**DRILLING LOG**

**SAMSON AND ZERBE**

**DIVISION OF PELLY CO., INC.**

PHONE 587-041

**630 KEAWE STREET**

HONOLULU, HAWAII—96806

---

**Date** Dec. 18 1963  **Job No.** 17-K-9  **Hole No.** 9-10  **Elevation** ft.

**Customer** Hawaii State Dept. of Lime, Location Poliama, Puu, Hawaii

**Driller** J. Leslie

**Hrs. Rig**

**Helper** J. Meyers

**Hrs. Gas**

**Helper** F. Ayads

**Hrs. Oil**

**Hrs. Repairs**

**Arv. Job** 6:35  **Lv. Job** 4:00  **Or. No.**

---

**Bit-Size**

**Type**

**Casing-Size** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start** ft., Depth Stop ft., Feet Drilled

**Water Levels, Time** M ft., Time M ft.

---

**Depth**

**Formation**

**Remarks**

---

Unloaded some equip. of Pell's yard—

Picked up some empty cartons—

Shipped out some equip.——

Stripped form—

Graded area around foundation block.

Loaded remaining's—equip. of Pell's yard—

Cleaned up area—

Unloaded some equip. at Pell's yard.

Shipped some equip. of Pell's yard—

---

**Remarks:**

Diamond drill rig misc. diamond drill equip.

---

**Signed** Sam Leslie  **Date** 12-15 1963  **D**
### Drilling Log

**Samson and Zerbe**

**Division of Pell Co., Inc.**

**630 Keawe Street**

**Honolulu, Hawaii—96806**

**Date:** Dec. 17, 1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:**

**Customer:** Hawaii State Dept. of LinK  
**Location:** Polana, Puna, Hawaii

<table>
<thead>
<tr>
<th>Driller</th>
<th>S. Leslie</th>
<th>10 1/2 Hrs.</th>
<th>Rig</th>
<th>Gas</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper A</td>
<td>F. Meyers</td>
<td>10 1/2 Hrs.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper B</td>
<td>F. Aigue</td>
<td>10 1/2 Hrs.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Arv. Job:** 7:00  
**End Job:** 6:00  
**Hrs.:**

**Bit-Size:**

**Type:**

**Casing-Size:**

**in., Length in hole:**

**ft. in., Amt. Perforated:**

**Depth Start:**

**ft., Depth Stop:**

**ft., Feet Drilled:**

**Water Levels, Time:**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
</table>

**Remarks:**

1. Loaded tool boxes (ore) onto truck.
2. Emptied enclosed shack.
4. Tore down drill rig—\[work\]—had to winch rig out into open.
5. H.F.T. hauled load of rig away.
6. Towed enclosed shack and loaded onto trailer.
7. Towed welding machine to Pell's yard.

**Signed:** Sam Leslie  
**Date:** 12-17-63  
**D:** 1518
**DRILLING LOG**

**SAMSON AND ZERBE**  
DIVISION OF PELL CO., INC.

**PHONE 587-041**  
630 KEAWE STREET  
HONOLULU, HAWAII—96806

**Date:** Dec. 16, 1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** ft.

**Customer:** Hawaii State Dept. of Lin.  
**Location:** Palama, Pearl, Hawaii

**Driller:** S. Leslie  
**Helper:** H. Meyers  
**Helper:** E. Ayiaa  
**Arv. Job:** 7:00  
**Lv. Job:** 5:30

**Rig:**  
**Gas:**  
**Oil:**  
**Repairs:**

---

**Bit-Size**  
**Type**

**Casing-Size** in., **Length in hole** ft. in., **Amt. Perforated** ft. in.

**Depth Start** ft., **Depth Stop** ft., **Feet Drilled**

**Water Levels, Time** M ft., **Time** M ft.

**Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Shipped out some equipt. -</td>
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<td></td>
<td></td>
<td>Checked on concrete delivery-</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Concrete arrived on job site @ 9:00</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Poured &amp; filled monolite space.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Poured foundation block.</td>
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<tr>
<td></td>
<td></td>
<td>Tore down open shack.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Hauled load of lumber.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Towed in water wagon.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unloaded trucks at Pell’s yard</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

Signed: Sam Leslie  
**Date:** 12-16-63  
**D:** 1517
DRILLING LOG

SAMSON AND ZERBE
DIVISION OF PELL CO., INC.

PHONE 587-041

630 KEAWE STREET

HONOLULU, HAWAII 96806

Date: Dec. 1963
Job No.: 17-K-9
Hole No.: 9-10
Elevation: 

Customer: Hawaii State Dept. of L & NR
Location: Punalu'u, Big Island, Hawaii

Driller: S. Lusin
10 Hrs.
Rig: 

Helper: H. Mizee
10 Hrs.
Gas: 
Oil: 

Helper: E. Kinzie
10 Hrs.
Repairs: 

Arv. Job: 7:00
Lv. Job: 5:30
Hrs.: 

Bit-Size: 
Type: 

Casing-Size: in., Length in hole: ft.
in., Amt. Perforated: ft. in.

Depth Start: ft., Depth Stop: ft., Feet Drilled: 

Water Levels, Time: M ft., Time: M ft.

Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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<tbody>
<tr>
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</tbody>
</table>

Made up form for concrete block.
Made up reinforcing steel frame.
Moved rig to clear block.
Finished digging for block.
Set in form & steel.
Loaded frames with equip.

Remarks: Hauled load of equip. to wharf in A.M.

Signed: S. Lusin
Date: 12-14-63

D 1516
### Drilling Log

**SAMSON AND ZERBE**  
DIVISION OF PELL CO., INC.  
630 KEAWE STREET, HONOLULU, HAWAII-96806

**Phone 587-041**  

**Date** Dec. 13, 1963  
**Job No.** 17-K-9  
**Hole No.** 9-10  
**Elevation** ft.

**Customer** Hawaii State Dept. of LNR  
**Location** Palama, Puna, Hawaii

**Driller** S. Leslie  
10 Hrs.  
Rig

**Helper** H. Meyers  
10 Hrs.  
Gas

**Helper** E. Abine  
10 Hrs.  
Oil

**Arv. Job** 7:00  
**Lv. Job** 5:30  
**Hrs.**

**Bit-Size**  
**Type**

**Casing-Size** in., **Length in hole** ft.  
**in., Amt. Perforated** ft.  
**in.**

**Depth Start** ft., **Depth Stop** ft., **Feet Drilled**

**Water Levels, Time** M ft., **Time** M ft.

**Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
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</tbody>
</table>

**Remarks:**  
Shipped out some equipment - bought 60' reinforcing steel - Tore up platform - Digging for foundation  
Steel - Loaded two trucks with equipment

**Signed** Sam Leslie  
**Date** 12-13 1963  
**D 1515**
**DRILLING LOG**

**SAMSON AND ZERBE**

**DIVISION OF PELL CO., INC.**

**PHONE 587-041**

630 KEAWE STREET  
HONOLULU, HAWAII—96806

**Date** Dec. 12, 1963  **Job No.** 17-E-9  **Hole No.** 9-10  **Elevation** ______ ft.

**Customer** Hawaii State Dept. of L & N C  **Location** Palama, Puna, Hawaii

<table>
<thead>
<tr>
<th>Driller</th>
<th>Hrs.</th>
<th>Rig</th>
<th>Helper</th>
<th>Hrs.</th>
<th>Gas</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>J. Leslie</td>
<td>10</td>
<td></td>
<td>H. Meyers</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F. Aquino</td>
<td>10</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Arr. Job** 7:00  **Lv. Job** 5:30  **Hrs.** __________________________  **Or. No.**

**Bit-Size** __________________________  **Type** __________________________

**Casing-Size** ______ in., Length in hole ______ ft.  **in., Amt. Perforated** ______ ft.  **in.**

**Depth Start** ______ ft., **Depth Stop** ______ ft., **Feet Drilled** __________________________

**Water Levels, Time** M ______ ft., **Time** M ______ ft.

**Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
</table>

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**Remarks:**

- Finished making up dummy measured drill line-
- Ran in dummy-
- Taked deviation readings every 20'
- Took dummy off-
- Checked with suction bailer to see if any fine gravel filtered in their perforations

---

**Signed** Sam Leslie  **Date** 12-12-1963  **D** 1514
Date: Dec. 11, 1963
Job No.: 17-K-9
Hole No.: 9-10
Elevation: ft.
Location: Pohana Puna, Hawaii
Customer: Hawaii State Dept. of L&NR

Driller: Leslie
10 1/2 Hrs. Rig
Helper: H. Meyers
10 1/2 Hrs. Gas
Helper: E. Aquino
10 1/2 Hrs. Oil
Arv. Job: 7:00
Lv. Job: 6:00

Bit-Size: Type
Depth Start: ft., Depth Stop: ft., Feet Drilled: ft.


Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Loaded load of misc. equip. to Young Bros.</td>
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<td></td>
<td></td>
<td>Cleared area for load of gravel to come - loaded trucks with misc. equip.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Load of gravel arrived at 12:00 (5 yds)</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Poured gravel into annular</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Space</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Used approx. 7 1/2 yds-filled to 53' from existing</td>
<td></td>
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<td></td>
<td></td>
<td>Ground level -</td>
<td></td>
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<td></td>
<td></td>
<td>Golf orders from Altea to run</td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Run dummy -
Tour off 7" bit & stem - Started putting dummy together

Signed: Sam Leslie
Date: 12-11-1963

D 1513
### DRILLING LOG

**SAMSON AND ZERBE**

DIVISION OF PELL CO., INC.

630 KEAWE STREET
HONOLULU, HAWAII-96806

**Phone** 587-041

---

**Date:** Dec. 10 1963  
**Job No.:** 17 K-9  
**Hole No.:** 9-10  
**Elevation:** 

**Customer:** Hawaii State Dept of LRNR  
**Location:** Pulama, Puna, Hawaii

---

**Driller:** S. Leslie  
**Helper:** H. Meyers  
**Helper:** E. Aguilar

**Rig:** 601  
**Gas:** 

**Oil:** 
**Reps:** 

**Arv. Job:** 7:00  
**Ld. Job:** 6:00  
**Hrs.:**

---

**Bit-Size:**  
**Type:**

**Casing-Size:** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start:** ft., Depth Stop ft. ft., Feet Drilled

**Water Levels, Time** M ft., Time M ft.

---

**Depth** | **Formation** | **Remarks** | **Top**
---|---|---|---

Took load of pump parts to Young Bros.
Want to bonus Golver's yard -
picked up sample of filter rock & sand -
Took samples to Buhl office for approval -
Picked up 4 bags cement -
1 ton 4-3 sand -
1 ton gravel 4-3

Lowered casing -
Put on 3" stem of 7" bit -
Had to drive casing -
Checked depth of well - after to get it back -
Lifted casing up 3' 250'
Made up dump trailer -
Mixed concrete 4-2-1 mix -
Pour plug -
Checked thickness of plug - 5' -
Loded two trucks with misc. equip.  
Hauled to town

**Signed:** Tom Leslie  
**Date:** 12-10 1963  
**D:** 1512
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

<table>
<thead>
<tr>
<th>Date</th>
<th>Job No.</th>
<th>Hole No.</th>
<th>Elevation (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/12/19</td>
<td>17-K-1</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

**Customer:**

**Location:**

**Driller:**

**Helper:**

**Arv. Job:** 6:30 AM

**Lv. Job:** 5:00 PM

---

**Bit-Size**

**Type**

**Casing-Size**

**Length in hole** ft. in., Amt. Perforated ft. in.

**Depth Start**

**Depth Stop**

**Feet Drilled**

**Water Levels, Time** M ft., Time M ft.,

---

**Measurements**

**Depth** | **Formation** | **Remarks** | **Top**
---|---|---|---

---

**Remarks:**

- Drpped couple hell bits off at Potts yard in air.
- Finished renting pump parts - moved diesel engine.
- Pump frame out of way - loaded pipes column on the trucks to ship out.
- Hole up deck - digging for foundation.

---

**Signed:**

**Date:** 12-7-1963

**No. D 1499**
DRILLING LOG
SAMSON AND ZERBE, LTD.

630 KEAWE STREET
HONOLULU, HAWAII

Date 19___ Job No. _______ Hole No. 5-16 Elevation ________ ft.
Customer __________________________ Location ____________

Driller ___________________________ 13/4 Hrs. Rig ________________
Helper ____________________________ 1 1/2 Hrs. Gas ________________
Helper ____________________________ 1 1/2 Hrs. Repairs ____________
Arv. Job 6:30-7:45 Lv. Job 4:45-5:30 Hrs. Or. No. ________________

Bit-Size __________________________ Type ______________________
Casing-Size ____________ in., Length in hole ____________ ft. ____________ in., Amt. Perforated ________ ft. ____________ in.
Depth Start ____________ ft., Depth Stop ____________ ft., Feet Drilled ____________
Water Levels, Time ______ M ____________ ft., Time ______ M ____________ ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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</tbody>
</table>

Measurements

A | B
---|---

Remarks: Pulled out pump - Started cleaning pump parts
        4' proving pump parts away from deck.
        Followed by rain in morning.

Signed ___________________________ Date ____________ 19__

No. D 1498
<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
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</tbody>
</table>

Remarks:

Signed ___________________________ Date __________ 19

No D 1496
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**  
**630 KEAWE STREET**  
**HONOLULU, HAWAII**

**Date:** 12-6-19  
**Job No.:** T-2-9  
**Hole No.:** 70  
**Elevation:** ft.

**Customers:**  
**Hawaii State Dept. of LR**  
**Location:** Kahului, Maui, Hawaii

|---------|--------------|--------|-------------|-----|--------|-------------|-------------|------------------|-------------|----------|------|

**Casing-Size:** in., **Length in hole:** ft. in., **Amt. Perforated:** ft. in.

**Depth Start:** ft., **Depth Stop:** ft., **Feet Drilled:**

**Water Levels, Time:** M ft., **Time:** M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
</table>

- **Test run well.**
- **Completed test at 1:00 P.M.**

**Remarks:**  
- Started circulating pump - took off backflow line crossing road.

**Signed:**  
**Date:** 12-6-19  
**No. D 1497**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

630 KEAWE STREET

**HONOLULU, HAWAII**

---

**Date** 05/19  
**Job No.** 12-1  
**Hole No.** 7  
**Elevation** ft.  
**Customer** Hawaii State Dept. Land  
**Location** Puna, Hawaii

---

**Driller** T. W. Wayfield  
**Hrs.**  
**Rig**  
**Helper**  
**Hrs.**  
**Gas**  
**Oil**  
**Helper**  
**Hrs.**  
**Repairs**  
**Arv. Job**  
**Lv. Job**  
**Hrs.**  
**Or. No.**

---

**Bit-Size**  
**Type**  
**Casing-Size** in., Length in hole ft. in., Amt. Perforated ft. in.  
**Depth Start** ft., Depth Stop ft., Feet Drilled  
**Water Levels, Time** M ft., Time M ft.  

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### Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Testing Well</td>
<td></td>
</tr>
</tbody>
</table>

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**Remarks:**

- Results of Bailing Test 11/20/63
  - Increasing in 2/30.81
  - Water at +3.15' 12:30 pm  
  - +3.29' 3:05 pm  
  - Hole depth 250'  
  - Avg. rate 22 gpm

- 2.85 gpm start  
- 2.46 gpm finish  
- 0 drill water 7.13 gpm

---

**Remarks:**

---

**Signed** T. W. Wayfield  
**Date** 12/3/63 19  
**No. D 1495**
Date: Dec. 5 - 1963  
Job No.: 172-3  
Hole No.: 9  
Elevation:  

Customer:  
Location:  

Driller:  
Hrs.: 10  

Helper:  
Hrs.:  

Arv. Job:  
Lv. Job:  
Hrs.: 15  

Bit-Size:  
Type:  


Depth Start: ft., Depth Stop: ft., Feet Drilled:  

Water Levels, Time: M ft., Time: M ft.  

<table>
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<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Testing Well</td>
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</tbody>
</table>

Signed:  
Date: 5-19-63  
No. D 1493
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE** 581-447

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Dec. 5 1963</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Hawaii State Dept of DLNR</td>
<td>Location</td>
<td>Polana, Puna, Hawaii</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>Leslie</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Helper</td>
<td></td>
<td>Hrs.</td>
<td>Rig</td>
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<tr>
<td>Helper</td>
<td></td>
<td>Hrs.</td>
<td>Gas</td>
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<tr>
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<td>Hrs.</td>
<td>Repairs</td>
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<tr>
<td>Bit-Size</td>
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</tr>
<tr>
<td>Casing-Size</td>
<td></td>
<td>in.,</td>
<td>Length in hole</td>
<td>ft.</td>
<td>in., Amt. Perforated</td>
<td>ft.</td>
<td>in.</td>
</tr>
<tr>
<td>Depth Start</td>
<td></td>
<td>ft.,</td>
<td>Depth Stop</td>
<td>ft., Feet Drilled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Levels, Time</td>
<td>M</td>
<td>ft., Time</td>
<td>M</td>
<td>ft.</td>
<td>Measurements</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measurements</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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</tr>
</tbody>
</table>

**Remarks:**

Testing well:

5:00 P.M. to 4:00 P.M.

**Signed** [Signature]  
**Date** 12-5 1963  
**No. D 1494**
Date: Dec 4, 1963, Job No.: 17, Hole No.: 9-11, Elevation: ft.
Customer: DEPT. LEVRES.
Location: Pulama

Driller: TVEFEUR
Helper: 
Helper: 
Arv. Job: 
Lv. Job: 
Hrs. Or. No.: 

E Hrs. Rig
Gas
Oil
Repairs

Rig

Bit-Size

Type

Casing-Size in., Length in hole ft., Amt. Perforated ft. in.

Depth Start ft., Depth Stop ft., Feet Drilled

Water Levels, Time M ft., Time M ft.

Measurements

A B

Depth

Formation

Remarks

Tests Well

Remarks:

Signed: TW ELFEUR
Date: 12/4/63

No D 1492
DRILLING LOG
SAMSON AND ZERBE, LTD.

Date: 19 ___________  Job No. ___________  Hole No. ___________  Elevation ___________ ft.

Customer: _______  Location: _______

Driller: ___________________________  Hrs. Rig: ___________________________
Helper: ___________________________  Hrs. Gas: ___________________________
Helper: ___________________________  Hrs. Oil: ___________________________
Arv. Job: ___________________________  Hrs. Repairs: ___________________________
LV. Job: ___________________________  Or. No. ___________________________

Bit-Size: ___________________________  Type: ___________________________
Depth Start: ___________ ft., Depth Stop: ___________ ft., Feet Drilled: ___________

Water Levels, Time ___________ M ___________ ft., Time ___________ M ___________ ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Measurements

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: ___________________________

Signed: ___________________________

Date: ___________  N° D 1490
### DRILLING LOG
SAMSON AND ZERBE, LTD.

**PHONE 581-447**
630 KEAWE STREET  
HONOLULU, HAWAII

<table>
<thead>
<tr>
<th>Date</th>
<th>Job No.</th>
<th>Job No.</th>
<th>Hole No.</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-24-67</td>
<td>116</td>
<td>'K-2'</td>
<td>9-10</td>
<td>169.48</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>Hrs.</th>
<th>Rig</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Brezla</td>
<td>10.5</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>Hrs.</th>
<th>Gas</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Eugene</td>
<td>10.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>Hrs.</th>
<th>Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arv. Job</th>
<th>Hrs.</th>
<th>Or. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:45</td>
<td>8.6</td>
<td></td>
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**Job**

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>in.</th>
<th>Length in hole</th>
<th>ft.</th>
<th>Amt. Perforated</th>
<th>ft.</th>
<th>in.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>ft.</th>
<th>Depth Stop</th>
<th>ft.</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time M ft.</th>
<th>Time M ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Measurements**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**Testing Well:**

**Signed**

**Date**

12-4 1967

**No. D 1491**
# DRILLING LOG

SAMSON AND ZERBE, LTD.

