

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
September 1999
Form Must Be Typed

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

ORIGINAL

Operator: License # 32429
 Name: CRAWFORD OIL & GAS, INC.
 Address: P. O. Box 51
 City/State/Zip: Coldwater, Kansas 67029
 Purchaser: ANR
 Operator Contact Person: _____
 Phone: (316) 582-2612
 Contractor: Name: DUKE DRILLING CO., INC.
 License: 5929
 Wellsite Geologist: Jon D. Christensen
 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>02-22-00</u>	<u>03-08-00</u>	<u>3-30-2000</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 033-21052 0000
 County: Comanche
 SW - SW-NE - Sec. 30 Twp. 33 S. R. 18 East West
2310 feet from S / (circle one) Line of Section
2310 feet from (circle one) W Line of Section
 Footages Calculated from Nearest Outside Section Corner:
 (circle one) NE SE NW SW
 Lease Name: O. DEEWALL Well #: 1
 Field Name: _____
 Producing Formation: MISSISSIPPIAN
 Elevation: Ground: 1948' Kelly Bushing: 1956'
 Total Depth: 6100' Plug Back Total Depth: 5469'
 Amount of Surface Pipe Set and Cemented at 665 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/ _____ 2000 _____ sx cmt.
 Drilling Fluid Management Plan ALT 1 9/29/00
 (Data must be collected from the Reserve Pit)
 Chloride content 12,400 ppm Fluid volume 500 bbls
 Dewatering method used haul off
 Location of fluid disposal if hauled offsite: _____
 Operator Name: GORDON KEANE
 Lease Name: HARMON License No.: 5993
 Quarter NW Sec. 11 Twp. 33 S. R. 20 East West
 County: Comanche Docket No.: 22304

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: Mark P. Price
 Title: Supt. Operations Date: 6-13-00
 Subscribed and sworn to before me this 13 day of June
2000
 Notary Public: Pamela Price
 Date Commission Expires: Feb. 27, 2004



KCC Office Use ONLY

Letter of Confidentiality Attached

If Denied, Yes Date: _____

Wireline Log Received

Geologist Report Received

UIC Distribution

Operator Name: CRAWFORD OIL & GAS, INC. Lease Name: O. DEEWALL Well #: 1
 Sec. 30 Twp. 33 S. R. 18 East West County: Comanche

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, lime 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 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Submit Copy)</i> List All E. Logs Run: <u>HIGH RESOLUTION</u> <u>COMA NEUTRON</u>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:70%;">Name</td> <td style="width:15%;">Top</td> <td style="width:15%;">Datum</td> </tr> <tr> <td>HEEBNER</td> <td>4344</td> <td></td> </tr> <tr> <td>DRUM</td> <td>4779</td> <td></td> </tr> <tr> <td>BASE KC</td> <td>5044</td> <td></td> </tr> <tr> <td>MARMATON</td> <td>5051</td> <td></td> </tr> <tr> <td>ALTAMONT</td> <td>5111</td> <td></td> </tr> <tr> <td>PAWNEE</td> <td>5152</td> <td></td> </tr> <tr> <td>CHEROKEE SHALE</td> <td>5194</td> <td></td> </tr> <tr> <td>MISSISSIPPI</td> <td>5277</td> <td></td> </tr> <tr> <td>VIOLA</td> <td>5999</td> <td></td> </tr> </table>	Name	Top	Datum	HEEBNER	4344		DRUM	4779		BASE KC	5044		MARMATON	5051		ALTAMONT	5111		PAWNEE	5152		CHEROKEE SHALE	5194		MISSISSIPPI	5277		VIOLA	5999	
Name	Top	Datum																													
HEEBNER	4344																														
DRUM	4779																														
BASE KC	5044																														
MARMATON	5051																														
ALTAMONT	5111																														
PAWNEE	5152																														
CHEROKEE SHALE	5194																														
MISSISSIPPI	5277																														
VIOLA	5999																														

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	# Sacs Used	Type and Percent Additives
Conductor		20"		40'	10Sk Grout		
Surface	12-1/4"	8-5/8"	24#	665'	Lite 60/40 Poz.	190 130	3%cc, 1/2# Floseal
Production	7-7/8"	4-1/2"	10/5#	5534'	Common	120	10% Salt

