



State of New Jersey  
Department of Environmental Protection  
Geological Survey



**Information Disclaimer**

The State of New Jersey makes great effort to provide secure, accurate and complete information. However, portions of the information contained here may be incorrect or not current.

The State of New Jersey, its officers, employees or agents shall not be liable for damages or losses of any kind arising out of or in connection with the use or performance of information, including but not limited to, damages or losses caused by reliance upon the accuracy or timeliness of any such information, or damages incurred from the viewing, distributing, or copying of those materials.







The materials and information provided here are provided "as is." No warranty of any kind, implied, expressed, or statutory, including but not limited to the warranties of non-infringement of third party rights, title, merchantability, fitness for a particular purpose, and freedom from computer virus, is given with respect to the contents of this document.

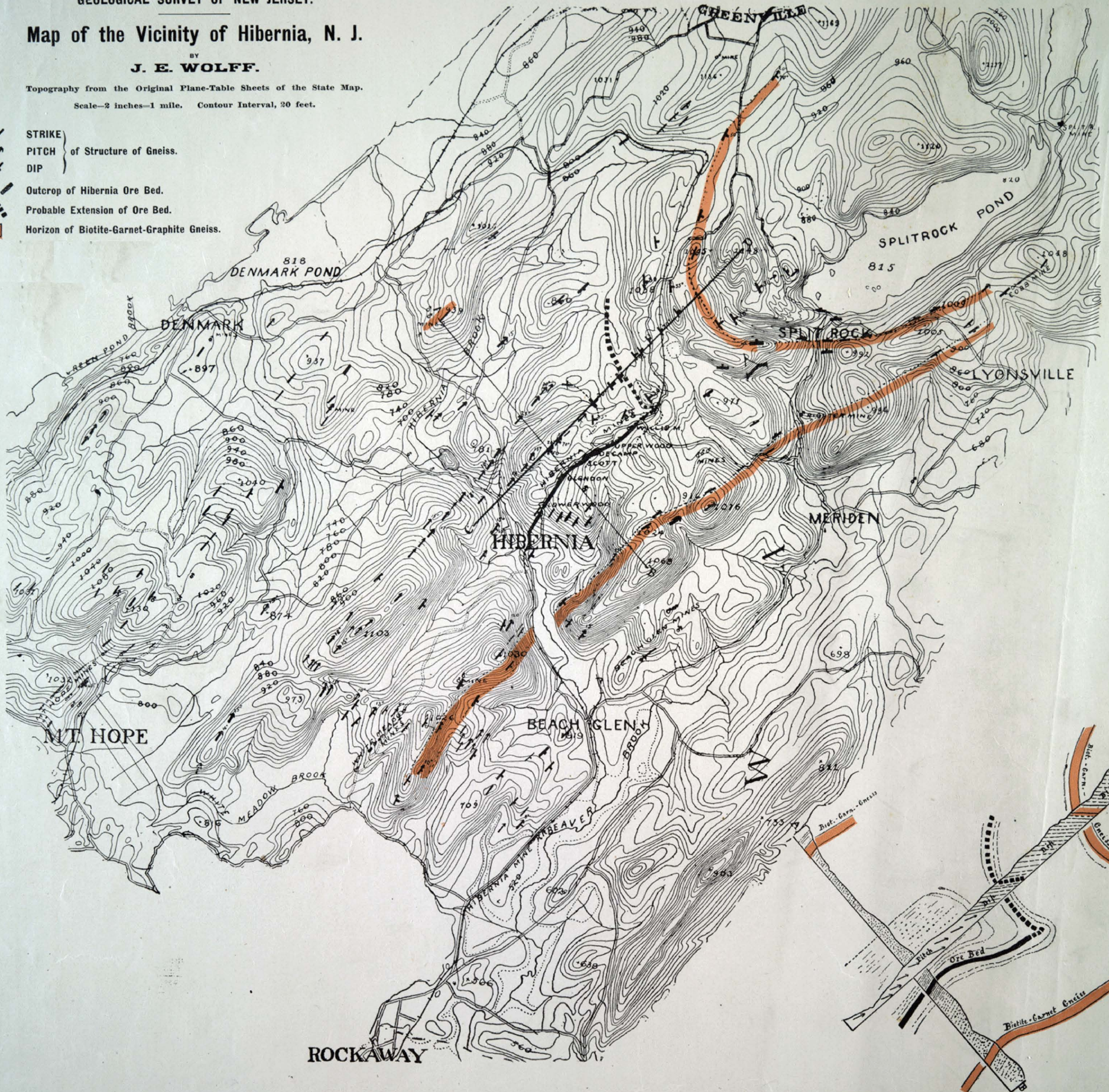
# Map of the Vicinity of Hibernia, N. J.

BY  
**J. E. WOLFF.**

Topography from the Original Plane-Table Sheets of the State Map.

Scale—2 inches—1 mile. Contour Interval, 20 feet.

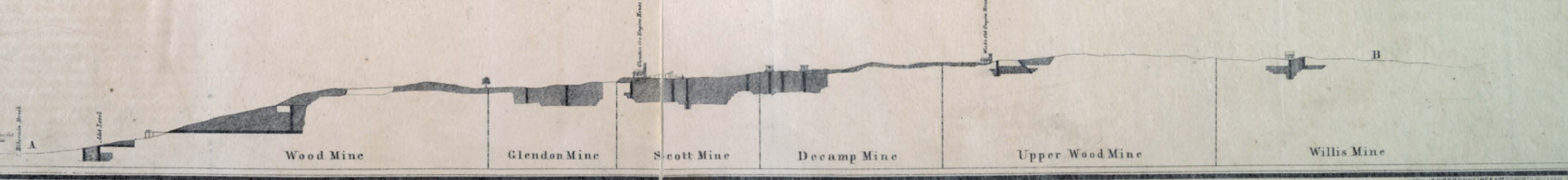
-  STRIKE
-  PITCH
-  DIP
-  Outcrop of Hibernia Ore Bed.
-  Probable Extension of Ore Bed.
-  Horizon of Biotite-Garnet-Graphite Gneiss.





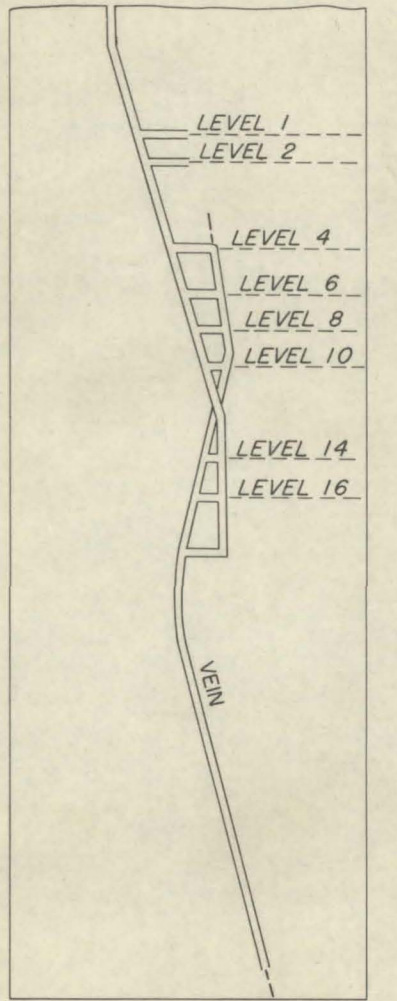
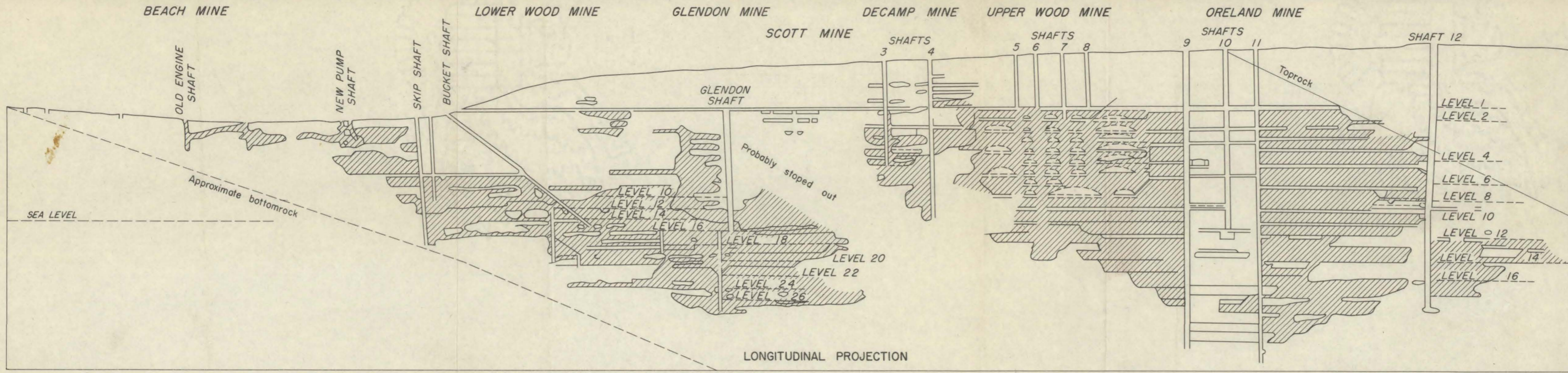
**HIBERNIA MINE TRACT**  
 with  
**PROFILE & SECTION**  
 showing workings  
 Sep<sup>r</sup> 1855.

**PROFILE**  
 and  
**SECTION OF HIBERNIA MINES**  
 showing  
 the extent of the workings  
 Sep<sup>r</sup> 1855.

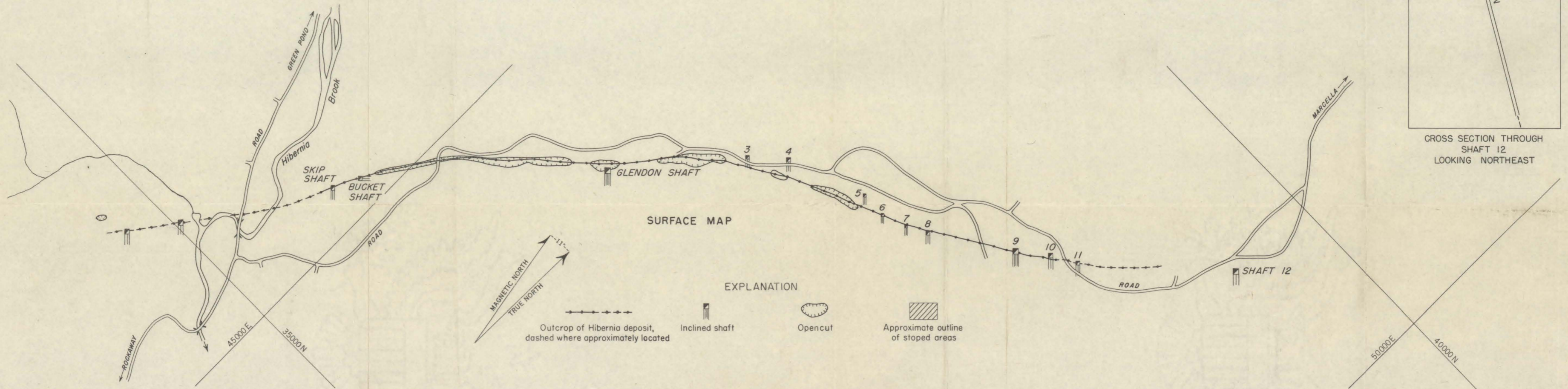




**HIBERNIA MINE**  
**SURFACE MAP**  
**LEGEND**  
 ○ PITS  
 ● D.D. HOLES  
 ■ SHAFTS  
 --- TUNNELS  
 SCALE: 1" = 200' — NOV. 1935



