

Johnson County, KS
Well: Cattle Track 5
Lease Owner: D Z

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

Commenced Spudding:
11/25/2014

WELL LOG

Thickness of Strata	Formation	Total Depth
10	Soil-Clay	10
6	Shale	16
7	Lime	23
6	Shale	29
15	Lime	44
8	Shale	52
9	Lime	61
9	Shale	70
23	Lime	93
17	Shale	110
20	Lime	130
12	Shale	142
18	Lime	160
27	Shale	187
16	Lime	203
12	Shale	215
9	Lime	224
23	Shale	247
20	Lime	267
51	Shale	318
17	Lime	335
15	Shale	350
18	Lime	368
4	Shale	372
4	Lime	376
4	Shale	380
15	Lime	395
168	Shale	563
5	Lime	568
2	Shale	570
3	Lime	573
11	Shale	584
4	Lime	588
147	Shale	735
5	Broken Sand	740
10	Sandy Shale	750
101	Shale	851
1	Broken Sand	852
2	Limey Sand	854
3	Broken Sand	857

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. 5

Farm Cattle Track

KS
(State)

Johnson
(County)

33
(Section)

14
(Township)

22
(Range)

For D+Z Exploration
(Well Owner)

Town Oilfield Services, Inc.

1207 N. 1st East

Louisburg, KS 66053

913-710-5400

Farm: _____ County _____

State; Well No. _____

Elevation _____

Commenced Spuding 11-25, 20 14

Finished Drilling 11-26, 20 14

Driller's Name _____

Driller's Name _____

Driller's Name Kenny Gunn

Tool Dresser's Name Cole Helcom

Tool Dresser's Name _____

Tool Dresser's Name _____

Contractor's Name _____

(Section) (Township) (Range)

Distance from _____ line, _____ ft.

Distance from _____ line, _____ ft.

CASING AND TUBING RECORD

10" Set _____	10" Pulled _____
8 8" Set <u>20</u>	8" Pulled _____
6 1/4" Set _____	6 1/4" Pulled _____
4" Set _____	4" Pulled _____
2 7/8" Set <u>911.50</u>	2" Pulled _____

CASING AND TUBING MEASUREMENTS

Feet	In.	Feet	In.	Feet	In.

Thickness of Strata	Formation	Total Depth	Remarks
10	sand & clay	10	
6	shale	16	
7	lime	23	
6	shale	29	
15	lime	44	
8	shale	52	
9	lime	61	
9	shale	70	
23	lime	93	
17	shale	110	
20	lime	130	
12	shale	142	
18	lime	160	
27	shale	187	
16	lime	203	
12	shale	215	
9	lime	224	
23	shale	247	
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51	shale	318	
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15	shale	350	
18	lime	368	
4	shale	372	
4	lime	376	
4	shale	380	
15	lime	395	

395

Thickness of Strata	Formation	Total Depth	Remarks
168	shale	563	
5	lime	568	
2	shale	570	
3	lime	573	
11	shale	584	
4	lime	588	
177	shale	735	
5	brown sand	740	
10	sandy shale	750	
101	shale	851	
1	broken sand	852	lite bleed.
2	limy sand	854	good bleed.
3	broken sand	857	good bleed 70% sand 30% limy sand
3	oil sand	860	good bleed good saturation
5	broken sand	865	good bleed 80% sand 20% sandy shale
10	sandy shale	875	
65	shale	940	TD

NOTES:

940' TD
 5⁵/₈ hole
 911.80' 2⁷/₈ pipe
 20' 7" surface
 3 sacks cement
 Bonus Well

Rules of Thumb

CEMENTING ANNULUS

2" ID - 6 ¹ / ₄ "	- 1 Sack	5.8'
2" ID - 8"	- 1 Sack	3.1'
3" ID - 8"	- 1 Sack	3.5'
4" ID - 8"	- 1 Sack	4.0'

CAPACITY

2"	- 1 BBL.	equals.....	256'
2 ¹ / ₂ "	- 1 BBL.	equals.....	164'
3"	- 1 BBL.	equals.....	115'
4"	- 1 BBL.	equals.....	64'
4 ⁷ / ₈ "	- 1 BBL.	equals.....	43'
6 ¹ / ₄ "	- 1 BBL.	equals.....	26'
8"	- 1 BBL.	equals.....	16'

WATER - CEMENT RATIO

5.5 gals. to 1 sack - 2¹/₂ hours
 to thicken slurry

7.7 gals. to 1 sack - 2 hours
 to thicken slurry