



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1093100
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

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

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

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

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

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

1093100

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

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

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

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

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

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

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

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

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

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

Operator Ritchie Exploration County Gove State Kansas Pump 6 X 15 X 9.34 SPM Casing Program 8 5/8 " @ 212 ft.
 Well # 1 Hanna Unit Location BPM
 Contractor Murfen Drilling Co. #14 Sec 18 TWP 14S RNG 31W D.P. 4.5 in. 230 FT/AMIN R.A.
 Stockpoint Pratt, Ks. Date 5/23/2012 Engineer Reid Atkins Collar 6.25 in. 530 ft. 419 FT/AMIN R.A. Total Depth 4600 ft.

DATE	DEPTH feet	WEIGHT lb/gal	VISCOSITY		GELS 10 sec / 10 min.	PH	FILTRATION ANALYSIS			SAND %	RETORT			Pump Press. PSI	CUMULATIVE COST	REMARKS AND TREATMENT
			Sec API @ 300 F	PV @ 300 F			Yp	ml API	Cake 32nds		Pres. #BBL	Cl ppm	Ca ppm			
5/23	0															0 Rig up
5/25	2274	9.9	29			7.0	n/c	2		35M	Hvy	9.3			6,516	Drig.
5/26	3509	8.6	54	13	17	11.0	6.4	1		2,000	20	2.0			9,226	Drig.
5/27	3980	9.0	57	18	17	10.0	7.2	1		2,400	80	4.7			11,154	Drig.
5/28	3951	9.1	67	20	19	14/40	8.0	2		3,500	80	5.3			12,368	Drig.
5/29	4085	9.2	64	22	19	13/38	9.5	2		4,000	120	6.1			13,851	CFS
5/30	4180	9.1	55	15	18	12/27	10.5	1		4,400	40	5.5			16,355	CFS
5/31	4358	9.3	56	18	17	13/34	10.5	1		4,800	40	6.6			15,979	CFS
6/1	4454	9.2	58	16	22	15/39	10.5	1		4,400	40	6.0			16,454	DST 5
6/2	4564	9.2	58	25	21	15/41	10.0	2		4,500	80	5.9			16,633	Drig.
6/3	4600														16,720	Final: LTD - 4600', 6 DST's, Plugged Well.

MATERIALS	Sacks		Amount		Sacks	Amount
	Materials	Materials	Materials	Materials		
C/S HULLS	150	2,692.50				
CAUSTIC SODA	25	1,653.75				
CO-POLY-L	1	184.00				
DRILL PAK	6	1,980.00				
LIME	4	44.00				
PREMIUM GEL	473	8,703.20				
SODA ASH	40	1,034.00				
SUPER LIG	15	429.00				
TOTAL COST						18,530.24

MUD-CO / SERVICE MUD INC.
 100 S. Main Suite #310
 Wichita, Ks. 67202
 316/264-2814 Fax: 316/264-5024

DRILLING MUD RECAP

Total Mud Cost 16,720.45
 Trucking Cost 1,809.79
 Trucking Surcharge
 Taxes
TOTAL COST 18,530.24



#1 Hanna Unit

1175' FNL & 2590' FEL

185' S & 50' E S/2 N/2 N/2 Section 18-14S-31W

Gove County, Kansas

API# 15-063-21997-00-00

Elevation: 2815' GL, 2825' KB

Sample Tops			Ref. Well
Anhydrite	2293'	+532	+5
B/Anhydrite	2313'	+512	+8
Heebner	3818'	-993	+8
Toronto	3840'	-1015	+5
Lansing	3855'	-1030	+10
LKC "C"	3896'	-1071	+8
Muncie Shale	4021'	-1196	+2
LKC "H"	4034'	-1209	+7
Stark Shale	4105'	-1280	+6
Hush	4132'	-1307	+13
BKC	4193'	-1368	-2
Altamont	4248'	-1423	+3
Pawnee	4310'	-1485	+5
Myrick	4349'	-1524	+4
Fort Scott	4362'	-1537	+7
Cherokee	4390'	-1565	+7
Johnson	4432'	-1607	+5
Morrow Sand	4475'	-1650	+11
Mississippian	4508'	-1683	-7
RTD	4600'	-1775	

C.

ALLIED CEMENTING CO., LLC. 034492

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Dakla, KS

DATE <u>6-2-12</u>	SEC <u>18</u>	TWP <u>14</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION <u>11:30pm</u>	JOB START <u>2:00pm</u>	JOB FINISH <u>7:00am</u>
BASE <u>Hanna Unit</u>	WELL # <u>1</u>	LOCATION <u>Dakla, KS 208, 2E,</u>			COUNTY <u>Cove</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>Van, Ed with</u>			

CONTRACTOR Murphy #14

TYPE OF JOB well

BOLE SIZE 7 7/8" T.D. 4600

CASING SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE 4 1/2" DEPTH 2300'

COOL _____ DEPTH _____

RES. MAX _____ MINIMUM _____

WEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT 29,156 bbl

EQUIPMENT _____

PUMP TRUCK CEMENTER Lakane

423/281 HELPER Jerry

BULK TRUCK _____

347 DRIVER Brandon

BULK TRUCK _____

DRIVER _____

OWNER same

CEMENT AMOUNT ORDERED 2205ks @ 65/100 flo-seal

COMMON 1305ks @ 16.25 2112.50

POZMIX 905ks @ 8.50 7692.50

GEL 85ks @ 2.625 2231.25

CHLORIDE _____ @ _____

ASC _____ @ _____

flo-seal 55# @ 2.70 1485.00

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING 286.29 ft³ @ 2.10 600.21

MILEAGE 7.87 hrs @ 22.35 174.76

TOTAL 4202.89

REMARKS:

mix 25 ks at 2300'

mix 100 ks at 1340'

mix 405 ks at 260'

mix 105 ks w/wooden plug top 40'

mix 20 ks movable

mix 30 ks rat hole

- 205 Thank you

CHARGE TO: Ritchie Exploration

TRETT _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB 2300'

PUMP TRUCK CHARGE 1250.00

EXTRA FOOTAGE _____ @ _____

MILEAGE 22 @ 7.00 154.00

MANIFOLD _____ @ _____

L.C. Mileage 22 @ 4.00 88.00

_____ @ _____

TOTAL 1492.00

I, _____ of 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 Greg Clark

SIGNATURE Greg Clark

PLUG & FLOAT EQUIPMENT

wooden plug @ 72.00

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL 72.00

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

[Handwritten mark]

ALLIED OIL & GAS SERVICES, LLC 056266

Federal Tax I.D.# 20-5976804

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

SERVICE POINT:

Oakley

DATE <u>5-23-12</u>	SEC <u>78</u>	TWP <u>14</u>	RANGE <u>31</u>	CALLED OUT	ON LOCATION	JOB START <u>12:20 AM</u>	JOB FINISH <u>1:00 AM</u>
LEASE <u>Hanna Unit</u>		WELL # <u>1</u>	LOCATION <u>Oakley 20.5 2E 1/2N</u>		COUNTY <u>Gore</u>	STATE <u>K.S.</u>	
OLD OR NEW (Circle one)			C.R.N.O.				

CONTRACTOR mwph 14

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 215'

CASING SIZE 8 5/8 DEPTH 215'

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG. 15'

PERFS.

DISPLACEMENT 12,74 BBL

EQUIPMENT

PUMP TRUCK CEMENTER Andrew

413-281 HELPER Jerry

BULK TRUCK

404 DRIVER Ethan

BULK TRUCK

DRIVER

OWNER same

CEMENT AMOUNT ORDERED 125 sks com 3% gel

COMMON 125 sks @ 16.15 2843.75

POZMIX @

GEL 3 sks @ 21.25 63.75

CHLORIDE 6 sks @ 58.20 349.20

ASC @

HANDLING 192,233 cu/ft @ 2.10 403.69

MILEAGE 2.35 ton/mile 8163 ton 4661.79

TOTAL 4127.18

REMARKS:

Cement did circulate

Thank you

CHARGE TO: Pitchie Exploration

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB 215'

PUMP TRUCK CHARGE 1125.00

EXTRA FOOTAGE @

MILEAGE 23 miles @ 2.00 46.00

MANIFOLD head @ 200.00

Light vehicle @ 4.00 92.00

TOTAL 1578.00

PLUG & FLOAT EQUIPMENT

@

@

@

@

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Corea Ulrich

SIGNATURE [Signature]

[Handwritten mark]

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



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

Mark Sievers, Chairman
Thomas E. Wright, Commissioner

Sam Brownback, Governor

September 11, 2012

John Niernberger
Ritchie Exploration, Inc.
8100 E 22ND ST N # 700
BOX 783188
WICHITA, KS 67278-3188

Re: ACO1
API 15-063-21997-00-00
Hanna Unit 1
NE/4 Sec.18-14S-31W
Gove County, Kansas

Dear Production Department:

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

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

Respectfully,
John Niernberger



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd ST. N. #700
Wichita, KS 67278

ATTN: Adam Eldani

Hanna Unit #1

18-14s-31w Gove,KS

Start Date: 2012.05.27 @ 21:09:30

End Date: 2012.05.28 @ 03:36:30

Job Ticket #: 47240 DST #: 1

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

Printed: 2012.06.12 @ 12:32:51



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd ST. N. #700
Wichita, KS 67278
ATTN: Adam Eldani

18-14s-31w Gove,KS
Hanna Unit #1
Job Ticket: 47240 **DST#: 1**
Test Start: 2012.05.27 @ 21:09:30

GENERAL INFORMATION:

Formation: **Lansing "C&D"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 23:33:00 Tester: Dustin Rash
 Time Test Ended: 03:36:30 Unit No: 38
 Interval: **3880.00 ft (KB) To 3944.00 ft (KB) (TVD)** Reference Elevations: 2825.00 ft (KB)
 Total Depth: 3944.00 ft (KB) (TVD) 2815.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

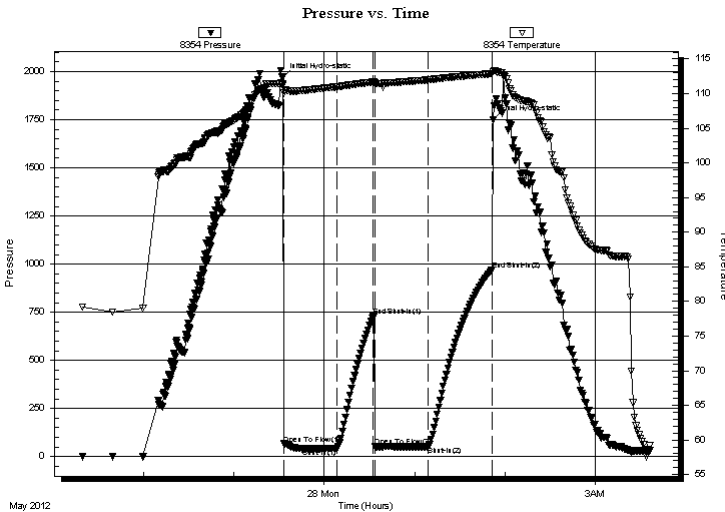
Serial #: 8354

Inside

Press @ Run Depth: 52.66 psig @ 3920.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.05.27 End Date: 2012.05.28 Last Calib.: 2012.05.28
 Start Time: 21:19:30 End Time: 03:36:30 Time On Btm: 2012.05.27 @ 23:32:30
 Time Off Btm: 2012.05.28 @ 01:52:00

TEST COMMENT: IF-Weak surface blow . Died @ 4 minutes.
 IS-No Return.
 FF-No Blow . Flushed Tool. No Blow .
 FS-No Return.

PRESSURE SUMMARY



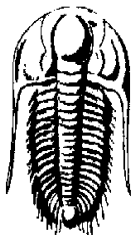
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.60	111.24	Initial Hydro-static
1	66.20	110.06	Open To Flow (1)
36	44.53	110.99	Shut-In(1)
60	730.08	111.68	End Shut-In(1)
61	51.61	111.52	Open To Flow (2)
97	52.66	111.99	Shut-In(2)
139	971.35	112.88	End Shut-In(2)
140	1748.35	113.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
8.00	100%Mud	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47240

DST#: 1

ATTN: Adam Eldani

Test Start: 2012.05.27 @ 21:09:30

GENERAL INFORMATION:

Formation: **Lansing "C&D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:33:00

Time Test Ended: 03:36:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 3880.00 ft (KB) To 3944.00 ft (KB) (TVD)

Reference Elevations: 2825.00 ft (KB)

Total Depth: 3944.00 ft (KB) (TVD)

2815.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8520 Outside

Press @ RunDepth: psig @ 3920.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.05.27 End Date: 2012.05.28

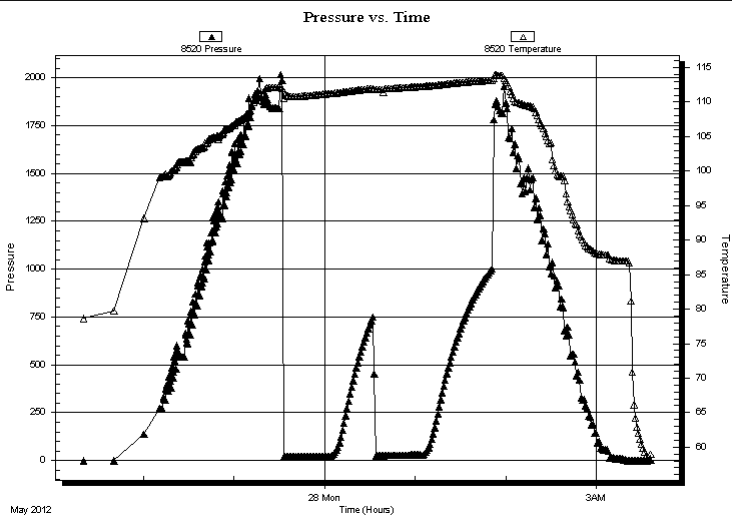
Last Calib.: 2012.05.28

Start Time: 21:20:30 End Time: 03:36:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Weak surface blow . Died @ 4 minutes.
 IS-No Return.
 FF-No Blow . Flushed Tool. No Blow .
 FS-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
8.00	100%Mud	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47240