CROSS SECTION THROUGH SHAFT 12 LOOKING NORTHEAST



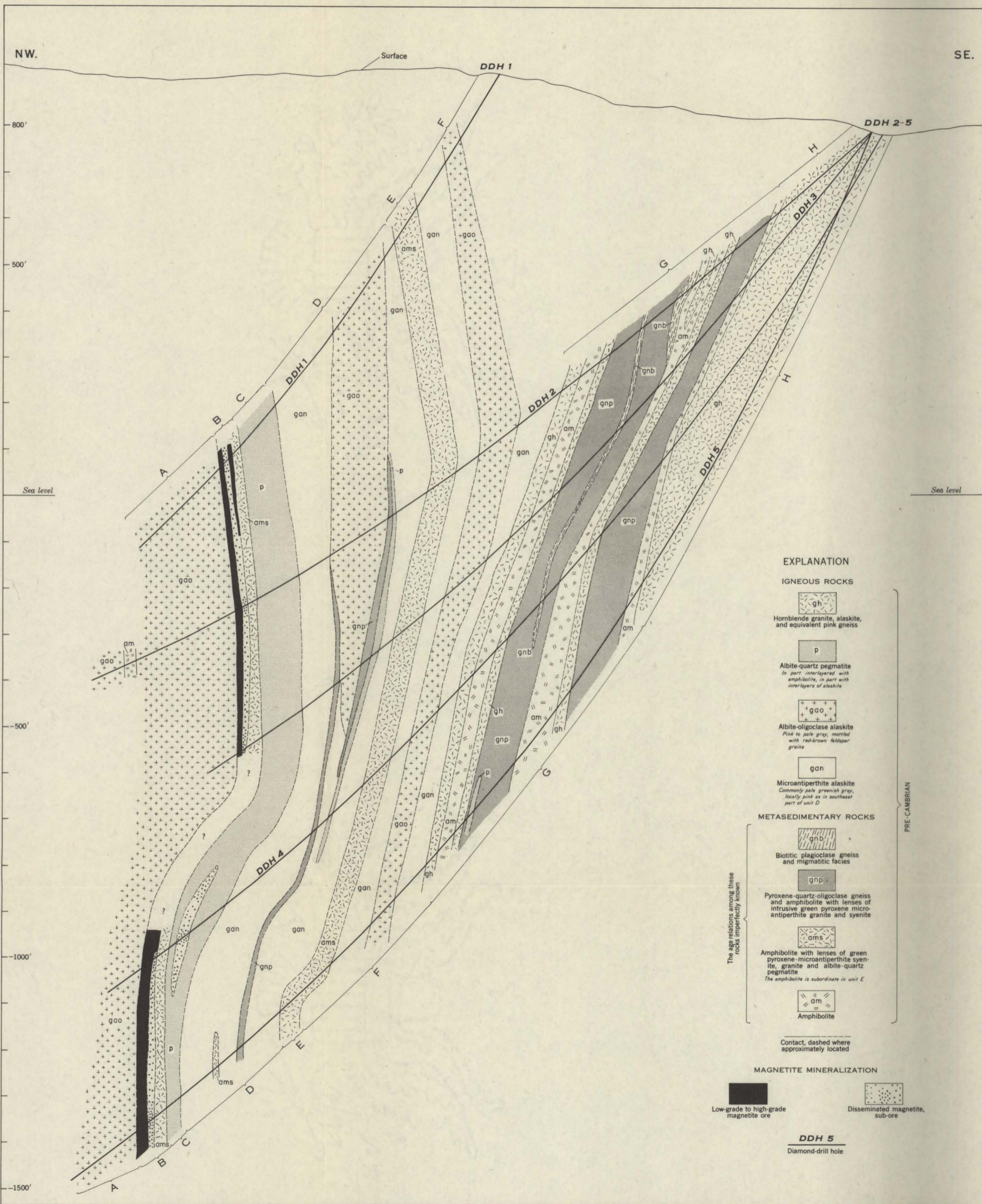
EXPLANATION

- Outcrop of Hibernia deposit, dashed where approximately located
- Inclined shaft
- Opencut
- Approximate outline of stoped areas

GENERALIZED SURFACE MAP AND LONGITUDINAL PROJECTION OF HIBERNIA MINE, MORRIS COUNTY, NEW JERSEY



Map and longitudinal projection after Spencer Hutchinson, mining engineer Coordinate system of Mount Hope mine



EXPLANATION

IGNEOUS ROCKS

**gh**  
Hornblende granite, alaskite, and equivalent pink gneiss

**p**  
Albite-quartz pegmatite  
*In part interlayered with amphibolite, in part with interlayers of alaskite*

**gao**  
Albite-oligoclase alaskite  
*Pink to pale gray, mottled with red-brown feldspar grains*

**gan**  
Microantiperthite alaskite  
*Commonly pale greenish gray, locally pink as in southeast part of unit D*

METASEDIMENTARY ROCKS

**gnb**  
Biotitic plagioclase gneiss and migmatitic facies

**gnp**  
Pyroxene-quartz-oligoclase gneiss and amphibolite with lenses of intrusive green pyroxene microantiperthite granite and syenite

**ams**  
Amphibolite with lenses of green pyroxene-microantiperthite syenite, granite and albite-quartz pegmatite  
*The amphibolite is subordinate in unit E*

**am**  
Amphibolite

Contact, dashed where approximately located

MAGNETITE MINERALIZATION

**Low-grade to high-grade magnetite ore**

**Disseminated magnetite, sub-ore**

**DDH 5**  
Diamond-drill hole

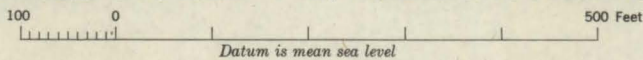
PRE-CAMBRIAN

The age relations among these rocks imperfectly known

Drill data from Warren Foundry and Pipe Corp.

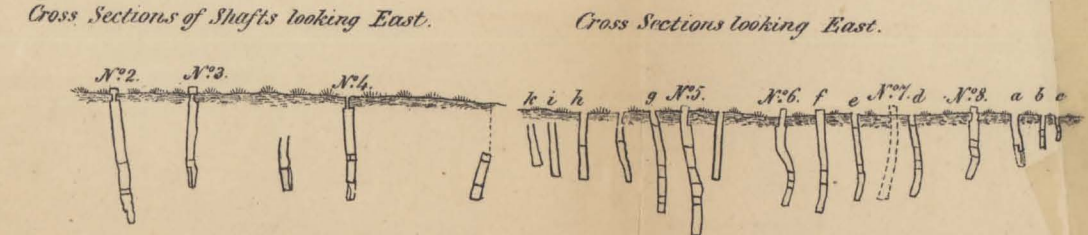
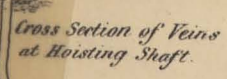
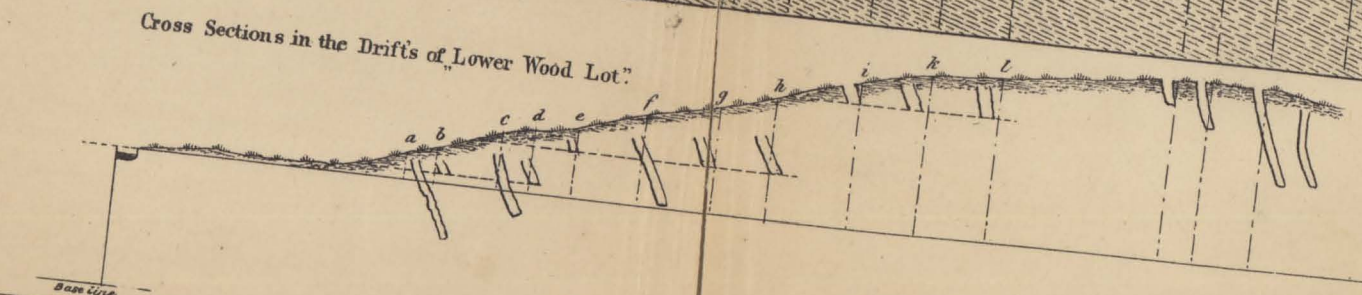
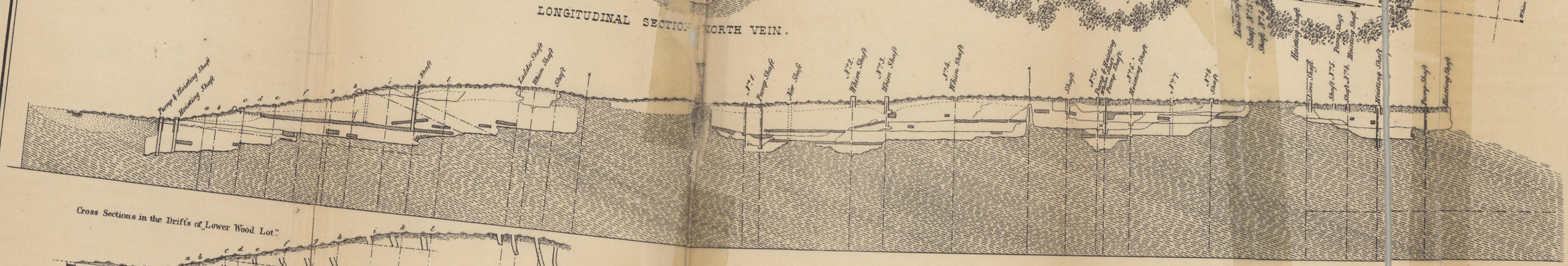
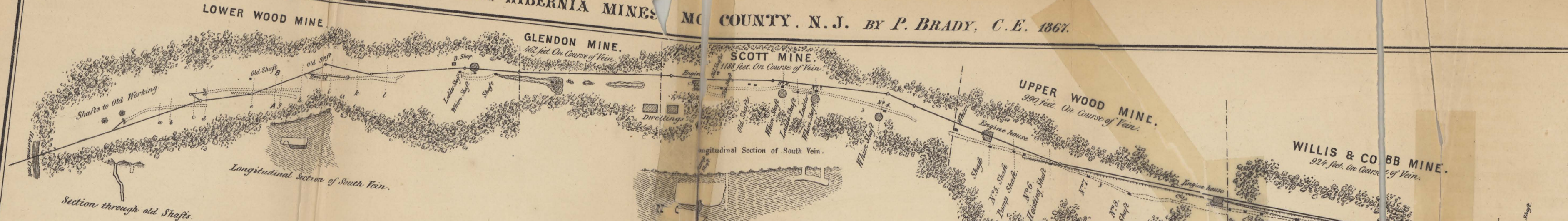
Geology by A. F. Buddington, 1953

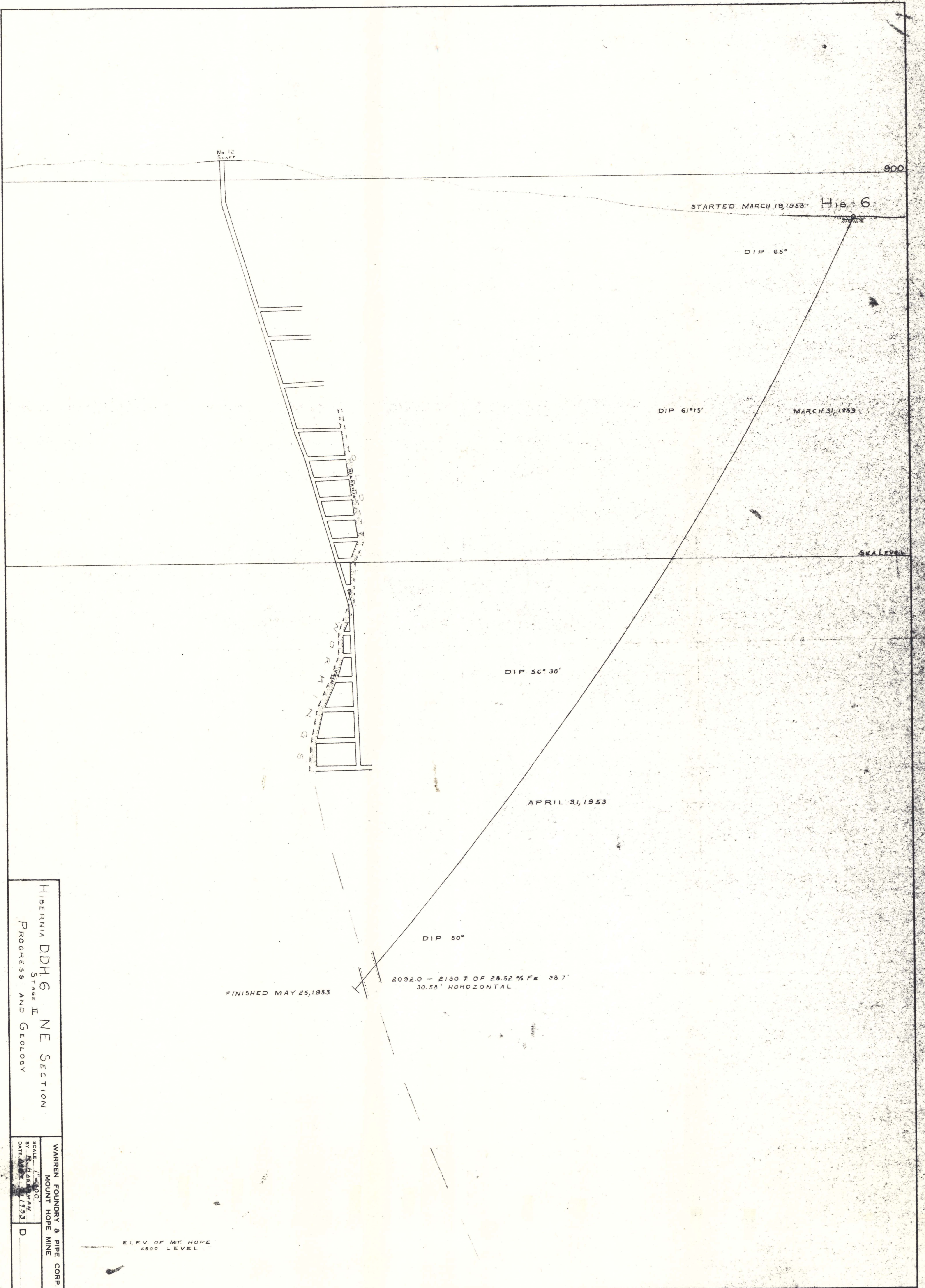
GEOLOGIC SECTION OF DIAMOND-DRILL HOLES 1-5, HIBERNIA MINE, DOVER DISTRICT, NEW JERSEY



