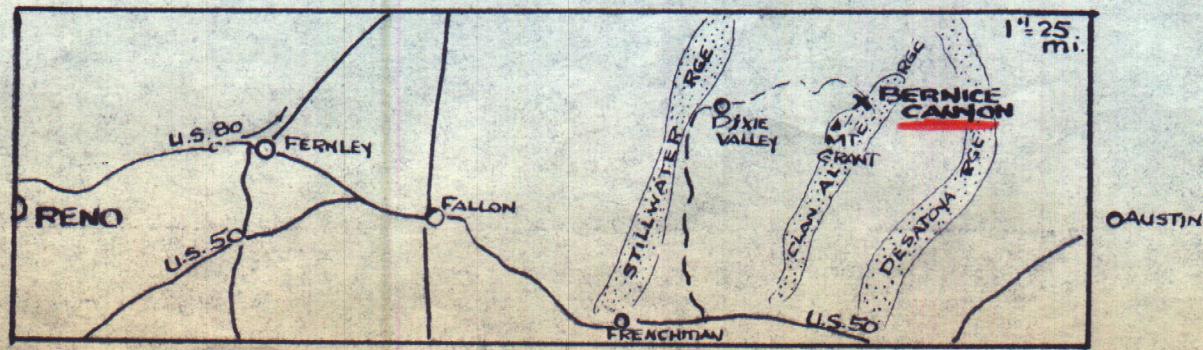
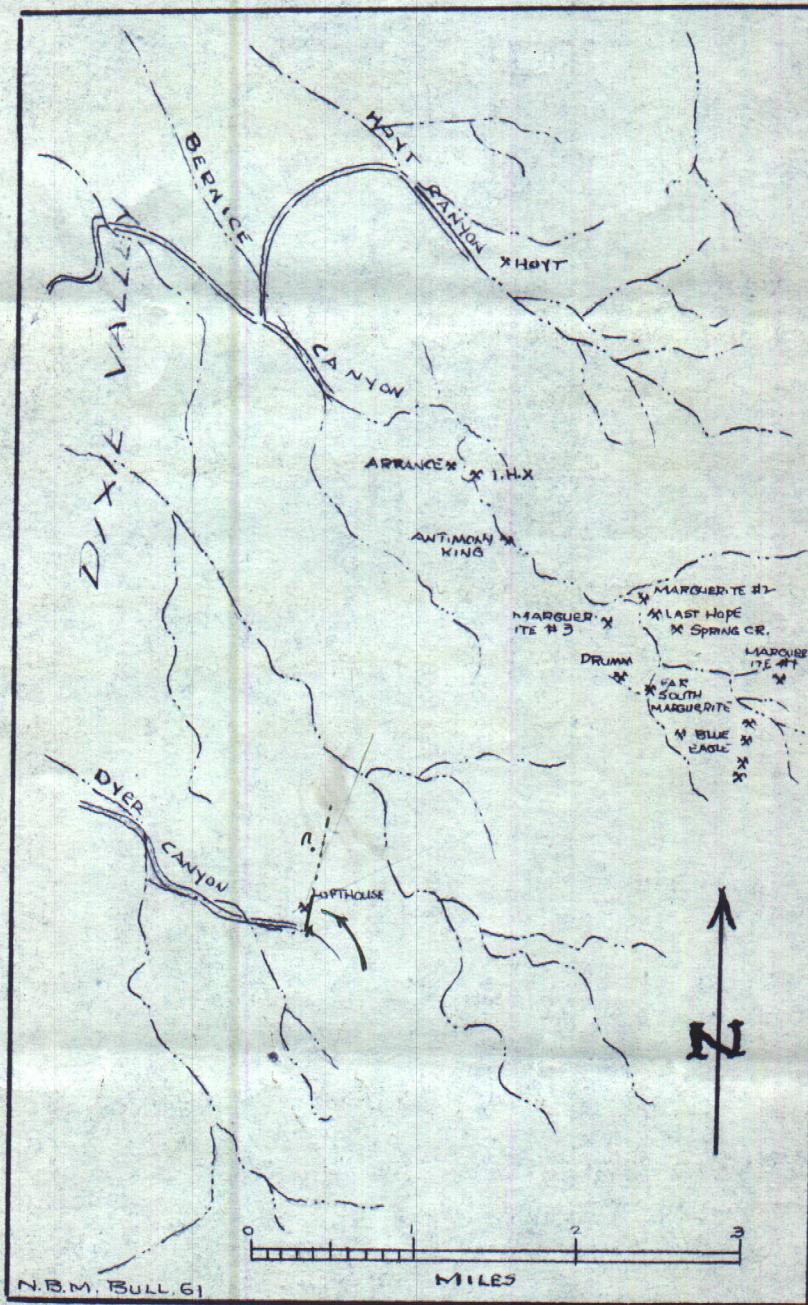
David LeCount Evans

