

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1
June 2009

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

CONFIDENTIAL WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

3/9/13

OPERATOR: License # 4767
Name: Ritchie Exploration, Inc.
Address 1: P.O. Box 783188
Address 2: _____
City: Wichita State: KS Zip: 67278 + 3188
Contact Person: John Niernberger
Phone: (316) 691-9500
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Pat Deenihan
Purchaser: _____
Designate Type of Completion:

KCC
MAR 13 2011
CONFIDENTIAL

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

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

Operator: _____
Well Name: _____
Original Comp. Date: _____ Original Total Depth: _____
 Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____

12/9/10	12/20/10	12/20/10
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 057-20709-00-00
Spot Description: 116' N & 50' E
NW SW NE _____ Sec. 33 Twp. 25 S. R. 22 East West
1,534 Feet from North / South Line of Section
2,260 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Ford
Lease Name: Knoeber Trust Well #: 1
Field Name: _____
Producing Formation: _____
Elevation: Ground: 2430 Kelly Bushing: 2442
Total Depth: 4910 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: 22000 ppm Fluid volume: 700 bbls
Dewatering method used: evaporation
Location of fluid disposal if hauled offsite: _____
Operator Name: _____
Lease Name: _____ License #: _____
Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
County: _____ Permit #: _____

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

AFFIDAVIT

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

Signature: _____
Title: Production Manager Date: 3/9/11

KCC Office Use ONLY

Letter of Confidentiality Received
Date: 3/9/11 - 3/9/13 **RECEIVED**
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: 1/1 KCC WICHITA Date: 3-10-11

Operator Name: Ritchie Exploration, Inc. Lease Name: Knoeber Trust Well #: 1
 Sec. 33 Twp. 25 S. R. 22 East West County: Ford

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

Drill Stem Tests Taken <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: Dual Induction Log Compensated Neutron/Density Log	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample Name Top Datum SEE ATTACHED <div style="text-align: center;"> KCC MAR 13 2011 CONFIDENTIAL </div>
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CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4"	8-5/8"	24#	315'	common	230	3%cc, 2% gel

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				

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

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date of First, Resumed Production, SWD or ENHR. _____		Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> 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 (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

RECEIVED
MAR 10 2011
KCC WICHITA



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MAR 13 2011
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#1 Knoeber Trust
1534' FNL & 2260' FEL
116' N & 50' E of NW SW NE Section 33-25S-22W
Ford County, Kansas
API# 15-057-20709-0000
Elevation: GL: 2430', KB: 2442'

DRILLING REPORT

Sample Tops

Anhydrite	1515'	+927
B/Anhydrite	1545'	+897
Wabaunsee	3461'	-1019
Heebner	4076'	-1634
Lansing	4189'	-1747
Lansing "C"	4222'	-1780
Muncie Shale	4365'	-1923
Stark Shale	4462'	-2020
Hush.	4523'	-2081
Lansing "L"	4536'	-2094
BKC	4560'	-2118
Altamont	4609'	-2167
Pawnee	4691'	-2249
Fort Scott	4723'	-2281
Cherokee Shale	4742'	-2300
Lower Cher. Shale	4776'	-2334
Atoka	4821'	-2379
Morrow	4838'	-2396
Mississippian	4846'	-2404
RTD	4910'	-2468

RECEIVED
MAR 10 2011
KCC WICHITA

ALLIED CEMENTING CO., LLC. 34196

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

SERVICE POINT: 2 frea Bend

DATE <u>12-9-10</u>	SEC <u>23</u>	TWP. <u>23E</u>	RANGE <u>22W</u>	CALLED OUT <u>5:00pm</u>	ON LOCATION <u>10:28am</u>	JOB START <u>11:28am</u>	JOB FINISH <u>1:00pm</u>
LEASER <u>Knobler</u>	WELL# <u>1</u>	LOCATION <u>Sperville Ks. 1 East To</u>			COUNTY <u>Ford</u>	STATE <u>KS</u>	
OLD OR NEW <u>(Circle one)</u>		RD 127 1/2 S 1/2 west S1/4					

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MAR 13 2011
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CONTRACTOR Duke Drilling Rig

TYPE OF JOB 318#

HOLE SIZE 12 1/8" T.D. 3/8"

CASING SIZE 8 7/8" DEPTH 3/8"

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 18#

PERFS. _____

DISPLACEMENT 19 bbl

OWNER Ritchie Expl.

CEMENT AMOUNT ORDERED 2.30 ok Com 38cc 28 gal

EQUIPMENT

PUMP TRUCK CEMENTER Mike m

181 HELPER Bill

BULK TRUCK # 244-112 DRIVER Kevin w

BULK TRUCK # _____ DRIVER _____

COMMON	<u>230</u>	@	<u>15.45</u>	<u>3.555.00</u>
POZMIX		@		
GEL	<u>4</u>	@	<u>20.80</u>	<u>83.20</u>
CHLORIDE	<u>8</u>	@	<u>58.80</u>	<u>470.40</u>
ASC		@		
HANDLING	<u>230</u>	@	<u>2.40</u>	<u>552.00</u>
MILEAGE	<u>230 x 45 x .10</u>			<u>1035.00</u>
TOTAL				<u>5489.20</u>

REMARKS:

Big make short trip out back in hole
Came out + run 8 7/8 P.P. in hole
Circulate hole + mix cement
Displace it down to foot
Cement did circulate to
surface

Thank
you
3/5

CHARGE TO: Ritchie Exploration Inc

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB	<u>318#</u>			
PUMP TRUCK CHARGE				<u>1018.00</u>
EXTRA FOOTAGE		@		
MILEAGE	<u>45</u>	@	<u>7.00</u>	<u>315.00</u>
MANIFOLD		@		
TOTAL				<u>1333.00</u>

PLUG & FLOAT EQUIPMENT

1-8 7/8 Wooden Plug	<u>53.00</u>			
		@		
		@		
		@		
		@		
		@		
TOTAL				<u>53.00</u>

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

PRINTED NAME Mike Godfrey

SIGNATURE Mike Godfrey

SALES TAX (If Any) _____

TOTAL CHARGES 1333.00

DISCOUNT _____ IF PAID IN 30 DAYS

RECEIVED
MAR 10 2011
KCC WICHITA

ALLIED CEMENTING CO., LLC. 038628

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

SERVICE POINT

enb

DATE <u>12-20-10</u>	SEC. <u>33</u>	TWP. <u>25</u>	RANGE <u>28 W</u>	CALLED OUT <u>7 AM</u>	ON LOCATION <u>7 AM</u>	JOB START <u>9 AM</u>	JOB FINISH <u>11 AM</u>
LEASE <u>Knobber Trust</u>	WELL # <u>#1</u>	LOCATION <u>Spokane 1E 1/2 S 1/2 W S15</u>			COUNTY <u>Ford</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one)							

CONTRACTOR Duke Drilling Rig 1

TYPE OF JOB Rotary Plug

HOLE SIZE 7 7/8 T.D. 4910 ft

CASING SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE 1 1/2 DEPTH 1530 ft

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT _____

OWNER _____

CEMENT AMOUNT ORDERED	<u>250 60 40 40 1/2 Flo</u>		
COMMON	<u>150</u>	@ <u>15.45</u>	<u>2317.50</u>
POZMIX	<u>100</u>	@ <u>8.00</u>	<u>800.00</u>
GEL	<u>9</u>	@ <u>20.80</u>	<u>187.20</u>
CHLORIDE		@	
ASC		@	
<u>Flow Seal</u>	<u>62#</u>	@ <u>2.50</u>	<u>155.00</u>
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>250</u>	@ <u>2.40</u>	<u>600.00</u>
MILEAGE	<u>250 x .45 x .10</u>		<u>1125.00</u>
TOTAL			<u>5184.20</u>

EQUIPMENT

PUMP TRUCK CEMENTER M. K.

181 HELPER Mary

BULK TRUCK

344-172 DRIVER Kevin W

BULK TRUCK

_____ DRIVER _____

REMARKS:

mix 50 ft at 1530 ft

mix 80 ft at 900 ft

mix 50 ft at 345 ft

mix 30 ft at 160 ft

mix 30 ft at 5 ft

mix 20 ft at mouse hole

SERVICE

DEPTH OF JOB	<u>1530 ft</u>		
PUMP TRUCK CHARGE	<u>1017.00</u>		
EXTRA FOOTAGE		@	
MILEAGE	<u>45</u>	@ <u>7.00</u>	<u>315.00</u>
MANIFOLD		@	
		@	
		@	
TOTAL			<u>1332.00</u>

CHARGE TO: Ritchie Exploration

STREET _____

CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

		@	
		@	
		@	
		@	
		@	
TOTAL			

To Allied Cementing Co., LLC.

