

(259) 212a 140

7-49

Tono. Ext.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

1760 level

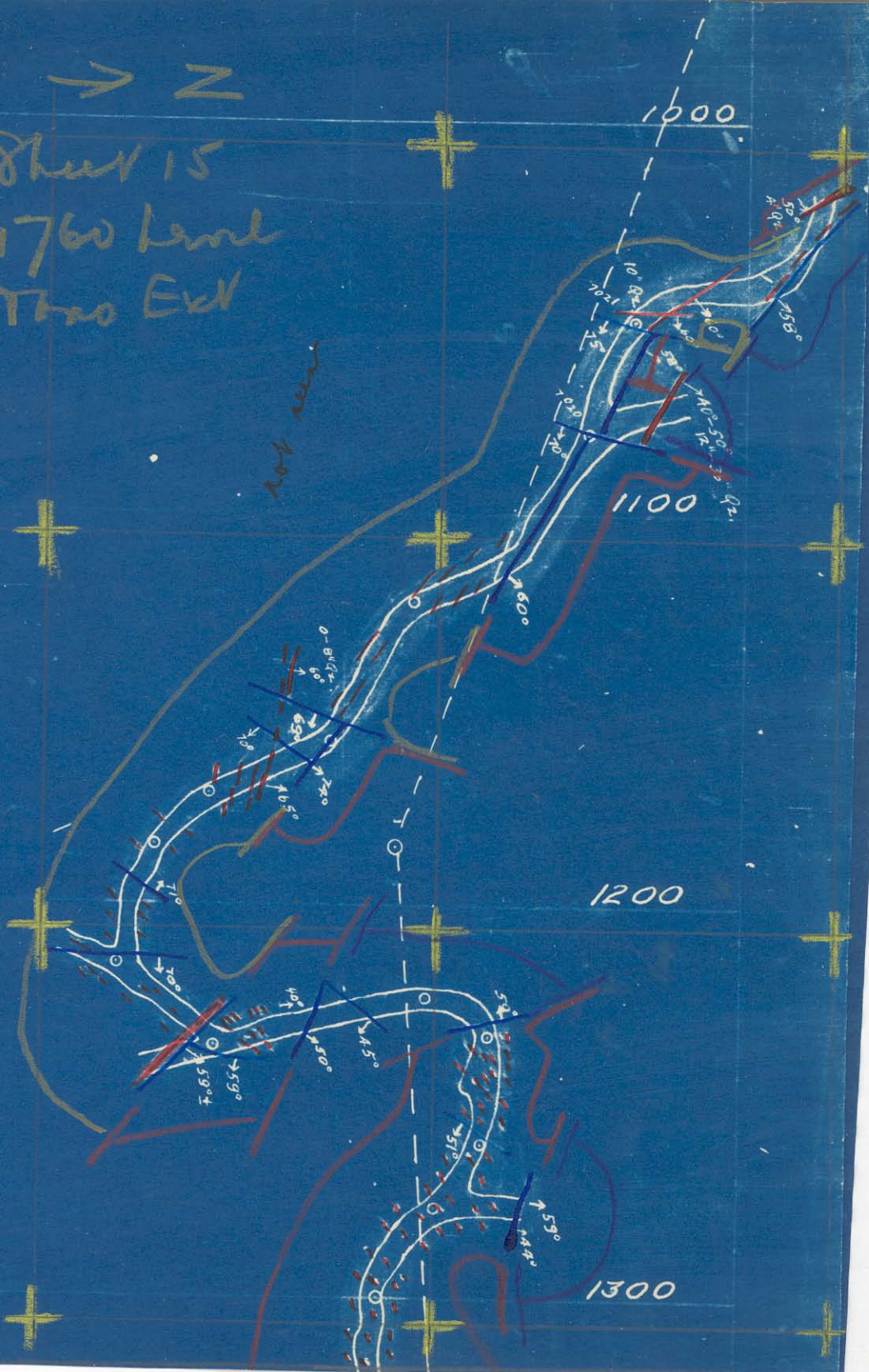
1804 Int.

SPECIMEN Number and Letter	Note Book	Page in Note Book

from Tule
(#7)

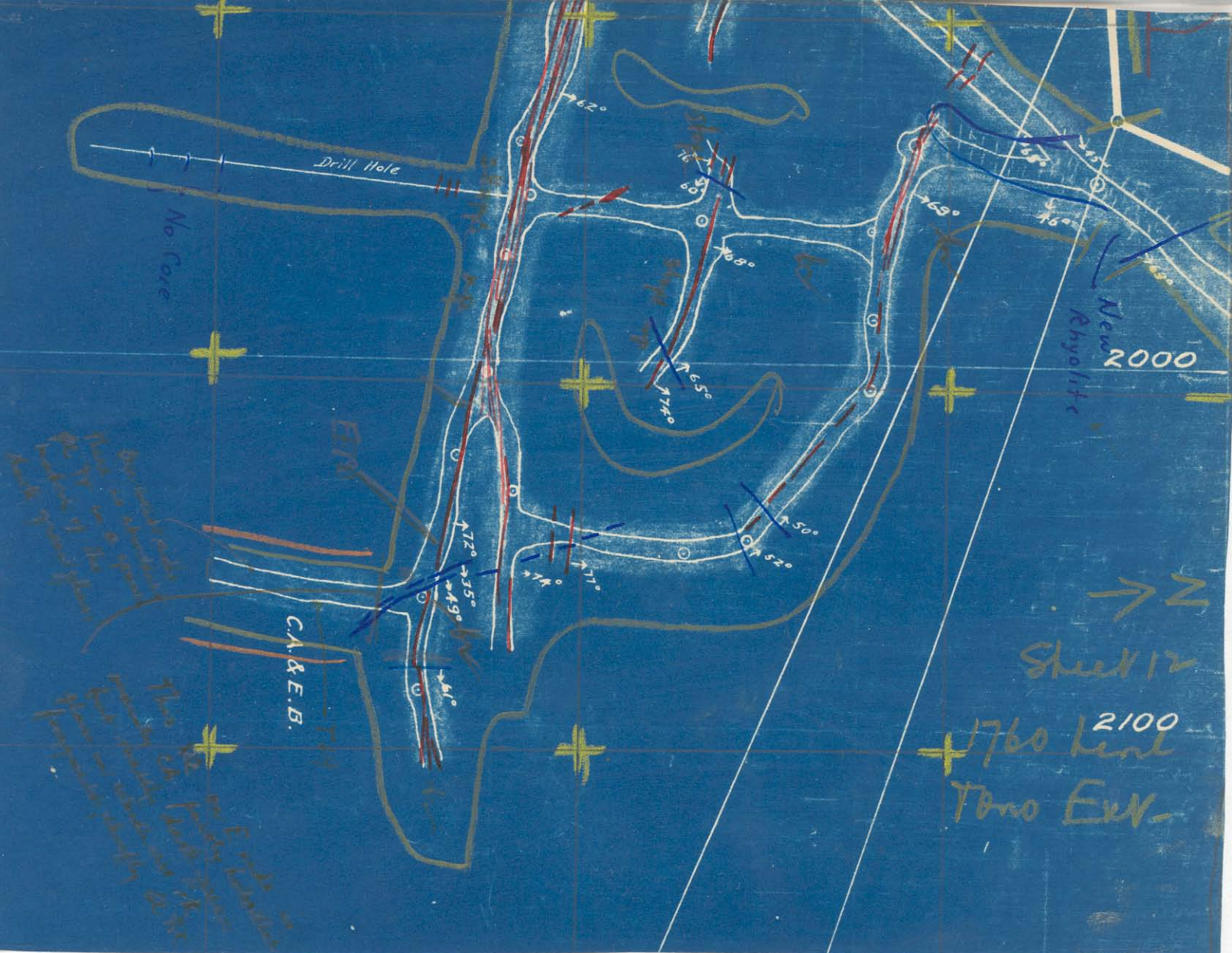
SPECIMEN Number and Letter	Note Book	Page in Note Book





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→
Sheet 16
1760 hmd
Tono Ext.

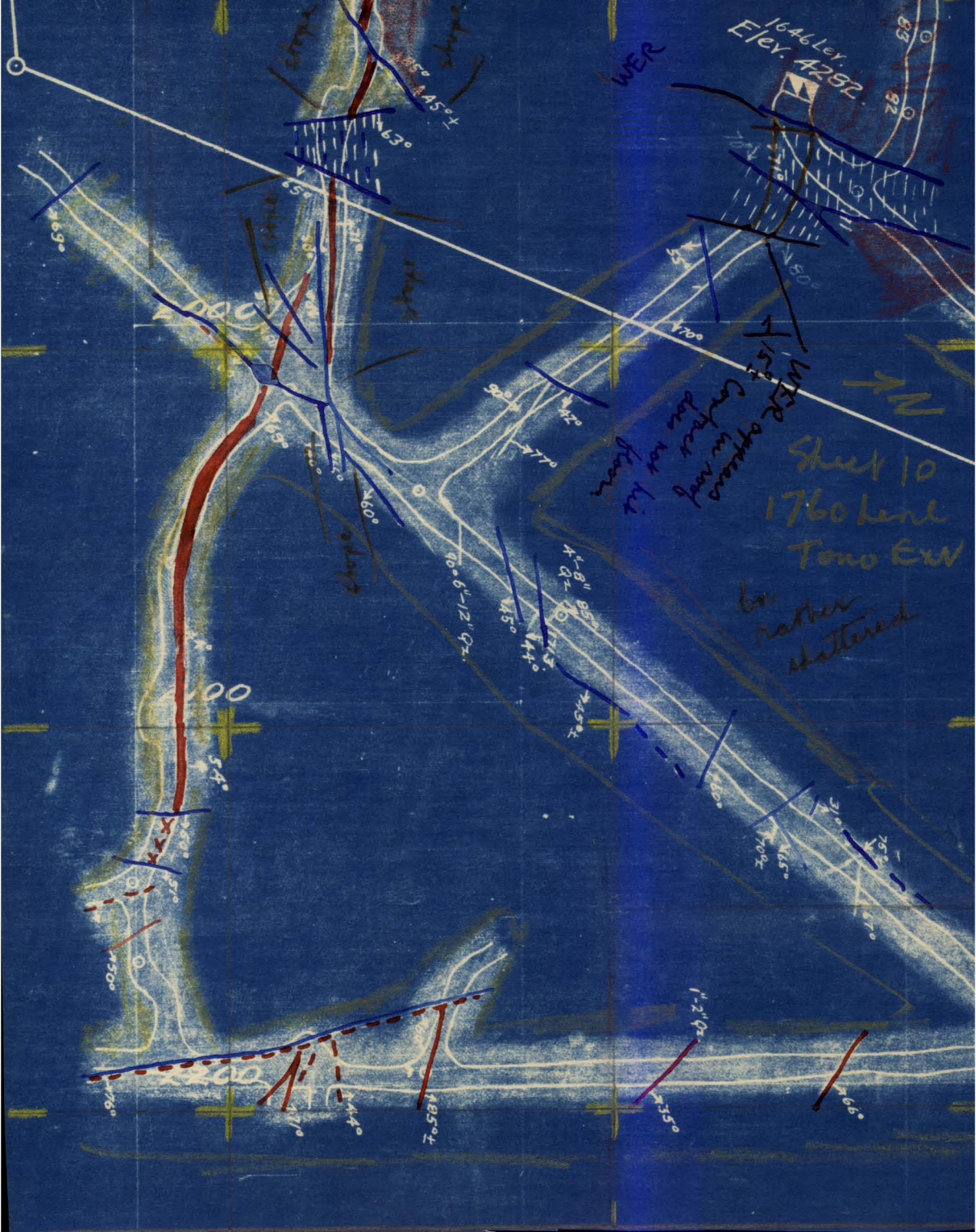


→ N
Sheet 14
1760 level
Tano Exr.



Sheet 13
1760 level
Yono Est

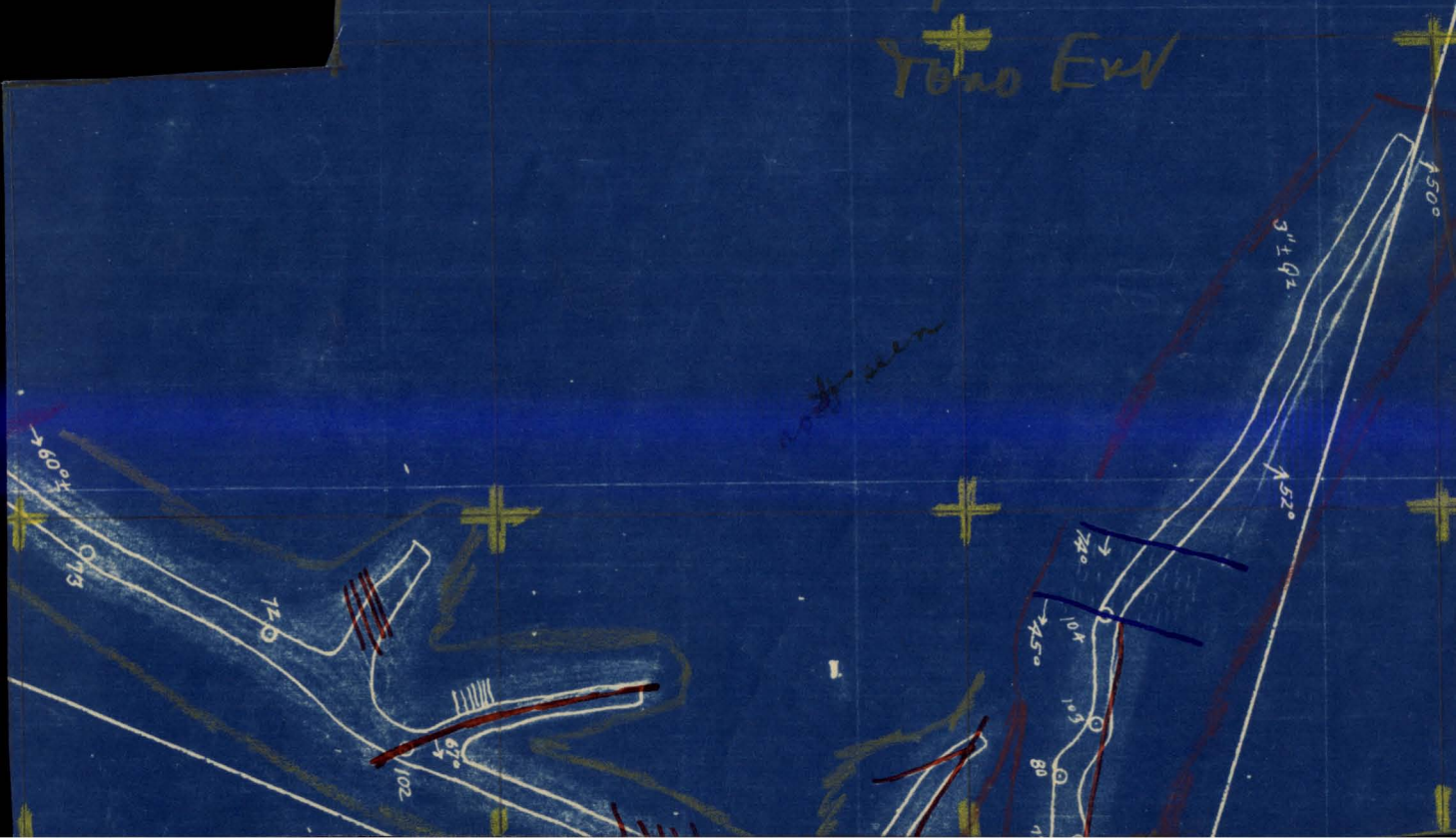




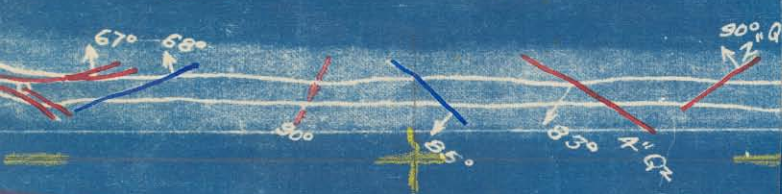
Sheet 9

1760 Lmd

Yono Env



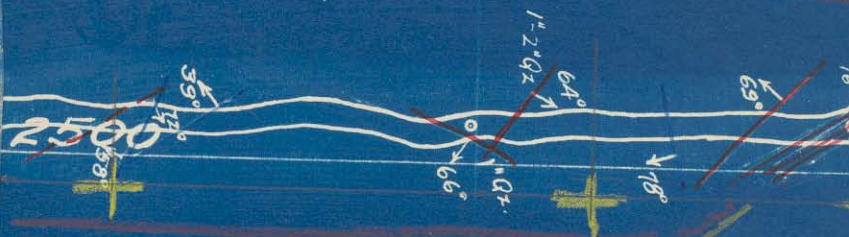
2400



Part of
Sheet 3

2500

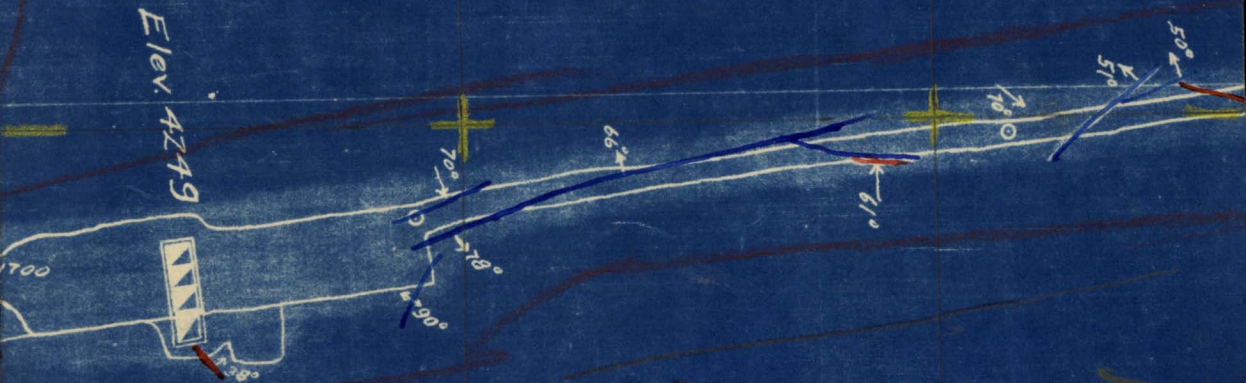
2600



Sheet 3
1760 level
Tono Exp.

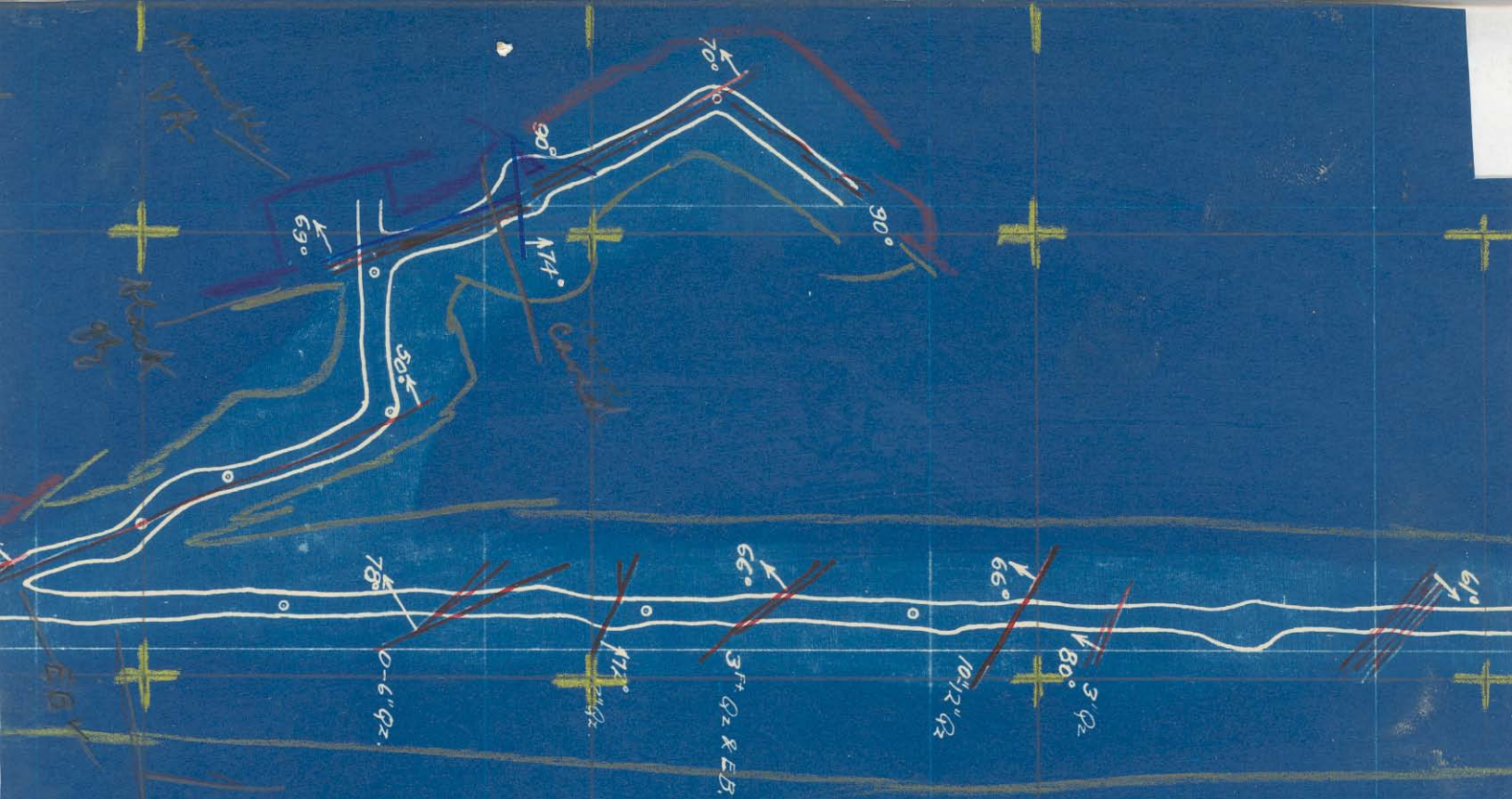
Victor shaft

Elev. 4249

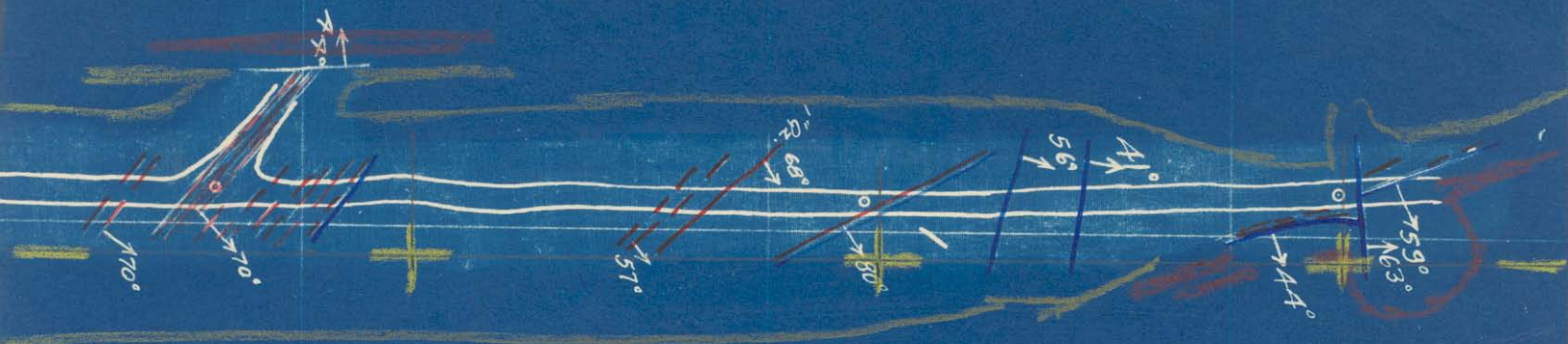


Red water

Sheet 5
176th level
Yono Ext.



