

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

ORIGINAL

1-12-14

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

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 Niemberger  
Phone: ( 316 ) 691-9500  
CONTRACTOR: License # 30606  
Name: Murfin Drilling Company, Inc.  
Wellsite Geologist: Dave Williams  
Purchaser: \_\_\_\_\_

Designate Type of Completion:

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

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

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

9/28/11	10/6/11	10/6/11
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 057-20752-00-00  
Spot Description: 50' N & 110' W  
SW\_NW \_\_\_\_\_ Sec. 10 Twp. 28 S. R. 22  East  West  
1,930 Feet from  North /  South Line of Section  
550 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE  NW  SE  SW  
County: Ford  
Lease Name: Derstein 10BC Well #: 1  
Field Name: \_\_\_\_\_  
Producing Formation: Penn Lime/Mississippian  
Elevation: Ground: 2380 Kelly Bushing: 2391  
Total Depth: 5200 Plug Back Total Depth: 5171  
Amount of Surface Pipe Set and Cemented at: 370 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set: 1338 Feet  
If Alternate II completion, cement circulated from: 1338  
feet depth to: surface w/ 400 sx cmt.

**Drilling Fluid Management Plan**

(Date must be collected from the Reserve Pit)

Chloride content: 11600 ppm Fluid volume: 1200 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 #: **RECEIVED**

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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 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: 1/12/12

**KCC Office Use ONLY**

- Letter of Confidentiality Received  
Date: 1/12/12 - 1/12/14  
 Confidential Release Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: [Signature] Date: 1/12/12

Operator Name: Ritchie Exploration, Inc. Lease Name: Derstein 10BC Well #: 1  
 Sec. 10 Twp. 28 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i>  List All E. Logs Run: Dual Induction Log Compensated Density/Neutron 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>
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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	23	370	Common	250	3%cc, 2% gel
Production	7-7/8	5-1/2	15.5	5197	AA-2	175	10% salt, 5% W-60, 5#sx glauconite

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
4	4986' - 4993' (11/9/11)		
4	4995' - 5004' (11/9/11)		
4	5043' - 5045', 5046' - 5048', 5051' - 5054' (11/9/11)		

TUBING RECORD:	Size: <u>2-7/8"</u>	Set At: <u>5055'</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>waiting on gas market</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. 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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <p style="text-align: center; font-size: 1.2em;"><b>CONFIDENTIAL</b></p> <p style="text-align: center;">JAN 12 2014</p>
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**#1 Derstein 10BC**

1930' FNL & 550' FWL

50°N & 110°W of SW NW Section 10-28S-22W

Ford County, Kansas

API# 15-057-20752-0000

Elevation: 2380' GL: 2391' KB

Sample Tops			Ref. Well
Anhydrite	1378'	+1013	+3
B/Anhydrite	1411'	+980	+11
Heebner	4180'	-1789	+7
Lansing	4323'	-1932	+3
Muncie Shale	4520'	-2129	+3
Stark Shale	4670'	-2279	-14
Marmaton	4814'	-2423	-17
Pawnee	4890'	-2499	-16
Cherokee Shale	4938'	-2547	-21
Atoka Shale	5016'	-2625	-8
Mississippian	5050'	-2659	-19
RTD	5200'	-2809	

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# Cement Report

Customer	Kitchie Exploration	Lease No.		Date	10-13-11
Lease	Berstein 10cc	Well #	1	Service Receipt	02165
Casing	5 1/2" 15.5	Depth	1338'	County	Ford
Job Type	742-5 1/2" Port Collar	Formation		State	KS
				Legal Description	10-28-22

Pipe Data		Perforating Data		Cement Data
Casing size	5 1/2" 15.5#	Tubing Size	2 7/8"	Lead
Depth		Depth	1338'	
Volume		Volume	7.75 bbl	
Max Press		Max Press	1500#	Tail in
Well Connection		Annulus Vol.	42 bbl	
Plug Depth		Packer Depth	Port Collar-1338'	

Time	Casing Pressure	Tubing Pressure	Bbbs. Pumped	Rate	Service Log
11:00					on loc. site assessment
11:05					spot trucks - rig in
12:00					safety meeting / CSA
12:30					pressure test / cement
12:35					test port collar 1200' - ok
12:45	100		10	3.5	nice hole
12:50	100		111	3.5	mix + pump 400 st. work in 200'
					60% total vol, 1st volubility @ 13.3 am
					160 gals @ 9 am / 1/2
1:05			7	3.5	disp 7 bbl
1:35					fluid in test 1700' ok
2:00			15	3	run out tubing down
2:15					job complete

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Service Units	30726	3811-10919	14355-14784	19827-19860	
Driver Names	A. Rivera	P. Martinez	C. Torres	V. Vasquez	

