Confidentiality Requested:
☐ Yes ☑ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1313208

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 35170
Name: DE & TZ LLC
Address 1: PO BOX 128
Address 2:
City: WELLSVILLE State: KS Zip: 66092 + __ __ __ __
Contact Person: Phil Frick
Phone: (785) 883-4057
CONTRACTOR: License # 33715
Name: Town Oilfield Service
Wellsite Geologist: None
Purchaser:

Designate Type of Completion:

☑ New Well ☐ Re-Entry ☐ Workover

☑ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☐ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

07/20/2016	07/21/2016	07/21/2016
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-091-24430-00-00
Spot Description:
SW SW NE NE Sec. 31 Twp. 14 S. R. 22 ☑ East ☐ West
4085 Feet from ☐ North / ☑ South Line of Section
1065 Feet from ☑ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Johnson
Lease Name: KNABE Well #: 16A
Field Name:
Producing Formation: Bartlesville
Elevation: Ground: 1051 Kelly Bushing: 1051
Total Vertical Depth: 980 Plug Back Total Depth: 925
Amount of Surface Pipe Set and Cemented at: 20 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from: 957
feet depth to: 0 w/ 114 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 0 ppm Fluid volume: 20 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date:
☐ **Confidential Release Date:**
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** Karen Ritter **Date:** 08/01/2016

[redacted] 1313208

Operator Name: DE & TZ LLC Lease Name: KNABE Well #: 16A

Sec. 31 Twp. 14 S. R. 22 ☑ East ☐ West County: Johnson

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Gamma Ray/Neutron/CCL

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Bartlesville	897	+154

CASING RECORD ☐ New ☑ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	9.875	7	17	20	Portland	3	NA
Production	5.625	2.875	7	957	50/50 Poz	114	See Ticket

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☑ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☑ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
3	897-907 - 31 Perfs - 2" DML RTG		

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 07/29/2016

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	2				

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)* _____

PRODUCTION INTERVAL:
_____
_____

Form	ACO1 - Well Completion
Operator	DE & TZ LLC
Well Name	KNABE 16A
Doc ID	1313208

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	9.875	7	17	20	Portland	3	NA
Production	5.625	2.875	7	957	50/50 Poz	114	See Ticket

Johnson County, KS
Well: Knabe 16A
Lease Owner:DE TZ

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

Commenced Spudding:
7/20/16

WELL LOG

Thickness of Strata	Formation	Total Depth
0-17	Soil-Clay	17
13	Sand	30
56	Shale	86
5	Lime	91
2	Shale	93
15	Lime	108
7	Shale	115
8	Lime	123
7	Shale	130
19	Lime	149
11	Shale	160
9	Sand	169
27	Lime	196
44	Shale	240
27	Lime	267
13	Shale	280
9	Lime	289
20	Shale	309
7	Lime	316
4	Shale	320
6	Lime	326
41	Shale	367
26	Lime	393
11	Shale	403
20	Lime	423
4	Shale	427
3	Lime	430
4	Shale	434
8	Lime	442
29	Shale	471
16	Sand & Sandy Shale	487
127	Shale	614
4	Lime	618
4	Shale	622
3	Lime	625
7	Shale	632
7	Lime	639
1	Shale	640
3	Sand	643
11	Shale	654

Johnson County, KS
Well: Knabe 16A
Lease Owner:DE TZ

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

Commenced Spudding:
7/20/16

4	Lime	658
15	Shale	673
2	Lime	675
29	Shale	704
2	Lime	706
70	Shale	776
8	Sand	784
10	Sandy Shale	794
11	Shale	805
3	Lime	808
27	Shale	835
8	Sand	843
54	Shale	897
6	Sand	903
2	Sand	905
1	Sand	906
15	Sandy Shale	921
59	Shale	980-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. 16A

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. 16A

Elevation 1051

Commenced Spuding 7-20 20 16

Finished Drilling 7-21 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 (Section) 14 (Township) 22 (Range)

Distance from S line, 4085 ft.

Distance from E line, 1065 ft.

3 sacks 9 hrs
5 5/8 borehole
2 7/8 casing

CASING AND TUBING RECORD

10" Set		10" Pulled	
7" Set	20	8" Pulled	
6¼" Set		6¼" Pulled	
4" Set		4" Pulled	
2" Set		2" Pulled	

CASING AND TUBING MEASUREMENTS

Feet	In.	Feet	In.	Feet	In.
893	60	Seat Nipple			
925.30		Baffle			
957.05		Float			
980	TD		2	7/8	

