Formation is hard, blue clay, from the surface to 110 ft. below which is very hard brown marl.

10 ft. - Platform of logs

Marks of gravel, charcoal, etc. every 10 ft.

Plan Showing A Part Of The Work Done In Oak Island, N.S. Previous To The Year 1795 N.D.

Constructed From Data Obtained In Several Attempts To Recover Treasure Therefrom

Prior To July 1, 1950

Flat stone with characters cut in it.

Money pit is filled with puddled blue clay from: 130 to 151 ft. and from 160 to 171 ft.

Iron not drilled through

Red Clay from 90 ft. to 94 ft. mixed with Forest Bed 4-6 ft. Bed of "Metal in Pieces" Piece of Fragment Recovered From This Bed.
Oak Island - Nova Scotia Exploration

1896 surface has subsided an estimated 8 feet.

Log of hole drilled in 1896

Below 1896 surface
Below 1931-32 surface
Drill set on platform in 1896 shaft

Iron, stopped casing but drill could pass. This iron was found to be an anchor fluke.
Parchment found in cuttings and 1" of box of false metal.
Iron plate. 171' 163"

Total depth

Top of circular tunnel at 95 feet, built in 1865
No other known workings below this level.

Bucket way No. 2
Position of unexplored portion of money pit below the 125 foot level was indicated by core drilling, which found, loose material and wood.

J. W. Lewis
May 1, 1957
Acroec Plan Taken from the original of said
Island or Island No. 28. Taken by David Wewandale [ illegible ] Surveyor 1st Day 7 July 1800
Lot No. 15 begins at a stake at the East corner
of Lot No. 14. Located to David Melvin thence South 28
degrees west to a stake at the East corner of Lot No. 32—73 rods.
Located to Samuel Bell thence Easterly on or by the sea shore
40 rods or to a stake at the west corner of Lot No. 16.
Located to John Smith, thence N. 28 East 71 rods or to
the shore to a stake thence westerly by said shore to
the place of beginning containing four acres.
According to the original survey. Surveyed for
David Wewandale By me. David Wewandale [ illegible ]
Surveyor

This Island formerly surveyed by
The late William Nelson By Surveyor

I certify the above to be a true copy of Plan No. 1046 on file in the Crown Land Records,
Department of Lands and forestry, Halifax, Nova Scotia.

[ Signature ]

[ Signature ]

This photostat is exactly one half the size of the original.
The scale is therefore:
Fourty rods to one inch.
Sketches from the OAK ISLAND TREASURE COMPANY
Prospectus, showing work done prior to 1893

SECTIONAL VIEW of WORKS.

1. MONEY PIT.
2. PIT 110 ft. DEEP.
3. = 100 =
4. = 75 =
5. = 35 =
6. = 118 =
7. RESERVOIR ON THE SHORE.
8. SUPPOSED TUNNEL.

MAP OF OAK ISLAND SHOWING WORKS.

1. MONEY PIT
2. PIT 110 ft. ABOUT 100 yrs. OLD.
3. = 100 =
4. = 75 =
5. = 35 =
6. = 118 =
7. = 30 =
8. EXCAVATION ON THE SHORE FILLED WITH STONES. A RESERVOIR.
9. SUPPOSED TUNNEL FROM SHORE TO MONEY PIT.
10. CELLAR TO SMITH'S HOUSE.
11. BARN.

FROG ISLAND
SMITH'S COVE
I arrived on Oak Island "near a small town along the C.N. R.R. named Western Shore" May 27, 1936, landing a considerable portion of the machinery May 28 being stormy and rough the man, Mr. Walker, who owned the scow advised against trying to land the balance till the bay became smoother.

On Friday May 29 with nine men and rigging equipment obtained from Mr. Walker with scow and gasoline tug, we landed and transported all equipment to the head of shaft known as the money pit. Using a horse and wagon belonging to Mr. A. C. Dauphinee.

I inspected the shaft carefully and found the timbers crushed part way across the shaft, the planking crushed in in places, and bowed in others. I measured to the water level and it was even 32 ft. on the South, or higher part of shaft. The N.W. and N. sides had settled twenty inches throwing the entire shaft out of square, and timbering out of line.

I started clearing away all useless material and began reinforcing the broken timbering and removing old timber from water level at 32 ft. I took measurements several times each day at various tide actions and found no variation in the water level.

I secured 8x8 timbers "Spruce" 22 ft. long and leveled them across edge of the shaft on S. and N. sides under these I strung spruce timber 6x6 and bedded cribbing of sawed timber at each end and blocked with sawed posts between, furnishing a strong solid head frame to begin working from.