409159 O - 58 (In pocket)

**PLOT OF HIBERNIA MINES, MO. COUNTY, N. J. BY P. BRADY, C. E. 1867.**





HIBERNIA DDH 6 NE SECTION  
 STAGE II  
 PROGRESS AND GEOLOGY

WARREN FOUNDRY & PIPE CORP.  
 MOUNT HOPE MINE  
 SCALE 1" = 500'  
 BY E. J. GARDNER  
 DATE JAN. 17, 1953  
 D

ELEV. OF MT HOPE  
 2600 LEVEL



900

STARTED JUNE 8, 1953 Hib. 7

DIP 68°

SEA LEVEL

DIP 60°  
JUNE 30, 1953

JULY 31, 1953

AUG. 31, 1953  
1879.7 - 20000 OF 31.22% Fe 20.3'  
19.7' HORIZONTAL

DIP 53°  
FINISHED SEPT 10, 1953



HIBERNIA DDH 7 NE SECTION  
PROGRESS AND GEOLOGY

WARREN FOUNDRY & PIPE CORP.  
MOUNT HOPE MINE  
SCALE 1" = 100'  
BY HASEMAN  
DATE 9-14-53  
D

HIB II STARTED JULY 12, 1953 900

DIP 69°

JULY 31, 1953

SEA LEVEL

DIP 63°30'

AUG 31, 1953

DIP 63°

1620' - 1628.5' 43.38%  
11.2' HORIZONTAL

1613.5' - 1631.0' 50.88% Fx  
11.6' HORIZONTAL

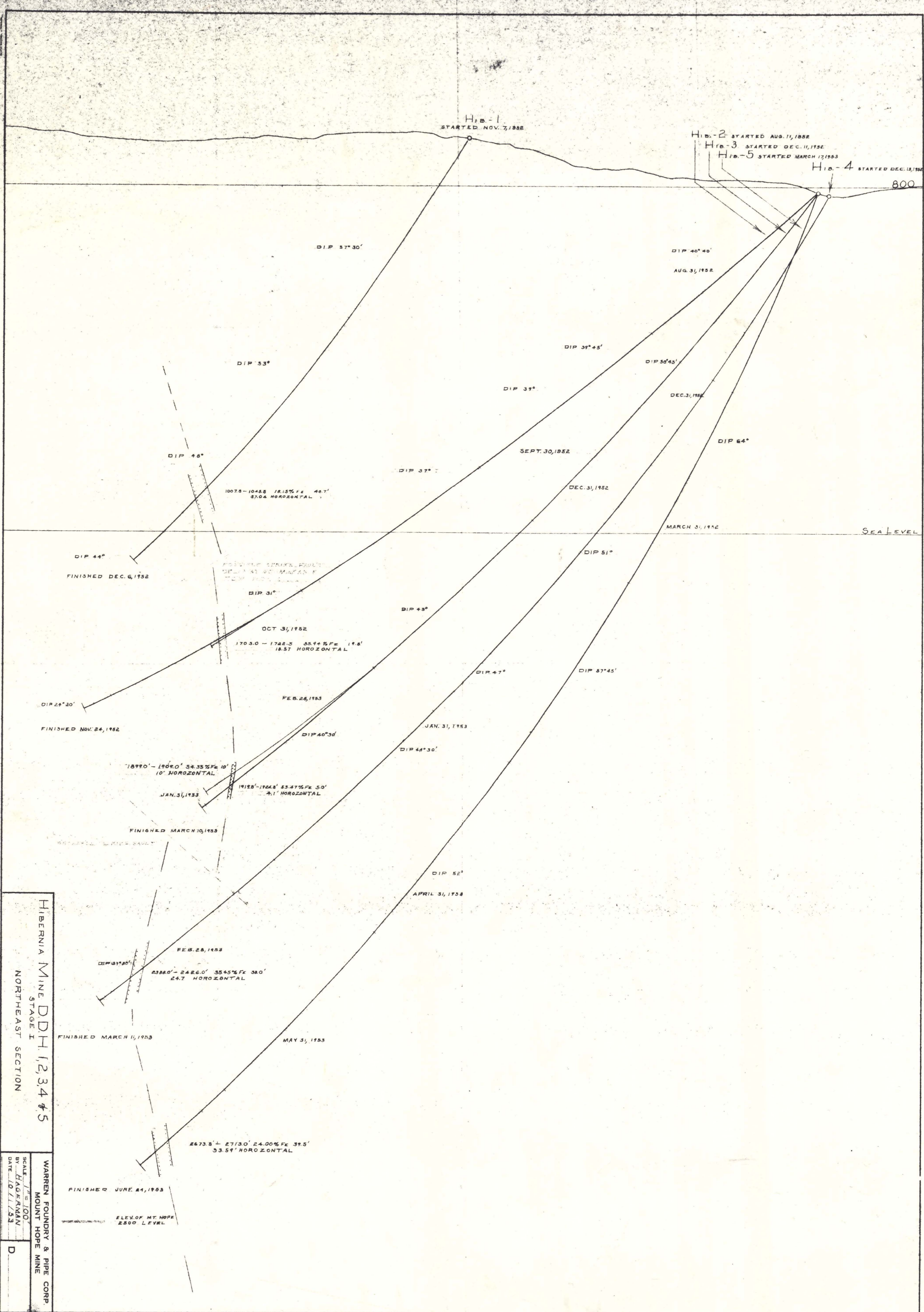
SEPT 30, 1953

DIP 58°

FINISHED NOV. 14, 1953

HIBERNIA DDH III NE SECTION  
STAGE III  
PROGRESS AND GEOLOGY

WARREN FOUNDRY & PIPE CORP.  
MOUNT HOPE MINE  
SCALE 1" = 100'  
BY H. G. F. W. MANN  
DATE 10/14/53  
D

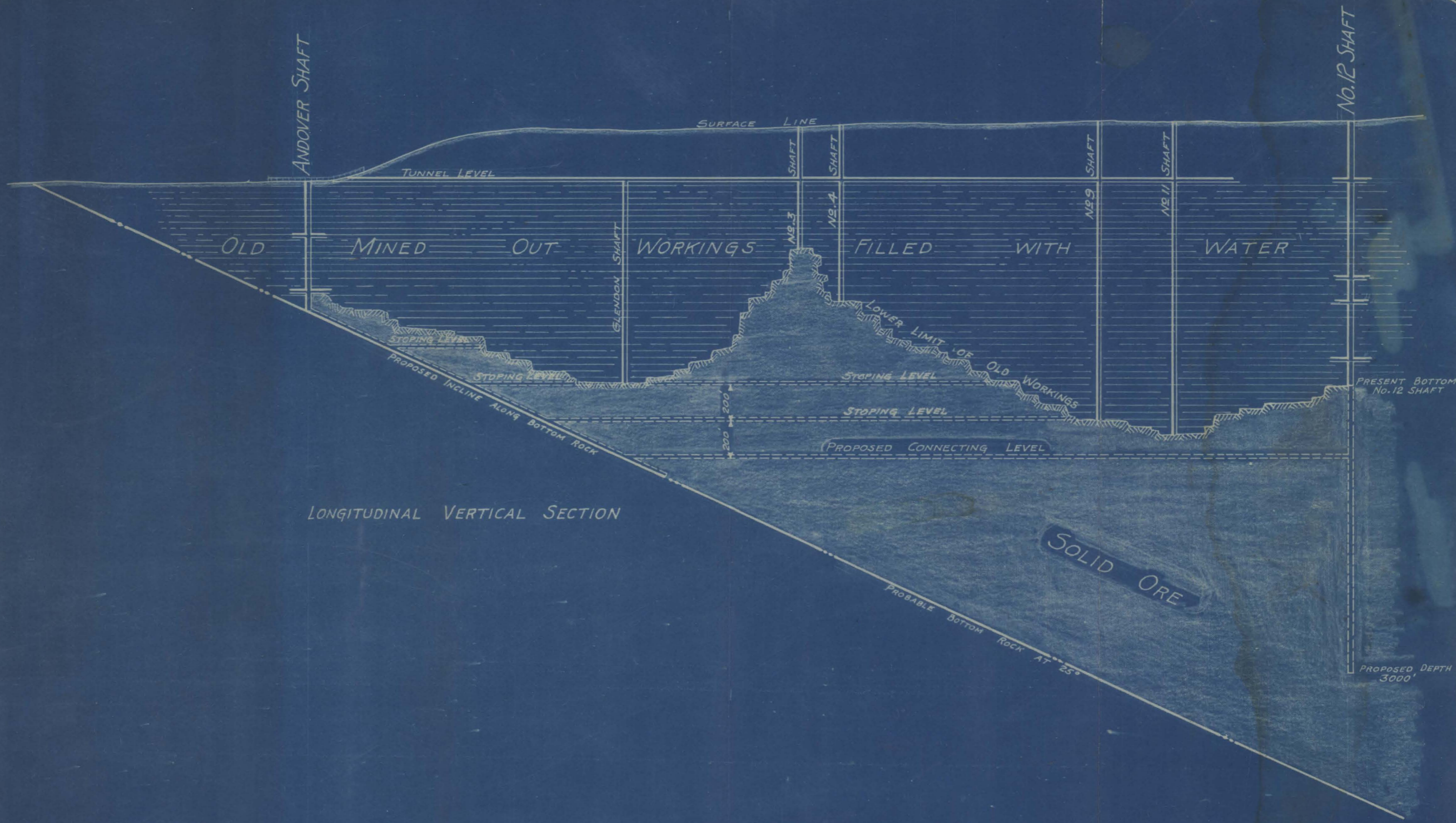


HIBERNIA MINE DDH 1, 2, 3, 4 & 5  
STAGE I  
NORTHEAST SECTION

WARREN FOUNDRY & PIPE CORP.  
MOUNT HOPE MINE

SCALE 1" = 100'  
BY HAGERMAN  
DATE 10/1/53

D



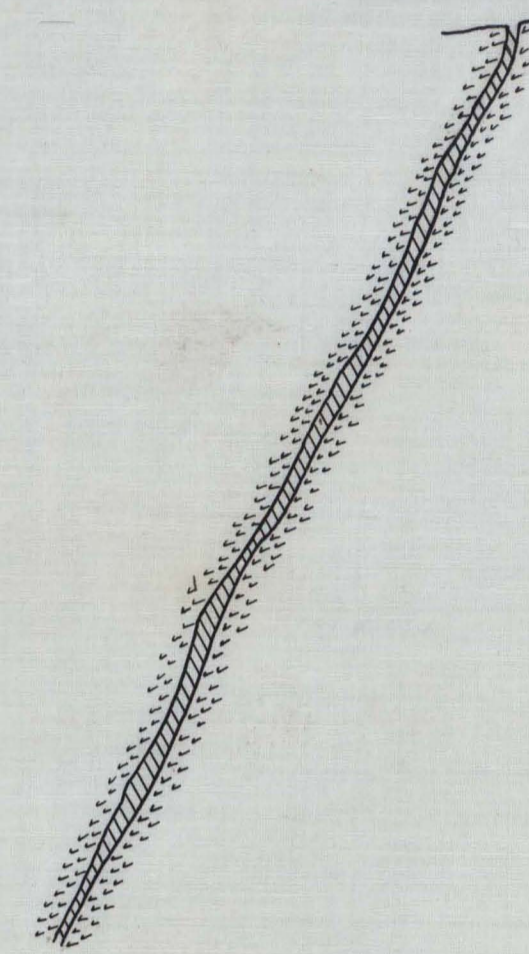
LONGITUDINAL VERTICAL SECTION

WHARTON STEEL CO. MINING DEPT.  
 SKETCH SHOWING PROPOSED DEVELOPMENT  
 OF HIBERNIA MINE THROUGH ANDOVER SHAFT  
 SCALE 1" = 500' J.C.S. OCT. 26, 1917

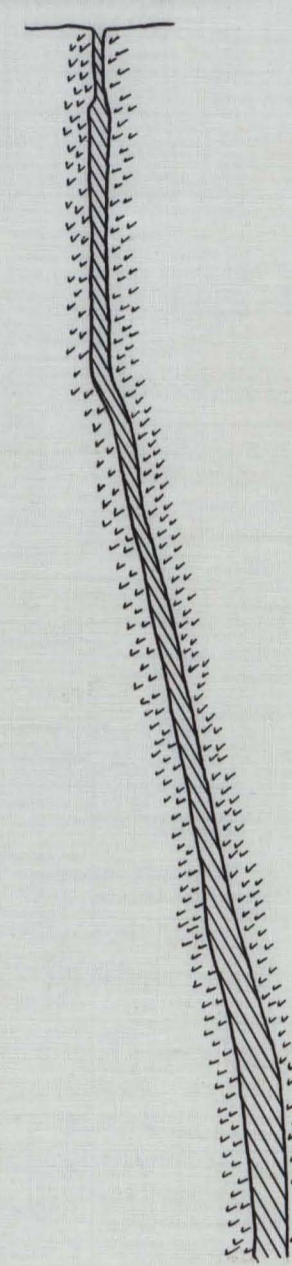
N.W.

