

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

RECEIVED ORIGINAL

AUG 17 2010

Form ACO-1
June 2009

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

KCC WICHITA

8/16/12

OPERATOR: License # 9855

Name: Grand Mesa Operating Company

Address 1: 1700 N. Waterfront Pkwy, Bldg 600

Address 2:

City: Wichita State: KS Zip: 67206 + 5 5 1 4

Contact Person: Ronald N. Sinclair

Phone: (316) 265-3000

CONTRACTOR: License # 30606

Name: Murfin Drilling Company, Inc.

Wellsite Geologist: Steven P. Carl AUG 16 2010

Purchaser: NCRA CONFIDENTIAL

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 #:

06/10/2010	06/20/2010	07/21/2010
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 063-21847-00-00

Spot Description: 2303' FSL & 2269' FWL

SW NE NE SW Sec. 31 Twp. 13 S. R. 31 East West

2,303 Feet from North / South Line of Section

2,269 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

County: Gove

Lease Name: Phelps Well #: 5-31

Field Name: Maurice Northeast

Producing Formation: L/KC Formation

Elevation: Ground: 2949' Kelly Bushing: 2954'

Total Depth: 4672' Plug Back Total Depth: 4660'

Amount of Surface Pipe Set and Cemented at: 5 jts @ 231 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: 2466 Feet

If Alternate II completion, cement circulated from: 2466'

feet depth to: Surface w/ 300 sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: 7,000 ppm Fluid volume: 600 bbls

Dewatering method used: Evaporation and backfilling of pit

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: Ronald N. Sinclair

Title: President Date: 08/16/2010

KCC Office Use ONLY

- Letter of Confidentiality Received Date: 8/16/10 - 8/16/12
- Confidential Release Date:
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: NS Date: 8-2010

Operator Name: Grand Mesa Operating Company Lease Name: Phelps Well #: 5-31 AUG 16 2010
 Sec. 31 Twp. 13 S. R. 31 East West County: Gove

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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: Array Induction Shallow Focussed Elect Log & Compact Photo Den Comp. Neutron Micro Res. Log, Dual Receiver Cmt Bnd Log	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum <p style="text-align: center;">“ SEE ATTACHED SHEET FOR LOG TOPS ”</p>
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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#	231'	Common	165	3%CC, 2%Gel
Production	7 7/8"	5 1/2"	15.5#	4670'	EA-2	175	

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 <input checked="" type="checkbox"/> Protect fresh water	0-2466'	SMD	300	

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	4229-4233'; 4201-4209'; 4147-4152';	250 Gal. - 15% MCA Acid	4229-4233'
4	4132-4138'; 4073-4081'; 4051-4058';	600 Gal. - 15% MCA Acid, w/ball injectors	4132-4158'
4	4012-4031'	Cement squeeze - 110 sxs	4132-4152'
		800 Gal. - 15% MCA Acid	4012-4031'

TUBING RECORD:	Size: <u>2 7/8"</u>	Set At: <u>4630'</u>	Packer At:	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
----------------	---------------------	----------------------	------------	--

Date of First, Resumed Production, SWD or ENHR. <u>July 21, 2010</u>		Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____					
Estimated Production Per 24 Hours	Oil Bbls. <u>114</u>	Gas Mcf	Water Bbls. <u>90</u>	Gas-Oil Ratio	Gravity <u>35.8</u>		

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>4012-4233'</u>
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Phelps 5-31
Sec. 31-13S-31W
Gove County, Kansas
Grand Mesa Operating Company
Spud 06/10/10
TD 06/20/10

LOG TOPS -- CONFIDENTIAL (2 YEAR)

Name	Top	Datum
Bs/Stone Corral	2445	+ 509
Heebner	3934	- 980
Lansing	3976	-1022
Muncie Creek	4129	-1175
Stark Shale	4219	-1265
Hushpuckney Shale	4256	-1302
Bs/KC	4288	-1334
Marmaton	4320	-1366
Little Osage Shale	4451	-1497
Excello Shale	4474	-1520
Johnson Zone	4548	-1594
Morrow Shale	4572	-1618
Mississippian	4600	-1646
LTD	4670	

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ALLIED CEMENTING CO., LLC. 038876

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

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AUG 16 2010

SERVICE POINT: Oakley

DATE <u>6/10/10</u>	SEC. <u>31</u>	TWP. <u>13</u>	RANGE <u>31</u>	CONFIDENTIAL CANCELED OUT	ON LOCATION	JOB START <u>8:30pm</u>	JOB FINISH <u>9:00pm</u>
Phelps LEASE	WELL # <u>531</u>	LOCATION <u>Oakley 205th Jayhawk ETO</u>			COUNTY <u>Gove</u>	STATE <u>Ks</u>	
OLD OR NEW (Circle one)		<u>460 10 2 1/2 Einto</u>					

CONTRACTOR Murphy 24

TYPE OF JOB Surface

HOLE SIZE 10 1/4 T.D. 231'

CASING SIZE 8 3/8 DEPTH 231'

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 15'

PERFS. _____

DISPLACEMENT 13-82

OWNER Same

CEMENT AMOUNT ORDERED 16.5 SK, com 300 oec

200 gal

COMMON	<u>165</u>	@	<u>15.45</u>	<u>2549.25</u>
POZMIX		@		
GEL	<u>3</u>	@	<u>20.80</u>	<u>62.40</u>
CHLORIDE	<u>6</u>	@	<u>58.20</u>	<u>349.20</u>
ASC		@		

EQUIPMENT

PUMP TRUCK CEMENTER Alan

423 HELPER Robert

BULK TRUCK

347 DRIVER Wayne

BULK TRUCK

_____ DRIVER _____

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HANDLING	<u>179 SK</u> @ <u>2.40</u> <u>417.60</u>
MILEAGE	<u>10.54/mile</u> <u>348.00</u>
TOTAL	<u>3726.45</u>

REMARKS:

Cement did not cure

Thank You
Alan, Wayne
Robert

CHARGE TO: Grand Mesa

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE 1018.00

EXTRA FOOTAGE @ _____

MILEAGE 20 @ 7.00 140.00

MANIFOLD @ _____

TOTAL 1158.00

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 Anthony Martin

SIGNATURE Anthony Martin

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

JOB LOG

SWIFT Services, Inc.

DATE 6-20-10 PAGE NO.

CUSTOMER Grand Mesa WELL NO. 5-31 LEASE Phelps JOB TYPE Cement 5 1/2 Casing TICKET NO. 18549

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1800							On Location
								5 1/2 15.5# Cent. 2, 4, 6, 8, 10, 12, 13, 14
								TD-4672 15, 16, 18, 51
								TP-4672' Basket, 2, 52
								PS-4670' D.V. Tool 52 @ 2 1/2 66'
								ST-10'
	0915							Start 5 1/2" Casing
	2115							Break Circulation
	2145	6 3/4	32	✓			200	Pump Mud Flush + KCL Flush
	2150	4 1/2		✓			200	Start Cement 175 SKs EA-2
			42					— Shut Down - Release Plug - Wash Pump Lines
	2225	6 3/4		✓			200	Start Displacement
		6 3/4	83	✓			400	Lift Cement
							850	Max Lift
	2230		110.1				1500	Land Plug - Release - Hold
								Drop Bomb
								Wash Truck
	2245			✓	✓		1200	Open D.V. Tool - Good Circulation
								Circulate
	0130	6 3/4	20	✓			200	Pump KCL Flush
	0135	3	7	✓				Plug Rat Hole 30 sks
	0140	3	5	✓				Plug Mouse Hole 20 sks
	0145	6		✓			200	Start Cement 250 sks
			138					Shut Down Release Plug
		6 3/4		✓			250	Start Displacement
		6 3/4	20	✓			400	Cement to Surface 70 sks to pit
	0230		58.6				1750	Land Plug - Close D.V. Tool
								Wash Truck
	0300							Job Complete
								Thank you
								Brett, Dave Russ + Jason

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JOB LOG

SWIFT Services, Inc.

DATE 20 Jul 10 PAGE NO.

CUSTOMER Grand Mesa WELL NO. 5-31 LEASE Phelps JOB TYPE Acidize peys TICKET NO. 18632

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								250 gal 15% UCA 2 3/4 x 5 1/2
								peys 4229-33 plug 4269 spot 4234 treat 4220 DISP 24.4
	1320							on location tag fluid 3400
	1350		6 1/2					spot 6.5 bbl start downhole
	1350							
	1400		23.5			Ø		load tubing
	1410					200		staging
	1415					300		staging
	1420							going to 400
	1421	1/8				300		feeding
	1425	1/8	24			225		
	1430	1/4				300		
	1432	1/4				350		
	1437	1/4	20.5			300		
	1440	1/3				300		
	1445	1/2	25			250		
	1452	1/2	26			200		break back to 200
	1458		27			200		DISIP 200
	1502					Ø		4 min to vacuum back up Trunks Blair & Russ

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DATE 2 JUL 10 PAGE NO. 1

CUSTOMER Grand Mesa WELL NO. 5-31 LEASE Phelps JOB TYPE ACIDIZE PERFS TICKET NO. 18634

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								600 gal 15% MCA w/ ball injector perms 4147-50 4132-4158
								perfs 4098 treat 23 x 5 1/2 4152 spot
	0755							on location TRK 104
	0815							top fluid 3400
	0820		6					spot 6 bbl - pull 2 joints
	0835							start acid - 20 balls in acid
	0843		24					(14 acid + 10 H ₂ O) load tubing pump up to 700
						700		staging
	0855					800		staging
	0900					900		staging
	0905					1000		staging
	0910					1100		staging
	0928		25			1100		1 bbl in since load
	0940		25 1/4					Break in pressure
		3/4				400		
		1				250		
			28			0		stop pumping - can not see a vacuum
		1 1/4				25		idle in
	0950	1 1/4	39			25		stop pumping - 10 sec to vacuum [LOAD = 39 bbls]
	1000							Circle up
								Perfs Revs: Please

