

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

ORIGINAL 6/27/12
RECEIVED
JUN 29 2011
KCC WICHITA

Form ACO-1

June 2009

Form Must Be Typed

Form must be Signed

All blanks must be Filled

OPERATOR: License # 8914
Name: H & C Oil Operating, Inc.
Address 1: P.O. Box 86
Address 2: _____
City: Plainville State: KS Zip: 67663 + 0086
Contact Person: Charles R. Ramsey
Phone: (785) 434-7434
CONTRACTOR: License # 33493
Name: American Eagle Drilling, LLC
Wellsite Geologist: Marc Downing
Purchaser: Coffeyville Resources

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 #: _____

04/28/2011 05/05/2011 06/10/2011

Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 065-23732-00-00

Spot Description: _____

_____SE_____SE_____NE Sec. 25 Twp. 9 S. R. 25 East West

2,310 Feet from North / South Line of Section

330 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: Graham

Lease Name: Steelsmith Well #: 25-1

Field Name: Wildcat

Producing Formation: Lansing Kansas City

Elevation: Ground: 2587 Kelly Bushing: 2582

Total Depth: 4195 Plug Back Total Depth: 4169

Amount of Surface Pipe Set and Cemented at: 262 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: 2245 Feet

If Alternate II completion, cement circulated from: 2245

feet depth to: surface w/ 195 sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: 60 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 #: _____

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INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 180 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: Charles R Ramsey

Title: President Date: 06/27/2011

KCC Office Use ONLY

- Letter of Confidentiality Received Date: 6/27/11 - 6/27/12
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: NY Date: 7-27-11

Operator Name: H & C Oil Operating, Inc. Lease Name: Steelsmith Well #: 25-1
 Sec. 25 Twp. 9 S. R. 25 East West County: Graham

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: Dual Induction, Microresistivity, Dual Compensated Porosity, Sonic Cement Bond	<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:70%;">Name</td> <td style="width:15%;">Top</td> <td style="width:15%;">Datum</td> </tr> <tr> <td>Anhydrite</td> <td>2251</td> <td>+341</td> </tr> <tr> <td>Topeka</td> <td>3663</td> <td>-1071</td> </tr> <tr> <td>Heebner</td> <td>3880</td> <td>-1288</td> </tr> <tr> <td>Toronto</td> <td>3903</td> <td>-1311</td> </tr> <tr> <td>Lansing</td> <td>3916</td> <td>-1324</td> </tr> <tr> <td>Base Kansas City</td> <td>4149</td> <td>-1558</td> </tr> </table>	Name	Top	Datum	Anhydrite	2251	+341	Topeka	3663	-1071	Heebner	3880	-1288	Toronto	3903	-1311	Lansing	3916	-1324	Base Kansas City	4149	-1558
Name	Top	Datum																				
Anhydrite	2251	+341																				
Topeka	3663	-1071																				
Heebner	3880	-1288																				
Toronto	3903	-1311																				
Lansing	3916	-1324																				
Base Kansas City	4149	-1558																				

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"	23#	262	common	165	3% c.c. & 2% gel
Production	7 7/8"	5 1/2"	14#	4193	common	210	10% salt & 5% gilsonite

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose: <input type="checkbox"/> Perforate <input checked="" type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
	surface-2245'	QMDC	195	1/4# flo-seal per sack

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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
4	4123'-4127'	500 gal 15% & 1500 Gal 20%	4123
4	4100'-4107'		
4	4056'-4058'	3000 gal 20%	4056
4	4061'-4063	500 Gal 15%	4061

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TUBING RECORD: Size: 2 3/8" Set At: 4160' Packer At: None Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. 06/26/2011 Producing Method: Flowing Pumping Gas Lift Other (Explain) _____ **KCC**

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	95		0		39

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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <u>4061'-4127'</u>
---	--	--

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 5074

Date	4-28-11	Sec.	25	Twp.	9	Range	25	County	Graham	State	Kansas	On Location		Finish	1:15 PM
Lease	Stegelsmith	Well No.	25-1		Location		Wakarusa N to Reddine Rd 10W 1/4								
Contractor	American Eagle		Rig 3		Owner		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.								
Type Job	Surface		T.D.		262		Charge To		H&C Oil						
Hole Size	12 1/4		Depth		262		Street								
Csg.	8 3/8 23b		Depth				City		State						
Tbg. Size			Depth				City		State						
Tool			Depth				City		State						
Cement Left in Csg.	10-15'		Shoe Joint		The above was done to satisfaction and supervision of owner agent or contractor.										
Meas Line			Displace		15 3/8		Cement Amount Ordered		165 Common 361 25bnd						

EQUIPMENT

Pumptrk	5	No.	Cementer	Steve	Common	165
			Helper			
Bulktrk	10	No.	Driver	Craig	Poz. Mix	
			Driver			
Bulktrk		No.	Driver	Corey	Gel.	3
			Driver			

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
	Sand
	Handling 174
	Mileage

Cement did Circulate

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FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

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Pumptrk Charge *Surface* **KCC**
Mileage *32*