→ Sheet 2
1760 level
Tono Ex.



Sheet 1
1760 Land
Tono Fxv

Andesite = M.A.?

Tm. Ex. 1200

Sheet 8

Andesite = M.T.

2700

100
N

gouge

much
of

coarse bl

blocked

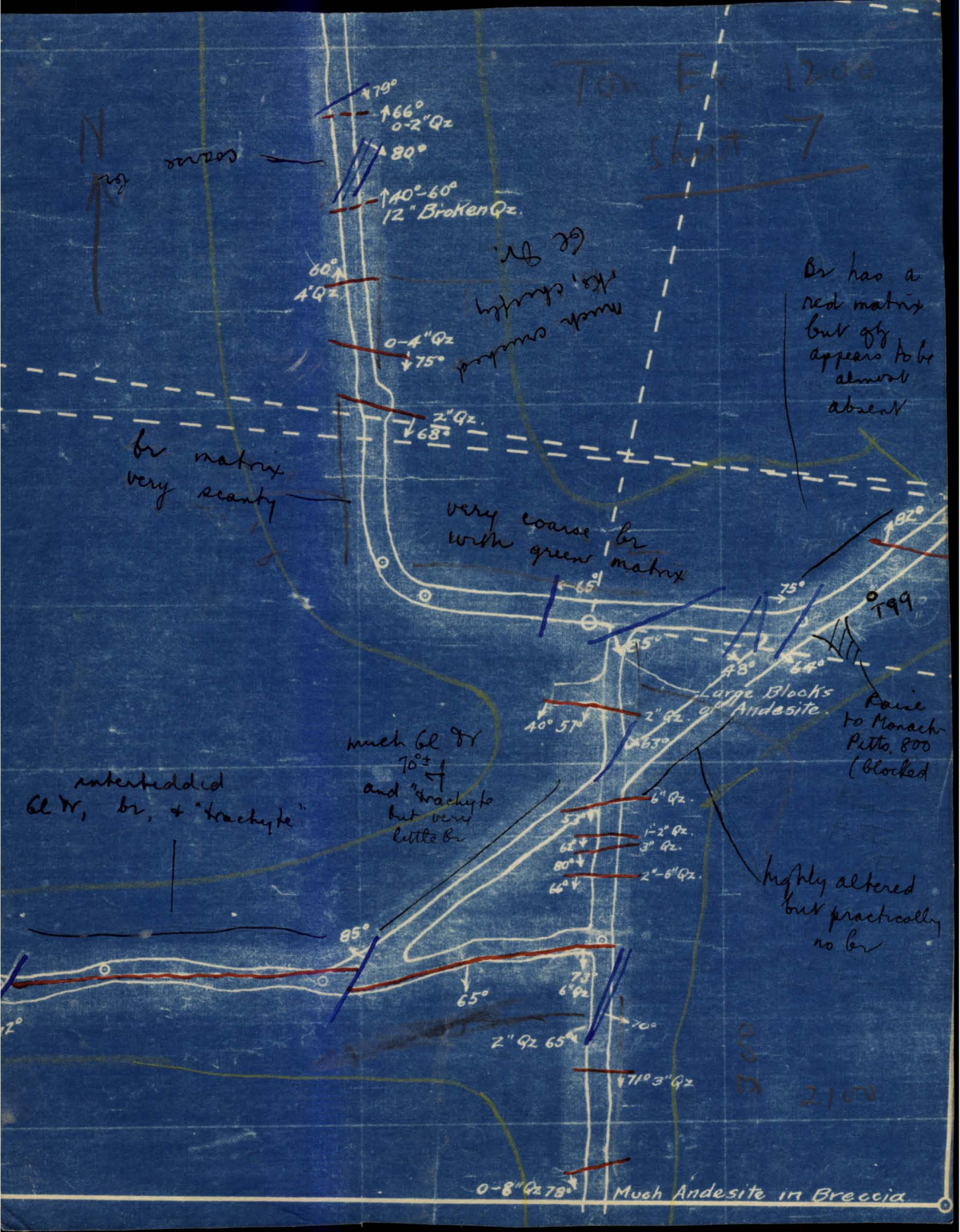
hard siliceous
rk, fine gr
rather like
T89B

Picked Sample
Au - 35 oz.
Ag 304 ± oz.

Coarse
br - sand
matrix
May have
interbedded
bl & r.

has a
wide variety
of inclusions

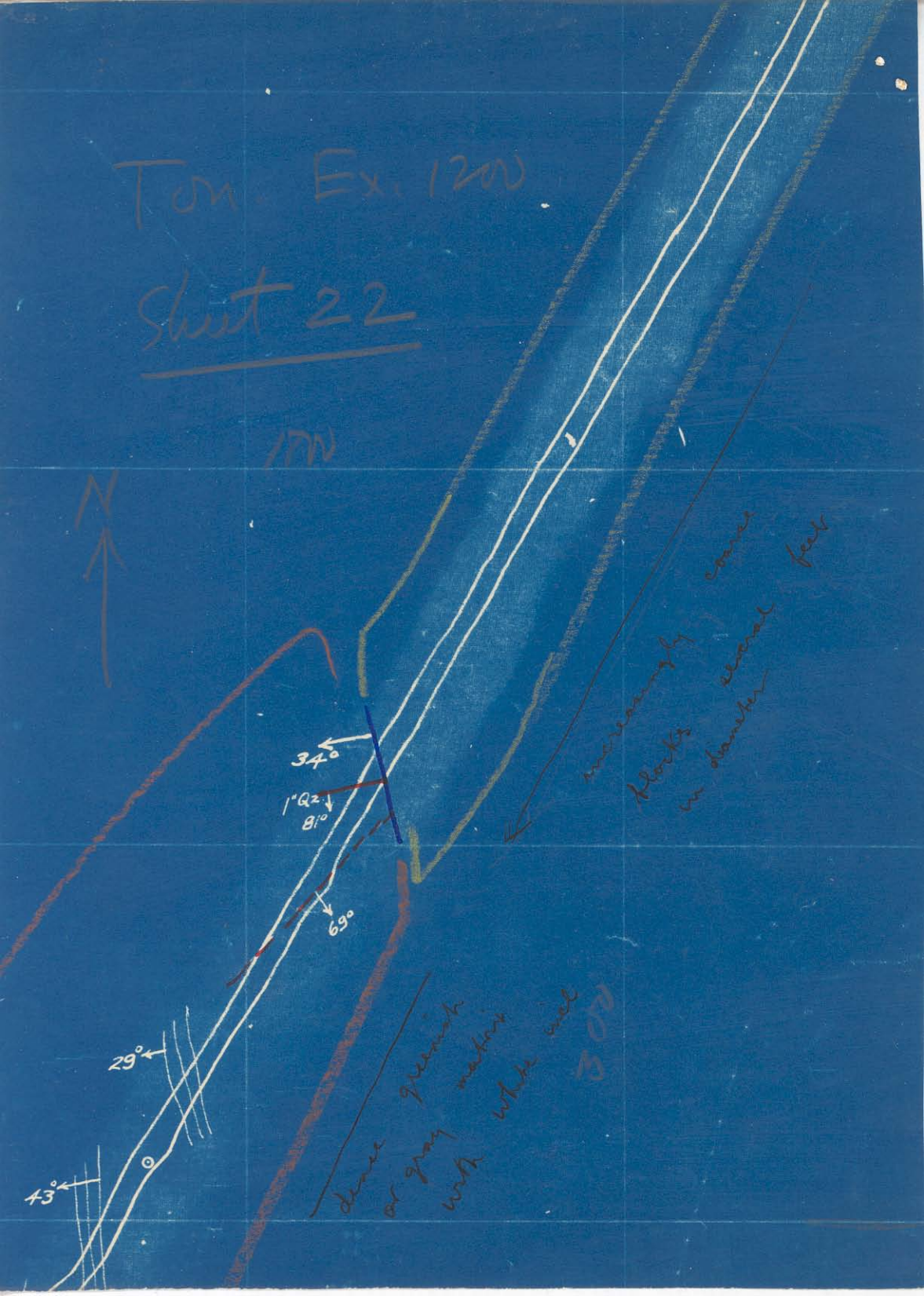
Tom Ex. 1200
Sheet 7



Tom. Ex. 1200

Sheet 22

17N



increasingly coarse
blocks several
in diameter

dense greenish
or gray matrix
with white sand

300

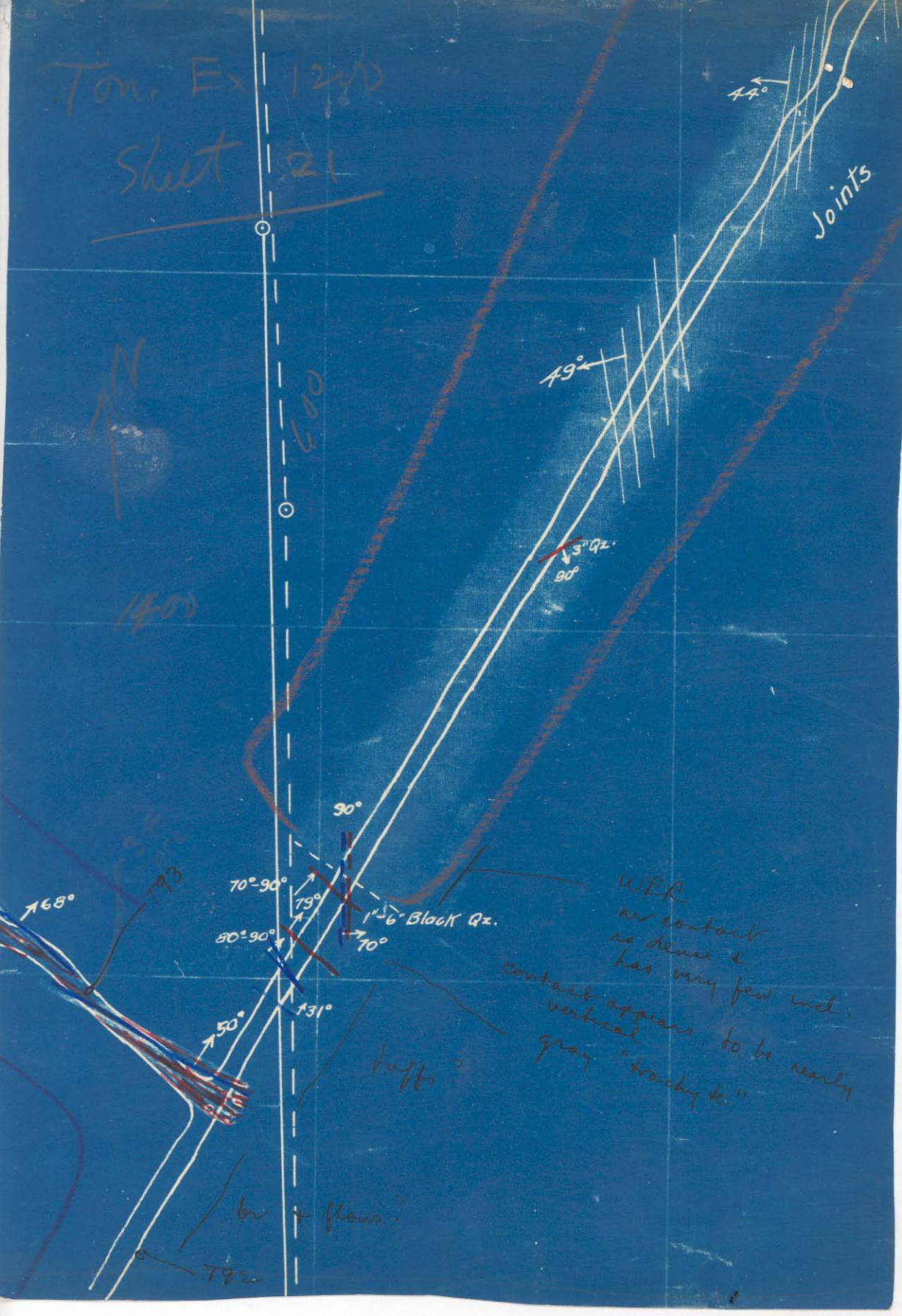
Ton. Ex 1240
Sheet 21

N
↑

600

1400

Joints



W.R.
no contact
no dense &
has very few incl.
contact appears to be nearly
vertical
gray "trachyte."

buff?

br + flows?

T92

T93

68°

70°-90°

90°

79°

50°-90°

1°-6" Black Qz.

70°

50°

131°

47° 0-2" Qz
 47° Picked Sample
 #49.00

Top Ex 1200
 Sheet 9

Coarser
 br

br has locally
 reddish matrix
 but mostly green

"Dike" has a
 reddish glass
 at base + appears
 to be chilled -
 Grades upward
 into br without
 a sharp contact

br in
 face is
 powderier

Breccia
 Dike

53° 12" ± Qz
 8-10°
 12" Qz

tuffs,
 flows

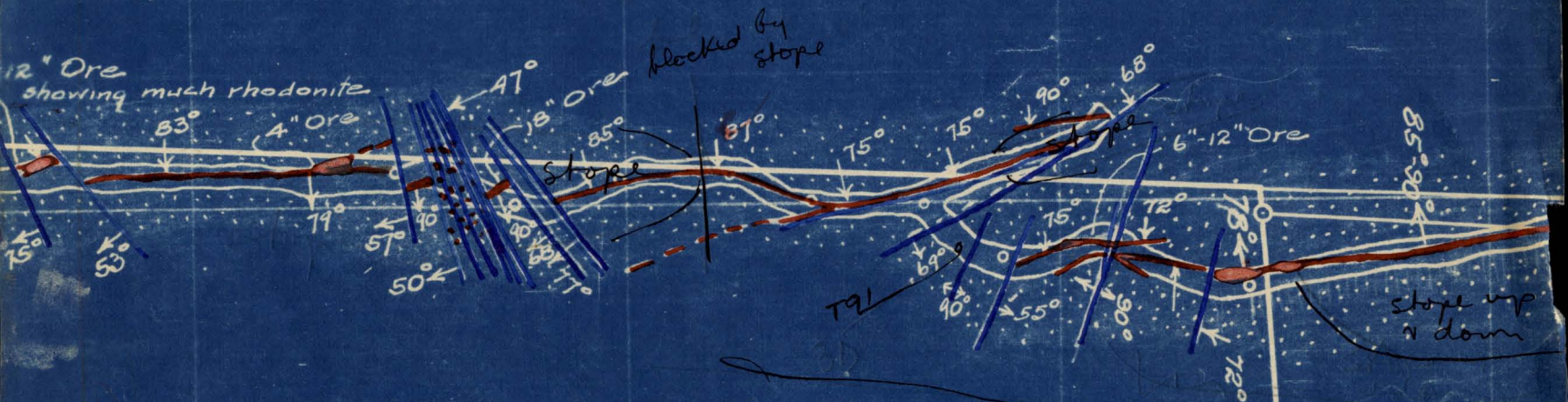
496
 57°
 77°
 1" Qz
 55°

fine gr br,
 flow breccia?
 tuffs?

2500

2000

some fine br,
 some coarser
 & some banded



Tm. Ex. 1200

Sheet 15

N ↑

2000

2000

2000

2000

not open

1200

0011

0001



2100

Tom. Ex. 1200

Sheet 16

4" Qtz. showing Hg. sulfid

1/2" gouge

4" white Qtz

1/2" Qtz. stringer

showing rhodochrosite
& Hg. sulfid

12" Qtz.