G. Rowe  
Customer Representative
T. Bennett  
Station Manager
A. Rivera  
Cementer

Customer: <b>Ritchie Exploration</b>	Lease No.	Date: <b>10/6/11</b>
Lease: <b>Derstein #1 - 10BC</b>	Well #	Service Receipt
Casing: <b>5 1/2</b>	Depth: <b>5196'</b>	County: <b>Ford</b>
Job Type: <b>O.L.S.</b>	Formation	Legal Description: <b>10-28-22</b>
State: <b>KS</b>		

Pipe Data		Perforating Data		Cement Data
Casing size: <b>5 1/2</b>	Tubing Size	Shots/Ft: <b>1.50</b>		Lead: <b>1175 3x KIK</b>
Depth: <b>5200.01</b>	Depth: <b>J.R.R.</b>	From	To: <b>3500'</b>	@ <b>14.85% W-60</b>
Volume: <b>123.75</b>	Volume: <b>J.R.R.</b>	From	To	<b>10% salt, 1.6% C15</b>
Max Press: <b>2500</b>	Max Press	From	To	<b>11 1/2" diam. 5 #9/L</b>
Well Connection: <b>P.C.</b>	Annulus Vol.	From	To	Tail in <b>50 3x 60/42</b>
Plug Depth	Packer Depth	From	To	<b>20' @ 13.5 #</b>

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<b>18:20</b>					<b>on loc.</b>
<b>16:30</b>					<b>st. F.F.</b>
<b>16:45</b>					<b>Finish F.E.</b>
<b>19:15</b>					<b>Circ Well thr</b>
<b>20:28</b>					<b>Bitest</b>
<b>20:31</b>	<b>150</b>		<b>12</b>	<b>25</b>	<b>Pom D Mord Flush</b>
<b>20:37</b>					<b>Plug R+M</b>
<b>20:50</b>	<b>150</b>		<b>0</b>	<b>5</b>	<b>start Mixing AH-7 @ 14.8 #</b>
<b>20:00</b>	<b>0</b>		<b>17</b>		<b>Finish Mixing</b>
<b>21:02</b>					<b>Wash and P.H.</b>
<b>21:07</b>	<b>0</b>		<b>0</b>	<b>10</b>	<b>start Disp</b>
<b>21:26</b>	<b>500</b>		<b>113</b>	<b>2</b>	<b>slow Rate</b>
<b>21:30</b>	<b>400-1500</b>		<b>123</b>		<b>Plug down</b>
<b>21:32</b>	<b>1500-0</b>				<b>Rolling 1st. Float valve</b>

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Service Units	<b>198886</b>	<b>3006519845</b>	<b>1987819863</b>
Driver Names	<b>Phinz</b>	<b>R. Olds</b>	<b>D. Canada</b>

**Carroll Rowe** Customer Representative      **Sam Bonnell** Station Manager      **Christie** Cementer

Taylor Printing, Inc.

# ALLIED CEMENTING CO., LLC. 037370

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

SERVICE POINT:  
Great Bend, KS

DATE <u>9-28-11</u>	SEC. <u>10</u>	TWP. <u>23</u>	RANGE <u>22</u>	CALLED OUT	ON LOCATION	JOB START <u>1000pm</u>	JOB FINISH <u>1039pm</u>
#1 Over & under LEASE	WELL # <u>10 BC</u>	LOCATION <u>Kard x 5 1/2 S on 400 1 1/2 East</u>			COUNTY <u>Kard</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>				<u>South into</u>			

CONTRACTOR Murphy Oil #21 OWNER Ritchie Exploration, Inc

TYPE OF JOB Service CEMENT AMOUNT ORDERED 250 sq. com 3% cc 2% gel

HOLE SIZE 12 1/4 T.D. 370  
CASING SIZE 8 1/8 24# DEPTH 371

TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
DRILL PIPE 4 1/2 DEPTH 370

TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
PRES. MAX \_\_\_\_\_ MINIMUM \_\_\_\_\_  
MEAS. LINE \_\_\_\_\_ SHOE JOINT \_\_\_\_\_

CEMENT LEFT IN CSG. 15  
PERFS. \_\_\_\_\_  
DISPLACEMENT fresh water

EQUIPMENT

PUMP TRUCK CEMENTER Bob B.  
# 366 HELPER Shane X

BULK TRUCK  
# 341 DRIVER Jimmy H

BULK TRUCK  
# \_\_\_\_\_ DRIVER \_\_\_\_\_

COMMON	<u>250</u>	@ <u>16.25</u>	<u>4062.50</u>
POZMIX		@	
GEL	<u>5</u>	@ <u>21.25</u>	<u>106.25</u>
CHLORIDE	<u>9</u>	@ <u>58.20</u>	<u>523.80</u>
ASC		@	
		@	
		@	
		@	
		@	
		@	
		@	
		@	
HANDLING	<u>264</u>	@ <u>2.25</u>	<u>594.00</u>
MILEAGE	<u>264 x 40 x .11</u>		<u>1.172.00</u>
			TOTAL <u>7028.25</u>

