Keystone Mining Co.
Memo on Proposed Exploration
Along the Crescent Fissure
Under Keystone Apex

STRATIGRAPHY

The Crescent zone has been found to traverse most of the geologic formations exposed in the district, which include Nugget, Ankareh, Thaynes, Woodside, Park City and Weber. These formations are all described in detail in U.S.G.S. P.P. #77 and will not be described again here except those with characteristics favorable to ore deposition.

Only two formations out of those mentioned above as being cut by the Crescent have produced ore along the Crescent zone. These are the Thaynes and Park City formations. The Thaynes formation consists of interbedded series of limestone, limy sandstone, sandstone, and shale. The limestone are relatively thin and are usually sandwiched between sandstone or limy sandstone. A shale unit called the Mid-Red divides the formation into the upper and lower Thaynes. The limestone beds most favorable to ore deposition are found in the calcareous series just above the Mid-Red shale and make up the ore sequence of the Zev stopes. Other favorable horizons are scattered both in the lower and upper members of the formation.

The Park City formation largely consists of limestone, shaly limestone, and cherty limestone with some quartzite and sandstone members. The favorable ore horizons have been known for many years and used as major guides in developing ore in the district, especially in the Silver King Mine. The most famous and productive horizon has been named the Jenney ore bed and lies between the "Jenney" or "footwall" quartzite and the "Hanging Wall" sandstone about 110 to 130 feet above

Weber contact. The Jenney ore bed limestone is about 22 feet thick with a 13-15 foot quartzite member below and a 3 foot sandstone bed above.

In the Silver Hill area twelve different horizons in the Park City formation have been found to be replaced with ore in minable tonnage. This is the largest number of distinct horizons at which ore has been found in this formation in the district. These beds usually are better limestone horizons between more impure limestone or sandstone beds.

THE EXPLORATION PROJECT

The most favorable place to prospect for further ore bodies along the Crescent zone southwest of the Silver Hill area is along the Jenney ore horizon in the immediate footwall of the fissure. The Jenney ore bed has proven to be by far the largest producer in the Silver Hill area and has the additional advantage of being almost the lowest favorable horizon in the Park City formation. The Silver Hill 900 level is ideally situated to prospect this horizon and to provide drilling stations for checking the overlying beds.

The proposed exploration program is outlined on Plate 5, and involves sixteen hundred feet of lateral drifting with a total of seven hundred feet of crosscuts. The program is outlined to drift parallel to the fissure approximately one hundred feet in the footwall with crosscuts to the Crescent zone every four hundred feet and drill stations every two hundred feet. It is necessary to drift far enough away from the Crescent zone to avoid the heavy ground along the fault and dikes. A total of five thousand feet of diamond drilling and five thousand feet of extension percussion drilling will be done principally as illustrated in Plate I.

Drill stations will be cut between each crosscut and will permit diamond drilling of overlying strata for possible replacement ores and also supplementary extension percussion drilling to the Crescent and along any footwall veins or beds that merit investigation. Experience in the district has proven the extension percussion drills to be of great

value in prospecting for ore adjacent to development headings and checking favorable bedding-vein intersection at a very low cost. They will enable the exploration program to be carried on without preliminary raises or subsidiary drifting.

The primary objective of the project is to open up a considerable length of the Crescent zone for exploration by diamond and percussion drilling, thus permitting the maximum amount of ground to be prospected at the least possible cost. Plate I illustrates the typical drill program at two hundred foot intervals, but it must be emphasized that much of the drilling will be determined by geological conditions during the course of the development work.

MARVIN P. BARNES
Consulting Geologist

TYPICAL CROSS SECTION
THRU
DRILL STATIONS & CROSSCUTS
ILLUSTRATING
POSITIONS OF DDH & EDH
RELATIVE TO CRESCENT FISSURE
1" = 100'

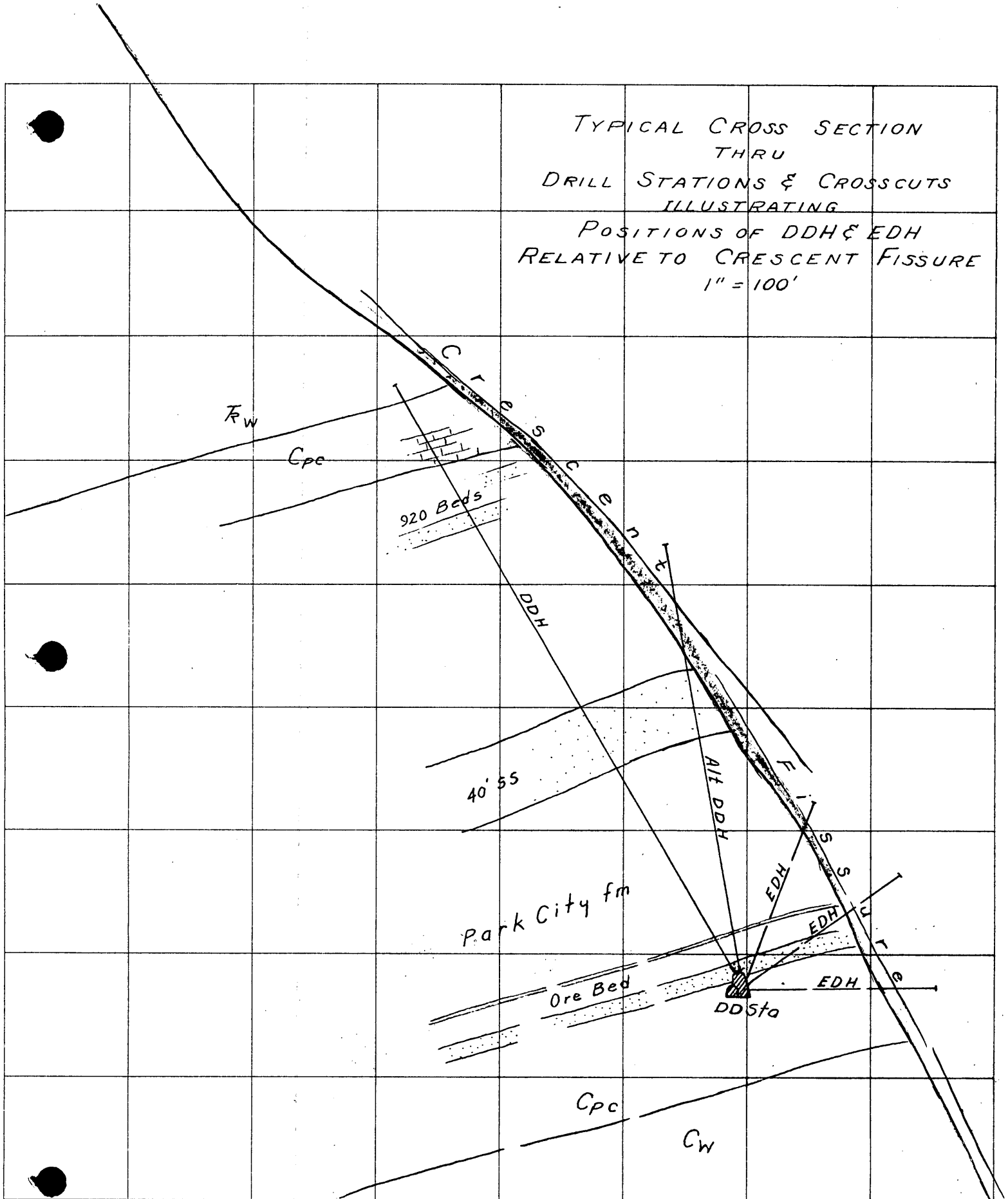


Plate I

April 6, 1960
Re: OME 0079 (Lead-Zinc)
Keystone Mining Company
Keystone Mine
Summit County, Utah

Memorandum

To: W. R. Griswold, Office of Minerals Exploration

From: Harold Kirkham, U. S. Geological Survey

Subject: Review of application for exploration assistance

The Applicant proposes to prospect for lead-zinc-silver replacement orebodies along the Crescent zone southwest of the Silver Hill area in the Park City District. The Jenney ore bed limestone and other favorable beds in the Park City formation and the Crescent fissure zone would be tested with 2,300 feet of lateral drifting and crosscutting, 3,000 feet of diamond drilling, and 5,000 feet of long hole or extension percussion drilling. Total cost of the project would be nearly $181,500.

Mr. Marvin F. Barnes, consulting geologist, reviewed the project with Messrs. Selfridge, Griswold, and Kirkham on April 5, 1960, in the OME conference room. The proposed program seems to be well designed to test the ore possibilities. The geologic problems and conditions that affect the chances of finding ore and the ground conditions are recognized by the Applicant.

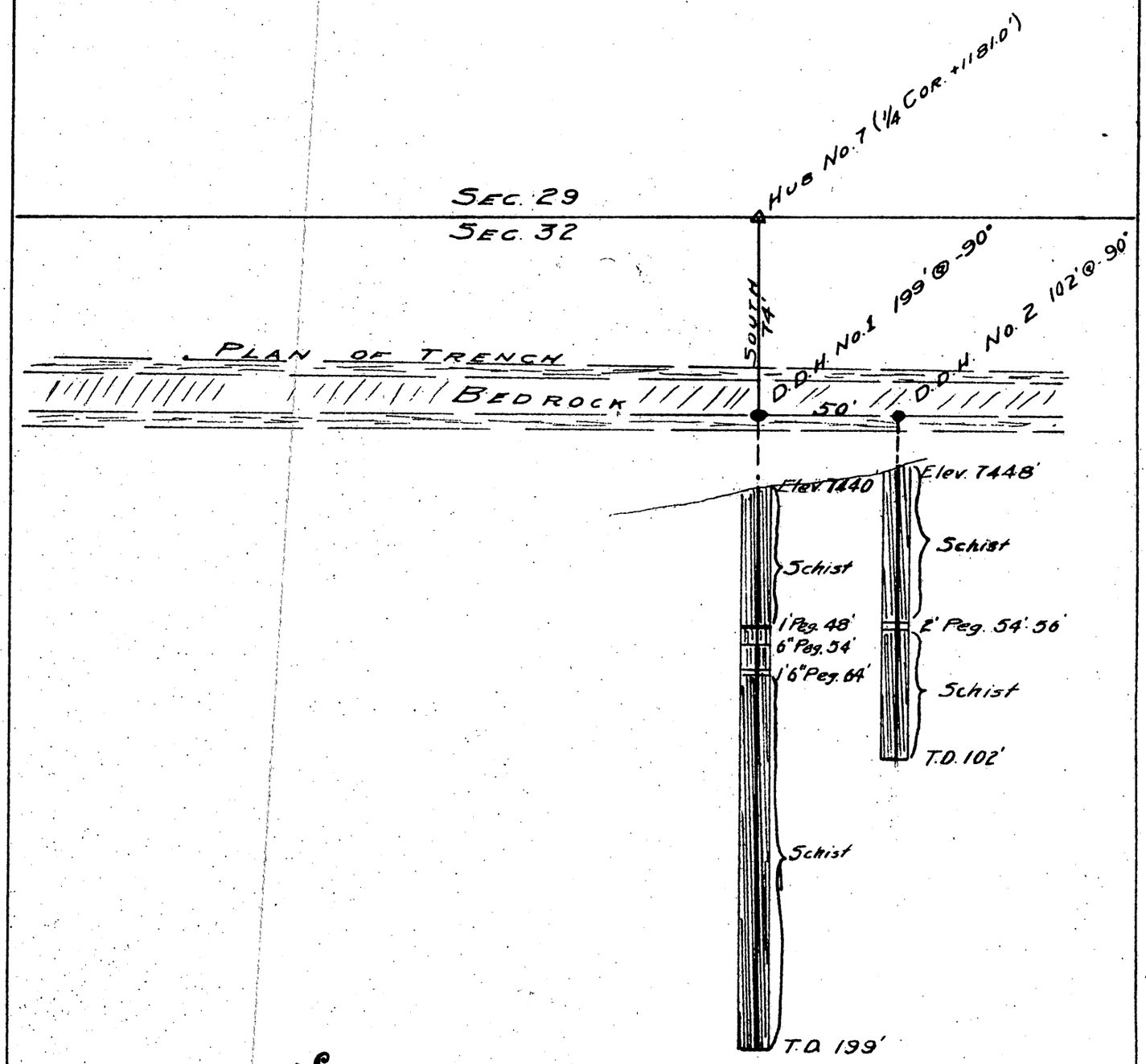
The field examiners have visited the mine, and I recommend obtaining their opinion of the proposal before further processing of the application.