*This Section Reversed*

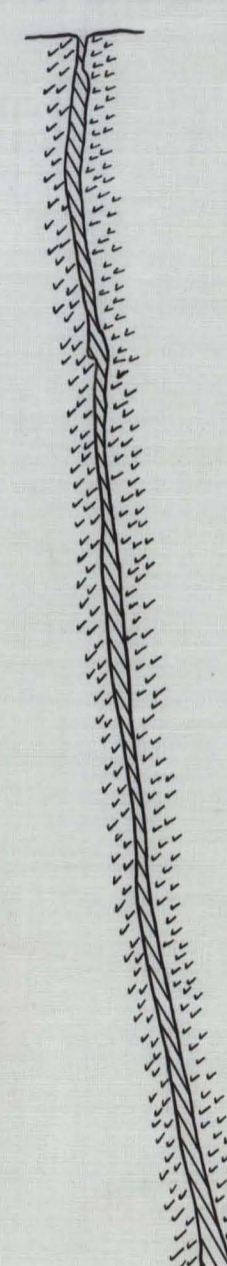
ANDOVER  
BUCKET SHAFT



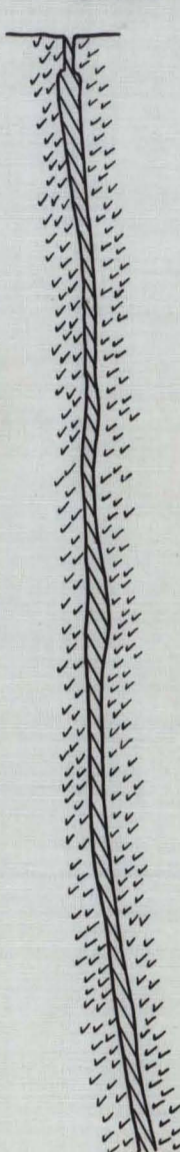
GLENDON  
GLENDON SHAFT



DE CAMP  
NO. 3 SHAFT



DE CAMP  
NO. 4 SHAFT



UPPER WOOD  
NO. 5 SHAFT



UPPER WOOD  
NO. 6 SHAFT



UPPER WOOD  
NO. 7 SHAFT

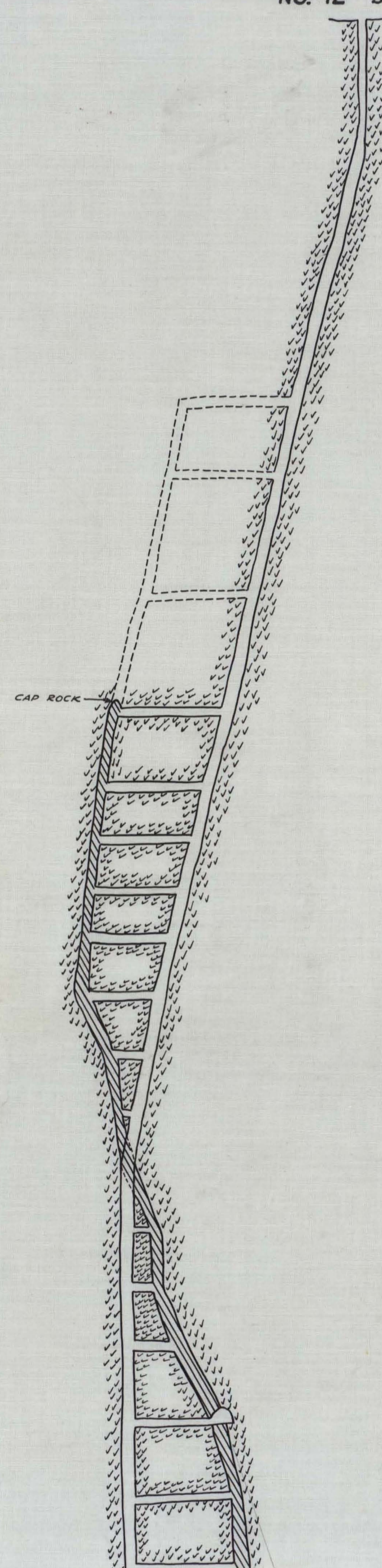


UPPER WOOD  
NO. 8 SHAFT



*This Section Reversed*

WILLIS OR ORELAND  
NO. 12 SHAFT



S.E.

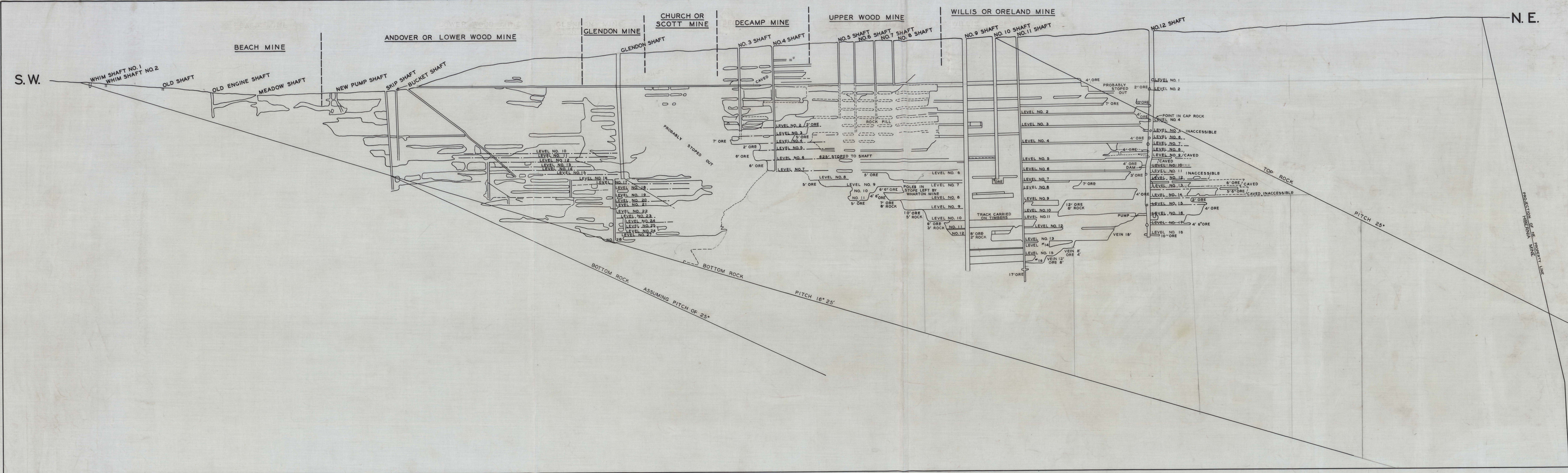
**HIBERNIA MINE**  
 WARREN FOUNDRY & PIPE CO.  
 CROSS SECTIONS OF ORE BODY  
 AS ENCOUNTERED IN SHAFTS  
 ALL SECTIONS LOOKING NORTHEAST

**LEGEND**

ORE  
 ROCK

SCALE: 1" = 100'

