



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1088557  
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: \_\_\_\_\_

1088557

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

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

Scale 1:240 (3") Imperial  
Well Measure Depth Log

**Well Name:** #1 NOONAN  
**Location:** sec 24 - Twp 17S - Rge 35W WICHITA COUNTY  
**License Number:** APV 15-20  
**Spud Date:** 30 MAR 2012 **Drilling Company:** Reged: KANSAS  
**Surface Coordinates:** 2,250 FSL, 8.120 FWL  
**Bottom Hole Coordinates:** 60' south & 30' east of NE - SW - SW  
**DEVIATION SURVEY:** 0.75 degree @ 254,  
 0.75 degree @ 4,166, 1 degree @ 5,019  
**Ground Elevation (ft):** 3,174 **K.B. Elevation (ft):** 3,184  
**Logged Interval (ft):** 3,506 **To:** 5,019 **Total Depth (ft):** 5,019  
**Formation:** COUCHROVE to MISSOURIAN  
**Chemical Displacement:** @ 3,405  
 Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

## OPERATOR

**Company:** Ritchie Exploration, Inc.  
**Address:** P.O. Box 753188  
 Wichita, Kansas 67278-3188

## GEOLOGIST

**Name:** Ted Jochems, Jr.  
**Company:** Consulting Geologist  
**Address:** 212 North Market ste 517  
 Wichita, Kansas 67202

## COMMENTS

**CONTRACTOR:** Val Drilling, Rig #7  
**Shut-in:** Shut-in tool  
**MUD:** Mud-Co (Tony Maestas)  
**DRILL STEM TESTS:** White Testing  
 (Chuck Kreutzer (#1) - #5), Jack McKinney (#6 - #8))  
**ELECTRIC LOGS:** Superior Well Services (Mitch Rupp)  
**CD/CIVIL:** 240  
**SURFACE CASING:** 8.625" @ 13 APR 2012  
 hole plugged and abandoned

## DRILL STEM TEST #1

4,097 - 4,106 30 - 45 - 30 - 45  
 IPF: fair blow built to BOB / 14 min  
 ISIP: no blowback  
 FFP: no blowback  
 FSP: no blowback  
 REC: 30' DM (100% M)  
 7' total fluids  
 FP: 50 - 59H / 61 - 69H  
 SIP: 1,193 - 1,193H  
 HP: 2,142 - 2,058 F  
 BHT: 108 degrees F  
**COMMENT:** shut-in curves indicate fair permeability

## DRILL STEM TEST #2

4,260 - 4,326 30 - 30 - 30 - 30  
 IPF: fair blow built to BOB / 14 min  
 ISIP: no blowback  
 FFP: no blow - flushed tool; no help  
 FSP: no blowback, turned tool five times, tool backlash and turned five more times.  
 REC: 7' DM (100% M)  
 7' total fluids  
 FP: 1,106 - 1,279H / 1,749 - 1,493H  
 SIP: 1,253 - 1,193H  
 HP: 2,192 - 2,058 F  
 BHT: 107 degrees F  
**COMMENT:** tool likely was out of rotation at first open.

## DRILL STEM TEST #3

4,259 - 4,355 30 - 45 - 45 - 60  
 IPF: fair blow built to BOB / 14 min  
 ISIP: no blowback  
 FFP: fair blow built to BOB / 16 min  
 FSP: no blowback  
 REC: 31'2" DM (100% M)  
 37'2" WCM (10% W, 90% M)  
 1,054' total fluids  
 Rv: 0.55 ohms @ 150 degrees F  
 CHLORIDES: 1,040 ppm recovery (5,000 ppm system)  
 FP: 34 - 151H / 154 - 285H  
 SIP: 2,315 - 2,028H  
 HP: 2,142 - 2,058 F  
 BHT: 108 degrees F  
**COMMENT:** shut-in curves indicate excellent permeability  
 represents oolitic zone in LKC J

## DRILL STEM TEST #4

4,369 - 4,425 30 - 30 - 30 - 30  
 IPF: weak 0.25' blow died / 6 min  
 ISIP: no blowback  
 FFP: no blow, flushed tool; no help  
 FSP: no blowback  
 REC: 10' DM (100% M)  
 10' total fluid  
 FP: 17 - 19H / 20 - 20H  
 SIP: 581 - 632H  
 HP: 2,184 - 2,204H  
 BHT: 108 degrees F  
**COMMENT:** shut-in curves suggest very poor permeability

## DRILL STEM TEST #5

4,457 - 4,532 30 - 30 - 30 - 30  
 IPF: weak surface blow, drill on opening  
 ISIP: no blowback  
 FFP: weak surface blow, drill on opening  
 FSP: no blowback  
 REC: 30' DM with oil speds (100% M)  
 30' total fluid  
 FP: 21 - 42H / 44 - 62H  
 SIP: 1,192 - 1,150H  
 HP: 2,332 - 2,008H  
 BHT: 110 degrees F  
**COMMENT:** shut-in curves indicate fair to good permeability

## DRILL STEM TEST #6

4,536 - 4,565 30 - 45 - 30 - 45  
 IPF: surface blow built to 0.25' min  
 ISIP: no blowback  
 FFP: weak surface blow  
 FSP: no blowback  
 REC: 10' DM with few oil spots (100% M)  
 10' total fluid  
 FP: 16 - 17H / 18 - 18H  
 SIP: 700 - 616H  
 HP: 2,200 - 2,143H  
 BHT: 109 degrees F  
**COMMENT:** shut-in curves indicate poor permeability

## DRILL STEM TEST #7

4,569 - 4,588 30 - 30 - 30 - 30  
 IPF: weak surface blow died / 15 min  
 ISIP: no blowback  
 FFP: no blow, flushed tool / 15 min; no help  
 FSP: no blowback  
 REC: 30' DM (100% M)  
 30' total fluids  
 FP: 23 - 26H / 26 - 29H  
 SIP: 80 - 55H  
 HP: 2,249 - 2,206H  
 BHT: 107 degrees F  
**COMMENT:** shut-in curves indicate no permeability.

## DRILL STEM TEST #8

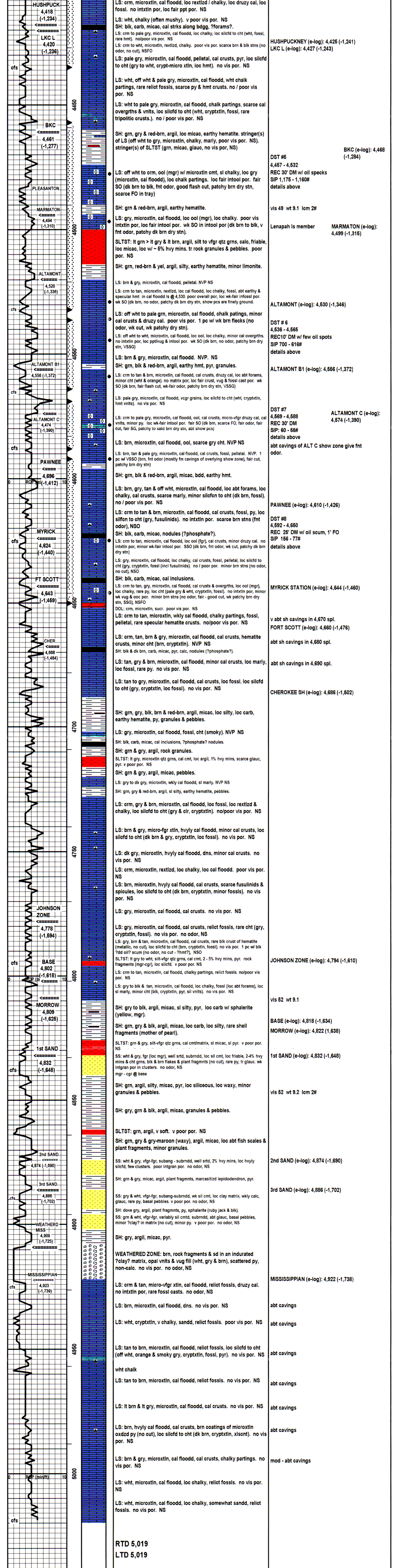
4,592 - 4,650 30 - 45 - 30 - 30  
 IPF: surface blow built to 0.75' min  
 ISIP: no blowback  
 FFP: very weak surface blow died / 8 min; flushed tool; no help  
 FSP: no blowback  
 REC: 25' DM w/ oil scum (100% M)  
 25' total fluid  
 FP: 15 - 19H / 22 - 25H  
 SIP: 156 - 77H  
 HP: 2,220 - 2,158H  
 BHT: 107 degrees F  
**COMMENT:** shut-in curves indicate extremely poor permeability

DAILY PENETRATION	
DATE	DEPTH
31 MAR	1,267
01 APR	1,374
2 APR	1,416
03 APR	3,738
04 APR	4,164
06 APR	4,186
06 APR	4,234
08 APR	4,386
08 APR	4,483
09 APR	4,486
10 APR	4,588
11 APR	4,686
12 APR	4,962

MUD REPORT	
WT VIB	DEPTH
1.969	9.4
3.070	9.5
3.754	9.6
4.170	9.7
4.186	9.8
4.186	9.9
4.387	10.0
4.608	9.8
4.666	9.9
4.625	9.1
4.702	9.1
4.686	9.3
4.686	9.3

ROCK TYPES	
Anyh	Coal
Bent	Chert
Brec	Dol
Cht	Gyp
Clyt	Igne
	Lst
	Meta
	Mfrst
	Salt
	Shale
	Shcol
	Shly
	Slst
	Silt
	Th

OTHER SYMBOLS	
Oil Show	Dead
Even	Gas
Spotted	Interval
Ques	Core
	Conn
	Rt
	Sidewall



**RTD 5,019**  
**LTD 5,019**  
 Ritchie Exploration, Inc.  
 #1 Noonan  
 sec 24 - Twp 17S - Rge 35W  
 Wichita County, Kansas



**#1 Noonan**

2250' FSL & 1020' FWL

60' S & 30' E of NE NW SW Section 24-17S-35W

Wichita County, Kansas

API# 15-203-20176-0000

Elevation: 3174' GL, 3184' KB

Sample Tops			Ref. Well
Anhydrite	2469'	+715	-2
B/Anhydrite	2488'	+696	-3
Stotler	3639'	-455	+10
Heebner	4032'	-848	+2
Lansing	4078'	-894	+2
Muncie Shale	4262'	-1078	+2
Stark Shale	4370'	-1186	-5
Hush	4418'	-1234	-5
BKC	4461'	-1277	-2
Marmaton	4494'	-1310	-6
Altamont	4520'	-1337	-7
Altamont - C	4574'	-1390	-2
Pawnee	4620'	-1416	-6
Myrick	4633'	-1449	-2
Cherokee Shale	4668'	-1484	+7
Johnson	4778'	-1594	+7
B/Johnson	4802'	-1618	+5
Morrow Shale	4809'	-1625	+6
Mississippian	4923'	-1739	-18
RTD	5019'	-1835	

