



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1096818  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

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
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

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.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



1096818

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to [kcc-well-logs@kcc.ks.gov](mailto:kcc-well-logs@kcc.ks.gov). Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

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

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR. \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Credo Petroleum Corporation
Well Name	William 1-6
Doc ID	1096818

All Electric Logs Run

Microresistivity Log
Dual Induction Log
Dual Compensated Porosity Log
Borehole Compensated Sonic Log

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

October 10, 2012

Jack Renfro  
Credo Petroleum Corporation  
1801 BROADWAY # 900  
DENVER, CO 80202-3858

Re: ACO1  
API 15-171-20893-00-00  
William 1-6  
SE/4 Sec.06-17S-31W  
Scott County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Jack Renfro

# ALLIED CEMENTING CO., LLC. 044131

Federal Tax I.D.# 20-6976804

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

SERVICE POINT:  
OAKLEY

DATE <u>8-7-2012</u>	SEC. <u>6</u>	TWP. <u>17S</u>	RANGE <u>31W</u>	CALLED OUT	ON LOCATION <u>11:30 AM</u>	JOB START <u>6:00 PM</u>	JOB FINISH <u>6:30 PM</u>
LEASEE <u>WILLIAM</u>	WELL # <u>1-6</u>	LOCATION <u>Scott city north to 8344527</u>			COUNTY <u>Scott</u>	STATE <u>Ks</u>	
OLD OR NEW (Circle one) <u>NEW</u>				6 1/2 E - N I 20		8.3	

CONTRACTOR: WYAN # 2 OWNER: SNM2 1.01

TYPE OF JOB: Surface

HOLE SIZE: 12 1/4 T.D. 250' CEMENT AMOUNT ORDERED: 160 SKS Com 3% CC 2% 821

CASING SIZE: 8 7/8 DEPTH 249'

TUBING SIZE: \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE: \_\_\_\_\_ DEPTH \_\_\_\_\_

TOOL: \_\_\_\_\_ DEPTH \_\_\_\_\_

PREBS. MAX: \_\_\_\_\_ MINIMUM: \_\_\_\_\_

MEAS. LINE: \_\_\_\_\_ SHOE JOINT: \_\_\_\_\_

CEMENT LEFT IN CSG. 15'

PERFS. \_\_\_\_\_

DISPLACEMENT 14.90 BALS

EQUIPMENT

PUMP TRUCK CEMENTER: TERRY Heinrich

# 422 HELPER: D.J. GRAY 3

BULK TRUCK DRIVER: Brandon Weir

# 396 DRIVER: \_\_\_\_\_

BULK TRUCK DRIVER: \_\_\_\_\_

# \_\_\_\_\_ DRIVER: \_\_\_\_\_

HANDLING 1.73 CU FT @ 2.49 36.7

MILEAGE 7.90 TONS X 45 X 2.35 81.5

TOTAL 421.1

REMARKS:

Run 6 7/8 8 7/8 casing totaling 249'  
MEX 160 SKS Com 3% CC 2% 821. Displace  
with 14.90 BALS WATER.

Cement Job Circulate

THANK YOU

CHARGE TO: CREDO Petroleum Corp.

STREET \_\_\_\_\_

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

SERVICE

DEPTH OF JOB 249'

PUMP TRUCK CHARGE 112.5

EXTRA FOOTAGE @ \_\_\_\_\_

MILEAGE 45 mi @ 7.00 315

MANIFOLD @ \_\_\_\_\_

Light Vehicle 15 mi @ 4.00 180

@ \_\_\_\_\_

TOTAL 1620

PLUG & FLOAT EQUIPMENT

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

@ \_\_\_\_\_

TOTAL \_\_\_\_\_

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 Walter Brown

SIGNATURE Walter Brown

SALES TAX (if Any) 250.07

TOTAL CHARGES 5,831.89

DISCOUNT 20 1166.37 IF PAID IN 30 DAYS

# ALLIED OIL & GAS SERVICES, LLC 056730

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:

0966ey

DATE <u>8-16-12</u>	SEC. <u>6</u>	TWP. <u>173</u>	RANGE <u>31W</u>	CALLED OUT	ON LOCATION	JOB START <u>2:30 AM</u>	JOB FINISH <u>3:30 AM</u>
LEASE <u>Williams</u>	WELL # <u>16</u>	LOCATION <u>Hegly 10W Ninto</u>			COUNTY <u>SCOTT</u>	STATE <u>KS</u>	
OLD OR (NEW) (Circle one)							

CONTRACTOR WFW 2

TYPE OF JOB P.T.A.

HOLE SIZE 7 7/8 T.D. 4208'

CASING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_

DRILL PIPE 4 1/2 DEPTH 2340'

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_

PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_

MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. \_\_\_\_\_

PERFS. \_\_\_\_\_

DISPLACEMENT \_\_\_\_\_

OWNER same

CEMENT AMOUNT ORDERED 295 sks 60/40 40/20

14 Flo-seg L

COMMON	<u>177 sks</u>	@ <u>16.25</u>	<u>2876.25</u>
POZMIX	<u>118 sks</u>	@ <u>8.50</u>	<u>1003.00</u>
GEL	<u>10 sks</u>	@ <u>21.25</u>	<u>212.50</u>
CHLORIDE		@	
ASC		@	
<u>Flo-seg L</u>	<u>73#</u>	@ <u>2.70</u>	<u>197.10</u>

EQUIPMENT

PUMP TRUCK # 431 CEMENTER Andrew Foxland  
HELPER 2 Dan & Roldoff

BULK TRUCK # 396 DRIVER 3 O.J. Gray

BULK TRUCK # \_\_\_\_\_ DRIVER \_\_\_\_\_

HANDLING 316.829 94/10 @ 2.10 665.34

MILEAGE 2.35 700/mile 13.229 mi 249.52

TOTAL 6197.71

529.15

REMARKS:

50 sks @ 2340'

80 sks @ 1590'

50 sks @ 280'

50 sks @ 270'

20 sks @ 60'

15 sks mouse hole

30 sks Rat hole

SERVICE

DEPTH OF JOB 2340'

PUMP TRUCK CHARGE 1250.00

EXTRA FOOTAGE @ \_\_\_\_\_

MILEAGE 40 miles @ 2.00 280.00

MANIFOLD @ \_\_\_\_\_

Light vehicle @ 4.00 160.00

CHARGE TO: Credo petroleum

STREET \_\_\_\_\_

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

TOTAL 1690.00

PLUG & FLOAT EQUIPMENT

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

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

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

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

To: Allied Oil & Gas Services, 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 Danny Johnston

SIGNATURE Danny Johnston

TOTAL 6546.7

SALES TAX (If Any) 48.03

TOTAL CHARGES 7,887.71

DISCOUNT 20 1577.54 IF PAID IN 30 DAYS



## DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway # 900  
Denver CO 80202-3858

ATTN: Bruce Ard

**William #1-6**

**6-17s-31w Scott,KS**

Start Date: 2012.08.11 @ 09:45:00

End Date: 2012.08.11 @ 16:26:45

Job Ticket #: 48343                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.22 @ 09:34:25

Credo Petroleum Corporation  
6-17s-31w Scott,KS  
William #1-6  
DST # 1  
Kansas City "C-F"  
2012.08.11



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48343

**DST#: 1**

ATTN: Bruce Ard

Test Start: 2012.08.11 @ 09:45:00

## GENERAL INFORMATION:

Formation: **Kansas City "C-F"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:45:30  
 Time Test Ended: 16:26:45  
 Interval: **4002.00 ft (KB) To 4097.00 ft (KB) (TVD)**  
 Total Depth: 4097.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jace McKinney  
 Unit No: 46  
 Reference Elevations: 2960.00 ft (KB)  
 2955.00 ft (CF)  
 KB to GR/CF: 5.00 ft

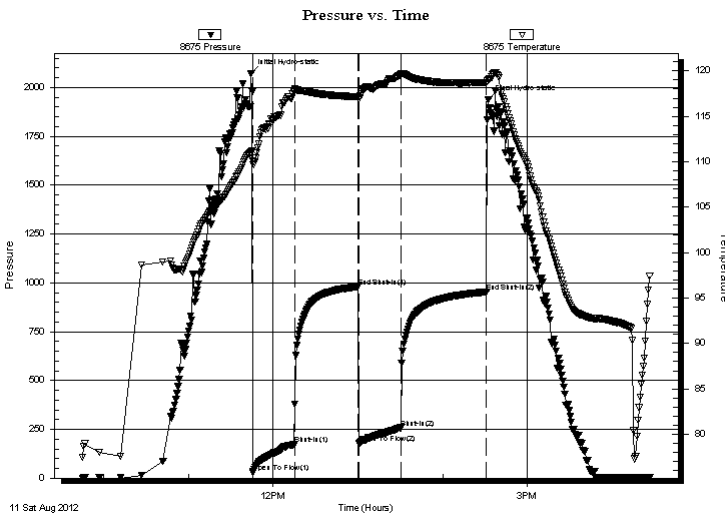
## Serial #: 8675

Inside

Press @ Run Depth: 257.68 psig @ 4003.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.08.11 End Date: 2012.08.11 Last Calib.: 2012.08.11  
 Start Time: 09:45:15 End Time: 16:26:45 Time On Btm: 2012.08.11 @ 11:44:30  
 Time Off Btm: 2012.08.11 @ 14:32:30

TEST COMMENT: B.O.B. in 13 min.  
 Bled off for 5 min. No return blow  
 B.O.B. in 21 min.  
 Bled off for 5 min. No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2072.60	111.08	Initial Hydro-static
1	29.58	110.14	Open To Flow (1)
31	173.87	117.83	Shut-In(1)
76	980.47	117.16	End Shut-In(1)
77	177.78	116.87	Open To Flow (2)
106	257.68	119.58	Shut-In(2)
167	953.92	118.70	End Shut-In(2)
168	1939.06	118.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
248.00	mcw 50%M 50%W	2.36
252.00	mud 100%M	3.53