Harold Kirkham

cc: OME (3)
H. M. Calloway, 3620
Director's reading
Branch reading
Chron. file
Docket file ✓

HKirkham/mm
G-MD-4-6-60

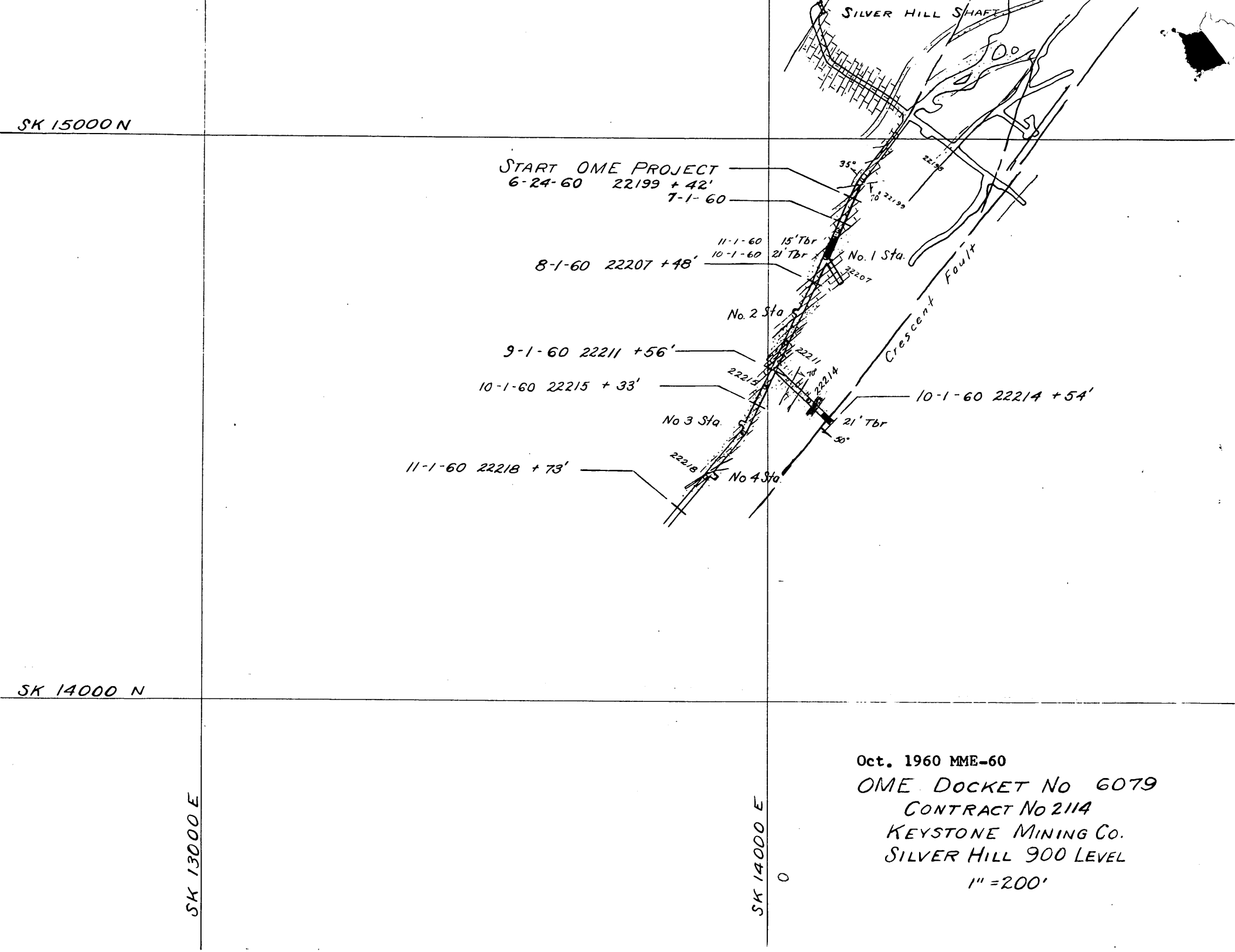
Aug. 1960 MME-60 (Beryl-Tantalum)
Tri-State Metals Corp.
2107 - OME-6058

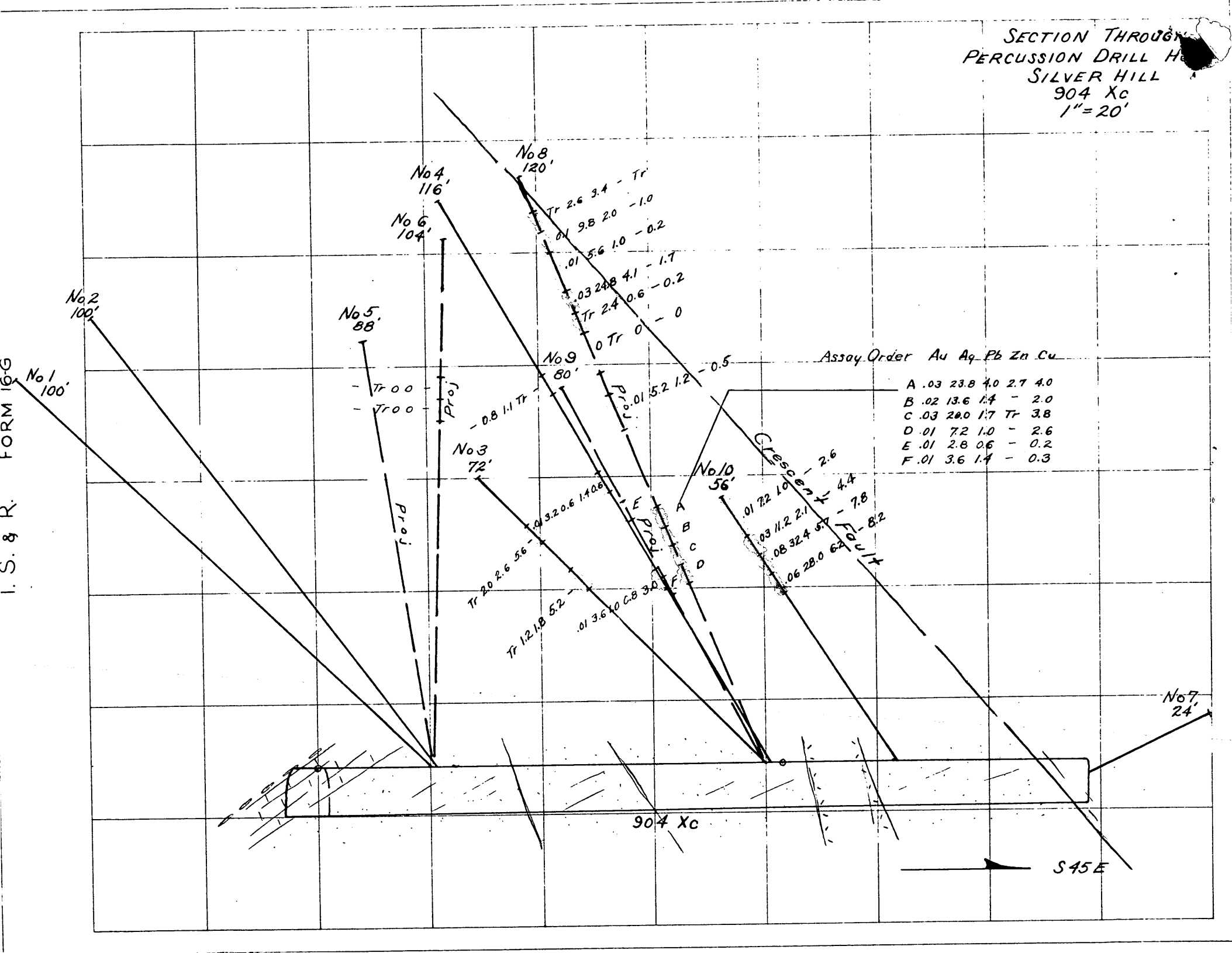


VERTICAL SECTION
DIAMOND DRILLING
O.M.E.- 6058
TRI-STATE METALS INC.
TED GLASS PROPERTY
TAOS COUNTY, NEW MEXICO

PROGRESS REPORT AUG. 1960
SCALE 1" - 50'

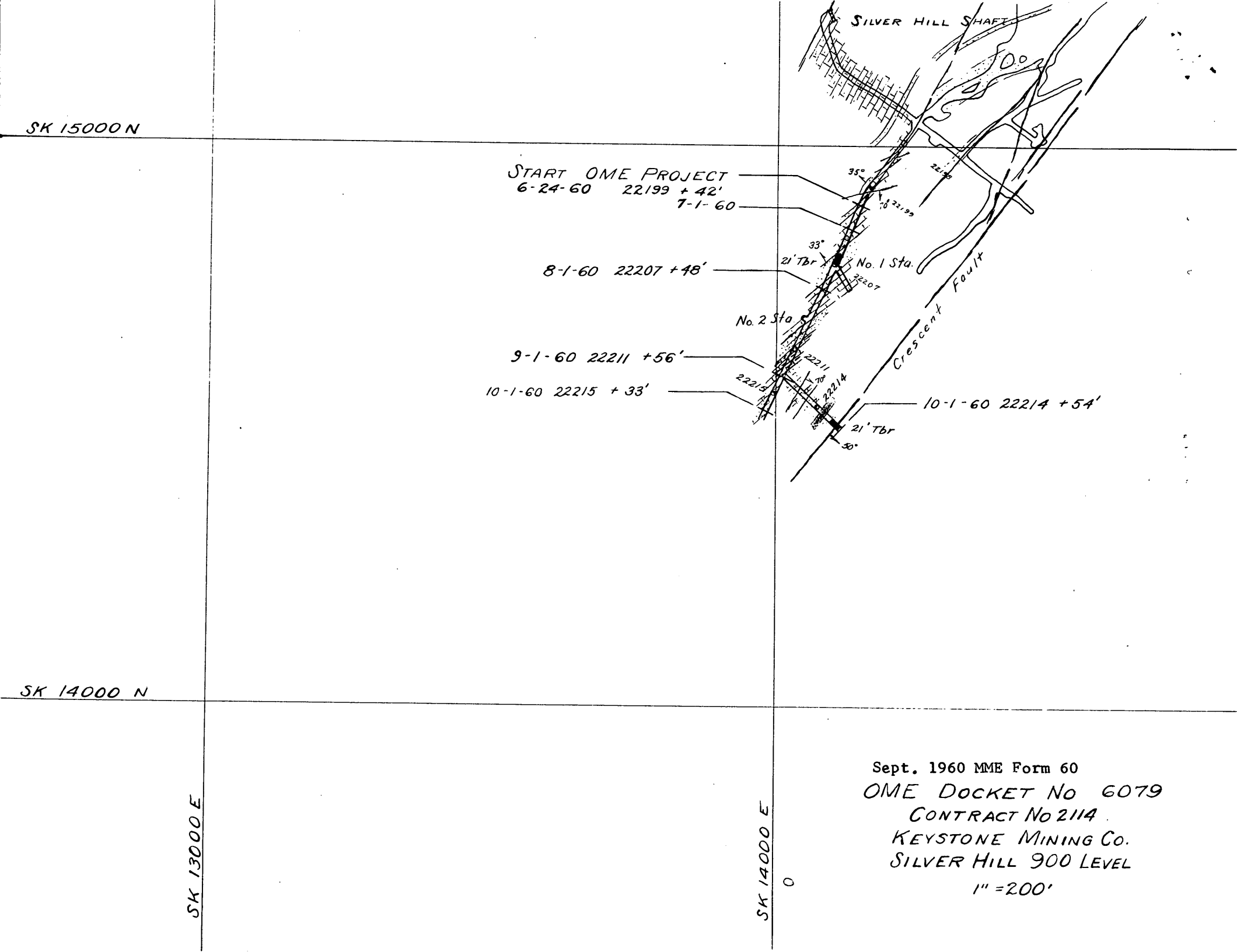
I.L.S.