Thank You

X Signature: *Brachy Baker*

Tax
Discount
Total Charge

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 5050

Date	5-5-11	Sec.	25	Twp.	9	Range	25	County	Carthage	State	KS	On Location		Finish	10:30pm
Lease	Steel Smith	Well No.	25-1		Location Wagonway Reel line 100160 120 write										
Contractor	American Eagle #3							Owner							
Type Job	Production string							To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size	7 7/8		T.D.		4195										
Csg.	5/2		Depth		4188										
Tbg. Size			Depth												
Tool	Pit collar # 48		Depth		2249										
Cement Left in Csg.	20.39		Shoe Joint		20.39										
Meas Line			Displace		10 1/2 BBL										
EQUIPMENT													Cement Amount Ordered		
Pumptrk	9	No.	Cement	210											
			Helper	210											
Bulktrk		No.	Driver	210											
			Driver	210											
Bulktrk	13	No.	Driver	210											
			Driver	210											
JOB SERVICES & REMARKS													Calcium		
Remarks:													Hulls		
Rat Hole 3051K													Salt 18		
Mouse Hole													Flowseal		
Centralizers 45 water / 54 mud / 2 water													Kol-Seal 1050 #		
Baskets													Mud CLR 48 500 gal		
D/V or Port Collar													CFL-117 or CD110 CAF 38		
5/2 size @ 4188 Insert @ 4167													Sand		
Est Circulation Pump 500 gal Mud Clear													Handling 228		
Plug Cathode Cement 5/2 40/1805K													Mileage		
Displace 45 BBL water / 34 BBL													FLOAT EQUIPMENT		
Mud. Land plug 28L water @ 1500 #													Guide Shoe 5/2		
Release Pressure 1/2													Centralizer AFU float shoe		
													Baskets 5		
													AFU Inserts 10 Turb's		
													Float Shoe Latch Down		
													Latch Down Port collar		
													CONFIDENTIAL		
													JUN 27 2012		
													KCC		
Pumptrk Charge													proval Long String		
Mileage 32															
													Tax		
													Discount		
X Signature													Total Charge		

Handwritten signature: Charles

Handwritten signature: Mark Ramsey

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QUALITY OILWELL CEMENTING, INC.

Fe

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 4639

Date	5-13-11	Sec.		Twp.		Range		County	Graham	State	Kansas	On Location		Finish	Milldam
Lease	Steph Smith	Well No.	25-1	Location											
Contractor													Owner		
Type Job													To Quality Oilwell Cementing, Inc.		
Hole Size													You are hereby requested to rent cementing equipment and furnish		
Csg.													cement and helper to assist owner or contractor to do work as listed.		
Tbg. Size													Charge To		
Tool													To		
Cement Left in Csg.													Street		
Meas Line													City		
Displace													State		
The above was done to satisfaction and supervision of owner agent or contractor.													Cement Amount Ordered		

EQUIPMENT

Pumptrk	5	No.	Cementer		Common	195
			Helper	Steve		
Bulktrk	12	No.	Driver	Bramble	Poz. Mix	
			Driver			
Bulktrk		No.	Driver	Dang	Gel.	
			Driver			

JOB SERVICES & REMARKS

Remarks:	Calcium
Rat Hole	Hulls
Mouse Hole	Salt
Centralizers	Flowseal
Baskets	Kol-Seal
D/V or Port Collar	Mud CLR 48
Port Collar @ 2245	CFL-117 or CD110 CAF 38
pressure casing to 1200 psi	Sand
Open tool & break circulation	Handling 400
Run 70 Bbl mud & then mix 195x	Mileage
Q-MDC & circulate cement	
Close tool & pressure casing to 1200 psi	
Run 5 jts & wash clean	
Used 195x	

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FLOAT EQUIPMENT

Pumptrk Charge	port collar
Mileage	32
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

Mark

X Signature *Charles Ramsey*

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Tax	
Discount	
Total Charge	



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating**

PO Box 86
Plainville, KS 67663

ATTN: Charles R Ramsay

25-9s-25w Graham,KS

Steelsmith #25-1

Start Date: 2011.05.02 @ 17:13:29

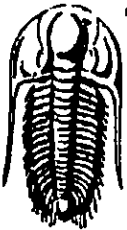
End Date: 2011.05.03 @ 00:07:29

Job Ticket #: 042615 DST #: 1

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Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Plainville, KS 67663

25-9s-25w Graham, KS

ATTN: Charles R Ramsay

Job Ticket: 042615

DST#: 1

Test Start: 2011.05.02 @ 17:13:29

GENERAL INFORMATION:

Formation: **LKC-C-D**

Deviated: No Whipstock ft (KB)

Time Tool Opened: 19:15:29

Time Test Ended: 00:07:29

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 44

Interval: 3936.00 ft (KB) To 3970.00 ft (KB) (TVD)

Total Depth: 3970.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2587.00 ft (KB)

2582.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6672

Inside

Press@RunDepth: 474.29 psig @ 3942.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.05.02

