

ORIGINAL

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

11/8/10

OPERATOR: License # 8628
Name: CREDO PETROLEUM CORPORATION
Address 1: 1801BROADWAY
Address 2: SUITE 900
City: DENVER State: CO Zip: 80202
Contact Person: JACK RENFRO
Phone: (303) 297-2200
CONTRACTOR: License # 33575
Name: WW DRILLING
Wellsite Geologist: JAMES MUSGROVE
Purchaser: N/A

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Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., 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 Conv. to SWD
 Conv. to GSW
 Plug Back: Plug Back Total Depth
 Commingled Permit #:
 Dual Completion Permit #:
 SWD Permit #:
 ENHR Permit #:
 GSW Permit #:
8/26/10 9/3/10 9/5/10
Spud Date or Date Reached TD Completion Date or Recompletion Date

API No. 15 - 171-20776-00-00
Spot Description:
SE_NW_SE_NW Sec. 32 Twp. 16 S. R. 31 East West
1,820 Feet from North / South Line of Section
1,940 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: SCOTT
Lease Name: GROTHUSEN Well #: 1-32
Field Name: MICHIGAN
Producing Formation: N/A
Elevation: Ground: 2938 Kelly Bushing: 2943
Total Depth: 4700 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 210 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

(Data must be collected from the Reserve Pit)
Chloride content: 3700 ppm Fluid volume: 750 bbls
Dewatering method used: EVAPORATION
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. East West
County: Permit #:

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.

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature: [Signature]
Title: OPERATIONS MANAGER Date: 11/8/2010

KCC Office Use ONLY

Letter of Confidentiality Received
Date: 11/8/10 - 11/8/11 RECEIVED
 Confidential Release Date: NOV 10 2010
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: [Signature] Date: 11/10/10

Operator Name: **CREDO PETROLEUM CORPORATION** Lease Name: **GROTHUSEN** Well #: **1-32**
 Sec. **32** Twp. **16** S. R. **31** East West County: **SCOTT**

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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 complete copy of all Electric Wire-line 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 Electric Log Submitted Electronically <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: DUAL INDUCTION, DUAL COMPENSATED POROSITY, MICRORESISTIVITY, BOREHOLE COMPENSATED SONIC	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name</td> <td style="width:20%;">Top</td> <td style="width:20%;">Datum</td> </tr> <tr> <td>ANHYDRITE</td> <td>2288</td> <td>+655</td> </tr> <tr> <td>HEEBNER</td> <td>3920</td> <td>-977</td> </tr> <tr> <td>LANSING</td> <td>3961</td> <td>-1018</td> </tr> <tr> <td>BKC</td> <td>4315</td> <td>-1372</td> </tr> <tr> <td>MARMATON</td> <td>4350</td> <td>-1407</td> </tr> <tr> <td>FT SCOTT</td> <td>4493</td> <td>-1550</td> </tr> <tr> <td>MISSISSIPPIAN</td> <td>4603</td> <td>-1660</td> </tr> </table>	Name	Top	Datum	ANHYDRITE	2288	+655	HEEBNER	3920	-977	LANSING	3961	-1018	BKC	4315	-1372	MARMATON	4350	-1407	FT SCOTT	4493	-1550	MISSISSIPPIAN	4603	-1660
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CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
SURFACE	12-1/4"	8-5/8"	24#	210	COMMON	165	3%CC, 2%GEL

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 <i>(Amount and Kind of Material Used)</i>	Depth

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 KCC WICHITA

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR.		Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____		
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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ALLIED CEMENTING CO., LLC. 036821

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

KCC
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SERVICE POINT:
Great Bend KS

DATE 9-5-10	SEC. 32	TWP. 16S	RANGE 31W	ON LOCATION	JOB START 6:00 AM	JOB FINISH 7:00 AM
LEASE Grothusen	WELL # 1-32	LOCATION Healy KS 8 West 1/2 North	WEST INTO	CALLED OUT	COUNTY Scott	STATE KS
OLD OR <u>NEW</u> (Circle one)						

CONTRACTOR www-10
 TYPE OF JOB Rotary Plug
 HOLE SIZE 7 7/8 T.D. 4700
 CASING SIZE 4 1/2 DEPTH 2390
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT
 CEMENT LEFT IN CSG.
 PERFS.
 DISPLACEMENT

OWNER Cuedo
 CEMENT
 AMOUNT ORDERED 270 SY 60/40 4% GEL
1/2 flo seal

COMMON	<u>162</u>	@	<u>15.95</u>	<u>2582.20</u>
POZMIX	<u>108</u>	@	<u>8.00</u>	<u>864.00</u>
GEL	<u>9</u>	@	<u>20.25</u>	<u>182.25</u>
CHLORIDE		@		
ASC		@		
<u>1/2 flo seal</u>	<u>67</u>	@	<u>2.55</u>	<u>168.85</u>
HANDLING	<u>270</u>	@	<u>2.50</u>	<u>675.00</u>
MILEAGE	<u>270 x 45 x .10</u>			<u>1215.00</u>
TOTAL				<u>5584.60</u>

EQUIPMENT
 PUMP TRUCK CEMENTER wayne
 # 181 HELPER David
 BULK TRUCK
 # 344 DRIVER Bill
 BULK TRUCK
 # DRIVER

REMARKS:
1st plug 2390 mix 50 SY
2nd plug 1650 mix 80 SY
3rd plug 800 mix 40 SY
4th plug 260 mix 50 SY
5th plug 60 mix 20 SY
Rot mix 30 SY

CHARGE TO: Cuedo Petroleum
 STREET _____
 CITY _____ STATE _____ ZIP _____

To Allied Cementing Co., LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) 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 and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Marty Mills
 SIGNATURE Marty Mills

SERVICE
 DEPTH OF JOB 2390
 PUMP TRUCK CHARGE 1185.00
 EXTRA FOOTAGE @
 MILEAGE 45 @ 7.00 315.00
 MANIFOLD @
 RECEIVED
 NOV 10 2010 TOTAL 1500.00

KCC WICHITA
 PLUG & FLOAT EQUIPMENT
1 Dry hole plug @ 40.00 40.00
 @
 @
 @
 @
 TOTAL 40.00

SALES TAX (If Any) _____
 TOTAL CHARGES _____
 DISCOUNT _____ IF PAID IN 30 DAYS

GENERAL TERMS AND CONDITIONS

DEFINITIONS: In these terms and conditions, "ALLIED" shall mean Allied Cementing Co., LLC, 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.

