

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1  
September 1999  
Form Must Be Typed

*See  
Drill  
Log*

WELL COMPLETION FORM

WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 33325  
Name: Petroleum Development Corporation  
Address: 1775 Sherman Street, Suite 3000  
City/State/Zip: Denver, CO 80203  
Purchaser: N/A  
Operator Contact Person: Larry Robbins  
Phone: (303) 860-5800  
Contractor: Name: Senaal Drilling, Co. LLC & Advanced Drilling Technologies, LLC  
License: 33775 & 33532  
Wellsite Geologist: N/A

Designate Type of Completion:  
 New Well  Re-Entry  Workover  
 Oil  SWD  SLOW  Temp. Abd.  
 Gas  ENHR  SIGW  
 Dry  Other (Core, WSW, Expl., Cathodic, 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./SWD  
 Plug Back \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Dual Completion \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Other (SWD or Enhr.?) \_\_\_\_\_ Docket No. \_\_\_\_\_

<u>12/15/2007</u>	<u>12/17/2007</u>	<u>03/13/2008</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 023-20837-0000  
County: Cheyenne  
SE SE NW Sec. 16 Twp. 5 S. R. 42  East  West  
2130 feet from S N (circle one) Line of Section  
2130 feet from E W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
(circle one) NE SE NW SW  
Lease Name: Armknrecht Well #: 22-16  
Field Name: Cherry Creek Niobrara Gas Area  
Producing Formation: Niobrara  
Elevation: Ground: 3690' Kelly Bushing: 3702'  
Total Depth: 1670' Plug Back Total Depth: 1616'  
Amount of Surface Pipe Set and Cemented at 7 joints @ 313 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 AH I NR 3-11-09  
(Data must be collected from the Reserve Pit)  
Chloride content 5000 ppm Fluid volume 50 bbls  
Dewatering method used Evaporation  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: \_\_\_\_\_  
Lease Name: \_\_\_\_\_ License No.: \_\_\_\_\_  
Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West  
County: \_\_\_\_\_ Docket No.: \_\_\_\_\_

**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.

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: Regulatory Agent Date: February 04, 2009  
Subscribed and sworn to before me this 4th day of February, 2009.  
Notary Public: [Signature]  
Date Commission Expires: \_\_\_\_\_ My Commission Expires 10/12/2010

CARRIE EGGLESTON  
NOTARY PUBLIC  
STATE OF COLORADO

**KCC Office Use ONLY**

Letter of Confidentiality Received  
 If Denied, Yes  Date: \_\_\_\_\_  
 Wireline Log Received **RECEIVED**  
 Geologist Report Received **KANSAS CORPORATION COMMISSION**  
 UIC Distribution **FEB 06 2009**  
**CONSERVATION DIVISION**  
**WICHITA, KS**

Operator Name: Petroleum Development Corporation Lease Name: Armknacht Well #: 22-16  
 Sec. 16 Twp. 5 S. R. 42  East  West County: Cheyenne

**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 copy of all Electric Wireline 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  
 (Submit Copy)

List All E. Logs Run:

CDL, CNL, Dual Induction, CBL

Log Formation (Top), Depth and Datum  Sample

Name Niobrara Top 1451' Datum

RECEIVED  
 KANSAS CORPORATION COMMISSION  
 FEB 06 2009  
 CONSERVATION DIVISION  
 WICHITA, KS

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
Surface	10"	7"	17#	313'	Type I/II	75	
Production	6 1/8"	4 1/2"	10.5 #	1639'	Type I/II	75	2% KCL

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
2	1468'-1480'	500 gal 15% HCL, 70 Quality N2 foam, 335 bbls Lightning 15# fluid system, 96080 lbs 12/20 mesh Ottawa Sand 4000 lbs SB Excel resin coated sand 273 MSCF N2	1468'-1480'

TUBING RECORD	Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Date of First, Resumerd Production, SWD or Enhr.	Producing Method
Production Pending	<input type="checkbox"/> Flowing <input 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  Vented  Sold  Used on Lease (If vented, Submit ACO-18.)

METHOD OF COMPLETION  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify) \_\_\_\_\_

Production Interval \_\_\_\_\_

SCHAAL DRILLING, CO.  
PO BOX 416  
BURLINGTON, CO. 80807  
719-346-8032  
FIELD REPORT  
SURFACE CASING, DRILLING AND CEMENTING

