

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: PRG  
Operator Contact Person: Mark Pinnick  
Phone: (316) 582-2612  
Contractor: Name: DUKE DRILLING CO., INC.  
License: 5929  
Wellsite Geologist: Jon 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. \_\_\_\_\_  
3/28/00 4/15/00 4/18/00  
Spud Date or Date Reached TD Completion Date or Recompletion Date

API No. 15 - 033-21076-0000  
County: Comanche  
65' W. SE. SE. SW Sec. 6 Twp. 34 S. R. 18  East  West  
330 feet from (S) / N (circle one) Line of Section  
2245 feet from E / (W) (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
(circle one) NE SE NW SW  
Lease Name: KING Well #: 1  
Field Name: Wildcat  
Producing Formation: Mississippian  
Elevation: Ground: 1895' Kelly Bushing: 1903'  
Total Depth: 6200' Plug Back Total Depth: 5518'  
Amount of Surface Pipe Set and Cemented at 612' 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 cm.

Drilling Fluid Management Plan AH.1, 9-27-00 USC.  
(Data must be collected from the Reserve Pit)  
Chloride content 14,000 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

STATE CORPORATION COMMISSION  
RECEIVED  
JUL 24 2000  
7-24-00  
CONSERVATION DIVISION  
Wichita, Kansas

**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 Pinnick  
Title: Sept. Operations Date: 7-24-00  
Subscribed and sworn to before me this 24<sup>th</sup> day of July,  
19 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

X

Operator Name: CRAWFORD OIL & GAS, INC. Lease Name: KING Well #: 1

Sec. 6 Twp. 34 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  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:  
 High Resolution Induction  
 Spectral Density Neutron  
 Cement Bond

Log Formation (Top), Depth and Datum  Sample

Name Top Datum

*See attached*

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	# Sacs Used	Type and Percent Additives
Conductor		20"		60'	10Sack Grout		
Surface	12-1/4"	8-5/8"	24#	612'	Lite	225	3%cc, 1/4# Floseal
Production	7-7/8"	4-1/2"	10.5#	5569'	AA-2	170	10%salt, 5#gil, 1/2%FLA322

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		Depth
	Specify Footage of Each Interval Perforated		(Amount and Kind of Material Used)		
6 spf	5324-30		1000 Gal 15%acid	90 T CO <sub>2</sub>	
6 spf	5346-50		160 sx sand	400 Bbl. Water	
6 spf	5361-66				

**TUBING RECORD** Size 2 3/8 Set At 5287 Packer At N/A Liner Run  Yes  No

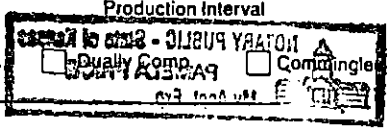
Date of First, Resumerd Production, SWD or Enhr. WOPL Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	0	150	40		

Disposition of Gas  Vented  Sold  Used on Lease  Open Hole  Per.  Other (Specify)

METHOD OF COMPLETION

Production Interval



Vented  Sold  Used on Lease  
 (If vented, Submit ACO-18.)

Open Hole  Per.  Other (Specify)

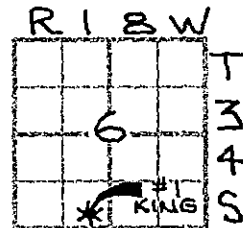
RECEIVED  
 STATE CORPORATION COMMISSION JON D. CHRISTENSEN  
 Consulting Geologist  
 100 S. Main, Suite 200  
 Wichita, KS 67202

GEOLOGIC  
 REPORT  
 LOG

SEP 26 2000  
 9-26-00  
 CONSERVATION DIVISION  
 Wichita Kansas

API # 15-033-21076-0000

COMPANY CRAWFORD  
OIL & GAS, INC.  
 WELL # 1 KING  
 FIELD BUTTERMILK N. EXT.  
 LOCATION 330' E 1/4 & 2245' FWL SW  
 SEC. 6 TWP. 34S RGE. 18W  
 COUNTY COMANCHE  
 STATE KANSAS



OPERATOR CRAWFORD OIL & GAS, INC.  
 CONTRACTOR DUKE DRIG. CO., RIG #1  
 COMM: 3/28/2000 COMP: 4/14/2000  
 CASING RECORD  
 20" COND AT 60'  
 SURF: 8 5/8" e G 1/2 w 1/325 PROD: 4 1/2" e  
 TOTAL DEPTH DRILLERS: 5x. 6200'  
 TOTAL DEPTH LOG 6192'

PRODUCTION MISSISSIPPI  
 ELEVATION KB 1903'  
 DF 1900'  
 GL 1895'  
 Drilling Measured From: KB  
 Samples Saved From 3500' To: 6200'  
 Drilling Time From 3500' To: 6200'  
 Samples Examined From: 4000' To: 6200'  
 Geological Supervision From 4300' To Total Depth  
 Wellsite Geologist JON CHRISTENSEN  
 Electrical Surveys HALLIBURTON:  
DIL W/GR & SP, FDC/CNL  
W/PE & CALIPER, MICROLOG