DST#: 1

ATTN: Adam Eldani

Test Start: 2012.05.27 @ 21:09:30

Tool Information

Drill Pipe:	Length: 3335.00 ft	Diameter: 3.80 inches	Volume: 46.78 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 533.00 ft	Diameter: 2.25 inches	Volume: 2.62 bbl	Weight to Pull Loose:	5000.00 lb
			<u>Total Volume: 49.40 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	82000.00 lb
Depth to Top Packer:	3880.00 ft			Final	82000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	64.00 ft				
Tool Length:	84.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3861.00	
Shut In Tool	5.00			3866.00	
Hydraulic tool	5.00			3871.00	
Packer	5.00			3876.00	20.00 Bottom Of Top Packer
Packer	4.00			3880.00	
Stubb	1.00			3881.00	
Perforations	5.00			3886.00	
Change Over Sub	1.00			3887.00	
Drill Pipe	32.00			3919.00	
Change Over Sub	1.00			3920.00	
Recorder	0.00	8354	Inside	3920.00	
Recorder	0.00	8520	Outside	3920.00	
Perforations	21.00			3941.00	
Bullnose	3.00			3944.00	64.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47240

DST#: 1

ATTN: Adam Eldani

Test Start: 2012.05.27 @ 21:09:30

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.16 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
8.00	100%Mud	0.039

Total Length: 8.00 ft Total Volume: 0.039 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

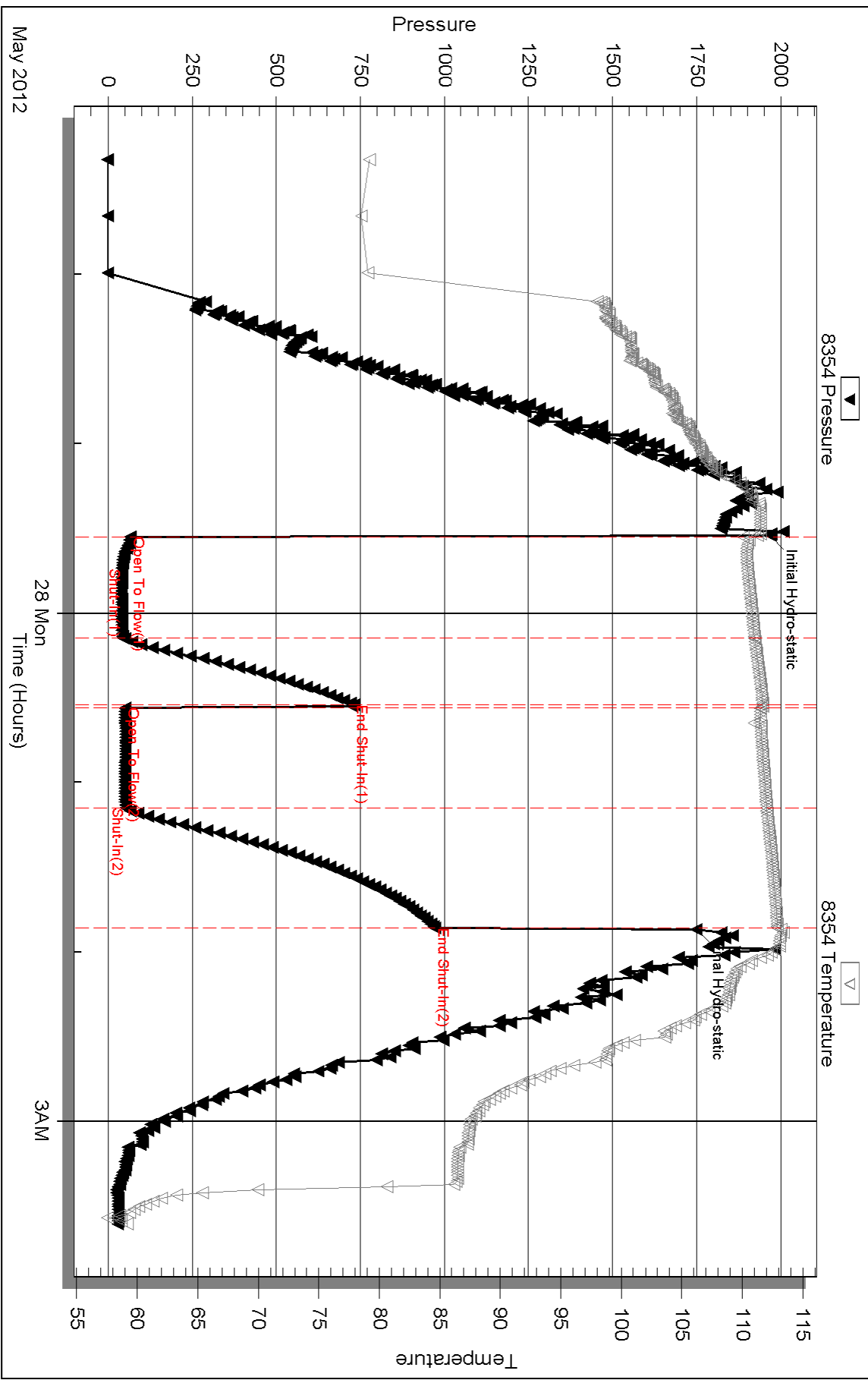
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

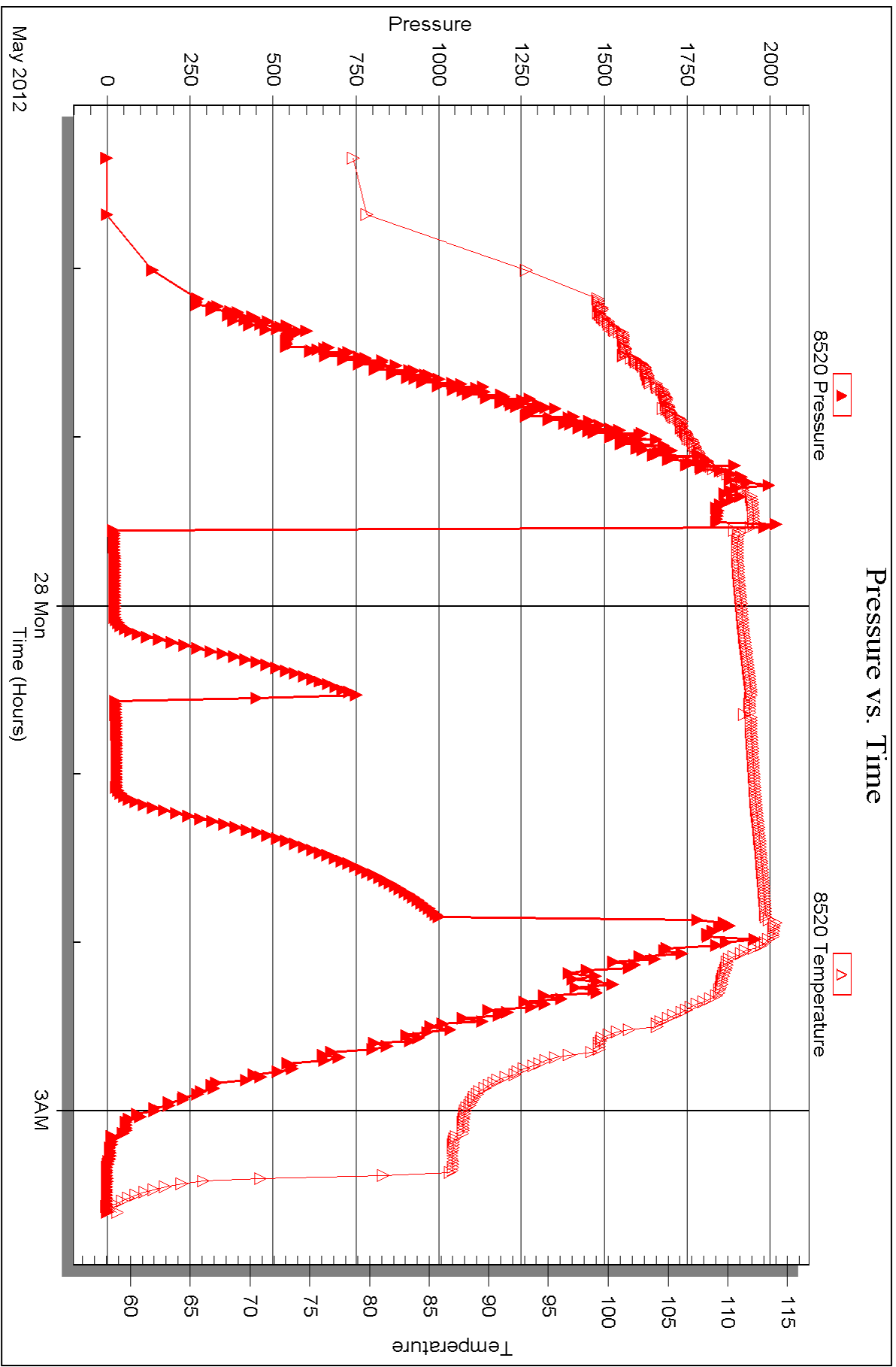


Serial #: 8520

Outside Ritchie Exploration, Inc.

Hanna Unit #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd ST. N. #700
Wichita, KS 67278

ATTN: Adam Eldani

Hanna Unit #1

18-14s-31w Gove,KS

Start Date: 2012.05.28 @ 13:50:30

End Date: 2012.05.28 @ 19:26:30

Job Ticket #: 47241 DST #: 2

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

Printed: 2012.06.12 @ 12:32:17



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd ST. N. #700
Wichita, KS 67278
ATTN: Adam Eldani

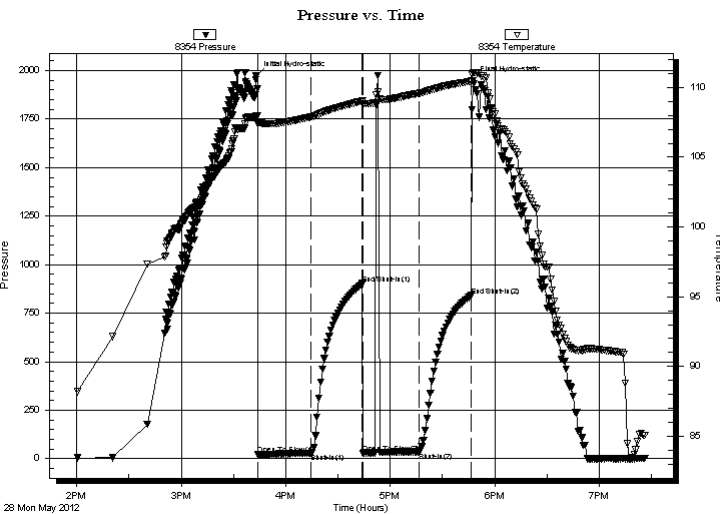
18-14s-31w Gove,KS
Hanna Unit #1
Job Ticket: 47241 **DST#: 2**
Test Start: 2012.05.28 @ 13:50:30

GENERAL INFORMATION:

Formation: **Lansing "E-G"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:43:50
 Time Test Ended: 19:26:30
 Interval: **3932.00 ft (KB) To 3997.00 ft (KB) (TVD)**
 Total Depth: 3997.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Rash
 Unit No: 38
 Reference Elevations: 2825.00 ft (KB)
 2815.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8354 Inside
 Press @ Run Depth: 35.16 psig @ 3972.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.05.28 End Date: 2012.05.28 Last Calib.: 2012.05.28
 Start Time: 14:00:30 End Time: 19:26:30 Time On Btm: 2012.05.28 @ 15:43:30
 Time Off Btm: 2012.05.28 @ 17:47:30

TEST COMMENT: IF-Weak surface blow . Died @ 5 minutes.
 IS-No Return.
 FF-Few bubbles. Flushed Tool. Few bubbles.
 FS-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1972.20	107.98	Initial Hydro-static
1	22.59	107.37	Open To Flow (1)
31	27.52	107.89	Shut-In(1)
61	902.31	109.03	End Shut-In(1)
61	29.60	108.78	Open To Flow (2)
93	35.16	109.57	Shut-In(2)
123	840.94	110.45	End Shut-In(2)
124	1949.53	111.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	100%Mud	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd ST. N. #700
Wichita, KS 67278
ATTN: Adam Eldani

18-14s-31w Gove, KS
Hanna Unit #1
Job Ticket: 47241 **DST#: 2**
Test Start: 2012.05.28 @ 13:50:30

GENERAL INFORMATION:

