



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-24

Sec. 31 Twp. 14 Rng. 22

FSL: 3590 FEL: 1050

API: 15-091-24412

Start: 03/25/15

End: 03/26/15

<u>Thickness of Strata</u>	<u>Formation</u>	<u>Total</u>	
7	Soil & Clay	7'	
35	Sand Stone	42	Red & grey, making water
6	Limey Sandstone	48	Grey, hard sandstone, making water
6	Sandstone	54	
48	Shale	102	
4	Lime	106	
3	Shale	109	
15	Lime	124	
6	Shale	130	
9	Lime	139	Making little fresh water
7	Shale	146	
18	Lime	164	
12	Shale	176	
2	Lime	178	
6	Shale	184	
28	Lime	212	
25	Shale	237	
3	Lime	240	
14	Shale	254	
24	Lime	278	
15	Shale	293	
8	Lime	301	
19	Shale	320	
10	Lime	330	
3	Shale	333	
26	Lime	359	
12	Shale	371	
1	Lime	372	
12	Shale	384	
6	Lime	390	
2	Shale	392	
1	Lime	393	
2	Shale	395	

12	Lime	407	
6	Shale	413	
24	Lime	437	
3	Shale	440	
4	Lime	444	
5	Shale	449	
5	Lime	454	Base of Kansas City / Hertha
28	Shale	482	
3	Broken Sand	485	Grey sand & shale, no odor
6	Sand	491	Grey, no odor
3	Broken Sand	494	
2	Silty Shale	496	
69	Shale	565	
2	Silty Shale	567	
3	Broken Sand	570	40% brown sand, 60% shale, ok bleed
1	Silty Shale	571	
52	Shale	623	
3	Lime	626	
2	Shale	628	
1	Coal	629	
6	Shale	635	
6	Lime	641	
16	Shale	657	
6	Lime	663	Making water
9	Shale	672	
4	Lime	676	
27	Shale	703	Red Bed
1	Lime	704	
9	Shale	713	
3	Broken Sand	716	Brown sand & grey shale, light bleed
57	Shale	773	
1	Lime & Shells	774	
3	Shale	777	
6	Broken Sand	783	Grey sand & shale, no show, no odor
4	Silty Shale	787	
22	Shale	809	
1	Coal	810	
3	Shale	813	
7	Silty Shale	820	
9	Shale	829	
1	Coal	830	
4	Shale	834	
1	Oil Sand	835	Brown soft sand, good bleed
3	Limey Sand	838	
35	Shale	873	
1	Coal	874	

22	Shale	896	
3	Oil Sand	899	Soft black sand, good bleed
2	Limey Sand	901	White Limey sand & black oil sand, good bleed
6	Broken Sand	907	70% black sand, 30% shale, ok bleed
2	Oil Sand	909	Black sand with few thin shale seems, ok bleed
7	Silty Shale	916	Shale with very thin laminated sand seems, no oil
1	Shale	917	
1	Coal	918	
66	Shale	984	TD

Drilled an 11" hole to 67'

Drilled a 5 5/8" hole to 984'

03/24/15 set 67' of 7" surface casing, cemented with 14 sacks of cement.

03/25/15 chip sampled Bartlesville zone.

03/25/15 set 969' of 2 7/8" 8 round upset tubing including 3 centralizers, 1 clamp, 1 float-shoe, and baffle.

Baffle set at 938'.



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# 803791

Invoice Date: 03/30/15 Terms: C.O.D. Page 1

D.E. EXPLORATION

P.O. BOX 128  
 WELLSVILLE KS 66092  
 USA  
 7858834057

KNABE #I-24

Part No	Description	Quantity	Unit Price	Discount(%)	Total
5401	Cement Pumper	1.000	1,085.0000	10.000	976.50
5406	Mileage Charge	30.000	4.2000	10.000	113.40
5402	Casing Footage	969.000	0.0000	0.000	0.00
5407	Min. Bulk Delivery Charge	1.000	368.0000	10.000	331.20
5502C	80 Vacuum Truck Cement	2.000	100.0000	10.000	180.00
1124	Poz Cement Mix	146.000	11.5000	30.000	1,175.30
1118B	Premium Gel / Bentonite	1,295.000	0.2200	30.000	199.43
1111	Sodium Chloride (Granulated Salt)	307.000	0.3900	30.000	83.81
1110A	Kol Seal (50# BAG)	730.000	0.4600	30.000	235.06
4402	2 1/2 Rubber Plug	1.000	29.5000	0.000	29.50
1401	HE 100 Polymer	0.500	47.2500	0.000	23.63

Subtotal 4,251.56  
 Discounted Amount 903.73  
 SubTotal After Discount 3,347.83

Amount Due 4,433.91 If paid after 03/30/15

Tax: 128.82

Total: 3,476.65



**CONSOLIDATED**  
Oil Well Services, LLC

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

2497  
2430  
**Invoice #803791**

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

TICKET NUMBER 50821  
LOCATION Ottawa, KS  
FOREMAN Casey Kennedy

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3/25/15	2355	Knabe # I-24	NE 31	14	22	JO
CUSTOMER DE + TZ c/o DE Exploration			TRUCK # DRIVER TRUCK # DRIVER			
MAILING ADDRESS PO Box 128			729	Casey	✓	Safety Meeting
CITY STATE ZIP CODE Wellsville KS 66702			467	KeiCar	✓	
			548	Paul	✓	
			370	MikFor	✓	

JOB TYPE long string HOLE SIZE 5 5/8" HOLE DEPTH 984' CASING SIZE & WEIGHT 2 7/8" EUE  
CASING DEPTH 916' DRILL PIPE \_\_\_\_\_ TUBING baffle - 938' OTHER \_\_\_\_\_  
SLURRY WEIGHT \_\_\_\_\_ SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT IN CASING 31'  
DISPLACEMENT 5.43 lbs DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE 5.4 bpm

REMARKS: hold safety meeting, established circulation, mixed & pumped 1/2 gal Polymer, circulated for 1 hr to condition hole, mixed & pumped 300 # gel followed by 5 hrs fresh water, mixed & pumped 146 sks 50/50 Pozmix cement w/ 2% gel, 5% salt, & 5 # Kalseal per sk, cement to surface, flushed pump clean, pumped 2 1/2" rubber plug to casing TD w/ 5.43 lbs fresh water, pressured to 800 PSI, released pressure, shut in casing.

\* mixed & pumped 300 # gel to get circulation

*(Handwritten signature and scribbles)*

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	1085.00	1085.00
5406	30 mi	MILEAGE	126.00	126.00
5402	916'	casing footage		
5407	minimum	tax mileage	3108.00	3108.00
5502c	2 hrs	80 Vac	200.00	200.00
		trucks	1779.00	
		-10%	177.90	
		subtotal		1601.10
1124	146 sks	50 Pozmix cement	1679.00	1679.00
1118B	1295 #	Gel	284.90	284.90
1111	307 #	Salt	119.73	119.73
1110A	730 #	Kalseal	335.80	335.80
		materials	2419.43	
		-30%	725.83	
		subtotal		1693.60
4402	1	2 1/2" rubber plug		29.50
1401	1/2 gal	Polymer		23.63
		7.375%		128.82
		SALES TAX		128.82
		ESTIMATED TOTAL		3476.65

Revin 3737 AUTHORIZATION Bryan Nick TITLE \_\_\_\_\_ DATE 4/4/3/17

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.