Summary Report on the Horseshoe Mine
Fay District - Lincoln County, Nevada
September - 1979

The Horseshoe Mine is situated in the Fay Mining District, Lincoln County, Nevada, near the Utah-Nevada border. The mine is approximately 25 road miles east of Pioche, Nevada, and approximately 20 road miles northwest of Modena, Utah. The property consists of six patented lode mining claims held under a lease and option agreement by Armet Company, a closely held Nevada Corporation.

The Fay Mining District and the adjoining Gold Springs Mining District are in the south extension of the Cedar range with elevations ranging from 6,000 to 7,000 feet. The hills are covered with desert juniper and pinion pine. There are no large streams in the area, but small streams and springs furnish sufficient water for domestic use and mining purpose. An adequate water supply for a metallurgical plant could be developed in the area.

The area is covered by a series of volcanic flows ranging from latite to andesite to rhyolite with several exposures of intruded rhyolite porphyry. The latite and the andesite flows are traversed by many north trending fissures, some of which reach widths of over 200 feet. Fissure fillings consist of quartz, calcite, andularia, with minor amounts of flourite and barite. Ore minerals include gold, silver, and manganese with occasional showings of copper and mercury.

Prospecting began in 1886 and quickly spread over the district. A number of small mines were developed and several small mills were constructed and operated during the period 1902-1910. Operations were resumed in the period 1933-1942, when executive order L208 shut down most of the U.S. gold mines to conserve labor and supplies during World War II. Except for occasional exploratory work, there has been no activity in the district since 1942 and most of the mine workings are inaccessible due to caved shaft collars and adit portals.

During the period 1902-1910, the Horseshoe Mine was developed by a 400' incline shaft on the vein and an estimated 100,000 tons of ore was mined from stopes above the 200 level, and from development headings on the 300 and 400 levels. The stoping area extends for approximately 1,000 feet along the strike of the vein, which is said to range from 8 to 13 feet in width. Ore grade reportedly ranged from 0.25 to 0.40 ounces of gold, and 3.0 to 5.0 ounces of silver per ton.

In 1939 a California group leased the property and undertook re-opening the mine and reconstruction of the mill. The mine was operating in 1941 and 1942 until closed by L208. Development work consisted of advancing drifts along the vein on the 300 and 400 levels and sinking a winze to the 500 level. Also several x-cuts were driven which intercepted parallel veins.

It is reported that on the 400 and 500 level, the vein was 10 to 13 feet in width, and on the 500 level the grade of ore had improved to

0.45 ounces of gold and 5.0 ounces of silver per ton.

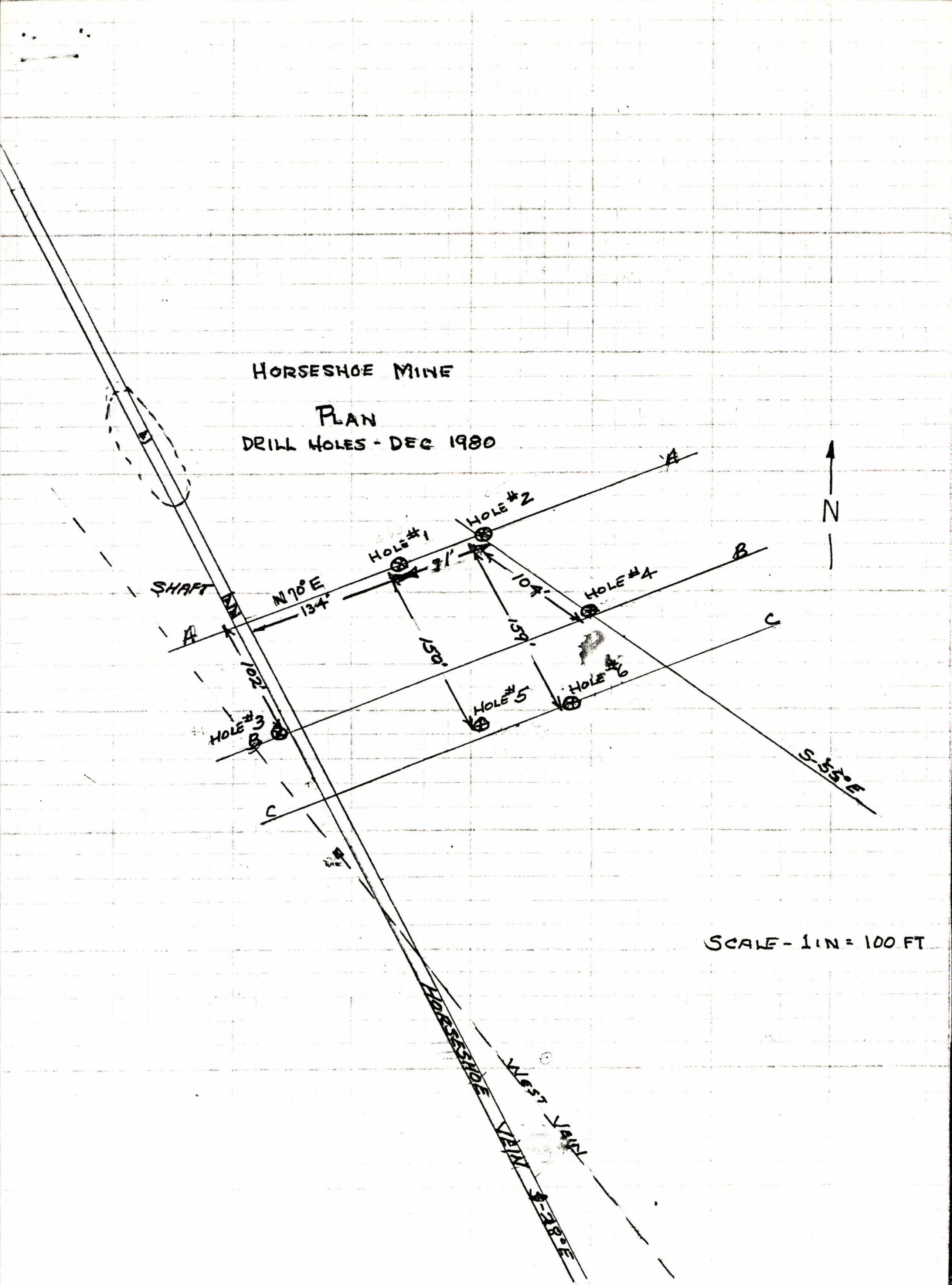
Since the mine workings are not accessible it is proposed to drill several diamond drill holes to intercept the vein below the 500' level. The number of holes will depend upon the results of the initial drilling. Initially, at least 3 holes should be drilled for a total footage of 2,000 to 2,500 feet at an estimated cost of $60,000 to $75,000, including sampling and assaying. If the results of this initial drilling are successful in indicating a potential ore body, substantial additional capital will be required for additional drilling and for developing and equipping the mine.

The property appears to offer a good target for exploration, particularly at the present prices for gold and silver.

Additional information on the property is availible in our office.

HORSESHOE MINE

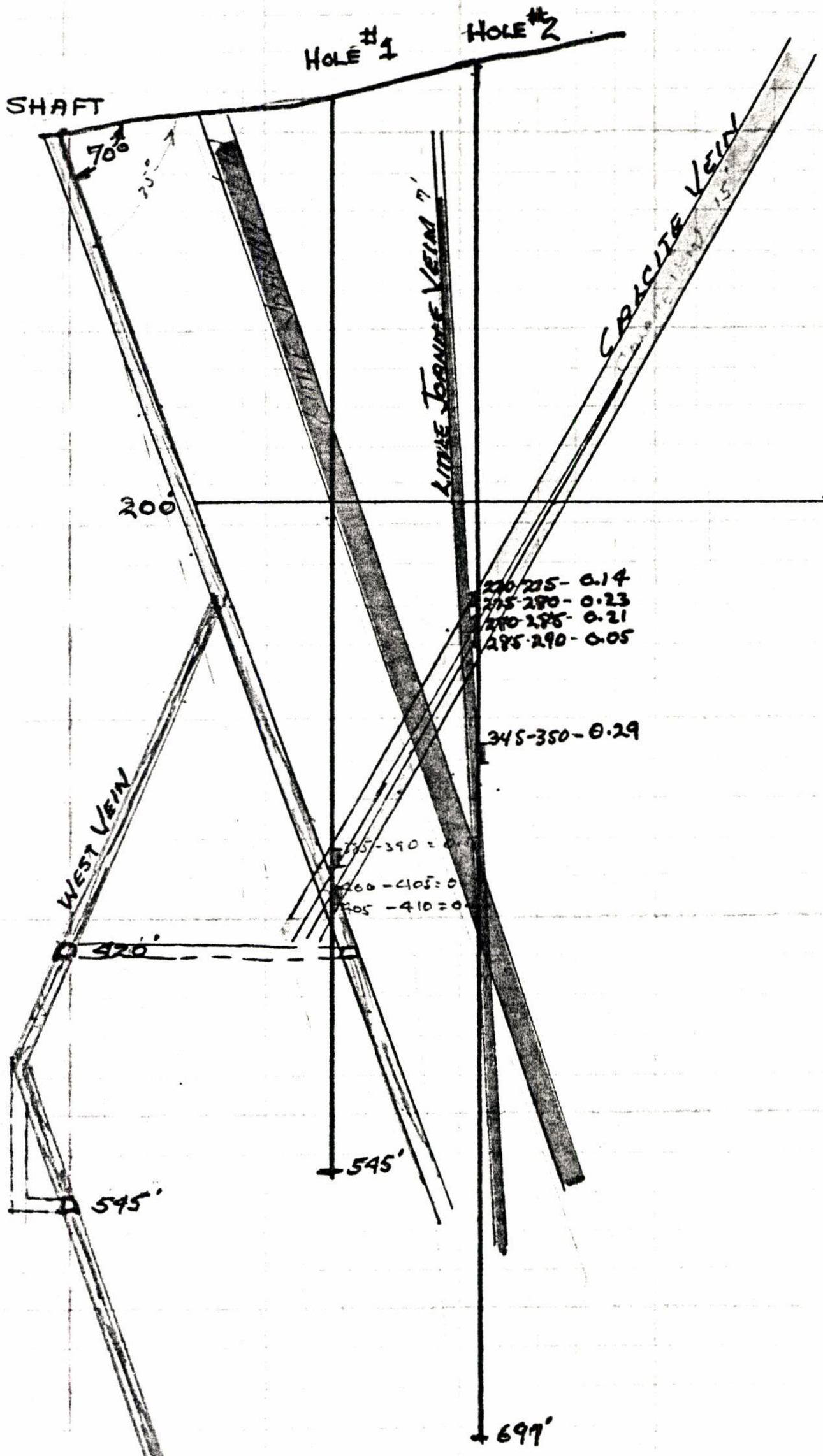
PLAN
DRILL HOLES - DEC 1980



SCALE - 1 IN = 100 FT

HORSESHOE MINE
DEC 1980

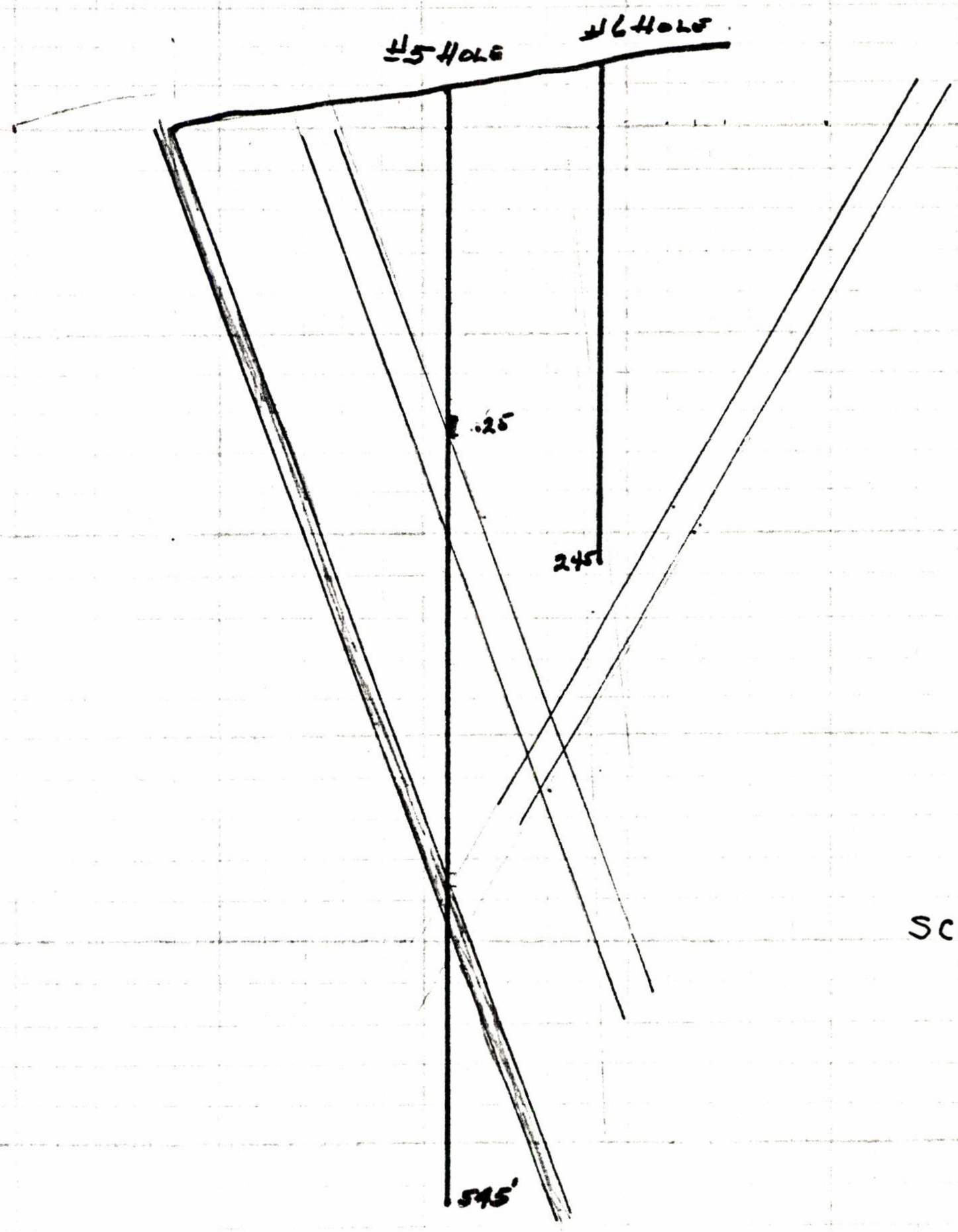
A-A SECTION



SCALE - 1 IN. = 100 FT.

HORSESHOE MINE
DEC - 1980

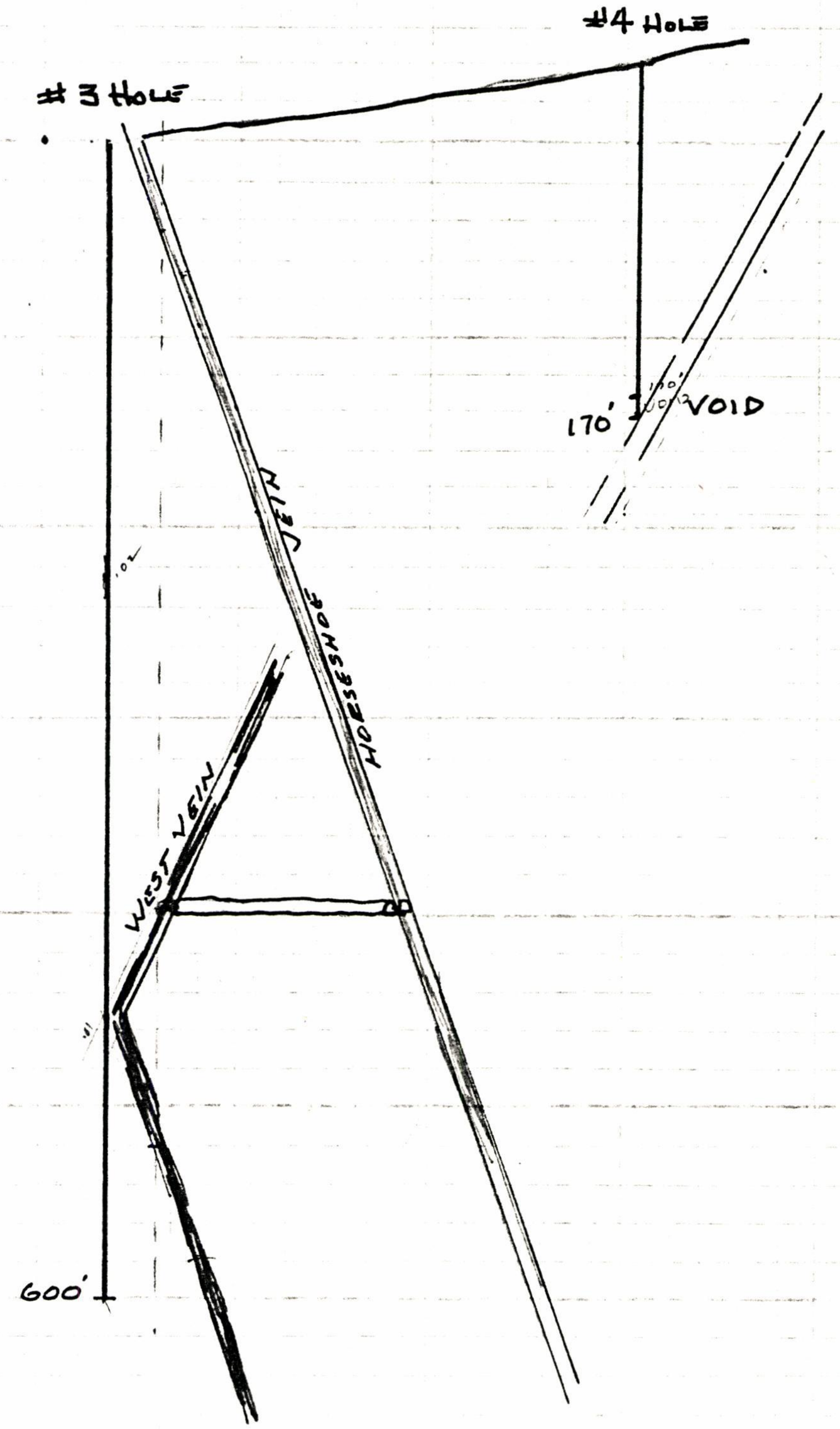
SECTION C-C



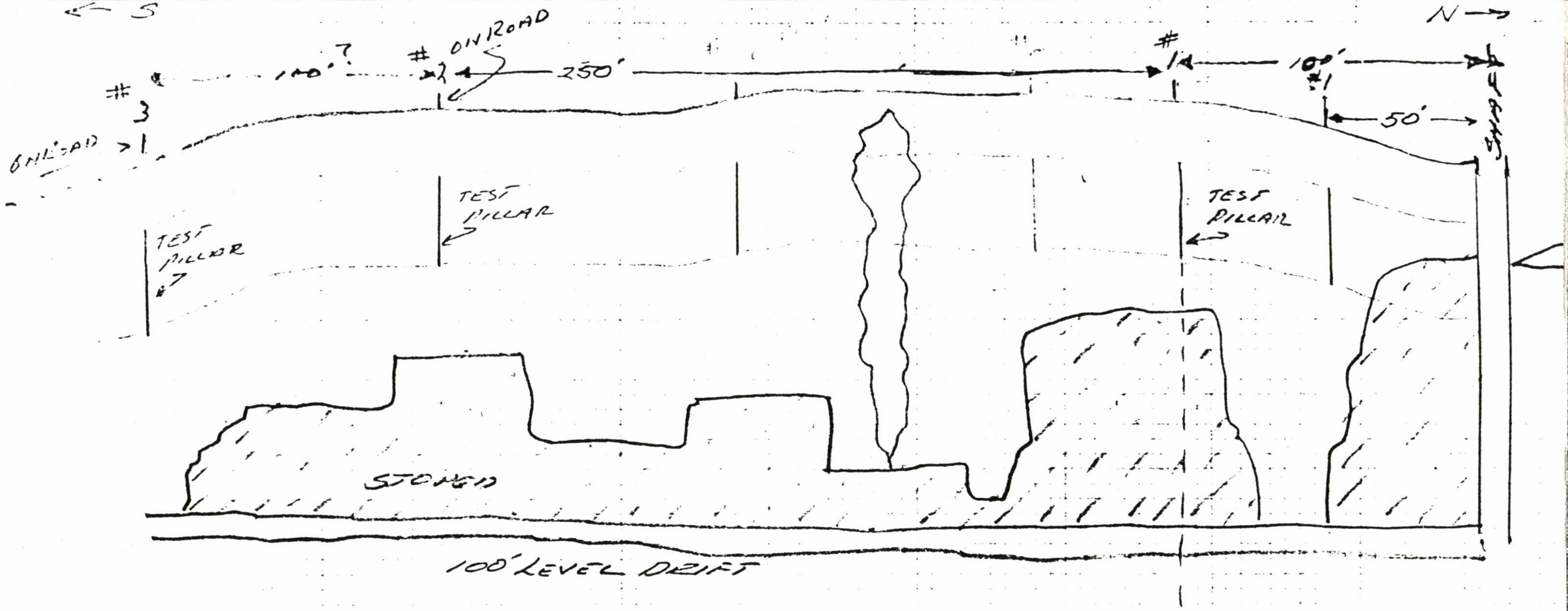
SCALE - 1 IN. = 100 FT.

