

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: _____
 Operator Contact Person: MARK PINNICK
 Phone: (316) 582-2612
 Contractor: Name: DUKE DRILLING CO.,
 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>03-10-00</u>	<u>03-22-00</u>	<u>3-26-00</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 033-21053-0000
 County: Comanche
 50'S
 50'W - C - SE - SW Sec. 30 Twp. 33 S. R. 18 East West
610 feet from (S) N (circle one) Line of Section
3350 feet from (E) W (circle one) Line of Section
 Footages Calculated from Nearest Outside Section Corner:
 (circle one) NE (SE) NW SW
 Lease Name: O. DEEWALL Well #: 2
 Field Name: BUTTERMILK EAST
 Producing Formation: MISSISSIPPIAN
 Elevation: Ground: 1931' Kelly Bushing: 1939'
 Total Depth: 5500' Plug Back Total Depth: 5412
 Amount of Surface Pipe Set and Cemented at 639 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 ALT 1 JH 7-14-00
 (Data must be collected from the Reserve Pit)
 Chloride content 12,800 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.: 22,304

RECEIVED
 STATE CORPORATION COMMISSION
 CONSERVATION DIVISION
 WICHITA, KANSAS
 JUL 03 2000
 7-3-00

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: SUPERINTENDENT OPERATIONS Date: 6-27-00
 Subscribed and sworn to before me this 27 day of June
2000
 Notary Public: Pamela Price
 Date Commission Expires: 2-29-04



KCC Office Use ONLY

Letter of Confidentiality Attached
 If Denied, Yes Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
 KCC

4

X

Operator Name: CRAWFORD OIL & GAS, INC. Lease Name: O. DEWALL Well #: 2
 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, 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 (Attach Additional Sheets) 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 (Submit Copy) List All E. Logs Run: NEUTRON II CEMENT BOND HIGH RESOLUTION	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name: <u>HEEBNER</u> Top: <u>4329</u> Datum: <u>-2390</u> <u>LANSING</u> <u>4526</u> <u>2587</u> STATE COMMISSION <u>SWOPE</u> <u>4877</u> <u>-2953</u> <u>BASE KC</u> <u>5034</u> <u>3 2000 -3095</u> <u>ALTAMONT</u> <u>5102</u> <u>-3163</u> <u>PAWNEE</u> <u>5144</u> <u>-3205</u> COOPERATION DIVISION <u>FORT SCOTT</u> <u>5177</u> <u>-3238</u> STATE OF KANSAS <u>CHEROKEE SHALE</u> <u>5186</u> <u>-3247</u> <u>MISSISSIPPI</u> <u>5269</u> <u>-3330</u>
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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	# Sacs Used	Type and Percent Additives
Conductor		20"		40'	10SK Grout		
Surface	12-1/4"	8-5/8"	24#	639'	Lite Class A	250 100	2%ge1, 3%cc
Production	7-7/8"	4-1/2"	10.5#	5470'	Common	115	10%Salt, 5#Gill.

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
6 SPF	5290-5302	1000 GAL 15% Acid 160 SK SAND	
6 SPF	5350-64	90 T. CO2 400 BBL H2O	

TUBING RECORD		Size <u>2 3/8"</u>	Set At <u>5339</u>	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 <u>300</u>	Water Bbls.	Gas-Oil Ratio	Gravity

Disposition of Gas		METHOD OF COMPLETION		Production Interval
<input type="checkbox"/> Vented	<input checked="" type="checkbox"/> Sold	<input type="checkbox"/> Used on Lease	<input type="checkbox"/> Open Hole	<input checked="" type="checkbox"/> Dually Comp.
(If vented, Sumit ACO-18.)		<input type="checkbox"/> Other (Specify)	<input type="checkbox"/> Commingled	<u>5290'-5302'</u> <u>5350'-5364'</u>

ALLIED CEMENTING CO., INC.

1049

Federal Tax I.D.# 48-0727860

15-033-21053

ORIGINAL

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

SERVICE POINT:

med. locke, ks

DATE 3-16-00	SEC.	TWP.	RANGE	CALLED OUT 8:30pm	ON LOCATION 12:00am	JOB START 6:15AM	JOB FINISH 7:45AM
LEASE	WELL #2	LOCATION Coldwater St. Jct. 48-E/S	COUNTY Comanche	STATE KS			
OLD OR NEW (Circle one)							

CONTRACTOR Duke Drilling Co.
 TYPE OF JOB Surface Casing
 HOLE SIZE 12 1/4 T.D. 674
 CASING SIZE 8 5/8 x 24 DEPTH 674
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX 500 MINIMUM 200
 MEAS. LINE SHOE JOINT 44 X 3
 CEMENT LEFT IN CSG.
 PERFS.
 DISPLACEMENT Fresh H₂O

OWNER Crawford
 CEMENT
 AMOUNT ORDERED 2505 x 6.5 35.1
 + 3%CC + 1/4# Flo-Seal 100 SX
 CLASS A + 3%CC + 2%Gel

EQUIPMENT
 PUMP TRUCK CEMENTER Larry Drelling
 # HELPER Tim W
 BULK TRUCK DRIVER Mike Rucker
 # DRIVER

COMMON @
 POZMIX @
 GEL @
 CHLORIDE @
 @
 @
 @
 @
 @
 HANDLING @
 MILEAGE @
 TOTAL

REMARKS:
 Pipe on Bottom - Break Circ.
 Pump 2505 x 6.5 35.1 + 3%cc
 1/4# Flo-Seal 100 SX CLASS A + 3%cc
 2% Gel. Release Plug Displace
 39 1/2 bbls. Fresh H₂O Pump Plug
 Shutt In. Cement. Did Circ.

SERVICE
 DEPTH OF JOB 674
 PUMP TRUCK CHARGE
 EXTRA FOOTAGE @
 MILEAGE @
 PLUG TRD 8 5/8 @
 @
 @

2. More specifically:
 by defective materials, products or supplies.
 (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.