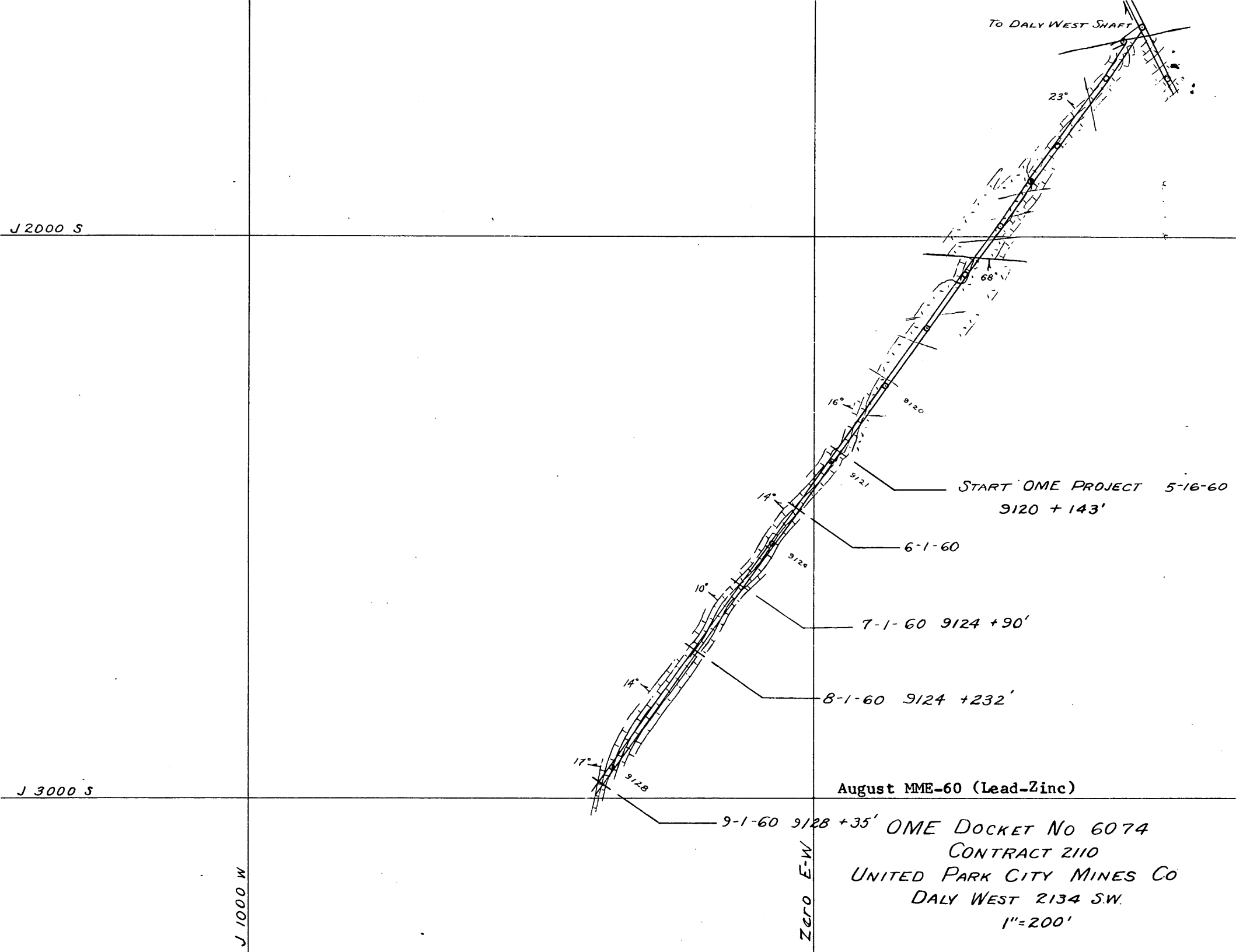

SILVER HILL SHAFT
SK 15000 N
START OME PROJECT
6-24-60 22199 + 42'
7-1-60
11-1-60 15' Tbr
10-1-60 21' Tbr
No. 1 Sta.
8-1-60 22207 + 48'
No. 2 Sta
9-1-60 22211 + 56'
10-1-60 22215 + 33'
No 3 Sta.
11-1-60 22218 + 73'
No 4 Sta.
10-1-60 22214 + 54'
21' Tbr
Crescent Fault
SK 14000 N
SK 13000 E
SK 14000 E
0
Oct. 1960 MME-60
OME DOCKET No 6079
CONTRACT No 2114
KEYSTONE MINING CO.
SILVER HILL 900 LEVEL
1" = 200'


SECTION THROUGH
PERCUSSION DRILL H
SILVER HILL
904 Xc
1" = 20'
No 8, 120'
No 4, 116'
No 6, 104'
No 2 100'
No 5, 88'
No 1 100'
No 9 80'
No 3 72'
No 10 56'
No 7, 24'
Tr 2.6 3.4 - Tr
.01 9.8 2.0 - 1.0
.01 5.6 1.0 - 0.2
.03 24.8 4.1 - 1.7
Tr 2.4 0.6 - 0.2
0 Tr 0 - 0
- 0.5
Tr 0 0 -
Tr 0 0 -
Proj.
- 0.8 1.1 Tr -
Proj. .01 5.2 1.2
.01 3.2 0.6 1.4 0.6
Tr 2.0 2.6 5.6 -
Tr 1.2 1.8 5.2 -
.01 3.6 1.0 0.8 3.0
Proj.
A
B
C
D
E
F
Crescent Fault
- 2.6
.01 7.2 1.0 - 4.4
.03 11.2 2.1 - 7.8
.08 32.4 5.7 - 8.2
.06 28.0 6.2
Assay Order Au Ag Pb Zn Cu
A .03 23.8 4.0 2.7 4.0
B .02 13.6 1.4 - 2.0
C .03 20.0 1.7 Tr 3.8
D .01 7.2 1.0 - 2.6
E .01 2.8 0.6 - 0.2
F .01 3.6 1.4 - 0.3
904 Xc
S 45 E

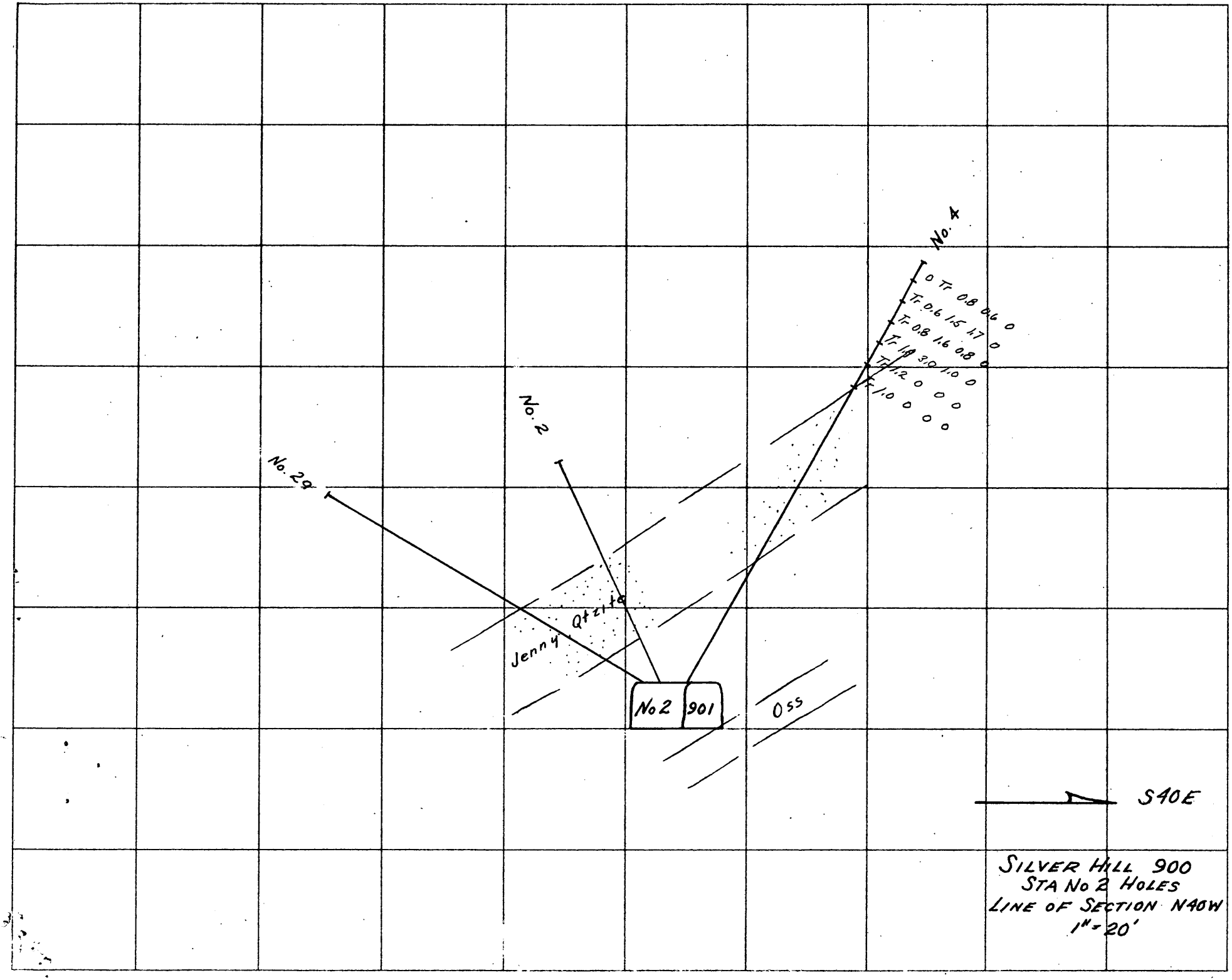
I. S. & R. FORM 16-G

[illegible]
[illegible]
[illegible]
[illegible]

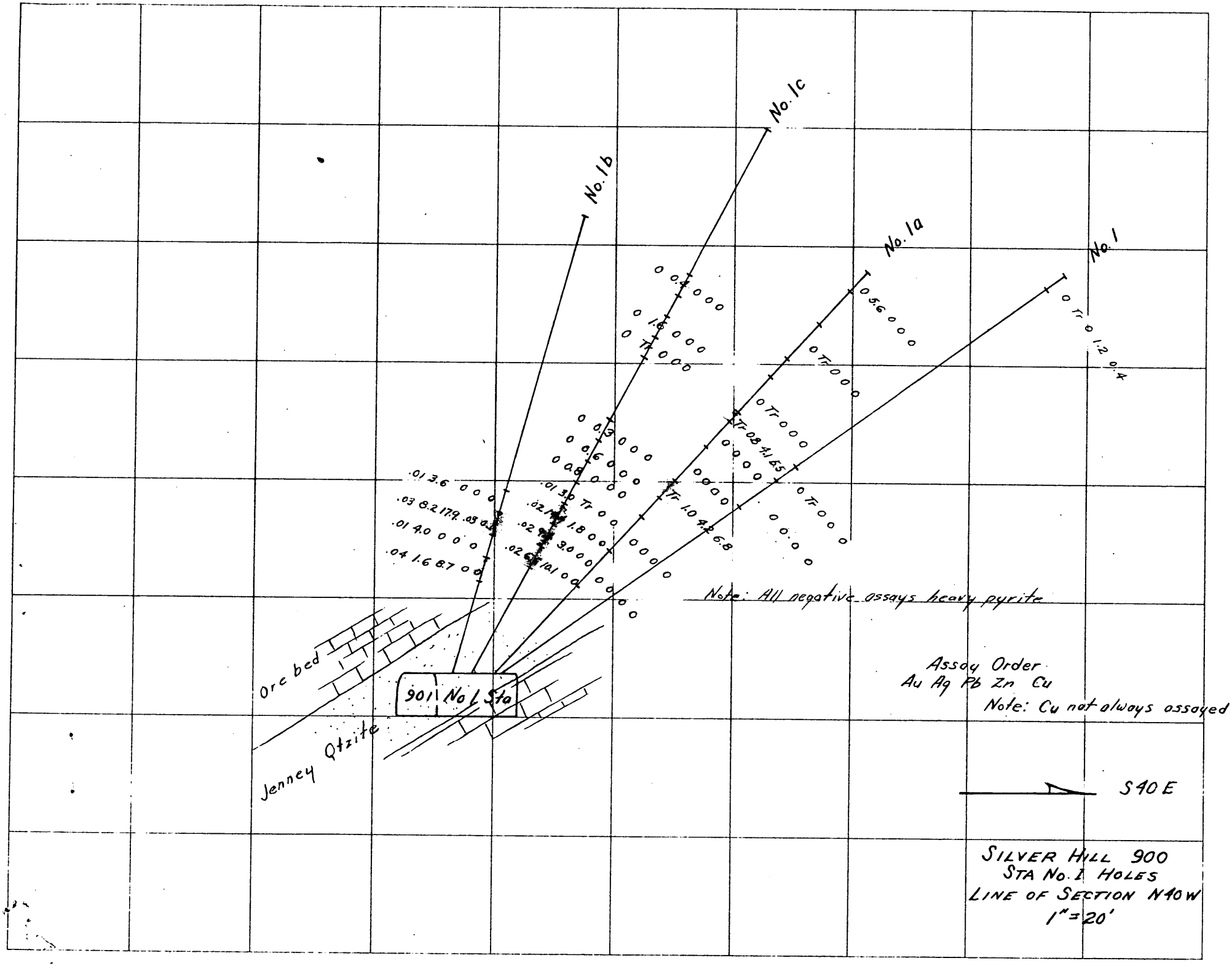

SILVER HILL SHAFT
SK 15000 N
START OME PROJECT
6-24-60 22199 + 42'
7-1-60
35°
22199
70°
33°
21' Tbr
No. 1 Sta.
8-1-60 22207 + 48'
22207
No. 2 Sta
Crescent Fault
9-1-60 22211 + 56'
22211
70°
22215
22214
10-1-60 22215 + 33'
10-1-60 22214 + 54'
21' Tbr
50°
SK 14000 N
SK 13000 E
SK 14000 E
0
Sept. 1960 MME Form 60
OME DOCKET No 6079
CONTRACT No 2114
KEYSTONE MINING CO.
SILVER HILL 900 LEVEL
1" = 200'


To Daly West Shaft
23°
68°
16°
9120
9121
14°
9122
10°
14°
17°
9128
J 2000 S
J 3000 S
J 1000 W
Zero E-W
Start OME Project 5-16-60
9120 + 143'
6-1-60
7-1-60 9124 +90'
8-1-60 9124 +232'
9-1-60 9128 +35'
August MME-60 (Lead-Zinc)
OME Docket No 6074
Contract 2110
United Park City Mines Co
Daly West 2134 S.W.
1"=200'

