



# Oil and Gas Well Drilling

3137 Virginia Rd, Wellsville KS 66092

Owners: Clay Hughes  
Isaac Burbank

## Well Log

Nick & Connie Hart  
Hart Well #7  
Sec. 5 Twp. 17 Rng. 22  
Miami County  
FSL: 4620 FEL: 2640  
API: 15-121-31031  
Start: 07/23/15  
End: 07/24/15

Phone: (785) 979-9493  
(913) 963-9127  
Fax: (785) 883-2305

| <u>Thickness of Strata</u> | <u>Formation</u> | <u>Total</u> |                                     |
|----------------------------|------------------|--------------|-------------------------------------|
| 3                          | Soil & Clay      | 3            |                                     |
| 3                          | Broken Lime      | 6            |                                     |
| 4                          | Shale            | 10           |                                     |
| 12                         | Lime             | 22           |                                     |
| 1                          | Shale            | 23           |                                     |
| 1                          | Lime             | 24           |                                     |
| 12                         | Shale            | 36           |                                     |
| 24                         | Lime             | 60           |                                     |
| 17                         | Shale            | 77           |                                     |
| 17                         | Lime             | 95           |                                     |
| 24                         | Shale            | 119          |                                     |
| 3                          | Sand             | 122          | Grey                                |
| 61                         | Shale            | 183          |                                     |
| 18                         | Lime             | 201          |                                     |
| 29                         | Shale            | 230          |                                     |
| 6                          | Lime             | 236          |                                     |
| 36                         | Shale            | 272          |                                     |
| 14                         | Lime             | 286          |                                     |
| 16                         | Shale            | 302          |                                     |
| 10                         | Lime             | 312          |                                     |
| 3                          | Shale            | 315          |                                     |
| 15                         | Lime             | 330          |                                     |
| 9                          | Shale            | 339          |                                     |
| 19                         | Lime             | 358          | Oil show                            |
| 4                          | Shale            | 362          |                                     |
| 14                         | Lime             | 376          | Base of the Kansas City / Hertha    |
| 23                         | Shale            | 399          |                                     |
| 6                          | Sand             | 405          | Green, gassy                        |
| 2                          | Broken Sand      | 407          | Shale & green sand, gassy           |
| 1                          | Sand             | 408          | Green, gassy                        |
| 5                          | Broken Sand      | 413          | Shale & green sand, gassy, ok bleed |
| 12                         | Silty Shale      | 425          | Grey sandy shale                    |

|     |               |       |                                                               |
|-----|---------------|-------|---------------------------------------------------------------|
| 121 | Shale         | 546   |                                                               |
| 11  | Lime          | 557   | Oil show                                                      |
| 4   | Shale         | 561   |                                                               |
| 3   | Lime          | 564   |                                                               |
| 23  | Shale         | 587   |                                                               |
| 7   | Lime          | 594   |                                                               |
| 15  | Shale         | 609   |                                                               |
| 2   | Lime          | 611   |                                                               |
| 16  | Shale         | 627   |                                                               |
| 4   | Lime          | 631   | Lime with laminated shale                                     |
| 12  | Shale         | 643   |                                                               |
| 2   | Lime          | 645   |                                                               |
| 18  | Shale         | 663   |                                                               |
| 3   | Silty Shale   | 666   |                                                               |
| 1   | Broken Sand   | 667   | 30% light brown sand, 70% shale, light bleeds                 |
| .5  | Limey Sand    | 667.5 |                                                               |
| .5  | Broken Sand   | 668   | 70% brown sand, 30% shale, ok bleed                           |
| 1   | Limey Sand    | 669   | Brown, some oil show                                          |
| 7   | Oil Sand      | 676   | Brown sand, good bleed, good saturation, few thin shale seems |
| 3.5 | Broken Sand   | 679.5 | 60% brown sand, 40% shale, good bleed, gassy                  |
| 5.5 | Silty Shale   | 685   |                                                               |
| 45  | Shale         | 730   |                                                               |
| 1   | Lime & Shells | 731   |                                                               |
| 22  | Shale         | 753   | TD                                                            |

Drilled an 11" hole to 22.4'  
Drilled a 5 5/8" hole to 753'

07/23/15 set 22.4' of 7" surface casing, cemented with 8 sacks of cement.

07/24/15 cored Upper Squirrel zone.

07/24/15 set 753' of 2 7/8" 8 round upset tubing including 3 centralizers, 1 clamp,  
1 float-shoe, and baffle.  
Baffle set at 713'.

Best perforation zone: 669'-679' (C.C.H.)

