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KCC WICHITA

KANSAS CORPORATION COMMISSION
GIL & GAS CONSERVATION DIVISION
ORIGINAL
WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

6/21/13
Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

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 # 33575
Name: WW Drilling, LLC
Wellsite Geologist: Jeff Christian
Purchaser: Plains Marketing

Designate Type of Completion:
 New Well Re-Entry Workover
 Oil WSW SWD SLOW
 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 #:

3/4/11	3/13/11	3/13/11
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 137-20545-0000
Spot Description: 30' S & 120' E of
NE Sec. 33 Twp. 5 S. R. 22 East West
1,350 Feet from North / South Line of Section
1,200 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Norton
Lease Name: Minks 33AD Well #: 3
Field Name:
Producing Formation: LKC
Elevation: Ground: 2370 Kelly Bushing: 2375
Total Depth: 3910' Plug Back Total Depth: 3875'
Amount of Surface Pipe Set and Cemented at: 280 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 1985 Feet
If Alternate II completion, cement circulated from: 1985
feet depth to: surface w/ 325 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 12000 ppm Fluid volume: 1100 bbls
Dewatering method used: evaporation
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. East West
County: Permit #:

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INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market, Room 2013, 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: [Signature]
Title: Production Manager Date: 6/21/11

KCC Office Use ONLY
 Letter of Confidentiality Received
Date: 6/21/11 - 6/21/13
 Confidential Release Date:
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: NS Date: 6/27/11

Operator Name: Ritchie Exploration, Inc. Lease Name: Minks 33AD Well #: 3
 Sec. 33 Twp. 5 S. R. 22 East West County: Norton

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: Radiation Guard Log	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample Name Top Datum <p style="text-align: center;">SEE ATTACHED</p>
--	--

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4	8-5/8	23	280	common	175	3%cc, 2% gel
Production	7-7/8	4-1/2	10.5	3900	60/40 Poz	170	10% salt, 2% gel, 3/4% CD31

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 <i>(Amount and Kind of Material Used)</i>	Depth
4	3627.5' - 3629.5' (3/24/11)	RECEIVED JUN 22 2011 KCC WICHITA	500 gallons 15% NE

TUBING RECORD:	Size: <u>2-3/8"</u>	Set At: <u>3864'</u>	Packer At:	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR: <u>4/5/11</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____
Estimated Production Per 24 Hours	Oil Bbls. <u>2.52</u> Gas Mcf _____ Water Bbls. <u>2.47</u> Gas-Oil Ratio _____ Gravity _____

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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: KCC
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#3 Minks 33AD

1350' FNL & 1200' FEL
30' S & 120' E of NE Section 33-5S-22W
Norton County, Kansas
2006 Drilling Program
Minks 33 Prospect
API# 15-137-20545-0000
WW Drilling, LLC Rig #6
Field: Jeff Christian
Office: Peter Fiorini
Elevation: GL: 2370', KB: 2375'

DRILLING REPORT

Sample Tops

Anhydrite	2007'	+368
B/Anhydrite	2025'	+350
Topeka	3347'	-972
King Hill	3436'	-1061
Oread A	3504'	-1129
Heebner	3540'	-1165
Toronto	3566'	-1191
Lansing	3582'	-1207
Muncie Creek	3680'	-1305
BKC	3769'	-1394
Arbuckle	3859'	-1484
RTD	3910	-1535

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ALLIED CEMENTING CO., LLC. 036434

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

SERVICE POINT:
Russell Ks

MINI 3340'3

DATE <u>7-13-2011</u>	SEC. <u>33</u>	TWP. <u>S</u>	RANGE <u>22</u>	CALLED OUT	ON LOCATION	JOB START <u>1:00 AM</u>	JOB FINISH <u>1:30 AM</u>
LEASE <u>MINI'S</u>	WELL # <u>3</u>	LOCATION <u>Hill City 13N 2E 1/2N 4W</u>			COUNTY <u>Norton</u>	STATE <u>KANSAS</u>	
OLD OR <u>NEW</u> (Circle one)							

CONTRACTOR W-W Drig. Rig #6
 TYPE OF JOB Cement Land Production String
 HOLE SIZE 7 7/8 T.D. 3910'
 CASING SIZE 4 1/2 New DEPTH 3900'
 TUBING SIZE 10.50 #2sg DEPTH
 DRILL PIPE DEPTH
 TOOL AFU INSERT DEPTH 3879'
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT 21'
 CEMENT LEFT IN CSG. 21'
 PERFS.
 DISPLACEMENT 62 1/2 BBL

OWNER
 CEMENT
 AMOUNT ORDERED 200 SX 60/100 10234E
22 GAL 3/4 OF 1% CO-31
500 GAL WFR-2 MURFUSH

COMMON	<u>120</u>	@	<u>16.25</u>	<u>1950.00</u>
POZMIX	<u>50</u>	@	<u>8.50</u>	<u>680.00</u>
GEL	<u>3</u>	@	<u>21.25</u>	<u>63.75</u>
CHLORIDE		@		
ASC		@		
<u>Soft</u>	<u>17</u>	@	<u>23.95</u>	<u>407.15</u>
<u>CO-31</u>	<u>129 #</u>	@	<u>9.35</u>	<u>1206.15</u>
		@		
<u>WFR-2</u>	<u>50.601</u>	@	<u>1.27</u>	<u>635.00</u>
		@		
		@		
		@		
HANDLING	<u>225</u>	@	<u>2.25</u>	<u>506.25</u>
MILEAGE	<u>11.16 m.c.</u>			<u>990.00</u>
				TOTAL <u>6438.30</u>

REMARKS:

Ran 94 IT'S New 10.50 4 1/2 CS
Set @ 3900 Circulate on Bottom
For 30 min Cement by 170 SX 60/100 10234E
22 GAL 3/4 OF 1% CO-31, Clear Line, Release TRP.
+ Displace w/ 62 1/2 BBL H2O, Land Plug
@ 1200 # Release Pressure & FLOAT (Held)
30 SX @ Patch
700# LIFT
PLUG DOWN 1:10 AM

SERVICE

DEPTH OF JOB				
PUMP TRUCK CHARGE				<u>2225.00</u>
EXTRA FOOTAGE		@		
MILEAGE	<u>80</u>	@	<u>7.00</u>	<u>560.00</u>
MANIFOLD		@		
<u>LUM</u>	<u>80</u>	@	<u>4.00</u>	<u>320.00</u>
		@		
				TOTAL <u>3105.00</u>

CHARGE TO: Ritchie Exploration Inc
 STREET _____
 CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

<u>Guide Shoe</u>				<u>110.00</u>
<u>AFU INSERT</u>		@		<u>146.00</u>
<u>6-TURBO-CENTRALIZERS</u>		@	<u>58.00</u>	<u>348.00</u>
<u>2-BASKETS</u>		@	<u>210.00</u>	<u>420.00</u>
<u>1-PORT Collar</u>		@		<u>1752.00</u>
<u>1-TRP</u>		@		<u>39.00</u>
				TOTAL <u>2815.00</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 Monk Bijsse
 SIGNATURE Monk Bijsse

SALES TAX (If Any) _____
 TOTAL CHARGES _____
 DISCOUNT _____ IF PAID IN 30 DAYS

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[Handwritten initials]

ALLIED CEMENTING CO., LLC. 036426

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

SERVICE POINT:
Russell KS,

DATE <u>3-4-2011</u>	SEC. <u>33</u>	TWP. <u>5</u>	RANGE <u>22</u>	CALLED OUT	ON LOCATION	JOB START <u>8:30 pm</u>	JOB FINISH <u>11:00 pm</u>
LEASE <u>Minks</u>	WELL # <u>3</u>	LOCATION <u>Hill City 13 N 2E 1/4 N 1/4 W</u>			COUNTY <u>Neosho</u>	STATE <u>KANSAS</u>	
OLD OR NEW (Circle one)							

CONTRACTOR W-W DRILLING Rig #6 OWNER _____

TYPE OF JOB Cement SURFACE

HOLE SIZE 12 1/4 T.D. 281

CASING SIZE 8 5/8 DEPTH 280

TUBING SIZE 23# CG DEPTH _____

DRILL PIPE DEPTH _____

TOOL DEPTH _____

PRES. MAX MINIMUM _____

MEAS. LINE SHOE JOINT _____

CEMENT LEFT IN CSG. 15'

PERFS. _____

DISPLACEMENT 17 / BBL

EQUIPMENT _____

PUMP TRUCK CEMENTER Glenn

398 HELPER Woody

BULK TRUCK _____

410 DRIVER Nick

BULK TRUCK _____

_____ DRIVER _____

CEMENT

AMOUNT ORDERED 175 SK Comm.

3% CC

2% GEL

COMMON	<u>175</u>	@ <u>13.00</u>	<u>2362.50</u>
POZMIX		@	
GEL	<u>3</u>	@ <u>20.25</u>	<u>60.75</u>
CHLORIDE	<u>6</u>	@ <u>51.50</u>	<u>309.00</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>175</u>	@ <u>2.25</u>	<u>393.75</u>
MILEAGE	<u>110/100/mile</u>		<u>1225.00</u>
TOTAL			<u>4351.00</u>

REMARKS:

Set 8 5/8 surface @ 280
Cement w/ 175 SK Comm 2% 3, Displaced
17 BBL H₂O + Shot in @ 300#
Cement D.D Circulate to surface

THANKS

CHARGE TO: PITCHIE EXPLORATION INC.

STREET _____

CITY _____ STATE _____ ZIP _____

TOTAL 1461.00

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.

PRINTED NAME Mark Biggs

SIGNATURE Mark Biggs

SALES TAX (If Any) _____

TOTAL CHARGES _____

DISCOUNT _____ IF PAID IN 30 DAYS

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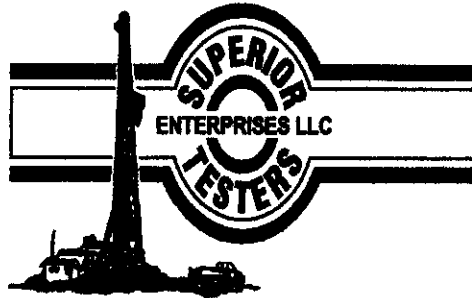
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DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

Start Date: 2011.03.07 @ 06:40:00

End Date: 2011.03.07 @ 00:00:00

Job Ticket #: 15663 DST #: 1

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

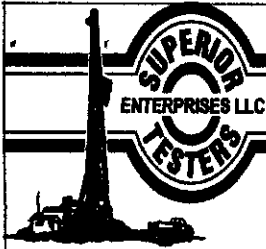
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Printed: 2011.03.14 @ 16:18:50

Ritchie Exploration Inc. #3 Mink 33AD 33/5S/22W Norton DST # 1 Topoka 2011.03.07



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15663

DST#: 1

ATTN: Jeff Christian

Test Start: 2011.03.07 @ 06:40:00

GENERAL INFORMATION:

Formation: **Topoka**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Hays/152

Interval: **3356.00 ft (KB) To 3482.00 ft (KB) (TVD)**

Total Depth: 3482.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2375.00 ft (KB)

2370.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8400

Outside

Press@RunDepth: 1155.01 psia @ 3478.89 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.03.07

End Date:

2011.03.07

Last Calib.:

2011.03.08

Start Time: 06:40:10

End Time:

13:33:00

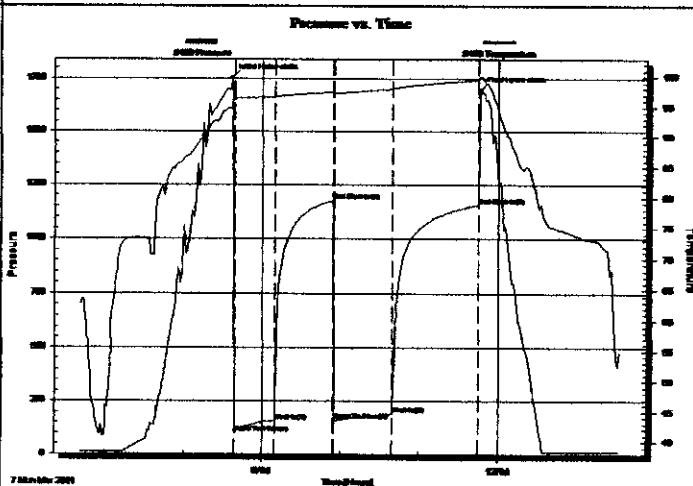
Time On Btm:

2011.03.07 @ 08:36:30

Time Off Btm:

2011.03.07 @ 11:46:30

TEST COMMENT: 1ST Opening 30 Minutes fair blow /blow built to 6 inches into bucket of water
1ST Shut-In 45 Minutes no blow back
2ND Opening 45 Minutes weak blow /blow blew 4.50 inches into bucket of water
2ND Shut-In 60 Minutes no blow back



PRESSURE SUMMARY

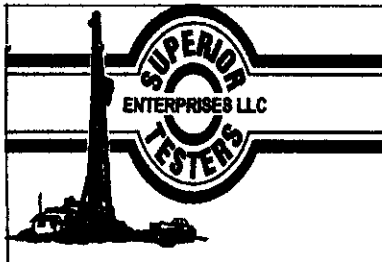
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1754.11	94.83	Initial Hydro-static
3	99.71	96.18	Open To Flow (1)
33	157.32	96.68	Shut-In(1)
78	1174.59	97.50	End Shut-In(1)
79	160.39	97.29	Open To Flow (2)
123	188.28	98.03	Shut-In(2)
189	1155.01	99.51	End Shut-In(2)
191	1695.18	100.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
224.00	Mud 100%	1856.23

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15663

DST#: 1

ATTN: Jeff Christian

Test Start: 2011.03.07 @ 06:40:00

GENERAL INFORMATION:

Formation: **Topeka**

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

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

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

Tester: **Dylan E Ellis**

Unit No: **3345/Hays/152**

Interval: **3356.00 ft (KB) To 3482.00 ft (KB) (TVD)**

Reference Elevations: **2375.00 ft (KB)**

Total Depth: **3482.00 ft (KB) (TVD)**

2370.00 ft (CF)

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

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

Serial #: **8405**

Inside

Press@RunDepth: **1153.97 psia @ 3477.89 ft (KB)**

Capacity: **5000.00 psia**

Start Date: **2011.03.07**

End Date:

2011.03.07

Last Calib.:

2011.03.08

Start Time:

06:41:01

End Time:

13:32:48

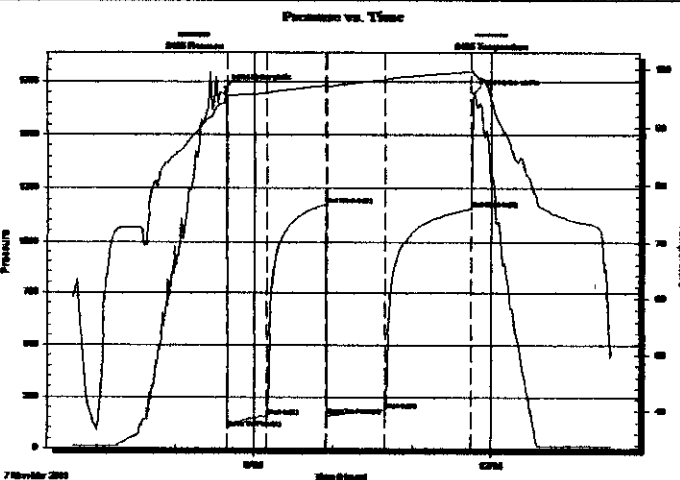
Time On Btm:

2011.03.07 @ 08:37:49

Time Off Btm:

2011.03.07 @ 11:46:49

TEST COMMENT: 1ST Opening 30 Minutes fair blow /blow built to 6 inches into bucket of water
1ST Shut-in 45 Minutes no blow back
2ND Opening 45 Minutes weak blow /blow blew 4.50 inches into bucket of water
2ND Shut-in 60 Minutes no blow back



PRESSURE SUMMARY

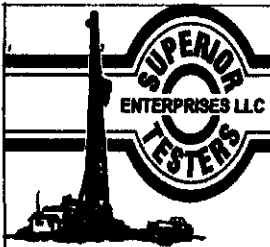
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1718.34	95.43	Initial Hydro-static
2	97.98	95.21	Open To Flow (1)
32	155.85	95.91	Shut-in(1)
76	1173.23	97.19	End Shut-in(1)
77	157.85	97.01	Open To Flow (2)
122	187.91	98.16	Shut-in(2)
187	1153.97	99.50	End Shut-in(2)
189	1695.23	99.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
224.00	Mud 100%	1856.23

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15663

DST#: 1

ATTN: Jeff Christian

Test Start: 2011.03.07 @ 06:40:00

Tool Information

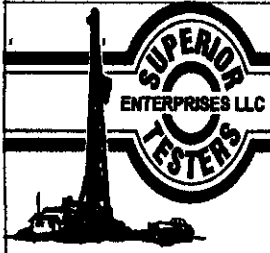
Drill Pipe:	Length: 3207.00 ft	Diameter: 3.80 inches	Volume: 44.99 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 124.06 ft	Diameter: 124.06 inches	Volume: 1854.83 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 1899.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	3.06 ft			String Weight: Initial 34000.00 lb
Depth to Top Packer:	3356.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	125.89 ft			
Tool Length:	153.89 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3333.00	
Hydraulic Tool	5.00			3338.00	
Jars	6.00			3344.00	
Safety Joint	2.00			3346.00	
Packer	5.00			3351.00	28.00 Bottom Of Top Packer
Packer	5.00			3356.00	
Perforations	5.00			3361.00	
Change Over Sub	0.75			3361.75	
Drill Pipe	92.39			3454.14	
Change Over Sub	0.75			3454.89	
Perforations	22.00			3476.89	
Recorder	1.00	8405	Inside	3477.89	
Recorder	1.00	8400	Outside	3478.89	
Bull Plug	3.00			3481.89	125.89 Bottom Packers & Anchor

Total Tool Length: 153.89



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15663

DST#: 1

ATTN: Jeff Christian

Test Start: 2011.03.07 @ 06:40:00

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: 6.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
224.00	Mud 100%	1856.233