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

TREATMENT REPORT

01593

ORIGINAL



Customer ID		Date	
Customer <i>DUKE DRILLING CO. INC.</i>		<i>3-22-00</i>	
Lease <i>O. DEERHILL</i>		Lease No.	Well # <i>2</i>
Old Order # <i>32388</i>	Station <i>Pratt, KS.</i>	Casing <i>4 1/2</i>	Depth <i>5470</i>
Job <i>CONDUITLINE - NEW WELL</i>		County <i>Pratt, KS</i>	State <i>KS</i>
Formation		Legal Description <i>27-335-18W</i>	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size <i>4 1/2</i>	Tubing Size	Shots/FT		Acid		RATE	PRESS	ISIP
Depth	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
Log Depth	Packer Depth	From	To	Flush	Gas Volume			Total Load

Customer Representative: *MIKE PENNICK* Station Manager: *DAVE HUTTON* Treater: *MARK CANNON*

Service Units	<i>107</i>	<i>23</i>	<i>32</i>	<i>70</i>
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Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>1900</i>					<i>CONDUITLINE 3/22/00 TD=5500'</i>
					<i>RUN 126 JIS 4 1/2 OSG = 5470'</i>
					<i>RUN MAIN FULL FRONT SHOE,</i>
					<i>CATCH DOWN Baffle IN 12" COLLAR.</i>
					<i>CENTRALIZER - 1-3-5-7-9</i>
					<i>BRONX CONC. 1/2 WWD END HOE</i>
					<i>SET CASING HT 5470'</i>
					<i>DROP BALL, CONC. HOE</i>
<i>5:07</i>	<i>300</i>		<i>20</i>	<i>5</i>	<i>PUMP 20 BBL 'A' FLUSH</i>
	<i>300</i>		<i>5</i>	<i>5</i>	<i>PUMP 5 BBL H₂O SPACER</i>
					<i>2545 60/40 10Z → RUN ANT HOE & HOUSE HOE</i>
<i>5:25</i>	<i>300</i>		<i>0</i>	<i>5</i>	<i>START MIX CEMENT</i>
					<i>(115 SACKS #112 CEMENT)</i>
	<i>150</i>		<i>30</i>	<i>5</i>	<i>FINISH MIX CEMENT</i>
					<i>START DOWN-CONDUITLINE - 200' PAUL</i>
<i>5:31</i>	<i>0</i>		<i>0</i>	<i>8</i>	<i>START ALL H₂O DISP</i>
	<i>400</i>		<i>70</i>	<i>8</i>	<i>LEFT-WAY CEMENT</i>
	<i>600</i>		<i>82</i>	<i>4</i>	<i>SLOW RATE</i>
<i>5:45</i>	<i>1500</i>		<i>86.2</i>	<i>4</i>	<i>HOE DOWN</i>
					<i>RELEASE 253 - HOE</i>
<i>6:30</i>					<i>JOB COMPLETE - THANKS</i>

10244 NE Hwy. 01 • P. O. Box 8613 • Pratt KS 67124-8613 • Phone (316) 672-1201 • FAX (316) 672-5383

White - Accounting • Canary - Customer • Pink - Field Office

TREATMENT REPORT 02046
ORIGINAL



Customer ID	Date
Customer DAVE WALLING CO. INC.	3-9-00
Lease C. DEEWALL	Lease No.
	Well # 1

Station Pratt, Ks.	Casing 4 1/2	Depth	County Nowata, Ks.	State Ks.
Job LONG STAKE - NEW WELL	Formation	Legal Description 20-33S-18W		

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 4 1/2	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
Depth 5534'	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		MHP Used			Annulus Pressure
Plug Depth	Peaker Depth	From	To	Flush	Gas Volume			Total Load

Customer Representative THOMAS PENNECK	Station Manager DAVE AITRY	Treater KEVIN GORDLEY
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Service Units	107	23	34	72
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Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1000					ON LOCATION RUN 130 JTS. 4 1/2 C/S.G. - 5569.95' RUN BASKET TYPE SHOE, LATCH DOWN BATTLE ON 1 1/2" COLLAR. MENTIONIZER - 1-3-5-7-9-11 SET MASONG AT 5534' DROP BALL AND SET BASKET SHOE WITH REG. PUMP. CIRC 1 HOUR
7:05	300		20	6	PUMP 20.661 "A" FRESH
			5	6	PUMP 5.661 H ₂ O SPKCR
			0	5	START MIX CEMENT (120 SLS)
150			31	5	FINISH MIX CEMENT CEMENT
			0	8	SHUT DOWN - MASONG LINE - DRIP PUMP
0			0	8	START H ₂ O H ₂ O DISP
400				8	START LEFT CEMENT
700				4	SLOW RATE
738	1500		88	4	PUMP DOWN - PUMPING - HOLD
1800					PUMP RUN 1/2 H ₂ O (25 SLS CEMENT) JOB COMPLETE - THOMAS KEVIN

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

White - Accounting • Canary - Customer • Pink - Field Office

TRILOBITE TESTING L.L.C.

ORIGINAL

OPERATOR : Crawford Oil & Gas Inc.

DATE 3-3-2000

WELL NAME: O. Deewall #1

KB 1956.00 ft

TICKET NO: 12499 DST # 1

LOCATION : 30-33s-18w Comanche co KS

GR 1948.00 ft

FORMATION: Mississippi

INTERVAL : 5284.00 To 5312.00 ft

TD 5312.00 ft

TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13278	13278	ALPINE			PF Fr. 1440 to 1510 hr
SI 45 Range(Psi)	4400.0	4400.0	5000.0	0.0	0.0	IS Fr. 1510 to 1555 hr
SF 30 Clock(hrs)	12HR	12HR	ELECT			SF Fr. 1555 to 1625 hr
FS 90 Depth(ft)	5309.0	5309.0	5285.0	0.0	0.0	FS Fr. 1625 to 1755 hr

	Field	1	2	3	4	
A. Init Hydro	2526.0	2478.0	2506.0	0.0	0.0	T STARTED 1220 hr
B. First Flow	716.0	753.0	710.0	0.0	0.0	T ON BOTM 1438 hr
B1. Final Flow	539.0	522.0	434.0	0.0	0.0	T OPEN 1440 hr
C. In Shut-in	1369.0	1350.0	1412.0	0.0	0.0	T PULLED 1755 hr
D. Init Flow	528.0	547.0	559.0	0.0	0.0	T OUT 2045 hr
E. Final Flow	407.0	382.0	307.0	0.0	0.0	
F. Fl Shut-in	1115.0	1084.0	1141.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2460.0	2438.0	2477.0	0.0	0.0	Tool Wt. 1800.00 lbs
Inside/Outside	I	I	I			Wt Set On Packer 25000.00 lbs
						Wt Pulled Loose 4000.00 lbs
						Initial Str Wt 54000.00 lbs
						Unseated Str Wt 57000.00 lbs
						Bot Choke 0.75 in
						Hole Size 7.78 in
						D Col. ID 2.25 in
						D. Pipe ID 3.80 in
						D.C. Length 0.00 ft
						D.P. Length 5266.00 ft