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
HEEBNER SHALE	4319'	4314	-2411	-1'
LANSING	4526'	4515	-2612	-1'
DRUM	4754'	4750	-2847	-6'
STARK SHALE	4875'	4872	-2969	-6'
SWOPE	4889'	4887	-2984	-7'
BASE K.C.	5032'	5029	-3126	-7'
MARMATON	5043'	5040	-3137	-8'
ALTAMONT	5106'	5100	-3197	-8'
PAWNEE	5148'	5142	-3239	-8'
CHEROKEE SHALE	5192'	5187	-3284	-9'
"DETRITAL MISS"	5276'	5299	-3396	-35'
MISSISSIPPI	5301'	5319	-3416	-20'
COWLEY	5683'	5685	-3782	-24'
VIOLA	6056'	6054	-4151	-21'

REFERENCE WELL FOR STRUCTURE CRAWFORD OIL & GAS  
#1 HOFFMAN TRUST: 60' S, NWNWNW SEC. 8-  
T34S-R18W, COMANCHE CO., KANSAS

# ALLIED CEMENTING CO., INC.

1434  
ORIGINAL

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

SERVICE POINT:  
med ledge

DATE 3-29-00	SEC. 6	TWP. 34S	RANGE 18W	CALLED OUT 5:00 A.M.	ON LOCATION 8:00 A.M.	JOB START 1:00 P.M.	JOB FINISH 2:00 P.M.
LEASE King	WELL# 1	LOCATION Buttermilk 3/4 E. N1S			COUNTY Comanche	STATE KS.	
OLD OR NEW (Circle one)							

CONTRACTOR Duke Drilg. Co.  
 TYPE OF JOB Surface Csg.  
 HOLE SIZE 12 1/4 TD. 712  
 CASING SIZE 8 5/8 X 24 DEPTH 7011'  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX 300 MINIMUM 100  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG.  
 PERFS.  
 DISPLACEMENT Fresh H<sub>2</sub>O

OWNER Crawford  
 CEMENT  
 AMOUNT ORDERED 225sx. ALW + 3%cc  
 1/4" Flt-Seal. 100sx. CLASS A  
 3%cc + 2%Gel  
 COMMON @  
 POZMIX @  
 GEL @  
 CHLORIDE @  
 @  
 @  
 @  
 @  
 @  
 HANDLING @  
 MILEAGE @  
 TOTAL

**EQUIPMENT**

PUMP TRUCK CEMENTER Larry Dredling  
 # 343 HELPER Justin Hart  
 BULK TRUCK  
 # 214 DRIVER Mr. Mike Rucker  
 BULK TRUCK  
 # DRIVER

**REMARKS:**

**SERVICE**

Pipe on Bottom - Break Circ.  
 Pump 225sx. ALW + 3%cc + 1/4"  
 Flt-Seal. 100sx. CLASS A + 3%cc  
 2%Gel. Release Plug Displace  
 Plug w/ Fresh H<sub>2</sub>O. Bump Plug  
 Shutt In. Cement Did Circ. ✓

DEPTH OF JOB  
 PUMP TRUCK CHARGE  
 EXTRA FOOTAGE @  
 MILEAGE @  
 PLUG TRD 8 5/8 @  
 @  
 @

TOTAL

CHARGE TO: Duke Drilg. Co.  
 STREET  
 CITY STATE ZIP

**FLOAT EQUIPMENT**

1-Baffle Plate @  
 1-Centralizer @  
 1-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 *Mike Godfrey*

*Mike Godfrey*  
 PRINTED NAME

## 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 wilful 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.

# ALLIED CEMENTING CO., INC.

1434

ORIGINAL

SERVICE POINT:

med ledge

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

DATE <u>3-29-66</u>	SEC. <u>6</u>	TWP. <u>S4S</u>	RANGE <u>18W</u>	CALLED OUT <u>5:00 A.M.</u>	ON LOCATION <u>8:00 A.M.</u>	JOB START <u>1:00 P.M.</u>	JOB FINISH <u>2:00 P.M.</u>
LEASE <u>Long</u>		WELL# <u>1</u>		LOCATION <u>Buttermilk 3/4 S. N/S</u>		COUNTY <u>Butterfield</u>	STATE <u>K.S.</u>
OLD OR NEW (Circle one)							