HORSESHOE MINE
DEC 1980

SECTION B-B



SCALE- 1IN = 100 FT



1" = 50'

#1 - 600'
2 - 55'
3. 55'
4 - TO BE LOCATED AFTER RESULTS OF 1-3 HOLES KNOWN.
5. " " " " "

HOLE TO LOCATE WEST VEIN

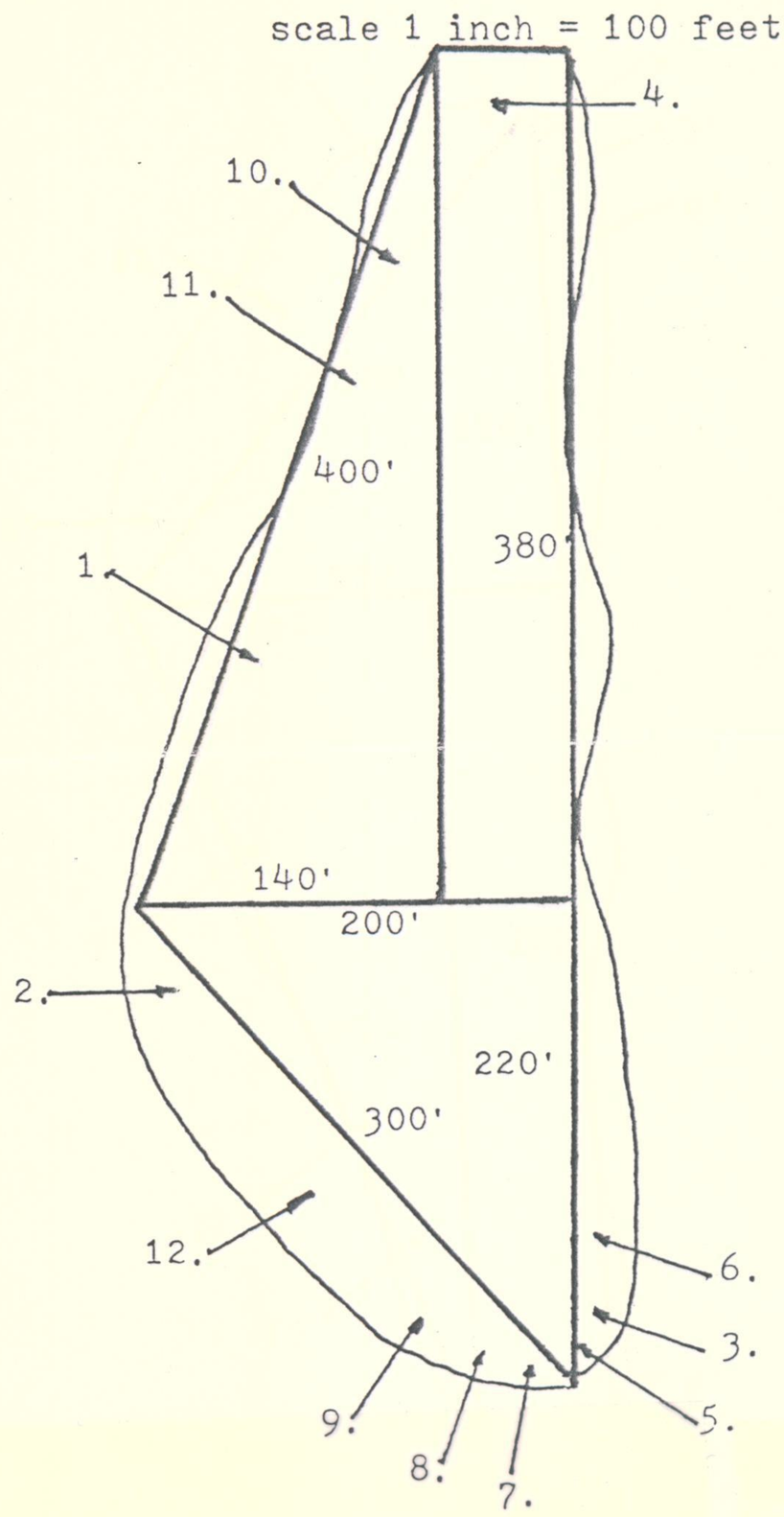
560/600'

GOLD SPRINGS MINING DISTRICT

NEVADA SIDE

HORSE SHOE MINE

		Gold	Silver
1.	Channel sample west side.	0.020	0.47
2.	Pole sample (channel).	0.020	0.50
3.	East side lower.	0.283	1.05
4.	Mill discharge sample.	0.065	1.50
5.	East side lower (10' left).	0.100	2.20
6.	East side lower (10' right).	0.065	1.50
7.	Lower end.	0.050	0.20
8.	Lower end.	0.135	2.00
9.	Lower end.	0.065	1.10
10.	Upper west side.	0.070	1.15
11.	Upper middle west side.	0.035	0.65
12.	Lower middle west side.	0.050	0.60



Screen sizing on Nevada side sample #2.

+ 100 mesh 50% of weight. -100 mesh 50% of weight.

63.8% of the Gold, and 55.51% of the silver were on the + 100 mesh screen.

Cyanide test on nevada side sample #2.

24 hour agitated leach.

recovery: 95.25% of the gold.

93.35% of the silver.

Considerable organic material was noted in the sample.

N.

S

350

310

300

35± Intermediate

50 Stope

65±

47

Drift on Vein

N. 36° W.

Dip

N. 28° W.

Horse Shoe Shaft

73°

Horse Shoe - Mine

4th. Level Lateral and West Vein

Scale 1-in = 25 ft.

Dec. 27, 1937

N.

S

1 3/4

8/30 4

1 - 3/16

35° Intermediate

65° 50 Slope

44'

Dip

Horse Shoe Shaft

73°

3° W

Horse Shoe - Mine

th. Level Lateral and West Vein

Scale 1-in = 25 ft.

Dec. 27, 1937

STRIKE N 55° W

Dip 65° S.W.

Telephone 363-3302

Hand Sample Serial 62751-62766

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

BRYANT L. LARSEN, President
G. P. WILLIAMS, Vice President
JAMES G. STRATTON, Secretary
A. S. JOLLIFFE, Treasurer
P. O. Box 1528
Salt Lake City, Utah 84110
(801) 363-3302

Mine S. S. Arentz
1720 Benificial Towers
SLC Utah

RESULTS PER TON OF 2000 POUNDS

Dec 8, 1981

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL Per Cent	ZINC Per Cent	~~SULPHUR~~ ~~Per Cent~~	~~IRON~~ ~~Per Cent~~	LIME Per Cent	Per Cent	Per Cent
							Au	Ag			
							ozs. per ton				
H-1 4' Chip Sample Structure Junction							none	0.1			
H-2 Chip Sample Horseshoe Vein 4'							none	0.3			
H-3 4' Chip Sample Horseshoe Vein							none	none			
H-4 Fay Mine Horseshoe Vein							trace	0.2			
H-5 S. E. Vein 4' Chip Outcrop							0.010	0.2			
H-6 Fay Mine Horseshoe Vein 5' Chip Sample in Trench							0.010	0.1			
H-7 Fay Mine West Vein 3.5' Chip Sample							0.040	0.5			
Fay Mine West Vein 4.5' Chip Sample across vein							0.010	0.3			
S. E. Vein 3' Chip on Road							none	0.2			
4 40-45							0.040	0.8			
4 50-55							0.080	0.8			
4 55-60							0.080	1.1			
4 60-65							0.060	1.0			
4 65-70							0.040	0.9			
4 70-75							0.040	0.7			
4 75-80							0.020	0.6			

Remarks

Charges $ 160.00

Office of
IRON COUNTY RECORDER
filed for record
RECEIPT

Parowan, Utah 11- -81

Received of Arnet Co.

Address 1729 Beneficial Life Tower

City, State Salt Lake City, Ut. 84111

Check		
Cash	4	-
Recording Fee	4	-
Refund		
Deed		
Mortgage		
Release		
Decree		
Affidavit		
Death Certificate		
Federal Tax Lien		
Others: Notice of Location		

Entry Number
231301

KELLY CO · SALT LAKE CITY UT 84101

Joan W. Wasden, Recorder

By [signature]
Deputy

NOTICE OF LOCATION
OF PLACER CLAIM

NOTICE IS HEREBY GIVEN, that the undersigned located and now claim the following described placer mining ground, containing 48.29 acres, more or less, situated in Gold Springs Mining District, Iron County, State of Utah and being more particularly described and marked on the ground as follows:*

That area contained in Lot #4, Section 26 & Lot #1 Section 35 T 33S R 20W

specifically those tailings immediately south of the Jennie Mine & Mill.

This claim is located upon a placer deposit of valuable minerals.

This claim is named the CHARLIE ZULU

Placer Mining Claim.

Located this 10th **day of** November, **19**81.

NAMES OF LOCATORS

231301

Armet Company

1720 Beneficial Life Tower

Salt Lake City, Utah 84111

Recorded at Request of Armet Company

Date NOV 13 1981 Time 3 p.m.

Fee 4.00 Book 284 Page 29

By CORA J. HULET, IRON COUNTY RECORDER

Ret'd ☑ Indx'd ☐ Abst'd ☐ Proof ☐

(*In this description, refer to some natural object or permanent monument and to stakes or monuments or exterior lines and discovery.)

29

BLANK NO. 21—© GEM PTG. CO. — 3215 SO. 2600 EAST — SALT LAKE CITY

Telephone 363-3302

Hand Sample Serial 61999-62014

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

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G. P. WILLIAMS, Vice President
JAMES G. STRATTON, Secretary
A. S. JOLLIFFE, Treasurer
P. O. Box 1528
Salt Lake City, Utah 84110
(801) 363-3302

Mine S.S. Arentz
1720 Benificial Towers
S.L.C. UT

RESULTS PER TON OF 2000 POUNDS

Nov 23, 1981

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
				Au Ozs per Ton	Ag						
Armet 1 0-3				0.020	1.7						
No Number				0.040	2.1						
Armet 3 0-4				0.040	2.0						
Armet 4 0-5				0.020	1.7						
Armet 5 0-4				0.020	2.2						
Armet 6 0-4				0.060	2.5						
Armet 7 0-4				0.060	1.6						
Armet 8 0-2.5				0.040	2.2						
Armet 9 0-2.5				0.020	1.6						
Armet 10 0-3				0.020	1.6						
Armet 11 0-4				0.060	1.5						
Armet 12 0-2.5				0.060	1.3						
Armet 13 3' Channel				0.090	2.7						
Armet 14 4- Channel				0.040	1.6						
Armet 15 5.5 Channel				0.050	1.6						
Armet 16 9' Channel				0.060	1.9						

Remarks

Charges $ 160.00

Telephone 363-3302

Hand Sample Serial 61999-62014

ASSAY REPORT

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Armet 1 0-3				0.020	1.7						
No Number				0.040	2.1						
Armet 3 0-4				0.040	2.0						
Armet 4 0-5				0.020	1.7						
Armet 5 0-4				0.020	2.2						
Armet 6 0-4				0.060	2.5						
Armet 7 0-4				0.060	1.6						
Armet 8 0-2.5				0.040	2.2						
Armet 9 0-2.5				0.020	1.6						
Armet 10 0-3				0.020	1.6						
Armet 11 0-4				0.060	1.5						
Armet 12 0-2.5				0.060	1.3						
Armet 13 3' Channel				0.090	2.7						
Armet 14 4- Channel				0.040	1.6						
Armet 15 5.5 Channel				0.050	1.6						
Armet 16 9' Channel				0.060	1.9						

Remarks

Charges $ 160.00

CERTIFICATE OF ASSAY

IRON TRIANGLE MINING, ASSAY OFFICE

SR 89063 Box 172 Pioche, Nevada 89043

M Arenty & Nelson – 11/13/81

DESCRIPTION		GOLD oz. per ton	SILVER oz. per ton	LEAD %	ZINC %	COPPER %	INSOL %	IRON %	NSPB %	NSZN %
Drill hole #1	30'-35'	nil/.001	.01							
"	35'-40'	.001	.01							
"	40'-45'	.006	.13							
"	45'-50'	.003	.07							
"	50'-55'	.001	.04							
"	55'-60'	.001	.01							
"	60'-65'	.001	.00							
Drill hole #2	20'-25'	.001	.01							
"	25'-30'	.001	.00							
Drill hole #3	20'-25'	.005	.10							
"	25'-30'	.009	.08							
"	30'-35'	.003	.02							
"	35'-40'	.001	.00							
Drill hole #4 (two marked same)	35'-40'	.016	.55							
"	40'-45'	.014	.34							
"	45'-50'	.018	.43							
"	50'-55'	.017	.66							

_____ ASSAYER

CERTIFICATE OF ASSAY

IRON TRIANGLE MINING, ASSAY OFFICE

SR 89063 Box 172 Pioche, Nevada 89043

M Arenty & Nelson – 11/14/81

(Wet Samples) DESCRIPTION		GOLD oz. per ton	SILVER oz. per ton	LEAD %	ZINC %	COPPER %	INSOL %	IRON %	NSPB %	NSZN %
Drill hole #1	425'-430'	.000	.01							
"	425'-430'	.000	.01							
"	430'-435'	.000	.00							
"	435'-440'	.000	.00							
"	440'-445'	.000	.00							
"	445'-450'	.000	.00							
"	510'-515'	.000	.04							
"	515'-520'	.000	.05							
"	520'-525'	.000	.02							
"	525'-530'	.000	.04							
"	530'-535'	.001	.06							
"	535'-540'	.000	.00							
"	540'-545'	.000	.00							
"	545'-550'	.000	.00							
"	550'-555'	.000	.00							
"	555'-560'	.000	.00							
"	560'-565'	.000	.00							

_____ ASSAYER

CERTIFICATE OF ASSAY

IRON TRIANGLE MINING, ASSAY OFFICE

SR 89063 Box 172 Pioche, Nevada 89043

M Arenty & Nelson - 11/13/81

DESCRIPTION		GOLD oz. per ton	SILVER oz. per ton	LEAD %	ZINC %	COPPER %	INSOL %	IRON %	NSPB %	NSZN %
Drill hole # ~~3~~ 4	55'-60'	.011	.62							
"	60'-65'	.012	.52							
"	65'-70'	.014	.50							
"	70'-75'	.005	.39							

_____ ASSAYER

— New Discovery Vein
Approx. Width 2-0'

		Au. oz.	Ag. oz.
1st. Sample	No. 6.	0.96	17.7
Check Samples	" 7.	0.80	11.2
"	" 8.	0.14	1.8
"	" 9.	0.44	6.4
"	" 11.	0.84	14.6
Bull Qz. Vein E. of Ore Sample	# 10.	0.10	1.3

50.000
15
30 50-00
75
125

Drift 11'

40'

10.
6. 8. 9.
7.
11.

N.

80'

