

Johnson County, KS
 Well: Knabe 14A
 Lease Owner: AltaVista

Town Oilfield Service, Inc.
 (913) 294-2125

Commenced Spudding:
 7/19/16

WELL LOG

Thickness of Strata	Formation	Total Depth
0-27	Soil-Clay	27
34	Shale	61
21	Lime	82
8	Shale	90
8	Lime	98
8	Shale	106
21	Lime	127
19	Sandy Shale	146
27	Lime	173
17	Shale	190
7	Lime	197
11	Shale	208
29	Lime	237
14	Shale	251
9	Lime	260
18	Shale	278
8	Lime	286
4	Shale	290
7	Lime	297
44	Shale	341
25	Lime	366
10	Shale	376
21	Lime	397
4	Shale	401
3	Lime	404
4	Shale	408
7	Lime	415
30	Shale	445
11	Sandy Shale	456
129	Shale	585
6	Lime	591
2	Shale	593
2	Lime	595
7	Shale	602
5	Lime	607
3	Shale	610
4	Sand	614
10	Shale	624
3	Lime	627
16	Shale	643

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. 14A

Farm Knabe

KS
(State)

Johnson
(County)

31
(Section)

14
(Township)

22
(Range)

For DE & TZ LLC
(Well Owner)

Town Oilfield Services, Inc.

1207 N. 1st East
Louisburg, KS 66053
913-710-5400

Knabe Farm: Johnson County
KS State; Well No. 14A
 Elevation 1037
 Commenced Spuding 7-19 20 16
 Finished Drilling 7-20 20 16
 Driller's Name Wesley Dollard
 Driller's Name _____
 Driller's Name _____
 Tool Dresser's Name Ryan Ward
 Tool Dresser's Name _____
 Tool Dresser's Name _____
 Contractor's Name TOS
31 14 22

(Section) (Township) (Range)
 Distance from S line, 4895 ft.
 Distance from E line, 1065 ft.

3 sacks
 10 hrs
 5 5/8 borehole
 2 7/8 casing

CASING AND TUBING RECORD

10" Set _____ 10" Pulled _____
 7" Set 20 8" Pulled _____
 6 1/4" Set _____ 6 1/4" Pulled _____
 4" Set _____ 4" Pulled _____
 2" Set _____ 2" Pulled _____

CASING AND TUBING MEASUREMENTS

Feet	In.	Feet	In.	Feet	In.
865.55		Seat nipple			
929.15		Ball			
960.85		Float			
980 TD				27/8	

Thickness of Strata	Formation	Total Depth	Remarks
0-27	soil - clay	27	
34	Shale	61	
21	Lime	82	
8	Shale	90	
8	Lime	98	
8	Shale	106	
21	Lime	127	
19	sandy shale	146	
27	LIME	173	
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29	Lime	237	
14	Shale	251	
9	Lime	260	
18	Shale	278	
8	Lime	286	
4	Shale	290	
7	Lime	297	
44	Shale	341	
25	Lime	366	
10	Shale	376	
21	Lime	397	
4	Shale	401	
3	Lime	404	
4	Shale	408	
7	Lime	415	Hertha

415

Thickness of Strata	Formation	Total Depth	Remarks
30	shale	445	
11	sandy shale	456	
129	shale	585	
6	Lime	591	
2	Shale	593	
2	Lime	595	
7	Shale	602	
5	Lime	607	
3	Shale	610	
4	sand	614	odor - slight slow
10	Shale	624	
3	Lime	627	
16	Shale	643	
2	Lime	645	
23	Shale	668	red bed
2	Lime	670	
73	shale	743	
7	sand	750	odor - slight slow
6	sandy shale	756	
15	shale	771	
4	Lime	775	
27	Shale	802	
6	sand	808	broken - slight slow
52	shale	860	
1	Lime	861	
3	shale	864	
5	sand	869	



REMIT TO
 Consolidated Oil Well Services, LLC
 Dept:970
 P.O.Box 4346
 Houston, TX 77210-4346