After erecting an engine and pump house I stood a head frame 22 ft. high of 6x6 spruce and securely x-braced and cross braced it.

For sheave supports at head I put up 6x6 spruce timbers spanning the six upright posts of tower.

After clearing away broken and rotten
timber I began pushing the bulged sides back in line and reinforcing with 6x6 spruce timber.

Here I halted with timbering and put in a 1000 gallon per min turbine pump which on the start delivered 1300 gallons per min at a depth of 100 ft it was delivering per minute.

I ran the pump 2 hours and fifteen min and lowered the water 70 ft in the shaft, which would be 100 ft below the deck-head of new timbering. I observed when the water was down to the above level, an old shaft several hundred feet north E above Smiths cove was drained also, "proving" there is some clear passage between the pit marked on map to be 55 ft. in depth.

On June 11th I began to concentrate all effort in retimbering the shaft at money pit and pushing down to the 150 ft. level.

Between May 29 and June 14 I have taken numerous measurements to the water level in the shaft at the money pit. These measurements were taken at every tide phase and I have not been able so far to detect any tidal affect; or variations in the water level in money pit shaft that might be due to tidal actions.

June 14th 1936. directly after writing the above at 12:00 noon I took another measurement and found the water level to be at 35 ft below surface landing of shaft. (This shows the water level lower by 3 ft. than at any former measuring. The tide is about half low. I think the draining of other pits has some bearing on the water level.

June 14 1936. I just took a measure to water level in shaft and found 33 ft. 10", a rise of 1'-2" at high tide.

At a point 42 ft. from deck head of shaft along the N.W. corner was found a hole 4'- wide and 5' long where a charge of dynamite (said to have been used to cut off steel cable support) had been exploded.

The 6"x6" timbers we cut off. Behind this
hole was a cavity and still another set of older timbering was visible. At 50 ft. to 60' a general settling has crushed the upright posts supporting ends of cross timbering from west to east. At about 54 ft a bulge of ten inches bowed the timbering inward. A considerable strain was evident at this point as one of the men struck one of the original timbers with a small wrecking bar it split with a report like a pistol. At this point I put in new 6"x6" uprights and 6"x6" cross timbering from W to # & N to S and doubled the upright posts in center.

June 17, 1936 A considerable seepage has showed along the N.E. corner and easterly end of shaft, or end directly beneath the hoist house. At 4:30 P.M. on above date this seepage was normal. At 8:30 P.M. I visited the shaft and heard running water. I descended with lights and found a stream about 2" pouring across the S.E. section of shaft. This was at about half tide. I had the shaft pumped down to 100 ft. at the time.

June 20: After further observations I found the above water was caused by the natural seepage finding a common outlet which increases and diminishes according to the height of tides.

June 21: I have noticed several cracks on the surface around the shaft. Two places these cracks were one foot in width and the sod fell away showing a distinct new disturbance. Today on careful inspection and measurements I found distinct outlines of a circle 75' in diameter with the shaft nearly in the center. This circle showed cracks one foot in width in three places and from 1 to 2 inches and just a faint line in others.

Inside the shaft there has been a slight but general settling since extensive pumping has been in operation.

I also noticed that three other old pits are gradually becoming dried out since above pumping operations.
I have noticed a slight settling at shaft head and the pump line is slightly out of alignment.

Today I brought out a crew of men and I descended to a point between 95 and 100 ft where I found the South West corner & sides jammed with old timber and the 6"x6" used in original shaft broken and pushed in about three feet; a 6"x6" timber was jammed endways against pump line gradually crowding it out of line.

Three men lowered me into the shaft below this wreckage in a life line, where I saw away timbers and dislodged broken lumber and sent it to surface. Later we realigned the pump at head of shaft.

Most of the timber which cross braces the shaft are broken or shoved out of place, as far down below this point as I could see. A considerable amount of old lumber is lodged along South East end making inspection uncertain and difficult till shaft is retimbered with new lumber down to this point.

July 10: We cleared away a mass of broken timber and bulging earth and caught up the caved area down to 110 ft. In this operation it was necessary to timber around pump line to prevent the South and West walls pushing in and destroying the entire pump system.

Nine pieces of 6"x6" timbers were crowded against the pump line pushing it out of plumb. These all had to be carefully cut away and new timbers substituted.

After securing the two dangerous walls down to 100 ft I ordered the pocket cleared away from 78 ft in order to have full control over the pump system.

Today (July 10) we are carrying out this work.