REMARKS:  
Pipe on bottom break circulation with cc  
ring. Mix 250 sq com 3% cc 2% gel  
Shut down release plug and displace 22.0 bbl  
fresh water and shut in  
Cement did circulate

SERVICE

DEPTH OF JOB	<u>371</u>		
PUMP TRUCK CHARGE			<u>1125.00</u>
EXTRA FOOTAGE		@	
MILEAGE <u>HUM</u>	<u>120</u>	@ <u>7.00</u>	<u>840.00</u>
MANIFOLD		@	
<u>hum</u>	<u>120</u>	@ <u>4.00</u>	<u>480.00</u>
		@	

CHARGE TO: Ritchie Exploration, Inc  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

TOTAL 2.445.00

PLUG & FLOAT EQUIPMENT

<u>02 8 3/8 basket</u>	@		
<u>8 3/8 centralizer</u>	@	<u>64.00</u>	<u>128.00</u>
<u>8 3/8 basket</u>	@	<u>478.00</u>	<u>478.00</u>
	@		
	@		
			TOTAL <u>606.00</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 John T. Wood

SIGNATURE John T. Wood

*Thank you*

SALES TAX (If Any) \_\_\_\_\_

TOTAL CHARGES 10,079.95

DISCOUNT 70% 20% 3 547.17

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IF PAID IN 30 DAYS

KCC



## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22nd Street North # 700 Wichita,  
Kansas 67278+  
3188

ATTN: Dave Williams

**10/28S/22W Ford Co.**

**Derstein 10 BC #1**

Start Date: 2011.10.03 @ 09:33:00

End Date: 2011.10.03 @ 19:15:30

Job Ticket #: 18680      DST #: 1

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**KCC**

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530

1-800-792-6902

Printed: 2011.10.06 @ 12:03:49

Ritchie Exploration Inc.

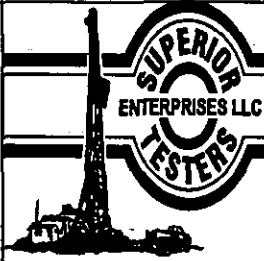
Derstein 10 BC #1

10/28S/22W Ford Co.

DST # 1

Mississippi

2011.10.03



# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
 8100 East 22nd Street North # 700 Wichita,  
 Kansas 67278+  
 3188  
 ATTN: Dave Williams

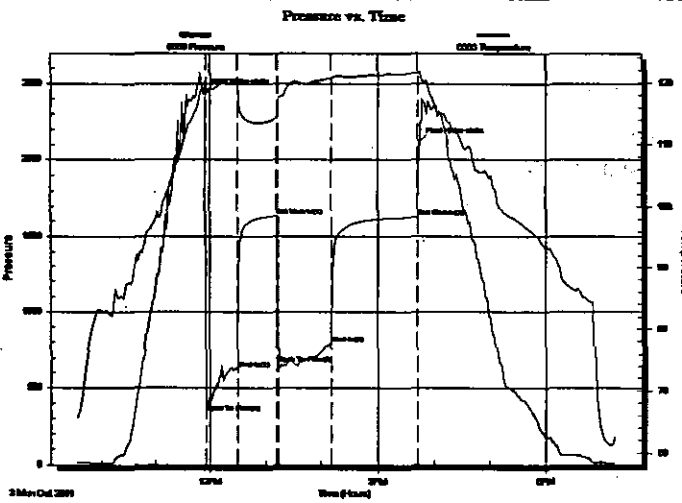
**Derstein 10 BC #1**  
**10/28S/22W Ford Co.**  
 Job Ticket: 18680      DST#: 1  
 Test Start: 2011.10.03 @ 09:33:00

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: **No** Whipstock:      ft (KB)  
 Test Type: **Conventional Bottom Hole (Initial)**  
 Time Tool Opened: **11:56:00**  
 Tester: **Dylan E Ellis**  
 Time Test Ended: **19:15:30**  
 Unit No: **3345/Great Bend/180**  
 Interval: **4982.00 ft (KB) To 5065.00 ft (KB) (TVD)**  
 Reference Elevations: **2391.00 ft (KB)**  
 Total Depth: **5065.00 ft (KB) (TVD)**  
**2380.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**  
 KB to GR/CF: **11.00 ft**

**Serial #: 6666**      **Outside**  
 Press@RunDepth: **785.08 psia @ 5062.00 ft (KB)**      Capacity: **5000.00 psia**  
 Start Date: **2011.10.03**      End Date: **2011.10.03**      Last Calib.: **2011.10.03**  
 Start Time: **09:34:00**      End Time: **19:15:30**      Time On Btm: **2011.10.03 @ 11:53:00**  
 Time Off Btm: **2011.10.03 @ 15:45:00**