A

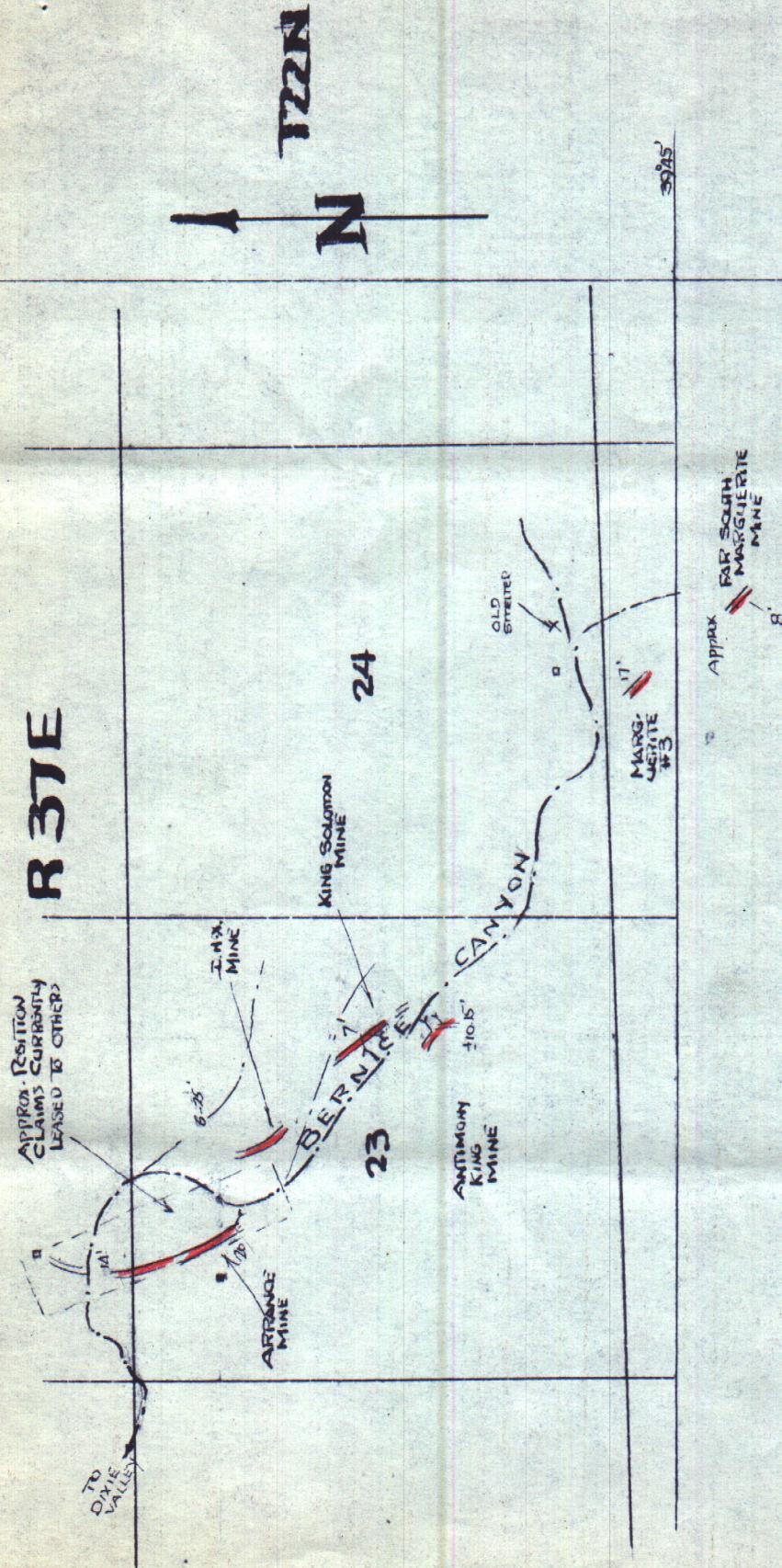
BERNICE CANYON ANTIMONY MINES

CLAN ALPINE DIST.
CHURCHILL CO., NEVADA

INDEX MAPS



B



BERNICE CANYON ANTIMONY MINES

CLARK ALPINE DIST.
CHURCHILL CO., NEVADA

1 INCH = 2000 FT

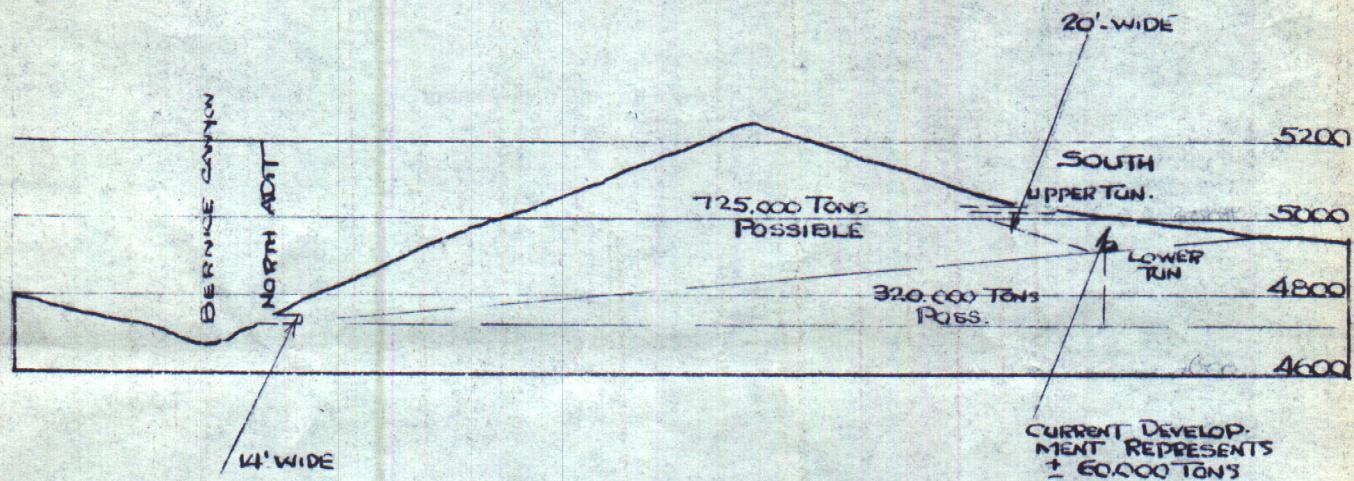
PLAN MAP

CONTROLLED BY ENLARGEMENT
OF U.S.G.S. HUMBOLDT SALT
MARSH 15 MINUTE Topo SHEET:
DEPARTMENT OF LAND SURVEY
E. LAWRENCE DRAKE, SURGEON
1963

D. LECONTE EVANS
CONS. GEOLOGIST

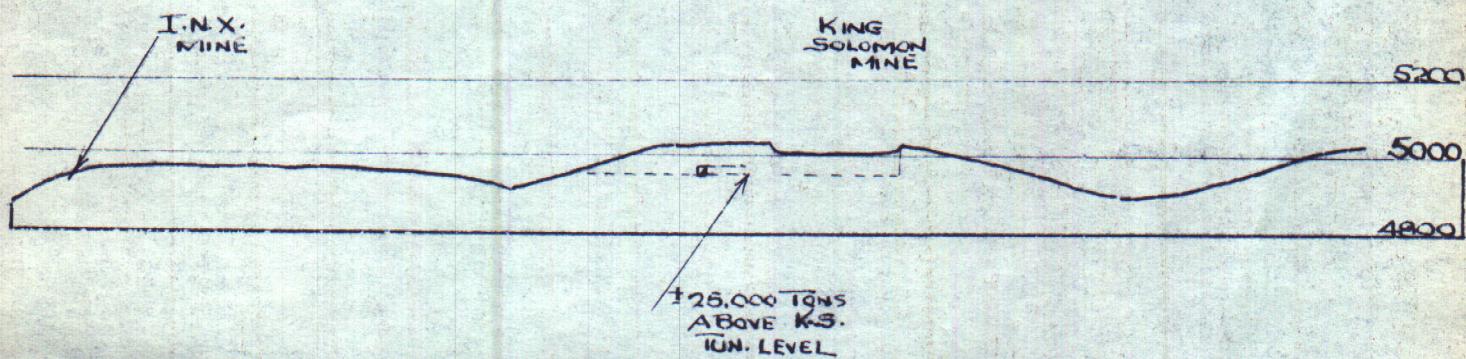
RENO, NEVADA
JULY 14, 1970

C



ARRANCE LONG SECTION

1" = 500'



KING SOLOMON LONG SECTION

1" = 500'

BERNICE CANYON
CLAN ALPINE DIST.
CHURCHILL CO., NEVADA.

D. LE COUNT EVANS
CONS. GEOLOGIST

RENO, NEVADA
JULY 19, 1970

5b

water

1965 -	50.525	/lb - 99% Sh - Jan 1
	0.445	" " " Jan 30
	0.435	" " " July 1
1966 -	0.50	- \$1/stu.

1967 0.445

Feb. 1965

1968

1969 .	0.645	-
	0.645	-
1970	0.045	38.39 - 40.17
	1.765	62900 -

Oct 1969	-
Nov. 1970	-
Jan. 1970	-
May 1970	-

Oct 1969	-
Nov. 1970	-
Jan. 1970	-
May 1970	-

E.C. Bradish aw
Any Express Lodge.
#2
in Reno

100.00 / 1,597.00%
100.00 / 1,597.00%
100.00 / 1,597.00%

Broken
Reserves:

Limited. To following estimator.

- King Solomon Dump. ~ 750

Antimony KING.

South-Tun-Dump 1000.

" " backside 1000

Antimony KING -

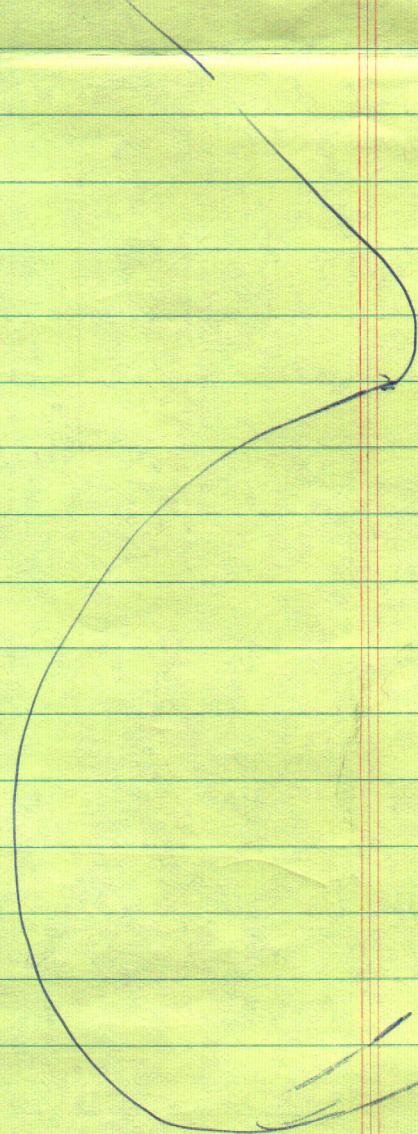
NORTH-Tun-Dump 1000

3750 TONS @ act-10%

$\frac{a_1}{a_2}$
 $\frac{a_2}{a_3}$
 $\frac{a_3}{a_4}$
 $\frac{a_4}{a_5}$

a_1

$\frac{a_5}{a_6}$
 a_6



(3)

Recommendations:

This memo's recommendations:

(a) Negotiation of an option - including the right to study properties - with termination date - not earlier than August 15.