# ALLIED CEMENTING CO., LLC. 034619

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

Federal Tax ID # 20-5975904

SERVICE POINT  
*Ballwin, Mo*

DATE	12-12	SEC	24	TWT	7	RANGE	25	CALLER OUT		ON LOCATION	3	ON START	3	ON FINISH	3
CUSTOMER	Reardon	WELL #	1	LOCATION	South 184 34 124	COUNTY	STEARNS	STATE	MO						
OLD OR NEW (Circle one)	NEW														

CONTRACTOR *1241 47*  
 TYPE OF JOB *PT* J.D. *50181*  
 HOLE SIZE *7 7/8* DEPTH *3370'*  
 CASING SIZE *5 1/2* DEPTH *3370'*  
 DRILL PIPE *5 1/2* DEPTH *3370'*

TOOL *PT* DEPTH  
 IRRS. MAX MINIMUM  
 MEAS. LINE SHOE JOINT  
 PERFS. *PT*  
 DISPLACEMENT *28 33 461*

EQUIPMENT  
 PUMP/TRUCK CEMENTER *Kaplan*  
 # *431* HELPER *Dave*  
 BULK TRUCK *11841926* DRIVER *Adam*  
 BULK TRUCK DRIVER

REMARKS:  
*21X 305' 2520'*  
*14X 305' 1580'*  
*14X 505' 750'*  
*14X 505' 820'*  
*14X 205' 621'*  
*14X 305' 205' 621'*  
*14X 505' 805' 621'*  
*14X 305' 805' 621'*  
*14X 505' 805' 621'*

CHARGE TO: *Private Exploration*  
 STREET \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

To Allied Cementing Co., LLC.  
 You are hereby requested to rent cementing equipment and furnish cementer and helpers 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 \_\_\_\_\_  
 SIGNATURE *Jessie Ann Miller*

OWNER *South*

AMOUNT ORDERED	3000 505' 6000 8800
COMMON	180 505' @ 16.25 = 2925.00
POZ MIX	120 505' @ 8.50 = 1020.00
OEL	120 505' @ 21.25 = 2550.00
CHLORIDE	0
ASC	120 505' @ 16.25 = 1950.00
TOTAL	12005.00

SERVICE

DEPTH OF JOB	3570'
PUMP/TRUCK CHARGE	1350.00
EXTRA FOOTAGE	0
MILEAGE	85 @ 20.00 = 1700.00
MANHOLE	0
AD mileage	0
TOTAL	1865.00

PLUG & FLOAT EQUIPMENT

①	
②	
③	
④	
⑤	
TOTAL	

SALLES TAX (if any) \_\_\_\_\_  
 TOTAL CHARGES \_\_\_\_\_ IF PAID IN 30 DAYS  
 DISCOUNT \_\_\_\_\_

*R*

# ALLIED CEMENTING CO., LLC. 035369

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:

*Rakley, K.*

DATE <i>3/30/12</i>	SEC. <i>24</i>	TWP. <i>7</i>	RANGE <i>35</i>	CALLED OUT	ON LOCATION <i>10:30pm</i>	JOB START <i>11:00</i>	JOB FINISH <i>1:30</i>
LEASE <i>Moorman</i>	WELL# <i>1</i>	LOCATION <i>Scott City 10 W to N205 3N</i>			COUNTY <i>Wichita</i>	STATE <i>Ks.</i>	
OLD OR NEW (Circle one)		IN <i>2 1/2 N</i> OF <i>Point</i>					

CONTRACTOR *Val 7* OWNER *Same*

TYPE OF JOB *Surfcast* CEMENT

HOLE SIZE *12 1/4* T.D. *254* AMOUNT ORDERED *165 lb on 300cc*

CASING SIZE *8 5/8* DEPTH *254* *200 gal*

TUBING SIZE DEPTH

DRILL PIPE *4 1/2* DEPTH

TOOL DEPTH

PRES. MAX MINIMUM COMMON *165 @ 16.25 268.25*

MEAS. LINE SHOE JOINT POZMIX @

CEMENT LEFT IN CSG. *15'* GEL @ *21.25 63.25*

PERFS. CHLORIDE *6 @ 58.20 349.20*

DISPLACEMENT *15.224 3* ASC @

EQUIPMENT @

PUMP TRUCK CEMENTER *Alan* @

# *400* HELPER *Wayne* @

BULK TRUCK @

# *347* DRIVER *Brandon* @

BULK TRUCK @

# DRIVER @

HANDLING *1244* @ *2.25 391.50*

MILEAGE *1/2 SR/ mile* @ *1244.00*

TOTAL *4729.00*

REMARKS:

*An Coy, Circulate, mix cement, Displace*

*Cement.*

*Cement did Circulate*

*Franklin, Ma, Mike, Brandon*

CHARGE TO: *Ritchie Exp*

STREET

CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

*8 5/8 casing string* @ *9.20*

@

@

@

@

TOTAL *9.20*

SALES TAX (If Any)

TOTAL CHARGES

DISCOUNT IF PAID IN 30 DAYS

PRINTED NAME

SIGNATURE *Jesse Curillo*



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

July 24, 2012

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

Re: ACO1  
API 15-203-20176-00-00  
Noonan 1  
SW/4 Sec.24-17S-35W  
Wichita 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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
 8100 E. 22nd st. N.  
 #700 Box 783188 Wichita Ks. 67278  
 ATTN: Ted Jochems

**24 17s 35w Wichita Ks**  
**Noonan #1**  
 Job Ticket: 45597      **DST#: 1**  
 Test Start: 2012.04.04 @ 21:55:00

## GENERAL INFORMATION:

Formation: **LKC-C,D,E**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 00:33:00  
 Tester: Chuck Kreuzer Jr.  
 Time Test Ended: 05:38:30  
 Unit No: 61  
 Interval: **4097.00 ft (KB) To 4186.00 ft (KB) (TVD)**  
 Reference Elevations: 3184.00 ft (KB)  
 Total Depth: 4186.00 ft (KB) (TVD)  
 3174.00 ft (CF)  
 Hole Diameter: 7.80 inches  
 Hole Condition: Good  
 KB to GR/CF: 10.00 ft

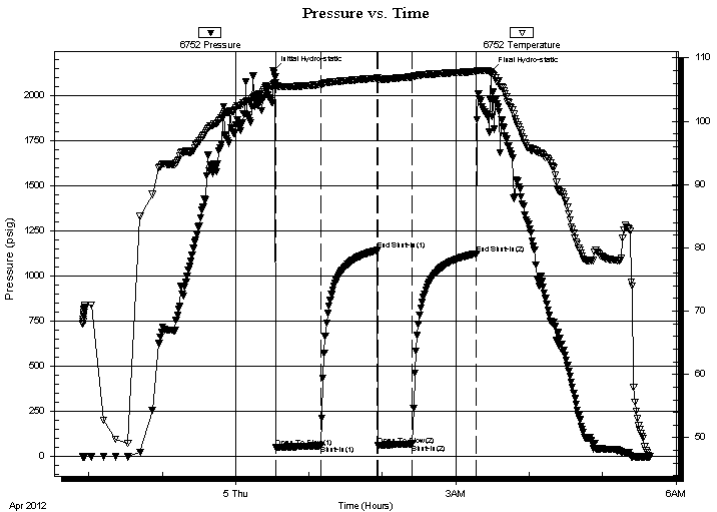
## Serial #: 6752

Inside

Press@RunDepth: 69.11 psig @ 4103.60 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.04.04      End Date: 2012.04.05      Last Calib.: 2012.04.05  
 Start Time: 21:55:05      End Time: 05:38:29      Time On Btm: 2012.04.05 @ 00:31:00  
 Time Off Btm: 2012.04.05 @ 03:29:00

**TEST COMMENT:** IF: Weak blow , Built to 1/2 in. over 30 mins.  
 IS: No blow back over 45 mins.  
 FF: No blow over 30 mins.  
 FS: No blow back over 45 mins.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2141.50	105.74	Initial Hydro-static
2	50.30	105.41	Open To Flow (1)
39	59.54	105.80	Shut-In(1)
85	1143.19	106.80	End Shut-In(1)
86	61.03	106.59	Open To Flow (2)
114	69.11	106.99	Shut-In(2)
166	1125.39	107.84	End Shut-In(2)
178	2135.94	107.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	mud-100%	0.42

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc.

**24 17s 35w Wichita Ks**

8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278

**Noonan #1**

Job Ticket: 45597

**DST#: 1**

ATTN: Ted Jochems

Test Start: 2012.04.04 @ 21:55:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 99.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 578.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	mud-100%	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6752