End Date: 2011.05.03

Last Calib.: 2011.05.03

Start Time: 17:13:30

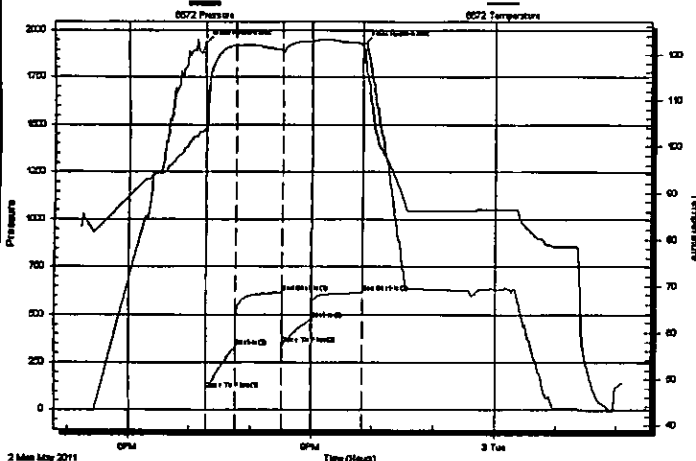
End Time: 02:07:29

Time On Btm: 2011.05.02 @ 19:15:14

Time Off Btm: 2011.05.02 @ 21:50:59

TEST COMMENT: IFF-Strong blow BOB in 1 min
ISI-Strong blow back BOB in 4 min
FFP-Strong blow BOB in 1 3/4 min
FSI-Good blow back BOB in 5 1/2 min Gas to surface

Pressure vs. Time



PRESSURE SUMMARY

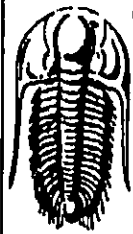
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1930.45	103.90	Initial Hydro-static
1	107.54	103.08	Open To Flow (1)
30	330.21	122.00	Shut-In(1)
76	615.94	121.05	End Shut-In(1)
77	348.06	120.89	Open To Flow (2)
105	474.29	122.80	Shut-In(2)
155	615.21	122.32	End Shut-In(2)
156	1923.55	122.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
558.00	MOVO 15%M20%W65%O	7.83
124.00	MOGO 25%M10%C65%O	1.74
587.00	Gassy Oil 25%G75%O	8.23
0.00	2589 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Rainville, KS 67663

25-9s-25w Graham, KS

Job Ticket: 042615

DST#: 1

ATTN: Charles R Ramsay

Test Start: 2011.05.02 @ 17:13:29

Tool Information

Drill Pipe:	Length: 3937.00 ft	Diameter: 3.80 inches	Volume: 55.23 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 2000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 55.23 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3936.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	54.00 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			3917.00	
Shut In Tool	5.00			3922.00	
Hydraulic tool	5.00			3927.00	
Packer	4.00			3931.00	20.00 Bottom Of Top Packer
Packer	5.00			3936.00	
Stubb	1.00			3937.00	
Perforations	5.00			3942.00	
Recorder	0.00	6672	Inside	3942.00	
Recorder	0.00	8321	Outside	3942.00	
Perforations	25.00			3967.00	
Bullnose	3.00			3970.00	34.00 Bottom Packers & Anchor

Total Tool Length: 54.00

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**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Plainville, KS 67663

25-9s-25w Graham, KS

Job Ticket: 042615

DST#: 1

ATTN: Charles R Ramsay

Test Start: 2011.05.02 @ 17:13:29

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 41 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 55000 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.76 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: inches		

Recovery Information

Recovery Table

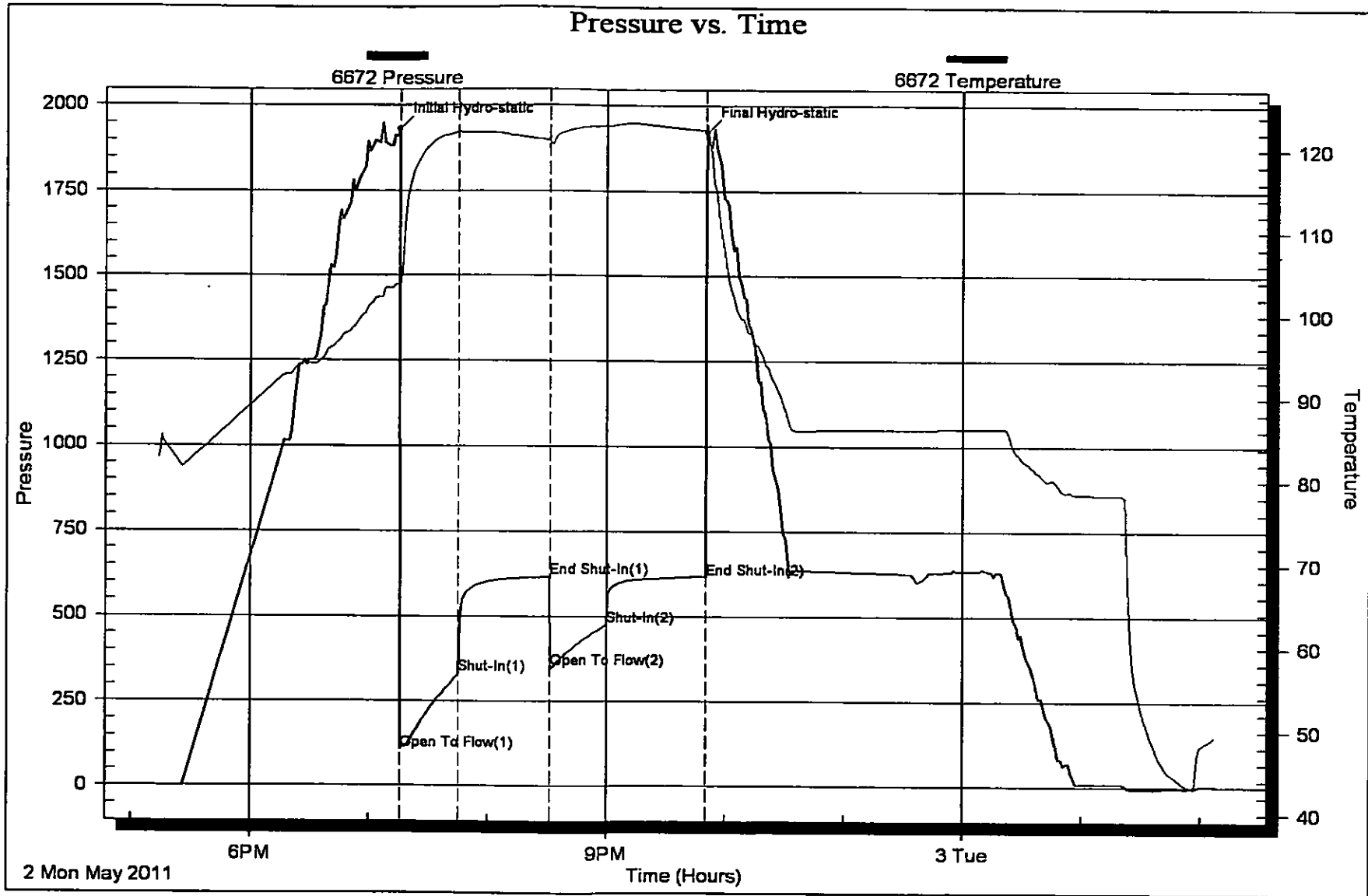
Length ft	Description	Volume bbl
558.00	MCWO 15%M20%W65%O	7.827
124.00	MCO 25%M10%G65%O	1.739
587.00	Gassy Oil 25%G75%O	8.234
0.00	2589 GIP	0.000