RECOVERY

Tot Fluid 100.00 ft of 0.00 ft in DC and 100.00 ft in DP
 5166.00 ft of Gas in pipe.
 100.00 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
 0.00 ft of

Unseated Str Wt 57000.00 lbs
 Bot Choke 0.75 in
 Hole Size 7.78 in
 D Col. ID 2.25 in
 D. Pipe ID 3.80 in
 D.C. Length 0.00 ft
 D.P. Length 5266.00 ft

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA-----
 Mud Type Chemical
 Weight 9.00 lb/c
 Vis. 50.00 S/L
 W.L. 8.40 in3
 F.C. 0.00 in
 Mud Drop Y 30.0 ft

BLOW DESCRIPTION

Initial Flow:
 Strong blow bottom of bucket immediately. Gas to surface in 2 minutes.
 Initial Shut-In:
 Blow back.
 Final Flow:
 Strong blow. Bottom of bucket immediately. (See gas flow chart).
 Final Shut-In:
 Blow back.

Amt. of fill 0.00 ft
 Btm. H. Temp. 118.00 F
 Hole Condition Good
 % Porosity 14.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out N
 Tool Chased N
 Tester Brad Bortz
 Co. Rep. Jon Christensen
 Contr. Duke
 Rig # 1
 Unit #
 Pump T.

Gas will burn.
 SAMPLES: Caught one sample
 SENT TO: Carraway

Test Successful: Y

GAS RECOVERY

COMPANY: Crawford Oil & Gas Inc.

DATE: 3-3-2000

WELL NAME: O. Deewall #1

KB Elev: 1956.00 ft TICKET #12499 DST # 1

WELL LOCATION: 30-33s-18w Comanche co KS

GR Elev: 1948.00 ft FORMATION: Mississippi

INTERVAL Fr.: 5284.00 To 5312.00 T.D.: 5312.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH 2" MERLA ORFICE

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	1.50	40	0	3155000.0
10	1.50	49	0	3692000.0
15	1.50	49	0	3692000.0
20	1.50	44	0	3394000.0
25	1.50	40	0	3155000.0
30	1.50	37	0	2976000.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	1.50	21	0	2012000.0
10	1.50	30	0	2619000.0
15	1.50	30	0	2619000.0
20	1.50	27	0	2380000.0
25	1.50	25	0	2258000.0
30	1.50	23	0	2140000.0

ORIGINAL

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: O. Deewall #1
 LOCATION : 30-33s-18w Comanche co KS
 TICKET No. 12499 D.S.T. No. 1 DATE 3-3-2000
 TOTAL TOOL TO BOTTOM OF TOP PACKERS 27
 INTERVAL TOOL
 BOTTOM PACKERS AND ANCHOR 28
 TOTAL TOOL 55
 DRILL COLLAR ANCHOR IN INTERVAL
 D.C. ANCHOR STND.Stands Single Total
 D.P. ANCHOR STND.Stands Single Total
 TOTAL ASSEMBLY
 D.C. ABOVE TOOLS.Stands Single Total
 D.P. ABOVE TOOLS.Stands 85 Single Total 5266
 TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5321
 TOTAL DEPTH 5312
 TOTAL DRILL PIPE ABOVE K.B. 9
 REMARKS:

P.O. SUB Cir. sub	5195
C.O. SUB Top of tool	5257
Double pin	5258
S.I. TOOL Sterling	5263
HMV Sterling	5268
JARS Sterling	5273
SAFETY JOINT Sterling	5275
■ PACKER Sparton	5280
■ PACKER Sparton	5284
DEPTH	
1 Ft.	5285
ANCHOR Alpine	5285
Pu. sub	5290
AK-1	5309
20 Ft. perfs.	5310
BULLNOSE 2 Ft. perfs.	
T.D.	5312

NATURAL GAS ANALYSIS REPORT

Sampled by:
 Trilobite Testing, L. L. C.
 Hays, Kansas
 Scott City, Kansas
 Phone: 800-728-5369
 Fax: 913-625-5620

Analyzed by:
 Caraway Analytical, Inc
 P. O. Box 2137
 Liberal, Kansas 67905
 Phone: 316-624-5389
 Fax: 316-626-7108

Lab Number: 20001286
 Sample From: O. Deewell #1 DST 1
 Producer: Crawford Oil & Gas
 Date:
 Time:
 Sampler:
 Source:

Analyzed: 03/04/00
 Pressure:
 Temperature:
 Location: 30-33-18
 County: Comanche
 State: Kansas
 Formation: Miss

	Mole %	GPM
Helium	He: 0.144	0.000
Hydrogen	H2: 0.012	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 2.597	0.000
Carbon Dioxide	CO2: 0.003	0.000
Methane	C1: 92.615	0.000
Ethane	C2: 2.994	0.801
Propane	C3: 0.965	0.266
Iso Butane	iC4: 0.105	0.034
Normal Butane	nC4: 0.264	0.083
Iso Pentane	iC5: 0.058	0.021
Normal Pentane	nC5: 0.066	0.024
Hexanes Plus	C6+: 0.177	0.077

TOTAL: 100.000 1.307
 Z Fact: 0.9979
 SP.GR.: 0.6019
 BTU (SAT): 1025.2 @ 14.73 psia
 BTU (DRY): 1043.4 @ 14.73 psia
 OCTANE RATING: 124.9

COMMENTS:

0.000

ORIGINAL

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: O. Deewall #1

LOCATION : 30-33s-18w Comanche co KS

TICKET No. 12499 D.S.T. No. 1 DATE 3-3-2000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 28

TOTAL TOOL 55

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands 85 Single Total 5266

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5321

TOTAL DEPTH 5312

TOTAL DRILL PIPE ABOVE K.B. 9

REMARKS:

P.O. SUB Cir. sub	5195
C.O. SUB Top of tool	5257
Double pin	5258
S.I. TOOL Sterling	5263

HMV Sterling	5268
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JARS Sterling	5273
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SAFETY JOINT Sterling	5275
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PACKER Sparton	5280
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PACKER Sparton	5284
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DEPTH	
1 Ft.	5285

ANCHOR Alpine	5285
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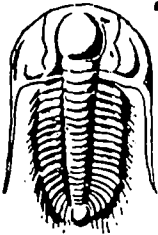
Pu. sub	5290
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AK-1	5309
------	------

20 Ft. perfs.	5310
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BULLNOSE 2 Ft. perfs.	
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T.D.	5312
------	------



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

Crawford Oil & Gas Inc.