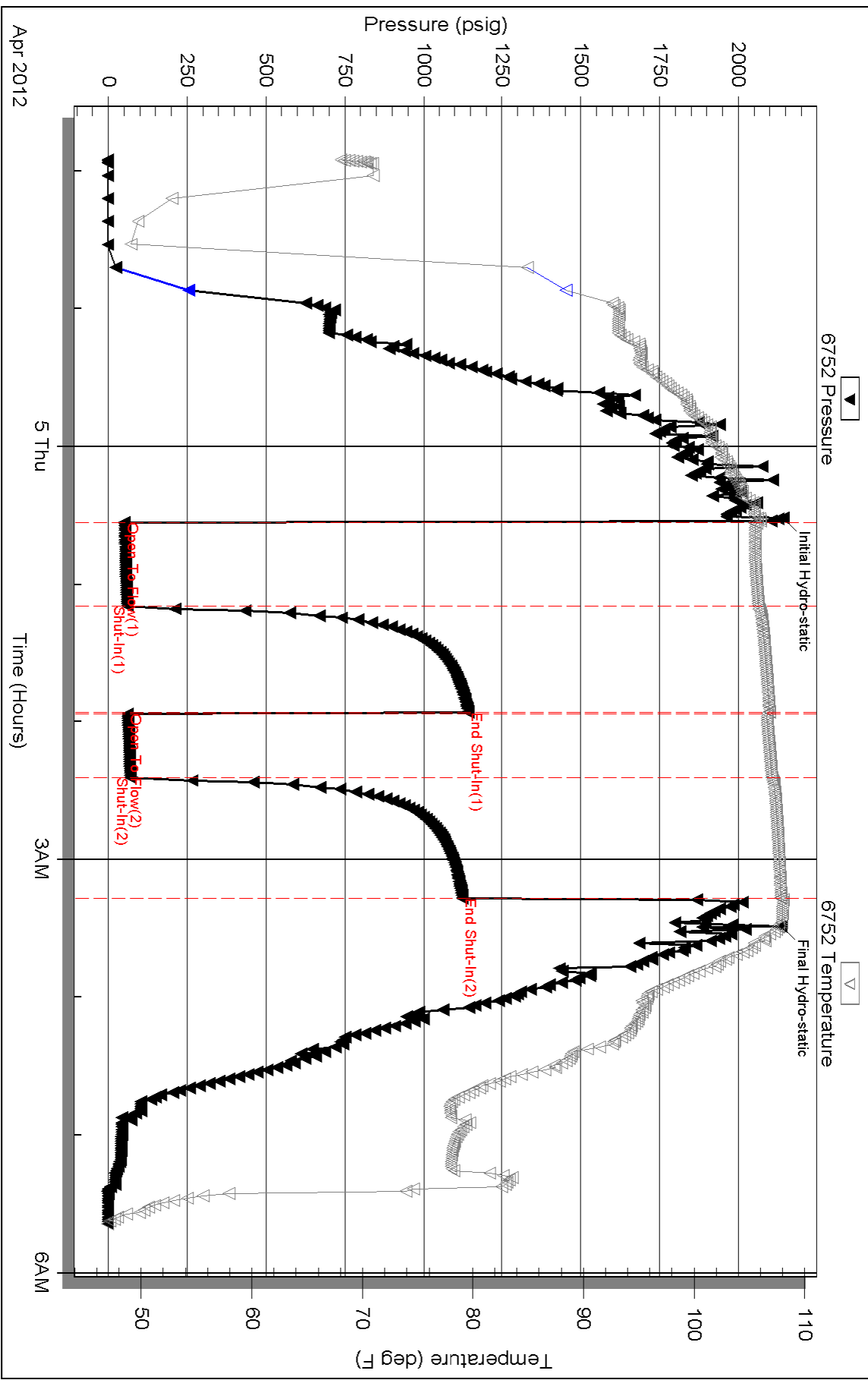
Inside

Richie Exploration Inc.

Noonan #1

DST Test Number: 1

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 45597

Printed: 2012.04.05 @ 08:16:33



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278  
ATTN: Ted Jochems

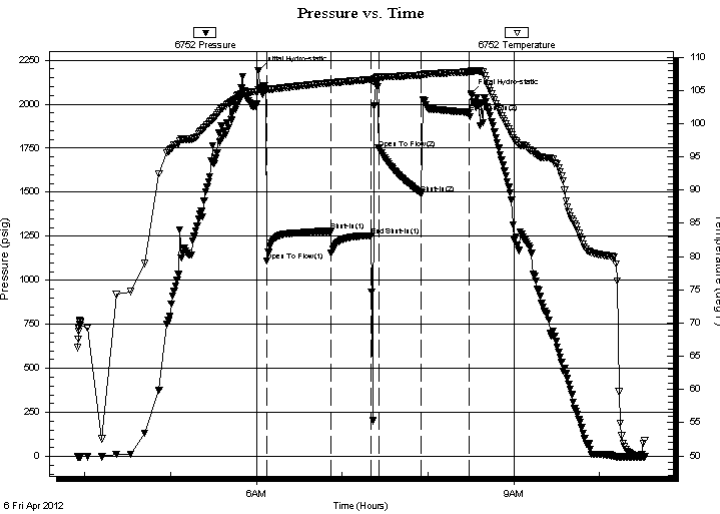
**24 17s 35w Wichita Ks**  
**Noonan #1**  
Job Ticket: 45598      **DST#: 2**  
Test Start: 2012.04.06 @ 03:55:00

## GENERAL INFORMATION:

Formation: **LKC-H,I**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 06:07:30  
Time Test Ended: 10:32:00  
Interval: **4260.00 ft (KB) To 4324.00 ft (KB) (TVD)**  
Total Depth: 4324.00 ft (KB) (TVD)  
Hole Diameter: 7.80 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Chuck Kreuzer Jr.  
Unit No: 61  
Reference Elevations: 3184.00 ft (KB)  
3174.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 6752      Inside**  
Press @ Run Depth: 1493.24 psig @ 4264.60 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.04.06      End Date: 2012.04.06      Last Calib.: 2012.04.06  
Start Time: 03:55:05      End Time: 10:31:59      Time On Btm: 2012.04.06 @ 06:01:30  
Time Off Btm: 2012.04.06 @ 08:30:00

**TEST COMMENT:** IF: Weak blow , Surface blow Died in 2 mins.  
IS: No blow back over 30 mins.  
FF: Flushed tool, No blow back over 30 mins.  
FS!: Turned tool 5 times tool backlashed turned tool 5 more times. No blow back over 30 mins.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2191.54	105.12	Initial Hydro-static
6	1107.87	105.16	Open To Flow (1)
51	1278.97	106.16	Shut-In(1)
79	1253.46	106.66	End Shut-In(1)
84	1749.09	107.01	Open To Flow (2)
114	1493.24	107.32	Shut-In(2)
147	1953.50	107.80	End Shut-In(2)
149	2058.42	107.91	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
7.00	mud-100%	0.10

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc.

**24 17s 35w Wichita Ks**

8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278

**Noonan #1**

Job Ticket: 45598

**DST#: 2**

ATTN: Ted Jochems

Test Start: 2012.04.06 @ 03:55:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.57 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
7.00	mud-100%	0.098

Total Length: 7.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6752

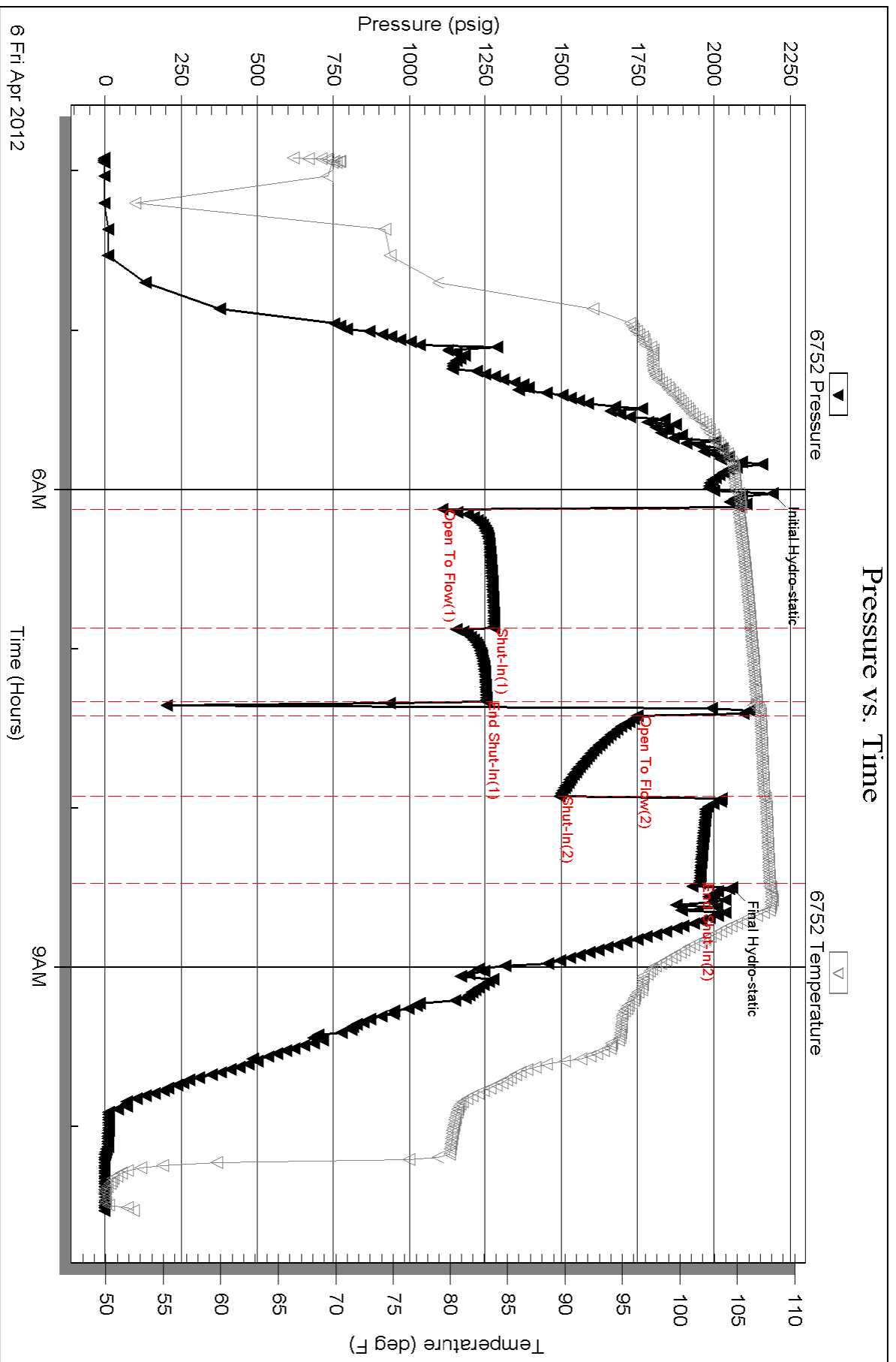
Inside

Ritchie Exploration Inc.