**Date:** Dec 3, 1963  
**Job No.:** 17-W-4  
**Hole No.:** 9-10  
**Elevation:** ft.  

**Customer:** Hawaii State Dept. Land & Mines  
**Location:** Punalu'u, Puna, Hawaii

**Driller:** T. J. Worfield  
**Helper:**  
**Arv. Job:**  
**Lv. Job:**  
**Hrs.**  
**Rig:**  
**Hrs.**  
**Gas:**  
**Hrs.**  
**Oil:**  
**Hrs.**  
**Repairs:**  
**Or. No.:**  

**Bit-Size:**  
**Type:**  
**Casing-Size:** in., Length in hole ft., Length in hole ft.  
**Amt. Perforated:** ft. in., Amt. Perforated ft. in.  
**Depth Start:** ft., Depth Stop:** ft., Feet Drilled **  

**Water Levels, Time:** M ft., Time:** M ft.  

**Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Running Pump Test</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

Signed: T. J. Worfield  
**Date:** 12/3/63  
**No. D 1489**
DRILLING LOG

SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date: Jan. 3, 1963
Job No.: 17-K-7
Hole No.: 9-10
Elevation: __________ ft.

Customer: Hilo State Dept. P. O. R.
Location: Kona, Hawaii

Driller: Leslie

Helper: __________ 6:30 115

Arv. Job: 6:30
Lv. Job: 5:15

Bit-Size: __________ Type:

Casing-Size: __________ in., Length in hole __________ ft. __________ in., Amt. Perforated __________ ft. __________ in.

Depth Start: __________ ft., Depth Stop: __________ ft., Feet Drilled: __________

Water Levels, Time: M __________ ft., Time: M __________ ft.

Measurements

Depth
Formation
Remarks
Top

A

B

Completed discharge line (5 yds.)

Appears 120'

Then ran approx. 145' of hose -

Rejected packing gland of pump -

All set to run well test -

Started pumping @ 11:45

Taking samples & readings

Av. rate to 100 @ 50 g.p.h.

Remarks:

Signed: Leslie

Date: 12-3, 1963

No. D 1488
### DRILLING LOG

#### SAMSON AND ZERBE, LTD.

**PHONE 581-447**  
**630 KEAWE STREET**  
**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>19-4-7</th>
<th>Job No.</th>
<th>17-X-7</th>
<th>Hole No.</th>
<th>7-16</th>
<th>Elevation</th>
<th>ft.</th>
</tr>
</thead>
</table>

**Customer**  
**Honolulu State Dept. of WATER**  
**Location**  
**Puna, Mindanao, Hawaii**

Driller:  
**J. L. Hughes**  
**131 Hrs.**  
**Rig**  
**6-1-1**

Helper:  
**L. E. Rice**  
**131/2 Hrs.**  
**Gas**  
**Oil**

Helper:  
**Hrs.**  
**Repairs**

Arv. Job:  
**6:30**  
**Lv. Job**  
**5:20**  
**Hrs.**

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
</tr>
</thead>
</table>

Casing-Size:  
**in., Length in hole**  
**ft.**  
**in., Amnt. Perforated**  
**ft.**  
**in.**

Depth Start:  
**ft., Depth Stop**  
**ft., Feet Drilled**

Water Levels, Time:  
**M ft., Time**  
**M ft.**

**Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Top of section to be shorted</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bottled necessary pipe fittings</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A hose on diesel engine's cooling</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>installed top section - put on angle drive - hooked up diesel</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>engine</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>installed engine</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>into the base of water - hooked up discharge line without</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>a pump</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ran pump for approx. 1/4 hour</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>No drawdown - stopped pump</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Put in meter - started working</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>on extending discharge line</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Took off angle drive</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shutoff and put in new stuffing box</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>packing, tried to stop water leak</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

<table>
<thead>
<tr>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>Len of pipeline to top of pump frame = 243.36</td>
<td></td>
</tr>
</tbody>
</table>

**Signed**  
**Larry Leslie**  
**Date**  
**12-2-65**  
**No. D 1487**
DRILLING LOG

SAMSON AND ZERBE, LTD.

630 KEAWE STREET
HONOLULU, HAWAII

Date  Dec. 1 19 63  Job No. 172-2  Hole No. 9-10  Elevation  ft.
Customer  University of N R  Location  Pali, Oahu, Hawaii

Driller  Leslie  Hrs. Rig
Helper  /  Hrs. Gas
Hrs. Repairs
Arv. Job  1:00  Lv. Job  2:00

Bit-Size Type
Casing-Size in., Length in hole ft. in., Amt. Perforated ft. in.
Depth Start ft., Depth Stop ft., Feet Drilled
Water Levels, Time M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Rolled &amp; top section of pump</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&amp; used it again to force</td>
</tr>
<tr>
<td></td>
<td></td>
<td>oil tube &amp; shaft to machine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>had to be shortened</td>
</tr>
<tr>
<td></td>
<td></td>
<td>had to find out what had to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>be bought to complete</td>
</tr>
<tr>
<td></td>
<td></td>
<td>cooling system hook up for</td>
</tr>
<tr>
<td></td>
<td></td>
<td>diesel engine</td>
</tr>
</tbody>
</table>

Remarks:

Signed  Leslie  Date  12-1-63  No. D 1500
# DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>November 3, 1963</th>
<th>Job No.</th>
<th>11 X-7</th>
<th>Hole No.</th>
<th>4-10</th>
<th>Elevation ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Hawaii State Dept. of HNR</td>
<td>Location</td>
<td>Palama Pond</td>
<td>Hawaii</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>C. THOMAS</td>
<td>Hrs.</td>
<td>Rig</td>
<td>602-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td>E. HANSON</td>
<td>Hrs.</td>
<td>Gas</td>
<td>Oil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td>G. REIDON</td>
<td>Hrs.</td>
<td>Repairs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing-Size</td>
<td>in., Length in hole</td>
<td>ft.</td>
</tr>
<tr>
<td>Depth Start</td>
<td>ft., Depth Stop</td>
<td>ft., Feet Drilled</td>
</tr>
<tr>
<td>Water Levels, Time</td>
<td>M</td>
<td>ft., Time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

- Installed pump -
- Top section measurements off
- Will have to cut shaft
- Oil tube shorter

Remarks:

Signed: Sam Leslie

Date: 11-30 1963

**No D 1486**
### DRILLING LOG
**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Job No.</th>
<th>Hole No.</th>
<th>Elevation</th>
<th>Customer</th>
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<tr>
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<th></th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>J. Laslie</td>
<td>T. Meyers</td>
<td>T. Kanno</td>
<td>7:40</td>
<td>12:00</td>
<td></td>
<td></td>
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<table>
<thead>
<tr>
<th>Rig</th>
<th>Gas</th>
<th>Oil</th>
<th>Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-21-1</td>
<td></td>
<td></td>
<td></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
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</table>

<table>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time M ft.</th>
<th>Time M ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Picked up Ford truck @ Kilauea</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Left Ford at airport -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Want to E.W.S. to pick up</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hotel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Checked with H.H. to haul</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Want to wharf - checked &amp; got special no. Doc. -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Loaded two Jeeps + H.H. Tender -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Still had to go to airport -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To pick up third jeep, tucker -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Picked up two drums diesel -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Went to Kilauea, tender + 3 Jeeps -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Got them unloading tender @ Kilauea -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jet pump frame in place -</td>
</tr>
</tbody>
</table>

**Remarks:**
- Shipped setting up pump packs -
- Installation started, sold assembly of two 20" sections -
- 23 stages 6" column -

**Signed:** J. Laslie  
**Date:** 11-29 1963  
**No. D 1485**
Date: 1/1/57  Job No. 14-7  Hole No. 1  Location Lahaina, Maui, Hawaii

Customer: Maui State Light 

Driller: S. Kerle
Producer: K. Cramer
Arv. Job 6:30  Hrs. Rig 80L-1

Hrs. Rig
10

Hrs. Gas

Hrs. Oil

Hrs. Repairs

Arv. Job 6:30  Hrs. 5:00  Or. No.

Bit-Size

Type

Casing-Size

in., Length in hole

ft.

in., Amt. Perforated

ft.

in.

Depth Start

ft., Depth Stop

ft., Feet Drilled

Water Levels, Time

M

ft., Time

M

ft.

Depth

Formation

Remarks

Top

Measurements

A

B

Take off drill stem 7" bit -
made up dummy

3 rings 7½" dia., 1' 0" long -
mounted on 6" o.d. spindle

Overall length of dummy

Bottom eng. to top eng. 39' 7¾"

Ran dummy down to 250'

Dummy went down & up

freely in presence of

inspector Hirose

Remarks:

Worked on Ford Truck - put on radiator - started
truck - charged battery - Took spare deep tire

to be replaced - Called Honolulu foreman for instructions

Signed

Sama Lesko

Date

11-27-63

No. D 1484
# DRILLING LOG

## SAMSON AND ZERBE, LTD.

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Job No.</th>
<th>Hole No.</th>
<th>Elevation</th>
<th>Customer</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>N 15 63</td>
<td>17-K-9</td>
<td>9-10</td>
<td></td>
<td>Hawaiian State</td>
<td>Pulama, Oahu, Hi</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>Hrs.</th>
<th>Rig</th>
<th>Helper</th>
<th>Hrs.</th>
<th>Gas</th>
<th>Oil</th>
<th>Helper</th>
<th>Hrs.</th>
<th>Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. Leslie</td>
<td>10</td>
<td>60L-1</td>
<td>E. Higginson</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6:30</td>
<td>5:00</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>Length in hole</th>
<th>Amt. Perforated</th>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M ft.</th>
<th>Time</th>
<th>M ft.</th>
<th>Measurements</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
</table>

**Remarks:**

- Started bail test at 12:35
- Stopped – 3:05
- Checked water level
- Head 305 B.L. 227.52
- Head 3.29'
- Made 155 bail
- 22 gals per bail

**Remarks:** Prepared for bail test – serviced & cleaning up driller

**Signed:** L. Leslie

**Date:** 11-26-63

**No D 1483**
# DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**Date**: Nov. 25, 1963  **Job No.**: 17-K-9  **Hole No.**: 9-10 **Elevation** ft.

**Customers**: Hawaii State Dept. of Marine Resources  **Location**: Puna, Puna, Hawaii

<table>
<thead>
<tr>
<th>Driller</th>
<th>5:10:19</th>
<th>10 Hrs.</th>
<th>Rig</th>
<th>60L-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper</td>
<td>E. A.</td>
<td>10 Hrs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
<th>Casing-Size</th>
<th>in., Length in hole</th>
<th>ft.</th>
<th>in., Amt. Perforated</th>
<th>ft.</th>
<th>in.</th>
<th>Repairs</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>ft.</th>
<th>Depth Stop</th>
<th>ft.</th>
<th>Feet Drilled</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M. ft.</th>
<th>Time</th>
<th>M. ft.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Measurements</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
</table>

**Remarks:**
- Sandline cable was all fouled on drum - Pulled off all of sandline cable (approx) 1000 ft.
- Cut off excess casing & anchored in proper position
- Moved all drill tools away from platform
- Moved water tank away
- Tuned up drill rig engine

**Signed**: Sam Leli  **Date**: 11-25-63  **No D 1482**
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**PHONE 581-447**

<table>
<thead>
<tr>
<th>Date</th>
<th>Nov. 23 1963</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>2317.75 ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Hawaii State Dept of L&amp;NR</td>
<td>Location</td>
<td>Mililani, Hana, Hawaii</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>50 Leslie</td>
<td>10 Hrs.</td>
<td>Rig</td>
<td>606-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td>50 Leslie</td>
<td>10 Hrs.</td>
<td>Gas</td>
<td>Oil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td></td>
<td>Hrs.</td>
<td>Repairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Bit-Size   |              | Type    |        |          |      |           |             |
| Depth Start| ft., Depth Stop | ft., Feet Drilled |          |          |          |             |
| Water Levels, Time | M ft., Time | M ft. |          |          |          |             |

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Completed installing casing -</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 13 lengths 251.40'</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Casing came to a stop</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>@ 249.40'</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>kent in with 7' bit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>cleaned out hole - casing went down to 250.02'</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

Casing went in very smoothly -

Turned freely till bottom

**Signed**

**Date**

11-23 1963

**No. D 1481**
### Drilling Log

**SAMSON AND ZERBE, LTD.**

**Phone**: 581-447  
**Address**: 620 Keawe Street, Honolulu, Hawaii

**Date**: 10/22/83  
**Job No.**: 17-L-9  
**Hole No.**: 9-10  
**Location**: Pearl, Pearl, Hawaii  
**Elevation**: 230.75 ft.

**Customer**: Hawaii State Dept. of Land

**Driller**: S. Leslie  
**Helper**: L. Rupine

**Hours**
- Driller: 10 hrs.
- Helper: 10 hrs.

**Rig**: 60L-1
**Gas**:  
**Oil**:  
**Repairs**:  
**Or. No.**: __________

**Arv. Job**: 6:30  
**Lv. Job**: 5:00  
**Hrs.**

**Bit-Size**: 12  
**Type**: Kennametal

**Casing-Size**: 8 3/8 in.  
**Length in hole**: 39.96 ft.

**Depth Start**: 247 ft.  
**Depth Stop**: 250 ft.

**Feet Drilled**: __________

**Water Levels, Time**: M ft., Time: M ft.

#### Depth Formations

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>247</td>
<td>cinders</td>
<td></td>
</tr>
<tr>
<td>248</td>
<td>mod. hard rock</td>
<td>Roamed out 7&quot; pilot hole to 247'</td>
</tr>
</tbody>
</table>
| 250   |                   | Lnl #1 Perforated = 21.66'  
|       |                   | " #2 solid  
|       |                   | Total 39.96'  
|                   | Reinforced bottom of #1 casing  
|                   | by doubling its thickness  

**Remarks**: Took off reamer, bit & stem - put on 7" bit & stem. Rigged up to install casing - made angle clips to lift casing - welded clips to casing - Installed len of perforated casing at one solid len

**Signed**  
**Date**: 19  
**No. D 1480**
DRILLING LOG

SAMSON AND ZERBE, LTD.

PHONE 581-447 630 KEawe STREET HONOLULU, HAWAII

Date: Nov. 21, 1963  Job No.: 17-K-9  Hole No.: 2-10  Elevation: 236.75 ft.
Customer: Hawaii State Dept. of Land  Location: Pauoa, Oahu, Hawaii

Driller: E. Leslie  10 Hrs. Rig: GOI-1
Helper: T. Aguine  15 Hrs. Gas: Oil
Hrs. Repairs

Bit-Size: 12  Type: Reaming
Depth Start: ___________ ft., Depth Stop: ___________ ft., Feet Drilled:

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>REMOVED OUT 7&quot; PILOT HOLE</td>
<td></td>
</tr>
<tr>
<td>240'</td>
<td></td>
<td>245'</td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Used plenty mud to combat cinders

Signed: Jim Leslie  Date: 11-21-63  NO. D 1479
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date:** Nov 20, 1963  
**Job No.:** 17-K-9  
**Hole No.:** 0-10  
**Elevation:** 250.75 ft.

**Customer:** Hawaii State Dept of LRNR  
**Location:** Palama Puna, Hawaii

---

**Driller:** J. Leslie  
**Hrs.:** 15  
**Rig:** 60L-1

**Helper:** F. Legg  
**Hrs.:** 10

**Helper:**  
**Hrs.:** Repairs

**Arv. Job:** 7:00  
**Lv. Job:** 5:00

---

**Bit-Size:** 12  
**Type:** Reaming

**Casing-Size:**  
**in., Length in hole:**  
**ft.**  
**in., Amt. Perforated:**  
**ft.**  
**in.**

**Depth Start:**  
**Depth Stop:**  
**feet drilled:**

---

**Water Levels, Time:** 9:45 A.M.  
**226.80 ft., Time:**  
**M**  
**ft.**

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Reaming out 7' pilot hole</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>231' to 240</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>having plenty trouble with cinders - more so at 240'</td>
<td></td>
</tr>
</tbody>
</table>

---

**Remarks:** Picked up freight at airport - bought angle iron to make casing lifting clips - S aid Mr. Chin at State Highway Div. about getting dirt - had Yama Tea haul it to job -

---

**Signed:** Sam Leslie  
**Date:** 11-20-1963  
**NO. D 1478**
# DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**Date:** Nov. 19, 1963  **Job No.:** 17-E-9  **Hole No.:** 7-10  **Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept of CONR  **Location:** Palama, Punu, Hawaii

**Driller:** D. Leslie  **Hrs.:** 11  **Rig:** COX-1

**Helper:** F. Sugane  **Hrs.:** 10  **Gas:**

**Driller:**  **Hrs.:** 0  **Oil:**

**Helper:**  **Hrs.:** 0  **Repairs:**

**Arv. Job:** 6:30  **Lv. Job:** 4:30  **Or. No.:**

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>ROAMER</td>
</tr>
</tbody>
</table>

**Casing-Size:** ______________ in., **Length in hole:** ______________ ft. ______________ in., **Amt. Perforated:** ______________ ft. ______________ in.

**Depth Start:** ______________ ft., **Depth Stop:** ______________ ft., **Feet Drilled:**

**Water Levels:**  **Time:** M ______________ ft., **Time:** M ______________ ft.

<table>
<thead>
<tr>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>---</td>
</tr>
</tbody>
</table>

**Depth** | **Formation** | **Remarks** | **Top** |
|-----------|---------------|-------------|---------|

- Reaming out 7" pilot hole
- 210' to 231'

**Remarks:**

**Signed:**  **Date:** Nov. 19, 1963  **No. D 1477**
Date: Nov. 18 1963  
Job No.: 17-K-9  
Hole No.: 7-10  
Elevation: 210 feet  

Customer: Hawaii State Dept. of LNR  
Location: Pahoa, Hawaii  

Driller: J. Leslie  
10 Hrs.  
Rig: GOOL-1  

Helper: S. Higman  
10 Hrs.  
Gas: Oil  

Arv. Job: 6:30  
Lv. Job: 4:30  
Hrs.  

Bit-Size: 12  
Type: Reaming  

Casing-Size: in., Length in hole: ft.  
Amt. Perforated: ft.  

Depth Start: ft., Depth Stop: ft., Feet Drilled:  

Water Levels, Time: M ft., Time: M ft.  

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Reaming out 7&quot; pilot hole</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>185' to 210'</td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Reassembled socket - repaired reaming bit  

Signed: J. Leslie  
Date: 11-18 1963  
No. D 1476
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE** 581-447

630 KEAWE STREET

**HONOLULU, HAWAII**

---

**Date** Nov. 16 19 63

**Job No.** 17-L-9

**Hole No.** 9-10

**Elevation** 230.75 ft.

**Customer** Hawaii State Dept. of LR NR

**Location** Palama, Puna, Hawaii

---

**Driller** J. Leslie 10 Hrs.

**Helper** E. Aquino 10 Hrs.

**Arv. Job** 6:30

**Lv. Job** 4:30

**Or. No.**

---

**Bit-Size** 7"

**Type** Chisel

**Casing-Size** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start** 246 - 6 ft., Depth Stop 247 ft. Feet Drilled 6'

---

**Water Levels, Time** 8:10 A. M. 227.10 ft., Time M ft. ft.

---

**Depth** | **Formation** | **Remarks** | **Top**
---|---|---|---
246 | cinders | Making little progress in cinders - Suction boiler got stuck in hole - Took 1 1/2 hours to get it out - Took off 7" bit & stem - Put on reaming bit - Reamed out 7" pilot hole from 163' to 185' |
247 |

---

**Remarks:**

---

**Signed** J. Leslie  

**Date** 11-16 19 63  

**N. D** 1475
Date: Nov. 15, 1963  
Job No.: 17-K-9  
Hole No.: 9-10  
Elevation: 230.75 ft.

Customer: Hawaii State Dept. of L & NR  
Location: Pearl City, Pearl, Hawaii

Driller: S. Leslie  
 Helper: E. Aguine  
Arv. Job: 6:30  
Lv. Job: 4:30

Rig: COL-1  
Gas: Oil  
Repairs: 

Bit-Size: 7”  
Type: Chisel

Casing-Size: in., Length in hole: ft.  
Amt. Perforated: ft. in.

Depth Start: 243 ft., Depth Stop: 246-6 ft.  
Feet Drilled: 3'-6"

Water Levels, Time: M ft., Time: M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>243</td>
<td>cinders</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Measurements

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:
- Picked up 4 drums gasoline & one cylinder oxygen.
- Having plenty troubles with cinders.

Signed: Sam Leslie  
Date: Nov. 15, 1963  
No. D 1474
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date**: Nov. 14, 1963  **Job No.**: 17-K-9  **Hole No.**: 9-10  **Elevation**: 230.75 ft.