MAIN OFFICE

P.O.Box884
 Chanute,KS 66720
 620/431-9210,1-800/467-8676
 Fax 620/431-0012

Invoice Invoice# 808123

Invoice Date: 07/22/16 Terms: Net 30 Page 1

D.E. EXPLORATION
 P.O. BOX 128
 WELLSVILLE KS 66092
 USA
 7858834057

KNABE #14-A

Part No	Description	Quantity	Unit Price	Discount(%)	Total
CE0450	Cement Pump Charge 0 - 1500'	1.000	1,500.0000	62.000	570.00
CE0002	Equipment Mileage Charge - Heavy Equipment	25.000	7.1500	62.000	67.93
CE0711	Minimum Cement Delivery Charge	1.000	660.0000	62.000	250.80
WE0853	80 BBL Vacuum Truck (Cement Services)	1.000	100.0000	62.000	38.00
CC5840	Poz-Blend I A (50:50)	116.000	13.5000	62.000	595.08
CC5965	Bentonite	295.000	0.3000	62.000	33.63
CC5326	Sodium Chloride, Salt	234.000	1.0000	62.000	88.92
CC6077	Kolseal	580.000	0.5000	62.000	110.20
CP8176	2 7/8" Top Rubber Plug	1.000	45.0000	62.000	17.10

Subtotal 4,662.25
 Discounted Amount 2,890.60
 SubTotal After Discount 1,771.65

Amount Due 4,834.02 If paid after 08/21/16

Tax: 65.27
 Total: 1,836.93



CONSOLIDATED
Oil Well Services, LLC

6235
6040

TICKET NUMBER 50154
LOCATION Ottawa KS
FOREMAN Fred Maden

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

FIELD TICKET & TREATMENT REPORT
CEMENT

Invoice # 88123

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
7-20-16	2355	Knabe # 14-A	NE 31	14	22	JO
CUSTOMER			TRUCK #			
DEYTZ LLC % DE Exploration			712	Fred Maden		
MAILING ADDRESS			368	Avl Mcd		
P.O. Box 128			675	Kid Det		
CITY	STATE	ZIP CODE	503	Mik Mad		
Wellsville	KS	66092				

JOB TYPE long string HOLE SIZE 5 7/8 HOLE DEPTH 980 CASING SIZE & WEIGHT 2 7/8 EUE
 CASING DEPTH 960 DRILL PIPE Baffle TUBING @ 930' OTHER _____
 SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 30' + Plug
 DISPLACEMENT 5.4 BBL DISPLACEMENT PSI _____ MIX PSI _____ RATE 4 BPM

REMARKS: Hold Safety meeting. Establish pump rate. Mix & Pump 100* Gel Flush. Mix & Pump 116 SKS for Blend I A Cement 2% Gel 5" Kal Seal 5% Salt. Cement to surface. Flush pump & line clean. Displace 2 1/2" Rubber plug to baffle in casing. Pressure to 700* PSI. Release pressure to set flow valve. Shut in Casing.

TOS Drilling. (wes). Fred Maden

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
CE0450	1	PUMP CHARGE	368	1500.00
CE0002	25mi	MILEAGE	368	178.75
CE0711	Minimum	Ten Miles Delivery	503	660.00
WE0853	1hr	50 BBL Vac Truck.	675	100.00
		Sub Total		2438.75
		less 62%	-1512.23	926.72
9207 CE5840	116 SKS	Por Blend I A Cement		1566.00
CE5965	295#	Bentonite Gel		88.50
CE5326	224#	Salt		234.00
CE6077	580#	Kal Seal		290.00
CE8176	1	2 1/2" Rubber Plug		45.00
		Sub Total		2223.50
		less 62%	-1378.87	844.92
		7.725%		65.27
		SALES TAX		65.27
		ESTIMATED TOTAL		1836.92
				(4834.02)

Revin 8737 AUTHORIZATION Bryan Maden 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.