60°

73°

85°

54°

58°

90°

85°

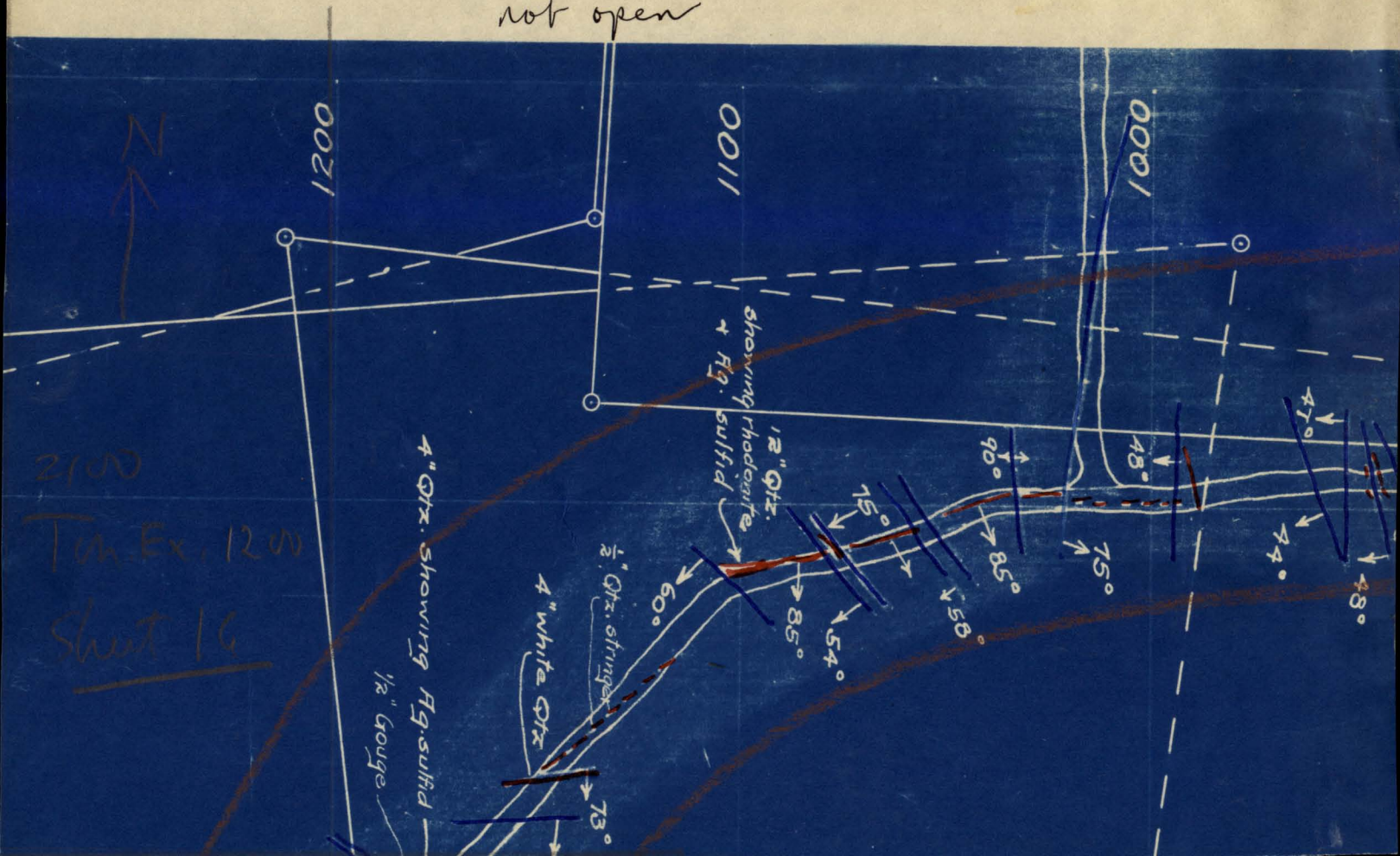
75°

48°

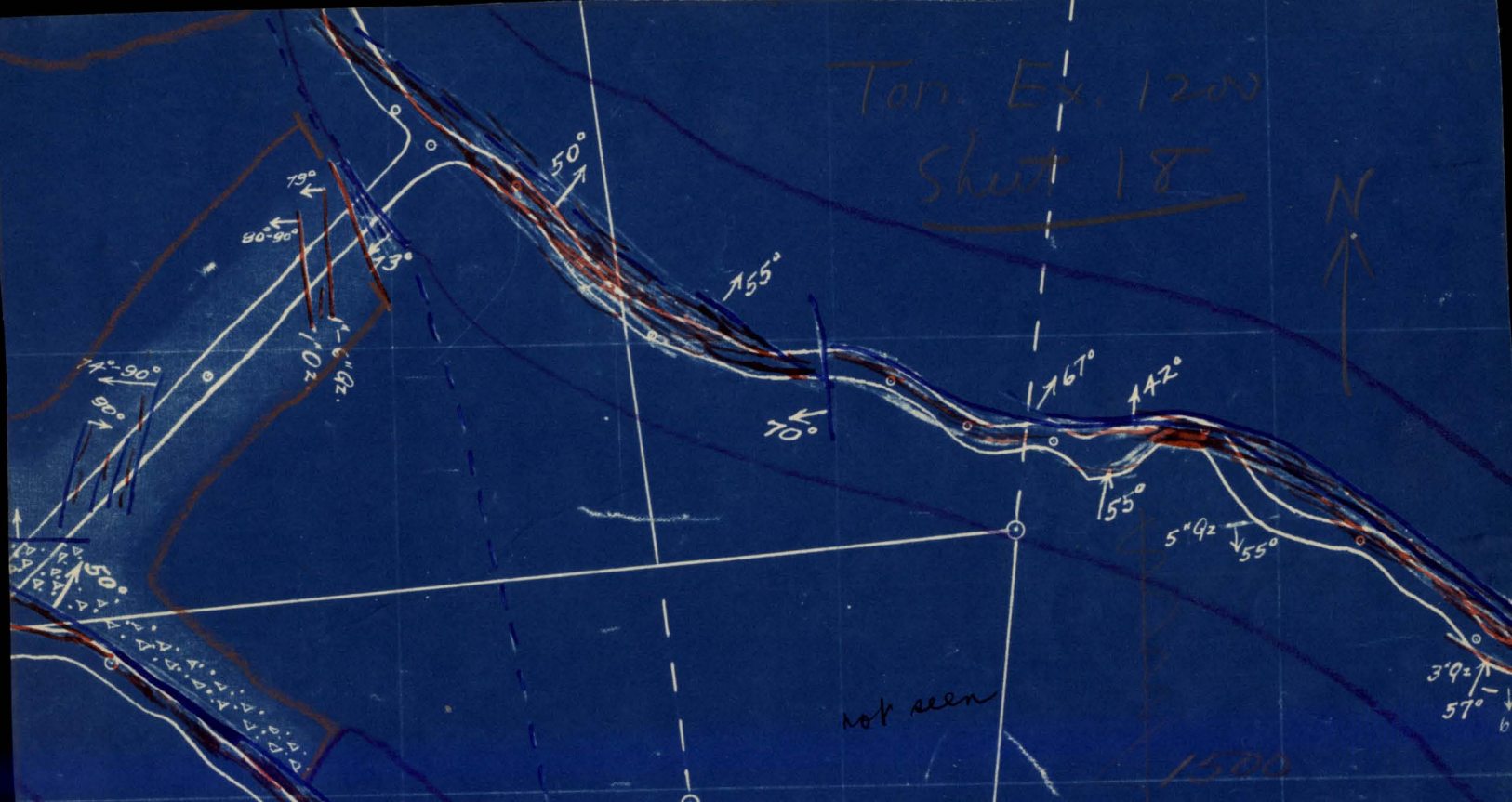
44°

48°

47°



Tom. Ex. 1200
Sheet 18



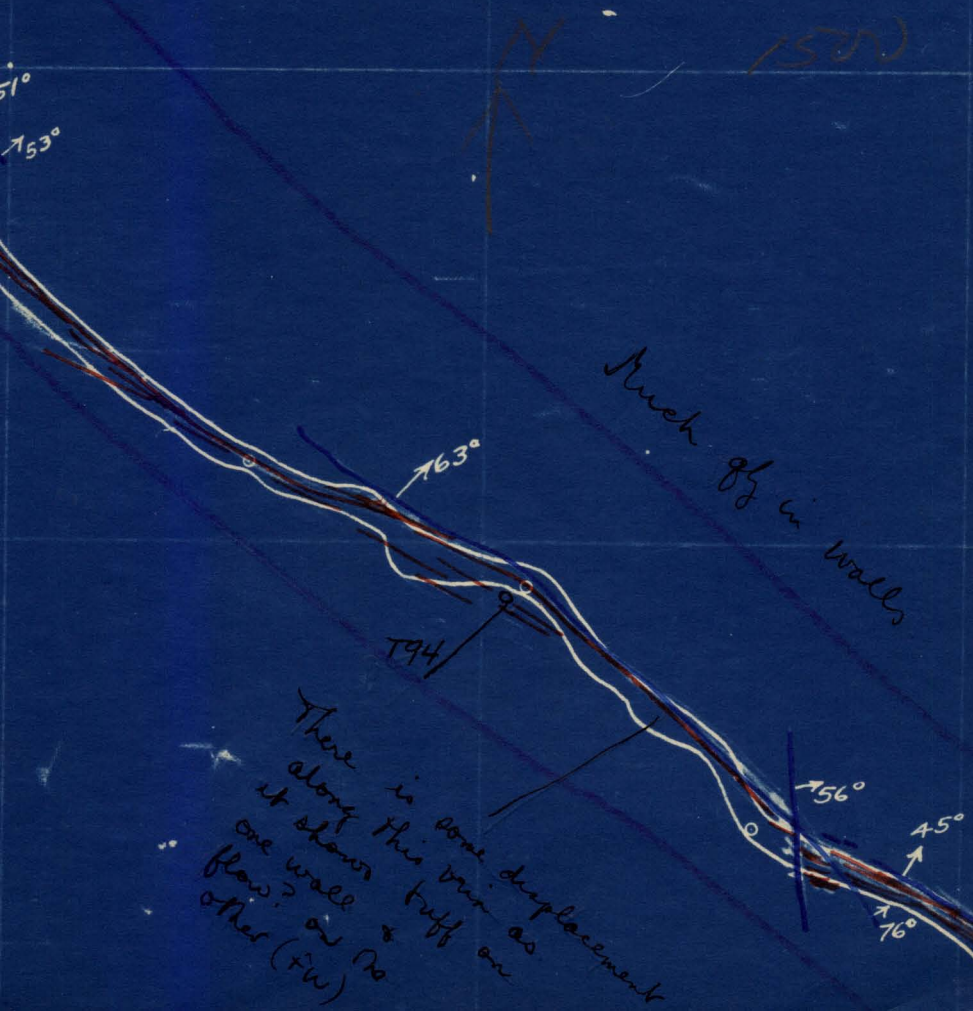


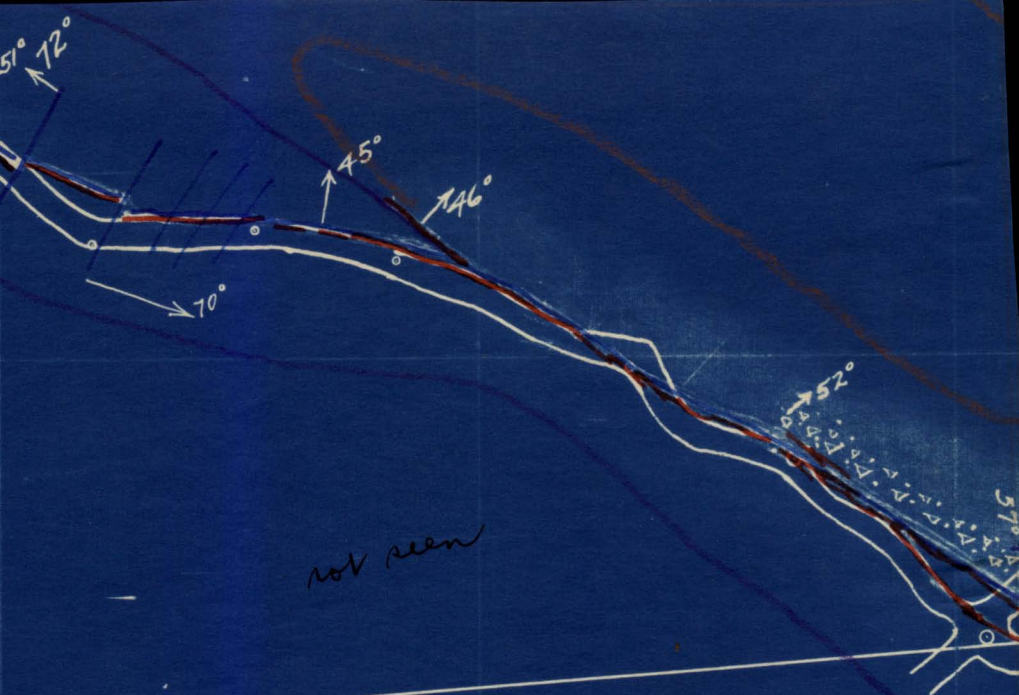
Top. Ex. 1200
Sheet 17

not seen

Tm. Ex. 1200

Sheet 20





Ton. Ex. 1200

1500

Sheet 19



300

finer
gr br
& stuff?

597

Gracia Dite

21602
picked
sample

58° 47' 44"

br
finer below dike

Breccia
Di'ke

21 Q
60

low

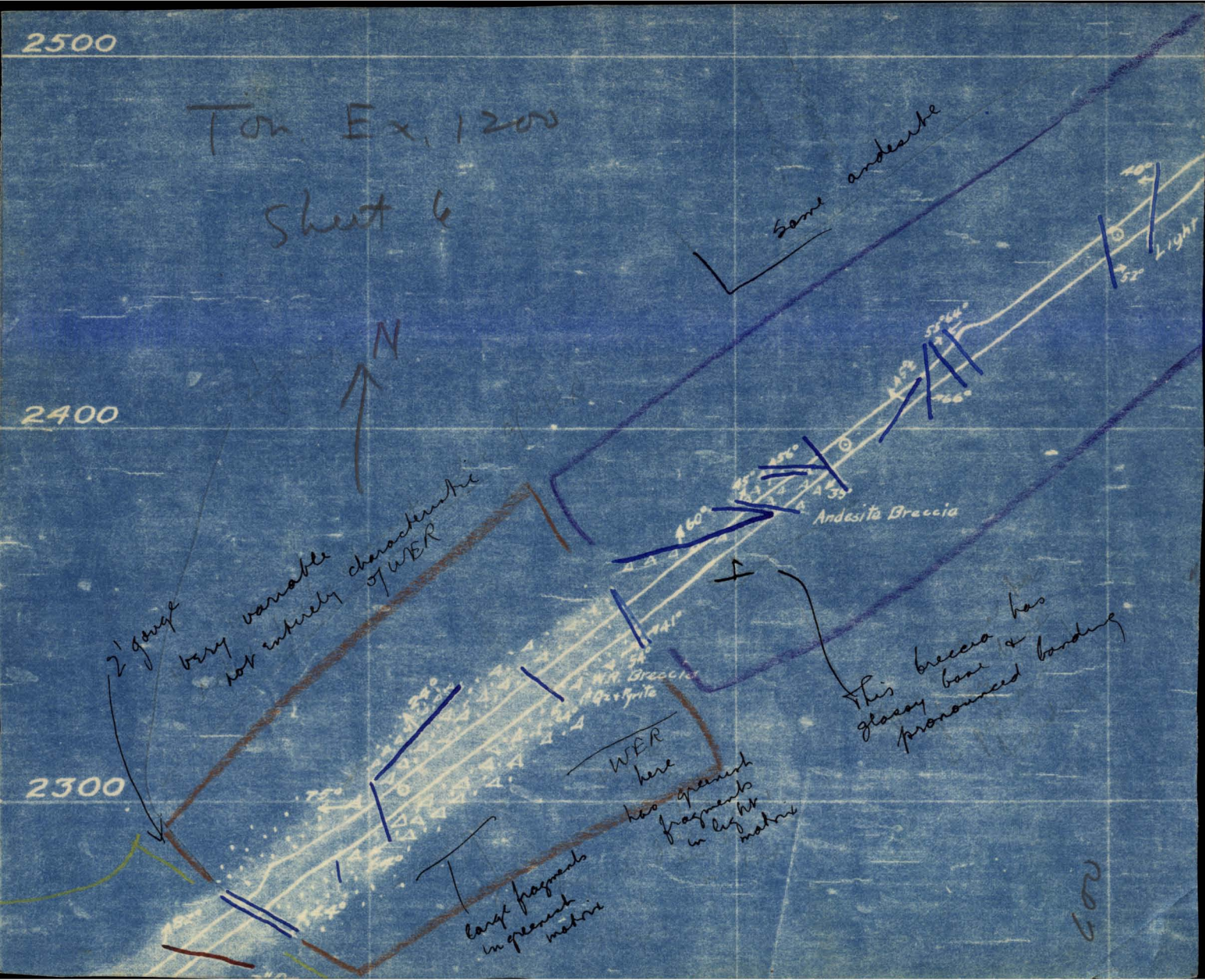
2500

Ton Ex. 1200

Sheet 6

2400

2300



dark, reddish
brownish
reddish
brownish

wide gorge

full of
small firebricks ($\frac{1}{16}$ ")
rather light
colored

4 ←

hence
inducible

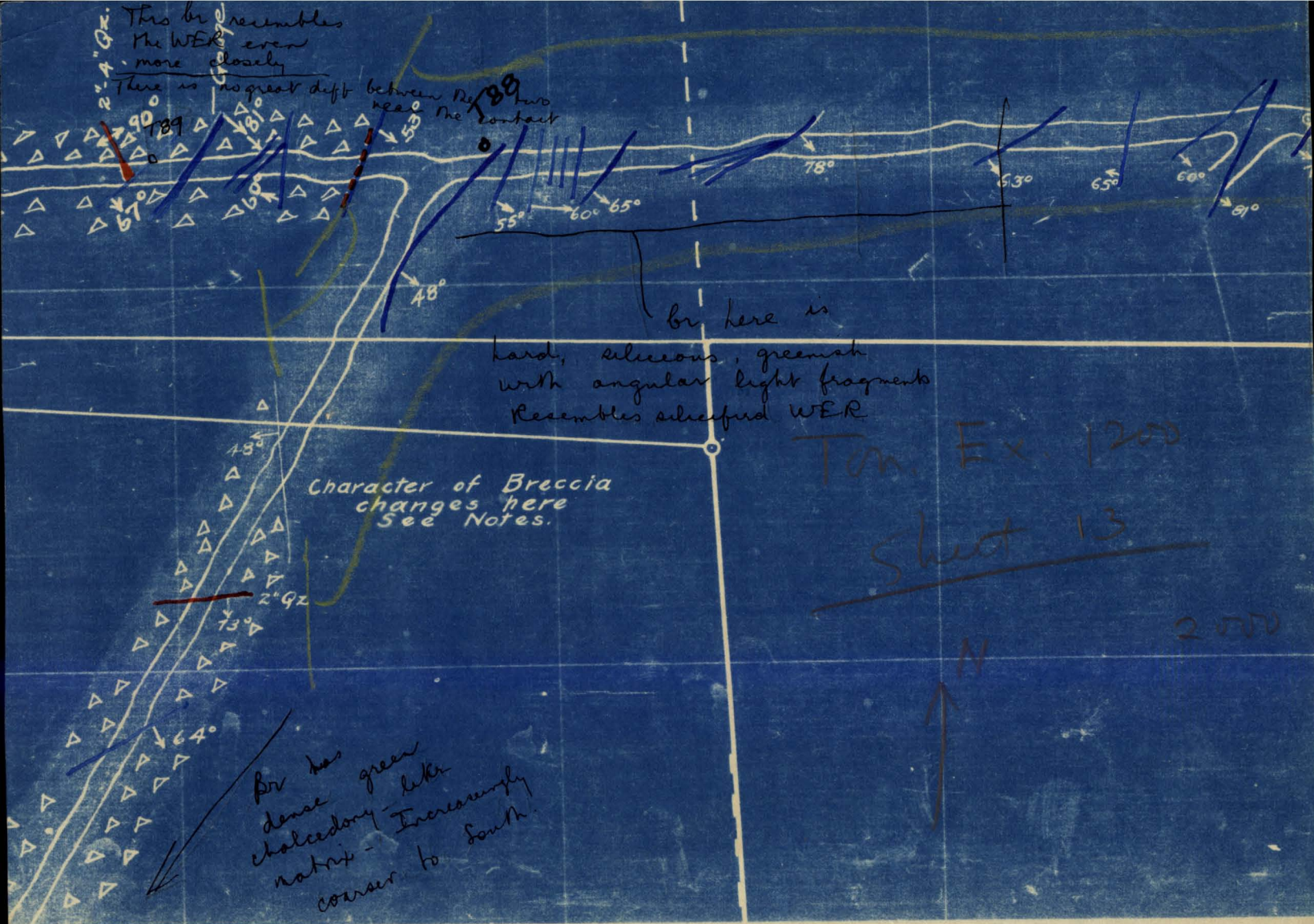
x 1/2 on wall of
drift. Assoc with
abundant reddish
iron staining

"Deltic" is offset about
20' long

be with
both red
& gray matrix

2.4.92. This br. resembles
the WER even
more closely

There is no great diff. between Res. ⁸⁸ and
the contact



br. here is
hard, siliceous, greenish
with angular light fragments
Resembles siliceified WER

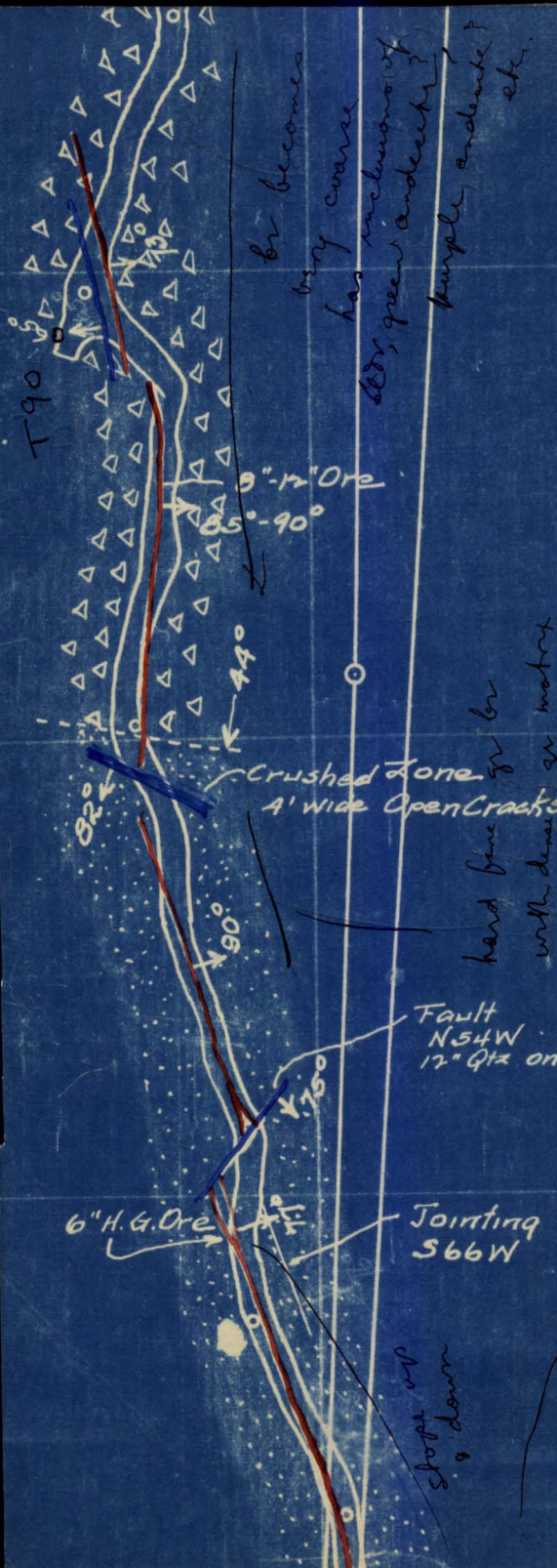
Character of Breccia
changes here
See Notes.

br. has green
dense chalcedony-like
matrix - Increasingly
coarser to South.