ALLIED CEMENTING CO., LLC. 038986

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

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SERVICE POINT: Oakley, KS

DATE <u>8-26-10</u>	SEC. <u>32</u>	TWP. <u>16</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>3:00 p.m.</u>	JOB START <u>5:30 p.m.</u>	JOB FINISH <u>6:00 p.m.</u>
LEASE <u>Grothusen</u>	WELL# <u>1-32</u>		LOCATION <u>Healy 7 1/2 W (Taeoka)</u>		COUNTY <u>Scott</u>	STATE <u>KS</u>	
OLD OR <u>NEW</u> (Circle one)			<u>1 1/2 W 1 1/2 W N</u>				

CONTRACTOR W-W #10

TYPE OF JOB Surface

HOLE SIZE 12" 4 T.D. 210'

CASING SIZE 8 5/8 24" DEPTH 210'

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 15'

PERFS. _____

DISPLACEMENT 12.4

OWNER _____

CEMENT AMOUNT ORDERED 165 sks Com 390c

290 gel

COMMON	<u>165</u>	@	<u>1545</u>	<u>2549.25</u>
POZMIX		@		
GEL	<u>3</u>	@	<u>2000</u>	<u>6200</u>
CHLORIDE	<u>6</u>	@	<u>5820</u>	<u>34920</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>174</u>	@	<u>240</u>	<u>417.00</u>
MILEAGE	<u>.10 x 5K mile</u>			<u>783.00</u>
TOTAL				<u>4161.45</u>

REMARKS:

Cement did circulate

Approx 45 sks

Job completed @ 5:45 pm

Thanks T-224 crew

SERVICE

DEPTH OF JOB	<u>210'</u>		
PUMP TRUCK CHARGE			<u>1018.00</u>
EXTRA FOOTAGE		@	
MILEAGE	<u>45</u>	@	<u>700</u>
MANIFOLD		@	
		@	
		@	

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TOTAL 1333.00

KCC WICHITA
PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

CHARGE TO: Credo Petroleum

STREET _____

CITY _____ STATE _____ ZIP _____

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PRINTED NAME DON GUY

SIGNATURE Don Guy

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—**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.

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(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.

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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.

JAMES C. MUSGROVE

Petroleum Geologist
212 Main Street
P.O. Box 215
Claflin, KS 67525

Office (620) 588-4250

Res. Claflin (620) 587-3444

Credo Petroleum Corp
Grothusen #1-32
1820' FNL & 1940' FWL; Section 32-16s-31w
Scott County, Kansas
Page 1

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Dry and Abandoned

Contractor: W & W Drilling Company (Rig #10)
Commenced: August 26, 2010
Completed: September 4, 2010
Elevation: 2943' K.B.; 2941' G.L; 2938' G.L.
Casing program: Surface; 8/58" @ 209'
Production; none
Sample: Samples saved and examined 3600' to the Rotary Total Depth.
Drilling time: One (1) foot drilling time recorded and kept 3600 ft to the Rotary Total Depth.
Measurements: All depths measured from the Kelly Bushing.
Drill Stem Tests: There were three (3) Drill Stem Tests ran by Trilobite Testing Co.
Electric Log: By Log Tech.

<u>Horizon</u>	<u>Log Depth</u>	<u>Sub-Sea Datum</u>
Anhydrite	2288	+655
Base Anhydrite	2348	+695
Topeka	3690	-747
Heebner	3920	-977
Toronto	3941	-998
Lansing	3961	-1018
Muncie Creek	4138	-1195
Stark Shale	4230	-1287
Base Kansas City	4315	-1372
Marmaton	4350	-1407
Pawnee	4448	-1505
* Myrick Station	4478	-1535
* Ft Scott	4493	-1550
* Cherokee Shale	4516	-1573
Johnson Zone	4557	-1614
Mississippian	4603	-1660
Rotary Total Depth	4700	-1757
Log Total Depth	4701	-1758
* Credo's		
	<u>Formation Tops</u>	
Ft Scott	4478	
Cherokee Shale	4490	

(All tops and zones corrected to Electric Log measurements).

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SAMPLE ANALYSIS, SHOWS OF OIL, TESTING DATA, ETC.

TOPEKA SECTION

3871-3890' Limestone; cream, white, fossiliferous, chalky, scattered porosity, questionable gray and brown stain, no show of free oil and no odor in fresh samples.

TORONTO SECTION

3941-3953' Limestone; white, cream, medium crystalline, fossiliferous, chalky, fair porosity, trace white and gray chert, no shows.

LANSING SECTION

3961-3970' Limestone; white, cream, highly oolitic, poor visible porosity, no shows.

3980-3986' Limestone; tan, gray, highly oolitic, dense.

3996-4001' Limestone; white and gray, oolitic, chalky, poor visible porosity, trace brown to golden brown stain, trace of free oil and no odor in fresh samples.

4008-4020' Limestone; white, cream, medium crystalline, chalky, scattered porosity, no shows.

4020-4030' Limestone; as above, shaley white chalk.

4042-4054' Limestone; white, cream, finely crystalline, chalky, scattered finely vuggy to pinpoint type porosity, golden brown stain, show of free oil and fair odor fresh samples.

Drill Stem Test #1 4036-4054'

Times: 30-30-30-60

Blow: Weak

Recovery: 5' mud

**Pressures: ISIP 1000 psi
 FSIP 1003 psi
 iFP 11-14 psi
 FFP 16-20 psi
 HSH 2039-2018 psi**

4056-4064' Limestone; cream, white, slightly fossiliferous, fine and medium crystalline, chalky, no shows.

4072-4080' Limestone; tan, oomoldic, good oomoldic porosity, poor spotty stain, trace of free oil and faint odor in fresh samples.