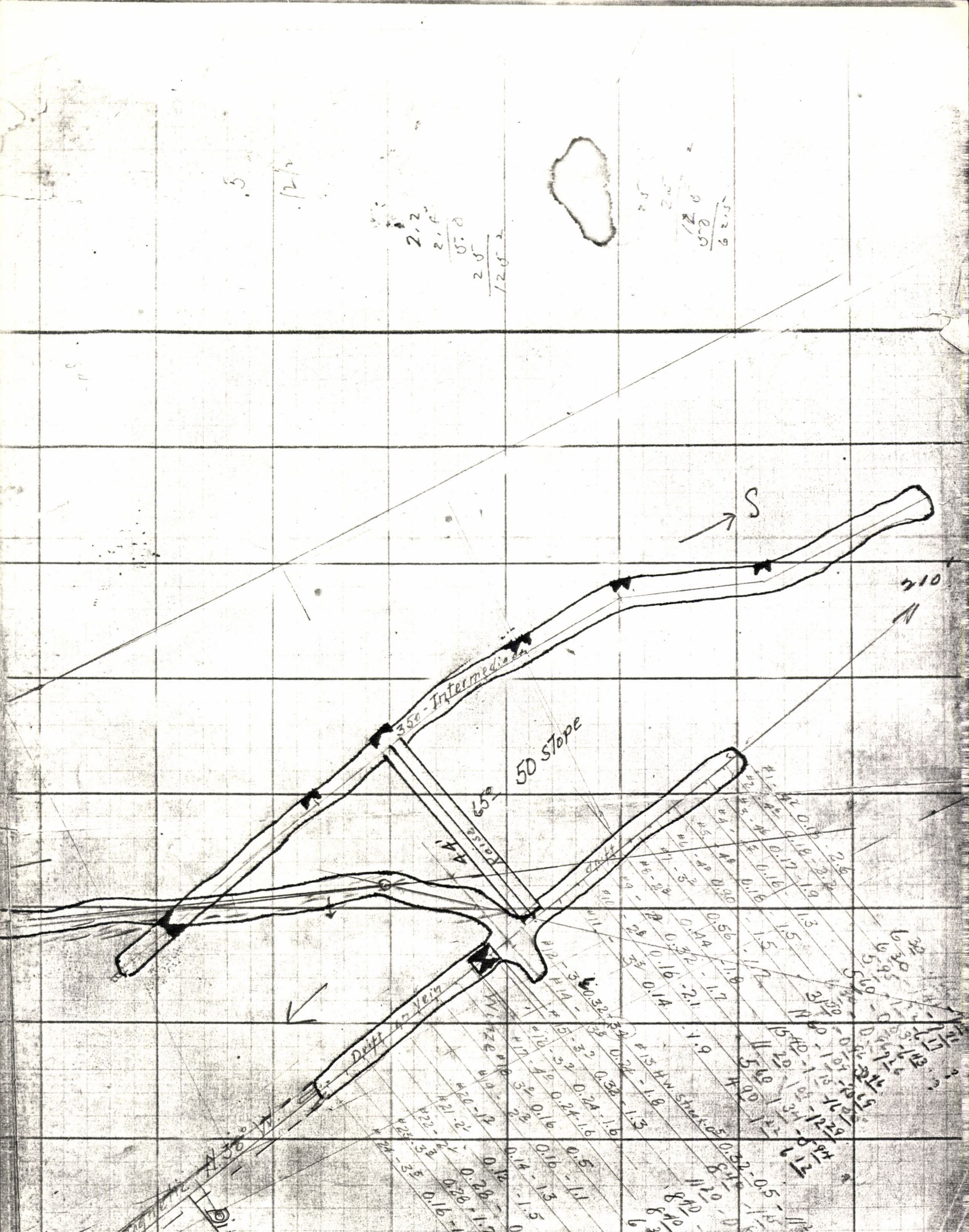
Main Shaft

Horse Shoe Vein

Horse Shoe - Mine

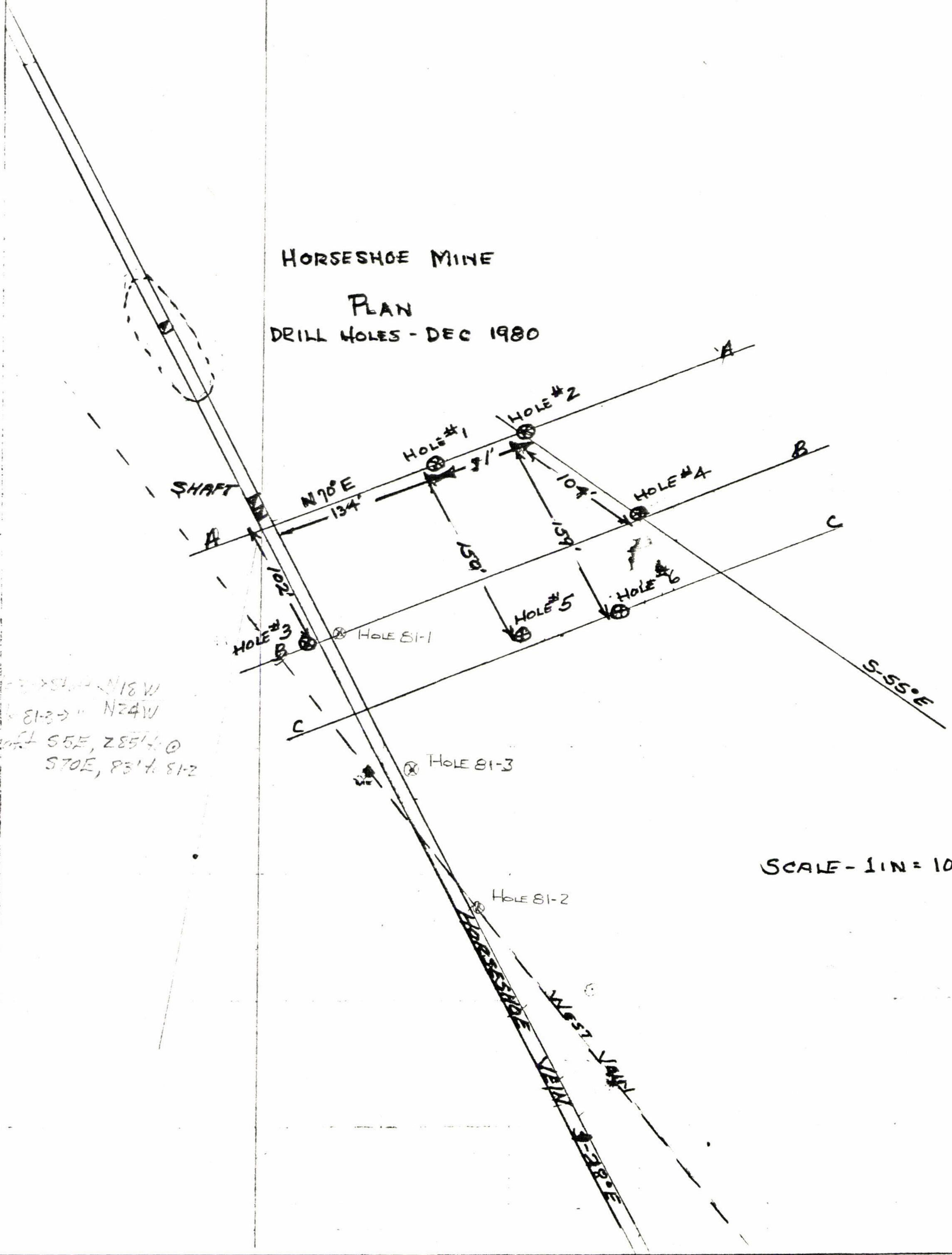
Fay, Nevada.
Nov. 5, 1937

Plan of 2-L Station and East X-Cut


S
310°
N
35c - Intermediate
50 Stope
65°
4' Raise
Drift
4' Vein
N 36° W
Dip 65° S.W.

HORSESHOE MINE

PLAN
DRILL HOLES - DEC 1980

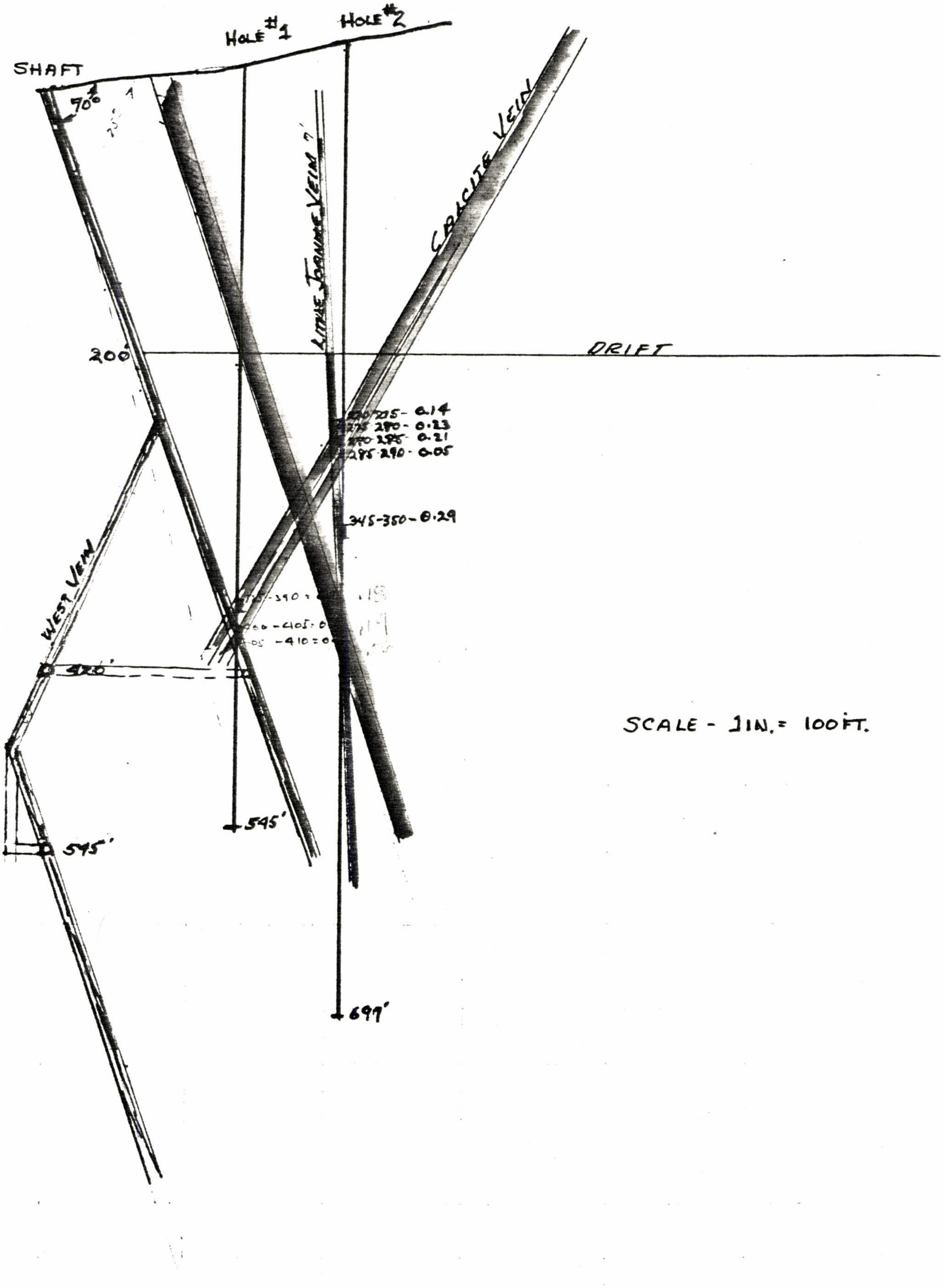


Hole 3 → S1 ... N18W
Hole 81-3 → " N24W
Shaft S5E, 285' to 81-1
S70E, 85' to 81-2

SCALE - 1 IN = 100 FT

HORSESHOE MINE
DEC 1980

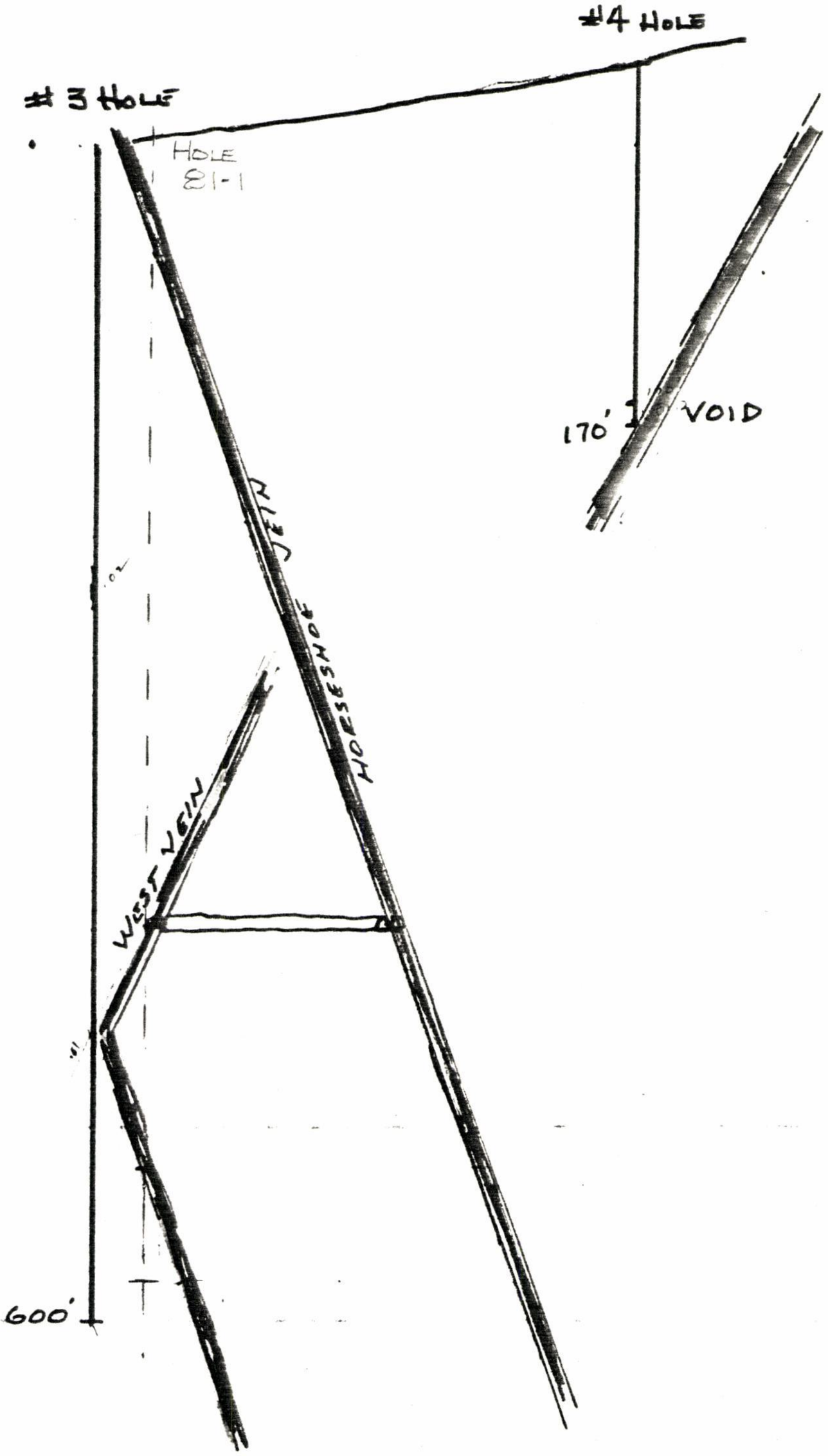
A-A SECTION



SCALE - 1 IN. = 100 FT.

ORSESHOE MINE
DEC 1980

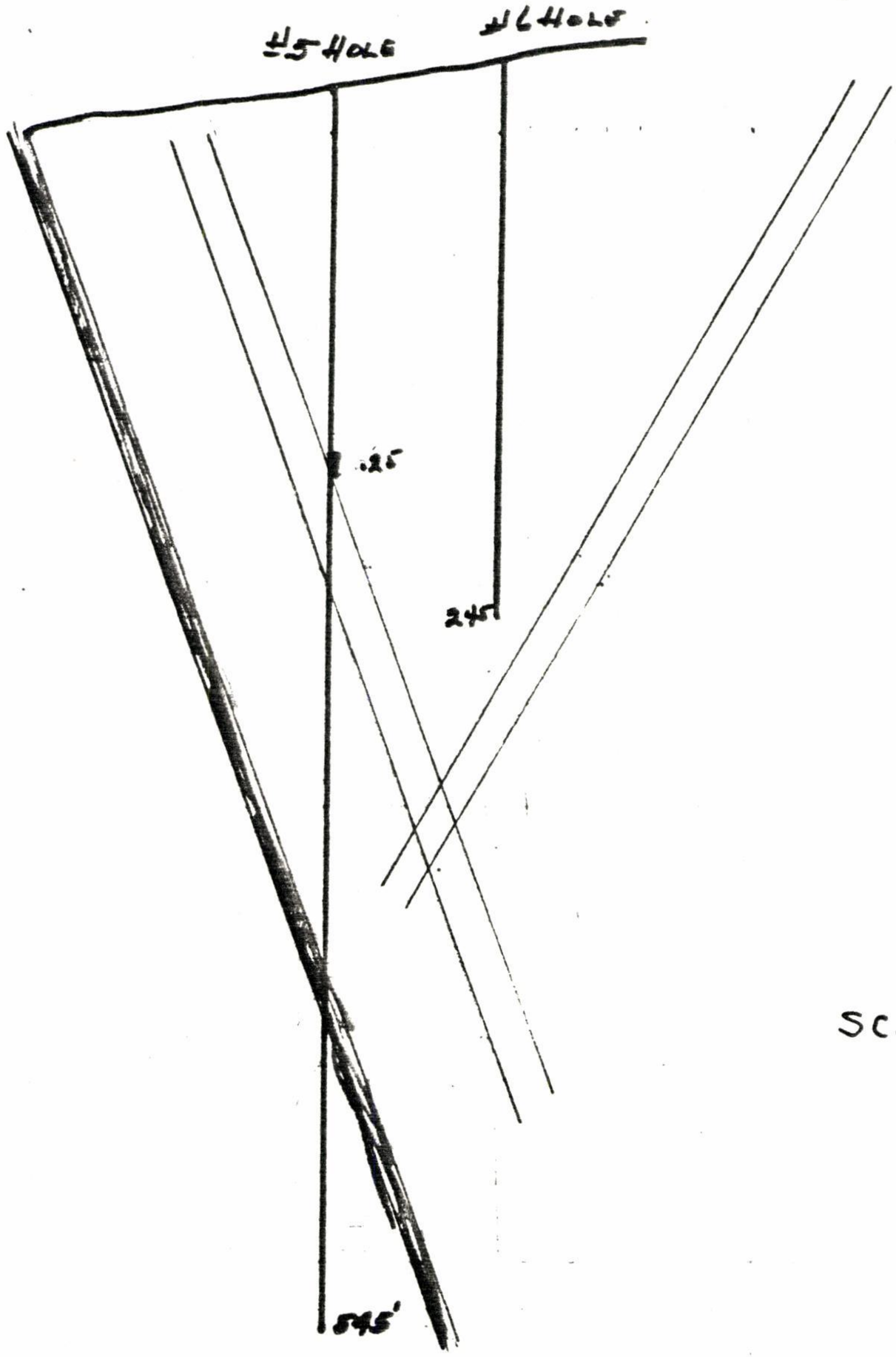
SECTION B-B



SCALE- 1IN = 100 FT

HORSESHOE MINE
DEC - 1980

SECTION C-C



SCALE - 1 IN. = 100 FT.

ROY E. NELSON

5224 COTTONWOOD LANE
SALT LAKE CITY, UTAH 84117

February 6, 1981

Mr. Samuel S. Arentz, President
Armet Company
Beneficial Life Tower
Salt Lake City, Utah

Dear Sam:

Pursuant to our conversations and agreement I obtained the services of Mr. J.W. Cole, metallurgist, and the Mount Wilson Drilling Company to layout, drill, sample and assay 2812' of reconnaissance drill holes on the Horseshoe mine property.

This work was done in December of 1980, and was stopped by winter weather. The objectives of this drilling was primarily to locate the various veins below the surface, to establish their dip and strikes and to determine their ore values. All samples were monitored with Atomic Absorption determination of silver content, and all samples were fire assayed for gold and silver content. This work was performed in the Silverhorn Operating Corporation's laboratory, located in Pioche, Nevada, under the supervision of J.W. Cole. The objective of each hole was as follows:

Hole Number 1: Intercept the Horseshoe vein at or below the 400' level and establish its ore value. This hole was drilled to a depth of 540'.

Hole Number 2: To intersect veins east of the Horseshoe and to penetrate the Horseshoe at approximate depth of 600'.

Hole Number 3: Spudded on the west edge of the Horseshoe vein to hopefully intersect the west vein above and below the 420' level. No intercept was made. The hole was apparantly too far to the west, and was drilled to 700'.

Hole Number 4: To intercept the Calcite vein at a shallow depth to establish its dip and location. This hole intercepted a void of at least 15' at 170'. This confirmed that the Calcite vein had been mined at least to this depth and probably to the 200' level, as established by a drift to the east from the main shaft at that level.

Hole Number 5: Located 150' south of Hole #1 on strike. Drilling was stopped at 545'. The assays below 390' are not reported. The sample retains will, if necessary, be assayed to complete this hole information.

Hole Number 6: Move 159' south of Hole #2 on strike. This hole was inadvertantly stopped at 235' or 35'-60' above the value horizon found in Hole #2.

Hole #6 should be deepened at least 100' and a Hole #7 should be drilled on the 'C' Section to intercept the Calcite Vein at the 200' level. If values are found in the Calcite vein in these holes then additional drilling should be done on strike to establish the length of this vein and its ore content.

The hole locations, assays and Mr. Cole's field notes are attached.

Yours truly,

Roy

Roy E. Nelson

Stateline - Gold Springs Project
November 1981

Work done during the first part of November 1981 was concentrated of the Horseshoe and Jennie properties.

A drilling program consisting of 4 shallow drill holes was completed on the Horseshoe property. The drilling was done with a 6" down-the-hole hammer by Christiansen Drilling of Ely, Nevada. Drill holes #1 - #3 were drilled on the Horseshoe vein in order to test the remaining crown pillar south of the shaft. Drill hole #4 was drilled on the West Vein to determine this vein's potential.

Drill Hole #1 This hole was collared off 102' south of the shaft and 7' off the hanging wall of the Horseshoe vein. The purpose of this hole was to test the crown pillar at a depth of 30' and the west vein at 520'. Total depth of the hole was 585', with water being encountered at 410'. This hole failed to intersect a well defined vein at either target area.

Drill Hole #2 This hole was collared off 240' south along the strike from Drill Hole #1. An intersect of quartz vein material was found from 20'-25', however no values were found. Total depth was 65'.

Drill Hole #3 This drill hole was collared off mid-way between drill holes #1 & #2. A strong quartz-calcite vein was intersected from 20'-35' and showed only trace amounts of Au & Ag. Total depth was 45'.

Drill Hole #4 This hole was collared off 270' southwest of the shaft on the West Vein and was drilled to 85' total depth. A well defined vein was intersected from 35-75 feet. The interval averages .05 oz/ton. Au and .81 oz/ton Ag.

Due to the amount and weight of the samples a complete split was stored in a shed adjoining the shaft and the other split brought to Salt Lake.

A brunton and tape survey was made of the area and this information plus surface sampling is compiled on a 1'-40' map.

Work on the Jennie property consisted of fencing potential hazards, mapping and sampling the Jennie tailings, and locating the placer claim on the Jennie tailings.