Total Length: 1269.00 ft Total Volume: 17.800 bbl

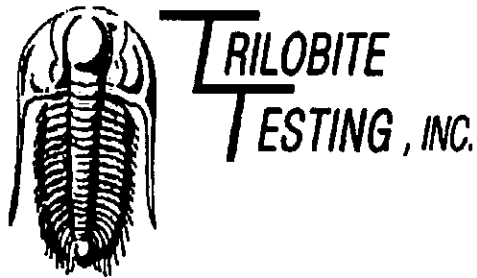
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:



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DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating**

PO Box 86
Plainville, KS 67663

ATTN: Charles R Ramsay

25-9s-25w Graham,KS

Steelsmith #25-1

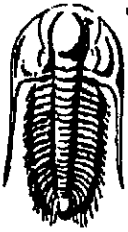
Start Date: 2011.05.03 @ 12:08:02

End Date: 2011.05.03 @ 18:30:47

Job Ticket #: 042616 DST #: 2

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Plainville, KS 67663

25-9s-25w Graham, KS

ATTN: Charles R Ramsay

Job Ticket: 042616

DST#: 2

Test Start: 2011.05.03 @ 12:08:02

GENERAL INFORMATION:

Formation: **LKC-H**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:54:02

Time Test Ended: 18:30:47

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 44

Interval: **4036.00 ft (KB) To 4070.00 ft (KB) (TVD)**

Total Depth: 4070.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2587.00 ft (KB)

2582.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **6672**

Inside

Press@RunDepth: 161.54 psig @ 4042.00 ft (KB)

Start Date: 2011.05.03

End Date: 2011.05.03

Start Time: 12:08:03

End Time: 18:29:47

Capacity: 8000.00 psig

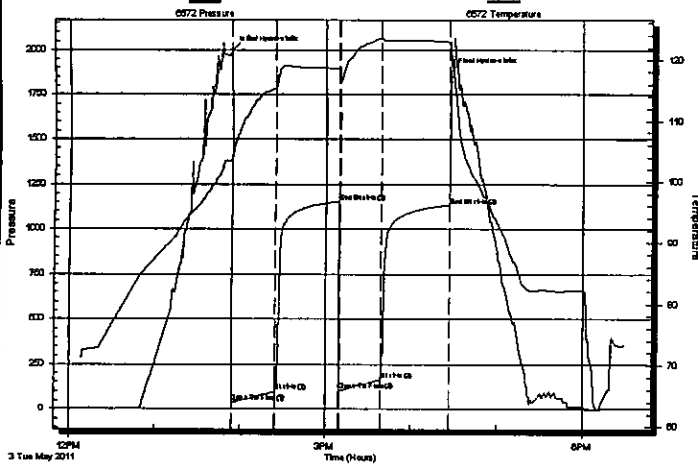
Last Calib.: 2011.05.03

Time On Btm: 2011.05.03 @ 13:53:47

Time Off Btm: 2011.05.03 @ 16:27:17

TEST COMMENT: IFR-Strong blow BOB in 2 min
ISI-Weak blow back built to 3 1/4 in
FFP-Strong blow BOB in 3 1/2 min
FSI-Fair blow back built to 6 1/4 in