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Drill Stem Test #2 4070-4080'

Times: 30-45-60-90
Blow: Strong
Recovery: 1798' water
Pressures: ISIP 1057 psi
FSIP 1059 psi
IFP 30-398 psi
FFP 403-845 psi
HSH 2040-1970 psi

- 4080-4094' Limestone; as above, no shows.
- 4094-4120' Limestone; white and gray, finely crystalline, few medium crystalline, chalky, no shows.
- 4140-4146' Limestone; white, gray, finely crystalline, few fossiliferous, chalky, no shows.
- 4156-4170' Limestone; white, fossiliferous in part, chalky in part, no shows
- 4192-4200' Limestone; white, cream, oolitic, fossiliferous, fair to good porosity, fair to good brown stain, and saturation, show of free oil and good odor in fresh samples.
- 4210-4215' Limestone; white, fossiliferous, chalky, black stain, trace free oil and faint odor in fresh samples.
- 4240-4250' Limestone; tan, finely crystalline, fair vuggy type porosity, trace spotty light stain, no show of free and no odor in fresh samples.
- 4250-4260' Limestone; tan, slightly fossiliferous, chalky, fair porosity, brown stain, trace of free oil and fair odor in fresh samples.

Drill Stem Test #3 4178-4285'

Times: 30-45-45-60
Blow: Strong
Recovery: 248' mud with oil spots
1984' muddy water with oil specks
Pressures: ISIP 1088 psi
FSIP 1089 psi
IFP 109-476 psi
FFP 487-780 psi
HSH 2202-2082 psi

- 4286-4300' Limestone; tan, brown and gray, fossiliferous, chalky, scattered porosity, no show.
- 4300-4310' Limestone; as above, tan, cherty, dense, trace tan oolitic, dense, limestone.

MARMATON SECTION

- 4350-4356' Limestone; white, gray, tan, chalky, few cherty, dense.

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- 4377-4388' Limestone; white, tan, finely crystalline, slightly fossiliferous, poor visible porosity, no shows.
- 4396-4405' Limestone; white, gray, finely crystalline, chalky in part, poor pinpoint type porosity, poor stain, trace of free oil no odor.
- 4116-4130' Limestone; tan, buff, oolitic, slightly cherty, poor porosity, few medium crystalline, no shows.
- 4130-4138' Limestone; tan, white, chalky, scattered pinpoint porosity, trace brown stain, trace of free oil and no odor in fresh samples.

PAWNEE SECTION

- 4448-4460' Limestone; tan, white, chalky, plus white and gray chert.

FT SCOTT SECTION (CREDO)

- 4478-4490' Limestone; white, gray, tan, chalky, plus amber white cherty. (Myrick Station).

CHEROKEE SECTION (CREDO)

- 4493-4500' Limestone; white, tan, highly oolitic, poor visible porosity (Ft Scott).
- 4506-4515' Limestone; tan, slightly fossiliferous, chalky, trace brown stain, trace of free oil and no odor.
- 4520-4535' Limestone; tan, highly oolitic (dense).

JOHNSON ZONE SECTION

- 4557-4570' Limestone; tan, finely crystalline, scattered intercrystalline porosity, brown stain, show of free oil and faint odor.
- 4570-4576' Limestone; as above, no shows.

CHEROKEE SAND SECTION

- 4591-4596' Sand; gray, white, very fine grained, quartzitic, sub rounded, calcareous, fair to good intergranular porosity, good brown and gray stain and saturation, show of free oil and faint odor in fresh samples.
- 4596-4603' Varied colored shale; trace medium grained, poorly sorted, calcareous sand, no show.

MISSISSIPPIAN SECTION

- 4603-4610' Limestone; white, dolomite, trace green tinted limestone, no shows.
- 4610-4620' Limestone; white, chalky, plus tan/white, fossiliferous, chert, trace white calcareous sand.
- 4620-4640' Limestone; tan, gray, finely crystalline, oolitic in part, chalky.

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4640-4660' Limestone; white/tan, oolitic, few sandy, poor visible porosity, chalky.
4660-4680' Limestone; as above.
4680-4700' Limestone; as above, plus white translucent chert.

Rotary Total Depth 4700
Log Total Depth 4701

Remarks:

After log analysis, it was decided to straddle test the 'B' zone.

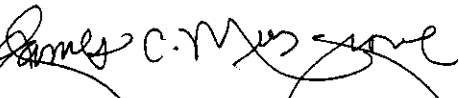
Drill Stem Test #4 3978-4004' (Straddle)

Times: 30-30-30-45
Blow: Weak
Recovery: 30' mud, oil spots in tool
Pressures: ISIP 780 psi
FSIP 858 psi
IFP 42-44 psi
FFP 46-48 psi
HSH 2013-1961 psi

Recommendations:

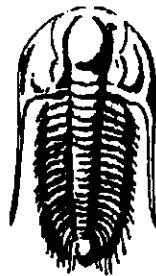
On the basis of the negative drill stem tests, it was recommended by all parties involved that the Grothusen #1-32 be plugged and abandoned at the Rotary Total Depth 4700 (-1757).

Respectfully submitted;


James C Musgrove
Petroleum Geologist



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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway #900
Denver CO 80202

ATTN: Jim Musgrove

32-16-31 Scott Co KS

Grothusen # 1-32

Start Date: 2010.08.31 @ 05:33:01

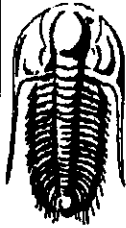
End Date: 2010.08.31 @ 11:16:15

Job Ticket #: 039717 DST #: 1

KCC
NOV 08 2010
CONFIDENTIAL

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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NOV 10 2010
KCC WICHITA