NOV. 1935

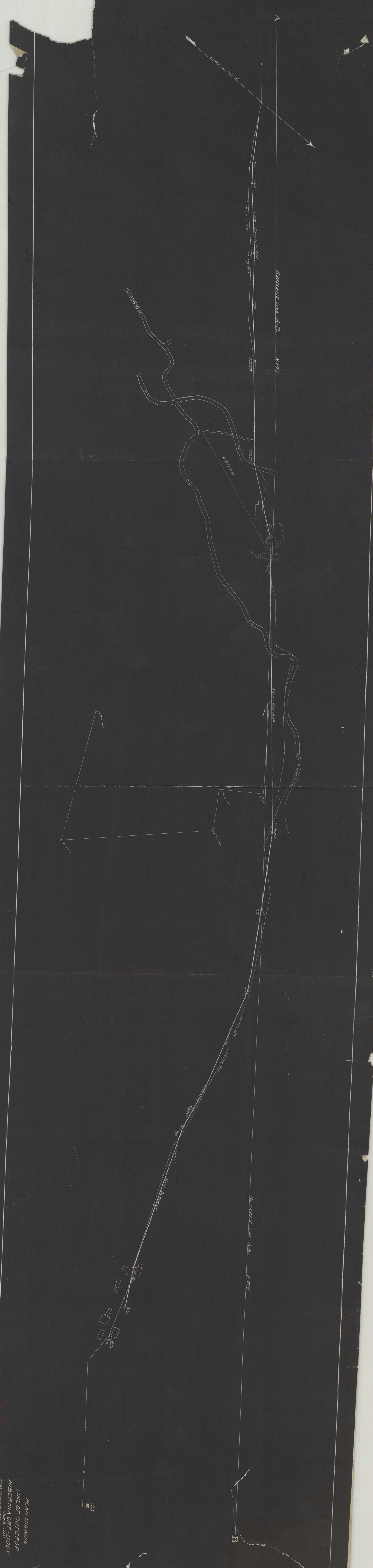


**HIBERNIA MINE**  
 WARREN FOUNDRY & PIPE CO.  
 LONGITUDINAL VERTICAL SECTION

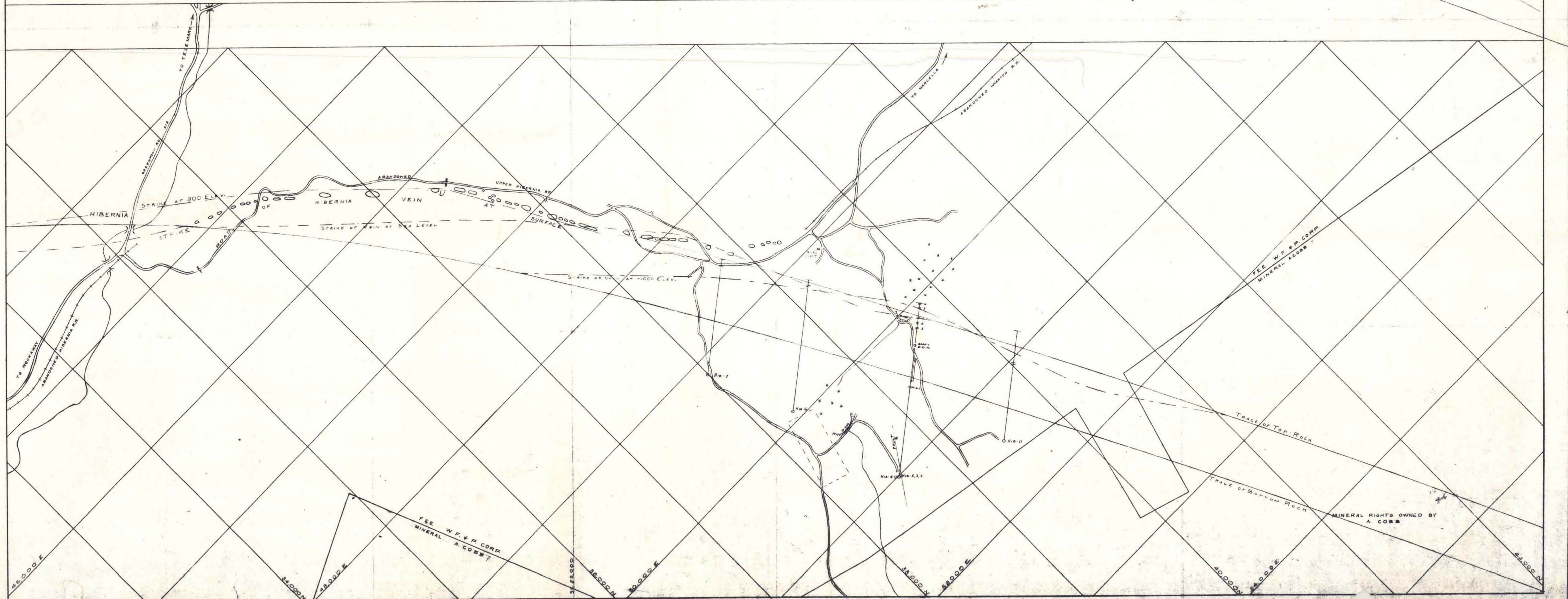
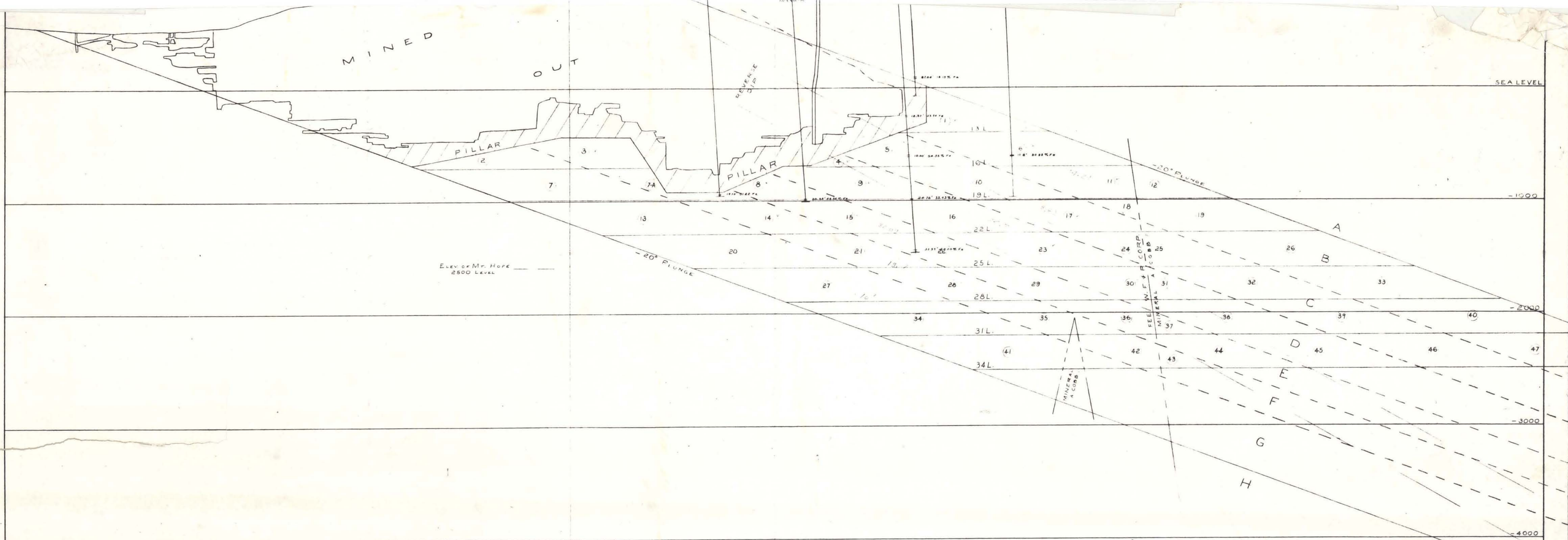
LEGEND

ROCK  
 ORE  
 ORE MINED OUT  
 FIGURES DENOTE WIDTH OF ORE AT POINTS INDICATED

SCALE: 1"=200'      NOV. 1935

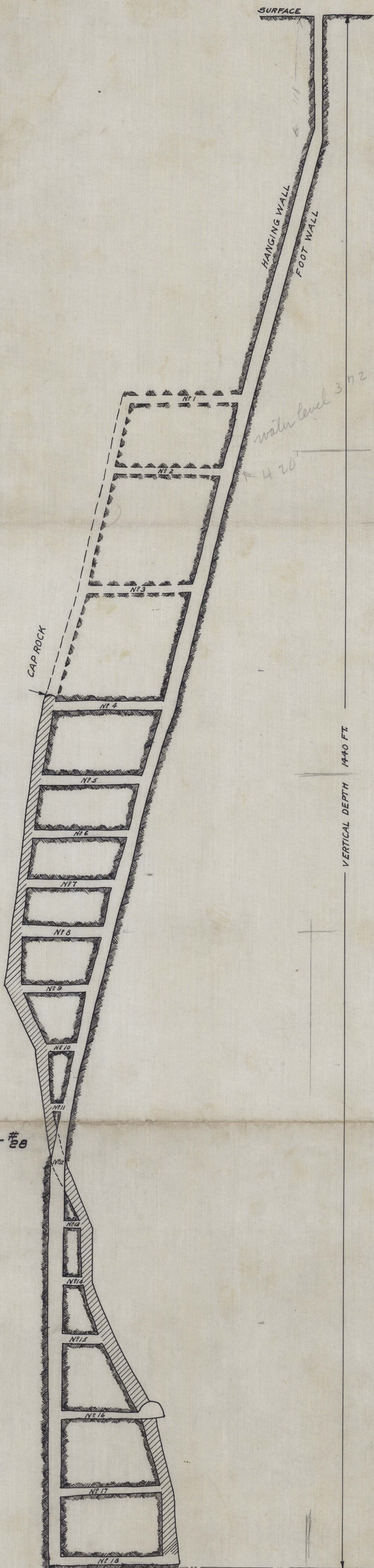


PLAN SHOWING  
 LINE OF OUTCROP  
 HIBERNIA ORE-BODY  
 Scale, 1"=100'  
 W.P. 1011  
 1911





1/2



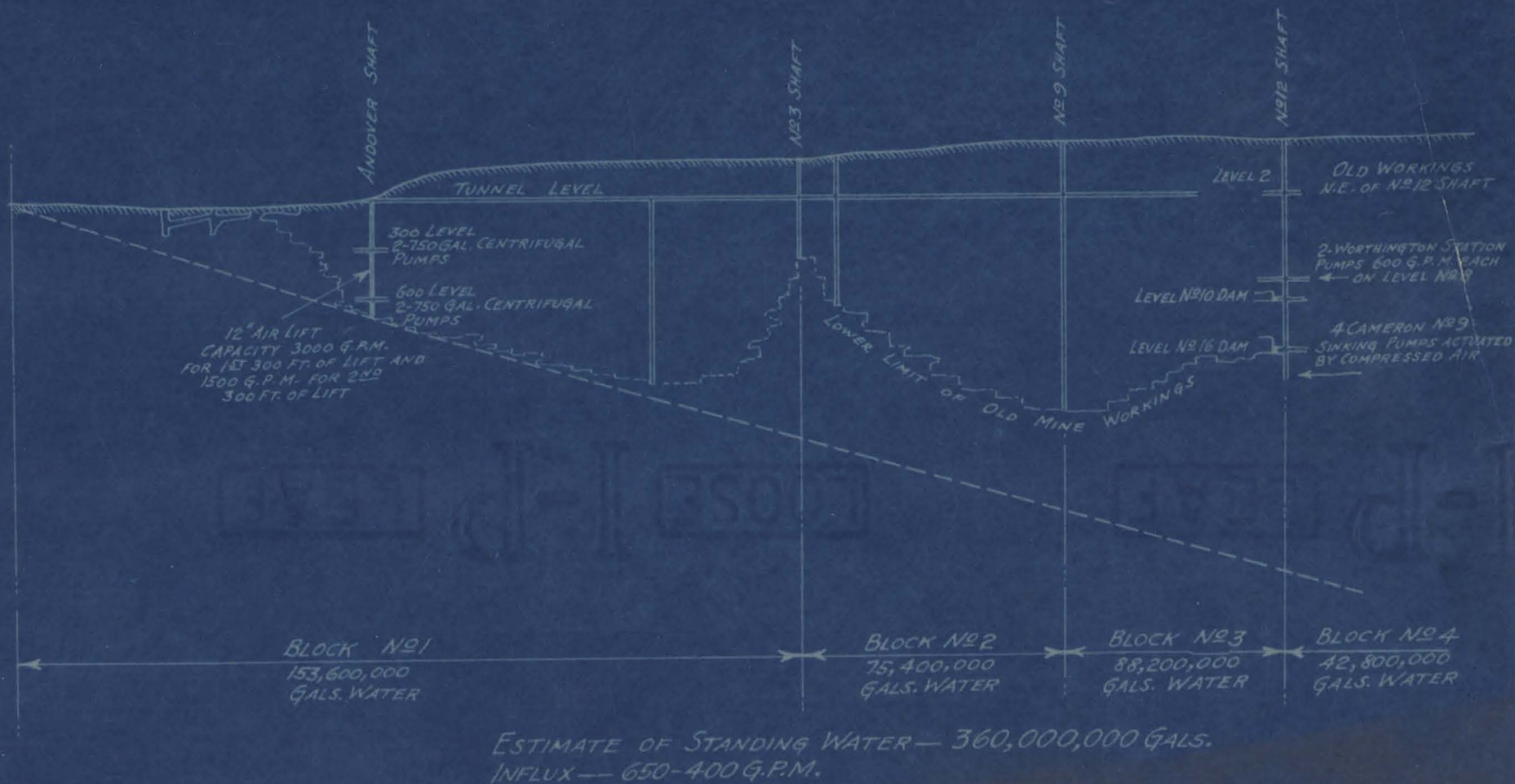
VERTICAL DEPTH 1440 FT.