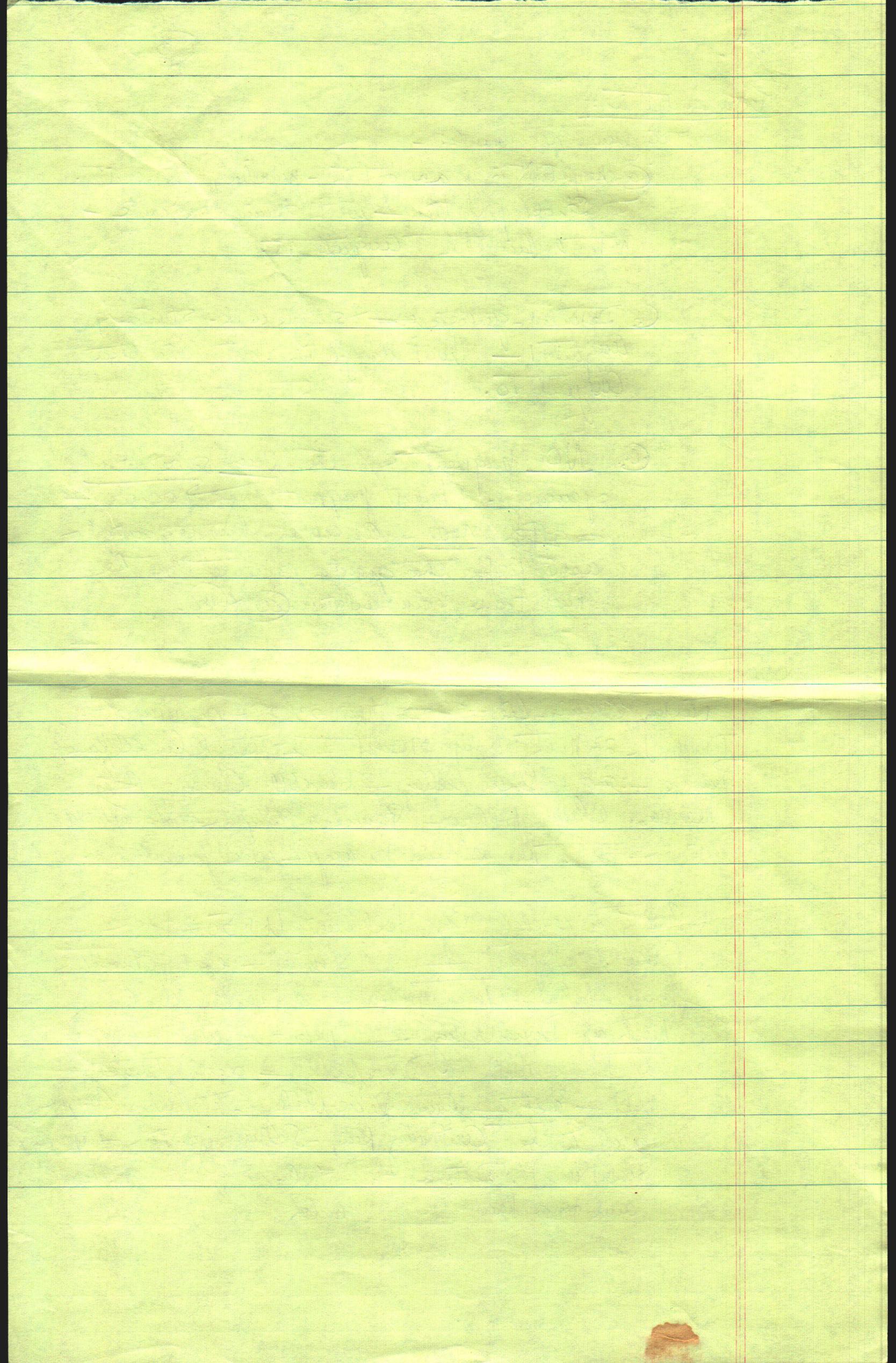
(b) Detailed geologic ~~and~~ sample work - starting August 1 with completion not later than August 10.

(c) NO payment of the Deep Substratal opening - "first payment" \$100,000 - ~~or after now~~ - or earlier. This negotiated - and before the greater necessity to be held firm - recommendation @ #1.

Location:

Terby Ocean - lies in Section 23, 24 + probably 25 - Township 22 North, Range 37 East - in the Clear Alpine Range - east of Dixie Valley - Churchill County, Nevada. Glaciers follow Bearse Creek in - to a reputed 12,500 feet. No claim to sheep - were persecuted.

Property is reached by following US 50 from Fallon to a point miles - east Frenchman Station, then following a gravelled road north up Dixie Valley miles to the town of to the famous feet. Dixie Valley - and thence miles - east - the Dixie Valley - to Remic Ocean and to the Antimony King - Salmon generation - (gravelly desert bed). Distance from Fallon is miles and from Reno miles.



(4)

Legal Title:

as reported - Mr. Frank Teelby - of Dixie Valley, as
 the possessors of 15 Standard Mining Claims
 have patented - and all held by general assessment.
 Claim pattern was unbroken - except that total -
 length amounted to 15,000 feet.

Two to three claims at the cut end of property -
 are held - by "Peachy Mowers" and others.
 Teelby claims that "Peachy" is not a name - that
 a loose understanding has been abrogated - as of
 that present tenement can be erected & in view ✓
 the agreed work - deducted - to erect present
 operators - may not become as Teelby reclaims.

History of Property & District:

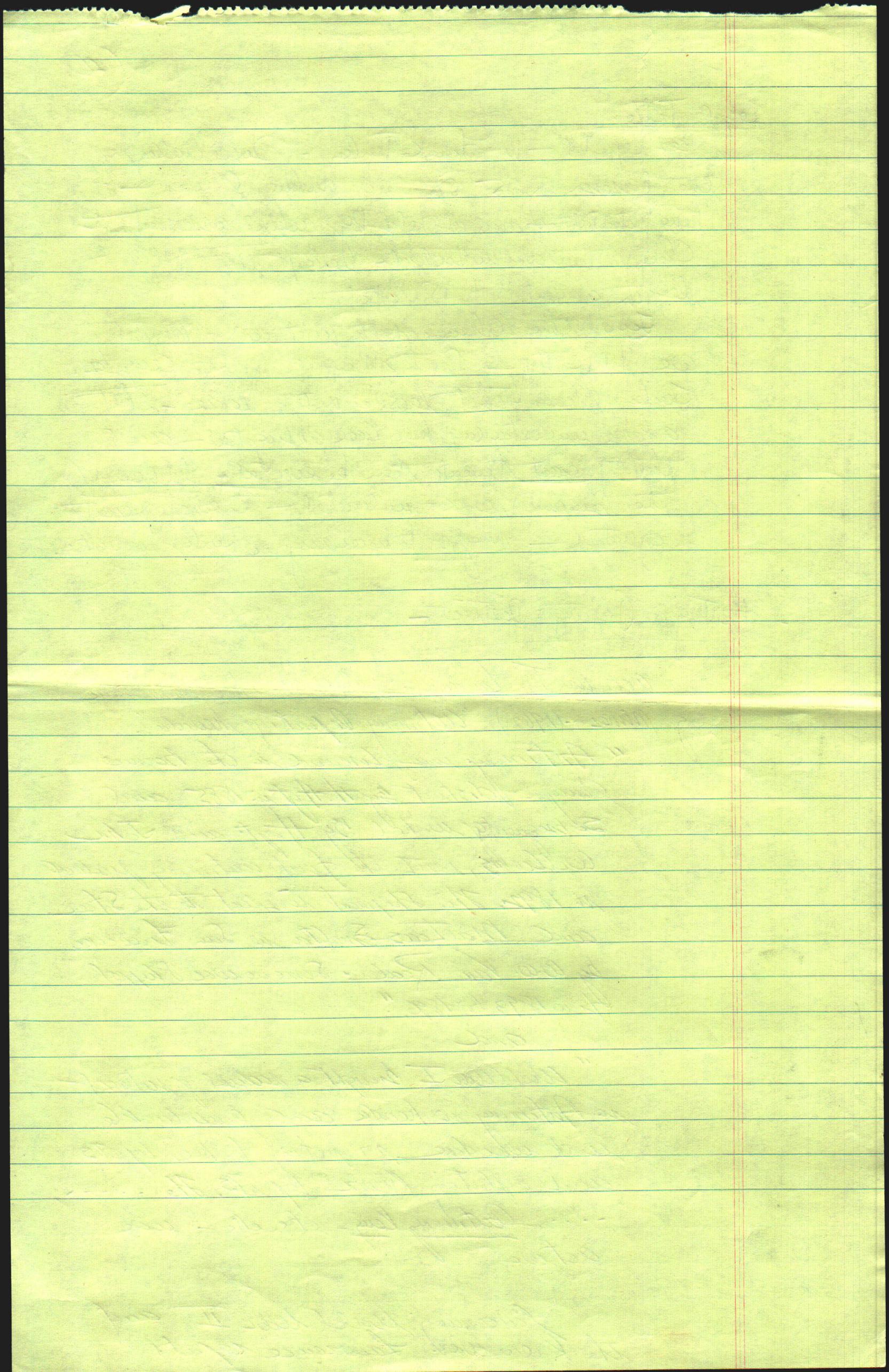
According to Lawrence in Bull. 61 - Nevada Bureau
 of Mines - (1903) "Autunomy Report of Nevada".