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48343

**DST#: 1**

ATTN: Bruce Ard

Test Start: 2012.08.11 @ 09:45:00

## Tool Information

Drill Pipe:	Length: 3878.64 ft	Diameter: 3.80 inches	Volume: 54.41 bbl	Tool Weight: 2500.00 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: 123.19 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 55.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.33 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4002.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	122.50 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			3975.50	
Shut In Tool	5.00			3980.50	
Hydraulic tool	5.00			3985.50	
Jars	5.00			3990.50	
Safety Joint	2.50			3993.00	
Packer	5.00			3998.00	27.50 Bottom Of Top Packer
Packer	4.00			4002.00	
Stubb	1.00			4003.00	
Recorder	0.00	8675	Inside	4003.00	
Recorder	0.00	8650	Outside	4003.00	
Perforations	25.00			4028.00	
Change Over Sub	1.00			4029.00	
Drill Pipe	64.00			4093.00	
Change Over Sub	1.00			4094.00	
Bullnose	3.00			4097.00	95.00 Bottom Packers & Anchor

**Total Tool Length: 122.50**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48343

**DST#: 1**

ATTN: Bruce Ard

Test Start: 2012.08.11 @ 09:45:00

## 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:	ppm
Viscosity: 65.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.36 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1100.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	mcw 50%M 50%W	2.357
252.00	mud 100%M	3.535

Total Length: 500.00 ft      Total Volume: 5.892 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW .20 @ 100 F = 25,000

Serial #: 8675

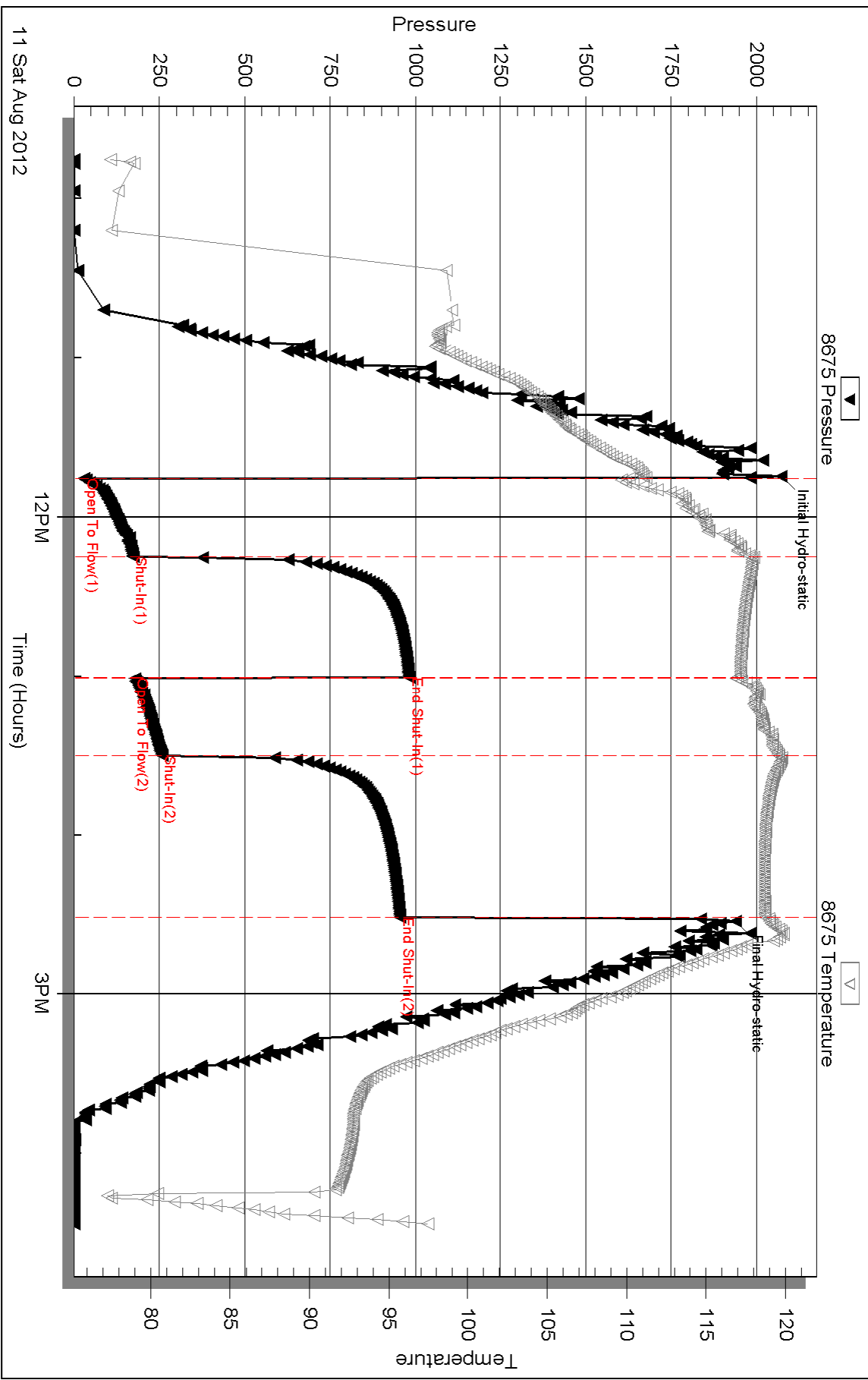
Inside

Crede Petroleum Corporation

William #1-6

DST Test Number: 1

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48343

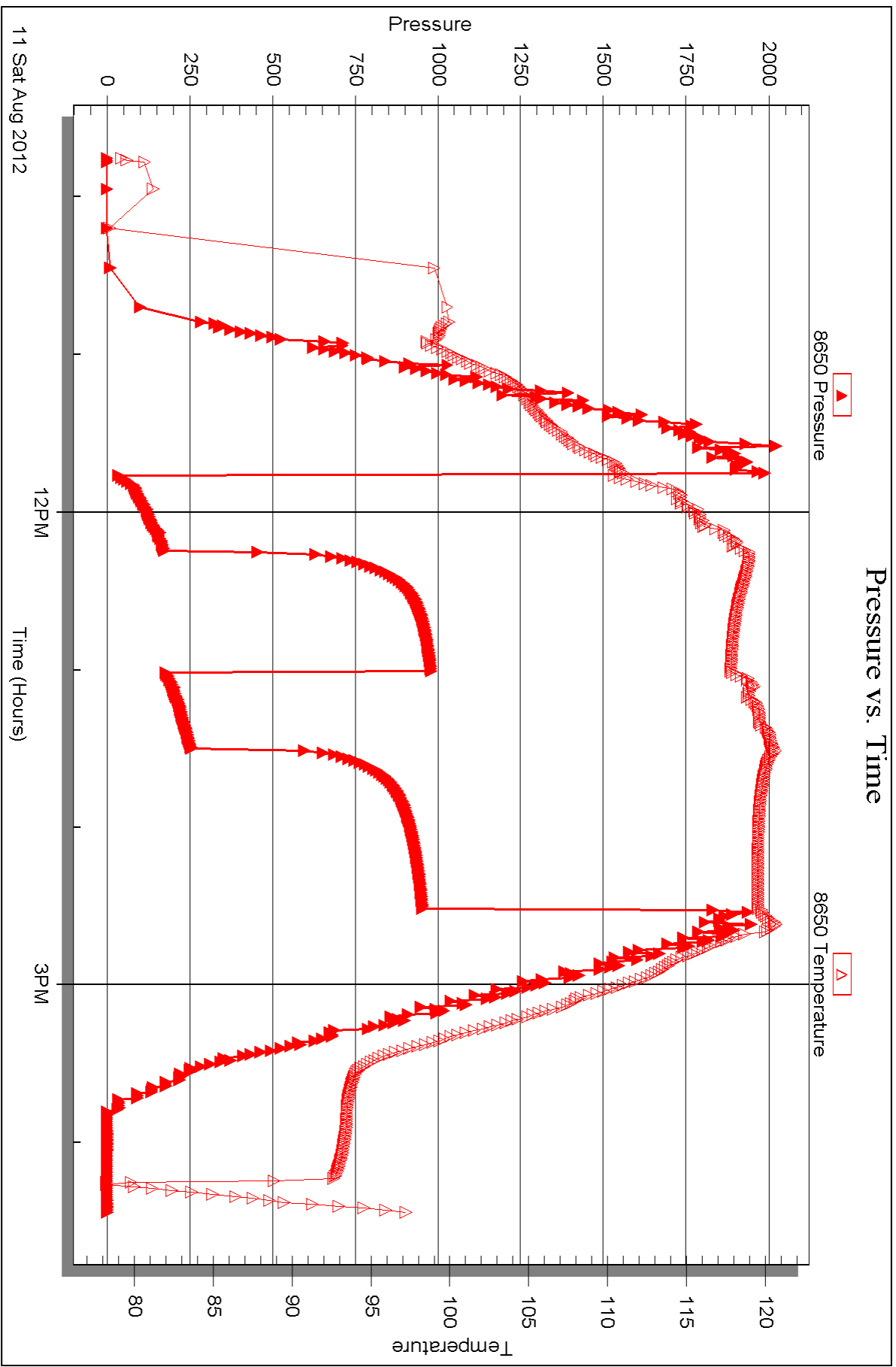
Printed: 2012.08.22 @ 09:34:29

Serial #: 8650

Outside Credo Petroleum Corporation

William#1-6

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway # 900  
Denver CO 80202-3858

ATTN: Bruce Ard

**William #1-6**

**6-17s-31w Scott,KS**

Start Date: 2012.08.12 @ 04:25:00

End Date: 2012.08.12 @ 13:12:15

Job Ticket #: 48344                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.22 @ 09:33:31