As the line was hard against the west wall a false set of timbers were set East of pump line to brace the new work. After swinging the line 8" in this direction we are able to cut out this bracing and replace it along the west wall and at the ends of the new work thereby allowing 6 ft to swing the line free towards the Eastern section of shaft.
July 5 Complete

120: Finished 7/13 set platform 110' 7-6

122: Set platform 12 7-6 completed

133: Set platform 135-7-30

140: Old broken timber rocks and old wire cable

157: Started setting black muck

163: Hit yellow soft mud

168: Tubing 14 x 12 long standing on angle dipping to east close to eastern wall of shaft in line with center line of timbering

2st P: Sand gravel boulders

2ft: Previously excavated
The work of sinking a new shaft at Oak Island began May 4, 1937, by clearing away refuse, collecting timber and other supplies and building a Shoe.

In the first eight feet of excavating there was a considerable old timbers encountered from foundations and fills from previous operations.

At about ten feet the well defined outline of an old shaft began to appear. This shaft had been filled in with gravel and coal ashes and other waste matter from other diggings.

At twenty feet an accurate measurement was taken of the old shaft, and was found to be 6 ft wide with about ten feet of its length showing, as it extends beyond the North East wall of the new shaft.

The old shaft had been timbered with double three inch planking.

The relative position of the old shaft with the new, or present operations are as follows.

On the South side of new shaft it is 2.6" from wall of new shaft and extending west for 6.0", then North past line of North wall of new shaft then East for 6.0" (width of old shaft) then South to starting point. On the Eastern end it is 6.0" West of new shaft.

The planking in old shaft are fairly well preserved.
NEW SHAFT

POSITION AT 20' BELOW COLLAR OF SHAFT OR DECK
The old filled shaft at 24' began to lean about ten inches towards the N.W.

At 26 ft. old timbers "standing on end" is appearing in the North West corner or section of new shaft.

Most of the ground is blue clay and boulders. However, in the filled shaft some gravel and coal ash appear at intervals to 26 ft.

Scale: 3/16" = 1 ft.

Position at 24'
Position at 35°
The following sketch shows the relative position of an old shaft with the new.

At 45 ft old 8"x8" hewed timbers are found outside the old 1936 working and the present shaft.
Position of old and new shafts at 50 ft.

At 47 ft there seemed to be slightly better digging in the area of old shaft and along the S.E. side of old shaft. No large boulders are encountered along this depth, but considerable old timber is taken out along the side next the pump shaft, which is probably packing put in when sinking other shaft.

Old 8"x8" timbers continue along wall, outside the pump shaft.

Ten or twelve pieces of old 2" drill casings were picked up, from 40' to 52', and one piece eight feet long of 2½" pipe was taken out. All this pipe was badly eaten out with rust.

The old 8x8" hewed cribbing is still along the wall of pump shaft, between the two shafts.

At the beginning these timbers were two feet away from the old shaft, leaving a void between the 8x8"'s, and the wall of the pump shaft.

However at 50'-0 these timbers are close to the pump shaft, and some of them are 8x9" hewed timbers.
Report of findings at 55'-0 in new shaft, and position of old shaft, with the New.

From 50'-0 to 55'-0

At 53'-0 we hit an old 6" drill casing under #2 hoistway. Located at the corner of old shaft, as shown in sketch.

This casing is inclining towards the old shaft and apparently has cut into the old shaft lower down.

The '8x8" timbers still continue along the outside wall of pump shaft, except they are now close to the timbering of pump shaft, while at the beginning they were about two feet away, with another 8x8" piece still outside the first layer.

A hole more than one foot long was cut thru both sets of timbers giving a perfect view of their position and size.

Position: at 55
At 57-6" we came to another 6" drill casing cutting the edge of the old shaft. Its exact position is shown in the above sketch.

When the casing was first opened it carried off all the water lying in bottom of shaft, and filled up to 3-6" from top where water remained.
Sketch, showing new shaft between 60' and 65 ft.

Removed one 10 ft. length of 6" drill casing from #2 bucket way

6" drill casing, cutting edge of old shaft

Found an old whale oil lamp filled with oil.

July 17 found piece of unexploded dynamite, in #2 bucket way.

Old 8x9" hewed timber still carries along the outside of the 1936 shaft. Considerable old timbers are found between the two shafts. (Presumably used as packing behind shaft)

6" 10

Position at 65'
Sketch, showing new shaft between 65' and 70 ft.

Old 6" drill casing. One 10 ft length has been taken off.

8.9" Timber

Large Granite Boulders

The old 8x9" timber between the two shafts seems to have disappeared between 67 and 70 feet.

The general conditions remain the same as the upper part of the shaft.

Position at 70'
Sketch showing new shaft between 70' and 75 ft.

Large Granite Boulder

This old shaft is showing center bracings beginning at seventy feet.