Noonan #1

DST Test Number: 2

### Pressure vs. Time

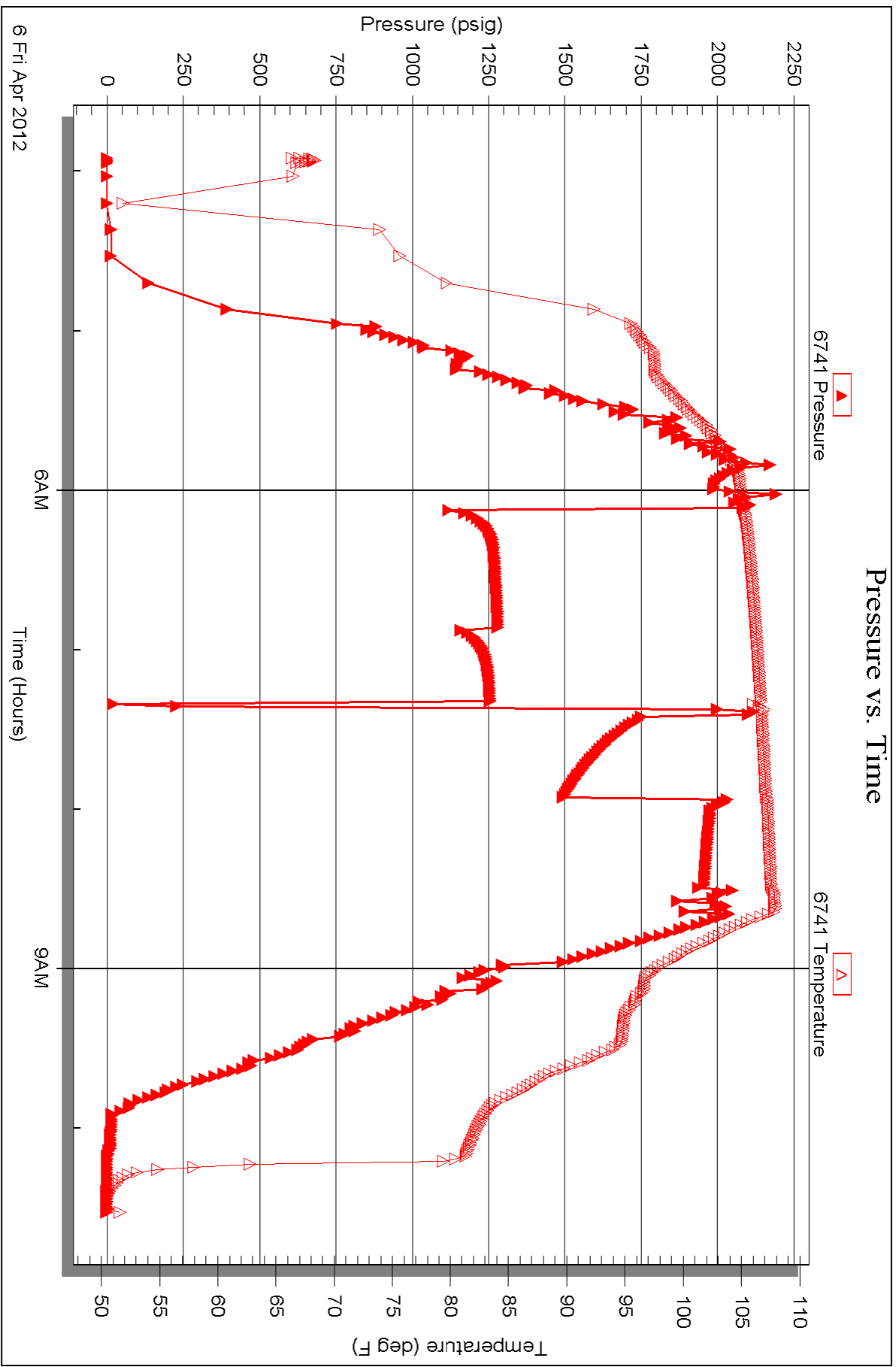


Serial #: 6741

Outside Ritchie Exploration Inc.

Noonan #1

DST Test Number: 2





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
 8100 E. 22nd st. N.  
 #700 Box 783188 Wichita Ks. 67278  
 ATTN: Ted Jochems

**24 17s 35w Wichita Ks**  
**Noonan #1**  
 Job Ticket: 45599 **DST#: 3**  
 Test Start: 2012.04.06 @ 20:18:00

## GENERAL INFORMATION:

Formation: **LKC-H,I,J**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 22:49:30  
 Time Test Ended: 04:10:30  
 Interval: **4259.00 ft (KB) To 4355.00 ft (KB) (TVD)**  
 Total Depth: 4355.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chuck Kreuzer Jr.  
 Unit No: 61  
 Reference Elevations: 3184.00 ft (KB)  
 3174.00 ft (CF)  
 KB to GR/CF: 10.00 ft

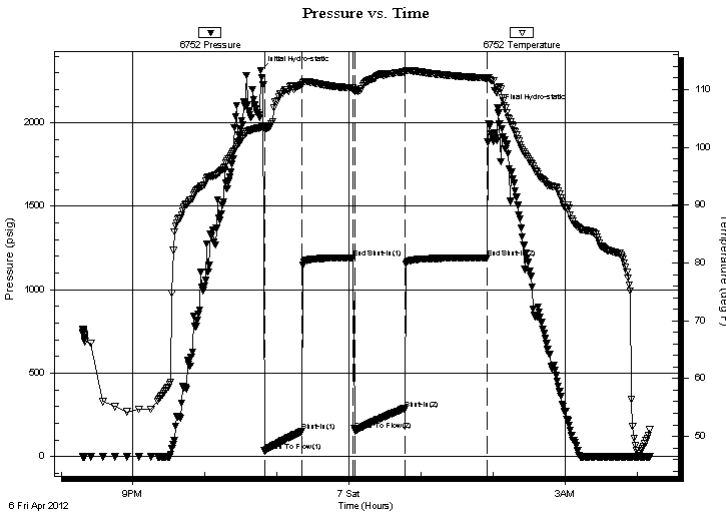
## Serial #: 6752

Inside

Press @ Run Depth: 285.13 psig @ 4263.60 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.04.06 End Date: 2012.04.07 Last Calib.: 2012.04.07  
 Start Time: 20:18:05 End Time: 04:10:29 Time On Btm: 2012.04.06 @ 22:46:30  
 Time Off Btm: 2012.04.07 @ 02:04:00

**TEST COMMENT:** IF: Fair blow , Built to B.O.B in 14 mins.  
 IS: Bled off for 2 mins. No blow back over 30 mins.  
 FF: Fair blow , Built to B.O.B in 16 mins.  
 FS: Bled off for 2 mins. No blow back over 60 mins.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2315.03	103.44	Initial Hydro-static
3	33.68	103.32	Open To Flow (1)
34	150.90	110.77	Shut-In(1)
77	1192.71	110.26	End Shut-In(1)
79	154.45	110.01	Open To Flow (2)
120	285.13	113.06	Shut-In(2)
189	1192.67	111.97	End Shut-In(2)
198	2088.39	109.90	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
372.00	w cm-20%w 80%m	5.22
372.00	w cm-10%w 90%m	5.22
310.00	mud-100%m	4.35

\* Recovery from multiple tests

## 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 Box 783188 Wichita Ks. 67278  
ATTN: Ted Jochems

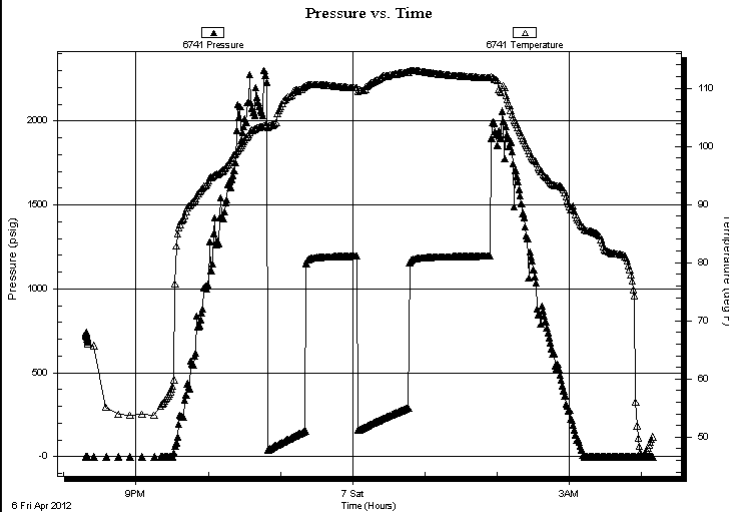
24 17s 35w Wichita Ks  
Noonan #1  
Job Ticket: 45599      **DST#: 3**  
Test Start: 2012.04.06 @ 20:18:00

### GENERAL INFORMATION:

Formation:	<b>LKC-H,I,J</b>		
Deviated:	No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)
Time Tool Opened:	22:49:30		Tester: Chuck Kreutzer Jr.
Time Test Ended:	04:10:30		Unit No: 61
<b>Interval:</b>	<b>4259.00 ft (KB) To 4355.00 ft (KB) (TVD)</b>		Reference Elevations: 3184.00 ft (KB)
Total Depth:	4355.00 ft (KB) (TVD)		3174.00 ft (CF)
Hole Diameter:	7.80 inches	Hole Condition: Good	KB to GR/CF: 10.00 ft

<b>Serial #: 6741</b>	<b>Outside</b>		
Press @ Run Depth:	psig @	4263.60 ft (KB)	Capacity: 8000.00 psig
Start Date:	2012.04.06	End Date: 2012.04.07	Last Calib.: 2012.04.07
Start Time:	20:18:05	End Time: 04:09:59	Time On Btm:
			Time Off Btm:

TEST COMMENT: IF: Fair blow , Built to B.O.B in 14 mins.  
IS: Bled off for 2 mins. No blow back over 30 mins.  
FF: Fair blow , Built to B.O.B in 16 mins.  
FS: Bled off for 2 mins. No blow back over 60 mins.



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
372.00	w cm-20%w 80%m	5.22
372.00	w cm-10%w 90%m	5.22
310.00	mud-100%m	4.35

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc.

**24 17s 35w Wichita Ks**

8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278

**Noonan #1**

Job Ticket: 45599

**DST#: 3**

ATTN: Ted Jochems

Test Start: 2012.04.06 @ 20:18:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

10000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.59 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
372.00	w cm-20%w 80%m	5.218
372.00	w cm-10%w 90%m	5.218
310.00	mud-100%m	4.348

