



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1250071  
OIL & GAS CONSERVATION DIVISION

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 # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

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 #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

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: \_\_\_\_\_ Date: \_\_\_\_\_



1250071

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> 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 <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
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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# 802350

Invoice Date: 11/30/14 Terms: Net 30 Page 1

D & Z EXPLORATION  
 901 N. ELM ST.  
 ST. ELMO IL 62458  
 USA  
 6188293274

Cattle Tracks #3

Part No	Description	Quantity	Unit Price	Discount(%)	Total
5401	Cement Pumper	1.000	1,085.0000	0.000	1,085.00
5406	Mileage Charge	30.000	4.2000	0.000	126.00
5402	Casing Footage	923.000	0.2300	100.000	0.00
5407	Min. Bulk Delivery Charge	0.500	368.0000	0.000	184.00
5502C	80 Vacuum Truck Cement	1.500	100.0000	0.000	150.00
1124	Poz Cement Mix	118.000	11.5000	30.000	949.90
1118B	Premium Gel / Bentonite	398.000	0.2200	30.000	61.29
1111	Sodium Chloride (Granulated Salt)	248.000	0.3900	30.000	67.70
1110A	Kol Seal (50# BAG)	590.000	0.4600	30.000	189.98
4402	2 1/2 Rubber Plug	1.000	29.5000	0.000	29.50

Subtotal 3,599.47  
 Discounted Amount 756.09  
 SubTotal After Discount 2,843.38

Amount Due 3,735.33 If paid after 12/30/14

Tax: 95.76  
 Total: 2,939.13





**CONSOLIDATED**  
Oil Well Services, LLC

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

1267  
1219

INVOICE # 802350

TICKET NUMBER 50674  
LOCATION Haways, KS  
FOREMAN Casa, Kennedy

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

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
11/25/14	3392	Cattle Tracks # 3	NE 33	14	22	JO
CUSTOMER Dt 2 Exploration						
MAILING ADDRESS 901 N. Elm St						
CITY St Elmo		STATE IL	ZIP CODE 62458			
TRUCK #	DRIVER	TRUCK #	DRIVER			
729	Caskan	✓	Safety Meeting			
1006	KeiCar	✓				
548	Dawisha	✓				
@ 675	KeiDot	✓				

JOB TYPE loss string HOLE SIZE 5 7/8" HOLE DEPTH 960' CASING SIZE & WEIGHT 2 7/8" EUE  
 CASING DEPTH 923' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
 SLURRY WEIGHT \_\_\_\_\_ SLURRY VOL \_\_\_\_\_ WATER gal/sk \_\_\_\_\_ CEMENT LEFT in CASING \_\_\_\_\_  
 DISPLACEMENT 5.34 bbls DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE 4.5 bpm

REMARKS: hold safety meeting, established circulation, mixed & pumped 200# gel followed by 10 bbls fresh water, mixed & pumped 118' sls 5% Popmix cement w/ 2% gel, 5% salt, & 5# Kalsol per sk, cement to surface, flushed pump down, pumped 2 1/2" rubber plug to casing TD w/ 5.34 bbls fresh water, pressured to 800 PSI, released pressure, shut in casing.

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE		1085.00
5400	30 mi	MILEAGE		126.00
5402	923'	Casing footage		
5407	1/2 min	ton mileage		184.00
5502C	1.5 hrs	80 Vac		150.00
1124	118 sls	5% Popmix cement	1357.00	
1118B	398 #	Premium Gel	87.56	
1111	248 #	Salt	96.72	
1110A	590 #	Kalsol	271.40	
		materials	1812.68	
		-30% subtotal	543.80	
				1268.88
4402	1	2 1/2" rubber plug		29.50
				3523.04
			7.375%	SALES TAX 95.76
				ESTIMATED TOTAL 2939.18

Ravin 3737

AUTHORIZATION \_\_\_\_\_ 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.



**TERMS**

In consideration of the prices to be charged for Consolidated Oil Well Services, LLC (COWS) services, equipment and products and for the performance of services and supplying of materials, Customer agrees to the following terms and conditions.

Terms. Cash in advance unless satisfactory credit is established. On credit sales, invoices are payable within 30 days of the invoice date. (i) All invoices not paid within 30 days, Customer agrees to pay COWS interest at the rate of 18% per annum or the maximum rate allowed by law, whichever is higher. In the event COWS retains an attorney to pursue collection of any amount, Customer agrees to pay all collection costs and attorney fees incurred by COWS.

Any applicable federal, state or local sales, use occupation, consumer's or emergency taxes shall be added to the quoted price. All process license fees required to be paid to others will be added to the scheduled prices.

**SERVICE CONDITIONS**

Customer warrants that the well is in proper condition to receive the services, equipment, products and materials to be supplied by COWS. The Customer shall at all time have complete care, custody, and control of the well, the drilling and production equipment at the well, and the premises about the well. A responsible representative of the Customer shall be present to specify depths, pressures, or materials used for any service which is to be performed.

(a) COWS shall not be responsible for any claim, cause of action or demand therefor referred to as a "claim" for damage to property, or injury to or death of employees and representatives, of Customer or the well owner (if different from Customer), unless such damage, injury or death is caused by the willful misconduct or gross negligence of COWS, including but not limited to sub-surface damage and surface damage arising from sub-surface damage.