The Jennie shaft and open stopes in the immediate vicinity of the shaft were fenced with barbed wire and metal fence posts to eliminate any potential hazard.

The Jennie tailings were mapped and sampled. Initial efforts to pipe sample the lower end of the tailings pile proved unsuccessful due to hardness of the tailings. The upper end of the tailings where they are more shallow and sandy were pipe sampled. Trench samples were cut in the gully where the tailings were to hard to pipe sample.

A placer claim was located on the Jennie tailings. This claim is located on Lot #4, Sec. 26 and Lot #1, Sec 35, T 33 S R 20 W, Salt Lake Base and Meridian and named Charlie Zulu.

INTRODUCTION:

On November 9, 1981 a mine exploration program was enacted at the Horseshoe Mine near Fay, Nevada (Sec.30; T.1N., R.71E.; Nevada Base Line). The program had three designed purposes: (1) To sample an existent crown pillar along the strike of the Horseshoe vein, southeast of the main Horseshoe shaft; (2) To explore and sample the possible intercepts, at depth, of a west vein structure near the 420 ft. level of the Horseshoe workings; (3) To map, surface sample, and drill (where feasible) vein structures within the immediate area of the Horseshoe Mine.

DRILL PROGRAM DESCRIPTION:

The Crown pillar sampling was accomplished through vertical drill holes located along the strike of the Horseshoe vein. Specific collar locations for Drill Holes #1, #2, and #3 were offset 7ft. east of and perpendicular to the hanging wall contact of the Horseshoe vein at the surface outcrop. Drill Hole #1 was designed to go beyond the intercepts of the crown pillar to a depth of between 400ft. to 600ft., to explore and sample the possible intercepts of a projected west vein structure (See Appendix "A"). Drill Hole #4 was designed to sample the intercept of a west dipping vein structure that outcrops at the surface west of but with the same general strike trend of the Horseshoe vein (See Appendix "A").

Drilling & Excavation: Some site preparation was necessary for Drill Holes #1 and #3. A private contractor, Max McCrosski of Panaca Nevada, was hired for site excavation and drill pad leveling. This work was completed on November 10, 1981.

Drilling began on November 10, 1981 by Christiansen Drilling of Ely, Nevada. A rotary "Down the Hole Hammer" drill was used in drilling the four vertical holes mentioned above. A 5¾" diameter button bit was used to cut the ½ in. minus chip samples. A cyclone sampler was used to collect the bulk sample. Samples were taken on 5ft. intervals with an approximate bulk sample weight of 50 lbs. These bulk samples were split on the 5ft. intervals into two, 1/8 sample splits used for assay and logging purposes. Drilling of Holes #1 through #4 was completed on November 12, 1981.

Mapping & Surface Sampling: A brunton and tape survey was made of the immediate area of the Horseshoe Mine. The survey included all drill holes and defined surface vein outcrops. Hand chip samples were taken from all vein outcrops for assay purposes. All work was completed on November 14, 1981.

Larry LaFrentz

AA Assay Results

Drill Hole	Footage interval	Oz./Ton Au	Oz./Ton Ag
#1	30'-35'	nil/-.001	.01
"	35'-40'	-.001	.01
"	40'-45'	.006	.13
"	45'-50'	.003	.07
"	50'-55'	-.001	.04
"	55'-60'	-.001	.01
"	60'-65'	-.001	.00
"	425'-430'	.000	.01
"	425'-430'	.000	.01
"	430'-435'	.000	.00
"	435'-440'	.000	.00
"	440'-445'	.000	.00
"	445'-450'	.000	.00
"	510'-515'	.000	.04
"	515'-520'	.000	.05
"	520'-525'	.000	.02
"	525'-530'	.000	.04
"	530'-535'	.001	.06
"	535'-540'	.000	.00
"	540'-545'	.000	.00
"	545'-550'	.000	.00
"	550'-555'	.000	.00
"	555'-560'	.000	.00
"	560'-565'	.000	.00
#2	20'-25'	.001	.01
"	25'-30'	-.001	.00
#3	20'-25'	.005	.10
"	25'-30'	.009	.08
"	30'-35'	.003	.02
"	35'-40'	-.001	.00
#4	35'-40'	.016	.55
"	40'-45'	.014	.34
"	45'-50'	.018	.43
"	50'-55'	.017	.66
#4	55'-60'	.011	.62
"	60'-65'	.012	.52
"	65'-70'	.014	.50
"	70'-75'	.005	.39

J. McCrosski - Assayer
Iron Triangle Mining, Assay Office
SR 89063
Box 172
Pioche, Nevada 89043

Horseshoe Sample Assays and Drill Hole #4 Check Assay

Telephone 363-3302

Hand Sample Serial 62751-62766

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

BRYANT L. LARSEN, President
G. P. WILLIAMS, Vice President
JAMES G. STRATTON, Secretary
A. S. JOLLIFFE, Treasurer
P. O. Box 1528
Salt Lake City, Utah 84110
(801) 363-3302

S. S. Arentz
1720 Benificial Towers
SLC Utah

RESULTS PER TON OF 2000 POUNDS

Dec 8, 1981

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL Per Cent	ZINC Per Cent	~~SULPHUR Per Cent~~ Au ozs. per ton	~~IRON Per Cent~~ Ag ozs. per ton	LIME Per Cent	Per Cent	Per Cent
H-1 4' Chip Sample Structure Junction							none	0.1			
H-2 Chip Sample Horseshoe Vein 4'							none	0.3			
H-3 4' Chip Sample Horseshoe Vein							none	none			
H-4 Fay Mine Horseshoe Vein							trace	0.2			
H-5 S. E. Vein 4' Chip Outcrop							0.010	0.2			
H-6 Fay Mine Horseshoe Vein 5' Chip Sample in Trench							0.010	0.1			
H-7 Fay Mine West Vein 3.5' Chip Sample							0.040	0.5			
Fay Mine West Vein 4.5' Chip Sample across vein H8							0.010	0.3			
S. E. Vein 3' Chip on Road H9							none	0.2			
4 40-45							0.040	0.8			
4 50-55							0.080	0.8			
4 55-60							0.080	1.1			
4 60-65							0.060	1.0			
4 65-70							0.040	0.9			
4 70-75							0.040	0.7			
4 75-80							0.020	0.6			

Remarks

Charges $ 160.00

4

Jennie Tailings Assays

Telephone 363-3302

Hand Sample Serial 61999-62014

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

BRYANT L. LARSEN, President
G. P. WILLIAMS, Vice President
JAMES G. STRATTON, Secretary
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P. O. Box 1528
Salt Lake City, Utah 84110
(801) 363-3302

S.S. Arentz
1720 Benificial Towers
S.L.C. UT

RESULTS PER TON OF 2000 POUNDS

Nov 23, 1981

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	Au Ozs per Ton	Ag Ozs per Ton	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent
Armet 1 0-3				0.020	1.7						
No Number #2				0.040	2.1						
Armet 3 0-4				0.040	2.0						
Armet 4 0-5				0.020	1.7						
Armet 5 0-4				0.020	2.2						
Armet 6 0-4				0.060	2.5						
Armet 7 0-4				0.060	1.6						
Armet 8 0-2.5				0.040	2.2						
et 9 0-2.5				0.020	1.6						
Armet 10 0-3				0.020	1.6						
Armet 11 0-4				0.060	1.5						
Armet 12 0-2.5				0.060	1.3						
Armet 13 3' Channel				0.090	2.7						
Armet 14 4- Channel				0.040	1.6						
Armet 15 5.5 Channel				0.050	1.6						
Armet 16 9' Channel				0.060	1.9						

Remarks

Charges $ 160.00

5

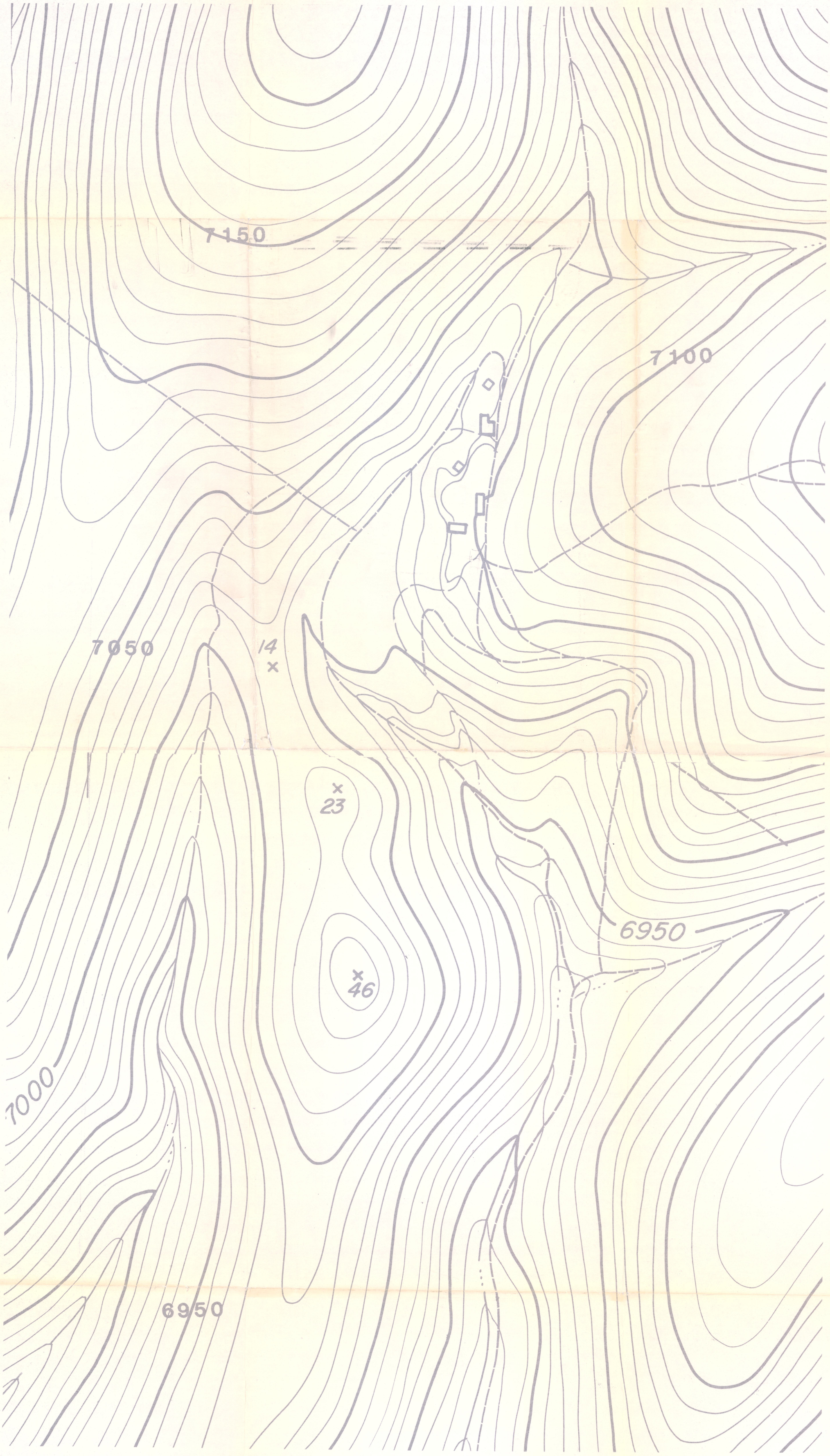

7150
7100
7050
14
23
46
6950
7000
6950

Table 20. Production of the Comet district, 1895-1952.

Year	Gold (ounces)	Silver (ounces)	Copper (pounds)	Lead (pounds)	Zinc (pounds)	Total value
1952	—	— —	— —	— —	— —	$ 21,300
1951	20	3,472	18,700	88,800	248,100	68,900
1950	19	1,613	2,400	27,200	104,800	21,200
1949	104	17,226	9,000	99,100	497,900	98,400
1948	114	27,499	29,700	158,600	821,100	172,900
1947	105	16,157	200	99,000	207,200	57,700
1946	42	9,516	— —	70,900	455,900	72,500
1945	22	1,956	— —	20,000	70,600	12,000
1944	58	2,413	800	22,300	5,500	6,300
1942	7	191	— —	100	— —	400
1941	98	3,510	400	8,400	— —	6,500
1940	193	6,761	1,300	29,100	— —	13,200
1939	66	8,942	900	61,900	— —	11,400
1938	109	15,857	500	165,500	— —	21,700
1937	144	17,045	1,000	276,500	— —	34,700
1936	130.38	24,579	573	284,956	— —	36,800
1935	38.93	13,420	898	160,702	— —	17,500
1934	62.24	14,759	1,284	229,903	— —	20,300
1913-1932[1]	168	48,531	7,176	231,420	— —	64,900
1912	—	— —	— —	— —	— —	[2]600
1898	—	— —	— —	— —	— —	[2]800
1896	—	— —	— —	— —	— —	[2]2,200
1895	—	— —	— —	— —	— —	[2]1,900
Total						$764,100

1. Nolan (in Hewett and others, 1936, p. 62).
2. Couch and Carpenter (1943).

Mineral deposits

Quartz veins and bedded replacement deposits occur in the district. The primary ore in the quartz veins, principally the Comet vein, contains galena, sphalerite, pyrite, wolframite, scheelite (minor), argentite, and gold. The oxidized ore contains plumbojarosite, cerussite, and limonite. The Comet vein averages 6 feet in width and contains four ore shoots in the wider parts. A parallel fissure several hundred feet north of the Comet vein is reported to contain as much as 1.4 percent WO_3, but this vein has not been developed.

Bedded replacement deposits, 10 to 15 feet thick, occur in the lower part of the Combined Metals Member of the Pioche Shale at the Pan American mine and in or near the base of the Lyndon Limestone at the Schodde mine. Three diamond drill holes by the U.S. Bureau of Mines (Trengove, 1949) near the Schodde mine show that 12 to 15 feet of low-grade sulfide ore occur in the Combined Metals Member at depths between 590 and 1,250 feet. The grade is comparable to that in the Pan American mine and the mineralized ground may be continuous between the two mines. The average grade is about 1 ounce silver, 1 percent lead, 3 percent zinc, and 7 to 9 percent manganese. Drill hole 3 in Lyndon Gulch cut 10.5 feet of higher grade ore that contained as much as 4.6 ounces silver, 3.7 percent lead, and 7.8 percent zinc. An additional 5 feet in this hole had a metal content near the average figures. The primary ore contains pyrite, sphalerite, argentiferous galena, and manganosiderite similar to the bedded replacement ore in the Pioche district.

The available information on the principal mines in the Comet district is summarized in table 21.

Eagle Valley (Fay, Deer Lodge), Gold Springs, and Stateline Districts

(Gold, silver, uranium)

Location

The Eagle Valley (Fay, Deer Lodge), Gold Springs, and Stateline districts are contiguous areas near the Nevada-Utah State line between 14 and 21 miles from the railroad at Modena, Utah, and about 10 miles east of Eagle Valley. The Stateline district, most of which is in Utah, is about 14 miles north of the Eagle Valley and Gold Springs districts and about 16 miles west of Modena, Utah. As used in this report, the term Eagle Valley district, Nevada, includes the Deer Lodge district north of Deer Lodge Canyon, and the Fay district south of this canyon and north of Buck Mountain. The Fay district appears to have been named for a ghost camp in Deer Lodge Canyon west of the Hackett Ranch. The Gold Springs district is east of Buck Mountain and is mostly in Utah. The districts are reached by unimproved dirt roads.

History and production

The ore deposits in the Stateline and Deer Lodge districts were discovered about 1896 and were active for

nly a few years. Considerable production was recorded etween 1900 and 1904. The Horseshoe mine in the Fay district produced 39,342 tons of ore worth $269,000 be-ween 1900 and 1902.

The Gold Springs district was discovered about 1897, ut active development did not begin until several years ter. By 1908 the town of Gold Springs had a popula-ion of 250. The two most productive properties in the old Springs district were the Jennie mine in Utah, hich produced about $52,900, and the Snowflake group n the east side of Buck Mountain in Nevada, which is stimated to have produced at least $31,000 prior to 1903. he Gold Springs district was undergoing active devel-pment in 1908 (Higgins, 1908) and considerable produc-ion was reported between 1907 and 1911.

The mines in Nevada were inactive between 1911 nd 1930, but a small production was recorded during he 1930's and 1940's. The total recorded production in he Nevada part of the districts was about $423,000, as hown in table 22. As far as is known, all of the producing ines in the Stateline district were in Utah. There were ills at the Horseshoe mine in the Fay district, the Jennie ine in the Gold Springs district, and the Ophir and ohnny mines in the Stateline district, Utah. The Johnny ine produced $30,000 between 1900 and 1902 (Smith, 902) and the Ophir produced at least as much. The ennie mine produced 12,200 tons of ore containing $48,-00 in gold and 8,441 ounces of silver, with a total value f $52,900 (Butler and others, 1920, p. 563). The Statz ine in the Stateline(?) district, Utah, shipped a con-iderable amount of uranium ore in 1956 and later.

Geology

We visited briefly but did not study the ore deposits f the Stateline, Deer Lodge, Fay, and Gold Springs istricts. Most of the following description is from Butler nd others (1920, p. 563-567), Smith (1902, 1908) and Higgins (1908). The geology of the entire area is dis-ussed as a unit, but the veins in each district are indi-idually described.

All the known mineral deposits are in volcanic rocks, hich cover the entire area except for a ridge of the High-and Peak(?) Formation west of the Stateline district. The oldest volcanic rocks are andesitic and latitic flows, uffs, and breccias, which are overlain by light-colored platy rhyolite that caps the higher hills. The structure is enerally simple and the volcanic rocks are nearly hori-ontal.

The volcanic rocks are cut by many north-south veins, nd the rocks near the veins, especially the older volcanic ocks, are altered in most places. The mafic minerals in he latitic rocks are generally chloritized, and the wall ocks along the veins are commonly bleached or silicified. The gold-bearing veins in the Stateline district are in silicified and iron-stained altered rhyolite, or rarely, in andesite.

Mineral deposits

Both north-south and east-west vein systems exist in the Stateline district, Utah. The principal north-south veins in this district, according to the map by Smith (1908, p. 16), are, from east to west, the Blackbird, Gold Eagle, Grand Central, Hard Times, Jumbo, Aggie D, Gold Belt-Utica, Willowvale, Free Coinage-Crown Point, Big 14, Sulphate, Hope, High Line-Venus, Burro, and Little Giant. The last five veins have a high silver-to-gold ratio. These veins generally dip 50°-70° W. All the other veins are characterized by gold with little silver.

The two most productive mines, however, were on a big discontinuously exposed east-trending vein. The ore from the Ophir mine on the west end of this vein is characterized by a high silver and a low gold content, but the Johnny mine on the east end and the Margaret mine between are characterized by equal parts of gold and silver. Much of the gold occurs as telluride. The ore shoots in the Ophir-Margaret-Johnny vein, which dips 65° N., occur at or near intersections with the north-south fissures and rake northwestward about 45°.

There are three northeast-striking veins and one northwest-striking vein besides those already named. The veins are generally between 3 and 6 feet wide but in the ore shoots locally widen to 10 feet. The vein filling is

Table 22. Production of the Eagle Valley district, 1900-1951.

(e, estimate)

Year	Gold (ounces)	Silver (ounces)	Total value
1951	1	1,344	$ 1,300
1949	1	634	600
1948	2	1,077	1,000
1943	7	49	300
1942	101	578	3,900
1941	44	270	1,700
1939	150	701	5,700
1938	42	206	1,600
1937	344	11,505	[1]21,200
1936	93	16,883	[1]16,300
1935	154	2,068	7,000
1934	58	4,978	5,600
1933	146	392	3,200
1932	5	118	100
1931	——	——	500
1910	159e	3,968	8,700
1909	149e	118e	3,200
1904	——	——	[2]15,500
1903-1932[3]	3,693	12,795	[3]84,600
1902	——	——	[2]23,900
1901	——	——	[2]155,500
1900	——	——	[2]89,600
Total			$423,000

1. From Bluebird and Helen mines.
2. Couch and Carpenter (1943, p. 84).
3. Nolan (in Hewett and others, 1936, p. 62).

fine-grained quartz, brecciated quartz, and volcanic rock. The veins contain considerable fluorite and manganese oxides.