Total Length: 1054.00 ft

Total Volume: 14.784 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6752

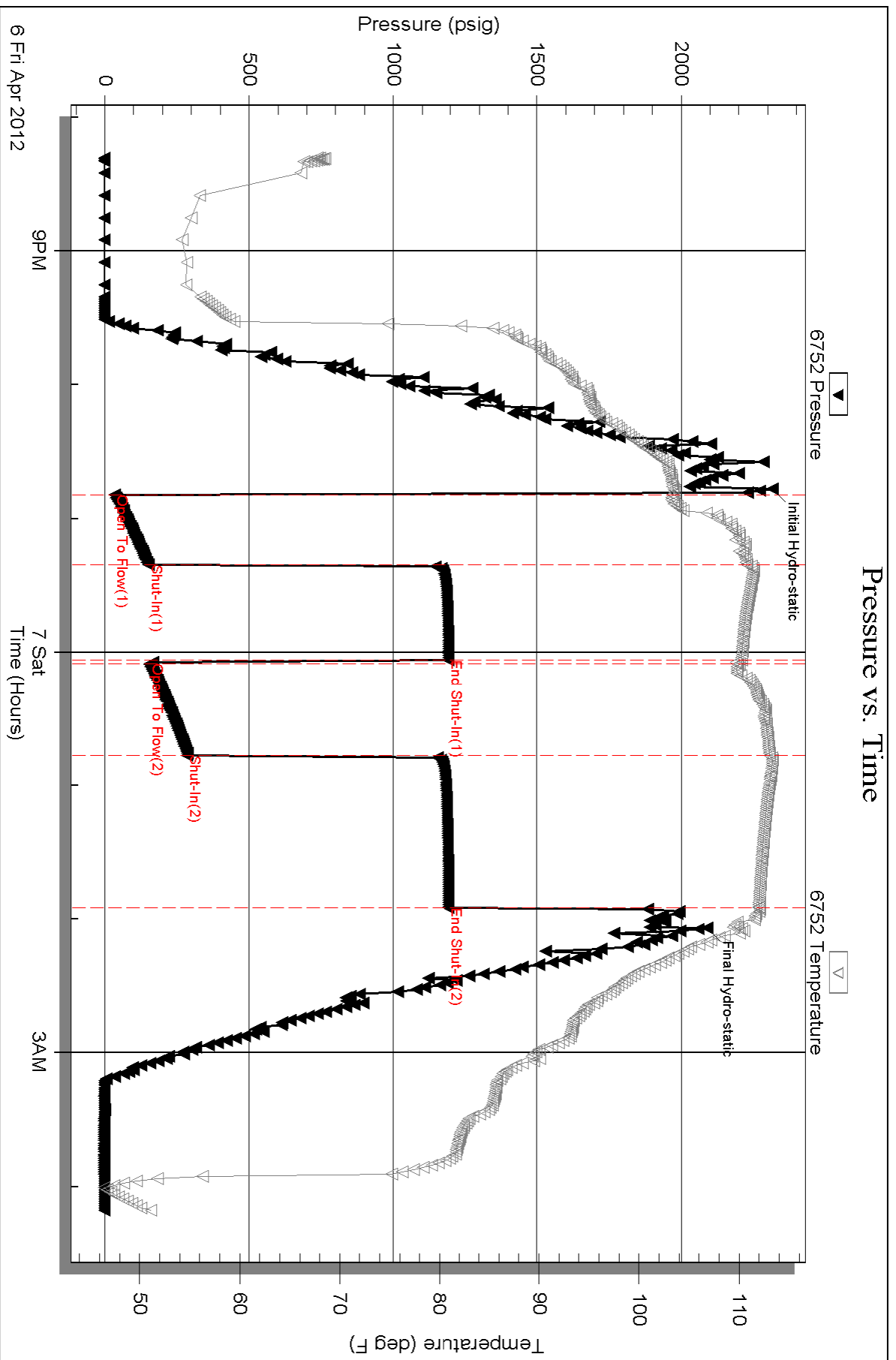
Inside

Ritchie Exploration Inc.

Noonan #1

DST Test Number: 3

# Pressure vs. Time



Triobite Testing, Inc

Ref. No: 45599

Printed: 2012.04.07 @ 10:37:06

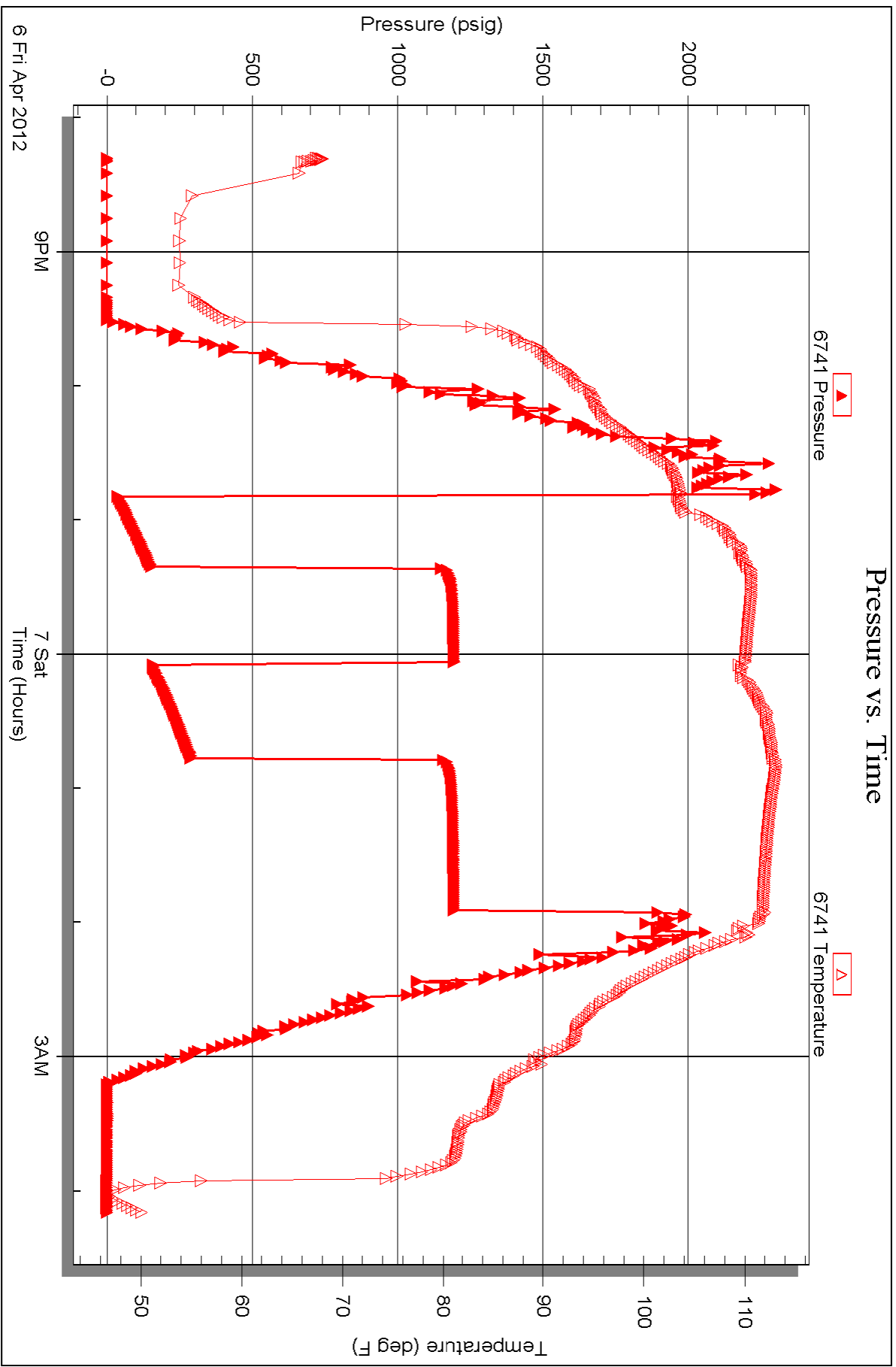
Serial #: 6741

Outside

Ritchie Exploration Inc.

Noonan #1

DST Test Number: 3





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
 8100 E. 22nd st. N.  
 #700 Box 783188 Wichita Ks. 67278  
 ATTN: Ted Jochems

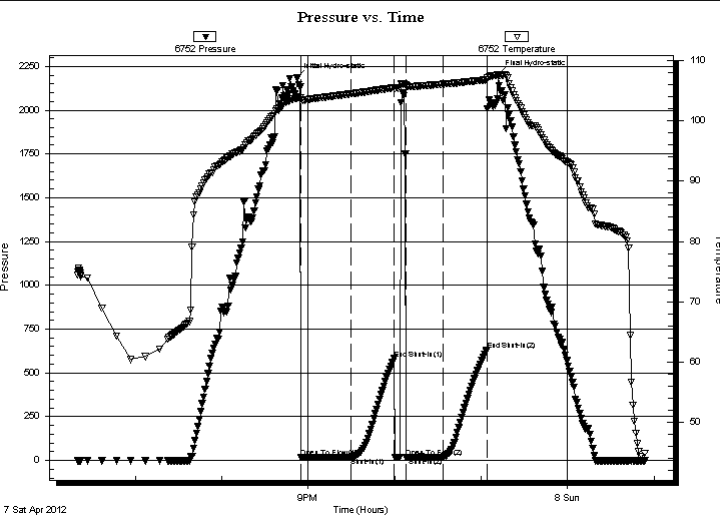
**24 17s 35w Wichita Ks**  
**Noonan #1**  
 Job Ticket: 45600      **DST#: 4**  
 Test Start: 2012.04.07 @ 18:20:00

## GENERAL INFORMATION:

Formation: **LKC-K,J**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 20:55:00  
 Tester: Chuck Kreuzer Jr.  
 Time Test Ended: 00:53:30  
 Unit No: 61  
 Interval: **4369.00 ft (KB) To 4435.00 ft (KB) (TVD)**  
 Reference Elevations: 3184.00 ft (KB)  
 Total Depth: 4435.00 ft (KB) (TVD)  
 3174.00 ft (CF)  
 Hole Diameter: 7.80 inches  
 Hole Condition: Good  
 KB to GR/CF: 10.00 ft

**Serial #: 6752      Inside**  
 Press @ Run Depth: 19.45 psig @ 4373.60 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.04.07      End Date: 2012.04.08      Last Calib.: 2012.04.08  
 Start Time: 18:20:05      End Time: 00:53:29      Time On Btm: 2012.04.07 @ 20:52:30  
 Time Off Btm: 2012.04.07 @ 23:12:00

**TEST COMMENT:** IF: Weak blow, Started at a 1/4 in. Started to die right away. Dead in 6 mins.  
 IS: No blow back over 30 mins.  
 FF: Flushed tool, No blow over 30 mins.  
 FS: No blow back over 30 mins.



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2184.08	103.78	Initial Hydro-static
3	16.57	103.27	Open To Flow (1)
37	18.97	104.47	Shut-In(1)
67	581.36	105.49	End Shut-In(1)
76	19.67	105.84	Open To Flow (2)
101	19.45	106.10	Shut-In(2)
132	631.76	106.81	End Shut-In(2)
140	2204.32	107.71	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
30.00	100% Mud w ith oil spots	0.42

\* Recovery from multiple tests

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc.