**TEST COMMENT:** 1ST Opening 30 Minutes very strong blow/blow blew to bottom of bucket in 30 seconds/gas to surface in 5 mins  
 1ST Shut-in 45 Minutes yes blow back  
 2ND Opening 60 Minutes very strong blow/blow blew to bottom of bucket instantly/gauged gas look at gas chart  
 2ND Shut-in 90 Minutes yes blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2440.73	119.14	Initial Hydro-static
3	334.69	118.31	Open To Flow (1)
36	627.60	120.65	Shut-in(1)
79	1635.28	114.16	End Shut-in(1)
81	660.66	117.59	Open To Flow (2)
138	785.08	120.64	Shut-in(2)
230	1627.12	121.52	End Shut-in(2)
232	2117.18	121.69	Final Hydro-static

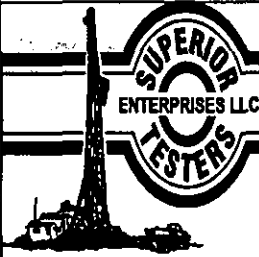
## Recovery

Length (ft)	Description	Volume (bbl)
756.00	Mud cut Oil	8.43
0.00	30% Mud 70% Oil	0.00
248.00	Gas cut Oily Mud	3.48
0.00	25% Gas 75% Oily Mud	0.00
0.00	MAX gas gauged was 1,980,000 cF day	0.00

## Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mc/d)
First Gas Rate	1.00	59.50	1710.55
Last Gas Rate	1.00	67.15	1930.48
Max. Gas Rate	1.00	67.15	1930.48





# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
 8100 East 22nd Street North # 700 Wichita,  
 Kansas 67278+  
 3188  
 ATTN: Dave Williams

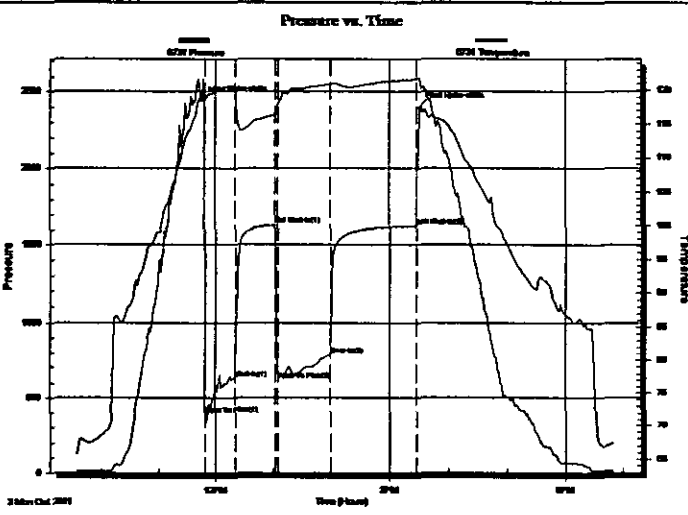
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## GENERAL INFORMATION:

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 Test Type: **Conventional Bottom Hole (Initial)**  
 Tester: **Dylan E Ellis**  
 Unit No: **3345/Great Bend/180**  
 Reference Elevations:      **2391.00 ft (KB)**  
    **2380.00 ft (CF)**  
    **KB to GR/CF: 11.00 ft**

**Serial #: 6731**      **Inside**  
 Press@RunDepth: **1626.27 psia @ 5061.00 ft (KB)**      Capacity: **5000.00 psia**  
 Start Date: **2011.10.03**      End Date: **2011.10.03**      Last Calib.: **2011.10.03**  
 Start Time: **09:34:00**      End Time: **18:51:00**      Time On Btm: **2011.10.03 @ 11:46:30**  
    **18:51:00**      Time Off Btm: **2011.10.03 @ 15:30:30**

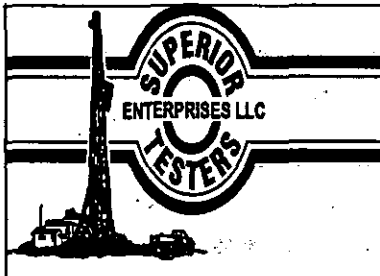
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 1ST Shut-In 45 Minutes yes blow back  
 2ND Opening 60 Minutes very strong blow/blow blew to bottom of bucket instantly/gauged gas look at gas chart  
 2ND Shut-In 90 Minutes yes blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2441.39	119.37	Initial Hydro-static
3	388.79	118.77	Open To Flow (1)
35	627.21	120.65	Shut-in(1)
76	1634.37	116.40	End Shut-In(1)
79	620.74	118.03	Open To Flow (2)
133	784.32	120.83	Shut-in(2)
221	1626.27	121.66	End Shut-In(2)
224	2397.66	121.87	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
756.00	Mud cut Oil	8.43
0.00	30% Mud 70% Oil	0.00
248.00	Gas cut Oily Mud	3.48
0.00	25% Gas 75% Oily Mud	0.00
0.00	MAX gas gauged w as 1,980,000 cF aday	0.00