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DATE 7-6-10 PAGE NO. 1

CUSTOMER GRAND MESA WELL NO. 5-31 LEASE PHELPS JOB TYPE TOOLS - SQUEEZE PERFS TICKET NO. 18574-18575

CHART NO.	TIME	RATE (BPM)	VOLUME (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1000							ON LOCATION TOP - 4201' (OIL ZONE)
								2 7/8 X 5 1/2 RRP = 4180'
								PERFS = 4147-52 4132-38
								PVR = 3971' (21 OUT)
	1000							PULL RRP W/ BALL CATCHER, RUN RRP W/O CATCHER
	1215		14 1/4	✓		1500		TEST TOOLS RRP = 4180 PVR = 4162 - HELD
	1245							RELEASE PVR - SPOT 2 SKS SAND
	1345	4	90	✓				CIRCULATE OIL OUT WELL
	1415				✓	500		SET PVR = 3971' - PSEALWAYS - SHUT IN
	1420	4	17	✓		100		INT RATE
	1425	3	23	✓		0		MIX CEMENT 110 SKS STAMPS
	1433	3	0	✓		0		DISPLACE CEMENT
		3	11	✓		300		"
		1 1/2	17	✓		500		"
		1/2	21	✓		650		"
		1/2	23	✓		800		" TOBOKS CLEAR
	1450	1/2	25	✓		800		" SHUT DOWN
	1455					750		SHUT IN - WASH TRUCK
	1530			✓		600/800		STAGE
	1540		25 1/4	✓		1500		" - HOLDING
	1600					1500		RELEASE - HELD
	1605	2 1/2	35		✓	400		REVERSE CLEAN
	1630			✓		750		PULL 2 STAMPS - PSE SQUEEZE - HELD - 5/2
								WAIT 1 HRS - PULL PVR OUT WELL
								DRILL OUT 7-7-10
								TOC = 4050' ±
								100 SKS CMT IN PERFS
								RECEIVED
								AUG 17 2010
	1700							JOB COMPLETE
								KCC WICHITA
								THANK YOU
								WAYNE, ROB, JASON R., JEFF

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THANK YOU
WAYNE, ROB, JASON R., JEFF

JOB LOG

SWIFT Services, Inc.

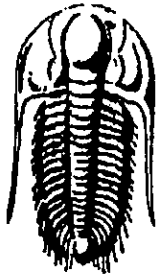
DATE 14 Jul 10 PAGE NO.

CUSTOMER Grand Mesa WELL NO. 5-31 LEASE Phelps JOB TYPE Acidize puffs TICKET NO. 18639

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								800 gals 15% MCA puffs 4012-4031 pacer 4004 2 3/4 x 5 1/2
	12:50							on loc TRK 109 (truck having overheating problems)
	13:30							Rig up - no spots
	13:35							going down hole - (no ball in) expecting 100-200 ft of fluid
	13:47		21 1/4			100		Load tubing go to 300 stage AT 300
	14:15	1/8	23			150		Perking
	14:17	1/4	24			50		
	14:20	1/2	25			150		
	14:25	-	26			Ø		truck stopped pressure to Ø
	14:30 14:45		28			Ø		resume pumping
		1				50		
	14:44	1	42			75		Pressure increases during the 1 bbl overflush
	14:45		42					
	14:45		43			75		shut down 151P 50 1 minute to vacuum
	15:00							rack up 1090 = 43
								Planks Run & Blow.

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**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Co**

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

ATTN: Bob Peterson/Steve Ca

31-13-31 Gove, KS

Phelps #5-31

Start Date: 2010.06.13 @ 23:48:00

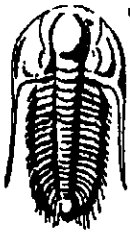
End Date: 2010.06.14 @ 07:25:00

Job Ticket #: 38900 , DST #: 1

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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

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carkey

31-13-31 Gove, KS

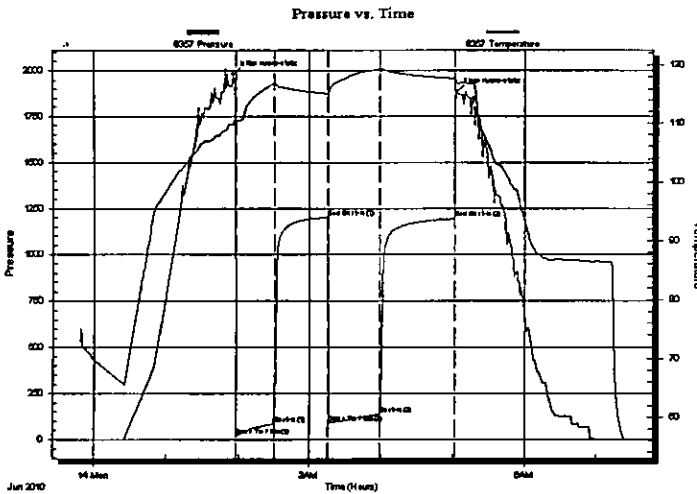
Job Ticket: 38900 DST#: 1
Test Start: 2010.06.13 @ 23:48:00

GENERAL INFORMATION:

Formation: **LKC 'C'**
 Deviated: **No** Whipstock: **ft (KB)**
 Time Tool Opened: **01:57:30**
 Time Test Ended: **07:25:00**
 Interval: **4001.00 ft (KB) To 4023.00 ft (KB) (TVD)**
 Total Depth: **4023.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Good**
 Test Type: **Conventional Bottom Hole**
 Tester: **Chuck Smith**
 Unit No: **37**
 Reference Elevations: **2954.00 ft (KB)**
2949.00 ft (CF)
 KB to GR/CF: **5.00 ft**

Serial #: 8357 Inside
 Press@RunDepth: **138.01 psig @ 4005.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2010.06.13** End Date: **2010.06.14** Last Calib.: **2010.06.14**
 Start Time: **23:48:05** End Time: **07:24:59** Time On Btm: **2010.06.14 @ 01:55:10**
 Time Off Btm: **2010.06.14 @ 05:03:09**

TEST COMMENT: IF: 9" Blow.
 IS: Weak surface return died @ 10 min.
 FF: 10" Blow.
 FSI: Weak surface return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1981.25	109.83	Initial Hydro-static
3	20.03	110.29	Open To Flow (1)
35	84.58	116.83	Shut-In(1)
80	1202.13	115.15	End Shut-In(1)
81	90.22	114.87	Open To Flow (2)
124	138.01	119.33	Shut-In(2)
187	1194.28	117.77	End Shut-In(2)
188	1885.61	117.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	MW 10%M 90%W	1.43
60.00	GMCO 10%G 40%M 50%O	0.84
40.00	GO 20%G 80%O	0.56
0.00	140 Feet weak GIP	0.00
0.00	RW: .166 @ 56 Degrees F = 50000 PPM	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 38900

DST#: 1

ATTN: Bob Peterson/Steve Carloway

Test Start: 2010.06.13 @ 23:48:00

Tool Information

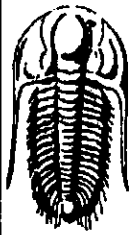
Drill Pipe:	Length: 3869.00 ft	Diameter: 3.80 inches	Volume: 54.27 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 54.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.50 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4001.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	49.50 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			3974.50	
Shut In Tool	5.00			3979.50	
Hydraulic tool	5.00			3984.50	
Jars	5.00			3989.50	
Safety Joint	2.50			3992.00	
Packer	5.00			3997.00	27.50 Bottom Of Top Packer
Packer	4.00			4001.00	
Stubb	1.00			4002.00	
Perforations	3.00			4005.00	
Recorder	0.00	8357	Inside	4005.00	
Recorder	0.00	6751	Outside	4005.00	
Perforations	15.00			4020.00	
Bullnose	3.00			4023.00	22.00 Bottom Packers & Anchor

Total Tool Length: 49.50



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 38900

DST#: 1

ATTN: Bob Peterson/Steve Carkey

Test Start: 2010.06.13 @ 23:48:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

50000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.93 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
180.00	MW 10%M 90%W	1.432
60.00	GMCO 10%G 40%M 50%O	0.842
40.00	GO 20%G 80%O	0.561
0.00	140 Feet weak GIP	0.000
0.00	RW: .166 @ 56 Degrees F = 50000 PPM	0.000

Total Length: 280.00 ft Total Volume: 2.835 bbf

Num Fluid Samples: 0

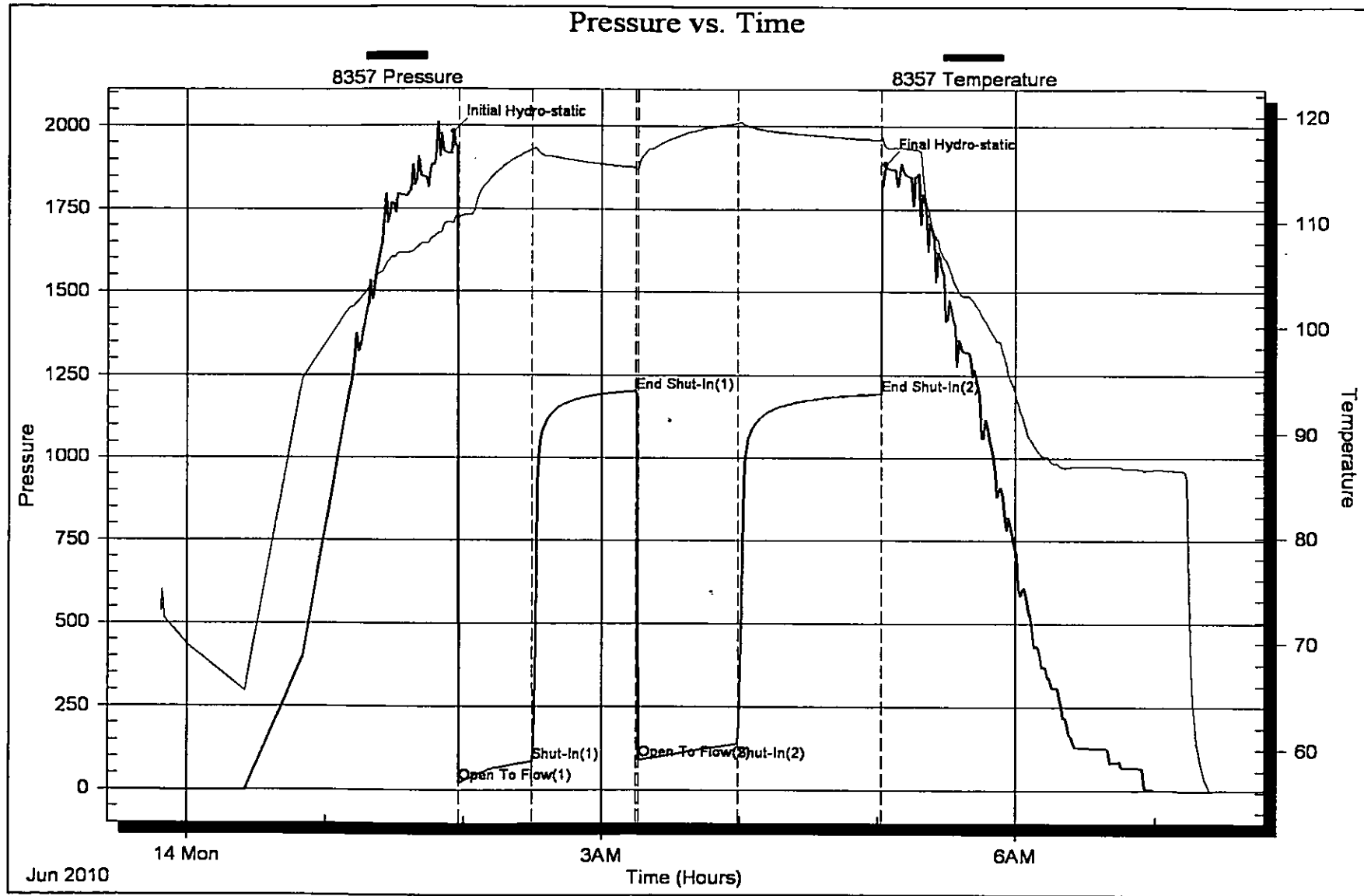
Num Gas Bombs: 0

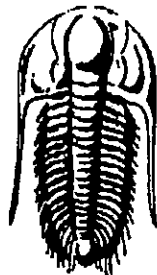
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API: 37 @ 60 Degrees F = 37.