Total Length: 224.00 ft

Total Volume: 1856.233 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

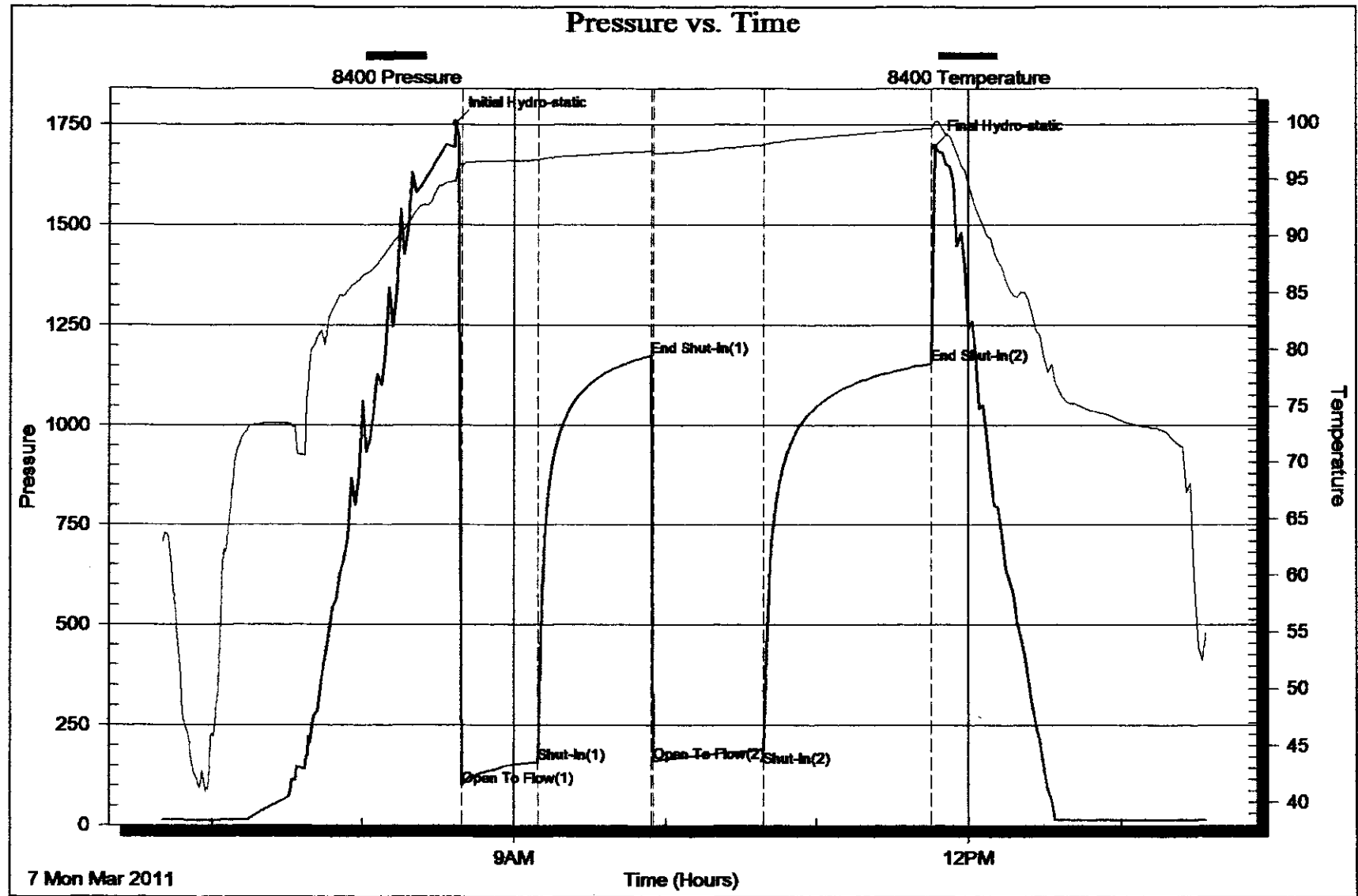
Recovery Comments:

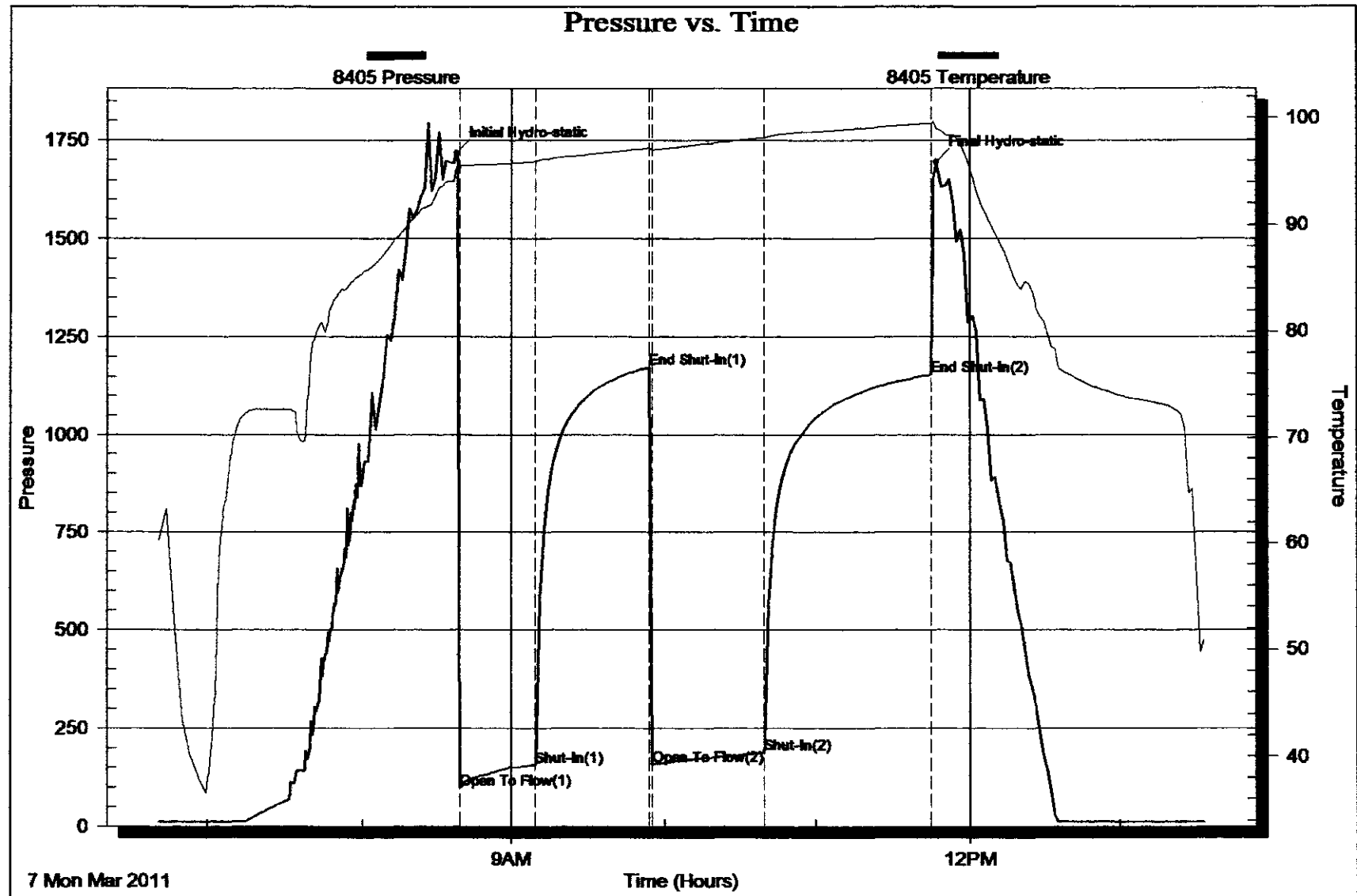
Serial #: 8400

Outside Ritchie Exploration Inc.

33/5S/22W Norton

DST Test Number: 1







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

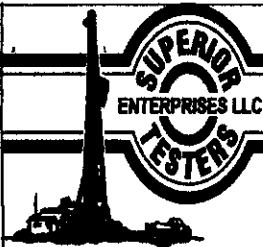
Start Date: 2011.03.08 @ 10:14:00

End Date: 2011.03.08 @ 16:09:10

Job Ticket #: 15664 DST #: 2

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

Printed: 2011.03.14 @ 16:15:44



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15664

DST#: 2

ATTN: Jeff Christian

Test Start: 2011.03.08 @ 10:14:00

GENERAL INFORMATION:

Formation: **Toronto**

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

Time Tool Opened: 11:42:10

Time Test Ended: 16:09:10

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

Tester: **Dylan E Ellis**

Unit No: **3345/Hays/152**

Interval: **3537.00 ft (KB) To 3577.00 ft (KB) (TVD)**

Reference Elevations: **2375.00 ft (KB)**

Total Depth: **3577.00 ft (KB) (TVD)**

2370.00 ft (CF)

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

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

Serial #: **8400**

Outside

Press@RunDepth: **90.43 psia @ 3574.00 ft (KB)**

Capacity: **5000.00 psia**

Start Date: **2011.03.08**

End Date:

2011.03.08

Last Calib.:

2011.03.09

Start Time: **10:14:23**

End Time:

16:09:10

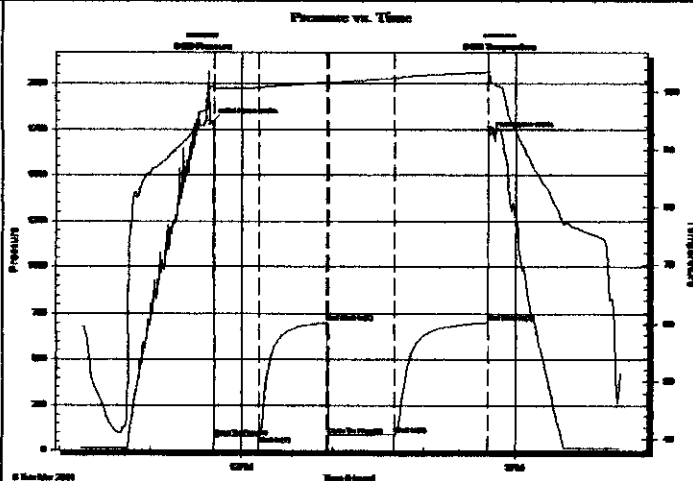
Time On Btm:

2011.03.08 @ 11:40:40

Time Off Btm:

2011.03.08 @ 14:42:40

TEST COMMENT: 1ST Opening 30 Minutes fair blow/blow blew 3.50 inches into bucket of water
1ST Shut-In 45 Minutes no blow back
2ND Opening 45 Minutes blow was dead all the way through out opening
2ND Shut-In 60 Minutes no blow back



PRESSURE SUMMARY

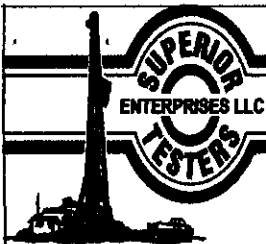
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1788.63	100.97	Initial Hydro-static
2	75.90	100.75	Open To Flow (1)
31	82.84	100.77	Shut-In(1)
76	702.70	101.68	End Shut-In(1)
77	84.08	101.58	Open To Flow (2)
120	90.43	102.41	Shut-In(2)
181	702.97	103.38	End Shut-In(2)
182	1719.24	103.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	Mud	0.61

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15664

DST#: 2

ATTN: Jeff Christian

Test Start: 2011.03.08 @ 10:14:00

GENERAL INFORMATION:

Formation: **Toronto**

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

Time Tool Opened: 11:42:10

Time Test Ended: 16:09:10

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

Tester: **Dylan E Ellis**

Unit No: **3345/Hays/152**

Interval: **3537.00 ft (KB) To 3577.00 ft (KB) (TVD)**

Total Depth: **3577.00 ft (KB) (TVD)**

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

Reference Elevations: **2375.00 ft (KB)**

2370.00 ft (CF)

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

Serial #: **8405**

Inside

Press@RunDepth: **702.97 psia @ 3573.00 ft (KB)**

Capacity: **5000.00 psia**

Start Date: **2011.03.08**

End Date:

2011.03.08

Last Calib.:

2011.03.09

Start Time: **10:14:23**

End Time:

16:09:10

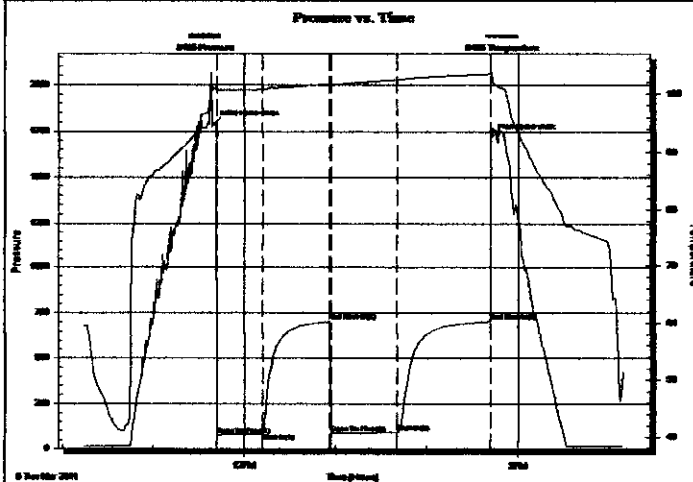
Time On Btm:

2011.03.08 @ 11:40:10

Time Off Btm:

2011.03.08 @ 14:42:40

TEST COMMENT: 1ST Opening 30 Minutes fair blow/blow blew 3.50 inches into bucket of water
1ST Shut-in 45 Minutes no blow back
2ND Opening 45 Minutes blow was dead all the way through out opening
2ND Shut-in 60 Minutes no blow back



PRESSURE SUMMARY

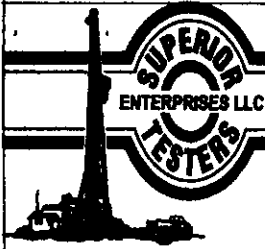
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1788.55	100.81	Initial Hydro-static
2	75.90	100.75	Open To Flow (1)
32	88.12	100.79	Shut-in(1)
76	702.70	101.68	End Shut-in(1)
77	84.08	101.58	Open To Flow (2)
121	90.43	102.41	Shut-in(2)
182	702.97	103.38	End Shut-in(2)
183	1719.24	103.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	Mud	0.61

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 Wichita Kansas
 67278+3188
 ATTN: Jeff Christian

#3 Mink 33AD
 33/5S/22W Norton
 Job Ticket: 15664 DST#: 2
 Test Start: 2011.03.08 @ 10:14:00

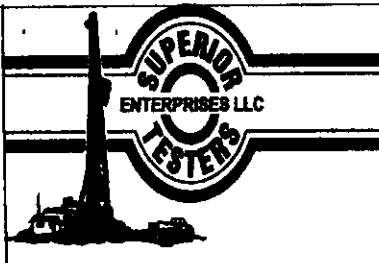
Tool Information

Drill Pipe:	Length: 3401.00 ft	Diameter: 3.80 inches	Volume: 47.71 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: 126.04 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 18000.00 lb
			<u>Total Volume: 48.33 bbl</u>	Tool Chased 15.00 ft
Drill Pipe Above KB:	10.04 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3537.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	60.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool slide to bottom and opened about 15 foot/pulled it back up filled hole and set the tool back down on bottom to make sure the mud that went down hole was because of the sliding of the tool.

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3522.00	
Hydraulic Tool	5.00			3527.00	
Packer	5.00			3532.00	20.00 Bottom Of Top Packer
Packer	5.00			3537.00	
Perforations	35.00			3572.00	
Recorder	1.00	8405	Inside	3573.00	
Recorder	1.00	8400	Outside	3574.00	
Bull Plug	3.00			3577.00	40.00 Bottom Packers & Anchor

Total Tool Length: 60.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.
 8100 East 22ND Street North 700 Wichita Kansas
 67278+3188
 ATTN: Jeff Christian

#3 Mink 33AD
 33/5S/22W Norton
 Job Ticket: 15664 DST#: 2
 Test Start: 2011.03.08 @ 10:14:00

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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.78 in ²	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 1200.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	Mud	0.610

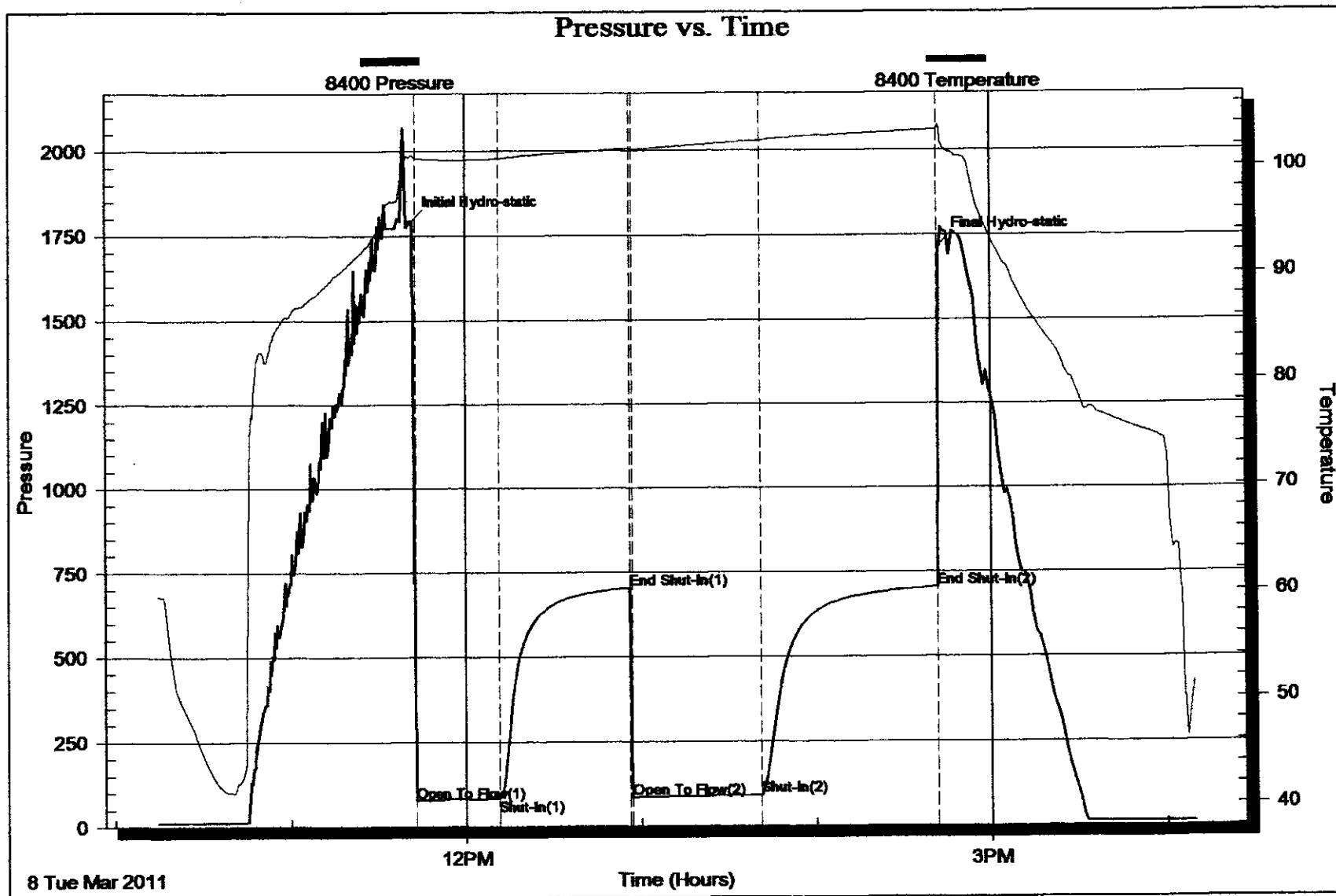
Total Length: 124.00 ft Total Volume: 0.610 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8400

Outside Ritchie Exploration Inc.