Gas Rates			
	Choke (Inches)	Pressure (psia)	Gas Rate (Mcfd)
First Gas Rate	1.00	59.50	1710.55
Last Gas Rate	1.00	67.15	1930.48
Max. Gas Rate	1.00	67.15	1930.48



# DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.  
 8100 East 22nd Street North # 700 Wichita,  
 Kansas 67278+  
 3188  
 ATTN: Dave Williams

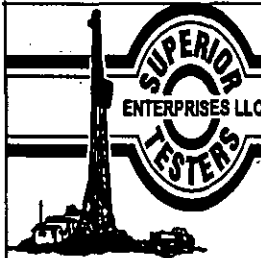
Derstein 10 BC #1  
 10/28S/22W Ford Co.  
 Job Ticket: 18680      DST#: 1  
 Test Start: 2011.10.03 @ 09:33:00

### Tool Information

Drill Pipe:	Length: 4738.00 ft	Diameter: 3.80 inches	Volume: 66.46 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: 238.60 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose:	42000.00 lb
			<b>Total Volume: 67.63 bbl</b>	Tool Chased:	0.00 ft
Drill Pipe Above KB:	23.60 ft			String Weight: Initial	80000.00 lb
Depth to Top Packer:	4982.00 ft			String Weight: Final	85000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	83.00 ft				
Tool Length:	112.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments: Caught a gas sample, made sure the gas would burn,

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4954.00	
Shut-In Tool-	5.00			4959.00	
Hydroic Tool	5.00			4964.00	
Jars	6.00			4970.00	
Safety Joint	2.00			4972.00	
Packer	5.00			4977.00	29.00      Bottom Of Top Packer
Packer	5.00			4982.00	
Perforations	5.00			4987.00	
Change Over Sub	0.75			4987.75	
Drill Pipe	62.50			5050.25	
Change Over Sub	0.75			5051.00	
Perforations	9.00			5060.00	
Recorder	1.00	6731	Inside	5061.00	
Recorder	1.00	6666	Outside	5062.00	
Bullnose	3.00			5065.00	83.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>112.00</b>				



# DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.  
 8100 East 22nd Street North # 700 Wichita;  
 Kansas 67278+  
 3188  
 ATTN: Dave Williams

Derstein 10 BC #1  
 10/28S/22W Ford Co.  
 Job Ticket: 18680      DST#: 1  
 Test Start: 2011.10.03 @ 09:33:00

## Mud and Cushion Information

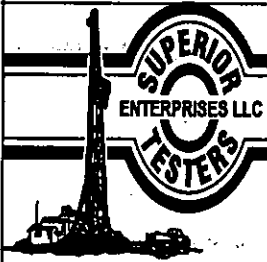
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 6000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
756.00	Mud cut Oil	8.431
0.00	30% Mud 70% Oil	0.000
248.00	Gas cut Oily Mud	3.479
0.00	25% Gas 75% Oily Mud	0.000
0.00	MAX gas gauged w as 1,980,000 cF aday	0.000

Total Length: 1004.00 ft      Total Volume: 11.910 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: On the 248' of Gas cut Oily Mud the mud and oil would not separate



# DRILL STEM TEST REPORT

GAS RATES

Ritchie Exploration Inc.

Derstein 10 BC #1

8100 East 22nd Street North # 700 Wichita,  
Kansas 67278+  
3188

10/28S/22W Ford Co.