**Customer**: Hawaii State Dept of KDE  **Location**: Kalaheo, Kauai, Hawaii

---

<table>
<thead>
<tr>
<th>Driller</th>
<th>Hrs.</th>
<th>Rig</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. Leslie</td>
<td>10 ½</td>
<td>60L-1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>Hrs.</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Johnson</td>
<td>10 ½</td>
<td>Oil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>Hrs.</th>
<th>Repairs</th>
</tr>
</thead>
</table>

**Arv. Job**: 6:30  **Lv. Job**: 5:00  **Hrs.**  **Or. No.**

---

**Bit-Size**: 7  **Type**: Chisel

**Casing-Size**: in., Length in hole ft., Amt. Perforated ft. in.

**Depth Start**: 235 ft., Depth Stop 243 ft., Feet Drilled 8

**Water Levels, Time**: 8:15 A.M. 227.13 ft., Time M ft.

---

**Depth** | **Formation** | **Remarks** | **Top**
--- | --- | --- | ---
235/237 | Cinder | | |
237/243 | Med. hard rock | | |

---

**Remarks**: Cinders keep falling in - slow progress - started improving near end of day

---

**Signed**: Sam Leslie  **Date**: 11-14-63  **No. D**: 1473
Date: Nov. 13, 1963 | Job No.: 17-K-9 | Hole No.: 9-10 | Elevation: 230.75 ft.

Customer: Hawaii State Dept. of L&NR | Location: Pahoa, Puna, Hawaii

Driller: S. Leslie | 10 Hrs. | Rig: 604-1
Helper: E. Aguilar | 10 Hrs. | Gas: Oil
Helper: | Hrs. | Repairs

Bit-Size: 7 | Type: Chisel


Depth Start: 225 ft., Depth Stop: 235 ft., Feet Drilled: 10

Water Levels, Time: | M: | ft., Time: 1:00 P.M. 227.15 ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>225</td>
<td>hard rock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>228.5</td>
<td>med. hard rock</td>
<td>started to get water</td>
<td></td>
</tr>
<tr>
<td>233</td>
<td>cinders &amp; clinkers</td>
<td>out of hole</td>
<td></td>
</tr>
</tbody>
</table>

Measurements: A | B

Water Level Reading at Top of Deck: 227.15'

Remarks: Having plenty trouble with cinders after water started coming into hole.
        Repaired by putting on suction bailer - using plenty mud.

Signed: Sam Leslie | Date: 11-13-63 | No. D 1472
<table>
<thead>
<tr>
<th>Date</th>
<th>Nov. 12, 1963</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>230.75 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Hawaii State Dept of INR</td>
<td>Location</td>
<td>Punalu, Puna, Hawaii</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>D. Leslie</td>
<td>10 Hrs.</td>
<td>Rig</td>
<td>60L-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td>F. Agnew</td>
<td>10 Hrs.</td>
<td>Gas</td>
<td>Oil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td></td>
<td></td>
<td>Hrs.</td>
<td>Repairs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arv. Job</td>
<td>4:00</td>
<td>Lv. Job</td>
<td>4:30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hrs.</td>
<td></td>
<td>Or. No.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit-Size</td>
<td>7&quot;</td>
<td>Type</td>
<td>Chisel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casing-Size</td>
<td></td>
<td>in.,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Length</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>in.,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amt.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ft.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>in.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depth Start</td>
<td>206 ft.</td>
<td>Depth Stop</td>
<td>225 ft.</td>
<td>Feet Drilled</td>
<td>19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Levels, Time</td>
<td>M</td>
<td>ft.</td>
<td>M</td>
<td>ft.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>206/</td>
<td>med. hard rock</td>
<td></td>
<td>210</td>
</tr>
<tr>
<td>210/</td>
<td></td>
<td></td>
<td>215</td>
</tr>
<tr>
<td>215/</td>
<td></td>
<td></td>
<td>220</td>
</tr>
<tr>
<td>220/</td>
<td>hard rock</td>
<td></td>
<td>225</td>
</tr>
<tr>
<td>225/</td>
<td>some soft thin layers</td>
<td></td>
<td>225</td>
</tr>
<tr>
<td>225/</td>
<td></td>
<td></td>
<td>225</td>
</tr>
<tr>
<td>225/</td>
<td>med. hard rock</td>
<td></td>
<td>225</td>
</tr>
</tbody>
</table>

- Remarks: Cinder cone keeps falling in-

Signed        Date   No. D 1471
Sam Leslie    11-12-1963
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>11-11-63</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>230.75 ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Hawaii State Dept of LRN</td>
<td>Location</td>
<td>Palama, Puna, Hawaii</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>J. Leslie</td>
<td>10 Hrs.</td>
<td>Rig</td>
<td>GOL-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td>F. Aquino</td>
<td>10 Hrs.</td>
<td>Gas</td>
<td>Oil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td></td>
<td></td>
<td>Repairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit-Size</td>
<td>7&quot;</td>
<td>Type</td>
<td>Chile</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casing-Size</td>
<td>in.</td>
<td>Length in hole</td>
<td>ft.</td>
<td>in., Amt. Perforated</td>
<td>ft.</td>
<td>in.</td>
<td></td>
</tr>
<tr>
<td>Depth Start</td>
<td>185'</td>
<td>Depth Stop</td>
<td>206'</td>
<td>Feet Drilled</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Levels, Time M ft.</td>
<td>Time</td>
<td>M ft.</td>
<td>Measurements</td>
<td>A</td>
<td>B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>185'</td>
<td>med. hard rock</td>
<td>190'</td>
<td>15%</td>
<td>14</td>
</tr>
<tr>
<td>192'</td>
<td></td>
<td>145'</td>
<td>n</td>
<td>14%</td>
</tr>
<tr>
<td>195'</td>
<td>hard rock</td>
<td>200'</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>205'</td>
<td>med. hard rock</td>
<td>205'</td>
<td>15%</td>
<td>14%</td>
</tr>
</tbody>
</table>

Remarks: Cinder falling in - tools got stuck few times

Signed | Sam Leslie | Date | 11-11-63 | No. D 1470 |
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**Date** Nov. 9, 1963  **Job No.** 17-K-9  **Location** Polana, Puna, Hawaii

**Elevation** 230.75 ft.

**Job No.** 9-10  **Hole No.** 9-10

**Customer** Hawaii State Dept of HNR

---

**Driller** J. Leslie  10 Hrs.

**Helper** E. Aguirre  10 Hrs.

**Arv. Job** 6:30  **Lv. Job** 4:30

---

**Bit-Size** 7"  **Type** Chisel

**Casing-Size** 170 (7") in., Length in hole __________ ft.  **Amnt. Perforated** __________ ft.  in.

**Depth Start** 170 (7") ft., Depth Stop 185 ft., Feet Drilled 15'

**Water Levels, Time** M ft., Time M ft.  **Measurements**  

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>170'</td>
<td>med. hard rock</td>
<td></td>
<td>170'</td>
<td>15'</td>
<td>14'</td>
</tr>
<tr>
<td>174'</td>
<td></td>
<td></td>
<td>175'</td>
<td>15'</td>
<td>14'</td>
</tr>
<tr>
<td>174'</td>
<td>hard rock</td>
<td></td>
<td>180'</td>
<td>15'</td>
<td>14'</td>
</tr>
<tr>
<td>176'</td>
<td></td>
<td></td>
<td>185'</td>
<td>15'</td>
<td>14'</td>
</tr>
<tr>
<td>176'</td>
<td>med. hard rock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>181'</td>
<td>hard - cracked</td>
<td>bit wedging in - rough drilling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>185'</td>
<td>rock</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

---

**Signed** Sam Leslie  **Date** 11 - 9 1963  **No. D 1469**
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Nov. 8, 1963</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>230.75 ft.</th>
</tr>
</thead>
</table>

**Customer:** Hawaii State Dept. of LRNR  
**Location:** Puna, Hawaii

<table>
<thead>
<tr>
<th>Driller</th>
<th>S. Leslie</th>
<th>Hrs.</th>
<th>10</th>
<th>Rig</th>
<th>60L-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper</td>
<td>E. Aquino</td>
<td>Hrs.</td>
<td>12</td>
<td>Gas</td>
<td>Oil</td>
</tr>
</tbody>
</table>

**Bit-Size:** 12  
**Type:** Reaming

**Casing-Size:** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start:** 160 ft., Depth Stop 163 ft., Feet Drilled 3

**Water Levels, Time:** ft., Time ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>163'</td>
<td>med. hard gray rock</td>
<td></td>
<td>162'</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>some hard spots</td>
<td></td>
<td>163'</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>165'</td>
<td>7&quot; x 19 - 165</td>
<td></td>
<td>168'</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>170'</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

**Remarks:** Reamed (12") to 63'  
Took off reamer + put on 7" bit

**Signed:** Sam Leslie  
**Date:** 11-8, 1963  
**No. D 1468**
**DRILLING LOG**

SAMSON AND ZERBE, LTD.

**PHONE 581-447**

630 KEAFE STREET HONOLULU, HAWAII

---

**Date** Nov-7 1963  **Job No.** 17-K-9  **Hole No.** 9-10  **Elevation** 230.75 ft.

**Customer** Hawaii State Dept. of LNR

**Location** Polana, Puna, Hawaii

---

**Driller** S. Leslie  **Helper** E. Aguirre

**Arv. Job** 6:30  **Lv. Job** 4:30

---

**Bit-Size** 12  **Type** Reaming

---

**Casing-Size** in., Length in hole ft.  **Amt. Perforated** ft. in.

**Depth Start** 148 ft., Depth Stop 160 ft., Feet Drilled 12

---

**Water Levels** Time M ft., Time M ft.

---

**Measurements**

<table>
<thead>
<tr>
<th>Depth (ft.)</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>148</td>
<td></td>
<td></td>
<td>15' 15</td>
</tr>
<tr>
<td>155</td>
<td></td>
<td></td>
<td>15' 15</td>
</tr>
<tr>
<td>160</td>
<td></td>
<td></td>
<td>15' 15</td>
</tr>
</tbody>
</table>

**Remarks:**

- Reaming out 7" pilot hole
- Put new gasoline tank on Jeep Truck

---

**Signed** Sam Leslie  **Date** 11-7 1963  **No. D** 1467
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

PHONE 581-447

630 KEAWE STREET

HONOLULU, HAWAII

Date **Nov. 6 1963**  
Job No. **17-K-9**  
Hole No. **9-10**  
Elevation **230.75 ft.**

Customer: Hawaii State Dept. of I.G.N.R.  
Location: Pahoa, Puna, Hawaii

Driller: **S. Leslie**  
**10 1/2 Hrs.**  
Rig: **GAL-1**

Helper: **E. Aquino**  
**10 1/2 Hrs.**

Helper:  
**Hrs.**  
Repairs:

Arv. Job: **6:30**  
Lv. Job: **5:00**  
**Hrs.**

**Bit-Size:** **12**  
**Type:** **Reaming**

**Casing-Size**: _______ in., Length in hole: _______ ft.  
Amt. Perforated: _______ ft.  
**in.**

**Depth Start**: **130 ft.**  
**Depth Stop**: **148 ft.**  
**Feet Drilled**: **18**

**Water Levels, Time**:  
**A**: M ft., **B**: M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>135'</td>
<td>15 1/2 14 1/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>140'</td>
<td>15 1/2 14 1/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>145'</td>
<td>15 1/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>148'</td>
<td>14 1/2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reaming out 7" pilot hole**

**Remarks:**  
Gas tank on Jeep sprung a bad leak -  
Picked up new gas tank from VHP after work

Signed: **Sam Leslie**  
Date: **11-6 1963**  
**N. D 1466**
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Nov. 5 1963</th>
<th>Job No. 17-K-9</th>
<th>Hole No. 9-10</th>
<th>Elevation 230.75 ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Hawaii State Dept. of LN&amp;L</td>
<td>Location</td>
<td>Pulana, Puna, Hawaii</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>S. Lashe</th>
<th>10 1/2 Hrs.</th>
<th>Rig</th>
<th>GAL-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper</td>
<td>E. Aguine</td>
<td>10 1/2 Hrs.</td>
<td>Gas</td>
<td>Oil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arv. Job</th>
<th>6:30</th>
<th>Lv. Job</th>
<th>5:00</th>
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</table>

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>12&quot;</th>
</tr>
</thead>
</table>

|-------------|-----|----------------|-----|----------------|-----|

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>110 ft.</th>
<th>Depth Stop</th>
<th>130 ft.</th>
<th>Feet Drilled</th>
<th>20</th>
</tr>
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<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>A</th>
<th>ft.</th>
<th>Time</th>
<th>B</th>
<th>ft.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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</thead>
<tbody>
<tr>
<td>115'</td>
<td></td>
<td></td>
<td>15&quot;</td>
</tr>
<tr>
<td>120'</td>
<td></td>
<td></td>
<td>15&quot;</td>
</tr>
<tr>
<td>125'</td>
<td></td>
<td></td>
<td>15&quot;</td>
</tr>
<tr>
<td>130'</td>
<td></td>
<td></td>
<td>15&quot;</td>
</tr>
</tbody>
</table>

**Remarks:** Reaming out 7" pilot hole.

**Remarks:** Rather rough drilling at times. Got stuck twice – got out easily both times.

**Signed:** Sam Leslie   **Date:** 11-5-1963   **No. D 1465**
# DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

<table>
<thead>
<tr>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Job No.</td>
<td>17-X-9</td>
</tr>
<tr>
<td>Hole No.</td>
<td>9-10</td>
</tr>
<tr>
<td>Elevation</td>
<td>230.75 ft.</td>
</tr>
</tbody>
</table>

**Customer:** Hawaii State Dept. of LRMR  
**Location:** Pahoa, Puna, Hawaii

<table>
<thead>
<tr>
<th>Driller</th>
<th>J. Leslie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>E. Aguirne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rig</th>
<th>601-1</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Arv. Job</th>
<th>6:30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lv. Job</td>
<td>4:30</td>
</tr>
</tbody>
</table>

**Bit-Size:** 7"  
**Type:** Chisel 1

**Casing-Size:** in., Length in hole ft., Amt. Perforated in., Amt. Perforated ft.

**Depth Start:** 160 ft., Depth Stop 146'6", Feet Drilled 6'6"

**Water Levels, Time:** M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>160'</td>
<td>medium hard grey rock</td>
<td>7&quot; hole 161' 15 1/4% 14%</td>
<td></td>
</tr>
<tr>
<td>163'</td>
<td></td>
<td>163' 15% 14%</td>
<td></td>
</tr>
<tr>
<td>165'</td>
<td></td>
<td>165' 15 1/4% 14%</td>
<td></td>
</tr>
<tr>
<td>105'</td>
<td></td>
<td>Reamed with 12&quot; bit 166'</td>
<td></td>
</tr>
<tr>
<td>110'</td>
<td></td>
<td>15% 14% 14%</td>
<td></td>
</tr>
</tbody>
</table>

**Measurements:**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>15&quot;</td>
<td>15&quot;</td>
</tr>
</tbody>
</table>

**Remarks:**

- Pilot hole starting to run off
- Took off 7" pilot bit 9 5/8"
- Put on 4x5 stem with reaming bit

**Signed:** Sam Leslie  
**Date:** 11-4 1963  
**No. D 1464**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date:** Nov. 2, 1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 250.75 ft.

**Customer:** Hawaii State Dept. of LINR  
**Location:** Palama, Oahu, Hawaii

**Driller:** L. Leslie  
**10 Hrs.**  
**Rig:** GOL-1

**Helper:** E. Amano  
**10 Hrs.**  
**Gas:** Oil

**Arv. Job:** 6:30  
**Lv. Job:** 4:30  
**Hrs.:** Repairs

---

**Bit-Size:** 7"  
**Type:** Chisel

**Casing-Size:** in., Length in hole ft., Amt. Perforated ft. in.

**Depth Start:** 140 ft., Depth Stop:** 160 ft., Feet Drilled:** 20

**Water Levels, Time M ft., Time M ft.**

| Depth | Formation | Remarks | Top
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>145'</td>
<td>med. hard rock -</td>
<td>15'</td>
<td>15% 14%</td>
</tr>
<tr>
<td>147'</td>
<td>grey</td>
<td>150'</td>
<td>15% 14%</td>
</tr>
<tr>
<td>150'</td>
<td>hard grey rock</td>
<td>155'</td>
<td>15%</td>
</tr>
<tr>
<td>160'</td>
<td>med. hard rock</td>
<td>160'</td>
<td>15% 14%</td>
</tr>
<tr>
<td>160'</td>
<td>hard grey rock</td>
<td>few soft spots</td>
<td></td>
</tr>
</tbody>
</table>

---

**Remarks:**

- Not getting much material out of hole - used some mud to get samples -
- Kainoa picked up 4 drums just hauled to job -
- Took Henry to airport

**Signed:** Sam Leslie  
**Date:** 11-2-1963  
**No. D 1463**
# DRILLING LOG

**SAMSON AND ZERBE**  
DIVISION OF PELL CO., INC.  

**PHONE 587-041**  
630 KEAWE STREET  
HONOLULU, HAWAII—96806

---

**Date:** 11-1-1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept of Highways  
**Location:** Palama, Hawaii

---

**Driller:** Hi Heeves  
**Helper:** E. Aguirre  
**Arv. Job:** 2:00 - 3:15  
**Lv. Job:** 11:00 - 12:15

---

**Bit-Size:** 7”  
**Type:** Chisel

---

**Casing-Size:** in., Length in hole ______ ft. in., Amt. Perforated ______ ft. in.

**Depth Start:** 114' ft., Depth Stop 140' ft., Feet Drilled 20'

**Water Levels, Time:** M ft., Time M ft.

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>120'</td>
<td>mud Hard Gray Rock</td>
<td></td>
<td>120'</td>
<td>15'14'</td>
<td></td>
</tr>
<tr>
<td>130'</td>
<td></td>
<td></td>
<td>122'</td>
<td>15'14'</td>
<td></td>
</tr>
<tr>
<td>130'</td>
<td></td>
<td></td>
<td>125'</td>
<td>15'14'</td>
<td></td>
</tr>
<tr>
<td>132'</td>
<td></td>
<td></td>
<td>128'</td>
<td>15'14'</td>
<td></td>
</tr>
<tr>
<td>132'</td>
<td></td>
<td></td>
<td>134'</td>
<td>15'14'</td>
<td></td>
</tr>
<tr>
<td>136'</td>
<td></td>
<td></td>
<td>140'</td>
<td>15'14'</td>
<td></td>
</tr>
<tr>
<td>140'</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Remarks:** Drilled Down from 114' to 120' or clean out

---

**Signed:** Henry Heeves  
**Date:** 11-1-1963  
**D:** 1511
# DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**  
**630 KEAWE STREET**  
**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Nov. 1 1963</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>230.75 ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>Hawaii State Dept. of UNR</td>
<td>Location</td>
<td>Pahoa, Puna, Hawaii</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Driller**  
**S. Leslie**  
**10 Hrs.**  
**Rig**  
**604-1**

**Helper**  
**A. Kaina**  
**10 Hrs.**  
**Gas**  
**Oil**

**Arv. Job**  
**6:30**  
**Lv. Job**  
**4:30**  
**Hrs.**  
**Repairs**  
**Or. No.**

**Bit-Size**  
**12**

**Casing-Size**  
**in., Length in hole**  
**ft., Amt. Perforated**  
**ft., in.**

**Depth Start**  
**80 ft.**  
**Depth Stop**  
**105 ft.**  
**Feet Drilled**  
**25**

**Water Levels, Time**  
**M ft., Time**  
**M ft.**

### Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>85'</td>
<td>15% 14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90'</td>
<td>15% 14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>97'</td>
<td>14% 14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>102'</td>
<td>15% 14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>105'</td>
<td>15% 14%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**  
*Reamed to 105' with 12" reamer - Took off reaming bit & stem - put on 7' bit & 3x4 stem - Tools stopped at 105' - started cleaning out pilot hole*

**Signed**  
**Sam Leslie**  
**Date**  
**11-1 1963**  
**No. D 1462**
**DRILLING LOG**

SAMSON AND ZERBE, LTD.