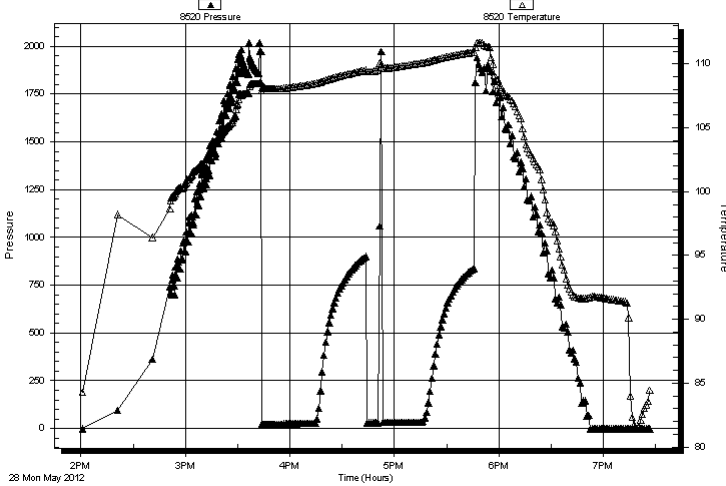
Formation:	Lansing "E-G"		
Deviated:	No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened:	15:43:50		Tester: Dustin Rash
Time Test Ended:	19:26:30		Unit No: 38
Interval:	3932.00 ft (KB) To 3997.00 ft (KB) (TVD)		Reference Elevations: 2825.00 ft (KB)
Total Depth:	3997.00 ft (KB) (TVD)		2815.00 ft (CF)
Hole Diameter:	7.88 inches	Hole Condition: Fair	KB to GR/CF: 10.00 ft

Serial #: 8520 Outside

Press @ RunDepth:	psig @ 3972.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2012.05.28	End Date:	2012.05.28
Last Calib.:		2012.05.28	
Start Time:	14:01:00	End Time:	19:26:30
Time On Btm:		Time Off Btm:	

TEST COMMENT: IF-Weak surface blow . Died @ 5 minutes.
IS-No Return.
FF-Few bubbles. Flushed Tool. Few bubbles.
FS-No Return.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
20.00	100%Mud	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47241

DST#: 2

ATTN: Adam Eldani

Test Start: 2012.05.28 @ 13:50:30

Tool Information

Drill Pipe:	Length: 3391.00 ft	Diameter: 3.80 inches	Volume: 47.57 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 533.00 ft	Diameter: 2.25 inches	Volume: 2.62 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 50.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	3932.00 ft			Final 82000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	93.00 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			3905.00	
Shut In Tool	5.00			3910.00	
Hydraulic tool	5.00			3915.00	
Jars	5.00			3920.00	
Safety Joint	3.00			3923.00	
Packer	5.00			3928.00	28.00 Bottom Of Top Packer
Packer	4.00			3932.00	
Stubb	1.00			3933.00	
Perforations	5.00			3938.00	
Change Over Sub	1.00			3939.00	
Drill Pipe	32.00			3971.00	
Change Over Sub	1.00			3972.00	
Recorder	0.00	8354	Inside	3972.00	
Recorder	0.00	8520	Outside	3972.00	
Perforations	22.00			3994.00	
Bullnose	3.00			3997.00	65.00 Bottom Packers & Anchor
Total Tool Length:	93.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47241

DST#: 2

ATTN: Adam Eldani

Test Start: 2012.05.28 @ 13:50:30

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: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	100%Mud	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

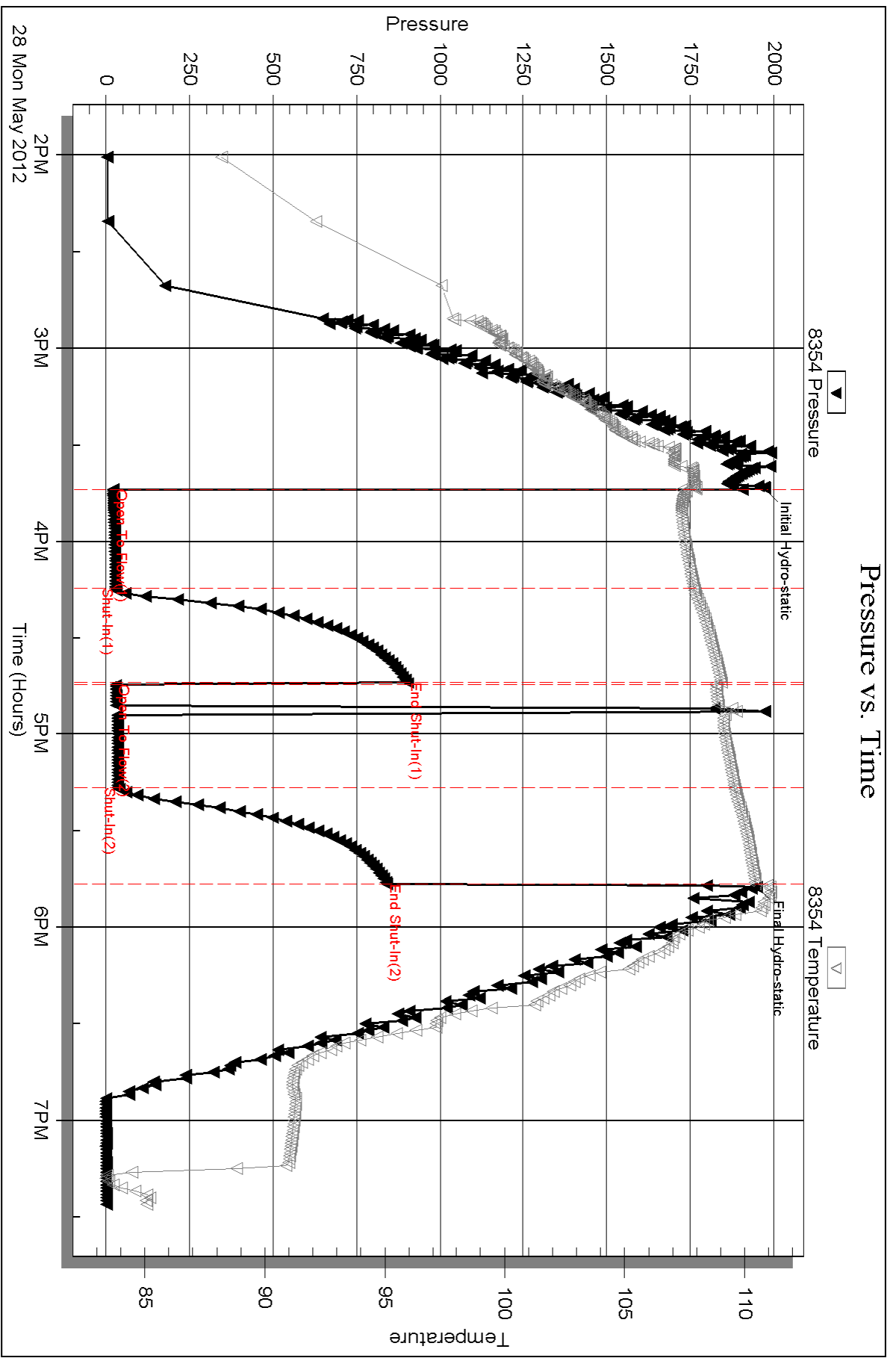
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

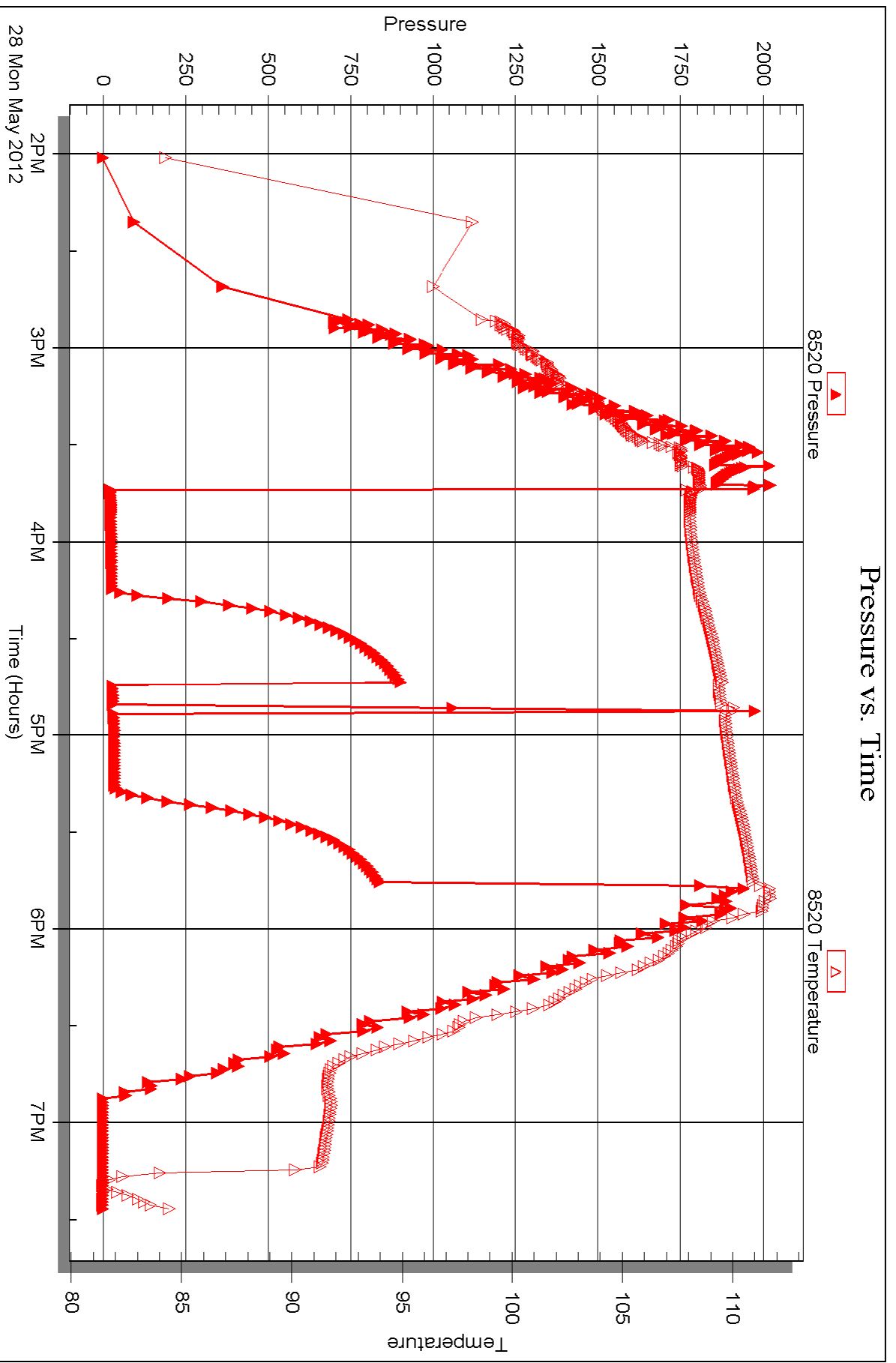


Serial #: 8520

Outside Ritchie Exploration, Inc.

Hanna Unit #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd ST. N. #700
Wichita, KS 67278

ATTN: Adam Eldani

Hanna Unit #1

18-14s-31w Gove,KS

Start Date: 2012.05.29 @ 12:24:15

End Date: 2012.05.29 @ 18:24:45

Job Ticket #: 47242 DST #: 3

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

Printed: 2012.06.12 @ 12:31:16



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd ST. N. #700
Wichita, KS 67278
ATTN: Adam Eldani

18-14s-31w Gove,KS
Hanna Unit #1
Job Ticket: 47242 **DST#: 3**
Test Start: 2012.05.29 @ 12:24:15

GENERAL INFORMATION:

Formation: **LKC "H-J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:48:15
Time Test Ended: 18:24:45
Interval: 4019.00 ft (KB) To 4109.00 ft (KB) (TVD)
Total Depth: 4109.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Rash
Unit No: 38
Reference Elevations: 2825.00 ft (KB)
2815.00 ft (CF)
KB to GR/CF: 10.00 ft

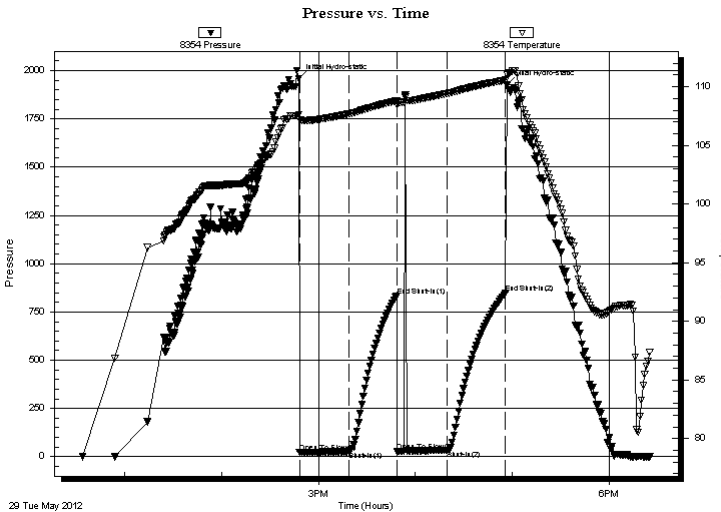
Serial #: 8354

Inside

Press @ Run Depth: 33.02 psig @ 4090.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.05.29 End Date: 2012.05.29 Last Calib.: 2012.05.29
Start Time: 12:34:15 End Time: 18:24:45 Time On Btm: 2012.05.29 @ 14:47:45
Time Off Btm: 2012.05.29 @ 16:56:45

TEST COMMENT: IF-Weak surface blow . Died @ 5 minutes 15 seconds.
ISI-No Return.
FF-No Blow . Flushed Tool. Few Bubbles.
FSI-No Return.

