

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

| | D | RILLER'S L | OG | | | |
|---|-------------------|-----------------------------|---|----------------|--------------------|-----------|
| Operator: Hupfer Operating, Inc |). | Lic# 30380 | Contractor: | Discovery [| Drilling Co., Inc. | LIC#31548 |
| P.O. Box 3912 | | | 2 4 | PO Box 763 | | |
| Shawnee, KS 66203 | 3-0912 | | i. | Hays, KS 6 | 7601 | |
| Lease: Heine # 3 | | | Location: | 990 FSL - 33 | 30 FWL | |
| | | | NW/SW/SW Section 28/ 19S/ 10 | | 1 | |
| | | | | | 19S/ 10W | |
| | | | | Rice County | , KS | |
| Loggers Total Depth: 3282' | | | API#15- | 159-22.791-0 | 00-00 | |
| Rotary Total Depth: 3284' | | | API#15- <u>159-22,791-00-00</u> Elevation: 1777 GL - 1785 KB | | | |
| Commenced: 9/4/2014 | | | Completed: 9/10/2014 | | | |
| Casing: 8 5/8" @ 3 | | | Status: | Constant State | =0 | |
| | | | | | | |
| | | | | | | |
| | DEPTH | HS & FORMA (All from KB) | | | | |
| Surface, Sand & Shale | 0' | - | Shale | | 399' | |
| Dakota Sand | <u>74'</u> | | Shale & Lime | • | 1229' | |
| Shale | 100' | -8 | Shale | | 2068' | |
| Cedar Hill Sand | 149' | | Shale & Lime | i j | 2274' | |
| Red Bed Shale | 206' | | Lime & Shale | 20 | 2871' | |
| Anhydrite | 394' | | RTD | 5 | 3284' | |
| Base Anhydrite | 399' | | | | | |
| STATE OF KANSAS)))ss | | \frown | | | | |
| COUNTY OF ELLIS | | (|) | 1 | ~ | |
| Thomas H. Alm of Discove the above and foregoing is a true | and correct log o | f the above cap | nan K | adge | <u>C</u> | |
| Subscribed and sworn to before n | | Thomas H. Alı | n | | | |
| | | | | | | |
| (Place stamp or seal below) | | Notary Public | | | | |

QUALITY OILWELL CEMENTING, INC.

den des regiones de las co

Federal Tax I.D.# 20-2886107

631 No. Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 Cell 785-324-1041 Finish Sec. Twp. Range County State On Location £ 0 Date 2 Location Ł Lease Well No. Owner To Quality Oilwell Cementing, Inc. Contractor You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. Type Job Charge To 3284 Derotimo 7 1 Hole Size T.D. 15,507 227 9 Csg Depth Street Tbg. Size Depth City State Tool Depth The above was done to satisfaction and supervision of owner agent or contractor. am 10%50 35.30 Cement Amount Ordered m. Cement Left in Csg Shoe Joint 48 11205 T KIS Meas Line Displace innu EQUIPMENT Common Cementer i No. D Poz. Mix Pumptrk Helper No. Driver Gel. Bulktrk Driver Driver No. Bulktrk Calcium Driver **JOB SERVICES & REMARKS** Hulls Salt 6 Remarks: Flowseal Rat Hole Kol-Seal Mouse Hole Centralizers Mud CLR 48 Baskets CFL-117 or CD110 CAP 38 D/V or Port Collar Sand Handling OLCA Mileage. 1005 FLOAT EQUIPMENT SY Guide Shoe 03 Centralizer Ð **Baskets AFU Inserts** Float Shoe Latch Down lackec. H 2 shoe 5 SUL Đ **Pumptrk Charge** 2000 Mileage Tax Discount **Total Charge** Signature