CONTRACTOR <u>Duke Drilling Co.</u>		OWNER <u>Crawford</u>
TYPE OF JOB <u>Surface Csg.</u>		
HOLE SIZE <u>12 1/4</u>	T.D. <u>712</u>	CEMENT
CASING SIZE <u>8 5/8 X 24</u>	DEPTH <u>611'</u>	AMOUNT ORDERED <u>2255x. ALLW + 3%cc</u>
TUBING SIZE <u>6</u>	DEPTH	<u>1/4" Flc-Seal. 100sx. CLASS A</u>
DRILL PIPE	DEPTH	<u>3%cc + 2%Gel</u>
TOOL	DEPTH	
PRES. MAX <u>300</u>	MINIMUM <u>100</u>	COMMON _____ @ _____
MEAS. LINE	SHOE JOINT	POZMIX _____ @ _____
CEMENT LEFT IN CSG.		GEL _____ @ _____
PERFS.		CHLORIDE _____ @ _____
DISPLACEMENT <u>Fresh H<sub>2</sub>O</u>		_____ @ _____
<b>EQUIPMENT</b>		
PUMP TRUCK # <u>343</u>	CEMENTER <u>Larry Drilling</u>	_____ @ _____
	HELPER <u>Justin Hart</u>	_____ @ _____
BULK TRUCK # <u>214</u>	DRIVER <u>Mr. Mike Rucker</u>	HANDLING _____ @ _____
BULK TRUCK # _____	DRIVER _____	MILEAGE _____
		TOTAL _____

<b>REMARKS:</b>	<b>SERVICE</b>
<u>Pipe on Bottom - Break Circ.</u>	DEPTH OF JOB _____
<u>Pump 2255x. ALLW + 3%cc + 1/4"</u>	PUMP TRUCK CHARGE _____
<u>Flc-Seal. 100sx. CLASS A + 3%cc</u>	EXTRA FOOTAGE _____ @ _____
<u>2%Gel. Release Plug. Displace</u>	MILEAGE _____ @ _____
<u>Plug w/ Fresh H<sub>2</sub>O. Bump Plug</u>	PLUG TRD <u>8 5/8</u> @ _____
<u>Shut In. Cement D. d. Circ. ✓</u>	_____ @ _____
	_____ @ _____
	TOTAL _____

CHARGE TO: Duke Drilling Co.

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**FLOAT EQUIPMENT**

1-Baffle Plate @ \_\_\_\_\_

1-Centralizer @ \_\_\_\_\_

1-Basket @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

\_\_\_\_\_ @ \_\_\_\_\_

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.

TOTAL \_\_\_\_\_

TAX \_\_\_\_\_

TOTAL CHARGE \_\_\_\_\_

DISCOUNT \_\_\_\_\_ IF PAID IN 30 DAYS

SIGNATURE [Signature] Mike Godfrey

PRINTED NAME

# ALLIED CEMENTING CO., INC.

1434  
**ORIGINAL**  
SERVICE POINT:  
med ledge

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

DATE <u>3-29-62</u>	SEC. <u>6</u>	TWP. <u>S4S</u>	RANGE <u>18W</u>	CALLED OUT <u>5:00 A.M.</u>	ON LOCATION <u>8:00 A.M.</u>	JOB START <u>1:00 P.M.</u>	JOB FINISH <u>3:00 P.M.</u>
LEASE <u>Long</u>		WELL # <u>1</u>		LOCATION <u>B. Hornik 7/4E-N/S</u>		COUNTY <u>Lincoln</u>	STATE <u>K.S.</u>
OLD OR NEW (Circle one)							

CONTRACTOR <u>Duke Drilg. Co.</u>	OWNER <u>Crawford</u>
TYPE OF JOB <u>Surface Casing</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>112</u>
CASING SIZE <u>8 5/8 x 24</u>	DEPTH <u>611'</u>
TUBING SIZE <u>8</u>	DEPTH <u>611'</u>
DRILL PIPE <u>8</u>	DEPTH <u>611'</u>
TOOL <u>8</u>	DEPTH <u>611'</u>
PRES. MAX <u>300</u>	MINIMUM <u>100</u>
MEAS. LINE <u>8</u>	SHOE JOINT <u>8</u>
CEMENT LEFT IN CSG. <u>8</u>	
PERFS. <u>8</u>	
DISPLACEMENT <u>Fresh H<sub>2</sub>O</u>	
<b>EQUIPMENT</b>	
PUMP TRUCK # <u>343</u>	CEMENTER <u>Larry Deering</u>
BULK TRUCK # <u>214</u>	DRIVER <u>Mr. Mike Rosker</u>
BULK TRUCK # <u>8</u>	DRIVER <u>8</u>
	TOTAL <u>8</u>

<b>REMARKS:</b> <u>Pipe on Bottom - Break Circ.</u> <u>12 mp 2 25sx. ALW + 3%cc + 1/4" Flc Seal. 100sx. CLASS A + 3%cc 2%Gel. Release Plug. Displace 1/4 w/ Fresh H<sub>2</sub>O. Bump Plug. Shut In. Cement. Did Circ.</u>	<b>SERVICE</b> DEPTH OF JOB _____ PUMP TRUCK CHARGE _____ EXTRA FOOTAGE @ _____ MILEAGE @ _____ PLUG TRP 8 5/8 @ _____ @ _____ @ _____ TOTAL _____
---	--

CHARGE TO: Duke Drilg. Co.