PRESSURE SUMMARY



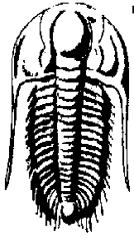
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1958.22	107.62	Initial Hydro-static
1	21.81	107.22	Open To Flow (1)
31	25.48	107.69	Shut-In(1)
61	833.36	108.82	End Shut-In(1)
61	26.06	108.43	Open To Flow (2)
92	33.02	109.43	Shut-In(2)
128	847.09	110.57	End Shut-In(2)
129	1925.71	111.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	100%Mud	0.10

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
 8100 E. 22nd ST. N. #700
 Wichita, KS 67278
 ATTN: Adam Eldani

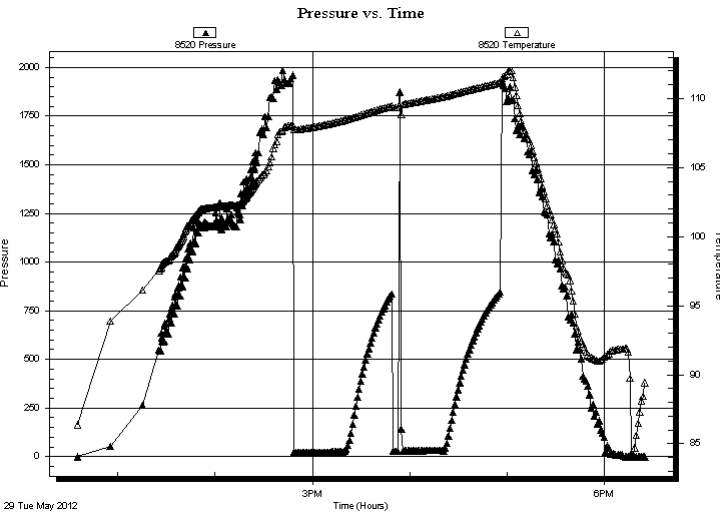
18-14s-31w Gove, KS
Hanna Unit #1
 Job Ticket: 47242 **DST#: 3**
 Test Start: 2012.05.29 @ 12:24:15

GENERAL INFORMATION:

Formation: **LKC "H-J"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:48:15
 Time Test Ended: 18:24:45
Interval: 4019.00 ft (KB) To 4109.00 ft (KB) (TVD)
 Total Depth: 4109.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Rash
 Unit No: 38
 Reference Elevations: 2825.00 ft (KB)
 2815.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8520 Outside
 Press@RunDepth: psig @ 4090.00 ft (KB)
 Start Date: 2012.05.29 End Date: 2012.05.29
 Start Time: 12:35:15 End Time: 18:25:15
 Capacity: 8000.00 psig
 Last Calib.: 2012.05.29
 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-Weak surface blow . Died @ 5 minutes 15 seconds.
 IS-No Return.
 FF-No Blow . Flushed Tool. Few Bubbles.
 FS-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
20.00	100%Mud	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47242

DST#: 3

ATTN: Adam Eldani

Test Start: 2012.05.29 @ 12:24:15

Tool Information

Drill Pipe:	Length: 3486.00 ft	Diameter: 3.80 inches	Volume: 48.90 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 533.00 ft	Diameter: 2.25 inches	Volume: 2.62 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 51.52 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 84000.00 lb
Depth to Top Packer:	4019.00 ft			Final 84000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	118.00 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			3992.00	
Shut In Tool	5.00			3997.00	
Hydraulic tool	5.00			4002.00	
Jars	5.00			4007.00	
Safety Joint	3.00			4010.00	
Packer	5.00			4015.00	28.00 Bottom Of Top Packer
Packer	4.00			4019.00	
Stubb	1.00			4020.00	
Perforations	5.00			4025.00	
Change Over Sub	1.00			4026.00	
Drill Pipe	63.00			4089.00	
Change Over Sub	1.00			4090.00	
Recorder	0.00	8354	Inside	4090.00	
Recorder	0.00	8520	Outside	4090.00	
Perforations	16.00			4106.00	
Bullnose	3.00			4109.00	90.00 Bottom Packers & Anchor
Total Tool Length:	118.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47242

DST#: 3

ATTN: Adam Eldani

Test Start: 2012.05.29 @ 12:24:15

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: 64.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.55 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	100%Mud	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

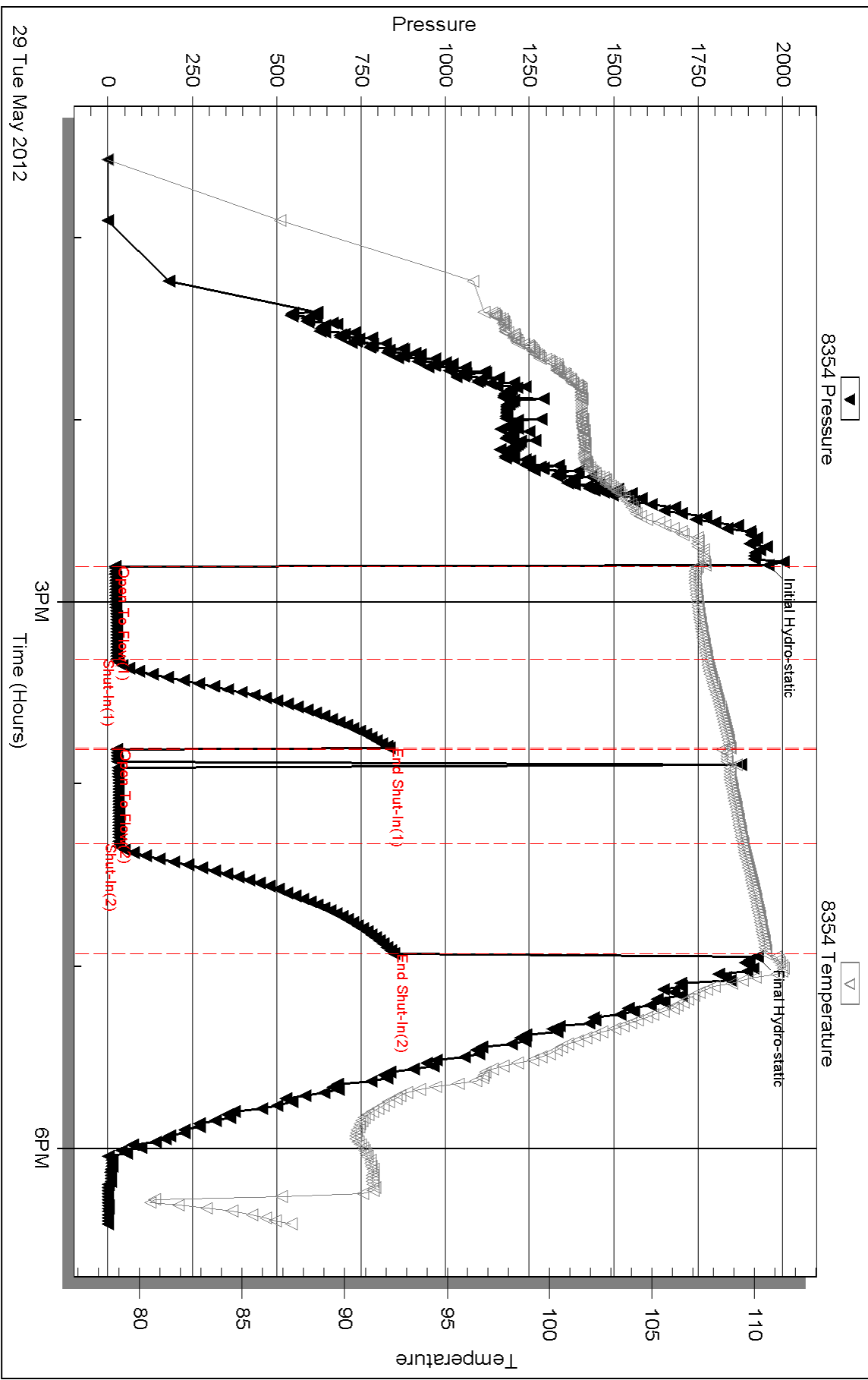
Inside

Ritchie Exploration, Inc.

Hanna Unit #1

DST Test Number: 3

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 47242

Printed: 2012.06.12 @ 12:31:18

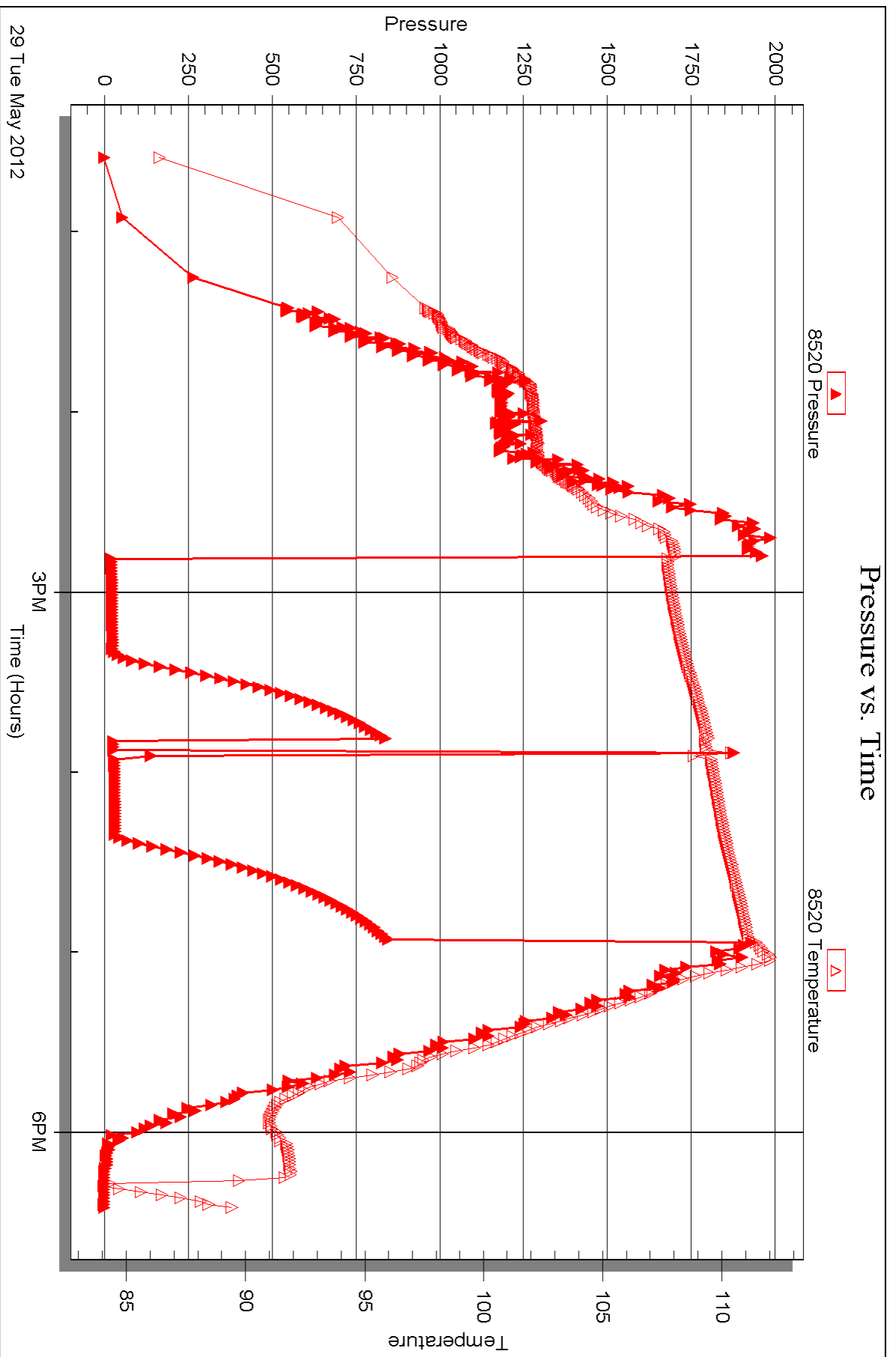
Serial #: 8520

Outside

Ritchie Exploration, Inc.

Hanna Unit #1

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 47242

Printed: 2012.06.12 @ 12:31:18



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd ST. N. #700
Wichita, KS 67278

ATTN: Adam Eldani

Hanna Unit #1

18-14s-31w Gove,KS

Start Date: 2012.05.30 @ 07:21:30

End Date: 2012.05.30 @ 13:39:00

Job Ticket #: 47243 DST #: 4

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

Printed: 2012.06.12 @ 12:30:35



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
 8100 E. 22nd ST. N. #700
 Wichita, KS 67278
 ATTN: Adam Eldani

18-14s-31w Gove,KS
Hanna Unit #1
 Job Ticket: 47243 **DST#: 4**
 Test Start: 2012.05.30 @ 07:21:30

GENERAL INFORMATION:

Formation: **LKC "K&L"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:23:00
 Time Test Ended: 13:39:00
 Interval: **4103.00 ft (KB) To 4180.00 ft (KB) (TVD)**
 Total Depth: 4180.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Rash
 Unit No: 38
 Reference Elevations: 2825.00 ft (KB)
 2815.00 ft (CF)
 KB to GR/CF: 10.00 ft

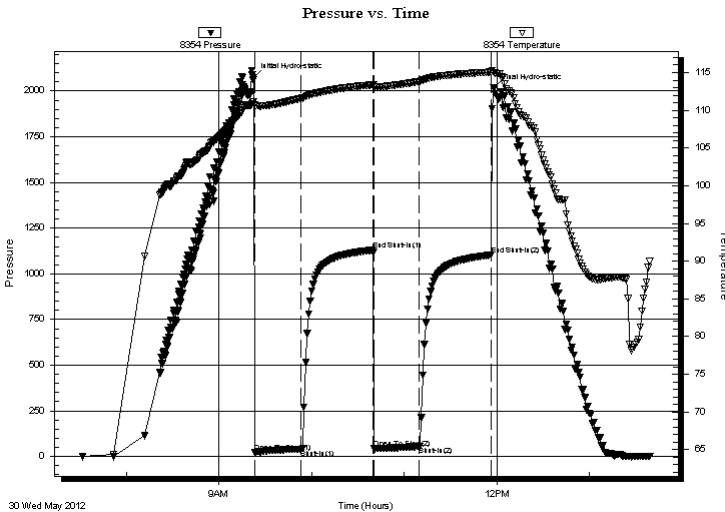
Serial #: 8354

Inside

Press @ Run Depth: 55.43 psig @ 4173.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.05.30 End Date: 2012.05.30 Last Calib.: 2012.05.30
 Start Time: 07:31:30 End Time: 13:39:00 Time On Btm: 2012.05.30 @ 09:22:30
 Time Off Btm: 2012.05.30 @ 11:58:00

TEST COMMENT: IF-Steady 1/4 inch blow throughout.
 IS-No Return.
 FF-No Blow.
 FSI-No Return.