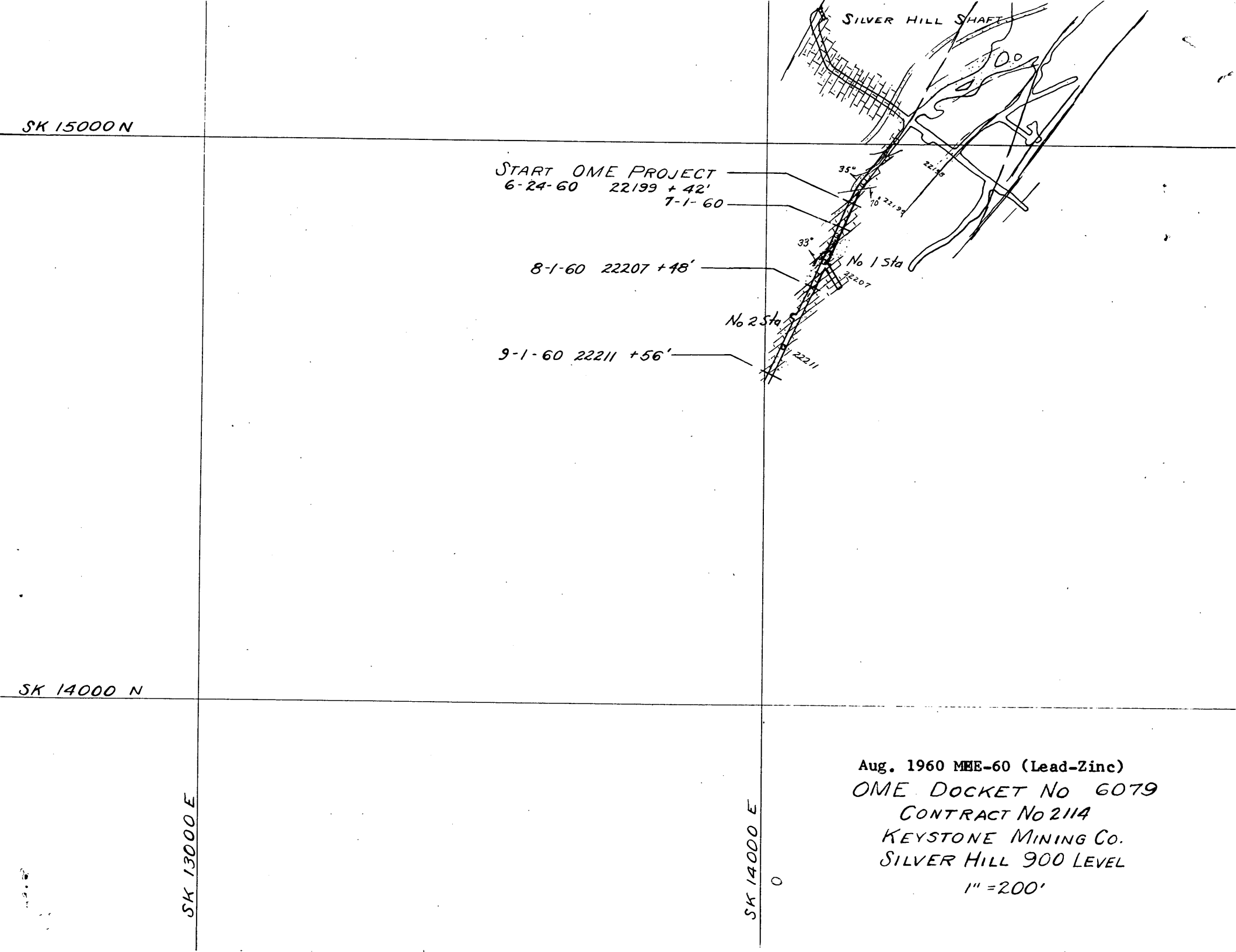
RECEIVED
SEP 23
OFFICE OF THE SECRETARY
FISCAL SECTION

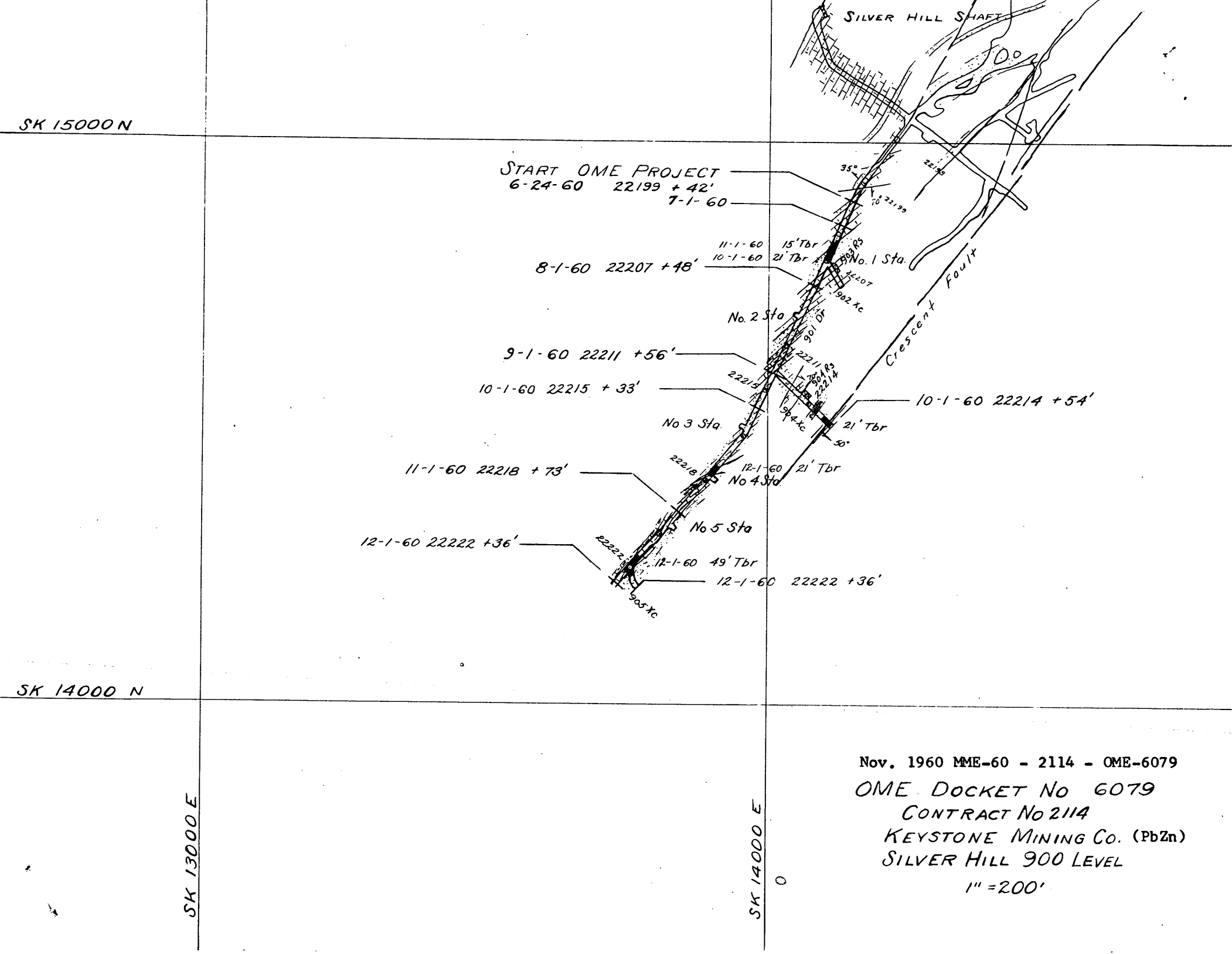

No. 4
0 Tr 0.8 0.6 0
Tr 0.6 1.5 1.7 0
Tr 0.8 1.6 0.8 0
Tr 1.0 3.0 1.0 0
Tr 1.2 0 0 0
Tr 1.0 0 0 0
No. 2
No. 2a
Qtzite
Jenny
No 2
901
Oss
S40E
SILVER HILL 900
STA No 2 HOLES
LINE OF SECTION N40W
1" = 20'

I. S. & R. FORM 16-G


No. 1c
No. 1b
No. 1a
No. 1
Ore bed
Jenney Qtzite
901 No 1 Sta
Note: All negative assays heavy pyrite
Assay Order
Au Ag Pb Zn Cu
Note: Cu not always assayed
S 40 E
SILVER HILL 900
STA No. 1 HOLES
LINE OF SECTION N40W
1" = 20'

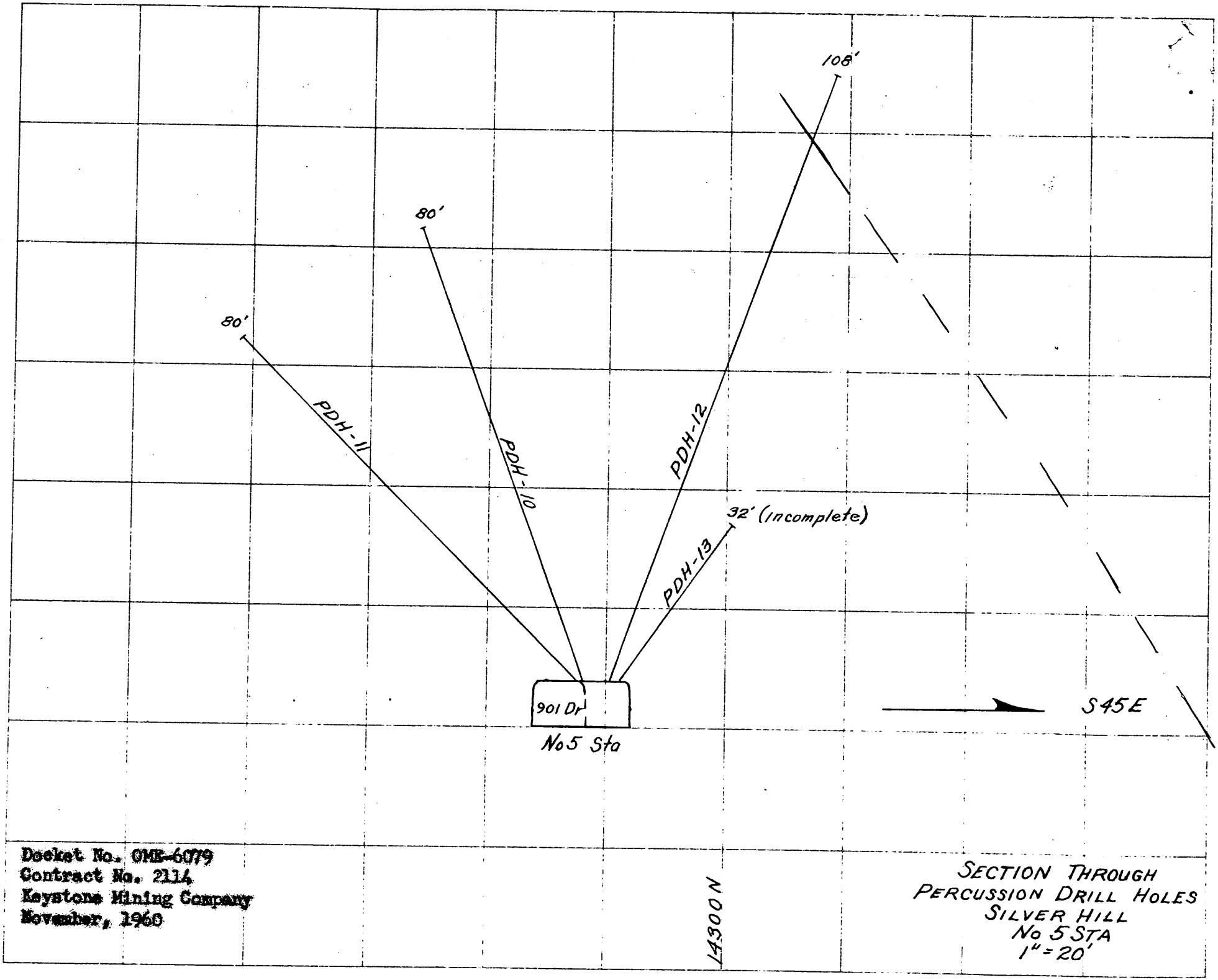
I. S. & R. FORM 16-G


SILVER HILL SHAFT
SK 15000 N
START OME PROJECT
6-24-60 22199 + 42'
7-1-60
8-1-60 22207 +48'
9-1-60 22211 +56'
35°
10°
33°
22199
22207
22211
No 1 Sta
No 2 Sta
SK 14000 N
SK 13000 E
SK 14000 E
0
Aug. 1960 MEE-60 (Lead-Zinc)
OME DOCKET No 6079
CONTRACT No 2114
KEYSTONE MINING CO.
SILVER HILL 900 LEVEL
1" = 200'