STREET \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

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.

SIGNATURE Mike Godfrey

**FLOAT EQUIPMENT**

1 - Baffle Plate @ _____
1 - Centralizer @ _____
1 - Basket @ _____
@ _____
@ _____
TOTAL _____
TAX _____
TOTAL CHARGE _____
DISCOUNT _____ IF PAID IN 30 DAYS
PRINTED NAME <u>Mike Godfrey</u>

ORIGINAL

TREATMENT REPORT 01600



Customer ID	Date
Customer DUKE DRILLING CO. INC.	4-15-00
Lease KING	Lease No.
	Well # 1

Field Order # 02437	Station Pratt, KS	Casing 4 1/2	Depth 5555	County COMMERCE	State KS.
Type Job LONG STRING - NEW WELL			Formation	Legal Description 6-345-18W	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 4 1/2	Tubing Size	Shots/Ft		Acid 170 SLS. MIX CEMENT	RATE	PRESS	ISIP	
Depth	Depth	From	To	Pre-Puff 10% SALT 5" CEMENT	Max		5 Min.	
Volume	Volume	From	To	Post 5 S.F.W. - 322, .75" w	Min		10 Min.	
Max Press	Max Press	From	To	Free CNS BLOC	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To	25 SLS 60/40 PER	HHP Used		Annulus Pressure	
Plug Depth	Peaker Depth	From	To	Post PAC 6 KH. & M.H.	Gas Volume		Total Load	

Customer Representative MARK PENNICK	Station Manager DAVE MURRY	Treater KEVIN GORDLEY
---	-------------------------------	--------------------------

Service Units	107	23	34	72
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Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1130					ON LOCATION TD-6200
					RUN 136 JTS 4 1/2 CSG - 5555'
					RUN BASKET TYPE FOOT SHOE, LATCH
					DOWN BAFFLE IN 1 <sup>ST</sup> COLLAR
					CENTRALIZER - 1-4-7-10-13
					BREAK CIRC. ON JT. # 60
					SET Casing AT 5555', DRIP BULL.
1950					SET BASKET SHOE, CIRC. 1 1/2 HOURS
					HOOK UP PUMP TRUCK TO Casing
2120	300		20	6	PUMP 20 bbl 1 <sup>ST</sup> FLUSH
	300		5	4	PUMP 5 bbl H <sub>2</sub> O SPACER
	25 SLS	60/40 PER			PLUG RAT HOLE & INCH 6 HOLE
	300		0	6	START MIX CEMENT
	100		45	6	FINISH MIX CEMENT
	0		0	8	SHUT DOWN - WASH LINE - DROP PLUG
	400			8	START 2% HCL H <sub>2</sub> O DISP.
	800		84	4	LIFTING CEMENT
	800			4	SLOW RATE
2200	1500		87.6	4	PULL DOWN
					RELEASE - PULL HEAD
2230					JOB COMPLETE - THANKS - KEVIN

RECEIVED  
STATE CORPORATION COMMISSION  
JUL 24 2000  
CONSERVATION DIVISION  
Wichita, Kansas



ORIGINAL

TREATMENT REPORT 01600



Customer ID	Date
Customer DUKE DRILLING CO. INC	4-15-00
Lease KING	Lease No.
	Well # 1

Field Order # 02437	Station PRATT, KS	Casing 4 1/2	Depth 5555	County COMANCHE	State KS.
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Type Job LONG STRING - NEW WELL	Formation	Legal Description 6-345-10W
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PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 4 1/2	Tubing Size	Shots/Ft		Acid 170 SLS. HAZ. CEMENT	RATE	PRESS	ISIP	
Depth	Depth	From	To	Drop Pack 10% SALT 5% GEL SOLVENT	Max		5 Min.	
Volume	Volume	From	To	5% SLS. 30% .75" W	Min		10 Min.	
Max Press	Max Press	From	To	HAZ. BLOOD	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To	25 SLS. 60/40 P.O.Z.	HHP Used		Annulus Pressure	
Rug Depth	Pecker Depth	From	To	PLUG H. & M.H.	Gas Volume		Total Load	