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48344

**DST#: 2**

ATTN: Bruce Ard

Test Start: 2012.08.12 @ 04:25:00

## GENERAL INFORMATION:

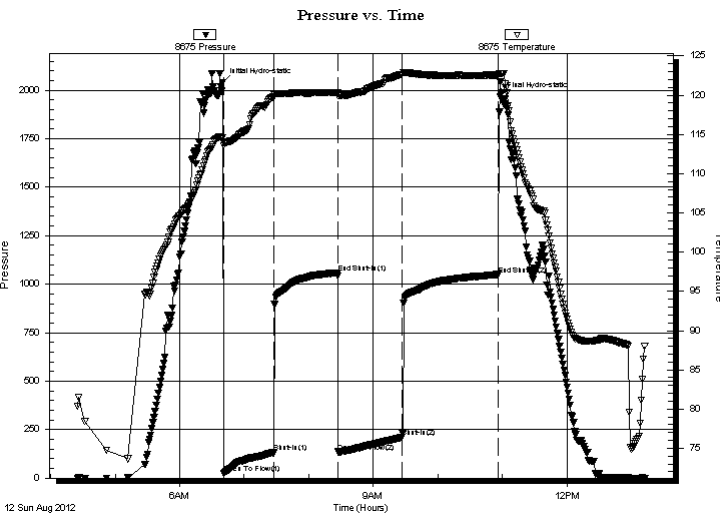
Formation: **Kansas City "H-J"**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 06:41:00  
 Tester: Jace McKinney  
 Time Test Ended: 13:12:15  
 Unit No: 46  
 Interval: **4152.00 ft (KB) To 4248.00 ft (KB) (TVD)**  
 Reference Elevations: 2960.00 ft (KB)  
 Total Depth: 4248.00 ft (KB) (TVD)  
 2955.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Fair  
 KB to GR/CF: 5.00 ft

## Serial #: 8675

Inside

Press @ Run Depth: 210.19 psig @ 4153.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.08.12 End Date: 2012.08.12 Last Calib.: 2012.08.12  
 Start Time: 04:25:15 End Time: 13:12:15 Time On Btm: 2012.08.12 @ 06:40:15  
 Time Off Btm: 2012.08.12 @ 10:57:45

**TEST COMMENT:** B.O.B. in 40 min.  
 Bled off for 5 min. No return blow  
 B.O.B. in 54 min.  
 Bled off for 5 min. No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2039.81	114.55	Initial Hydro-static
1	23.71	113.55	Open To Flow (1)
47	131.19	119.72	Shut-In(1)
107	1058.96	120.28	End Shut-In(1)
108	135.20	119.93	Open To Flow (2)
167	210.19	122.63	Shut-In(2)
257	1050.15	122.55	End Shut-In(2)
258	1967.44	122.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
186.00	w cm 20%W 80%M	1.49
224.00	100%M with few oil spots	3.14

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48344

**DST#: 2**

ATTN: Bruce Ard

Test Start: 2012.08.12 @ 04:25:00

## Tool Information

Drill Pipe:	Length: 4004.89 ft	Diameter: 3.80 inches	Volume: 56.18 bbl	Tool Weight: 2500.00 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: 123.19 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 56.79 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.58 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4152.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	96.00 ft			
Tool Length:	123.50 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			4125.50	
Shut In Tool	5.00			4130.50	
Hydraulic tool	5.00			4135.50	
Jars	5.00			4140.50	
Safety Joint	2.50			4143.00	
Packer	5.00			4148.00	27.50 Bottom Of Top Packer
Packer	4.00			4152.00	
Stubb	1.00			4153.00	
Recorder	0.00	8675	Inside	4153.00	
Recorder	0.00	8650	Outside	4153.00	
Perforations	26.00			4179.00	
Change Over Sub	1.00			4180.00	
Drill Pipe	64.00			4244.00	
Change Over Sub	1.00			4245.00	
Bullnose	3.00			4248.00	96.00 Bottom Packers & Anchor

**Total Tool Length: 123.50**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48344

**DST#: 2**

ATTN: Bruce Ard

Test Start: 2012.08.12 @ 04:25:00

## 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:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.36 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	w cm 20%W 80%M	1.487
224.00	100%M with few oil spots	3.142

Total Length: 410.00 ft      Total Volume: 4.629 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

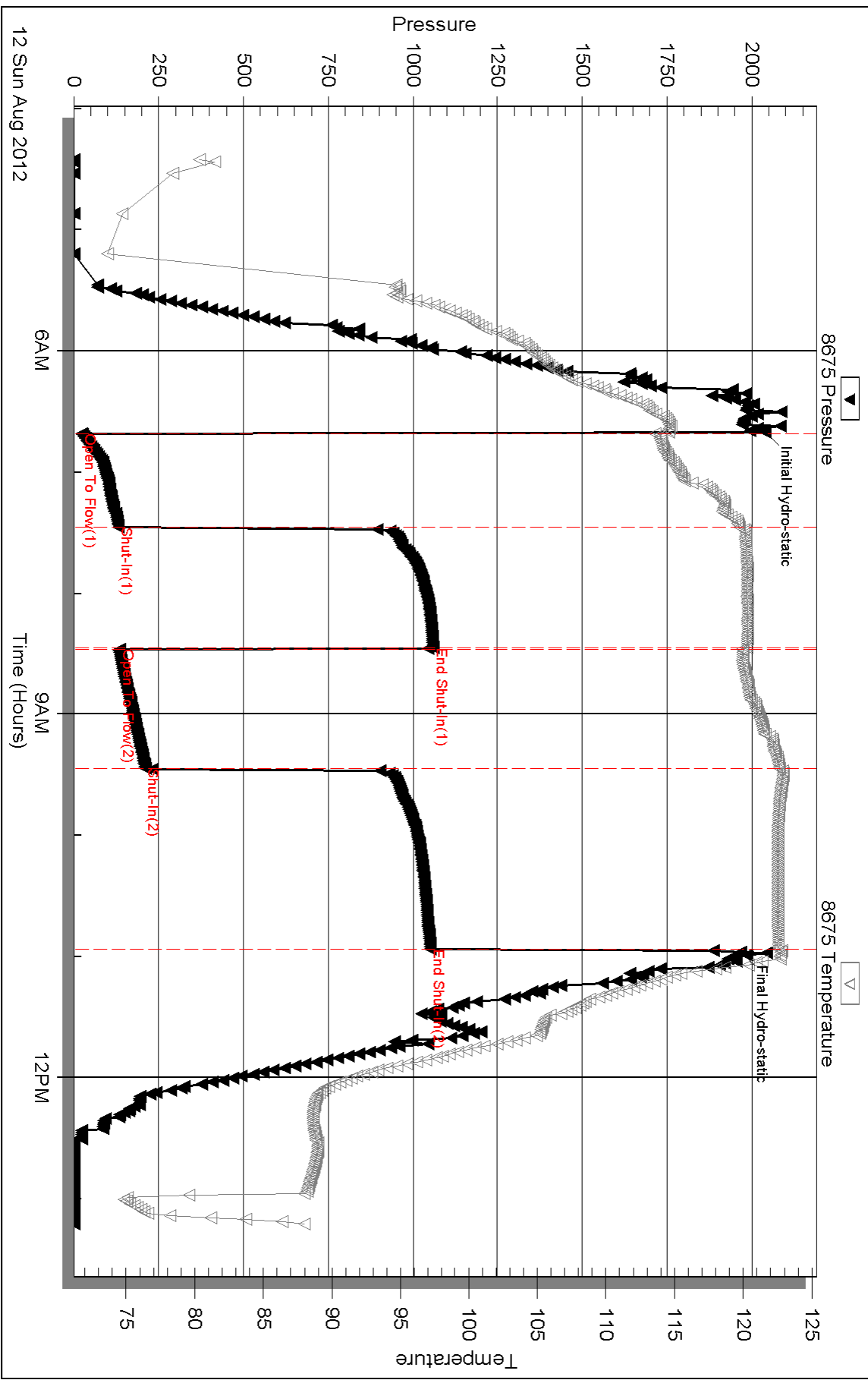
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .20 @ 90 F = 28,000