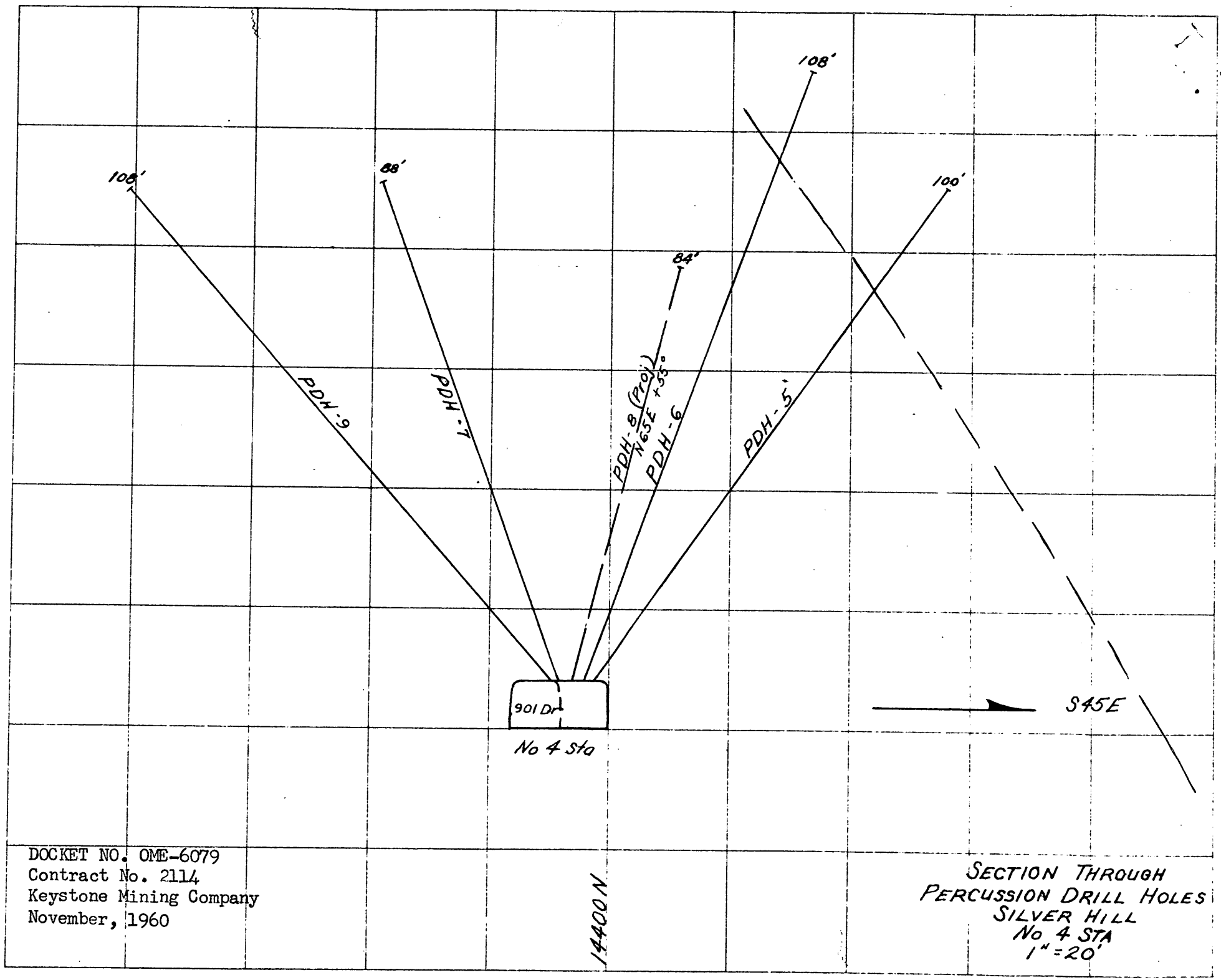
Nov. 1960 MME-60 - 2114 - OME-6079

OME DOCKET No 6079
CONTRACT No 2114
KEYSTONE MINING CO. (PbZn)
SILVER HILL 900 LEVEL
1" = 200'



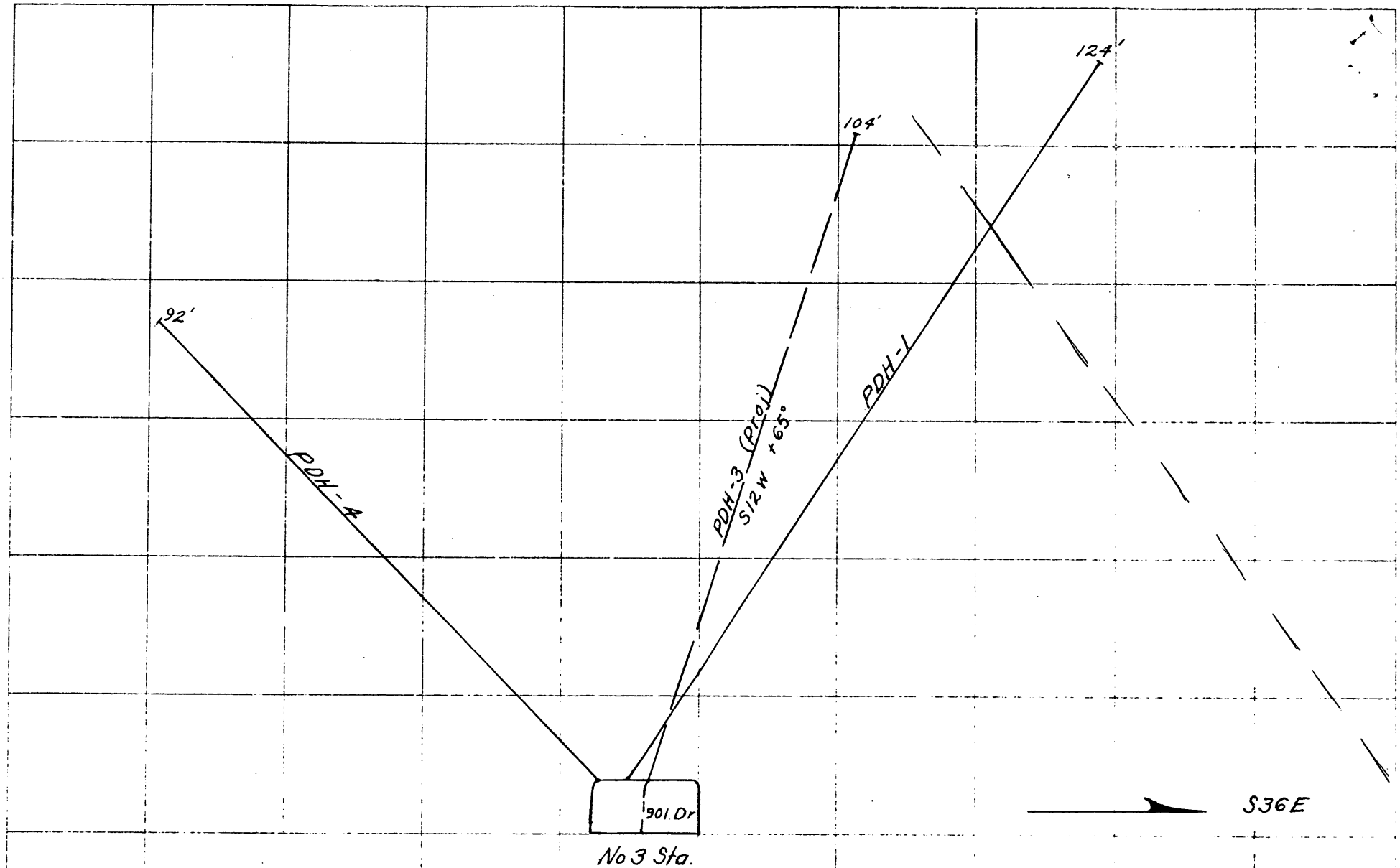
Docket No. OMB-6079
Contract No. 2114
Keystone Mining Company
November, 1960

SECTION THROUGH
PERCUSSION DRILL HOLES
SILVER HILL
No 5 STA
1" = 20'



DOCKET NO. OME-6079
Contract No. 2114
Keystone Mining Company
November, 1960

SECTION THROUGH
PERCUSSION DRILL HOLES
SILVER HILL
No. 4 STA
1" = 20'



DOCKET NO. OME-6079
Contract No. 2114
Keystone Mining Company
November, 1960

14500N

SECTION THROUGH
PERCUSSION DRILL HOLES
SILVER HILL
No 3 STA
1" = 20'

March 28, 1960

Walker Bank & Trust Company
Main and Second South
Salt Lake City, Utah

Re: Exploration Loan
Attention: Mr. A. B. Keeler, Jr.

Gentlemen:

We have discussed with you informally the desire of Keystone Mining Company to borrow the sum of One Hundred Eighty Thousand Dollars ($180,000.00) on a five to seven year loan in order to complete certain exploration work on our mining properties in the Park City Mining District.

As we have discussed with you, our corporation is in a sound financial condition and has no outstanding liabilities. The nature of the exploration work which we contemplate is outlined in the report and illustrated on the maps which we have furnished to you. This exploration program is necessary in order to place our claims into production again on an economically favorable basis.

We would appreciate your consideration of such a loan in view of the foregoing and the other information which has been furnished to you.

Very truly yours,

KEYSTONE MINING COMPANY

_____
President

WALKER BANK & TRUST COMPANY

ESTABLISHED 1859 — MEMBER FEDERAL RESERVE SYSTEM

SALT LAKE CITY, UTAH

March 29, 1960

Mr. Clarence Bamberger, President
Keystone Mining Company
163 South Main Street
Salt Lake City, Utah

Dear Mr. Bamberger:

We have received your letter of March 28, 1960 requesting our favorable consideration of a five to seven year term loan of $180,000, to complete certain exploration work on your properties in the Park City mining district. Your letter supplements the several conferences we have had concerning the exploration work, and we appreciate the detail in which you presented your program to us.

For many years past we have made only a very few loans to mining companies; and in all of these instances the loans were for short-term working capital needs and were well secured either by pledge of United States Government bonds or, in one instance, by refined metal awaiting shipment. We have never made loans for exploratory or development work. In the present so-called "tight money market", we have refused to make term loans of any kind, feeling we could best serve our customers by confining loans to strictly short-term extensions of credit.

Accordingly, we are not interested in making the loan of $180,000 to the Keystone Mining Company, as outlined in your letter, nor would we be interested in participating in such a loan with any other bank or agency of Government.

We appreciate, however, your bringing this matter to our attention.

Yours very truly,

A. B. Kesler, Jr.
Vice President

ABK:oo

WALKER BANK 100 YEARS 1859 1959

Aug. 1960 MME-60 (PbZnCu)
Brennan Hannifin
2109 - OME-6067

5600N

5400N

5200N

5000N

4200E

4400E

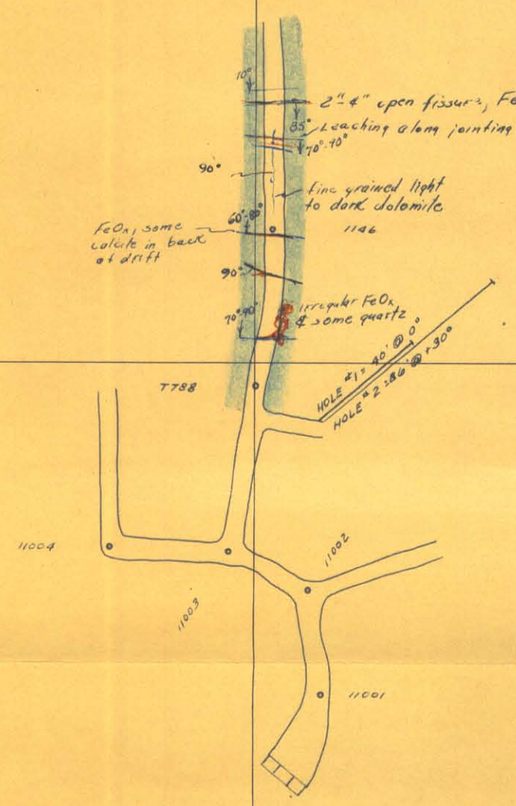
4600E

4800E

EXPLORATION CONTRACT

Brennan Hannifin

DOCKET NO. OME-6067



HOLE #1

DIST.	Au.	Ag.	Pb.	Zn.
20-24	-	.1	Tr.	Tr.
24-28	.01	.5	Tr.	.5
28-32	.01	.4	Tr.	.7
32-40	Tr	.8	.3	.3

HOLE #2

DIST.	Au	Ag	Pb	Zn
20-24	-	.1	.3	Tr
24-28	-	Tr.	Tr.	Tr.
28-32	-	.2	Tr	Tr
32-36	-	.2	Tr	Tr.
36-40	-	Tr	Tr	Tr
40-44	Tr	.2	.4	Tr
44-48	Tr	.1	Tr.	Tr.
60-64	.005	.2	Tr.	.9
68-72	.005	Tr	Tr.	.4
72-76	Tr.	Tr.	Tr.	.3
76-80	Tr.	Tr	Tr.	Tr.
80-86	Tr	.1	Tr.	.4