OPERATOR

O. Deewell #1

WELL NAME AND NO.

DST NO.

GTS. in 2 min

15" Flow

20" Flow

Mln.	Ins. of Water (PSIG)	Orifice Size	MCF/D	Mln.	Ins. of Water (PSIG)	Orifice Size	MCF/D
5	40	1 1/2	3,155,000	5	21	1 1/2	2,012,000
10	49	1 1/2	3,692,000	10	30	1 1/2	2,619,000
15	49	1 1/2	3,692,000	15	30	1 1/2	2,619,000
20	44	1 1/2	3,394,000	20	27	1 1/2	2,380,000
25	40	1 1/2	3,155,000	25	25	1 1/2	2,258,000
30	37	1 1/2	2,974,000	30	23	1 1/2	2,140,000

Remarks: Caught Gas Smpl. sent to Carraway
GAS will burn

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL

Test Ticket

Nº 12499

Well Name & No. <u>O. Deewall #1</u>	Test No. <u>1</u>	Date <u>3-3-2000</u>
Company <u>Crawford oil & Gas Inc</u>	Zone Tested <u>Mississippi</u>	
Address <u>P.O. Box 454 Mooreland OK 73843-0454</u>	Elevation <u>1956</u> KB <u>1948</u> GL	
Co. Rep / Geo. <u>Jon Christenson</u>	Cont. <u>Duke #1</u>	Est. Ft. of Pay <u>18</u> Por. <u>14</u> %
Location: Sec. <u>30</u> Twp. <u>33S</u> Rge. <u>18W</u>	Co. <u>Comanche</u> State <u>Ks</u>	
No. of Copies <u>5</u> Distribution Sheet (Y, N) <u>Y</u>	Turnkey (Y, N) <u>—</u>	Evaluation (Y, N) <u>—</u>

Interval Tested <u>5284 - 5312</u>	Initial Str Wt./Lbs. <u>54,000</u>	Unseated Str Wt./Lbs. <u>57,000</u>
Anchor Length <u>28'</u> <u>tool 27'</u>	Wt. Set Lbs. <u>25,000</u>	Wt. Pulled Loose/Lbs. <u>4,000</u>
Top Packer Depth <u>5279</u>	Tool Weight <u>1,800</u>	
Bottom Packer Depth <u>5284</u>	Hole Size — <u>7 7/8"</u> —	Rubber Size — <u>6 3/4"</u> —
Total Depth <u>5312</u>	Wt. Pipe Run <u>—</u>	Drill Collar Run <u>—</u>
Mud Wt. <u>9.0</u> LCM <u>4#</u> Vis. <u>50</u> WL <u>8.4</u>	Drill Pipe Size <u>4 1/2 XH</u>	Ft. Run <u>5266 9' up</u>
Blow Description <u>Strong Blow O.B.B. Immediately G.T.S. in 2 min I.F.P.</u>		
<u>Blow Back on I.S.I.P.</u>		
<u>Strong Blow O.B.B. Immediately F.F.P. "See gas Flow Chart"</u>		
<u>Blow Back on F.S.I.P.</u>		

Recovery — Total Feet <u>100'</u>	GIP <u>5/64</u>	Ft. in DC <u>—</u>	Ft. in DP <u>100'</u>	
Rec. <u>100</u> Feet Of <u>Drilg mud</u>	%gas	%oil	%water <u>100</u> %mud	
Rec. <u>—</u> Feet Of <u>—</u>	%gas	%oil	%water	%mud
Rec. <u>—</u> Feet Of <u>—</u>	%gas	%oil	%water	%mud
Rec. <u>—</u> Feet Of <u>—</u>	%gas	%oil	%water	%mud
Rec. <u>—</u> Feet Of <u>—</u>	%gas	%oil	%water	%mud
BHT <u>118°</u>	°F Gravity <u>—</u>	°API D@ <u>—</u>	°F Corrected Gravity <u>—</u>	°API
RW <u>—</u> @ <u>—</u>	°F Chlorides <u>—</u>	ppm Recovery	Chlorides <u>5,800</u>	ppm System

	AK-1	Alpine	PSI	Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	<u>2526</u>	<u>2506</u>		<u>2357</u>	<u>11:30 Am</u>
(B) First Initial Flow Pressure	<u>716</u>	<u>710</u>		(depth) <u>5285</u>	T-Started <u>12:20</u>
(C) First Final Flow Pressure	<u>539</u>	<u>434</u>		Recorder No. <u>13278</u>	T-Open <u>2:40pm</u>
(D) Initial Shut-In Pressure	<u>1369</u>	<u>1412</u>		(depth) <u>5309</u>	T-Pulled <u>5:55 PM</u>
(E) Second Initial Flow Pressure	<u>528</u>	<u>559</u>		Recorder No. <u>—</u>	T-Out <u>8:45 PM</u>
(F) Second Final Flow Pressure	<u>407</u>	<u>307</u>		(depth) <u>—</u>	T-Off Location <u>—</u>
(G) Final Shut-in Pressure	<u>1115</u>	<u>1141</u>		PSI Initial Opening <u>30</u>	Test <input checked="" type="checkbox"/>
(Q) Final Hydrostatic Mud	<u>2460</u>	<u>2477</u>		PSI Initial Shut-in <u>45</u>	Jars <input checked="" type="checkbox"/>
				Final Flow <u>30</u>	Safety Joint <input checked="" type="checkbox"/>
				Final Shut-in <u>90</u>	Straddle <u>—</u>

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 Christenson
 Our Representative Brad Bartz

Circ. Sub —
 Sampler —
 Extra Packer —
 Elec. Rec.
 Mileage —
 Other —
 TOTAL PRICE \$ —

ORIGINAL

TRILOBITE TESTING L.L.C.

OPERATOR : Crawford Oil & Gas, Inc. DATE 03/04/200
WELL NAME: #1 O.Deewall KB 1956.00 ft TICKET NO: 12088 DST #2
LOCATION : 30-33s-18w Comanche co KS GR 1948.00 ft FORMATION: Mississippi
INTERVAL : 5340.00 To 5406.00 ft TD 5406.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Table with columns: Mins, Field, 1, 2, 3, 4, TIME DATA. Rows include PF 30 Rec., SI 45 Range (Psi), SF 45 Clock (hrs), FS 90 Depth (ft).

Table with columns: Field, 1, 2, 3, 4, TOOL DATA. Rows include A. Init Hydro, B. First Flow, Bl. Final Flow, C. In Shut-in, D. Init Flow, E. Final Flow, F. Fl Shut-in, G. Final Hydro, Inside/Outside.

