

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1329250
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: _____

1329250

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <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> _____	PRODUCTION INTERVAL: _____ _____
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GEOL

E 1767 CM9/2/70 CARD ISSUED 11/19/70 IP P 16 B0 + 4 BW
ARB 3232-35

API 15-053-20,151
TOPS DEPTH

DATUM 8 5/8" 1357/500SX; 5 1/2" 3232/150SX

RTD 3235

NO TOPS OR OTHER INFORMATION TO BE
RELEASED

INDEPENDENT OIL & GAS SERVICE
WICHITA, KANSAS

WILKINS

FIELD

Click on the Preview image to view it in a pop-up

NORTHERN GAS PRODUCTS COMPANY 1-32 3190' - 3235' TENNECO OIL COMPANY

Legal Location Sec. - Twp. - Rng. 32 - 17 - 9W Well No. 1 Field Area N.E. BUSHTON County ELLSWORTH State KANSAS

FLUID SAMPLER DATA	
Sampler Pressure _____ P.S.I.G. at Surface	
Recovery: Cu. Ft. Gas _____	
cc. Oil _____	
cc. Water _____	
cc. Mud _____	
Tot. Liquid cc. _____	
Gravity _____ 45.5 ° API @ 60 °F.	
Gas/Oil Ratio _____ cu. ft./bbl.	
RESISTIVITY _____	CHLORIDE CONTENT _____

Recovery Water _____ @ _____ °F. _____ ppm
Recovery Mud _____ @ _____ °F. _____
Recovery Mud Filtrate _____ @ _____ °F. _____ ppm
Mud Pit Sample _____ @ _____ °F. _____
Mud Pit Sample Filtrate _____ @ _____ °F. _____ ppm
Mud Weight _____ 10 vis _____ 38 cp

Date 9-10-70	Ticket Number 331141
Kind of Job OPEN HOLE	Halliburton District GREAT BEND
Tester MR. MOORE	Witness MR. GRANT
Drilling Contractor STERLING DRILLING COMPANY	IC S

EQUIPMENT & HOLE DATA	
Formation Tested	Arbuckle
Elevation	1767' DF _____ Ft.
Net Productive Interval	4' _____ Ft.
All Depths Measured From	Kelly Bushing
Total Depth	3235' _____ Ft.
Main Hole/Casing Size	7 7/8"
Drill Collar Length	344.98' I.D. 2.50"
Drill Pipe Length	1985.40' - 934.60' I.D. 3.826" - 2.50"
Packer Depth(s)	3185' - 3190' _____ Ft.
Depth Tester Valve	3165' _____ Ft.

TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Cushion	-	3164'	1/4"	3/4"

Recovered	140	Feet of	Gas in pipe	Meo. From Tester Valve
Recovered	70	Feet of	Clean oil	
Recovered	270	Feet of	Heavy oil & slightly gas cut mud	
Recovered	300	Feet of	Froggy oil & gas cut mud	
Recovered		Feet of		

Remarks Opened tool for 10 minute first flow with a weak blow increasing to a good blow. Closed tool for 45 minute initial closed in pressure. Reopened tool for 61 minute second flow with a fair blow increasing to good blow throughout test. Closed tool for 90 minute second closed in pressure.

TEMPERATURE	Gauge No. 1839	Gauge No. 1838	Gauge No.	TIME	
	Depth: 3172' Ft.	Depth: 3230' Ft.	Depth: _____ Ft.		
Est. 98 °F.	12 Hour Clock	12 Hour Clock	Hour Clock	Tool A.M. Opened 16:17 XXM.	
3229' @ Actual 120 °F.	Blanked Off NO	Blanked Off YES	Blanked Off	Tool A.M. Closed 18:13 XXM.	
	Pressures		Pressures	Reported	Computed
	Field	Office	Field	Minutes	Minutes
Initial Hydrostatic	-	1630	1668		
Flow	Initial	22	46		
	Final	107	128	11	10
Closed in	-	1058	1079	45	45
Flow	Initial	121	137		
	Final	271	301	60	61
Closed in	-	1022	1042	90	90
Final Hydrostatic	-	1630	1650		

ZONES OF POROSITY & STAINING, CONT'D.

ARBUCKLE SECTION, CONT'D.