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		Acid, Fracture, Shot, Cement Squeeze Record	
	Specify Footage of Each Interval Perforated		(Amount and Kind of Material Used)	
4 SPF	5344-50		1000 GAL 15% ACID	
4 SPF	5302-06		90 T. CO ₂	
4 SPF	5294-96		160 SX SAND	
4 SPF	5282-90		400 Bbl. H ₂ O	
4 SPF	5270-74			

TUBING RECORD	Size <u>2 3/8"</u>	Set At	Packer At <u>NA</u>	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---------------	--------------------	--------	---------------------	---

Date of First, Resumerd Production, SWD or Enhr. <u>WOPL</u>	Producing Method <input checked="" 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
		<u>300 Mcf</u>			

Disposition of Gas <input type="checkbox"/> Vented <input checked="" type="checkbox"/> Sold <input type="checkbox"/> Used on Lease	METHOD OF COMPLETION <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify)
--	--



15-033-21052-0000

JOB SUMMARY

ORDER NO. 70006

TICKET # **462234** TICKET DATE **2-23-00**

REGION North America	NWA/COUNTRY U.S.A	BDA / STATE Ks	COUNTY Comanche
MBU ID / EMP # 100102 106824	EMPLOYEE NAME R. Whentley	PSL DEPARTMENT 2E	ORIGINAL
LOCATION Liberal Ks	COMPANY Duke Drilling Co	CUSTOMER REP / PHONE	
TICKET AMOUNT 6689.77	WELL TYPE 01	API / UWI # 170001 F10-10 4/00	
WELL LOCATION 170001 F10-10 4/00	DEPARTMENT 2E	JOB PURPOSE CODE 010	
LEASE / WELL # 1	SEC / TWP / RNG 30 335 18W		

HES EMP NAME/EMP#(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#(EXPOSURE HOURS)	HRS	HES EMP NAME/EMP#(EXPOSURE HOURS)	HRS
R. Whentley 106824	4						
D. McNamee 106322	4						
R. Ferguson	4						

HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES	HES UNIT NUMBERS	R/T MILES
420621	254						
54038 77941	254						
54067 6610	314						

Form Name _____ Type: _____
 Form Thickness _____ From _____ To _____
 Packer Type _____ Set At _____
 Bottom Hole Temp. _____ Pressure _____
 Misc. Data _____ Total Depth _____

DATE	CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
2-23-00	3.30	8.20	10.55	2/23/00

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY	MAKE
Float Collar		
Float Shoe		
Guide Shoe		
Centralizers	2	HES
Bottom Plug		
Top Plug	1	HES
Head	1	HES
Packer		
Other RadPie	1	HES

WELL DATA

	NEW/USED	WEIGHT	SIZE	FROM	TO	MAX ALLOW
Casing	new	24	8 5/8	100	665	1000
Liner						
Liner						
Tbg/D.P.						
Tbg/D.P.						
Open Hole						SHOTS/FT.
Perforations						
Perforations						
Perforations						

MATERIALS

Treat Fluid	Density	Lb/Gal
Disp. Fluid	Density	Lb/Gal
Prop. Type	Size	Lb.
Prop. Type	Size	Lb.
Acid Type	Gal.	%
Acid Type	Gal.	%
Surfactant	Gal.	ln
NE Agent	Gal.	ln
Fluid Loss	Gal/Lb	ln
Gelling Agent	Gal/Lb	ln
Fric. Red.	Gal/Lb	ln
Breaker	Gal/Lb	ln
Blocking Agent	Gal/Lb	
Perfpac Balls	Qty.	
Other		
Other		
Other		
Other		

HOURS ON LOCATION		OPERATING HOURS		DESCRIPTION OF JOB
DATE	HOURS	DATE	HOURS	
2-23		2-23		2000 JUL 15 10 41 AM KANSAS STATE NEW YORK NEW YORK NEW YORK NEW YORK NEW YORK NEW YORK NEW YORK NEW YORK NEW YORK
TOTAL		TOTAL		

HYDRAULIC HORSEPOWER
 Avail. _____ Used _____
AVERAGE RATES IN BPM
 Disp. _____ Overall _____
CEMENT LEFT IN PIPE
 Reason **Insect**