DRILLING DATE 12-15-07

WELL NAME & LEASE # Armknecht 22-16

MOVE IN, RIG UP, DIG PITS ETC. DATE 12-13-07 TIME 11:30 AM PM

SPUD TIME 9:30 AM PM SHALE DEPTH 215 TIME 11:15 AM PM

HOLE DIA. 10 FROM 0 TO 305 TD TIME 12:30 AM PM

CIRCULATE, T.O.O.H., SET 300.00 FT CASING 313.00 KB FT DEPTH

7 JOINTS 7 OD #/FT 14 15.5 17 20 23

PUMP 75 SAC CEMENT 471 GAL.DISP. CIRC. 3 BBL TO PIT

PLUG DOWN TIME 2:30 AM PM DATE 12-15-07

CEMENT LEFT IN CSG. 30 FT TYPE: PORTLAND CEMENT I/II ASTM C 150  
CENTRALIZER 1 CEMENT COST \$ 1313.35

ELEVATION 3690  
+12KB 3702

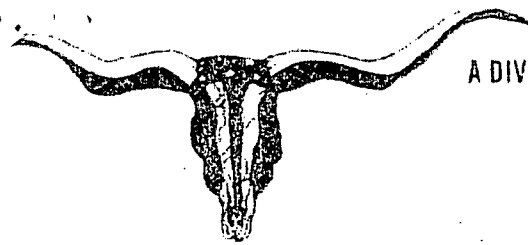
PIPE TALLY

1. 42.95  
2. 43.00  
3. 42.75  
4. 42.85  
5. 42.92  
6. 42.70  
7. 42.83  
8.  
9.  
10.  
11.  
12.  
13.  
14.  
15.  
16.  
TOTAL 300.00

RECEIVED  
KANSAS CORPORATION COMMISSION

FEB 06 2009

CONSERVATION DIVISION  
WICHITA, KS



A DIVISION OF ADVANCED DRILLING TECHNOLOGIES, LLC.

**LONGHORN CEMENTING CO.**

P.O. BOX 203 YUMA, COLORADO 80759  
Phone: 970-848-0799 Fax: 970-848-0798

DATE 12-18-07 TICKET NO. 1428

DATE OF JOB	DISTRICT	NEW WELL <input checked="" type="checkbox"/>	OLD WELL <input type="checkbox"/>	PROD <input type="checkbox"/>	INJ <input type="checkbox"/>	WDW <input type="checkbox"/>	CUSTOMER ORDER NO.
CUSTOMER <u>PDX</u>		LEASE <u>ArmKnecht 22-16</u>					WELL NO.
ADDRESS		COUNTY	STATE				
CITY	STATE	SERVICE CREW <u>MIKE-Brad</u>					
AUTHORIZED BY		EQUIPMENT <u>UNIT #111</u>					
TYPE JOB: <u>Logging</u>	DEPTH FT.	CEMENT DATA: BULK <input type="checkbox"/>	SAND DATA:	SACKS <input type="checkbox"/>	TRUCK CALLED	DATE	AM/PM
SIZE HOLE: <u>6 1/8</u>	DEPTH FT.	SACKS BRAND TYPE	% GEL	ADMIXES	ARRIVED AT JOB		AM/PM
SIZE & WT. CASTING <u>4 1/2</u>	DEPTH FT.	<u>75</u> <u>A</u> <u>111</u>			START OPERATION		AM/PM
SIZE & WT. D PIPE OR TUBING	DEPTH FT.				FINISH OPERATION		AM/PM
TOP PLUGS	TYPE:	WEIGHT OF SLURRY: <u>13.4</u>	LBS. / GAL.	LBS. / GAL.	RELEASED		AM/PM
		VOLUME OF SLURRY <u>1.35 cu ft / sk</u>					
<u>FBID 1624</u>	MAX DEPTH FT.	SACKS CEMENT TREATED WITH <u>2</u> % OF <u>calcium</u>			MILES FROM STATION TO WELL		
		MAX. PRESSURE		PS.I.			

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only these terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without written consent or an officer of Advanced Drilling Technologies, LLC.

SIGNED: \_\_\_\_\_  
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM / PRICE REF. NUMBER	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
001-2	Depth Charge - Cement - Military Asper Contact				4200.00
300-2	4 1/2 Accuser Floats	0			—
300-4	4 1/2 Latch down Baffle plug	0			—
300-6	4 1/2 Centralizers	0			—
300-8	4 1/2 Scratchers	0			—
300-12	7" Centralizers	1			36.44
400-2	Calcium	50 LB			50.00
400-4	KCL	150 LB			60.45
					4846.89
				RECEIVED KANSAS CORPORATION COMMISSION	
				FEB 06 2009	
0606	Freshwater 20 B&B's				
0605	Cement 17.5				
0615	Displacement 25.8				
0630	Bump plug @ 200psi				
				CONSERVATION DIVISION WICHITA, KS	

ACID DATA:			
	GALLONS	%	ADDITIVES
HCL			
HCL			

SERVICE & EQUIPMENT	% TAX ON \$	
MATERIALS	% TAX ON \$	
<b>TOTAL</b>		

SERVICE REPRESENTATIVE  
FIELD SERVICE ORDER NO.

*[Signature]*

THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED

*[Signature]*