Customer Representative MARK PENNICK	Station Manager DAVE MURRY	Treater KEVIN GOODEY
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Service Units	107	23	34	72
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Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1130					ON LOCATION TD-6200
					RUN 136 JTS 4 1/2 OSG - 5555'
					RUN BASKET TYPE FOOT SHOE, LATCH
					DOWN BUZZER IN 15' COLLAR.
					CENTRALIZER - 1-4-7-10-13
					RECEIVED STATE CORPORATION COMMISSION
					APPROX. CONC. ON JT. # 60
1950			III 24 2000		SET CENSURE AT 5555', DRIP BULL.
					SET BASKET SHOE, CONC. 1 1/2 HOURS
					HOOK UP PUMP TRUCK TO CENSURE
2120	300		CONSERVATION DIVISION Wichita Kansas	6	PUMP 20 bbl H <sub>2</sub> O FLUSH
	300		5	4	PUMP 5 bbl H <sub>2</sub> O SPURGE
	25 SLS. 60/40 P.O.Z. PERMANENT				PLUG RAT HOLE & INCREASE HOLE
	300		0	6	START MIX CEMENT
	100		45	6	FINISH MIX CEMENT
	0		0	8	SHUT DOWN - WASH LINE - DROP PLUG
	400			8	START 2% HCL H <sub>2</sub> O DISP.
	800		84	4	LIFTING CEMENT
	1500		87.6	4	SLOW RATE
					PLUG DOWN
					RELEASE - PLUG HEAD
2230					JOB COMPLETE - THANKS - KEVIN

10244 NE Hwy. 61 - P. O. Box 8613 - Pratt, KS 67124-8613 • Phone (316) 672-1201 • FAX (316) 672-5383

**TREATMENT REPORT** 01600



Customer ID	Date
Customer <b>DUKE DRILLING CO. INC.</b>	<b>4-15-00</b>
Lease <b>KING</b>	Lease No. / Well #

Field Order # <b>02437</b>	Station <b>PRATT, KS</b>	Casing <b>4 1/2</b>	Depth <b>5555</b>	County <b>COMING</b>	State <b>KS</b>
Type Job <b>LONG STRING - NEW WELL</b>			Formation	Legal Description <b>6-345-18W</b>	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size <b>4 1/2</b>	Tubing Size	Shots/Ft		Acid <b>170 SLS. ANZ CEMENT</b>	RATE	PRESS	ISIP	
Depth	Depth	From	To	Base Fluid <b>10% SALT 5% GELSONATE</b>	Max		5 Min.	
Volume	Volume	From	To	Fluid <b>5% S.F.P. - 322, .75" W</b>	Min		10 Min.	
Max Press	Max Press	From	To	Free <b>25 SLS. 60/40 PZ</b>	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To	Flush <b>25 SLS. 60/40 PZ</b>	HHP Used		Annulus Pressure	
Plug Depth	Packet Depth	From	To	Flush <b>25 SLS. 60/40 PZ</b>	Gas Volume		Total Load	

Customer Representative <b>MARK PENNICK</b>	Station Manager <b>DAVE MURRY</b>	Treater <b>KEVIN GORDLEY</b>
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Service Units	107	23	34	72
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Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1130					ON LOCATION TD-6200
					RUN 13LJTS 4 1/2 OSG - 5555'
					RUN BASKET TYPE FOOT SHOE, LATCH
					DOWN Baffle IN 15' COLLAR
					CONTROLLER - 1-4-7-10-13
					RECEIVED STATE CORPORATION COMMISSION
					BREAK CIRC. ON JT. #60
1950			24		SET Casing AT 5555', DRIP BULL.
					SET BASKET SHOE, CIRC. 1 1/2 HOURS
					HOOK UP PUMP TRUCK TO CASING
2120	300		20	6	PUMP 20 bbl H <sub>2</sub> O FLUSH
	300		5	6	PUMP 5 bbl H <sub>2</sub> O SPURGE
					25 SLS. 60/40 PZ CEMENT → PUG RAT HOLE & INHOUSE HOLE
	300		0	6	START MIX CEMENT
	100		45	6	FINISH MIX CEMENT
	0		0	8	SHUT DOWN - WASH WELVE - DROP PLUG
	400			8	START 2% HCL H <sub>2</sub> O DISP.
	800		84	4	LIFTING CEMENT
	1500		87.6	4	SLOW RATE
					PUG DOWN
					RELEASE - PUG HEAD
2230					JOB COMPLETE - THANKS - KEVIN

TRILOBITE TESTING L.L.C.