# Pressure vs. Time

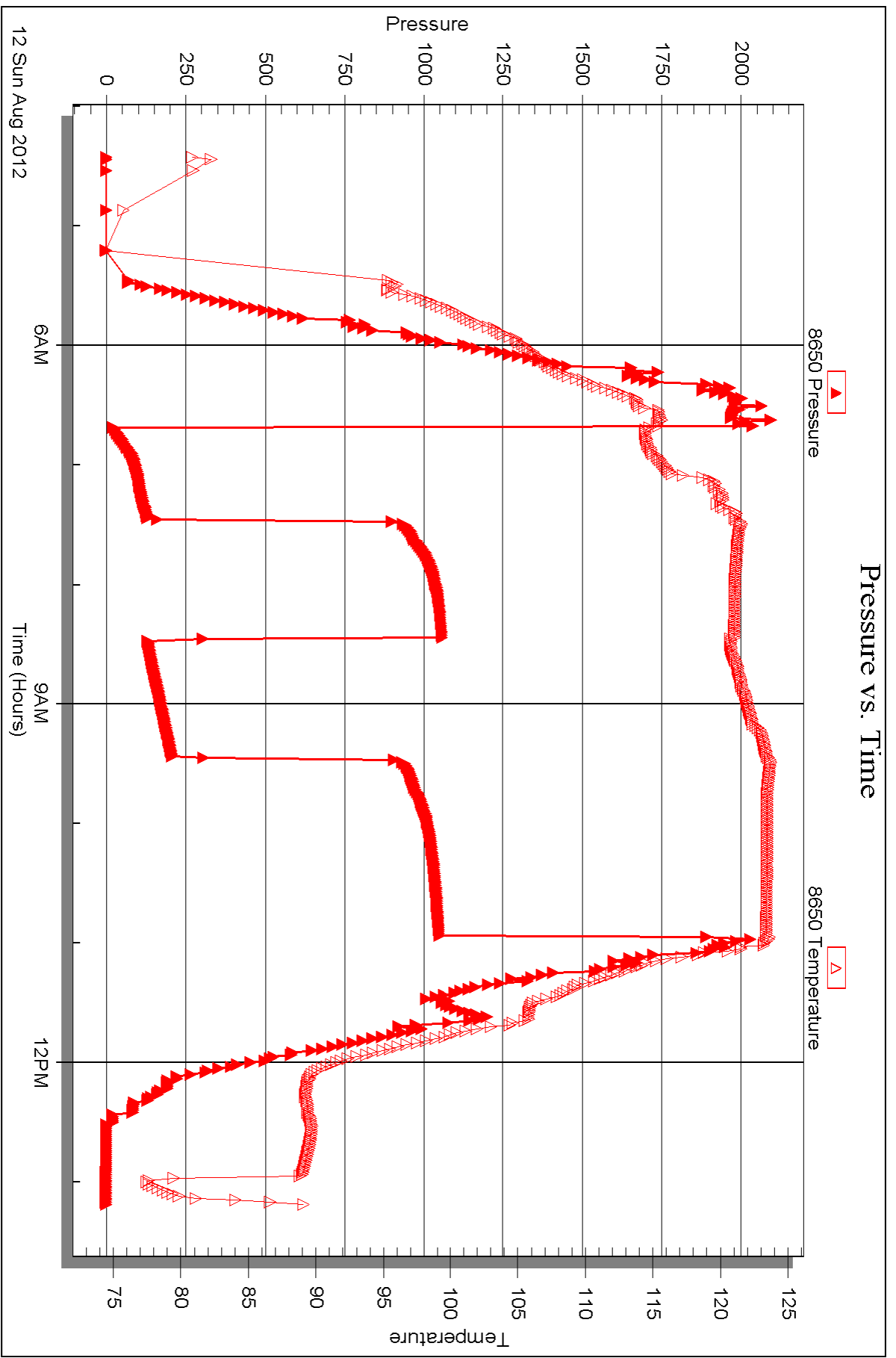


Serial #: 8650

Outside Credo Petroleum Corporation

William #1-6

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 48344

Printed: 2012.08.22 @ 09:33:35



## DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway # 900  
Denver CO 80202-3858

ATTN: Bruce Ard

**William #1-6**

**6-17s-31w Scott,KS**

Start Date: 2012.08.13 @ 03:45:00

End Date: 2012.08.13 @ 11:03:00

Job Ticket #: 48345                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.22 @ 09:32:43



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48345

**DST#: 3**

ATTN: Bruce Ard

Test Start: 2012.08.13 @ 03:45:00

## GENERAL INFORMATION:

Formation: **KC "K"- Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:07:15

Time Test Ended: 11:03:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

**Interval: 4246.00 ft (KB) To 4410.00 ft (KB) (TVD)**

Reference Elevations: 2960.00 ft (KB)

Total Depth: 4410.00 ft (KB) (TVD)

2955.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8675**

**Inside**

Press @ Run Depth: 171.66 psig @ 4247.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.13

End Date:

2012.08.13

Last Calib.: 2012.08.13

Start Time: 03:45:15

End Time:

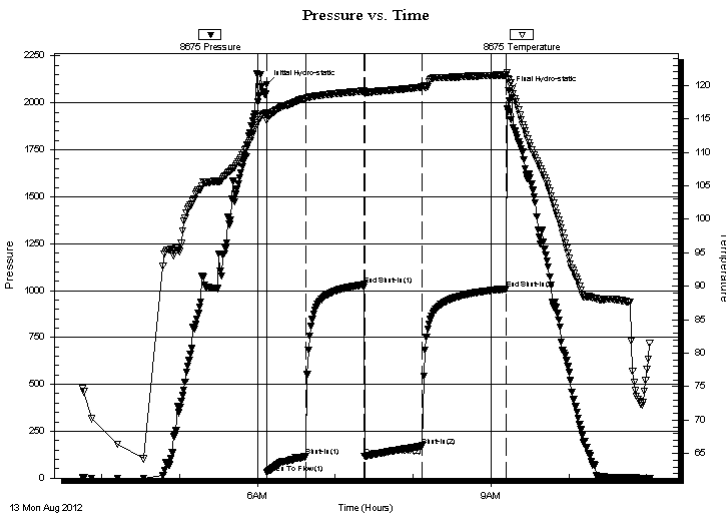
11:03:00

Time On Btm: 2012.08.13 @ 06:07:00

Time Off Btm: 2012.08.13 @ 09:13:45

**TEST COMMENT:** Built to 9" blow  
Bled off for 5 min. No return blow  
Built to 7" blow  
Bled off for 5 min. No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2096.19	115.91	Initial Hydro-static
1	28.17	114.70	Open To Flow (1)
31	116.55	117.94	Shut-In(1)
75	1031.32	119.13	End Shut-In(1)
76	116.09	118.79	Open To Flow (2)
120	171.66	119.76	Shut-In(2)
185	1008.80	121.54	End Shut-In(2)
187	2066.97	120.83	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
123.00	w cm 20%W 80%M	0.60
207.00	mud 100%M	2.90

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48345

**DST#: 3**

ATTN: Bruce Ard

Test Start: 2012.08.13 @ 03:45:00

## Tool Information

Drill Pipe:	Length: 4129.38 ft	Diameter: 3.80 inches	Volume: 57.92 bbl	Tool Weight: 2500.00 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: 123.19 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 58.53 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	34.07 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4246.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	164.00 ft			
Tool Length:	191.50 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			4219.50	
Shut In Tool	5.00			4224.50	
Hydraulic tool	5.00			4229.50	
Jars	5.00			4234.50	
Safety Joint	2.50			4237.00	
Packer	5.00			4242.00	27.50 Bottom Of Top Packer
Packer	4.00			4246.00	
Stubb	1.00			4247.00	
Recorder	0.00	8675	Inside	4247.00	
Recorder	0.00	8650	Outside	4247.00	
Perforations	32.00			4279.00	
Change Over Sub	1.00			4280.00	
Drill Pipe	126.00			4406.00	
Change Over Sub	1.00			4407.00	
Bullnose	3.00			4410.00	164.00 Bottom Packers & Anchor

**Total Tool Length: 191.50**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48345

**DST#: 3**

ATTN: Bruce Ard

Test Start: 2012.08.13 @ 03:45:00

## 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:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.77 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
123.00	w cm 20%W 80%M	0.605
207.00	mud 100%M	2.902

Total Length: 330.00 ft      Total Volume: 3.507 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

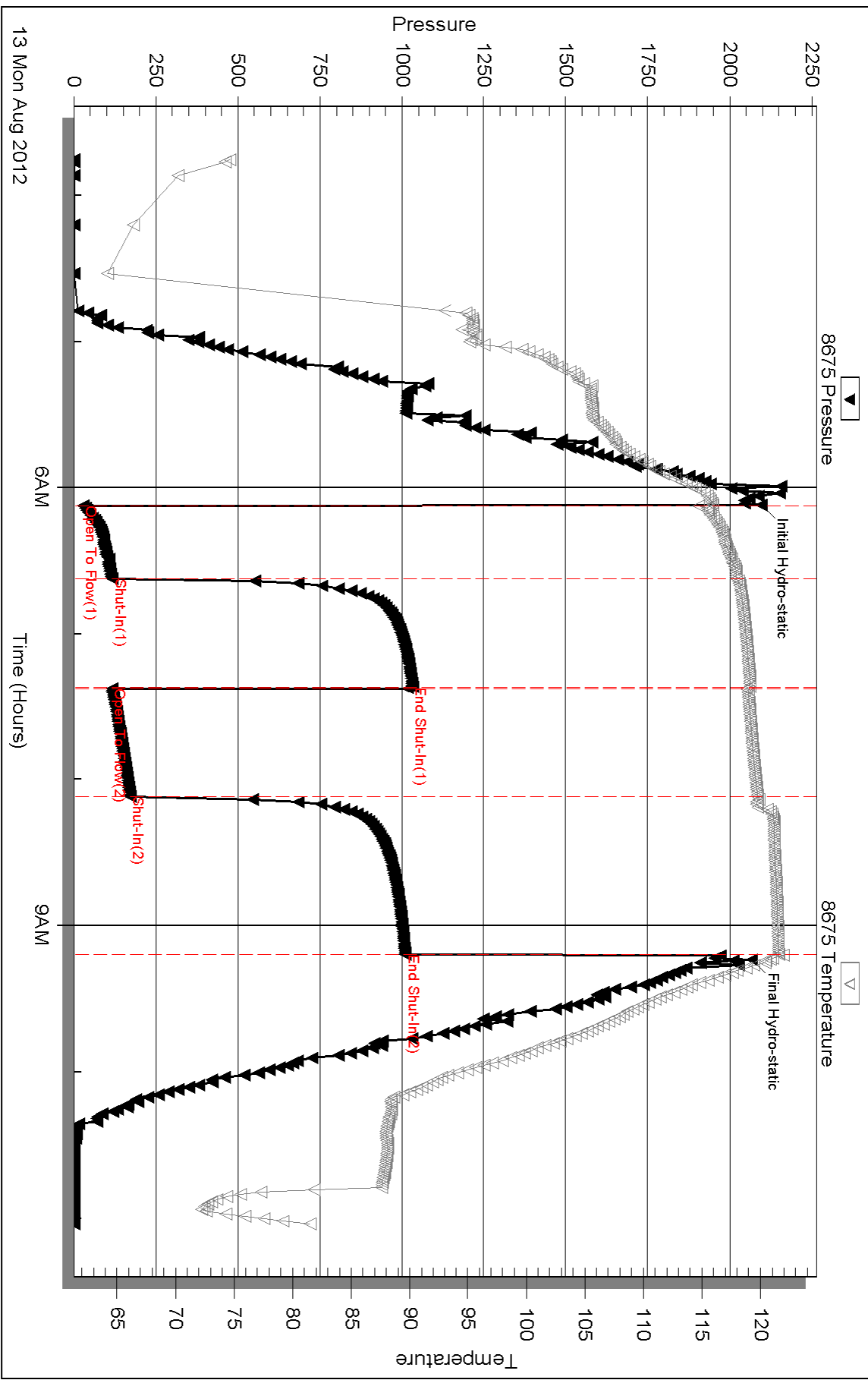
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .35 @ 75 F = 20,000