BULLION BECK

1100 LEVEL

SCALE = 1" = 50'

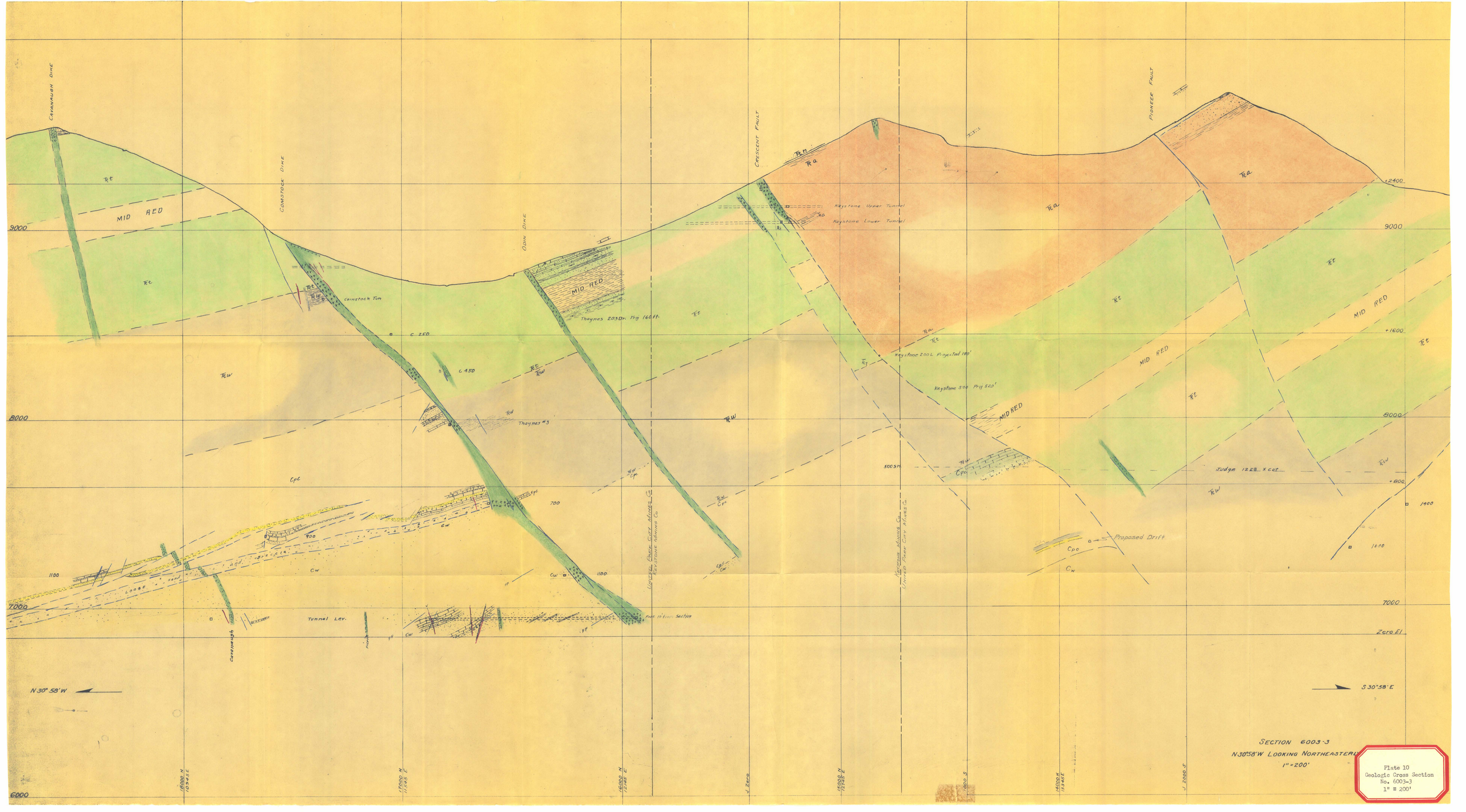
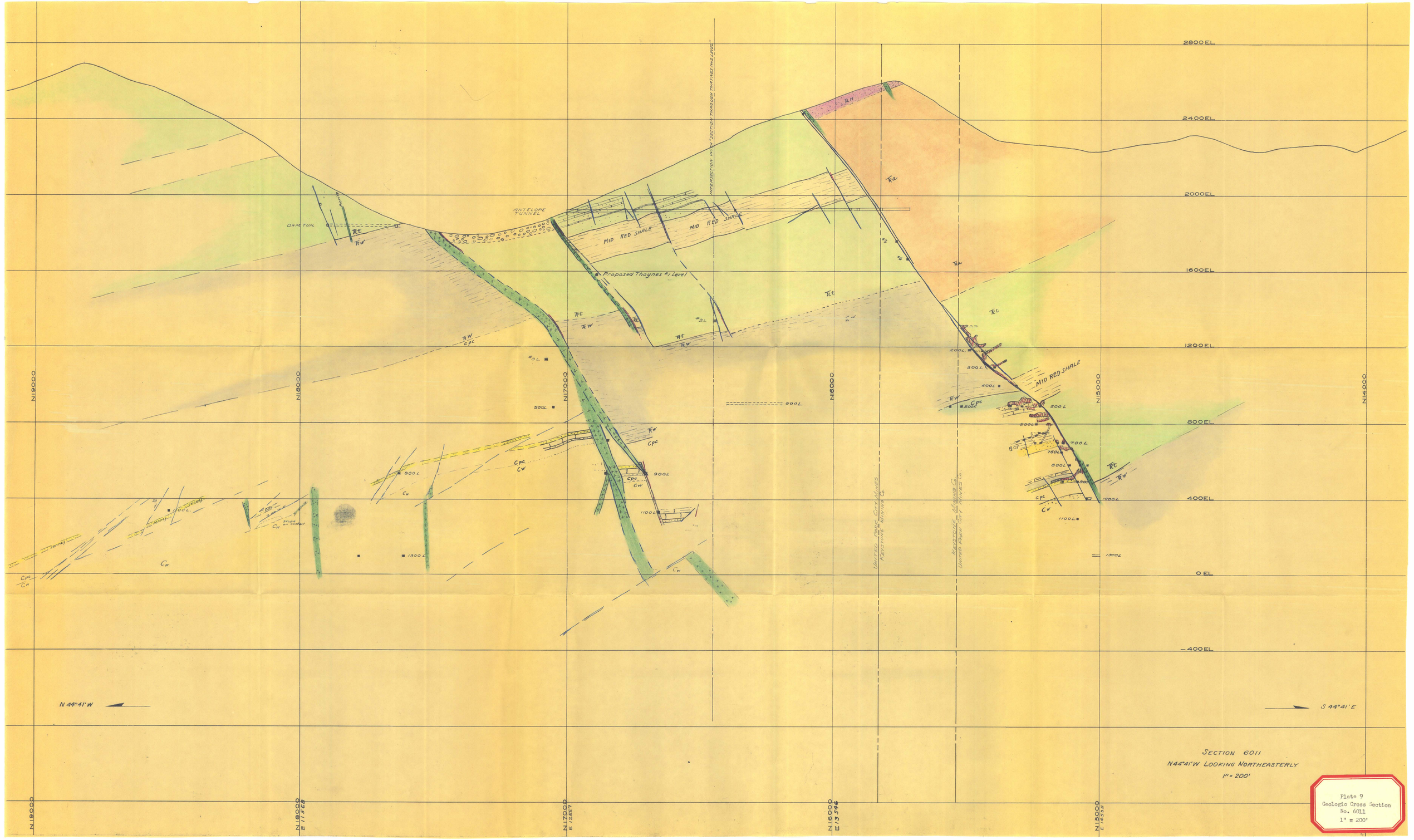


Plate 10
Geologic Cross Section
No. 6003-3
1" = 200'

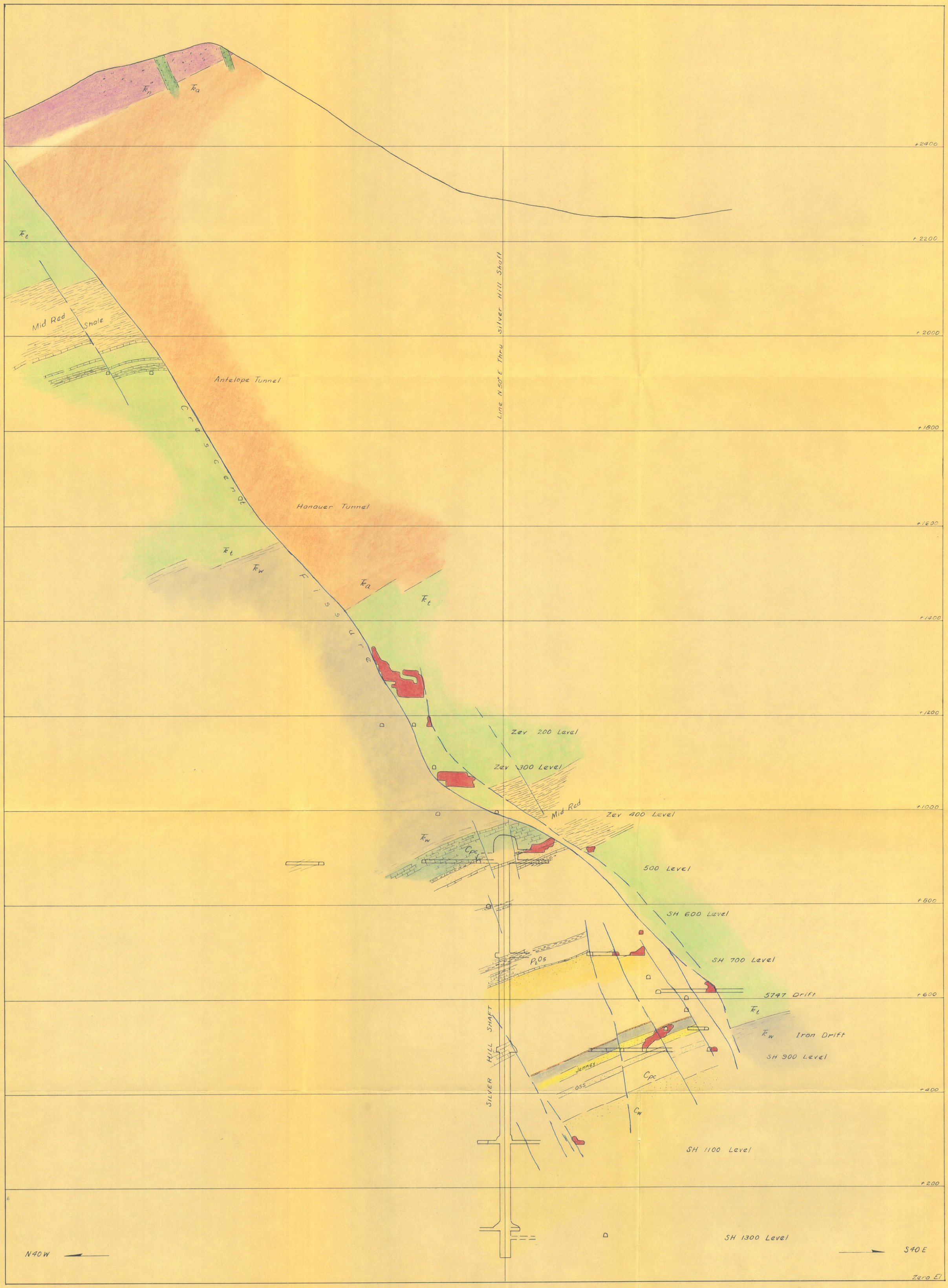


SECTION 6011
N44°41'W LOOKING NORTHEASTERLY
1" = 200'

Plate 9
Geologic Cross Section
No. 6011
1" = 200'

SECTION 3
N40W LOOKING NORTHEASTERLY
1"=100'

Plate 8
Geologic Cross Section
No. 3
1" = 100'



SECTION 2
N40W LOOKING NORTHEASTERLY
1" = 100'

Plate 7
Geologic Cross Section No.2
1" = 100'