Another ten foot length of 6" drill casing has been taken out, as shown in above sketch, also a short piece of 2" pipe. The material in the old shaft at this point seems to be of a slightly softer nature. In barring across to old shaft there is a quantity of old timbers encountered, standing on a steep angle. The ends of some were cut off under the shoe, and the other ends are visible from the old shaft where we tap thru for the drainage.

The new shaft is practically dry, only making about five or six buckets water daily at this point.

Position at 75
Sketch showing new shaft between 75' and 80'.

The shaft is practically dry along this area, and is not making more than two barrels of water per 24 hours exclusive of that which comes up with the mud.

The ground seems to be better digging for the past five or six feet. There are fewer boulders encountered, and the ground is not quite as rubbery as was the case higher.

A piece of an old oak stump was taken out in this area.
Sketch, between 80-0" and 85-0"

General conditions unchanged from last sketch.

Bottom very dry. About four buckets of water coming in each twenty-four hours.
Sketch between 85 and 90 feet

1836 Shaft position at 90' as found in 1931

In 1931, Chappell found timber with bolt on which he had set the drill when he drilled through the treasure in 1836 or 7. This is the location. This is the depth—90'. Present depth of timber with bolt.

Conditions unchanged, unless it seems slightly easier digging along the S.E. half of shaft.

Position at 90'
Sketch of shaft between 90- and 95-0" ft.

Hit a water course at 93'-0"
Possibly the collapsed water tunnel designed to flood treasure tunnel.
A band of clay "resembling putty, but which I call talc, and believe to be of a volcanic origin" crosses the shaft in the vicinity of the above water tunnel, "Or water course".
This clay is pliable and would furnish a good material to seal off water, and I have seen nothing like it in any other place in this vicinity.
A small section of the tunnel collapsed when we struck it showing a small opening as in above sketch.

Position at 95'
Sketch of shaft between 95- and 100-0 ft.

Tunnel 3'-10" leading from old shaft as in sketch. Timbered with hewed 6" and 5" hemlock. Height unknown at this point.

6" drill casing

At 100-0 ft the top of what appears to be an old tunnel leading from the old shaft in a line as shown in above sketch. The tunnel is 3.10" wide inside and of 5" and 6" hewed hemlock timber.

A more complete report will be obtained at a little lower depth.
Sketch from 100-0 to 101-6" at bottom of shaft.

Shaft deflected 4-6" as shown in dotted line

Old Timbers packed between shafts.

1936 shaft

1936 hoist house

Circular tunnel cutting across shaft as shown in above sketch.

Position at 101-6"
Sketch of shaft at 102-0 showing outline of an old semi-circular tunnel, as sketched below.

A packing of old heved timbers is still following between the two shafts.

The dimensions of the above semi-circular tunnel are: 3'10" wide, and 6'-4" high, and of heved six and eight inch timber.

A packing of timber was found outside the tunnel at the N.W. end, and near the center, "outside" along the N.E. side.
The old shaft, and semi-circular tunnel has disappeared and the ground seems to be more sandy.

An occasional piece of old timber is still to be found which appears to be packed outside the old workings.
DESCRIPTION OF HOLES
6" Outward from Vertical Axis
45, 46, 47°.

4½ ft from Floor & Horizontal
35°, 39°, 41°, 42°, 43°, 44°.
On Floor & 45° Outward
37, 38, 40, 48.
4½ ft from Floor & 45° Outward
36.
The Rest are Vertical.

FLOOR AT 121'-6"
Tunnels dug by Hamilton. Floor is at 165 feet.

HEDDEN SHAFT 12 X 24'

The 6x6' compartment in the Hedden Shaft was deepened from 121' to 170'.

The floors in both shafts were in solid ground.

The holes drilled in the bottom of this shaft were in part inclined to the SW but not inclined more than 10°. They penetrated gravel and soft material.

This data was obtained from Mr. Ervin Hamilton June 29, 1950.

J. W. Lewis.

Broken lines show position of shafts at the surface.

Solid lines show position of shafts at 170' which is the approximate maximum depth in both shafts.

Mr. Hamilton states that the depths indicated in this sketch refer to the distances below the natural ground level, at the fence which surrounds the sunken ground of the Money Pit, and not at the shaft collars. J.W.L.

Position at 170'
### Drill Hole Reports

#### Hole #1
August 27, 1937

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>27.0</td>
<td>2½&quot; Pipe Sand, Layer hard sand</td>
</tr>
<tr>
<td>2.6</td>
<td>Open space. Very soft mud</td>
</tr>
<tr>
<td>2.0</td>
<td>Hard layer sand</td>
</tr>
<tr>
<td>1.6</td>
<td>Soft mud</td>
</tr>
<tr>
<td>1.6</td>
<td>Hard clay or mud</td>
</tr>
</tbody>
</table>

Below floor of drill or about 3 ft. above floor at 12 1/6" level.