33/5S/22W Norton

DST Test Number: 2



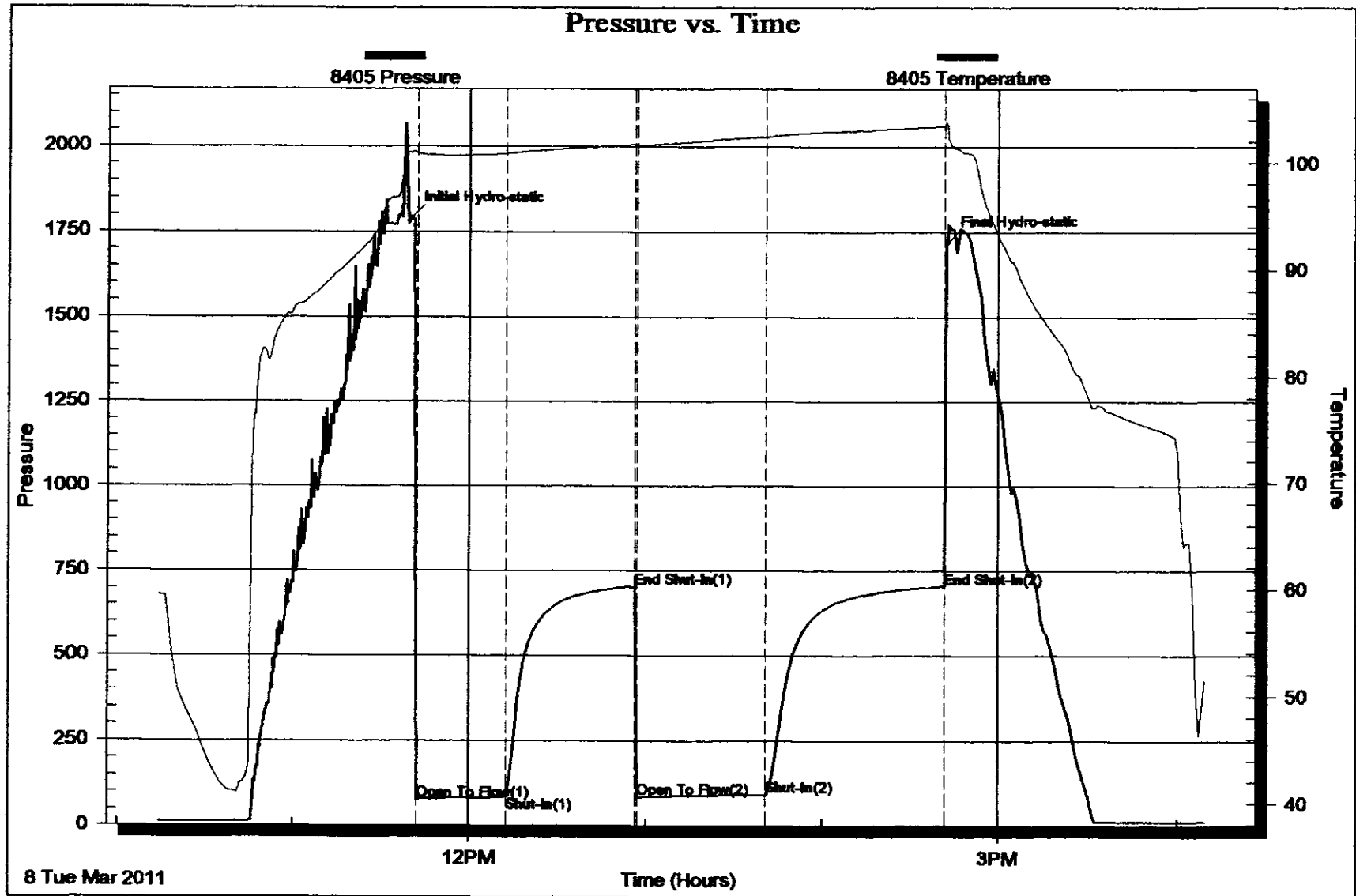
Serial #: 8405

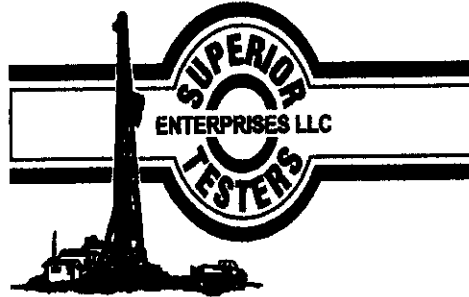
Inside

Ritchie Exploration Inc.

33/5S/22W Norton

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

Start Date: 2011.03.09 @ 12:37:00

End Date: 2011.03.09 @ 00:00:00

Job Ticket #: 15665 DST #: 3

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

Printed: 2011.03.14 @ 16:15:32

Ritchie Exploration Inc.

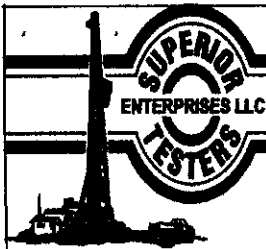
#3 Mink 33AD

33/5S/22W Norton

DST # 3

Lansing Kansas City

2011.03.09



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15665

DST#: 3

ATTN: Jeff Christian

Test Start: 2011.03.09 @ 12:37:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Hays/152

Interval: **3595.00 ft (KB) To 3622.00 ft (KB) (TVD)**

Reference Elevations: 2375.00 ft (KB)

Total Depth: 3622.00 ft (KB) (TVD)

2370.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8400

Outside

Press@RunDepth: 477.47 psia @ 3619.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.03.09

End Date:

2011.03.09

Last Calib.:

2011.03.09

Start Time:

12:37:10

End Time:

17:48:30

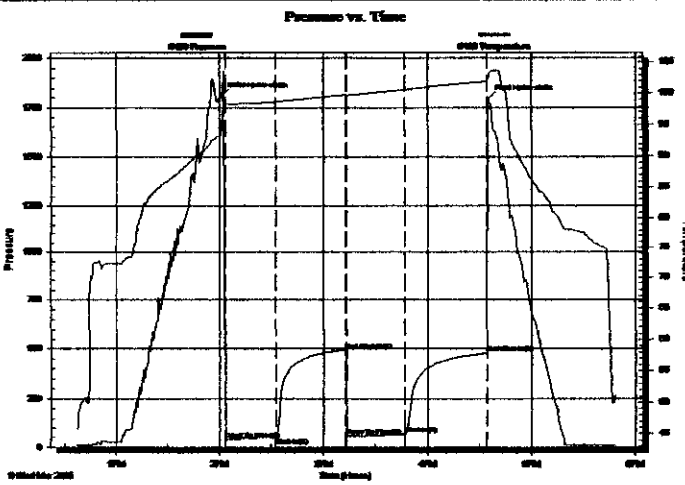
Time On Btm:

2011.03.09 @ 14:02:00

Time Off Btm:

2011.03.09 @ 16:35:00

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



PRESSURE SUMMARY

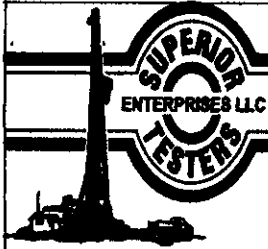
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1809.28	96.67	Initial Hydro-static
2	38.04	98.24	Open To Flow (1)
31	53.31	98.63	Shut-in(1)
71	493.73	99.75	End Shut-in(1)
72	54.43	99.68	Open To Flow (2)
105	67.13	100.57	Shut-in(2)
152	477.47	101.88	End Shut-in(2)
153	1797.76	102.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	Drilling Mud 100%	0.37

Gas Rates

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



DRILL STEM TEST REPORT

Richie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15665

DST#: 3

ATTN: Jeff Christian

Test Start: 2011.03.09 @ 12:37:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

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

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

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

Tester: **Dylan E Ellis**

Unit No: **3345/Hays/152**

Interval: **3595.00 ft (KB) To 3622.00 ft (KB) (TVD)**

Reference Elevations: **2375.00 ft (KB)**

Total Depth: **3622.00 ft (KB) (TVD)**

2370.00 ft (CF)

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

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

Serial #: **845**

Inside

Press@RunDepth: **476.41 psia @ 3618.00 ft (KB)**

Capacity: **5000.00 psia**

Start Date: **2011.03.09**

End Date:

2011.03.09

Last Calib.:

2011.03.09

Start Time: **12:38:01**

End Time:

17:48:47

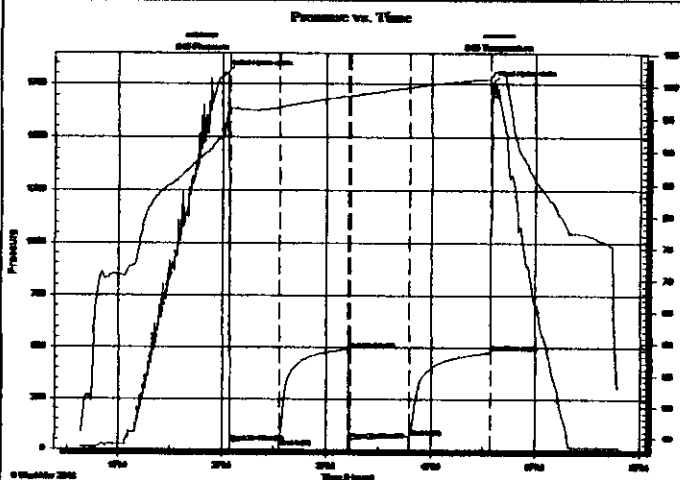
Time On Btm:

2011.03.09 @ 14:02:17

Time Off Btm:

2011.03.09 @ 16:34:47

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



PRESSURE SUMMARY

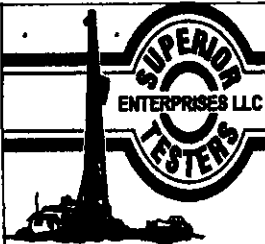
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1797.54	94.83	Initial Hydro-static
2	36.33	96.52	Open To Flow (1)
31	51.61	96.76	Shut-in(1)
70	492.02	98.63	End Shut-in(1)
72	52.51	98.60	Open To Flow (2)
106	67.72	99.87	Shut-in(2)
152	476.41	101.24	End Shut-in(2)
153	1750.53	101.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	Drilling Mud 100%	0.37

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 Wichita Kansas
 67278+3188
 ATTN: Jeff Christian

#3 Mink 33AD
 33/5S/22W Norton
 Job Ticket: 15665 DST#: 3
 Test Start: 2011.03.09 @ 12:37:00

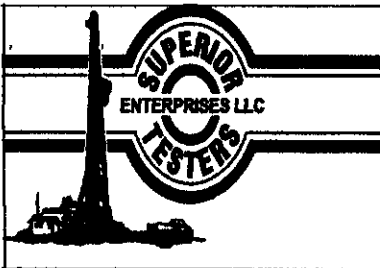
Tool Information

Drill Pipe:	Length: 3461.00 ft	Diameter: 3.80 inches	Volume: 48.55 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: 126.04 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 22000.00 lb
			<u>Total Volume: 49.17 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.04 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3595.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3580.00	
Hydraulic Tool	5.00			3585.00	
Packer	5.00			3590.00	20.00 Bottom Of Top Packer
Packer	5.00			3595.00	
Perforations	22.00			3617.00	
Recorder	1.00	845	Inside	3618.00	
Recorder	1.00	8400	Outside	3619.00	
Bull Plug	3.00			3622.00	27.00 Bottom Packers & Anchor

Total Tool Length: 47.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15665

DST#: 3

ATTN: Jeff Christian

Test Start: 2011.03.09 @ 12:37:00

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: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
75.00	Drilling Mud 100%	0.369

Total Length: 75.00 ft

Total Volume: 0.369 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

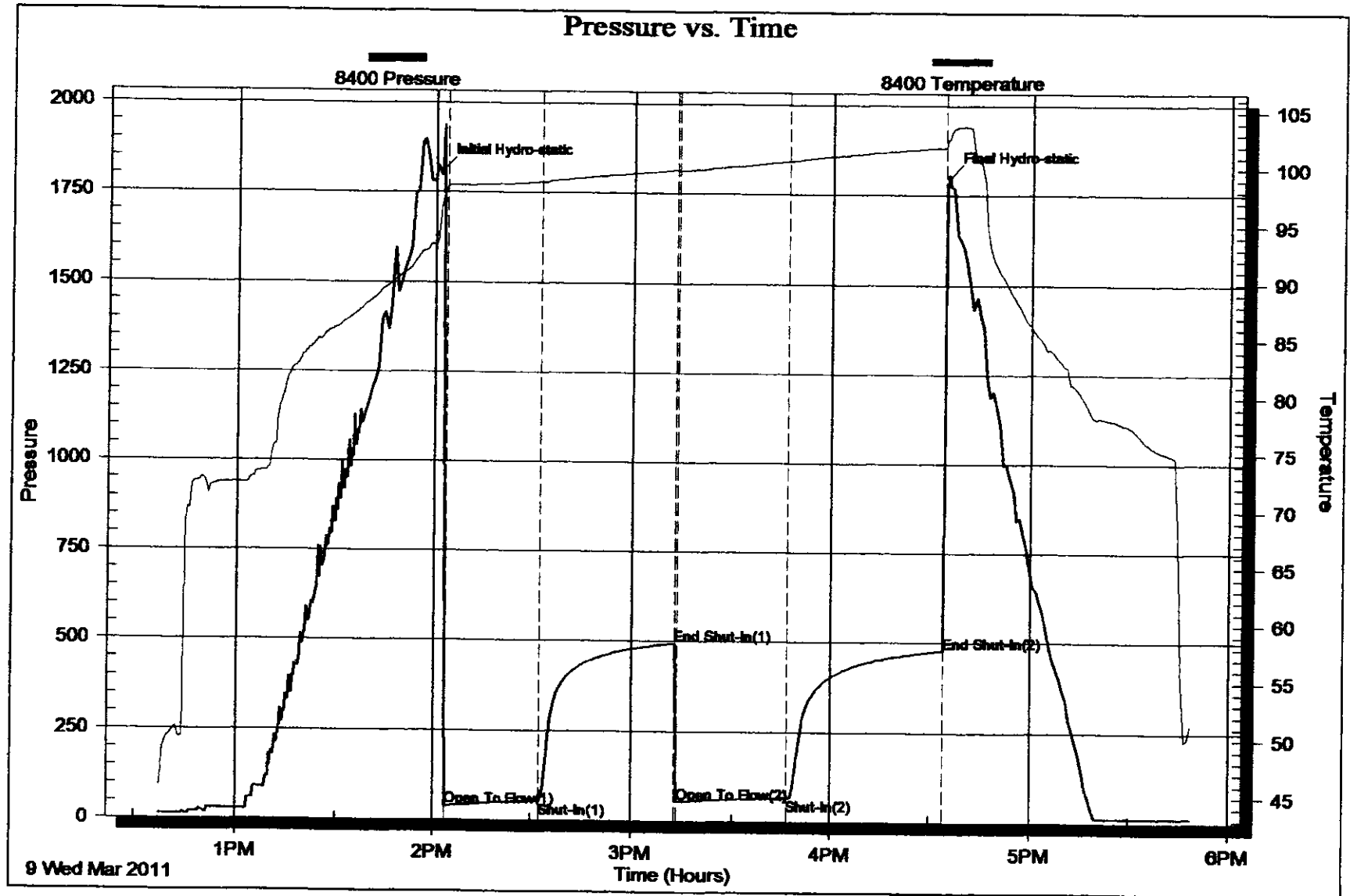
Recovery Comments:

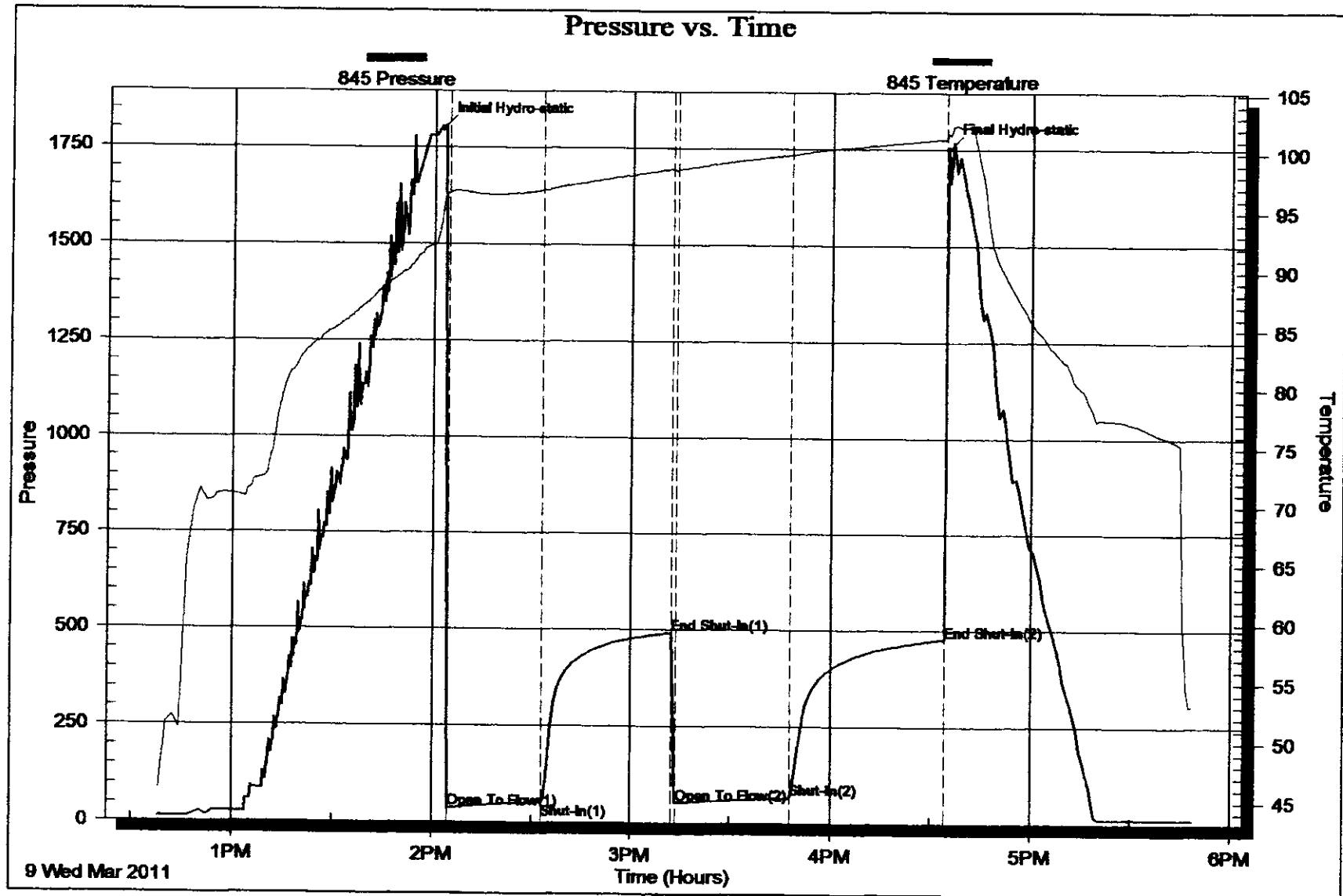
Serial #: 8400

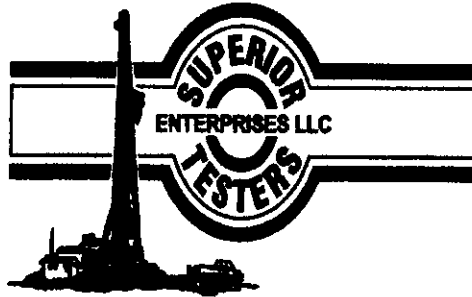
Outside Ritchie Exploration Inc.