Carbonate is less abundant and pyrite more abundant in the Stateline district than at Fay or Gold Springs. The ore generally had a value between $5 and $20 per ton (old price) but some ore worth $60 a ton was shipped and several hundred tons from the Ophir mine had a value of $100 per ton.

The principal veins in the Gold Springs district, from east to west, are the Jumbo, Independence, Jennie, Talisman, and Snowflake, but only the Snowflake is in Nevada (Butler and others, 1920, p. 367). Most of these strike north and dip steeply east. The Jennie vein can be traced for 2,200 feet and generally is 6 to 10 feet wide, but some stopes are as wide as 19 feet (Higgins, 1908, p. 16). There are eight other distinct veins on the Jennie property.

The Independence vein is 15 to 20 feet wide, and the ore had a value of $10 to $12 per ton. The Snowflake vein extends more than 6,000 feet along the east side of Buck Mountain and reaches a maximum width of nearly 100 feet. A shipment from a shaft near its south end on the Snowflake No. 5 claim assayed $660 per ton. Farther north 2,550 tons of $10 to $15 ore were mined from an open cut on the Snowflake claim. Still farther north on the Buck claim, the vein is developed by two shafts, one 135 feet deep and the other 150 feet deep. Several lots of ore from the Buck claim brought about $60 per ton. A smaller vein on the Charley Ross claim, in the Mountain View group of claims, has been developed by a 175-foot shaft on a "body of talc ore forty feet wide." This body is good milling ore, containing streaks assaying as high as $3,000 per ton. Shipments have given returns as high as $2,900. This rich ore is reported to contain gold telluride and sylvanite (Higgins, 1908, p. 15-18).

The principal veins in the Fay and Deer Lodge districts are the Horseshoe, Homestake, Iris, and Deer Lodge. The most productive mine was the Horseshoe, which produced more than 39,300 tons of ore worth $269,000 between 1900 and 1902. Some of these veins, like those in the Gold Springs district, extend into the rhyolite, but most of the production has come from veins in the latite. The prominent vein north of Deer Lodge Canyon, which is developed by the Helen, White Horse (Silver Star) and Gypsy claims, strikes N. 30° E., dips 40° SE., and can be traced for 3 miles.

The veins in all these districts are crustified fissure fillings that consist of chalcedonic and comb quartz, yellowish adularia, lamellar carbonate, fluorite, pyrite, copper carbonates, and free-milling gold. Native mercury is reported from several mines and was recovered by panning at the Homestake mine. Cerargyrite occurs in a prominent vein northwest of Deer Lodge on the White Horse (Silver Star) claim and molybdite occurs in the Jumbo lode in the Gold Springs district. The veins in the Stateline district contain much pyrite and some tellurides (Butler and others, 1920). Autunite occurs in a prospect near the summit of the high peak at the head of Deer Lodge Creek. A sample from here contained 0.14 percent uranium.

The information on the mines in these districts is summarized in table 23.

Viola (Pittsburg, Cherokee) District

(Silver, copper, lead, zinc, mercury)

Location

The Viola (Pittsburg, Cherokee) district lies northwest of the Tule Desert and 8 to 11 miles east of Meadow Valley Wash, along the south edge of the Clover Mountains. The district is north of the graded Carp and Bunker Peak road, and is crossed by a dirt road.

History and production

Little is known about the history of this district, for apparently no records were kept, but there was some activity at least as early as the 1880's when the Cherokee vein was discovered by a Cherokee Indian. Since that time, however, there has been only sporadic or intermittent activity in the district. According to a local rancher, Paul Henrie (oral communication, 1956), one carload of ore containing 1,400 ounces of silver per ton was shipped from a property (Viola shaft?) east of the Cherokee mine in the early days. The total production from the district is unknown but it is probably less than $400,000, most of which came from the Wells Cargo fluorspar mine, which was opened in 1958 (table 24).

Geology

All the known mineral deposits occur in three isolated areas of pre-Tertiary rocks surrounded by Tertiary volcanic rocks. The western area, called the Cherokee area, is composed of Permian and Triassic rocks that strike northwest and dip northeast. These rocks strike at right angles to Mississippian and Pennsylvanian limestones in the second or Pittsburg area; a major prevolcanic fault zone must separate the two areas. The limestones in the Pittsburg area strike northeast and dip steeply northwest. Limestone beds of Mississippian and Pennsylvanian(?) Age in the third or Wells Cargo area have about the same attitude as those in the Pittsburg area.

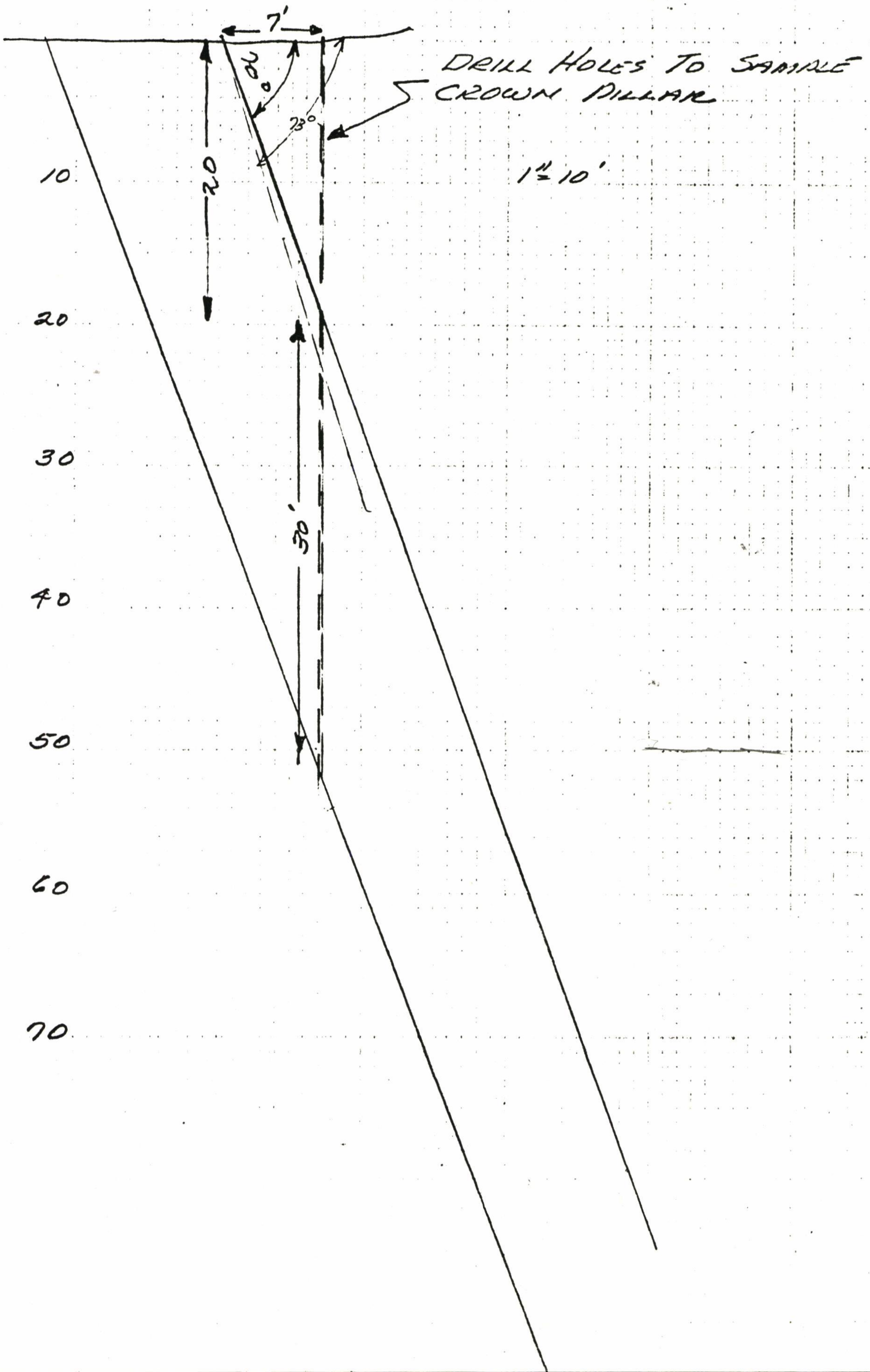
Mineral deposits

Nearly all the mineral deposits in the Pittsburg area occur in Mississippian limestone, usually near the base of the overlying altered volcanic rocks. Large masses of jasperoid, which cap many of the hills, are believed to

Table 23. Principal mines of the Eagle Valley and Gold Springs districts.

Name	Location Sec.	T.	R.	Commodities	Geologic setting	Production, remarks, and references
Eagle Valley District						
Horseshoe	30	1 N.	71 E.	Au, Ag	Crustified epithermal quartz vein in latite.	Total production considerably exceeds the 39,300 tons of ore worth $296,000 produced between 1900 and 1902. Had a 90-ton cyanide plant in 1902; 120-ton plant in 1908. Tailings shipped in 1931. Small mill in 1941-1942. Couch and Carpenter (1943, p. 87); Lincoln (1923, p. 119).
Homestake	30(?)	1 N.	71 E.	Au, Ag	do.	----------
Iris	30(?)	1 N.	71 E.	Au, Ag	do.	30-ton amalgamation and cyanide plant in 1907. 30-ton arrastra in 1908. Lincoln (1923, p. 119).
Gypsy and Helen groups (Interocean, Bluebird, Silver Star, and White Horse claims)	18(?)	1 N.	71 E.	Ag, Au	Prominent vein strikes N. 30° E., dips 40° SE. Can be traced 3 miles.	Shipment (17 carloads?) worth $36,760 made in 1936-1937. Three carloads shipped from Gypsy and Helen in 1941. Two carloads shipped from Silver Star in 1947.
Gold Springs District						
Snowflake group (Big Buck and Little Buck claims)	32(?)	1 N.	71 E.	Au, Ag	Snowflake vein strikes north for more than 6,000 ft. Maximum width 100 ft. Developed by at least 3 shafts.	Estimated to have produced at least $31,000. 2,550 tons of $10-$15 ore mined from open pit. Shipment from shaft assayed $660 per ton.
Mountain View group	32	1 N.	71 E.	Au, Ag	Vein developed by 175-ft shaft contained milling ore with very high-grade telluride-rich streaks.	Higgins (1908, p. 15-18).

HORSESHOE VEIN

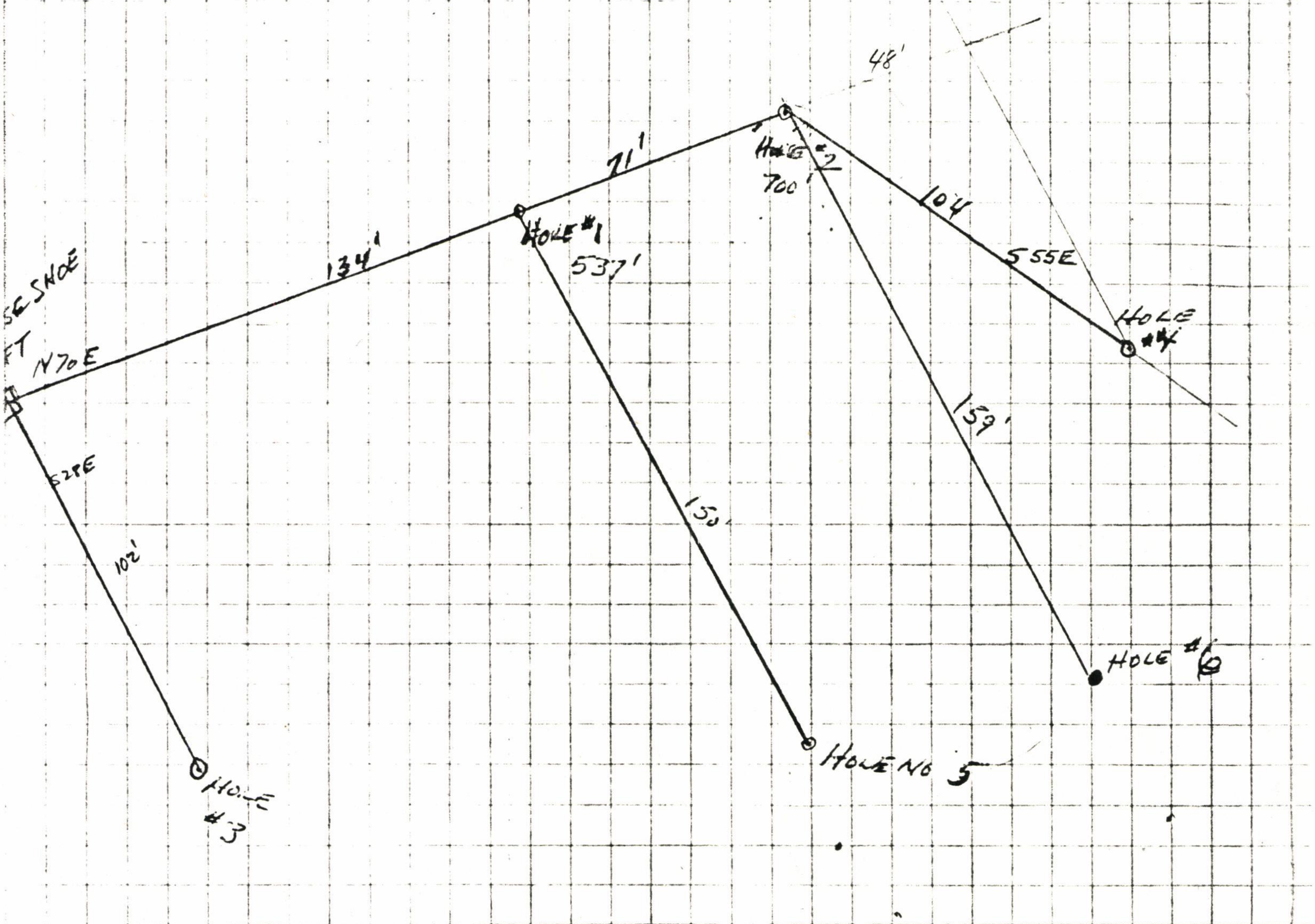


1" = 40'

N

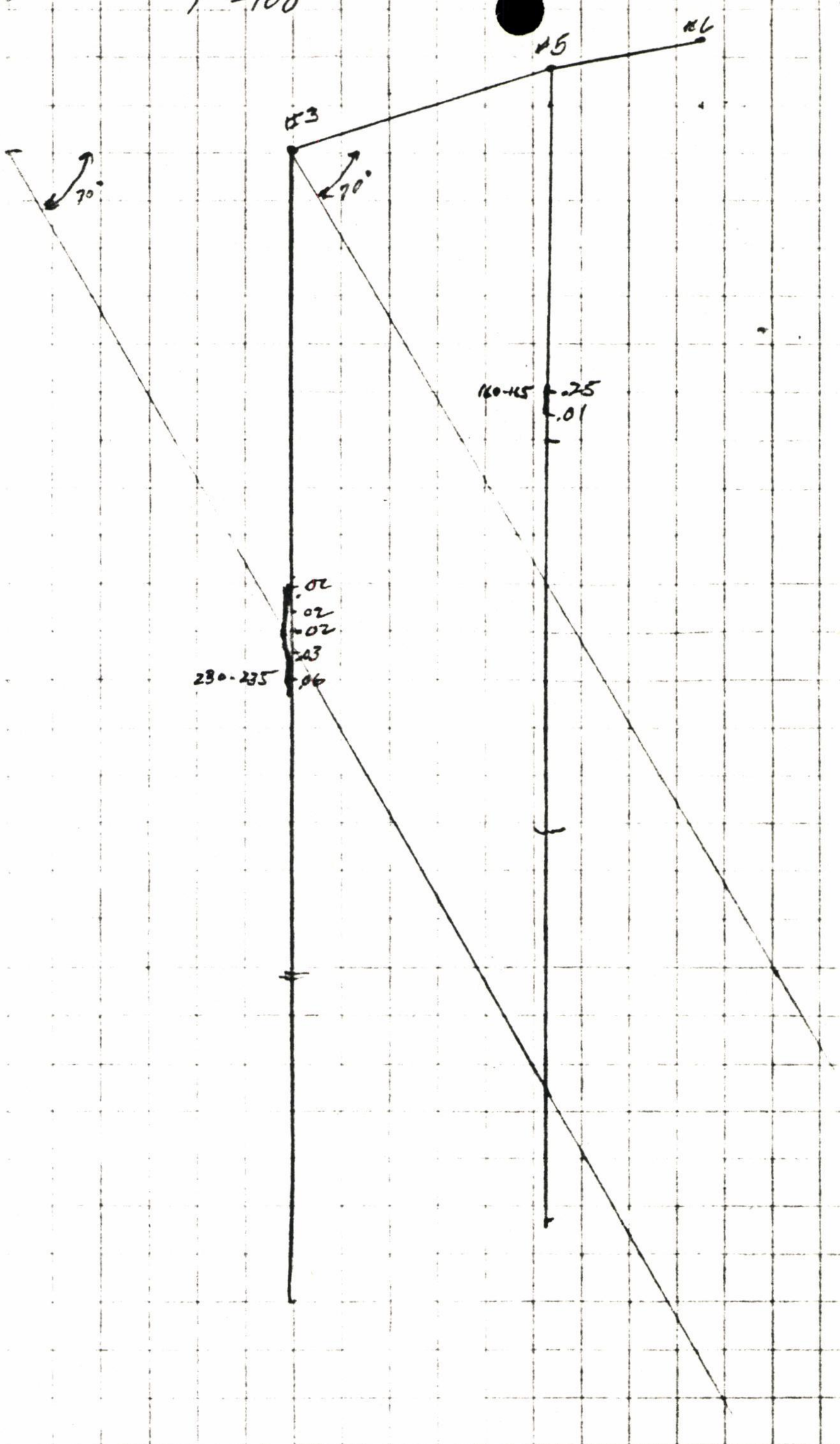
HORSE SHOE

J. W. COLE
FIELD NOTES
DEC-1980



1" = 100'

HORSESHOE #3, 4+5



70°

75

150'

#1

#2

60'

300

61°

180

.14
.23
.21
.05
.22
.193
.158

.03
.18
.14
.96
4.37

437

02
03

560

SCALE 1"=60'

620'

640

810' @

#1 —— #5.
150'

#2 —— #6
159

150'

70°

75

#1

#2

60'

61°

180

.14
.23
21
05

.22

.193

.158

.03

.13

.14

.96

437

437

560

640'

810'

#1 —— #5.
150'

#2 —— #6
159

SCALE 1"66'

1" = 100'

HORSESHOE 1,243

HOLE #3

HOLE #2

HOLE #4

SHAFT

0'

134'

71'

18'

5'

44'