### Pressure vs. Time

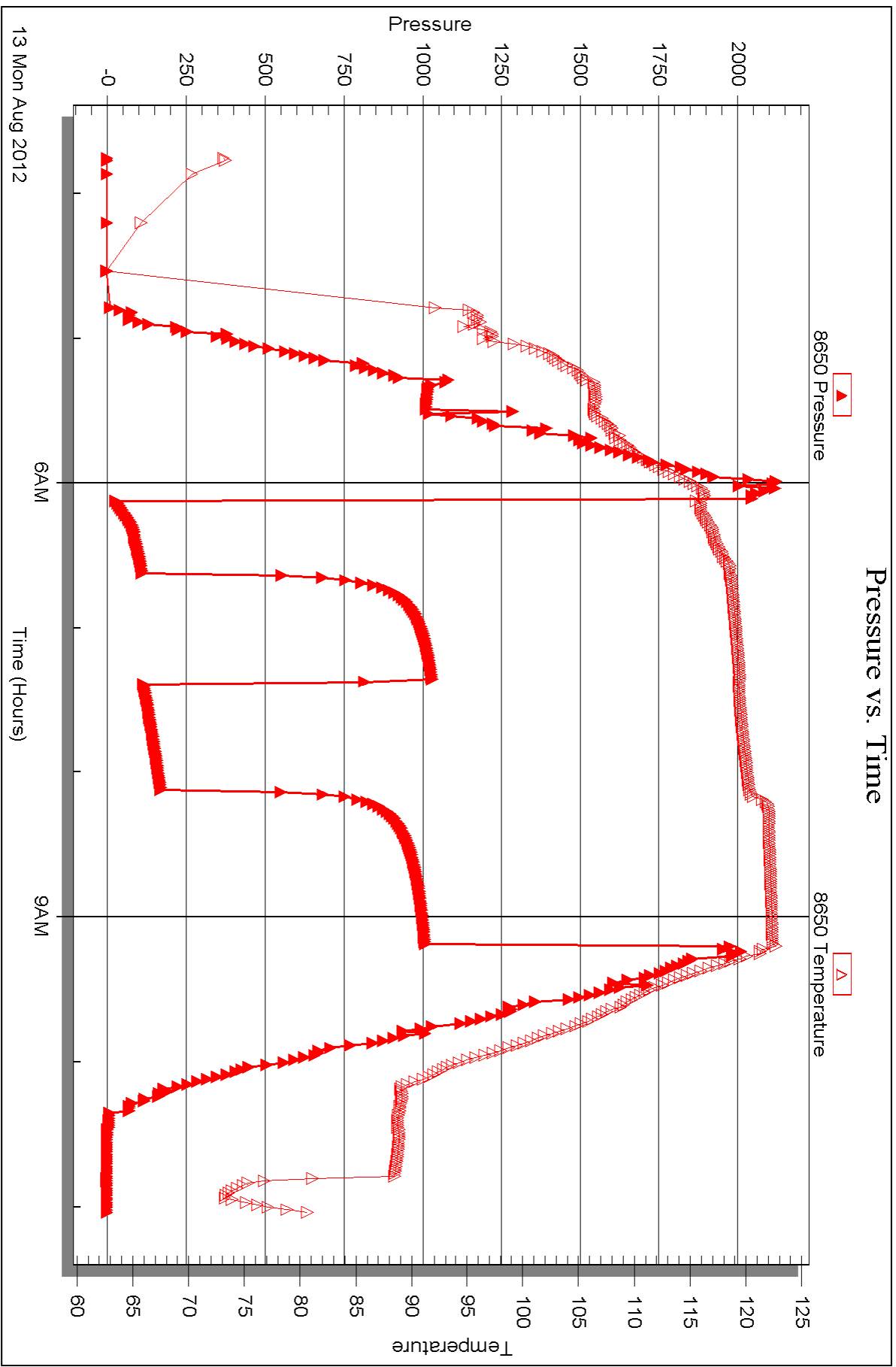


Serial #: 8650

Outside Credo Petroleum Corporation

William #1-6

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 48345

Printed: 2012.08.22 @ 09:32:47



## DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway # 900  
Denver CO 80202-3858

ATTN: Bruce Ard

**William #1-6**

**6-17s-31w Scott,KS**

Start Date: 2012.08.13 @ 21:20:00

End Date: 2012.08.14 @ 04:01:00

Job Ticket #: 48346                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.22 @ 09:31:42



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48346

**DST#: 4**

ATTN: Bruce Ard

Test Start: 2012.08.13 @ 21:20:00

## GENERAL INFORMATION:

Formation: **Altamont - Fort Scot**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:22:15

Time Test Ended: 04:01:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

**Interval: 4406.00 ft (KB) To 4508.00 ft (KB) (TVD)**

Reference Elevations: 2960.00 ft (KB)

Total Depth: 4508.00 ft (KB) (TVD)

2955.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8675 Inside**

Press @ Run Depth: 47.96 psig @ 4407.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.13

End Date:

2012.08.14

Last Calib.: 2012.08.14

Start Time: 21:20:15

End Time:

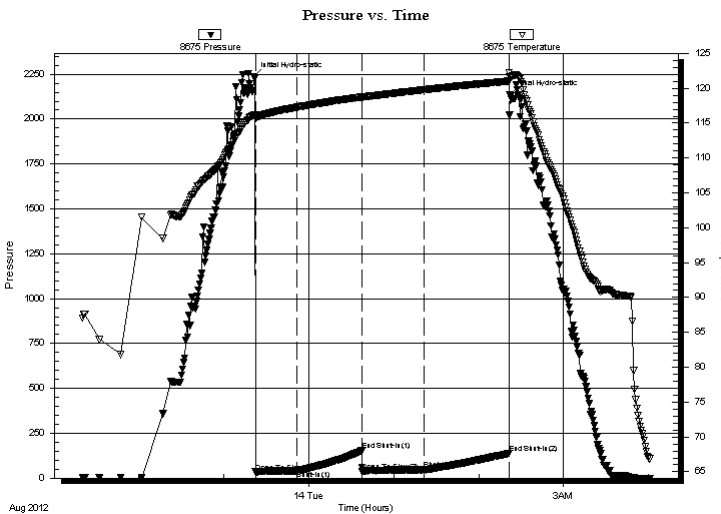
04:01:00

Time On Btm: 2012.08.13 @ 23:21:00

Time Off Btm: 2012.08.14 @ 02:22:00

**TEST COMMENT:** Built to 2" blow  
No return blow  
Built to 1" blow  
No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2235.95	116.20	Initial Hydro-static
2	34.63	115.67	Open To Flow (1)
31	41.47	117.28	Shut-In(1)
77	152.77	118.75	End Shut-In(1)
77	37.89	118.72	Open To Flow (2)
121	47.96	119.79	Shut-In(2)
181	138.04	121.04	End Shut-In(2)
181	2133.70	121.60	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	100% Mud with oil scum	0.30

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48346

**DST#: 4**

ATTN: Bruce Ard

Test Start: 2012.08.13 @ 21:20:00

## Tool Information

Drill Pipe:	Length: 4290.27 ft	Diameter: 3.80 inches	Volume: 60.18 bbl	Tool Weight:	2500.00 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: 123.19 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	72000.00 lb
			<u>Total Volume: 60.79 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	34.96 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4406.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	102.00 ft				
Tool Length:	129.50 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			4379.50	
Shut In Tool	5.00			4384.50	
Hydraulic tool	5.00			4389.50	
Jars	5.00			4394.50	
Safety Joint	2.50			4397.00	
Packer	5.00			4402.00	27.50 Bottom Of Top Packer
Packer	4.00			4406.00	
Stubb	1.00			4407.00	
Recorder	0.00	8675	Inside	4407.00	
Recorder	0.00	8650	Outside	4407.00	
Perforations	32.00			4439.00	
Change Over Sub	1.00			4440.00	
Drill Pipe	64.00			4504.00	
Change Over Sub	1.00			4505.00	
Bullnose	3.00			4508.00	102.00 Bottom Packers & Anchor

**Total Tool Length: 129.50**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48346

**DST#: 4**

ATTN: Bruce Ard

Test Start: 2012.08.13 @ 21:20:00

## 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:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	100% Mud with oil scum	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