"Autunomy was discovered in the Tonopah
 Canyon District by H. Hoyt in 1885 and
 subsequently worked by Hoyt and John
 Williams, with the first autonomy protocol
 in 1892. This deposit was lost to E. Star
 and MacLeans Smelting in San Francisco.
 by W.W. Van Real - Smelting was stopped
 from 1893 to 1896."

and

"Would like I brought a number of miners -
 in Autunomy in people and considerable
 work were done prospecting for new deposits
 and effectively known deposits. The ----,
 ----, Autunomy King - etc. etc. - were
 active

Concerning Waller II and
 the Korea War. Lawrence reports



~~that - took~~ large shipments were sent to the metal Roanoke ore-buying station at Butte Mountain - from Mooney Astoria - including Bemis copper, and goes on to say -

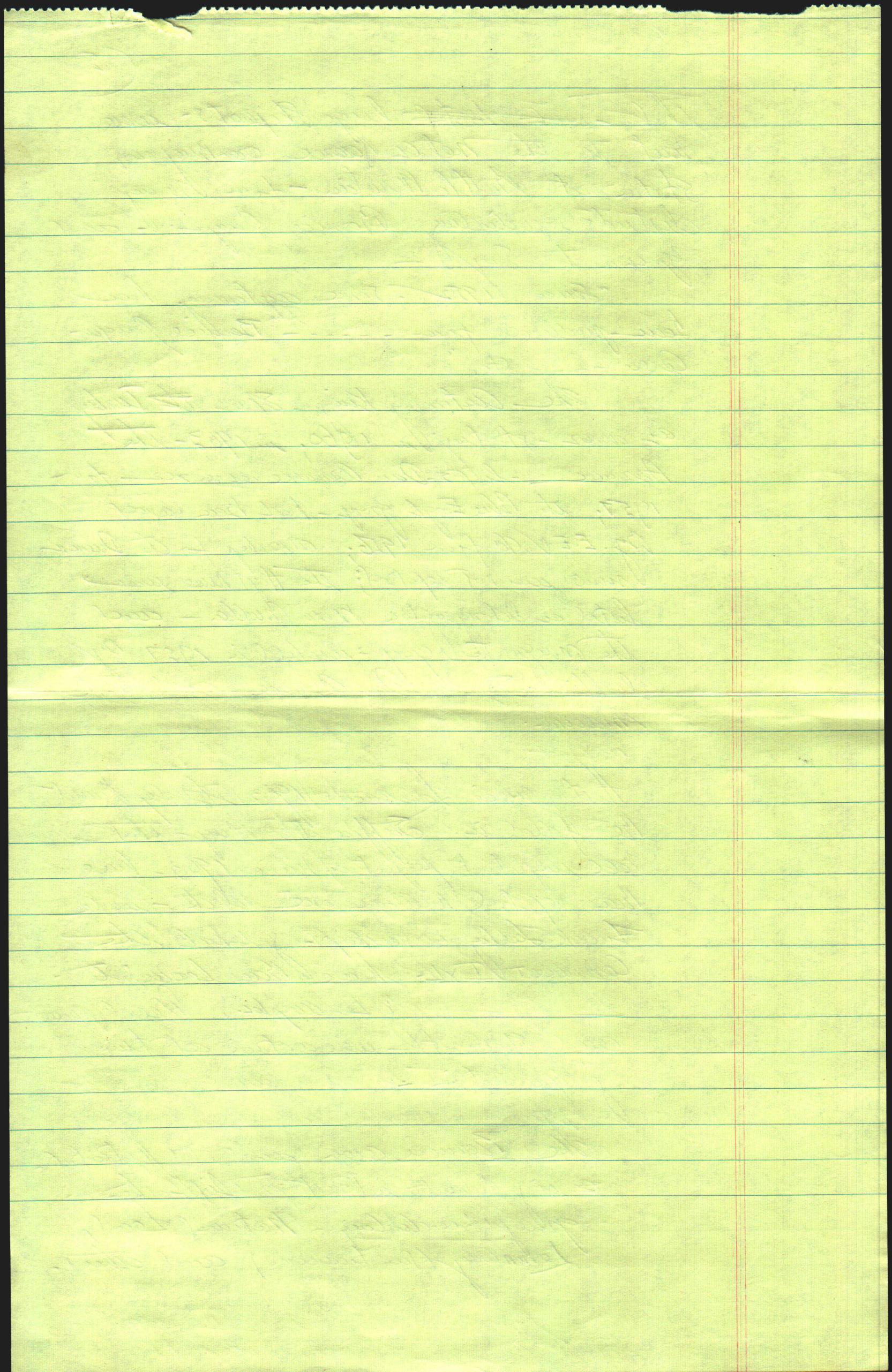
"Since 1952 - some cyanide has been produced from ----- the Butte copper mine ----- etc."

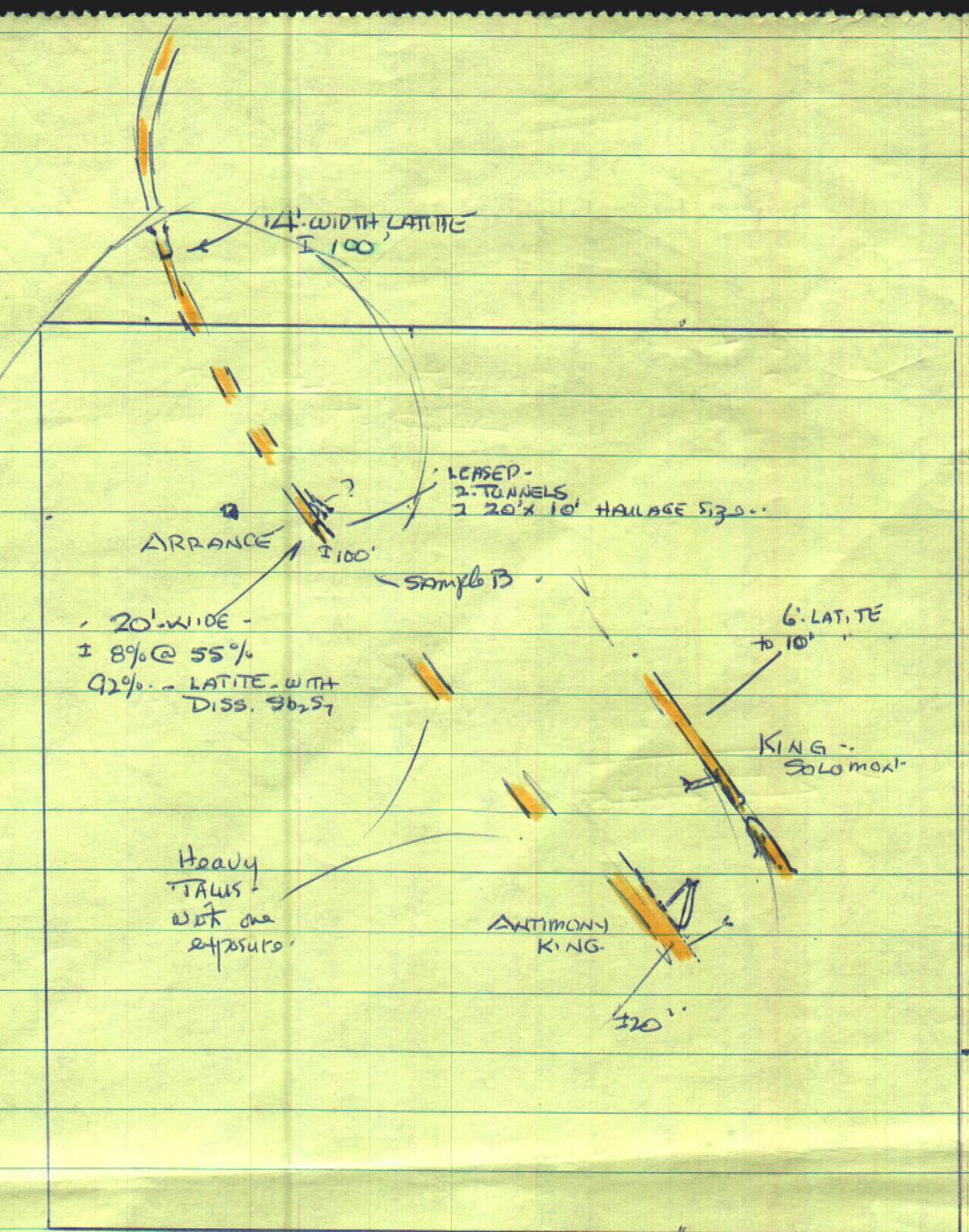
The Attorney King - Spur the Turkey or owner - starting in 1960, in 1963 - the Amance - last - Dan Amance owner for 1957; the Blue Eagle group - had been owned by E.E. Volk from 1956; ownership for the Duane mine never hot reported; the Hoyt mine was listed as belonging to Wm. Muller - and the Marquette gray - was held in 1957 by William Sizemore, Dan Amance and F.R. Anderson.

Histroy since Lawrence's 1963 study must be filled in. Suffice it to say - that all important properties since 1963 - have been reported here - as one Black - mule Creek Turkey member - which the Amance & IXL - have been located to.

Los Angeles & Bechtel - and Phelps - were active at time of publication -

The Nevada area needs protection - in current need to fix - after great nuclear - National Lead, Lehman (San Francisco) and others.







b^2

a^2

c^2

(2)

~~Exhaustive investigation of potential
minerals on
property carried out by
Minerals International Inc.
in 1963-1964 and
a second study by
the same firm in 1970.~~

The property affects a Chalcocite - pyrite vein "high grade" - as is now - and has been processed, or mining meets as a mess - and recovering tribute by stakeholders flotation - a possible leaching + -

~~The current recent spectacular rise in Sb - to 1.74/lb - and
now - the present - ~~down~~ back - to - \$ - lb - the -~~

Procedure: Suddenly high competition from foreign imports - and
with funds of the essence - efforts were directed to
rapidly surveying the North 5000 feet of the
property - the center of mining activity. Observations
outcrops - hornick outcrop sets that tremble - & conversation
with Mr. Turley - and his associated - leaching "Leo"
- who - knows the current situation - told the day.