33/5S/22W Norton

DST Test Number: 3







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

Start Date: 2011.03.10 @ 11:42:00

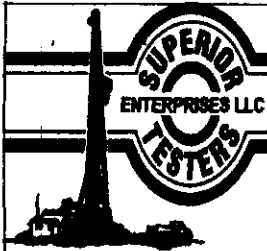
End Date: 2011.03.10 @ 00:00:00

Job Ticket #: 15666 DST #: 4

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

Printed: 2011.03.14 @ 16:12:30

Ritchie Exploration Inc. #3 Mink 33AD 33/5S/22W Norton DST # 4 Lansing Kansas City 2011.03.10



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15666

DST#: 4

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 11:42:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Hays/152

Interval: **3621.00 ft (KB) To 3638.00 ft (KB) (TVD)**

Total Depth: 3638.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2375.00 ft (KB)

2370.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **8405**

Inside

Press@RunDepth: 498.33 psia @ 3634.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.03.09

End Date: 2011.03.09

Last Calib.: 2011.03.10

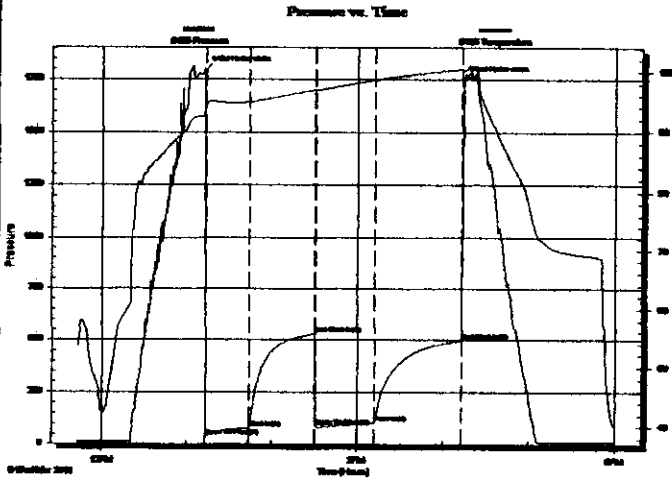
Start Time: 11:43:01

End Time: 18:00:16

Time On Btm: 2011.03.09 @ 13:12:46

Time Off Btm: 2011.03.09 @ 16:13:46

TEST COMMENT: 1ST Opening 30 Minutes good blow /blow blew to bottom of bucket of water in 17 minutes
1ST Shut-in 45 Minutes yes
2ND Opening 45 Minutes good blow /blow blew to bottom of bucket of water in 15 minutes
2ND Shut-in 60 Minutes yes



PRESSURE SUMMARY

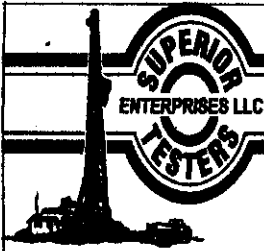
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1793.17	94.18	Initial Hydro-static
1	34.03	94.51	Open To Flow (1)
31	77.59	94.94	Shut-in(1)
77	529.39	96.98	End Shut-in(1)
78	84.24	96.94	Open To Flow (2)
119	104.35	98.58	Shut-in(2)
180	498.33	100.48	End Shut-in(2)
181	1751.61	100.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Clean Oil	0.30
120.00	Mud cut Oil	1.10
0.00	Mud 30% Oil 70%	0.00
60.00	Gassy Mud cut Oil	0.84
0.00	Gas 10% Mud 40% Oil 50%	0.00
0.00	Gravity of Oil corrected was 39	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15666

DST#: 4

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 11:42:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Hays/152

Interval: **3821.00 ft (KB) To 3638.00 ft (KB) (TVD)**

Reference Elevations: 2375.00 ft (KB)

Total Depth: 3638.00 ft (KB) (TVD)

2370.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8400

Outside

Press@RunDepth: 499.38 psia @ 3635.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.03.09

End Date:

2011.03.09

Last Calib.: 2011.03.10

Start Time: 11:42:10

End Time:

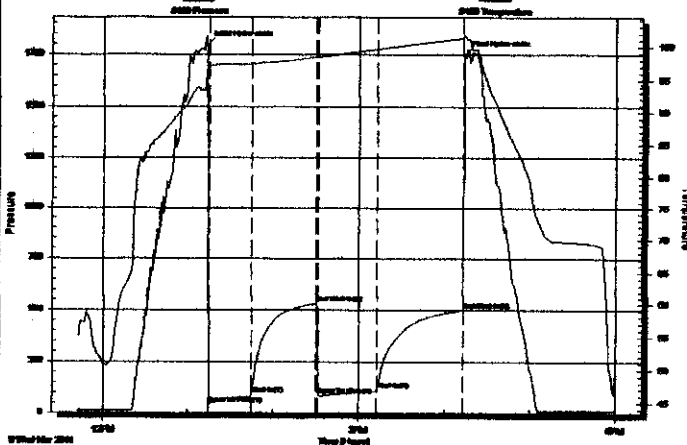
18:00:00

Time On Btm: 2011.03.09 @ 13:13:00

Time Off Btm: 2011.03.09 @ 16:14:00

TEST COMMENT: 1ST Opening 30 Minutes good blow /blow blew to bottom of bucket of water in 17 minutes
 1ST Shut-In 45 Minutes yes
 2ND Opening 45 Minutes good blow /blow blew to bottom of bucket of water in 15 minutes
 2ND Shtu-In 60 Minutes yes

Pressure vs. Time



PRESSURE SUMMARY

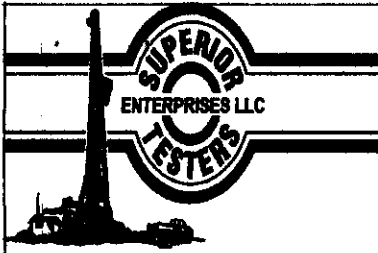
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1793.01	96.16	Initial Hydro-static
2	38.96	96.82	Open To Flow (1)
32	91.44	97.33	Shut-In(1)
77	530.29	98.47	End Shut-In(1)
79	84.77	98.41	Open To Flow (2)
120	113.37	99.58	Shut-In(2)
180	499.38	101.27	End Shut-In(2)
181	1747.56	101.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Clean Oil	0.30
120.00	Mud cut Oil	1.10
0.00	Mud 30% Oil 70%	0.00
60.00	Gassy Mud cut Oil	0.84
0.00	Gas 10% Mud 40% Oil 50%	0.00
0.00	Gravity of Oil corrected was 39	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15666

DST#: 4

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 11:42:00

Tool Information

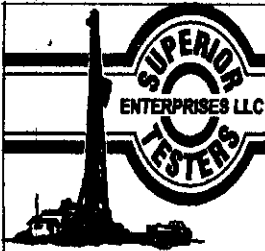
Drill Pipe:	Length: 3489.00 ft	Diameter: 3.80 inches	Volume: 48.94 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 124.06 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 20000.00 lb
			<u>Total Volume: 49.55 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.06 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3621.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	17.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3606.00	
Hydraulic Tool	5.00			3611.00	
Packer	5.00			3616.00	20.00 Bottom Of Top Packer
Packer	5.00			3621.00	
Perforations	12.00			3633.00	
Recorder	1.00	8405	Inside	3634.00	
Recorder	1.00	8400	Outside	3635.00	
Bull Plug	3.00			3638.00	17.00 Bottom Packers & Anchor

Total Tool Length: 37.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15666

DST#: 4

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 11:42:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: 7.79 in³
Resistivity: ohm.m
Salinity: 1500.00 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
60.00	Clean Oil	0.295
120.00	Mud cut Oil	1.100
0.00	Mud 30% Oil 70%	0.000
60.00	Gassy Mud cut Oil	0.842
0.00	Gas 10% Mud 40% Oil 50%	0.000
0.00	Gravity of Oil corrected w as 39	0.000

Total Length: 240.00 ft Total Volume: 2.237 bbl

Num Fluid Samples: 0

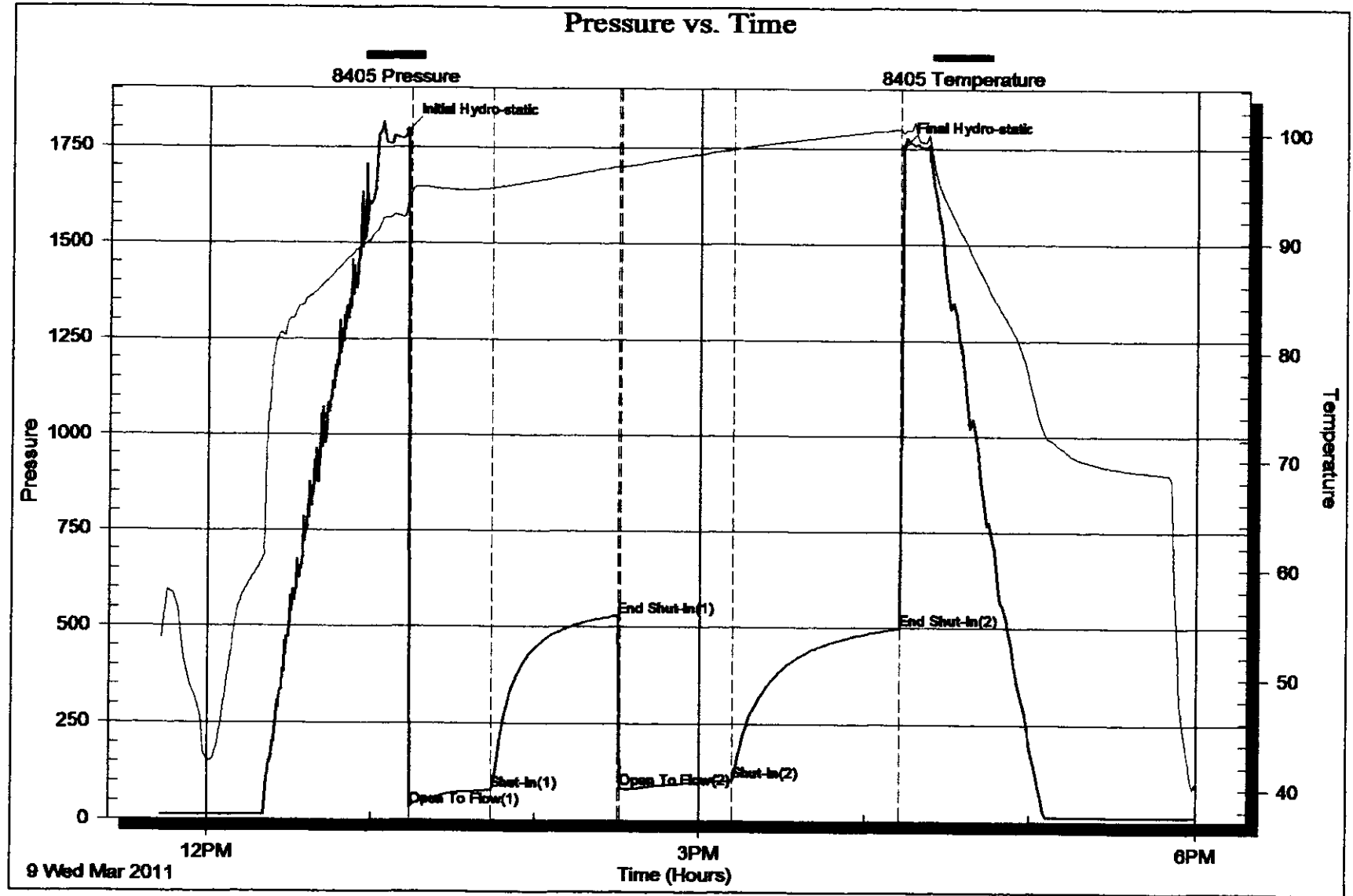
Num Gas Bombs: 0

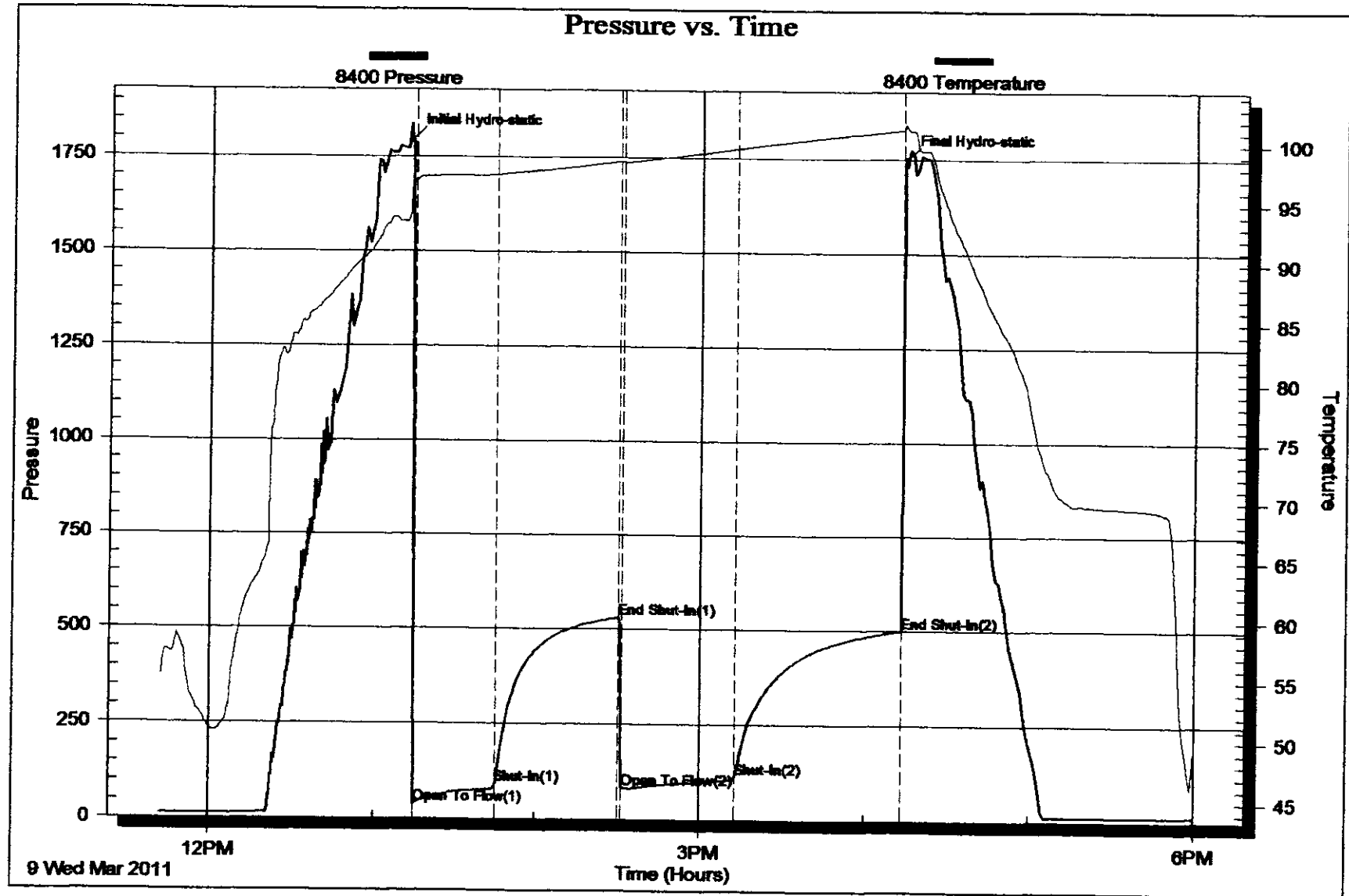
Serial #:

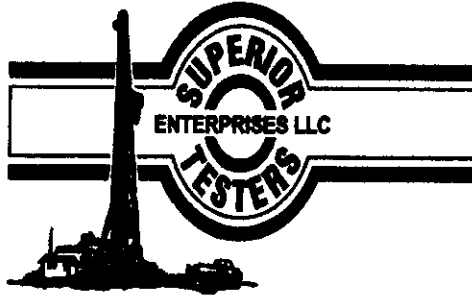
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

Start Date: 2011.03.10 @ 01:00:00

End Date: 2011.03.10 @ 00:00:00

Job Ticket #: 15667 DST #: 5

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

Printed: 2011.03.14 @ 16:12:16

Ritchie Exploration Inc.