PRESSURE SUMMARY



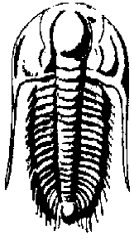
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2072.73	111.16	Initial Hydro-static
1	23.44	110.71	Open To Flow (1)
31	41.35	111.57	Shut-In(1)
77	1129.41	113.39	End Shut-In(1)
78	42.77	113.17	Open To Flow (2)
107	55.43	113.81	Shut-In(2)
154	1102.62	115.07	End Shut-In(2)
156	2016.63	114.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	100%Mud	0.25

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd ST. N. #700
Wichita, KS 67278
ATTN: Adam Eldani

18-14s-31w Gove,KS
Hanna Unit #1
Job Ticket: 47243 **DST#: 4**
Test Start: 2012.05.30 @ 07:21:30

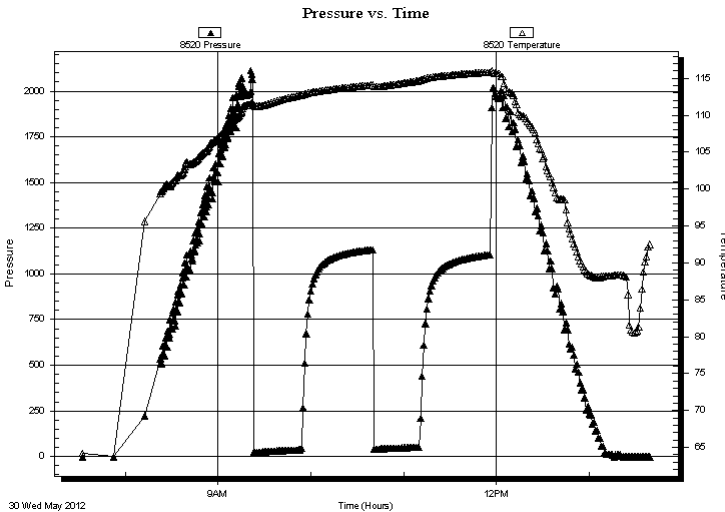
GENERAL INFORMATION:

Formation: **LKC "K&L"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:23:00
Time Test Ended: 13:39:00
Interval: **4103.00 ft (KB) To 4180.00 ft (KB) (TVD)**
Total Depth: 4180.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Dustin Rash
Unit No: 38
Reference Elevations: 2825.00 ft (KB)
2815.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8520 Outside
Press @ RunDepth: psig @ 4173.00 ft (KB)
Start Date: 2012.05.30 End Date: 2012.05.30
Start Time: 07:32:30 End Time: 13:39:00
Capacity: 8000.00 psig
Last Calib.: 2012.05.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Steady 1/4 inch blow throughout.
ISI-No Return.
FF-No Blow.
FSI-No Return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
50.00	100%Mud	0.25

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47243

DST#: 4

ATTN: Adam Eldani

Test Start: 2012.05.30 @ 07:21:30

Tool Information

Drill Pipe:	Length: 3550.00 ft	Diameter: 3.80 inches	Volume: 49.80 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 533.00 ft	Diameter: 2.25 inches	Volume: 2.62 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 52.42 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 84000.00 lb
Depth to Top Packer:	4103.00 ft			Final 84000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	105.00 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			4076.00	
Shut In Tool	5.00			4081.00	
Hydraulic tool	5.00			4086.00	
Jars	5.00			4091.00	
Safety Joint	3.00			4094.00	
Packer	5.00			4099.00	28.00 Bottom Of Top Packer
Packer	4.00			4103.00	
Stubb	1.00			4104.00	
Perforations	5.00			4109.00	
Change Over Sub	1.00			4110.00	
Drill Pipe	62.00			4172.00	
Change Over Sub	1.00			4173.00	
Recorder	0.00	8354	Inside	4173.00	
Recorder	0.00	8520	Outside	4173.00	
Perforations	4.00			4177.00	
Bullnose	3.00			4180.00	77.00 Bottom Packers & Anchor
Total Tool Length:	105.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47243

DST#: 4

ATTN: Adam Eldani

Test Start: 2012.05.30 @ 07:21:30

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
50.00	100%Mud	0.246

Total Length: 50.00 ft Total Volume: 0.246 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

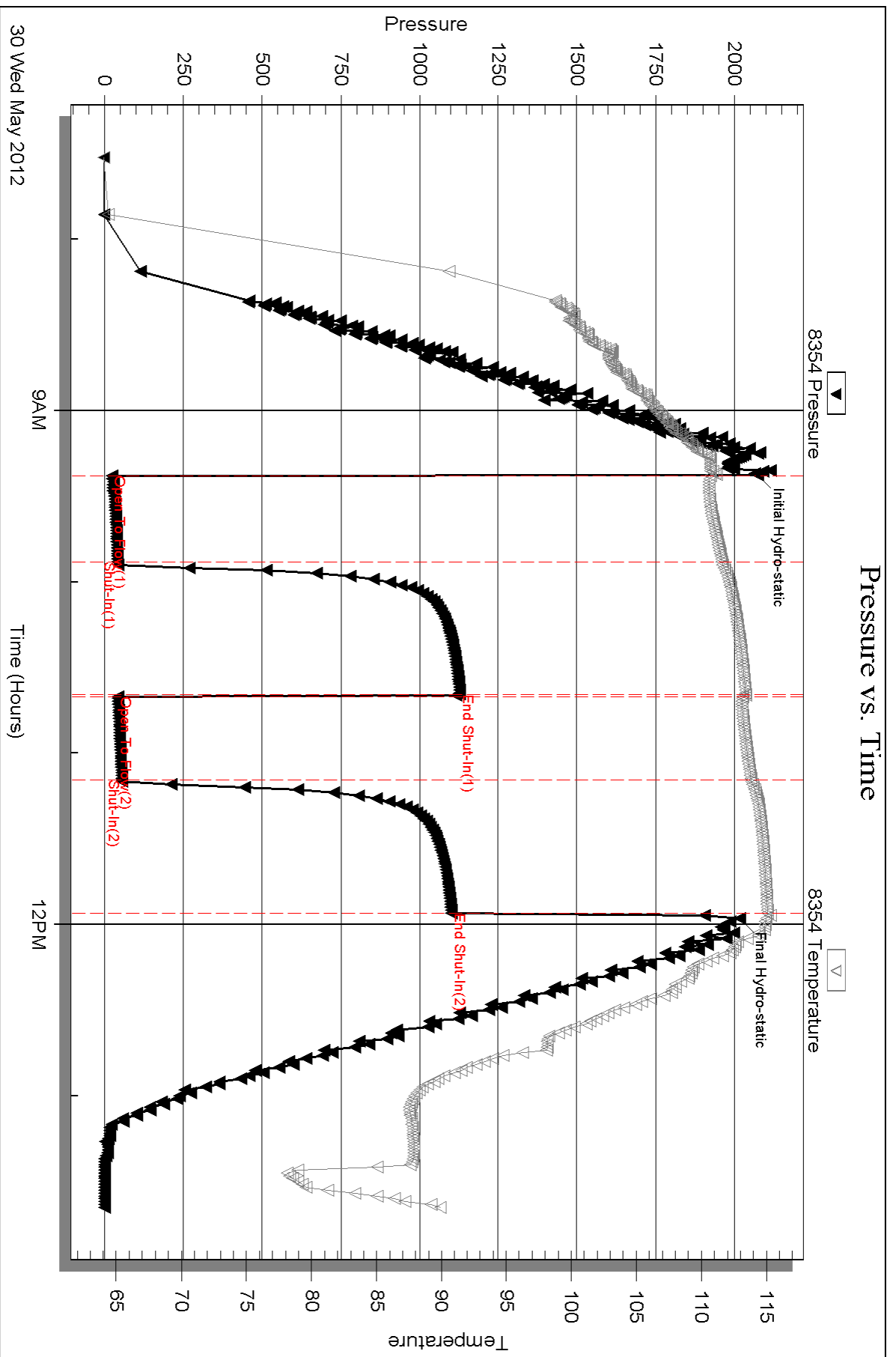
Serial #: 8354

Inside

Ritchie Exploration, Inc.

Hanna Unit #1

DST Test Number: 4

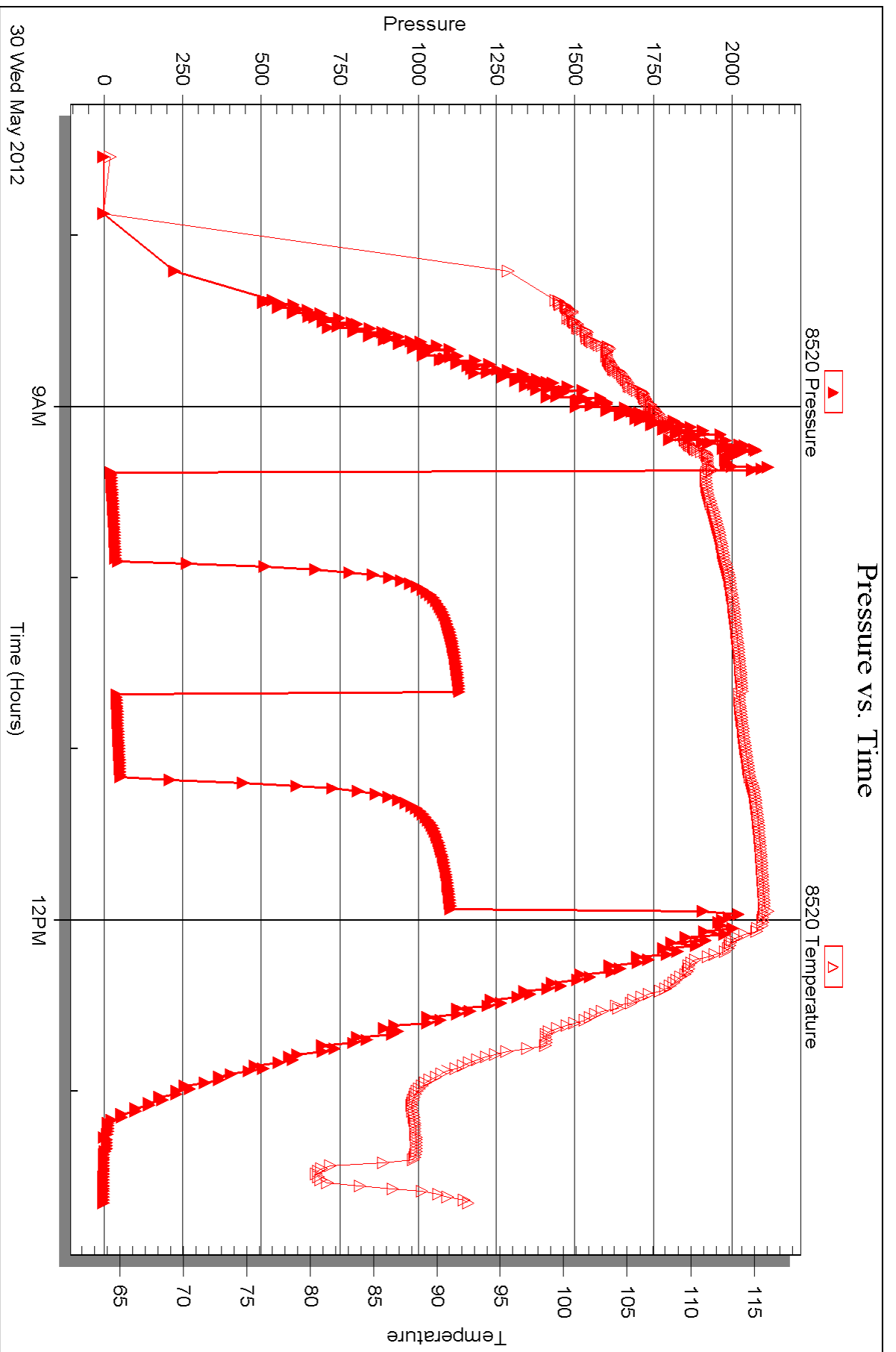


Serial #: 8520

Outside Ritchie Exploration, Inc.