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Co**

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

ATTN: Bob Peterson/Steve Ca

31-13-31 Gove, KS

Phelps #5-31

Start Date: 2010.06.14 @ 14:04:59

End Date: 2010.06.14 @ 21:14:44

Job Ticket #: 39052 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Grand Mesa Operating Co

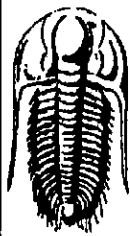
Phelps #5-31

31-13-31 Gove, KS

DST # 2

LKC 'D'

2010.06.14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39052

DST#: 2

ATTN: Bob Peterson/Steve Carkey

Test Start: 2010.06.14 @ 14:04:59

GENERAL INFORMATION:

Formation: LKC 'D'

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:55:29

Time Test Ended: 21:14:44

Test Type: Conventional Bottom Hole

Tester: Chuck Smith

Unit No: 37

Interval: 4026.00 ft (KB) To 4035.00 ft (KB) (TVD)

Total Depth: 4035.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2954.00 ft (KB)

2949.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6751

Outside

Press@RunDepth: 263.27 psig @ 4032.00 ft (KB)

Start Date: 2010.06.14

End Date:

2010.06.14

Start Time: 14:05:04

End Time:

21:14:43

Capacity: 8000.00 psig

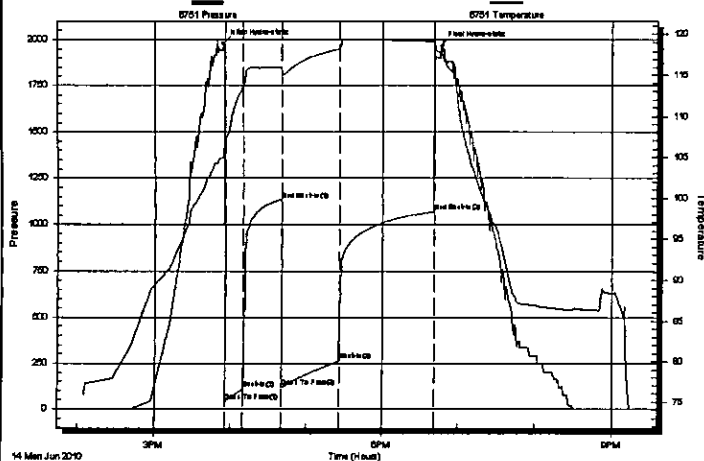
Last Calib.: 2010.06.14

Time On Btm: 2010.06.14 @ 15:53:44

Time Off Btm: 2010.06.14 @ 18:46:29

TEST COMMENT: IF: B.O.B. @ 3 min.
IS: 7" Slow build return.
FF: B.O.B. @ 6 1/2 min.
FSI: B.O.B. @ 47 min.

Pressure vs. Time



PRESSURE SUMMARY

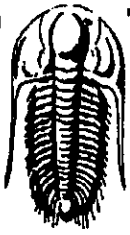
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1978.92	104.93	Initial Hydro-static
2	44.36	106.51	Open To Flow (1)
17	108.28	113.57	Shut-In(1)
47	1134.05	115.90	End Shut-In(1)
47	119.20	115.45	Open To Flow (2)
92	263.27	118.25	Shut-In(2)
167	1071.95	119.16	End Shut-In(2)
173	1966.44	117.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MOCW 20%M 30%O 50%W	0.59
248.00	GO 45%G 55%O	3.48
248.00	GO 55%G 45%O	3.48
77.00	GO 15%G 85%O	1.08
0.00	RW: .153 @ 68 Degrees F = 45000 PPM	0.00
0.00	1035 Feet GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carloway

31-13-31 Gove, KS

Job Ticket: 39052

DST#: 2

Test Start: 2010.06.14 @ 14:04:59

Tool Information

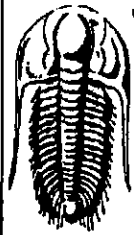
Drill Pipe:	Length: 3899.00 ft	Diameter: 3.80 inches	Volume: 54.69 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 55.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.50 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4026.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	36.50 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			3999.50	
Shut In Tool	5.00			4004.50	
Hydraulic tool	5.00			4009.50	
Jars	5.00			4014.50	
Safety Joint	2.50			4017.00	
Packer	5.00			4022.00	27.50 Bottom Of Top Packer
Packer	4.00			4026.00	
Stubb	1.00			4027.00	
Perforations	5.00			4032.00	
Recorder	0.00	8357	Inside	4032.00	
Recorder	0.00	6751	Outside	4032.00	
Bullnose	3.00			4035.00	9.00 Bottom Packers & Anchor

Total Tool Length: 36.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa Operating Co
1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carloway

Phelps #5-31
31-13-31 Gove, KS
Job Ticket: 39052 **DST#: 2**
Test Start: 2010.06.14 @ 14:04:59

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 39 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 47000 ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.16 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2700.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

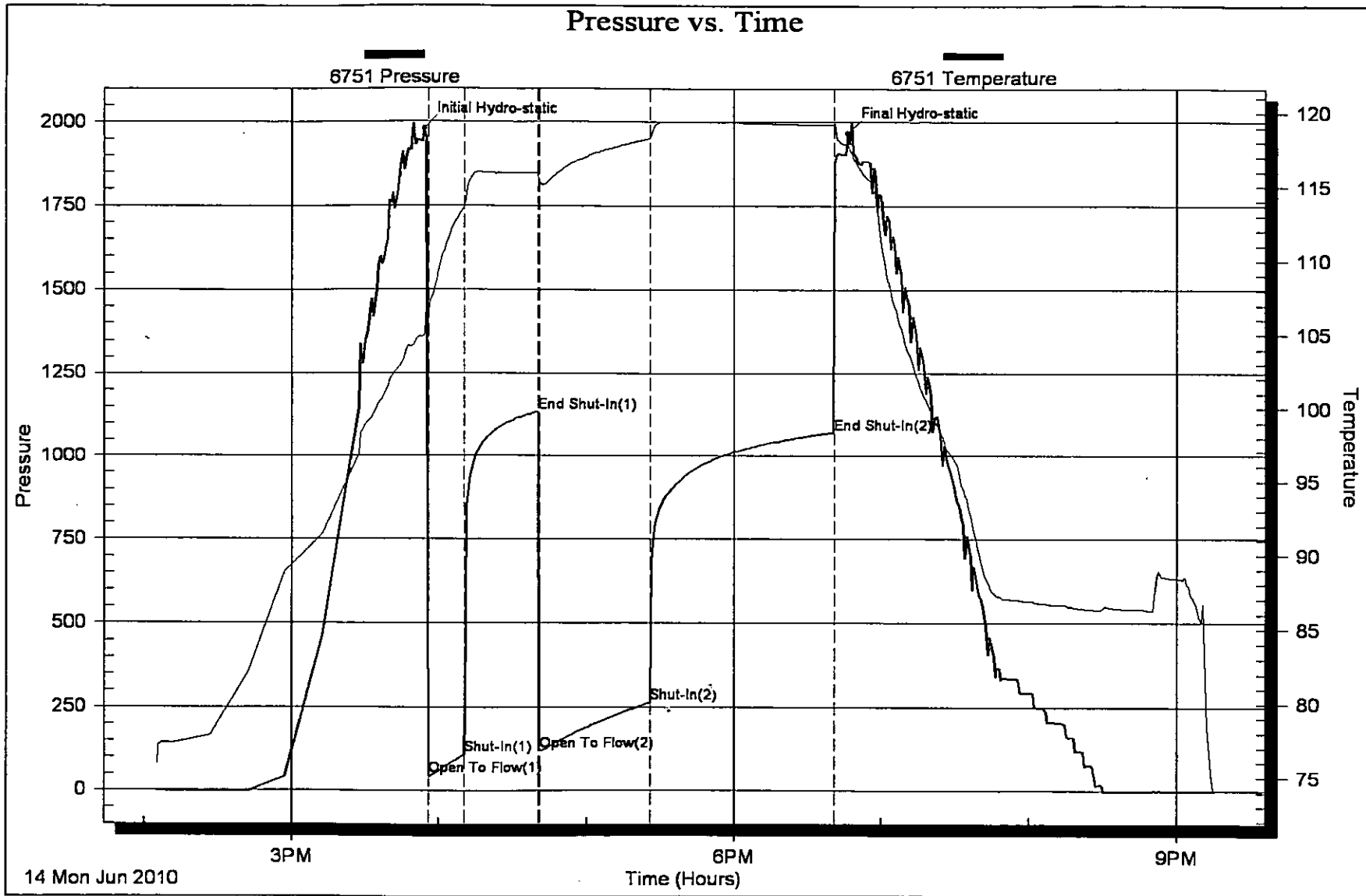
Length ft	Description	Volume bbl
120.00	MOCW 20%M 30%O 50%W	0.590
248.00	GO 45%G 55%O	3.479
248.00	GO 55%G 45%O	3.479
77.00	GO 15%G 85%O	1.080
0.00	RW: .153 @ 68 Degrees F = 45000 PPM	0.000
0.00	1035 Feet GIP	0.000

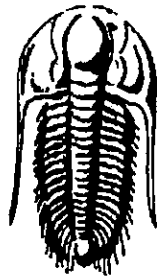
Total Length: 693.00 ft Total Volume: 8.628 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: API: 40 @ 70 Degrees F = 39.