QUALITY OILWELL CEMENTING, INC. Federal Tax I.D.# 20-2886107

| Builting P.U. No. Driver P.U. Calcium 9 JOB SERVICES & REMARKS Hulls Remarks: Cement d.gd Circuitle, Salt Rat Hole Flowseal Mouse Hole Kol-Seal Centralizers Mud CLR 48 Baskets CFL-117 or CD110 CAF 38 | ∩e 785-483-2025 √l 785-324-1041 | Home O | ffice P.O. B | ox 32 R | ussell, KS 67665 | No. | 627 | 9 8 4 | |
|--|--|------------|-------------------------|--|--|----------------------|------------------|--------------|--|
| Lesse TREATE Well No. 3 Owner ELS Stay by flee Ruo Contractor Discussery 2 Vou are hereby requested to reacher thing equipment and turnish cementer and helper to assist owner or contractor to do work as listed. Hole Size 12 Vul " TD. 30 Y 1" Generative and helper to assist owner or contractor to do work as listed. Carrier and helper to assist owner or contractor to do work as listed. Tog. Size 12 Depth 30 Y 1" State Tog. Size 12 Depth 13 D 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Cement Lett in Csg. 2 D 1" Shoe Joint 20 1" Generative and the contractor. Center Mark 2 M 10 1" Generative and the contractor and the contractor. Center Mark 2 M 10 1" Generative and the contractor and the contractor and the contractor. Diverse Mark 2 M 10 1" Generative and the contractor and the contr | Date 9-4-14 28 | | ge Ry | County | KS | On Location | 00 | pm | |
| Lease There well No. 3 Owner ELS Stay by fee fuo Contractor DiScovery 2 To Quality Oliveil Comming, Inc. by fee fuo and helper to assist owner or contractor to do work as listed. Contracter and helper to assist owner or contractor to do work as listed. Prove Job Street Contractor to do work as listed. Prove Job Street Contractor to do work as listed. Prove Job Street Contractor to do work as listed. To Quart helper to assist owner or contractor to do work as listed. Prove Job Street Contractor to do work as listed. Prove Job Street Contractor Deptice Deptin Tool Deptin City State Common 22 S Common 32 (C 22/00 Meas Line Deptin Common 22 S Pumptrk (L No Freedor Distreet Distreet Contractor) Common 22 S Pumptrk (L No Freedor Distreet Distreet Contractor) Common 22 S Pumptrk (L No Freedor Distreet Market Cit Contractor) Distreet Contractor Advect Contractor Distreet Contractor Advect Contractor Common 22 S Pumptrk (L No Freedor Distreet Market Cit Contractor) Distreet Contractor Advect Contractor Distreet Contractor Advect Cit Contractor Distreet Contractor Advect Cit Contractor Distreet Contracto | L Solo | 2 | Locati | ion Elling | wood Ks - E | to 3Rd | Rd. 12 | 12 | |
| Contractor D*Scovery 2 Io Gually Other Committing equipment and furnish commetter and helper to assist owner or contractor to do work as listed. Type Job Scattacc. T.D. 30 4 1 Scattacc. Generater and helper to assist owner or contractor to do work as listed. Scattacc. Scattacc. Construction Depth Street. Street. Tool. Depth The above was done to satisfaution and supervision of owner agent or contractor. Common Lett in Csg. Do'l Street. Common 22.5 Pumptrk No EQUIPMENT Common 22.5 Pumptrk No Environmenter 200.0 Street. Distruct Control 22.5 Common 22.5 Pumptrk No Environmenter 200.0 Street. Distruct Street. Canton 22.5 Street. Pumptrk No Environmenter 200.0 Common 22.5 Pumptrk No Environmenter 200.0 Calcium 9 Jos SERVICES & REMARKS Hulls Eduition 9 Jos SERVICES & REMARKS Hulls Eduition 200.0 Reithole Control 23.5 Control 200.0 <tr< td=""><td></td><td></td><td>3</td><td>and an an</td><td>Els Stan</td><td>by free</td><td>RND</td><td></td></tr<> | | | 3 | and an | Els Stan | by free | RND | | |
| Type Job Surface cementer and helper to assist owner or contractor to do work as listed. Hole Size 21/4 " T.D. D.4 ! Parge Hupfel OperAng Csg. 85/5 " Depth 30.4 ! Street Depth Giv Top. Size Depth Giv State Top. State Top. State Tool Depth The above was done to satisfaction and supervision of owner agent or contractor. Cement Amount Ordered DD.5 Common 32.5 Measure Displace 38.5 Vul \$10.546.1 Common 22.5 Common 22.5 Pumptrix No Denert Comment Get \$15 Common 22.5 Common 22.5 Pumptrix No Denert Comment Get \$15 Control \$2.5 Common 22.5 Butkrix No Denert Comment Get \$15 Control \$2.5 Common \$2.5 Buskrix Common \$2.5 Control \$2.5 Common \$2.5 Control \$2.5 Buskrix No Denert Comment Food \$2.5 Control \$2.5 Buskrix Control \$2.5 Control \$2.5 Control \$2.5 Control \$2.5 At Hole Flowseat </td <td colspan="3"></td> <td colspan="5">To Quality Oilwell Cementing, Inc.</td> | | | | To Quality Oilwell Cementing, Inc. | | | | | |
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| | X Signature Jeel | 1-L_ | | | | Total Charge | 8 | | |

HEINE #3 - S2 Of SW/4 Sec. 28-19-10W, Rice CO.

DST'S & COMPLETION

DRILL STEM TESTS: HEINE #3

- DST #1: Lansing 2956' to 3086'. 30-45-30-60. Recovered 126' GIP and 50 ' VSOCM. ISIP - 363, FSIP 420, IFP 27-27, FFP 26-35.
- DST #2: Arbuckle 3243' to 3279'. 45-45-45-60. Recovered 365' GIP, 68' muddy oil, 70% oil and 25' clean gassy oil. ISIP 705, FSIP 705, IFP 14-29, FFP 34-42.
- DST #3: Arbuckle 3243 to 3284'. 45-45-45-60. Strong blow with blow back. Recovered 675' GIP, 240' oil and heavy oil cut mud. ISIP 747, FSIP 676, IFP 15-58, FFP 66-85.
- COMPLETION: Drilled Packer Shoe Swab down, Good show of oil. Acidized w/ 250 gals. 15% mud acid. Swab down. Swabbed 6 BFPH, 50 oil. Overnight fill up 1850' with 950' oil on top. Run tubing & rods.