Hanna Unit #1

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd ST. N. #700
Wichita, KS 67278

ATTN: Adam Eldani

Hanna Unit #1

18-14s-31w Gove,KS

Start Date: 2012.05.31 @ 22:40:15

End Date: 2012.06.01 @ 05:21:15

Job Ticket #: 47244 DST #: 5

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

Printed: 2012.06.12 @ 12:29:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
 8100 E. 22nd ST. N. #700
 Wichita, KS 67278
 ATTN: Adam Eldani

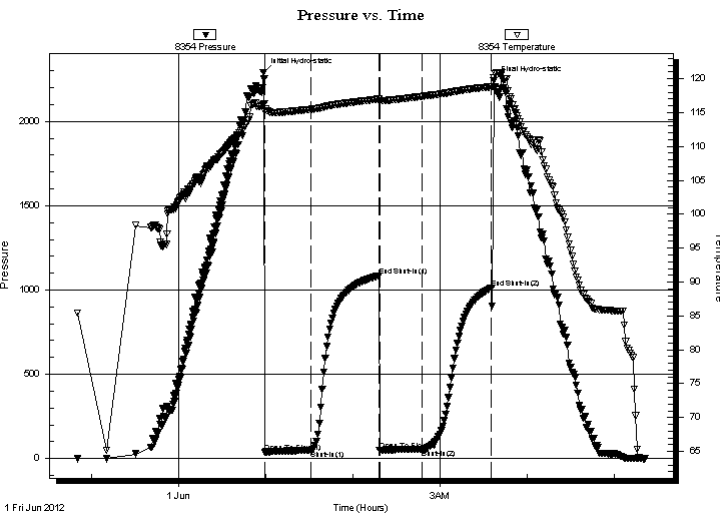
18-14s-31w Gove, KS
Hanna Unit #1
 Job Ticket: 47244 **DST#: 5**
 Test Start: 2012.05.31 @ 22:40:15

GENERAL INFORMATION:

Formation: **Johnson**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:59:15
 Time Test Ended: 05:21:15
 Interval: **4410.00 ft (KB) To 4454.00 ft (KB) (TVD)**
 Total Depth: 4454.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dustin Rash
 Unit No: 38
 Reference Elevations: 2825.00 ft (KB)
 2815.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8354 Inside
 Press @ Run Depth: 56.21 psig @ 4449.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.05.31 End Date: 2012.06.01 Last Calib.: 2012.06.01
 Start Time: 22:50:15 End Time: 05:21:15 Time On Btm: 2012.06.01 @ 00:58:15
 Time Off Btm: 2012.06.01 @ 03:36:45

TEST COMMENT: IF-Weak surface blow . Died @ 21 minutes.
 IS-No Return.
 FF-Few Bubbles.
 FS-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2290.37	116.16	Initial Hydro-static
1	38.95	115.10	Open To Flow (1)
33	49.04	115.47	Shut-In(1)
80	1085.10	116.99	End Shut-In(1)
80	51.45	116.57	Open To Flow (2)
109	56.21	117.38	Shut-In(2)
157	1012.33	118.81	End Shut-In(2)
159	2241.62	120.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	2%Oil/98%Mud	0.10

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.
8100 E. 22nd ST. N. #700
Wichita, KS 67278
ATTN: Adam Eldani

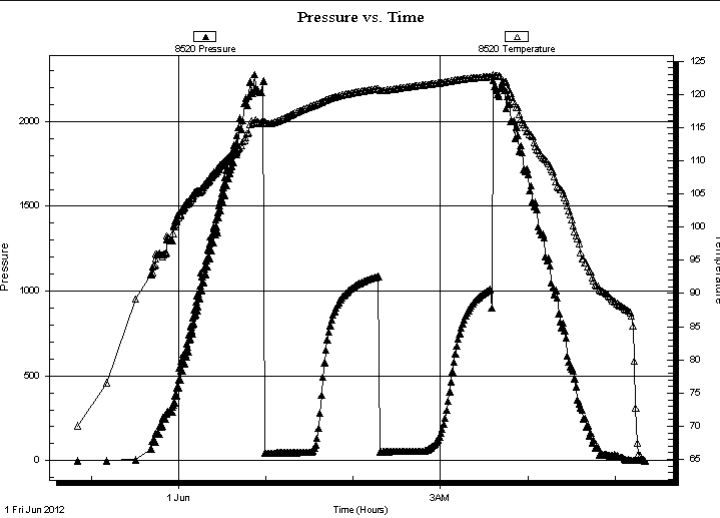
18-14s-31w Gove,KS
Hanna Unit #1
Job Ticket: 47244 **DST#: 5**
Test Start: 2012.05.31 @ 22:40:15

GENERAL INFORMATION:

Formation: **Johnson**
Deviated: No Whipstock: ft (KB) Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 00:59:15 Tester: Dustin Rash
Time Test Ended: 05:21:15 Unit No: 38
Interval: 4410.00 ft (KB) To 4454.00 ft (KB) (TVD) Reference Elevations: 2825.00 ft (KB)
Total Depth: 4454.00 ft (KB) (TVD) 2815.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 10.00 ft

Serial #: 8520 Outside
Press @ Run Depth: psig @ 4449.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.05.31 End Date: 2012.06.01 Last Calib.: 2012.06.01
Start Time: 22:50:45 End Time: 05:20:45 Time On Btm:
Time Off Btm:

TEST COMMENT: IF-Weak surface blow . Died @ 21 minutes.
ISI-No Return.
FF-Few Bubbles.
FSI-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
20.00	2%Oil/98%Mud	0.10

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47244

DST#: 5

ATTN: Adam Eldani

Test Start: 2012.05.31 @ 22:40:15

Tool Information

Drill Pipe:	Length: 3867.00 ft	Diameter: 3.80 inches	Volume: 54.24 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 533.00 ft	Diameter: 2.25 inches	Volume: 2.62 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 56.86 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 85000.00 lb
Depth to Top Packer:	4410.00 ft			Final 85000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	72.00 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			4383.00	
Shut In Tool	5.00			4388.00	
Hydraulic tool	5.00			4393.00	
Jars	5.00			4398.00	
Safety Joint	3.00			4401.00	
Packer	5.00			4406.00	28.00 Bottom Of Top Packer
Packer	4.00			4410.00	
Stubb	1.00			4411.00	
Perforations	5.00			4416.00	
Change Over Sub	1.00			4417.00	
Drill Pipe	31.00			4448.00	
Change Over Sub	1.00			4449.00	
Recorder	0.00	8354	Inside	4449.00	
Recorder	0.00	8520	Outside	4449.00	
Perforations	2.00			4451.00	
Bullnose	3.00			4454.00	44.00 Bottom Packers & Anchor
Total Tool Length:	72.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47244

DST#: 5

ATTN: Adam Eldani

Test Start: 2012.05.31 @ 22:40:15

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: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	2%Oil/98%Mud	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

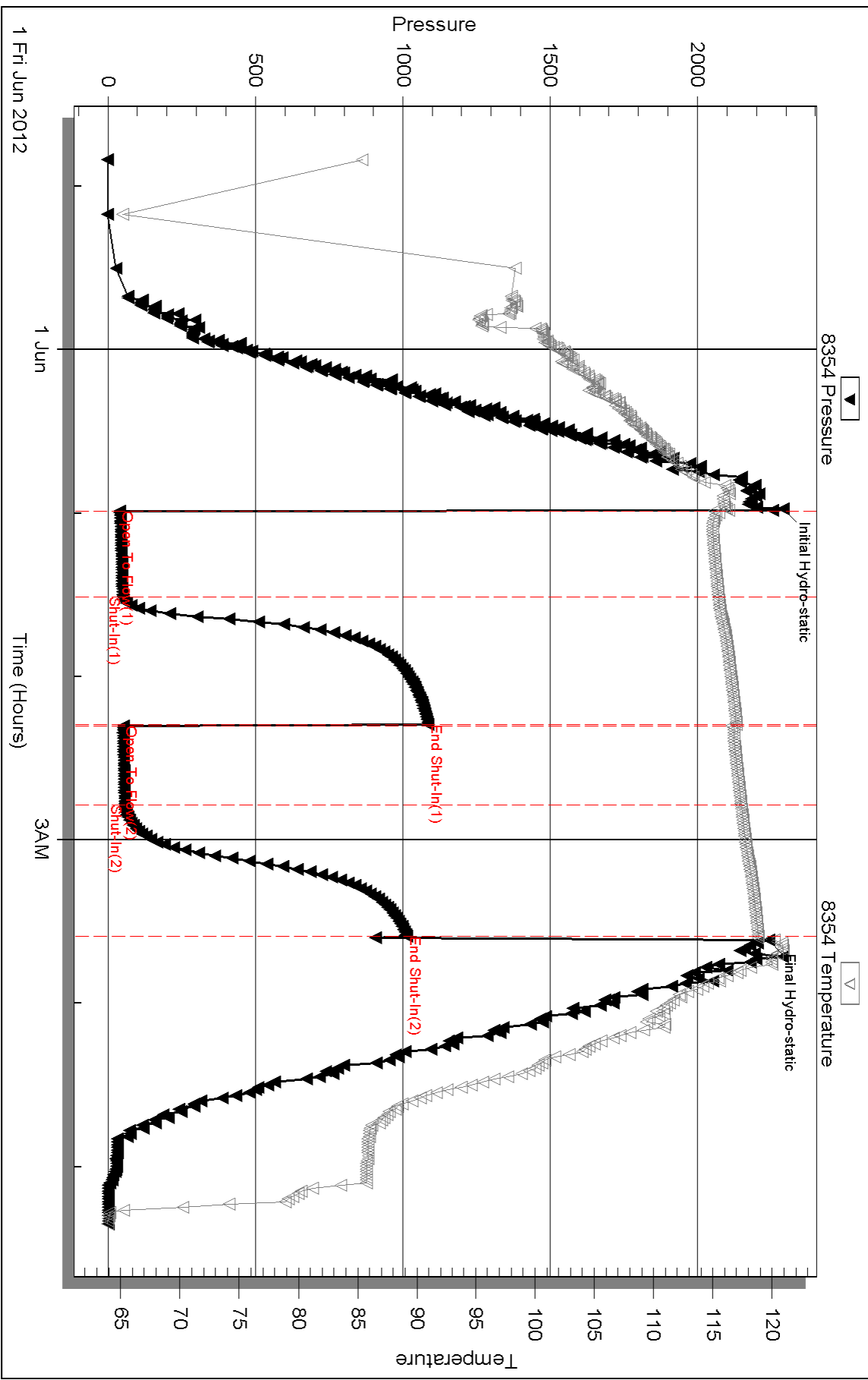
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

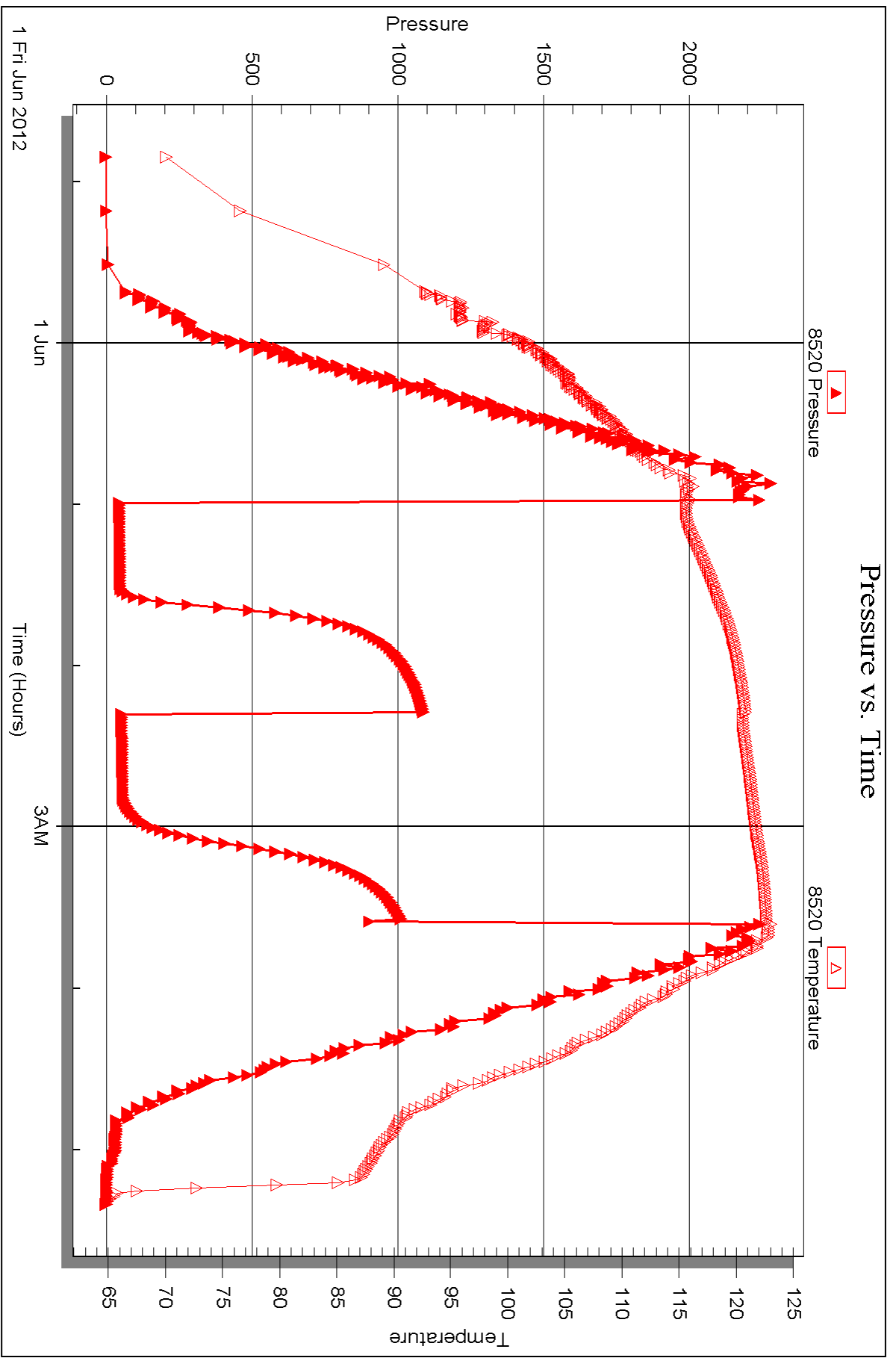


Serial #: 8520

Outside Ritchie Exploration, Inc.