PHONE 581-447

630 KEAWE STREET

HONOLULU, HAWAII

---

**Date** Oct. 31, 1963  **Job No.** 17-K-9  **Hole No.** 9-10  **Elevation** 230.75 ft.

**Customer** Hawaii State Dept. of Lat NR  **Location** Puna, Hawaii

**Driller** J. Leskie  **Hrs.**  **Rig** 602-1

**Helper** A. Kaiona  **Hrs.**

**Helper**

**Arv. Job** 7:00  **Lv. Job** 5:30  **Hrs.**

---

**Bit-Size** 18"  **Type** Remming

**Casing-Size** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start** 77' ft., Depth Stop 80' ft., Feet Drilled 3

**Water Levels, Time** M ft., **Time** M ft.

<table>
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<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
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<td></td>
</tr>
<tr>
<td></td>
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<td></td>
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</table>

**Measurements**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>15°</td>
<td>15°</td>
</tr>
</tbody>
</table>

---

**Remarks:** Returned from hon. couldn't find helper (Aquina) picked up Kaiona.

**Fixed up bit - lead bit cutting edge was smaller than body.**

**Started remming at 73' - got stuck several times.**

**Signed** J. Leskie  **Date** 10-31 1963  **No.** D 1461
Date: 10-30-1963  
Job No: K-9  
Hole No: 9-10  
Elevation: 230.75 ft.

Customer: Hawaii State Dept. of Land and Natural Resources  
Location: Palama, Hawaii

Driller: Henry Heann  
10 1/2 Hrs.  
Rig: 60-1 M1

Helper: A. Kaimoa  
10 1/2 Hrs.  
Gas: Oil

Helper:  
Hrs.  
Repairs:

Job: 3:15 - 4:30 Hrs.  
Or. No.: 

Bit-Size: 12"  
Type: Reamer

Casing-Size: in., Length in hole: ft.  
Amt. Perforated: ft.  
in.

Depth Start: 76' - 5" ft.  
Depth Stop: 77' ft.  
Feet Drilled:

Water Levels, Time: M ft., Time: M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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<tbody>
<tr>
<td>76</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76 - 4&quot;</td>
<td></td>
<td></td>
<td>15 1/2 15</td>
</tr>
<tr>
<td>76 - 7&quot;</td>
<td></td>
<td></td>
<td>15 3/8 15 1/8</td>
</tr>
<tr>
<td>76 - 9&quot;</td>
<td></td>
<td></td>
<td>15 3/8 15</td>
</tr>
<tr>
<td>77</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Measurements:

- Very rough Reaming stick in pilot hole every time.
- Thin Rock: fell along side of jaw - 2 hrs to get loose.
- Wearing jaw Bumper.

Remarks:

Signed: Henry Heann  
Date: 10-30-1963  
D 1510
### DRILLING LOG

**SAMSON AND ZERBE**

**DIVISION OF PELL CO., INC.**

**PHONE 587-041**

**630 KEAWE STREET**

**HONOLULU, HAWAI'I—96806**

**Date** 10-29-1963  
**Job No.** 12-K-9  
**Hole No.** 9-10  
**Elevation** 230.75 ft.

**Customer:** Hawaii State Dept of H'卫

**Location:** Punalu'u, Hawaii

---

<table>
<thead>
<tr>
<th>Driller</th>
<th>Helper</th>
<th>Rig No.</th>
<th>Hrs.</th>
<th>Gas</th>
<th>Oil</th>
<th>Hrs.</th>
<th>Or. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>H. Heamoe</td>
<td>A. Kainoa</td>
<td>60-1D</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Arv. Job:** 6:15-7:30  
**Lv. Job:** 3:15-4:30  
**Hrs. Repairs:** _________________

---

**Bit-Size:** 12"  
**Type:** 

**Casing-Size:** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start:** 75' ft., Depth Stop: 76' ft., Feet Drilled _________________

**Water Levels, Time:** M ft., Time M ft.

---

**Measurements**

<table>
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<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
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<td>15</td>
</tr>
<tr>
<td>75-2&quot;</td>
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<td></td>
<td>15&quot;</td>
</tr>
<tr>
<td>75-5&quot;</td>
<td></td>
<td></td>
<td>15&quot;</td>
</tr>
<tr>
<td>76</td>
<td></td>
<td></td>
<td>15&quot;</td>
</tr>
</tbody>
</table>

**Remarks:**

- Stuck in pilot hole every time
- Rock was tall above side of floor
- Above morning had used jaw bumper to get hole out

---

**Signatures:**

**Signed:** Jerry Heamoe  
**Date:** 10-29-1963  
**D 1509**
**DRILLING LOG**

**SAMSON AND ZERBE**

**DIVISION OF PELL CO., INC.**

**PHONE 587-041**

630 KEAWE STREET  
630 KEAWE STREET  
HONOLULU, HAWAII—96806

**Date** 10-28-1963  
**Job No.** 17-K-9  
**Hole No.** 9-10  
**Elevation.** 230.75 ft.

**Customer** Hawaii State Dept. of L&I  
**Location** Pulama, Hawaii

Driller: H. Heanne  
**10 Hrs.**  
**Rig** 60-1

Helper: A. Kainoa  
**10 Hrs.**  
**Gas**  
**Oil**

Helper:  
**Hrs.**  
**Repairs**

Arv. Job: 630-745  
**1v.** 315-430  
**Hrs.**

**Location**

**Bit-Size** 12"  
**Type** Flame

**Casing-Size** in., **Length in hole** ft. in., **Amt. Perforated** ft. in.

**Depth**  
**Start** 74'  
**Stop** 25,  
**Feet Drilled**

**Water Levels, Time** M ft., **Time** M ft.

**Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>74'4&quot;</td>
<td>15 1/4 14 3/4</td>
<td></td>
</tr>
<tr>
<td>74'-6&quot;</td>
<td>15 1/4 14 3/4</td>
<td></td>
</tr>
<tr>
<td>74'-9&quot;</td>
<td>15 1/4 14 3/4</td>
<td></td>
</tr>
<tr>
<td>75&quot;</td>
<td>15 1/4 14 3/4</td>
<td></td>
</tr>
</tbody>
</table>

Remarks: 

Very Rough Drilling  
Bit Stuck in Pilet

Signed: Henry Heanne  
**Date** 10-28-1963  
**D** 1508
**DRILLING LOG**

**SAMSON AND ZERBE**

**DIVISION OF PELL CO., INC.**

**PHONE 587-041**

**630 KEAWE STREET**

**HONOLULU, HAWAII—96806**

---

**Date:** 10-26- 1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 230.75 ft.

**Customer:** Hawaii state Dept. of HWR  
**Location:** Punalu'u Hawaii

**Driller:** H. Heanna 9½ Hrs.  
**Rig:** 60-1 1

**Helper:** H. Kaissa 9½ Hrs.  
**Gas:**  
**Oil:**

**Arv. Job:** 6:30-7:45  
**Lv. Job:** 3:00-4:00

**Bit-Size:** 12"  
**Type:** Reaming

**Casing-Size:** in., Length in hole ft.  
**Amt. Perforated:** ft. in.

**Depth Start:** 73 ft.  
**Depth Stop:** 74 ft.  
**Feet Drilled:**

**Water Levels, Time:** M ft.  
**Time:** M ft.

---

**Measurements**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

---

**Depth**  
**Formation**  
**Remarks**  
**Top**

| 73' 4" | 15½ | 14½ |
| 73' 6" | 15½ | 14½ |
| 74'  | 15½ | 14½ |

**Remarks:**  
been raising of and on

---

**Signed:** Herry Heanna  
**Date:** 10-26- 1963  
**D:** 1507
DRILLING LOG
SAMSON AND ZERBE
DIVISION OF PELL CO., INC.

PHONE 587-041

630 KEAWE STREET

HONOLULU, HAWAII—96806

Date 10-24-1963 Job No. 17-K-9 Hole No. 9-10 Elevation 234.75 ft.

Customer Hawaii State Dept. of LonR Location Pulama Hawaii

Driller H. Heanne 10 Hrs. Rig 60-1

Helper A. Leinoa 10 Hrs. Gas

Helper __________ Hrs. Repairs


Bit-Size __________ Type Reamer 12"

Casing-Size __________ in., Length in hole __________ ft. __________ in., Amt. Perforated __________ ft. __________ in.

Depth Start __________ ft., Depth Stop __________ ft., Feet Drilled __________

Water Levels, Time __________ M. __________ ft., Time __________ M. __________ ft.

<table>
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<th>Depth</th>
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<td>15</td>
</tr>
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<td></td>
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<td></td>
<td>15</td>
</tr>
<tr>
<td>72' 4&quot;</td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14</td>
</tr>
<tr>
<td>73'</td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>19</td>
</tr>
</tbody>
</table>

Reaming out

still rough opening with pilot

Remarks:

Signed Henry Heanne Date 10-24-1963 D 1506
**DRILLING LOG**

**SAMSON AND ZERBE**

**DIVISION OF PELL CO., INC.**

**630 KEAWE STREET**

**HONOLULU, HAWAII—96806**

---

**Date:** 10-23-1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 270.75 ft.

**Customer:** Hawaii State Dept. of  
**Location:** Pulama Hawaii

**Driller:** H. Heasman  
**Helper:** A. Kaima  
**Rig:** 60-1

**Gas:**  
**Oil:**

**Bit-Size:** 12"  
**Type:**

**Casing-Size:** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start:** 70 ft.  
**Depth Stop:** 72 ft.  
**Feet Drilled:** 2 ft.

**Water Levels, Time:** M ft., Time M ft.

---

<table>
<thead>
<tr>
<th>Depth</th>
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<th>Remarks</th>
</tr>
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<td>70'</td>
<td>15½ 14¾</td>
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</tr>
<tr>
<td>70' 8&quot;</td>
<td>15½ 14¾</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70' 6&quot;</td>
<td>15½ 14¾</td>
<td></td>
<td></td>
</tr>
<tr>
<td>71'</td>
<td>15½ 14¾</td>
<td></td>
<td></td>
</tr>
<tr>
<td>71' 6&quot;</td>
<td>15½ 14¾</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72'</td>
<td>15½ 14¾</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

** Remarks:**

- Reaming out pilot hole
- Still tough going

---

**Signed:** Henry Heasman  
**Date:** 10-23-1963  
**D:** 1505
**DRILLING LOG**

**SAMSON AND ZERBE**

**DIVISION OF PELL CO., INC.**

630 KEAWE STREET

HONOLULU, HAWAII—96806

---

**Date:** 10-22-1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept. of I & NR  
**Location:** Palama, Hawaii

**Driller:** Henry Heanue  
**Helper:** Al Kainoa

**Rig:** 60-61  
**Gas:** Oil

**Arv. Job:** 6:30-7:45  
**Job End:** 8:30-4:30  
**Hrs. Repairs:**

---

**Bit-Size:** 12"  
**Type:**

**Casing-Size:** in., Length in hole ft., Amt. Perforated ft., in.

**Depth Start:** 68 ft., Depth Stop 70 ft., Feet Drilled

---

**Water Levels, Time**

| Depth | Formations | Remarks | Top
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>68' 3&quot;</td>
<td></td>
<td>15(\frac{5}{8})&quot;</td>
<td></td>
</tr>
<tr>
<td>68' 6&quot;</td>
<td></td>
<td>15(\frac{5}{8})&quot;</td>
<td></td>
</tr>
<tr>
<td>69'</td>
<td></td>
<td>15(\frac{5}{8})&quot;</td>
<td></td>
</tr>
<tr>
<td>69' 8&quot;</td>
<td></td>
<td>15(\frac{5}{8})&quot;</td>
<td></td>
</tr>
<tr>
<td>70'</td>
<td></td>
<td>15(\frac{5}{8})&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**Measurements**

**Remarks:**

*Very tough going. Bit stuck in pilot hole.*

**Signed:** Henry Heanue  
**Date:** 10-22-1963  
**D:** 1504
**DRILLING LOG**

**SAMSON AND ZERBE**

**DIVISION OF PELL CO., INC.**

**PHONE 587-041**

**630 KEAWE STREET**

**HONOLULU, HAWAII—96806**

Date: **10-21-1963**  
Job No.: **17-K-9**  
Hole No.: **9-10**  
Elevation: **230.75 ft.**

Customer: **Hawaii State Dept. of Lew**  
Location: **Pulama, Hawaii**

Driller: **H. Heanes**  
10 Hrs.  
Rig: **60-L1**

Helper: **K. Kaimoa**  
10 Hrs.  
Gas: **Oil**

Arv. Job: **6:30 - 8:30**  
Lv. Job: **3:30 - 4:30**

Bit-Size: **12''**  
Type: 

Casing-Size: **in., Length in hole ft., in., Amt. Perforated ft., in.**

Depth Start: **67'**  
Depth Stop: **68'**  
Foot Drilled: 

Water Levels:  
Time **A** M ft., Time **B** M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>67'</strong></td>
<td></td>
<td></td>
<td><strong>67'</strong></td>
</tr>
<tr>
<td><strong>67.9''</strong></td>
<td></td>
<td></td>
<td><strong>67.9''</strong></td>
</tr>
<tr>
<td><strong>68'</strong></td>
<td></td>
<td></td>
<td><strong>68'</strong></td>
</tr>
</tbody>
</table>

**Peeving and pilot hole**

**Very tough going**

Remarks: **Hauling 4 drums gas from Standard oil Co. to Job.**

Signed: **Henry Heanes**  
Date: **10-21-1963**  
**D 1503**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date**: Oct. 19, 1963  
**Job No.**: 17-E-9  
**Hole No.**: 9-10  
**Elevation**: 230.75 ft.

**Customer**:  
**Location**:  

**Driller**: S. Leslie  
**Rig**: 604-I  
**Hrs.**:  

**Helper**: F. Osuna  
**Hrs. Gas**: Oil  
**Hrs. Repairs**:  

**Arv. Job**: 6:30 T  
**Lv. Job**:  
**Hrs.** Or. No.:  

---

**Bit-Size**: 12  
**Type**: Reaming  

**Casing-Size**: in., **Length in hole**: ft. in., **Amt. Perforated**: ft. in.  

**Depth Start**: ft., **Depth Stop**: ft., **Feet Drilled**:  

**Water Levels, Time** A M ft., **Time** B M ft.  

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>A 15&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reaming out 7&quot; pilot hole</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Started at 63&quot;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guide bit fight in pilot hole</td>
<td>66' 15 1/2 14%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>66'-6&quot; &quot; &quot;</td>
<td>66'-9&quot; 15 1/2 14%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>67'-6&quot; 15 1/2 14%</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:** Threaded reamer - put on reaming bit.

---

**Signed**: S. Leslie  
**Date**: 10-19, 1963  
**No. D 1452**
**DRILLING LOG**

**SAMSON AND ZERBE**

DIVISION OF PELL CO., INC.

630 KEAWE STREET

HONOLULU, HAWAII 96806

**Date** 10-18-1963  **Job No.** 12K-7  **Hole No.** 9-10  **Elevation** 230.75 ft.

**Customer** Hawaii State Dept of LR  **Location** Palama, Hawaii

**Driller** H. Heanne  **Hrs.** Rig 60-641

**Helper** A. Kainoa  **Hrs.** Gas Oil

**Helper**  **Hrs.** Repairs

**Arv. Job** 2:00  **Lv. Job**

**Bit-Size** 7"  **Type** Chisel

**Casing-Size** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start** 111' ft.  **Depth Stop** 120' ft.  **Feet Drilled** 9'

**Water Levels, Time** M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>Med Hard Rock</td>
<td>111</td>
<td>15' 15'</td>
</tr>
<tr>
<td>112</td>
<td></td>
<td></td>
<td>15' 15'</td>
</tr>
<tr>
<td>113</td>
<td></td>
<td></td>
<td>15' 15'</td>
</tr>
<tr>
<td>114</td>
<td></td>
<td></td>
<td>15' 15'</td>
</tr>
<tr>
<td>115</td>
<td>Soft Rock</td>
<td>115</td>
<td>15' 15'</td>
</tr>
<tr>
<td>116</td>
<td></td>
<td></td>
<td>15' 15'</td>
</tr>
<tr>
<td>117</td>
<td></td>
<td></td>
<td>15' 15'</td>
</tr>
<tr>
<td>118</td>
<td></td>
<td></td>
<td>15' 15'</td>
</tr>
<tr>
<td>119</td>
<td>Hard Rock</td>
<td>119</td>
<td>15' 15'</td>
</tr>
<tr>
<td>120</td>
<td></td>
<td></td>
<td>15' 15'</td>
</tr>
</tbody>
</table>

**Remarks:**

________________________________________________________

**Signed** Henry Heanne  **Date** 10-18-1963  **D** 1502
DRILLING LOG
SAMSON AND ZERBE, LTD.

Date: Oct 18, 1963  Job No.: 17-K-9  Hole No.: 9-10  Elevation: 230.75 ft.

Customers: Hawaii State Dept of L&HR  Location: Puna, Puna, Hawaii

Driller: J. Leslie  Rig: CUL-1
Helper: E. Aguirre
Helper:
Arv. Job: 6:30-7:45  Lvl. Job: 3:45-5:00

Bit-Size: 7"  Type: chisel


Depth Start: 107 ft., Depth Stop: 110 ft., Feet Drilled: 4

Water Levels, Time: M ft., Time: M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>107</td>
<td>med. hard grey rock</td>
<td>108' 15% 4%</td>
<td></td>
</tr>
<tr>
<td>110</td>
<td></td>
<td>110' 15% 4%</td>
<td></td>
</tr>
<tr>
<td>111</td>
<td></td>
<td>111' 15% 4%</td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Discontinued drilling at 11:00 a.m. - Concentrated on fixing 12" reamer.