SHEET # 28

CROSS SECTION  
 Nº 12 SHAFT AND ORE BODY  
 AT HIBERNIA N.J.  
 VIEW LOOKING WEST

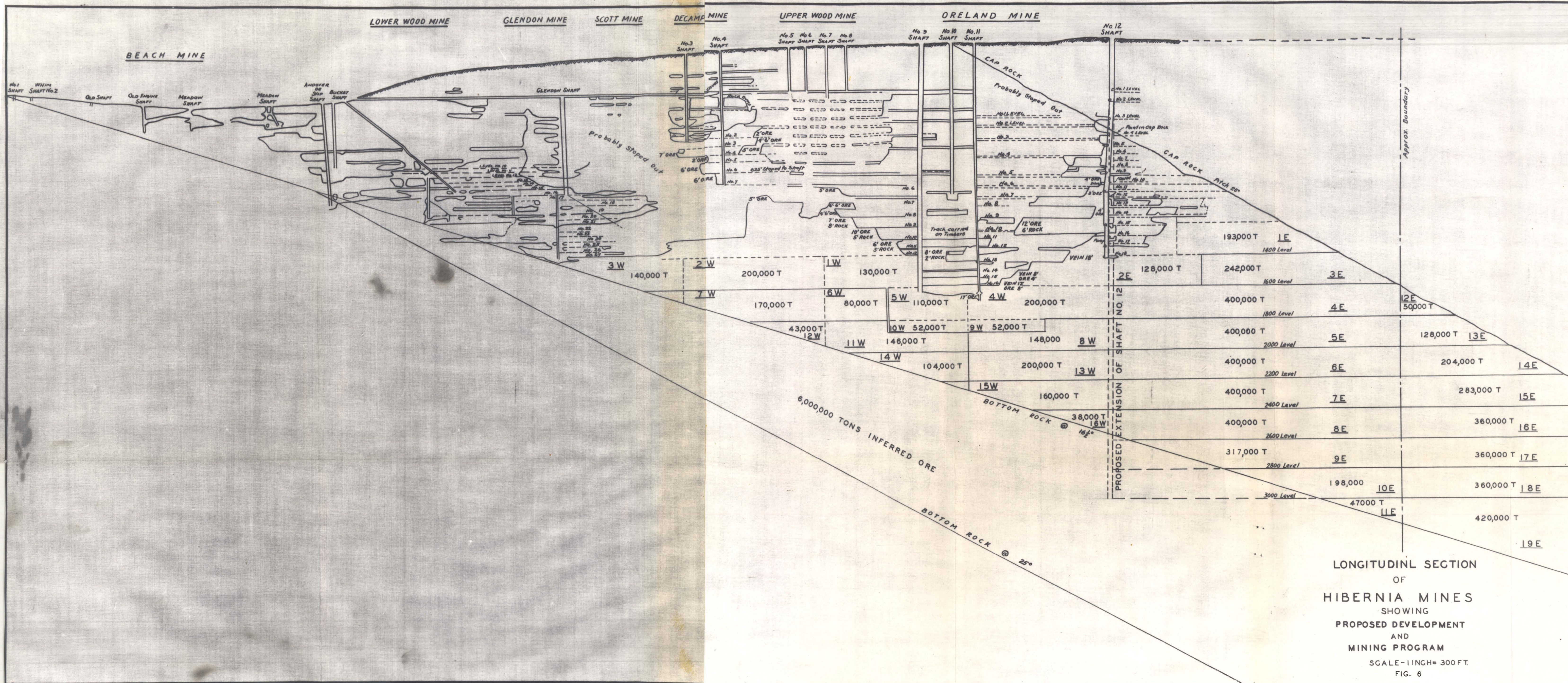
H.M. ROCHE

To ACCOMPANY JULY 1917 REPORT  
OF  
GENERAL SUPERINTENDENT OF MINES  
TO  
PRESIDENT OF WHARTON STEEL CO

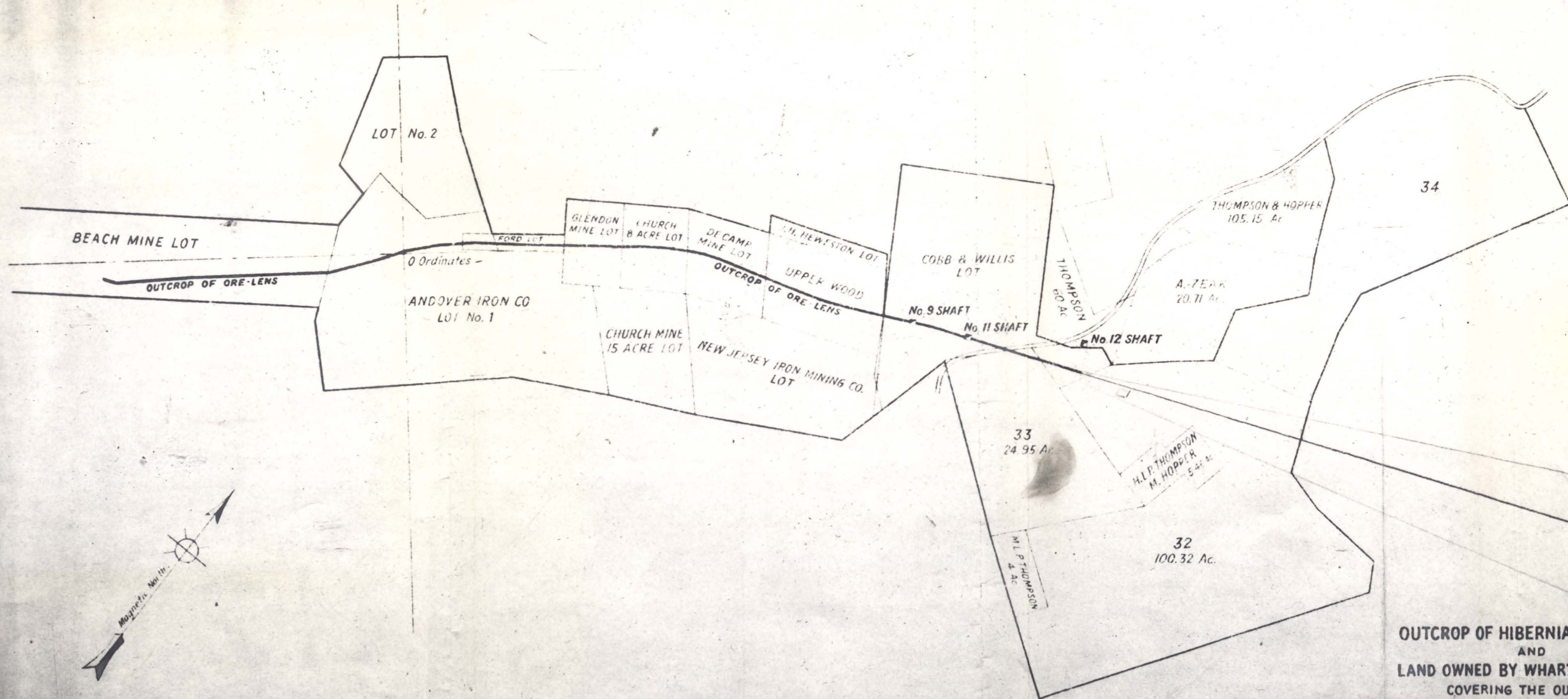


APPROVED: *H. M. Coche*

SKETCH SHOWING AMOUNT OF STANDING WATER  
IN HIBERNIA MINE AND PROPOSED METHOD OF  
DEWATERING SAME  
SCALE 1"=100' J.C.S. SEPT. 18, 1917



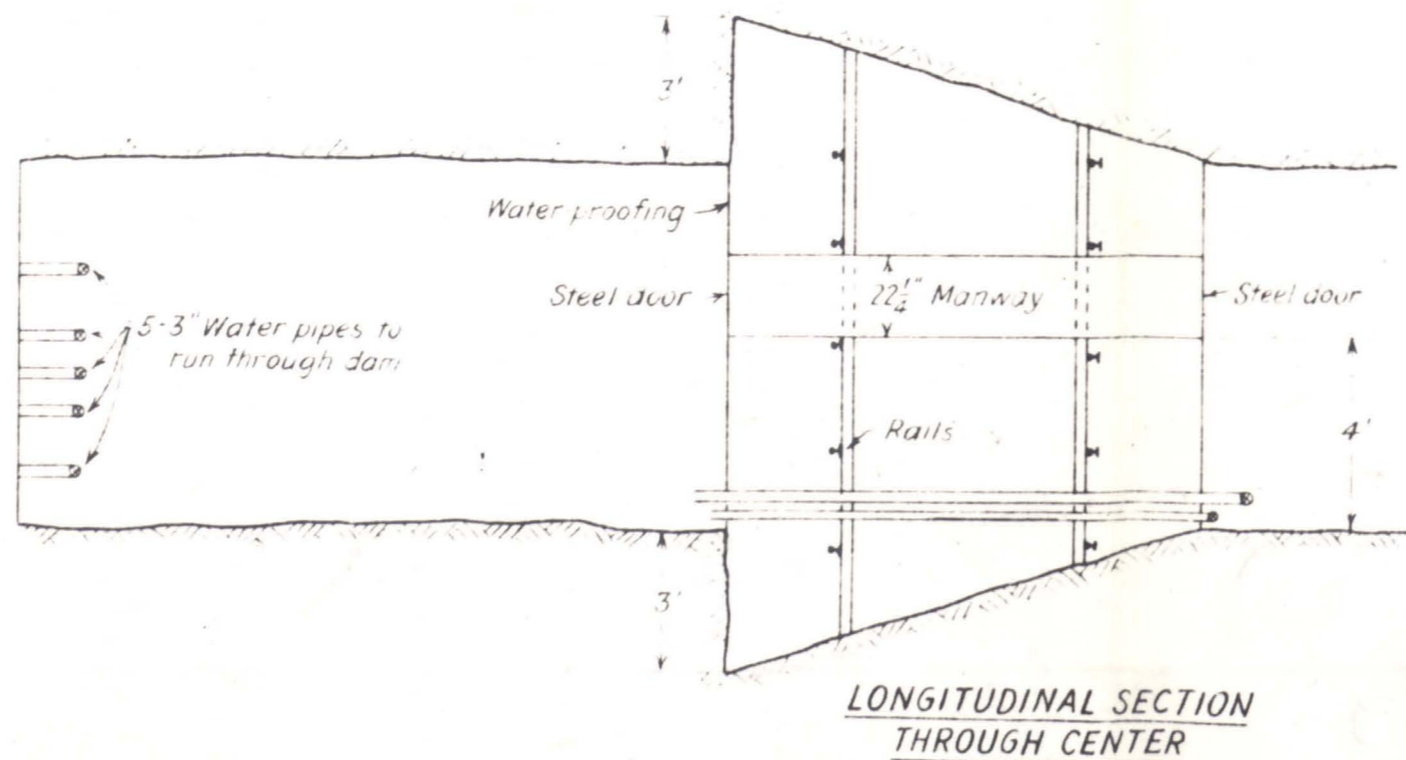
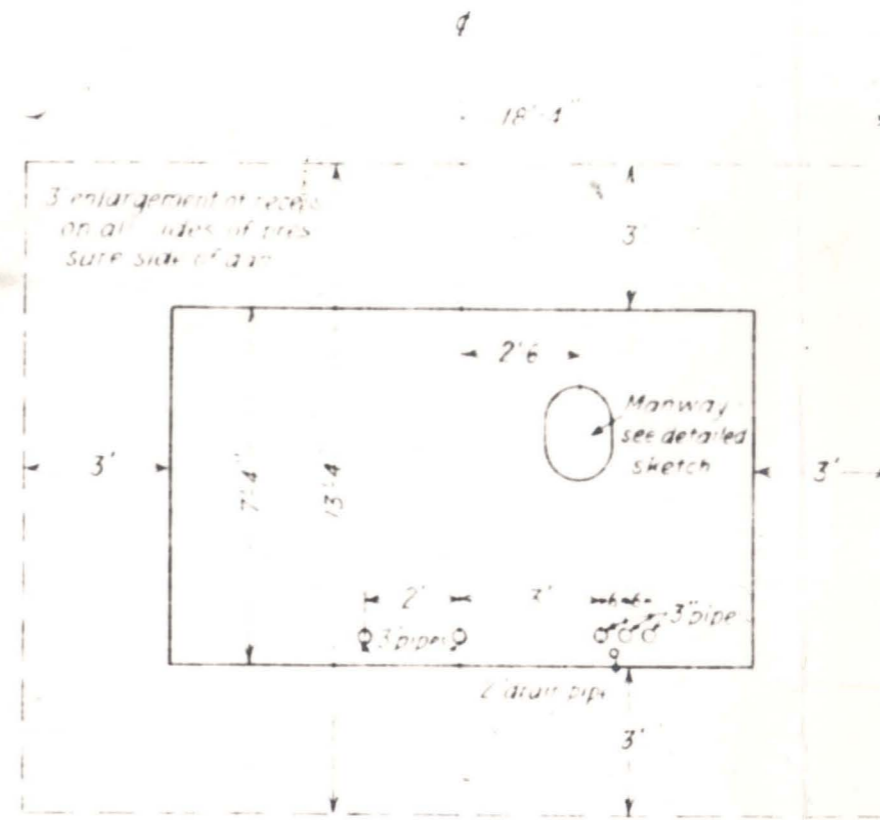
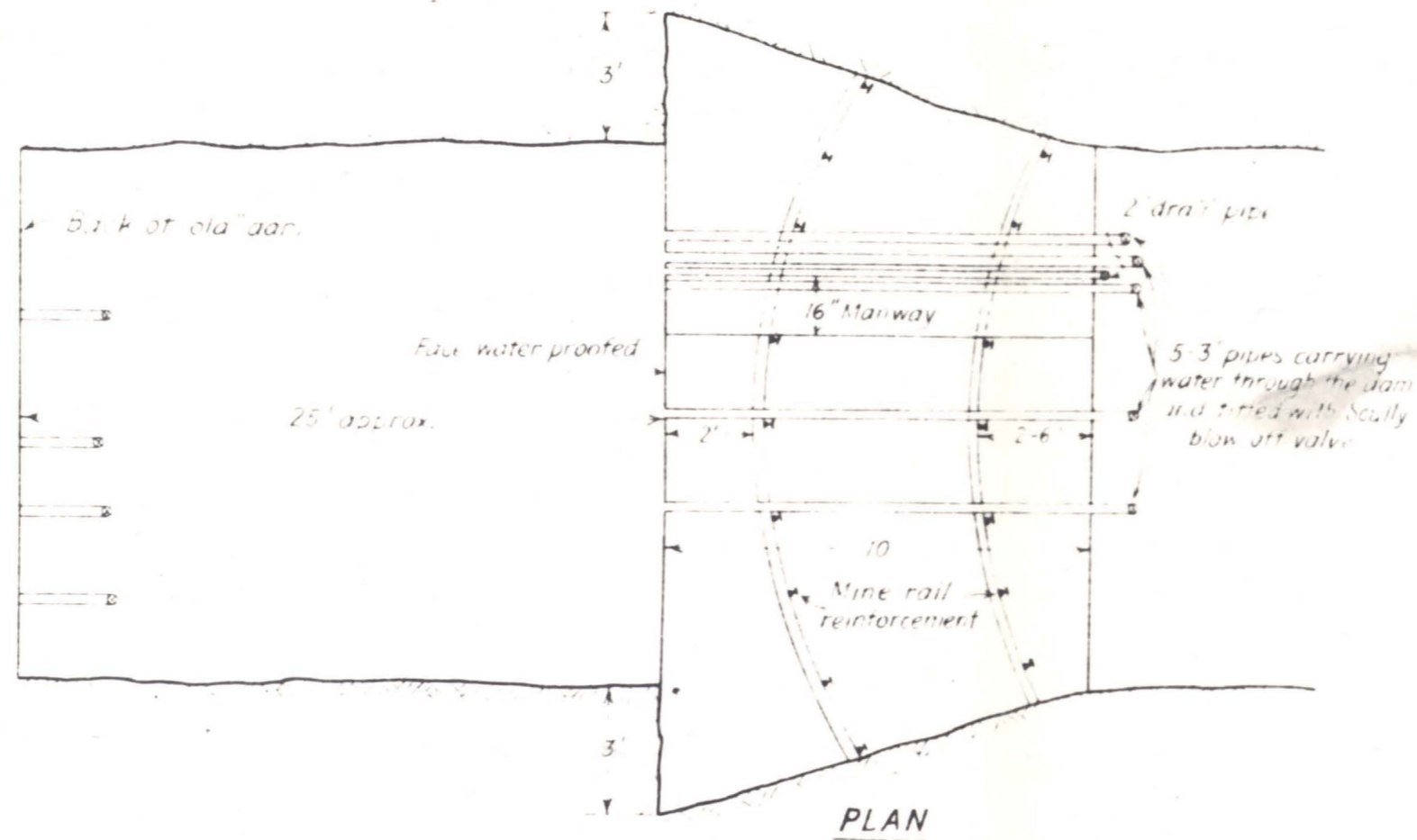
LONGITUDINAL SECTION  
 OF  
 HIBERNIA MINES  
 SHOWING  
 PROPOSED DEVELOPMENT  
 AND  
 MINING PROGRAM  
 SCALE - 1 INCH = 300 FT.  
 FIG. 6