Pressure vs. Time



PRESSURE SUMMARY

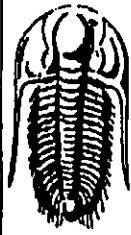
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1999.59	103.95	Initial Hydro-static
1	37.86	103.26	Open To Flow (1)
31	96.97	115.44	Shut-In(1)
76	1153.83	118.63	End Shut-In(1)
77	101.47	116.58	Open To Flow (2)
106	161.54	123.55	Shut-In(2)
154	1127.36	122.91	End Shut-In(2)
154	1878.52	122.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
248.00	HOCGM 5%M35%O60%G	3.48
124.00	MCOG 10%M25%G65%O	1.74
31.00	MO 10%M90%O	0.43
0.00	3131 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Plainville, KS 67663

25-9s-25w Graham, KS

ATTN: Charles R Ramsay

Job Ticket: 042616

DST#: 2

Test Start: 2011.05.03 @ 12:08:02

Tool Information

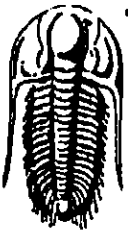
Drill Pipe:	Length: 4035.00 ft	Diameter: 3.80 inches	Volume: 56.60 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 56.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	4036.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	54.00 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	4.00			4031.00	20.00 Bottom Of Top Packer
Packer	5.00			4036.00	
Stubb	1.00			4037.00	
Perforations	5.00			4042.00	
Recorder	0.00	6672	Inside	4042.00	
Recorder	0.00	8321	Outside	4042.00	
Perforations	25.00			4067.00	
Bullnose	3.00			4070.00	34.00 Bottom Packers & Anchor

Total Tool Length: 54.00

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Plainville, KS 67663

25-9s-25w Graham,KS

Job Ticket: 042616

DST#: 2

ATTN: Charles R Ramsay

Test Start: 2011.05.03 @ 12:08:02

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.75 in³

Gas Cushion Type:

Resistivity: ohm m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	HCOGM 5%M35%O60%G	3.479
124.00	MCOGO 10%M25%G65%O	1.739
31.00	MO 10%M90%O	0.435
0.00	3131 GIP	0.000

Total Length: 403.00 ft

Total Volume: 5.653 bbl

Num Fluid Samples: 0

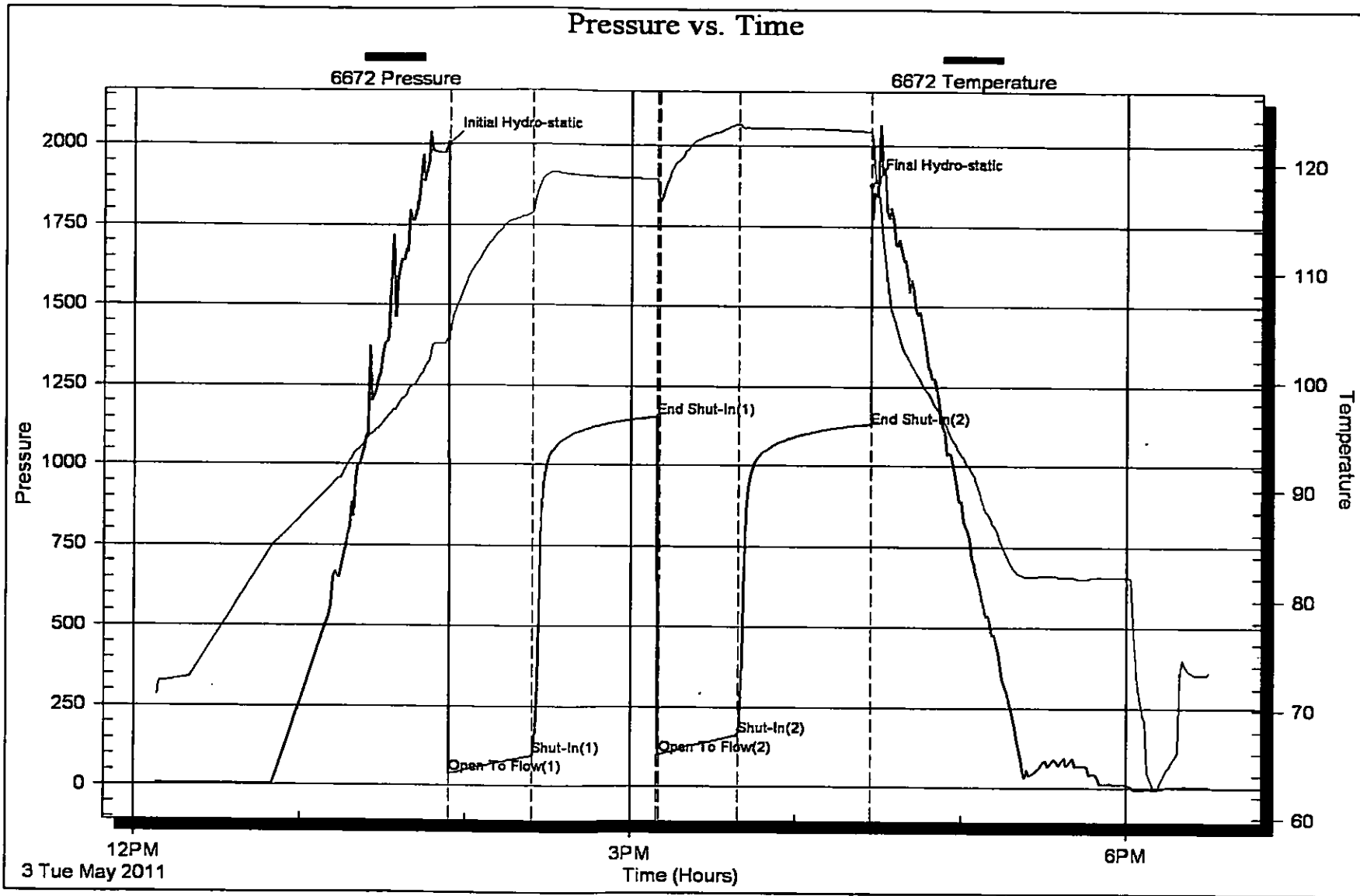
Num Gas Bombs: 0

Serial #:

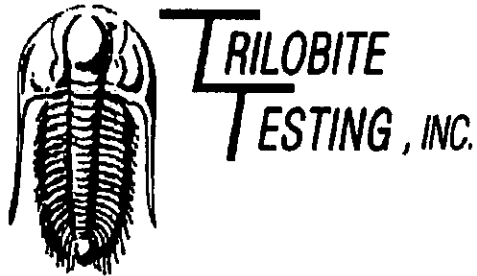
Laboratory Name:

Laboratory Location:

Recovery Comments:



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DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating**

PO Box 86
Plainville, KS 67663

ATTN: Charles R Ramsay

25-9s-25w Graham,KS

Steelsmith #25-1

Start Date: 2011.05.04 @ 02:39:54

End Date: 2011.05.04 @ 09:46:54

Job Ticket #: 042617 DST #: 3

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Plainville, KS 67663

25-9s-25w Graham, KS

ATTN: Charles R Ramsay

Job Ticket: 042617

DST#: 3

Test Start: 2011.05.04 @ 02:39:54

GENERAL INFORMATION:

Formation: **LKC-I-J**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 04:41:24

Time Test Ended: 09:46:54

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 44

Interval: **4066.00 ft (KB) To 4110.00 ft (KB) (TVD)**

Total Depth: **4110.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2587.00 ft (KB)**

2582.00 ft (CF)

KB to GR/CF: **5.00 ft**

Serial #: **6672**

Inside

Press@RunDepth: **142.56 psig @ 4074.00 ft (KB)**

Start Date: **2011.05.04**

End Date: **2011.05.04**

Start Time: **02:39:55**

End Time: **09:46:54**

Capacity: **8000.00 psig**

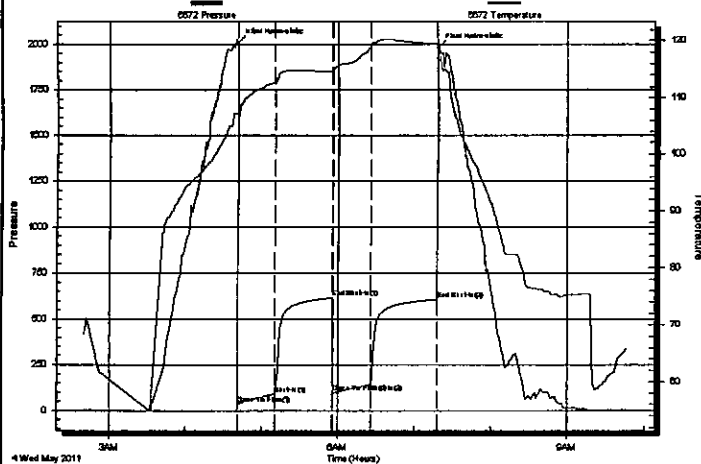
Last Calib.: **2011.05.04**

Time On Btrn: **2011.05.04 @ 04:41:09**

Time Off Btrn: **2011.05.04 @ 07:18:39**

TEST COMMENT: IFF-Strong blow BOB in 3 1/4 min
ISI-Weak blow back built to 2 in
FFP-Strong blow BOB in 4 min
FSI-Fair blow back built to 7 3/4 in

Pressure vs. Time



PRESSURE SUMMARY

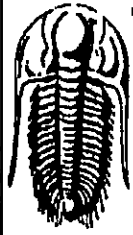
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2008.42	107.45	Initial Hydro-static
1	33.58	106.37	Open To Flow (1)
30	87.43	112.62	Shut-In(1)
75	614.16	114.72	End Shut-In(1)
76	99.73	114.52	Open To Flow (2)
105	142.56	119.15	Shut-In(2)
157	605.76	119.47	End Shut-In(2)
158	1983.29	120.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	HOC/M 50%G38%O10%M2%W	0.87
248.00	HOC/M 35%G45%O20%M	3.48
31.00	MCO 30%M70%O	0.43
0.00	1860 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Rainville, KS 67663

25-9s-25w Graham, KS

ATTN: Charles R Ramsay

Job Ticket: 042617

DST#: 3

Test Start: 2011.05.04 @ 02:39:54

Tool Information

Drill Pipe:	Length: 4061.00 ft	Diameter: 3.80 inches	Volume: 56.97 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 56000.00 lb
			<u>Total Volume: 56.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	4066.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