**Core Times**

| <u>Depth</u> | <u>Minutes</u> | <u>Seconds</u> |
|--------------|----------------|----------------|
| 666-667      | 1              | 47             |
| 668          | 1              | 57             |
| 669          | 2              | 00             |
| 670          |                | 39             |
| 671          |                | 51             |
| 672          |                | 58             |
| 673          | 1              | 10             |
| 674          | 1              | 01             |
| 675          |                | 49             |
| 676          |                | 50             |
| 677          | 1              | 03             |
| 678          | 1              | 49             |
| 679          | 1              | 13             |
| 680          | 1              | 02             |
| 681          | 1              | 15             |
| 682          | 1              | 36             |
| 683          |                | 58             |
| 684          |                | 54             |
| 685          |                | 55             |
| 685-686      |                | 58             |



**CONSOLIDATED**  
Oil Well Services, LLC

PO Box 884, Chanute, KS 66720  
620-431-9210 or 800-467-8676

# FIELD TICKET & TREATMENT REPORT

## CEMENT

3652  
3572

TICKET NUMBER 49738  
LOCATION Chanute, KS  
FOREMAN Casey Kennedy

| DATE                          | CUSTOMER #  | WELL NAME & NUMBER | SECTION | TOWNSHIP | RANGE   | COUNTY         |
|-------------------------------|-------------|--------------------|---------|----------|---------|----------------|
| 7/24/15                       | 3635        | Hart # 7           | NES     | 17       | 22      | LI             |
| CUSTOMER<br>Hart Oil Co.      |             |                    |         |          |         |                |
| MAILING ADDRESS<br>PO Box 250 |             |                    |         |          |         |                |
| CITY<br>Paducah               | STATE<br>KS | ZIP CODE<br>66071  |         |          |         |                |
|                               |             |                    | TRUCK # | DRIVER   | TRUCK # | DRIVER         |
|                               |             |                    | 729     | Casey    | ✓       | Safety Meeting |
|                               |             |                    | 3608    | Alamad   | ✓       |                |
|                               |             |                    | 804     | Art McD  | ✓       |                |
|                               |             |                    | 31A     | Jim Gre  | ✓       |                |

JOB TYPE long string HOLE SIZE 5 7/8" HOLE DEPTH 753' CASING SIZE & WEIGHT 2 7/8" EUE  
CASING DEPTH 743' DRILL PIPE 7 (3) TUBING 7 (3) OTHER   
SLURRY WEIGHT  SLURRY VOL  WATER gal/sk  CEMENT LEFT in CASING 30'  
DISPLACEMENT 4.13 bbls DISPLACEMENT PSI  MIX PSI  RATE 4 bpm

REMARKS: held safety meeting, established circulation, mixed & pumped 200# Gel followed by 5 bbls fresh water, mixed & pumped 95 sks 50# Pozblend cement w/ 2% gel + 1/2# Phenoseal per spec, cement to surface, flushed pump clean, pumped 2 1/2" rubber plug to bottle w/ 4.13 bbls fresh water, pressured to 800 PSI, released pressure, shut in casing.

*[Signature]*

| ACCOUNT CODE | QUANTITY or UNITS | DESCRIPTION of SERVICES or PRODUCT | UNIT PRICE | TOTAL     |
|--------------|-------------------|------------------------------------|------------|-----------|
| CE0450       | 1                 | PUMP CHARGE                        | 1500.00    |           |
| CE0002       | 20 mi             | MILEAGE                            | 143.00     |           |
| CE0741       | min               | ton mileage                        | 600.00     |           |
| WE0853       | 2 hrs             | 80 lbc                             | 200.00     |           |
|              |                   | trucks                             | 2503.00    |           |
|              |                   | - 49%                              | 1226.47    |           |
|              |                   | Subtotal                           |            | 1276.53   |
| CC5840       | 95 sks            | 50# Pozblend                       | 1282.50    |           |
| CC5965       | 360 #             | Gel                                | 108.00     |           |
| CC6079       | 48 #              | Phenoseal                          | 64.80      |           |
| CP8176       | 1                 | 2 1/2" rubber plug                 | 45.00      |           |
|              |                   | materials                          | 1500.30    |           |
|              |                   | - 49%                              | 735.15     |           |
|              |                   | Subtotal                           |            | 765.15    |
|              |                   | 8%                                 |            |           |
|              |                   | SALES TAX                          |            | 61.21     |
|              |                   | ESTIMATED TOTAL                    |            | 2102.89   |
|              |                   |                                    |            | (4123.32) |

3794

Revin 9737

AUTHORIZATION *[Signature]*

TITLE

DATE

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form