**OUTCROP OF HIBERNIA ORE-LENS  
AND  
LAND OWNED BY WHARTON STEEL CO.  
COVERING THE OUTCROP**

AS TAKEN FROM  
LAND DEEDS  
Scale: Approx. 1"=600'  
Aug. 1937

Fig. 1



**ELEVATION PRESSURE SIDE OF DAM**

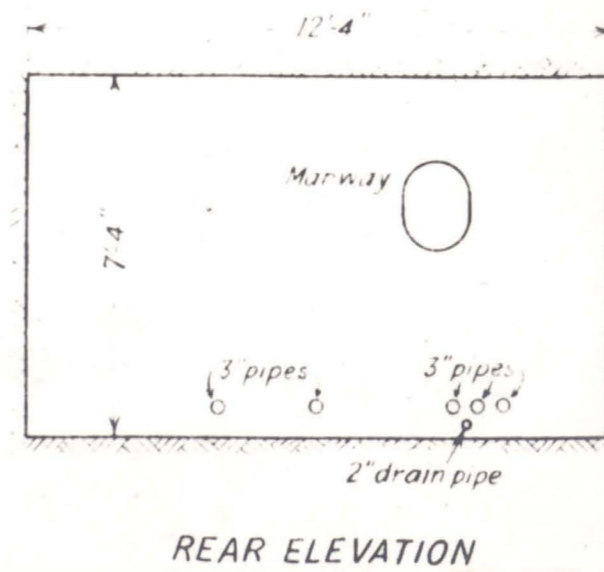
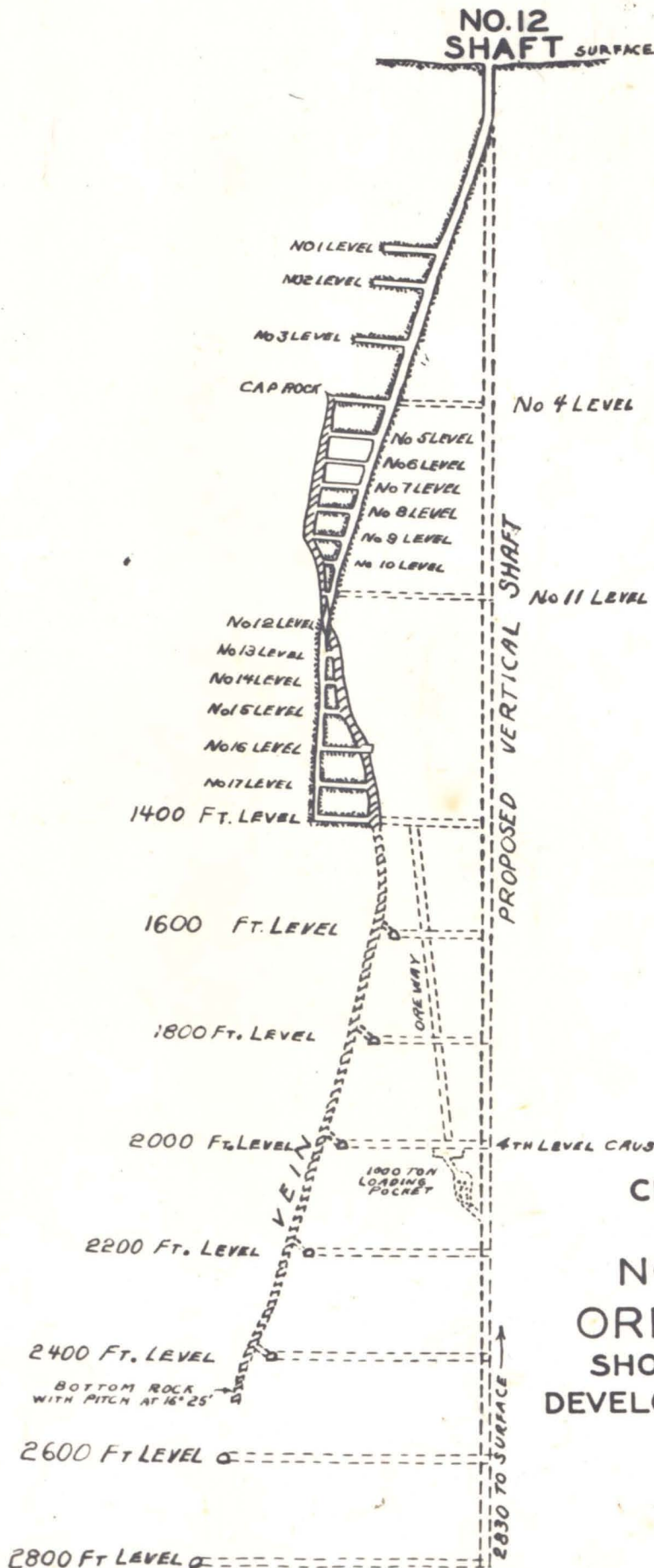


Fig. 5  
**REINFORCED CONCRETE BULKHEAD FOR No. 16 LEVEL HIBERNIA MINE**

Scale: 1" = 4'

Designed by Mines Management  
Sept. 1913

*Ernest Perkins 1937*



CROSS SECTION  
 OF  
 NO. 12 SHAFT  
 ORELAND MINE  
 SHOWING PROPOSED  
 DEVELOPMENT PROGRAM

SCALE 1"-300'

FIG. 2

West East

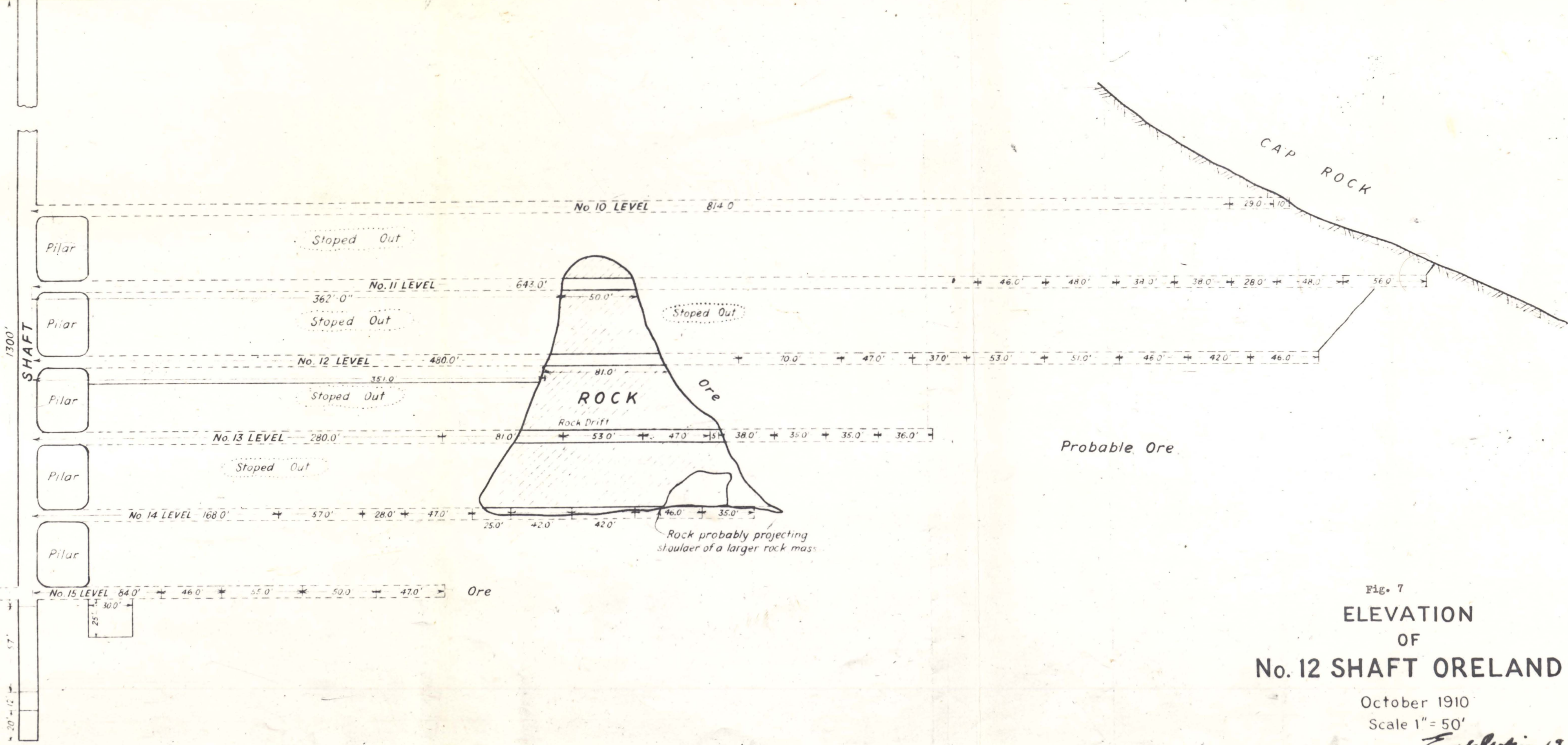


Fig. 7  
**ELEVATION  
 OF  
 No. 12 SHAFT ORELAND**

October 1910  
 Scale 1" = 50'

