

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 SIOW 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>03-06-00</u>	<u>03-19-00</u>	<u>4-10-00</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 033-21054-0000
 County: Comanche
50' E SE SE NW Sec. 27 Twp. 33 S. R. 18 East West
2310 feet from S (N) (circle one) Line of Section
2360 feet from E (W) (circle one) Line of Section
 Footages Calculated from Nearest Outside Section Corner:
 (circle one) NE SE (NW) SW
 Lease Name: L. DEEWALL Well #: 1
 Field Name: _____
 Producing Formation: MISSISSIPPIAN
 Elevation: Ground: 1976' Kelly Bushing: 1989'
 Total Depth: 6040' Plug Back Total Depth: 5380'
 Amount of Surface Pipe Set and Cemented at 664' 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 A/H-1, 8-24-00 v.c.
 (Data must be collected from the Reserve Pit)
 Chloride content 12,000 ppm Fluid volume 600 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: [Handwritten Signature]
 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. 29, 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: L. DEEWALL Well #: 1
 Sec. 27 Twp. 33S 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, 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 <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>COMP. NEUTRON</u>	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum <p style="font-size: 2em; text-align: center;"><i>See attached.</i></p>
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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
Conductor		20"		43'	10SK Grout		
Surface	12-1/4"	8-5/8"	24#	664'	Lite Class A	250 100	3%cc 2%gel, 3%cc
Production	7-7/8"	4-1/2"	10'5#	5550'	A-Con	160	2%gel, 5#Gil, 1/2%FLA, 3/4%G. Block

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 checked="" type="checkbox"/> Plug Off Zone	5422-36	COMMON	50	10% SALT

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type		Acid, Fracture, Shot, Cement Squeeze Record		Depth
	Specify Footage of Each Interval Perforated		(Amount and Kind of Material Used)		
4SPF	5422-36		1000 GAL 15% ACID	500 G. ACID	POST SQUEEZE
4SPF	5321-28		90 T. CO ₂	60 T. CO ₂	
6SPF	5269-87		160 SK SAND	100 SK SAND	
			400 Bbl H ₂ O	200 Bbl H ₂ O	

TUBING RECORD	Size <u>2 3/8"</u>	Set At <u>5235</u>	Packer At <u>NA</u>	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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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)
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Estimated Production Per 24 Hours	Oil Bbls. <u>3 Bbls.</u>	Gas Mcf <u>300 MCF</u>	Water Bbls. <u>10 Bbls.</u>	Gas-Oil Ratio	Gravity
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Disposition of Gas <input type="checkbox"/> Vented <input checked="" type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Sumit ACO-18.)</i>	METHOD OF COMPLETION <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Stacked <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify) _____
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GEOLOGIC
REPORT
LOG

API # 15-033-21054

COMPANY CRAWFORD
OIL & GAS, INC.

WELL # 1 L. DEEWALL

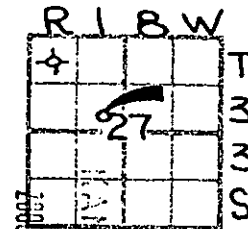
FIELD WILDCAT

LOCATION 50'E, SE SE NW

SEC. 27 TWP. 33S RGE. 18W

COUNTY COMANCHE

STATE KANSAS



PRODUCTION MISSISSIPPI

ELEVATION KB 989'

DE 986'

U 976'

Drilling Measured From: E & B

Samples Saved From 3800 To: 6040

Drilling Time From 3800 To: 6040

Samples Examined From 4000 To: 6040

Geological Supervision From 4150 To Total Dept.

Wellsite Geologist JON CHRISTENSEN

Electrical Surveys BAKER ATLAS

DIL W/ SP & GR, FDC/CNL

W/CALIPER & PE, MICROLOG

OPERATOR CRAWFORD OIL & GAS

CONTRACTOR DUKE DRIG. CO., RIG #7

CONV: 3/6/2000 COMP: 3/19/2000

CASING RECORD

SURF: 20" COND. e 40'
8 5/8" e 664' w/ 350' PROD: 4 1/2" e

TOTAL DEPTH DRILLERS: 5x. 6040'

TOTAL DEPTH LOG 6034'

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
HEEBNER SHALE	4340'	4334	-2345	+10'
LANSING	4516'	4530	-2541	-16'
DRUM	4772'	4766	-2777	+3'
STARK SHALE	4886'	4878	-2889	+4'
SWOPE	4898'	4894	-2905	FLAT
BASE K.C.	5045'	5037	-3048	+3'
MARMATON	5058'	5048	-3059	+4'
ALTAMONT	5112'	5105	-3116	+5'
PAWNEE	5154'	5144	-3155	+10'
FORT SCOTT	5186'	5178	-3189	+8'
CHEROKEE SHALE	5195'	5188	-3199	+6'
DETRITAL MISS.	5277'	5257	-3268	+17'
MISSISSIPPI	5284'	5264	-3275	+15'
VIOLA	5925'	5938	-3949	NDE

REFERENCE WELL FOR STRUCTURE BIG CHIEF DRIG. CO.

#1 SEYFRIT: CNWNW SEC. 27-T33S-R18W

COMANCHE CO., KANSAS

ALLIED CEMENTING CO., INC

Federal Tax I.D.#

1046 ORIGINAL

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
med lody, ks.