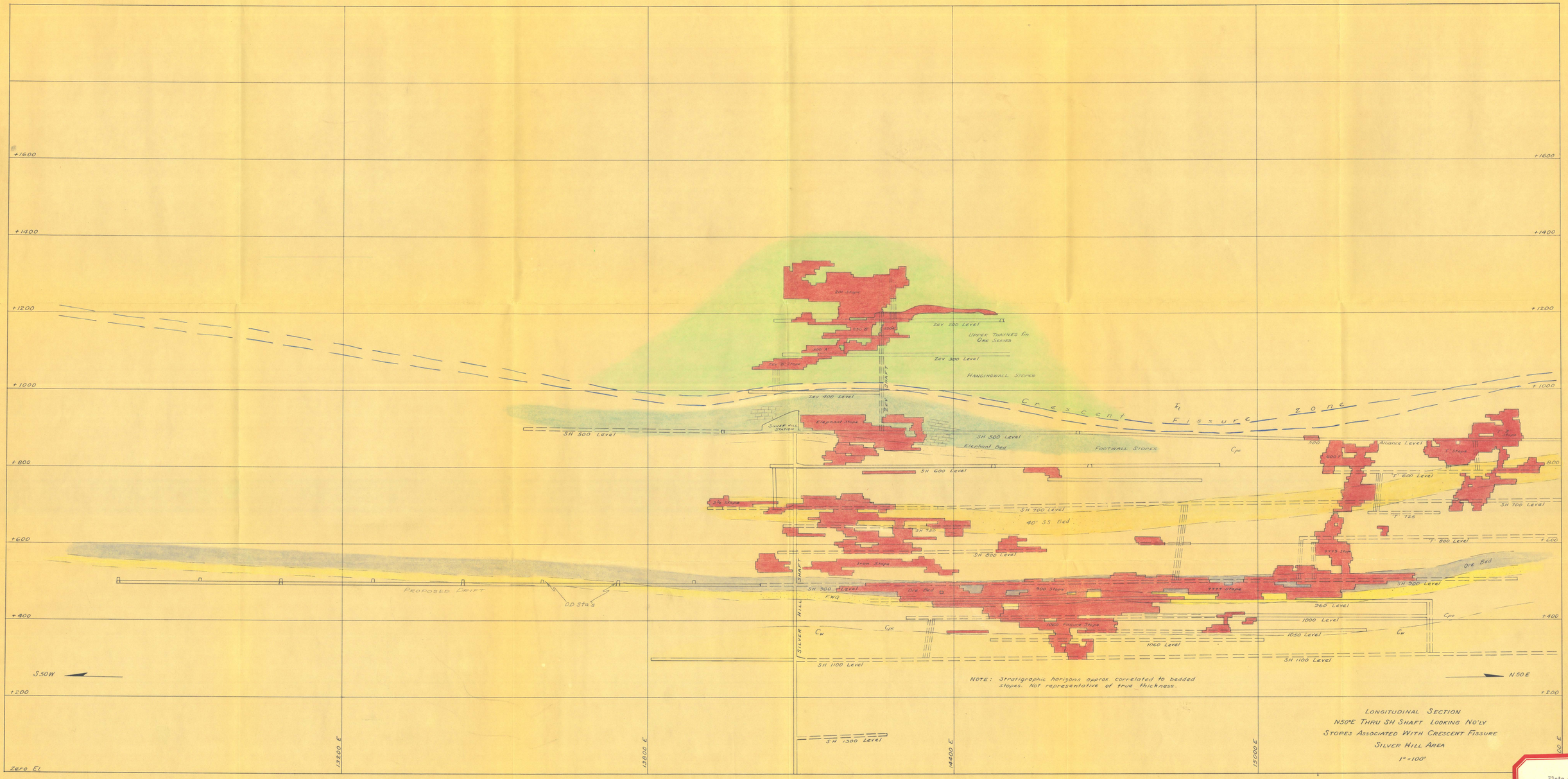


Plate 6
Longitudinal Section
Thru Silver Hill Stopes
1" = 100'

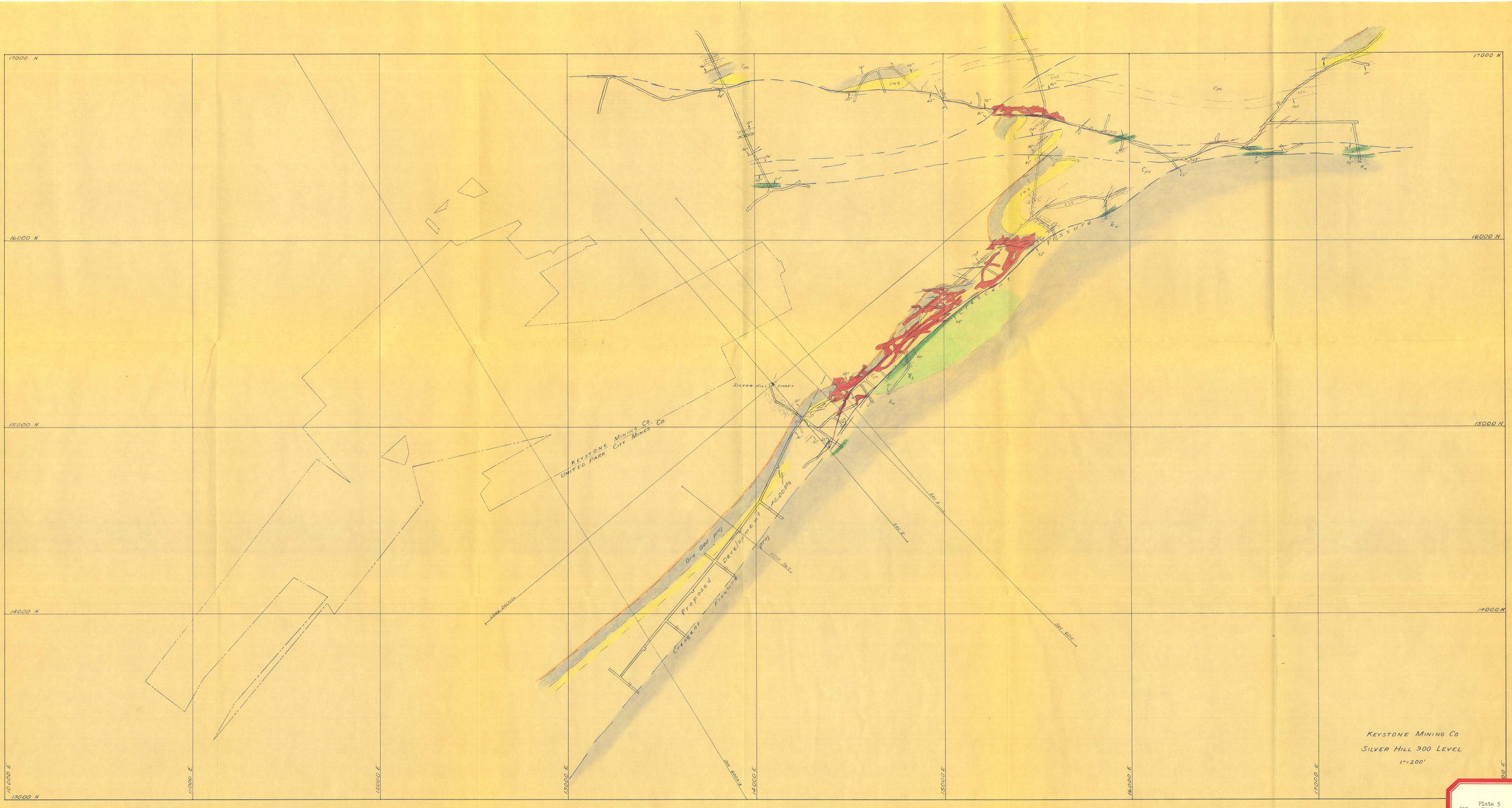


Plate 5
Silver Hill 900 Level
1" = 200'

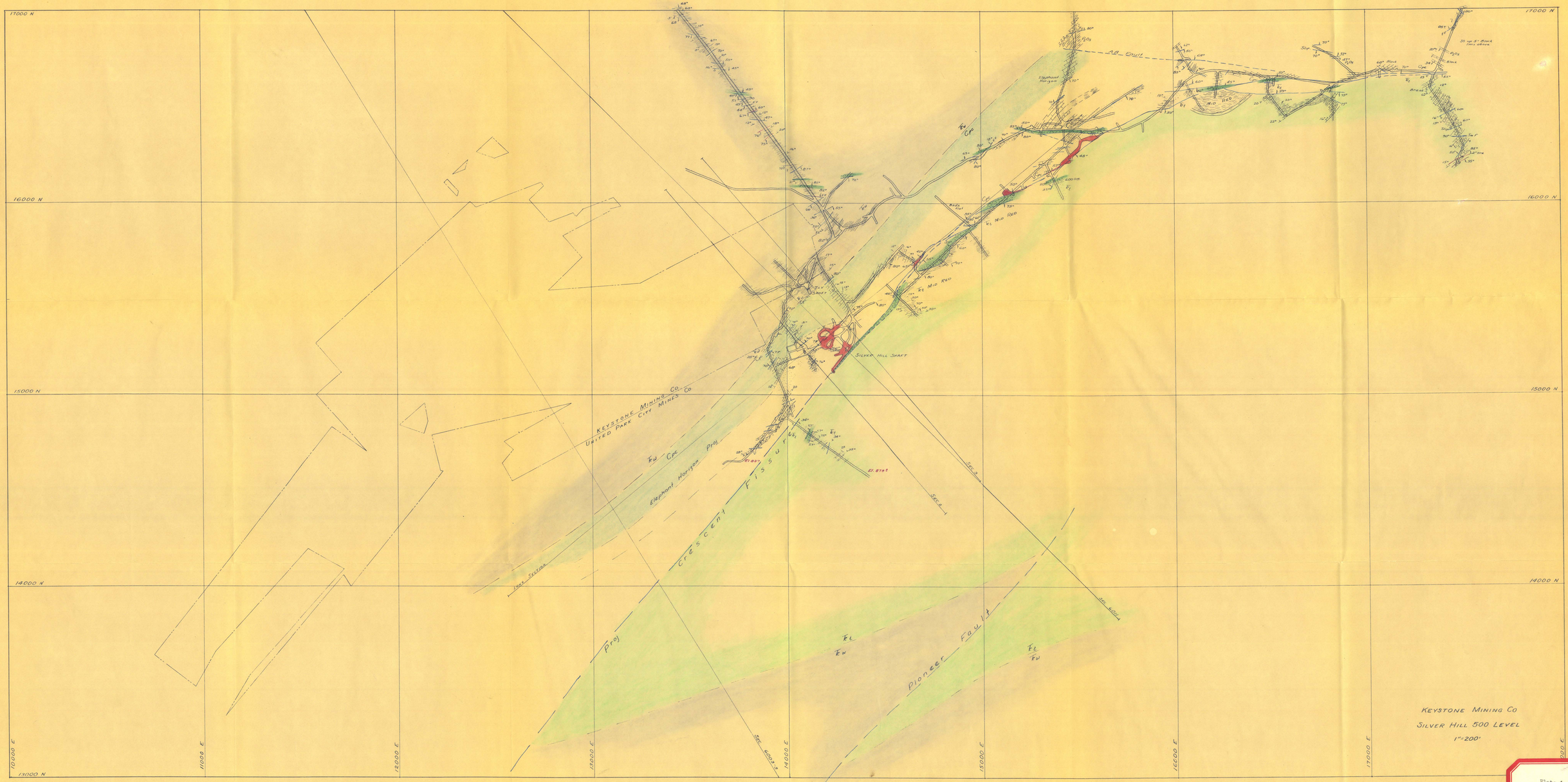
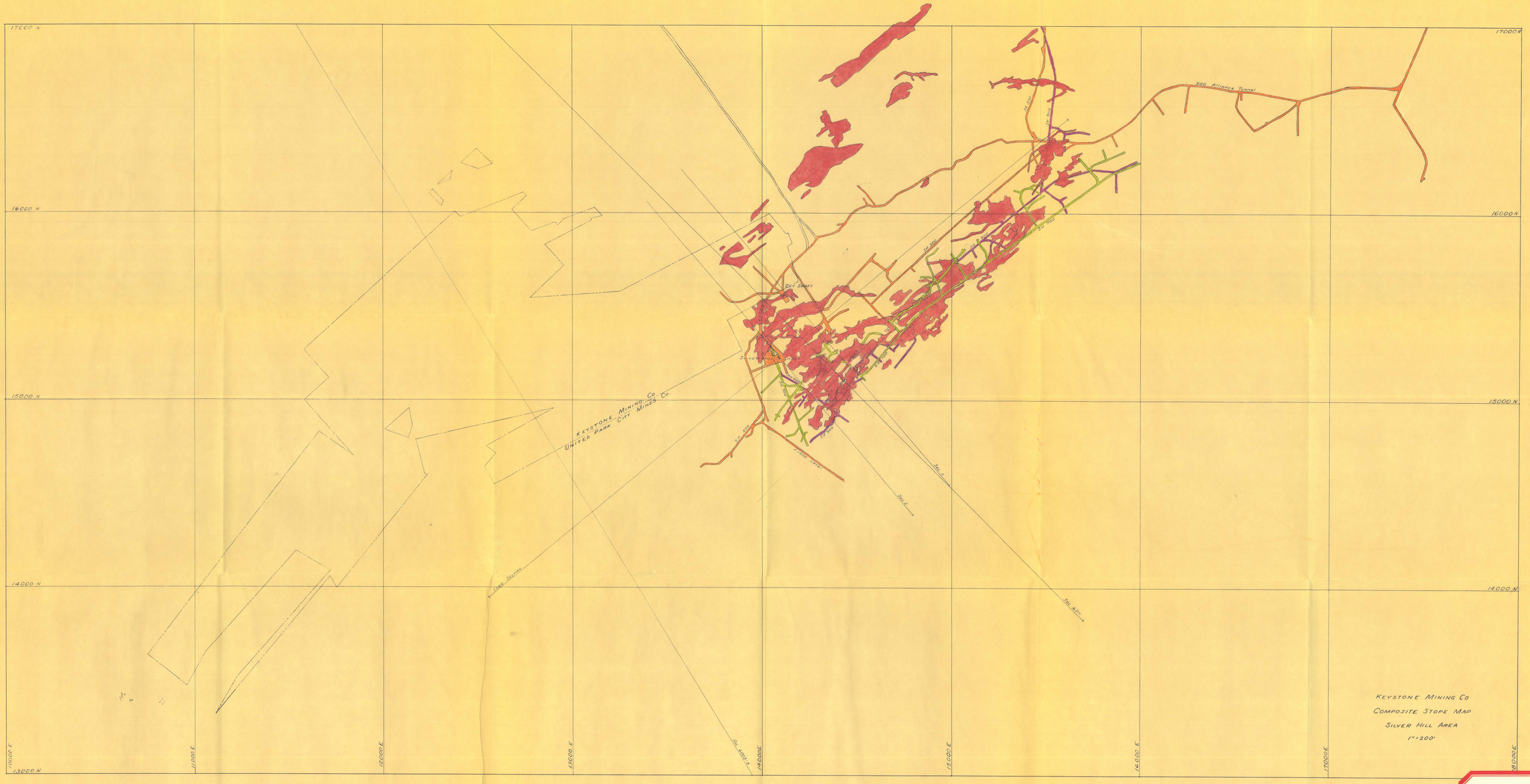
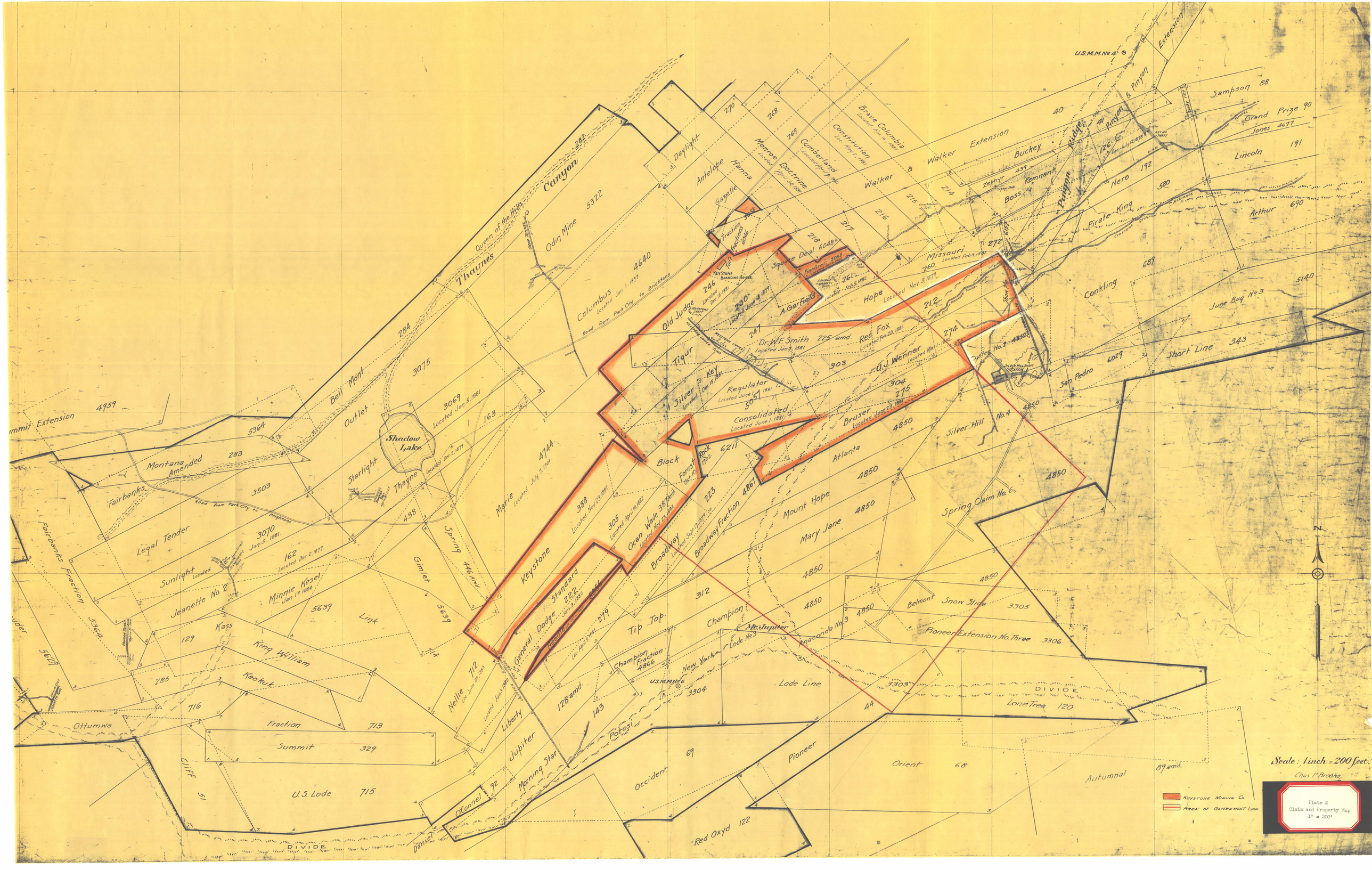