Job Ticket: 18680

DST#: 1

ATTN: Dave Williams

Test Start: 2011.10.03 @ 09:33:00

## Gas Rates Information

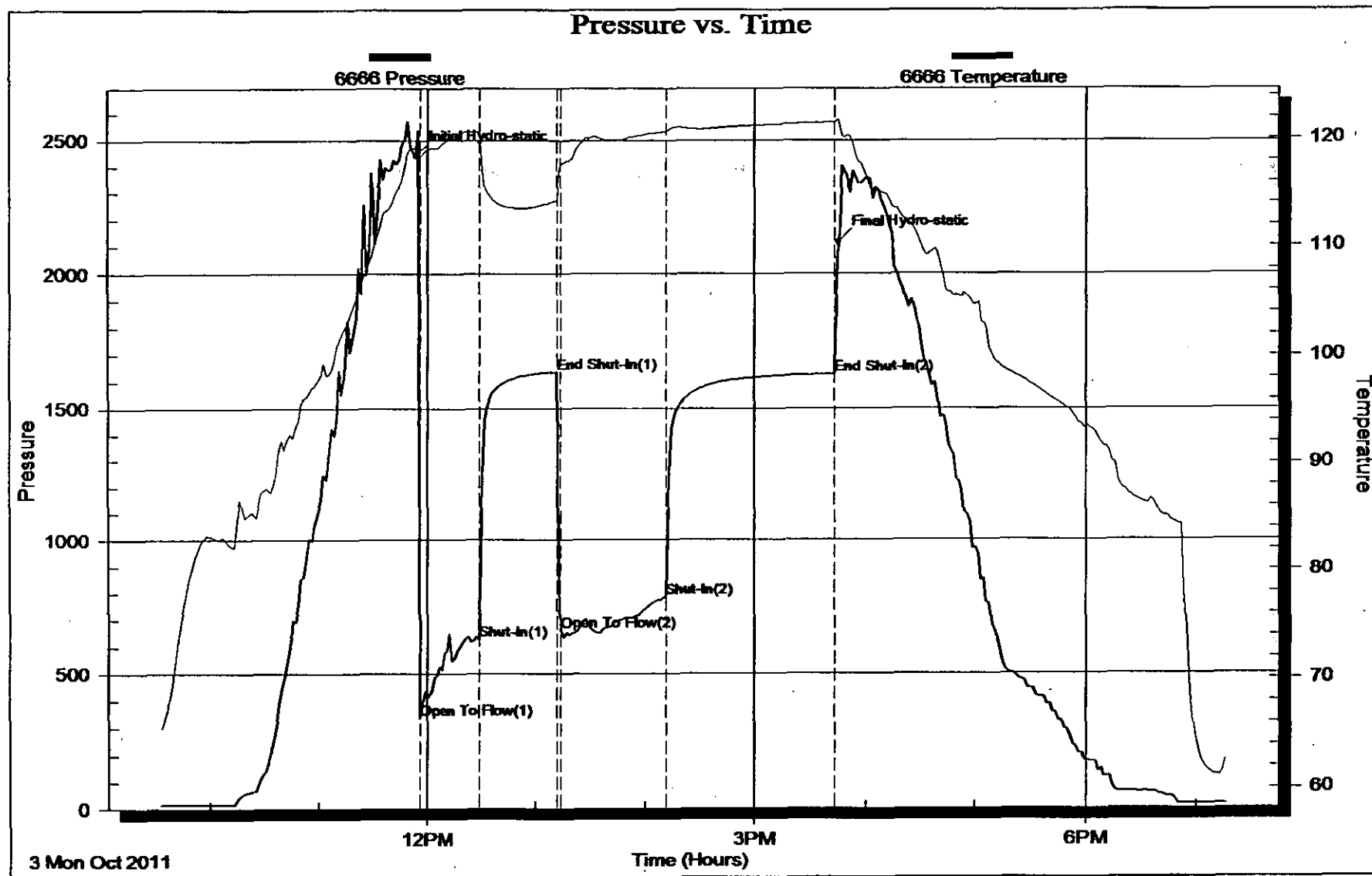
Temperature: 59 (deg F)