Ton. Ex. 1200

Sheet 13

2500



same siliceous and both walls

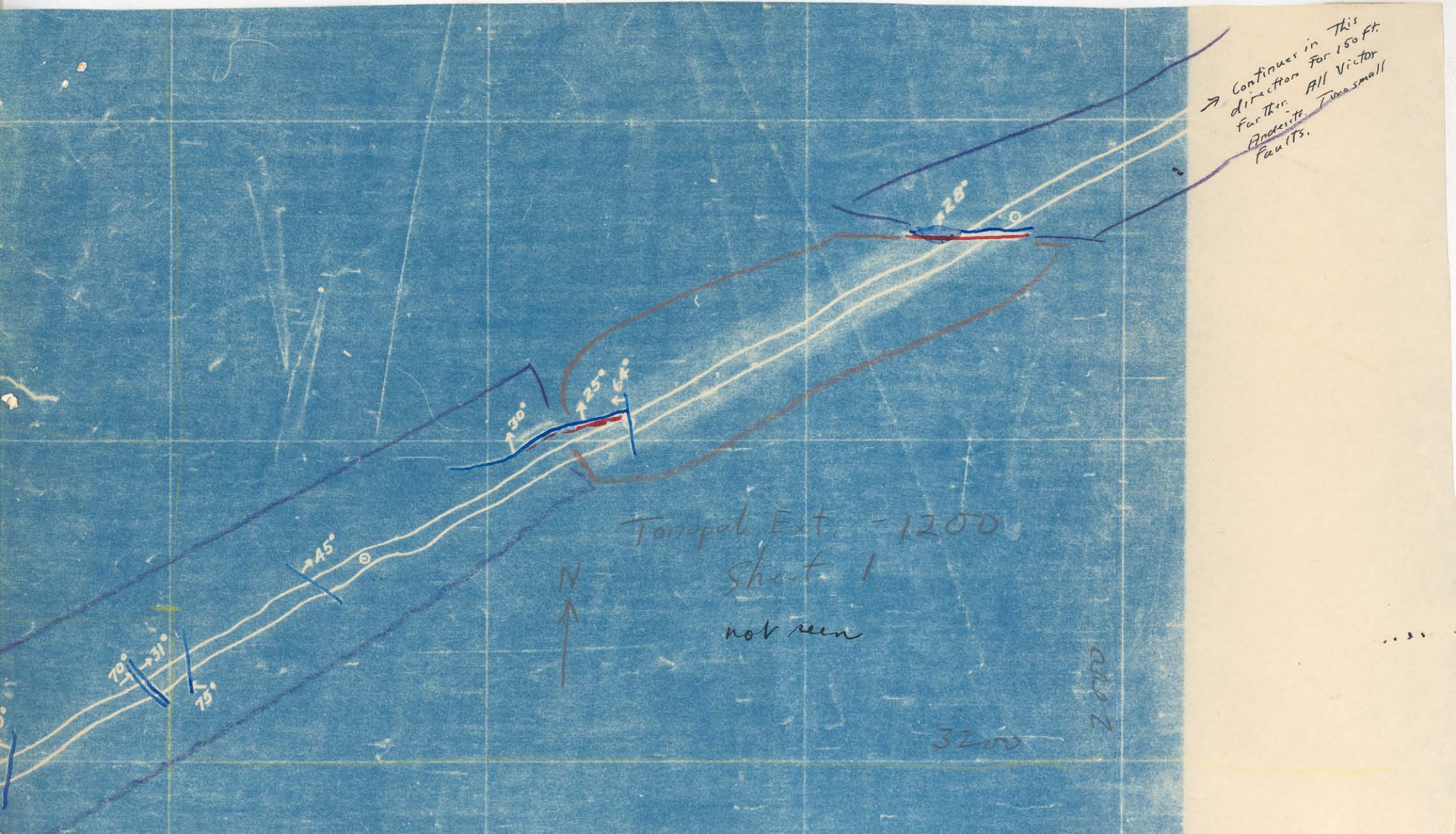
shot up & down

→ Continues in this
direction for 150 ft.
Further. All Vector
Andersite. Time small
Faults.

Tonopah Ext. - 1200
Sheet 1
not seen

3200

2000



Tom. Ex. 1200

Sheet 2

not seen

N
↑

3100

1400

30°
↑

26°
↑

76°
↑

77°
↑

72°
↑

69°
↑

Calcite
→ 70°

75°
↑

50°
↑

These fgs
are saturated
with water

blocked

andesite with numerous
small ($\frac{1}{16}$ ") feldspar phenocrysts

Dark Andesite

795°

50±
4

slight banding + structures

Ton. Ex. 1200

Sheet 5

2400

700



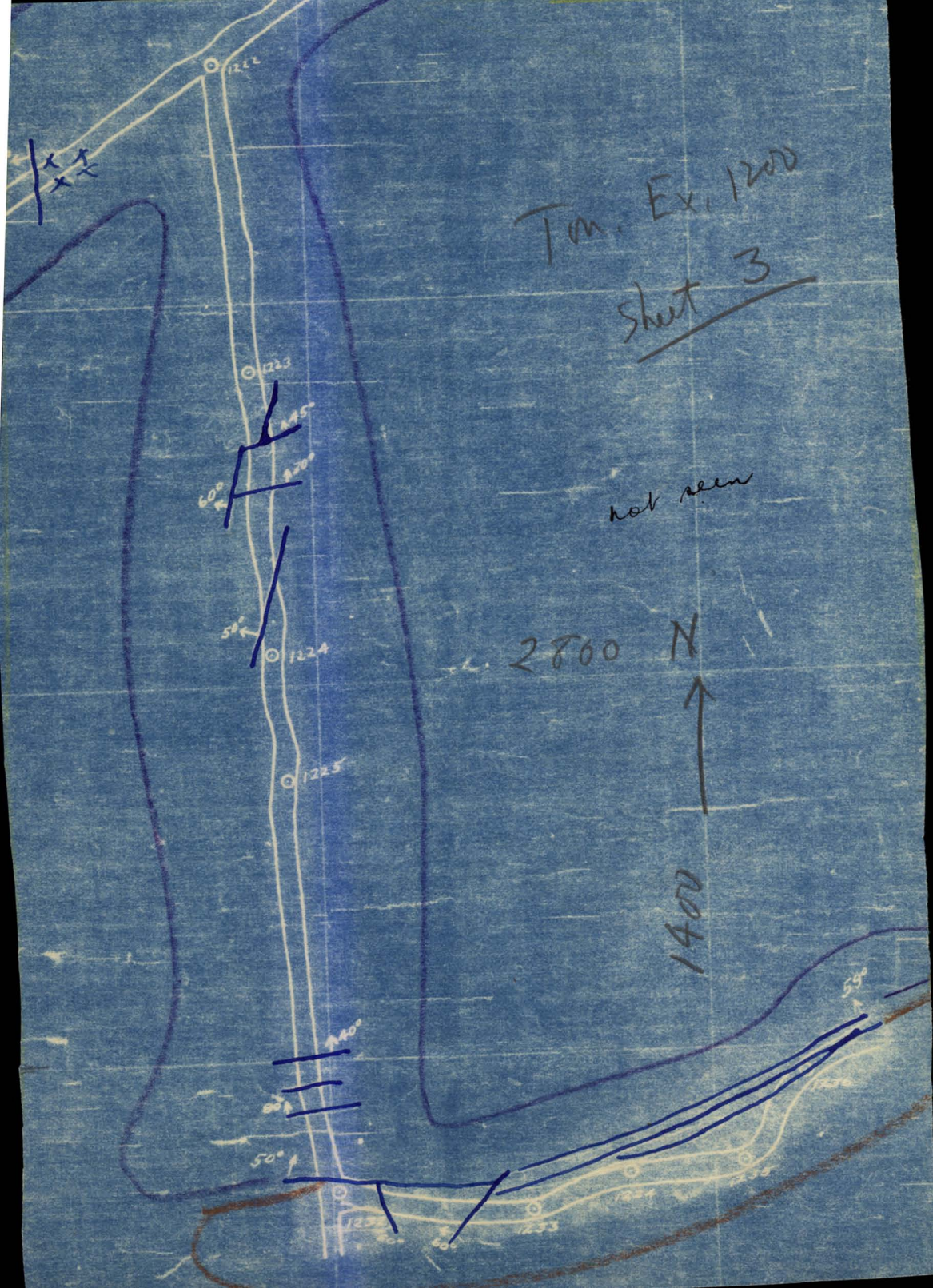
Tom. Ex. 1200

Sheet 3

not seen

2800 N

1400



Tom. Ex. 1200

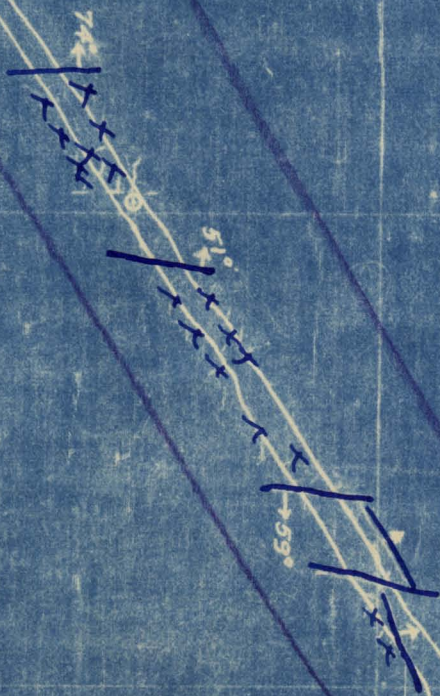
Sheet 4

1800



not seen

2800



60' to face
←

Tom. Ex. 1200
Sheet 12

the on both sides
are thought to be the
same but silicification
& carbonatization
make it difficult
to prove.
Prob mostly fine gr

N
↑

white
"trachyte"

porphyry?

no fault.

porphyry

-300

-400

-500

640

620

590

560

530

500

480

see in
applied
heavy
+ 88

face

88

480

480

(254) 2ten 140

60f9

1680 ~~Ext~~ level

Tono Ext.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Sheet 4 & 5
Not finished.

SPECIMEN Number and Letter	Note Book	Page in Note Book

VA
T5✓
T8✓
T17✓
T18✓
T28

CA 102
T1
T2
T3
T4
T6
T7
T13
T20

WER
T7
T9
T11
T12
T15
T16
T21
T22
T24
T29

EA
T14
T19
T23
T26

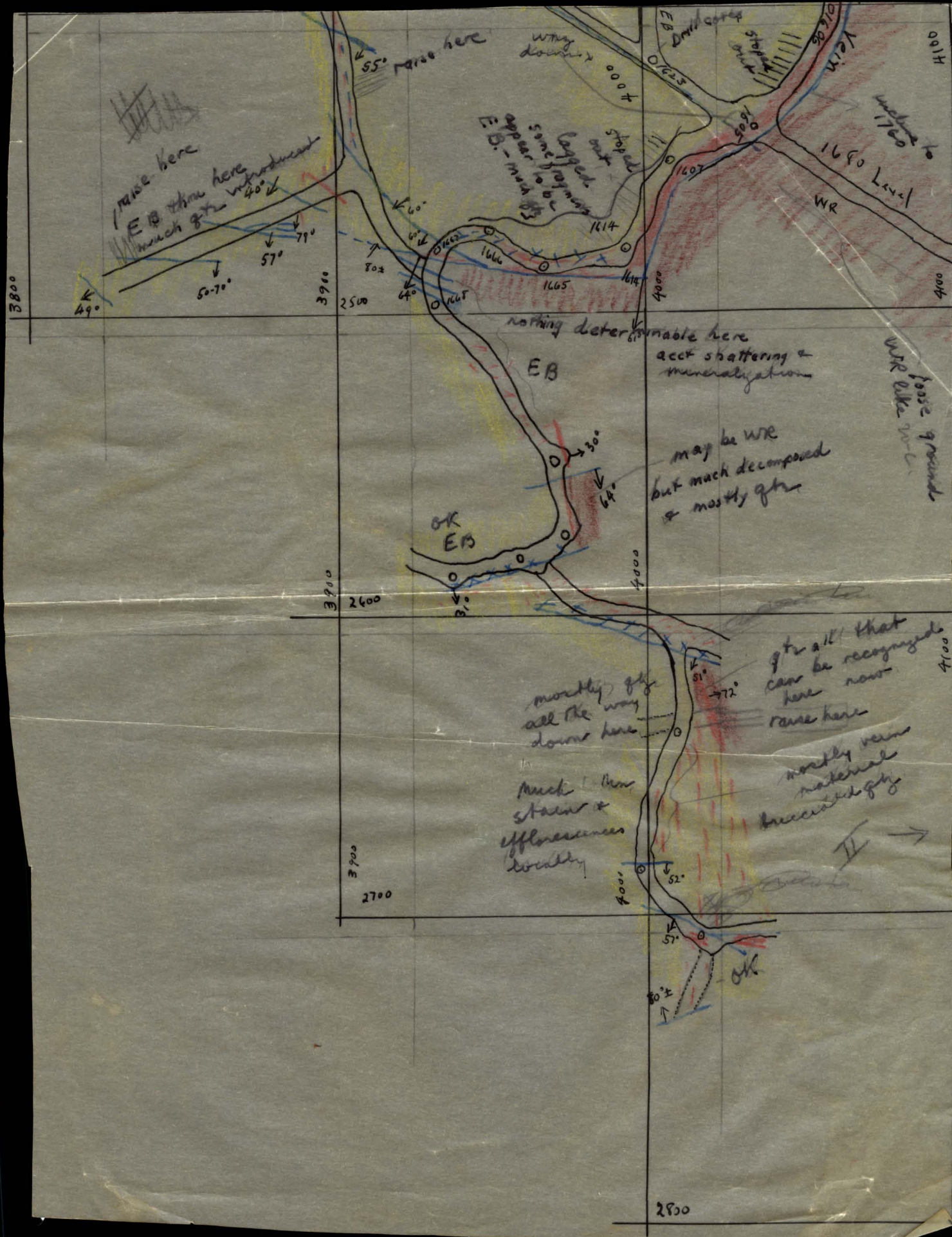
CA
T30
T31

Kuc
T10
T25
T27

Front rubs
(#7)

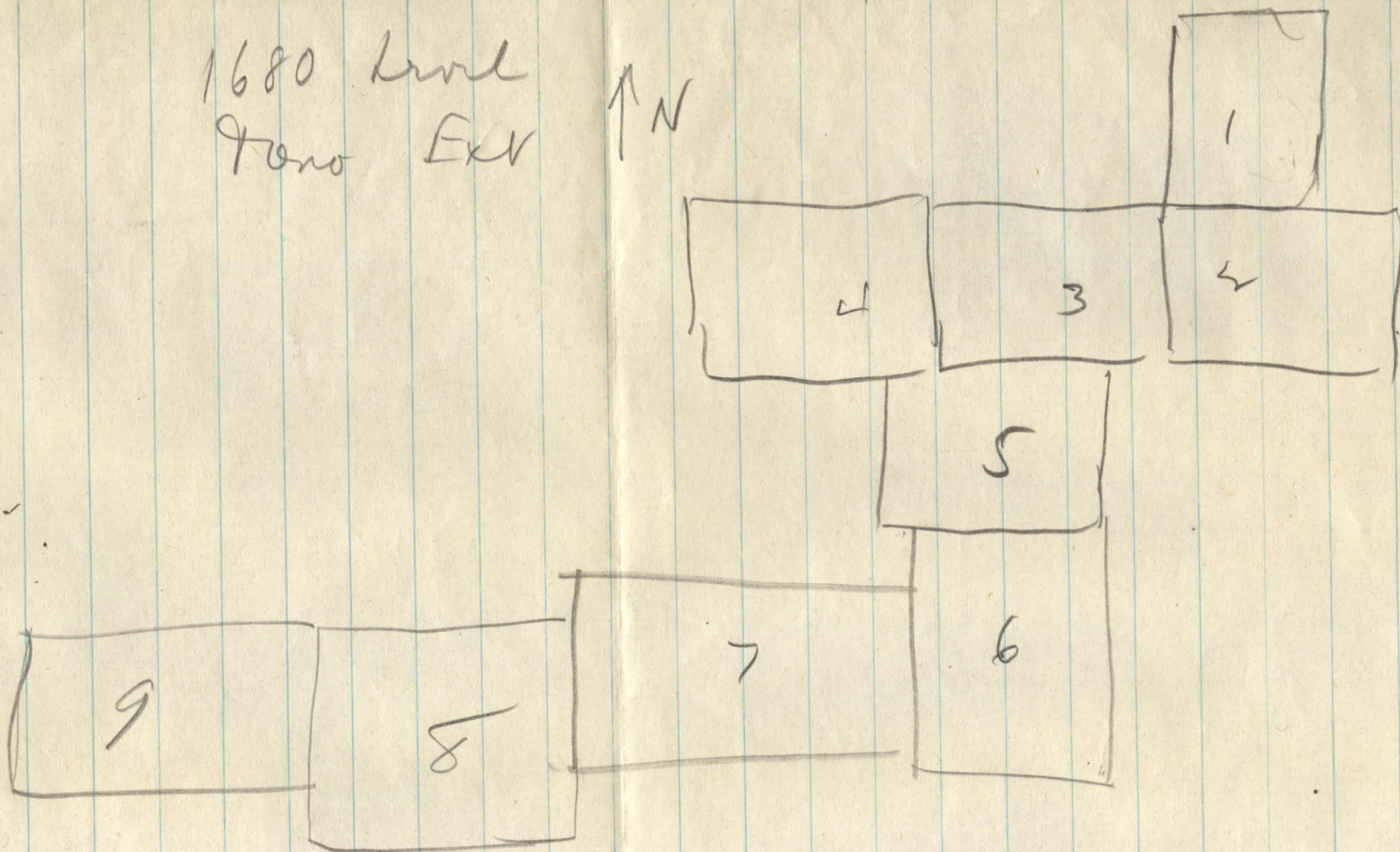
Chips needed
T1
T2 } wash
T3 } first -
T4

SPECIMEN Number and Letter	Note Book	Page in Note Book



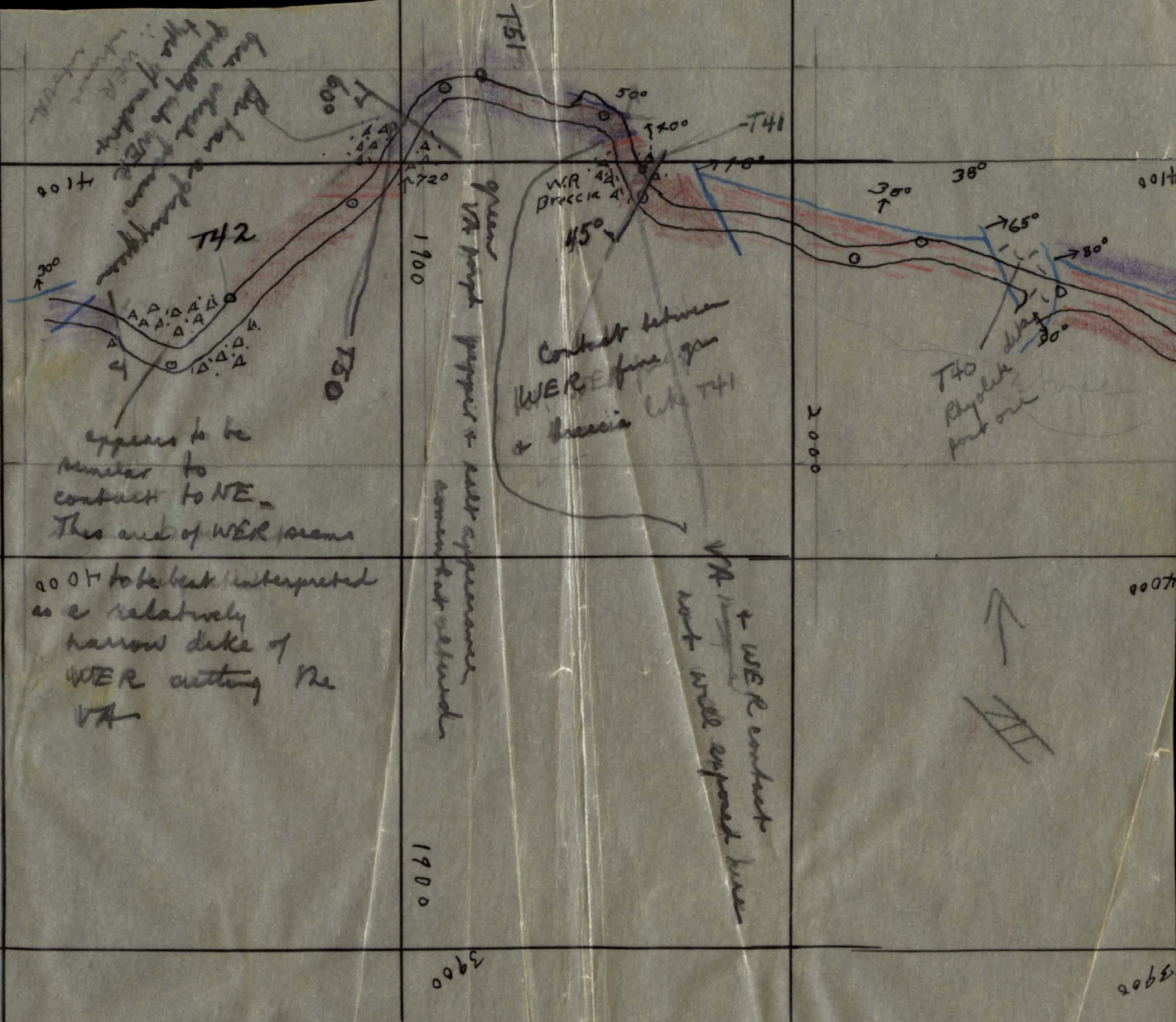
1680 Level
Tono Exr

↑ N



Tonopah EX Raise Sec Completed.