#### Hole #2
August 28, 1937

(Open space from 26' to 29')

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.3</td>
<td>2¼&quot; Casing Sand</td>
</tr>
<tr>
<td>4.9</td>
<td>Sand</td>
</tr>
<tr>
<td>3.0</td>
<td>Open water course</td>
</tr>
<tr>
<td>1.0</td>
<td>Layer hard mud</td>
</tr>
<tr>
<td>1.0</td>
<td>Wood</td>
</tr>
<tr>
<td>8.0</td>
<td>Soft mud</td>
</tr>
<tr>
<td>2.0</td>
<td>Mud and small stones</td>
</tr>
</tbody>
</table>

197'

#### Hole #3
August 31, 1937

(Open space from 15' to 17')

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.3</td>
<td>2¼&quot; Casing Sand</td>
</tr>
<tr>
<td>9.0</td>
<td>Sand</td>
</tr>
<tr>
<td>5.0</td>
<td>Decomposed limestone</td>
</tr>
<tr>
<td>8.0</td>
<td>Sand and mud</td>
</tr>
<tr>
<td>0.3</td>
<td>Wood</td>
</tr>
<tr>
<td>1.9</td>
<td>Mud</td>
</tr>
</tbody>
</table>

157'

#### Hole #4
August 31, 1937

<table>
<thead>
<tr>
<th>Depth (ft)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.0</td>
<td>Hard Sand</td>
</tr>
<tr>
<td>1.0</td>
<td>Soft mud, water way</td>
</tr>
<tr>
<td>10.0</td>
<td>Hard Sand</td>
</tr>
<tr>
<td>5.0</td>
<td>Mud and sand, hard</td>
</tr>
<tr>
<td>2.0</td>
<td>Limestone</td>
</tr>
<tr>
<td>1.0</td>
<td>Sand, hard</td>
</tr>
<tr>
<td>0.6</td>
<td>Stones</td>
</tr>
<tr>
<td>1.6</td>
<td>Soft mud, water way</td>
</tr>
<tr>
<td>6.6</td>
<td>Mud with soft streaks</td>
</tr>
</tbody>
</table>

132'
Hole #5
September 1, 1937

11.0 Hard Sand 11.0
13.0 Hard Sand 24.0

Hole #6
September 2, 1937

11.0 Casing, Hard Sand 11.0
4.0 Hard Sand 15.0
1.0 Mud 16.0
13.0 Hard sand 29.0
1.0 Mud, soft 30.0
5.0 Hard sand 35.0
5.0 Soft mud 40.0

Hole #7
September 3, 1937

27.0 Hard sand 27.0
1.0 Mud seam 28.0
2.0 Hard sand 30.0
1.0 Limestone 31.0
2.0 Hard sand 33.0
0.2 Wood 33.2
7.0 Very soft sand 40.2

Hole #8
September 4, 1937

15.6 Hard sand 15.6
0.6 Mud seam, last water 16.0
15.0 Hard sand 31.0
2.0 Hard sand 33.0
0.3 Edge of timber 33.3
1.3 Soft space 34.6
6.6 Soft mud 41.0

Hole #9
September 6, 1937

16.0 Hard sand 16.0
1.0 Mud seam 17.0
4.6 Hard sand 21.6
3.0 Limestone 24.6
6.6 Hard sand & cobbles 31.0
9.6 Hard sand and clay 40.6

******************************************************************************
Hole #10  
September 7, 1937  
Vertical

(Casing driven 21'0")

26.0 Hard Sand  
0.8 Limestone  
3.4 Soft mud  
11.0 Layers of sand with soft streaks  

(8" Limestone core recovered.)

************************************************************

Hole #11  
September 8, 1937  
Vertical

(2½" Casing driven 21.0)

26.0 Hard sand  
3.0 Soft mud  
8.0 Hard layers of sand  
4.0 Softer sand  

(Nothing recovered.)

************************************************************

Hole #12  
September 9, 1937  
Vertical

(Casing driven 21')

23.0 Hard sand  
1.6 Soft mud  
2.6 Wood  
4.0 Hard Sand  
3.0 Soft mud  
7.0 Sand and mud in layers

************************************************************

Hole #13  
September 10, 1937  
Vertical

(21'0"--2½" Casing)

26.0 Hard sand  
1.0 Mud, soft.  
0.6 Limestone  
5.0 Hard sand  
0.8 Limestone  
2.0 Hard sand  
2.0 Soft mud  
4.4 Hard and soft layers

************************************************************
Hole #14
September 11, 1937

(Drove 2½" casing 21'.)