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Co**

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

ATTN: Bob Peterson/Steve Ca

31-13-31 Gove, KS

Phelps #5-31

Start Date: 2010.06.15 @ 09:09:00

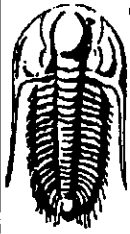
End Date: 2010.06.15 @ 19:05:49

Job Ticket #: 39053 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carkey

31-13-31 Gove, KS

Job Ticket: 39053

DST#: 3

Test Start: 2010.06.15 @ 09:09:00

GENERAL INFORMATION:

Formation: **LKC 'E'F**

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

Time Tool Opened: 10:38:10

Time Test Ended: 19:05:49

Test Type: **Conventional Bottom Hole**

Tester: **Chuck Smith**

Unit No: **37**

Interval: **4048.00 ft (KB) To 4103.00 ft (KB) (TVD)**

Total Depth: **4103.00 ft (KB) (TVD)**

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

Reference Elevations: **2954.00 ft (KB)**

2949.00 ft (CF)

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

Serial #: 8357

Inside

Press@RunDepth: **999.32 psig @ 4049.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.06.15**

End Date: **2010.06.15**

Last Calib.: **2010.06.15**

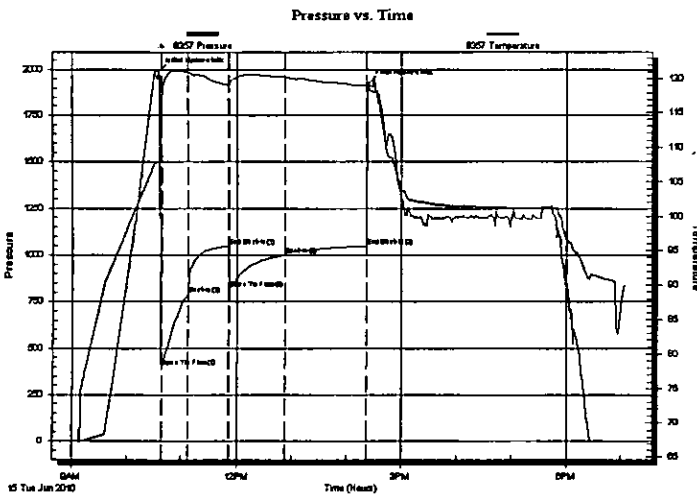
Start Time: **09:09:05**

End Time: **19:05:50**

Time On Btm: **2010.06.15 @ 10:35:00**

Time Off Btm: **2010.06.15 @ 14:24:50**

TEST COMMENT: IF: B.O.B. @ 45 seconds.
IS: 6" Return died @ 37 min.
FF: B.O.B. @ 2 min.
FS: 4" Return died @ 26 min.



PRESSURE SUMMARY

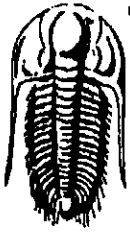
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1990.14	107.94	Initial Hydro-static
4	399.93	115.08	Open To Flow (1)
32	788.13	121.00	Shut-In(1)
77	1048.03	119.07	End Shut-In(1)
77	816.03	119.12	Open To Flow (2)
138	999.32	120.24	Shut-In(2)
228	1048.80	119.04	End Shut-In(2)
230	1924.93	118.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MW 25%M 75%W	0.59
2294.00	GMWCO 20%G 5%M 5%W 70%O Circula	32.18 ta
62.00	GO 30%G 70%O	0.87
31.00	GO 50%G 50%O	0.43
0.00	RW: .134@ 92 Degrees F = 40000 PPM	0.00
0.00	1395 Feet GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Grand Mesa Operating Co
1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carloway

Phelps #5-31
31-13-31 Gove, KS
Job Ticket: 39053 DST#: 3
Test Start: 2010.06.15 @ 09:09:00

Tool Information

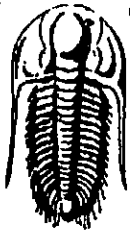
Drill Pipe:	Length: 3931.00 ft	Diameter: 3.80 inches	Volume: 55.14 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 55.73 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	30.50 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	4048.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	82.50 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			4021.50	
Shut In Tool	5.00			4026.50	
Hydraulic tool	5.00			4031.50	
Jars	5.00			4036.50	
Safety Joint	2.50			4039.00	
Packer	5.00			4044.00	27.50 Bottom Of Top Packer
Packer	4.00			4048.00	
Stubb	1.00			4049.00	
Recorder	0.00	8357	Inside	4049.00	
Recorder	0.00	6751	Outside	4049.00	
Perforations	18.00			4067.00	
Change Over Sub	1.00			4068.00	
Drill Pipe	31.00			4099.00	
Change Over Sub	1.00			4100.00	
Bullnose	3.00			4103.00	55.00 Bottom Packers & Anchor

Total Tool Length: 82.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa Operating Co
1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carloway

Phelps #5-31
31-13-31 Gove, KS
Job Ticket: 39053 DST#: 3
Test Start: 2010.06.15 @ 09:09:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 35 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 40000 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.18 in*	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 3000.00 ppm		
Filter Cake: 1.00 inches		

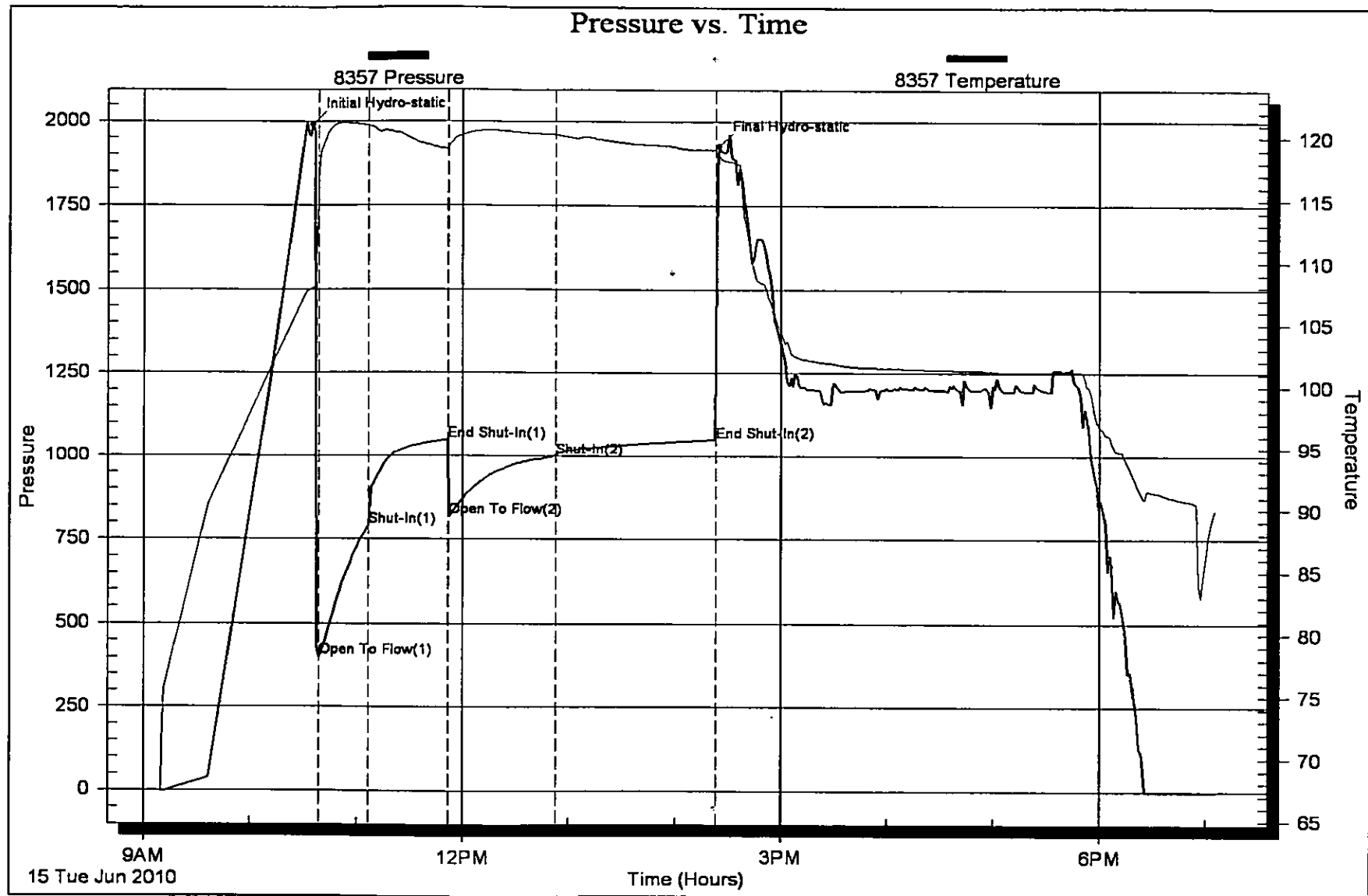
Recovery Information

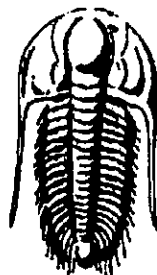
Recovery Table

Length ft	Description	Volume bbl
120.00	MW 25%M 75%W	0.590
2294.00	GMWCO 20%G 5%M 5%W 70%O Circulated	32.179
62.00	GO 30%G 70%O	0.870
31.00	GO 50%G 50%O	0.435
0.00	RW: .134@ 92 Degrees F = 40000 PPM	0.000
0.00	1395 Feet GIP	0.000

Total Length: 2507.00 ft Total Volume: 34.074 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: API: 39 @ 100 Degrees F = 35.