CEMENT DATA

STAGE	SACKS	CEMENT	BULK/SKS	ADDITIVES	YIELD	LBS/GAL
1	190	HLC	B	3% c/c 1/2 1/2 Fluor	2.06	12.3
1	130	4060 202 H	B	3% c/c 1/2 1/2 Fluor	1.33	14.2

Circulating _____	Displacement _____	Preflush: Gal - BBI _____	Type _____
Breakdown _____	Maximum _____	Load & Bkdn: Gal - BBI _____	Pad: BBI - Gal _____
Average _____	Frac Gradient _____	Treatment Gal - BBI _____	Disp: BBI - Gal 39.4
Shut In: Instant _____	5 Min _____ 15 Min _____	Cement Slurr Gal - BBI 114.7	
		Total Volume Gal, BBI _____	

Frac Ring #1 _____	Frac Ring #2 _____	Frac Ring #3 _____	Frac Ring #4 _____
--------------------	--------------------	--------------------	--------------------

THE INFORMATION STATED HEREIN IS CORRECT CUSTOMER'S REPRESENTATIVE SIGNATURE *Mark Hill*

15-033-21052-0000

TREATMENT REPORT 02040



Customer ID		Date	
Customer <i>DAVE DEEWALL CO. INC.</i>		<i>3-9-00</i>	
Lease <i>O. DEEWALL</i>		Lease No.	Well # <i>1</i>
Station <i>Pratt, KS</i>	Casing <i>4 1/2</i>	Depth	County <i>COMANCHE</i>
State <i>KS</i>		Legal Description <i>20" 333-18W</i>	

Job *LONGSTRING - NEW WELL*

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size <i>4 1/2</i>	Tubing Size	Shots/FT		Acid		RATE	PRESS	ISIP
Depth <i>5534</i>	Depth	From	To	Pre Pad		Max		5 Min.
Volume	Volume	From	To	Pad		Min		10 Min.
Max Press	Max Press	From	To	Frac		Avg		15 Min.
Well Connection	Annulus Vol.	From	To			HHP Used		Annulus Pressure
Plug Depth	Packar Depth	From	To	Flush		Gas Volume		Total Load

Customer Representative *MINK PENNECK* Station Manager *DAVE ANTRY* Treater *KEVIN GERDLEY*

Service Units	<i>107</i>	<i>23</i>	<i>34</i>	<i>72</i>				
---------------	------------	-----------	-----------	-----------	--	--	--	--

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>1000</i>					<i>ON LOCATION</i>
					<i>RUN 130 JTS. 4 1/2" P56 - 5569.95'</i>
					<i>RUN BASKET TYPE SHOE, LATCH</i>
					<i>DOWN BATTLE ON 1 1/2" COLLAR.</i>
					<i>MENTIONER - 1-3-5-7-9-11</i>
					<i>SET CASING AT 5534'</i>
					<i>DROP BALL AND SET BASKET</i>
					<i>SHOE WITH REG PUMP.</i>
					<i>OPRO 1 HOUR</i>
<i>7:05</i>	<i>300</i>		<i>20</i>	<i>6</i>	<i>PUMP 20 BBL "A" FLUSH</i>
			<i>5</i>	<i>6</i>	<i>PUMP 5 BBL H2O SPACER</i>
			<i>0</i>	<i>5</i>	<i>START MIX CEMENT (120 SLS)</i>
<i>150</i>			<i>31</i>	<i>5</i>	<i>FINISH MIX CEMENT CEMENT</i>
			<i>0</i>	<i>8</i>	<i>SHUT DOWN - WASH LINE - DEPT PUMP</i>
	<i>0</i>		<i>0</i>	<i>8</i>	<i>START HCL H2O DISP</i>
	<i>400</i>			<i>8</i>	<i>START LEFT CEMENT</i>
	<i>700</i>			<i>4</i>	<i>SLOW RATE</i>
<i>7:38</i>	<i>1500</i>		<i>88</i>	<i>4</i>	<i>PUMP DOWN - WASH - HOLD</i>
					<i>PUMP PH & pH - (75 SLS CEMENT)</i>
<i>1800</i>					<i>JOB COMPLETE - THANKS KEVIN</i>

10244 NE Hwy 61 • P. O. Box 8643 • Pratt, KS • 67124-8643 • Phone (316) 672-1201 • FAX (316) 672-5383