RECOVERY

Tot Fluid 454.00 ft of 0.00 ft in DC and 454.00 ft in DP
4842.00 ft of Gas in pipe.
120.00 ft of Gas & oil cut muddy water
0.00 ft of 8% gas 12% oil 10% water 70% mud
120.00 ft of Gas & oil cut watery mud
0.00 ft of 20% gas 10% oil 40% water 30% mud
214.00 ft of Oil & gas cut muddy water
0.00 ft of 10% gas 5% oil 75% water 10% mud
0.00 ft of
SALINITY 130000.00 P.P.M. A.P.I. Gravity 0.00

TOOL DATA table with rows: Tool Wt., Wt Set On Packer, Wt Pulled Loose, Initial Str Wt, Unseated Str Wt, Bot Choke, Hole Size, D Col. ID, D. Pipe ID, D.C. Length, D.P. Length.

MUD DATA table with rows: Mud Type, Weight, Vis., W.L., F.C., Mud Drop N, Amt. of fill, Btm. H. Temp., Hole Condition, % Porosity, Packer Size, No. of Packers, Cushion Amt., Cushion Type, Reversed Out N, Tool Chased N, Tester, Co. Rep., Contr., Rig #, Unit #, Pump T.

BLOW DESCRIPTION

Initial Flow: Strong blow. Bottom of bucket in 20 seconds.
Initial Shut-In: Bled down for 4 minutes. Built back to 1 1/2" in water bucket.
Final Flow: Strong blow bottom of bucket in 10 seconds. Gas to surface in 5 minutes. Gauged gas.
Final Shut-In: Bled down for 10 minutes. Built back to 1 1/2" in water bucket.

SAMPLES: Caraway Analytical, 728.N Roosevelt
SENT TO: Liberal, Ks. 67901

Test Successful: Y

GAS RECOVERY

COMPANY: Crawford Oil & Gas, Inc.

DATE: 03/04/200

WELL NAME: #1 O.Deewall

KB Elev: 1956.00 ft TICKET #12088 DST #2

WELL LOCATION: 30-33s-18w Comanche co KS

GR Elev: 1948.00 ft FORMATION: Mississippi

INTERVAL Fr.: 5340.00 To 5406.00 T.D.: 5406.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Merla gauge

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	0	13	6100.0
15	0.25	0	12	5860.0
20	0.25	0	12	5860.0
25	0.25	0	12	5860.0
30	0.25	0	12	5860.0
35	0.25	0	12	5860.0
40	0.25	0	12	5860.0
45	0.25	0	12	5860.0

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL
N^o 12088

Test Ticket

Well Name & No. #1 O. Deewall Test No. #2 Date 03/04/2000
 Company Crawford Oil & Gas P.O. box 454 Zone Tested (Miss)
 Address Mooreland, Okla. 73852-0454 Elevation 1956 KB 1948 GL
 Co. Rep / Geo. Jon Christensen Cont. Duke #1 Est. Ft. of Pay Por. %
 Location: Sec. 30 Twp. 33S Rge. 18W Co. Comanche State KS
 No. of Copies 5 Distribution Sheet (Y, N) Turnkey (Y, N) Evaluation (Y, N)

Interval Tested 5340' - 5406' Initial Str Wt./Lbs. 54,000 Unseated Str Wt./Lbs. 54,000
 Anchor Length 66' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 65,000
 Top Packer Depth 5335' Tool Weight 2/00
 Bottom Packer Depth 5340' Hole Size — 7 7/8" Rubber Size — 6 3/4"
 Total Depth 5406' Wt. Pipe Run N/A Drill Collar Run N/A
 Mud Wt. 8.9 LCM 3# Vis. 52 WL 10.8 Drill Pipe Size 4 1/2 XH Ft. Run 5327'

Blow Description TF: Strong blow b.o.b in 20 sec.
ISI: Bled down for 4 mins. Built back to 1 1/2" in H2O bucket.
FF: Strong blow b.o.b in 10 sec. O/S in 5 mins. Gauge Gas.
TSI: Bled down for 10 mins. Built back to 1 1/2" in H2O bucket.

Recovery — Total Feet	GIP	Ft. in DC	Ft. in DP	%gas	%oil	%water	%mud
Rec. <u>120'</u>	Feet Of <u>6' OCMW</u>	<u>8</u>	<u>4.54'</u>	<u>12%</u>	<u>10%</u>	<u>70%</u>	<u>70%</u>
Rec. <u>120'</u>	Feet Of <u>6' OCMW</u>	<u>20%</u>		<u>10%</u>	<u>90%</u>	<u>30%</u>	<u>30%</u>
Rec. <u>214'</u>	Feet Of <u>6' OCMW</u>	<u>10%</u>		<u>5%</u>	<u>75%</u>	<u>10%</u>	<u>10%</u>
Rec. <u>4042'</u>	Feet Of <u>Gas In pipe</u>						
Rec. <u> </u>	Feet Of <u> </u>						

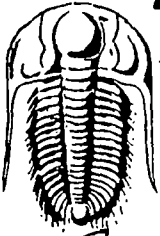
BHT 130° °F Gravity °API D@ °F Corrected Gravity °API
 RW .05 @ 86° °F Chlorides 130,000 ppm Recovery Chlorides 6,800 ppm System

	AK-1	Alpine	PSI Recorder No.	T-On Location
(A) Initial Hydrostatic Mud	<u>2659</u>	<u>2645</u>	<u>2350</u>	<u>0900</u>
(B) First Initial Flow Pressure	<u>75</u>	<u>58</u>	(depth) <u>5346'</u>	T-Started <u>1026</u>
(C) First Final Flow Pressure	<u>120</u>	<u>125</u>	PSI Recorder No. <u>10991</u>	T-Open <u>1300</u>
(D) Initial Shut-In Pressure	<u>1629</u>	<u>1622</u>	(depth) <u>5403'</u>	T-Pulled <u>1630</u>
(E) Second Initial Flow Pressure	<u>149</u>	<u>131</u>	PSI Recorder No. <u> </u>	T-Out <u>1700</u>
(F) Second Final Flow Pressure	<u>213</u>	<u>212</u>	(depth) <u> </u>	T-Off Location <u>2030</u>
(G) Final Shut-in Pressure	<u>1608</u>	<u>1572</u>	PSI Initial Opening <u>30</u>	Test <u> </u>
(Q) Final Hydrostatic Mud	<u>2600</u>	<u>2594</u>	PSI Initial Shut-in <u>75</u>	Jars <u> </u>
			Final Flow <u>75</u>	Safety Joint <u> </u>
			Final Shut-in <u>90</u>	Straddle <u> </u>

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Approved By [Signature]
 Our Representative Darwin Johnson

Circ. Sub
 Sampler
 Extra Packer
 Elec. Rec.
 Mileage
 Other
 TOTAL PRICE \$



TRILOBITE TESTING

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

Craftord Oil & Gas, Inc
OPERATOR

#1 O. Deewall
WELL NAME AND NO.