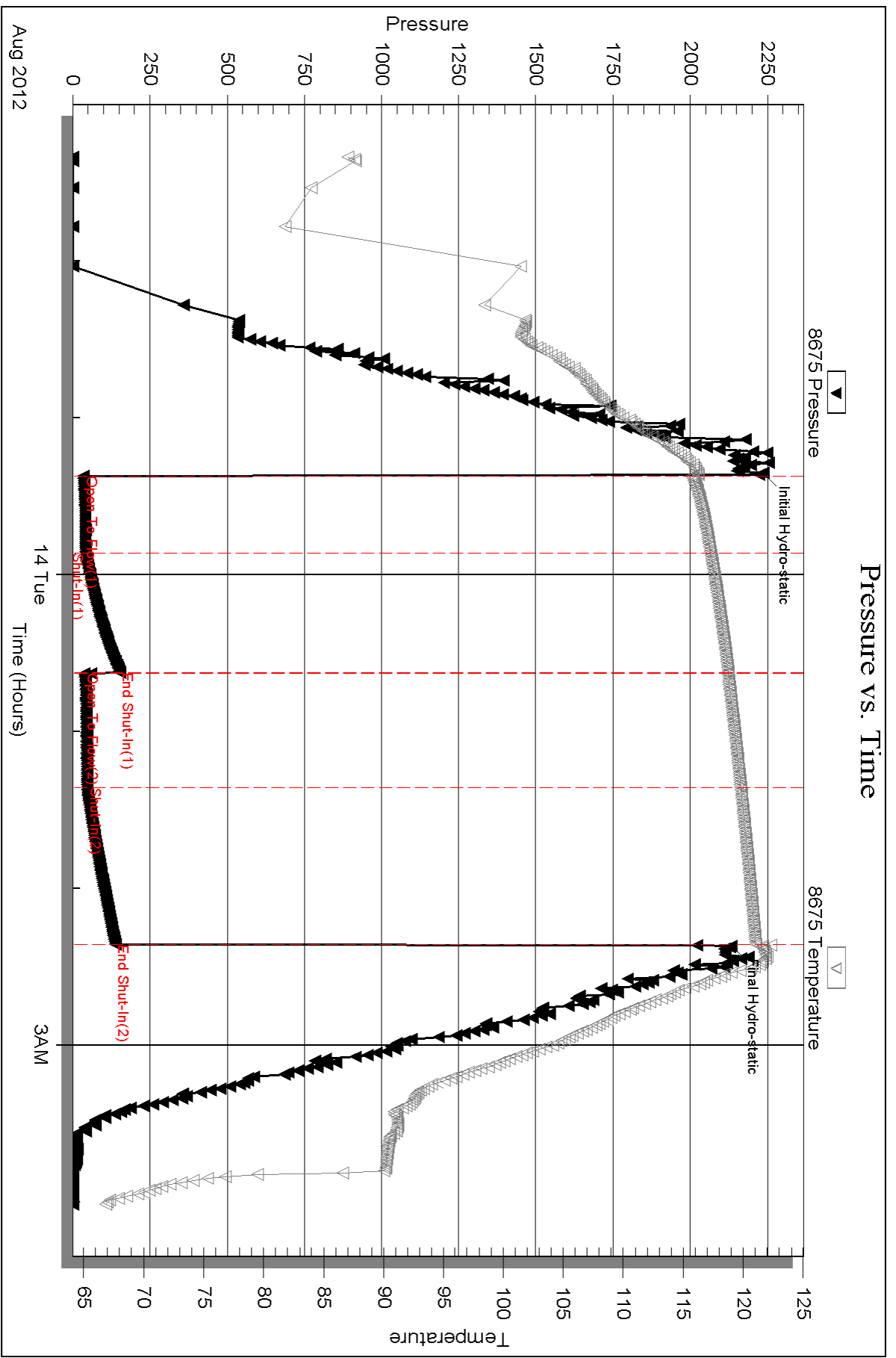
Serial #: 8675

Inside

Crede Petroleum Corporation

William #1-6

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 48346

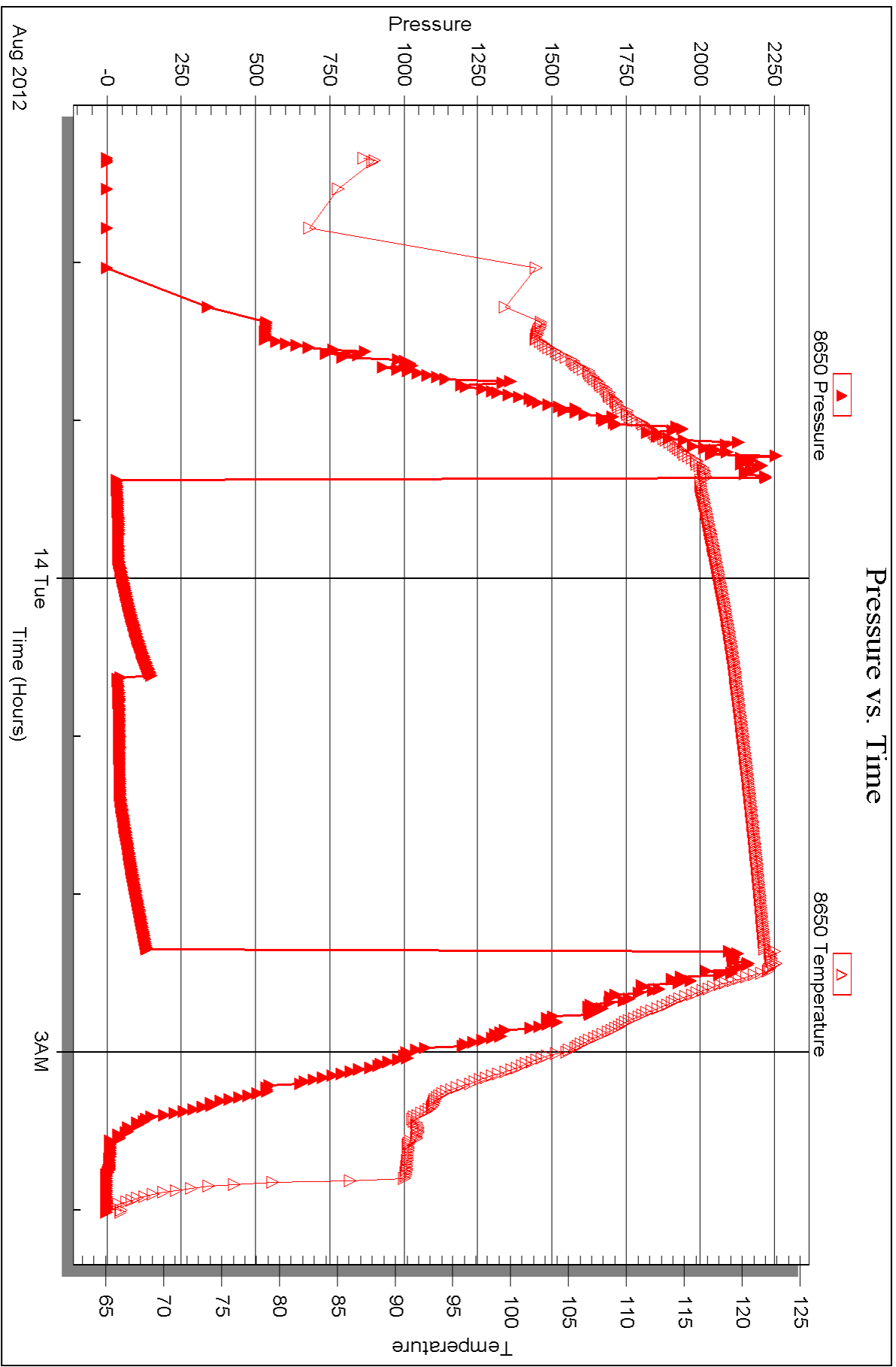
Printed: 2012.08.22 @ 09:31:46

Serial #: 8650

Outside Credo Petroleum Corporation

William#1-6

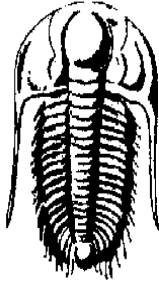
DST Test Number: 4



Triobite Testing, Inc

Ref. No: 48346

Printed: 2012.08.22 @ 09:31:46



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Credo Petroleum Corporation**

1801 Broadway # 900  
Denver CO 80202-3858

ATTN: Bruce Ard

**William #1-6**

**6-17s-31w Scott,KS**

Start Date: 2012.08.14 @ 20:20:00

End Date: 2012.08.15 @ 04:15:30

Job Ticket #: 48347                      DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.08.22 @ 09:30:58



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48347

**DST#: 5**

ATTN: Bruce Ard

Test Start: 2012.08.14 @ 20:20:00

## GENERAL INFORMATION:

Formation: **Cherokee - Top of Mi**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:13:00

Time Test Ended: 04:15:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

**Interval: 4506.00 ft (KB) To 4642.00 ft (KB) (TVD)**

Reference Elevations: 2960.00 ft (KB)

Total Depth: 4642.00 ft (KB) (TVD)

2955.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8675 Inside**

Press @ Run Depth: 82.91 psig @ 4507.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.14

End Date:

2012.08.15

Last Calib.: 2012.08.15

Start Time: 20:20:15

End Time:

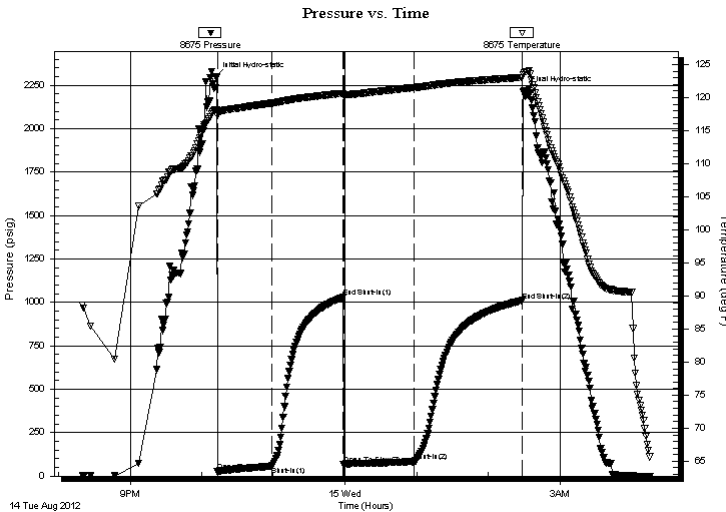
04:15:30

Time On Btm: 2012.08.14 @ 22:12:00

Time Off Btm: 2012.08.15 @ 02:30:00

**TEST COMMENT:** Built to 4 1/2" blow  
No return blow  
Built to 3" blow  
No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2299.23	118.19	Initial Hydro-static
1	25.00	117.30	Open To Flow (1)
47	57.76	119.15	Shut-In(1)
107	1029.20	120.64	End Shut-In(1)
107	65.71	120.27	Open To Flow (2)
167	82.91	121.51	Shut-In(2)
257	1010.12	123.04	End Shut-In(2)
258	2220.45	123.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
123.00	ocm 10%O 90%M	0.60
25.00	ocm 40%O 60%M	0.35
2.00	100% Clean Oil	0.03

## Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48347

**DST#: 5**

ATTN: Bruce Ard

Test Start: 2012.08.14 @ 20:20:00

## Tool Information

Drill Pipe:	Length: 4386.09 ft	Diameter: 3.80 inches	Volume: 61.53 bbl	Tool Weight: 2500.00 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: 123.19 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 62.14 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.78 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4506.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	136.00 ft			
Tool Length:	163.50 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			4479.50	
Shut In Tool	5.00			4484.50	
Hydraulic tool	5.00			4489.50	
Jars	5.00			4494.50	
Safety Joint	2.50			4497.00	
Packer	5.00			4502.00	27.50 Bottom Of Top Packer
Packer	4.00			4506.00	
Stubb	1.00			4507.00	
Recorder	0.00	8675	Inside	4507.00	
Recorder	0.00	8650	Outside	4507.00	
Perforations	35.00			4542.00	
Change Over Sub	1.00			4543.00	
Drill Pipe	95.00			4638.00	
Change Over Sub	1.00			4639.00	
Bullnose	3.00			4642.00	136.00 Bottom Packers & Anchor

**Total Tool Length: 163.50**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Credo Petroleum Corporation

**6-17s-31w Scott,KS**

1801 Broadway # 900  
Denver CO 80202-3858

**William #1-6**

Job Ticket: 48347

**DST#: 5**

ATTN: Bruce Ard

Test Start: 2012.08.14 @ 20:20:00

## 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:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
123.00	ocm 10%O 90%M	0.605
25.00	ocm 40%O 60%M	0.349
2.00	100% Clean Oil	0.028

Total Length: 150.00 ft      Total Volume: 0.982 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8675

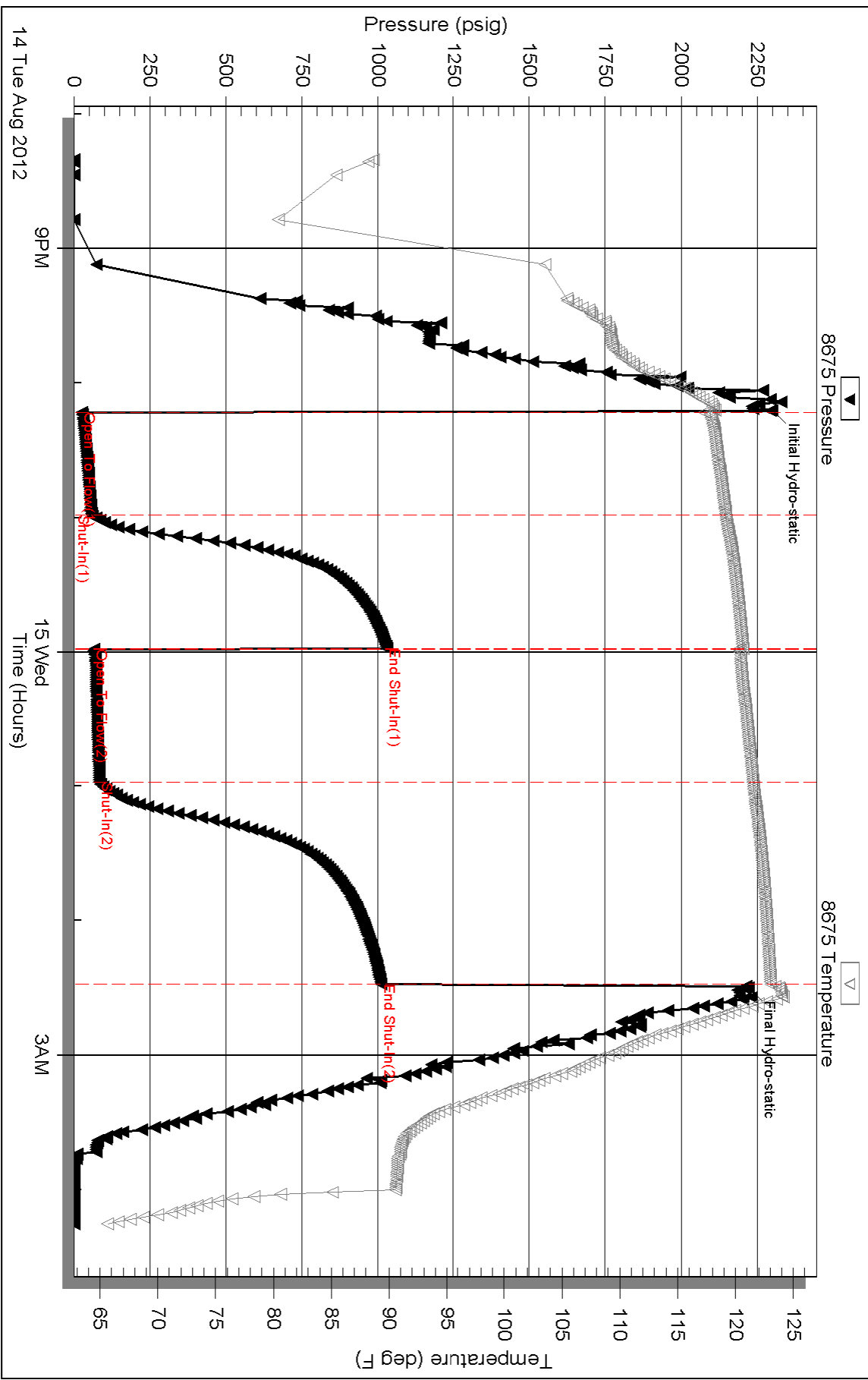
Inside

Crede Petroleum Corporation

William #1-6

DST Test Number: 5

### Pressure vs. Time



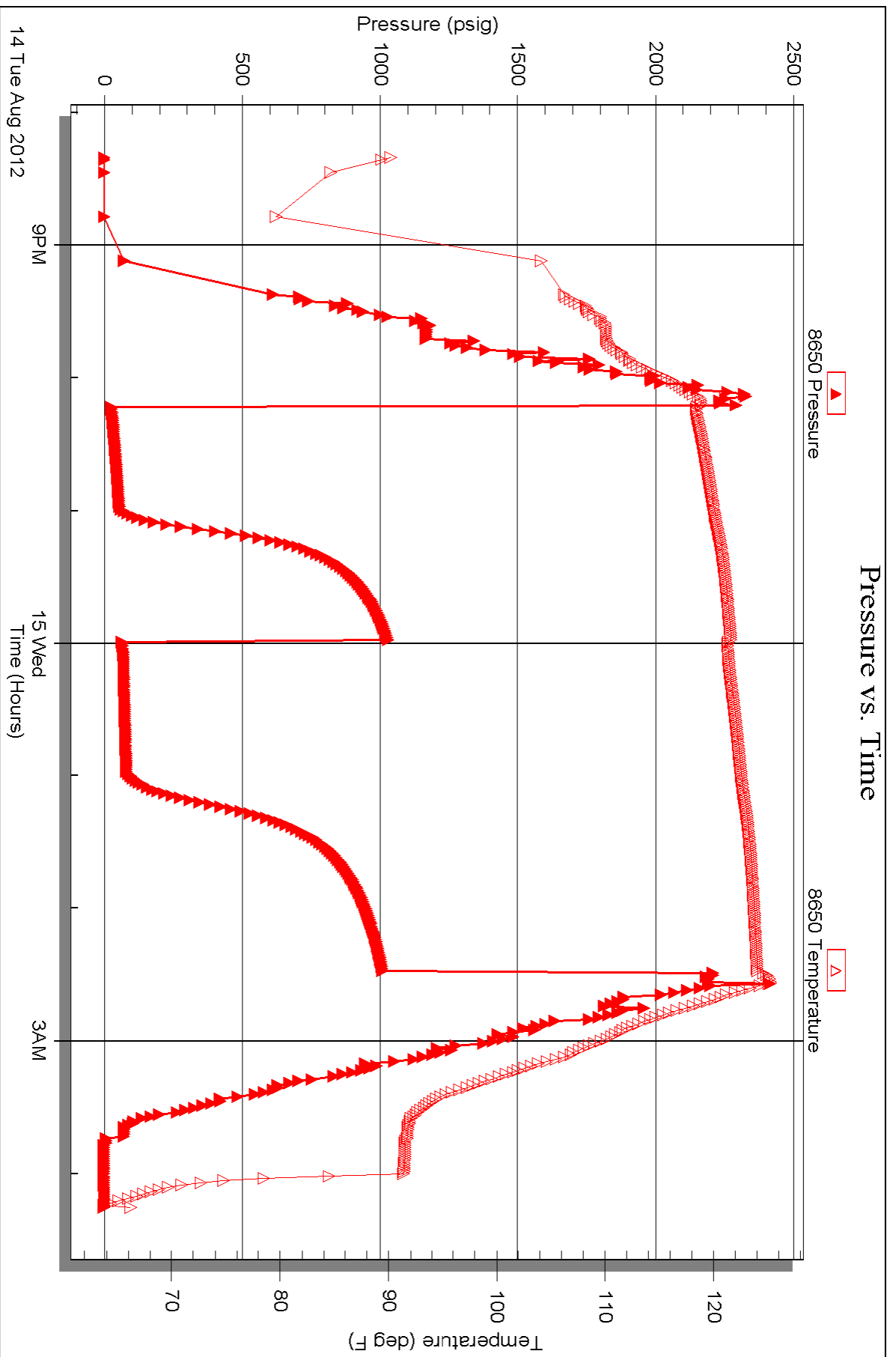


Serial #: 8650

Outside Credo Petroleum Corporation

William #1-6

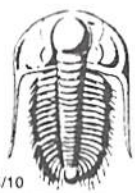
DST Test Number: 5



Triobite Testing, Inc

Ref. No: 48347

Printed: 2012.08.22 @ 09:31:02



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48343

Well Name & No. Williams #1-6 Test No. 1 Date 8/11/12  
 Company Credo Petroleum Corporation Elevation 2960 KB 2955 GL  
 Address 1801 Broadway #900 Denver CO. 80202-3858  
 Co. Rep / Geo. Bruce Ard Rig WW Rig 2  
 Location: Sec. 6 Twp. 17S Rge. 3W Co. Scott State KS