**24 17s 35w Wichita Ks**

8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278

**Noonan #1**

Job Ticket: 45600

**DST#: 4**

ATTN: Ted Jochems

Test Start: 2012.04.07 @ 18:20:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 66.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	100% Mud with oil spots	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

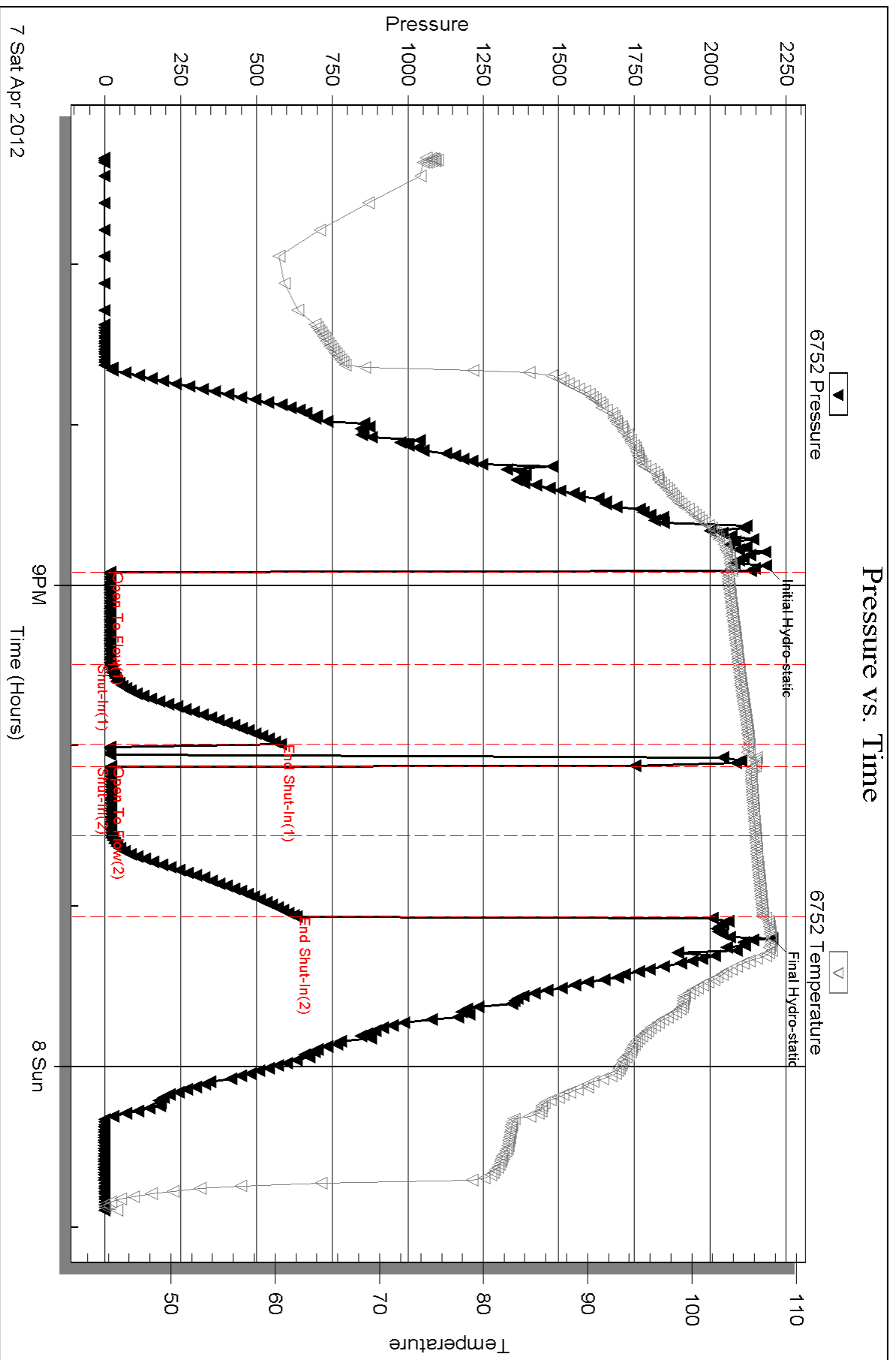
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278  
ATTN: Ted Jochems

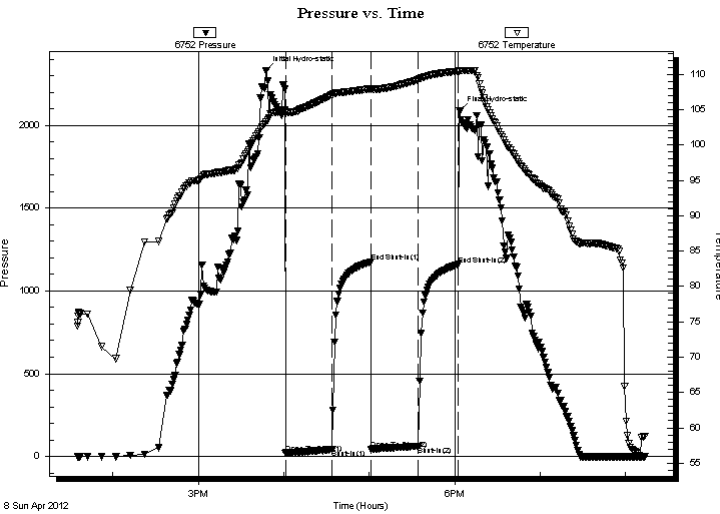
**24 17s 35w Wichita Ks**  
**Noonan #1**  
Job Ticket: 46051      **DST#: 5**  
Test Start: 2012.04.08 @ 13:35:00

## GENERAL INFORMATION:

Formation: **Pleasanton to Altamo**  
Deviated: No Whipstock: ft (KB)      Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 16:01:00      Tester: Chuck Kreuzer Jr.  
Time Test Ended: 20:14:00      Unit No: 61  
**Interval: 4457.00 ft (KB) To 4532.00 ft (KB) (TVD)**      Reference Elevations: 3184.00 ft (KB)  
Total Depth: 4532.00 ft (KB) (TVD)      3174.00 ft (CF)  
Hole Diameter: 7.80 inches      Hole Condition: Good      KB to GR/CF: 10.00 ft

**Serial #: 6752      Inside**  
Press @ Run Depth: 62.49 psig @ 4461.60 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.04.08      End Date: 2012.04.08      Last Calib.: 2012.04.08  
Start Time: 13:35:05      End Time: 20:13:59      Time On Btm: 2012.04.08 @ 15:47:30  
Time Off Btm: 2012.04.08 @ 18:03:30

**TEST COMMENT:** IF: Weak surface blow over 30 mins.  
IS: No blow back over 30 mins.  
FF: Weak surface blow over 30 mins.  
FS: No blow back over 30 mins.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2331.52	103.29	Initial Hydro-static
14	20.72	104.66	Open To Flow (1)
47	42.11	107.10	Shut-In(1)
74	1175.09	107.94	End Shut-In(1)
74	44.10	107.81	Open To Flow (2)
107	62.49	109.22	Shut-In(2)
135	1159.53	110.43	End Shut-In(2)
136	2085.94	110.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	mud w ith oil specs	0.42

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Ritchie Exploration Inc.

**24 17s 35w Wichita Ks**

8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278

**Noonan #1**

Job Ticket: 46051

**DST#: 5**

ATTN: Ted Jochems

Test Start: 2012.04.08 @ 13:35:00

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
30.00	mud w ith oil specs	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

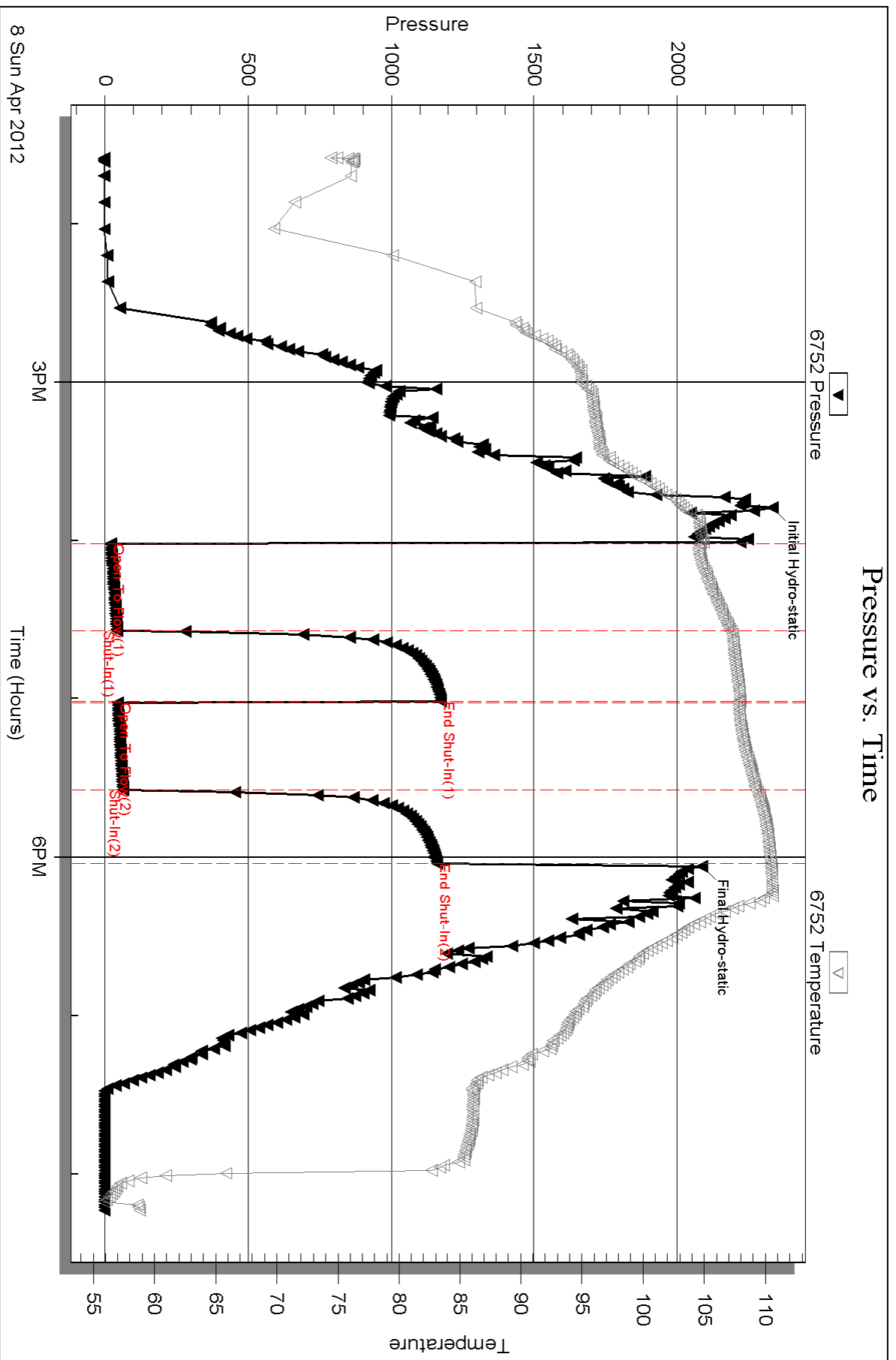
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278  
ATTN: Ted Jochems