#2
DST NO.

675 5 mins. on Final Flow.

(Miss)

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
<i>10</i>	<i>13"</i>	<i>.250</i>	<i>6100</i>				
<i>15</i>	<i>12"</i>	<i>.250</i>	<i>5860</i>				
<i>20</i>	<i>12"</i>	<i>.250</i>	<i>5860</i>				
<i>25</i>	<i>12"</i>	<i>.250</i>	<i>5860</i>				
<i>30</i>	<i>12"</i>	<i>.250</i>	<i>5860</i>				
<i>35</i>	<i>12"</i>	<i>.250</i>	<i>5860</i>				
<i>40</i>	<i>12"</i>	<i>.250</i>	<i>5860</i>				
<i>45</i>	<i>12"</i>	<i>.250</i>	<i>5860</i>				

Remarks:

*** TOOL DIAGRAM *** CONVENTIONAL

ORIGINAL

WELL NAME: #1 O.Deewall

LOCATION : 30-33s-18w Comanche co KS

TICKET No. 12088 D.S.T. No. 2 DATE 03/04/200

TOTAL TOOL TO BOTTOM OF TOP PACKERS 28

INTERVAL TOOL

BOTTOM PACKERS AND ANCHOR 36

TOTAL TOOL 64

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single 1 Total 30

TOTAL ASSEMBLY 94

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands Single 85 Total 5327

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5421

TOTAL DEPTH 5406

TOTAL DRILL PIPE ABOVE K.B. 15

REMARKS:

P.O. SUB Top of tool @	5313
C.O. SUB	5314
S.I. TOOL	5319
HMV	5324
JARS	5329
SAFETY JOINT	5331
PACKER	5335
PACKER	5340
DEPTH 5340	
1'to	5341
ANCHOR 30'of perms.to	5371
Alpine rec.@	5346
30'of drillpipe to	5401
	5401
Ak-1 rec. @	5403
BULLNOSE 5' bullnose to	5406
T.D.	

ORIGINAL

WELL NAME: O. Deewall #2
COMPANY: Crawford Oil & Gas
LOCATION: 30-33s-18w
Comanche co Kansas
DATE: 3/23/00

RECEIVED
STATE CORPORATION COMMISSION

JUL 03 2000

CONSERVATION DIVISION
WPA/WR/...

TRILOBITE TESTING L.L.C.

ORIGINAL

OPERATOR : Crawford Oil & Gas DATE 3-20-00
 WELL NAME: O. Deewall #2 KB 1938.00 ft TICKET NO: 12130 DST #1
 LOCATION : 30-33S-18W Comanche KS. GR 1931.00 ft FORMATION: Mississippian
 INTERVAL : 5285.00 To 5325.00 ft TD 5325.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13339	13339	3246			PF Fr. 0337 to 0407 hr
SI 45 Range(Psi)	4000.0	4000.0	4995.0	0.0	0.0	IS Fr. 0407 to 0452 hr
SF 30 Clock(hrs)	12 HR	12 HR	ALP			SF Fr. 0452 to 0522 hr
FS 90 Depth(ft)	5320.0	5320.0	5290.0	0.0	0.0	FS Fr. 0522 to 0652 hr

	Field	1	2	3	4	
A. Init Hydro	2622.0	2622.0	2612.0	0.0	0.0	T STARTED 0100 hr
B. First Flow	187.0	197.0	96.0	0.0	0.0	T ON BOTM 0334 hr
Bl. Final Flow	62.0	68.0	20.0	0.0	0.0	T OPEN 0337 hr
C. In Shut-in	629.0	627.0	671.0	0.0	0.0	T PULLED 0652 hr
D. Init Flow	62.0	90.0	19.0	0.0	0.0	T OUT 1000 hr
E. Final Flow	62.0	58.0	24.0	0.0	0.0	
F. Pl Shut-in	569.0	877.0	612.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2573.0	2539.0	2571.0	0.0	0.0	Tool Wt. 1800.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 30000.00 lbs
						Wt Pulled Loose 60000.00 lbs
						Initial Str Wt 50000.00 lbs
						Unseated Str Wt 50000.00 lbs
						Bot Choke 0.75 in
						Hole Size 8.88 in
						D Col. ID 0.00 in
						D. Pipe ID 3.80 in
						D.C. Length 0.00 ft
						D.P. Length 5289.00 ft

RECOVERY

Tot Fluid 30.00 ft of 0.00 ft in DC and 30.00 ft in DP
 30.00 ft of Gas & oil cut mud
 0.00 ft of 10% gas 15% oil 75% mud
 0.00 ft of
 0.00 ft of Free oil in tool
 0.00 ft of
 0.00 ft of
 0.00 ft of
 0.00 ft of

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:
 Strong blow off bottom immediately.
 Gas to surface in 13 minutes.
 Initial Shut-In:
 No return blow.
 Final Flow:
 Strong blow gauged 45" water on 1/4" orifice= 11.1 mcf/day
 Final Shut-In:
 No return blow.

SAMPLES:

SENT TO:

MUD DATA-----
 Mud Type Chemical
 Weight 9.23 lb/cf
 Vis. 47.00 S/L
 W.L. 8.80 in3
 F.C. 0.00 in
 Mud Drop N
 Amt. of fill 0.00 ft
 Btm. H. Temp. 115.00 F
 Hole Condition Good
 % Porosity 0.00
 Packer Size 6.75 in
 No. of Packers 2
 Cushion Amt. 0.00
 Cushion Type
 Reversed Out N
 Tool Chased N
 Tester Rod Steinbrink
 Co. Rep. Jon Christensen
 Contr. Duke
 Rig # 1
 Unit #
 Pump T.

Test Successful: Y

GAS RECOVERY

COMPANY: Crawford Oil & Gas

DATE: 3-20-00

WELL NAME: O. Deewall #2

KB Elev: 1938.00 ft TICKET #12130 DST #1

WELL LOCATION: 30-33S-18W Comanche KS.