OPERATOR : Crawford Oil & Gas Inc.  
WELL NAME: King #1  
LOCATION : 6-34s-18w Comanche co KS  
INTERVAL : 5319.00 To 5372.00 ft

DATE 04-07-000

KB 1895.00 ft TICKET NO: 12784 DST #1  
GR 1903.00 ft FORMATION: Mississippi  
TD 5372.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30	Rec.	10248	10248	2342		PF Fr. 1425 to 1455 hr
SI 45	Range(Psi )	4400.0	4400.0	4995.0	0.0	0.0 IS Fr. 1455 to 1540 hr
SF 60	Clock(hrs)	12 hr	12 hr	batt.		SF Fr. 1540 to 1640 hr
FS 90	Depth(ft )	5369.0	5369.0	5327.0	0.0	0.0 FS Fr. 1640 to 1810 hr

	Field	1	2	3	4	
A. Init Hydro	2568.0	2553.0	2574.0	0.0	0.0	T STARTED 1059 hr
B. First Flow	53.0	64.0	54.0	0.0	0.0	T ON BOTM 1420 hr
B1. Final Flow	62.0	70.0	66.0	0.0	0.0	T OPEN 1425 hr
C. In Shut-in	335.0	315.0	316.0	0.0	0.0	T PULLED 1811 hr
D. Init Flow	64.0	70.0	52.0	0.0	0.0	T OUT 2100 hr
E. Final Flow	71.0	64.0	65.0	0.0	0.0	
F. Fl Shut-in	359.0	345.0	349.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2536.0	2514.0	2540.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	0	0	I	T		Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 60000.00 lbs
						Initial Str Wt 47000.00 lbs
						Unseated Str Wt 48000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.88 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 0.00 ft
						D.P. Length 5323.00 ft

RECOVERY

Tot Fluid 105.00 ft of 0.00 ft in DC and 105.00 ft in DP  
600.00 ft of Gas in pipe.  
105.00 ft of Drilling mud  
0.00 ft of 100% mud  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of  
0.00 ft of EST.FT. of PAY-----20  
SALINITY 6000.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----

Mud Type Chemical  
Weight 9.10 lb/c  
Vis. 51.00 S/L  
W.L. 9.60 in3  
F.C. 0.20 in  
Mud Drop N

BLOW DESCRIPTION

Initial Flow:  
Strong blow. Bottom of bucket in 30 seconds.

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JUN 24 2000

Initial Shut-In:  
No blow.

Final Flow:  
Strong blow. Bottom of bucket in 35 seconds.

CONSERVATION DIVISION  
Wichita, Kansas

Final Shut-In:  
No blow.

Amt. of fill 2.00 ft  
Btm. H. Temp. 124.00 F  
Hole Condition good  
& Porosity 11.00  
Packer Size 6.75 in  
No. of Packers 2  
Cushion Amt. 0.00 N  
Cushion Type None  
Reversed Out N  
Tool Chased N  
Tester Gary Pevoteaux  
Co. Rep. Jon Christensen  
Contr. Duke Drlg.  
Rig # 1  
Unit #  
Pump T. LCM 4 #/bl

SAMPLES: None  
SENT TO: Caraway/Liberal

Test Successful: Y

\*\*\* TOOL DIAGRAM \*\*\* CONVENTIONAL

WELL NAME: King #1

LOCATION : 6-34s-18w Comanche co KS

TICKET No. 12784 D.S.T. No. 1 DATE 04-07-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 27

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 21

TOTAL TOOL ..... 48

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single 1 Total 32

TOTAL ASSEMBLY ..... 80

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands86 Single Total 5323

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5403

TOTAL DEPTH ..... 5372

TOTAL DRILL PIPE ABOVE K.B. .... 31

REMARKS:  
Comments:

FLUID SAMPLER DATA (not run)

GAS-----		cubic ft
OIL-----		ML.
MUD-----		ML.
WATER-----		ML.
OTHER-----		
PRESSURE-----		PSI
Rw -----	ohms @	deg. F.
CHLORIDES-----		ppm.
GRAVITY-----		deg.API

P.O. SUB		
C.O. SUB @ top of tool		5292
S.I. TOOL Sterling		5298
HMV Sterling		5303
JARS bowen		5308
SAFETY JOINT bowen		5310
PACKER Top		5314
PACKER Btm.		5319
DEPTH 5319		
1 ft.		5320
ANCHOR		
4'perfs & sub to		5324
Alpine rec. @ 5327		
1 jt. pipe to		5356
11'perfs & sub to		5367
AK-1 rec. @ 5369		
BULLNOSE 5 ft. perforated T.D.		5372

# TEST HISTORY

12784 DST#1 KING #1 CRAWFORD OIL & GAS

## Flag Points

	t (Min.)	P (PSIg)
A:	0.00	2573.55
B:	0.00	53.87
C:	29.50	65.86
D:	45.00	315.64
E:	0.00	52.28
F:	58.50	64.53
G:	91.00	348.71
Q:	0.00	2540.07