DST #1 3100-3235: OPEN 10", SHUT IN 45", OPEN 60", SHUT IN 90". STRONG BLOW THROUGHOUT. RECOVERED 140 GAS IN THE PIPE PLUS 640 FLUID. (70' CLEAN OIL + 270 HEAVY OIL & SLIGHTLY GAS CUT MUD + 300 FROGGY OIL & GAS CUT MUD, NO WATER.) IHP=1669#; IF=46#-128#; ISIP=1079#/45"; 2ND FP=137#-301#; FSIP=1042#/90"; FHP=1650#; TEMPERATURE=112° F.

STRUCTURAL POSITION:

ON TOP OF THE HEEBNER SHALE, THIS TEST WAS 4 FEET LOWER THAN SOHIO PETROLEUM #2 ALDEN, C N/2 SE SE SEC. 32-17-94. IT WAS 5' HIGHER ON TOP OF THE ARBUCKLE.

RECOMMENDATION:

IN VIEW OF THE FAVORABLE STRUCTURAL POSITION AND THE POSITIVE RESULTS OF THE DRILL STEM TEST TAKEN IN THE ARBUCKLE FORMATION, IT WAS RECOMMENDED THAT PIPE BE RUN WITHOUT DRILLING ANY DEEPER, AND AN ATTEMPT BE MADE TO COMPLETE AS A COMMERCIAL PRODUCER IN THE OPEN HOLE.

RESPECTFULLY SUBMITTED,

Richard K. Grant

RICHARD K. GRANT

RICHARD K. GRANT
 CONSULTING GEOLOGICAL ENGINEER
~~101 EAST RAINBOW~~
 WICHITA, KANSAS 67206
 820 GUTTON PLACE
 SEPTEMBER 14, 1970

TELEPHONE
 685-7700
 RES.
 OFF. 267-9534

GEOLOGICAL REPORT

TENNECO OIL COMPANY #1-32 NORTHERN NATURAL GAS PRODUCTS
 1420' FNL & 1500' FEL OF NE₄ OF SECTION 32-173-9 WEST
 ELLSWORTH COUNTY, KANSAS

ELEVATION: 1270' K. B. (ALL MEASUREMENTS FROM KELLY BUSHING)

COMMENCED: SEPTEMBER 3, 1970
 COMPLETED: SEPTEMBER 11, 1970

CASING: 8-5/8" SURFACE CASING @ 1360' w/500 SACKS CEMENT.
 5 1/2" OIL STRING CEMENTED 3' OFF BOTTOM.

FORMATION TOPS:

	<u>SAMPLE</u>	<u>SCHLUMBERGER</u>
ANHYDRITE (ORLG.)	458(+1312)	
BASE ANHYDRITE	479(+1291)	
TOPEKA	2439(- 719)	2492(- 722)
HEEBNER SHALE	2756(- 936)	2761(- 991)
TORONTO	2778(-1003)	2773(-1003)
DOUGLAS SHALE	2791(-1021)	2791(-1021)
BROWN LIME	2873(-1103)	2873(-1103)
LANSING	2894(-1124)	2890(-1120)
BASE KANSAS CITY	3174(-1404)	3173(-1403)
ARBUCKLE	3231(-1461)	3235(-1464)?
TOTAL DEPTH	3235(-1465)	3239(-1469)

ZONES OF POROSITY & STAINING:

LANSING SECTION

2984-3009

BUFF AND GRAY COARSELY OOLICASTIC LIMESTONE.
 GOOD POROSITY, NO SHOW.

3036-96

WHITE AND GRAY, FINE AND COARSELY OOLICASTIC
 LIMESTONE. NO SHOWS OR STAINS.

ARBUCKLE SECTION

3231-35

DOLOMITE, WHITE & GRAY, MEDIUM TO COARSE RHOM-
 BIC. FAIR ODDR, GOOD SHOW OF FREE OIL. INTER-
 CRYSTALLINE POROSITY LOOKS GOOD.