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

SALES TAX (If Any) _____

PRINTED NAME Mike Godfrey TOTAL CHARGES 1332.00

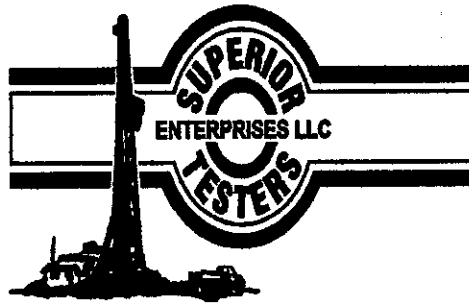
DISCOUNT _____ IF PAID IN 30 DAYS _____

SIGNATURE Mike Godfrey

KCC
MAR 13 2011
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RECEIVED
MAR 10 2011
KCC WICHITA

R



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 P.O.Box
783188
Wichita, Kansas 67278

ATTN: Pat Deenihan

35/25S/22W Ford

Knoeber Trust #1

Start Date: 2010.12.16 @ 08:14:00

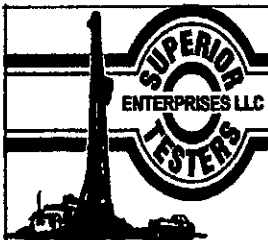
End Date: 2010.12.16 @ 13:58:00

Job Ticket #: 15723 DST #: 1

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2010.12.20 @ 12:58:32

Ritchie Exploration Inc. Knoeber Trust #1 35/25S/22W Ford DST # 1 Altamont 2010.12.16



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 15723

DST#: 1

ATTN: Pat Deenihan

Test Start: 2010.12.16 @ 08:14:00

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:16:30

Time Test Ended: 13:58:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/155/Great Bend

Interval: **4589.00 ft (KB) To 4674.00 ft (KB) (TVD)**

Reference Elevations: 2442.00 ft (KB)

Total Depth: 4674.00 ft (KB) (TVD)

2430.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 12.00 ft

Serial #: 8400 Outside

Press@RunDepth: 78.29 psia @ 4670.20 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.12.16

End Date:

2010.12.16

Last Calib.:

2010.12.16

Start Time: 08:15:00

End Time:

13:58:00

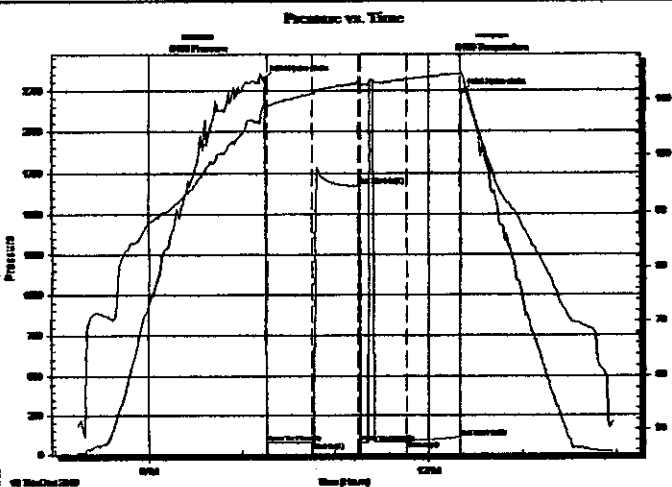
Time On Btm:

2010.12.16 @ 10:15:00

Time Off Btm:

2010.12.16 @ 12:21:00

TEST COMMENT: 1ST Opening 30 Minutes very weak surface blow/blow died in 18 minutes
1ST Shut-in 30 Minutes no blow back
2ND Opening 30 Minutes blow dead/flushed tool/12 bubbles than dead
2ND Shut-in 30 Minutes no blow back



PRESSURE SUMMARY

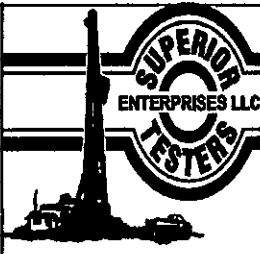
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2316.98	109.24	Initial Hydro-static
2	71.94	108.98	Open To Flow (1)
31	73.07	111.21	Shut-in(1)
60	1670.95	113.06	End Shut-in(1)
62	75.81	112.70	Open To Flow (2)
91	78.29	113.75	Shut-in(2)
125	108.92	114.75	End Shut-in(2)
126	2228.71	114.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	0.21

Gas Rates

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



DRILL STEM TEST REPORT

Richie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 15723

DST#: 1

ATTN: Pat Deenihan

Test Start: 2010.12.16 @ 08:14:00

GENERAL INFORMATION:

Formation: **Altamont**

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

Time Tool Opened: 10:16:30

Time Test Ended: 13:58:00

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Dylan E Blis**

Unit No: **3345/155/Great Bend**

Interval: **4589.00 ft (KB) To 4674.00 ft (KB) (TVD)**

Total Depth: **4674.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2442.00 ft (KB)**

2430.00 ft (CF)

KB to GR/CF: **12.00 ft**

Serial #: 330

Inside

Press@RunDepth: **110.31 psia @ 4669.20 ft (KB)**

Start Date: **2010.12.16**

End Date:

2010.12.16

Start Time: **08:15:25**

End Time:

14:04:55

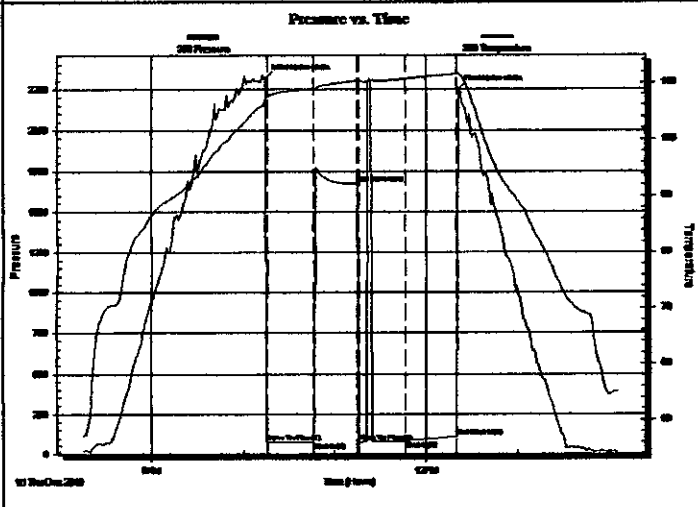
Capacity: **5000.00 psia**

Last Calib.: **2010.12.16**

Time On Btm: **2010.12.16 @ 10:14:55**

Time Off Btm: **2010.12.16 @ 12:20:55**

TEST COMMENT: 1ST Opening 30 Minutes very weak surface blow /blow died in 18 minutes
 1ST Shut-in 30 Minutes no blow back
 2ND Opening 30 Minutes blow dead/flushed tool/12 bubbles than dead
 2ND Shut-in 30 Minutes no blow back



PRESSURE SUMMARY

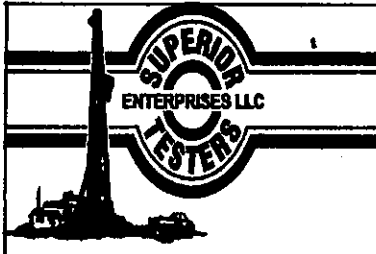
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2314.99	106.91	Initial Hydro-static
2	72.27	107.50	Open To Flow (1)
32	73.77	108.92	Shut-in(1)
60	1671.22	110.25	End Shut-in(1)
61	75.35	110.27	Open To Flow (2)
92	79.39	110.65	Shut-in(2)
125	110.31	111.60	End Shut-in(2)
126	2247.83	111.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud 100%	0.21

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Fitchie Exploration Inc.
 8100 East 22ND Street North 700 P.O.Box 783188
 Wichita, Kansas 67278
 ATTN: Pat Deenihan

Knoeber Trust #1
 35/25S/22W Ford
 Job Ticket: 15723 DST#: 1
 Test Start: 2010.12.16 @ 08:14:00

Tool Information

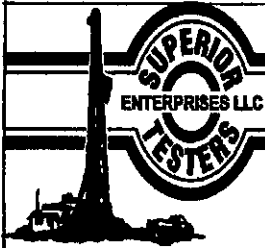
Drill Pipe:	Length: 4565.00 ft	Diameter: 3.80 inches	Volume: 64.03 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 8000.00 lb
			Total Volume: 64.03 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4589.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	84.20 ft			
Tool Length:	113.20 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			4561.00	
Shut-In Tool	5.00			4566.00	
Hydraulic Tool	5.00			4571.00	
Jars	6.00			4577.00	
Safety Joint	2.00			4579.00	
Packer	5.00			4584.00	29.00 Bottom Of Top Packer
Packer	5.00			4589.00	
Perforations	5.00			4594.00	
Change Over Sub	0.75			4594.75	
Drill Pipe	59.70			4654.45	
Change Over Sub	0.75			4655.20	
Perforations	13.00			4668.20	
Recorder	1.00	330	Inside	4669.20	
Recorder	1.00	8400	Outside	4670.20	
Bullnose	3.00			4673.20	84.20 Bottom Packers & Anchor

Total Tool Length: 113.20



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 15723

DST#: 1

ATTN: Pat Deenihan

Test Start: 2010.12.16 @ 08:14:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 7.98 in³
Resistivity: ohm.m
Salinity: 2400.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Mud 100%	0.210

Total Length: 15.00 ft Total Volume: 0.210 bbl

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

Laboratory Name: Laboratory Location:

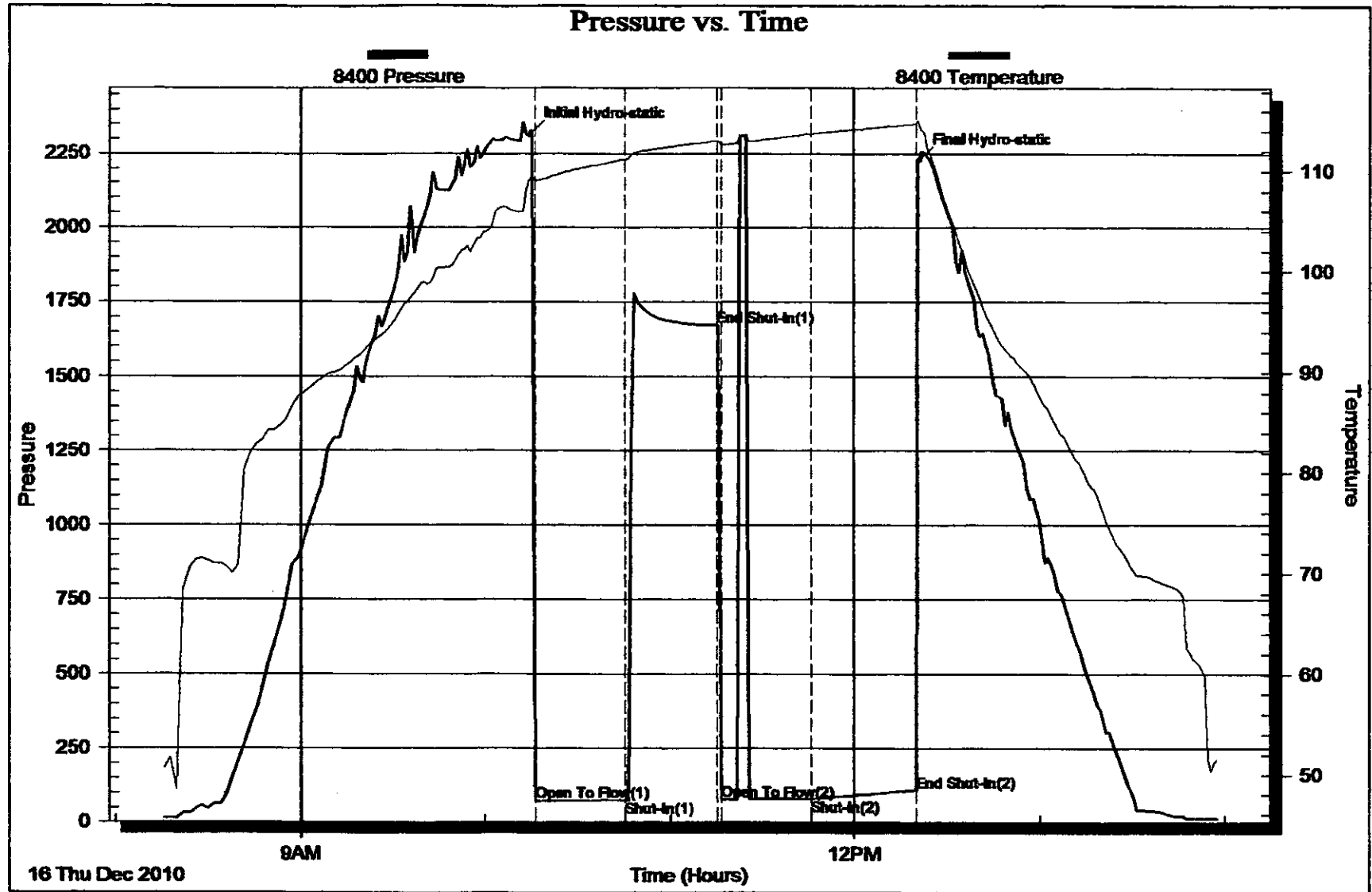
Recovery Comments:

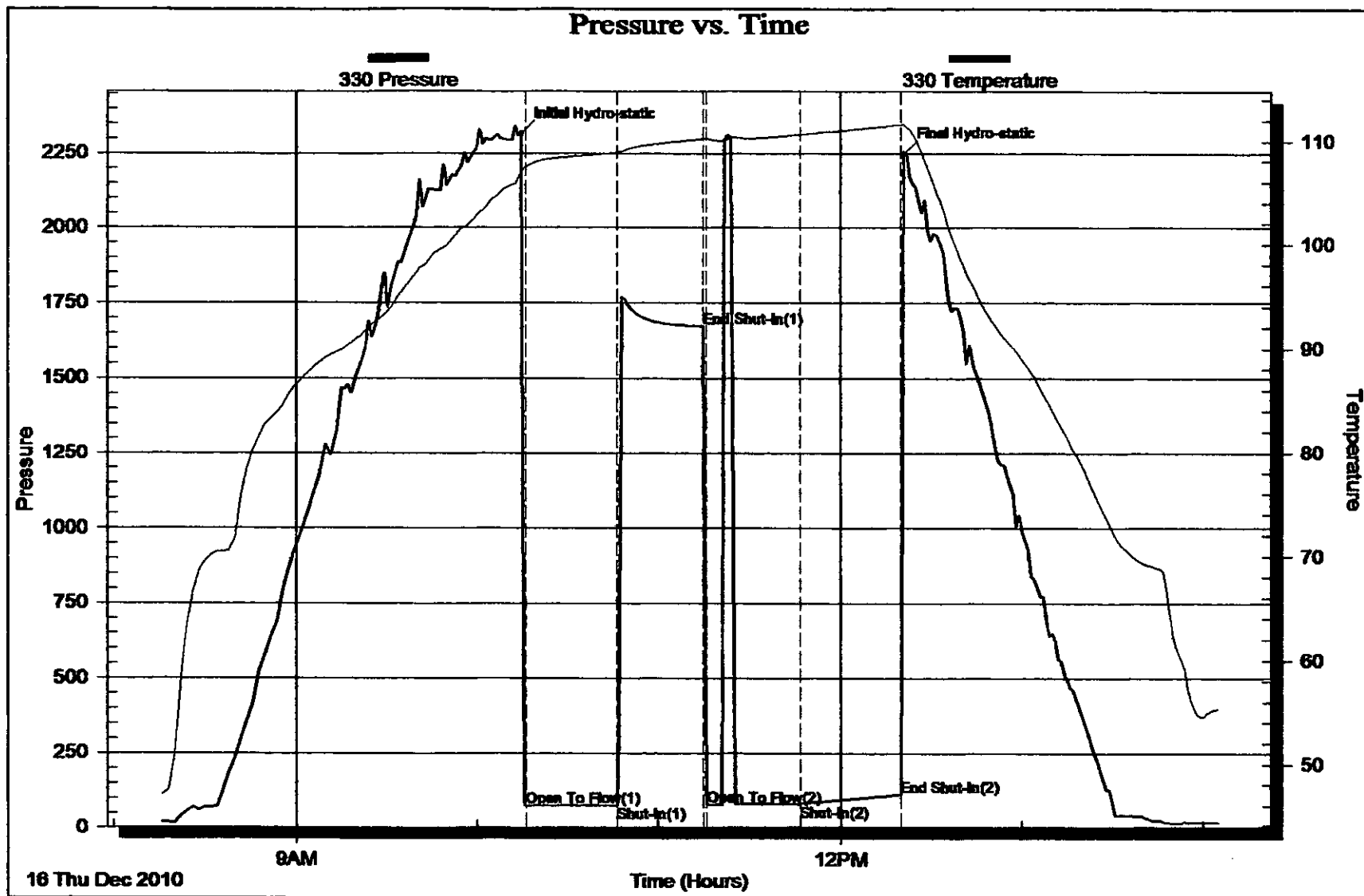
Serial #: 8400

Outside Ritchie Exploration Inc.

35/25S22W Ford

DST Test Number: 1







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 P.O.Box
783188
Wichita, Kansas 67278

ATTN: Pat Deenihan

35/25S/22W Ford

Knoeber Trust #1

Start Date: 2010.12.17 @ 02:45:00

End Date: 2010.12.17 @ 09:34:30

Job Ticket #: 15724 DST #: 2

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2010.12.20 @ 12:57:08

Ritchie Exploration Inc.

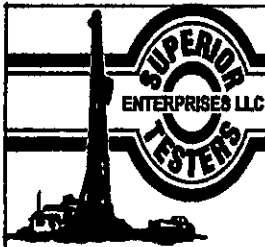
Knoeber Trust #1

35/25S/22W Ford

DST # 2

Altamont/Pawnee

2010.12.17



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 15724

DST#: 2

ATTN: Pat Deenihan

Test Start: 2010.12.17 @ 02:45:00

GENERAL INFORMATION:

Formation: Altamont/Pawnee

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:40:30

Time Test Ended: 09:34:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/155/Great Bend

Interval: 4637.00 ft (KB) To 4710.00 ft (KB) (TVD)

Total Depth: 4710.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2442.00 ft (KB)

2430.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 8400

Outside

Press@RunDepth: 85.43 psia @ 4706.35 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.12.17

End Date:

2010.12.17

Last Calib.: 2010.12.17

Start Time: 02:46:00

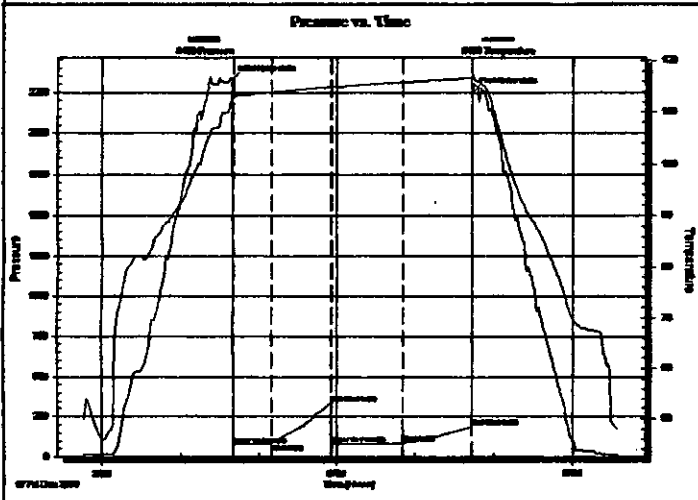
End Time:

09:34:30

Time On Btrr: 2010.12.17 @ 04:39:00

Time Off Btrr: 2010.12.17 @ 07:44:00

TEST COMMENT: 1ST Opening 30 Minutes fair blow/blow built to about 2 inches into the bucket of water
 1ST Shut-in 45 Minutes no blow back
 2ND Opening 45 Minutes dead all the way through out opening
 2ND Shut-in 60 Minutes no blow back