24.0 Hard sand 24.0
1.0 Soft mud 25.0
2.0 Hard sand 27.0
4.0 Soft mud 31.0
10.0 Hard and soft layers of sand. 41.0

Hole #15
September 13, 1937

(Drove 2½" casing 21'.)

21.0 Hard sand 21.0
3.0 Soft mud 24.0
10.0 Hard sand 24.0
7.0 Soft and hard layers 41.0

Hole #16
September 18, 1937

(Drove 2½" casing 21'.)

31.0 Hard sand 31.0
3.0 Soft mud 34.0
7.0 Sand and mud in layers 41.0

Hole #17
September 20, 1937

(Drove 2½" casing 21'.)

22.0 Hard sand 22.0
4.4 Open space 26.4
0.8 Hard sand 27.0
1.6 Wood 28.6
3.6 Hard sand 32.0
3.6 Very soft bit dripped 35.6
6.0 Hard and soft layers 41.6
#18 Hole.  
July 28, 1938

Drove 2½" casing 26' 9".

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.0</td>
<td>Hard sand</td>
<td>13.0</td>
</tr>
<tr>
<td>2.0</td>
<td>Mud seam</td>
<td>15.0</td>
</tr>
<tr>
<td>8.0</td>
<td>Mud seams and sand</td>
<td>23.0</td>
</tr>
<tr>
<td>7.0</td>
<td>Hard sand</td>
<td>30.0</td>
</tr>
<tr>
<td>2.0</td>
<td>Mud seam, &quot;rods fell&quot;</td>
<td>32.0</td>
</tr>
<tr>
<td>1.0</td>
<td>Hard sand</td>
<td>33.0</td>
</tr>
<tr>
<td>1.0</td>
<td>Soft mud</td>
<td>34.0</td>
</tr>
<tr>
<td>3.0</td>
<td>Hard sand</td>
<td>37.0</td>
</tr>
<tr>
<td>2.0</td>
<td>Soft mud</td>
<td>39.0</td>
</tr>
<tr>
<td>4.9</td>
<td>Hard</td>
<td>43.9</td>
</tr>
</tbody>
</table>

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

Hole #19  
July 29, 1938

Drove 25 ft. 2½" casing.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.0</td>
<td>Hard sand</td>
<td>25.0</td>
</tr>
<tr>
<td>3.0</td>
<td>Soft mud</td>
<td>28.0</td>
</tr>
<tr>
<td>5.0</td>
<td>Drills washed down</td>
<td>33.0</td>
</tr>
<tr>
<td>3.0</td>
<td>Soft sand</td>
<td>36.0</td>
</tr>
<tr>
<td>3.0</td>
<td>Hard sand</td>
<td>39.0</td>
</tr>
<tr>
<td>5.0</td>
<td>Soft sand, or mud</td>
<td>44.0</td>
</tr>
</tbody>
</table>

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

Hole #20  
July 30, 1938

Drove 26' 0 2¼ Casing.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.0</td>
<td>Hard sand, &quot;inlayers with soft seams of mud.&quot;</td>
<td>30.0</td>
</tr>
<tr>
<td>6.0</td>
<td>Very soft, &quot;washed down&quot;</td>
<td>36.0</td>
</tr>
<tr>
<td>4.0</td>
<td>Soft sand</td>
<td>40.0</td>
</tr>
<tr>
<td>2.6</td>
<td>Hard sand</td>
<td>42.6</td>
</tr>
<tr>
<td>5.6</td>
<td>Soft sand &amp; mud</td>
<td>48.0</td>
</tr>
</tbody>
</table>

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *

Hole #21  
August 1, 1938

Drove 34' 0 2¼ casings.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Description</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.0</td>
<td>Sand, in hard layers with mud seams</td>
<td>30.0</td>
</tr>
<tr>
<td>4.0</td>
<td>Soft layer sand</td>
<td>34.0</td>
</tr>
<tr>
<td>1.0</td>
<td>Hard layer of sand</td>
<td>35.0</td>
</tr>
<tr>
<td>3.0</td>
<td>Drills dropped, &quot;washed down&quot;</td>
<td>38.0</td>
</tr>
<tr>
<td>10.0</td>
<td>Sand, &quot;with soft layers&quot;</td>
<td>48.0</td>
</tr>
<tr>
<td>3.0</td>
<td>Hard layer sand</td>
<td>51.0</td>
</tr>
<tr>
<td>0.6</td>
<td>Limestone</td>
<td>51.6</td>
</tr>
<tr>
<td>2.6</td>
<td>Layer of sand, &quot;rather soft&quot;</td>
<td>54.0</td>
</tr>
</tbody>
</table>

* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
Hole #22
August 2, 1938

Drove 31.0 2\text{4}/\text{8}'' casings.