Plate 4
Silver Hill 500 Level
1" = 200'

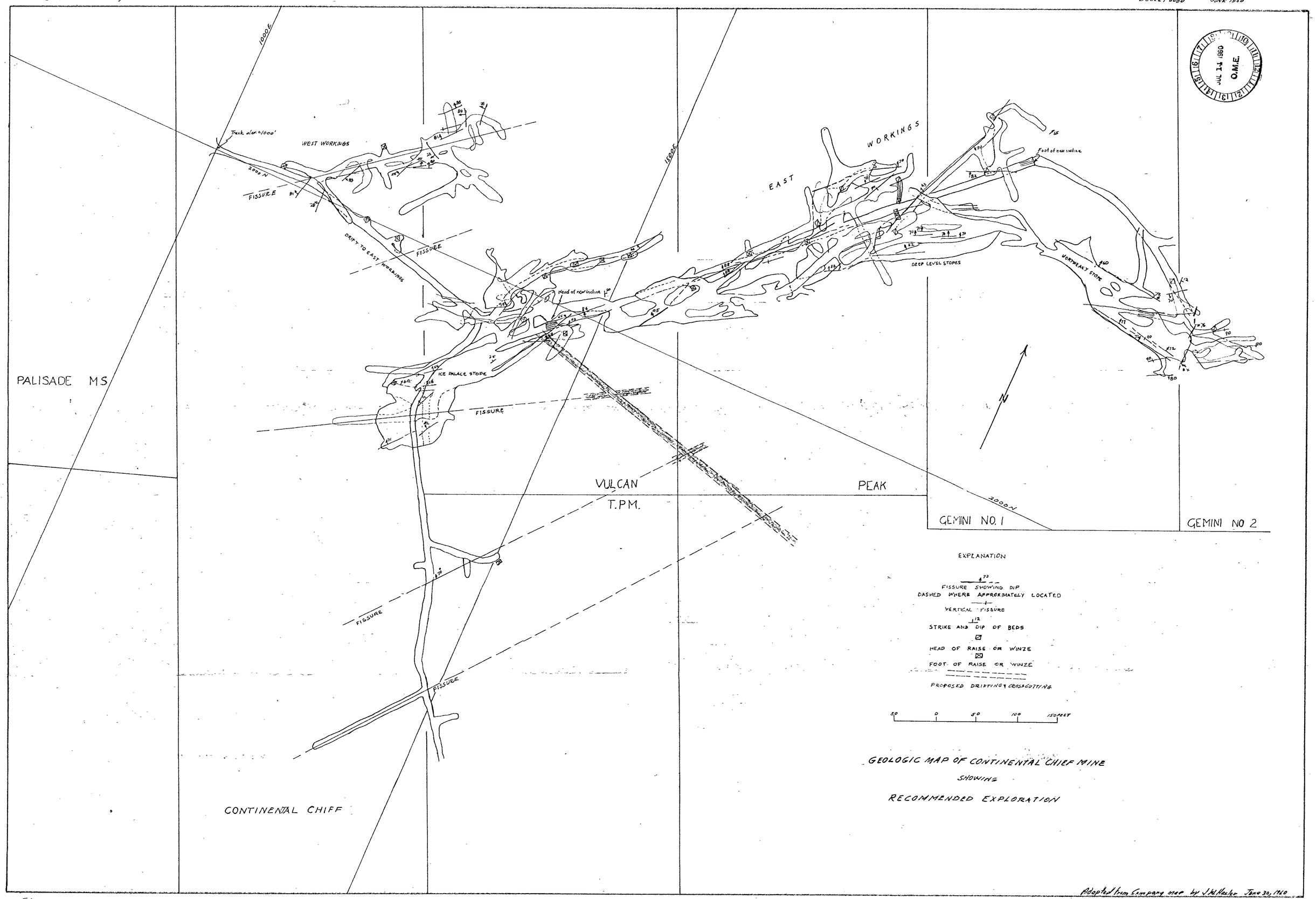

17000 N
16000 N
15000 N
14000 N
13000 N
10000 E
11000 E
12000 E
13000 E
14000 E
15000 E
16000 E
17000 E
18000 E
Keystone Mining Co.
United Park City Mines Co.
Zev Shaft
500 Alliance Tunnel
Long Section
Sec. 6051-3
Sec. 6011
Sec. 1
Sec. 2
Sta. 400
Sta. 500
Sta. 600
Sta. 700
Sta. 800
Sta. 900
Sta. 1000
Sta. 1100
Sta. 1200
Sta. 1300
Sta. 1400
Sta. 1500
Sta. 1600
Sta. 1700
Sta. 1800
Sta. 1900
Sta. 2000
Sta. 2100
Sta. 2200
Sta. 2300
Sta.


Queen of the Hills
Thaynes Canyon
Odin Mine 5322
Columbus 4640
Located Jan. 1, 1877.
Road from Park City to Brightons
Daylight
Antelope
Hanna
Gazelle
Monroe Doctrine
Located April 30, 1881
Cumberland
Brave Columbia
Constitution
Walker
Walker Extension
Buckey
Zephyr
Boss
Remnant
Pinyon Ridge
Pinyon & Pinyon Extension
U.S.M.M.No 4
Sampson 88
Grand Prize 90
Jones 4677
Lincoln 191
Nero 192
Pirate King
Arthur 690
Missouri
Located Feb. 9, 1881
Hope
Located Nov. 5, 1879
Square Deal 6048
Old Judge
Located Dec. 15, 1881
A. Garfield
Dr. W.F. Smith
Located Jan. 9, 1881
Red Fox
Located Feb. 20, 1881
U.J. Wenner
Located Mar. 1, 1882
Tiqur
Silver Key
Located Dec. 15, 1881
Regulator
Located June 1, 1881
Consolidated
Located June 1, 1881
Bruser
Located June 23, 1881
Conkling
June Bug No 3
Short Line 343
San Pedro 6029
Silver Hill No. 4
Atlanta
Mount Hope
Mary Jane
Spring Claim No. 6s
Block
Forest Rock No. 2
Keystone
Standard
Ocean Wave 387 amd
Broadway
Broadway Fraction 4861
Tip Top
Champion
Mr. Jupiter
Anaconda No 3
Belmont
Snow Slide 3305
Pioneer Extension No. Three 3306
Lode Line
Lone Tree 120
DIVIDE
Pioneer
Orient 68
Autumnal 89 amd.
Occident 69
Red Oxyd 122
Morning Star
Jupiter
Liberty
Nellie 712
Link
Gimlet
Spring
Marie 4744
Starlight
Thayne
Shadow Lake
Outlet
Bell Mont
Summit Extension 4959
Montana Amended 283
Fairbanks
Legal Tender
Sunlight
Jeanette No. 2
Minnie Kesel
Kass
King William
Keokuk
Fairbanks Fraction
Ottumwa
Fraction
Summit 329
U.S. Lode 715
Cliff 51
O'Connel 92
Daniel
DIVIDE
Scale: 1 inch = 200 feet.
Chas. F. Brooks
Keystone Mining Co.
Area of Government Lien
Plate 2
Claim and Property Map
1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

PREPARED FOR
OFFICE OF MINERALS EXPLORATION
DOCKET 6080 JUNE 1960

JUL 14 1960
O.M.E.



GEOLOGIC MAP OF CONTINENTAL CHIEF MINE
SHOWING
RECOMMENDED EXPLORATION

Adapted from Company map by J.W. Hacker June 30, 1960

Figure 2