

Johnson County, KS
 Well: Sugar Ridge N-5
 Lease Owner: DZ Eploration

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

Commenced Spudding:
 11/10/2014

WELL LOG

| Thickness of Strata | Formation | Total Depth |
|---------------------|-------------|-------------|
| 0 - 8 | Soil & Clay | 8 |
| 19 | Shale | 27 |
| 4 | Lime | 31 |
| 5 | Shale | 36 |
| 17 | Lime | 53 |
| 10 | Shale | 63 |
| 12 | Lime | 75 |
| 3 | Shale | 78 |
| 23 | Lime | 101 |
| 18 | Shale | 119 |
| 22 | Lime | 141 |
| 5 | Shale | 146 |
| 52 | Lime | 198 |
| 18 | Shale | 216 |
| 9 | Lime | 225 |
| 21 | Shale | 246 |
| 7 | Lime | 253 |
| 7 | Shale | 260 |
| 6 | Lime | 266 |
| 32 | Shale | 298 |
| 1 | Lime | 299 |
| 11 | Shale | 310 |
| 26 | Lime | 336 |
| 6 | Shale | 342 |
| 24 | Lime | 366 |
| 4 | Shale | 370 |
| 4 | Lime | 374 |
| 6 | Shale | 380 |
| 5 | Lime | 385 |
| 173 | Shale | 558 |
| 6 | Lime | 564 |
| 10 | Shale | 574 |
| 6 | Lime | 580 |
| 15 | Shale | 595 |
| 3 | Lime | 598 |
| 122 | Shale | 720 |
| 6 | Grey Sand | 726 |
| 10 | Broken Sand | 736 |
| 9 | Grey Sand | 745 |
| 94 | Shale | 839 |

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 x PSI x .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. N-6

Farm Sugar Ridge

KS Johnson
(State) (County)

29 14 22
(Section) (Township) (Range)

For D+Z Exploration
(Well Owner)

Town Oilfield Services, Inc.

1207 N. 1st East

Louisburg, KS 66053

913-710-5400

| Thickness of Strata | Formation | Total Depth | Remarks |
|---------------------|-------------|-------------|---------|
| 8 | soil & clay | 8 | |
| 19 | shale | 27 | |
| 4 | lime | 31 | |
| 5 | shale | 36 | |
| 17 | lime | 53 | |
| 10 | shale | 63 | |
| 12 | lime | 75 | |
| 3 | shale | 78 | |
| 23 | lime | 101 | |
| 18 | shale | 119 | |
| 22 | lime | 141 | |
| 5 | shale | 146 | |
| 52 | lime | 198 | |
| 18 | shale | 216 | |
| 9 | lime | 225 | |
| 21 | shale | 246 | |
| 7 | lime | 253 | |
| 7 | shale | 260 | |
| 6 | lime | 266 | |
| 32 | shale | 298 | |
| 1 | lime | 299 | |
| 11 | shale | 310 | |
| 26 | lime | 336 | |
| 6 | shale | 342 | |
| 24 | lime | 366 | |
| 4 | shale | 370 | |
| 4 | lime | 374 | |