400L	500L	600L	660L
R 433 ✓	R 581	✓ 649	666-1
✓ 432 ✓	✓ 580	✓ 641 WZ	666-2
✓ 3048	✓ 572	✓ 642 WZ	667
434 ✓	✓ 580	✓ 641 RA	666L
429 ✓	✓ 579	✓ 643 R	663
430 ✓	✓ 578	✓ 650 R	664
432 RA ✓	✓ 3224	✓ 641 R	
428 ✓	✓ Lower Cen WZ	✓ 648 R	666
404	✓ 503 IntA	✓ 640 R	667
405 ✓	✓ 503 IntA	✓ 631 R	668
	✓ 503 IntA	✓ 630 R	669
FW-REgypt ✓	(557)	✓ 644 R	666 STR
403 ✓	✓ 589	✓ 663 R	
	✓ R-K	✓ 663 RA	
	✓ 597	✓ 609	665 ✓
	✓ 599	✓ 629 A	665A ✓
	✓ R-B	✓ 609 N	668 ✓
	✓ R-4(SE-ST)	✓ R609N	666 ✓
	✓ 527	✓ 605	
	529	(641 N)	
	529A	600 ✓	
	✓ 593	647	
	✓ 545	629 ✓	
✓ R 32240 ✓		645 E ✓	
> 370 R. ✓		613 ✓	
320 ✓		645-B ✓	
		610 ✓	
		667 ✓	
		667A ✓	
		647A	





2700

2600

2500

water bulk head
& reservoir in
cut off exploration
here

loose ground
all thru here
qtz veins
coarser phase of WR
similar to but
badly decomposed.

here (spec —)
WR shows coarser fragments
sparsely distributed thru
typical groundmass.
4200 largest is 2" long
more typical WR than
here. Much pyrite

T35 WR(?)
Darker green than typ.
maybe wet or
more chloritization

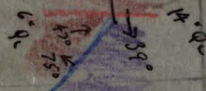
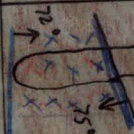
Qtz - efflorescences
& probably MnO₂ stain.

MT(?) - spec T36
appears coarser grained
& more equigranular
than WR. Shows
rhomboidal fracturing
Silicification along
fault plane
MT shows suggestion
of flow lines

4300

2600

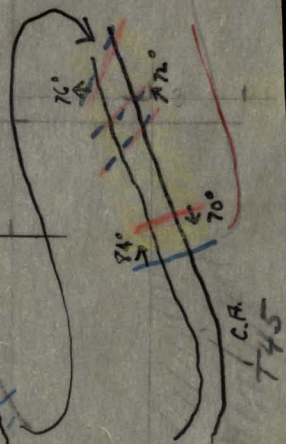
4400



O.K. Vein Follows
nearly vert. W.R.-
E.B. contact
up 40 ft. t.



about 1' thick
Contact zone is about
EB appears to be fine gr.
A little weathering.

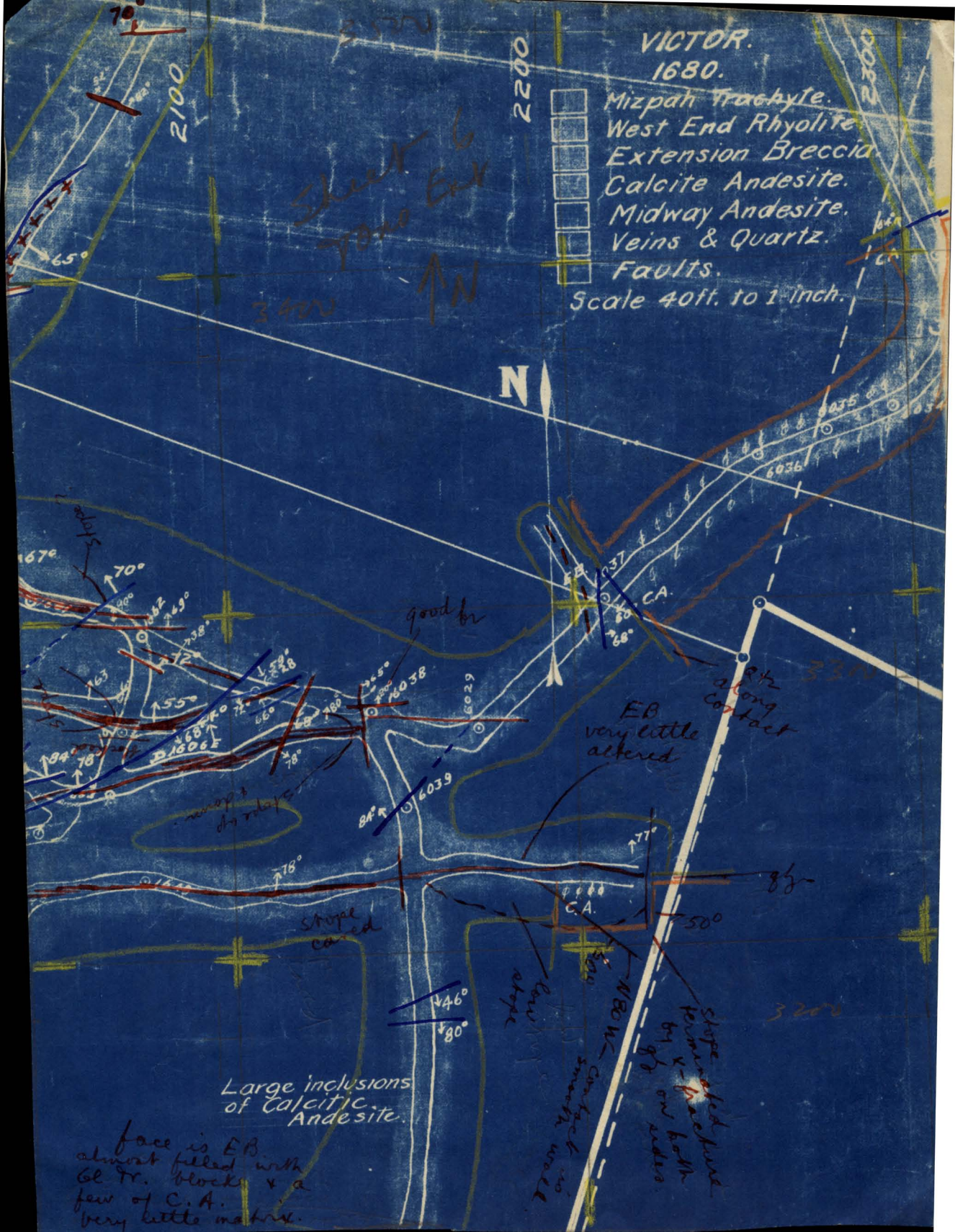


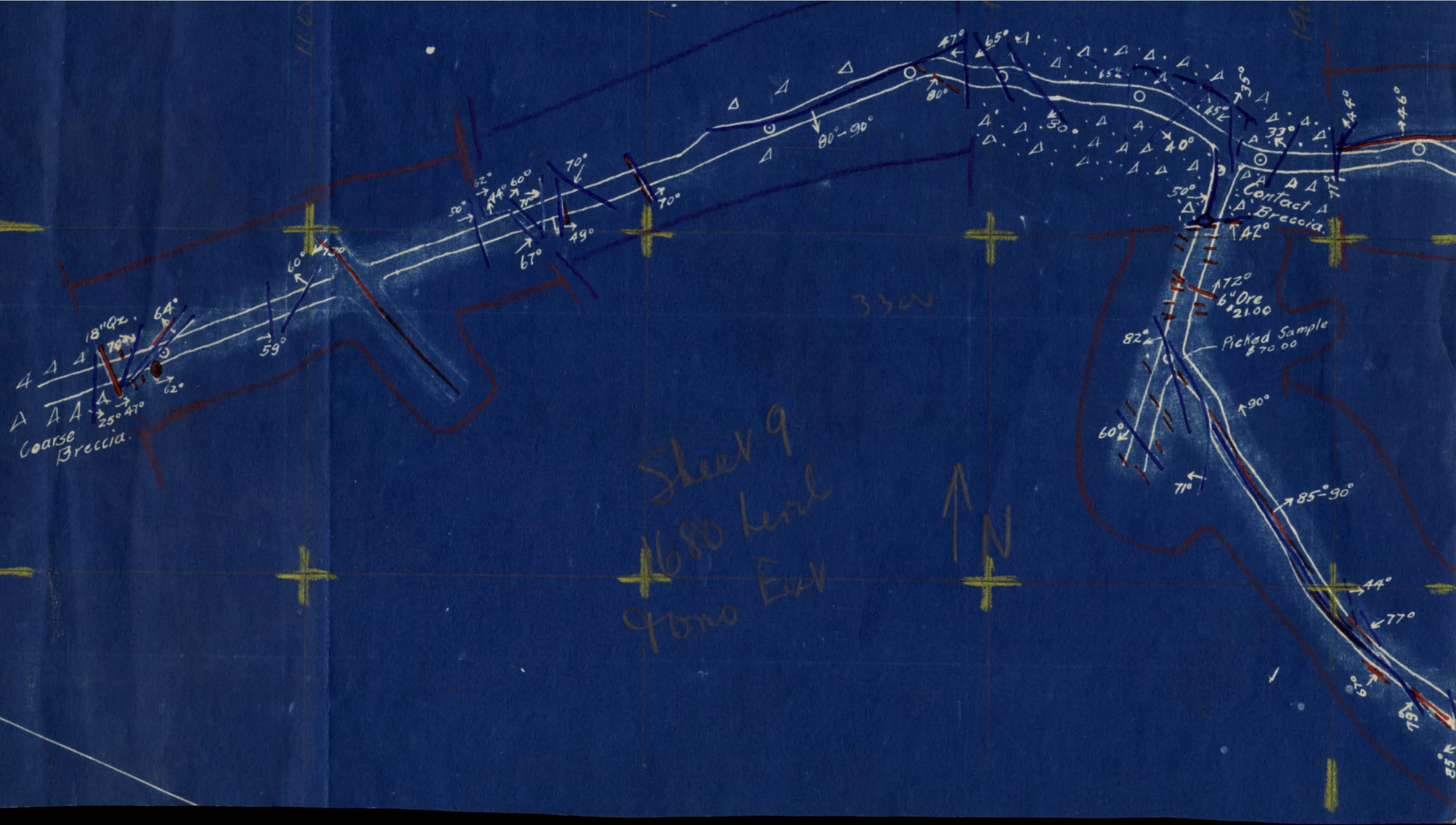


VICTOR.
1680.

- Mizpah Trachyte.
- West End Rhyolite.
- Extension Breccia.
- Calcite Andesite.
- Midway Andesite.
- Veins & Quartz.
- Faults.

Scale 40ft. to 1 inch.

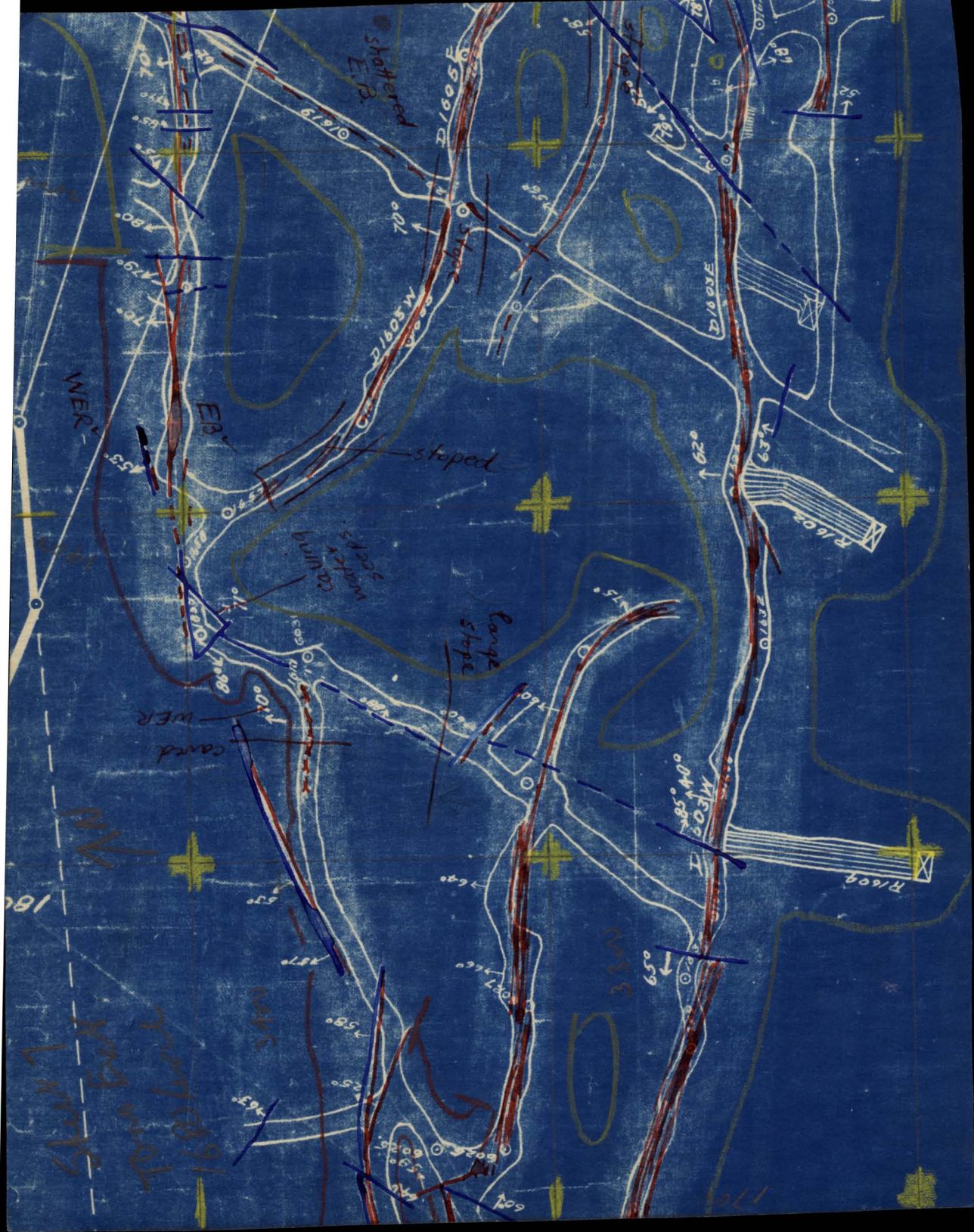




Sheet 9
1680 level
9000 Evt

3300

N



shattered
E.R.

stoped

Large
slope

canal
works
stays

canal
WER

EB

D1032

R1602

M1031

R1602

3300

650

1891
1892
1893
1894
1895
1896
1897
1898
1899
1900
1901
1902
1903
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1999
2000

TONOPAH EXTENSION MINING COMPANY

Organized in 1901 - to develop 3 claims.

John McKane, Pittsburg, Pa., started shaft - entered ore-bearing formations at 183 feet.

1904 Shipping ore encountered - by 1905 levels at 244 and 385 feet

1905 Shipped 10,000 tons - \$388,000

1906 Shipped 22,154 tons - \$859,000

1907 Shipped 5,722 tons - \$225,611

1908 Shipped 3,274 tons - \$147,845
\$50 ore scarce but a large tonnage of milling ore being developed.

1909 Mill under construction; no ore shipped.

1910 Feb. 1st, 30-stamp mill started production - 110 tons per day at \$14 grade.

October 1910, 136 tons/day, 90 percent extraction, 20 percent recovered values being in concentrate

44,524 tons produced; recovered value \$501,000 (\$12.96 ore sent to mill?)
Shaft 972 feet deep.

Purchased Red Rock group (33 acres) and McKane group (144 acres) for \$54,330

Key Pittman secured Golden Anchor and Midway Extension groups of claims (15 in all) and organized Tonopah Merger Mining Co.

1911 (FY ending 3-31-12)
Produced 53,500 tons, gross value \$590,000.
Mill discontinued concentration.

1912 (FY ending 3-31-13)
Mined 54,618 tons; mill recovery \$737,616 or \$13.50/ton
Mining cost \$5.33 a ton including cost of 10,232 feet of development and 950 feet shaft sinking.

March 1912 (?)
Started sinking No. 2 shaft 1,500 feet west of No. 1 shaft. Levels established at 756, 850, and 950 feet. Average stamp duty for 30 stamps was 5.18 tons per day.

1913 (FY ending 3-31-14)

Milled 58,022 tons with average 14.867 ounces silver and 0.156 ounces gold; total value \$696,721

Average value ore milled, \$12.008 per ton.

Average price for silver \$0.5904 per ounce.

Recovered value \$615,780 or \$10.613 per ton.

Mining cost \$5.78; unusually high development work - 16,091 feet.

The 750-foot level of No. 2 shaft was connected by a raise to the 660-foot level of No. 1 shaft.

Mined small tonnage good grade ore from North vein above 270 and 400-foot levels.

Bulk of tonnage mined from South and Lower Contact veins on 500 and 600-foot levels.

New level established at 680 feet.

North crosscut of new shaft 750-foot level encountered Murray vein, which extends only a short distance above the level to caprock.

Development of this vein on 850 and 950-foot levels favorable

1914 (FY ending 3-31-15)

Prosperous year due to Egyptian and Merger ore bodies.

Milled 71,882 tons of \$19.966 with \$1,285,508 recovered value (\$17.884/ton)

Average price received for silver \$0.51507 and \$20.6718 for gold.

Average content was 28.13 ounces silver and 0.264 ounces gold.

No. 1 shaft produced ores from 440-foot and 660-foot levels.

Large tonnage annually high grade ore mined from Egyptian vein on Red Rock claims. (Litigation with West End-apex of vein on California claim)

An incline winze sunk from 950-foot level to 1,350-foot level opening good ore in Merger vein.

Added 10-stamp section and eight Wilfley tables to mill.

North vein No. 1 shaft practically mined out.

Large tonnage mined from Egyptian, and from South and Lower Contact veins on the 500, 600, 660, and 680 levels

Murray vein developed on 850 and 950-foot levels and new levels established at 1,020, 1,100, and 1,170 levels.

Increase of 77.4 cents per ton in milling cost due almost entirely to increased cost of chemicals for treating higher grade ore.

1915 (FY ending 3-31-16)

Milled 91,981 tons of \$18.038 ore, with 92.4 percent recovery for net receipt of \$1,496,564.

The average price received for silver was \$0.5258 and gold was \$20.6718

Tonopah Merger and Tonopah Victor properties acquired for 328,368 shares of Merger has both north and south Merger veins developed on 1170-level. (stock.

Victor had not yet encountered ore.

Operations of No. 1 shaft discontinued.

Stopping continued on Murray vein from 750 to 1,170-foot levels.

Main ore shoot on Murray vein (1,260 L) was 400-feet long, varying from 20 feet in the middle to 3-to-4 feet at the ends.

North Merger vein opened on 1,260-foot level; ore shoot 500-feet long and from 4 to 12-feet wide. Western limit of this shoot found.

1915 (Continued)

A new vein, the OK, found between the Murray and North Merger; width varies from a few inches to 4-feet; an ore shoot 200-feet long, averaging 6-feet wide extends to the level above.

Breccia vein found south of the Murray vein; averages 4 feet wide.

Murray vein oreshoot on 1,350-foot level is 500-feet long with maximum width of 24 feet.

An oreshoot 300 feet long, 26 feet maximum width has been developed on the North Merger vein on the 1,350-foot level.

Oreshoot on Murray vein on Victor 1,540-foot level shows 40 foot width and extends to the bottom of the winze from the 1,350-foot level.

Increase in cost of milling due to "tremendous" increase in the price of zinc and all chemicals. Also to increased cyanide consumption for a short period due to presence of copper in one part of a stope above the 1,170-foot level

Slight increase in marketing cost due to increase in tonnage of concentrates marketed.

Ore mostly from McKane group through No. 2 shaft.

On new 1,350-foot level (developed from 950-foot level winze) the Murray vein ore shoot was 500 feet long with a maximum width of 26 feet.

On 1,260-foot level, good ore bodies discovered in North Merger the OK, and Breccia veins.

Victor shaft 1,540-foot level was flooded when taken over.

Main south crosscut cut both North Merger and Murray veins, showing a 200-foot ore shoot with a 40-foot width at the Murray.

1916 (FY ending 3-31-17)

Ten more stamps added to mill, making 50 in all.

Milled 109,402 tons (300 tpd) of \$17.11 grade with recovery of \$1,707,176

1917 (FY ending 3-31-18)

Milled 110,188 tons of \$12.54 grade with recovery of 1,250,982

(\$11.353). Silver content of ore only 62 percent of previous year.

Average content was 11.771 ounces silver and 0.117 ounce gold

Average price received for silver was \$0.86081 per ounce and for gold \$20.6718 per ounce.

Ore bodies in No. 2 shaft mined out to 1,440-foot level; in Victor shaft area to 1,540-foot level.

Large station cut on 1,680-foot level for 560 gpm pump. Auxiliary 400 K.W. steam power plant installed for pumps.