Thickness of Strata	Formation	Total Depth	Remarks
0-17	soil-clay	17	
13	sand	30	water
56	Shale	86	
5	Lime	91	
2	Shale	93	
15	Lime	108	
7	Shale	115	
8	Lime	123	
7	Shale	130	
19	Lime	149	
11	Shale	160	redbed
9	sand	169	no Oil water
27	Lime	196	
44	Shale	240	
27	Lime	267	
13	Shale	280	
9	Lime	289	
20	Shale	309	
7	Lime	316	
4	Shale	320	
6	Lime	326	
41	Shale	367	water
26	Lime	393	
11	Shale	403	
20	Lime	423	
4	Shale	427	
3	Lime	430	

430

Thickness of Strata	Formation	Total Depth	Remarks
4	Shale	434	
8	Lime	442	Hertha
29	Shale	471	
16	sand & sandy shale	487	
127	Shale	614	
4	Lime	618	
4	Shale	622	
3	Lime	625	
7	Shale	632	
7	Lime	639	
1	Shale	640	
3	Sand	643	slight show
11	Shale	654	
4	Lime	658	
15	Shale	673	
2	Lime	675	
29	Shale	704	reddish
2	Lime	706	
70	Shale	776	
8	Sand	784	brown - odor - no show
10	sandy shale	794	
11	Shale	805	
3	Lime	808	
27	Shale	835	
8	Sand	843	no oil
54	Shale	897	
6	Sand	903	broken oil - good show

903

Thickness of Strata	Formation	Total Depth	Remarks
2	sand	905	solid - good saturation
1	sand	906	broken oil - good show
15	sandy shale	921	
59	shale	980	TD

CONSOLIDATED
Oil Well Services, LLC

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# 808127

Invoice Date: 07/25/16

Terms: Net 30

Page 1

D.E. EXPLORATION

P.O. BOX 128
WELLSVILLE KS 66092
USA

7858834057

KNABE #16A

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)	114.000	13.5000	62.000	584.82
CC5965	Bentonite	292.000	0.3000	62.000	33.29
CC5326	Sodium Chloride, Salt	230.000	1.0000	62.000	87.40
CC6077	Kolseal	570.000	0.5000	62.000	108.30
CP8176	2 7/8" Top Rubber Plug	1.000	45.0000	62.000	17.10

Subtotal	4,625.35
Discounted Amount	2,867.72
SubTotal After Discount	1,757.63

Amount Due 4,794.26 If paid after 08/24/16

Tax:	64.19
Total:	1,821.83

CONSOLIDATED
Oil Well Services, LLC

6241
6146

TICKET NUMBER 50155
LOCATION Ottawa KS
FOREMAN Fred Mader

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

FIELD TICKET & TREATMENT REPORT
CEMENT

Invoice # 808127

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
7-21-16	2355	Knabe # 16A	NE 31	14	22	JO

CUSTOMER: DE & T2 LLC % DE Exploration
MAILING ADDRESS: P.O. Box 128
CITY: Wellsville | STATE: KS | ZIP CODE: 66092

TRUCK #	DRIVER	TRUCK #	DRIVER
712	Fre Mad		
368	Arl Mc b		
675	Kel Dex		
503	Mik Haa		

JOB TYPE: long string | HOLE SIZE: 5 7/8 | HOLE DEPTH: 980. | CASING SIZE & WEIGHT: 2 7/8 EUE
CASING DEPTH: 957 | DRILL PIPE: Baffle in | TUBING @ 925' | OTHER:
SLURRY WEIGHT: | SLURRY VOL: | WATER gal/sk: | CEMENT LEFT in CASING: 32' + Plug
DISPLACEMENT: 5.38 | DISPLACEMENT PSI: | MIX PSI: | RATE: 4 BPM

REMARKS: Held Safety meeting. Establish pump rate. Mix & Pump 100# Gel Flush. Mix & Pump 114 sks Por Blend IA Cement 2% Gel 5% Salt 5# Kol Seal/sk. Cement to Surface. Flush pump & lines clean. Displace 2½" Plug to Baffle in Casing. Pressure to 800# PSI. Release pressure to set Float value. Shut in Casing.

TOS Drilling. (wes)

Fred Mader

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT		UNIT PRICE	TOTAL
CE0450	1	PUMP CHARGE	368	1500.00	
CE0002	25mi	MILEAGE	368	1.75	
CE0711	Minimum	Ton Miles Delivery	503	660.00	
WE0853	1 hr	80 BBL Vac Truck	675	100.00	
		Sub Total		2436.75	
		Less 62%		1512.03	924.72
9230 CC5840	114 sks	Por Blend IA Cement		1539.00	
CC5965	292#	Bentonite Gel		87.60	
CC5326	230#	Salt		230.00	
CC6077	570#	Kol Seal		285.00	
CP8186	1	2½" Rubber Plug		45.00	
		Sub Total		2186.60	
		Less 62%		-1355.69	830.91
			7.725%	SALES TAX	64.19
				ESTIMATED TOTAL	1821.83 (4794.26)

Ravin 3737

AUTHORIZTION Bryan Hall 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