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Co**

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

ATTN: Bob Peterson/Steve Ca

31-13-31 Gove, KS

Phelps #5-31

Start Date: 2010.06.16 @ 09:29:00

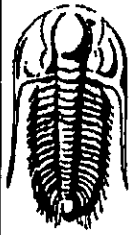
End Date: 2010.06.16 @ 16:12:09

Job Ticket #: 39054 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39054

DST#: 4

ATTN: Bob Peterson/Steve Carloway

Test Start: 2010.06.16 @ 09:29:00

GENERAL INFORMATION:

Formation: **LKC 'H, I'**

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

Time Tool Opened: 10:55:20

Time Test Ended: 16:12:09

Test Type: **Conventional Bottom Hole**

Tester: **Chuck Smith**

Unit No: **37**

Interval: **4127.00 ft (KB) To 4193.00 ft (KB) (TVD)**

Total Depth: **4193.00 ft (KB) (TVD)**

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

Reference Elevations: **2954.00 ft (KB)**

2949.00 ft (CF)

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

Serial #: **8357**

Inside

Press@RunDepth: **187.43 psig @ 4131.00 ft (KB)**

Start Date: **2010.06.16**

End Date:

2010.06.16

Capacity: **8000.00 psig**

Last Calib.: **2010.06.16**

Start Time: **09:29:05**

End Time:

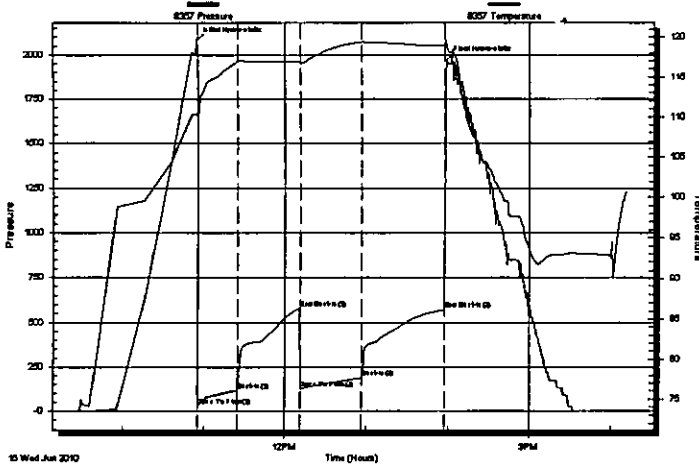
16:12:10

Time On Btm: **2010.06.16 @ 10:54:20**

Time Off Btm: **2010.06.16 @ 13:58:20**

TEST COMMENT: IF: B.O.B. @ 12 min.
IS: 6" Slow building return.
FF: B.O.B. @ 14 min.
FS: B.O.B. @ 37 min.

Pressure vs. Time



PRESSURE SUMMARY

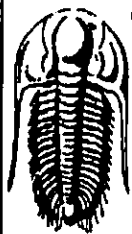
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2081.19	110.34	Initial Hydro-static
1	27.61	109.73	Open To Flow (1)
31	116.60	116.94	Shut-In(1)
77	579.53	116.84	End Shut-In(1)
77	124.48	116.67	Open To Flow (2)
123	187.43	119.34	Shut-In(2)
183	571.64	118.85	End Shut-In(2)
184	1971.53	119.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OSMV 10%M 90%W	0.59
186.00	GOCMV 20%G 15%O 30%M 35%W	2.61
62.00	GMCO 25%G 20%M 55%O	0.87
31.00	GO 45%G 55%O	0.43
0.00	RW: .150 @ 95 Degrees F = 35000 PPM	0.00
0.00	1953 Feet weak GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39054

DST#: 4

ATTN: Bob Peterson/Steve Carloway

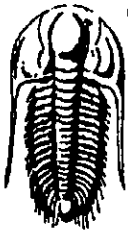
Test Start: 2010.06.16 @ 09:29:00

Tool Information

Drill Pipe:	Length: 3994.00 ft	Diameter: 3.80 inches	Volume: 56.03 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: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 56.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.50 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4127.00 ft			Final 57000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	93.50 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			4100.50	
Shut In Tool	5.00			4105.50	
Hydraulic tool	5.00			4110.50	
Jars	5.00			4115.50	
Safety Joint	2.50			4118.00	
Packer	5.00			4123.00	27.50 Bottom Of Top Packer
Packer	4.00			4127.00	
Stubb	1.00			4128.00	
Perforations	3.00			4131.00	
Recorder	0.00	8357	Inside	4131.00	
Recorder	0.00	6751	Outside	4131.00	
Perforations	26.00			4157.00	
Change Over Sub	1.00			4158.00	
Drill Pipe	31.00			4189.00	
Change Over Sub	1.00			4190.00	
Bullnose	3.00			4193.00	66.00 Bottom Packers & Anchor
Total Tool Length:	93.50				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa Operating Co
1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carloway

Phelps #5-31
31-13-31 Gove, KS
Job Ticket: 39054 DST#: 4
Test Start: 2010.06.16 @ 09:29:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 52.00 sec/qt
Water Loss: 7.97 in³
Resistivity: 0.00 ohm.m
Salinity: 3500.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 37 deg API
Water Salinity: 35000 ppm

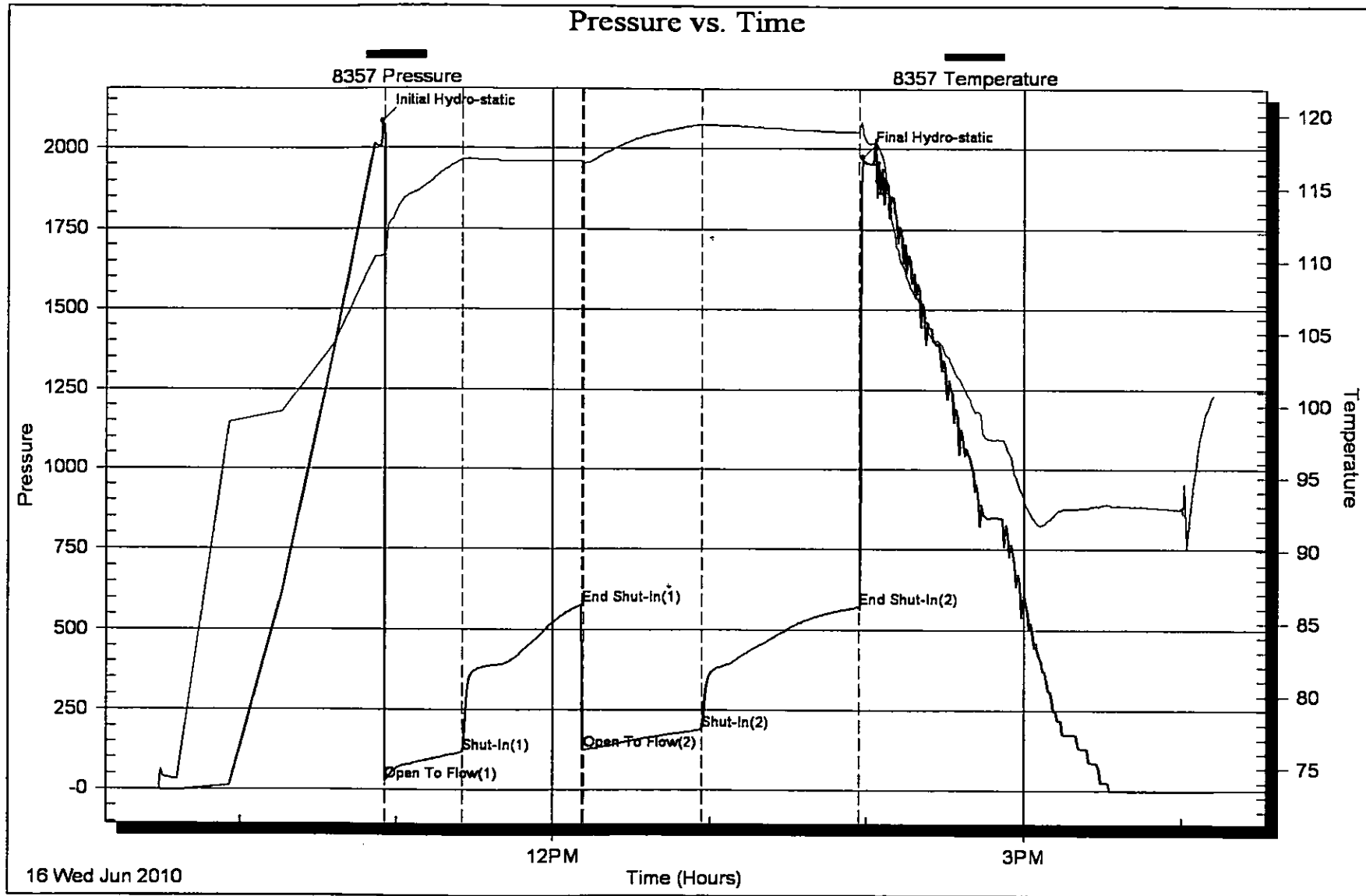
Recovery Information

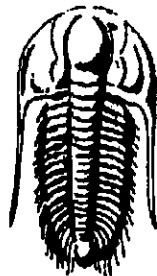
Recovery Table

Length ft	Description	Volume bbl
120.00	OSMV 10%M 90%W	0.590
186.00	GOCMV 20%G 15%O 30%M 35%W	2.609
62.00	GMCO 25%G 20%M 55%O	0.870
31.00	GO 45%G 55%O	0.435
0.00	RW: .150 @ 95 Degrees F = 35000 PPM	0.000
0.00	1953 Feet weak GIP	0.000
0.00	620 Feet strong GIP	0.000

Total Length: 399.00 ft Total Volume: 4.504 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: API: 40 @ 90 Degrees F = 37.





**TRILLOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Co**

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

ATTN: Bob Peterson/Steve Ca

31-13-31 Gove, KS

Phelps #5-31

Start Date: 2010.06.16 @ 23:37:08

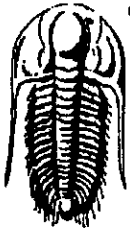
End Date: 2010.06.17 @ 05:12:58

Job Ticket #: 39055 DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa Operating Co
1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carloway

Phelps #5-31
31-13-31 Gove, KS
Job Ticket: 39055 DST#: 5
Test Start: 2010.06.16 @ 23:37:08

GENERAL INFORMATION:

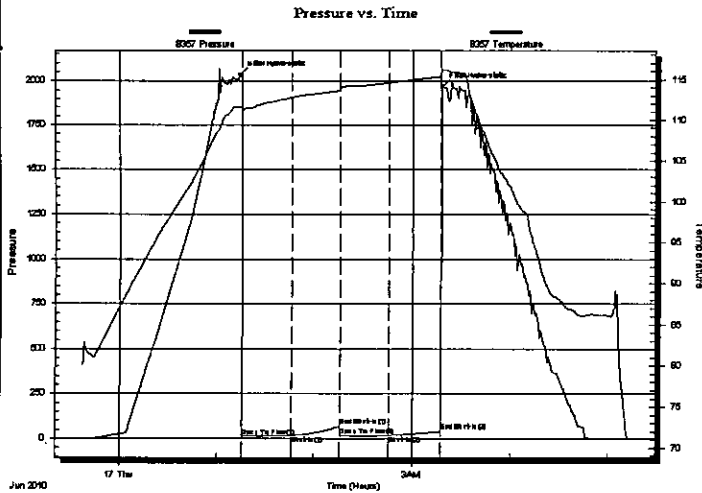
Formation: **LKC 'J'**
Deviated: **No** Whipstock: ft (KB)
Time Tool Opened: 01:15:38
Time Test Ended: 05:12:58
Interval: **4203.00 ft (KB) To 4217.00 ft (KB) (TVD)**
Total Depth: **4217.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Good**
Test Type: **Conventional Bottom Hole**
Tester: **Chuck Smith**
Unit No: **37**
Reference Elevations: **2954.00 ft (KB)**
2949.00 ft (CF)
KB to GR/CF: **5.00 ft**

Serial #: 8357

Inside

Press@RunDepth: **17.84 psig @ 4204.00 ft (KB)** Capacity: **8000.00 psig**
Start Date: **2010.06.16** End Date: **2010.06.17** Last Calib.: **2010.06.17**
Start Time: **23:37:13** End Time: **05:12:58** Time On Btm: **2010.06.17 @ 01:13:58**
Time Off Btm: **2010.06.17 @ 03:17:38**

TEST COMMENT: IF: Surface blow died @ 22 min.
IS: No return.
FF: No blow.
FSI: No return.



PRESSURE SUMMARY

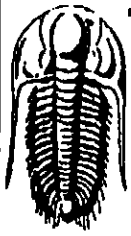
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2033.83	111.55	Initial Hydro-static
2	13.06	110.86	Open To Flow (1)
32	15.41	112.83	Shut-In(1)
62	68.96	113.70	End Shut-In(1)
63	16.32	113.86	Open To Flow (2)
92	17.84	114.66	Shut-In(2)
123	40.71	115.41	End Shut-In(2)
124	1971.18	116.13	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM 3% O 97% M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39055

DST#: 5

ATTN: Bob Peterson/Steve Carkey

Test Start: 2010.06.16 @ 23:37:08

Tool Information

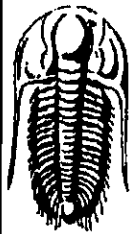
Drill Pipe:	Length: 4088.00 ft	Diameter: 3.80 inches	Volume: 57.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 57.93 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	32.50 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4203.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	41.50 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			4176.50	
Shut In Tool	5.00			4181.50	
Hydraulic tool	5.00			4186.50	
Jars	5.00			4191.50	
Safety Joint	2.50			4194.00	
Packer	5.00			4199.00	27.50 Bottom Of Top Packer
Packer	4.00			4203.00	
Stubb	1.00			4204.00	
Recorder	0.00	8357	Inside	4204.00	
Recorder	0.00	6751	Outside	4204.00	
Perforations	10.00			4214.00	
Bullnose	3.00			4217.00	14.00 Bottom Packers & Anchor

Total Tool Length: 41.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa Operating Co
1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carkey

Phelps #5-31
31-13-31 Gove, KS
Job Ticket: 39055 DST#: 5
Test Start: 2010.06.16 @ 23:37:08

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 55.00 sec/qt
Water Loss: 7.97 in³
Resistivity: 0.00 ohm.m
Salinity: 3500.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 0 deg API
Water Salinity: 0 ppm

Recovery Information

Recovery Table

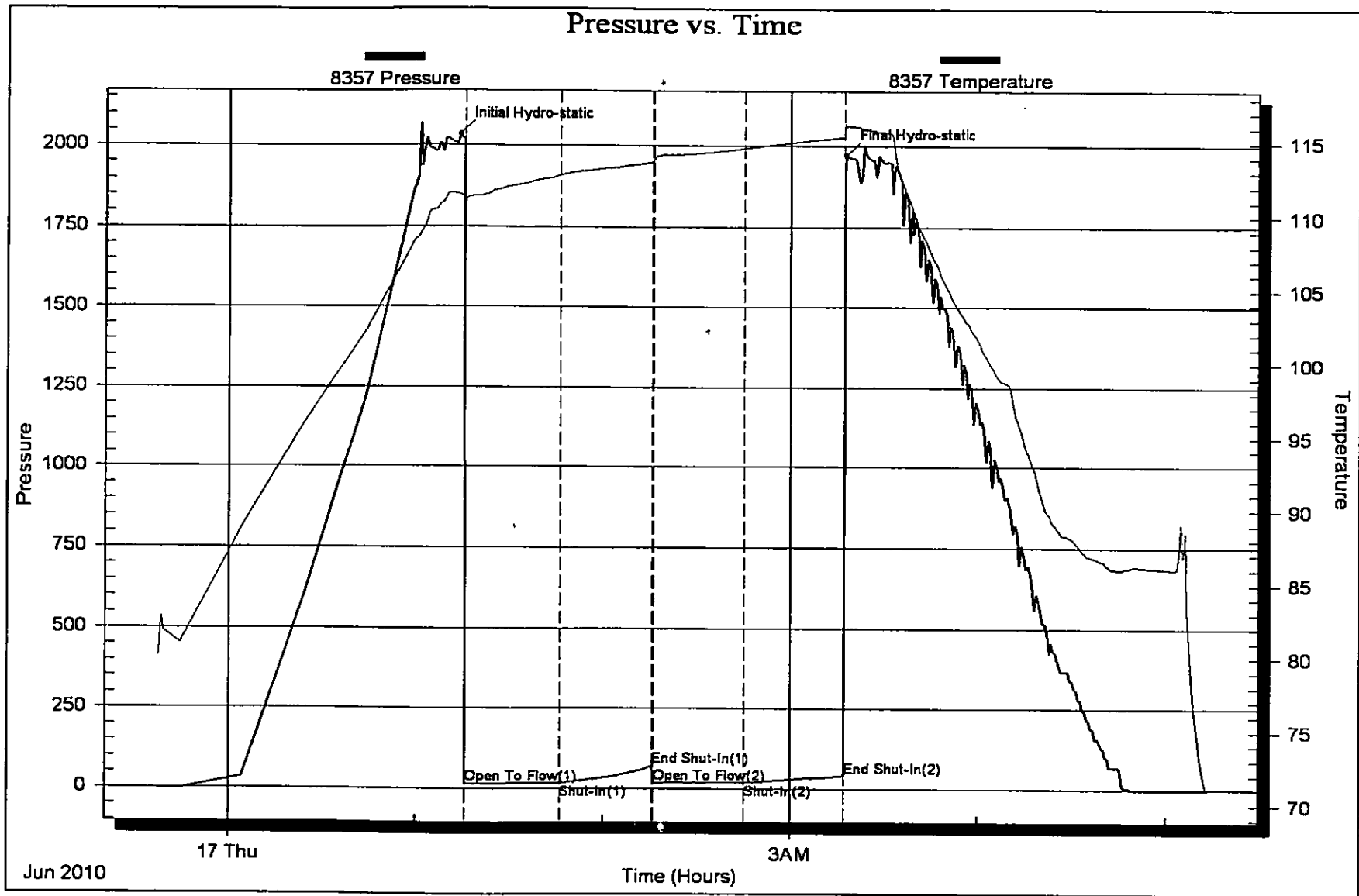
Length ft	Description	Volume bbl
5.00	OCM 3%O 97%M	0.025

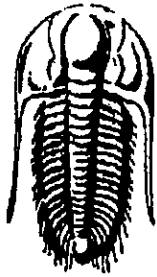
Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Co**

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

ATTN: Bob Peterson/Steve Ca

31-13-31 Gove, KS

Phelps #5-31

Start Date: 2010.06.17 @ 12:55:00

End Date: 2010.06.17 @ 19:15:39

Job Ticket #: 39056 DST #: 6

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Grand Mesa Operating Co

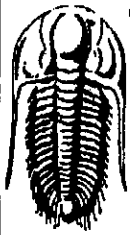
Phelps #5-31

31-13-31 Gove, KS

DST # 6

LKC JK

2010.06.17



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39056

DST#: 6

ATTN: Bob Peterson/Steve Carloway

Test Start: 2010.06.17 @ 12:55:00

GENERAL INFORMATION:

Formation: **LKC 'K'**
Deviated: **No** Whipstock: **ft (KB)**
Time Tool Opened: 14:21:20
Time Test Ended: 19:15:39

Test Type: **Conventional Bottom Hole**
Tester: **Chuck Smith**
Unit No: **37**

Interval: **4220.00 ft (KB) To 4251.00 ft (KB) (TVD)**
Total Depth: **4251.00 ft (KB) (TVD)**
Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2954.00 ft (KB)**
2949.00 ft (CF)
KB to GR/CF: **5.00 ft**

Serial #: 8357

Inside

Press@RunDepth: **151.36 psig @ 4223.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2010.06.17** End Date: **2010.06.17**

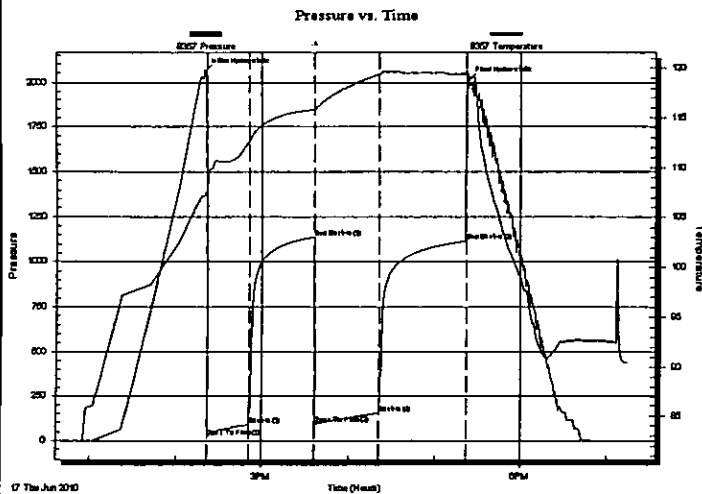
Last Calib.: **2010.06.17**

Start Time: **12:55:05** End Time: **19:15:40**

Time On Btm: **2010.06.17 @ 14:19:40**

Time Off Btm: **2010.06.17 @ 17:22:50**

TEST COMMENT: **F: B.O.B. @ 14 min.**
IS: 3" Return.
FF: B.O.B. @ 11 min.
FS: 9" Return