DATE 3-7-00	SEC. 27	TWP. 33s	RANGE 18w	CALLED OUT 12:00 A.M.	ON LOCATION 3:00 A.M.	JOB START 7:30 A.M.	JOB FINISH 11:00 A.M.
LEASE Newall	WELL# 1	LOCATION Coldwater, 5 Sta. Ft. 25-			COUNTY McPherson	STATE KS.	
OLD OR NEW (Circle one)			35-15-1/2E-9K				

CONTRACTOR Duke Drilling Co. OWNER Crawford

TYPE OF JOB surface CSG.

HOLE SIZE 12 1/4 T.D. 667

CASING SIZE 2 5/8 x 24 DEPTH 666

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX 3.5 MINIMUM 1.50

MEAS. LINE SHOE JOINT 27.90

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT Fresh H₂O/

EQUIPMENT

PUMP TRUCK CEMENTER Larry Dreding

343 HELPER Justin Hart

BULK TRUCK

254 DRIVER Mike Rucker

BULK TRUCK

DRIVER

REMARKS:

Pipe on Bottom. Break Circ.

Cement w/ 250 SX ALWt 3%CC

1/4# Flc. Seal. 100 SX. CLASS A + 3%CC

2% Gel. Pump Trip. Shut In

Cement did Circ. ✓

CEMENT

AMOUNT ORDERED 250 SX ALWt. 3%CC

1/4# Flc. Seal. 100 SX. CLASS A + 3%CC

2% Gel.

COMMON @

POZMIX @

GEL @

CHLORIDE @

@

@

@

@

@

HANDLING @

MILEAGE @

SERVICE

DEPTH OF JOB 666

PUMP TRUCK CHARGE

EXTRA FOOTAGE @

MILEAGE @

PLUG 8 5/8 TRP @

@

@

TOTAL

CHARGE TO: Duke Drilling Co.

STREET

CITY STATE ZIP

FLOAT EQUIPMENT

1. Battle Plate @

2. Centralizer @

2. Basket @

@

@

TOTAL

To Allied Cementing Co., Inc.

You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

TAX

TOTAL CHARGE

DISCOUNT IF PAID IN 30 DAYS

SIGNATURE x Kenneth McGuire

x KENNETH M'GUIRE

PRINTED NAME

RECEIVED
KANSAS CORP. COM.
2000 JAN 15 10 42 AM

GENERAL TERMS AND CONDITIONS

DEFINITIONS: In these terms and conditions, "Allied" shall mean Allied Cementing Co., Inc., and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract, "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

—**TERMS:** Unless satisfactory credit has been established, "CUSTOMER" must tender full cash payment to "ALLIED" before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, "CUSTOMER" agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing, in no event shall this Contract provide for interest exceeding the maximum rate of interest that "CUSTOMER" may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the "CUSTOMER" or at the option of "ALLIED," refunded directly to "CUSTOMER." For purposes of this paragraph, ALLIED and CUSTOMER agree that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

—**ATTORNEY FEES:** In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or in any way pertaining to the terms of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limited to, a reasonable sum as and for attorney's fees.

—**PRICES AND TAXES:** All merchandise listed in "ALLIED'S" current price schedule are F.O.B. ALLIED'S local station and are subject to change without notice. All prices are exclusive of any federal, state, local, or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by ALLIED shall be added to the quoted prices charged to CUSTOMER.

—**TOWING CHARGES:** ALLIED will make a reasonable attempt to get to and from each job site using its own equipment. Should ALLIED be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by ALLIED, will be charged to and paid by CUSTOMER.

—**PREPARATION CHARGES:** If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay ALLIED for the expenses incurred by ALLIED as a result of the cancellation.

—**DEADHAUL, CHARGES:** Unless otherwise specified on the front of this Contract, a deadhaul charge as set forth in ALLIED'S current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

—**SERVICE CONDITIONS AND LIABILITIES:** 1. ALLIED carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond ALLIED'S control, ALLIED shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless ALLIED, its officers, agents and employees, from and against any and all claims or suits for:

(A) Damage to property or for bodily injury, sickness, disease, or death, brought by any person, including CUSTOMER and/or the well owner; and:

(B) Oil spills, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with ALLIED'S performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of ALLIED or its employees.

2. With respect to any of ALLIED'S tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to ALLIED at the landing, CUSTOMER shall either recover the lost item without cost to ALLIED or reimburse ALLIED the current replacement cost of the item unless the loss or damage results from the sole negligence of ALLIED or its employees.

3. ALLIED does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

WARRANTIES: 1. ALLIED warrants all merchandise manufactured or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. ALLIED'S obligation under this warranty is expressly limited to repair, replacement, or allowance for credit, at its option, for any merchandise which is determined by ALLIED to be defective. THIS IS THE SOLE WARRANTY OF ALLIED AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESS OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE, CUSTOMER'S sole and only remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein provided, and ALLIED shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.

2. More specifically:

(A) Nothing in this contract shall be construed as a warranty by ALLIED of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.

(B) Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by ALLIED or any interpretation of tests, meter readings, chart information, analysis of research, or recommendations made by ALLIED, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of ALLIED or its employees in the preparation or furnishing of such facts, information or data.

(C) Work done by ALLIED shall be under the direct supervision and control of the CUSTOMER or his agent and ALLIED will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.

