

Johnson County, KS
Well: Thomas-B #I-9
Lease Owner: ST Petrol

Town Oilfield Service, Inc.
(913) 837-8400

Commenced Spudding:
02/24/2014

WELL LOG

| Thickness of Strata | Formation | Total Depth |
|---------------------|-----------------------|-------------|
| 9 | soil/clay | 9 |
| 14 | sandstone | 23 |
| 27 | shale | 50 |
| 3 | lime | 53 |
| 63 | shale | 116 |
| 4 | lime | 120 |
| 4 | sandy shale | 124 |
| 14 | lime | 138 |
| 8 | shale | 146 |
| 7 | lime | 153 |
| 9 | shale | 162 |
| 19 | lkime | 181 |
| 4 | shale | 185 |
| 21 | sand | 206 |
| 27 | lime | 233 |
| 15 | sandy shale and shale | 248 |
| 10 | lime | 258 |
| 15 | shale | 273 |
| 24 | lime | 297 |
| 15 | shale | 312 |
| 9 | lime | 321 |
| 20 | shale | 341 |
| 7 | lime | 348 |
| 5 | shale | 353 |
| 6 | lime | 359 |
| 33 | shale | 392 |
| 1 | lime | 393 |
| 13 | shale | 406 |
| 25 | lime | 431 |
| 6 | shale | 437 |
| 24 | lime | 461 |
| 5 | shale | 466 |
| 4 | lime | 470 |
| 5 | shale | 475 |
| 6 | lime | 481 |
| 5 | shale | 486 |
| 7 | sandy shale | 493 |
| 55 | shale | 548 |
| 10 | sandy shale | 558 |
| 35 | shale | 593 |

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| | | |
|----|---------------|---------|
| 7 | sand | 600 |
| 5 | sandy shale | 605 |
| 52 | shale | 657 |
| 5 | lime | 662 |
| 15 | shale | 677 |
| 5 | lime | 682 |
| 6 | sand | 688 |
| 3 | sandy shale | 6914 |
| 8 | shale | 699 |
| 3 | lime | 702 |
| 3 | shale | 705 |
| 2 | coal | 707 |
| 8 | shale | 715 |
| 6 | lime | 721 |
| 25 | shale | 746 |
| 3 | lime | 749 |
| 12 | shale | 761 |
| 6 | sand | 767 |
| 5 | sandy shale | 772 |
| 55 | shale | 827 |
| 6 | sand | 833 |
| 6 | sandy shale | 839 |
| 16 | shale | 855 |
| 2 | lime | 857 |
| 10 | shale | 867 |
| 3 | lime and sand | 870 |
| 5 | sand | 875 |
| 8 | shale | 888 |
| 5 | sand | 893 |
| 3 | sandy shale | 896 |
| 7 | shale | 903 |
| 5 | sand | 908 |
| 21 | shale | 929 |
| 1 | sand | 930 |
| 2 | broken sand | 952 |
| 10 | shale | 942 |
| 3 | sand | 945 |
| 5 | sand | 950 |
| 2 | sand | 952 |
| 5 | broken sand | 957 |
| 3 | broken sand | 960 |
| 2 | broken sand | 962 |
| 10 | sandy shale | 972 |
| 48 | shale | 1020-TD |
| | | |
| | | |

Short Cuts

TANK CAPACITY

BBLs. (42 gal.) equals $D^2 \times .14 \times h$

D equals diameter in feet.

h equals height in feet.

BARRELS PER DAY

Multiply gals. per minute x 34.2

HP equals $BPH \times PSI \times .0004$

BPH - barrels per hour

PSI - pounds square inch

TO FIGURE PUMP DRIVES

* D - Diameter of Pump Sheave

* d - Diameter of Engine Sheave

SPM - Strokes per minute

RPM - Engine Speed

R - Gear Box Ratio

*C - Shaft Center Distance

D - $RPM \times d$ over $SPM \times R$

d - $SPM \times R \times D$ over RPM

SPM - $RPM \times D$ over $R \times d$

R - $RPM \times D$ over $SPM \times d$

BELT LENGTH - $2C + 1.57(D + d) + \frac{(D-d)^2}{4C}$

* Need these to figure belt length

TO FIGURE AMPS: $\frac{WATTS}{VOLTS} = AMPS$

746 WATTS equal 1 HP

Log Book

Well No. * 1-9

Farm Thomas - B

KS
(State)

Johnson
(County)

31
(Section)

14
(Township)

22
(Range)

For ST Petroleum
(Well Owner)

Town Oilfield Services, Inc.

1207 N. 1st East

Louisburg, KS 66053

913-710-5400

| Thickness of Strata | Formation | Total Depth | Remarks |
|---------------------|-------------------|-------------|--------------|
| 9 | soil/clay | 9 | |
| 14 | sandstone | 23 | |
| 27 | shale | 50 | |
| 3 | Lime | 53 | |
| 63 | shale | 116 | |
| 4 | Lime | 120 | |
| 4 | sandy shale | 124 | |
| 14 | Lime | 138 | |
| 8 | shale | 146 | Dark |
| 7 | Lime | 153 | |
| 9 | shale | 162 | |
| 19 | Lime | 181 | |
| 4 | shale | 185 | |
| 21 | sand | 206 | grey, no oil |
| 27 | Lime | 233 | |
| 15 | sandy shale/shale | 248 | |
| 10 | Lime | 258 | |
| 15 | shale | 273 | |
| 24 | Lime | 297 | |
| 15 | shale | 312 | |
| 9 | Lime | 321 | |
| 20 | shale | 341 | |
| 7 | Lime | 348 | |
| 5 | shale | 353 | |
| 6 | Lime | 359 | |
| 33 | shale | 392 | |
| 1 | Lime | 393 | |