PRESSURE SUMMARY

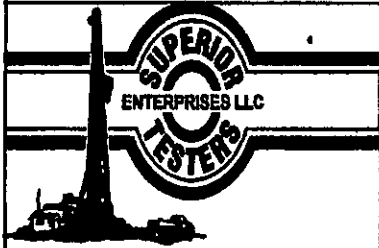
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2330.16	112.58	Initial Hydro-static
2	76.97	112.83	Open To Flow (1)
32	79.45	113.82	Shut-in(1)
77	336.33	114.86	End Shut-in(1)
78	79.88	114.80	Open To Flow (2)
132	85.43	115.75	Shut-in(2)
184	189.65	116.58	End Shut-in(2)
185	2250.82	117.05	Final Hydro-static

Recovery

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

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.
 8100 East 22ND Street North 700 P.O.Box 783188
 Wichita, Kansas 67278
 ATTN: Pat Deenihan

Knoeber Trust #1
 35/25S/22W Ford
 Job Ticket: 15724 DST#: 2
 Test Start: 2010.12.17 @ 02:45:00

Tool Information

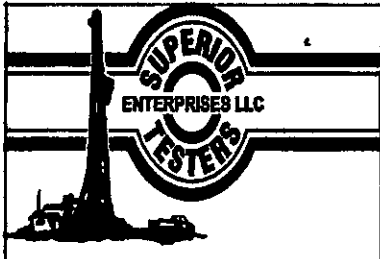
Drill Pipe:	Length: 4619.00 ft	Diameter: 3.80 inches	Volume: 64.79 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 35000.00 lb
			Total Volume: 64.79 bbl	Tool Chased 8.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 51000.00 lb
Depth to Top Packer:	4637.00 ft			Final 51000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	72.35 ft			
Tool Length:	101.35 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			4609.00	
Shut-in Tool	5.00			4614.00	
Hydraulic Tool	5.00			4619.00	
Jars	6.00			4625.00	
Safety Joint	2.00			4627.00	
Packer	5.00			4632.00	29.00 Bottom Of Top Packer
Packer	5.00			4637.00	
Perforations	5.00			4642.00	
Change Over Sub	0.75			4642.75	
Drill Pipe	31.85			4674.60	
Change Over Sub	0.75			4675.35	
Perforations	29.00			4704.35	
Recorder	1.00	330	Inside	4705.35	
Recorder	1.00	8400	Outside	4706.35	
Bullhose	3.00			4709.35	72.35 Bottom Packers & Anchor

Total Tool Length: 101.35



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 15724

DST#: 2

ATTN: Pat Deenihan

Test Start: 2010.12.17 @ 02:45:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3100.00 ppm			
Filter Cake: 1.00 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:

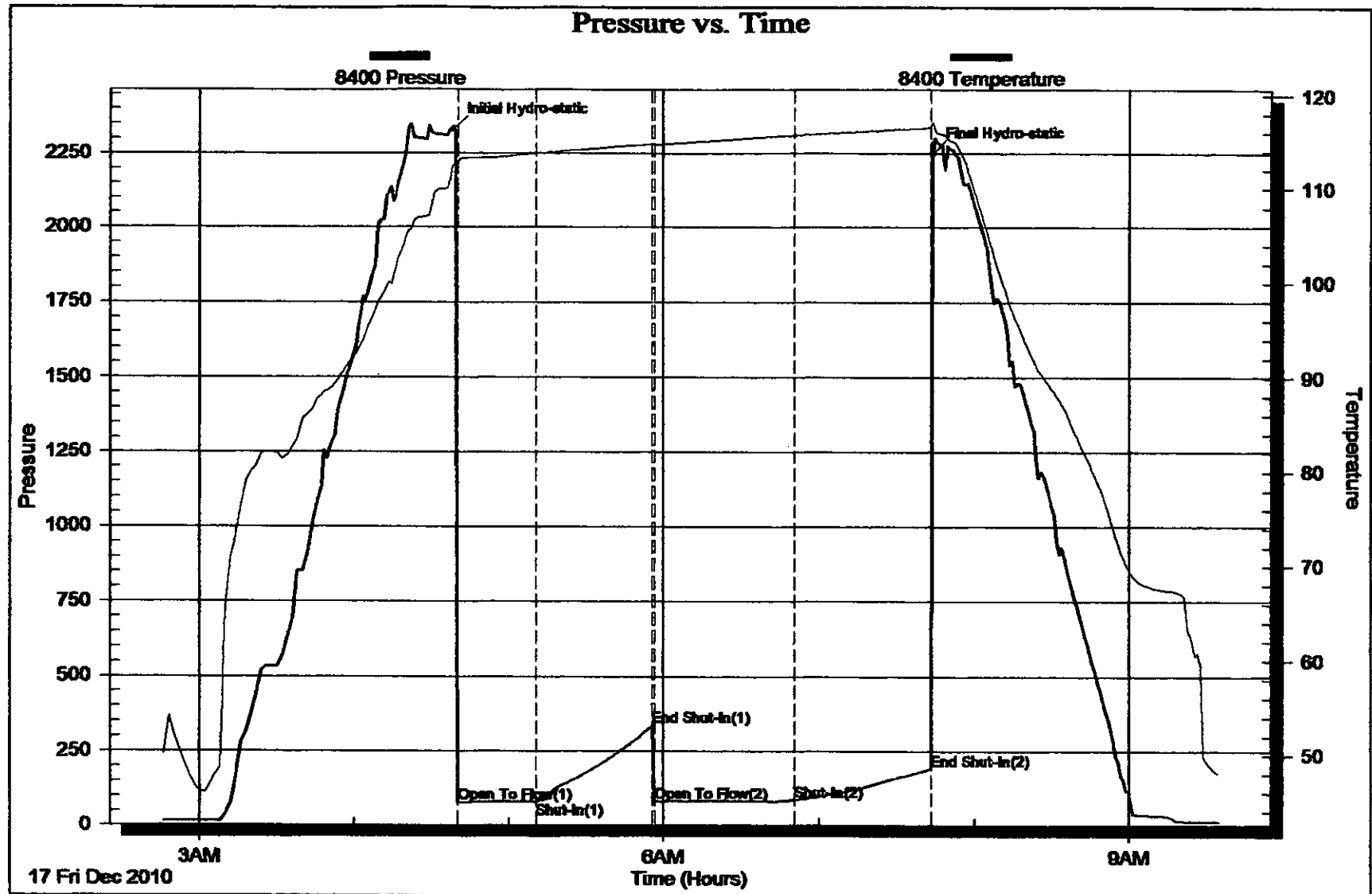
Recovery Comments:

Serial #: 8400

Outside Ritchie Exploration Inc.

35/25S/22W Ford

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 P.O.Box
783188
Wichita, Kansas 67278

ATTN: Pat Deenihan

35/25S/22W Ford

Knoeber Trust #1

Start Date: 2010.12.18 @ 01:41:00

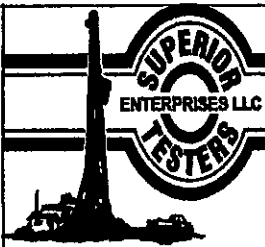
End Date: 2010.12.18 @ 08:41:00

Job Ticket #: 15725 DST #: 3

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2010.12.20 @ 13:26:00

Ritchie Exploration Inc. Knoeber Trust #1 35/25S/22W Ford DST # 3 Lower Cherokee 2010.12.18



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 15725

DST#: 3

ATTN: Pat Deenihan

Test Start: 2010.12.18 @ 01:41:00

GENERAL INFORMATION:

Formation: Lower Cherokee

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:57:30

Time Test Ended: 08:41:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/155/Great Bend

Interval: 4772.00 ft (KB) To 4828.00 ft (KB) (TVD)

Total Depth: 4828.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2442.00 ft (KB)

2430.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 8400

Outside

Press@RunDepth: 58.98 psia @ 4824.60 ft (KB)

Start Date: 2010.12.18

End Date:

2010.12.18

Capacity:

5000.00 psia

Start Time: 01:42:00

End Time:

08:41:00

Last Calib.:

2010.12.18

Time On Btm:

2010.12.18 @ 03:58:00

Time Off Btm:

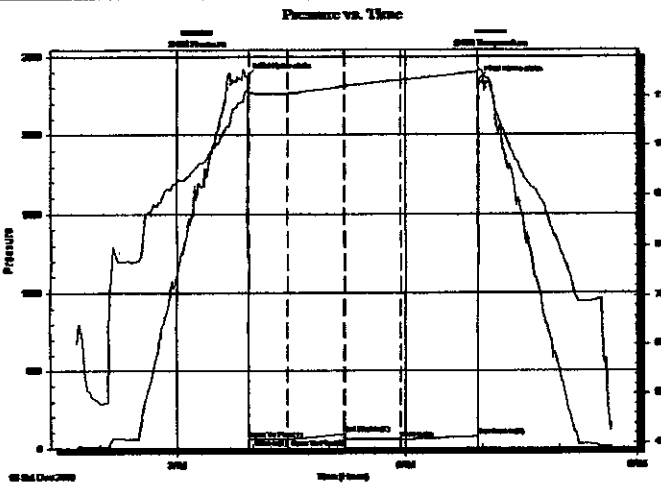
2010.12.18 @ 06:57:00

TEST COMMENT: 1ST Opening 30 Minutes very weak surface blow /blow stayed the same did not build

