Johnson County, KS
Well:Thomas B 12
Lease Owner:ST Petroleum

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

Commenced Spudding:
10/03/2013

WELL LOG

Thickness of Strata	Formation	Total Depth
10	soil/clay	10
9	sandstone	19
3	shale	22
2	lime	25
89	shale	114
21	lime	135
7	shale	142
9	lime	151
7	shale	158
18	lime	176
5	shale	181
7	sand	188
5	lime	193
8	sand & sandy shale	201
25	lime	226
39	sandy shale & shale	265
2	lime	267
6	shale	273
23	lime	296
14	shale	310
8	lime	318
19	shale	337
8	lime	345
6	shale	351
5	lime	356
43	shale	399
26	lime	425
8	shale	433
23	lime	456
3	shale	459
4	lime	463
4	shale	467
5	lime	472
4	shale	476
7	sandy shale	483
92	shale	575
7	sand	582
4	sandy shale	586
50	shale	636
3	lime	639

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3	shale	642
2	lime	644
10	shale	654
7	lime	661
6	sand	667
3	sandy shale	670
6	shale	676
3	lime	679
2	coal	681
7	shale	688
7	lime and shale	695
27	shale	722
3	lime	725
9	shale	734
6	sand	740
5	sandy shale	745
49	shale	794
11	sand	805
12	sandy shale	817
10	shale	827
3	lime	830
27	shale	857
1	sand	858
1	sand	859
2	broken sand	861
1	broken sand	862
5	sandy shale	867
3	shale	870
4	sand	874
3	sandy shale	877
17	shale	894
2	sand	896
6	sandy shale	902
1	broken sand	903
1	broken sand	904
1	sand	905
1	broken sand	906
1	sand	907
5	sand	912
7	broken sand	919
7	sandy shale	926-TD

Short Cuts

TANK CAPACITY

BBLS. (42 gal.) equals D^2x.14xh

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 - RPMxd over SPMxR

d - SPMxRxD over RPM

SPM - RPMXD over RxD

R - RPMXD over SPMxD

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

* Need these to figure belt length

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

746 WATTS equal 1 HP

Log Book

Well No. 12

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

Thomas B Farm: Johnson County

KS State; Well No. 12

Elevation 1062

Commenced Spuding 10-3, 2013

Finished Drilling 10-4, 2013

Driller's Name Chad Weaver

Driller's Name

Driller's Name

Tool Dresser's Name Cole Holeman

Tool Dresser's Name

Tool Dresser's Name

Contractor's Name TOS

31	14	22
(Section)	(Township)	(Range)

Distance from S line, 3990 ft.

Distance from E line, 1671 ft.

3-sacks

CASING AND TUBING RECORD

10" Set		10" Pulled	
7 8" Set	20.5'	8" Pulled	
6¼" Set		6¼" Pulled	
4" Set		4" Pulled	
2 7/8 Set	950.5	2" Pulled	

942.50 Baffle
980 TD

CASING AND TUBING MEASUREMENTS

Feet	In.	Feet	In.	Feet	In.

Thickness of Strata	Formation	Total Depth	Remarks
10	soil/clay	10	
9	sandstone	19	
3	shale	22	
2	Lime	25	
89	shale	114	
21	Lime	135	
7	shale	142	
9	Lime	151	Dark
7	shale	158	
18	Lime	176	
5	shale	181	
7	sand	188	
5	Lime	193	sandy, no oil
8	sand/sandy shale	201	
25	Lime	226	
39	sandy shale/shale	265	
2	Lime	267	
6	shale	273	
23	Lime	296	
14	shale	310	
8	Lime	318	
19	shale	337	
8	Lime	345	
6	shale	351	
5	Lime	356	
43	shale	399	
26	Lime	425	water

Thickness of Strata	Formation	Total Depth	Remarks
8	shale	433	
23	Lime	456	
3	shale	459	
4	Lime	463	
4	shale	467	
5	Lime	472	Hertha
4	shale	476	
7	sandy shale	483	
92	shale	575	
7	sand	582	
4	sandy shale	586	no oil
50	shale	636	
3	Lime	639	
3	shale	642	
2	Lime	644	
10	shale	654	
7	Lime	661	
6	sand	667	
3	sandy shale	670	odor, little show
6	shale	676	
3	Lime	679	
2	coal	681	
7	shale	688	
7	Lime & shale	695	
27	shale	722	705' red bed
3	Lime	725	
9	shale	734	

734

Thickness of Strata	Formation	Total Depth	Remarks
6	sand	740	shey, no oil
5	sandy shale	745	
49	shale	794	
11	sand	805	no oil, Broken
12	sandy shale	817	
10	shale	827	
3	Lime	830	
	shale	857	
1	sand	858	odor, 5%-10% oil Broken
1	sand	859	50% ok bleeding
2	Broken sand	861	5%-10% oil
1	Broken sand	862	20% oil
5	sandy shale	867	
3	shale	870	
4	sand	874	no oil
3	sandy shale	877	
17	shale	894	
2	sand	896	no oil
6	sand, shale	902	
1	Broken sand	903	2% oil, odor
1	Broken sand	904	10%-15% oil
1	sand	905	35%-40% oil, ok bleeding
1	Broken sand	906	25% oil
1	sand	907	2% oil
5	sand	912	50%-60%
7	Broken sand	919	no oil
7	sandy shale	926	

CONSOLIDATED
Oil Well Services, LLC

262956

TICKET NUMBER 42371
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
10/4/13	7532	Thomas B # 12	NE 31	14	22	JO

CUSTOMER: ST Petroleum Inc
MAILING ADDRESS: 18800 Sunflower Rd
CITY: Edgerton | STATE: KS | ZIP CODE: 66021

TRUCK #	DRIVER	TRUCK #	DRIVER
481	Casey	✓	Safety Meeting
666	CarMac	✓	
503	HarBec	✓	
370	JasRic	✓	

JOB TYPE: long string | HOLE SIZE: 5 7/8" | HOLE DEPTH: 960' | CASING SIZE & WEIGHT: 2 7/8" EUE
CASING DEPTH: 957' | DRILL PIPE: | TUBING: baffle - 943' | OTHER:
SLURRY WEIGHT: | SLURRY VOL: | WATER gal/sk: | CEMENT LEFT in CASING: 8'
DISPLACEMENT: 5.46 bbls | DISPLACEMENT PSI: | MIX PSI: | RATE: 4.5 bpm

REMARKS: held safety meeting, established circulation, mixed + pumped 200# Premium Gel followed by 10 bbls fresh water, mixed + pumped 135 sks 50/50 Pozmix cement w/ 2% gel + 1/4 #/sk Flosal per sk cement to surface, flushed pump clean, pumped 2 1/2" rubber plug to baffle w/ 5.46 bbls fresh water, pressured to 800 PSI, released pressure, shut in casing.

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE		1085.00
5406	30 mi	MILEAGE		126.00
5402	957'	casing footage		—
5407	minimum	ton mileage		368.00
5502C	2 hrs	80 Vac		180.00
1124	135 sks	50/50 Pozmix cement		1552.50
1118B	427 #	Premium Gel		93.94
1107	34 #	Flosal		83.98
4402	1	2 1/2" rubber plug		29.50
		7.375%	SALES TAX	129.80
			ESTIMATED TOTAL	3648.72

Ravin 3737

AUTHORIZTION _____ 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 for