Signed: Sam Leslie  Date: 10-18-63  No. D 1451
<table>
<thead>
<tr>
<th>Date</th>
<th>10-17-1963</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>230.75 ft.</th>
</tr>
</thead>
</table>

**Customer:** Hawaii State Dept. of Water

**Location:** Pulama, Hawaii

**Driller:** H. Heanse

**Helper:** A. Kinsra

**Arv. Job:** 2:00-3:15, Job 11:00-12:15

**Bit-Size:** 7 3/4

**Type:** Chive

**Casing-Size:**

**Length in hole:**

**Amt. Perforated:**

**Depth Start:** 100 ft., Depth Stop: 107 ft., Feet Drilled: 7

**Water Levels, Time:** M ft., Time: M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>100'</td>
<td>Med Hard Rock</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td>101</td>
<td></td>
<td></td>
<td>101</td>
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<tr>
<td>102</td>
<td></td>
<td></td>
<td>102</td>
</tr>
<tr>
<td>103</td>
<td></td>
<td></td>
<td>103</td>
</tr>
<tr>
<td>104</td>
<td>Hard Rock</td>
<td></td>
<td>104</td>
</tr>
<tr>
<td>105</td>
<td></td>
<td></td>
<td>105</td>
</tr>
<tr>
<td>106</td>
<td></td>
<td></td>
<td>106</td>
</tr>
<tr>
<td>107</td>
<td></td>
<td></td>
<td>107</td>
</tr>
</tbody>
</table>

**Remarks:**

Signed: Henry Heanse

Date: 10-17-1963
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**
**630 KEAWE STREET**
**HONOLULU, HAWAII**

**Date:** 11-17-63  **Job No.:** 17-K-9  **Hole No.:** 1-10  **Elevation:** 350.75 ft.

**Customer:** Nuuanu Tidelands  **W.R.:** Location: Tidewater, Pau, Hawaii

<table>
<thead>
<tr>
<th>Driller</th>
<th>10 1/2 Hrs.</th>
<th>Rig</th>
<th>Helper</th>
<th>10 1/2 Hrs.</th>
<th>Gas</th>
<th>Helper</th>
<th>Hrs.</th>
<th>Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Arv. Job:** 5:45  **Lv. Job:** 5:45-7:00  **Or. No.:**

---

**Bit-Size:** 7"  **Type:** Asis

**Casing-Size:** in., Length in hole ft., Amt. Perforated ft., in.

**Depth Start:** 87 ft.  **Depth Stop:** 100 ft.  **Feet Drilled:** 13 ft.

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M ft.</th>
<th>Time A</th>
<th>M ft.</th>
<th>Time B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

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<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>87 ft.</td>
<td>hard lined rock</td>
<td>89' 15% 14%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 ft.</td>
<td>few soft spots</td>
<td>90' 15% 14%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>91-6''</td>
<td>14%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>96' 15% 14%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>101'</td>
<td>15%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Remarks:**

---

**Signed:** John Leslie  **Date:** 12-17 1963  **No. D 1450**
# DRILLING LOG

## SAMSON AND ZERBE, LTD.

**PHONE 581-447**

630 KEAWE STREET  HONOLULU, HAWAII

---

**Date:** 10-16-53  
**Job No.:** 7-K-9  
**Hole No.:** 9-10  
**Elevation:**  ft.

**Customer:** Hawaii State Dept. of Rail.  
**Location:** Pahana, Hawaii.

---

**Driller:** I. Alama  
**Helper:** A. Alama  
**Arv. Job:** 2:00-3:30  
**Lv. Job:** 11:00-12:00

---

**Rig:** 60-2  
**Gas:**  
**Oil:**  
**Reps.:**

---

**Bit-Size:** 7"  
**Type:** Chisel

---

**Casing-Size:** in., Length in hole ft., Amt. Perforated ft., in.

---

**Depth Start:** 83' ft., Depth Stop 87' ft., Feet Drilled 4'

---

**Water Levels, Time:** M ft., Time M ft.

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>83</td>
<td>Hard gray rock</td>
<td>83'</td>
<td>15½</td>
</tr>
<tr>
<td>84</td>
<td></td>
<td>84'</td>
<td>15½</td>
</tr>
<tr>
<td>85</td>
<td></td>
<td>85'</td>
<td>15½</td>
</tr>
<tr>
<td>86</td>
<td></td>
<td>86'</td>
<td>15 3/8</td>
</tr>
<tr>
<td>87</td>
<td></td>
<td>87'</td>
<td>15 3/8</td>
</tr>
</tbody>
</table>

---

**Remarks:**

---

**Signed:** I. Alama  
**Date:** 10-16-53  
**No. D:** 1449
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**Date:** Oct. 16, 1963  **Job No.:** 142-9  **Hole No.:** 1-10  **Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept. of N.P.  **Location:** Palama Puea, Hawaii

**Driller:** J. Leslie  **Hrs. Rig:** 602-1  **Gas:**

**Helper:** Figueira  **Hrs. Repairs:**

**Arv. Job 6:45 A.M. Job 7:45-5:00**  **Or. No.:**

**Bit-Size:** 12" - 7"  **Type:** Reaming - Chisel

**Casing-Size:** in., Length in hole ft.  **Amt. Perforated** ft. in.

**Depth Start:** 80 ft.  **Depth Stop:** 83 ft.  **Feet Drilled:** 3

**Water Levels, Time:** M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>80'</td>
<td>hard grey rock</td>
<td></td>
<td>15° 15'</td>
</tr>
<tr>
<td>83'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82'</td>
<td></td>
<td></td>
<td>15° 15 1/6</td>
</tr>
<tr>
<td>83'</td>
<td></td>
<td></td>
<td>15° 15 1/6</td>
</tr>
</tbody>
</table>

**Remarks:** Hole running off. Took off reaming bit and put on 7" bit - Started drilling from 83'  Pilot hole starting to run off

**Signed:** Sam Leslie  **Date:** 10-16-63  **No. D 1448**
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**Date:** 10-15-1963  |  **Job No.:** ZH-K-7  |  **Location:** Pulama, Hawaii

**Customer:** Hawaii State Dept. of LWR

---

**Driller:** H. Heamer  |  **Hrs.:** 10  |  **Rig:** 65-21

**Helper:** A. Kaimoa  |  **Hrs.:** 10  |  **Gas:**

**Helper:**

**Arv. Job:** 2:00-3:15  |  **Lv. Job:** 11:00-12:00  |  **Oil:**

**Hrs.:**

**Bit-Size:** 12  |  **Type:**

**Casing-Size:** _______ in., Length in hole _______ ft., ___________ ft. in., Amt. Perforated _______ ft. _______ in.

**Depth Start:** 66' ft., Depth Stop 66' 6" ft., Feet Drilled _______ ft.

**Water Levels, Time M ft., Time M ft., Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>65</td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>66</td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>66.6</td>
<td></td>
<td>Learning Out</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

**Remarks:**

- Learning Out
- Gas and oil plug

**Signed:** Henry Heamer  |  **Date:** 10-15-63  |  **No. D 1447**
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

<table>
<thead>
<tr>
<th>Date</th>
<th>Oct 15 1963</th>
<th>Job No. 17-6-2</th>
<th>Hole No. 9-10</th>
<th>Elevation 221.75 ft.</th>
<th>Customer</th>
<th>Location</th>
<th>Honolulu, Oahu, Hawaii</th>
</tr>
</thead>
</table>

| Driller    | J. Hailey   | 12 Hrs.       | Rig 601-1     |                      |          |          |                       |
| Helper     | F. Hinoe    |                |               |                      |          |          |                       |
| Helper     |             |                |               |                      |          |          |                       |
| Arv. Job   | 6:30-7:45   |                | Job 2:15-4:00 |                      | Or. No.  |          |                       |

| Bit-Size   | 12          | Type           |               |                      |          |          |                       |

| Casing-Size| 6 in., Length in | ft. | Amt. Perforated | ft. | in. |                      |          |          |                       |
| Depth Start| ft., Depth Stop | ft., Feet Drilled |                      |          |          |                       |
| Water Levels, Time | M | ft., Time | M | ft. |                      |          |          |                       |

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Reaming out pilot hole</td>
<td>65' 7/16 66' 1/2</td>
<td></td>
</tr>
<tr>
<td>65' 15° 15''</td>
<td>65'-6&quot; 15 1/2 15 1/2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>66' 15 1/2 15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Remarks: |                       |          |               |               |          |          |                       |

<table>
<thead>
<tr>
<th>Signed</th>
<th>Date</th>
<th>No.</th>
<th>10-15-63</th>
</tr>
</thead>
</table>

No D 1446
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date:** 10-14-63  
**Job No.:**  
**Hole No.:**  
**Elevation:** 350.75 ft.  
**Customer:** Hawaii State Dept. of Div.  
**Location:** Palama, Hawaii  

**Driller:** H. Hearme  
**Rig:** 60-L-1  
**Hrs.:** 10  
**Helper:** A. Vairone  
**Gas:** Oil  
**Hrs.:** 10  
**Repairs:**  
**Arv. Job:** 9:00-8:15  
**Lv. Job:** 11:00-12:00  
**Hrs.:**  

---

**Bit-Size:** 12  
**Type:**  
**Casing-Size:**  
**Length in hole:**  
**Amt. Perforated:**  
**Depth Start:**  
**Depth Stop:**  
**Feet Drilled:**  
**Water Levels, Time:** M ft., Time M ft.  
**Measurements:**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

**Water Levels Time**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**Remarks:**

Continue Build upREAMING BIT on ground.  
then made up tool: Started at 65reaming

**Signed:** Henry Harme  
**Date:** 10-14-63  
**No. D 1445**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**Date**: Oct 14, 1963  
**Job No.**: 11-X-9  
**Hole No.**: 7-10  
**Elevation**: 230.75 ft.

**Customer**: Iowan State Dept.  
**Location**: Polynia Time, Hawaii

**Driller**: J. Leslie  
**Hrs.**: 10  
**Rig**: GOL-1

**Helper**: E. Aguwa  
**Hrs.**: 10  
**Gas**:  
**Oil**:  
**Repairs**:  
**Arv. Job**: 6:30  
**Lv. Job**: 3:15  
**Hrs.**: 4:30

**Bit-Size**: 7"  
**Type**: Chisel

**Casing-Size**: in., Length in hole ft.  
**in., Amt. Perforated**: ft.  
**Depth Start**: 73 ft.  
**Depth Stop**: 80 ft.  
**Feet Drilled**: 7'

**Water Levels, Time**: M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>73'</td>
<td>bared gray rock</td>
<td>73'-6&quot;</td>
<td>15&quot; 15&quot;</td>
<td></td>
</tr>
<tr>
<td>75'</td>
<td></td>
<td>75'</td>
<td>15'/14&quot;</td>
<td></td>
</tr>
<tr>
<td>80'</td>
<td></td>
<td>80'</td>
<td>15'/14&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks**: drilling 7" pilot hole to 80' till 11:20 a.m.  
Took off 7" bit 4 3x4" stem-  
Making major repairs to 12" reaming bit

**Signed**: J. Leslie  
**Date**: 10 - 14  
**No. D 1444**
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**  
630 KEAWE STREET  
HONOLULU, HAWAII

---

**Date:** 4-7-63  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 230.75 ft.

**Customer:**  
**Location:** Punalu'u, Puna, Hawaii

---

**Driller:** J. Leslie  
**Helper:** L. Quinane

**Rig:**  
**Gas:**  
**Oil:**  
**Repairs:**

**Arv. Job:** 6:30-7:45  
**Lv. Job:** 8:15-4:30

---

**Bit-Size:** 7"  
**Type:** Chisel

**Casing-Size:** 6-1/2'  
**Length in hole:** 125'  
**Amt. Perforated:** 125'

**Depth Start:** 67'3" ft.  
**Depth Stop:** 73" ft.  
**Feet Drilled:** 5'9"

---

**Water Levels:**  
**Time M ft.**  
**Time M ft.**

---

**Depth**  
**Formation**  
**Remarks**  
**Top**  

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
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</tr>
</thead>
<tbody>
<tr>
<td>67'3&quot;</td>
<td>hard grey rock</td>
<td></td>
<td></td>
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</table>

---

**Remarks:** Drilling pilot hole

---

**Signed:**  
**Date:** 10-12-63  
**No. D 1443**
DRILLING LOG
SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date Oct. 11 1963 Job No. 17-K-9 Hole No. 9-10 Elevation 230.75 ft.
Customer
Driller L. Lasia 10 Hrs. Rig 60L-1
Helper A. Kaimoa 10 Hrs. Gas Oil
Helper

Bit-Size 12" changed to 7" Type Reaming Chisel
Casing-Size in., Length in hole ft. in., Amt. Perforated ft. in.
Depth Start 65 ft., Depth Stop 67-3 ft., Feet Drilled 2'-3"
Water Levels, Time M ft., Time M ft.

Depth Formation Remarks Top
165 very hard grey rock

Reaming bit couldn't
Advance After Reaching
Bottom of pilot hole - 65'
Rock too hard of bit
Too flat on bottom -
Took off bit 4 stem-
Put on bit 3 stem + bit-
Startled off very slowly -
to keep drill in 15"-6"15" position

Remarks:

Signed Sami Lasia Date 10-11-63 No D 1442
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

630 KEAWE STREET  HONOLULU, HAWAII

---

**Date:** 10-11-1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 233.75 ft.

---

**Customer:**  
**Location:**  

---

**Driller:**  
**Hrs.:** 9  
**Rig:** 60-11

**Helper:**  
**Hrs.:** 9  
**Gas:**  
**Oil:**

**Helper:**  
**Hrs.:**  
**Repairs:**

**Arv. Job:** 6:30 - 7:45  
**Job:** 8:15 - 3:30  
**Hrs.:**

---

**Bit-Size:** 12  
**Type:**  
**Remarks:**

**Casing-Size:** in., **Length in hole:** ft. in., **Amt. Perforated:** ft. in.

**Depth Start:** ft., **Depth Stop:** ft., **Feet Drilled:**

**Water Levels, Time:** M ft., **Time:** M ft.

---

<table>
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**Remarks:**  

---

**Signed:**  
**Date:** 10-11-1963  
**No D 1441**
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<th>Job No.</th>
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<th>Hole No.</th>
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<td>Hawaii's State Dept. of L &amp; R</td>
<td>Location</td>
<td>Pulama, Hawaii</td>
<td></td>
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<tr>
<td>Driller</td>
<td>J. J. Thompson</td>
<td>Hrs.</td>
<td>23/4</td>
<td>Rig</td>
<td>60-1-1</td>
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<tr>
<td>Helper</td>
<td>A. Kaulana</td>
<td>Hrs.</td>
<td>23/4</td>
<td>Gas</td>
<td>Oil</td>
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<tr>
<td>Bit-Size</td>
<td>12</td>
<td>Type</td>
<td>Bailing</td>
<td></td>
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</tr>
<tr>
<td>Depth Start</td>
<td>ft.</td>
<td>Depth Stop</td>
<td>ft.</td>
<td>Feet Drilled</td>
<td>ft.</td>
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<td>Water Levels, Time</td>
<td>M</td>
<td>ft., Time</td>
<td>M</td>
<td>ft.</td>
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</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>15</td>
</tr>
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Signed: Tommy Souza
Date: 10-10-63

No. D 1440
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

PHONE 581-447  
630 KEAWE STREET  
HONOLULU, HAWAII

<table>
<thead>
<tr>
<th>Date</th>
<th>Oct. 10 1963</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>230.75 ft.</th>
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<td>Customer</td>
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<td>Polynesian Mansion, Hawaii</td>
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<tr>
<td>Driller</td>
<td>S. Leslie</td>
<td>10 Hrs.</td>
<td>Rig</td>
<td>60L-1</td>
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<tr>
<td>Helper</td>
<td>E. Aquino</td>
<td>10 Hrs.</td>
<td>Gas</td>
<td>Oil</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td></td>
<td></td>
<td>Repairs</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Bit-Size</td>
<td>12</td>
<td>Type</td>
<td>Reming</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Casing-Size</td>
<td></td>
<td>in., Length in hole</td>
<td>ft.</td>
<td>in., Amt. Perforated</td>
<td>ft.</td>
<td>in.</td>
<td></td>
</tr>
<tr>
<td>Depth Start</td>
<td>65 ft.</td>
<td>Depth Stop</td>
<td>ft.</td>
<td>Feet Drilled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Levels, Time</td>
<td>M</td>
<td>ft., Time</td>
<td>M</td>
<td>ft.</td>
<td>Measurements</td>
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<tbody>
<tr>
<td></td>
<td></td>
<td>A.M. CHECK</td>
<td>65'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reming all day at this</td>
<td>15-15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P.M. 65'</td>
<td>15</td>
</tr>
</tbody>
</table>

Reming at 65'

Signed: S. Leslie  
Date: 10-10-63  
No. D 1439
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date:** 10-9-1963  **Job No.:** 7-K-9  **Hole No.:** 7-10  **Elevation:** 230.75 ft.

**Customer:**  **Location:**  

---

**Driller:**  **Helper:**  

**Rig:** 60-2-1  

**Gas:**  **Oil:**  

---

**Arv. Job:** 10:00  **Lv. Job:** 11:45  **Hrs.**  

---

**Bit-Size:** 12  **Type:**  

**Casing-Size:** 54.5 in., Length in hole ft., Amt. Perforated ft., in.  

**Depth Start:** 64.6 ft., Depth Stop 65.6 ft., Feet Drilled ft.  

**Water Levels, Time M ft.**  

---

**Depth**  |  **Formation**  |  **Remarks**  |  **Top**
---|---|---|---
64.6" | Very Hard Grey Rock |  | 15 15
64" |  | 15 15
64-8" |  | 15\% 15\%
65-6" |  | 15\% 15\%

**Measurements**

|  |  
|---|---|---|---|
| A | B |  
| 15 | 15 |  

---

**Remarks:** Hole like to go off  

---

**Signed:**  

**Date:** 10-9-1963  

**No. D 1438**
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date**: Oct 9, 1963  
**Job No.**: 17-K-9  
**Hole No.**: 9-10  
**Elevation**: 230.75 ft.  
**Customer**: Hawaii State Dept. of LR  
**Location**: Kilauea, Puna, Hawaii

---

**Driller**: J. Hosia  
**Helper**: E. Elywian  
**Helper**:  
**Arv. Job**: 6:30-7:15, Job 8:15-4:30  
**Hrs.**:  
**Rig**: 602-1  
**Gas**:  
**Oil**:  
**Repairs**:  
**Or. No.**:  
**Depth Start**: 63'-6"  
**Depth Stop**: 64'-6"  
**Feet Drilled**: 1  
**Bit-Size**: 12  
**Type**: Reaming

---

**Casing-Size**: in., **Length in hole**: ft., in., **Amt. Perforated**: ft., in.

---

**Depth Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
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<th>Top</th>
<th>Measurements</th>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>62'</td>
<td>15&quot; 15&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63'-6&quot;</td>
<td>15 15&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>64'</td>
<td>15 14½&quot;</td>
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<td></td>
<td></td>
<td></td>
<td>64'-6&quot;</td>
<td>15½&quot; 15&quot;</td>
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</tbody>
</table>

**Remarks**: Reaming out 7" pilot hole

---

**Signed**: Sam Leslie  
**Date**: 10-9-63  
**No. D**: 1437
<table>
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</table>

Remarks:

Peacoming out 2" pilot hole.

Signed

Date 1-5-63

No. D 1400
DRILLING LOG
SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date Oct 8 1963
Job No. 17-K-9
Hole No. 9-10
Elevation 230.75 ft.

Customer: State of Hawaii
Location: Puna, Puna, Hawaii

Driller: J. Leslie
Hrs. 10
Rig: 60L-1

Helper: E. Aguirre
Hrs. 10
Gas
Oil

Arv. Job 6:30-7:45
Lv. Job 8:15-4:30
Hrs.

Bit-Size 12
Type Reaming


Depth Start 62'-6" ft., Depth Stop 63'-6" ft., Feet Drilled 0'-6"

Water Levels, Time M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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<tr>
<td></td>
<td></td>
<td>Reaming out 7&quot; pilot hole.</td>
<td></td>
</tr>
</tbody>
</table>

Remarks: Hole running off-

Signed J. Leslie
Date Oct 8 1963
No. D 1436
# Drilling Log

**Date**: 10-7-1963  
**Job No.**: K-9  
**Hole No.**: 9-10  
**Elevation**: 230.75 ft.

**Customer**: Hawaii State Dept. of **Location**: Palama, Honolulu

**Driller**: H. Hansen  
**Helper**: R. Kline

<table>
<thead>
<tr>
<th>Rig</th>
<th>Hrs.</th>
<th>Gas</th>
<th>Oil</th>
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<tbody>
<tr>
<td></td>
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**Arv. Job**: 2:00-3:15  
**Lv. Job**: 10:00-12:00  
**Or. No.**: 

**Hrs. Repairs**: 

**Bit-Size**: 12  
**Type**: Drilling

**Casing-Size**: __________ in., **Length in hole**: __________ ft.  
**Amt. Perforated**: __________ ft., __________ in.

**Depth Start**: 62 ft., **Depth Stop**: 62 ½ ft., **Feet Drilled**: 

**Water Levels, Time**: M __________ ft., **Time**: M __________ ft.

<table>
<thead>
<tr>
<th>Depth</th>
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<th>Remarks</th>
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<tbody>
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</table>

**Remarks**: Measurement on A-B going of the, continue pull in back to clean out

**Signed**: Henry Hansen  
**Date**: 10-7-1963  
**No. D**: 1399
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Oct. 7 1963</th>
<th>Job No.</th>
<th>17-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>330.75 ft.</th>
</tr>
</thead>
</table>

**Customer:**

Hawaii State Dept. of HNR

**Location:** Puna, Hawaii

**Driller:** D. Lesha

**Helper:** E. S. Aguirre

**Rig:** LA-1

**Gas:**

**Oil:**

**Helper Hrs.:**

**Repairs:**

**Arv. Job:** 6:30 - 7:45

**Lv. Job:** 8:15 - 4:30

**Bit-Size:** 12

**Type:** Reaming

**Casing-Size:** in., Length in hole

**Depth Start:** 60 ft., Depth Stop 62 ft.

**Feet Drilled:** 2

**Water Levels, Time:** M ft., Time M ft.

### Measurements

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<td>60'</td>
<td>15° 15&quot;</td>
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<tr>
<td>61'</td>
<td>15° 15&quot;</td>
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<tr>
<td>62'</td>
<td>15° 15&quot;</td>
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</tr>
<tr>
<td>63'</td>
<td>15° 15&quot;</td>
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**Remarks:** Engine trouble in a.m. - changed plugs - tuned up one-twelve

**Signed:** Sam Lesha

**Date:** 10-7 1963

**No. D 1435**
memo

to

Walter Watson

From Samson and Zerbe

Attached:
Logs for Job. 17-K-9
Pulama
Sept 30th through Oct. 5th.
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date** 19** Job No.** 12  **Hole No.** 12  **Elevation** _____ ft.