1ST Shut-in 45 Minutes no blow back

2ND Opening 45 Minutes dead all the way through out

2ND Shut-in 60 Minutes no blow back



PRESSURE SUMMARY

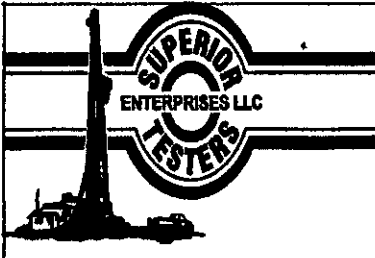
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2373.13	111.08	Initial Hydro-static
2	58.42	110.72	Open To Flow (1)
32	58.65	110.59	Shut-in(1)
76	92.26	111.85	End Shut-in(1)
77	58.61	111.87	Open To Flow (2)
121	58.98	113.20	Shut-in(2)
180	75.41	114.81	End Shut-in(2)
181	2348.71	115.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Slightly Oil spotted Mud	0.07
0.00	Oil 0.50 Mud 99.5	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 15725

DST#: 3

ATTN: Pat Deenihan

Test Start: 2010.12.18 @ 01:41:00

GENERAL INFORMATION:

Formation: **Lower Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:57:30

Time Test Ended: 08:41:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/155/Great Bend

Interval: **4772.00 ft (KB) To 4828.00 ft (KB) (TVD)**

Total Depth: 4828.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2442.00 ft (KB)

2430.00 ft (CF)

KB to GR/CF: 12.00 ft

Serial #: 8405

Inside

Press@RunDepth: 74.10 psia @ 4823.60 ft (KB)

Start Date: 2010.12.18

End Date:

2010.12.18

Start Time: 01:42:01

End Time:

08:49:59

Capacity: 5000.00 psia

Last Calib.: 2010.12.18

Time On Btm: 2010.12.18 @ 03:55:29

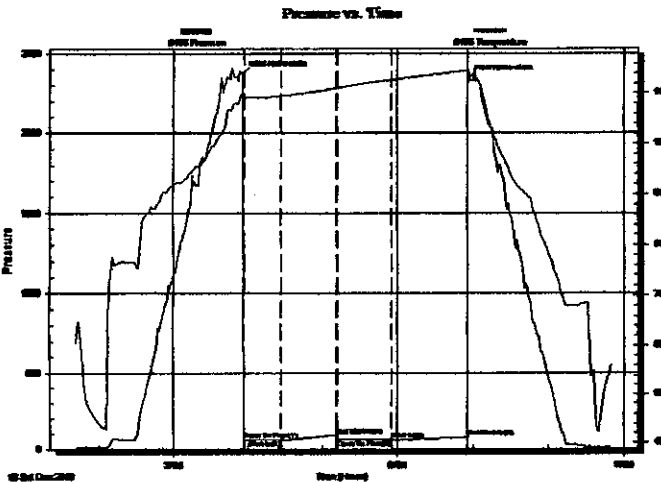
Time Off Btm: 2010.12.18 @ 06:56:29

TEST COMMENT: 1ST Opening 30 Minutes very weak surface blow /blow stayed the same did not build

1ST Shut-in 45 Minutes no blow back

2ND Opening 45 Minutes dead all the way through out

2ND Shut-In 60 Minutes no blow back



PRESSURE SUMMARY

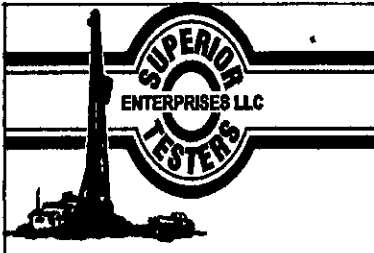
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2373.52	109.75	Initial Hydro-static
2	56.46	109.27	Open To Flow (1)
31	56.63	109.41	Shut-in(1)
76	90.95	111.04	End Shut-in(1)
77	56.95	111.08	Open To Flow (2)
120	57.23	112.71	Shut-in(2)
180	74.10	114.55	End Shut-in(2)
181	2342.47	114.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Slightly Oil spotted Mud	0.07
0.00	Oil 0.50 Mud 99.5	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.
 8100 East 22ND Street North 700 P.O.Box 783188
 Wichita, Kansas 67278
 ATTN: Pat Deenihan

Knoeber Trust #1
35/25S/22W Ford
 Job Ticket: 15725 DST#: 3
 Test Start: 2010.12.18 @ 01:41:00

Tool Information

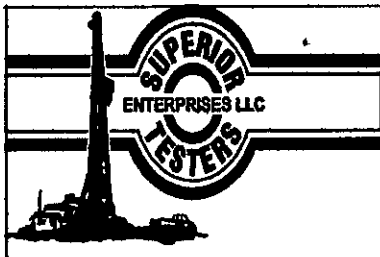
Drill Pipe:	Length: 4753.00 ft	Diameter: 3.80 inches	Volume: 66.67 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 4000.00 lb
			Total Volume: 66.67 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4772.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.60 ft			
Tool Length:	84.60 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			4744.00	
Shut-In Tool	5.00			4749.00	
Hydraulic Tool	5.00			4754.00	
Jars	6.00			4760.00	
Safety Joint	2.00			4762.00	
Packer	5.00			4767.00	29.00 Bottom Of Top Packer
Packer	5.00			4772.00	
Perforations	5.00			4777.00	
Change Over Sub	0.75			4777.75	
Drill Pipe	31.10			4808.85	
Change Over Sub	0.75			4809.60	
Perforations	13.00			4822.60	
Recorder	1.00	8405	Inside	4823.60	
Recorder	1.00	8400	Outside	4824.60	
Bullnose	3.00			4827.60	55.60 Bottom Packers & Anchor

Total Tool Length: 84.60



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 15725

DST#: 3

ATTN: Pat Deenihan

Test Start: 2010.12.18 @ 01:41:00

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: 39.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Slightly Oil spotted Mud	0.070
0.00	Oil 0.50 Mud 99.5	0.000

Total Length: 5.00 ft

Total Volume: 0.070 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

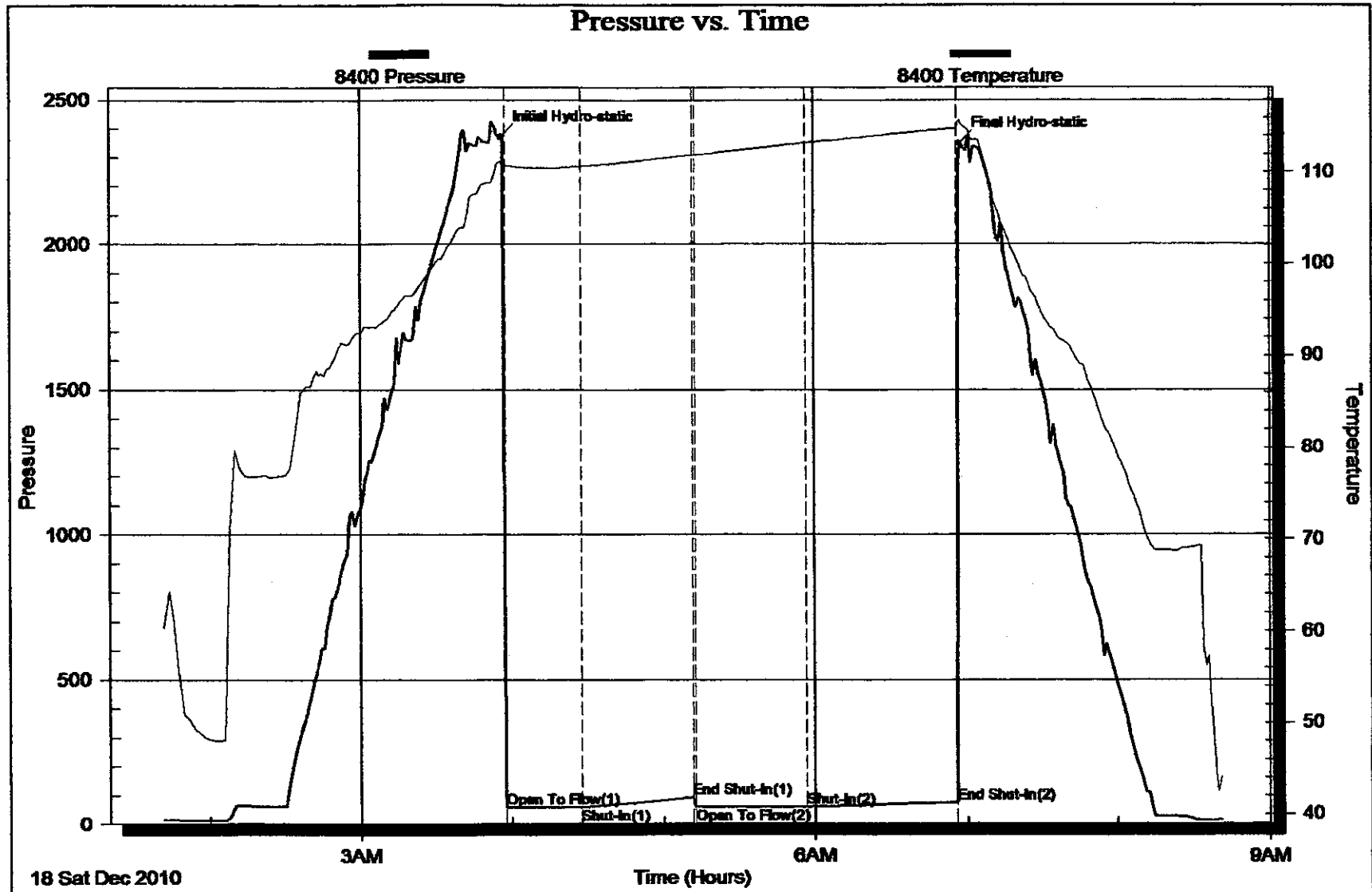
Recovery Comments:

Serial #: 8400

Outside Ritchie Exploration Inc.