Copy In
 Formation Data File

TENNECO OIL COMPANY

DEV. DRLG. P & A
 *C DRLG. CONST.
 RECOMPLETION _____

DRILLING RECORD

PTK NO. _____

FIELD S. E. Wilkins, Ellsworth Co, Kansas LEASE Northern Natural Gas Products Co. WELL NO. 1-32

DATE	DEPTH	DETAIL OF OPERATION
		<u>FIRST REPORT</u>
		Loc: 1420 FNL & 1650 FEL Sec. 32-T17S-R9W, PROJ TD 3300 ARBUCKLE
2/70		TOC WI 100%.
2/4	<u>497'</u>	Drlg. Made 497'. Mud 8.3, vis 32. 100' $\frac{1}{2}^{\circ}$, 350' $\frac{1}{4}^{\circ}$, 450' $\frac{1}{2}^{\circ}$, Spud 5: 45 pm 9-3-70 DM \$127 TM \$127 DC \$2941 TC \$2941 1 day
2/5	<u>1250</u>	Drlg made 753'. ST $3/4^{\circ}$ @ 950, $1/2^{\circ}$ @ 1200. DC \$2673 TC \$5614 2 days
2/6	<u>1365</u>	Made 115. Nippling up & repairing rig. Drld $11\frac{1}{4}$ " hole to 1365. Ran surface csg 42 jts., 1348' of $8\frac{5}{8}$ " 24#. K-55 8 rounds ST&C csg. Set @ <u>1357'</u> w/500 sx. 50/50 pozmix plus 18% salt. Failed in w/150 Class "A" plus 3 CaCl. Plug dwn 6:50 w/1000 psi. Circ approximately 65 sx. of clean cmt to surface. DC \$7869 TC \$13,483 3 days
9/7	<u>1940</u>	Made 575' Drlg. Drld plug 9-6-70 @ 1:00 pm. DC \$2076 TC \$15,559 4 days
2/8	<u>2684</u>	Made 1744 Trip. DC \$6186 TC <u>21,735</u> 5 days
2/9	<u>2956</u>	Made 272. Making trip. Mud 9.6, vis 41, WL-16. ST 1° @ 2956'. DC \$1803 DM \$421 TM \$742 TDC \$1953 TCC \$23,688 6 days
2/10	<u>3224</u>	ST 3224' - 1° . Making a trip. Made 268'. Mud wt 9.8, vis 42, WL 12.6, D.M.\$85 T.M. \$827 D.C. \$1385 T.C. <u>\$25,073</u> 7 days
2/11	<u>3235</u>	Made 11'. Drlg. Ran DST #1 from 3190 to 3235. Ran DIL, G-SRW logs. TD 3239. Going in hole w/Bit. Prep to lay DP down. DST tested 3190-3235 open 1 hr 10 min. Closed 2 hrs. 15 min. 640' fluid. 70 clean oil. 270 heavy oil cut mud. 300' froggie oil & gas cut mud. Recorded pressures IHP 1668. Initial fluid fr 462, 128 PSI, ISP 1079, 2nd. flow 137,301, Final ST 1042, final HP 1650. Bottom hole temp. 112° . DC \$1214 TC <u>\$26,287</u> 8 days
2/12	<u>TD 3235</u>	PBTD 3232. Finished laying DP down. Rigged up ran csg. & cmtd. Released rig @ 6:30 pm. 9/11/70. TC \$36,980

FILE

STERLING DRILLING COMPANY
P. O. Box 129
Sterling, Kansas 67579

WELL LOG - - - - - TENNECO #1-32
Located: 1420' FNL and 1500' FEL, Sec. 32-17-9N, Ellsworth
County, Kansas

OWNER: Tenneco Oil Company
ROTARY DRILLING CONTRACTOR: Sterling Drilling Company

COMPLETED: September 3, 1970
COMPLETED: September 11, 1970

TOTAL DEPTH: 3235'

LOG

CASING RECORD

0 - 245	Clay Sand	Ran 42 joints 6 5/8" 24# new seamless casing. 1349.77' pipe set @ 1359.77'
245 - 458	Shale with Sand Stringers	K.B. Cemented with 500 sacks Pozmix 2% gel, 18% salt and 150 common 3% cc.
458 - 479	Anhydrite	Plug down 6:50 PM, 9-5-70.
479 - 880	Shale	
880 - 1174	Shale and Salt	
1174 - 2489	Lime and Shale	
2489 - 2740	Lime	
2740 - 2820	Lime and Shale	
2820 - 3155	Lime	
3155 - 3235	Lime and Shale	Ran 101 joints 5 1/2" casing, 3250.77' including shoe. Cemented at 3232' K.B. with 150 sacks 50/50 Pozmix " ", 18% salt. Plug down at 6:00 PM, 9-11-70; by Halliburton.

1 Copy Sent To Well File