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Credo Petroleum Corporation

1801 Broadway #900
Denver CO 80202

ATTN: Jim Musgrove

Grothusen # 1-32

32-16-31 Scott Co KS

Job Ticket: 039717

DST#: 1

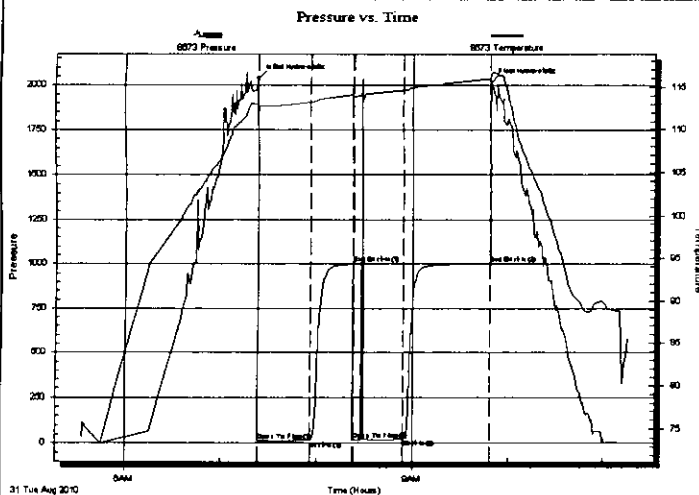
Test Start: 2010.08.31 @ 05:33:01

GENERAL INFORMATION:

Formation: **Lansing "E"**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: 07:23:15
 Time Test Ended: 11:16:15
 Interval: **4036.00 ft (KB) To 4054.00 ft (KB) (TVD)**
 Total Depth: **4054.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole**
 Tester: **Mike Roberts**
 Unit No: **28**
 Reference Elevations: **2943.00 ft (KB)**
2938.00 ft (CF)
 KB to GRVCF: **5.00 ft**

Serial #: 8673 Inside
 Press@RunDepth: **20.58 psig @ 4037.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2010.08.31** End Date: **2010.08.31** Last Calib.: **2010.08.31**
 Start Time: **05:33:01** End Time: **11:16:15** Time On Btm: **2010.08.31 @ 07:23:00**
 Time Off Btm: **2010.08.31 @ 09:49:15**

TEST COMMENT: IF:Weak blow died in 25 min.
 IS:No return blow
 FF:No blow ----flushed tool--- no blow
 FS:No return blow



PRESSURE SUMMARY

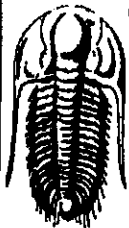
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2039.68	113.07	Initial Hydro-static
1	11.14	111.67	Open To Flow (1)
33	14.59	113.18	Shut-In(1)
60	1000.25	114.09	End Shut-In(1)
60	16.98	113.59	Open To Flow (2)
91	20.58	114.63	Shut-In(2)
146	1003.68	115.95	End Shut-In(2)
147	2018.81	116.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	m 100%	0.02

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Credo Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

Job Ticket: 039717

DST#: 1

ATTN: Jim Musgrove

Test Start: 2010.08.31 @ 05:33:01

Tool Information

Drill Pipe:	Length: 3922.00 ft	Diameter: 3.80 inches	Volume: 55.02 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 75000.00 lb
		Total Volume: 55.63 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4036.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	18.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4017.00	
Shut In Tool	5.00			4022.00	
Hydraulic tool	5.00			4027.00	
Packer	5.00		Fluid	4032.00	20.00 Bottom Of Top Packer
Packer	4.00			4036.00	
Stubb	1.00			4037.00	
Recorder	0.00	8673	Inside	4037.00	
Recorder	0.00	8654	Inside	4037.00	
Perforations	14.00			4051.00	
Bullnose	3.00			4054.00	18.00 Bottom Packers & Anchor
Total Tool Length:	38.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Credo Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

Job Ticket: 039717

DST#: 1

ATTN: Jim Musgrove

Test Start: 2010.08.31 @ 05:33:01

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.15 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	m 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