**24 17s 35w Wichita Ks**  
**Noonan #1**  
Job Ticket: 45940      **DST#: 6**  
Test Start: 2012.04.09 @ 07:55:00

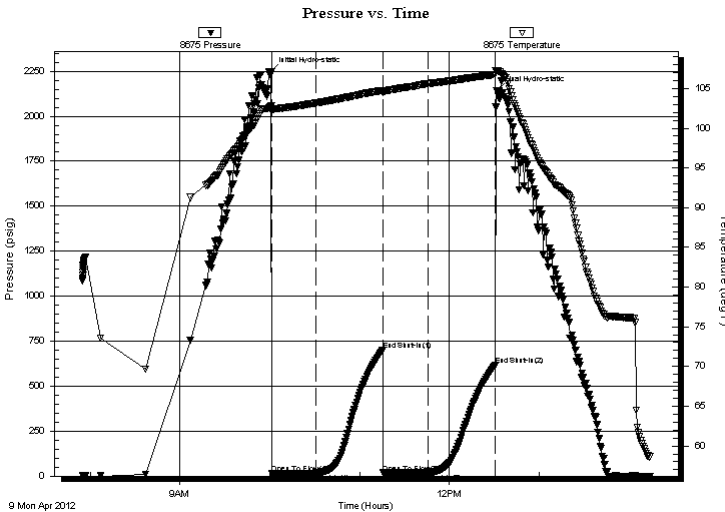
## GENERAL INFORMATION:

Formation: **Lower Altamont & Alt**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 10:01:15  
Time Test Ended: 14:14:15  
Interval: **4536.00 ft (KB) To 4565.00 ft (KB) (TVD)**  
Total Depth: 4565.00 ft (KB) (TVD)  
Hole Diameter: 7.80 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Jace McKinney  
Unit No: 46  
Reference Elevations: 3184.00 ft (KB)  
3174.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 8675      Inside**  
Press @ Run Depth: 17.87 psig @ 4537.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.04.09      End Date: 2012.04.09      Last Calib.: 2002.01.05  
Start Time: 07:55:01      End Time: 14:14:15      Time On Btm: 2012.04.09 @ 10:01:00  
Time Off Btm: 2012.04.09 @ 12:31:30

**TEST COMMENT:** Built to 1/4" blow  
No return blow  
Weak surface blow  
No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2249.52	102.76	Initial Hydro-static
1	15.75	102.12	Open To Flow (1)
30	16.95	103.16	Shut-In(1)
75	700.34	104.76	End Shut-In(1)
75	17.76	104.44	Open To Flow (2)
105	17.87	105.60	Shut-In(2)
150	615.58	106.75	End Shut-In(2)
151	2142.78	107.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	100% Mud w ith few oil spots	0.14

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc.

**24 17s 35w Wichita Ks**

8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278

**Noonan #1**

Job Ticket: 45940

**DST#: 6**

ATTN: Ted Jochems

Test Start: 2012.04.09 @ 07:55:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	100% Mud with few oil spots	0.140

Total Length: 10.00 ft      Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

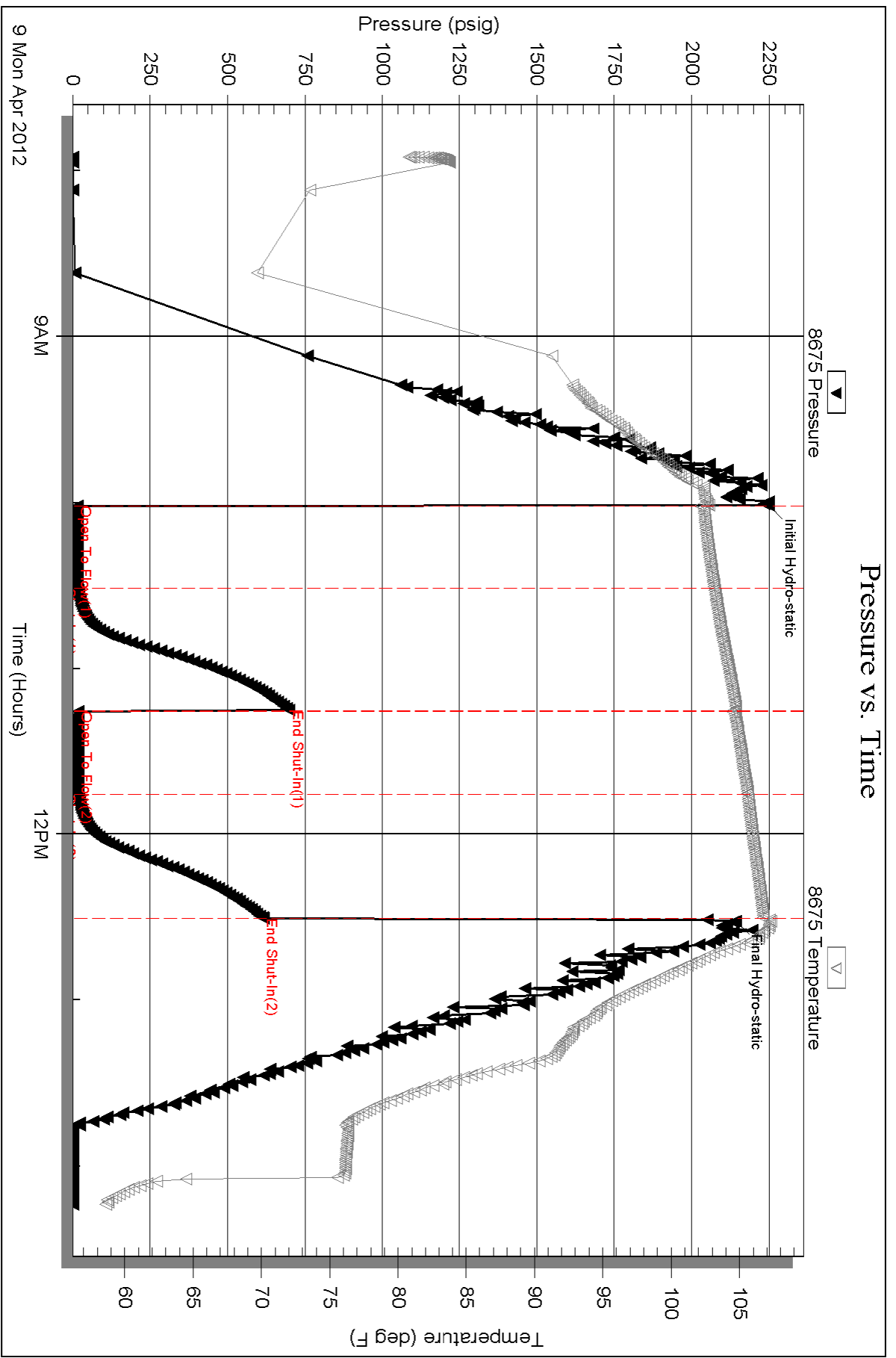
Serial #: 8675

Inside

Ritchie Exploration Inc.

Noonan #1

DST Test Number: 6





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278  
ATTN: Ted Jochems

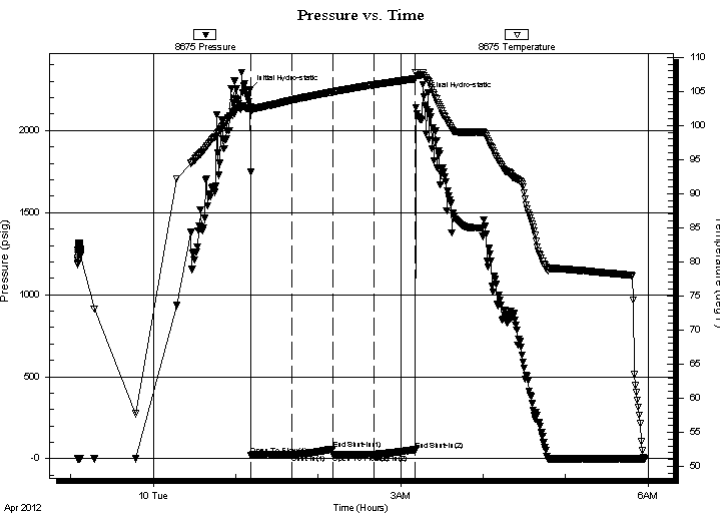
**24 17s 35w Wichita Ks**  
**Noonan #1**  
Job Ticket: 45941      **DST#: 7**  
Test Start: 2012.04.09 @ 23:05:00

## GENERAL INFORMATION:

Formation: **Altamont C Zone**  
Deviated: No    Whipstock:                      ft (KB)  
Time Tool Opened: 01:11:15  
Time Test Ended: 05:57:30  
Interval: **4569.00 ft (KB) To 4588.00 ft (KB) (TVD)**  
Total Depth: 4588.00 ft (KB) (TVD)  
Hole Diameter: 7.80 inches    Hole Condition: Good  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Jace McKinney  
Unit No: 46  
Reference Elevations: 3184.00 ft (KB)  
3174.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 8675      Inside**  
Press@RunDepth: 28.81 psig @ 4570.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.04.09      End Date: 2012.04.10      Last Calib.: 2002.01.06  
Start Time: 23:05:01      End Time: 05:57:30      Time On Btm: 2012.04.10 @ 01:10:00  
Time Off Btm: 2012.04.10 @ 03:17:00

**TEST COMMENT:** Weak surface blow . Died in 15 min.  
No return blow  
Flushed tool. No blow  
No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2249.24	102.57	Initial Hydro-static
2	23.16	102.02	Open To Flow (1)
31	25.99	103.70	Shut-In(1)
61	59.73	104.92	End Shut-In(1)
61	26.48	104.90	Open To Flow (2)
91	28.81	105.96	Shut-In(2)
121	55.14	106.84	End Shut-In(2)
127	2205.83	107.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	100% Mud	0.42

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc.