No work done from No. 1 shaft.

Station cut on 600-foot level No. 2 shaft and a crosscut driven to connect with working from No. 1 shaft.

Stoping on Murray vein on 660, 850, and 950-foot levels. A small amount of ore remains to be stoped from above these levels.

Low grade ore produced from stopes on Murray and Merger veins on 1,170-foot level.

East block, Murray vein and No. 2 Merger Footwall vein, No.2 1,260-foot level mined out.

A large tonnage rather low grade ore mined from Merger vein 1,350-foot level. East block, Murray vein and OK vein, 1,350-foot level mined out.

A large tonnage mined from Murray vein, 1,440-foot level.

Murray vein ore-shoot 1,540-foot level mined out.
No attempt made to sink Victor shaft below 1,759 feet due to greatly increased flow of water.
Main south crosscut on 1,680-foot level cut in succession, the Merger, Victor, OK, and the Murray veins.
A 300-foot long ore-shoot developed on Merger vein ore width varies from 3 to 18 feet.
Must look to 1,680 and lower levels for ore of better grade.
Present pumping equipment not adequate for deeper operations.
A 350 gpm pump will be installed on 1,680-foot bed to pump to surface, doubling pumping capacity.
New hoist ordered for Victor shaft; will hoist 4-ton skips 1000 fpm from depth of 3000 feet.
Wage increase of 50 cents per day, effective September 1, 1917.

1918 (FY ending 3-31-19)

Milled 114,921 tons with receipts of \$1,630,000.
Silver averaged \$1.00 per ounce. Victor 1,680-foot level main producer and Victor became main shaft.

1919 (FY ending 3-31-20)

Milled 70,661 tons averaging 12,157 ounces silver and 0.116 ounce gold, with receipts of \$1,083,145-average gross value of ore \$16.676 per ton.
Average price of silver \$1.1744 per ounce.
Four months strike.
Purchased Accidental claim (14.9 acres).
Most ore mined from Victor 1,680-foot level.
Old 1,120-foot deep McKane shaft was being sunk to same depth as Victor 1,540-foot level.
Small amount of ore stoped from Vertical Vein on No. 2 shaft 600-foot level.
Mined 3,000 tons of ore from Lower Contact vein on 660-foot level.
Removed pillars of ore from Murray, Merger, and OK veins on 950, 1,260 and 1,350-foot veins.
Greatest tonnage from 1,440-foot level.
Southwest crosscut on Victor 1,540-foot vein to locate Murray vein discontinued because of flow of water.
Murray vein stopes from 1,680-foot level principal producers.
Only a small tonnage mined from the flat-dipping Merger vein 1,680-foot level due to shortage of miners.
Retimbered McKane shaft (1,600 feet west of No. 2 shaft) to 580-foot depth.
Erected head frame and installed electric hoist at McKane shaft.
Installed 500 gpm turbine pump on 1,680-foot level Victor shaft.

1920 (FY ending 3-31-21)

Milled 89,022-tons of \$15.591 grade with recovery \$1,278,292 (\$14.359) or 92 percent.
Average silver content was 12.929 ounces per ton; gold was 0.127 ounces per ton.
Silver average price was \$1.0025 per ounce.
Victor 1,760-foot level main producing level.
Victor shaft sunk 128 feet and a level established at 1,880 feet.
McKane shaft sunk 406 feet; retimbered 532 feet to 1,112 feet below surface.
No work done from No. 1 shaft this year.

1920 (Continued)

Small tonnage mined from Vertical and Lower Contact veins from No. 2 shaft 600-foot level.
Lower Contact vein mined out above 660-foot level.
Mined 600 tons of high-grade ore from Murray vein pillars from 950 to 1,260-foot levels.
Merger Footwall vein, 1,260-foot level produced 2,800 tons.
Mined large tonnage of low-grade ore from Murray and Merger veins pillars on 1,350 and 1,440-foot levels.
Known orebodies in the section of the mine worked from No. 2 Shaft are exhausted. Favorable ground has been thoroughly prospected.
Mined 3,600 tons average grade ore from Merger vein 1,540-foot level.
A new vein, Deming, found in footwall of Murray vein; a 60-foot long ore-shoot assayed \$20 across 2-foot width.
36 percent of tonnage mined came from 1,760-foot level.
Murray vein on 1,760-foot level--good ore in hanging-wall and footwall branches.
No commercial ore found in Murray vein, 1,760-foot bed west of west fault, but there is more quartz and greater mineralization in this block than on any of upper levels.
A new vein, the Anchor, 1,760 foot level, produced 2,800 tons of good grade ore; does not extend to level above (1,680-foot level).
Victor shaft cut Merger vein at 1,850 feet; shows only low grade quartz spots of ore.
Large station cut north of shaft for pump and sinking hoists.
McKane shaft sunk 406 feet below old sump; 1,350, 1,540, and 1,650-foot levels established.
Old northeast crosscut on McKane 1,100-foot level retimbered and connected to 1,170-foot level, No. 2 shaft by a short raise.
Main veins have not been developed on any new level during the year.
Wage increase of 50 cents per day, effective February 14, 1920.

1921 (FY ending 3-31-22)

Milled 84,463 tons of \$12.68 ore yielding \$1,001,759 (\$11.86 per ton), with average price for silver at \$0.9986 per ounce.
Average silver content 10.535 ounces per ton; gold 0.105 ounces per ton.
Although net income was only \$100,512, dividends of \$263,543 were paid.
The net realization per ton was \$1.111 or a total of \$93,921.
A two-month strike occurred as a result of a 75¢ per day reduction in wages, effective April 16, 1921.
Due to shortage of labor, operations continued on a limited scale for 5 months; pumping charges continued.
A crosscut on 1,650-foot level of McKane shaft struck water flow that flooded the shaft to the 1,540-foot level. This water later diverted to sump on Victor 1,680-foot level and 600 gpm pumps ordered.
Two 600 gpm vertical triplex to be installed on McKane 1,540-foot level.
Substantial bodies of commercial ore discovered on Victor 1,880-foot level.
Purchased 22-acre property of Cash Boy Consolidated Mining Company for cash and Extension stock.
No work done from No. 1 shaft.
Operations from No. 2 shaft discontinued.
Stopping Merger vein only work done on 1,540-foot level.

1921 (Continued)

Only development work done on 1,680-foot level.

Substantial tonnage produced from 1,760-foot level. Several long exploratory crosscuts driven.

Drifted 443 feet westerly on Merger vein.

Hangingwall branch of Murray vein developed by west drift.

Crosscut driven 1,010 feet westerly on McKane 1,200-foot level, into favorable area.

1922 (FY ending 3-31-23)

Company reported production 129,571 tons with a value of \$1,757,129 to State of Nevada

1923 (FY ending 3-31-24)

In 1923 the reported production was 141,090 tons having a value of \$1,883,065.

West Tonopah and Iowa Tonopah groups of claims purchased in 1923.

An ore shoot on the Victor vein 700 feet in length with a maximum width of 80 feet. It was mined mostly by 60-foot filled square-set stopes.

In 1923 a 2000 HP diesel power plant was ordered to assure steady power for pumping.

Ten more stamps were added to the mill increasing the daily capacity to 500 tons.

Rich ore encountered in crosscut on 1,200-foot level several hundred feet west of the McKane shaft.

Good ore encountered on the Victor 2,000-foot level. A raise from this level connected with the bottom of the Cash Boy shaft at 1,670 feet.

A sinking hoist was installed on the Victor 1,880-foot level and the 2,125-foot and 2,250-foot levels established.

Electric haulage installed to transport ore the long distance to the Victor Shaft for hoisting.

Drop in price of silver from \$1.00 to 65¢ in June 1923 with the end of Government purchase under the Pittman Act.

1924 (FY ending 3-31-25)

Milled 171,046 tons (467 tpd) having value of \$15.443 per ton with recovered value of \$2,467,449 (\$14.426).

Content of ore was 17.117 ounces silver and 0.184 ounces gold.

Average price received for silver was \$0.6796 per ounce and for gold was \$20.6718 per ounce.

Purchased patented claims of Tonopah Mines Corp. consisting of 354,323 acres (\$191,500). Also acquired by location the Triangle claim.

Poor showing from 1,400 feet of development mainly on 2,000, 2,125, 2,250, and 2,375-foot levels. Available ore supply very low.

The expected continuation of the fine orebodies on the 1,880-foot level failed to materialize.

Fear of flooding the mine impeded the search for ore.

No work done westward on 1,540-foot level from the McKane Shaft due to uncertainty of electric power service. Having pumping capacity of 2,300 gpm from 1,540 foot level to surface. Flow to pumps from McKane has been limited to 300 gpm for the past two years, lowering the level by 12 feet per year. A greater flow might flood the mine. Water level west of McKane Shaft is 300 feet above level of pumps.

1924 (Continued)

The westerly crosscut on the Victor 2,000-foot level was discontinued lest an excessive flow of water be encountered.

The existence of several orebodies to the west on the lowest levels cannot be ascertained, due to the expected flow of excessive water, until a continuous power supply is available to operate the pumps.

Expended \$338,152.85 on plant and equipment; \$273,039.05 was for construction work in connection with the new Diesel Engine power plant. This expenditure does not include the cost of the two new Diesel engines now being erected. This cost will have to be made during the coming year.

Dividends distributed to stockholders totaled \$282,793 (equivalent to 20 percent of each full share of stock outstanding.)

Only work done in No. 1 and No. 2 shaft areas by leasers; small tonnage shipped to local custom mills.

Cash Boy shaft sunk 415 feet below 2,000-foot level; new levels established on 2,125, 2,250, and 2,375-foot levels.

Cost of producing an ounce of silver, allowing credit for value of gold, was 39.65 cents.

1925 (FY ending 3-31-26)

Milled 78,347 tons (216 tpd) with a value of \$10.901. The recovery was \$811.592 or \$10.359 per ton.

The ore contained 11.508 ounces silver, and 0.115 ounces gold per ton. The average price received for the silver was \$0.6929 per ounce, and for the gold \$20.6718 per ounce.

Two 2000 HP diesel engines operating successfully.

Work to the west on the 2,125, 2,250, and 2,375-foot levels approaching area of expected water inflow had to be stopped. Ore all stopped out except shaft pillar.

A small tonnage of ore was mined by leasers from workings tributary to the No. 1 and No. 2 shafts. This ore was milled at local custom mills.

An additional 445 feet of drifting on the 1,200-foot level (McKane shaft) disclosed ore occurrences on the West Tonopah vein. The mineralization was too erratic, so stoping was abandoned. Production was 1,096 tons of low grade ore. The vein was further developed by 460 feet of raises above and a 64-foot winze below this level. No pay ore was found.

On the Victor 2,000-foot level, the most westerly block of the Murray vein showed 4 feet of ore averaging about \$15.00 per ton for 60-foot length. A raise was put up on this ore to the 1,880-foot level. While drifting west on this vein a 750 gpm flow developed and work had to be stopped.

A crosscut from the West Tonopah shaft on the 950-foot level cut a vein which showed some good grade ore but the values were erratic.

A crosscut on the 1,100-foot level (West Tonopah Shaft) reached a point 200 feet south of the shaft when the flow of water became so large that the mine was shut down and the shaft filled with water to almost the 950 level.

1925 (Continued)

Pumping at the McKane and Victor the past year lowered the water level, so the 1,100-foot level is now dry. Only small stringers of ore were found on the 1,100-foot level. Ore milled past few months has come from development; ore reserves practically exhausted.

Now pumping 3,000,000 gallons per day; average pumping head is 1,800 feet. (2083 gpm)

Northwest crosscut 1,540-foot level from 900 feet west of McKane shaft failed to disclose any structure of importance in projected Denver vein area. Southwest crosscut discontinues 450 feet from objective due to heavy flow of water.

McKane 1,650-foot level which was flooded several years ago drained by tapping water on Victor 2,000-foot level.

North crosscut Victor 1,760-foot level discontinued after being extended 1,558 feet north of shaft.

A new block of the Murray vein 1,880-foot level developed; a 110-foot long ore shoot, eight feet wide, averaging \$8 per ton was mined. Failed to pay dividend.

Paid \$354,345.77 for plant and equipment including cost and installation of two new Diesel engines.

Deficit of \$347,509.39

Cost of producing an ounce of silver was \$1.082

1926 (FY ending 3-31-27)

Only 300,000 of the 700,000 authorized shares were sold.

3 year 10 percent first mortgage bonds issued - \$270,000 subscription
Deficit of over half million dollars.

\$185,000 due on diesel engines

U. S. Government demanded additional income tax of \$228,841 for 1919, 1920, and 1921.

Supreme Court of Nevada disallowed deductions for depreciation insurance taxes, and Eastern office expense in computing net earnings for State bullion tax.

Milled 51,587 tons of \$8.29 value with silver at 59 cents.

Attempts to develop to west on Victor 1,880 and 2,000-foot levels on the Murray vein had to be discontinued due to danger of mine flooding.

Three new veins discovered on McKane 1,540-foot level; the Bermuda, Pay Master, and Merton, which had a 6-foot wide, 300-foot long ore shoot. The ore was hauled one mile to the Victor shaft.

1927 Milled 40,828 tons with recovered value of \$295,528 or 7.15 per ton.

1928 777 tons for \$4,507

in 1928
Forced into receivership and sold at public sale in 1929 to Thos. F. Cole, one of the largest bond holders for \$627,000. The sale brought enough only to equal the bonds and current debts, leaving nothing for the preferred and common stock.

Large capital investment of diesel engines not warranted by meager ore reserves.

Cole organized new company, Tonopah Extension Mines, Inc., in 1929

- 1929 August 1929 New ore found on 1,880-foot level; milling 165 tons per day.
November 1929 Work suspended on 1,880-foot level.
- 1930 Ore being mined on 1,600-foot level.
- 1931 January 1931 Company suspended operations.
Tonopah Extension Mines Inc., produced \$200,000 value ore until
1939 (State records)
- 1939 Final report in 1939
- 1940 Two diesel engines sold and shipped to South Carolina
- 1942 October, Mill ^{destroyed by a later fire} ~~set on fire~~, which destroyed office building and managers residence.

Tonopah Extension Mines, Inc.

The Tonopah Extension Mines, Inc., was incorporated in 1929 as a reorganization of the Tonopah Extension Mining Company which had been formed in 1902. The original holdings of the company were composed of three claims situated west of the property of the Tonopah Mining Company and north of the MacNamara and West End mines. Beginning in 1910, the company started to acquire additional claims in the western portion of the district. The properties of the following companies had been acquired mostly by payment with stock of the Extension Company up through 1927:- Red Rock Consolidated Mining McKane Mining Company, Pittsburg Tonopah Extension Mining Company, Company, Tonopah Victor Mining Company, Tonopah Merger Mining Company, Tonopah Sully Mining Company, Iowa Tonopah Mining Company, Cash Boy Consolidated Mining Company, West Tonopah Consolidated Mining Company, and Tonopah Mines Corporation. Several of these companies in turn were consolidations of smaller groups. The total area of the claims included in these acquisitions is 1148.057 acres.

It is reported that an additional block of about 1100 acres has been acquired since 1927. The old company was capitalized for \$2,000,000 in common stock and \$700,000 in preferred stock. It also had \$300,000 in bonds outstanding.

The company went into the hands of a receiver as a result of defaulting on the

Two groups
Ruth "
German-Amer
Mining Co
(All patented)

bond issue and its property was bought by T. F. Cole early in 1929 at a receiver's sale. The new company was incorporated by him on Apr. 2, 1929.

There are at least seven shafts upon the company's property: No. 1, No. 2, Victor, McKane, Cash Boy, West Tonopah, and Red Rock. The Merger shaft, is included within the land turned over to the Tonopah Mining Company in settlement of a suit over extra lateral rights (page ---). The No. 1 shaft near the eastern edge of the property was the original working shaft but has not been used for company work since 1916. It is 1050 feet deep. The No. 2 shaft was started in 1912 and sunk to a depth of 950 feet. An incline shaft was driven from the 950-foot level down to the 1440-foot level. The No. 2 shaft was abandoned in 1922 and is now caved. The Victor shaft has been in the main working shaft in recent years and is nearly 2,000 feet deep. The McKane shaft is bottomed at the ¹⁶⁵⁰~~1500~~ foot level. Since its connection with the workings from the Victor shaft, it has been used chiefly as an auxiliary shaft. The Cash Boy shaft ~~and~~ is about 2350 feet deep and has been used as a ventilating shaft exclusively recently. The West Tonopah shaft, about 1100 feet deep and the Red Rock shaft, 540 feet deep, are not connected with the workings from the other shafts.

The initial discovery of ore in the Extension Mine was made early in 1904, when a vein of high grade ore was struck at a depth of 227 feet in the No. 1 shaft. Other discoveries were made thereafter and ore was shipped to smelters until 1909 when the exhaustion of the higher grade shipping ores caused the mine to shut down until a 30-stamp mill could be built. The mill was completed in January 1910 and a five year period of gradually increasing prosperity ensued. The large production in 1914 and 1915 reflects the discovery of the Murray vein in workings from the No. 2 shaft. After 1915, the production again declined for a variety of reasons. The necessity for pumping increasingly large quantities of water and labor disputes were among the chief contributing factors but the occurrence of a relatively low grade zone in the Murray vein on the 1540-foot level from the Victor shaft also had a pronounced effect. The declining production was abruptly reversed in 1922 by the discovery of the rich shoot in the Murray vein on the 1760-foot and lower levels, and the yearly output reached another maximum in 1924. Below the 2,000-foot level, however, the ore shoot was cut off by a large fault and attempted exploration to the west was met by tremendous flows of hot water. The last ore from the Murray vein in the workings from the Victor

shaft was mined in 1926. Although new discoveries were made in the western part of the property in the vicinity of the McKane shaft, the declining price of silver, combined with the expense of pumping, caused successively the failure of the old company as a result of default on the bonds which had been issued in 1926-7 to finance for the extensive exploration, and the cessation of operations by the new company early in 1931. *X Should be up in Nov '31*

The annual production of the Tonopah Extension Mine is shown in the following table. The production of the Tonopah Merger and the Cash Boy Mines for the years preceding their acquisition by the Extension are shown separately. The old company paid dividends amounting to \$3,927,220.63 through 1927 and also retired \$187,500 worth of bonds issued in 1910. The old company appears to have made no investments outside of Tonopah, unlike many of the other local companies but instead acquired adjoining properties within the district.

9-110 a
(Nov. 1926)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CHEMISTRY AND PHYSICS

Report No. D-530

For J. J. Glass
(Letter of Apr. 13, 1936)

Feldspar from the Tonopah Extension mine, 1880 ft. level,
Tonopah, Nevada.

$\text{Laths } \approx \frac{6}{4} \left(\frac{K}{Na} \right)$

Minerals present: Quartz and pyrite 2, calcite 1.5, sericite .5,
albite phenocrysts 3-5, laths of the unknown feldspar.

			27.25	36.14	44	30.36
			Al	Ar		
	SiO ₂	60.72.52	1.208	312	.896	.390 .106
	Al ₂ O ₃	13.24	.129	082	.077	.068 .012
Pyrite	1.25					
(CaFe)CO ₃	1.78					
FeO	.16					
Fe ₂ O ₃	.82					
FeO	.26					
BaO	.46					
	MgO	None	-			
	CaO	.76	.014			
	Na ₂ O	3.22	.052	.052		
	K ₂ O	6.14	.065			.065
	H ₂ O (total)	.68	.038			
	TiO ₂	.16	.002			
	CO ₂	.76	.017			
	BaO	.30	.002			SO ₃ required = 0.16
	FeS ₂	1.25				
		100.11				

A few grains of an unknown brownish black mineral were not
identified and may be insignificant in quantity.

By

J. G. Fairchild

Reported May 20, 1936

R. C. Wells

Chief Chemist.

Annual production of the Tonopah Extension Mining Company
and its successor, the Tonopah Extension Mines, Inc.

Year		Tons	Gold ounces	Silver ounces	Oz Au/100 oz Ag
1904		5,242	3,628.13	225,533	1.607
1905		16,752	10,794.48	928,202	1.163
1906		21,047	11,016.25	950,237	1.159
1907		6,910	3,999.89	342,697	1.167
1908		3,551	2,332.88	278,794	.838
1909		- -			
1910		32,410	6,461.21	612,489	1.057
1911		50,776	8,008.80	726,298	1.119
1912		53,230	8,873.29	858,709	1.036
1913		58,115	8,405.54	794,592	1.057
1914		63,721	14,554.76	1,422,452	1.023
1915		91,544	18,971.00	2,064,473	.919
1916		100,771	18,824.89	1,887,465	.998
1917		114,566	13,447.41	1,338,995	1.004
1918		114,474	12,385.93	1,284,802	.965
1919		78,421	8,936.91	926,011	.966
1920		82,717	9,757.84	979,912	.996
1921		78,255	8,500.50	856,765	.992
1922		129,571	15,010.70	1,445,263	1.038
1923		139,791	19,276.33	1,845,899	1.044
1924		172,391	30,102.67	2,762,876	1.088
1925	N {	106,679	15,858.15	1,484,708	1.068
	E {	1,096	76.00	10,960	.693
1926	N {	42,723	4,536.33	409,563	1.107
	E {	13,880	971.60	138,800	.699
1927	E	64,118	6,675.67	711,523	.938
1928					
1929					
1930					
1931					
1932					

Production of the Tonopah Merger Mine up to its acquisition
by the Tonopah Extension Mining Company

Year	Tons of ore	Gold in ounces	Silver in ounces	
1912	1,496	354.56	32,752	1.082
1913	10,875	3,891.43	321,233	1.211
1914	4,761	1,540.59	125,246	1.231
1915	3,936	671.53	60,110	1.117

Production of the Tonopah Cash Boy Mine up to its acquisition
by the Tonopah Extension Mining Company

Year	Tons of ore	Gold in ounces	Silver in ounces	
1915	79	13.20	1,372	.963
1916	229	57.46	6,127	.938
1917	1,105	253.23	26,990	.939
1918	362	55.78	5,901	.946
1919	137	11.71	1,182	.992
1920	2,601	271.81	27,181	1.000
1921	525	68.72	6,725	1.021

D-530

3

April 13, 1936.