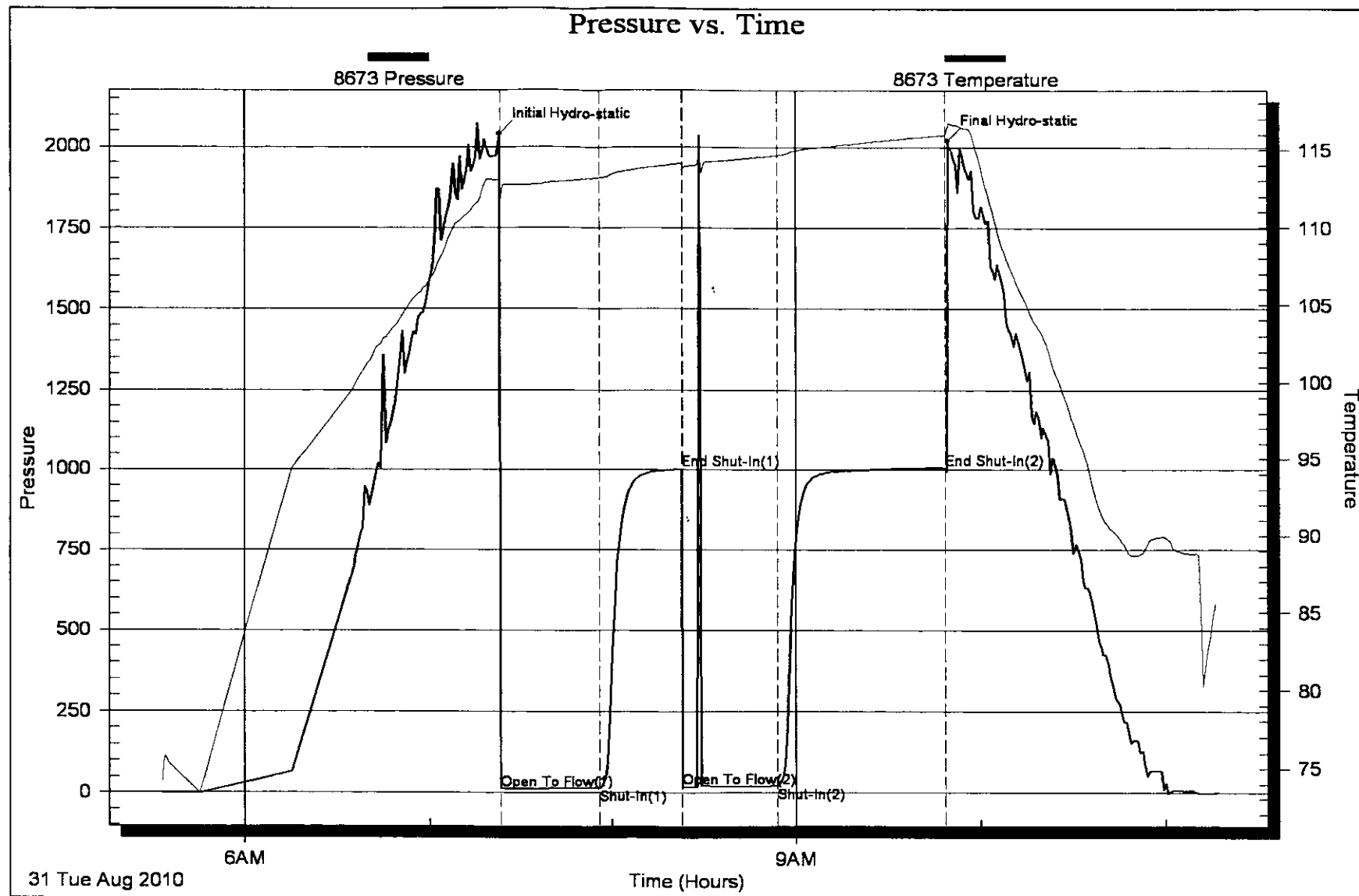
Num Gas Bombs: 0

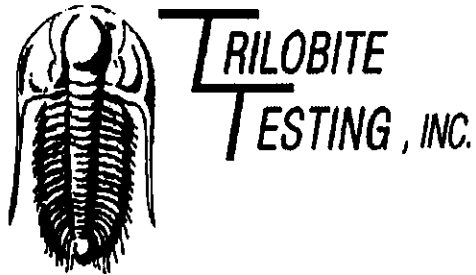
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway #900
Denver CO 80202

ATTN: Jim Musgrove

32-16-31 Scott Co KS

Grothusen # 1-32

Start Date: 2010.08.31 @ 18:41:01

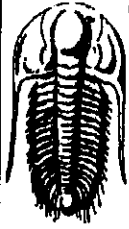
End Date: 2010.09.01 @ 02:24:15

Job Ticket #: 039718 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Credo Petroleum Corporation

1801 Broadway #900
Denver CO 80202

ATTN: Jim Musgrove

Grothusen # 1-32

32-16-31 Scott Co KS

Job Ticket: 039718

DST#: 2

Test Start: 2010.08.31 @ 18:41:01

GENERAL INFORMATION:

Formation: **Lansing "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:01:00

Time Test Ended: 02:24:15

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 28

Interval: **4070.00 ft (KB) To 4080.00 ft (KB) (TVD)**

Total Depth: 4080.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2943.00 ft (KB)

2938.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8673 Inside

Press@RunDepth: 845.56 psig @ 4071.00 ft (KB)

Start Date: 2010.08.31

End Date: 2010.09.01

Start Time: 18:41:01

End Time: 02:24:15

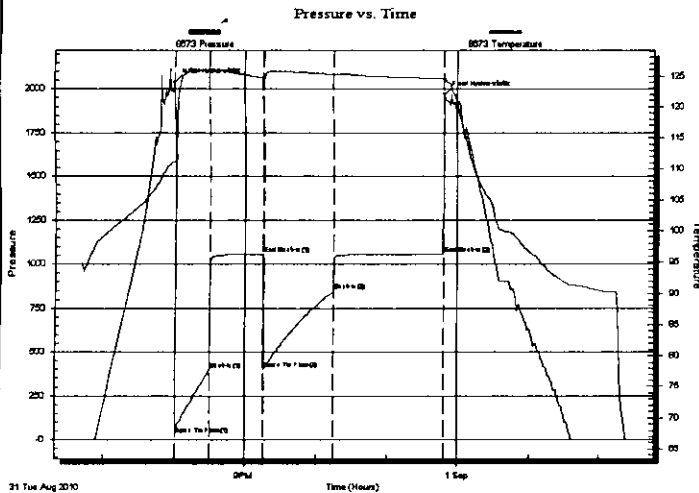
Capacity: 8000.00 psig

Last Calib.: 2010.09.01

Time On Btm: 2010.08.31 @ 20:00:45

Time Off Btm: 2010.08.31 @ 23:48:45

TEST COMMENT: IF:BOB in 5 min
IS:No return blow
FF:BOB in 6 min.
FS:No return blow



PRESSURE SUMMARY

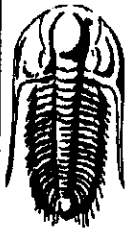
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2040.48	111.31	Initial Hydro-static
1	30.31	110.35	Open To Flow (1)
30	398.01	125.89	Shut-In(1)
75	1057.29	124.73	End Shut-In(1)
76	403.60	124.37	Open To Flow (2)
135	845.56	125.23	Shut-In(2)
228	1059.05	124.58	End Shut-In(2)
228	1970.32	124.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1550.00	sw 100%w	20.61
248.00	mcw 30% m 70%w	3.48

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Credo Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

Job Ticket: 039718

DST#: 2

ATTN: Jim Musgrove

Test Start: 2010.08.31 @ 18:41:01

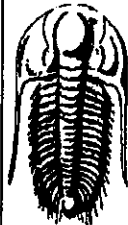
Tool Information

Drill Pipe:	Length: 3933.00 ft	Diameter: 3.80 inches	Volume: 55.17 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 85000.00 lb
		Total Volume:	55.78 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4070.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	30.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4051.00	
Shut In Tool	5.00			4056.00	
Hydraulic tool	5.00			4061.00	
Packer	5.00		Fluid	4066.00	20.00 Bottom Of Top Packer
Packer	4.00			4070.00	
Stubb	1.00			4071.00	
Recorder	0.00	8673	Inside	4071.00	
Recorder	0.00	8654	Inside	4071.00	
Perforations	6.00			4077.00	
Bullnose	3.00			4080.00	10.00 Bottom Packers & Anchor
Total Tool Length:	30.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Credo Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

Job Ticket: 039718

DST#: 2

ATTN: Jim Musgrove

Test Start: 2010.08.31 @ 18:41:01

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

38000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.15 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
1550.00	sw 100%w	20.613
248.00	mcw 30% m 70%w	3.479