| Thickness of Strata | Formation | Total Depth | Remarks |
|---------------------|-------------|-------------|-----------------|
| | | 393 | |
| 13 | shale | 406 | |
| 25 | Lime | 431 | |
| 6 | shale | 437 | |
| 24 | Lime | 461 | |
| 5 | shale | 466 | |
| 4 | Lime | 470 | |
| 5 | shale | 475 | |
| 6 | Lime | 481 | Harder |
| 5 | shale | 486 | |
| 7 | sandy shale | 493 | |
| 55 | shale | 548 | |
| 10 | sandy shale | 558 | |
| 35 | shale | 593 | |
| 7 | sand | 600 | very little oil |
| 5 | sandy shale | 605 | |
| 52 | shale | 657 | |
| 5 | Lime | 662 | |
| 15 | shale | 677 | |
| 5 | Lime | 682 | |
| 6 | sand | 688 | no oil |
| 3 | sandy shale | 691 | |
| 8 | shale | 699 | |
| 3 | Lime | 702 | |
| 3 | shale | 705 | |
| 2 | coal | 707 | |
| 8 | shale | 715 | |
| 6 | Lime | 721 | |

721

| Thickness of Strata | Formation | Total Depth | Remarks |
|---------------------|-------------|-------------|-------------------------------|
| 25 | shale | 746 | red bed 725 |
| 3 | lime | 749 | |
| 12 | shale | 761 | |
| 6 | sand | 767 | odor, very little oil |
| 5 | sandy shale | 772 | |
| 55 | shale | 827 | |
| 6 | sand | 833 | Broken, Brown sand, no oil |
| 6 | sandy shale | 839 | |
| 16 | shale | 855 | |
| 2 | lime | 857 | |
| 10 | shale | 867 | |
| 3 | limestone | 870 | |
| 5 | sand | 875 | no oil |
| 8 | shale | 888 | |
| 5 | sand | 893 | no oil |
| 3 | sandy shale | 896 | |
| 7 | shale | 903 | |
| 5 | sand | 908 | no oil |
| 21 | shale | 929 | |
| 1 | sand | 930 | no oil |
| 2 | Broken sand | 932 | |
| 10 | shale | 942 | |
| 2 | sand | 945 | odor, 80% - sd. d, good bleed |
| 5 | sand | 950 | 80% - 90% oil |
| 2 | sand | 952 | 70% - 80% oil |
| 5 | Broken sand | 957 | 10% - 20% oil |
| 3 | Broken sand | 960 | 5% - 10% oil |



CONSOLIDATED
Oil Well Services, LLC

266300

TICKET NUMBER 42554

LOCATION Ottawa, KS

FOREMAN Casey Kennedy

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

FIELD TICKET & TREATMENT REPORT
CEMENT

| DATE | CUSTOMER # | WELL NAME & NUMBER | SECTION | TOWNSHIP | RANGE | COUNTY |
|---------------------------------------|------------|--------------------|---------|----------|----------------|--------|
| 2/28/14 | 7532 | Thomas B # I-9 | NE 31 | 14 | 22 | JO |
| CUSTOMER ST Petroleum Inc. | | | TRUCK # | | DRIVER | |
| MAILING ADDRESS 18800 Sunflower Rd | | | 729 | | Casken | |
| CITY Edgerton | | | 6666 | | Gar Moo | |
| STATE KS | | | 503 | | Jas Ric | |
| ZIP CODE 66021 | | | 369 | | Der Mas | |
| | | | TRUCK # | | DRIVER | |
| | | | ✓ | | Safety Meeting | |
| | | | ✓ | | | |
| | | | ✓ | | | |

JOB TYPE long string HOLE SIZE 5 5/8" HOLE DEPTH 1020' CASING SIZE & WEIGHT 2 7/8" CUE
 CASING DEPTH 988' DRILL PIPE _____ TUBING baffle - 983' OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 5'
 DISPLACEMENT 5.69 bbls DISPLACEMENT PSI _____ MIX PSI _____ RATE 5 bpm

REMARKS: held safety meeting, established circulation, mixed & pumped 200 # Premium Gel followed by 10 bbls fresh water, mixed & pumped 182 sks 50/50 Pozmix cement w/ 2% gel + 1/4 # Floseal per sk, cement to surface, flushed pump clean pumped 2 1/2" rubber plug to baffle w/ 5.69 bbls fresh water, pressured to 800 PSI, well held pressure for 30 min MIT, released pressure, shut in casing.

[Handwritten signature]

| ACCOUNT CODE | QUANTITY or UNITS | DESCRIPTION of SERVICES or PRODUCT | UNIT PRICE | TOTAL |
|--------------|-------------------|------------------------------------|------------|-----------------|
| 5401 | 1 | PUMP CHARGE | | 1085.00 |
| 5406 | 30 mi | MILEAGE | | 126.00 |
| 5402 | 988' | casing footage | | |
| 5407 | minimum | ton mileage | | 368.00 |
| 5502C | 2 hrs | 80 Vac | | 180.00 |
| 1124 | 182 sks | 50/50 Pozmix cement | | 2093.00 |
| 1118B | 506 # | Premium Gel | | 111.32 |
| 4402 | 1 | 2 1/2" rubber plug | | 29.50 |
| 1107 | 46 # | Floseal | | 113.62 |
| | | | 7.375% | SALES TAX |
| | | | | ESTIMATED TOTAL |
| | | | | 4279.57 |

Flavin 3737

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