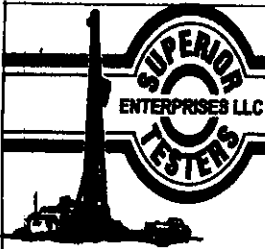
#3 Mink 33AD

33/5S/22W Norton

DST # 5

Lansing Kansas City

2011.03.10



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15667

DST#: 5

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 01:00:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

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

Tester: **Dylan E Ellis**

Unit No: **3345/Hays/152**

Interval: **3636.00 ft (KB) To 3659.00 ft (KB) (TVD)**

Total Depth: **3659.00 ft (KB) (TVD)**

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

Reference Elevations: **2375.00 ft (KB)**

2370.00 ft (CF)

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

Serial #: **8400**

Outside

Press@RunDepth: **1058.43 psia @ 3656.00 ft (KB)**

Start Date: **2011.03.10**

End Date: **2011.03.10**

Capacity: **5000.00 psia**

Last Calib.: **2011.03.10**

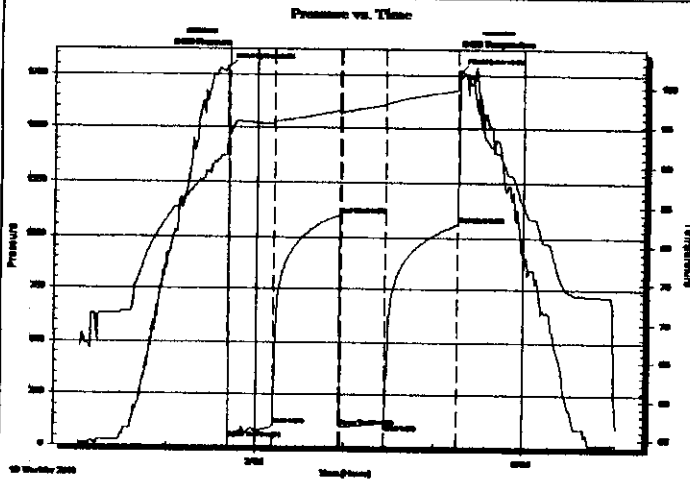
Start Time: **01:00:10**

End Time: **07:04:00**

Time On Btm: **2011.03.10 @ 02:40:30**

Time Off Btm: **2011.03.10 @ 05:16:30**

TEST COMMENT: 1ST Opening 30 Minutes weak but slow building blow /blow built to 2.50 inches into bucket of water
 1ST Shut-in 45 Minutes no blow back
 2ND Opening 30 Minutes weak but slow building blow /blow built to 3 inches into bucket of water
 2ND Shut-in 45 Minutes no blow back



PRESSURE SUMMARY

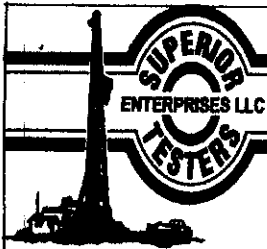
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1786.45	94.07	Initial Hydro-static
1	36.90	93.86	Open To Flow (1)
31	101.74	95.46	Shut-in(1)
76	1100.46	97.02	End Shut-in(1)
77	94.74	96.82	Open To Flow (2)
106	110.18	97.79	Shut-in(2)
155	1058.43	99.67	End Shut-in(2)
156	1768.79	100.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Water cut Mud	0.15
0.00	40% Water 60% Mud	0.00
62.00	Mud cut Water with skim of Oil	0.30
0.00	20% Mud 80% Water Skim of Oil	0.00
62.00	Slightly Oil cut Muddy Water	0.56
0.00	2% Oil 30% Mud 68% Water	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15667

DST#: 5

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 01:00:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

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

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

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

Tester: **Dylan E Ellis**

Unit No: **3345/Hays/152**

Interval: **3636.00 ft (KB) To 3659.00 ft (KB) (TVD)**

Total Depth: **3659.00 ft (KB) (TVD)**

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

Reference Elevations: **2375.00 ft (KB)**

2370.00 ft (CF)

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

Serial #: **8405** Inside

Press@RunDepth: **1058.46 psia @ 3655.00 ft (KB)**

Start Date: **2011.03.10**

End Date: **2011.03.10**

Capacity: **5000.00 psia**

Last Calib.: **2011.03.10**

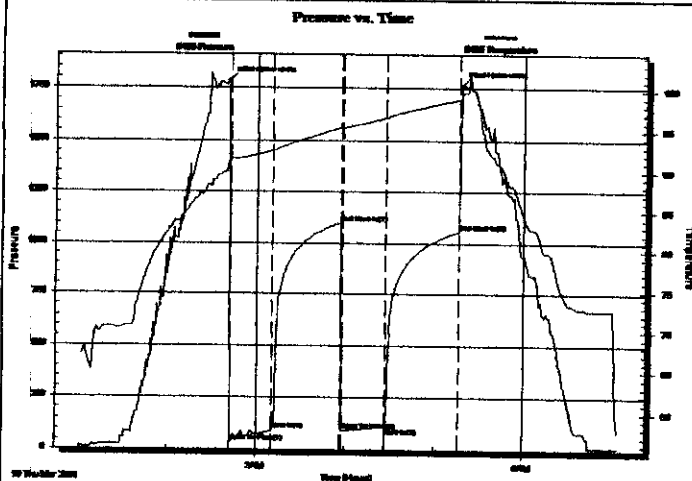
Start Time: **01:01:01**

End Time: **07:04:45**

Time On Btrm: **2011.03.10 @ 02:40:45**

Time Off Btrm: **2011.03.10 @ 05:17:15**

TEST COMMENT: 1ST Opening 30 Minutes weak but slow building blow/blow built to 2.50 inches into bucket of water
1ST Shut-in 45 Minutes no blow back
2ND Opening 30 Minutes weak but slow building blow/blow built to 3 inches into bucket of water
2ND Shut-in 45 Minutes no blow back



PRESSURE SUMMARY

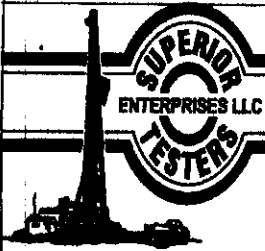
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1783.68	91.57	Initial Hydro-static
2	36.90	91.60	Open To Flow (1)
30	92.03	92.65	Shut-in(1)
76	1097.29	95.44	End Shut-in(1)
77	92.87	95.33	Open To Flow (2)
106	108.61	96.66	Shut-in(2)
156	1058.46	98.86	End Shut-in(2)
157	1764.06	99.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Water cut Mud	0.15
0.00	40% Water 60% Mud	0.00
62.00	Mud cut Water with skim of Oil	0.30
0.00	20% Mud 80% Water Skm of Oil	0.00
62.00	Slightly Oil cut Muddy Water	0.56
0.00	2% Oil 30% Mud 68% Water	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15667

DST#: 5

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 01:00:00

Tool Information

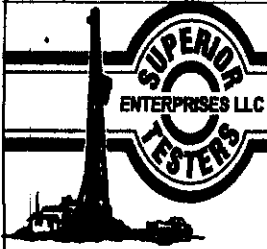
Drill Pipe:	Length: 3514.00 ft	Diameter: 3.80 inches	Volume: 49.29 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 126.04 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 23000.00 lb
			<u>Total Volume: 49.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.04 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3636.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3621.00	
Hydraulic Tool	5.00			3626.00	
Packer	5.00			3631.00	20.00 Bottom Of Top Packer
Packer	5.00			3636.00	
Perforations	18.00			3654.00	
Recorder	1.00	8405	Inside	3655.00	
Recorder	1.00	8400	Outside	3656.00	
Ball Plug	3.00			3659.00	23.00 Bottom Packers & Anchor

Total Tool Length: 43.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15667

DST#: 5

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 01:00:00

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: 40.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.59 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 1300.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

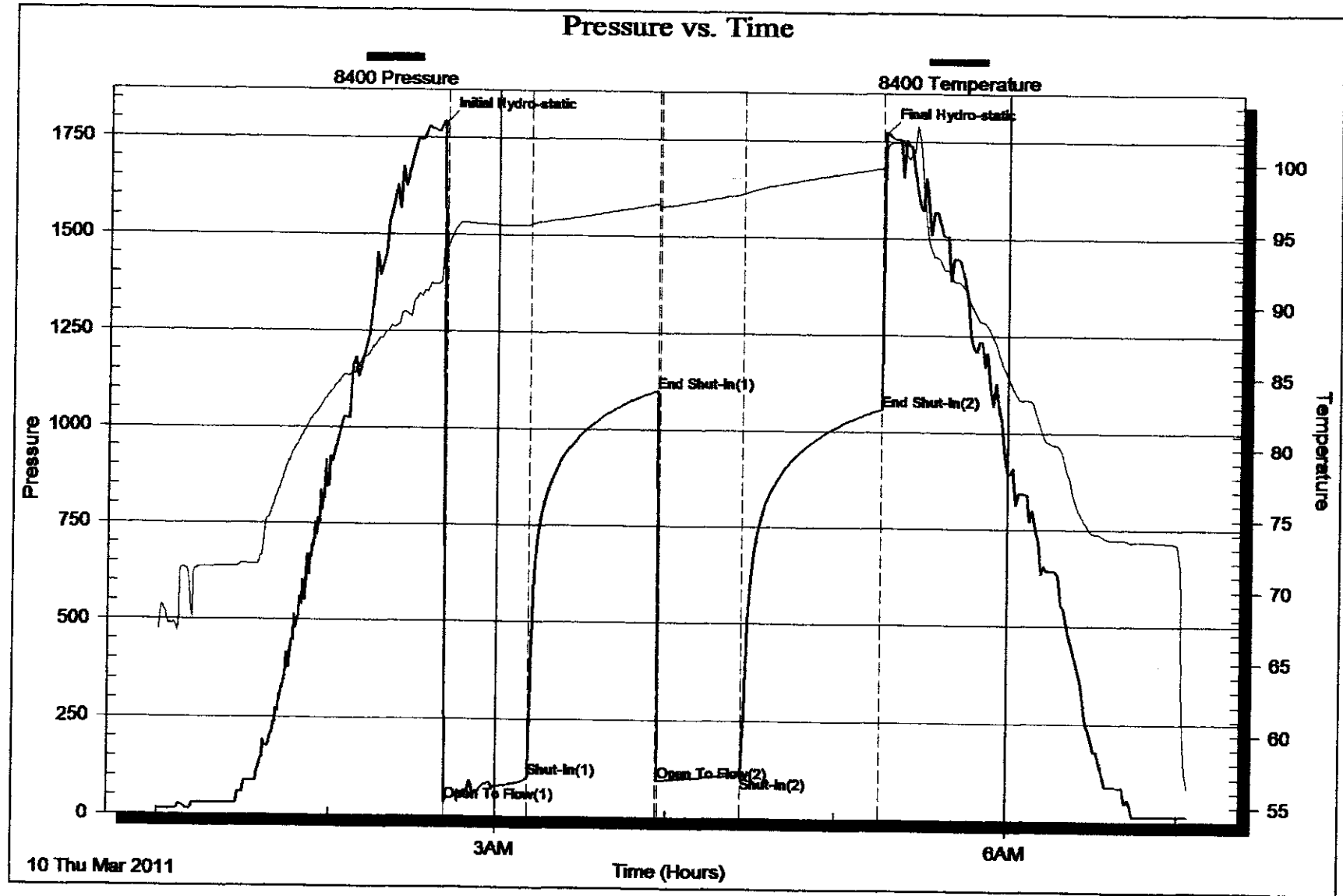
Length ft	Description	Volume bbl
30.00	Water cut Mud	0.148
0.00	40% Water 60% Mud	0.000
62.00	Mud cut Water with skim of Oil	0.305
0.00	20% Mud 80% Water Skim of Oil	0.000
62.00	Slightly Oil cut Muddy Water	0.560
0.00	2% Oil 30% Mud 68% Water	0.000
0.00	Chlorides were 39,000.0	0.000
0.00	Resistivity was .30 @ 68 degrees	0.000

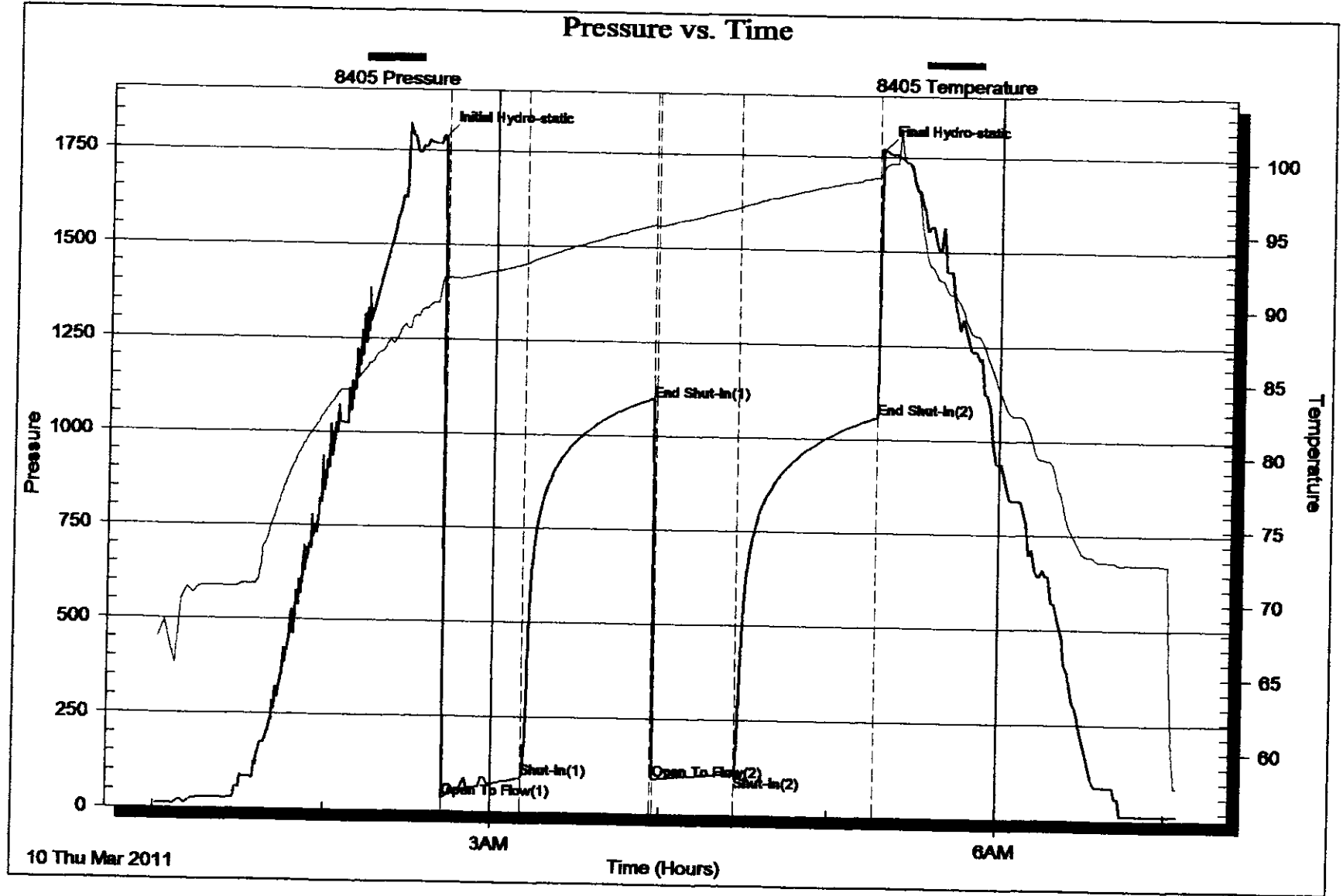
Total Length: 154.00 ft Total Volume: 1.013 bbl

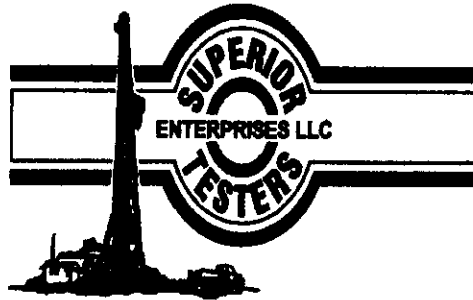
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

Start Date: 2011.03.11 @ 05:36:00

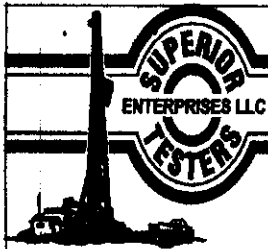
End Date: 2011.03.11 @ 00:00:00

Job Ticket #: 15668 DST #: 6

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

Printed: 2011.03.14 @ 16:08:18

Ritchie Exploration Inc. #3 Mink 33AD 33/5S/22W Norton DST # 6 Lansing Kansas City 2011.03.11



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15668

DST#: 6

ATTN: Jeff Christian

Test Start: 2011.03.11 @ 05:36:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Hays/152

Interval: **3676.00 ft (KB) To 3738.00 ft (KB) (TVD)**

Total Depth: 3738.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2375.00 ft (KB)

2370.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **8405**

Inside

Press@RunDepth: 512.64 psia @ 3733.79 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.03.11

End Date:

2011.03.11

Last Calib.: 2011.03.11

Start Time: 05:37:01

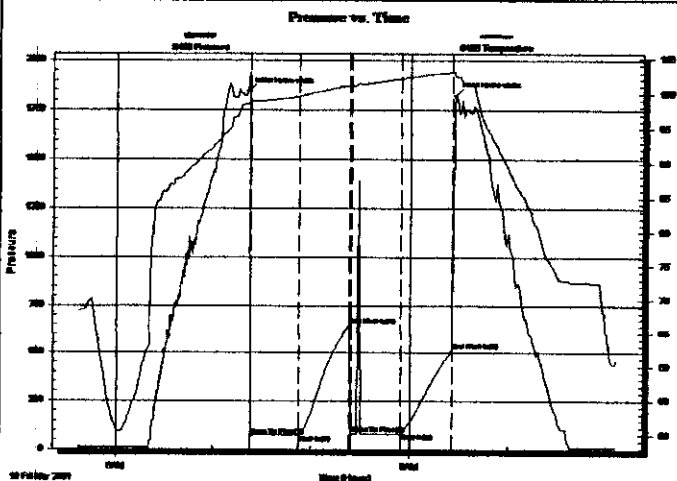
End Time:

11:05:44

Time On Btm: 2011.03.11 @ 07:20:44

Time Off Btm: 2011.03.11 @ 09:27:14

TEST COMMENT: 1ST Opening 30 Minutes weak blow /blow blew 1 inch and than died in 21 minutes
1ST Shut-in 30 Minutes no blow back
2ND Opening 30 Minutes opened tool/blow dead/w aited 5 minutes flushed tool good surge no help
2ND Shut-in 30 Minutes no blow back



PRESSURE SUMMARY

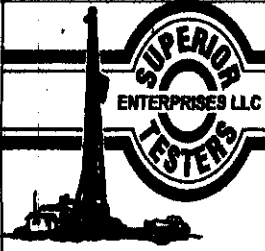
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1843.21	98.49	Initial Hydro-static
2	72.98	98.83	Open To Flow (1)
32	77.36	99.58	Shut-in(1)
63	647.79	101.07	End Shut-in(1)
64	78.80	101.00	Open To Flow (2)
94	85.24	102.08	Shut-in(2)
125	512.64	103.09	End Shut-in(2)
127	1823.12	102.44	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	Mud 100%	0.12

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15668

DST#: 6

ATTN: Jeff Christian

Test Start: 2011.03.11 @ 05:36:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Hays/152

Interval: **3676.00 ft (KB) To 3738.00 ft (KB) (TVD)**

Reference Elevations: 2375.00 ft (KB)

Total Depth: 3738.00 ft (KB) (TVD)

2370.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 5.00 ft

Serial #: 8400

Outside

Press@RunDepth: 513.20 psia @ 3734.79 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.03.11

End Date:

2011.03.11

Last Calib.:

2011.03.11

Start Time: 05:36:10

End Time:

11:06:30

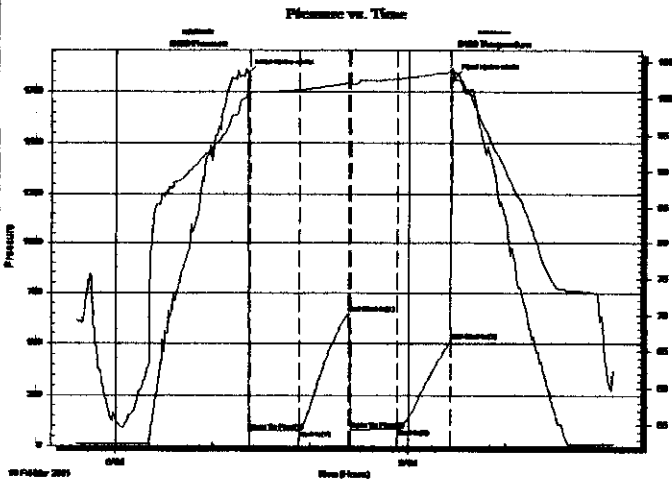
Time On Btm:

2011.03.11 @ 07:21:30

Time Off Btm:

2011.03.11 @ 09:28:00

TEST COMMENT: 1ST Opening 30 Minutes weak blow /blow blew 1 inch and than died in 21 minutes
1ST Shut-in 30 Minutes no blow back
2ND Opening 30 Minutes opened tool/blow dead/w aited 5 minutes flushed tool good surge no help
2ND Shut-in 30 Minutes no blow back



PRESSURE SUMMARY

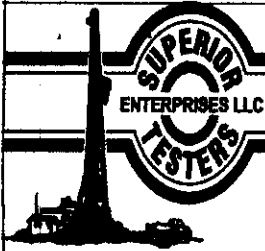
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1844.43	100.84	Initial Hydro-static
2	74.90	100.74	Open To Flow (1)
32	78.83	101.17	Shut-in(1)
62	648.08	102.07	End Shut-in(1)
63	80.61	101.95	Open To Flow (2)
92	84.14	102.73	Shut-in(2)
125	513.20	103.62	End Shut-in(2)
127	1818.81	103.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	Mud 100%	0.12

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15668

DST#: 6

ATTN: Jeff Christian

Test Start: 2011.03.11 @ 05:36:00

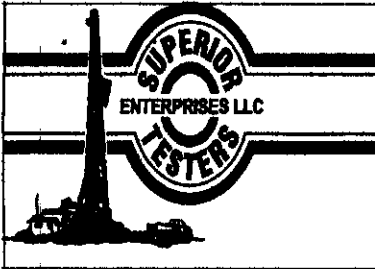
Tool Information

Drill Pipe:	Length: 3557.00 ft	Diameter: 3.80 inches	Volume: 49.90 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: 124.06 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 29000.00 lb
			<u>Total Volume: 50.51 bbl</u>	Tool Chased: 10.00 ft
Drill Pipe Above KB:	25.06 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3676.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	61.79 ft			
Tool Length:	81.79 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool slide about 10 feet to bottom. Mud dropped about 5 feet and stayed there

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3661.00	
Hydraulic Tool	5.00			3666.00	
Packer	5.00			3671.00	20.00 Bottom Of Top Packer
Packer	5.00			3676.00	
Perforations	5.00			3681.00	
Change Over Sub	0.75			3681.75	
Drill Pipe	31.29			3713.04	
Change Over Sub	0.75			3713.79	
Perforations	19.00			3732.79	
Recorder	1.00	8405	Inside	3733.79	
Recorder	1.00	8400	Outside	3734.79	
Bull Plug	3.00			3737.79	61.79 Bottom Packers & Anchor

Total Tool Length: 81.79



DRILL STEM TEST REPORT

FLUID SUMMARY

Fitchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15668

DST#: 6

ATTN: Jeff Christian

Test Start: 2011.03.11 @ 05:36:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 40.00 sec/qt
Water Loss: 9.59 in³
Resistivity: ohm.m
Salinity: 1300.00 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
25.00	Mud 100%	0.123

Total Length: 25.00 ft Total Volume: 0.123 bbl

Num Fluid Samples: 0

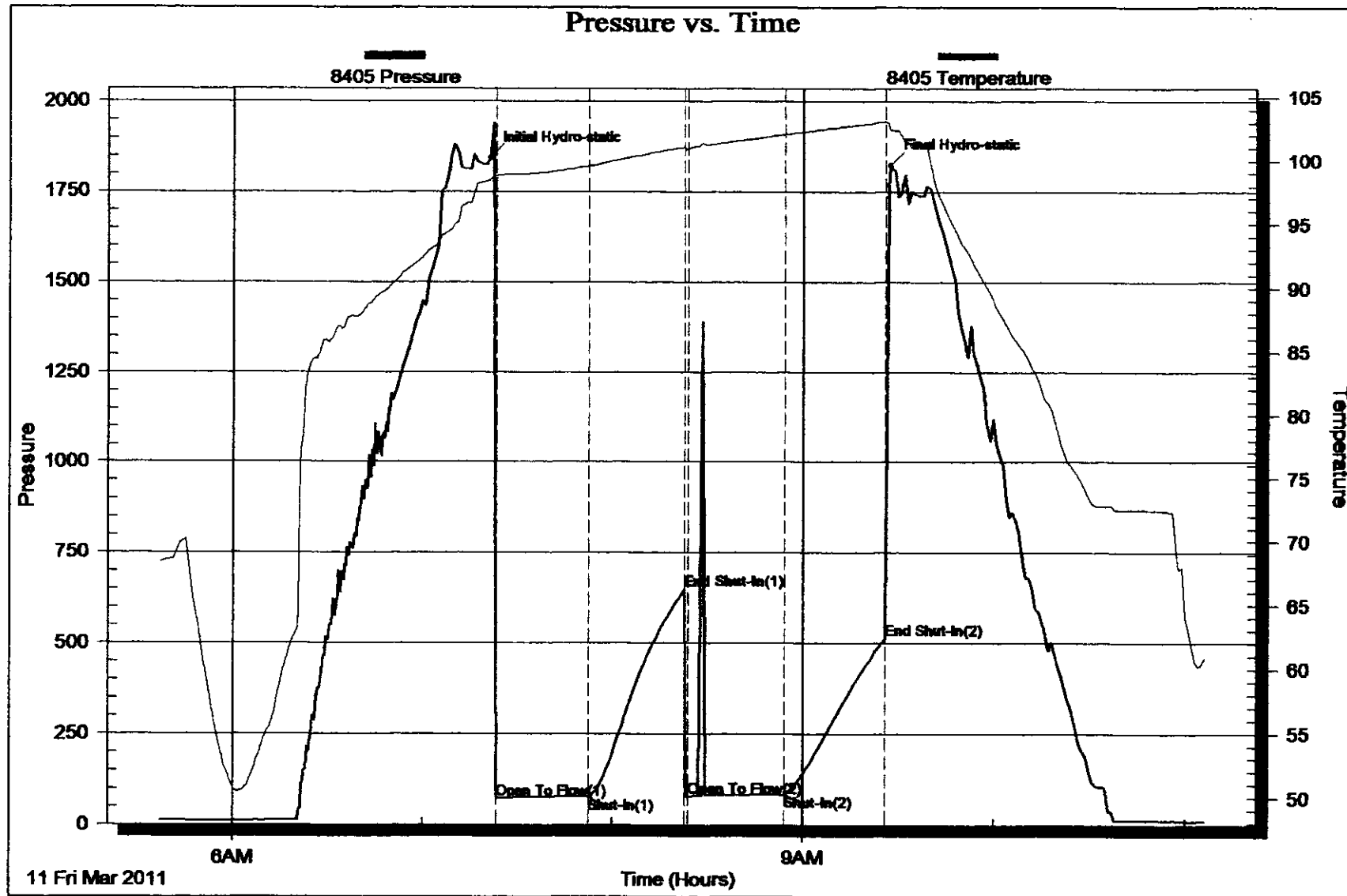
Num Gas Bombs: 0

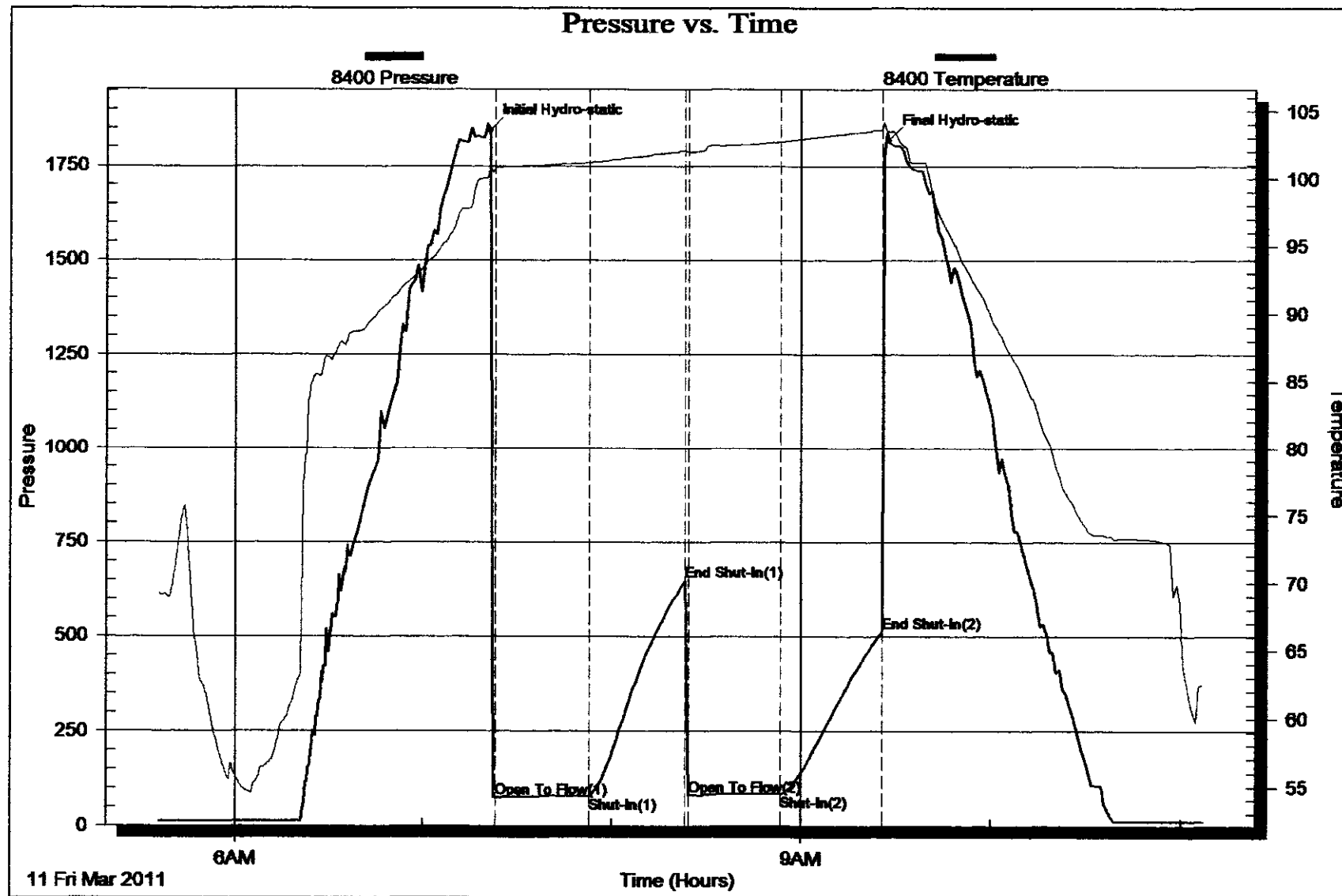
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

Start Date: 2011.03.11 @ 07:59:00

End Date: 2011.03.11 @ 00:00:00

Job Ticket #: 15669 DST #: 7

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

Printed: 2011.03.14 @ 16:06:44

Ritchie Exploration Inc.

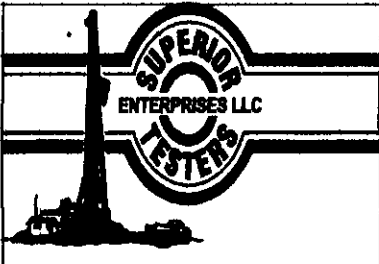
#3 Mink 33AD

33/5S/22W Norton

DST # 7

Lansing Kansas City

2011.03.11



DRILL 'STEM' TEST REPORT

Ritchie Exploration Inc.
 8100 East 22ND Street North 700 Wichita Kansas
 67278+3188
 ATTN: Jeff Christian

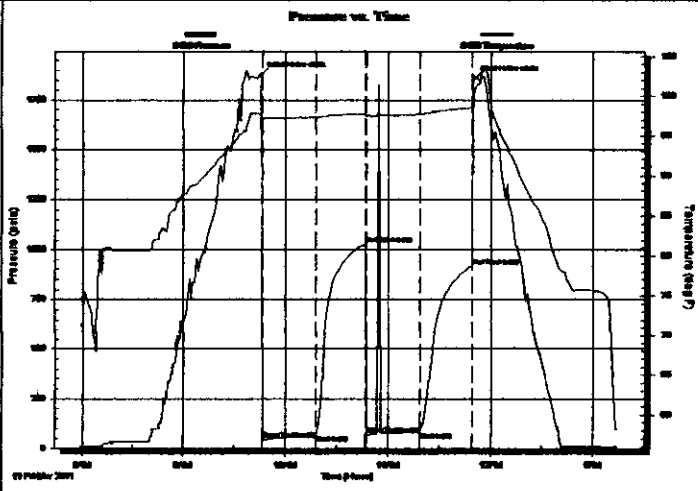
#3 Mink 33AD
 33/5S/22W Norton
 Job Ticket: 15669 DST#: 7
 Test Start: 2011.03.11 @ 07:59:00

GENERAL INFORMATION:

Formation: Lansing Kansas City
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 00:00:00
 Time Test Ended: 00:00:00
 Interval: 3735.00 ft (KB) To 3772.00 ft (KB) (TVD)
 Total Depth: 3772.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Dylan E Ellis
 Unit No: 3345/Hays/152
 Reference Elevations: 2375.00 ft (KB)
 2370.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8400 Outside
 Press@RunDepth: 918.25 psia @ 3769.00 ft (KB)
 Start Date: 2011.03.11 End Date: 2011.03.11
 Start Time: 07:59:10 End Time: 13:14:30
 Capacity: 5000.00 psia
 Last Calib.: 2011.03.12
 Time On Btrr: 2011.03.11 @ 09:45:30
 Time Off Btrr: 2011.03.11 @ 11:50:00

TEST COMMENT: 1ST Opening 30 Minutes open tool blow w as dead didnt slide at all and mud held right were it was
 1ST Shut-in 30 Minutes no blow back
 2ND Opening 30 Minutes opened tool/blow w as dead/good flush/no help/still dead
 2ND Shut-in 30 Minutes no blow back



PRESSURE SUMMARY

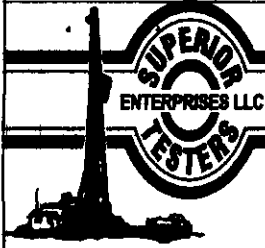
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1876.99	97.64	Initial Hydro-static
1	44.09	97.20	Open To Flow (1)
32	67.67	97.32	Shut-in(1)
61	1030.37	97.74	End Shut-in(1)
62	70.70	97.51	Open To Flow (2)
93	84.29	97.78	Shut-in(2)
124	918.25	98.50	End Shut-in(2)
125	1854.60	98.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Drilling Mud 100% with Oil spots in it	0.44

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15669

DST#: 7

ATTN: Jeff Christian

Test Start: 2011.03.11 @ 07:59:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Hays/152

Interval: 3735.00 ft (KB) To 3772.00 ft (KB) (TVD)

Total Depth: 3772.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2375.00 ft (KB)

2370.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8405

Inside

Press@RunDepth: 916.53 psia @ 3768.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.03.11

End Date:

2011.03.11

Last Calib.:

2011.03.12

Start Time: 08:00:01

End Time:

13:14:43

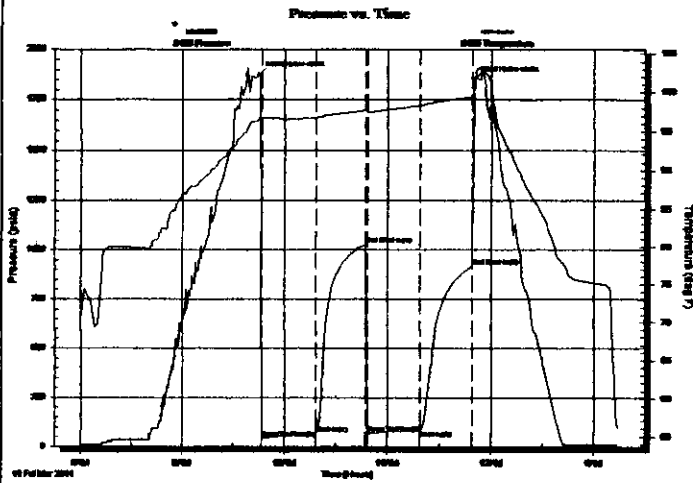
Time On Btm:

2011.03.11 @ 09:44:43

Time Off Btm:

2011.03.11 @ 11:50:13

TEST COMMENT: 1ST Opening 30 Minutes open tool blow w as dead didnt slide at all and mud held right were it was
1ST Shut-in 30 Minutes no blow back
2ND Opening 30 Minutes opened tool/blow w as dead/good flush/no help/still dead
2ND Shut-in 30 Minutes no blow back



PRESSURE SUMMARY

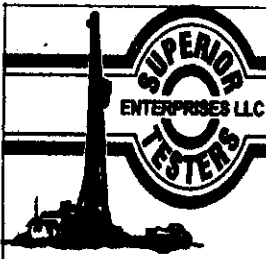
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1876.60	96.64	Initial Hydro-static
2	40.96	96.52	Open To Flow (1)
34	67.06	96.76	Shut-In(1)
63	1031.16	97.66	End Shut-In(1)
64	68.39	97.49	Open To Flow (2)
94	82.54	98.31	Shut-In(2)
125	916.53	99.36	End Shut-In(2)
126	1852.90	99.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Drilling Mud 100% with Oil spots in it	0.44

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15669

DST#: 7

ATTN: Jeff Christian

Test Start: 2011.03.11 @ 07:59:00

Tool Information

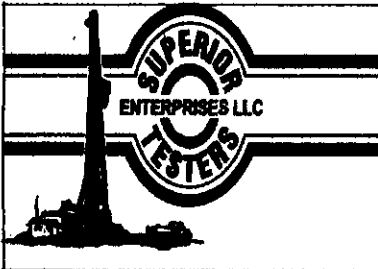
Drill Pipe:	Length: 3615.00 ft	Diameter: 3.80 inches	Volume: 50.71 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 126.04 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 36000.00 lb
			<u>Total Volume: 51.33 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.04 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3735.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	57.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3720.00	
Hydraulic Tool	5.00			3725.00	
Packer	5.00			3730.00	20.00
Packer	5.00			3735.00	Bottom Of Top Packer
Perforations	32.00			3767.00	
Recorder	1.00	8405	Inside	3768.00	
Recorder	1.00	8400	Outside	3769.00	
Bull Plug	3.00			3772.00	37.00
					Bottom Packers & Anchor

Total Tool Length: 57.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15669

DST#: 7

ATTN: Jeff Christian

Test Start: 2011.03.11 @ 07:59:00

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: 7.99 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 3200.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

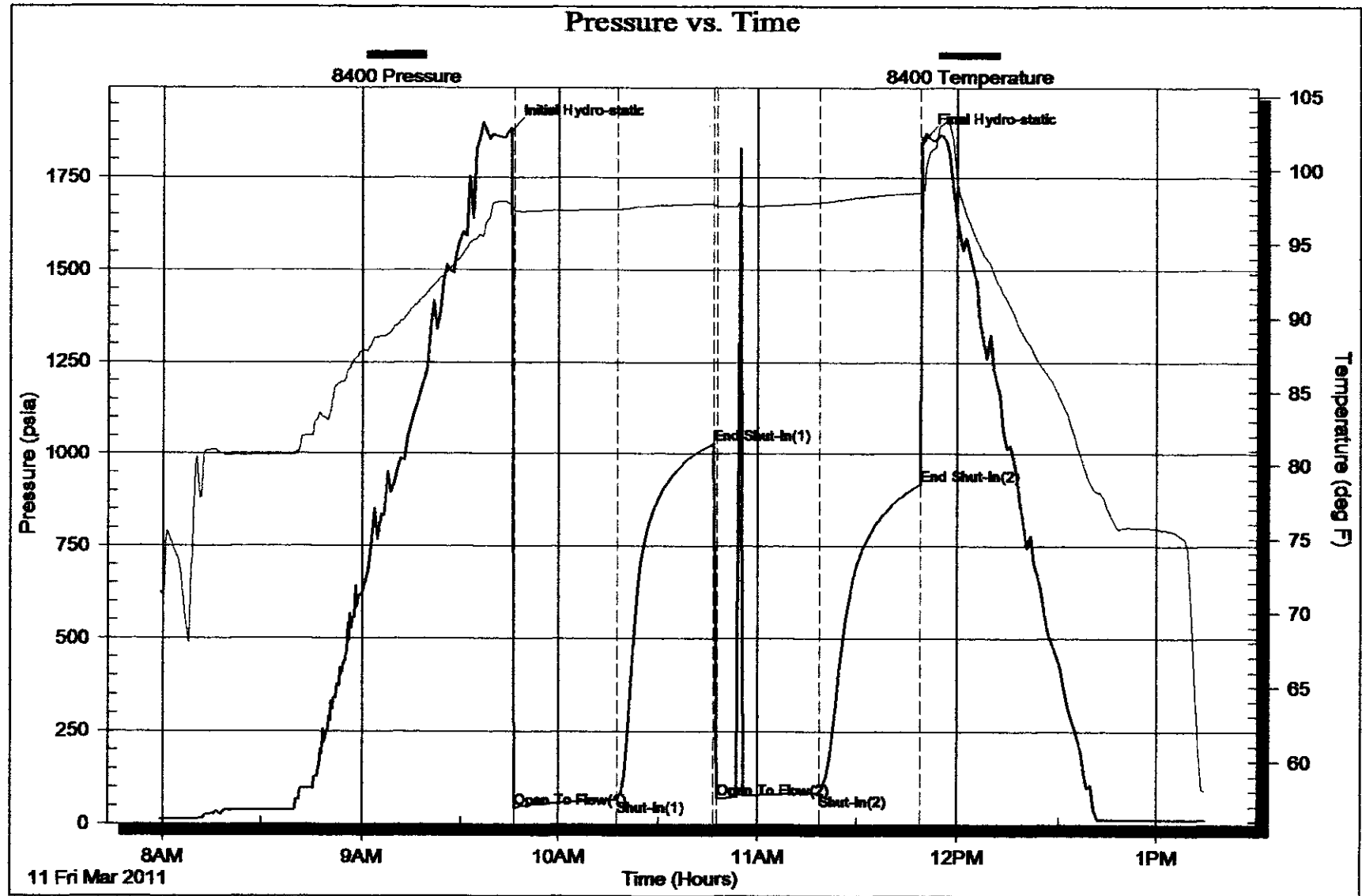
Length ft	Description	Volume bbl
90.00	Drilling Mud 100% with Oil spots in it	0.443

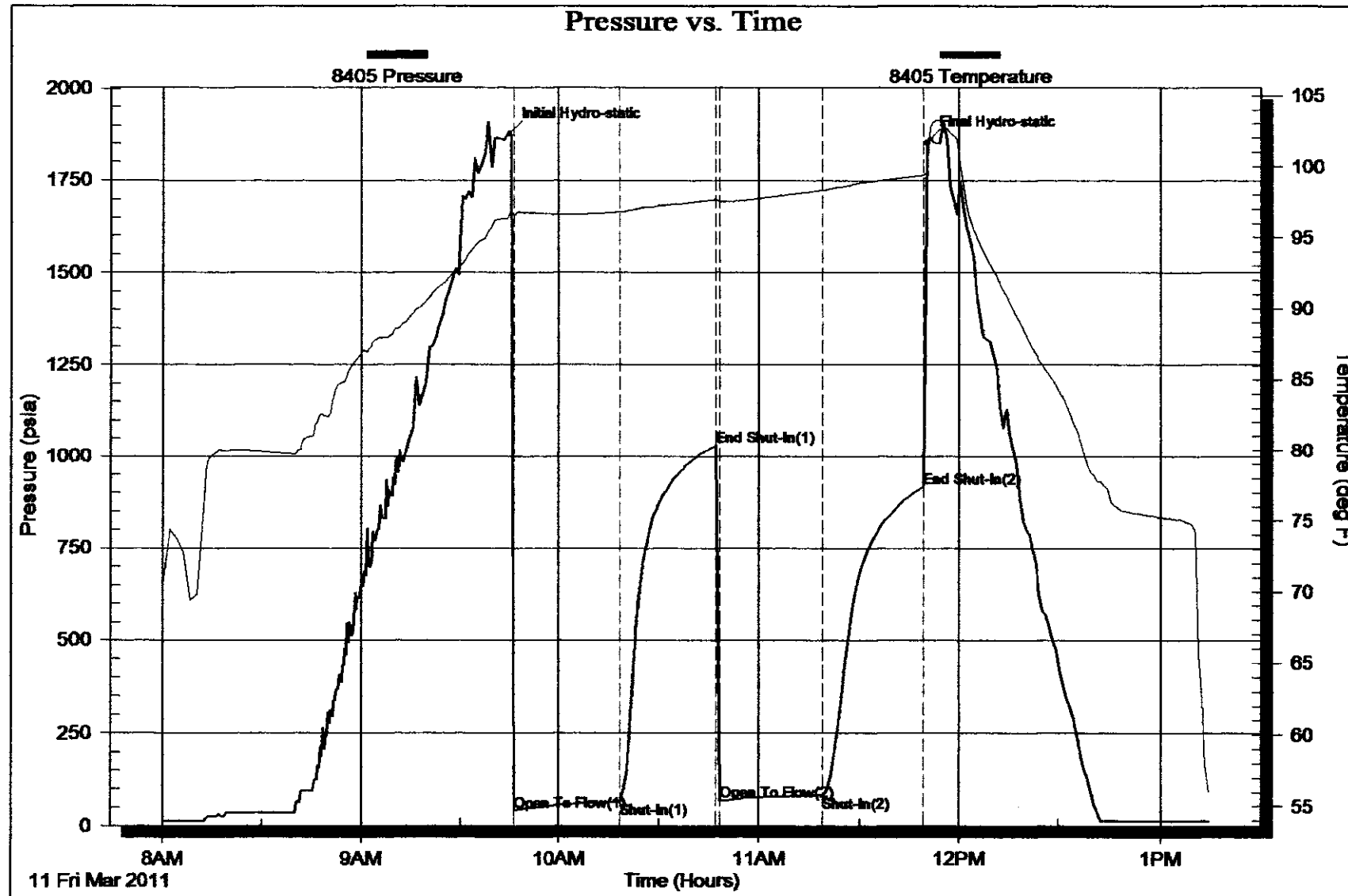
Total Length: 90.00 ft Total Volume: 0.443 bbl

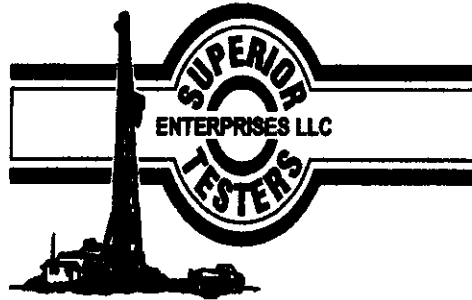
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

Start Date: 2011.03.10 @ 11:42:00

End Date: 2011.03.10 @ 00:00:00

Job Ticket #: 15666 DST #: 4

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

Printed: 2011.03.14 @ 16:12:30

Ritchie Exploration Inc.

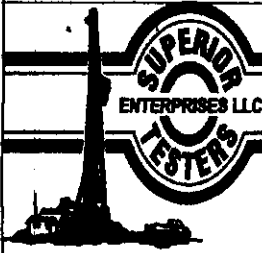
#3 Mink 33AD

33/5S/22W Norton

DST # 4

Lansing Kansas City

2011.03.10



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15666

DST#: 4

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 11:42:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

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

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

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

Tester: **Dylan E Ellis**

Unit No: **3345/Hays/152**

Interval: **3621.00 ft (KB) To 3638.00 ft (KB) (TVD)**

Total Depth: **3638.00 ft (KB) (TVD)**

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

Reference Elevations: **2375.00 ft (KB)**

2370.00 ft (CF)

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

Serial #: **8405**

Inside

Press@RunDepth: **498.33 psia @ 3634.00 ft (KB)**

Capacity: **5000.00 psia**

Start Date: **2011.03.09**

End Date:

2011.03.09

Last Calib.: **2011.03.10**

Start Time: **11:43:01**

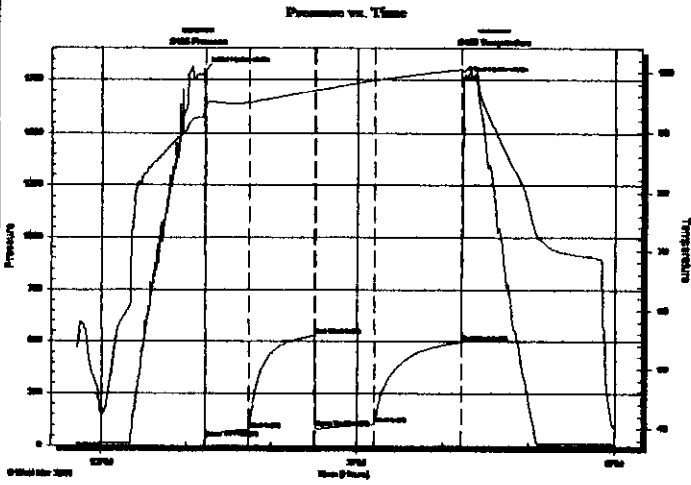
End Time:

18:00:16

Time On Btm: **2011.03.09 @ 13:12:46**

Time Off Btm: **2011.03.09 @ 16:13:46**

TEST COMMENT: 1ST Opening 30 Minutes good blow /blow blew to bottom of bucket of water in 17 minutes
 1ST Shut-in 45 Minutes yes
 2ND Opening 45 Minutes good blow /blow blew to bottom of bucket of water in 15 minutes
 2ND Shu-in 60 Minutes yes



PRESSURE SUMMARY

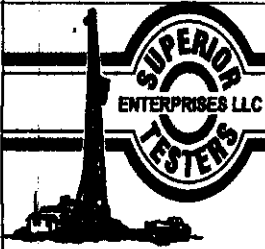
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1793.17	94.18	Initial Hydro-static
1	34.03	94.51	Open To Flow (1)
31	77.59	94.94	Shut-in(1)
77	529.39	96.98	End Shut-in(1)
78	84.24	96.94	Open To Flow (2)
119	104.35	98.58	Shut-in(2)
180	498.33	100.48	End Shut-in(2)
181	1751.61	100.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Clean Oil	0.30
120.00	Mud cut Oil	1.10
0.00	Mud 30% Oil 70%	0.00
60.00	Gassy Mud cut Oil	0.84
0.00	Gas 10% Mud 40% Oil 50%	0.00
0.00	Gravity of Oil corrected was 39	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15666

DST#: 4

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 11:42:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

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

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

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

Tester: **Dylan E Ellis**

Unit No: **3345/Hays/152**

Interval: **3621.00 ft (KB) To 3638.00 ft (KB) (TVD)**

Total Depth: **3638.00 ft (KB) (TVD)**

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

Reference Elevations: **2375.00 ft (KB)**

2370.00 ft (CF)

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

Serial #: **8400**

Outside

Press@RunDepth: **499.38 psia @ 3635.00 ft (KB)**

Capacity: **5000.00 psia**

Start Date: **2011.03.09**

End Date:

2011.03.09

Last Calib.: **2011.03.10**

Start Time: **11:42:10**

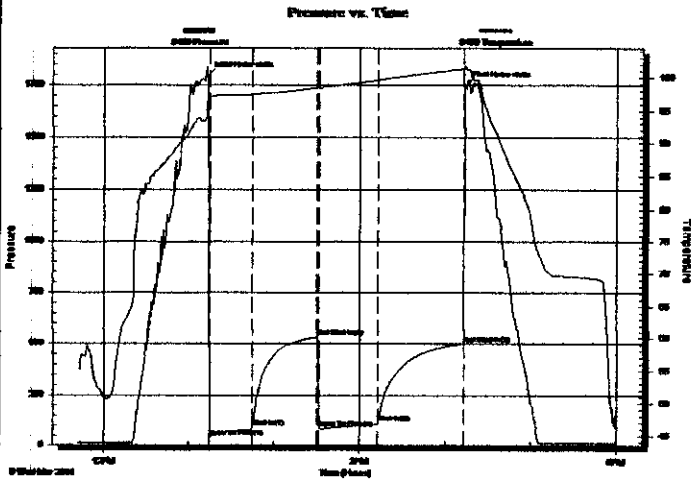
End Time:

18:00:00

Time On Btm: **2011.03.09 @ 13:13:00**

Time Off Btm: **2011.03.09 @ 16:14:00**

TEST COMMENT: 1ST Opening 30 Minutes good blow/blow blew to bottom of bucket of water in 17 minutes
 1ST Shut-in 45 Minutes yes
 2ND Opening 45 Minutes good blow/blow blew to bottom of bucket of water in 15 minutes
 2ND Shtu-In 60 Minutes yes



PRESSURE SUMMARY

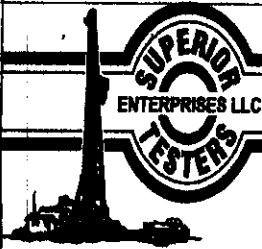
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1793.01	96.16	Initial Hydro-static
2	38.96	96.82	Open To Flow (1)
32	91.44	97.33	Shut-In(1)
77	530.29	98.47	End Shut-In(1)
79	84.77	98.41	Open To Flow (2)
120	113.37	99.58	Shut-In(2)
180	499.38	101.27	End Shut-In(2)
181	1747.56	101.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Clean Oil	0.30
120.00	Mud cut Oil	1.10
0.00	Mud 30% Oil 70%	0.00
60.00	Gassy Mud cut Oil	0.84
0.00	Gas 10% Mud 40% Oil 50%	0.00
0.00	Gravity of Oil corrected was 39	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15666