**Customer**  
**Location**

**Driller**  
**Hrs.**  
**Rig** 60 x 1

**Helper**  
**Hrs.**  
**Gas**  
**Oil**

**Rig**  
**Gas**  
**Oil**

**Helper**  
**Hrs.**  
**Repairs**

**Arv. Job** 2  
**Lv. Job** 2  
**Hrs.**

**Or. No.**

---

**Bit-Size** 12  
**Type**

---

**Casing-Size** 12 in., **Length in hole** 200 ft., **Amt. Perforated** 12 in., **Depth Start** 100 ft., **Depth Stop** 200 ft., **Feet Drilled**

---

**Water Levels, Time** M ft., **Time** M ft.

---

**Depth**  
**Formation**  
**Remarks**  
**Top**

<table>
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<th>Depth</th>
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<tr>
<td>400</td>
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**Remarks:**

---

**Signed**  
**Date** 19  

**No. D 1398**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**PHONE 581-447**

**HONOLULU, HAWAII**

**Date:** Oct 5 1963  **Job No.:** 17-K-9  **Hole No.:** 9-10  **Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept of LR  **Location:** Kilohana, Puna, Hawaii

<table>
<thead>
<tr>
<th>Driller</th>
<th>Hrs</th>
<th>Helper</th>
<th>Hrs</th>
<th>Rig</th>
</tr>
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<tbody>
<tr>
<td>5 J. Leisler</td>
<td>10</td>
<td>7.4 H. Johnston</td>
<td>1o</td>
<td>60L-1</td>
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<table>
<thead>
<tr>
<th>Helper</th>
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<tbody>
<tr>
<td>8 Hrs.</td>
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<table>
<thead>
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<th>Helper Hrs. Repairs</th>
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<tr>
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<table>
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<th>Arv. Job</th>
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<th>Or. No.</th>
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<tbody>
<tr>
<td>6:30 1/4</td>
<td>50</td>
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<tr>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
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<td>47 ft.</td>
<td>56 ft.</td>
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<th>Water Levels, Time M ft.</th>
<th>Time M ft.</th>
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### Measurements

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### Depth Formations

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<tr>
<td>49'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49'</td>
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</tbody>
</table>

- Checked holereamed 50' 15 15
- Tore 12" bit stem 53 15 15
- Repaired 12" bit 54 15 15
- Put on 4X5 stem 55 15 14 3/4

- 4 12" bit 56 15 14 3/4

**Remarks:**

- Startful reaming 14 3/4

**Signed:**  Sheri Leslie  **Date:** 10-5 1963  **No D 1397**
DRILLING LOG
SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date 10-4-1963  Job No. 17-K-7  Hole No. 7-10  Elevation __________ ft.
Customer Hawaii State Dept. of LR  Location Wailua, Hawaii

Driller H. Kramer  10 Hrs.  Rig __________
Helper H. Kramer  10 Hrs.  Gas __________
Helper __________ Hrs.  Oil __________
Arv. Job __________  Lv. Job __________  Hrs. __________  Or. No. __________

Bit-Size __________ Type __________
Casing-Size ________ in., Length in hole __________ ft. __________ in., Amt. Perforated __________ ft. __________ in.
Depth Start __________ ft., Depth Stop __________ ft., Feet Drilled __________
Water Levels, Time ______ M __________ ft., Time ______ M __________ ft. __________

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<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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</tbody>
</table>

Measurements

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<th>B</th>
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</tbody>
</table>

Water Levels, Time ______ M __________ ft., Time ______ M __________ ft. __________

Remarks:

________________________________________________________________________

Signed ____________________________________ Date __________ 19 __________

No. D 1396
**Date**: 10-4-1963  
**Job No.**: 17-K-9  
**Hole No.**: 9-10  
**Elevation**: 250.75 ft.

**Customer**: Hawaii State Dept. of H.R.  
**Location**: Pahu, Hawaii

**Driller**: J. Leslie  
**Helper**: R. Aumane  
**Arv. Job**: 6:30 A.M.  
**Tv. Job**: 3:15-4:30

<table>
<thead>
<tr>
<th>Rig</th>
<th>Hrs.</th>
<th>Gas</th>
<th>Oil</th>
<th>Hrs.</th>
<th>Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>60L-1</td>
<td>10</td>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

**Bit-Size**: 7"  
**Type**: Dril

**Casing-Size**: ______ in., Length in hole ______ ft.  
**Amt. Perforated**: ______ ft. ______ in.

**Depth Start**: ______ ft., **Depth Stop**: ______ ft., **Feet Drilled**: ______

**Water Levels, Time**: M ______ ft., **Time**: M ______ ft.

### Depth Table

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>68'</td>
<td>hard gray rock</td>
<td>drilled to 65'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>pulled out 8&quot; casing (47')</td>
</tr>
<tr>
<td></td>
<td></td>
<td>healed 4 mini cutters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>out body of bit - 3' from bottom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>increasing from 7&quot; bit to 9&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Steel reaming at 48'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>increased cutters to 7/4&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reaming 4'/2&quot; to 45'</td>
</tr>
</tbody>
</table>

**Remarks**:

- Drilled to 65'
- Pulled out 8" casing (47')
- Healed 4 mini cutters
- Out body of bit - 3' from bottom
- Increasing from 7" bit to 9"
- Steel reaming at 48'
- Increased cutters to 7/4"
- Reaming 4'/2" to 45'

**Signed**:  
**Date**: 10-4-1963  
**No. D 1395**
DRILLING LOG
SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date 10-3-1963  Job No. 17-K-7  Hole No. 9-10  Elevation 230.75 ft.
Customer Hawaii State Dept. of Agriculture  Location Palama Hawaii

Driller  H. Arkansas  Hrs.  13  Rig  60-4
Helper  H. Arkansas  Hrs.  26  Gas  Oil
Helper  

Bit-Size  7"  Type  Mike C

Depth Start  ft., Depth Stop  ft., Feet Drilled
Water Levels, Time  M  ft., Time  M  ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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<tbody>
<tr>
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</tbody>
</table>

Measurements

A   B

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formaion</th>
<th>Remarks</th>
<th>Top</th>
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<tbody>
<tr>
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</tbody>
</table>

Signed H. Arkansas  Date 10-3-1963  No. D 1394

Remarks: Hauling 4 Drum Gas-Oil to job.
DRILLING LOG
SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date Oct. 3 1963 Job No. 17-K-9 Hole No. 9-10 Elevation 230.75 ft.
Customer Hawaii State Dept of LYN R. Location Palama, Punch, Hawaii

Driller Leslie 10 1/2 Hrs. Rig GOL-1
Helper AJ Jones 10 1/2 Hrs. Gas Oil
Helper ______ Hrs. Repairs ______
Arv. Job 6:30-7:45. Lv. Job 3:45-5:00 Hrs. __________ Or. No. ______

Bit-Size ______ Type Chisel
Casing-Size ______ in., Length in hole ______ ft. ______ in., Amt. Perforated ______ ft. ______ in.
Depth Start 50 ft., Depth Stop 53 ft., Feet Drilled ______
Water Levels, Time ______ M ______ ft., Time ______ M ______ ft.

<table>
<thead>
<tr>
<th>Depth</th>
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<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>med. hard rock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>hard rock</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>hard rock</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Measurements

Remarks:

Signed Sam Leslie Date 10-3-63 No. D 1393
DRILLING LOG

SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date: 10-2-1963  Job No.: 5-8-7  Hole No.: 7-10  Elevation: ______ ft.

Customer:  Location: ________________

Driller:  Hrs.  Rig: 60.

Helper:  Hrs.  Gas: ____________

Helper:  Hrs.  Oil: ____________


Bit-Size: ______  Type: ______


Depth Start: ______ ft., Depth Stop: ______ ft., Feet Drilled: ______

Water Levels, Time: M ______ ft., Time: M ______ ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Soft Sand</td>
<td></td>
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</table>

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<th>Measurements</th>
<th>A</th>
<th>B</th>
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</table>

Remarks: ____________________________________________________________________

Signed: ________________________  Date: 19-6-3  No. D 1392
Date: Oct 2 1963  Job No.: 17-K-4  Hole No.: 9-10  Location: Pahoa, Puna, Hawaii

Customer:  Hawaii State Dept of LNR

Driller:  S. Laslie  11 1/2 Hrs.  Rig:  No. 1
Helper:  E. Bighe  11 1/2 Hrs.  Gas:  Oil

Bit-Size:  12" - 7"  Type:  Reaming  Chisel
Depth Start:  ft., Depth Stop:  ft., Feet Drilled:  

Water Levels, Time:  M  ft., Time:  M  ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
<td>Reamed to 47' - Cleaner out hole - Cut a 3 5/8&quot; disc, attached to plumb line. 1 3/4&quot; disc, to within an inch of the water in hole (40-6). Marked check marks on deck. To give best position for 8&quot; pipe - Took off 4x5&quot; drill bits. Made up 3x4&quot; tools - with 7&quot; chisel bit - touched up bit - Reinforced bottom of casing. Built 4 welded an eccentric. 18&quot; from bottom of casing. Installed casing, turning eccentric to set 5&quot; casing in proper position.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:  Stuck at bottom of hole - ran submerged & set top of casing in best position - next shift started drilling.

Bothered by bad weather all day

Signed:  Sam Laslie  Date:  10-2  1963  No. D 1391
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Job No.</th>
<th>Hole No.</th>
<th>Elevation</th>
<th>ft.</th>
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<th>Customer</th>
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<tr>
<th>Driller</th>
<th>Hrs.</th>
<th>Rig</th>
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<tr>
<th>Helper</th>
<th>Hrs.</th>
<th>Gas</th>
<th>Oil</th>
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</table>

| Helper | Hrs. | Repairs | |
|--------|------|---------| |

|----------|---------|------|---------|

| Bit-Size | Type | |
|----------|------| |

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>in., Length in hole</th>
<th>ft.</th>
<th>in., Amt. Perforated</th>
<th>ft.</th>
<th>in.</th>
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</table>

| Depth Start | ft., Depth Stop | ft., Feet Drilled | |
|-------------|-----------------|-------------------| |

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<tr>
<th>Water Levels, Time</th>
<th>M</th>
<th>ft., Time</th>
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<th>ft.</th>
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</table>
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

### Date: Oct 1, 1963

**Job No.: 17-K-7**

**Hole No.: 1-10**

**Elevation: 230.75 ft.**

**Customer:**

Hawaii State Dept. of L & N R.

**Location:** Pukalani, Maui, Hawaii

---

**Driller: J. Leslie**

**10 Hrs.**

**Rig:** 60L-1

**Helper:** E. Kayne

**10 Hrs.**

**Gas:** Oil

**Reps.**

**Arv. Job: 6:30 - 7:45, Job 8:15 - 4:30**

**Hrs.**

---

**Bit-Size:** 12

**Type:** Gaming

**Casing-Size:** in., Length in hole ft.

**in., Amt. Perforated ft. in.**

**Depth Start:** ft., Depth Stop ft., Feet Drilled

**Water Levels, Time M ft., Time M ft.**

### Measurements

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**Remarks**

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</table>

**Remarks:**

Running 41' 6-0"

---

**Signed:** J. Leslie

**Date:** 10-1 1963

**No. D 1389**
<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
</table>

Remarks: had put in Boulderi to Beans Bad Area out

Signed: James E. Dunn  Date: 9-30-1963  

No. D 1388
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**Phone:** 581-447  
**Address:** 630 Keawe Street, Honolulu, Hawaii

### Details
- **Date:** Sept 30, 1963  
- **Job No.:** 17.K-7  
- **Hole No.:** 1-10  
- **Elevation:** 230.75 ft.

### Customer Information
- **Customer:** Hawaii State Dept. of L&I
- **Location:** Pearl City, Pearl, Hawaii

### Drilling Crew
- **Driller:** L. Lashe  
- **Hrs.:** 10  
- **Rig:** 60L-1
- **Helper:** E. Aquino  
- **Hrs.:** 10

### Arrival and Departure Times
- **Arv. Job:** 6:30 - 7:45  
- **Lv. Job:** 3:15 - 4:50

### Bit and Casing Information
- **Bit-Size:** 12  
- **Type:** Reaming
- **Casing-Size:** in., Length in hole ft.  
- **Amt. Perforated:** ft., in.

### Depth and Remarks
- **Depth:**  
  - **Formation:**  
  - **Remarks:** Reaming and open 24' to 32'

### Water Levels
- **Time M ft.**  
- **Time M ft.**

### Remarks
- **Remarks:**

---

**Signed:**  
**Date:** 9-30-63  
**No. D 1387**
ROUTE SLIP

DIVISION OF WATER AND LAND DEVELOPMENT

From: [Redacted] Date: 10/5 File In: 

<table>
<thead>
<tr>
<th>TO: INITIAL</th>
<th>PLEASE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROBERT T. CHUCK</td>
<td>SEE ME</td>
</tr>
<tr>
<td>WALTER O. WATSON</td>
<td>TAKE ACTION</td>
</tr>
<tr>
<td>TAKEO FUJII</td>
<td>REVIEW &amp; COMMENT</td>
</tr>
<tr>
<td>JAMES YOSHIMOTO</td>
<td>INVESTIGATE &amp; REPORT</td>
</tr>
<tr>
<td>GEORGE YOKOTA</td>
<td>DRAFT REPLY</td>
</tr>
<tr>
<td>ALBERT CHING</td>
<td>ACKNOWLEDGE RECEIPT</td>
</tr>
<tr>
<td>HONG FONG CHANG</td>
<td>TYPE DRAFT COPIES</td>
</tr>
<tr>
<td>JANE SAKAI</td>
<td>TYPE FINAL</td>
</tr>
<tr>
<td>DORIS HAMADA</td>
<td>cc TO</td>
</tr>
<tr>
<td>JEAN TANAKA</td>
<td>MAIL</td>
</tr>
<tr>
<td>Tamae Shiraishi</td>
<td>FOR YOUR:</td>
</tr>
<tr>
<td>Janice Horimoto</td>
<td>APPROVAL</td>
</tr>
</tbody>
</table>

REMARKS:
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**PHONE 581-447**

---

**Date:** 9-28-63  
**Job No.:** 7-10  
**Hole No.:** 7-10  
**Elevation:** ________ ft.

**Customer:** Hawaiian State Bank  
**Location:** Honolulu

---

**Driller:**  
**Hrs.:** 10  
**Rig:** 80 - 4

**Helper:**  
**Hrs.:** 10  
**Gas:** Oil

**Helper:**  
**Hrs.:**  
**Repairs:**

**Arv. Job:** 9-28  
**Lv. Job:** 9-28  
**Hrs.:**  
**Or. No.:**

---

**Bit-Size:** 12"  
**Type:** Drilling

**Casing-Size:** _______ in., **Length in hole:** _______ ft. _______ in., **Amt. Perforated:** _______ ft. _______ in.

**Depth Start:** _______ ft., **Depth Stop:** _______ ft., **Feet Drilled:** __________

**Water Levels, Time:** M _______ ft., **Time:** M _______ ft.

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<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>42'</td>
<td></td>
<td>15'</td>
<td>15</td>
</tr>
<tr>
<td>42'</td>
<td></td>
<td>15'</td>
<td>15</td>
</tr>
<tr>
<td>4½</td>
<td></td>
<td>15'</td>
<td>15</td>
</tr>
</tbody>
</table>

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**Measurements**

---

**Remarks:** threw in some more cable and Bentonite.

---

**Signed:** Henry Manea  
**Date:** 9-28-63  
**No. D 1386**
DRILLING LOG
SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date: Sept 30 1963  Job No.: 17X-1  Hole No.: 1-10  Elevation: 239.5 ft.
Customer: Hawaii State Dept. of HNL  Location: Honolulu, Hawaii

Driller: J. Leslie  10 Hrs.  Rig: 602 - 1
Helper: L. McGuire  10 Hrs.  Gas:  -  Oil: -
Helper: -  Hrs.  Repairs: -
Arv. Job: 6:30 7:45  LV. Job: 7:15  4:30  Hrs.  Or. No.: -

Bit-Size: 12  Type: Kennamet
Depth Start: - ft., Depth Stop: - ft., Feet Drilled: -
Water Levels, Time: M - ft., Time: M - ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
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<tr>
<td></td>
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<td>15&quot;</td>
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<td>15&quot;</td>
</tr>
</tbody>
</table>

Remarks:

Signed: Sam Leslie  Date: 1-28-1963  No. D 1385
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**Date** 9-27-1963  **Job No.** 17-R-9  **Hole No.** 9-10  **Elevation** 230.75 ft.

**Customer** Hawaii State Dept. 2  **Location** ?

Driller: H. Hiawan  **Hrs.** 13  **Rig** 60-1

Helper: H. Kaina  **Hrs.** 10  **Gas**  __________  **Oil**  __________

**Hrs.** Repairs

**Arv. Job 2:00, 3:15**  **Lv. Job 10:45 - 12:00**  **Hrs.** Or. No.

Bit-Size  1 1/2  **Type**  Drilling

Casing-Size  __________ in.  **Length in hole**  __________ ft.  __________ in.  **Amt. Perforated**  __________ ft.  __________ in.

Depth Start  __________ ft.  **Depth Stop**  __________ ft.  **Feet Drilled**

Water Levels, Time  __________ ft.,  **Time**  __________ M  __________ ft.

**Measurements**

<table>
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<tr>
<th>Depth</th>
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<th>Remarks</th>
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<td>15&quot;</td>
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</tbody>
</table>

Remarks: This is cable Binga

**Signed** H. Hiawan  **Date** 9-27-1963

**NO D 1384**
**DRILLING LOG**

SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date: **Sept 27, 1963**  
Job No.: **17.K.9**  
Hole No.: **1-10**  
Elevation: **230.75'**

Customer: **Hawaii State Dept. of L & N**  
Location: **Punahou, Oahu, Hawaii**

Driller: **C. Leslie**  
Hrs.:  
Rig: **60L-1**

Helper: **L. Johnson**  
Hrs.:  
Gas:  
Oil:  
Repairs:  
Arv. Job: **7:45 AM, Job 3:15 PM**  
Hrs.:  
Or. No.: 

Bit-Size: **12**  
Type: **

Casing-Size: in., Length in hole: ft. in., Amt. Perforated ft. in.

Depth Start: ft., Depth Stop: ft., Feet Drilled: 

Water Levels, Time: M ft., Time: M ft.:

<table>
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<th>Depth</th>
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<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Measurements

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>15'</td>
<td>15'</td>
</tr>
<tr>
<td>40'</td>
<td>15'</td>
</tr>
<tr>
<td>41'</td>
<td>15'</td>
</tr>
<tr>
<td>42'</td>
<td>14'</td>
</tr>
</tbody>
</table>

Remarks:  
**Plumber starting cases - drilled casing up -**  
**Trench casing may need repair.**

Signed: 

Date: **1-37, 1963**  
No. D 1383
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**  
**630 KEAWE STREET**  
**HONOLULU, HAWAII**

**Date**  9-26-1963  
**Job No.**  17-K-9  
**Hole No.**  
**Elevation**  
**Location**  

<table>
<thead>
<tr>
<th>Customer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii State Dept. of Mines</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>10 Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rig 50-2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>10 Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Gas</td>
</tr>
<tr>
<td></td>
<td>Oil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Repairs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arv. Job</th>
<th>2:00-3:15</th>
<th>Lv. Job</th>
<th>10:30-12:15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hrs.</td>
<td></td>
<td>Or. No.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Fanning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>in.</th>
<th>Length in hole</th>
<th>ft.</th>
<th>Amt. Perforated</th>
<th>ft.</th>
<th>in.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>ft.</th>
<th>Depth Stop</th>
<th>ft.</th>
<th>Feet Drilled</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M</th>
<th>ft.</th>
<th>Time</th>
<th>M</th>
<th>ft.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>15'2'</td>
<td>14'9/4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41</td>
<td>15'2'</td>
<td>14'2'</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

---

**Signed**  
**Date**  7-25-1963  
**No. D 1382**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**PHONE 581-447**

**HONOLULU, HAWAII**

---

**Date:** Sept. 26 1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept. of LR  
**Location:** Puunana, Puna, Hawaii

---

**Driller:** J. Leslie  
**Helper:** J. Aquino

**Rig:** 60-L-1  
**Gas:** Oil

**Arv. Job:** 6:30 - 7:45  
**Lv. Job:** 8:15 - 9:30

**Hrs. Repairs:**

---

**Bit-Size:** 6 in.  
**Type:** Diamond  
**Casing-Size:** 30 in., Length in hole 25 ft.  
**Amt. Perforated:** 50 ft.  
**Depth Start:** 20 ft., Depth Stop:** 60 ft., **Feet Drilled:** 40 ft.