70°

LITTLE JOHNNY

LITTLE JONNIE

VOID

WALKER

.01
.14
.23
.21
.05
.01

329

.03
.18
.14
325.3N
.06
.02
.02

.05
.01

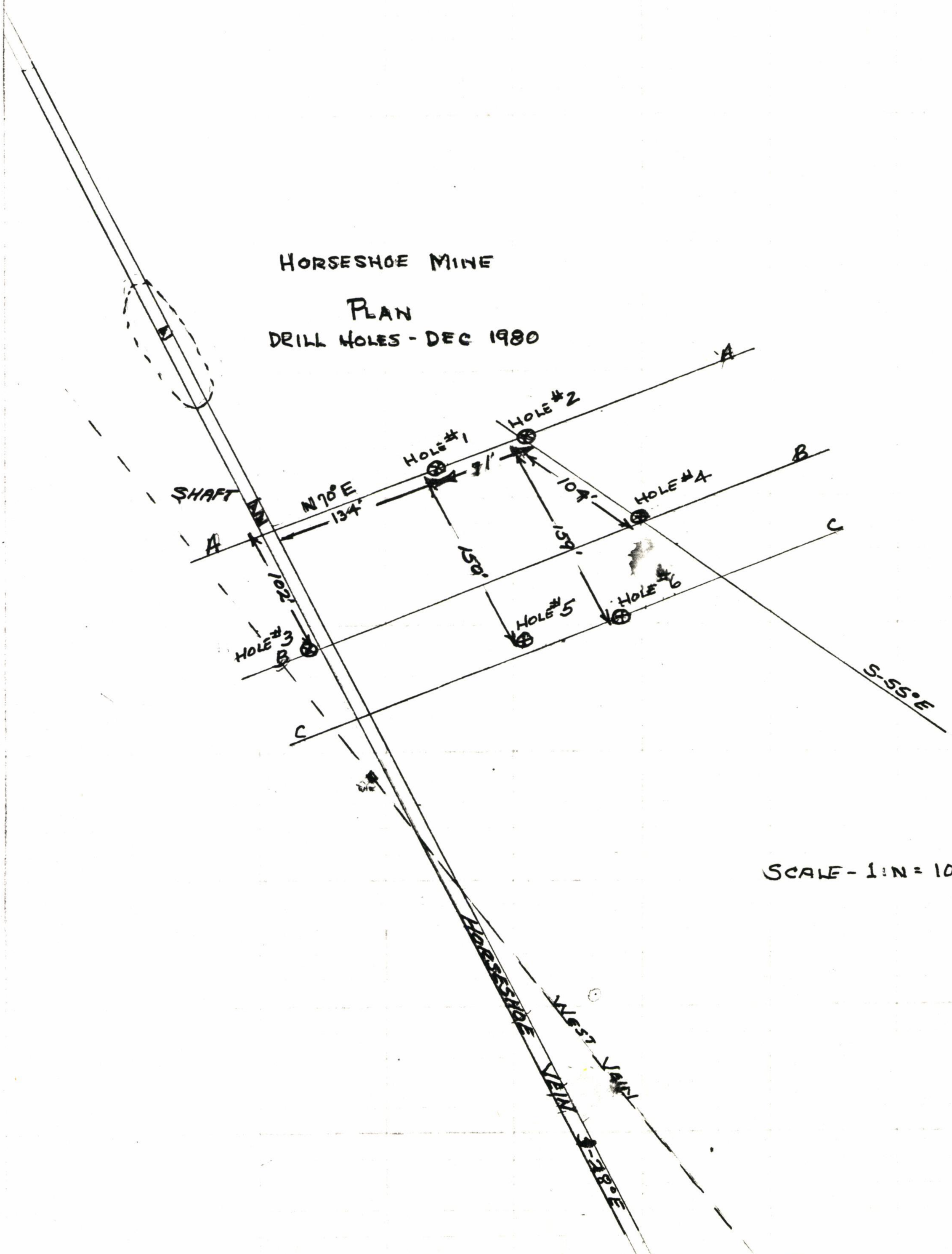
.02
.03
.01

337
BOTTOM

TD
BOTTOM

HORSESHOE MINE

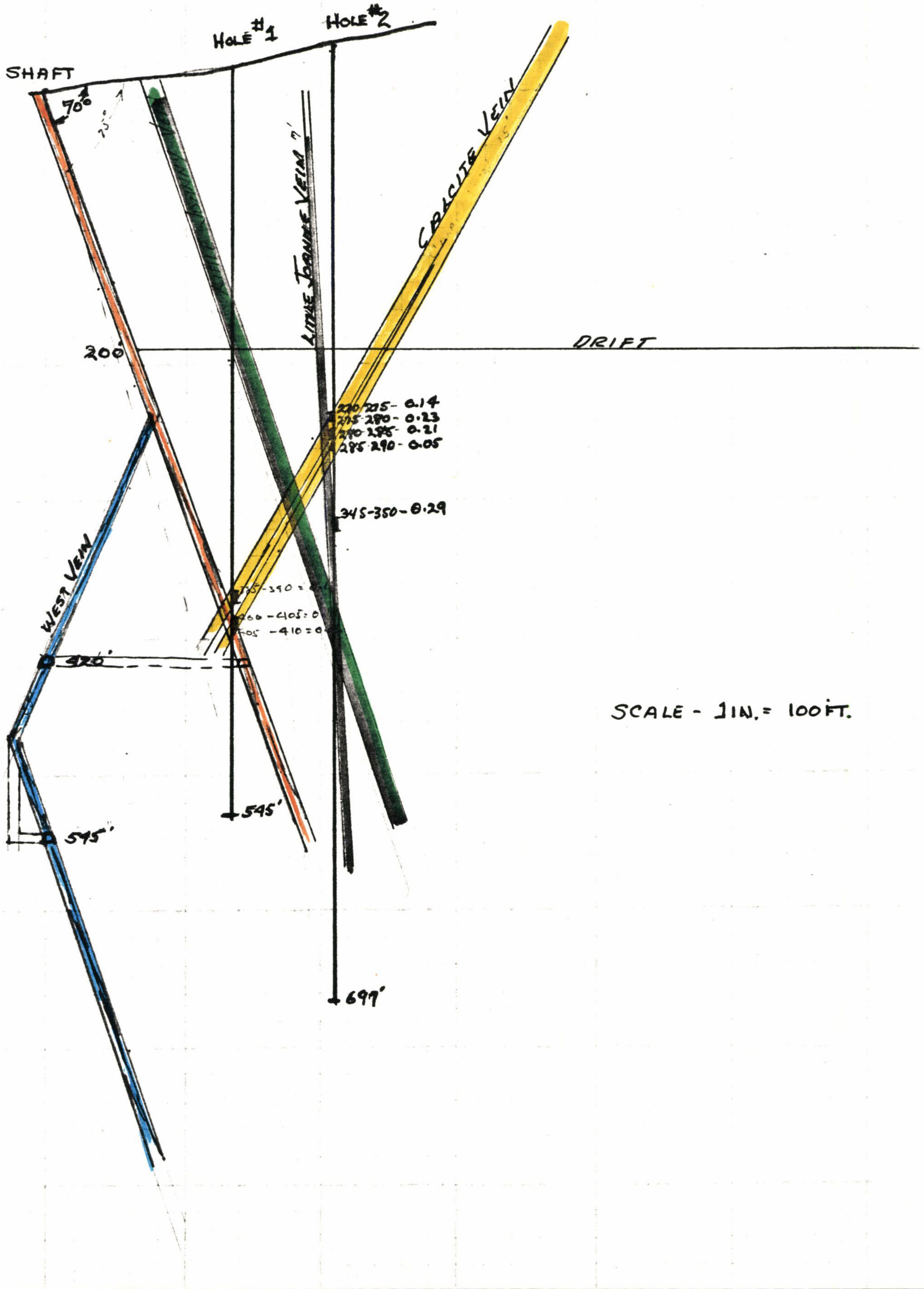
PLAN
DRILL HOLES - DEC 1980



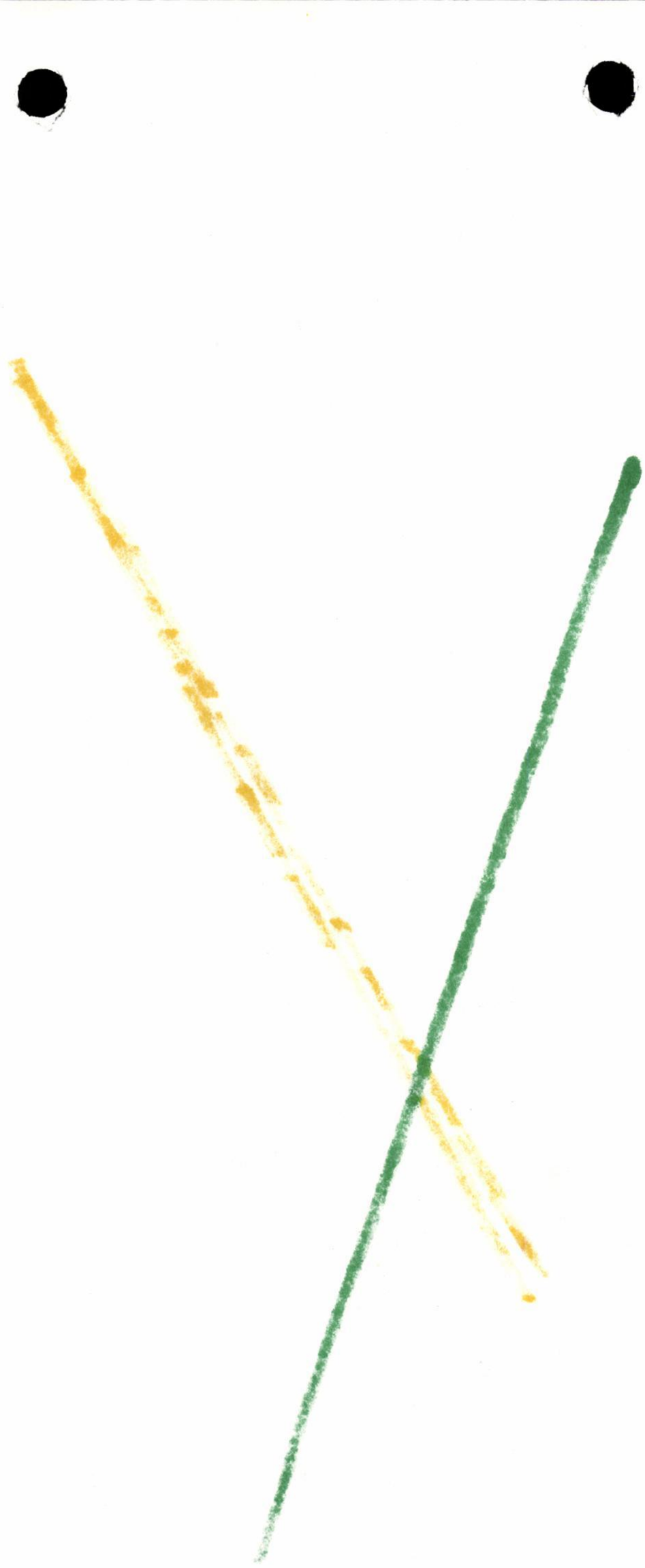
SCALE - 1 IN = 100 FT

HORSESHOE MINE
DEC 1980

A-A SECTION

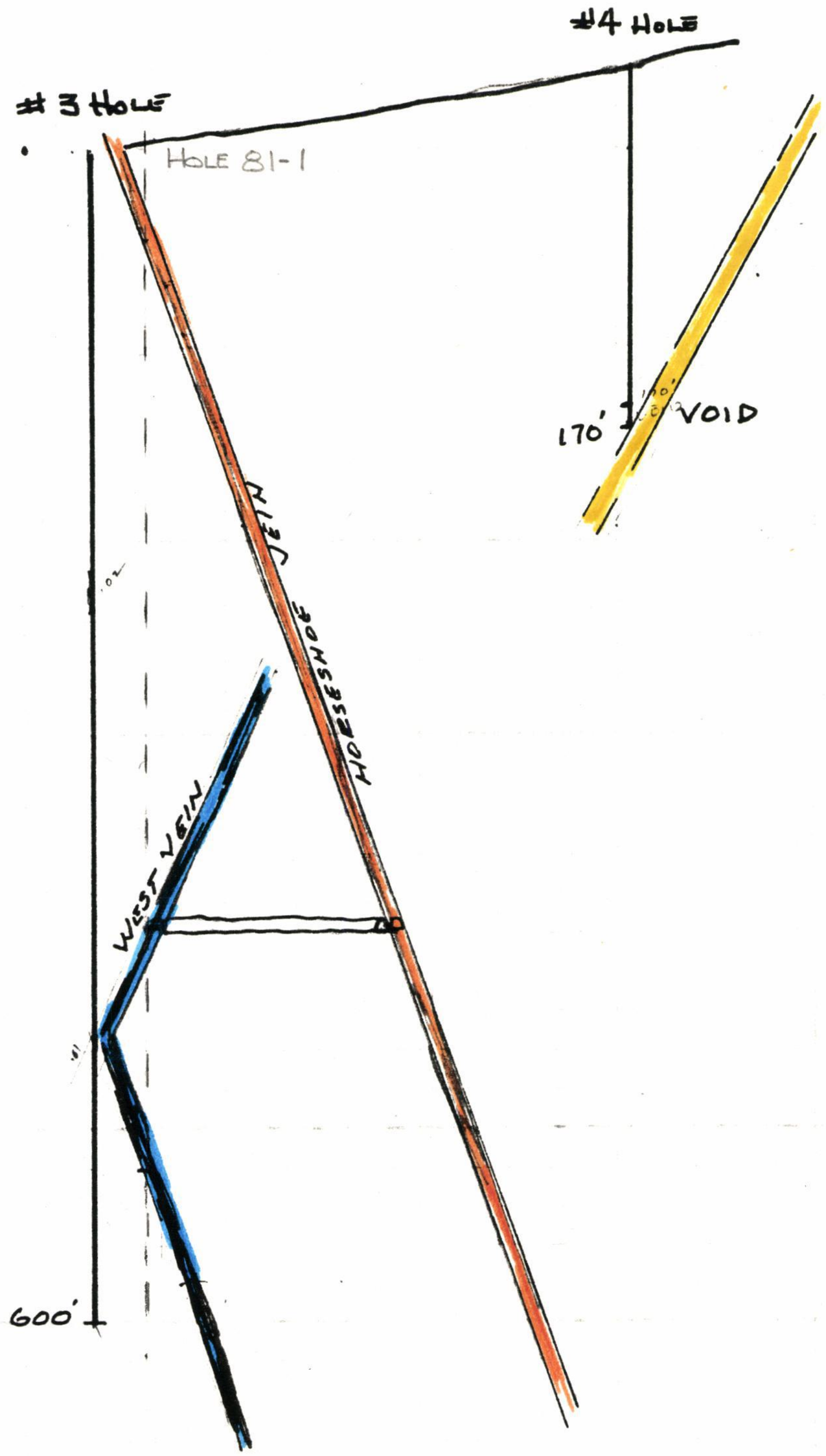


SCALE - 1 IN. = 100 FT.



HORSESHOE MINE
DEC 1980

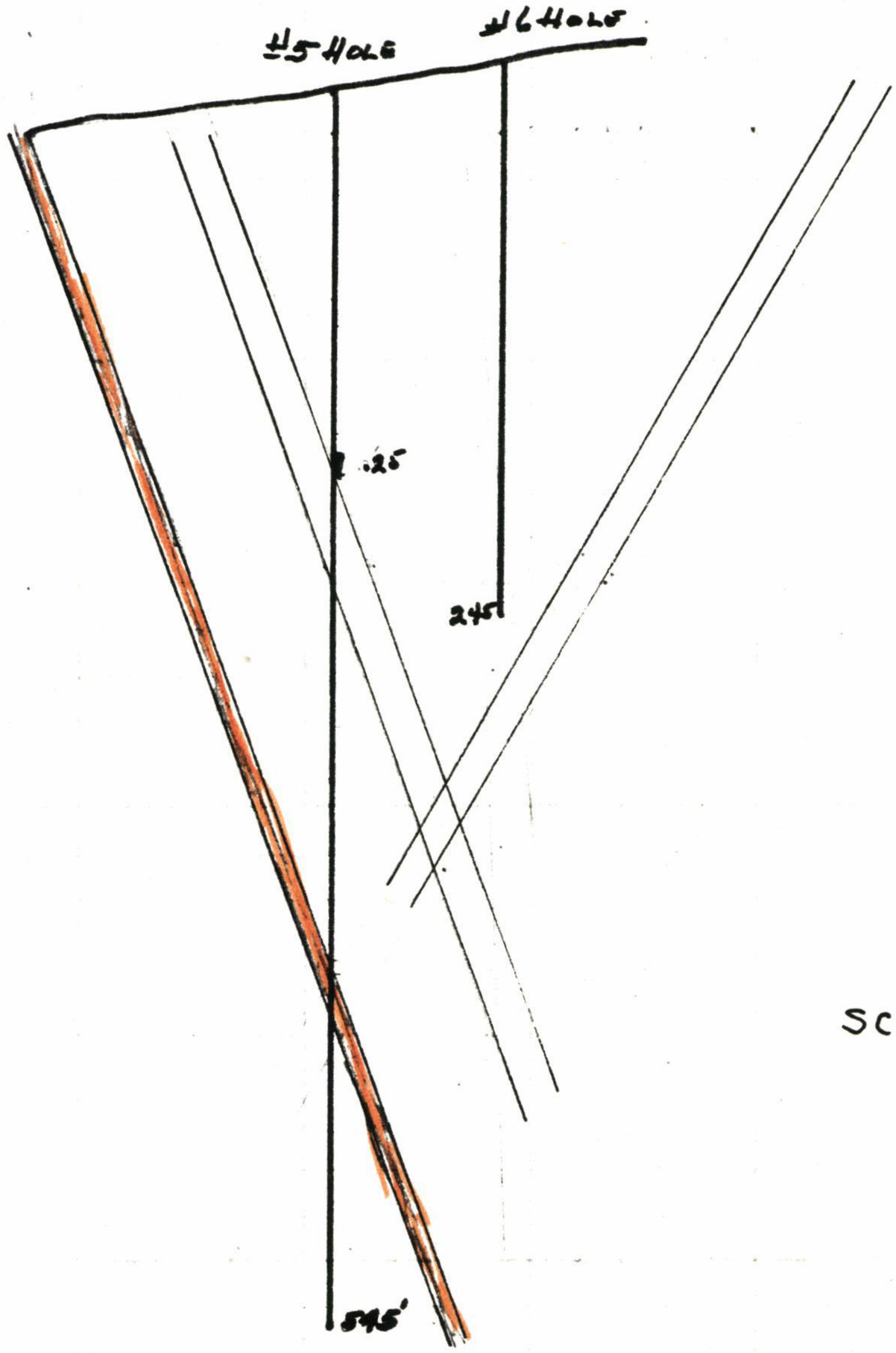
SECTION B-B



SCALE- 1IN = 100 FT

HORSESHOE MINE
DEC - 1980

SECTION C-C



SCALE - 1 IN. = 100 FT.

Telephone 363-3302

Hand Sample Serial 62751-62766

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

BRYANT L. LARSEN, President
G. P. WILLIAMS, Vice President
JAMES G. STRATTON, Secretary
A. S. JOLLIFFE, Treasurer
P. O. Box 1528
Salt Lake City, Utah 84110
(801) 363-3302

Mine .....

S. S. Arentz
1720 Benificial Towers
SLC Utah

RESULTS PER TON OF 2000 POUNDS

Dec 8, 1981

NUMBER	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent	COPPER Per Cent	INSOL Per Cent	ZINC Per Cent	~~SULPHUR Per Cent~~ Au ozs. per ton	~~IRON Per Cent~~ Ag ozs. per ton	LIME Per Cent	Per Cent	Per Cent
H-1 4' Chip Sample Structure Junction							none	0.1			
H-2 Chip Sample Horseshoe Vein 4'							none	0.3			
H-3 4' Chip Sample Horseshoe Vein							none	none			
H-4 Fay Mine Horseshoe Vein							trace	0.2			
H-5 S. E. Vein 4' Chip Outcrop							0.010	0.2			
H-6 Fay Mine Horseshoe Vein 5' Chip Sample in Trench							0.010	0.1			
H-7 Fay Mine West Vein 3.5' Chip Sample							0.040	0.5			
Fay Mine West Vein 4.5' Chip Sample across vein							0.010	0.3			
S. E. Vein 3' Chip on Road							none	0.2			
4 40-45							0.040	0.8			
4 50-55							0.080	0.8			
4 55-60							0.080	1.1			
4 60-65							0.060	1.0			
4 65-70							0.040	0.9			
4 70-75							0.040	0.7			
4 75-80							0.020	0.6			

Remarks .....

Charges $ 160.00

Summary Report on the Horseshoe Mine
Fay District - Lincoln County, Nevada
September - 1979

The Horseshoe Mine is situated in the Fay Mining District, Lincoln County, Nevada, near the Utah-Nevada border. The mine is approximately 25 road miles east of Pioche, Nevada, and approximately 20 road miles northwest of Modena, Utah. The property consists of six patented lode mining claims held under a lease and option agreement by Armet Company, a closely held Nevada Corporation.