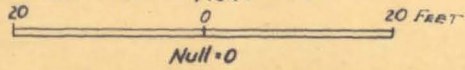
*Franklin 1937*

# DIP NEEDLE PROFILE

ACROSS

## HIBERNIA VEIN

AT A POINT 1500 FEET  
SOUTHWEST OF NO. 12 SHAFT



N30W  
100

S30E 100

80

80

60

60

40

40

20

20

0

0

-20

-20

2206

Surface #

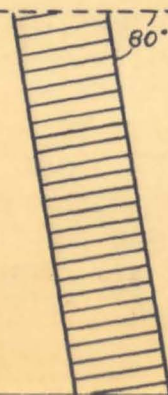
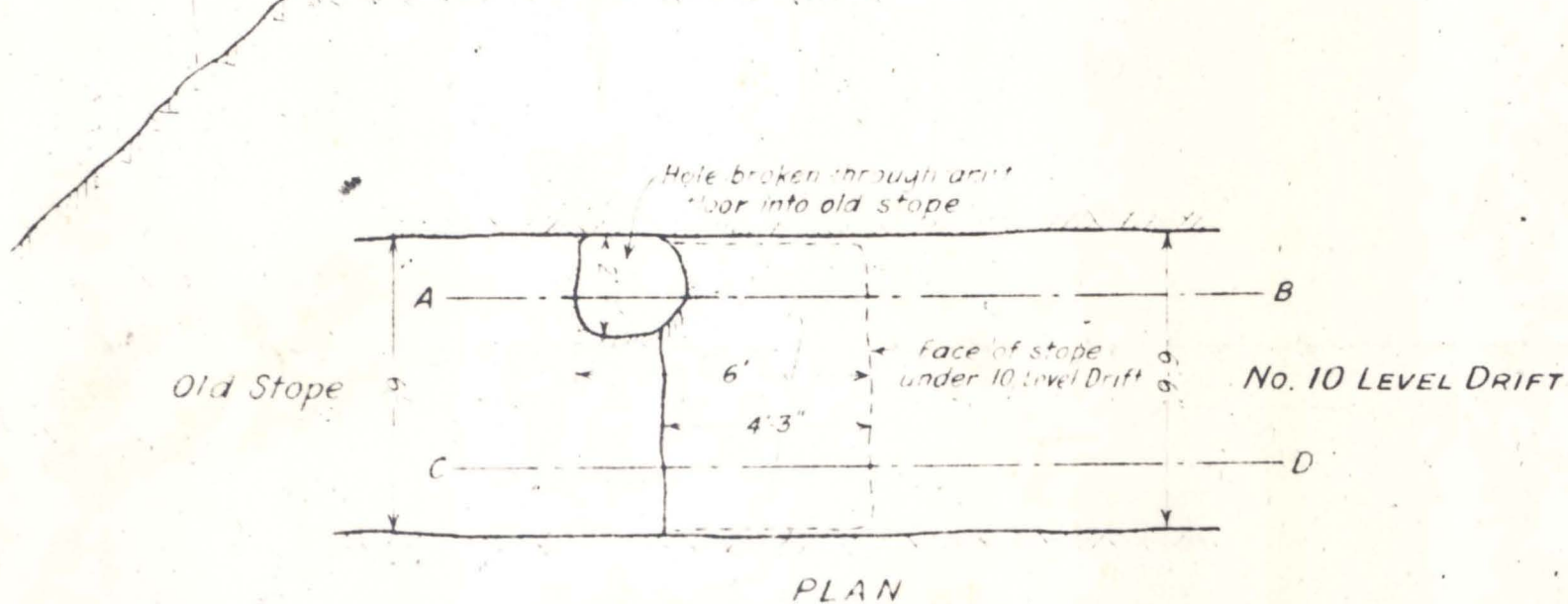
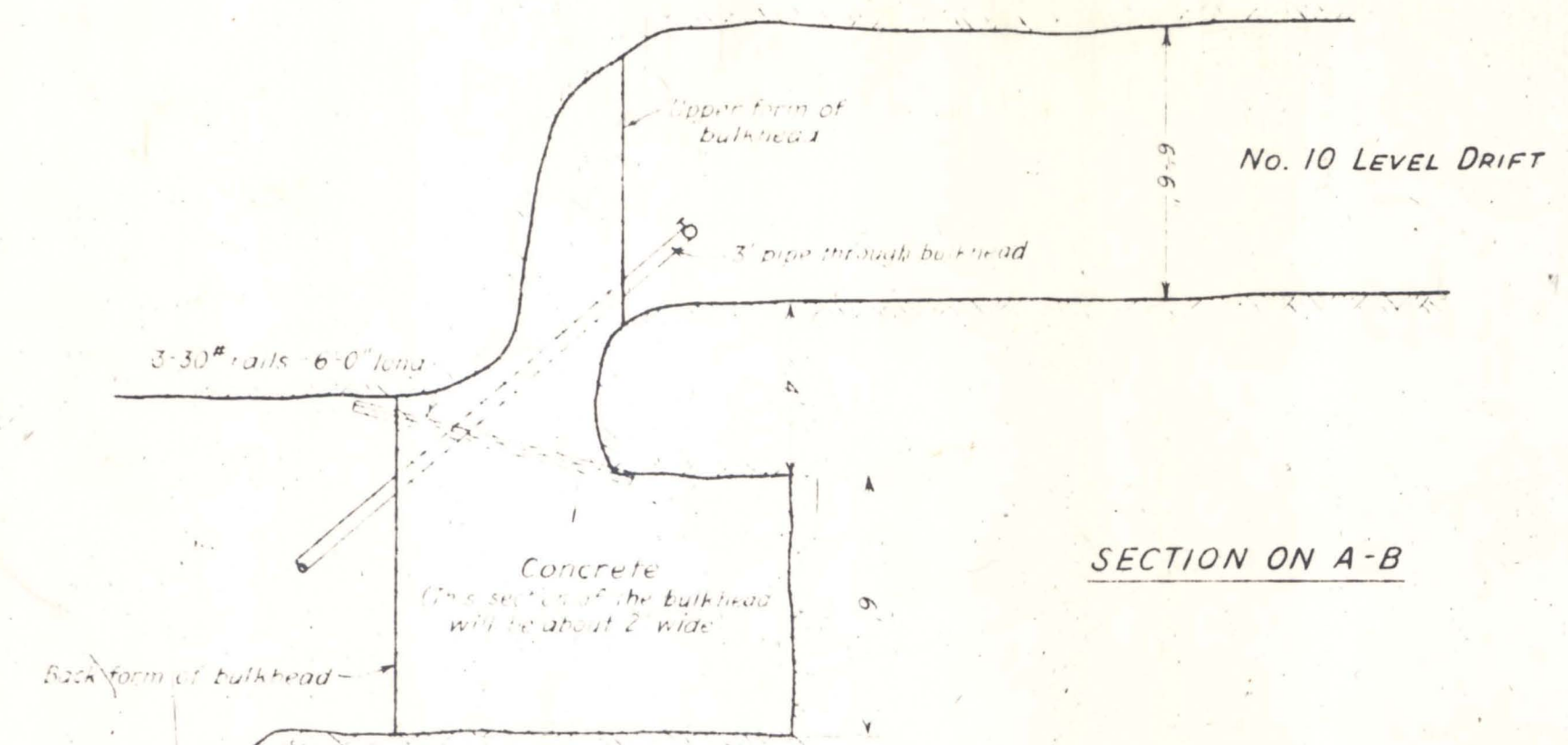


Figure 6





SECTION ON LINE C-D

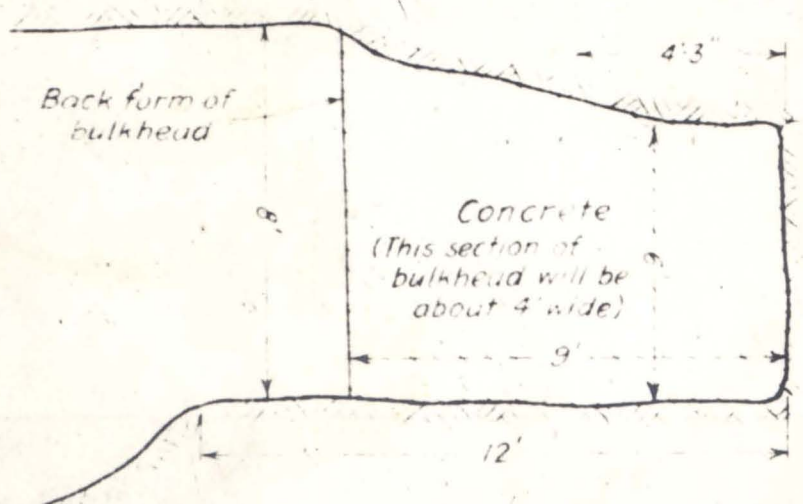
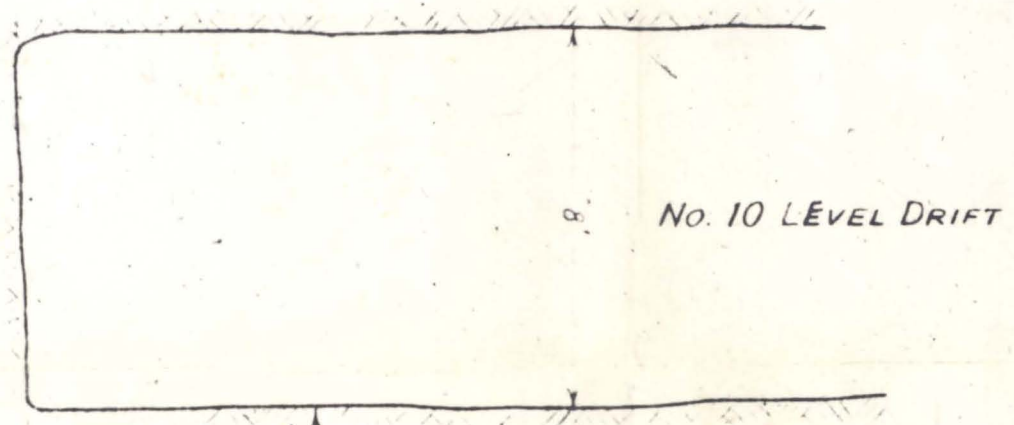


Fig. 4  
**No. 10 LEVEL BULKHEAD  
 HIBERNIA MINE**

Scale:  $\frac{1}{4}'' = 1'$   
 Designed by Mines Management  
 Sept. 1913  
*E. W. Perkins 1913*

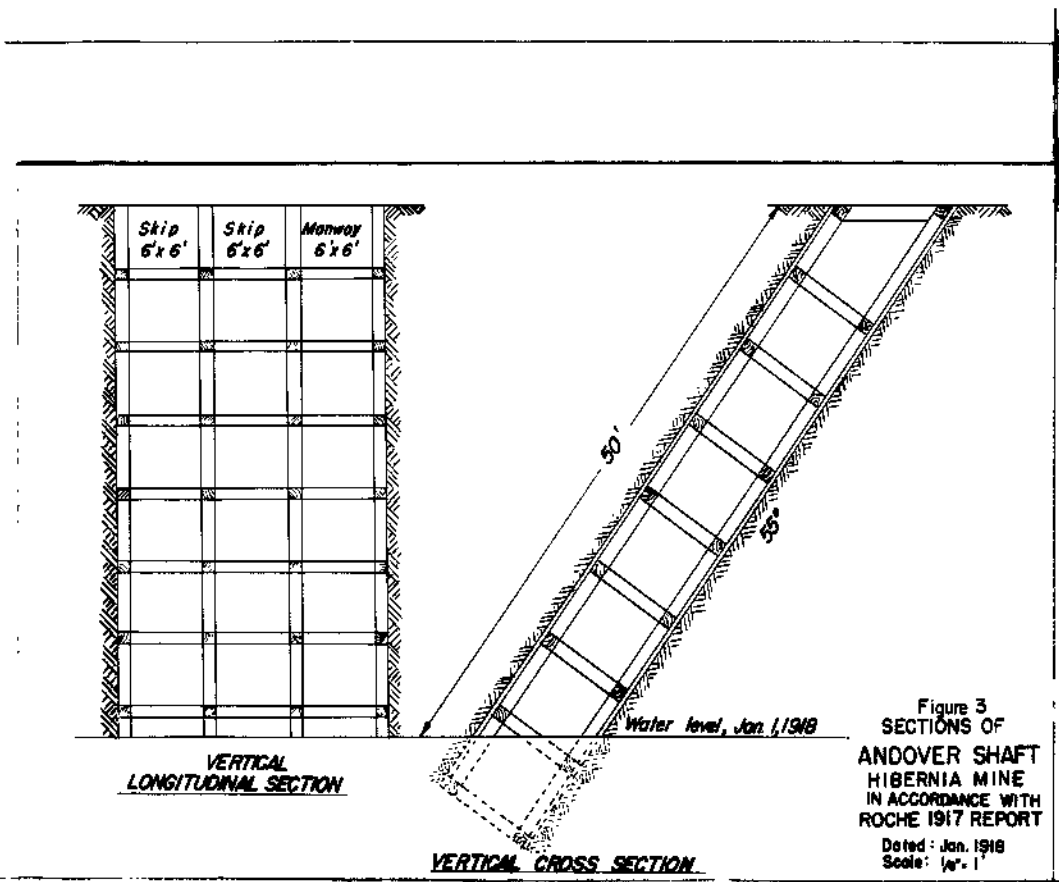


Figure 3  
 SECTIONS OF  
 ANDOVER SHAFT  
 HIBERNIA MINE  
 IN ACCORDANCE WITH  
 ROCHE 1917 REPORT  
 Dated: Jan. 1918  
 Scale: 1/2" = 1'

300021330

14.5.11300759