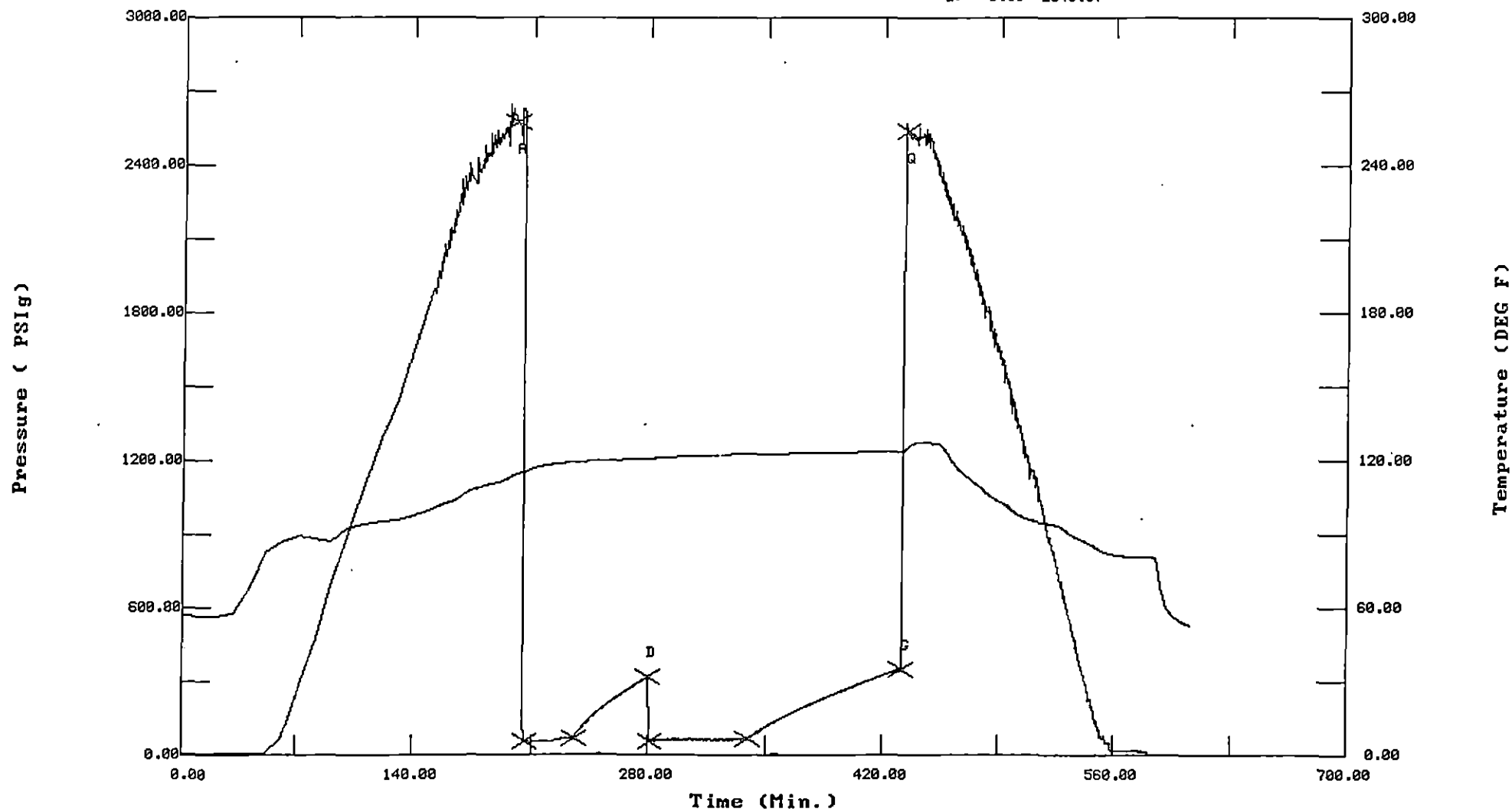
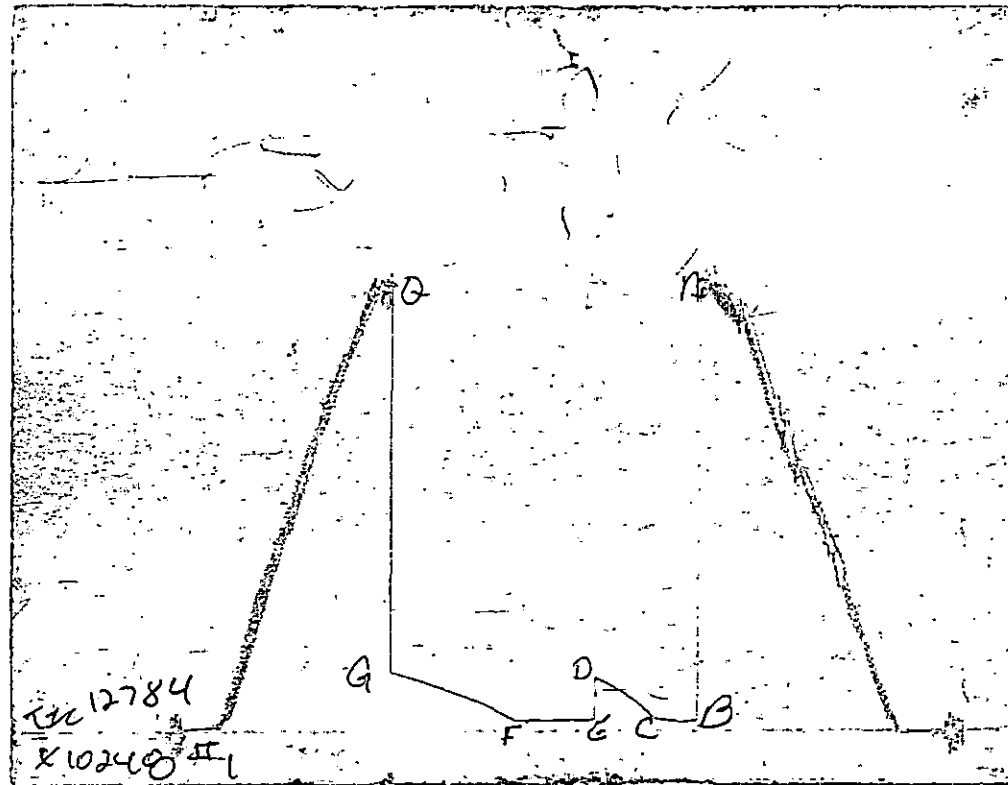


CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

N<sup>o</sup> 12784

Well Name & No. KING #1 Test No. 1 Date 4-7-2000  
 Company Crawford Oil & Gas Inc. Zone Tested Miss.  
 Address P.O. Box 51, Caldwellwater Ks. 67029 Elevation 1903 KB 1895 GL  
 Co. Rep / Geo. Jon Christensen Cont. Duke Dely #1 Est. Ft. of Pay 20 Por.      %  
 Location: Sec. 6 Twp. 34S Rge. 18W Co. Comanche State Ks.  
 No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) yes Evaluation (Y, N)     

Interval Tested 5319 - 5372' Initial Str Wt./Lbs. 47,000 Unseated Str Wt./Lbs. 48,000  
 Anchor Length 53' Wt. Set Lbs. 26,000 Wt. Pulled Loose/Lbs. 60,000  
 Top Packer Depth 5314' Tool Weight 2100<sup>lb</sup>  
 Bottom Packer Depth 5319' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓  
 Total Depth 5372' Wt. Pipe Run None Drill Collar Run None  
 Mud Wt. 9.1 LCM 4<sup>th</sup> Vis. 51 WL 9.66 Drill Pipe Size 4 1/2" x 11 Ft. Run 5323'  
 Blow Description IF: Strong blow, BOB. in 30 secs. ISI: No blow

FF: Strong blow, BOB. in 35 secs. FSI: No blow

Recovery — Total Feet 105 Fluid GIP 600 Ft. in DC      Ft. in       
 Rec. 105 Feet Of Dry Mud. %gas %oil %W  
 Rec.      Feet Of      %gas %oil %W  
 Rec.      Feet Of      %gas %oil %W  
 Rec.      Feet Of      %gas %oil %W  
 Rec.      Feet Of      %gas %oil %W %water %mud  
 BHT 124' °F Gravity N/A °API D<sub>40</sub>      °F Corrected Gravity N/A °API  
 RW N.C. @      °F Chlorides 6,000 ppm Recovery Chlorides 4,000 ppm System

	AK-1	Alpine	psi	Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	2569	2574	psi	2342	0930
(B) First Initial Flow Pressure	53	54	psi	(depth) 5327'	T-Started 1059
(C) First Final Flow Pressure	62	66	psi	Recorder No. 10243	T-Open 1425
(D) Initial Shut-In Pressure	335	316	psi	(depth) 5369'	T-Pulled 1811
(E) Second Initial Flow Pressure	64	52	psi	Recorder No. <u>    </u>	T-Out 2100
(F) Second Final Flow Pressure	71	65	psi	(depth) <u>    </u>	T-Off Location 2210
(G) Final Shut-in Pressure	359	349	psi	Initial Opening 30	Test <u>✓</u> 800
(Q) Final Hydrostatic Mud	2536	2540	psi	Initial Shut-in 45	Jars <u>✓</u> 200
				Final Flow 60	Safety Joint <u>✓</u> 50
				Final Shut-in 90	Straddle <u>    </u>
				<u>1</u>	Circ. Sub <u>    </u>
				<u>1</u>	Sampler <u>    </u>
					Extra Packer <u>    </u>
					Elec. Rec. <u>✓</u> 150

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Jon Christensen

Our Representative Gary Christensen

Mileage       
 Other STAND 34 ✓ 30<sup>00</sup>  
 TOTAL PRICE \$ ✓ 1230<sup>00</sup>