35/25S22W Ford

DST Test Number: 3

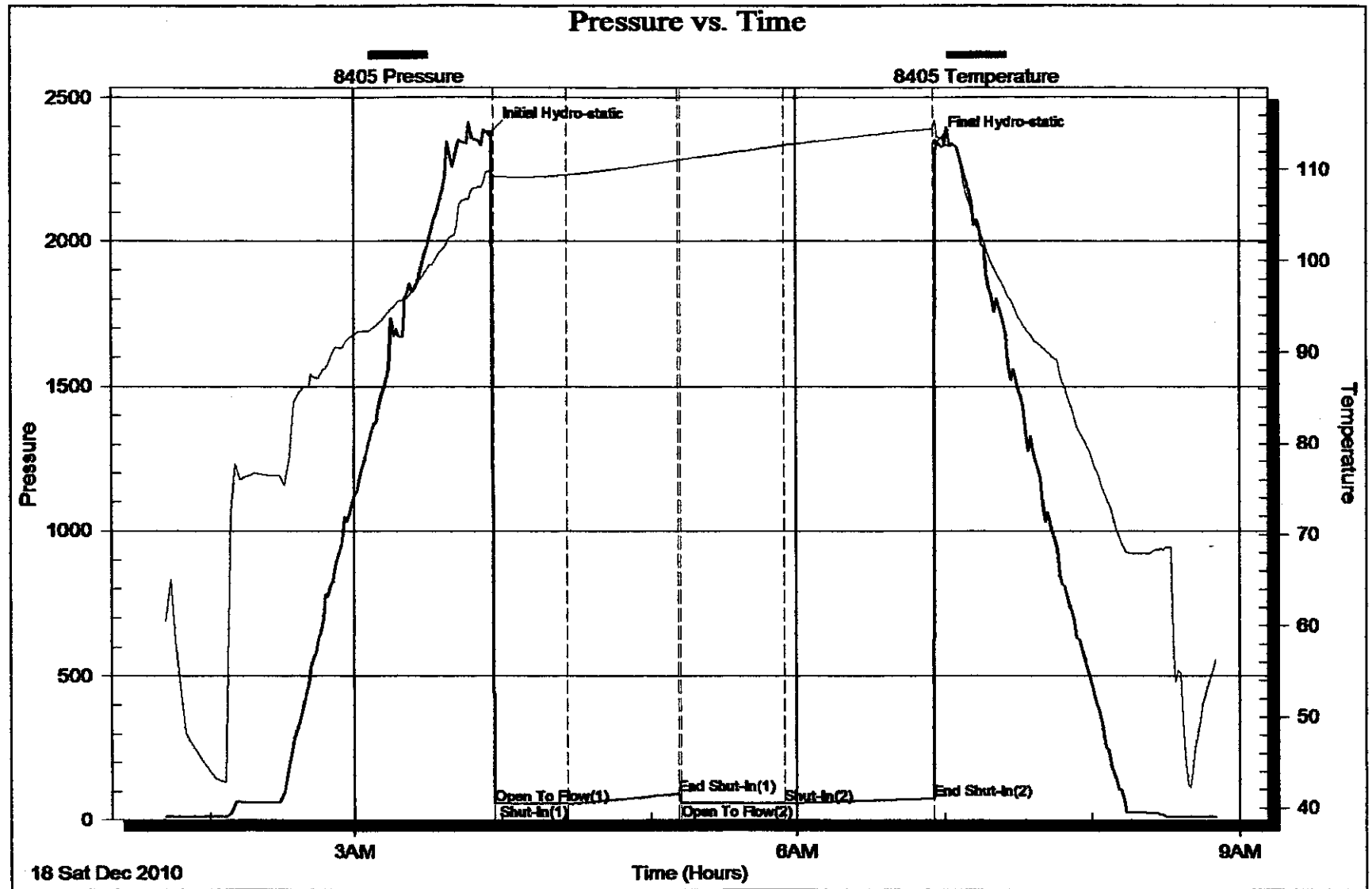


Serial #: 8405

Inside Ritchie Exploration Inc.

35/25S22W Ford

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 P.O.Box
783188
Wichita, Kansas 67278

ATTN: Pat Deenihan

35/25S/22W Ford

Knoeber Trust #1

Start Date: 2010.12.19 @ 08:27:00

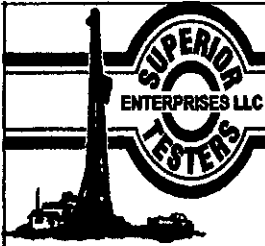
End Date: 2010.12.19 @ 13:35:30

Job Ticket #: 16001 DST #: 4

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2010.12.20 @ 12:54:53

Ritchie Exploration Inc. Knoeber Trust #1 35/25S/22W Ford DST # 4 Morrow 2010.12.19



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 16001

DST#: 4

ATTN: Pat Deenihan

Test Start: 2010.12.19 @ 08:27:00

GENERAL INFORMATION:

Formation: **Morrow**

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

Time Tool Opened: 00:00:00

Time Test Ended: 13:35:30

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Dylan E Ellis**

Unit No: **3345/155/Great Bend**

Interval: **4824.00 ft (KB) To 4910.00 ft (KB) (TVD)**

Total Depth: **4910.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2442.00 ft (KB)**

2430.00 ft (CF)

KB to GR/CF: **12.00 ft**

Serial #: 8400 **Outside**

Press@RunDepth: **psia @ 4906.75 ft (KB)**

Start Date: **2010.12.19**

End Date: **2010.12.19**

Capacity: **5000.00 psia**

Last Calib.: **2010.12.19**

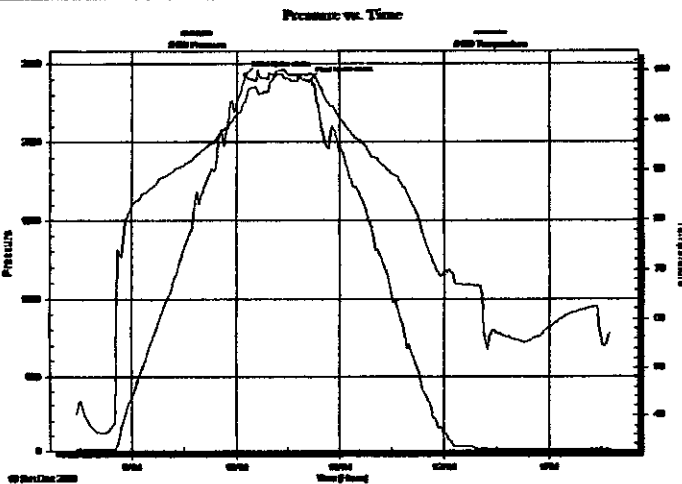
Start Time: **08:28:00**

End Time: **13:35:30**

Time On Btm: **2010.12.19 @ 10:05:30**

Time Off Btm: **2010.12.19 @ 10:42:30**

TEST COMMENT: We had a mis-run Packer failure/tried to set the tool 2 times and than came out of the hole



PRESSURE SUMMARY

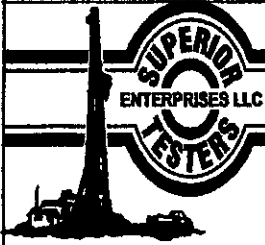
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2427.71	103.61	Initial Hydro-static
37	2390.92	109.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 16001

DST#: 4

ATTN: Pat Deenihan

Test Start: 2010.12.19 @ 08:27:00

GENERAL INFORMATION:

Formation: **Morrow**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 13:35:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/155/Great Bend

Interval: **4824.00 ft (KB) To 4910.00 ft (KB) (TVD)**

Reference Elevations: 2442.00 ft (KB)

Total Depth: 4910.00 ft (KB) (TVD)

2430.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 12.00 ft

Serial #: 8405 Inside

Press@RunDepth: psia @ 4905.75 ft (KB)

Capacity: 5000.00 psia

Start Date: 2010.12.19

End Date: 2010.12.19

Last Calib.: 2010.12.19

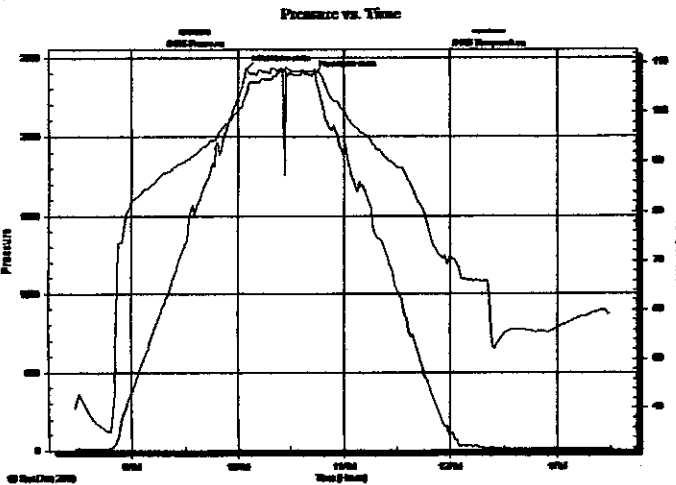
Start Time: 08:28:01

End Time: 13:29:58

Time On Btm: 2010.12.19 @ 10:04:58

Time Off Btm: 2010.12.19 @ 10:42:28

TEST COMMENT: We had a mis-run Packer failure/tried to set the tool 2 times and than came out of the hole