GR Elev: 1931.00 ft FORMATION: Mississippi

INTERVAL Fr.: 5285.00 To 5325.00 T.D.: 5325.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH 2" Merla Gauge

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
15	0.75	8	0	227000.0
20	0.75	0	80	127000.0
30	0.75	0	10	44800.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.62	0	25	11300.0
25	0.25	0	45	11100.0
30	0.25	0	45	11100.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: O. Deewall #2

LOCATION : 30-33S-18W Comanche KS.

TICKET No. 12130 D.S.T. No. 1 DATE 3-20-00

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL 40

BOTTOM PACKERS AND ANCHOR

TOTAL TOOL 67

DRILL COLLAR ANCHOR IN INTERVAL

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 67

D.C. ABOVE TOOLS.Stands Single Total

D.P. ABOVE TOOLS.Stands86 Single Total 5289

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5356

TOTAL DEPTH 5325

TOTAL DRILL PIPE ABOVE K.B. 31

REMARKS:

P.O. SUB 1' Above 120' DP	5138
C.O. SUB 1'	5258
S.I. TOOL 5'	5264
HMV 5'	5269
JARS 5'	5274
SAFETY JOINT 2'	5276
PACKER 4'	5280
PACKER 5'	5285
DEPTH 1'	5286
ANCHOR	
ALP Rec. @	5290
34' Perf	5320
AK-1 Rec. @	5320
BULLNOSE 5'	
T.D.	5325

TEST HISTORY

12130 DST #1 O. Deewall #2 Crawford Oil & Gas

Flag Points

	t (Min.)	P (PSig)
A:	0.00	2612.84
B:	0.00	96.82
C:	32.00	20.81
D:	44.00	671.44
E:	0.00	19.19
F:	32.00	24.50
G:	93.00	612.60
Q:	0.00	2571.78

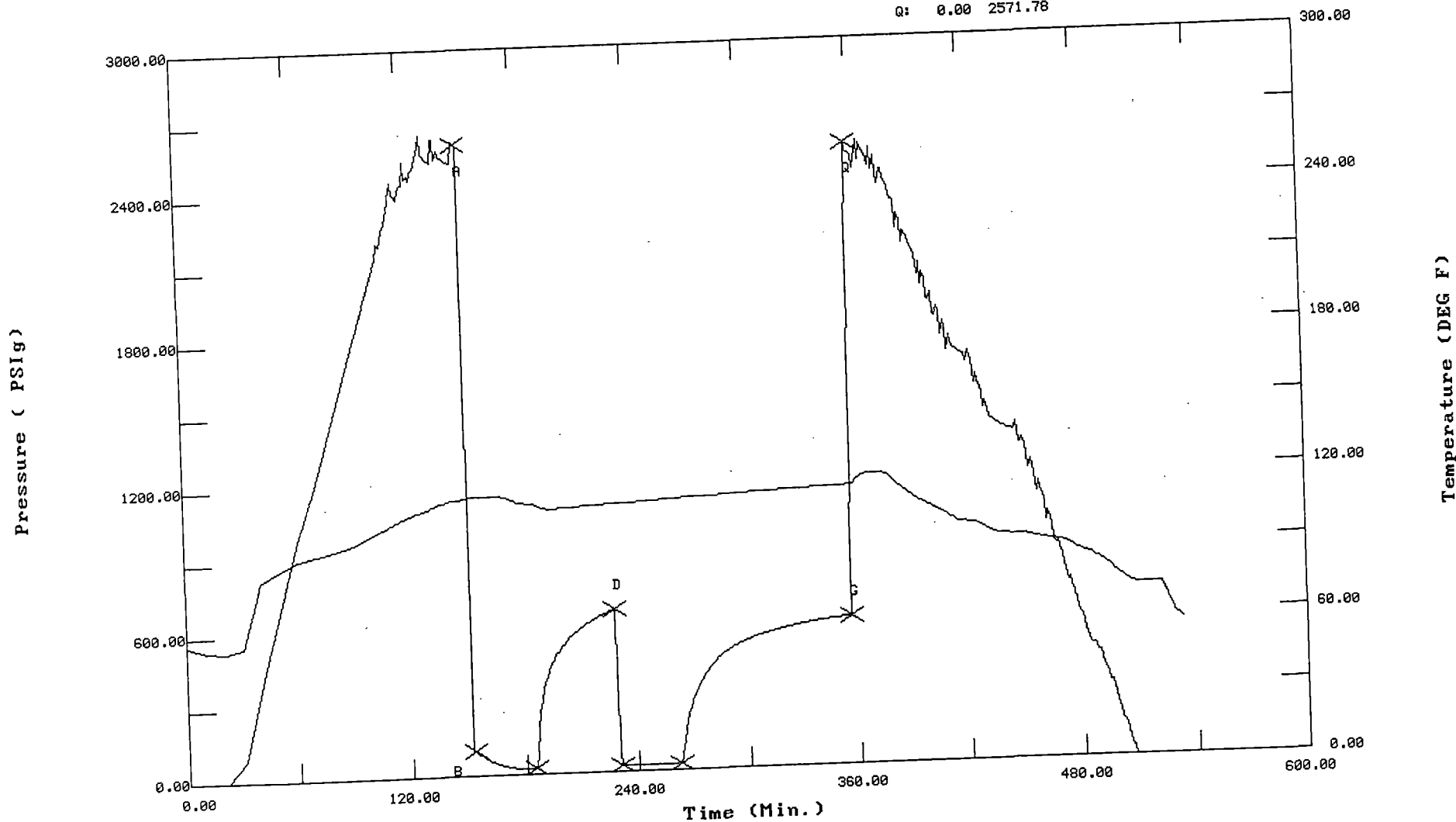
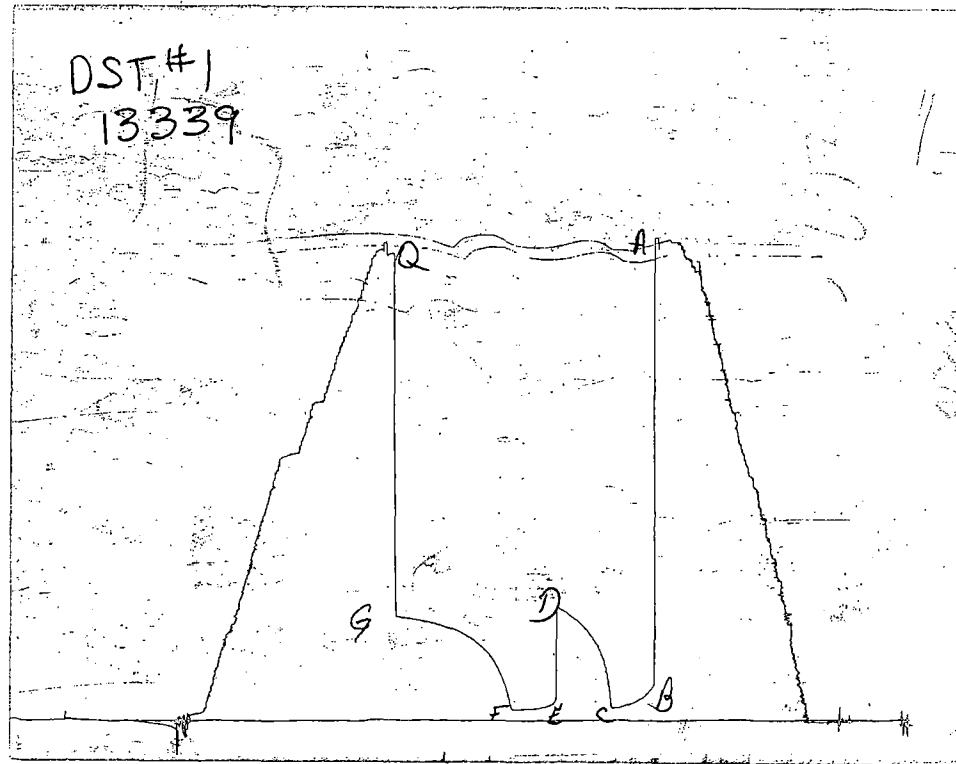