To Contractors:

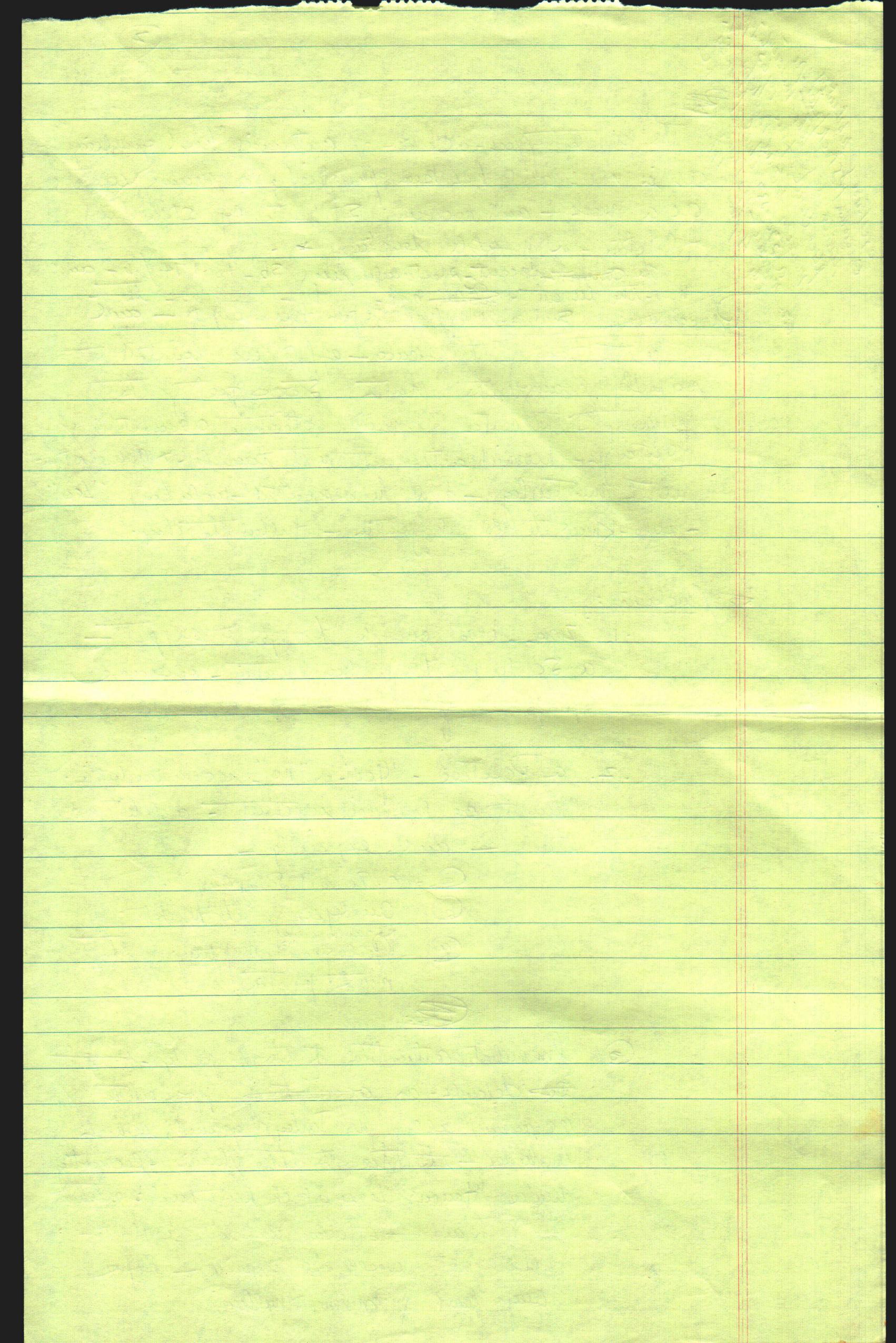
1. Zones - have enough tonnage to support -
a 50 to 150 ton per day operation - if average
grade - of about 4% can be maintained.

2. a Positive - "yes" - or "no" - recommendation
cannot be proceeded without - a detailed
study - and especially -

- (a) - contains sampling .
- (b) - analyses the market
- (c) - ~~recommendation~~ Geological mapping of the
host pattern.

Also:

(d) Immediate attraction to the property - would
depend on acquisition of possibilities of
acquiring all of Mr. Turley's interest; which
includes - the ties to the miners - currently
under "tenure" lease at the host end; without
the host end - extensive immediate explanation
& development would be required - Revo
ally proof of Mining & Milling.



Mr. M. O. Johnston

Tahoe City
California.

October

Re: ~~FRANK TURLEY - PROPERTIES~~
- Antimony Properties -
BERNICE CANYON -
- ~~CHURCHILL COUNTY, NEVADA~~ -

A.

Dear Mr. Johnston:

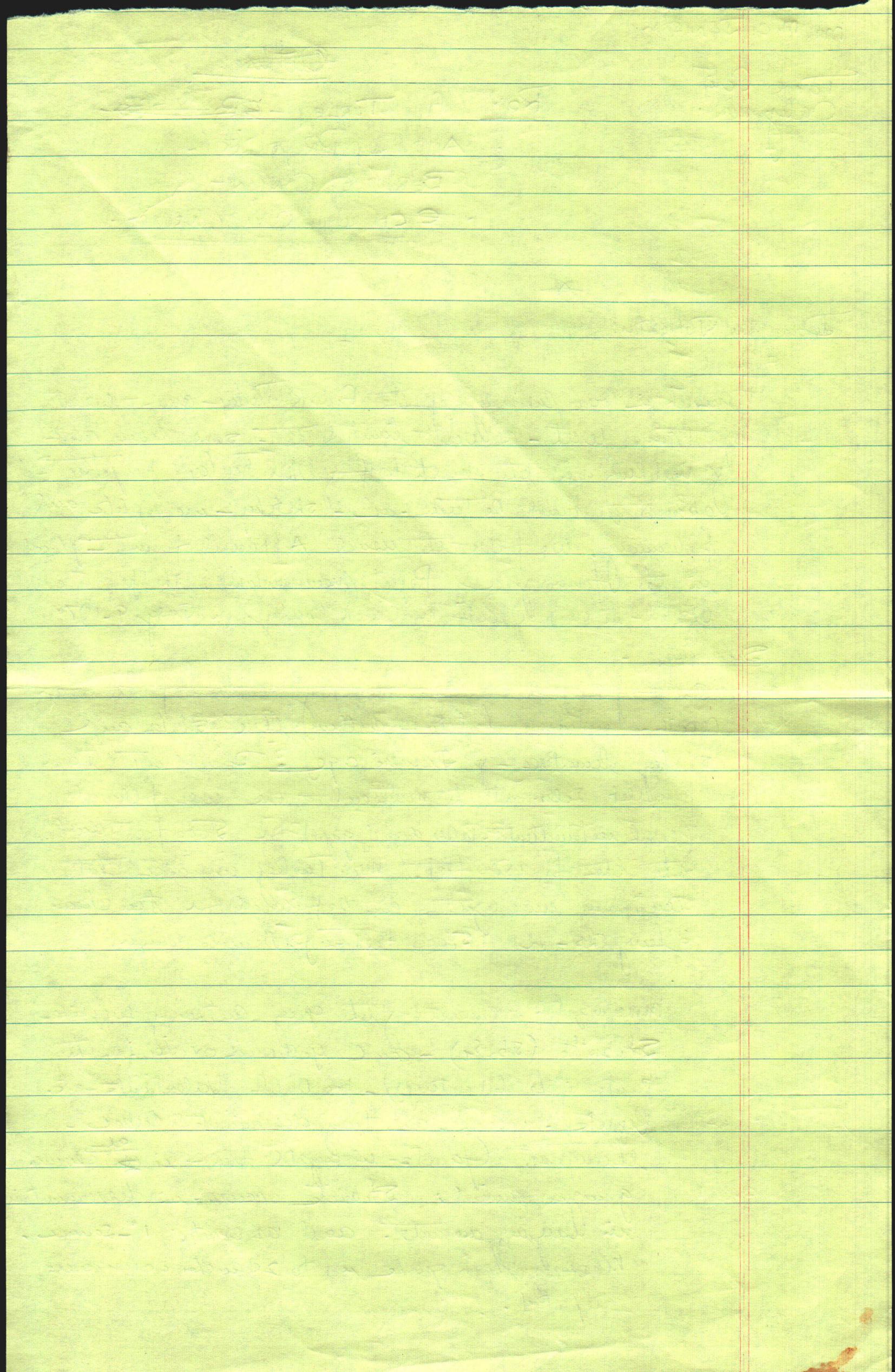
Forward:

Herewith is our summary of the Frank Turley-area - & current operations. Work - a West limited to - some seven hours of walking over the north half of Mr. Turley's property - Observations must be taken - as - sketchy - incomplete and preliminary, we follow the usual Appraisal format - placed in the form of a "Report Memorandum". The property was visited - in company with Mr. Check Harvey on July 9-1970.