Total Length: 1798.00 ft Total Volume: 24.092 bbf

Num Fluid Samples: 0

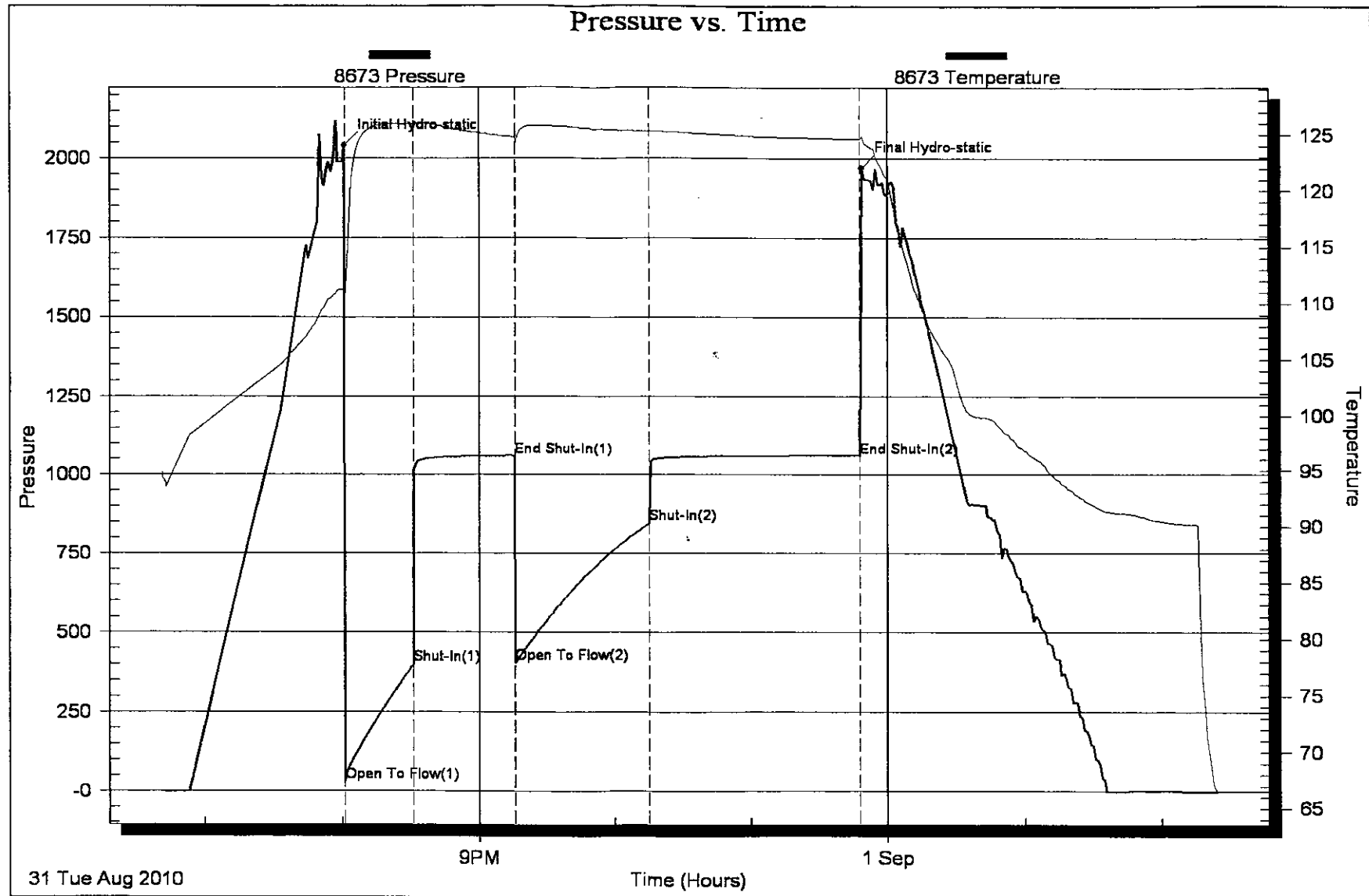
Num Gas Bombs: 0

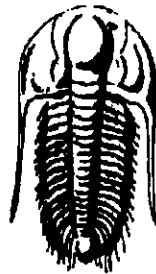
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .194@69.9 degrees=38,000





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway #900
Denver CO 80202

ATTN: Jim Musgrove

32-16-31 Scott Co KS

Grothusen # 1-32

Start Date: 2010.09.01 @ 00:34:01

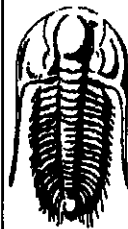
End Date: 2010.09.01 @ 08:02:15

Job Ticket #: 039719 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Credo Petroleum Corporation

1801 Broadway #900
Denver CO 80202

ATTN: Jim Musgrove

Grothusen # 1-32

32-16-31 Scott Co KS

Job Ticket: 039719

DST#: 3

Test Start: 2010.09.01 @ 00:34:01

GENERAL INFORMATION:

Formation: KC

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:33:30

Time Test Ended: 08:02:15

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 28

Interval: 4178.00 ft (KB) To 4285.00 ft (KB) (TVD)

Total Depth: 4285.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2943.00 ft (KB)

2938.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8673

Inside

Press@RunDepth: 780.18 psig @ 4249.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.09.01

End Date: 2010.09.01

Last Calib.: 2010.09.02

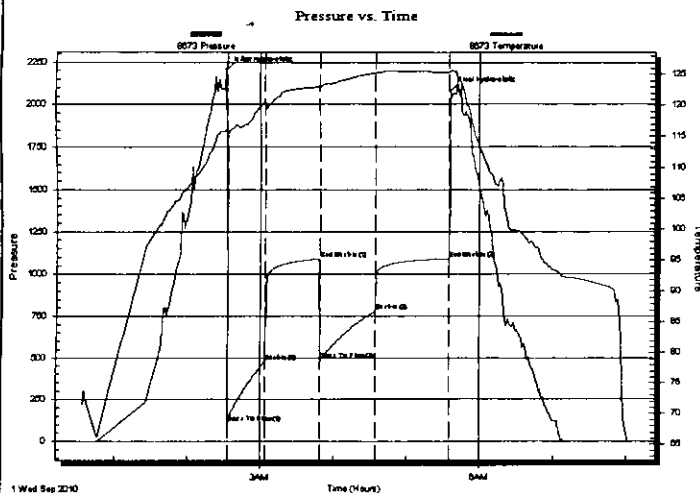
Start Time: 00:34:01

End Time: 08:02:15

Time On Btm: 2010.09.01 @ 02:32:30

Time Off Btm: 2010.09.01 @ 05:35:45

TEST COMMENT: IF:BOB in 3 min
IS:No return blow
FF:BOB in 5 min
FS:No return blow