Hanna Unit #1

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 47244

Printed: 2012.06.12 @ 12:29:41



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration, Inc.**

8100 E. 22nd ST. N. #700
Wichita, KS 67278

ATTN: Adam Eldani

Hanna Unit #1

18-14s-31w Gove,KS

Start Date: 2012.06.01 @ 17:40:15

End Date: 2012.06.01 @ 23:55:15

Job Ticket #: 47245 DST #: 6

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

Printed: 2012.06.12 @ 12:27:11

Ritchie Exploration, Inc.
18-14s-31w Gove,KS
Hanna Unit #1
DST # 6
Morrow Sand
2012.06.01



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47245

DST#: 6

ATTN: Adam Eldani

Test Start: 2012.06.01 @ 17:40:15

GENERAL INFORMATION:

Formation: **Morrow Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:01:15

Time Test Ended: 23:55:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Interval: 4460.00 ft (KB) To 4512.00 ft (KB) (TVD)

Reference Elevations: 2825.00 ft (KB)

Total Depth: 4512.00 ft (KB) (TVD)

2815.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8354 Inside

Press @ Run Depth: 34.50 psig @ 4499.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.06.01

End Date:

2012.06.01

Last Calib.:

2012.06.01

Start Time: 17:50:15

End Time:

23:55:15

Time On Btm:

2012.06.01 @ 20:00:45

Time Off Btm:

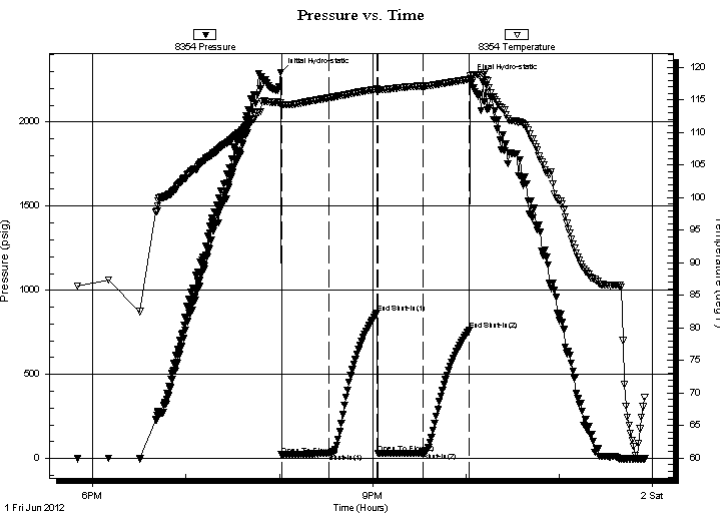
2012.06.01 @ 22:02:45

TEST COMMENT: IF-Weak surface blow . Died @ 7 minutes 30 seconds.

ISI-No Return

FF-No Blow .

FSI-No Return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2294.38	114.60	Initial Hydro-static
1	22.51	114.01	Open To Flow (1)
31	30.58	115.28	Shut-In(1)
62	865.85	116.64	End Shut-In(1)
63	30.02	116.49	Open To Flow (2)
92	34.50	117.08	Shut-In(2)
121	761.29	118.10	End Shut-In(2)
122	2256.24	118.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	100%Mud	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47245

DST#: 6

ATTN: Adam Eldani

Test Start: 2012.06.01 @ 17:40:15

Tool Information

Drill Pipe:	Length: 3931.00 ft	Diameter: 3.80 inches	Volume: 55.14 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	26000.00 lb
Drill Collar:	Length: 533.00 ft	Diameter: 2.25 inches	Volume: 2.62 bbl	Weight to Pull Loose:	5000.00 lb
			<u>Total Volume: 57.76 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial	88000.00 lb
Depth to Top Packer:	4460.00 ft			Final	88000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	52.00 ft				
Tool Length:	80.00 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			4433.00	
Shut In Tool	5.00			4438.00	
Hydraulic tool	5.00			4443.00	
Jars	5.00			4448.00	
Safety Joint	3.00			4451.00	
Packer	5.00			4456.00	28.00 Bottom Of Top Packer
Packer	4.00			4460.00	
Stubb	1.00			4461.00	
Perforations	5.00			4466.00	
Change Over Sub	1.00			4467.00	
Drill Pipe	31.00			4498.00	
Change Over Sub	1.00			4499.00	
Recorder	0.00	8354	Inside	4499.00	
Recorder	0.00	8520	Outside	4499.00	
Perforations	10.00			4509.00	
Bullnose	3.00			4512.00	52.00 Bottom Packers & Anchor
Total Tool Length:	80.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration, Inc.

18-14s-31w Gove,KS

8100 E. 22nd ST. N. #700
Wichita, KS 67278

Hanna Unit #1

Job Ticket: 47245

DST#: 6

ATTN: Adam Eldani

Test Start: 2012.06.01 @ 17:40:15

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	100%Mud	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

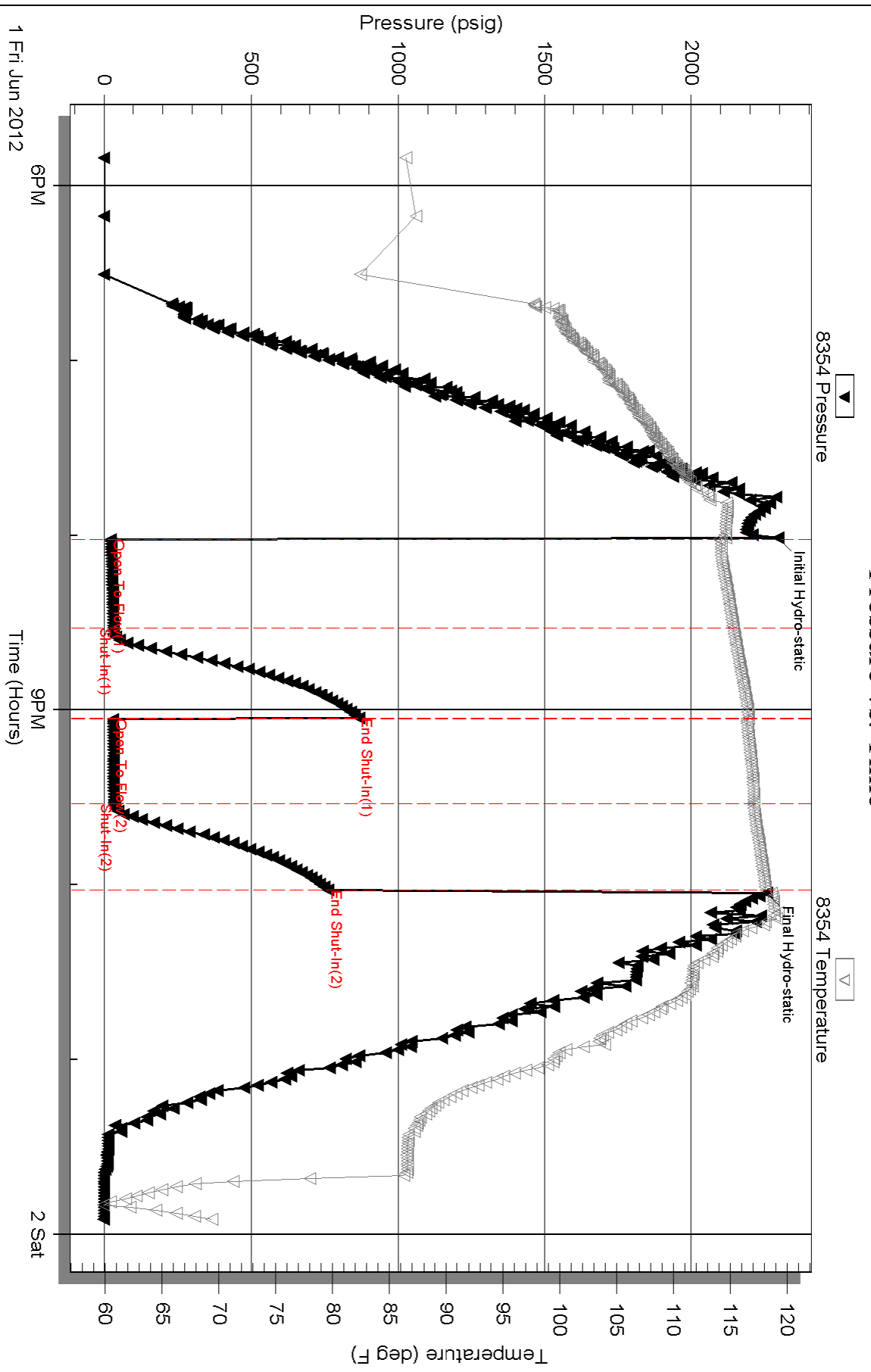
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

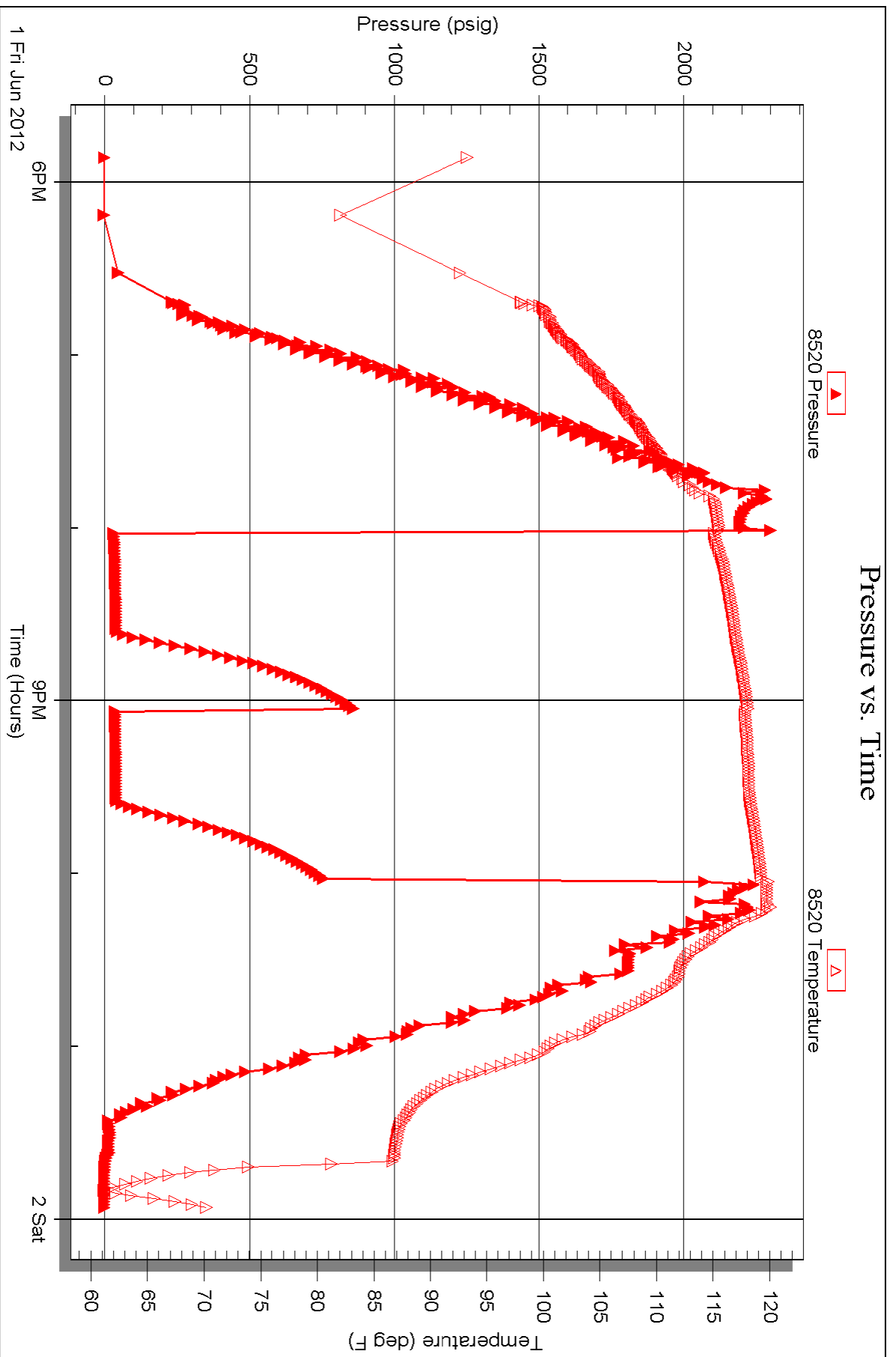


Serial #: 8520

Outside Ritchie Exploration, Inc.