Interval Tested 4002-4097 Zone Tested Kansas City "C-F"  
 Anchor Length 95 Drill Pipe Run 3828.64 Mud Wt. 9.15  
 Top Packer Depth 3998 Drill Collars Run 123.19 Vis 65  
 Bottom Packer Depth 4002 Wt. Pipe Run \_\_\_\_\_ WL 8.4  
 Total Depth 4097 Chlorides 1,100 ppm System LCM 1

Blow Description B.O.B. in 13 min.  
Bled off for 5 min. No return below  
B.O.B. in 21 min.  
Bled off for 5 min. No return below

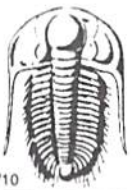
Rec	Feet of	%gas	%oil	%water	%mud
<u>252</u>	<u>Mud</u>			<u>100</u>	
<u>248</u>	<u>MW</u>		<u>50</u>	<u>50</u>	
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 500 BHT 119 Gravity \_\_\_\_\_ API RW 20 @ 100 ° F Chlorides 25,000 ppm  
 (A) Initial Hydrostatic 2,073  Test 1250 T-On Location 9:00  
 (B) First Initial Flow 30  Jars 250 T-Started 9:45  
 (C) First Final Flow 174  Safety Joint 75 T-Open 11:45  
 (D) Initial Shut-In 980  Circ Sub N/C T-Pulled 14:30  
 (E) Second Initial Flow 178  Hourly Standby \_\_\_\_\_ T-Out 16:27  
 (F) Second Final Flow 258  Mileage 38RT 5890 Comments \_\_\_\_\_  
 (G) Final Shut-In 954  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2,939  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer 320  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 60  
 Sub Total 1633.90  
 Total 1953.90  
 MP/DST Disc't \_\_\_\_\_

Approved By Bruce Ard Our Representative [Signature]

TriLOBITE TESTING INC. shall not be liable for damaged or 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.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48344

Well Name & No. William # 1-le Test No. 2 Date 8/12/12  
 Company Crede Petroleum Corporation Elevation 2960 KB 2955 GL  
 Address 1801 Broadway #900 Denver CO. 80202-3858  
 Co. Rep / Geo. Bruce Ard Rig WW Rig 2  
 Location: Sec. le Twp. 17s Rge. 31w Co. Scott State KS

Interval Tested 4152-4248 Zone Tested Kansas City "H-5"  
 Anchor Length 96 Drill Pipe Run 4004.89 Mud Wt. 9.15  
 Top Packer Depth 4148 Drill Collars Run 123.19 Vis 65  
 Bottom Packer Depth 4152 Wt. Pipe Run \_\_\_\_\_ WL 8.4  
 Total Depth 4248 Chlorides 1,100 ppm System LCM 1

Blow Description B.O.B. in 40 min.  
Bled off for 5 min. No return below  
B.O.B. in 54 min.

Bled off for 5 min. No return below

Rec	Feet of	%gas	%oil	%water	%mud
<u>224</u>	<u>Mud with few oil spots</u>			<u>100</u>	
<u>186</u>	<u>w/cm</u>			<u>20</u>	<u>80</u>
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 410 BHT 123 Gravity \_\_\_\_\_ API RW 20 @ 90 ° F Chlorides 28,000 ppm  
 (A) Initial Hydrostatic 2,040  Test 1250 T-On Location 4:08  
 (B) First Initial Flow 24  Jars 250 T-Started 4:25  
 (C) First Final Flow 131  Safety Joint 75 T-Open 6:40  
 (D) Initial Shut-In 1,059  Circ Sub N/C T-Pulled 10:55  
 (E) Second Initial Flow 135  Hourly Standby \_\_\_\_\_ T-Out 13:12  
 (F) Second Final Flow 210  Mileage 38 RT 58.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 1,050  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,967  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 45  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 0  
 Total 1633.90  
 MP/DST Disc't \_\_\_\_\_

Approved By Bruce Ard Our Representative [Signature]  
 Trilobite Testing Inc. shall not be liable for damaged 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.





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48345

Well Name & No. William #1-6 Test No. 3 Date 8/13/12  
 Company Credo Petroleum Corporation Elevation 2960 KB 2955 GL  
 Address 1801 Broadway #900 Denver CO. 80202-3858  
 Co. Rep / Geo. Bruce Ard Rig WW Rig 2  
 Location: Sec. 6 Twp. 17s Rge. 3W Co. Scott State K5

Interval Tested 4246 - 4410 Zone Tested Kansas City "K" - Marmation  
 Anchor Length 164 Drill Pipe Run 4129.38 Mud Wt. 9.2  
 Top Packer Depth 4242 Drill Collars Run 123.19 Vis 6.1  
 Bottom Packer Depth 4246 Wt. Pipe Run \_\_\_\_\_ WL 8.8  
 Total Depth 4410 Chlorides 1,500 ppm System LCM 1

Blow Description Built to 9" below  
Bled off for 5 min. No return below  
Built to 7" below  
Bled off for 5 min. No return below

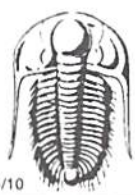
Rec	Feet of	%gas	%oil	%water	%mud
<u>207</u>	<u>100% Mud</u>			<u>100</u>	
<u>123</u>	<u>WCM</u>		<u>20</u>	<u>80</u>	
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total 330 BHT 121 Gravity \_\_\_\_\_ API RW 35 @ 75 ° F Chlorides 20,000 ppm

(A) Initial Hydrostatic <u>2,096</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>3:15</u>
(B) First Initial Flow <u>28</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>3:45</u>
(C) First Final Flow <u>117</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>6:07</u>
(D) Initial Shut-In <u>1,031</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/A</u>	T-Pulled <u>9:11</u>
(E) Second Initial Flow <u>116</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>11:03</u>
(F) Second Final Flow <u>172</u>	<input checked="" type="checkbox"/> Mileage <u>38RT</u> 58.90	Comments _____
(G) Final Shut-In <u>1,009</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2,067</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1633.90</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____

Sub Total 1633.90

Approved By Bruce B. Ard Our Representative [Signature]  
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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48346

Well Name & No. William # 1-6 Test No. 4 Date 8/13/12 8/14/12  
 Company Crdo Petroleum Corporation Elevation 2960 KB 2955 GL  
 Address 1801 Broadway #900 Denver CO. 80202-3858  
 Co. Rep / Geo. Bruce Ard Rig WW Rig 2  
 Location: Sec. 6e Twp. 17S Rge. 31W Co. Scott State KS

Interval Tested 4406-4508 Zone Tested Altament - Fort Scott  
 Anchor Length 102 Drill Pipe Run 4290.27 Mud Wt. 9.3  
 Top Packer Depth 4402 Drill Collars Run 123.19 Vis 57  
 Bottom Packer Depth 4406 Wt. Pipe Run \_\_\_\_\_ WL 8.8  
 Total Depth 4508 Chlorides 1,600 ppm System LCM 2

Blow Description Built to 2" below  
No return below  
Built to 1" below  
No return below

Rec	Feet of	%gas	%oil	%water	%mud
<u>6e0</u>	<u>Mud with oil seam</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 6e0 BHT 121 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic	<u>2,236</u>	<input checked="" type="checkbox"/> Test	<u>1250</u>	T-On Location	<u>20:50</u>
(B) First Initial Flow	<u>35</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>21:20</u>
(C) First Final Flow	<u>41</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>23:22</u>
(D) Initial Shut-In	<u>153</u>	<input checked="" type="checkbox"/> Circ Sub	<u>N/C</u>	T-Pulled	<u>2:22</u>
(E) Second Initial Flow	<u>38</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>4:01</u>
(F) Second Final Flow	<u>48</u>	<input checked="" type="checkbox"/> Mileage	<u>38 RT</u> 58.90	Comments	
(G) Final Shut-In	<u>138</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>2,134</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 60

Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

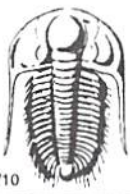
Sub Total 1633.90

Sub Total 0  
 Total 1633.90  
 MP/DST Disc't \_\_\_\_\_

Approved By Bruce B. Ard Our Representative [Signature]

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48347

Well Name & No. William #1-6 Test No. 5 Date 8/14/12 / 8/15/12  
 Company Credo Petroleum Corporation Elevation 2960 KB 2955 GL  
 Address 1801 Broadway #900 Denver CO. 80202-3858  
 Co. Rep / Geo. Bruce Ard Rig WW Rig 2  
 Location: Sec. 6 Twp. 17S Rge. 3W Co. Scott State K5

Interval Tested 4506-4642 Zone Tested Cherokee - Top of Miss.  
 Anchor Length 136 Drill Pipe Run 4386.09 Mud Wt. 9.35  
 Top Packer Depth 4502 Drill Collars Run 123.19 Vis 53  
 Bottom Packer Depth 4506 Wt. Pipe Run \_\_\_\_\_ WL 8.0  
 Total Depth 4642 Chlorides 1,600 ppm System LCM 2

Blow Description Built to 4 1/2" below  
No return below  
Built to 3" below  
No return below

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Clean Oil</u>	<u>100</u>			
<u>25</u>	<u>OCM</u>	<u>40</u>		<u>60</u>	
<u>123</u>	<u>BCM</u>	<u>10</u>		<u>90</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 150 BHT 123 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ ° F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2,299  Test 1250 T-On Location 19:55  
 (B) First Initial Flow 25  Jars 250 T-Started 20:20  
 (C) First Final Flow 58  Safety Joint 75 T-Open 22:13  
 (D) Initial Shut-In 1,029  Circ Sub N/C T-Pulled 2:28  
 (E) Second Initial Flow 66  Hourly Standby \_\_\_\_\_ T-Out 4:15  
 (F) Second Final Flow 83  Mileage 38RT 58.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 1,010  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2,220  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 45  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90  
 Sub Total 1633.90  
 Total 1633.90  
 MP/DST Disc't \_\_\_\_\_

Approved By Bruce B. Ard Our Representative [Signature]  
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