

Johnson County, KS
Well:thomas B 20
Lease Owner:ST Petroleum

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

Commenced Spudding:
10-2-2013

WELL LOG

Thickness of Strata	Formation	Total Depth
7	soil/clay	7
14	sand stone	21
68	shale	89
3	lime	92
4	shale	96
16	lime	112
7	shale	119
8	lime	127
7	shale	134
19	lime	153
11	shale	164
13	sandy shale and sand	177
28	lime	205
19	sandy shale and shale	224
8	lime	232
16	shale	248
21	lime	269
15	shale	284
8	lime	292
20	shale	312
6	lime	318
7	shale	325
7	lime	332
44	shale	376
24	lime	40
8	shale	408
24	lime	432
4	shale	436
4	lime	440
4	shale	444
6	lime	450
4	shale	454
6	sandy shale	460
99	shale	559
8	sandy shale	567
58	shale	625
5	lime	630
3	shale	633
2	lime	635
8	shale	643

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7	lime	650
4	sand	654
2	sandy shale	656
9	shale	665
3	lime	668
2	coal	670
9	shale	679
6	lime and shale	685
20	shale	705
2	lime	707
3	shale	710
2	lime	712
6	shale	718
7	sand	725
3	sandy shale	728
58	shale	786
7	broken sand	793
5	sandy shale	798
14	shale	812
3	lime	815
9	shale	824
4	sand	828
13	shale	841
6	sand	847
3	sandy shale	850
10	shale	860
4	sand	864
2	sandy shale	866
34	shale	900
1	broken sand	901
1	sand	902
1	sandy lime	903
2	sand	905
1	sand	906
1	broken sand	907
1	broken sand	908
1	broken sand	909
1	broken sand	910
16	sand	926
10	sandy shale	936
44	shale	980-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 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 $SPM \times d$

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

* Need these to figure belt length

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

746 WATTS equal 1 HP

Log Book

Well No. 20

Farm Thomas B

KS Johnson
(State) (County)

31 14 22
(Section) (Township) (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
7	soil/clay	7	
14	sandstone	21	
68	shale	89	
3	Lime	92	
4	shale	96	
16	Lime	112	
7	shale	119	Dark
8	Lime	127	
7	shale	134	
19	Lime	153	
11	shale	164	
13	sandy shale + sand	177	
28	Lime	205	
19	sandy shale + shale	224	
8	Lime	232	
16	shale	248	
21	Lime	269	
15	shale	284	
8	Lime	292	
20	shale	312	
6	Lime	318	
7	shale	325	
7	Lime	332	
44	shale	376	
24	Lime	400	
8	shale	408	
24	Lime	432	

Thickness of Strata	Formation	Total Depth	Remarks
4	shale	436	
4	Lime	440	
4	shale	444	
6	Lime	450	
4	shale	454	
6	sandy shale	460	
99	shale	559	
8	sandy shale	567	
58	shale	625	
5	Lime	630	
3	shale	633	
2	Lime	635	
8	shale	643	
7	Lime	650	
4	sand	654	no oil
2	sandy shale	656	
9	shale	665	
3	Lime	668	
2	coal	670	
9	shale	679	
6	Lime & shale	685	
20	shale	705	690' red bed
2	Lime	707	
3	shale	710	
2	Lime	712	
6	shale	718	
7	sand	725	odor, little oil

725

Thickness of Strata	Formation	Total Depth	Remarks
3	sandy shale	728	
58	shale	786	
7	Broken sand	793	no oil
5	sandy shale	798	
14	shale	812	
3	lime	815	
9	shale	824	
4	sand	828	no oil
13	shale	841	
6	sand	847	no oil
3	sandy shale	850	
10	shale	860	
4	sand	864	no oil
2	sandy shale	866	
	shale	900	
3	Broken sand	901	20% oil, odor
1	sand	902	solid ok bleeding
1	sandy lime	903	no oil
2	sand	905	90% - solid oil
1	sand	906	30% - 40% oil
1	Broken sand	907	20% oil
3	Broken sand	908	50% oil
1	Broken sand	909	5% - 10%
1	Broken sand	910	no oil
16	sand	926	no oil
10	sandy shale	936	
44	shale	980	TD



262872

TICKET NUMBER 42369

LOCATION Ottawa, KS

FOREMAN Casper 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
10/31/12	7532	Thomas B # 20	NE 31	14	22	JO
CUSTOMER ST Petroleum			TRUCK #			
MAILING ADDRESS 18800 Sunflower Rd			481	Driver	Cas Ken	✓ Safety Meeting
CITY Edgerton			10106	Driver	Gar Moo	✓
STATE KS			503	Driver	Mat Loc	✓
ZIP CODE 66021			369	Driver	Mik Moo	✓

JOB TYPE Logging HOLE SIZE 5 1/2" HOLE DEPTH 980' CASING SIZE & WEIGHT 2 7/8" EUE
 CASING DEPTH 941' DRILL PIPE _____ TUBING baffle-932' OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 9'
 DISPLACEMENT 5.39 bbls DISPLACEMENT PSI _____ MIX PSI _____ RATE 4.5 bpm

REMARKS: Established circulation, mixed & pumped 200 # Premium Gel followed by 10 bbls fresh water, mixed & pumped 127 #s 50/50 Pozmix cement w/ 2% gel + 1/4 # Floeal per sk, cement to surface, flushed pump clean, pumped 2 1/2" rubber plug to baffle w/ 5.39 bbls fresh water, pressured to 600 PSI, 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
5402	941'	LOGGING casing footage		
5406	30 mi	mileage		126.00
5407	minimum	ten mileage		368.00
5502C	2 hrs	SD Vac		180.00
1124	127 #s	50/50 Pozmix cement		1460.50
118B	413 #	Premium Gel		90.86
1107	32 #	Floeal		79.04
4402	1	2 1/2" rubber plug		29.50
			7.375%	SALES TAX
				ESTIMATED TOTAL
				3541.32

Revin 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.