Memorandum to the Chief Chemist,

Through the Chief Geologist,

Please have analyses made of the following specimens:

1. An unknown mineral, at least an unidentified mineral, from the Brewer Mine, near Jefferson, S. C., apparently of simple composition. The mineral occurs in a white quartz-sericite schist. The crystals are dark gray - nearly black - short prisms. In transmitted light the mineral grains are indigo blue. The mean index of refraction is 1.72.
2. A feldspar from the Tanopah Mine consisting of what appears to correspond to a soda orthoclase (low-index) feldspar which has from 3% to 5% of albite phenocrysts.

The specimens have been transmitted directly to the Chemical Laboratory.

Jewell J. Glass.

¶ The "Donopah rhyolite" as defined by Spurr ^{also included} ~~as defined~~ ^{the} ~~rather~~ extensive exposures of rhyolite and volcanic breccias that are found at the surface in the vicinity of Donopah, particularly to the north of the ^{town} Donopah. These were not ~~so~~ extensively studied in the field, but as shown on page —, there seems to be but little doubt that they are considerably younger than the Donopah formation as here defined.

Distribution. Rocks belonging to the Donopah formation are exposed in all of the mines that were ^{examined} ~~studied~~ during the survey of the district. At many localities, however, ^{in the vicinity of veins or major faults} extensive alteration has masked the true nature of the formation. ~~of the~~ The largest exposures of relatively unaltered rock are found on the 1200-foot, 1540-foot, and 1880-foot levels of the Donopah Extension Mine in the ^{region} ~~between~~ tributary to the McKane shaft. Smaller but equally significant exposures may be seen on the 1050-foot level from the Extension No. 1 shaft, the 1000-foot and 1140-foot levels of the Sand Grass, the 700-foot level of the Big Jack, the 800-foot and 960-foot levels of the West End, the 1100-foot level ^{of} ~~from~~ the Desert Annie, the 1100-foot and 1300-foot levels of the Belmont, ~~and~~ the 1100-foot level of the Rescue-End, and the 1000-foot level of the

10 CT
 (41) for
 36 fuff
 10 flows
 2 dikes
 99

Donopah Extension - In general, the better exposures^{of the formation} are found on the ~~higher~~ levels, ~~of the mesa~~, which are, for the most part, limited to the more easterly and westerly ~~mesas~~.

Lithologic character ¹¹ Spurr, in his original description

¹¹ Spurr, J.E. U.S. Geol Survey Prof Paper 42 pp 1905

~~considered~~ the formation to be an ~~extrusion~~ ^{and} ~~which~~ ^{reiterated} this belief in later publications²¹, explaining the

²¹ Spurr, J.E

apparent blocky appearance as the result of auto-succration near the borders of the extension - He did, however, recognize that the rocks which he mapped separately as "glassy trachyte" but which are included within the Donopah formation as here defined, represented surface flows - ³¹ Burgess, on the other hand, regarded

³¹ Burgess, J.A. Econ Geology, vol. 4, pp , 1909.

These rocks as surface accumulations of bedded pyroclastic material and offered a considerable amount of both field and microscopic evidence ^{in confirmation of} ~~but to have~~ this view -

"S.G. fault - as mapped - C.F. considerably chloritized in vicinity of fault.

Fault consists of two N slips, about 5 ft. apart - the upper one entirely within the C.F., while at lower occurs contact of C.F. and a bedded series. The faults both show considerable fine, clay-like gouge. The F.W. of lower slip is much siltified.

The "Tuff" stk. N 10° W & dip 65° W. The succession is as follows:-

T137 - "C" Fine grained, light colored, much siltified rock 6 Ft.

— underlain by a "rubble" of white friable material, containing fragmental gte, & fragment. of country rock - locally much siltified - originally a fault - or perhaps, flow - breccia. Relations are not clear - bedding, if any, is not conformable to rest of the series. 1-3 ft.

Definitely a fault, more or less paralleling the main sandstone slips.

T138 - "H" ~~Another light colored, much siltified rock~~ Another light colored, much siltified rock - especially in upper portion. Broken faces show numerous aggregates of a white, stellate, mineral. (Probably, $84\frac{1}{2}\%$ am). 1-2'

— Conformably beneath this is a bed of "varved shale" 1'

T139 - "I" " " " is a "rubble" of white material, including fragment. of ^{gte.} shale, generally similar - except for better consolidation, to bed underlying "C". (Also lacks any fragments of "C") Appears to be conformable above & below. 4"-6"

— "varved shales" 5"

T140 - "D" Tuff - showing nice gradation from coarse grain at bottom of bed to finer at top. 7"
arrow in spec. indicates upper part.

- T141- "E" "Varved shale" conformable above, and below - when it is 2"
 succeeded by a fairly massive tuff, rather similar to D.
 In its lower portion this tuff shows a distinctly
 coarser grain. Its upper surface occasionally projects
 as a dike - but into the overlying shale. (Probably
not intrusion, as it appears conformable with shale
 above & below. 30'
- T142- "F" illustrates the lower portion of the above described tuff bed. 7"
 — varved shales
- T143- "G" lower portion of shale bed - int. which shales grade 9"
 imperceptibly. back ~~to~~ shaly ~~laminar~~ laminar.
 This conformably overlies a rock - similar to "F"
 which shows gradation near top to fine
 grained tuff, and towards base becomes
 exceedingly coarse breccia. 60'
- T144- "J" Finer grained tuffs, with lenses of material like "J" 40'
 T145- "K" — shales - locally much contorted 8"
- 8/16 — Another series of fine to coarse tuffs. Spec. — 200
 illus. one of the ~~two~~ phases - suggestive of "B.T." 60'
 — shales 2"
- T146- "A" Finer grained tuff, laid on a "pillow surface" of 30'
 — shales 8"
 — coarse to fine tuff 70'
- 7+75 "B" T147- —

- shales 3"
- tuff - very fine grained 18"
- thin bedded shales 1'

From here till out of fault to north is a series of rather coarse, but generally very well bedded tuffs.

T-148 "C" (4+90) illus an of the coarsest & more unusual phases.

T-149 "D" (5+70) is typical of most of the series.

At 4+80 are two N faults, each with about 12" gauge,

dipping 80° N - on NW side is another tuff? -

but much finer grained than preceding series, and is blocky and shows no bedding at all. (considerably fractured. Bounded on north by strong fault, as

mapped by Winchell, and this brings in W.E.R., the

dark, greenish var. - much quartz is with it, and

"typical W.E.R." cannot be positively identified till 2+80.

See map sheet for remainder of geology?

then x-cut.

Prob. Rhyolite.

"E"

T-150

TM - W E Coord

5600-5700. Elev. Montana 575 & Int. Add. unknown Int.

Elev. NS

Elev. Stone Cabin 500 -

5700-5800 Elev. Montana 465

" Stone Cabin 400

" ~~Cal. Tono~~ 3rd

" Fraction shaft -

5800-5900 " Stone Cabin 300

" Montana 390 & 340

" DQ shaft

" Lin Butler 400

5900-6000 Elev Stone Cabin -

6000-6100 Elev Stone Cabin + ST #2 100 -

" Montana 70

4000-4900

~~See Heliport 1400 sheet -~~

~~4400-4500 Add CB 1523~~

4600-4700

Add CB 1235

4800-4900 - Check Mon Pitts 1100 5

Add Stalpa ~~back on 1100 after~~

EVENTS FOR THE CONTEST.

Select for first-aid treatment such injuries as are of common occurrence within mines, such as cuts and lacerations, simple fractures, compound fractures, burns, suffocation by gases, electric shock, dislocations, mangled members.

RULES GOVERNING FIRST-AID CONTEST.

A set of rules to govern a first-aid contest is presented below:

1. A team shall be composed of five men and a captain. Any employe of a coal company may be a member of a contesting team, provided he is not a physician or trained nurse.

2. The captain shall select the patient and designate the member or members of the team to perform the event.

3. The captain shall control his team in their field work by giving audible commands.

4. The captain may select himself as one of the members who will perform the event.

5. The captain or other members shall not prompt the person performing the event unless he be one of the performers. This rule will not apply in full-team events.

6. At the conclusion of any event the captain shall raise his right hand and announce his team number. The team shall remain at its post until relieved by the judge.

7. Teams shall bring their own first-aid materials, including bandages, splints, blankets, etc., and shall not be allowed to leave the patient in order to obtain material.

8. The triangular bandage shall be the standard used in the contest, but roller bandages may be used, and equal credit will be given for their proper use.

9. All splints must be prepared on the field for each event requiring their use. Specially designed splints may be used, but they must be assembled during the time of each event requiring their use.

10. No practicing shall be allowed on the field before the beginning of the contest.

11. The teams will be numbered consecutively, beginning at No. 1, and they shall occupy their consecutive positions on the field.

12. The judges will perform their work progressively,* judging such number of teams in each event as the judges may determine and announce before the beginning of the contest.

13. In events involving resuscitation, the rescue of the patient, and stretcher drill the judge may require the teams to perform separately.

*Each judge will be assigned to judge two or three teams for one event; for the following event he will judge two or three other teams, and in like

14. Each judge will mark his team number, event, and discounts for each team judged, sign his name, and deliver to the recorder his record.

15. The recorders will add the discounts and mark the points made by each team in each event. The total points will be divided by the number of events and the quotient will be the average for each team for the whole contest.

16. Time will not be an element unless the team or men performing exceed the allotted time or fail to give treatment promptly. All events shall commence and be finished at the sounding of a gong.

17. All proposed exceptions to these rules must be made to the committee on rules not later than 10 days prior to the day of the contest. The decision of the committee will be final.

18. The prizes will be listed by the committee on awards.

PENALTIES AND DISCOUNTS FOR FIRST-AID CONTEST.

A specimen tally sheet showing penalties imposed in first-aid contests is given below:

SPECIMEN TALLY SHEET FOR FIRST-AID CONTEST.

Name and number of event.....

No.	Cause of penalty.	Pts. dis- counted.	Team No.....	Team No.....	Team No.....	Team No.....	Team No.....
1	Not doing the most im- portant thing first.....	5	.....	.....	.....	.....	.....
2	Failure of captain to command properly	2	.....	.....	.....	.....	.....
3	Slowness in work and lack of attention.....	4	.....	.....	.....	.....	.....
4	Failure to entirely cover the wound or ignor- ance of location of in- jury	4	.....	.....	.....	.....	.....
5	Ineffectual artificial res- piration	10	.....	.....	.....	.....	.....
6	Splints improperly pad- ed or applied.....	2	.....	.....	.....	.....	.....
7	Tight, loose or improperly applied bandages	6	.....	.....	.....	.....	.....
8	Insecure or "granny" knot	5	.....	.....	.....	.....	.....
9	Unclean first-aid material	5	.....	.....	.....	.....	.....
10	Failure to have on hand sufficient and proper material to complete a dressing	5	.....	.....	.....	.....	.....
11	Lack of neatness	2	.....	.....	.....	.....	.....
12	Awkward handling of patient on stretcher...	5	.....	.....	.....	.....	.....
13	Assistance lent by patient	5	.....	.....	.....	.....	.....
14	Tourniquet improperly applied	5	.....	.....	.....	.....	.....
15	Failure to stop bleeding...	5	.....	.....	.....	.....	.....
16	Not treating shock.....	5	.....	.....	.....	.....	.....
17	Failure to be aseptic.....	10	.....	.....	.....	.....	.....
18	Incorrect treatment	10	.....	.....	.....	.....	.....
Total.....		95	.....	.....	.....	.....	.....

A.I. X Blueprint of workings (1906) of Fraction #1 + 2 + Wandering Boy
#1 ✓ Tracings of levels of gas with a little geology - (Tom Butler)
A6 Tracing of Desert Queen workings

Hole #11 Surface Sand Grass S 1057 W 5367.5 Elev 2870±
5' - 819' Later andesite bre at 800-809
829 Upper rhy
839 - ~~1905~~ Breccia
1008 - 1055 Caliche And.

Hole #12 Surface Sand Grass S 842.5 Elev 2857.±
W 5906
11 - 211 Tens Rhy Dac...
225 Later Andesite
prob to 908'
Good ore at 871-885

Ext 400 + 500

Re: Tonopah Extension Mines Inc.
Nevada Coalition Gold Mines Co.

Mr. Allan Melhado
120 Broadway,
New York, N. Y.

April 8, 1955

Dear Mr. Melhado:-

C I am enclosing for your consideration a report dated 1-18-55 by John L. Dynan on the Tonopah Extension Mines as it existed at the time of discontinuing operations in December 1930, also a generalized report which I made up for my own information in January, 1952 and excerpts from J. A. Burgess' report on May 12, 1930 which was made primarily to instruct the management on immediate development, at that time, but contained some information in the nature of forecasting which could apply at this date. Burgess was one of our most important Mining Geologists who followed the progress of mining in the Tonopah District almost from the date of discovery and contributed considerably to the effective development of the mines in the area. To the enclosed matter I wish to add a couple of paragraphs to briefly describe the Corporate Structure as it exists today and to give my views on a development idea which might be of interest, also a brief statement on the Uranium situation.

Corporate Structure

P In 1929 the Tonopah Extension Mining Co. was placed in Receivership and subsequently foreclosed by the creditors (contributors to a plan for refinancing the Company) and a New Company titled, Tonopah Extension Mines Inc. was organized. New Bonds in the amount of \$ 1,200,000.00 were authorized and \$ 1,086,600.00 were issued to satisfy the creditors and for new sums invested in the venture; the corporation was organized with a total authorized capital stock of 2,000,000 shares @ \$1.00 par. There was duly issued to the bondholder a Temporary Certificate which entitled the holder thereof to a specified number of shares of stock; this certificate was of no value after Dec. 1929. To my knowledge 1,600,000 shares were authorized to be issued but no stock was ever issued as the stock books are complete in every detail without a certificate missing. In other words the shareholders, as such have not had stock issued to them. I might add here that T. F. Cole was the principle purchaser of the bonds and the ultimate legatees of his estate hold approximately 61% of those outstanding. At this time the bonds are in default as to interest and the assets of the Corporation open to foreclosure proceedings although no such action is contemplated. In my opinion foreclosure proceedings could be brought to insure title to the assets by the bondholders and arrangements made whereby the entire authorized capital stock and name of the corporation could be fitted to any desired purpose. An explanation for the plight which the Company reached and a reason for not continuing on with the Corporate plan, almost before the ink was dry on the bonds, can be found in the fact that they were under the constant drain of a serious water pumping problem in the formative stages of the organization so that they were

under the constant drain of a serious water pumping problem in the formative stages of the organization so that they were under a terrific debt burden when production began and the price of silver was already on the skids going from 55¢ to 35¢ per ounce in about a years time-the answer was obvious.

New Development Proposal

C
O
P
Y
It is the unanimous opinion of everyone familiar with the property that the real big hope of the future lies in developments to the West of the present working faces. It is also well known that operations to the West will require the sinking of a new shaft. You will note these basic facts from my report. The sinking of a new shaft is an expensive undertaking and one would be immediately concerned as to whether a more conservative plan could be worked out preparatory to taking this step. At the time the mining operations were in progress the sinking of a new shaft appeared justified and was contemplated but we are now faced with a vastly different economic situation. In other words, I feel that the situation, then, warranted the sinking of a new shaft as a regular procedure in the process of orderly mine development but now a less expensive plan of exploration might be considered ahead of development. What I have in mind is the feasibility of core drilling from certain shafts to the West of the McKane. The West Tonopah Shaft is approximately 3800 feet West of the McKane shaft and is on the Southerly limit of the Tonopah Ore Zone. The West Tonopah Shaft could be repaired to the 1000 foot point (as related to the McKane collar) and a station prepared at that point for core drilling operations. Holes pointed North and at various minus angles would x-cut the Tonopah Ore Zone, which strikes Westerly. This work would explore the Westerly limits of the Tonopah Extension property.

Further, in order to safe guard the program, it is deemed advisable that an option be obtained from our neighbor to the West on certain groups of claims which are on the trend of the expected development. As a matter of fact these claims are sufficiently important to warrant securing a definite workings agreement in the option before drilling is started. With this option safely secured a second step in this exploration program would be a core drilling program from the 1000 ft. point in the Bonanza Shaft. This elevation would also be taken from the collar of the McKane Shaft. Drilling in this case would be to the South as the Bonanza Shaft is to the North of the North limit of the Tonopah Ore Zone. Holes here should also be directed at various minus angles and possibly one horizontal hole. This would explore the ore zone some 3400 ft. West of the West Tonopah Shaft. The Bonanza Shaft is on the ground owned by our neighbor to the West, about 100 ft. West of the Western limit of our claims, which confirms the need for an agreement with these people. I might add here that I am on excellent terms with these people and would have little trouble closing a proper agreement with them.

To avoid any misunderstanding regarding the above suggestion concerning the acquisition of rights to more ground I wish to state that the Tonopah Extension has ample territory to warrant the work recommended.

6-25-55

Re : Tonopah Extension Mines, Inc.

C Mr. Allan L. Melhado
120 Broadway
New York 5, N. Y.

Dear Mr. Melhado :

O I am enclosing Mr. H. I. Altshuler's last letter to me re the subject of a deal on the Tonopah Extension property. I am not sure whether he has kept you informed of our correspondence but this tells the final story. The general trend of the other letters were largely technical. To make a long story short he has made a pretty fair analysis of the ratio of the total expenditure required in the final development of the property and the expenditure of risk money to see whether one would want to go for the whole chunk. The ratio is 10 : 1 which is quite normal - I think anyone would prefer to spend \$ 1.00 to find out if they should spend \$ 10.00.

P It is quite evident that his people are not willing to take on this type of risk, and, if we are going to find someone who will we will have to contact a more venturesome group. All of these things are worth knowing in our search for the proper type of people. Somebody like Thayer Lindsley of Ventures Ltd. if approached right he would be just the right type and he knows the Tonopah area as he was once the President of the Tonopah Mining Co.. I don't believe I could make a proper approach from here and inasmuch as you already have your feet slightly damp I would suggest that you make a preliminary approach if you know him otherwise one would have to find someone who does. My contacts with Mr. Lindsley were in the twenties - rather a long ways off but they were quite pleasant.

Y What Mr. Lindsley and others, perhaps, who might be good prospects for this project do not know is this possibility of doing an exploration job through a relatively inexpensive drilling program from existing mining shafts. Our friend Henry didn't take too kindly to it but it would have its appeal to the proper parties.

We would appreciate your making another try and you can be assured of complete cooperation.

Our kindest regards and best wishes,

Sincerely,

Albert Silver

Albert Silver

Mr. Homer Williams, General Manager
Tonopah Extension Mines. Inc.,
Tonopah, Nevada

TONOPAH EXT. MINES-INC.
EXHIBIT "B"
SCHEDULE "A"

January 18, 1935

Dear Sir:

The purpose of this report is to verify the value of the collateral offered as security for Loan, under Exhibit "C" of the application made by Tonopah Extension Mines, Inc., of Tonopah, Nevada, to the Reconstruction Finance Corporation.

This collateral comes under four heads: Probable Ore; Reduction Works; Equipment and Buildings, and Mining Claims. These will be taken up in order.

PROBABLE ORE.

In mines of the nature of those at Tonopah, the amount of ore which is definitely blocked out in measurable form at any one time is usually comparatively small. The mines at Tonopah have been producing for 30 years, and for most of that time there has not been any large ore reserve blocked out in advance. Hence in any block of ground where geological conditions are favorable and the presence of mineralized veins is known, the total amount of ore which will be produced is likely to be many times that which can be definitely measured at a given time. In a table which is attached to this report, and has been compiled from annual reports of the Tonopah Extension, mine production from 1912 to date is shown as 1,747,000 tons of ore. The largest tonnage ever claimed as "Ore Reserves" is 150,000 tons, in the report for the year ended March 31, 1913, and in most of these measurable tonnages are claimed. This is a point which must be born in mind in submitting figures on any "Ore Reserves" which may be partly blocked out or indicated.

The past large production of the mine came mostly from the Murray Vein, on which a large shoot of ore extended from above the 950 foot level to about the 2125 foot level. The year 1925 was the last year of large production from this shoot, and during the years 1926-1929 exploration of newer ore-bearing ground to the west of this shoot was under way. This exploration work opened a series of new veins. At the end of 1930, falling silver price and heavy expense of pumping mine water caused a complete shut-down except for leasing operations above water level.

- (a) The water has risen in the lowest mine workings to a point seventy-five feet below the 1200 foot level. For this reason workings to which reference is made in this report are inaccessible, and the information contained herein in regard to them is obtained from Company maps, assay reports and other records. All of these maps and records so consulted were those regularly kept by the operating officers of the Company for their own information and guidance in the conduct of operations.