**24 17s 35w Wichita Ks**

8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278

**Noonan #1**

Job Ticket: 45941

**DST#: 7**

ATTN: Ted Jochems

Test Start: 2012.04.09 @ 23:05:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	100% Mud	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

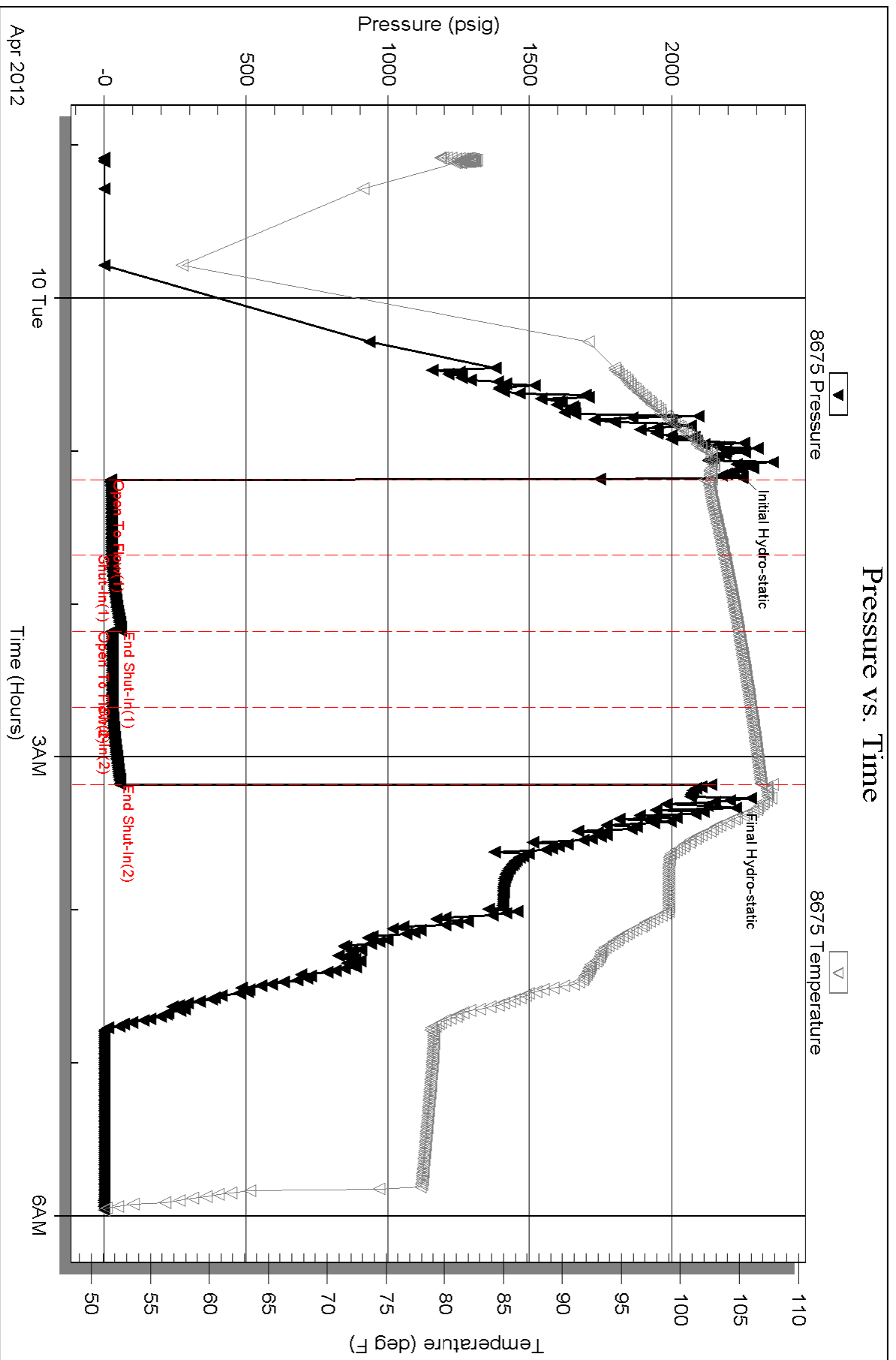
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time







**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
 8100 E. 22nd st. N.  
 #700 Box 783188 Wichita Ks. 67278  
 ATTN: Ted Jochems

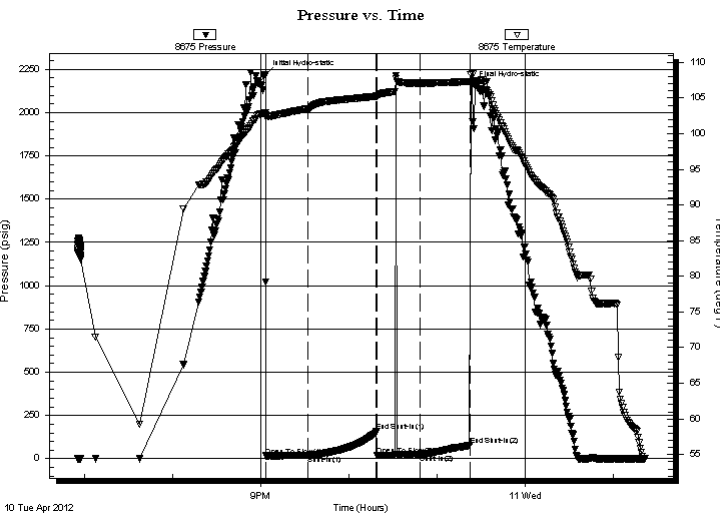
**24 17s 35w Wichita Ks**  
**Noonan #1**  
 Job Ticket: 45942      **DST#: 8**  
 Test Start: 2012.04.10 @ 18:55:00

## GENERAL INFORMATION:

Formation: **Pawnee-Myric Station**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 21:03:30  
 Time Test Ended: 01:21:15  
 Interval: **4592.00 ft (KB) To 4650.00 ft (KB) (TVD)**  
 Total Depth: 4650.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jace McKinney  
 Unit No: 46  
 Reference Elevations: 3184.00 ft (KB)  
 3174.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8675 Inside**  
 Press @ RunDepth: 24.76 psig @ 4593.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.04.10 End Date: 2012.04.11 Last Calib.: 2012.04.10  
 Start Time: 18:55:01 End Time: 01:21:15 Time On Btm: 2012.04.10 @ 21:03:00  
 Time Off Btm: 2012.04.10 @ 23:23:45

**TEST COMMENT:** Built to 3/4" blow  
 No return blow  
 Flushed tool. Weak surface blow  
 No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2219.71	102.95	Initial Hydro-static
1	16.75	102.37	Open To Flow (1)
29	19.39	103.45	Shut-In(1)
76	156.37	105.25	End Shut-In(1)
76	22.18	105.17	Open To Flow (2)
105	24.76	107.07	Shut-In(2)
140	76.99	107.33	End Shut-In(2)
141	2158.00	108.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	100% Mud w ith oil scum	0.35
1.00	Free Oil	0.01

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Ritchie Exploration Inc.

**24 17s 35w Wichita Ks**

8100 E. 22nd st. N.  
#700 Box 783188 Wichita Ks. 67278

**Noonan #1**

Job Ticket: 45942

**DST#: 8**

ATTN: Ted Jochems

Test Start: 2012.04.10 @ 18:55:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 70.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.58 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 9600.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
25.00	100% Mud w ith oil scum	0.351
1.00	Free Oil	0.014

Total Length: 26.00 ft      Total Volume: 0.365 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8675

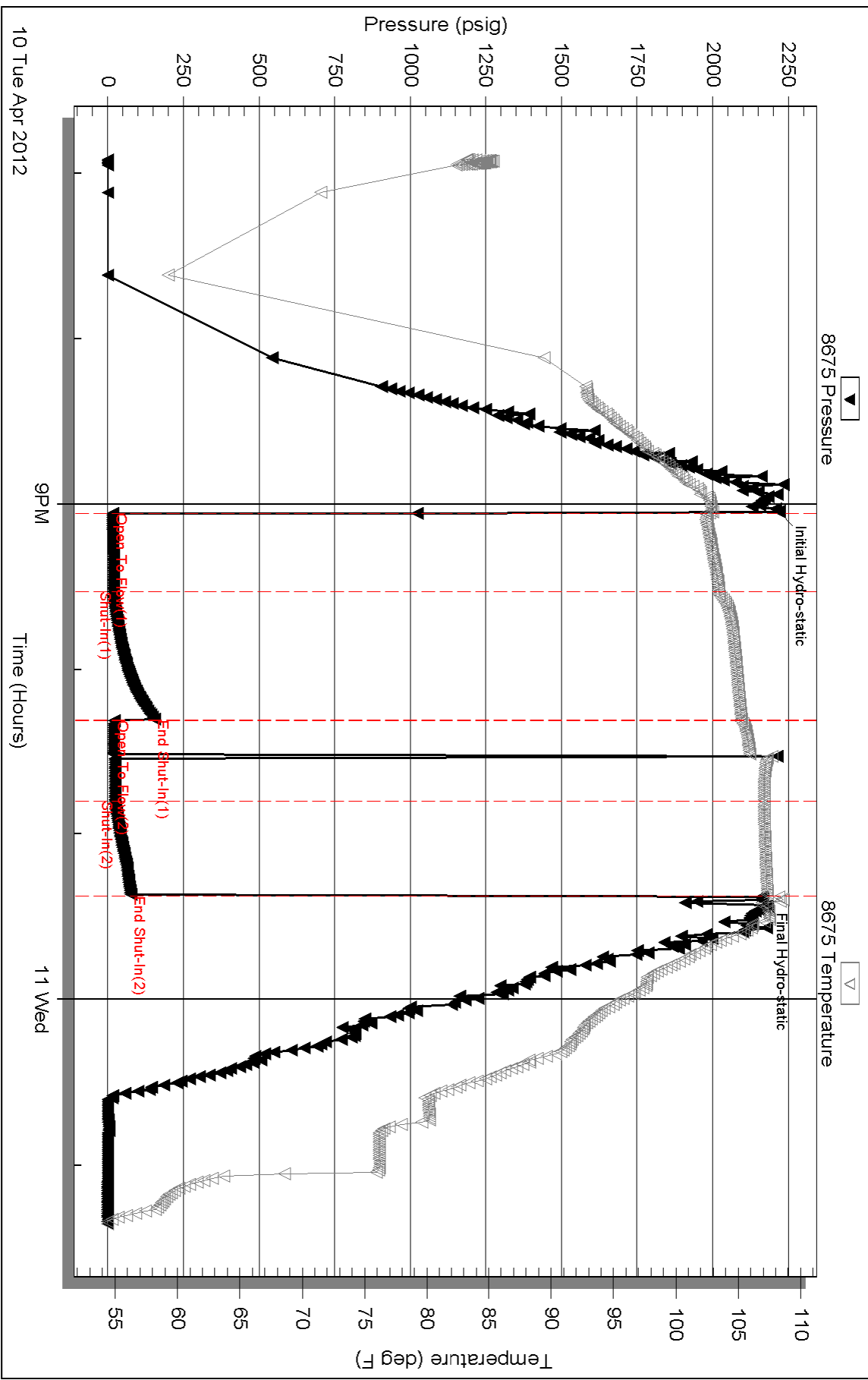
Inside

Ritchie Exploration Inc.

Noonan #1

DST Test Number: 8

# Pressure vs. Time



Triobite Testing, Inc

Ref. No: 45942

Printed: 2012.04.12 @ 13:32:12