Summary: -

Antimony Sulfides & Oxides - occurring - dikes - of the White, Cecil - numerous latite - feldspar, three Shale and Shale lenses - Jurassic age - Dashed with two-pyrite dials - at the north end - one over foliated (weak retronut - Takes several gaps) for 5000 feet and the other for 1500 feet. Mr. Turley indicates that Antimony mineralization can be followed for three screen lengths - or 15,000 feet say. Bernice property.

Mineralization - consists - the gray - Antimony Sulfide - Stibnite (Sb_2S_3) - and yellowish oxides (in the particularly leached cuttings) - no Babbly Valantinite - etc. Pyrite - occurs - as tiny disseminated cubes - lithographic. Gypsum - in crystal form - is the common gangue mineral. Stibnite occurs - in dissemination in varying amounts - and as erratic 1" - several masses of high grade up to 24 inches across were reported.



M. O. Johnston -
(916) 523-4018

- Retained Rev. 8:45 AM after licensing 5:15.

Procedure - United in as much detail as possible
actions part of property.

Conclusion: -

- . A - zones have enough - ~~area~~ Truncate to -
be greatest - eg.
 - 2 - check samples ✓ lower
grade - but ✓ 2 to 4%.
- . B. - would deal only - of 3-class
needless - "less" has excluded with
group.
- C - consider an immediate - recommendation
should - wait - until - I have a
decision to - . perhaps - pictures -
including @ some estimate of breakdown
needless & on behalf of
 - (b) - consideration ✓ where to treat
- damage grade area.
- (d) post / capital investment -
industry & mining
- (e) sample return - in case
make - off.
- (f) tonnage = production

Recommended:

Requiring door open - of portable - until -
object Wed or there for my calling.
- phone - (what's telephone) ?

will - - be in touch by phone - then send
a letter to have effect - say
finally provide a "memo" type
upset - receiver of shotgun & gun..

Tahoe Testee

- M.O. Johnston -
- Lake Tahoe &
Glendale }

Vic - Paul Fremont -

Over of fallen - in Pine Valley.

- Howard Turkey - Sb carrier - -
15 - claims -
I 140 miles - 10 miles to east.
Nat

20 feet - in Tunnel -
hit - us - .

500,000

- 100,000 down

2540 West Lake
Blvd

* * no melt =

3 miles so -
of Bridge -

(916) 583-4018 - - G

Call me

+ 5 - PM -

in - Johnson,
house

part sunny side -
1/8 mile from
Forest line

- Chuck Conway - at Lake - - hoover equipment.

P.O. Box 944 -
TAHOE CITY -
CALIF

1. - Panama + Mexico - delayed
until - late July.

OVER

2. - must be here tomorrow

Depend entirely
De Witt; please. -

3. TIED - up. Sat 11th.
to 18th. Then 20th - 28th
then Mexico - 29th etc.

Call him this afternoon.

4. CAN - LEAVE HERE 5PM FRI
& BELIEVE CONC. PROPERTY -
& PREPARE - RESULTS WHILE
AT TAHOE - OK?

LETTER AT
COULD BE DRAFTED
DETAILED AUGUST
EARLY ON
11 AM RE. RESERVE POSSIBILITIES

BELIEVE. I CAN GIVE
JOHNSON - OPINION

Outline:

1. Foreword -

1. Summary:

1. Procedures.

1. Concessions.

1. Recommendations.

1. Location.

1. Project Legal Title.

Holding of Property & Right.

General & Limiting Condition.

- Access -

water Supply

Power Supply.

Trade Supply

Climate

- Labor Supply.

Mill sites.

Toxins Disposal.

Recapitulation.

ILLUSTRATIONS.

- Geology -

Petrography

Structure -

Mineralogy.

I. Index Map.

II. map of current activity

III. ~~cross~~
Long Section
East-West
end..

Oil Reserves:

Economic Considerations.

Choices of operation

- 1. Selective mining or "High Grade"

- 2. Mining in mass + milling.

The ~~at~~ the market

Index of Rough Cost ..

70-1001

WMC.

1. May - Rancher Expl & Dev. planning to replace
strip mine, east of Hellroaring Lake -
→ will start drilling for SB-recover
2. May. M. S. Antimony Corp. - ^{Schreiber} ~~then lesser~~ Ag-Au Mine dev.
- at Thompson Falls, Montana. report, Antimony
in "Substantial Mineralization". High grade
Ag being extracted. explanation shows -
Several ore veins - varying in thickness from a
few inches to more than 10 feet. They have been
explored - over an area measuring more than
5000 feet in length & 3000 feet in width
3. April - Geo Warsaw (Can. Geocorp) + Matie Cruise
Mining Corp. - joint venture in a property
near Wheaton Springs, San Bern. Co - Calg -
for Antimony. Can. Geocorp. built at
Gorman, Calif (BfE-por-sen). Many modifications
to handle ore. Article reports,
development of an acute shortage of
metals prices skyrocketing from \$1 to
\$4 per pound - most leading metal
traded - predictably even higher prices

James and I went to the
Bull Run - Virginia State Park
on Saturday 10th October 2004.
We took the 1000 foot trail up
the hill to the top of the mountain.
The view was great.
We saw many birds and animals.
We also saw many people.
We had a great time.
We will go back again.

Consumption - U.S.A. - 1968

Primary - ~~Brackets~~ Tot

1966 - 19681 24269 43,952

1967 17,350 23660 41,010

1968 17,350 22650 40,000 *

Brutal 1969 - Mining Review

Supply - indicates a growth
rate in consumption ^{USA}.

3.4% per annum for

Period - 1968-1978

for a wall of gravelite
(nucleus - new sand block)

3.2-3.4% per annum.
1968-1973

same reference indicates that

Total Supply - (wall) will

not be able to maintain a
growth rate of more than

1.5-2.0% per annum

② 6.5% has 24000 Tons

ant. refel. in Strategic

Stockpiles. It has so far

only 3500 Tons. from 1964-
1968 - (with 125 Tons in 1969)

Mining Review 1969 - Nucleus

"As the market is roughly in
equilibrium at the moment,
it may be deduced that

demand will be exceeding
supply, with a gradual
tightening of supplies -

in the next 5 years period."

Antimony Statistics

S.Tons

1969 1968 1967 1966 - 1965

~~240,000~~ 18535.00
~~16,800.00~~
~~1025~~
~~1945~~
~~avg~~

Total world

74,300 65,600 68,500 70,500

*** S.AFRICA - 19,600 18535 13,597

USSR ~~out~~ 7,100

{ CHINA. ~~24,000~~ 22,500 25,400 25,400

Czechs. ~~13,200~~ 12,200 = 12,704

POLAND. ~~13,000~~ 13,000 = 12,704

12,000

7,500

MEXICO.

3,800 4,199

6,7500

Yugoslavia

2,500 ± 2,400 ~~out~~

Turkey.

2,500 ~~out~~

32,000 34,000 39,000

Morocco

Total mining-
Produced.

64,335 57,600

~~65,000~~
~~57,960~~
~~1,704~~

*** Mine Producers

6,965 7,400 — —

37,500

Total

71,300

65,100 68,500 70,500

59,000

*** 1000 to 2000 -

Morocco -

THAILAND

Australia -

less than
1000 TMI -

USA -

Borneo

Canada

Italy -

Austria

Burma

Prussia

Spain

Argentina

ALL S.A. PRODUCTION FROM
CONSOLIDATED MURCHISON.
AT GRAVELOTTE in E-TRANSVAAL

1968:

20,000 T/Mo or 240,000 T/yr

Producing 18,535 T-Sb -;

Recoverable
Grade ... = 7.7%

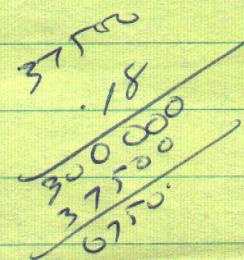
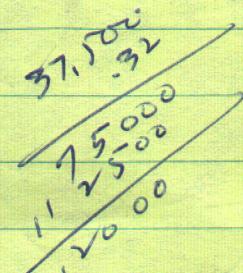
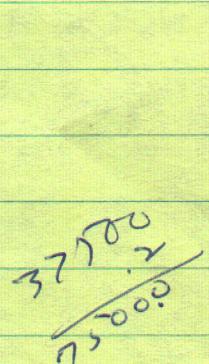
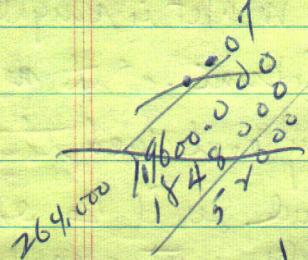
1969 -