The Fay Mining District and the adjoining Gold Springs Mining District are in the south extension of the Cedar range with elevations ranging from 6,000 to 7,000 feet. The hills are covered with desert juniper and pinion pine. There are no large streams in the area, but small streams and springs furnish sufficient water for domestic use and mining purpose. An adequate water supply for a metallurgical plant could be developed in the area.

The area is covered by a series of volcanic flows ranging from latite to andesite to rhyolite with several exposures of intruded rhyolite porphyry. The latite and the andesite flows are traversed by many north trending fissures, some of which reach widths of over 200 feet. Fissure fillings consist of quartz, calcite, andularia, with minor amounts of flourite and barite. Ore minerals include gold, silver, and manganese with occasional showings of copper and mercury.

Prospecting began in 1886 and quickly spread over the district. A number of small mines were developed and several small mills were constructed and operated during the period 1902-1910. Operations were resumed in the period 1933-1942, when executive order L208 shut down most of the U.S. gold mines to conserve labor and supplies during World War II. Except for occasional exploratory work, there has been no activity in the district since 1942 and most of the mine workings are inaccessible due to caved shaft collars and adit portals.

During the period 1902-1910, the Horseshoe Mine was developed by a 400' incline shaft on the vein and an estimated 100,000 tons of ore was mined from stopes above the 200 level, and from development headings on the 300 and 400 levels. The stoping area extends for approximately 1,000 feet along the strike of the vein, which is said to range from 8 to 13 feet in width. Ore grade reportedly ranged from 0.25 to 0.40 ounces of gold, and 3.0 to 5.0 ounces of silver per ton.

In 1939 a California group leased the property and undertook re-opening the mine and reconstruction of the mill. The mine was operating in 1941 and 1942 until closed by L208. Development work consisted of advancing drifts along the vein on the 300 and 400 levels and sinking a winze to the 500 level. Also several x-cuts were driven which intercepted parallel veins.

It is reported that on the 400 and 500 level, the vein was 10 to 13 feet in width, and on the 500 level the grade of ore had improved to

0.45 ounces of gold and 5.0 ounces of silver per ton.

Since the mine workings are not accessible it is proposed to drill several diamond drill holes to intercept the vein below the 500' level. The number of holes will depend upon the results of the initial drilling. Initially, at least 3 holes should be drilled for a total footage of 2,000 to 2,500 feet at an estimated cost of $60,000 to $75,000, including sampling and assaying. If the results of this initial drilling are successful in indicating a potential ore body, substantial additional capital will be required for additional drilling and for developing and equipping the mine.

The property appears to offer a good target for exploration, particularly at the present prices for gold and silver.

Additional information on the property is availible in our office.

CERTIFICATE OF ASSAY

IRON TRIANGLE MINING, ASSAY OFFICE

SR 89063 Box 172 Pioche, Nevada 89043

M Arentz & Nelson - 11/14/81

(Wet Samples) DESCRIPTION		GOLD oz. per ton	SILVER oz. per ton	LEAD %	ZINC %	COPPER %	INSOL %	IRON %	NSPB %	NSZN %
Drill hole #1	425'-430'	.000	.01							
"	425'-430'	.000	.01							
"	430'-435'	.000	.00							
"	435'-440'	.000	.00							
"	440'-445'	.000	.00							
"	445'-450'	.000	.00							
"	510'-515'	.000	.04							
"	515'-520'	.000	.05							
"	520'-525'	.000	.02							
"	525'-530'	.000	.04							
"	530'-535'	.001	.06							
"	535'-540'	.000	.00							
"	540'-545'	.000	.00							
"	545'-550'	.000	.00							
"	550'-555'	.000	.00							
"	555'-560'	.000	.00							
"	560'-565'	.000	.00							

ASSAYER

CERTIFICATE OF ASSAY

IRON TRIANGLE MINING, ASSAY OFFICE

SR 89063 Box 172 Pioche, Nevada 89043

M Arenty & Nelson - 11/13/81

DESCRIPTION		GOLD oz. per ton	SILVER oz. per ton	LEAD %	ZINC %	COPPER %	INSOL %	IRON %	NSPB %	NSZN %
Drill hole #1	30'-35'	nil/.001	.01							
"	35'-40'	.001	.01							
"	40'-45'	.006	.13							
"	45'-50'	.003	.07							
"	50'-55'	.001	.04							
"	55'-60'	.001	.01							
"	60'-65'	.001	.00							
Drill hole #2	20'-25'	.001	.01							
"	25'-30'	.001	.00							
Drill hole #3	20'-25'	.005	.10							
"	25'-30'	.009	.08							
"	30'-35'	.003	.02							
"	35'-40'	.001	.00							
Drill hole #4 (two marked same)	35'-40'	.016	.55							
"	40'-45'	.014	.34							
"	45'-50'	.018	.43							
"	50'-55'	.017	.66							

ASSAYER

CERTIFICATE OF ASSAY

IRON TRIANGLE MINING, ASSAY OFFICE

SR 89063 Box 172 Pioche, Nevada 89043

M Arenty & Nelson - 11/19/81

DESCRIPTION		GOLD oz. per ton	SILVER oz. per ton	LEAD %	ZINC %	COPPER %	INSOL %	IRON %	NSPB %	NSZN %
Drill hole # ~~3~~ 4	55'-60'	.011	.62							
"	60'-65'	.012	.52							
"	65'-70'	.014	.50							
"	70'-75'	.005	.39							

_____ ASSAYER

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEER LODGE CANYON QUADRANGLE
NEVADA—UTAH
7.5 MINUTE SERIES (TOPOGRAPHIC)

(EAGLE VALLEY RESERVOIR) 3160 II SW

3260 III SW (STEAMBOAT MTN. SW)

114°07'30" 38°00' 753000m E. 754 1 250 000 FEET (UTAH) R. 70 E. 5' R. 71 E. 757 3160 II SE (RICE MOUNTAIN) R. 71 E. R. 20 W. 2'30" 760 761 950 000 FEET (NEV.) 763 114°00' 38°00'

4209000m N. 490 000 FEET (UTAH) T. 2 N. T. 1 N. 4208 4207 4206 4205 57'30" 4204 4203 4202 4201 55' 4200 4199 1 150 000 FEET (NEV.) 4198 4197 4196 37°52'30"

4209 4208 1 180 000 FEET (NEV.) 4207 T. 32 S. T. 33 S. 4206 4205 57'30" 4204 4203 4202 4201 55' 4200 460 000 FEET (UTAH) 4199 4198 4197000m N. T. 33 S. T. 34 S.

3159 I NW (URSINE)

URSINE 10 MI.

MODENA 17 MI.

MODENA 13 MI.

(PANACA SUMMIT) 3159 I SW

3159 I SE

Ofer Mine
Johnny Mine
Government Peak
Ofer Basin
Water Tank
Ox Valley
Ox Valley Spring
Mahogany Peak
Gold Bug Mtn
Water Canyon Spring
Tempa Mine
White Horse Spring
Deer Lodge
Hackett Cem
Deer Lodge
Homestake Mine
Iris Mine
The Arch
Horseshoe Mine
Pope Mine
Fay
Charley Ross Mine
Little Buck Mine
Big Buck Mine
Snowflake Mine
Fay Cemetery
Buck Mtn
Red Eagle Mine
Thor Mine
Jennie Mine
Independence Mine
Jumbo Mine
Gold Springs
Etna Mine
Sawmill Spring
Cottonwood Springs
Paradise Spring
Big Summit BM 6680
Prospect
Immigration Wash
Fay Midnight Trail
Gold Springs
Johnny Canyon Spring
Mormon Gulch Spring
Summer Camp Spring
Pine Springs
Serviceberry Canyon
Deer Lodge Canyon
Johnny Canyon
Mormon Gulch
Water Canyon
Deer Lodge Canyon
Gold Springs Wash
Paradise Wash
Immigration Wash
Ox Valley
Fay Canyon Wash
Gold Springs
Pine Springs
Serviceberry Springs
Johnny Canyon Spring
Water Canyon Spring
Mormon Gulch Spring
Summer Camp Spring
Sawmill Spring
Cottonwood Springs
Gold Springs
Paradise Spring
Spring
Springs
JEEP TRAIL
MOUNTAINS
PARADISE
LINCOLN CO
IRON CO
NEVADA
UTAH
BASE LINE
T 1 S
R 70 E
R 71 E
R 20 W
R 19 W
USLM 1 7050
USLM 2 6868

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1971. Field checked 1972

Projection: Nevada coordinate system, east zone (transverse Mercator)
10,000-foot grid ticks based on Nevada coordinate system, east zone and Utah coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 11, shown in blue. 1927 North American datum

Fine red dashed lines indicate selected fence lines

Where omitted, land lines have not been established

GN MN 1°48' 32 MILS 15½° 276 MILS
UTM GRID AND 1972 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000
1 0 1 MILE
1000 0 1000 2000 3000 4000 5000 6000 FEET
1 0 1 KILOMETER
CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

NEVADA
QUADRANGLE LOCATION

ROAD CLASSIFICATION
Primary highway, hard surface
Secondary highway, hard surface
Light-duty road, hard or improved surface
Unimproved road
Interstate Route U. S. Route State Route

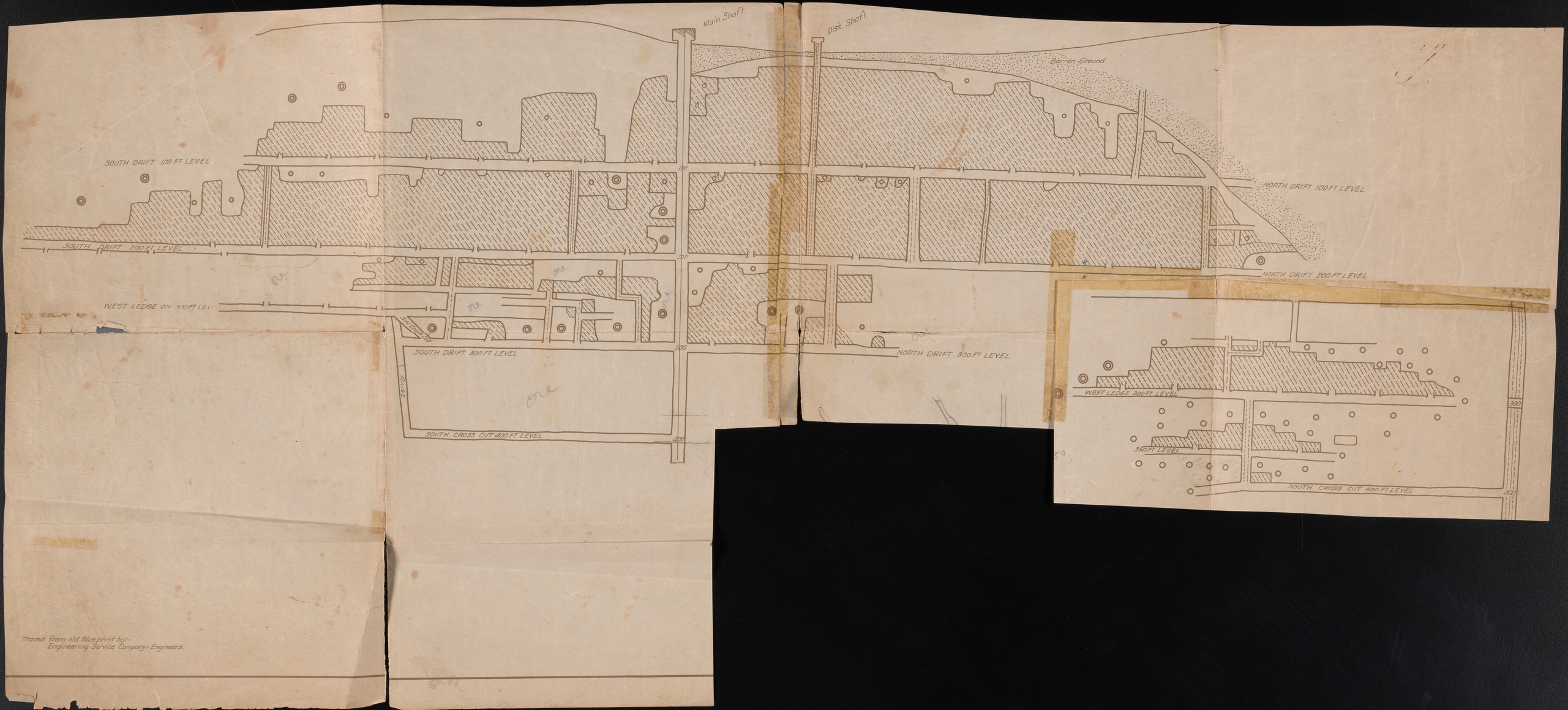
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

DEER LODGE CANYON, NEV.—UTAH
N3752.5—W11400/7.5

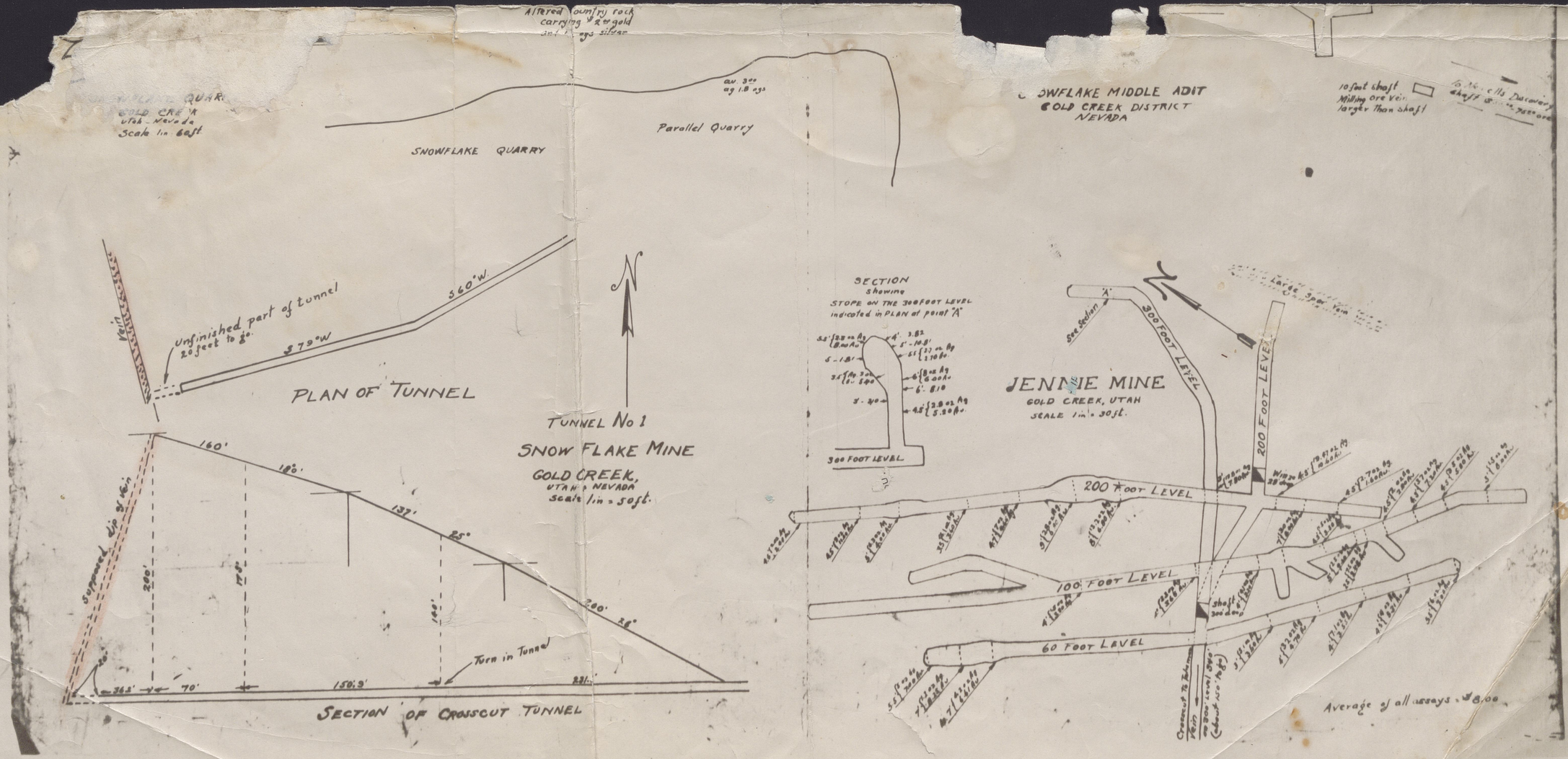
1972

AMS 3159 I NE—SERIES V896

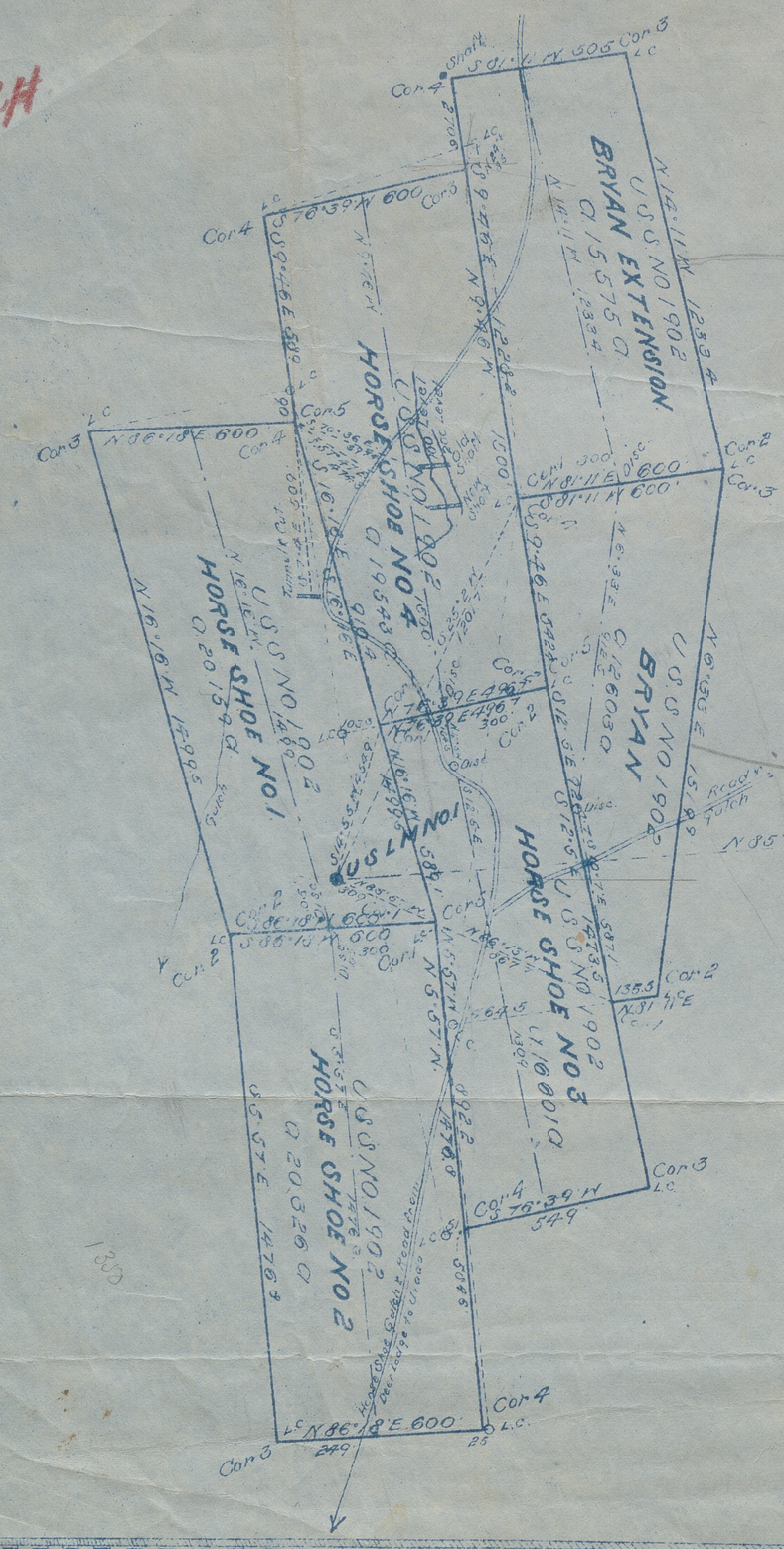
1270 000 FEET (UTAH) • INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1975



Traced from old Blue print by:-
Engineering Service Company - Engineers.