PRESSURE SUMMARY

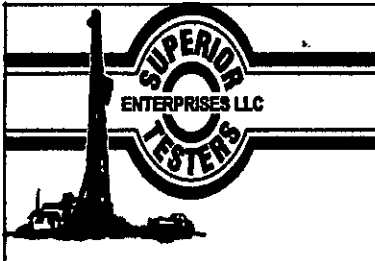
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2426.64	103.30	Initial Hydro-static
38	2390.34	108.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.
 8100 East 22ND Street North 700 P.O.Box 783188
 Wichita, Kansas 67278
 ATTN: Pat Deenihan

Knoeber Trust #1
 35/25S/22W Ford
 Job Ticket: 16001 DST#: 4
 Test Start: 2010.12.19 @ 08:27:00

Tool Information

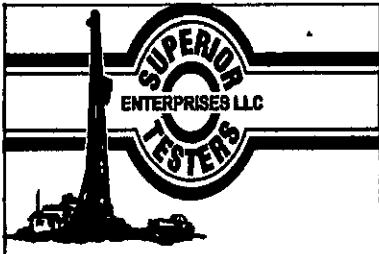
Drill Pipe:	Length: 4825.00 ft	Diameter: 3.80 inches	Volume: 67.68 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 25000.00 lb
			<u>Total Volume: 67.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4824.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.75 ft			
Tool Length:	114.75 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			4796.00	
Shut-In Tool	5.00			4801.00	
Hydrolic Tool	5.00			4806.00	
Jars	6.00			4812.00	
Safety Joint	2.00			4814.00	
Packer	5.00			4819.00	29.00 Bottom Of Top Packer
Packer	5.00			4824.00	
Perforations	5.00			4829.00	
Change Over Sub	0.75			4829.75	
Drill Pipe	62.25			4892.00	
Change Over Sub	0.75			4892.75	
Perforations	12.00			4904.75	
Recorder	1.00	8405	Inside	4905.75	
Recorder	1.00	8400	Outside	4906.75	
Bullnose	3.00			4909.75	85.75 Bottom Packers & Anchor

Total Tool Length: 114.75



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 16001

DST#: 4

ATTN: Pat Deenihan

Test Start: 2010.12.19 @ 08:27:00

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: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 4500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf

Total Length:

ft

Total Volume:

bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

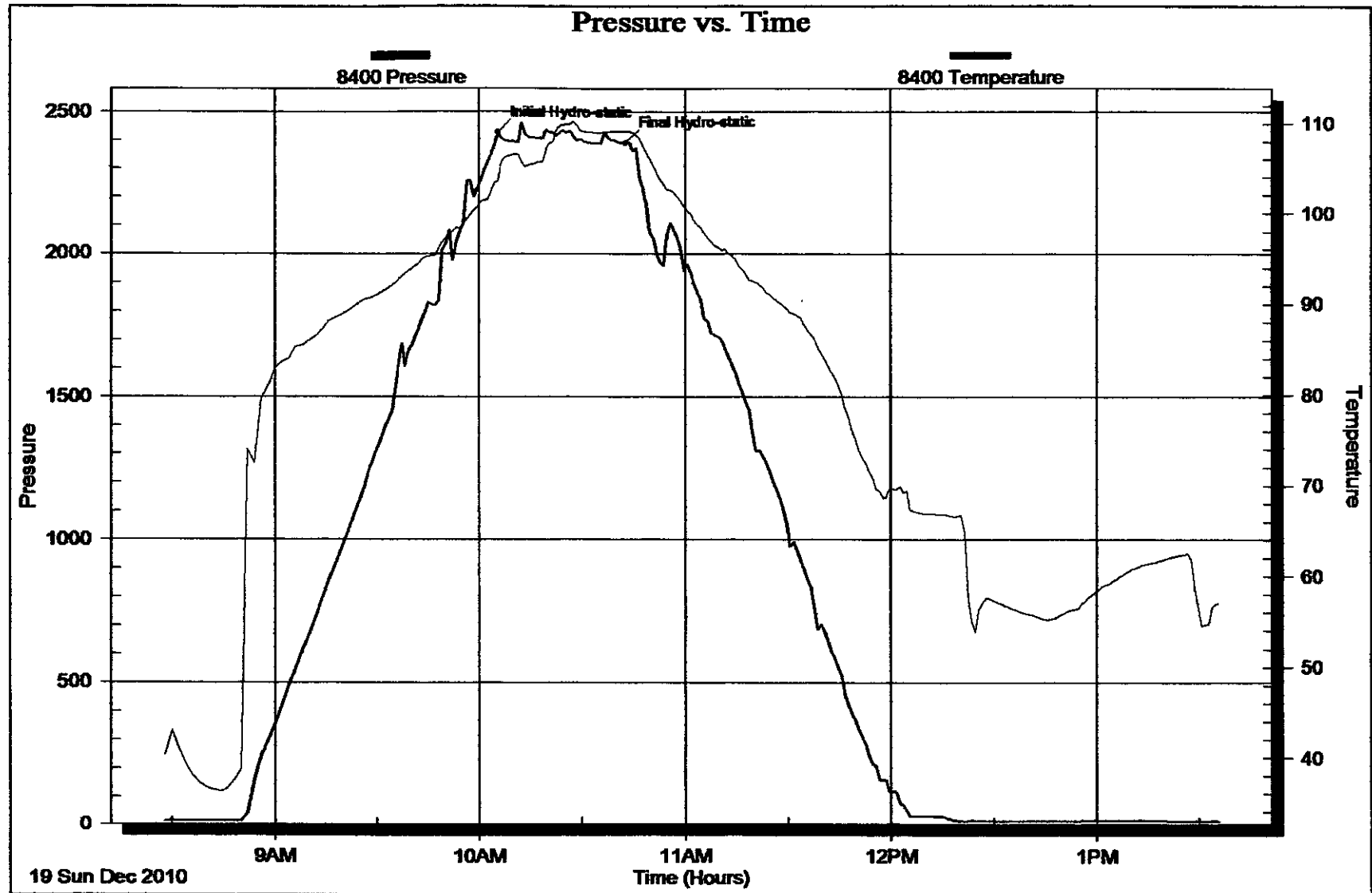
Recovery Comments:

Serial #: 8400

Outside Ritchie Exploration Inc.

35/25S/22W Ford

DST Test Number: 4



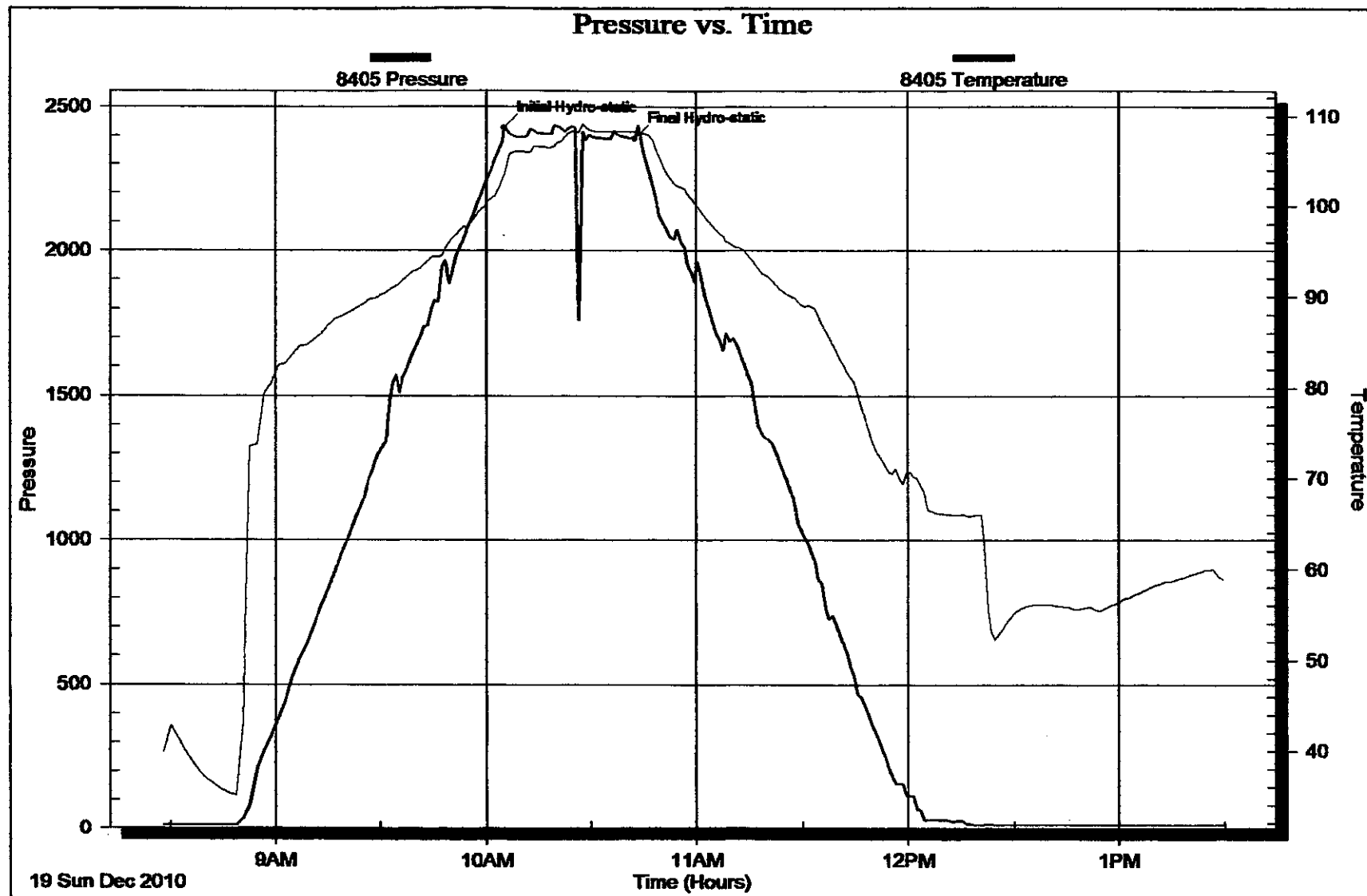
Serial #: 8405

Inside

Ritchie Exploration Inc.