(b) Unless a claim is the result of the sole willful misconduct or gross negligence of COWS, Customer shall be responsible for and indemnify and hold COWS harmless from any claim for: (1) reservoir loss or damage, or property damage resulting from sub-surface pressure, losing control of the well and/or a well blowout; (2) damages as a result of a subsurface trespass, or an action in the nature thereof, arising from a service operation performed by COWS; (3) injury to or death of persons, other than employees of COWS, or damage to property (including, but not limited to, injury to the well), or any damages whatsoever, irrespective of cause, growing out of or in any way connected with the use of radioactive material in the well hole; and (4) well damage or reservoir damage caused by (i) loss of circulation, cement invasion, cement misplacement, pumping cement or cement plugs on wells with loss of circulation, including the failure to displace plug to proper depth, (ii) sub-surface pressure and resulting failure to complete pumping of cement or cement plug, including dehydration of cement slurry or flashing, plugged float shoe, annulus bridging or plugging, or down hole tools being lost or left in the well, or becoming stuck in the well for any reason and by any cause. COWS may furnish down hole tools and may supply supervision for the running and placement of such tools but will not be liable for any damage, loss or result caused by the use of such tools.

**WARRANTIES - LIMITATION OF LIABILITY**

COWS warrants title to the products, supplies and materials, and that the same are free from defects in workmanship and materials. THERE ARE NO OTHER WARRANTIES, MERCHANTABILITY OR FITNESS FOR PURPOSE, WHICH EXTEND BEYOND THOSE STATED IN THE IMMEDIATELY PRECEDING SENTENCE. COWS's liability and Customer's exclusive remedy in any claim (whether in contract, tort, breach of warranty or otherwise) arising out of the use or use of any COWS' products, supplies, materials or services is expressly limited to the replacement of such products, supplies, materials or services or their return to COWS or, at COWS' option, an allowance to Customer of credit for the cost of such items.

Customer waives and releases all claims against COWS for any special, incidental, indirect, consequential or punitive damages.

Furthermore, Customer will be responsible for the cost to replace such tools if they are lost or left in the well.

(c) COWS makes no guarantee of the effectiveness of any COWS' products, supplies or materials, or the results of any COWS' treatment or services.

(d) Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, COWS is unable to guarantee the accuracy of any chart interpretation, research analysis, job recommendation or other data furnished by COWS. COWS' personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Customer agrees that COWS shall not be responsible for any damage arising from the use of such information except where due to COWS' gross negligence or willful misconduct in the preparation or furnishing of it.

(e) COWS may buy and re-sell to Customer down hole equipment, including but not limited to float equipment, DV tools, port collars, type A & B packers, and Customer agrees that COWS is not an agent or dealer for the companies who manufacture such items, and further agrees that Customer shall be solely responsible for and indemnify COWS against any claim with regard to the effectiveness, malfunction of, or functionality of such items.



Johnson County, KS  
Well: Cattle Track # 3  
Lease Owner: DZ Exploration

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

Commenced Spudding:  
11-24-2014

WELL LOG

Thickness of Strata	Formation	Total Depth
0 - 14	Soil & Clay	14
10	Shale	24
6	Lime	30
6	Shale	36
15	Lime	51
9	Shale	60
8	Lime	68
9	Shale	77
25	Lime	102
18	Shale	120
19	Lime	139
11	Shale	150
18	Lime	168
26	Shale	194
19	Lime	213
12	Shale	225
8	Lime	233
21	Shale	254
9	Lime	263
4	Shale	267
6	Lime	273
34	Shale	307
1	Lime	308
13	Shale	321
24	Lime	345
11	Shale	356
21	Lime	377
3	Shale	380
3	Lime	383
4	Shale	387
8	Lime	395
178	Shale	573
3	Lime	576
4	Shale	580
6	Lime	586
27	Shale	613
3	Lime	616
124	Shale	740
5	Brown Sand	745
10	Sandy Shale	755





# 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  $BPH \times PSI \times .0004$

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. 3

Farm Cattle track

KS

(State)

Johnson

(County)

33

(Section)

14

(Township)

22

(Range)

For D+Z Exploration  
(Well Owner)

## Town Oilfield Services, Inc.

1207 N. 1st East

Louisburg, KS 66053

913-710-5400





Thickness of Strata	Formation	Total Depth	Remarks
14	soil & clay	14	
10	shale	24	
6	lime	30	
6	shale	36	
15	lime	51	
9	shale	60	
8	lime	68	
9	shale	77	
25	lime	102	
18	shale	120	
19	lime	139	
11	shale	150	
18	lime	168	
26	shale	194	
19	lime	213	
12	shale	225	
8	lime	233	
21	shale	254	
9	lime	263	
4	shale	267	
6	lime	273	
34	shale	307	
1	lime	308	
13	shale	321	
24	lime	345	
11	shale	356	
21	lime	377	





NOTES:

960' TD  
 5 5/8 hole  
 923.15' 2 7/8  
 20' 7" surface  
 3 sacks cement  
 Bonus Well

Rules of Thumb

CEMENTING ANNULUS

2" ID - 6 1/4"	- 1 Sack	.....	5.8'
2" ID - 8"	- 1 Sack	.....	3.1'
3" ID - 8"	- 1 Sack	.....	3.5'
4" ID - 8"	- 1 Sack	.....	4.0'

CAPACITY

2"	- 1 BBL.	equals.....	256'
2 1/2"	- 1 BBL.	equals.....	164'
3"	- 1 BBL.	equals.....	115'
4"	- 1 BBL.	equals.....	64'
4 7/8"	- 1 BBL.	equals.....	43'
6 1/4"	- 1 BBL.	equals.....	26'
8"	- 1 BBL.	equals.....	16'

WATER - CEMENT RATIO

5.5 gals. to 1 sack - 2 1/2 hours  
 to thicken slurry  
 7.7 gals. to 1 sack - 2 hours  
 to thicken slurry