22,000 T/Mo or 264,000 T/yr

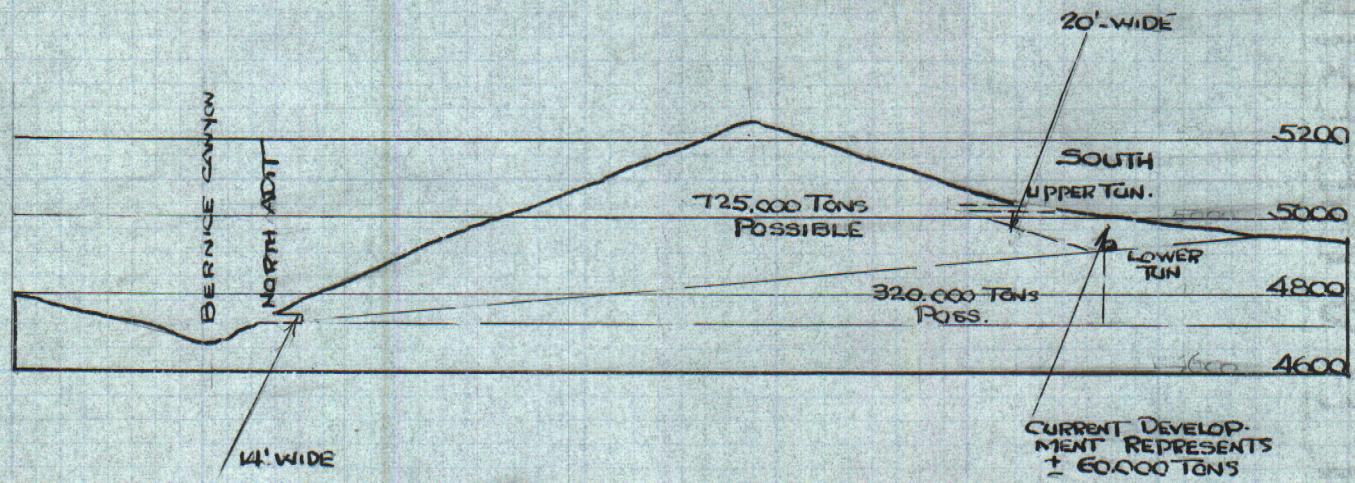
Producing 19,600 T-Sb -;

Re-C.Grade. = 7.49%

SB.



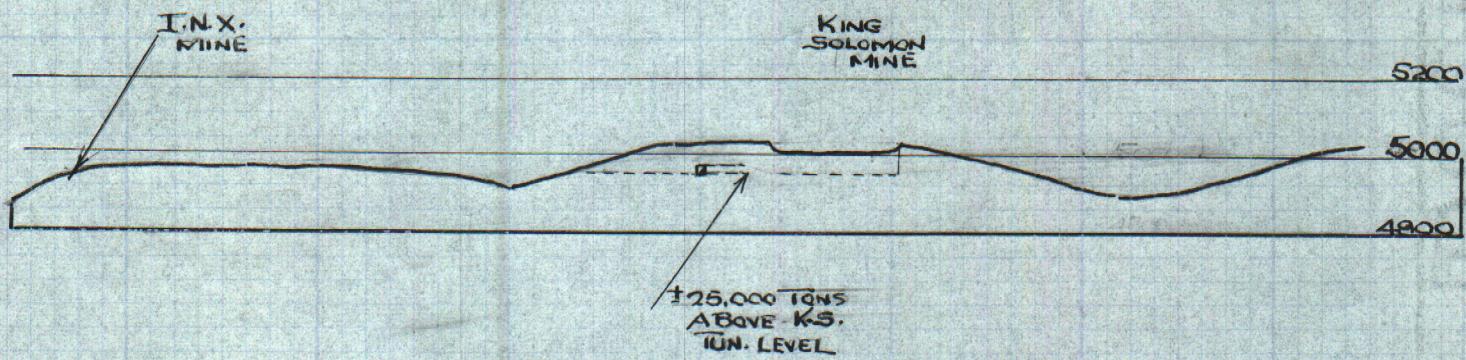
C



ARRANCE LONG SECTION

1"=500'

TOPO ENLARGED
FROM U.S.G.S.
HUMBOLDT SALT
MARSH SHEET.



KING SOLOMON LONG SECTION

1"=500'

BERNICE CANYON

CLAN ALPINE DIST.
CHURCHILL CO., NEVADA.

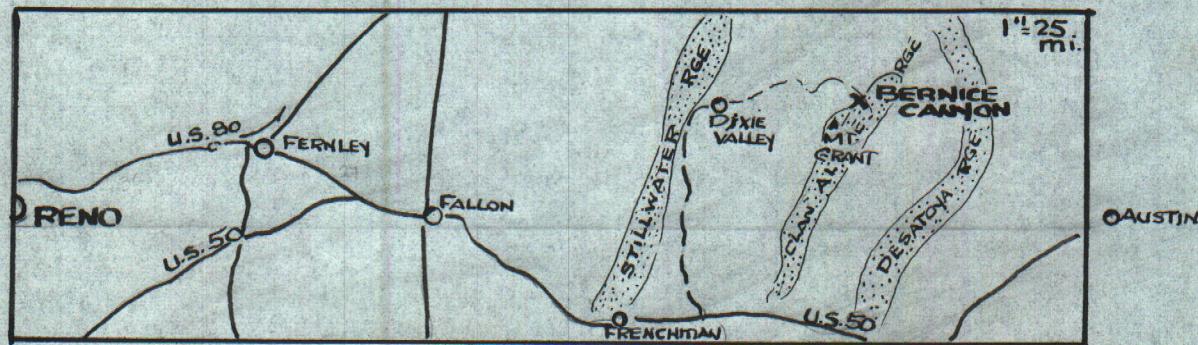
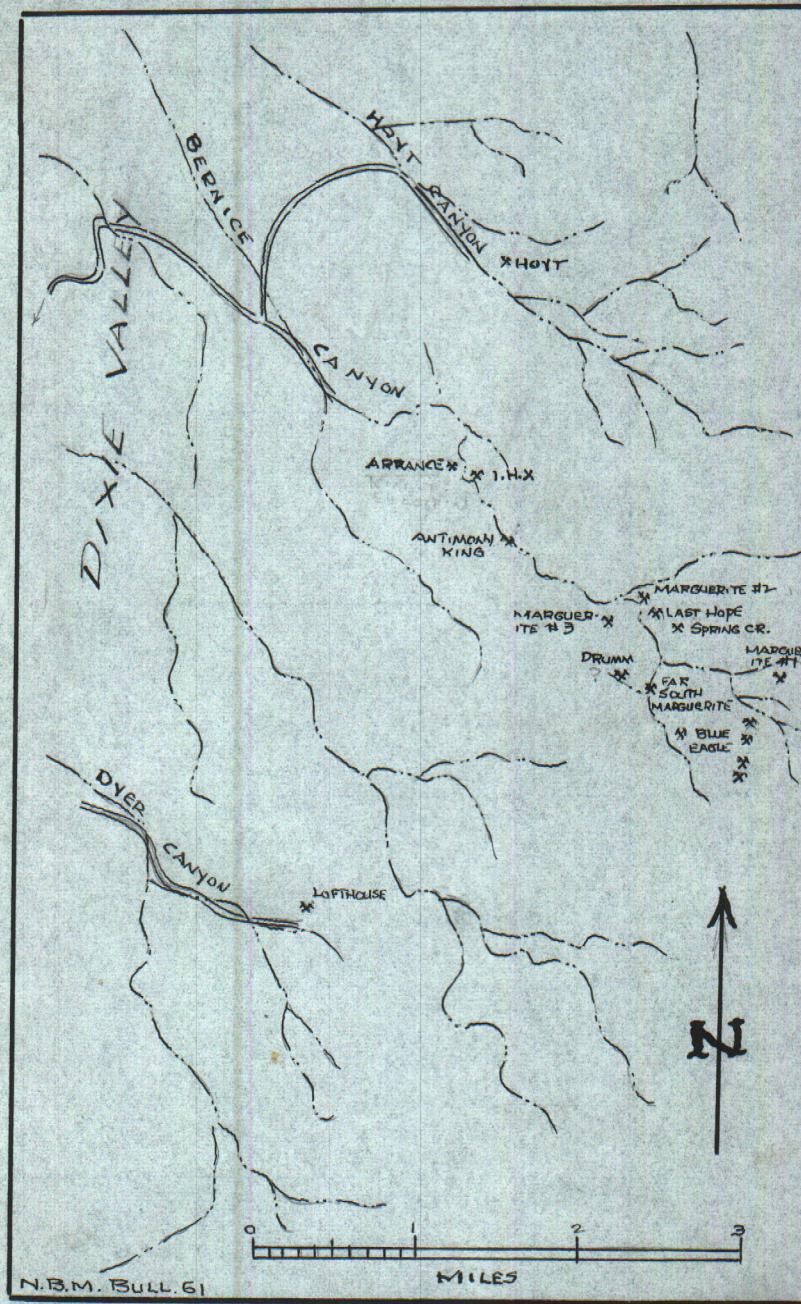
D. LECOUNT EVANS
CONS.GEOLOGIST.RENO, NEVADA
JULY 19, 1970.