The principal veins opened by this work are three in number. The Denver Vein, the most northerly, is in all probability the faulted westerly extension of the Murray Vein, south of the Denver Vein two more veins known as the Morton Vein and the Bermuda Veins were discovered and developed. Each of the three veins has produced important quantities of ore. These veins were opened up on the 1540 foot level, and 1200 foot level, and most of the known ore between these levels was

stoped out, although higher metal prices may now make available much material that could not then be mined. A level known as the 1650 foot level was opened through winzes from the 1540, and the same veins and ore-shoots developed there. These shoots also, or as much of them as was payable ore at the time, were stoped out to the 1540 foot level.

While this work was prosecuted, crosscuts were being run on the 1880 foot level from the Victor Shaft to develop these veins on that level. One crosscut cut the Merton Vein, on which 250 feet of drifting did not show any ore. The Bermuda Vein was not cut, because the nature of a junction which occurs between the Bermuda and the Merton required the extension of the Merton east drift to find the Bermuda Vein. Another crosscut was driven to and past the position of the east end of the Denver Vein, as projected downward from its position on the 1540 foot level. Two quartz veins were cut by this crosscut, either one of which may be the Denver Vein. On the most northerly one 120 feet of drifting did not find any ore. At 120 feet this drift left the vein and continued about 200 feet farther to the west on a contact. On the southerly vein no drifting was done.

All of the work done on the 1880 foot level therefore has not yet found the downward continuation of these ore shoots. This work is however by no means conclusive, and the various drifts must be extended on the veins. Long experience in Tonopah has shown that in many places the most productive veins become small and barren, and that they can change to good widths of pay ore with great suddenness. At this time, however, the heavy pumping expense and the low price of silver, compelled abandonment of the development work on the 1880 foot level and confining of the work to the ore on the levels above.

Hence the important unmined ore which was exposed at the time the mine shut down consists of the sill-floors or bottom of the 1650 foot level. These sill floors are all shown and designated by number on the maps sent by the Company with their application. The assay values of samples obtained therefrom in the course of mining are also shown, in ounces of silver per ton of ore. A table is attached giving the number of each of these sill floors, length and average width of the ore, horizontal area of the ore, average assay value of the ore, and the product of area times average assay value. These figures, as before stated, are from Company maps and assay reports. The assay figures, as far as practicable, have been checked by going over the Company's daily assay reports. The average assay value as given for any sill is the arithmetical average of all the assays which the daily reports show as coming from that sill. The general average assay for the whole level is obtained by weighting the average for each sill according to the area of the sill. These figures result in a total sill floor area of 10,246 square feet, and an average assay value for this area, as computed from daily mine samples, of 14.05 ounces silver per ton. The ore of this mine runs so uniformly 100 ounces of silver to one ounce of gold that mine samples are not assayed for gold, the content being assumed as one per cent of the silver content. Hence we may assume that this ore will have an average assay of 0.14 ounces of gold per ton.

The next point to consider is what tonnage of ore may be figured on from the showing of these sills. Tonopah ore is of such a specific gravity that 12.5 cubic feet of average ore in place weighs one ton. For these sills each foot vertically that they extend below the 1650 foot level will contain 10,246 cubic feet, or 820 tons.

from the West Tonopah Shaft (this shaft belongs to Tonopah Extension) but it would not make good sense to develop ore 800 ft. from the limits of our property without first preparing for further expansion, particularly when one considers the capital outlay required for a new shaft, water pumping and mining facilities. In other words the groups of claims I have in mind to the West of us would serve as an added guarantee of ultimate success on a large scale if the drilling program resulted satisfactorily. A study of our maps is required to obtain a proper understanding of this proposed exploration and its important potential.

Uranium Activities on Tonopah Extension Property

The Tonopah Extension Mines Inc. owns a large acreage to the North and West of the known Tonopah Ore Zone. Over a considerable part of this area, radiometric surveys have indicated the presence of uranium and recent work on a nearby property has offered reasonable assurance that commercial deposits exist in that area. Because of the fact that it would be of great financial advantage to us to be relieved of the maintenance expense of this area, the cost of exploration being beyond our means, and the further fact that this development is highly speculative and is outside of the Tonopah Ore Zone, we have entered into a leasing agreement on 51 claims, 15 patented and 36 held by possessory title, which calls for a minimum work requirement and a royalty of $12\frac{1}{2}\%$ of the net sales. This lease would, of course, be assigned to the successors of Tonopah Extension Mines Inc. The royalty figure is very satisfactory. I wish to add that this lease does not interfere in any way with the contemplated exploration discussed in this letter-the area in question is quite remote from that section which we prize as highly desirable. I am not attempting to disparage the Uranium possibilities but with the other exploration possibilities in the known Tonopah Ore Zone as a prime interest we would serve best in the capacity of landlords particularly when one considers that if the plans proceed to the building of a large Uranium recovery plant, in which large volumes of water are required, we would be the only source of this supply.

I am sorry that the above had to be so long but the subject could hardly be covered otherwise.

Sincerely,

/S/ Albert Silver

P.S. I find on reviewing the above letter I failed to explain why the proposed core drilling program should be at a depth no greater than 1000' below the collar of the McKane Shaft. The natural water level after all these years of accumulation is at about the 1200 ft. level and the drill work should be above this point to avoid complications from water pressure.

I had planned discussing the Nevada Coalition property in Manhattan, Nevada in this letter but believe we should reserve this for later. This is a real long shot opportunity which requires core drilling and could result in a tremendous reward. The objective here was never reached and still remains as a prize potential.

Albert Silver

It is expected that further development to the Westward on the 1880 foot level will disclose the downward continuation of these ore deposits to this horizon and as work is advanced below the 1880 foot level the ore bearing areas, when developed, will disclose important merchantable ore deposits. The ore bearing formation pitch to the West and it has been disclosed that ore shoots encountered therein also have a Westerly pitch but these formations when prospected have disclosed ore bodies.

On the Murray Vein, the ore shoot was large and rich on the 1880 and 2000 foot levels, and was still important on the 2125 foot level. It therefore seems to me a reasonable assumption that these shoots under discussion will extend downward from the 1650 foot sills to the 2125 foot level, a vertical distance of 475 feet. This would make a tonnage of 389,500 tons, of an average assay of 14.05 ounces silver and 0.14 ounce gold per ton, to be classified as probable ore, since it is exposed on one side only.

It is also probable that exploration to the westward on all levels from 1200 to 2125 will develop other new shoots of ore. The company's geological maps show good veins in the faces of the west drifts on the Merton Vein on the 1200, 1540, and 1650 levels, and the Denver vein on the 1540 and 1650 levels, although the values in the veins at these points are low. The rocks encasing the veins are still the ore bearing rocks, in which or on whose contacts ore bodies have occurred. Also, the ore bearing rocks are exposed in workings from the Company's West Tonopah Shaft. These exposures are about 2000 feet southwest of the present west faces. It seems reasonable therefore to expect other oreshoots to occur west of the present known ones. An intensive development campaign must be kept up to explore this area, and the cost per ton for development will be high. This will be unavoidable in order to keep up a supply of ore for the mill.

The ore supply can therefore be briefly summed up as follows:

- (1) A block exposed on one side (bottom of 1650 level), and assumed to extend to 2125 foot level, and estimated to contain 389,500 tons of an average grade of 14.05 ounces silver and 0.14 ounce gold per ton.
- (2) A block of geologically favorable ground extending 1500 to 2000 feet, and possibly much farther, to the west of the present faces, into which the known veins are headed on their respective courses. This is a block which should produce a large amount of ore, but for which it is impossible at present to present any definite figures as to tonnage to be expected.

Some investigation was made to see how mine sampling can be expected to check actual returns from milling ore. During the calendar year of 1930, the 98,486 tons mine averaged 15.3 ounces silver per ton. Of this ore, 91,170 tons, or 92.5 per cent, came from stopes above the 1650 sill, average assay for which has been shown to be 14.05 ounces. From this it seems to the figure arrived at from the mine assays can be safely counted on to be realized in the actual milling. Reference to the attached production table shows that all the ore mined from 1912 to date averaged 15.2 ounces per ton.

A table is attached showing costs per ton for past operations as future costs will no doubt be closely comparable. Figures for some of these years are abnormally high, as in 1921-22 on account of labor strikes and 1926-27 because of reduced scale operations. Costs in the last year of operation, 1930, are abnormally low, because of less than normal pumping and development expense. Future costs can not now be

estimated in detail with great accuracy, because many of the factors entering are not known. I believe, in view of the cost of past operations, that \$9.50 per ton is a fair figure to cover the cost of mining, milling, and marketing.

On the basis of these figures, the net profit from the probable ore would be as follows:

<u>Estimated Tons</u>	<u>Assay ounces per ton</u>	<u>Gross Value per ton</u>	<u>Recovered Value at 93% Extraction</u>
389,500	Ag 14.05 Au 0.14	Ag @ .64 $\frac{1}{2}$ cents Au @ 35.00 13.96	\$12.98
<u>Cost per ton</u>	<u>Profit per ton</u>		<u>Total profit</u>
\$9.50	\$3.48		\$1,355,460.

REDUCTION WORKS.

The company's 60 stamp mill and 500 ton cyanide plant was inspected. It appears in good condition except for reasonable repair and reconditioning. The original cost of this plant was \$452,628.16 of which \$320,588.33 has been written off as depreciation. This leaves present book value \$132,039.83.

EQUIPMENT AND BUILDINGS

The major items under this head have been inspected also, and are in general in good condition except one of the Bethlehem Diesel Engines, which is dismantled. Original cost of all machinery equipment, and buildings, exclusive of Reduction Works, is shown on the Company books as \$1,529,302.63. This has been written down to \$706,552.45, of which approximately \$522,000 is the present book value of the Diesel Plant. It is difficult to place a valuation on any of this equipment, other than to take the book value. Obviously its value as a going plant is far in excess of its value if sold off as used equipment.

MINING CLAIMS

The company's Mining Claims were checked from the maps and other records, and the number of claims and acreage verified. Undeveloped mining claims are hard to evaluate, especially where the ore bearing formations do not outcrop. There seems to be no way to appraise these claims except to take the book value, which represents the judgment of successful operators at the time the various parcels of ground were acquired. This book value is \$544,649.83, representing 106 patented claims, acreage 1480.56, and 43 claims held by location, acreage 764; total acreage 2244.56.

The assets offered as Collateral are, therefore:

Net profit from Probable Ore to 2125 foot Level	-----	\$1,355,460.00
Reduction Works (Company's Book Value)	-----	132,039.83
Machinery and Buildings	(" " ")	706,552.45
Mining claims	(" " ")	544,649.83
		<u>\$ 2,738,702.11</u>

Respectfully Submitted,

January 18, 1935.

/s/ John L. Dynan
Mining Engineer.

TONOPAH EXTENSION MINES INC.

Albert Silver
Reno, Nevada

4-8-55

Report on Property of

Tonopah Extension Mines, Inc.,

Location and Extent of Property:

The Mining property of the Tonopah Extension Mines, Inc., consisting of 113 patented claims and 45 unpatented mining claims, is in the Tonopah Mining District, Nye and Esmeralda Counties, Nevada.

Purpose of this report:

The purpose of this report is to indicate the future potential of the property, rather than dwell on its historical phases. From the beginning in 1902 to the time operations were suspended in 1930 covers an interesting period of financing, development and production of vast extent and importance. Dividends of approximately \$4,000,000.00,- the sinking of 6 shafts, from 1100' to 2250' in depth,- the running of many miles of underground laterals,- the building of mining and milling plants, etc., resulted, from a production of approximately \$25,000,000.00. The sequel of this story is of course, the struggle to maintain a development plan ahead of mining in the face of declining prices for silver; the decision to curtail and then to discontinue development, which mark the death knell of a mining operation; and finally, the clean up period. The decision to close down came when the price of silver dropped below 34¢ per ounce (the present price is 90½¢ per ounce) at which point, production costs could not be met even after discontinuing development work.

Geology

The ore carries silver and gold in quartz veins in trachyte, rhyolite and volcanic breccia; in several veins varying in width from 3' to 60', the ore occurring in shoots of various lengths. The strike of vein system is about N. 70° W. and the dip from 45° to 70° to the North.

Value of Old Developed and Mined Areas to the Current Potential:

The area referred to under this heading, is that which was mined out from the #1 and #2 shafts, the Victor and the Cash Boy shafts, and as far West as the McKane shaft, but not including the McKane. It is the opinion of the writer, that in consideration of the costs of rehabilitating the old shafts and pumping out the water, the ore expectance there would not warrant the outlay. Aside from the difficulty of opening up the old part of the property, one can also be reasonably certain that it is fairly well mined out; hence it can be said that this old mined out area has practically no value in terms of current potential.

Report- Tonopah Extension Mines, Inc.
Jan. 28, 1952

Area to the North of the Victor Shaft:

The area referred to under this heading, has no connection with the mined out area referred to above, and is related in no way, to the expected development West of the McKane shaft. It is apparently unrelated to the recognized ore zone which comprised the productive area of the Tonopah District. A new development, presently headed by Calumet & Hecla Mining Company and Homestake Mining Company, might develop valuable ore bodies to the East of and adjacent to about 26 patented mining claims owned by the Tonopah Extension Mines, Inc. in this area North of the Victor Shaft. Because of its unrelated position to the main part of the property and the potential expected West of the McKane shaft, this group of claims had best be set up for some future deal with the companies mentioned. Considering the thickness of the cap rock, and the high cost of shaft sinking, one can no longer plan this kind of a program with so little to go on; it had better be left to the people presently preparing shaft facilities near by on adjacent ground.

" TABLE SHOWING COSTS PER TON "

YEAR ENDED MAR. 31, 1931	TONS MINED & MILLED	FEET DEVEL- OPMENT DONE	MINING COST	MILLING COST	MARKET- ING COST	TOTAL COST PER TON
1912	50,900	10,156				
1913	54,616	11,172	\$ 4.725	\$ 3.247	\$ 0.227	\$ 8.199
1914	58,022	16,092	5.331	3.290	0.293	8.854
1915	71,882	12,651	5.784	3.979	0.190	8.953
1916	91,981	12,967	5.191	3.753	0.450	9.394
1917	109,402	12,017	4.614	4.478	0.501	9.593
1918	110,187	10,977	4.900	3.623	0.296	8.819
1919	114,921	10,322	5.260	3.210	0.171	8.641
1920	70,611	5,941	4.804	3.447	0.237	8.484
1921	89,022	9,114	5.512	3.964	0.225	9.711
1922	84,463	10,024	6.440	4.091	0.270	10.801
1923	134,801	8,884	6.071	3.842	0.207	10.120
1924	144,917	12,469	5.568	3.530	0.221	9.319
1925	171,046	13,997	5.737	3.457	0.252	9.446
1926	78,347	13,401	5.890	3.337	0.288	9.515
			9.214	4.293	0.212	13.719
1927	51,587	8,574			2.443*	
1928	66,024		11.764	3.583	0.164	18.054
1929	42,401					
Apr. 1, 1929 to Dec. 1, 1929	49,194					
Calendar Year 1930	98,486		5.071	2.549	0.222	7.842
* Special	42,401					

" TABLE SHOWING PRODUCTION AND GRADE OF ORE "

YEAR ENDED MAR. 31	TONS MINED & MILLED	OUNCES AGGREGATE CONTAINED	OUNCES GOLD CONTAINED	SILVER OZ PER TON	GOLD OZ PER TON
1912	50,900	848,408	9,011.8	16.67	0.177
1913	54,616	957,675	9,758.6	17.53	0.179
1914	58,022	862,636	9,065.9	14.86	0.156
1915	71,882	2,022,220	19,040.4	28.13	0.264
1916	91,981	2,293,466	22,130.4	24.93	0.240
1917	109,402	2,068,650	19,622.4	18.91	0.179
1918	110,187	1,296,999	12,484.9	11.77	0.117
1919	114,921	1,473,007	13,957.2	12.82	0.121
1920	70,611	858,411	8,180.3	12.16	0.116
1921	89,022	1,150,963	11,324.4	12.93	0.127
1922	84,463	889,778	8,845.2	10.53	0.105
1923	134,801	1,709,498	17,459.3	12.68	0.129
1924	144,917	2,227,419	23,211.2	15.37	0.160
1925	171,046	2,927,721	31,524.6	17.12	0.184
1926	78,347	901,627	9,037.5	11.51	0.115
1927	51,567	541,589	5,133.6	10.50	0.100
1928	66,024	825,723	7,534.1	12.51	0.114
1929	42,401	559,371	5414 .6	13.19	0.128
Apr. 1, 1929 to Dec. 31, 1929	49,194	539,127	5,369.7	10.96	0.109
Calendar Year 1930	98,486	1,507,378	14,770.2	15.30	0.150
Month of Jan. 1931	4,500	99,450	1,078.9	22.10	0.240
	1,747,312	26,561.118	263,961.2	15.20	0.151

TABLE SHOWING SILL AREAS
AND ASSAYS ON 1650 FOOT
LEVEL AND ESTIMATES OF
PROBABLE TONNAGE BETWEEN
1650 and 2125 LEVELS

<u>PLACE</u>	<u>LENGTH IN FEET</u>	<u>WIDTH</u>	<u>AREA IN SQ. FT.</u>	<u>ASSAY-OZS.</u>	<u>AREA X OZS.</u>
1622 Sill	175	7.0'	1224	24.4	29,866
1622 W. Sill	165	4.9'	815	8.2	6,683
1622 Sill	150	6.1'	918	10.4	9,547
1632 Sill	160	5.5'	880	17.0	14,960
1660 W. Sill	75	20.0'	1500	13.5	20,250
1650 W. Sill	100	18.3'	1827	18.3	33,434
1650 Sill	135	5.6'	750	7.2	5,400
1652 Sill	100	7.85'	785	7.2	5,652
1651 Sill	100	5.35'	535	10.9	5,831
1655 Sill	115	8.8'	1012	12.2	12,346
			10,246	14.05	143,969

$10,246 \div 12.5 = 820$ Tons per vertical Foot

$820 \times 475 = 389,500$ Tons $\times 14.05$ 5,472,475 Ozs. Silver.

this can be done there is always the chance that larger ore bodies will be exposed that will result in a more profitable operation, and a longer life for the mine. My recommendation is that operations be continued on the present plan.

Very truly yours,

John A. Burgess

Main Potential in Western Area:

In the Western half of the Tonopah Extension property, we will find the greatest potential for ore remaining in the entire Tonopah District. Development which was proceeding to the West was stopped, for reasons previously explained. When the mine discontinued development, this work had made considerable progress Westerly on the five principal veins in the property, namely, the Merton, Bermuda, Paymaster, Denver and West Tonopah; and when the mine closed down there remained in the mine, considerable proven ore above the 1600' level, with only a start made on the development below this level. It is obvious that the future hope of the Tonopah Extension mine, lies in the development of ore bodies to the West. To properly develop the area and to insure economic mining, a new shaft will have to be sunk at a strategic point to the North-West of the McKane shaft, the McKane shaft serving as a second exit and possibly as a relief in the handling of mine water. With the tremendous production of the Tonopah District in mind, the incentive for this effort is the possibility of developing large ore bodies on the veins which are already known to exist.

General Remarks:

Power and water facilities are available in the district at reasonable prices, and the town of Tonopah offers housing facilities for the employees. Water is available in the mine for milling purposes.

The Metallurgy of the ore is simple; and silver-gold bullion can be produced on the ground. A new modern plant will have to be constructed to replace the one which was lost by fire- the cyanide process was used which yielded a recovery of about 93% of the Gold and Silver contained in the ore. Complete maps are available.

/s/ Albert Silver.....
Albert Silver- Reno, Nevada
Registered Mining Engineer

Excerpt from J.A. Burgess Report of May 12, 1930

In general, this report forms an approval of the plan of development that you are now carrying on. It is unfortunate that your horizon for exploration is limited, by excessive water below and by barren formations above, to the 1540 and 1650 levels. However, it appears probable that on these levels, the ore-bearing formations will extend west to the company's property line, west of the West Tonopah shaft, and I feel that there is a good chance of finding additional ore in this western ground.

The ore bodies found thus far, to the west of the McKane shaft have been more widely separated and more expensive to find than those farther east. Up to the present, they have not proved to be as large as the more easterly oreshoots, but they have not yet been fully delimited. The grade of ore, however, shows no decrease to the west. The ore mined during my stay at the mine was about \$12. value per ton, a profitable grade, in spite of silver being worth only 42¢ per ounce.

The condition that will affect the success of operations in this western territory are those of success in developing additional ore in large quantities, and the expenses of development and of pumping water. It has been demonstrated that ore bodies like those in the Denver vein and the 1622 Merton vein, once found, can be worked at a profit when they are above the depth where heavy pumping costs are involved. The water level is now about 60 feet below the 1660 ft. level.

There was an operating profit in March, a deficit in April, and the prospects are for a profit in May. It appears that, in spite of the present low price of silver, the mine may be able to at least pay its expenses and to continue development for the next few months. As long as

5700' E.I.

EGYPTIAN STOPE

T. EX.

400. F.W.R.

577R

5600' E.I.

VERT. PROJECTION FACING SOUTH.

See Plan of
West. Portion
of Egypt. Stope.

PLAN.

5550'

4640 0140