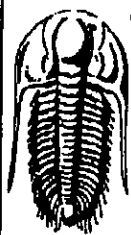
Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4047.00	
Shut In Tool	5.00			4052.00	
Hydraulic tool	5.00			4057.00	
Packer	4.00			4061.00	20.00 Bottom Of Top Packer
Packer	5.00			4066.00	
Stubb	1.00			4067.00	
Perforations	7.00			4074.00	
Recorder	0.00	6672	Inside	4074.00	
Recorder	0.00	8321	Outside	4074.00	
Perforations	33.00			4107.00	
Bullnose	3.00			4110.00	44.00 Bottom Packers & Anchor

Total Tool Length: 64.00

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**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Rainville, KS 67663

25-9s-25w Graham, KS

Job Ticket: 042617

DST#: 3

ATTN: Charles R Ramsay

Test Start: 2011.05.04 @ 02:39:54

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	HOCVM 50%G38%O10%M2%W	0.870
248.00	HOCGM 35%G45%O20%M	3.479
31.00	MCO 30%M70%O	0.435
0.00	1860 GIP	0.000

Total Length: 341.00 ft

Total Volume: 4.784 bbl

Num Fluid Samples: 0

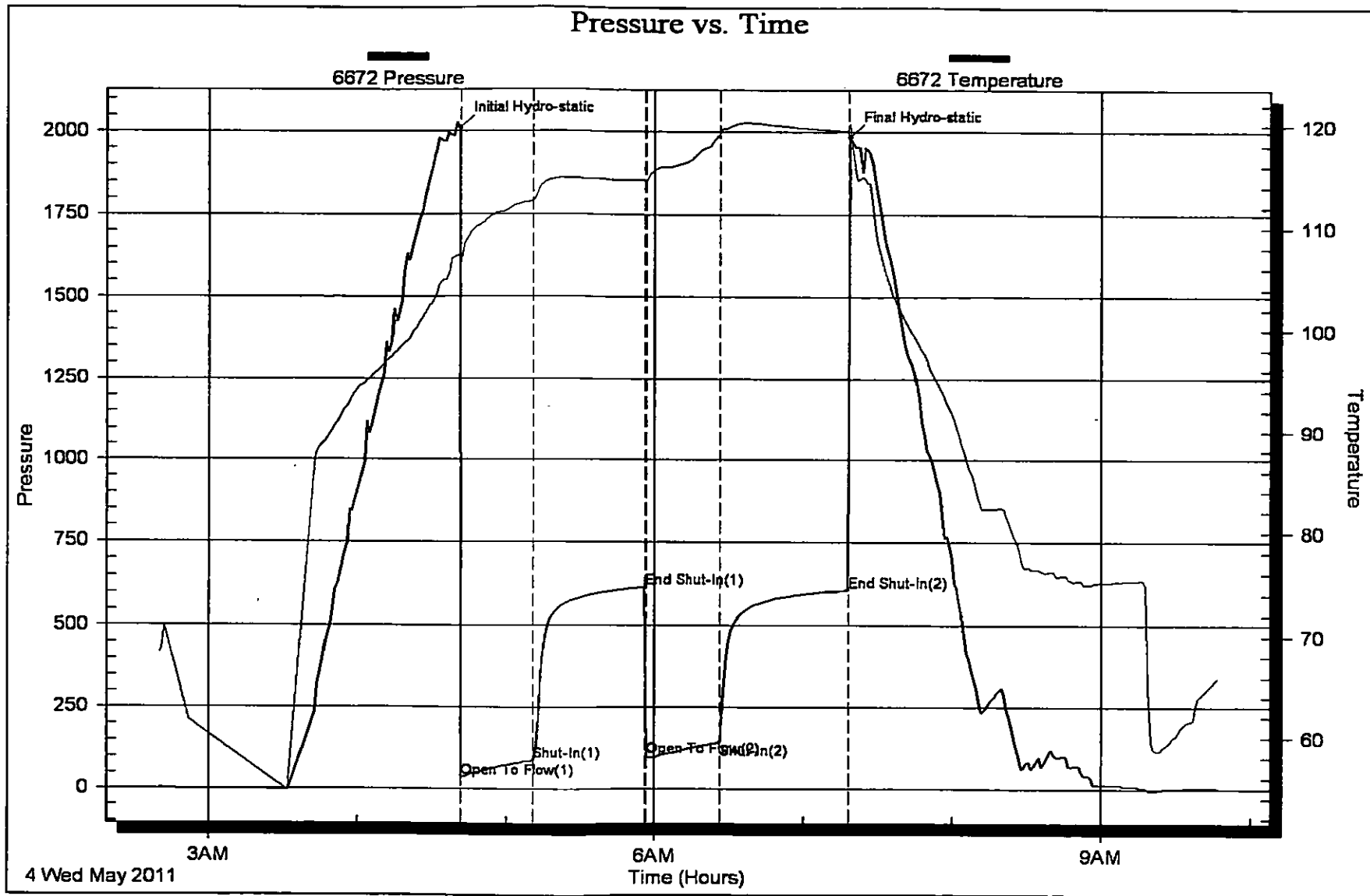
Num Gas Bombs: 0

Serial #:

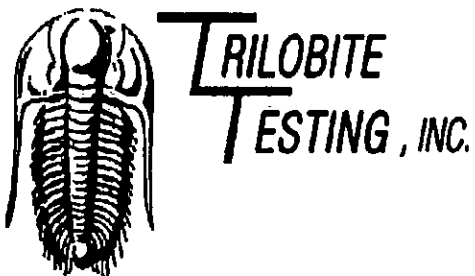
Laboratory Name:

Laboratory Location:

Recovery Comments:



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DRILL STEM TEST REPORT

Prepared For: **H&C Oil Operating**

PO Box 86
Plainville, KS 67663

ATTN: Charles R Ramsay

25-9s-25w Graham,KS

Steelsmith #25-1

Start Date: 2011.05.04 @ 16:56:04

End Date: 2011.05.05 @ 00:10:34

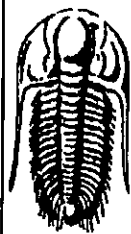
Job Ticket #: 042618 DST #: 4

Trilobite Testing, Inc
PO Box 1733 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

H&C Oil Operating

PO Box 86
Plainville, KS 67663

ATTN: Charles R Ramsay

Steelsmith #25-1

25-9s-25w Graham, KS

Job Ticket: 042618

DST#: 4

Test Start: 2011.05.04 @ 16:56:04

GENERAL INFORMATION:

Formation: LKC-K-L

Deviated: No Whipstock ft (KB)

Time Tool Opened: 19:00:04

Time Test Ended: 00:10:34

Test Type: Conventional Bottom Hole

Tester: Jeff Brown

Unit No: 44

Interval: 4107.00 ft (KB) To 4170.00 ft (KB) (TVD)

Total Depth: 4170.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2587.00 ft (KB)

2582.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6672

Inside

Press@RunDepth: 39.75 psig @ 4112.00 ft (KB)

Start Date: 2011.05.04

End Date: 2011.05.05

Start Time: 16:56:05

End Time: 00:09:34

Capacity: 8000.00 psig

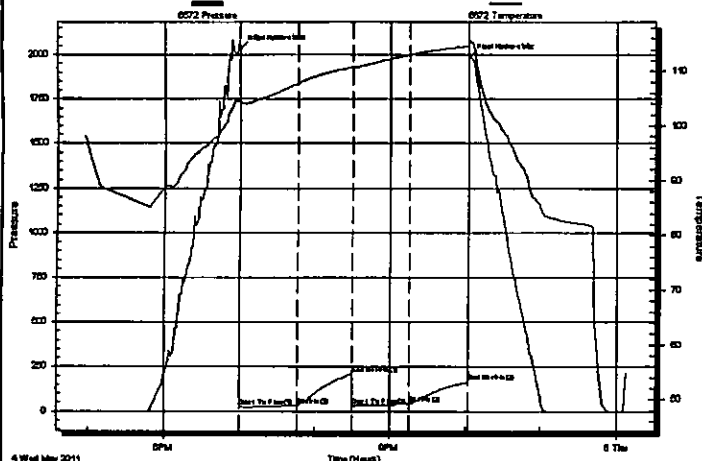
Last Calib.: 2011.05.05

Time On Btm: 2011.05.04 @ 18:59:49

Time Off Btm: 2011.05.04 @ 22:02:49

TEST COMMENT: IFR-Good blow BOB in 10 1/2 min
ISI-Weak surface blow back Died out in 15 min
FFR-Good blow BOB in 43 1/2 min
FSI-Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2032.33	104.76	Initial Hydro-static
1	25.71	103.86	Open To Flow (1)
47	30.50	107.78	Shut-In(1)
90	210.00	110.72	End Shut-In(1)
91	32.71	110.66	Open To Flow (2)
136	39.75	113.07	Shut-In(2)
183	164.55	114.65	End Shut-In(2)
183	1983.56	115.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	MOGO 45%M5%G50%O	0.87
0.00	341 GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Plainville, KS 67663

25-9s-25w Graham, KS

Job Ticket: 042618 **DST#: 4**

ATTN: Charles R Ramsay

Test Start: 2011.05.04 @ 16:56:04

Tool Information

Drill Pipe:	Length: 4092.00 ft	Diameter: 3.80 inches	Volume: 57.40 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 57.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	4107.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	43.00 ft			
Tool Length:	63.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

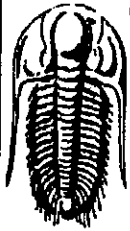
Tool Description

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			4088.00	
Shut In Tool	5.00			4093.00	
Hydraulic tool	5.00			4098.00	
Packer	4.00			4102.00	20.00 Bottom Of Top Packer
Packer	5.00			4107.00	
Stubb	1.00			4108.00	
Perforations	3.00			4111.00	
Change Over Sub	1.00			4112.00	
Recorder	0.00	6672	Inside	4112.00	
Recorder	0.00	8321	Outside	4112.00	
Drill Pipe	31.00			4143.00	
Change Over Sub	1.00			4144.00	
Perforations	3.00			4147.00	
Bullnose	3.00			4150.00	43.00 Bottom Packers & Anchor

Total Tool Length: 63.00

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

H&C Oil Operating

Steelsmith #25-1

PO Box 86
Rainville, KS 67663

25-9s-25w Graham, KS

Job Ticket: 042618 **DST#: 4**

ATTN: Charles R Ramsay

Test Start: 2011.05.04 @ 16:56:04

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: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	MGO 45%M5%C50%O	0.870
0.00	341 GIP	0.000

Total Length: 62.00 ft Total Volume: 0.870 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