31.0 Sand in hard layers, "with mud seams" 31.0
11.0 Sand, "hard" 42.0
4.0 Sand & mud, "very soft" 46.0
2.6 Hard sand 48.6

Hole #23
August 2, 1938

Drove 26.6" 2\text{4}/\text{8}'' casings.

26.6" hard sand in layers" with small mud seams", 26.6
1.6 Soft sand 28.0
6.6 Apparently wood, Chopped thru. (no core) 38.6
13.6 Hard sand 42.0
4.0 Very soft (Drills washed down) 46.0
2.6 Hard sand 48.6

Hole #24
August 2, 1938

Drove 23.6 2\text{4}/\text{8}'' casings.

26.00 Hard sand in layers; with mud seams. 26.00
7.0 Hard sand in layers; with mud seams. 33.00
0.6 Loose limestone. (floating) 33.6
7.6 Hard Sand 41.0
3.9 Soft. "Drills washed down" 44.9
0.3 Limestone 45.0

Hole #25 August 3, 1938

Drove 25.0 2\text{4}/\text{8}'' casings.

34.0 Hard sand, with occasional small mud seams 34.0
3.0 Soft mud. Drills washed down. 37.0
9.6 Hard sand 46.6
1.0 Limestone 47.6

Hole #26
August 4, 1938

Drove 23.0 2\text{4}/\text{8}'' casings

33.0 Hard sand with mud seems 33.0
4.0 Soft sand. 37.0
0.6 Limestone; (Floating) 37.6
4.6 sand. In hard and soft layers. 42.0
1.0 Limestone 43.0
Hole #27  
August 4, 1938

Drove 21.0 2 1/4" Casing.

30.0 Hard sand with mud seams in layers.  30.0
2.0 Mud seam. "Rods washed down".    32.0
10.0 Hard sand                           42.0

******************************************************************************

Hole #28  
August 4, 1938

Drove 23.0 2 1/2" casing.

30.0 Hard sand                            30.0
1.0 Soft mud                               31.0
4.0 Soft sand                              35.0
2.0 Hard layer sand                       37.0
2.0 Soft sand mud                         39.0
3.0 Hard layer sand                       42.0
3.0 Limestone                             45.0

******************************************************************************

Hole #29  
August 6, 1938

Drove 26.0 2 1/4" casing

30.0 Hard sand                            30.0
2.0 Soft, bits washed                     32.0 3/4-
15.3 Sand in hard and soft layers         47.3
0.9 Limestone                             48.0

******************************************************************************

Hole #30  
August 6, 1938

Drove 33.0 2 1/4" casing 33.0

30.0 Very soft                            30.0
3.0 Hard Iron cuttings                    33.0
This hole ran into an old 6" drill casing which sprung our casing out of line.

******************************************************************************

Hole #31  
August 8, 1938

Drove 23.0 2 1/4" casing 23.0

6.0 Soft, "Drills washed               29.0
8.0 Hard sand & gravel                  37.0
2.0 Soft Drills washed                  39.0 1/2-
1.6 Hard sand in layers                 40.6
2.6 Limestone                           43.0

******************************************************************************
Hole #32
August 8, 1938

Drove 25.0 2½" Casing  25.0

46.0 Hard sand and coarse gravel in layers  46.6
4.6 Limestone  47.0

Hole #33
August 9, 1938

Drove 23.0 2½" casing  23.0

34.0 Hard sand with layers of mud  34.0
2.0 Soft Drills washed down  36.0
5.0 Hard packed sand  41.0
1.0 Soft Drills washed down  42.0
1.0 Hard packed sand  43.0
2.6 Limestone  45.6

Hole #34
August 10, 1938

21.0ft. 2¼" casing drove 21.0

12.0 Hard sand, and coarse gravel  33.0
0.3 Brown Limestone; "floating"  33.3
9.3 Hard sand, with mud seams.  42.6
0.6 Limestone  43.0

Hole #35
August 11, 1938

Drilled horizontal, above shoe from #2 bucket way.

0.6 Spruce wall timber in new shaft  1.6
1.0 Mud  2.0
0.6 Old timber  5.0
3.0 Mud  5.6
0.6 Old timber  12.3
6.9 Timber, drilled on steep angle (end)  13.1
0.10 Spruce timber  13.6
0.5 Boulder  13.6
26.6 Mud, Gravel and Sand  40.0

Hole #35-A
August 12, 1938

Stared from above set up and struck large boulder
at 5.6 and abanded to set up on above hole" or #35.