PRESSURE SUMMARY

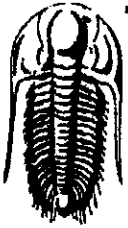
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2202.92	116.29	Initial Hydro-static
1	109.11	115.31	Open To Flow (1)
32	476.41	120.60	Shut-In(1)
77	1088.62	123.01	End Shut-In(1)
77	487.91	122.68	Open To Flow (2)
122	780.18	125.26	Shut-In(2)
183	1089.49	125.41	End Shut-In(2)
184	2082.61	125.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	m 100% with oil spots	2.35
1984.00	mcw 15% m 85% w with oil spots	27.83

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Credo Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

Job Ticket: 039719

DST#: 3

ATTN: Jim Musgrove

Test Start: 2010.09.01 @ 00:34:01

Tool Information

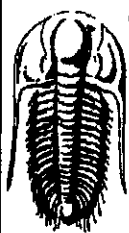
Drill Pipe:	Length: 4054.00 ft	Diameter: 3.80 inches	Volume: 56.87 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 85000.00 lb
		<u>Total Volume:</u>	<u>57.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4178.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	107.00 ft			
Tool Length:	135.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4151.00	
Shut In Tool	5.00			4156.00	
Hydraulic tool	5.00			4161.00	
Jars	5.00			4166.00	
Safety Joint	3.00			4169.00	
Packer	5.00		Fluid	4174.00	28.00 Bottom Of Top Packer
Packer	4.00			4178.00	
Stubb	1.00			4179.00	
Perforations	5.00			4184.00	
Change Over Sub	1.00			4185.00	
Drill Pipe	64.00			4249.00	
Recorder	0.00	8654	Inside	4249.00	
Recorder	0.00	8673	Inside	4249.00	
Change Over Sub	1.00			4250.00	
Perforations	32.00			4282.00	
Bullnose	3.00			4285.00	107.00 Bottom Packers & Anchor
Total Tool Length:	135.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Credo Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

Job Ticket: 039719

DST#: 3

ATTN: Jim Musgrove

Test Start: 2010.09.01 @ 00:34:01

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

20000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.36 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
248.00	m 100% with oil spots	2.349
1984.00	mcw 15% m 85% w with oil spots	27.830

Total Length: 2232.00 ft Total Volume: 30.179 bbf

Num Fluid Samples: 0

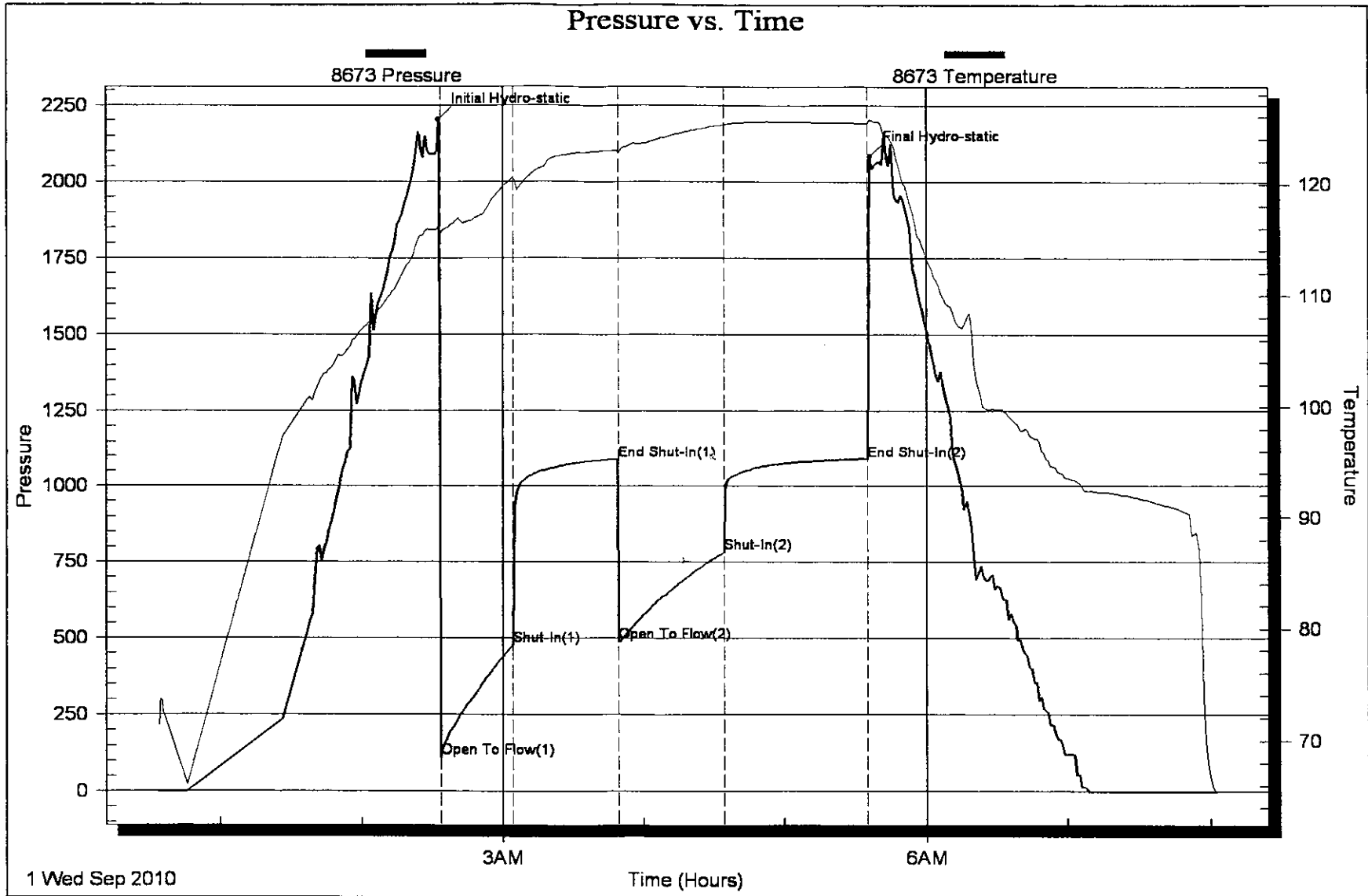
Num Gas Bombs: 0

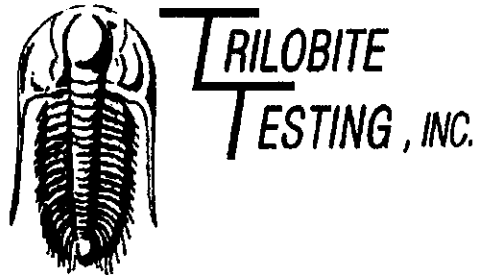
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.367 @66.1=20000





DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway #900
Denver CO 80202

ATTN: Jim Musgrove

32-16-31 Scott Co KS

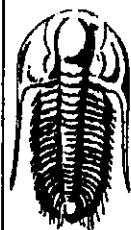
Grothusen # 1-32

Start Date: 2010.09.04 @ 15:10:00

End Date: 2010.09.04 @ 21:30:00

Job Ticket #: 039720 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Credo Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

ATTN: Jim Musgrove

Job Ticket: 039720

DST#: 4

Test Start: 2010.09.04 @ 15:10:00

GENERAL INFORMATION:

Formation: LKC 'B'

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:08:30

Time Test Ended: 21:30:00

Test Type: Conventional Straddle

Tester: Chuck Smith

Unit No: 37

Interval: 3978.00 ft (KB) To 4004.00 ft (KB) (TVD)

Total Depth: 4701.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2943.00 ft (KB)

2938.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8654

Inside

Press@RunDepth: 47.94 psig @ 3985.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.09.04

End Date: 2010.09.04

Last Calib.: 2010.09.04

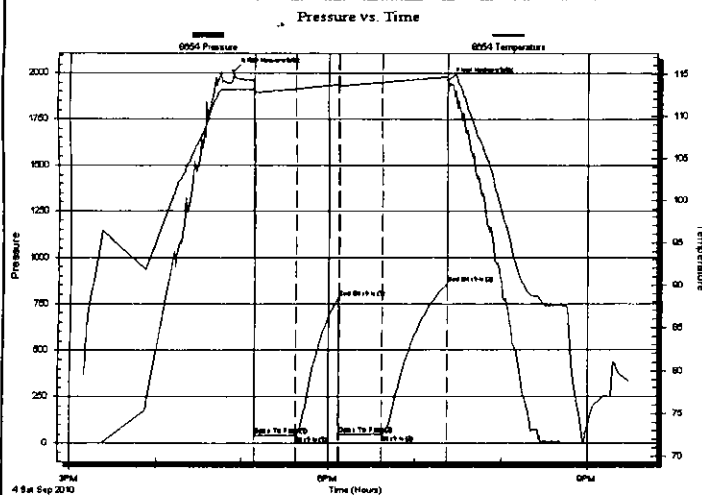
Start Time: 15:10:01

End Time: 21:30:00

Time On Btm: 2010.09.04 @ 16:53:45

Time Off Btm: 2010.09.04 @ 19:22:15

TEST COMMENT: IF: Steady 1" blow.
IS: No return.
FF: Weak surface blow.
FS: Weak surface return died @ 8 min.



PRESSURE SUMMARY

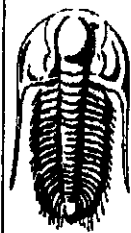
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2012.94	113.16	Initial Hydro-static
15	42.59	112.67	Open To Flow (1)
44	44.42	113.25	Shut-In(1)
74	780.17	113.74	End Shut-In(1)
74	46.39	113.46	Open To Flow (2)
103	47.94	114.02	Shut-In(2)
148	858.01	114.66	End Shut-In(2)
149	1960.62	115.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	m 100% Oil spots in tool.	0.15

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Crede Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

Job Ticket: 039720

DST#: 4

ATTN: Jim Musgrove

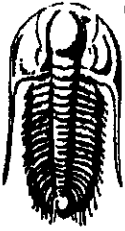
Test Start: 2010.09.04 @ 15:10:00

Tool Information

Drill Pipe:	Length: 3832.00 ft	Diameter: 3.80 inches	Volume: 53.75 bbl	Tool Weight: 6500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 54.36 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	3978.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	4004.00 ft			
Interval between Packers:	26.00 ft			
Tool Length:	751.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3951.00	
Shut In Tool	5.00			3956.00	
Hydraulic tool	5.00			3961.00	
Jars	5.00			3966.00	
Safety Joint	3.00			3969.00	
Packer	5.00			3974.00	28.00 Bottom Of Top Packer
Packer	4.00			3978.00	
Stubb	1.00			3979.00	
Perforations	6.00			3985.00	
Recorder	0.00	8654	Inside	3985.00	
Recorder	0.00	8673	Outside	3985.00	
Perforations	15.00			4000.00	
Blank Off Sub	1.00			4001.00	
top of s pack	3.00			4004.00	
Packer	1.00			4005.00	
Stubb	1.00			4006.00	26.00 Tool Interval
Packer	4.00			4010.00	
Stubb	1.00			4011.00	
Recorder	0.00	6669	Below	4011.00	
Perforations	20.00			4031.00	
Change Over Sub	1.00			4032.00	
Drill Pipe	665.00			4697.00	
Change Over Sub	1.00			4698.00	
Bullnose	3.00			4701.00	697.00 Bottom Packers & Anchor
Total Tool Length:	751.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Credo Petroleum Corporation

Grothusen # 1-32

1801 Broadway #900
Denver CO 80202

32-16-31 Scott Co KS

Job Ticket: 039720

DST#: 4

ATTN: Jim Musgrove

Test Start: 2010.09.04 @ 15:10:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	0 deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	0 ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.78 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3700.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	m 100% Oil spots in tool.	0.148

Total Length: 30.00 ft Total Volume: 0.148 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Mixed and ran in a tank of mud before this test due to mud properties.

