

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION



**ORIGINAL**

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 # 33711  
Name: B-C Steel, LLC  
Address 1: 209 N FRY  
Address 2: P.O. BOX 126  
City: YATES CENTER State: KS Zip: 66783 +  
Contact Person: BERT CARLSON  
Phone: (620) 625-2999  
CONTRACTOR: License # 433737  
Name: HAT DRILLING RIG#2  
Wellsite Geologist: MARK BRECHEISEN  
Purchaser: NAT-GAS AND CONSOLIDATED

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Designate Type of Completion:  
 New Well     Re-Entry     Workover  
 Oil     WSW     SWD     SLOW  
 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 #: \_\_\_\_\_  
MAR 15 2001    MAR 27 2001    MAR 29 2011  
Spud Date or    Date Reached TD    Completion Date or  
Recompletion Date       Recompletion Date

API No. 15 - 035-24385-0000  
Spot Description: \_\_\_\_\_  
SE-SE-SW Sec. 18 Twp. 31 S. R. 8  East  West  
330 Feet from  North /  South Line of Section  
2475 2600 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE  NW  SE  SW  
County: COWLEY  
Lease Name: COPPER HIATT Well #: 18-1A  
Field Name: RADCLIFF NORTH EAST  
Producing Formation: LANCING  
Elevation: Ground: 1412 Kelly Bushing: 1417  
Total Depth: 2496 Plug Back Total Depth: SURFACE  
Amount of Surface Pipe Set and Cemented at: 457.50 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: EVAPORATED  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**INSTRUCTIONS:** An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

**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.  
Signature: [Signature]  
Title: agent Date: 5/24/2011

**KCC Office Use ONLY**  
 Letter of Confidentiality Received  
Date: \_\_\_\_\_  
 Confidential Release Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ATT - Dig - 8/18/11

Operator Name: B-C Steel, LLC Lease Name: COPPER HIATT Well #: 18-1A  
 Sec. 18 Twp. 31 S. R. 8  East  West County: COWLEY

**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  Yes  No  
 (Attach Additional Sheets)

Samples Sent to Geological Survey  Yes  No

Cores Taken  Yes  No

Electric Log Run  Yes  No

Electric Log Submitted Electronically  Yes  No  
 (If no, Submit Copy)

Log Formation (Top), Depth and Datum  Sample  
 Name Top Datum

List All E. Logs Run:

**CEMENT BOND AND COMPOSITE LOG**

CASING RECORD <input checked="" 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
LONGSTRING	6 3/4	4 1/2	9.5	2496	QUICKSET	80	KOL-SEL#5
SURFACE	4 1/2	2 3/8		457.50	QUICKSET	3	

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				

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
13	13 1/2 SLICK STICK GUN 2272	RECEIVED JUL 28 2011 KCC WICHITA	2278

TUBING RECORD:	Size: <u>2 3/8</u>	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR. <u>MAY 1</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> 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 (If vented, Submit ACO-18.)	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled (Submit ACO-5) <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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**CONSOLIDATED**  
Oil Well Services, LLC



**ENTERED**

TICKET NUMBER 30312

LOCATION Eureka, KS

FOREMAN Shannon Feck

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

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

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY																
3-30-11	1152	Cooper-Hiatt 18-1A	18	31 S	8 E	Cowley																
CUSTOMER B.C. Steel LLC			<table border="1"> <thead> <tr> <th>TRUCK #</th> <th>DRIVER</th> <th>TRUCK #</th> <th>DRIVER</th> </tr> </thead> <tbody> <tr> <td>520</td> <td>John</td> <td></td> <td></td> </tr> <tr> <td>515</td> <td>Calin</td> <td></td> <td></td> </tr> <tr> <td>437</td> <td>Jim</td> <td></td> <td></td> </tr> </tbody> </table>				TRUCK #	DRIVER	TRUCK #	DRIVER	520	John			515	Calin			437	Jim		
TRUCK #	DRIVER	TRUCK #					DRIVER															
520	John																					
515	Calin																					
437	Jim																					
MAILING ADDRESS 209 N. Fry																						
CITY Yates Center																						
STATE KS		ZIP CODE 66783																				

JOB TYPE longstring 0 HOLE SIZE 6 3/4 HOLE DEPTH 2496 CASING SIZE & WEIGHT 4 1/2" @ 9.5#  
 CASING DEPTH \_\_\_\_\_ DRILL PIPE N/A TUBING N/A OTHER \_\_\_\_\_  
 SLURRY WEIGHT 13.6 SLURRY VOL 25 BBL WATER gal/sk 8.0 CEMENT LEFT in CASING NONE  
 DISPLACEMENT 38.7 DISPLACEMENT PSI 900 MIX PSI 250 RATE 5 BBL/min

REMARKS: Safety meeting rig up to 4 1/2 casing. Break circulation with 5 BBL Fresh water mixed 90 sks thickset cement w/5# kol-seal/sk + 1/2 lb phenosol/sk @ 13.6#/gal yield 1.69. washout pump & lines, shut down, release 4 1/2 rubber plug. Displace with 38.7 BBL fresh water. Final pump pressure 900 psi bump plug to 1300 psi. wait 2 minutes, release pressure. Good circulation @ all times.

"Thanks Shannon & Crew"

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	975.00	975.00
5406	55	MILEAGE	4.00	220.00
1126 A	80 SKS	thickset cement	18.30	1464.00
1110 A	400 #	5# Kol-Seal/SK	.44	176.00
1107 A	40 #	1/2# phenosol/SK	1.22	48.80
5407	4.4 tons	ton mileage bulk truck	M/C	330.00
5502 C	6 hrs	90 BBL Vac truck	90.00	540.00
1123	3000 gals	city water	@ 15.60/gal	46.80
4404	1	4 1/2 Rubber plug	42.00	42.00
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			Sub total	3842.60
			6.8% SALES TAX	261.20
			ESTIMATED TOTAL	4103.80

Revin 3737

AUTHORIZATION Brent Hartman TITLE Well sup DATE 3-30-11

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.

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

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Geological Report

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

**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': Stalnaker 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.

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- 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 petroliferous 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 petroliferous 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 petroliferous 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 petroliferous 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 petroliferous 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

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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.

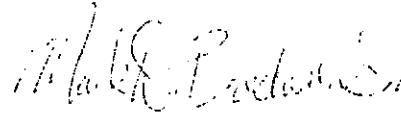
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Approximately 40% even to mottled, dull yellow mineral fluorescence. Slight flash odor observed, no show. At 2443', a 300-unit gas kick was observed.

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



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(Mark D. Brecheisen)

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