0.6 Spruce wall timber in new shaft  0.6
1.0 Mud  1.6
0.6 Old timber  2.0
3.0 Mud  5.0
0.6 Old timber, "spruce"  5.6
Hole #36
August 16, 1938

(This hole started on a 45 degree angle above)
(the shoe in #2 bucketway along wall of new)
(shaft near the pump shaft.)

0.6 Spruce timber, "sidewall of new shaft." 0.6
1.10 Mud and cobbles 2.4
1.8 Old timber on end 4.0
2.0 Cobbles 6.0
0.6 Old timber 6.6
0.6 Cobbles 7.0
1.0 Mud 8.0
0.6 Old Timber 8.6
0.6 Boulders 9.0
0.6 Old timber 9.6
1.6 Mud 11.0
0.6 Old timber 11.6
1.6 Boulders 13.0
0.6 Old timber 13.6
4.0 Thru boulders and mud 17.6

Came up against large boulder and after working one full shift, and twisting off both the casing and core barrel, and two chopping bits we abandoned this hole and moved on another hole.

Hole #37
August 17, 1938

Drilled on a 45 degree angle, under the shoe in the South east section of new shaft; "under ladderway, and pointing in direct line with shaft, (2 Ft. from sidewall near pump shaft)

38.0 Hard sand, small boulders, and coarse gravel 38.0
3.0 Soft, "Drills washed down when rotated by hand." 41.0
1.0 Hard sand 42.0
2.0 Soft, "Drills washed down, when rotated by hand." 44.0
4.6 Hard sand; coarse gravel 48.6
1.6 Limestone 50.0

Hole #38
August 18, 1938

Drilled in South East section of new shaft under ladderway, and on a 45 degree angle downward under the shoe. The hole also angled almost in the corner passing corner of old pump shaft under the 1936 hoist house.

31.0 Hard sand, and coarse gravel 31.0
3.0 Soft, "Drills washed down when rotated by hand." 34.0
2.0 Hard sand 36.0
3.0 Soft, Drills washed down by hand 39.0
7.0 In hard and soft layers 46.0
Hole #39
August 19, 1938
Horizontal South

Hole drilled from same set up as #38, except it was drilled Horizontal above the shoe, its course was same as above hole.

12.0 Hard sand and coarse gravel
2.0 Soft mud
12.0 Hard sand and coarse gravel
3.0 Soft. (water course)
15.0 Hard and soft layers, sand and mud. (Take out 1.4" mud core)

Hole #40
August 19, 1938

Drilled from South West compartment of new shaft on a 45 degree angle below the shoe, pointing slightly off a direct line with shaft towards the corner, and pointing about in line with south corner of fence surrounding the transformers.

34.0 Hard sand and coarse gravel
0.6 Piece of floating stone
10.6 Hard sand and coarse gravel

Hole #41
August 20, 1938
Horizontal SW

Drilled Horizontal "above shoe" 0.6 from corner on long sidewall of new shaft, pointing diagonal across the South West section of shaft.

20.6 Hard sand and gravel
18.6 Very soft, Drills washed in by hand

Hole #42
August 22, 1938
Horizontal NW

Drilled horizontal above shoe along first set of braceings next the #2 hoist way, and pointing towards the #2 Dump.

42.0 Hard sand and coarse gravel

Hole #43
August 22, 1938
Horizontal NW

Drilled horizontal in South West section of new shaft, in a direction at right angles with shaft "in center of the section just above shoe.

44.0 Hard sand and coarse gravel
### Engineering Data

#### Water Pressures

<table>
<thead>
<tr>
<th>Head (in feet)</th>
<th>Pressure (in Pounds per sq. inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>55</td>
<td>27.5</td>
</tr>
<tr>
<td>75</td>
<td>37.5</td>
</tr>
<tr>
<td>160</td>
<td>80.0</td>
</tr>
</tbody>
</table>

#### Flow through pipes

<table>
<thead>
<tr>
<th>Pipe diameter (in inches)</th>
<th>Velocity (in second ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>3.20</td>
</tr>
<tr>
<td>10</td>
<td>2.04</td>
</tr>
<tr>
<td>12</td>
<td>1.50</td>
</tr>
</tbody>
</table>

#### Tunnel (rock filled)

- Diameter 2 1/2 ft.
- Area Cross-section 5 sq. ft.
- Max voids 44%
- Voids per linear ft. 2.2 Cu. ft.

#### Cement

- 1 bag weighs 94 lbs.
- 4 bags fill one barrel
- 1 barrel weighs 376 lbs and contains 3.8 cu.ft.

#### Note

Gold 19.2 - Silver 10.5

Sea water freezes at 28°C or 29°F