35/25S/22W Ford

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 P.O.Box
783188
Wichita, Kansas 67278

ATTN: Pat Deenihan

35/25S/22W Ford

Knoeber Trust #1

Start Date: 2010.12.19 @ 01:43:00

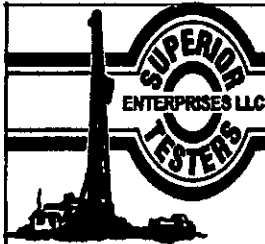
End Date: 2010.12.19 @ 09:34:30

Job Ticket #: 16002 DST #: 5

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2010.12.20 @ 12:53:20

Ritchie Exploration Inc.
Knoeber Trust #1
35/25S/22W Ford
DST # 5
Morrow
2010.12.19



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 16002

DST#: 5

ATTN: Pat Deenihan

Test Start: 2010.12.19 @ 01:43:00

GENERAL INFORMATION:

Formation: **Morrow**

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

Time Tool Opened: 04:17:30

Time Test Ended: 09:34:30

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Dylan E Ellis**

Unit No: **3345/155/Great Bend**

Interval: **4824.00 ft (KB) To 4916.00 ft (KB) (TVD)**

Total Depth: **4916.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2442.00 ft (KB)**

2430.00 ft (CF)

KB to GR/CF: **12.00 ft**

Serial #: **8400**

Outside

Press@RunDepth: **191.77 psia @ 4912.75 ft (KB)**

Capacity: **5000.00 psia**

Start Date: **2010.12.19**

End Date:

2010.12.19

Last Calib.:

2010.12.19

Start Time: **01:44:00**

End Time:

09:34:30

Time On Btm:

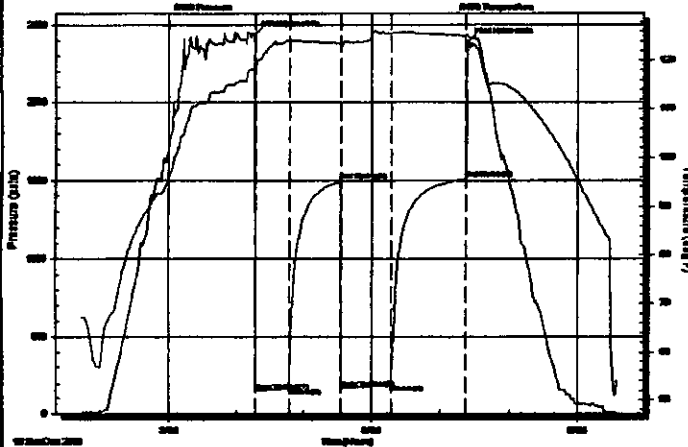
2010.12.19 @ 04:16:30

Time Off Btm:

2010.12.19 @ 07:24:30

TEST COMMENT: 1ST Opening 30 Minutes fair blow/blow built to 8 inches into water/died of to 4 inches into bucket
 1ST Shut-in 45 Minutes no blow back
 2ND Opening 45 Minutes weak but dying blow/blow made 2 inches and died in 23 minutes
 2ND Shut-in 60 Minutes no blow back

Pressure vs. Time



PRESSURE SUMMARY

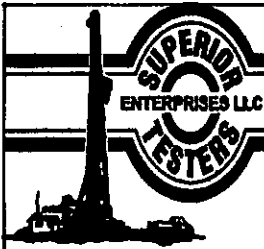
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2437.57	118.17	Initial Hydro-static
1	151.83	117.87	Open To Flow (1)
31	168.66	124.05	Shut-in(1)
76	1496.16	123.55	End Shut-in(1)
77	171.57	122.94	Open To Flow (2)
121	191.77	125.66	Shut-in(2)
186	1509.83	125.09	End Shut-in(2)
188	2389.03	124.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	Mud 100%	3.37

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 16002

DST#: 5

ATTN: Pat Deenihan

Test Start: 2010.12.19 @ 01:43:00

GENERAL INFORMATION:

Formation: **Morrow**

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

Time Tool Opened: 04:17:30

Time Test Ended: 09:34:30

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Dylan E Ellis**

Unit No: **3345/155/Great Bend**

Interval: **4824.00 ft (KB) To 4916.00 ft (KB) (TVD)**

Total Depth: **4916.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Fair**

Reference Elevations: **2442.00 ft (KB)**

2430.00 ft (CF)

KB to GR/CF: **12.00 ft**

Serial #: **8405**

Inside

Press@RunDepth: **1508.94 psia @ 4911.75 ft (KB)**

Start Date: **2010.12.19**

End Date:

2010.12.19

Capacity: **5000.00 psia**

Last Calib.: **2010.12.19**

Start Time: **01:44:01**

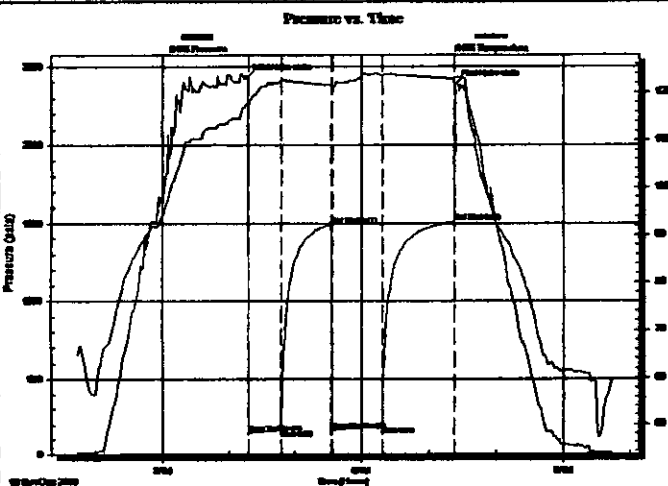
End Time:

09:43:57

Time On Btm: **2010.12.19 @ 04:16:27**

Time Off Btm: **2010.12.19 @ 07:23:57**

TEST COMMENT: 1ST Opening 30 Minutes fair blow/blow built to 8 inches into water/died of to 4 inches into bucket
1ST Shut-in 45 Minutes no blow back
2ND Opening 45 Minutes weak but dying blow/blow made 2 inches and died in 23 minutes
2ND Shut-in 60 Minutes no blow back



PRESSURE SUMMARY

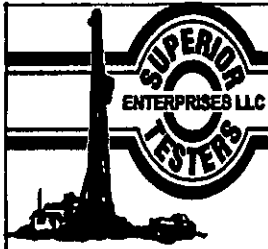
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2428.04	117.51	Initial Hydro-static
2	150.15	116.82	Open To Flow (1)
32	167.16	122.40	Shut-In(1)
77	1495.15	121.48	End Shut-In(1)
78	168.63	120.91	Open To Flow (2)
122	193.24	123.57	Shut-In(2)
187	1508.94	122.81	End Shut-In(2)
188	2385.89	123.03	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
240.00	Mud 100%	3.37

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 16002

DST#: 5

ATTN: Pat Deenihan

Test Start: 2010.12.19 @ 01:43:00

Tool Information

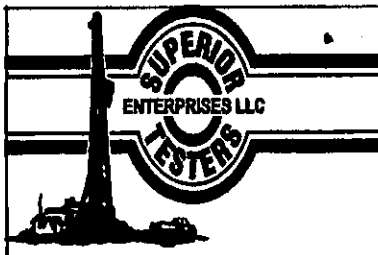
Drill Pipe:	Length: 4822.00 ft	Diameter: 3.80 inches	Volume: 67.64 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 17000.00 lb
			<u>Total Volume: 67.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4824.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	91.75 ft			
Tool Length:	120.75 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			4796.00	
Shut-In Tool	5.00			4801.00	
Hydraulic Tool	5.00			4806.00	
Jars	6.00			4812.00	
Safety Joint	2.00			4814.00	
Packer	5.00			4819.00	29.00 Bottom Of Top Packer
Packer	5.00			4824.00	
Perforations	5.00			4829.00	
Change Over Sub	0.75			4829.75	
Drill Pipe	62.25			4892.00	
Change Over Sub	0.75			4892.75	
Perforations	18.00			4910.75	
Recorder	1.00	8405	Inside	4911.75	
Recorder	1.00	8400	Outside	4912.75	
Buflnose	3.00			4915.75	91.75 Bottom Packers & Anchor

Total Tool Length: 120.75



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

Knoeber Trust #1

8100 East 22ND Street North 700 P.O.Box 783188
Wichita, Kansas 67278

35/25S/22W Ford

Job Ticket: 16002

DST#: 5

ATTN: Pat Deenihan

Test Start: 2010.12.19 @ 01:43:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 7.99 in²

Resistivity: ohm.m

Salinity: 4500.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psia

Oil API:

Water Salinity: ppm

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	Mud 100%	3.367

Total Length: 240.00 ft Total Volume: 3.367 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8400

Outside Ritchie Exploration Inc.

35/25S/22W Ford

DST Test Number: 5