PRESSURE SUMMARY

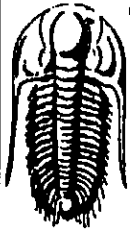
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2058.27	107.27	Initial Hydro-static
2	21.68	106.96	Open To Flow (1)
32	87.20	112.55	Shut-In(1)
77	1137.24	115.78	End Shut-In(1)
77	92.35	115.75	Open To Flow (2)
122	151.36	119.40	Shut-In(2)
182	1115.61	119.44	End Shut-In(2)
184	2008.19	119.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OSMV 10%M 90%W	0.59
62.00	GOWM 20%G 10%O 20%W 50%M	0.87
155.00	GO 50%G 50%O	2.17
0.00	651 Feet GIP	0.00
0.00	RW: .120 @ 86 Degrees F = 50000 PPM	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39056

DST#: 6

ATTN: Bob Peterson/Steve Carkey

Test Start: 2010.06.17 @ 12:55:00

Tool Information

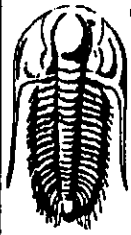
Drill Pipe:	Length: 4089.00 ft	Diameter: 3.80 inches	Volume: 57.36 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 57.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.50 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4220.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	31.00 ft			
Tool Length:	58.50 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			4193.50		
Shut In Tool	5.00			4198.50		
Hydraulic tool	5.00			4203.50		
Jars	5.00			4208.50		
Safety Joint	2.50			4211.00		
Packer	5.00			4216.00	27.50	Bottom Of Top Packer
Packer	4.00			4220.00		
Stubb	1.00			4221.00		
Perforations	2.00			4223.00		
Recorder	0.00	8357	Inside	4223.00		
Recorder	0.00	6751	Outside	4223.00		
Perforations	25.00			4248.00		
Bullnose	3.00			4251.00	31.00	Bottom Packers & Anchor

Total Tool Length: 58.50



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39056

DST#: 6

ATTN: Bob Peterson/Steve Carloway

Test Start: 2010.06.17 @ 12:55:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 58.00 sec/qt
Water Loss: 8.56 in³
Resistivity: 0.00 ohm.m
Salinity: 3200.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 37 deg API
Water Salinity: 50000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	OSMW 10%M 90%W	0.590
62.00	GOWM 20%G 10%O 20%W 50%M	0.870
155.00	GO 50%G 50%O	2.174
0.00	651 Feet GIP	0.000
0.00	RW: .120 @ 86 Degrees F = 50000 PPM	0.000

Total Length: 337.00 ft Total Volume: 3.634 bbl

Num Fluid Samples: 0

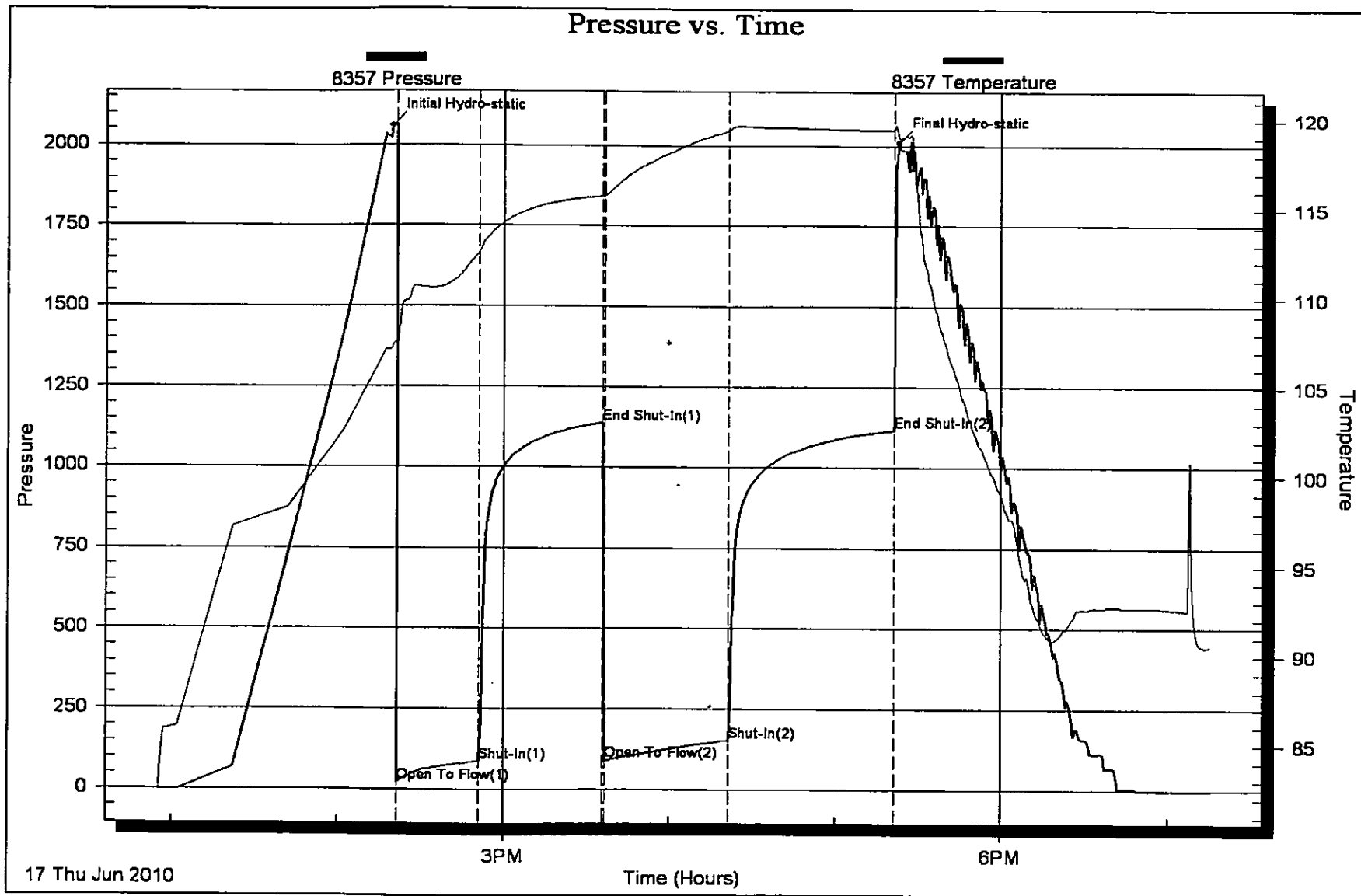
Num Gas Bombs: 0

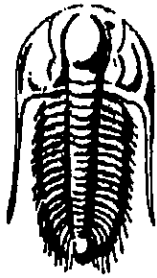
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API: 40 @ 90 Degrees F = 37.





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Co**

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

ATTN: Bob Peterson/Steve Ca

31-13-31 Gove, KS

Phelps #5-31

Start Date: 2010.06.18 @ 05:09:00

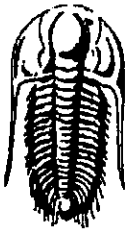
End Date: 2010.06.18 @ 09:52:20

Job Ticket #: 39057 DST #: 7

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39057

DST#: 7

ATTN: Bob Peterson/Steve Carkway

Test Start: 2010.06.18 @ 05:09:00

GENERAL INFORMATION:

Formation: **LKC 'L'**

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

Time Tool Opened: 06:54:00

Time Test Ended: 09:52:20

Test Type: **Conventional Bottom Hole**

Tester: **Chuck Smith**

Unit No: **37**

Interval: **4255.00 ft (KB) To 4300.00 ft (KB) (TVD)**

Total Depth: **4300.00 ft (KB) (TVD)**

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

Reference Elevations: **2954.00 ft (KB)**

2949.00 ft (CF)

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

Serial #: **8357**

Inside

Press@RunDepth: **17.11 psig @ 4259.00 ft (KB)**

Start Date: **2010.06.18**

End Date:

2010.06.18

Capacity: **8000.00 psig**

Last Calib.: **2010.06.18**

Start Time: **05:09:05**

End Time:

09:52:20

Time On Btm: **2010.06.18 @ 06:52:40**

Time Off Btm: **2010.06.18 @ 07:56:20**

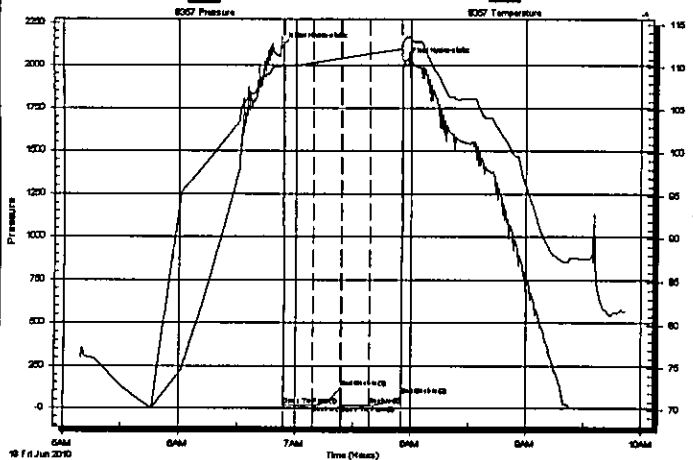
TEST COMMENT: IF: 1/2" Blow died @ 14 min.

IS: No return.

FF: No blow.

FS: No return.