SNOWFLAKE QUARRY
GOLD CREEK
Utah - Nevada
Scale 1 in 60 ft
Altered country rock carrying $2 or gold
SNOWFLAKE QUARRY
Parallel Quarry
av. 3oz
ag 1.8 ozs
Unfinished part of tunnel
20 feet to go.
S 60° W
S 75° W
PLAN OF TUNNEL
TUNNEL No 1
SNOW FLAKE MINE
GOLD CREEK,
UTAH - NEVADA
Scale 1 in = 50 ft.
Supposed Dip of Vein
160'
180'
137'
25°
200'
17°
140'
280'
28°
Turn in Tunnel
30'
36.5'
70'
150.9'
22'
SECTION OF CROSSCUT TUNNEL
SNOWFLAKE MIDDLE ADIT
GOLD CREEK DISTRICT
NEVADA
10 foot shaft
Milling ore vein
larger than shaft
SECTION
Showing
STOPE ON THE 300 FOOT LEVEL
indicated in PLAN at point 'A'
300 FOOT LEVEL
JENNIE MINE
GOLD CREEK, UTAH
SCALE 1 in = 30 ft.
See Section
300 FOOT LEVEL
200 FOOT LEVEL
100 FOOT LEVEL
60 FOOT LEVEL
Large Spar Vein
Average of all assays $8.00

Ex- A
Map #1
Page 2H



Claim Located August 2-3-8-10-10" 1896

Mineral Survey No. 1902

L.O.T. No.

CARSON CITY Land District.

PLAT

OF THE CLAIM OF

A.W.McCUNE & W.L.HOGE

KNOWN AS THE

Horse Shoe No1, Horse Shoe No 2
Horse Shoe No3, Horse Shoe No 4
Bryan & Bryan Extension

IN Eagle Valley MINING DISTRICT,
Lincoln COUNTY, Nevada
Containing an Area of 104.807 Acres.
Scale of 400 Feet to the inch.
Variation 16° 15 E.
SURVEYED April 5 to 13 1900 BY

Frank Anderson U.S. Deputy Mineral Surveyor,

The Original Field Notes of the Survey of the Mining Claim of
A.W.McCUNE & W.L. HOGE
known as the
HORSE SHOE NO.1, HORSE SHOE NO.2
HORSE SHOE NO.3, HORSE SHOE NO.4
BRYAN & BRYAN EXTENSION

from which this plat has been made under my direction have been examined and approved, and are on file in this office; and I herein certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof.

I further certify that Five Hundred Dollars worth of labor has been expended or improvements made upon said Mining Claim by claimant or grantors, and that said improvements consist of O/a Shaft $2500. New Shaft $3375. 100 ft Level $6072. 200 ft Level $2874. Cut $100. Open Cut $75.
Value improvements $14996.00
that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.

And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office.
Reno, Nevada
May 11th 1900

Matthew Kyle
U.S. Surveyor General for
Nevada

Exhibit A

MAP 1

Page 2-H

John C Jordan
Modern Abstract

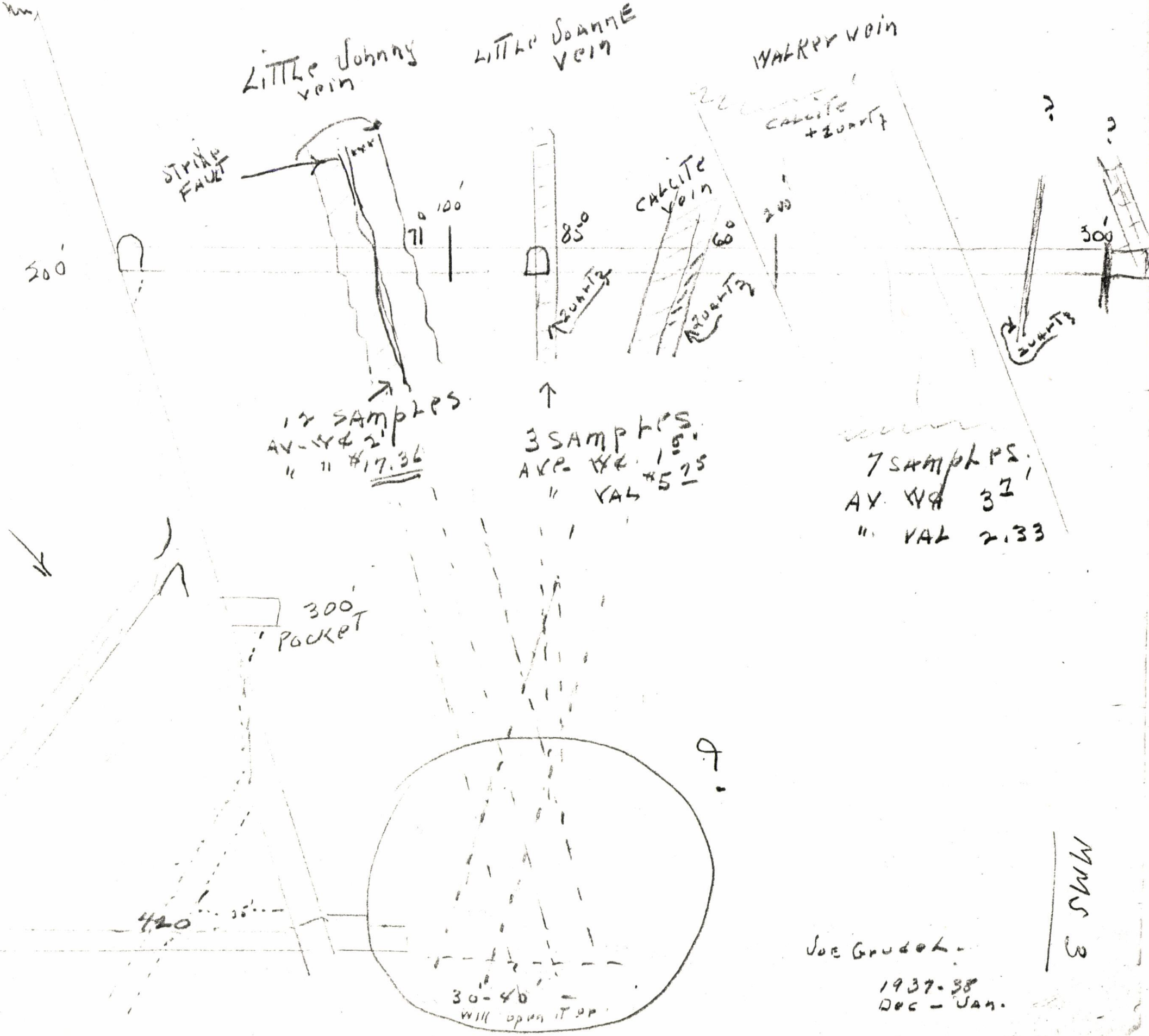
Profile

Looking North

Little Johnny vein

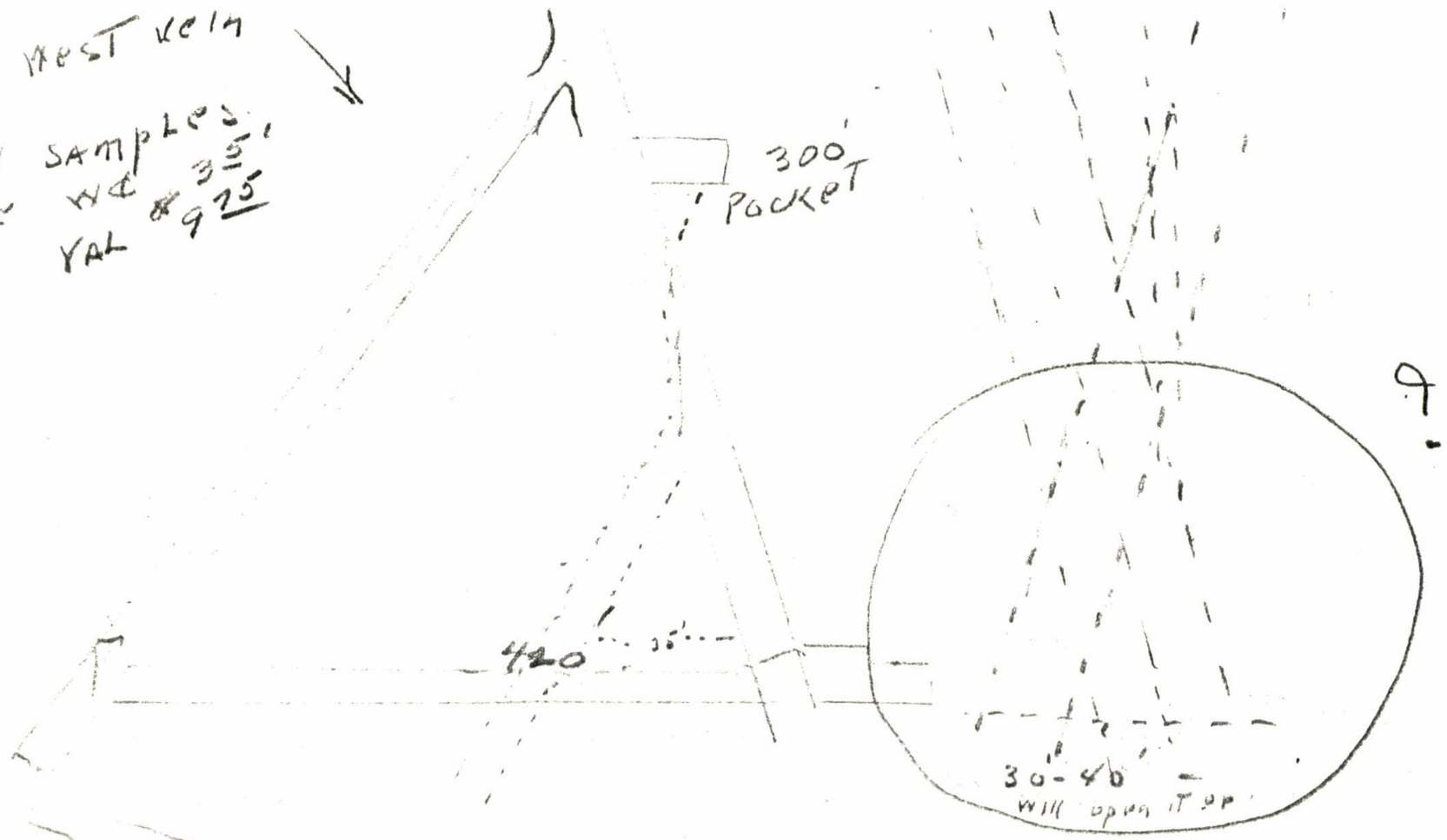
Little Joanne vein

Walker vein



West vein

34 samples.
Ave Wd 3.5'
" Val #9.25



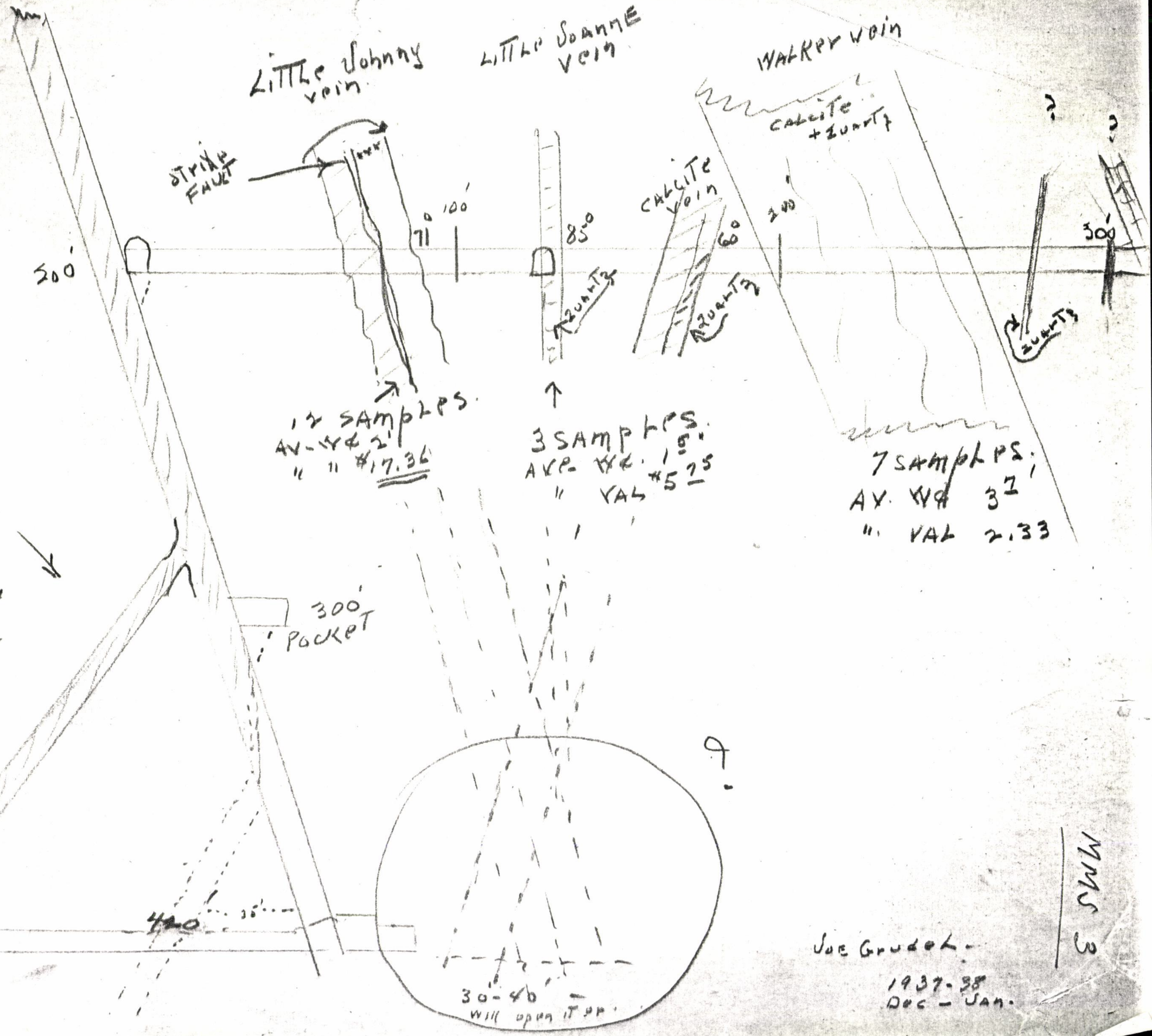
Joe Grubich.

1937-38
Dec - Jan.

MMS 3

Profile

Looking North



9.

MMS 3

Joe Grubel.

1937-38
Dec - Jan.

70° E. DIP

200 LEVEL

300 LEVEL

SHAFT

S. DRIFT

76'

E 10 N.

25' N. 34° W.

24' N. 26° W.

12' N. 34° W.

VEIN

STOPED

133' N. 4° W.

17' N. 10° E.

41' N. 22° W.

26' N. 0

FACE

50' W. 38° N.

33' N. 16° W.

FACE

58' W. 5° N.

N. 30° W. 433'

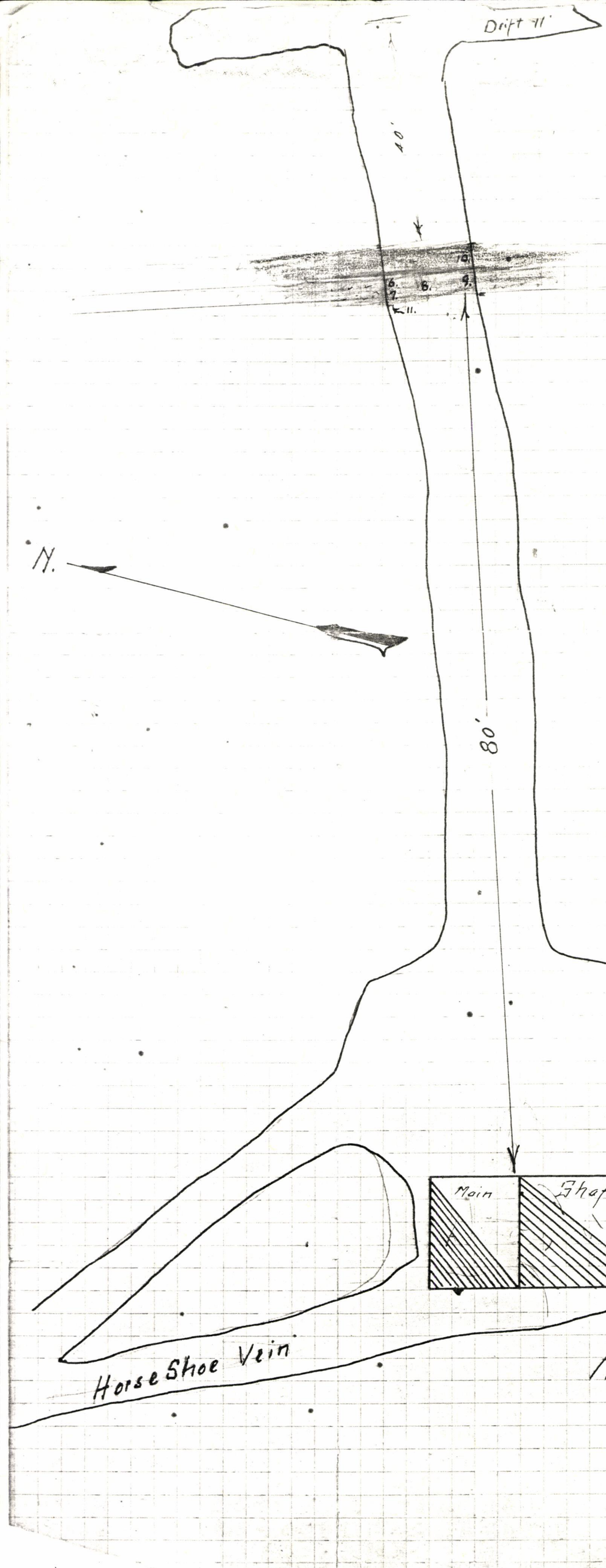
453'

HORSE SHOE Mine FAY, NEVADA

Projection North Drift 400 Level

Scale 1" = 50'

AUG. 1942.



— New Discovery Vein
Approx. width 2-0'

		Au. oz.	Ag. o
1st. Sample	No. 6.	0.96	17.7
Check Samples	" 7.	0.80	11.2
"	" 8.	0.14	1.8
"	" 9.	0.44	6.4
"	" 11.	0.84	14.6
Bull Qz. Vein E. of Ore Sample	# 10.	0.10	1.3

50.000
40
20 — 00
70
100

HorseShoe - Mine

Fay, Nevada.
Nov. 5, 1937

Plan of 2-L Station and East X-Cut

MMS 2

SCALE 1" = 50'

Feb 1942

PAT ENGLISH

N

Face

N 30° W 433'

N 3° W 50'

N 17° W 41'

N 10° E 17'

13' N W

Stope

Face

33' N 16° W

N 30° W

5 DRIFT

SHAFT

N 65° E 54'

N 24° W 41'

N 65° E 54'

N 30° W

Vein

Break Through To East Vein

350' West vein

S

15' (No. 45 Fines)

(400' MAIN HAUL)

Haulage

N 65° W

N 65° E

SHAFT

SEC MAP 65

PAT ENGLISH

130.

1" = 25'

4TH Level - West vein

DEC 27 - 1937

BY JOE GRUDEL

Brought Bemis Phelps M.E.

AVERAGE

#10.19