**Water Levels, Time:**  
**M:** 41 ft., **Time:** 10:00 M

---

**Depth**  
**Formation**  
**Remarks**  
**Top**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Backfilled to 38'**  
**Threw in several cabling**  
**Kings**

---

**P.M. Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>15 3/4</td>
<td>14 3/4</td>
</tr>
<tr>
<td>41</td>
<td>15 3/4</td>
<td>14 3/4</td>
</tr>
</tbody>
</table>

---

**Remarks:**

---

**Signed**  
**Date:** 9-26-63  
**No. D 1381**
ROUTE SLIP

DIVISION OF WATER AND LAND DEVELOPMENT

From: ______ Date: ______ File In: ______

TO: INITIAL

<table>
<thead>
<tr>
<th>Please:</th>
<th>Initials</th>
<th>Signed</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEE ME</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAKE ACTION</td>
<td>WALTER O. WATSON</td>
<td></td>
</tr>
<tr>
<td>REVIEW &amp; COMMENT</td>
<td>TAKEO FUJII</td>
<td></td>
</tr>
<tr>
<td>INVESTIGATE &amp; REPORT</td>
<td>JAMES YOSHIMOTO</td>
<td></td>
</tr>
<tr>
<td>DRAFT REPLY</td>
<td>GEORGE YOKOTA</td>
<td></td>
</tr>
<tr>
<td>ACKNOWLEDGE RECIPT</td>
<td>ALBERT CHING</td>
<td></td>
</tr>
<tr>
<td>TYPE DRAFT COPIES</td>
<td>HONG FONG CHANG</td>
<td></td>
</tr>
<tr>
<td>TYPE FINAL</td>
<td>JANE SAKAI</td>
<td></td>
</tr>
<tr>
<td>cc TO</td>
<td>DORIS HAMADA</td>
<td></td>
</tr>
<tr>
<td>MAIL</td>
<td>JEAN TANAKA</td>
<td></td>
</tr>
<tr>
<td>FOR YOUR:</td>
<td>Tamae Shiraishi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Janice Horimoto</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

REMARKS:

---
DRILLING LOG
SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date: 9-25-1968  Job No.: 17-K-9  Hole No.: 9-10  Elevation: 230.75 ft.
Customer: Hawaii State Dept. of TSR
Location: Punalu'u, Hawaii

Driller: H. Hansen  10' Hrs.  Rig: 30-L
Helper: A. Kinna  13' Hrs.  Gas:  Oil:
Helper:  Hrs.  Repairs:
Arv. Job: 11:45 5:45  Or. No.:

Arv. Job: 11:45  Or. No.:

Bit-Size: 12"  Type: Economy
Depth Start: ft., Depth Stop: ft., Feet Drilled:
Water Levels, Time: M ft., Time: M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formaion</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15&quot;</td>
</tr>
</tbody>
</table>

Measurements

Remarks: Back fill Hole with Hard Rock to 36'  

Signed: Barry Hansen  Date: 9-25-1968

No D 1380
# DRILLING LOG

## SAMSON AND ZERBE, LTD.

**Date**: Sept 25 1963  
**Job No.**: 17-K-1  
**Hole No.**: 1-T0  
**Elevation**: 229.75 ft.

### Customer
- Hawaii State Dept of LR

### Location
- Honolulu, Oahu, Hawaii

### Driller
- S. Leslie  
- 19 Hrs.  
- Rig: Oil

### Helper
- F. Goforth  
- 10 Hrs.  
- Gas: Oil

### Arv. Job: 6:30  
**Lv. Job**: 3:15 - 4:30  
**Hrs. Repairs**:

### Bit-Size
- 12

### Casing-Size

### Depth Start
- ft.

### Depth Stop
- ft.

### Feet Drilled

---

### Water Levels
- Time M ft  
- Time M ft

### Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Checked cable measurement at top &amp; measurement off-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tried connecting with clay line -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>couldn't -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Had to leave engine and of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reverting at 47' -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Body of bit rubbing on wall -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recomputed measurements -</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hole 1&quot; off 40&quot; from &quot;A&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;B&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>At 31' 15&quot; reading of 15415</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preparing to back fill hole -</td>
</tr>
</tbody>
</table>

### Remarks:
- Casing (8") on job: 253.43' plain  
- 21.65' perforated  
- 280.08' Total

**Signed**: S. Leslie  
**Date**: 9 - 25 1963  
**No D**: 1379
<table>
<thead>
<tr>
<th>Date</th>
<th>9-24-1963</th>
<th>Job No.</th>
<th>9-K-9</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>239.75 ft</th>
</tr>
</thead>
</table>

Customer: Hawaii State Dept. of Vet. & Location: Pahana

<table>
<thead>
<tr>
<th>Driller</th>
<th>10 Hrs.</th>
<th>Rig</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper</td>
<td>10 Hrs.</td>
<td>Gas</td>
<td>Oil</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Arv. Job 1:00 pm  Lv. Job ___________ Hrs. Or. No.

Bit-Size  12 in. Type: Foaming

Casing-Size __ in., Length in hole ___________ ft. ___________ in., Amt. Perforated ___________ ft. ___________ in.

Depth Start 47 ft., Depth Stop ___________ ft., Feet Drilled ___________ ft.

Water Levels, Time M ___________ ft., Time M ___________ ft.

<table>
<thead>
<tr>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>15&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>15 1/8</td>
</tr>
</tbody>
</table>

Remarks: Hauling 6 Drums of gas from Standard Oil to job.

Signed: Henry H. Date 9-24-1963 No. D 1378
**DRILLING LOG**

SAMSON AND ZERBE, LTD.

**PHONE** 581-447  
**630 KEAWE STREET**  
**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Job No.</th>
<th>Hole No.</th>
<th>Elevation</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 24, 1963</td>
<td>17-K-7</td>
<td>7-10</td>
<td>230-75 ft.</td>
<td>Kolea, Puna, Hawaii</td>
</tr>
</tbody>
</table>

**Customer**  
Hawaii State Dept of LAND & WATER RESOURCES

**Driller**  
J. Leslie  
Hrs. Rig: 10

**Helper**  
E. Aguilar  
Hrs. Gas: 10, Oil: 10, Repairs: 10

**Arv. Job**  
4:30  
Lv. Job: 5:15 - 9:30  
Hrs. Or. No.

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
<th>Casing-Size</th>
<th>Length in hole</th>
<th>Amt. Perforated</th>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>casing</td>
<td>in.</td>
<td>ft.</td>
<td>ft. in.</td>
<td>47 ft.</td>
<td>ft.</td>
<td></td>
</tr>
</tbody>
</table>

**Water Levels, Time**  
M ft., Time M ft.

<table>
<thead>
<tr>
<th>Measurements</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A M. Check</td>
<td>45'</td>
<td>15.13</td>
</tr>
<tr>
<td></td>
<td>45'</td>
<td>15.23</td>
</tr>
<tr>
<td></td>
<td>47'</td>
<td>15.23</td>
</tr>
</tbody>
</table>

**Depth**  

**Formation**  

**Remarks**  
Trying to concentrate  
Reading near bottom of hole - made some improvement.

**Remarks:**  
Bit hung up at 7' - had to ream several spots  
7' - got to bottom

**Signed**  
Tom Leslie  
Date 9-24, 1963

**No. D 1377**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date:** JUN 28 1963  
**Job No.:** 17-K-9  
**Hole No.:** 9-10  
**Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept. of LNG Resources  
**Location:** Paia, Maui, Hawaii

---

**Driller:** S. Leslie  
**Helper A:**  
**Helper E. Aquino:**

---

**10 Hrs.**  
**9 Hrs.**  
**9 Hrs.**

**Rig:** EOL-1

**Arv. Job:** 7:00  
**Lv. Job:** 5:30  
**Or. No.:**

---

**Bit-Size:** 12"  
**Type:** Reaming

**Casing-Size:** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start:** 47 ft.  
**Depth Stop:** ft.  
**Feet Drilled:**

**Water Levels, Time M ft. Time M ft.**

---

### Measurements

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

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### Depth Formation Remarks Top

<table>
<thead>
<tr>
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<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Remarks:**

Repaird bit 2 hrs.  
Had to work on brushes of welding machine to get it to weld.  
didn't do any drilling

---

**Signed:** Sam Leslie  
**Date:** 7-23-1963  
**No. D:** 1376
# DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date:** Sept 26, 1963  
**Job No.:** 63-38  
**Hole No.:** 9-10  
**Elevation:** 290.75 ft.

**Customer:** Hawaii ST Dept Land & Water, Pauwela, Maui, Hawaii

---

**Driller:** W. Williams  
**Hrs.:** 8  
**Rig:** 60-2

**Helper:** C. Acuna  
**Hrs.:** 8  
**Gas:**

**Helper:** E. Ayupais  
**Hrs.:** 8  
**Oil:**

**Arv. Job:** 6:30  
**Lv. Job:** 5:30  
**Hrs.:** ___

---

**Bit-Size:** 11"  
**Type:** Mother Hubbard

---

**Casing-Size:** ___ in., **Length in hole:** ___ ft.  
**In., Amt. Perf. hole:** ___ ft. ___ in.

---

**Depth Start:** 46'6" ft.  
**Depth Stop:** 47'6" ft.  
**Feet Drilled:** 0'6"

---

**Water Levels, Time:** M ___ ft., **Time:** M ___ ft.

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>46'6&quot;</td>
<td>Very Hard Rock</td>
<td>Hole Wanta to go up</td>
<td>15&quot; 14%</td>
</tr>
<tr>
<td>47'6&quot;</td>
<td></td>
<td></td>
<td>15% 14%</td>
</tr>
</tbody>
</table>

---

**Remarks:**  
Put boom on jeep truck, start moving heavy equipment, type on front tread, drive broke.

---

**Signed:**  
**Date:** Sept 26, 1963  
**No. D 1375**
DRILLING LOG
SAMSON AND ZERBE, LTD.

PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date: Sept 19, 1963
Job No.: 63-38
Hole No.: 9-10
Elevation: 230.75 ft.

Customer: Hawaii State Dept. Land
Location: Wai'anae, Hawaii

Driller: A. Perello
10 Hrs.
Rig: 60-L

Helper: A. Hoener
10 Hrs.
Gas: __________
Oil: __________

Helper: Asano
10 Hrs.
Repairs: __________

Arv. Job: __________
Lv. Job: __________

Bit-Size: 12 in.
Type: Mother Hubbard


Depth Start: 456 ft., Depth Stop: 466 ft., Feet Drilled: 10 ft.

Water Levels, Time: M __________ ft., Time: M __________ ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>456 ft.</td>
<td>Lunder pocket</td>
<td>Test mud</td>
<td>15&quot;</td>
</tr>
<tr>
<td>466 ft.</td>
<td></td>
<td></td>
<td>14.24 &quot;</td>
</tr>
</tbody>
</table>

Remarks: Fred truck broke down and Henry took it.

Signed: ______________________
Date: __________ 19__

NO. D 1374
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

630 KEAWE STREET

HONOLULU, HAWAII

---

**Date:** Sept. 18, 1963  
**Job No.:** 63-38  
**Hole No.:** 7-40  
**Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept. Land & Water  
**Location:** Wailana, Hawaii

**Driller:** Heresito H. Hansen  
**Hrs.:** 10  
**Rig:** 60 - L

**Helper:**  
**Hrs.:** 10  
**Gas:**  

**Helper:**  
**Hrs.:** 10  
**Oil:**  
**Reparisions:**

**Arv. Job:** 6:30  
**Lv. Job:** 5:00  
**Hrs.:** 11  
**Or. No.:**

---

**Bit-Size:** 11"  
**Type:** hollow steel card

**Casing-Size:** 14" in., Length in hole: 480 in., Amnt. Perforated: 22 ft., 1 in.

**Depth Start:** 45 ft., **Depth Stop:** 45 1/2 ft., **Feet Drilled:** 0' 6"

---

**Water Levels, Time:** M  
**ft., Time:** M  
**ft.**

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>45 ft.</td>
<td>Very hard rock on one side</td>
<td>Drilling cast hole</td>
<td>May 1976</td>
</tr>
<tr>
<td>45 1/2 ft.</td>
<td></td>
<td>Finished building log</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Home moving heavy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Equipment on other lug Hand.</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

---

**Signed:**  
**Date:**  
**No. D 1373**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Job No.</th>
<th>Hole No.</th>
<th>Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept 17</td>
<td>63-38</td>
<td>M-10</td>
<td>520.75</td>
</tr>
</tbody>
</table>

Customer ____________________________ Location ______________________

Driller: W. DeWeese 10-1/2 Hrs. Rig 60-L
Helper: A. Blum 10-1/2 Hrs. Gas
Helper: E. Regan 10-1/2 Hrs. Oil

Bit-Size 11" Type Meth. Bellard

Casing-Size _______ in., Length in hole _______ ft. _______ in., Amt. Perforated _______ ft. _______ in.

Depth Start 45 ft., Depth Stop 45 ft., Feet Drilled 0

Water Levels, Time _______ M _______ ft., Time _______ M _______ ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
</table>
| 45    | Figuring out | overloaded H.T. Truck  
| 45    | hole 0     | Building dry house  
|       |            | and setting other equipment  |

**Measurements**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Signed W. DeWeese Date Sept 17, 1963

No. D 1372
# DRILLING LOG

## SAMSON AND ZERBE, LTD.

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>1963</th>
<th>Job No.</th>
<th>43-38</th>
<th>Hole No.</th>
<th>9-10</th>
<th>Elevation</th>
<th>730.75 ft.</th>
</tr>
</thead>
</table>

**Customer**: State Dept. of Natural Resources

**Location**: Oahu, Hawaii

### Driller

- Name: H. Terence
- Hrs.: 10 1/2
- Rig: 60.6

### Helper

- Name: R. Auger
- Hrs.: 10 1/2
- Gas: Oil
- Hrs.: Repairs

### Arv. Job

- Time: 12:30
- Lv. Job: 12:30
- Hrs.: 10 1/2

### Bit-Size

### Casing-Size

- Size: 4 3/4 in.
- Length in hole: ft.

### Depth

- Start: 14 ft.
- Stop: 15 ft.
- Feet Drilled: 1 ft.

### Water Levels, Time

- M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>43 ft.</td>
<td>Reaming out 4 3/4 ft.</td>
<td></td>
<td>14&quot;</td>
</tr>
</tbody>
</table>

### Remarks:

- [Blank]

**Signed**: H. Terence

**Date**: 19

**No. D 1371**
ROUTE SLIP

DIVISION OF WATER AND LAND DEVELOPMENT

From: Date: 2/18 File In: 

<table>
<thead>
<tr>
<th>TO: INITIAL</th>
<th>PLEASE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROBERT T. CHUCK</td>
<td>SEE ME</td>
</tr>
<tr>
<td>WALTER O. WATSON</td>
<td>TAKE ACTION</td>
</tr>
<tr>
<td>TAKEO FUJII</td>
<td>REVIEW &amp; COMMENT</td>
</tr>
<tr>
<td>JAMES YOSHIMOTO</td>
<td>INVESTIGATE &amp; REPORT</td>
</tr>
<tr>
<td>GEORGE YOKOTA</td>
<td>DRAFT REPLY</td>
</tr>
<tr>
<td>ALBERT CHING</td>
<td>ACKNOWLEDGE RECEIPT</td>
</tr>
<tr>
<td>HONG FONG CHANG</td>
<td>TYPE DRAFT COPIES</td>
</tr>
<tr>
<td>JANE SAKAI</td>
<td>TYPE FINAL</td>
</tr>
<tr>
<td>DORIS HAMADA</td>
<td>cc TO</td>
</tr>
<tr>
<td>JEAN TANAKA</td>
<td>MAIL</td>
</tr>
<tr>
<td>Tamae Shiraimhi</td>
<td></td>
</tr>
<tr>
<td>Janice Horimoto</td>
<td></td>
</tr>
<tr>
<td>Al Lee</td>
<td></td>
</tr>
</tbody>
</table>

REMARKS:
<table>
<thead>
<tr>
<th>Date</th>
<th>Helper</th>
<th>C. Hrs.</th>
<th>Job</th>
<th>Oil</th>
<th>Helper</th>
<th>C. Hrs.</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>C. Hrs.</th>
<th>Job</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Arv. Job</th>
<th>Hrs.</th>
<th>Helper</th>
<th>C. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>C. Hrs.</th>
<th>Job</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>Bit-Size</th>
<th>Depth Part 1</th>
<th>Depth Part 2</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top 14'5&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Levels M ft.</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>___________________________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>430 Keawe Street</td>
</tr>
<tr>
<td>Honolulu, Hawaii</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>581-447</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assistant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signed</th>
</tr>
</thead>
<tbody>
<tr>
<td>R. Brandt</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>4/30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1370</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>N° D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1370</td>
</tr>
</tbody>
</table>
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**Date:** Sept. 13, 1963  
**Job No.:** 63-38  
**Hole No.:** 9-10  
**Elevation:** 230.75 ft.

**Customer:** Hawaii State Dept.  
**Location:** Honolulu, Hawaii

**Driller:** H. Ferrerella  
**5 Hrs.**  
**Rig:** 60-1

**Helper:** E. Angiari  
**5 Hrs.**  
**Gas:** Oil

**Helper:**  
**Hrs.**  
**Repairs:**

**Arv. Job:** 6:30  
**Lv. Job:** 11:30  
**5 Hrs.**  
**Or. No.:**

**Bit-Size**  
**Type**

**Casing-Size** in., **Length in hole**: ft. in., **Amt. Perforated**: ft. in.

**Depth Start:** ft., **Depth Stop:** ft., **Feet Drilled:**

**Water Levels, Time:** M ft., **Time:** M ft.

**Measurements**

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Heavy Rain Unable to Drill</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unloaded Water Tank from truck leaked</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>welding machine</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and took it to Apuani Motor repair shop</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

---

**Signed:** H. Ferrerella  
**Date:** Sept. 13, 1963  
**No. D 1369**
DRILLING LOG
SAMSON AND ZERBE, LTD.
PHONE 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date Sept. 12, 1963 Job No. 62-38 Hole No. 9-10 Elevation 280.75 ft.
Customer

Driller __________________ Hrs. Rig 60 - L
Helper __________________ Hrs. Gas __________ Oil __________
Helper __________________ Hrs. Repairs __________
Arv. Job 0:30
Lv. Job 4:00
9 1/2 Hrs. Or. No. ____________

Bit-Size "" Type __________
Casing-Size _______ in., Length in hole _______ ft. _______ in., Amnt. Perforated _______ ft. _______ in.
Depth Start 44 1/2 ft., Depth Stop 44 1/2 ft., Feet Drilled 0 - 0
Water Levels, Time _____ M _____ ft., Time _____ M _____ ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Learning cut hole with \n</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Welding machine broke \n</td>
</tr>
</tbody>
</table>

Measurements

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
</table>

Remarks:

Signed ____________________________ Date Sept. 1, 1963

No. D 1368
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

PHONE 581-447  
630 KEAWE STREET  
HONOLULU, HAWAII

<table>
<thead>
<tr>
<th>Date</th>
<th>1962</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job No.</td>
<td>2-28</td>
</tr>
<tr>
<td>Hole No.</td>
<td>7-10</td>
</tr>
<tr>
<td>Elevation</td>
<td>230.75 ft.</td>
</tr>
</tbody>
</table>

Customer: 1453 Westland Estates  
Location:

<table>
<thead>
<tr>
<th>Driller</th>
<th>10 Hrs.</th>
<th>Rig</th>
<th>6-C-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper</td>
<td>10 Hrs.</td>
<td>Gas</td>
<td>Oil</td>
</tr>
<tr>
<td>Helper</td>
<td>Hrs.</td>
<td>Repairs</td>
<td></td>
</tr>
<tr>
<td>10 Hrs.</td>
<td>Or. No.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Bit-Size | 11" |
| Type | Asta |

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>in., Length in hole</th>
<th>ft.</th>
<th>in., Amt. Perforated</th>
<th>ft.</th>
<th>in.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>42-0 ft.</th>
<th>Depth Stop</th>
<th>44-0 ft.</th>
<th>Feet Drilled</th>
<th>2'-0&quot;</th>
</tr>
</thead>
</table>

Water Levels, Time: M  ft., Time: M  ft.

