



Fueling American Prosperity™

Oil and Gas Well Drilling

3137 Virginia Rd, Wellsville KS 66092

Owners: Clay Hughes
Isaac Burbank

Phone: (785) 979-9493
(913) 963-9127

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Well Log

DE & TZ LLC

Knabe Well #: I-27

Sec. 31 Twp. 14 Rng. 22

FSL: 2820 FEL: 1020

API: 15-091-24415

Start: 03/17/15

End: 03/18/15

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>
11	Soil & Clay	11
2	Clay & Gravel	13
7	Shale	20
5	Lime	25
41	Shale	66
14	Lime	80
2	Shale	82
15	Lime	97
8	Shale	105
7	Lime	112
5	Shale	117
22	Lime	139
21	Shale	160
28	Lime	188
27	Shale	215
6	Lime	221
15	Shale	236
22	Lime	258
13	Shale	271
9	Lime	280
17	Shale	297
9	Lime	306
6	Shale	312
5	Lime	317
33	Shale	350
2	Lime	352
10	Shale	362
8	Lime	370
2	Shale	372
16	Lime	388
7	Shale	395
22	Lime	417
5	Shale	422

Red bed

3	Lime	425	
5	Shale	430	
6	Lime	436	Base of Kansas City / Hertha
25	Shale	461	
2	Silty Shale	463	
10	Broken Sand	473	Grey sand & shale, faint gas odor
2	Silty Shale	475	
135	Shale	610	
5	Lime	615	
4	Shale	619	
4	Lime	623	
1	Coal	624	
4	Shale	628	
6	Lime	634	
2	Shale	636	
4	Silty Shale	640	
12	Shale	652	
3	Lime	655	Oil show
2	Shale	657	
1	Coal	658	
2	Shale	660	
1	Lime	661	
2	Shale	663	
5	Lime	668	
3	Shale	671	
1	Lime	672	
3	Shale	675	
10	Shale	685	Red bed
14	Shale	699	
1	Lime	700	
7	Shale	708	
1	Limey Sand	709	Hard grey sand, no show, no odor
2	Sand	711	Grey, no show, no odor
4	Silty Shale	715	
33	Shale	748	
1	Lime & Shells	749	
10	Shale	759	
1	Lime & Shells	760	
9	Shale	769	
1	Limey Sand	770	
2	Silty Shale	772	
6	Broken Sand	778	Brown sand & grey shale, no show, no odor
3	Silty Shale	781	
18	Shale	799	
4	Lime	803	
28	Shale	831	

3	Silty Shale	834	
28	Shale	862	
1	Lime	863	
2	Shale	865	
1	Coal	866	
25	Shale	891	
1	Broken Sand	892	Lime & black sand, ok bleed
1	Oil Sand	893	Black, good bleed
2	Limey Sand	895	80% lime, 20% black sand, ok bleed
4	Broken Sand	899	75% black sand, 25% soft white limey sand, good bleed
1	Oil Sand	900	Black, good bleed
1	Broken Sand	901	80% black sand, 20% lime, good bleed
3	Sand	904	Brown soft sand, no oil
1	Limey Sand	905	Brown & grey, no oil
1	Silty Shale	906	
9	Shale	915	
3	Silty Shale	918	
77	Shale	995	TD

Drilled an 11" hole to 22.8'

Drilled a 5 5/8" hole to 995'

03/17/15 set 22.8' of 7" surface casing, cemented with 6 sacks of cement.

03/18/15 chip sampled Bartlesville zone.

03/18/15 set 980' of 2 7/8" 8 round upset tubing including 3 centralizers, 1 clamp, 1 float-shoe, and baffle.

Baffle set at 952'



CONSOLIDATED
Oil Well Services, LLC

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

2474
2413

Invoice # 803777

FIELD TICKET & TREATMENT REPORT
CEMENT

TICKET NUMBER 50895
LOCATION Ottawa KS
FOREMAN Fred Maden

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3.18.15	2365	Knabe # J-27	NE 31	14	22	JO
CUSTOMER DE+TZ % DE Exploration			TRUCK # DRIVER TRUCK # DRIVER			
MAILING ADDRESS P.O. Box 128			712 / Fred Maden			
CITY STATE ZIP CODE Wellsville KS 66092			495 / Har Bec			
			675 / Kei Det			
			504 / Gar Moo			

JOB TYPE Logging HOLE SIZE 5 7/8 HOLE DEPTH 993 CASING SIZE & WEIGHT 2 7/8 EUE
CASING DEPTH 980 DRILL PIPE Baffle in TUBING 954 OTHER _____
SLURRY WEIGHT _____ SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT in CASING 26' + Plug
DISPLACEMENT 5.54 BB DISPLACEMENT PSI _____ MIX PSI _____ RATE 5 BPM

REMARKS: Hold Safety meeting. Establish pump rate. Pump 1/2 gal NE-100 Polymer. Circulate well to condition hole. Mix & Pump 100 # Gal Flush. Mix & Pump 135 SKs 50/50 Por Mix Cement 270 Gal 5% Salt 5# Kal Seal/sk. Cement to surface. Flush pump & lines clean. Displace 2 1/2" Rubber plug to baffle in casing. Pressure to 800# PSI. Release pressure to set float valve. Shut in casing.

H B Energy

Fred Maden

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	495	1085.00
5406	30 mi	MILEAGE	495	126.00
5402	980	Casing footage	NK	
5407	Minimum	Ton Miles	804	368.80
5520	2 hrs	80 BBL Vac Truck	675	200.00
		Sub Total		1779.80
		Less 10%		-177.98
				1601.82
1124	135 sks	50/50 Por Mix Cement	1552.50	
115B	327 #	Premium Gel	71.24	
111	272 #	Granulated Salt	106.08	
1110A	675 #	Kal Seal	310.50	
		Material	2041.02	
		Less 30%	-612.31	
4402	1	2 1/2" Rubber Plug		29.50
1401	1/2 Gal	NE 100 Polymer		23.62
			7.375%	109.29
		SALES TAX		109.29
		ESTIMATED TOTAL		3192.23

Ravin 3737

Completed

AUTHORIZATION Bryan Miller TITLE _____ DATE 4/27/15

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.