Pressure vs. Time



PRESSURE SUMMARY

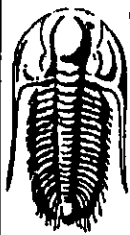
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2105.68	110.12	Initial Hydro-static
2	16.59	109.25	Open To Flow (1)
17	17.42	110.59	Shut-In(1)
31	119.08	111.15	End Shut-In(1)
32	17.09	111.13	Open To Flow (2)
46	17.11	111.65	Shut-In(2)
63	72.25	112.20	End Shut-In(2)
64	2025.59	113.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OSM 100%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39057

DST#: 7

ATTN: Bob Peterson/Steve Carloway

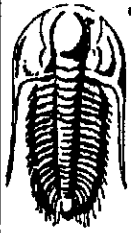
Test Start: 2010.06.18 @ 05:09:00

Tool Information

Drill Pipe:	Length: 4119.00 ft	Diameter: 3.80 inches	Volume: 57.78 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: 22000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 58.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.50 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4255.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	72.50 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			4228.50	
Shut In Tool	5.00			4233.50	
Hydraulic tool	5.00			4238.50	
Jars	5.00			4243.50	
Safety Joint	2.50			4246.00	
Packer	5.00			4251.00	27.50 Bottom Of Top Packer
Packer	4.00			4255.00	
Stubb	1.00			4256.00	
Perforations	3.00			4259.00	
Recorder	0.00	8357	Inside	4259.00	
Recorder	0.00	6751	Outside	4259.00	
Perforations	5.00			4264.00	
Change Over Sub	1.00			4265.00	
Drill Pipe	31.00			4296.00	
Change Over Sub	1.00			4297.00	
Bullnose	3.00			4300.00	45.00 Bottom Packers & Anchor
Total Tool Length:	72.50				



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39057

DST#: 7

ATTN: Bob Peterson/Steve Carkey

Test Start: 2010.06.18 @ 05:09:00

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:

bbbl

Water Loss: 8.58 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
5.00	OSM 100%M	0.025

Total Length: 5.00 ft

Total Volume: 0.025 bbl

Num Fluid Samples: 0

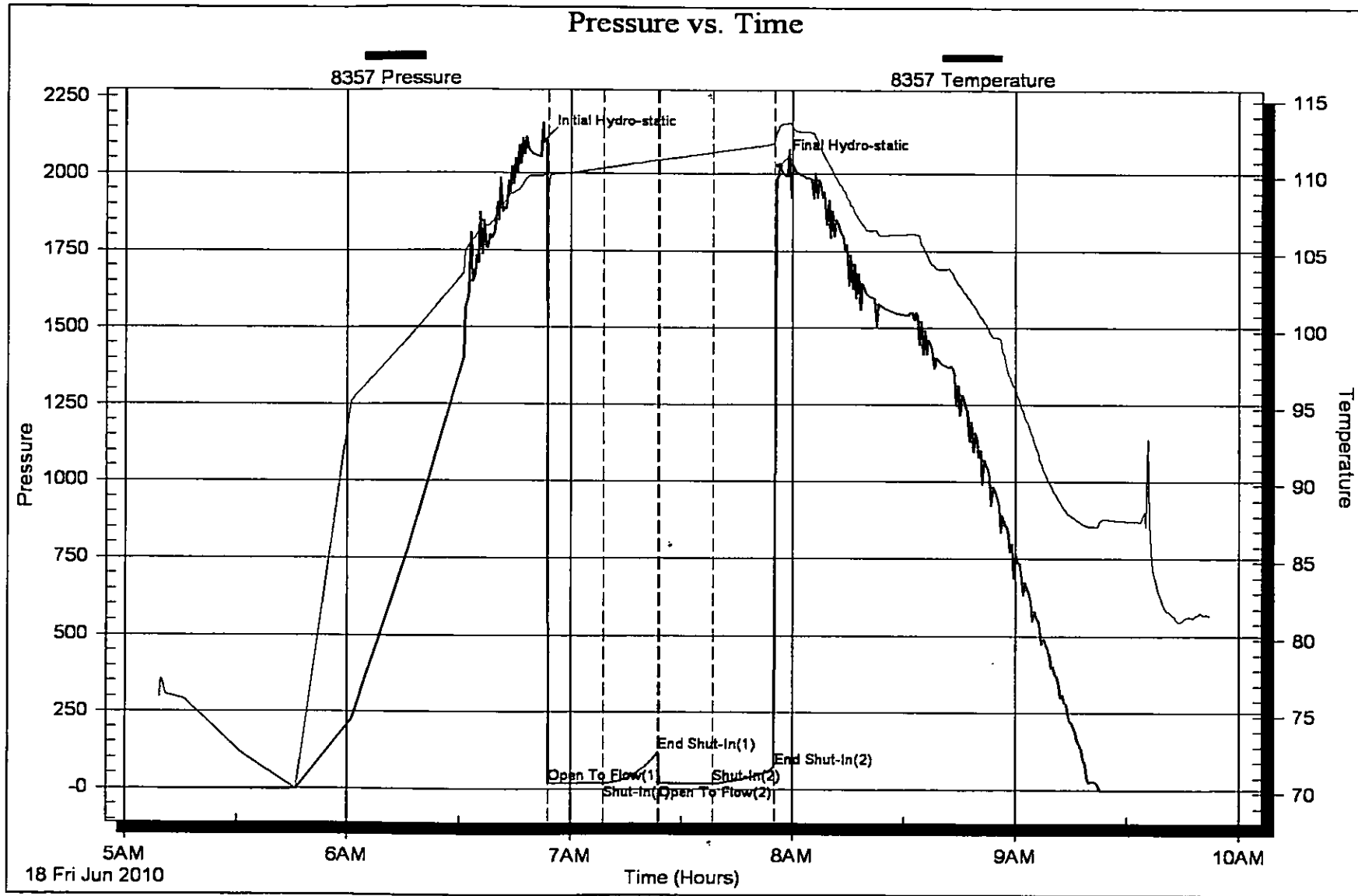
Num Gas Bombs: 0

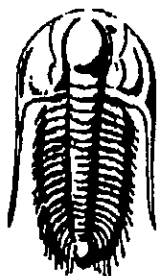
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Co**

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

ATTN: Bob Peterson/Steve Ca

31-13-31 Gove, KS

Phelps #5-31

Start Date: 2010.06.19 @ 12:42:08

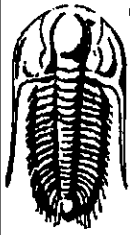
End Date: 2010.06.19 @ 18:25:17

Job Ticket #: 39058 DST #: 8

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39058

DST#: 8

ATTN: Bob Peterson/Steve Carkway

Test Start: 2010.06.19 @ 12:42:08

GENERAL INFORMATION:

Formation: **Johnson**

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

Time Tool Opened: 14:40:38

Time Test Ended: 18:25:17

Test Type: **Conventional Bottom Hole**

Tester: **Chuck Smith**

Unit No: **37**

Interval: **4531.00 ft (KB) To 4576.00 ft (KB) (TVD)**

Total Depth: **4576.00 ft (KB) (TVD)**

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

Reference Elevations: **2954.00 ft (KB)**

2949.00 ft (CF)

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

Serial #: **8357**

Inside

Press@RunDepth: **34.97 psig @ 4535.00 ft (KB)**

Start Date: **2010.06.19**

End Date:

2010.06.19

Capacity: **8000.00 psig**

Last Calib.: **2010.06.19**

Start Time: **12:42:13**

End Time:

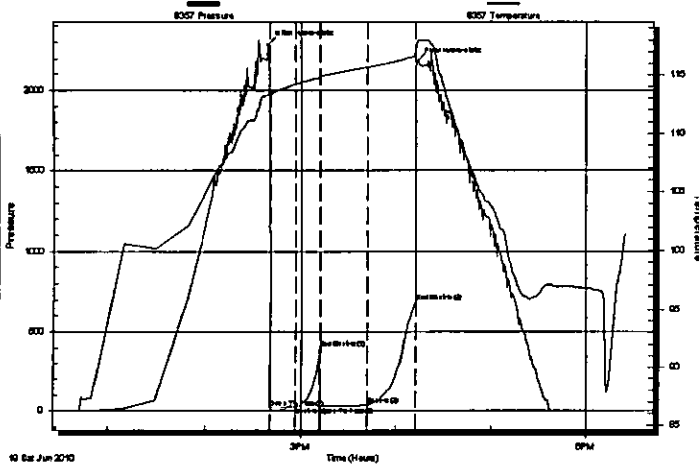
18:25:18

Time On Btm: **2010.06.19 @ 14:39:18**

Time Off Btm: **2010.06.19 @ 16:13:38**

TEST COMMENT: IF: 1/2" Blow receded to surface blow.
IS: No return.
FF: Slow building 1 1/2" blow.
FSI: No return.

Pressure vs. Time



PRESSURE SUMMARY

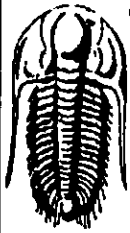
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2286.40	113.37	Initial Hydro-static
2	16.45	112.86	Open To Flow (1)
18	23.65	114.20	Shut-In(1)
33	396.21	114.81	End Shut-In(1)
34	27.32	114.84	Open To Flow (2)
63	34.97	115.66	Shut-In(2)
93	682.70	116.61	End Shut-In(2)
95	2182.74	117.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	OCM 15%O 85%M	0.15

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Grand Mesa Operating Co

Phelps #5-31

1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206

31-13-31 Gove, KS

Job Ticket: 39058

DST#: 8

ATTN: Bob Peterson/Steve Carkey

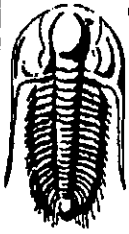
Test Start: 2010.06.19 @ 12:42:08

Tool Information

Drill Pipe:	Length: 4399.00 ft	Diameter: 3.80 inches	Volume: 61.71 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: 22000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 62.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.50 ft			String Weight: Initial 55000.00 lb
Depth to Top Packer:	4531.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	72.50 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			4504.50	
Shut In Tool	5.00			4509.50	
Hydraulic tool	5.00			4514.50	
Jars	5.00			4519.50	
Safety Joint	2.50			4522.00	
Packer	5.00			4527.00	27.50 Bottom Of Top Packer
Packer	4.00			4531.00	
Stubb	1.00			4532.00	
Perforations	3.00			4535.00	
Recorder	0.00	8357	Inside	4535.00	
Recorder	0.00	6751	Outside	4535.00	
Perforations	5.00			4540.00	
Change Over Sub	1.00			4541.00	
Drill Pipe	31.00			4572.00	
Change Over Sub	1.00			4573.00	
Bullnose	3.00			4576.00	45.00 Bottom Packers & Anchor
Total Tool Length:	72.50				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Grand Mesa Operating Co
1700 N. Waterfront Parkway
Building 600
Wichita, KS 67206
ATTN: Bob Peterson/Steve Carloway

Phelps #5-31
31-13-31 Gove, KS
Job Ticket: 39058 DST#: 8
Test Start: 2010.06.19 @ 12:42:08

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: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.77 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 4500.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	OCM 15%O 85%M	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:

