



KANSAS CORPORATION COMMISSION 1061810  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

June 2009

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
- Conv. to GSW
- Plug Back: \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date      Date Reached TD      Completion Date or Recompletion Date

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

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

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

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

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

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

Total 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**

- Letter of Confidentiality Received  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1061810

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

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

**INSTRUCTIONS:** Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

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
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<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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Geological Report

Cooper Hiatt #18-1  
SE, SE, SW Sec. 18, T31S, R8E  
330' FSL; 2475' FWL  
Cowley County, KS  
API #15-035-24385-00-00

Used Geological for 18-1#  
moved over soft from 18-1

**Operator:** B-C Steel, LLC, C/O Bert Carlson, 209 North Fry, Yates Center, KS, 66783.

**Drilling Contractor:** Hat Drilling. Midway Mud Rotary Rig #2.

**Wellsite Geologist:** Mark Brecheisen.

**Dates Drilled:** January 24<sup>th</sup>, 2011 to January 25<sup>th</sup>, 2011.

**Size Hole:** 8 1/4"

**Total Depth:** 2455'

**Elevation:** 1412'

**Drilling Fluid:** Freshwater bentonite and additives.

**Surface Casing:** 460' of 8-5/8" casing cemented with 150 sx of cement to surface.

**Formation Tops:** Formation tops were estimated from drill graph, hole lost, no electric logs ran.

**Field Name:** Radcliff, Northeast.

**Status:** To be plugged.

**Oil Shows:** Layton Sandstone @2040'-2100', Kansas City Limestone @2120'-2130', Swope Limestone @2262', Hertha Limestone @2275'.

**Gas Shows:** Layton Sandstone @2040'-2100', Kansas City Limestone @2120'-2130', Swope Limestone @2262', Hertha Limestone @2275', Cleveland Sandstone @2350', Altamont Limestone @2443'.

**Water Encountered:** No appreciable water encountered upon drilling.

**On Location:** January 24<sup>th</sup>, 2011, 7:50 am. Well Depth 1322'; left location @ TD, Well Depth of 2455' @ 11:00 am, January 25<sup>th</sup>, 2011.

**Notes:** Well cuttings were examined at rig and discarded. Samples of "zones of interest" were saved and examined with a binocular microscope and black light. Sample run not correlated to electric log since none were run.

- 0-1550': Samples not examined.
- 1550'-1570': Shale, medium to medium dark gray, trace limestone and sandstone, no fluorescence, no petroliferous odor or show.
- 1570'-1580': Shale (85%), silty to sandy, micaceous in part, fairly hard. Sandstone (15%), light to medium-gray, very fine to fine-grained, micaceous, argillaceous, with some shale laminae present, no fluorescence, no show.
- 1580'-1590': Shale, medium-dark gray, silty to sandy, micaceous, fairly hard, trace limestone, no fluorescence, no petroliferous odor or show.
- 1590'-1600': Shale (80%), medium-dark to dark gray, soft, silty in part, micaceous. Sandstone (20%), off-white to very light gray. Very fine to fine-grained, well sorted with sub-angular to sub-rounded grains, few traces of black bitumen on few samples. No fluorescence, no show.
- 1600'-1610': Shale, medium-dark gray, soft, greasy, slightly silty. Estimated Iatan Limestone Top @ 1609'.
- 1610'-1620': Shale (65%) Medium-dark to dark gray, soft, greasy to silty, micaceous in part, traces of red limestone present. Limestone (30%), pale to dark yellowish-brown, fine to coarse crystalline, hard, dense, no visible inter-crystalline porosity. Sandstone (5%), off-white to light gray, fine grained, well sorted with sub-angular to sub-rounded grains. Traces of black bitumen on few samples, no fluorescence, no petroliferous odor or show.
- 1620'-1630': Limestone, pale to dark yellowish-brown, fine to coarse crystalline with many calcite veins running throughout rock samples. Trace shale, 20% dull mottled mineral fluorescence, no show.
- 1630'-1650': Shale, dark gray, soft, micaceous, silty to sandy in part, trace limestone, 5% mottled variegated mineral fluorescence, no show.
- 1650'-1670': Shale, medium to medium-dark gray, silty to sandy. Sandstone, light to medium gray, fine grained, well sorted, sub-angular to sub angular grains, fairly hard, micaceous, no fluorescence, no show.
- 1670'-1700': Stalnakker Sandstone Section, off-white to medium-gray, very fine to fine grained. Well sorted with sub-rounded to well-rounded grains, very friable very clean, trace shale scattered throughout, traces of mottled dull yellow mineral fluorescence. No petroliferous odor or show.
- 1700'-1730': Shale, medium to dark gray, silty to sandy, micaceous, traces of sandstone present, no staining, no fluorescence, no petroliferous odor or show.
- 1730'-1750': Shale, medium to medium dark gray, sandy in part with some traces of laminated sand present. Limestone approximately 20%, dark yellowish brown, less than 2% even, medium bright yellow mineral fluorescence, no show, no petroliferous odor.

- 1750'-1760': Shale, medium to medium dark gray, silty to sandy, no fluorescence.
- 1760'-1810': Limestone, pale brown to yellowish brown to olive gray, fine crystalline, fair to good friability, mottled, good inter-crystalline porosity, approximately 30% mottled, very dull yellow mineral fluorescence. Approximate top of Lansing Group at 1760'.
- 1810'-1840': Shale, dark gray to pale green, silty, very soft, traces of limestone scattered throughout. At approximately 1834', a 15-unit gas kick was observed but quickly dropped back to base line.
- 1840'-1890': Limestone, yellowish-brown to olive-gray, fine to medium crystalline, mottled, fossiliferous, fair to good friability, traces of inter-crystalline porosity present, shale partings present. Overall, 40% even, very dull mineral fluorescence, no petrolierous odor or show. Between 1880' and 1890' a 15-unit gas kick was observed.
- 1890'-1950': Limestone, dark yellowish-brown, mottled, fine to coarse crystalline, fairly hard, shale scattered throughout interval. Overall, 10% even, medium-bright yellow mineral fluorescence.
- 1950'-2030': Shale, medium to medium-dark gray, slightly silty to sandy with few scattered sandstone laminae present, traces of limestone present, overall no fluorescence, no petrolierous odor or show.
- 2030'-2040': Limestone, dark yellowish-brown to olive-gray, fine to medium crystalline, visible pinpoint vugular porosity. Few samples exhibited medium-dark brown oil stain on the surface, broken samples showed no saturation, dark gray shale present, light to medium-gray sandstone present. Overall, trace of bright yellow mineral fluorescence. No petrolierous odor or show.
- 2040'-2100': Layton "A" and "B" Sandstone, light to medium gray, very fine to fine grained, very friable, micaceous, good inter-granular porosity, very faint oil stain on few samples, slight to fair flash odor in few samples, sandstone very loosely cemented, traces of shale present. Overall, 10% dull to medium-yellow hydrocarbon fluorescence. No cut, no real petrolierous odor or show. At 2056', showed a 15-unit gas kick, and at approximately 2065, a 35-unit gas kick was observed. At 2077' a 40-unit gas kick set off alarm, followed immediately by a second 85+ unit kick. At 2095', a 90+ unit gas kick was observed. At 2090'-2100', free oil was observed in sand samples cut with acid, slight brown oil stain on many samples, no cut with reagent. This section had a 40% even, bright yellow hydrocarbon fluorescence. Good to strong petrolierous odor, faint show.
- 2100'-2120': Limestone, pale yellow-brown to olive-gray, fine crystalline, fairly hard, no visible porosity, traces of shale and sandstone present. 60% even, bright yellow mineral fluorescence, no odor or show.
- 2120'-2130': Limestone, pale yellow-brown to olive-gray, fine to coarse crystalline, some vugular and oolitic porosity visible in rock, traces of oil in wet HCL cut, fair to good friability, oil stain in and around some vugs, no real saturation, 25% mottled to even, variegated hydrocarbon and mineral fluorescence. No cut, strong

petroliferous odor to sample, a 90 unit gas kick was observed after drilling this interval.

2130'-2260': Intermixed limestone and shale with no real porosity present, no petroliferous show of any kind, no odor. Overall, this interval displayed an estimated 25-30% pinpoint to mottled variegated mineral fluorescence.

2260'-2270': Limestone (50%), tan to olive-gray, trace of pinpoint, medium-brown oil stain on very few samples, no saturation, no cut. A 180+ unit gas kick was observed at 2262'. Overall, sample displayed trace of pinpoint to mottled bright yellow mineral fluorescence. Swope Limestone.

2270'-2280': Limestone (80%), tan to pale yellowish-brown, fine crystalline, good friability, few samples have medium-light brown, pinpoint to mottled oil stain on surfaces. Slight free oil show with HCL cut. Slow, uneven, poor milky blue cut with reagent on select samples. Good inter-crystalline porosity with pinpoint and vugular porosity exhibited on samples with oil stain. Approximately 7% mottled, bright yellow hydrocarbon fluorescence. Strong petroliferous odor to sample, poor show. Believe this to be a break in the Hertha Limestone. At 2275', hotwire went off 5X scale, stayed pegged on 5X scale for two minutes.

2280'-2340': Limestone, tan to pale yellowish-brown, fine crystalline, fair friability, sucrosic in part, no oil stain present, trace, pinpoint, bright yellow mineral fluorescence, no odor or show. Approximate base of Kansas City at 2325'.

2340'-2350': Shale, dark gray to black, Lenepah Limestone present in this sample. Traces of Cleveland Sandstone showing up in this sample, light gray, fine grained, well rounded and sorted. Overall, less than 10% variegated, pinpoint to even mineral fluorescence.

2350'-2400': Cleveland Sandstone section, light gray, very fine grained, well sorted and rounded, extremely friable, micritic in part, argillaceous in part, good inter-granular porosity, traces of medium-gray shale and limestone present throughout this interval. At approximately 2347' a 300-unit gas kick was observed, believed to be the Cleveland Sandstone.

2400'-2410': Limestone, tan to pale yellowish-brown, fine crystalline, mottled, sucrosic, fair inter-crystalline porosity, traces of medium to pale green shale, less than 3% dull, even, yellow mineral fluorescence. No petroliferous odor or show.

2410'-2420': Sandstone, very fine to fine grained, well sorted with sub-rounded to well-rounded grains, good friability, slightly micaceous, limestone and shale present in this interval, overall less than 7% even dull yellow mineral fluorescence.

2420'-2440': Shale, medium-dark gray, slightly silty, micaceous, 10% even dull yellow mineral fluorescence. No petroliferous odor or show.

2440'-2455': Limestone, tan to pale yellow-brown, fine to coarse crystalline, fairly friable, good inter-crystalline porosity in some samples, traces of black bitumen on few limestone samples, black shale present, carbonaceous with traces of vitrinite coal present.

Approximately 40% even to mottled, dull yellow mineral fluorescence. Slight flash odor observed, no show. At 2443', a 300-unit gas kick was observed.

TD 2455' @ 11:00 am, January 25<sup>th</sup>, 2011.



(Mark D. Brecheisen)