CHART PAGE



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

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

N^o 12130

Bill to Duke:

Test Ticket

Well Name & No. <u>O. Deewall #2</u>	Test No. <u>1</u>	Date <u>3-20-00</u>
Company <u>Crawford Oil & Gas</u>	Zone Tested <u>Mississippian</u>	
Address <u>P.O. Box 51 Coldwater KS. 67029-0051</u>		Elevation <u>1938</u> KB <u>1931</u> GL
Co. Rep / Geo. <u>John Christensen</u>	Cont. <u>Duke #1</u>	Est. Ft. of Pay <u> </u> Por. <u> </u> %
Location: Sec. <u>30</u>	Twp. <u>33^s</u>	Rge. <u>18^w</u> Co. <u>Comanche</u> State <u>KS.</u>
No. of Copies <u>5</u>	Distribution Sheet (Y, N) <u>N</u>	Turnkey (Y, N) <u>Y</u> Evaluation (Y, N) <u> </u>

Interval Tested <u>5285 - 5325</u>	Initial Str Wt./Lbs. <u>50,000</u>	Unseated Str Wt./Lbs. <u>50,000</u>
Anchor Length <u>40'</u>	Wt. Set Lbs. <u>30,000</u>	Wt. Pulled Loose/Lbs. <u>60,000</u>
Top Packer Depth <u>5280</u>	Tool Weight <u>1,800</u>	
Bottom Packer Depth <u>5285</u>	Hole Size — 7 7/8" <u> </u>	Rubber Size — 6 3/4" <u> </u>
Total Depth <u>5325</u>	Wt. Pipe Run <u> </u>	Drill Collar Run <u> </u>
Mud Wt. <u>9.3</u> LCM <u>4[#]</u> Vis. <u>47</u> WL <u>8.8</u>	Drill Pipe Size <u>4 1/2" XH</u>	Ft. Run <u>5289'</u> (8)
Blow Description <u>IF: Strong blow off btm immediately GTS @ 13 mins.</u>		
<u>ISI: No return blow.</u>		
<u>FFI Strong blow gauged 45" wtr on 1/4" orifice = 11.1 mcf/day</u>		
<u>FSI: No return blow.</u>		

Recovery — Total Feet <u>30'</u>	GIP <u>GTS-IF-13 min</u>	Ft. in DC <u> </u>	Ft. in DP <u>30'</u>
Rec. <u> </u> Feet Of <u> </u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
Rec. <u> </u> Feet Of <u> </u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
Rec. <u>30'</u> Feet Of <u>GOCM</u>	<u>10</u> %gas <u>15</u> %oil <u> </u> %water <u>75</u> %mud		
Rec. <u> </u> Feet Of <u>Free Oil in Tool</u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
Rec. <u> </u> Feet Of <u> </u>	%gas <u> </u>	%oil <u> </u>	%water <u> </u> %mud <u> </u>
BHT <u>115°</u>	°F Gravity <u> </u>	°API D@ <u> </u>	°F Corrected Gravity <u> </u> °API <u> </u>
RW <u> </u> @ <u> </u> °F	Chlorides <u> </u> ppm	Recovery Chlorides <u>7200</u> ppm	System <u> </u>

	AK-1	Alpine		
(A) Initial Hydrostatic Mud	<u>2622</u>	<u>2612</u>	PSI Recorder No. <u>3246</u>	T-On Location <u>#02215</u>
(B) First Initial Flow Pressure	<u>187</u>	<u>96</u>	PSI (depth) <u>5290</u>	T-Started <u>0100</u>
(C) First Final Flow Pressure	<u>62</u>	<u>20</u>	PSI Recorder No. <u>13339</u>	T-Open <u>0337</u>
(D) Initial Shut-In Pressure	<u>629</u>	<u>671</u>	PSI (depth) <u>5320</u>	T-Pulled <u>0652</u>
(E) Second Initial Flow Pressure	<u>62</u>	<u>19</u>	PSI Recorder No. <u> </u>	T-Out <u>1000</u>
(F) Second Final Flow Pressure	<u>62</u>	<u>24</u>	PSI (depth) <u> </u>	T-Off Location <u>1100</u>
(G) Final Shut-in Pressure	<u>569</u>	<u>612</u>	PSI Initial Opening <u>30</u>	Test <u> </u>
(Q) Final Hydrostatic Mud	<u>2573</u>	<u>2571</u>	PSI Initial Shut-in <u>45</u>	Jars <u>X</u>
			Final Flow <u>30</u>	Safety Joint <u>X</u>
			Final Shut-in <u>90</u>	Straddle <u> </u>
				Circ. Sub <u>X</u> <u>N/C</u>
				Sampler <u> </u>
				Extra Packer <u> </u>
				Elec. Rec. <u>X</u>
				Mileage <u>168 mi</u>
				Other <u> </u>
				TOTAL PRICE \$ <u> </u>

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Approved By *John Christensen*
 Our Representative *Bob Steinbrink*