Hanna Unit #1

DST Test Number: 6





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47240

Well Name & No. Hanna Unit #1 Test No. 1 Date 5-27-12
 Company Ritchie Exploration, Inc. Elevation 2825 KB 2815 GL
 Address 8100 E. 22nd St. N. #700 Wichita, KS 67278
 Co. Rep / Geo. _____ Rig Murphy 14
 Location: Sec. 18 Twp. 14S Rge. 31W Co. Gove State KS

Interval Tested 3880-3944 Zone Tested Lansing "C+D"
 Anchor Length 64' Drill Pipe Run 3335 Mud Wt. 9.0
 Top Packer Depth 3875 Drill Collars Run 533.14 Vis 57
 Bottom Packer Depth 3880 Wt. Pipe Run 0 WL 7.2
 Total Depth 3944 Chlorides 2400 ppm System LCM 3

Blow Description IF- Weak surface blow. Died @ 4 minutes.
IST- No Return,
FF- No Blow. Flushed tool. No Blow.
FST- No Return,

Rec	Feet of	%gas	%oil	%water	%mud
8	Mud			100	

Rec Total 8 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1968 Test 1150 T-On Location 2000
 (B) First Initial Flow 66 Jars 250 T-Started 2115
 (C) First Final Flow 45 Safety Joint 75 T-Open 2332
 (D) Initial Shut-In 730 Circ Sub _____ T-Pulled 0135
 (E) Second Initial Flow 52 Hourly Standby _____ T-Out 0330
 (F) Second Final Flow 53 Mileage 117.80 Comments Bar-2109
 (G) Final Shut-In 971 Sampler _____
 (H) Final Hydrostatic 1748 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1592.80
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1592.80

Approved By _____ Our Representative D. Rash

TriLOBite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47241

Well Name & No. Hanna Unit #1 Test No. 2 Date 5-28-12
 Company Ritchie Exploration, Inc. Elevation 2825 KB 2815 GL
 Address 8100 E. 22nd St. N. #700 Wichita, KS 67278
 Co. Rep / Geo. Adam Eldon Rig Mulvan 14
 Location: Sec. 18 Twp. 14S Rge. 31W Co. Gove State KS

Interval Tested 3932-3997 Zone Tested LKC "E,F,+G"
 Anchor Length 65' Drill Pipe Run 3391 Mud Wt. 9.1
 Top Packer Depth 3927 Drill Collars Run 533.14 Vis 67
 Bottom Packer Depth 3932 Wt. Pipe Run 0 WL 8.0
 Total Depth 3997 Chlorides 3500 ppm System LCM 3#

Blow Description TF - Weak surface blow. Died @ 5 minutes.
VST - No Return.
FF - Few bubbles. Flushed Tool. Few bubbles.
FST - No Return.

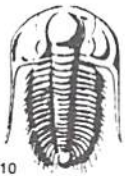
Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 111 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1972 Test 1150 T-On Location 1315
 (B) First Initial Flow 23 Jars 250 T-Started 1400
 (C) First Final Flow 28 Safety Joint 75 T-Open 1543
 (D) Initial Shut-In 902 Circ Sub _____ T-Pulled 1745
 (E) Second Initial Flow 30 Hourly Standby _____ T-Out 1930
 (F) Second Final Flow 35 Mileage 38x2 117.80 Comments Bart - 1350
 (G) Final Shut-In 841 Sampler _____
 (H) Final Hydrostatic 1950 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1592.80
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1592.80

Approved By _____ Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47242

Well Name & No. Hanna Unit #1 Test No. 3 Date 5-29-12
 Company Ritchie Exploration, Inc. Elevation 2825 KB 2815 GL
 Address 8100 E. 2nd St. N. #700 Wichita, KS 67278
 Co. Rep / Geo. Adam Eldan: Rig Muffin 14
 Location: Sec. 18 Twp. 14S Rge. 31W Co. Gove State KS

Interval Tested 4019-4109 Zone Tested LKC "H,I,J"
 Anchor Length 90' Drill Pipe Run 3486 Mud Wt. 9.2
 Top Packer Depth 4014 Drill Collars Run 533.14 Vis 64
 Bottom Packer Depth 4019 Wt. Pipe Run 0 WL 9.6
 Total Depth 4109 Chlorides 4000 ppm System LCM 3#

Blow Description FF- Weak surface blow. Died @ 5 minutes 15 seconds.
FST- No Return.
FF- No Blow. Flushed Tool. Few Bubbles.
FST- No Return.

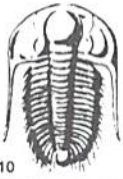
Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1958</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>1130</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>1230</u>
(C) First Final Flow <u>25</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>1447</u>
(D) Initial Shut-In <u>833</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1650</u>
(E) Second Initial Flow <u>26</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1830</u>
(F) Second Final Flow <u>33</u>	<input checked="" type="checkbox"/> Mileage <u>38X2</u> 117.80	Comments <u>BHT-1224</u>
(G) Final Shut-In <u>847</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1926</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1692.80</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1692.80</u>	

Approved By _____ Our Representative D. Rash

Triobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47243

Well Name & No. Hanna Unit #1 Test No. 4 Date 5-30-12
 Company Ritchie Exploration, Inc. Elevation 2825 KB 2815 GL
 Address 8100 E. 22nd St. N. #700 Wichita, KS 67278
 Co. Rep / Geo. Adam Eldari Rig Mullin 14
 Location: Sec. 18 Twp. 14S Rge. 31W Co. Gove State KS

Interval Tested 4103 - 4180 Zone Tested LKC "K+L"
 Anchor Length 77' Drill Pipe Run 3550 Mud Wt. 9.1
 Top Packer Depth 4098 Drill Collars Run 533.14 Vis 55
 Bottom Packer Depth 4103 Wt. Pipe Run 0 WL 8.0
 Total Depth 4180 Chlorides 4400 ppm System LCM 4

Blow Description IF - Steady 1/4 inch blow throughout,
FSI - No Return,
FF - No Blow,
FSI - No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>50</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 50 BHT 115 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2073 Test 1250 T-On Location 0645
 (B) First Initial Flow 23 Jars 250 T-Started 0730
 (C) First Final Flow 41 Safety Joint 75 T-Open 0922
 (D) Initial Shut-In 1129 Circ Sub T-Pulled 1155
 (E) Second Initial Flow 43 Hourly Standby T-Out 1330
 (F) Second Final Flow 55 Mileage 38X2 117.80 Comments BHT - 0721
 (G) Final Shut-In 1103 Sampler Ruined Shale Packer
 (H) Final Hydrostatic 2017 Straddle Ruined Packer
 Shale Packer Extra Copies
 Extra Packer Extra Recorder
 Extra Recorder Sub Total 0
 Day Standby Total 1692.80
 Accessibility MP/DST Disc't
 Sub Total 1692.80

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47244

4/10

Well Name & No. Hanna Unit #7 Test No. 5 Date 5-31-12
 Company Ritchie Exploration, Inc. Elevation 2825 KB 2815 GL
 Address 8100 E. 22nd St. N. #700 Wichita, KS 67278
 Co. Rep / Geo. Adam Eldan Rig Mullin 14
 Location: Sec. 18 Twp. 14S Rge. 31W Co. Gove State KS

Interval Tested 4410 - 4454 Zone Tested Johnson
 Anchor Length 44' Drill Pipe Run 3867 Mud Wt. 9.3
 Top Packer Depth 4405 Drill Collars Run 533.14 Vis 56
 Bottom Packer Depth 4410 Wt. Pipe Run 0 WL 7.2
 Total Depth 4454 Chlorides 3800 ppm System LCM 3#

Blow Description IF - Weak surface blow. Died @ 21 minutes.
VSI - No Return.
FF - Few bubbles.
FST - No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>USOCM</u>		<u>2</u>	<u>98</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 120 Gravity 1250 API RW @ 117.80 °F Chlorides 3800 ppm

(A) Initial Hydrostatic 2290 Test 1250 T-On Location 2100
 (B) First Initial Flow 39 Jars 250 T-Started 2300
 (C) First Final Flow 49 Safety Joint 75 T-Open 0059
 (D) Initial Shut-In 1085 Circ Sub T-Pulled 0335
 (E) Second Initial Flow 51 Hourly Standby T-Out 0515
 (F) Second Final Flow 56 Mileage 38X2 117.80 Comments BHT-2240
 (G) Final Shut-In 1012 Sampler
 (H) Final Hydrostatic 2242 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1692.80
 Accessibility MP/DST Disc't

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

Sub Total 1692.80

Approved By _____ Our Representative D. Rash

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TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47245

4/10

Well Name & No. Hanna Unit #7 Test No. 6 Date 6-1-12
 Company Ritchie Exploration, Inc. Elevation 2825 KB 2815 GL
 Address 8100 E. 22nd St. N. #700 Wichita, KS 67278
 Co. Rep / Geo. Adam Eldari Rig Mulfin 14
 Location: Sec. 18 Twp. 14S Rge. 31W Co. Gove State KS

Interval Tested 4460-4512 Zone Tested Marrow Sand
 Anchor Length 52' Drill Pipe Run 3931 Mud Wt. 9.2
 Top Packer Depth 4455 Drill Collars Run 533,14 Vis 58
 Bottom Packer Depth 4460 Wt. Pipe Run 0 WL 8.0
 Total Depth 4512 Chlorides 4400 ppm System LCM 4#

Blow Description IF - Weak surface blow. Died @ 7 minutes 30 seconds.
~~ISF - No Return.~~
FF - No Blow.
~~FST - No Return.~~

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15 BHT 119 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2294 Test 1250 T-On Location 1700
 (B) First Initial Flow 23 Jars 250 T-Started 1800
 (C) First Final Flow 31 Safety Joint 75 T-Open 1959
 (D) Initial Shut-In 866 Circ Sub _____ T-Pulled 2200
 (E) Second Initial Flow 30 Hourly Standby _____ T-Out _____
 (F) Second Final Flow 35 Mileage 38X2 117.80 Comments BHT-1740
 (G) Final Shut-In 761 Sampler _____
 (H) Final Hydrostatic 2256 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1692.80
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1692.80

Approved By _____ Our Representative [Signature]

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Adam Eldani Geo-Log/Report

WellSight Systems

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: #1 HANNA UNIT
Location: SEC 18- twp 14S- rge 31W GOVE COUNTY
License Number: API 15-063-21997
Spud Date: 05/23/2012
Surface Coordinates: 1175' FNL 2590' FEL
Region: KANSAS
Drilling Completed: 6/2/2012

Bottom Hole Coordinates: Deviation Surveys are detailed through out the Geo-Report.

Ground Elevation (ft): 2815
 Logged Interval (ft): 3600 To: 4600
 Formation: Mississippian
 Type of Drilling Fluid: Mud-Co Chemical
 K.B. Elevation (ft): 2825
 Total Depth (ft): 4600
 Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Ritchie Exploration Inc. (drilled by MURFIN #14)
Address: 8100 E. 22nd ST. N. #700
 Wichita, KS, 67278-3188

GEOLOGIST

Name: Adam M.A. Eldani
Company: Ritchie Exploration Inc.
Address: 8100 E. 22nd ST. N. #700
 Wichita, KS, 67278-3188

TOPS & DRILL REPORT

TOPS:	SAMPLE TOPS:
ANH: 2291+534	ANH: 2242+583
BIANHY: 2314+511	BIANHY: 2314+511
HEEBNER: 3822-997	HEEBNER: 3818-993
LANSING: 3860-1035	LANSING: 3855-1030
MUNCIE: 4020-1195	MUNCIE: 4021-1209
STARK: 4103-1278	STARK: 4105-1280
ALTAMONT: 4243-1418	ALTAMONT: 4248-1423
PAWNEE: 4308-1483	PAWNEE: 4310-1485
CHEROKEE: 4389-1564	CHEROKEE: 4390-1565
MISS: 4504-1679	MISS: 4508-1683

DAILY DRILLING REPORT:
 5/23 spud
 5/24 1277'
 5/25 2310'
 5/26 3509'
 5/27 3980'
 5/28 3951'
 5/29 4085'
 5/30 4180'
 5/31 4358'
 6/01 4454'
 6/02 4564'

All DST's info. are NEAR the correct log depth.
 RIG: MURFIN CO. #14
 DRILLPIPE: 4-1/2" XH
 TOOLPUSHER: GREG UNRUH
 MUD: MUDCO (REID ATKINS)
 GAS DETECTOR: NONE
 DRILL STEM TESTS: TRILOBITE TESTING
 LOGS: SUPERIOR
 OFFICE: PETER FORINI

Comments
 SURFACE Casing: 8 5/8" @ 212'
 Well Log Surveys BY SUPERIOR: Compensated Density/ Neutron Log, & Dual Indentation.
 STRUCTURALLY, THIS WELL RAN HIGHER TO OFFSET, ALL SHOWS WERE TESTED.
 After evaluation of electrical logs and drill stem test results, the operator determined THE HANNA UNIT #1 to non-commercial and elected to plug and abandon the well as a dry hole.
 SAMPLES WILL BE DEPOSITED WITH KANSAS GEOLOGICAL SURVEY.
 RESPECTFULLY SUBMITTED
 Adam M. A. Eldani

ROCK TYPES			
Anhy	Clyst	Mrst	Shgy
Bent	Coal	Salt	Silst
Brec	Congl	Shale	Ss
Cht	Dol	Shcol	Till
		Igne	
		Lmst	
		Meta	

ACCESSORIES			
MINERAL	Gyp	FOSSIL	Ostra
Anhy	Hymim	Algae	Pelec
Arggrn	Kaol	Amph	Pellet
Arg	Marl	Belm	Pisilote
Bent	Minxl	Biochl	Plant
Bit	Nodule	Brach	Strom
Brecfrag	Phos	Bryoza	
Calc	Pyr	Cephal	
Chtdk	Salt	Coral	
Chttd	Sandy	Crin	
Dol	Silt	Echin	
Feldspar	Sil	Fish	
Ferpet	Sulphur	Foram	
Ferr	Tuff	Fossil	
Glau		Gastro	
		Oolite	
			STRINGER
			Anhy
			Arg
			Bent
			Coal
			Dol
			Gyp
			Ls
			Mrst
			Ssstrg
			Ststrg

OTHER SYMBOLS			
POROSITY	Vuggy	ROUNDING	Spotted
Earthy	Well	Rounded	Quies
Fenest	Moderate	Subng	Dead
Fracture	Poor	Subnd	EVENT
Inter		Angular	Rft
Moldic			Sidewall
Organic		OIL SHOW	
Pinpoint		Even	
			INTERVAL
			Core
			Dst