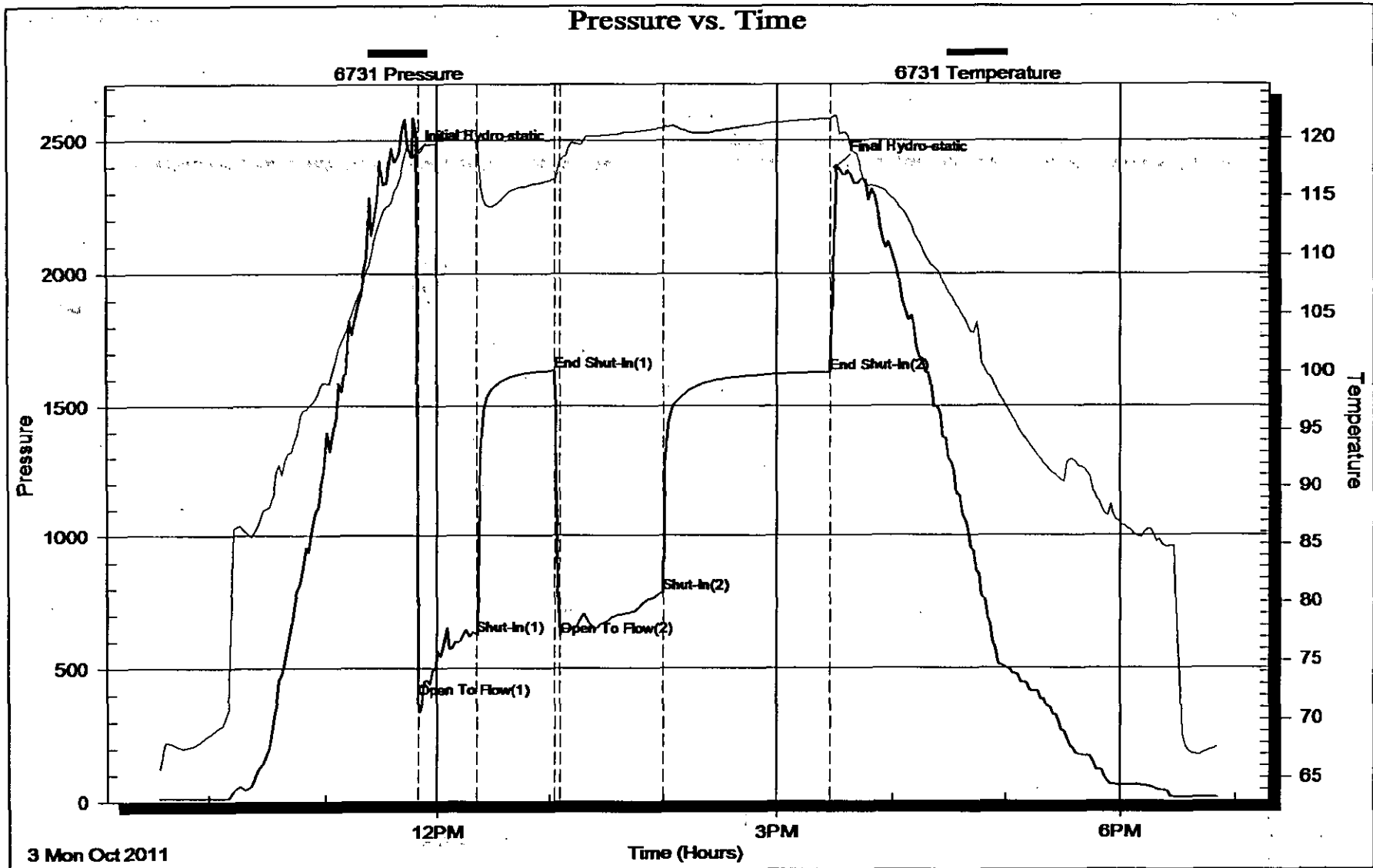
Relative Density: 0.65

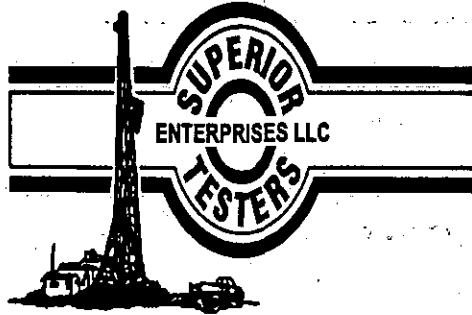
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
1	20	1.00	59.50	1710.55
1	20	1.00	59.50	1710.55
1	30	1.00	67.15	1930.48
2	5	1.00	59.50	1710.55
2	15	1.00	67.15	1930.48







## DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc.**

8100 East 22nd Street North # 700 Wichita,  
Kansas 67278+  
3188

ATTN: Dave Williams

**10/28S/22W Ford Co.**

**Derstein 10 BC #1**

Start Date: 2011.10.04 @ 07:43:00

End Date: 2011.10.04 @ 00:00:00

Job Ticket #: 18681                      DST #: 2

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

Printed: 2011.10.06 @ 12:04:00

Ritchie Exploration Inc.

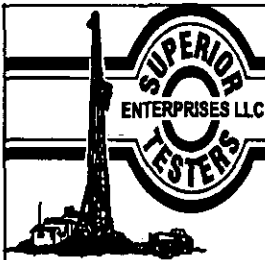
Derstein 10 BC #1

10/28S/22W Ford Co.

DST # 2

Mississippi

2011.10.04



# DRILL STEM TEST REPORT

Ritchie Exploration Inc.  
 8100 East 22nd Street North # 700 Wichita,  
 Kansas 67278+  
 3188  
 ATTN: Dave Williams

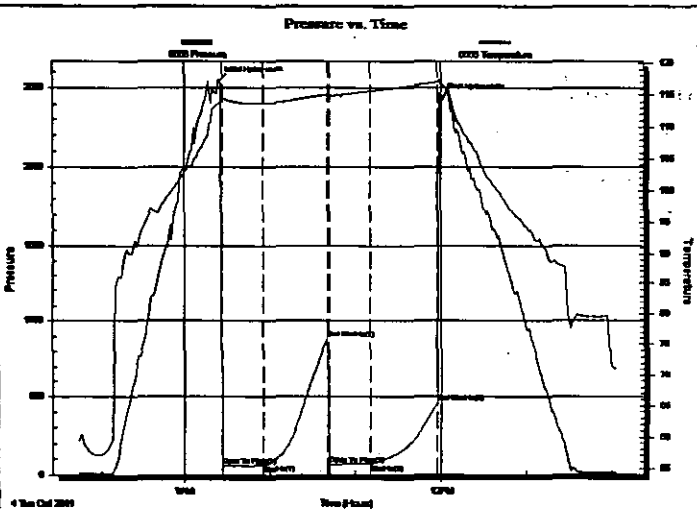
**Derstein 10 BC #1**  
**10/28S/22W Ford Co.**  
 Job Ticket: 18681      DST#: 2  
 Test Start: 2011.10.04 @ 07:43:00