DST#: 4

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 11:42:00

Tool Information

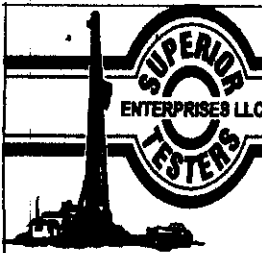
Drill Pipe:	Length: 3489.00 ft	Diameter: 3.80 inches	Volume: 48.94 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 124.06 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 20000.00 lb
			<u>Total Volume: 49.55 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.06 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3621.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	17.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3606.00	
Hydraulic Tool	5.00			3611.00	
Packer	5.00			3616.00	20.00 Bottom Of Top Packer
Packer	5.00			3621.00	
Perforations	12.00			3633.00	
Recorder	1.00	8405	Inside	3634.00	
Recorder	1.00	8400	Outside	3635.00	
Bull Plug	3.00			3638.00	17.00 Bottom Packers & Anchor

Total Tool Length: 37.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15666

DST#: 4

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 11:42:00

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: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
60.00	Clean Oil	0.295
120.00	Mud cut Oil	1.100
0.00	Mud 30% Oil 70%	0.000
60.00	Gassy Mud cut Oil	0.842
0.00	Gas 10% Mud 40% Oil 50%	0.000
0.00	Gravity of Oil corrected w as 39	0.000

Total Length: 240.00 ft Total Volume: 2.237 bbf

Num Fluid Samples: 0

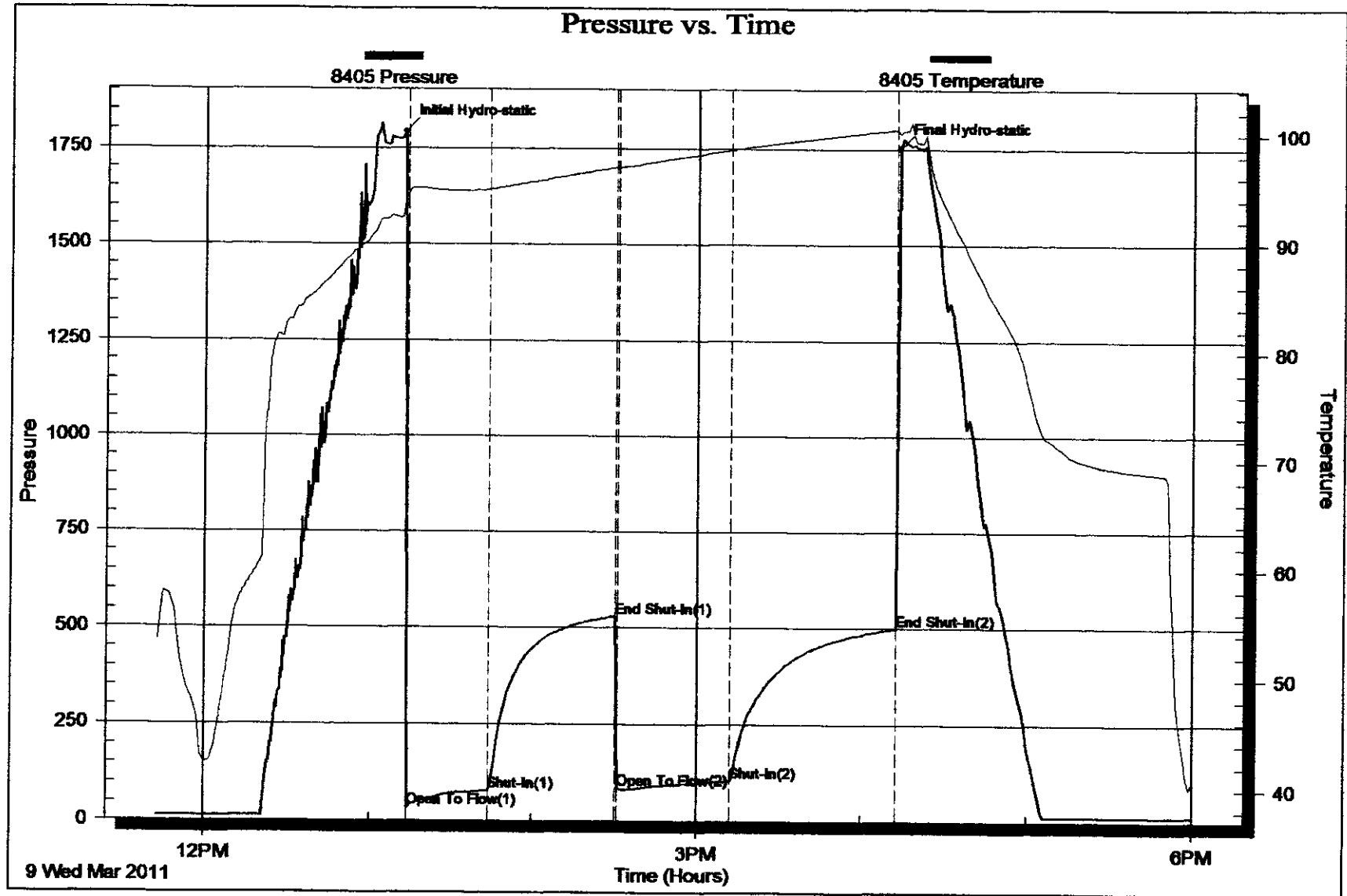
Num Gas Bombs: 0

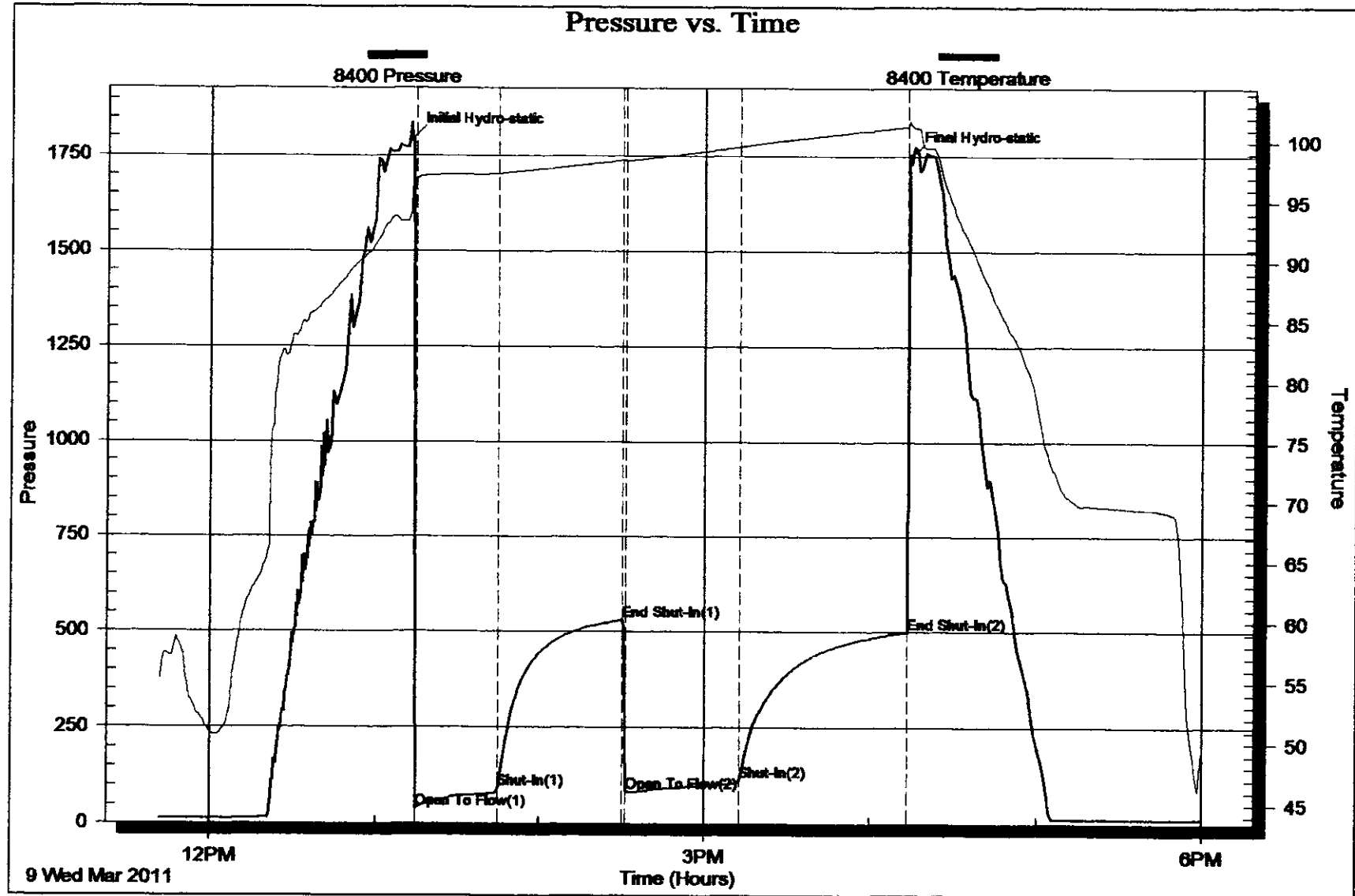
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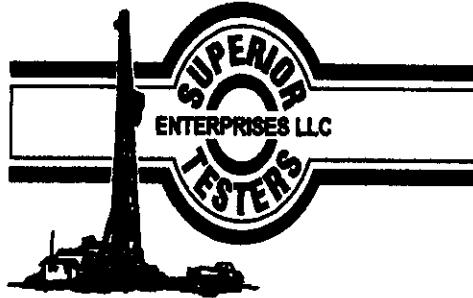
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22ND Street North 700 Wichita
Kansas 67278+3188

ATTN: Jeff Christian

33/5S/22W Norton

#3 Mink 33AD

Start Date: 2011.03.10 @ 01:00:00

End Date: 2011.03.10 @ 00:00:00

Job Ticket #: 15667 DST #: 5

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

Printed: 2011.03.14 @ 16:12:16

Ritchie Exploration Inc.

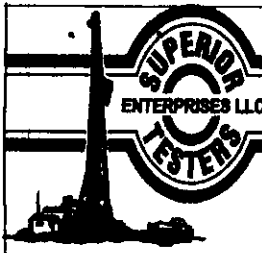
#3 Mink 33AD

33/5S/22W Norton

DST # 5

Lansing Kansas City

2011.03.10



DRILL STEM TEST REPORT

Ritchie Exploration Inc.

#3 Mink 33AD

8100 East 22ND Street North 700 Wichita Kansas
67278+3188

33/5S/22W Norton

Job Ticket: 15667

DST#: 5

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 01:00:00

GENERAL INFORMATION:

Formation: **Lansing Kansas City**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Hays/152

Interval: **3636.00 ft (KB) To 3659.00 ft (KB) (TVD)**

Reference Elevations: 2375.00 ft (KB)

Total Depth: 3659.00 ft (KB) (TVD)

2370.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8400 Outside

Press@RunDepth: 1058.43 psia @ 3656.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.03.10

End Date: 2011.03.10

Last Calib.: 2011.03.10

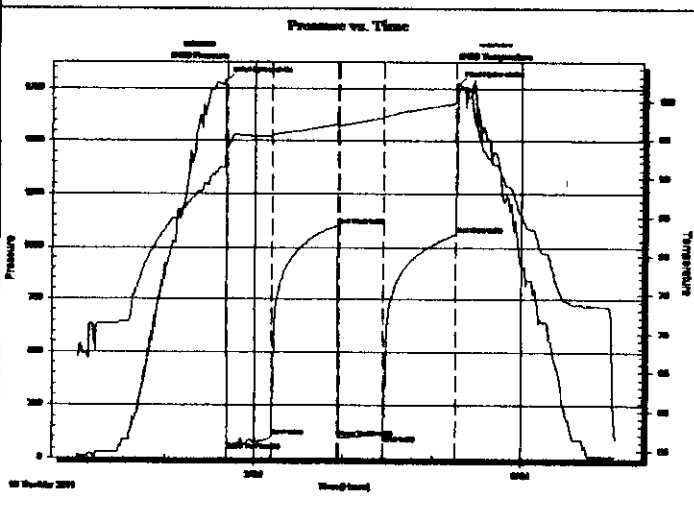
Start Time: 01:00:10

End Time: 07:04:00

Time On Btrm: 2011.03.10 @ 02:40:30

Time Off Btrm: 2011.03.10 @ 05:16:30

TEST COMMENT: 1ST Opening 30 Minutes weak but slow building blow /blow built to 2.50 inches into bucket of water
 1ST Shut-In 45 Minutes no blow back
 2ND Opening 30 Minutes weak but slow building blow /blow built to 3 inches into bucket of water
 2ND Shut-In 45 Minutes no blow back



PRESSURE SUMMARY

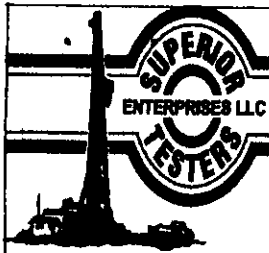
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1786.45	94.07	Initial Hydro-static
1	36.90	93.86	Open To Flow (1)
31	101.74	95.46	Shut-in(1)
76	1100.46	97.02	End Shut-in(1)
77	94.74	96.82	Open To Flow (2)
106	110.18	97.79	Shut-in(2)
155	1058.43	99.67	End Shut-in(2)
156	1768.79	100.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Water cut Mud	0.15
0.00	40% Water 60% Mud	0.00
62.00	Mud cut Water with skim of Oil	0.30
0.00	20% Mud 80% Water Skim of Oil	0.00
62.00	Slightly Oil cut Muddy Water	0.56
0.00	2% Oil 30% Mud 68% Water	0.00

Gas Rates

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



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Total Depth: 3659.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2375.00 ft (KB)

2370.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8405

Inside

Press@RunDepth: 1058.46 psia @ 3655.00 ft (KB)

Start Date: 2011.03.10

End Date:

2011.03.10

Capacity: 5000.00 psia

Last Calib.: 2011.03.10

Start Time: 01:01:01

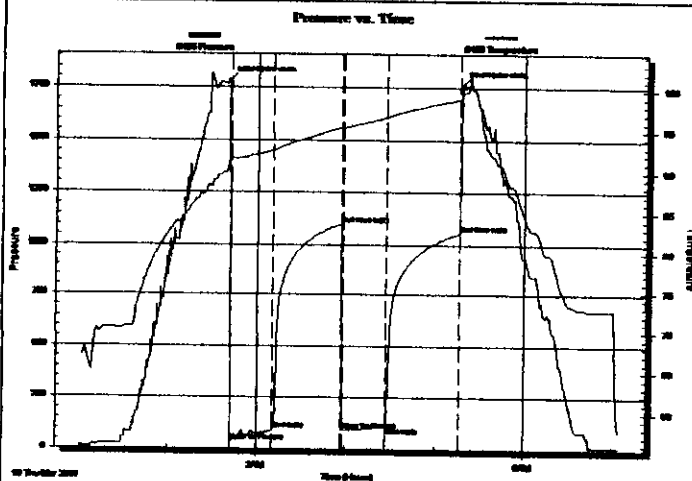
End Time:

07:04:45

Time On Btm: 2011.03.10 @ 02:40:45

Time Off Btm: 2011.03.10 @ 05:17:15

TEST COMMENT: 1ST Opening 30 Minutes weak but slow building blow/blow built to 2.50 inches into bucket of water
 1ST Shut-in 45 Minutes no blow back
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PRESSURE SUMMARY

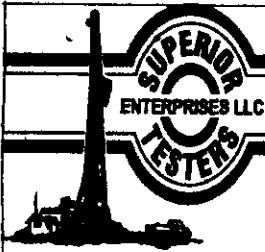
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1783.68	91.57	Initial Hydro-static
2	36.90	91.60	Open To Flow (1)
30	92.03	92.65	Shut-in(1)
76	1097.29	95.44	End Shut-in(1)
77	92.87	95.33	Open To Flow (2)
106	108.61	96.66	Shut-in(2)
156	1058.46	98.86	End Shut-in(2)
157	1764.06	99.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Water cut Mud	0.15
0.00	40% Water 60% Mud	0.00
62.00	Mud cut Water with skim of Oil	0.30
0.00	20% Mud 80% Water Skim of Oil	0.00
62.00	Slightly Oil cut Muddy Water	0.56
0.00	2% Oil 30% Mud 68% Water	0.00

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.

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33/5S/22W Norton

Job Ticket: 15667

DST#: 5

ATTN: Jeff Christian

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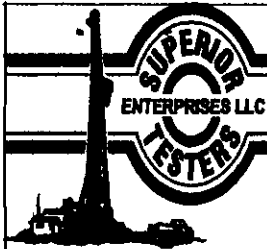
Tool Information

Drill Pipe:	Length: 3514.00 ft	Diameter: 3.80 inches	Volume: 49.29 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: 126.04 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose: 23000.00 lb
			<u>Total Volume: 49.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.04 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3636.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	43.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3621.00	
Hydraulic Tool	5.00			3626.00	
Packer	5.00			3631.00	20.00 Bottom Of Top Packer
Packer	5.00			3636.00	
Perforations	18.00			3654.00	
Recorder	1.00	8405	Inside	3655.00	
Recorder	1.00	8400	Outside	3656.00	
Bull Plug	3.00			3659.00	23.00 Bottom Packers & Anchor
Total Tool Length:	43.00				



DRILL STEM TEST REPORT

FLUID SUMMARY

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67278+3188

33/5S/22W Norton

Job Ticket: 15667

DST#: 5

ATTN: Jeff Christian

Test Start: 2011.03.10 @ 01:00:00

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: 40.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.59 in ²	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 1300.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Water cut Mud	0.148
0.00	40% Water 60% Mud	0.000
62.00	Mud cut Water with skim of Oil	0.305
0.00	20% Mud 80% Water Skim of Oil	0.000
62.00	Slightly Oil cut Muddy Water	0.560
0.00	2% Oil 30% Mud 68% Water	0.000
0.00	Chlorides were 39,000.0	0.000
0.00	Resistivity was .30 @ 68 degrees	0.000

Total Length: 154.00 ft Total Volume: 1.013 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