BERNICE CANYON ANTIMONY MINES

CLAN ALPINE DIST.
CHURCHILL CO., NEVADA

A

INDEX MAPS



B

PLAN MAP

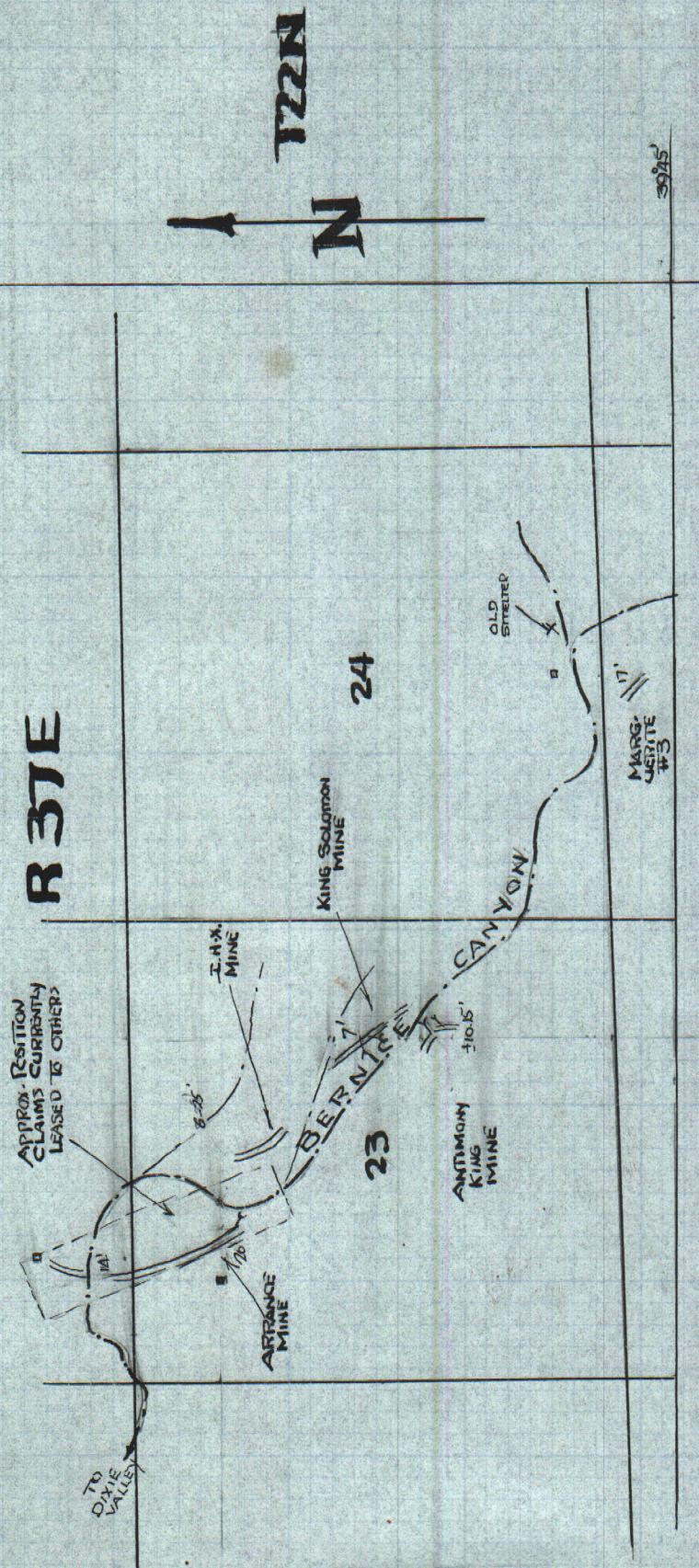
CONTROL, BY ENLARGEMENT
OF U.S.G.S. HUMBOLDT
MARS 15 MINUTE TOPO SHEET.
PERTINENT DETAILS FROM
E. LAWRENCE SKETCH OF MAP
H.B.M. JULY 1963

D. LECONTE EVANS
CONS.GEOLOGIST

RENO, NEVADA
JULY 1970

BERNICE CANYON ANTIMONY MINES

CLOUD ALPINE DIST.
CHURCHILL CO., NEVADA
1 INCH = 2000 FT



M. O. JOHNSTON
420 NORTH BRAND BOULEVARD
SUITE 513
GLENDALE, CALIFORNIA 91203
(213) 241-0520, 245-4831

Tahoe City Calif

Aug. 3 - 1970

Dear Dorr-

I am sorry that this check is so late. However the Report had to go to Long View first.

We turned this down and we wish to thank you so much for your very clear and concise report. Hope the next time things will be better.

I'd so enjoy meeting you and Mrs. Gram - and drop by when you can -

Sincerely,

M.O.

METALLURGICAL LABORATORIES, INC.

CHEMISTS • ASSAYERS • SPECTROGRAPHERS

1142 HOWARD STREET

• SAN FRANCISCO, CALIFORNIA 94103

• AREA CODE 415 863-8575

REPORT OF ANALYSIS

Submitted by Mr. David Le Count Evans
1700 Royal Drive
Reno, Nevada 89503

Date July 15, 1970

Sample of Minerals

P. O. No.

Lab. No. 7018

SAMPLE MARK	PERCENTAGES	
Bernice A	Antimony	0.72
Bernice B	Antimony	0.54

METALLURGICAL LABORATORIES, INC.

By



ARTHUR LAKES
EXPERIENCE PROFILE

Registered Nevada Professional Engineer, License No. 1408
Life Member, Association of Professional Engineers of British Columbia

Miner-timberman-sampler-surveyor-assayer

Student assistant in geological and mining examinations

Assayer-chemist, Stephen Rickard Laboratories, Denver, Colorado

Exploration engineer for Colorado Gold Dredging Company, a subsidiary to General Development, New York. Sampling, mapping placer ground prior to installation of two gold dredges.

Editor of Mining Science, monthly magazine, Denver, Colorado.

Manager and Engineer for Alturas Mining Company, Hailey, Idaho. Small development to producing silver-lead property.

Manager, Ymir-Wilcox Dev. Co., Ymir, British Columbia. Production from Wilcox gold mine.

Formed partnership, Larson & Lakes Consulting Mining Engineers and Geologists, Spokane, Washington.

Two years in United States Army - from First Lieutenant to Major and sent overseas.

Resumed partnership, Larson & Lakes. Geologist and engineer in apex lawsuits. Conducted successful operations at Lucky Jim zinc mine and Whitewater Deep lead-zinc mine into outstanding British Columbia producers.

Conducted geologic survey and mapping of Sheep Creek gold camp, Salmo, British Columbia, resulting in discovery of Gold Belt mine, successfully exploited by North American Mines Company, Boston, Massachusetts. Similarly with Reeves McDonald zinc-lead mine from prospect to an outstanding lead-zinc mine. Later sold to Pend Oreille Mining Company.

Manager and Engineer for Emerald mine, Sheep Creek District, British Columbia. Explored and developed extensions of lead-zinc ore zones with my brother, the late Harold Lakes, into 1,800 tons per diem producer, and discovered and opened the large high grade scheelite deposits that made this mine one of the largest tungsten producers of North America.

Conducted geologic and geophysical survey of Texada Island, British Columbia, copper and iron deposits and examined and reported on numerous mines and prospects in Canada and the United States. Discovered and opened Wesko gold mine, Ymir, British Columbia.

Established consulting office at Spokane, Washington, and directed early exploration and development of Lucky Friday mine, Coeur d'Alene, Idaho, to 1,200-level before leaving for Nevada. Property has developed into one of America's outstanding silver-lead-zinc mines with its stock price expanding from 10¢ per share in 1945 to nearly \$75 per share today. (Hecla Mining Company gave 1-1/2 shares of Hecla stock for 1 share of Lucky Friday. Hecla is selling around \$50 today.)

Member of three-man advisory board to adjust extra lateral conflicts at Coeur d'Alene district mining properties.

Conducted three season geologic survey in Slocan District, British Columbia, geologic mapping easterly extension of Emerald tungsten area, Salmo, British Columbia, and north extension of Pend Oreille mining district, Washington and British Columbia.

Returned to Nevada to open Tumtum Mountain Mine into production and established Consulting Engineers Service in Nevada since 1954.

-15-

ADDENDACOPY

LABORATORY REPORT, ABBOT A. HANKS, INC.

624 Sacramento Street
San Francisco 11, California

Lab. No. 65823

Date March 29, 1954

Submitted by Tungsten Mountain Mining Co. Sample Mark 1
Box 456, Fallon, Nevada

QUALITATIVE SPECTROGRAPHIC ANALYSIS

Metals found
and Estimated Percentage Range

Less than .03%	.03% to .30%	.30% to 3.0%	3.0% to 30%	30% to 100%
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Nickel	Potassium	Magnesium	Silicon
Cobalt	Titanium	Manganese	Aluminum
Chromium	Molybdenum	Sodium	Calcium
Copper	Lead	<u>Tungsten</u>	Iron
Bismuth	Vanadium		
Strontium			
Tin			
Zinc			

Respectfully submitted

ABBOT A. HANKS, INC.

By Original signed by

Martin E. Quist
Spectro-Chemist.