<table>
<thead>
<tr>
<th>Measurements</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>42-0&quot;</td>
<td>Hand rock soft</td>
<td>Steel pipe bit stuck</td>
</tr>
<tr>
<td>44-0&quot;</td>
<td>on one side of hole</td>
<td></td>
</tr>
<tr>
<td>45-0&quot;</td>
<td></td>
<td>Boulder fell on top of pipe</td>
</tr>
<tr>
<td>45-0&quot;</td>
<td></td>
<td>Steel tool stuck</td>
</tr>
<tr>
<td>45-0&quot;</td>
<td></td>
<td>in hole from 10-0 ft.</td>
</tr>
<tr>
<td>45-0&quot;</td>
<td></td>
<td>210 ft. used day</td>
</tr>
<tr>
<td>45-0&quot;</td>
<td></td>
<td>Bungers to get out tool</td>
</tr>
</tbody>
</table>

Remarks:

---

Signed:  
Date: 1-8-63  
No. D 1367
Date Sept. 10 1963 Job No. 63-38 Hole No. 9-10 Elevation 230.73 ft.

Customer

Driller / Helper
K. Watanabe 50% Hrs. Rig 60 - C
E. Asgian 50% Hrs. Gas Oil

Arv. Job 6:30  L. Job 5:00 10% Hrs. Or. No. ___

Bit-Size 11"  Type Sta

Casing-Size ___ in., Length in hole ft., Amt. Perforated ft. in.

Depth Start 39' 0" ft., Depth Stop 45' 0" ft., Feet Drilled ___

Water Levels, Time M ft., Time M ft.

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>39'</td>
<td>Very hard gray</td>
<td>Took Bit off and rebuild</td>
<td>15&quot; 15&quot;</td>
</tr>
<tr>
<td>45'</td>
<td>rock</td>
<td></td>
<td>13&quot; 13&quot;</td>
</tr>
</tbody>
</table>

Remarks: Repaired small contractor's pump

Signed M. Termed Date Sept. 10 1963 N. D 1366
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

PHONE 581-447

630 KEAWE STREET

HONOLULU, HAWAII

---

Date: **Sept 9 1963**  
Job No.: **63-38**  
Hole No.: **9-10**  
Elevation: **230.75 ft.**

Customer:  
**Hawaii State Dept. of Land & Nat. Res.**  
Location: **Kailua, Hawaii**

---

**Driller:** Feliciello  
**Helper:** Angeles  
**Rig:** 60-2-L

---

**Helper**  
**Hrs.**  
**Gas**  
**Oil**

---

**Arv. Job**  
**Lv. Job**  
**Hrs.**  
**Repairs**

---

**Bit-Size**  
**Type**

---

**Casing-Size**  
**in., Length in hole**  
**ft.**  
**in., Amt. Perforated**  
**ft.**  
**in.**

**Depth Start**  
**ft., Depth Stop**  
**ft., Feet Drilled**

---

**Water Levels, Time**  
**M ft., Time**  
**M ft.,**  
**ft.**

---

**Measurements**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
</table>

---

**Depth**  
**Formation**  
**Remarks**  
**Top**

---

**Remarks:**

- Hi, we have a helper.  
  Let them be here.  
  Also, technical for information.

- Got to job site at 1:30 AM. Building.
  But didn't do no drilling.

---

**Remarks:**

---

**Signed:** Feliciello  
**Date:** Sept 9 1963  
**No. D 1365**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

630 KEAWE STREET

HONOLULU, HAWAII

---

**Date:** Sept 7, 1963  
**Job No.:** 63-38  
**Hole No.:** 1  
**Elevation:** 130.75 ft.

**Customer:** Blue Sky Hawaii  
**Location:** Kailua Hawaii

---

<table>
<thead>
<tr>
<th>Driller</th>
<th>Hrs.</th>
<th>Rig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>60-6</td>
</tr>
</tbody>
</table>

**Helper**

<table>
<thead>
<tr>
<th>Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Arv. Job** 6:00  
**Lv. Job** 5:00  
**Hrs.**

---

**Bit-Size** 11"  
**Type**

**Casing-Size** in., **Length in hole** ft.  
**Am. Perforated** ft. in.

**Depth Start** 35'0" ft., **Depth Stop** 27'0" ft., **Feet Drilled** 4'0"

**Water Levels, Time M ft., Time M ft.**

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>35’</td>
<td>Very Hard Gray</td>
<td>Drilling up bit</td>
<td>14’3’</td>
</tr>
<tr>
<td>37’</td>
<td>Tava Rock</td>
<td>every 1/4th hr.</td>
<td>14’3’</td>
</tr>
</tbody>
</table>

---

**Remarks:**

---

**Signed**  
**Date:** Sept 7, 1963  
**No D 1364**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

PHONE 581-447  
630 KEAWE STREET  
630 KEAWE STREET  
HONOLULU, HAWAII

**Date:** Sept 8, 1963  
**Job No.:** 63-38  
**Hole No.:** 5  
**Elevation:** 230.75 ft.

**Customer:**  
**Location:** Kauai, Hawaii

---

**Driller:**  
**Hrs.:** 10  
**Rig:** 60-L

**Helper:**  
**Hrs.:** 16

**Arv. Job:**  
**Lv. Job:**  
**Hrs.:**  
**Or. No.:**

---

**Bit-Size:** 11"  
**Type:** Stan

**Casing-Size:** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start:** 33'-0" ft., Depth Stop 35'-0" ft., Feet Drilled 2'-0"

**Water Levels, Time:** 6:30 M 5:10 ft., Time M ft.

---

**Depth** | **Formation** | **Remarks** | **Top**
--- | --- | --- | ---
33'-0" | Very Hard Gray | Building hit gravel | 15" 15"
35'-0" | Sack | Surface breaking edge | 14 1/2" 14 1/2"

---

**Remarks:**

---

**Signed:**  
**Date:** Sept 6, 1963  
**No. D:** 1363
## Drilling Log

**SAMSON AND ZERBE, LTD.**

**PHONE** 581-447  
**630 KEAWE STREET**  
**HONOLULU, HAWAII**

**Date:** Sept 5, 1963  
**Job No.:** 63-39  
**Hole No.:** 1  
**Elevation:** 230, 75 ft.

**Customer:** B.W.S. Co. Hawaii  
**Location:** Nu'uanu Hawaii

<table>
<thead>
<tr>
<th>Driller</th>
<th>Hours</th>
<th>Rig</th>
<th>Gas</th>
<th>Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>W. Tonelle</td>
<td>10 3/4</td>
<td>60-1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Helper</th>
<th>Hours</th>
<th>Gas</th>
<th>Oil</th>
<th>Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. Lee</td>
<td>10 3/4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit Size</th>
<th>Type</th>
<th>After List</th>
</tr>
</thead>
<tbody>
<tr>
<td>11''</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casing Size</th>
<th>Length in hole</th>
<th>Amt. Perforated</th>
<th>ft.</th>
<th>in.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>26-0</td>
<td>52-0</td>
<td>26-0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M</th>
<th>ft.</th>
<th>Time</th>
<th>M</th>
<th>ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measurements</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>15''</td>
<td>15''</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>26'-0</td>
<td>Hard lava rock</td>
<td>Building at time</td>
<td>15''</td>
</tr>
<tr>
<td>52'-0</td>
<td>Hard lava rock</td>
<td>Hole beginning to go off well</td>
<td>16''</td>
</tr>
<tr>
<td>52'-0</td>
<td>Hard lava rock</td>
<td>Some cal &amp; scale half ~ 2 inches</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

**Signed:** W. Tonelle  
**Date:** Sept 5, 1963  
**No. D 1362**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

630 KEAWE STREET  
HONOLULU, HAWAII

---

**Date:** 7-4-1967  
**Job No.:** 63-28  
**Hole No.:** 1  
**Elevation:** 230.7 ft.

**Customer:**  
**Location:** Palama, Hawaii

---

**Driller:**  
**Hrs.:** 11  
**Rig:** 60 - L

**Helper:**  
**Hrs.:** 11  
**Gas:**  
**Oil:**

**Helper:**  
**Hrs.:**  
**Repairs:**

**Arv. Job:**  
**Lv. Job:**  
**Or. No.:**

---

**Bit-Size:**  
**Type:**

**Casing-Size:** in., Length in hole ft., Amt. Perforated ft. in.

**Depth Start:** 19 ft., Depth Stop: 56 ft., Feet Drilled: 5

**Water Levels, Time:** M ft., Time M ft.,

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>18'</td>
<td>Lava Rock</td>
<td>15&quot; in. round &amp;</td>
<td>15&quot; 15&quot;</td>
</tr>
<tr>
<td>26'</td>
<td>Lava Rock</td>
<td>15&quot; 15&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**Measurements**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>15&quot;</td>
<td>15&quot;</td>
</tr>
</tbody>
</table>

**Remarks:**

- Reset Blooming on rig
- Put Cutting edge on Bit Broken
- Hard Water

---

**Signed:** M. Borrill  
**Date:** 7-4-1967  
**No. D 1361**
DRILLING LOG
SAMSON AND ZERBE, LTD.

Phone 581-447
630 KEAWE STREET
HONOLULU, HAWAII

Date: d - m - y
Job No.
Hole No.
Elevation ft.

Customer

Location

Driller
Hrs.
Rig

Helper
Hrs.
Gas

Hrs.
Repairs

Arv. Job
Lv. Job
Hrs.
Or. No.

Bit-Size
Type

Casing-Size in., Length in hole ft. in., Amt. Perforated ft. in.

Depth Start ft., Depth Stop ft., Feet Drilled

Water Levels, Time M ft., Time M ft.

Measurements

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
</table>

Remarks:

Signed

Date

No. D 1360
### DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

---

**Date:** Aug 28 1963  
**Job No.:** C3.38  
**Hole No.:** 4  
**Elevation:** 330.75 ft.

**Customer:**   
**Location:** Honolulu, Hawaii

**Driller:**  
**Helper:**  
**Arv. Job:**  
**Lv. Job:**

**Rig:** 60 - L  
**Gas:**  
**Oil:**  
**Repairs:**

**Hrs:**

---

**Bit-Size:** 11"  
**Type:** Star Bit

**Casing-Size:** in., Length in hole ft. in., Amt. Perforated ft. in.

**Depth Start:** 60'  
**Depth Stop:** 18  
**Feet Drilled:**

---

**Water Levels, Time M ft., Time M ft.**

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td>60'</td>
<td>Love rock</td>
<td>Build up Star bit</td>
<td></td>
</tr>
</tbody>
</table>

---

**Remarks:**

---

**Signed:** H. Swor  
**Date:** Aug 28 1963  
**No. D 1358**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

Phone 581-447

630 KEAWE STREET

HONOLULU, HAWAII

---

**Date:** Aug 29 1963  
**Job No.:** G3-38  
**Hole No.:** 1  
**Elevation:** 230.75 ft.

**Customer:** E.W. S. Hilo, Hawaii  
**Location:** Kalama, Hawaii  

<table>
<thead>
<tr>
<th>Driller</th>
<th>H. Perriolo</th>
<th>10 Hrs.</th>
<th>Rig</th>
<th>60 - 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper</td>
<td>D. Kee</td>
<td>10 Hrs.</td>
<td>Gas</td>
<td>Oil</td>
</tr>
<tr>
<td>Helper</td>
<td></td>
<td>Hrs.</td>
<td></td>
<td>Repairs</td>
</tr>
</tbody>
</table>

**Bit-Size:** 11"  
**Type:**  

**Casing-Size:** in., Length in hole ft. in., Amt. Perforated ft. in.  
**Depth Start:** 1:00 ft., Depth Stop 6:00 ft., Feet Drilled 6:00  

**Arv. Job:**  
**Lv. Job:**  
**Hrs. Repairs:**  
**Or. No.:**

**Depth** | **Formation** | **Remarks** | **Top**  
--- | --- | --- | ---

| 0.0" | Jawa rock | Drilled water repaired | |
| 0.0" |          | Re-drilled, rebuilding | |
|      |          | Test bit | |

**Water Levels, Time:** M ft., Time M ft.  

---

**Measurements**

---

**Remarks:**

---

**Signed:** H. Perriolo

**Date:** Aug 29 1963  
**No. D 1357**
**DRILLING LOG**

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

630 KEAWE STREET

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Aug 32</th>
<th>Job No.</th>
<th>Elevation</th>
<th>FT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>B.W.S.</td>
<td>Location</td>
<td>Waipahu, Hawaii</td>
<td></td>
</tr>
<tr>
<td>Driller</td>
<td>H. Terence</td>
<td>Hrs.</td>
<td>Rig 60-7</td>
<td></td>
</tr>
<tr>
<td>Helper</td>
<td>D. Ka</td>
<td>Hrs.</td>
<td>Gas Oil</td>
<td></td>
</tr>
<tr>
<td>Arv. Job</td>
<td></td>
<td>Hrs.</td>
<td>Repairs</td>
<td></td>
</tr>
<tr>
<td>Lv. Job</td>
<td></td>
<td>Or. No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bit-Size</td>
<td></td>
<td>Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Casing-Size</td>
<td>in.,</td>
<td>Length in hole</td>
<td>ft.,</td>
<td>Amt. Perforated</td>
</tr>
<tr>
<td>Depth Start</td>
<td>ft.,</td>
<td>Depth Stop</td>
<td>ft.,</td>
<td>Feet Drilled</td>
</tr>
<tr>
<td>Water Levels, Time</td>
<td>M</td>
<td>ft.,</td>
<td>Time</td>
<td>M</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Helped to set up 60-7</td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Signed: H. Terence

Date: Aug 52

**NO D 1359**
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**
630 KEAWE STREET
HONOLULU, HAWAII

---

**Date:** Aug. 27, 1963  
**Job No.:** 63-38  
**Location:** Kilauea, Hawaii

---

<table>
<thead>
<tr>
<th>Customer</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii Div. of water development</td>
<td>Kilauea, Hawaii</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Driller</th>
<th>Helper 1</th>
<th>Helper 2</th>
<th>Rig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>60 - L</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Helper 1</th>
<th>Helper 2</th>
<th>Repairs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Customer</th>
<th>Helper 1</th>
<th>Helper 2</th>
<th>Hrs.</th>
<th>Or. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>Depth Stop</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Water Levels</th>
<th>Time M ft.</th>
<th>Time M ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Finished repairing rig - Sullivan 20</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>Remarks:</th>
</tr>
</thead>
</table>

---

Signed: [Signature]  
Date: Aug. 27, 1963  
**No. D 1356**
Date: Aug 12 1963  
Job No.: 63-38  
Hole No.:  
Elevation: ft.  
Customer:  
Location:  

Driller: N. Tremble  
Hrs.: 4  
Rig: 60-6  

Helper: D. Ku.  
Hrs.: 4  
Gas:  
Oil:  

Arv. Job:  
Lv. Job:  
Hrs.:  
Or. No.:  

Bit-Size:  
Type:  

Depth Start: ft., Depth Stop: ft., Feet Drilled:  

Water Levels, Time: M ft., Time: M ft.  

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
<th>Top</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Picked up calipers and battery repaired.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>engine on 60-6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blocked top of pit, put up tower half mast</td>
<td></td>
</tr>
</tbody>
</table>

Measurements

A | B
---|---

Remarks:  

Signed: N. Tremble  
Date: Aug 17 1963  
No. D 1354
## DRILLING LOG

### SAMSON AND ZERBE, LTD.

**630 KEAWE STREET**

**HONOLULU, HAWAII**

**PHONE 581-447**

<table>
<thead>
<tr>
<th>Date</th>
<th>Aug 15, 1963</th>
<th>Job No.</th>
<th>63-38</th>
<th>Hole No.</th>
<th>1</th>
<th>Elevation</th>
<th>ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>K.W. S. Isle, Hawaii</td>
<td>Location</td>
<td>Kualoa, Hawaii</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Driller**

H. Scruelle

9 Hrs. Rig 60-1

**Helper**

D. Kan

9 Hrs. Gas Oil

**Arv. Job**

**Lv. Job**

**Hrs.**

**Hrs.**

**Or. No.**


<table>
<thead>
<tr>
<th>Bit-Size</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Casing-Size</th>
<th>in.</th>
<th>Length in hole</th>
<th>ft.</th>
<th>Amt. Perforated</th>
<th>ft.</th>
<th>in.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>ft.</th>
<th>Depth Stop</th>
<th>ft.</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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</table>

**Water Levels, Time**

<table>
<thead>
<tr>
<th>M</th>
<th>ft.</th>
<th>Time</th>
<th>M</th>
<th>ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Measurements

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Leveled off ground to set rig tule to start engine on rig found water in gas tank took off calculator found gotten rusted and plowed to it to calculator service battery is also dead</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

Signed

H. Scruelle

Date 8-15-1963

No. D 1352
# DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Aug. 14, 1963</th>
<th>Job No.</th>
<th>63-38</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>B.W. &amp; Co., Hawaii</td>
<td>Location</td>
<td>Pulama, Hawaii</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Driller</th>
<th>H. Casella</th>
<th>9 Hrs.</th>
<th>Rig 60-L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Helper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arv. Job</td>
<td>7:00 AM</td>
<td>Lv. Job</td>
<td>4:30</td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bit-Size</th>
<th></th>
<th>Type</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Casing-Size</td>
<td></td>
<td>in.,</td>
<td></td>
</tr>
<tr>
<td>Amt.</td>
<td></td>
<td>ft.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth Start</th>
<th>ft.</th>
<th>Depth Stop</th>
<th>ft.</th>
<th>Feet Drilled</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Water Levels, Time</th>
<th>M</th>
<th>ft., Time</th>
<th>M</th>
<th>ft.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Measurements</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Depth</th>
<th>Formation</th>
<th>Remarks</th>
</tr>
</thead>
</table>

**Remarks:**

- Hauled rig from Pukea yard to Pulama farm.
- Unloaded truck and rig over well site with help of truck driver.

**Signed**

<table>
<thead>
<tr>
<th>Signed</th>
<th>A. Casella</th>
<th>Date</th>
<th>Aug. 14, 1963</th>
<th>No. D 1351</th>
</tr>
</thead>
</table>
## DRILLING LOG

**SAMSON AND ZERBE, LTD.**

**PHONE 581-447**

**630 KEAWE STREET**

**HONOLULU, HAWAII**

<table>
<thead>
<tr>
<th>Date</th>
<th>Aug 16 1963</th>
<th>Job No.</th>
<th>63 - 3 F</th>
<th>Hole No.</th>
<th>Elevation</th>
<th>ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>H. W. S</td>
<td>Location</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Driller**

<table>
<thead>
<tr>
<th></th>
<th>4 Hrs.</th>
<th>Rig</th>
</tr>
</thead>
</table>

**Helper**

<table>
<thead>
<tr>
<th></th>
<th>4 Hrs.</th>
<th>Gas</th>
</tr>
</thead>
</table>

**Helper**

<table>
<thead>
<tr>
<th></th>
<th>Hrs.</th>
<th>Repairs</th>
</tr>
</thead>
</table>

**Arv. Job**

<table>
<thead>
<tr>
<th></th>
<th>Lv. Job</th>
<th>Hrs.</th>
<th>Or. No.</th>
</tr>
</thead>
</table>

**Bit-Size**

<table>
<thead>
<tr>
<th></th>
<th>Type</th>
</tr>
</thead>
</table>

**Casing-Size**

|---------------------|----------------------|---------|

**Depth Start**

<table>
<thead>
<tr>
<th>ft., Depth Stop</th>
<th>ft., Feet Drilled</th>
</tr>
</thead>
</table>

**Water Levels, Time**

<table>
<thead>
<tr>
<th>M ft., Time</th>
<th>M ft.</th>
</tr>
</thead>
</table>

### Measurements

<table>
<thead>
<tr>
<th>A</th>
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**Remarks:**

- Checking drill rig and equipment at well head.
- Hiring help for job.

**Signed**

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**No. D**

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Remarks:

Signed: [Signature] Date: Aug 9, 1963

No. D 30