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole (Initial)**  
 Time Tool Opened: **00:00:00** Tester: **Dylan E Ellis**  
 Time Test Ended: **00:00:00** Unit No: **3345/Great Bend/180**  
 Interval: **5074.00 ft (KB) To 5119.00 ft (KB) (TVD)** Reference Elevations: **2391.00 ft (KB)**  
 Total Depth: **5119.00 ft (KB) (TVD)** **2380.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Fair** KB to GRVCF: **11.00 ft**

Serial #: **6666** Outside  
 Press@RunDepth: **465.63 psia @ 5116.00 ft (KB)** Capacity: **5000.00 psia**  
 Start Date: **2011.10.04** End Date: **2011.10.04** Last Calib.: **2011.10.04**  
 Start Time: **07:44:00** End Time: **14:05:00** Time On Btm: **2011.10.04 @ 09:24:30**  
 Time Off Btm: **2011.10.04 @ 12:00:00**

TEST COMMENT: 1ST Opening 30 Minutes weak blow /w eak surface blow all the way through out open  
 1ST Shut-In 45 Minutes no blow back  
 2ND Opening 30 Minutes blow dead/flushed tool/blow blow for 4 minutes and died  
 2ND Shut-In 45 Minutes no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2540.74	113.83	Initial Hydro-static
2	53.45	114.31	Open To Flow (1)
31	60.92	113.74	Shut-In(1)
77	886.66	115.09	End Shut-In(1)
79	60.69	114.88	Open To Flow (2)
107	67.22	115.63	Shut-In(2)
153	465.63	117.03	End Shut-In(2)
156	2436.43	116.69	Final Hydro-static

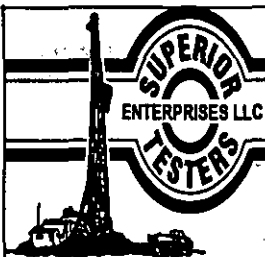
## Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud-100%/ very light skim of oil	0.15

## Gas Rates

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





# DRILL STEM TEST REPORT

Ritchie Exploration Inc.

8100 East 22nd Street North # 700 Wichita,  
Kansas 67278+  
3188  
ATTN: Dave Williams

Derstein 10 BC #1

10/28S/22W Ford Co.

Job Ticket: 18681 DST#: 2

Test Start: 2011.10.04 @ 07:43:00

### GENERAL INFORMATION:

Formation: Mississippi

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:00:00

Time Test Ended: 00:00:00

Interval: 5074.00 ft (KB) To 5119.00 ft (KB) (TVD)

Total Depth: 5119.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Great Bend/180

Reference Elevations: 2391.00 ft (KB)

2380.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6731

Inside

Press@RunDepth: 464.52 psia @ 5115.00 ft (KB)

Start Date: 2011.10.04

End Date: 2011.10.04

Start Time: 07:44:00

End Time: 14:10:00

Capacity: 5000.00 psia

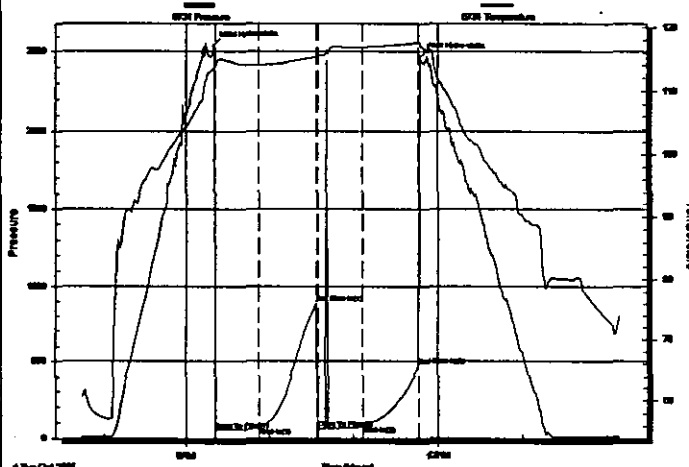
Last Calib.: 2011.10.04

Time On Btm: 2011.10.04 @ 09:20:00

Time Off Btm: 2011.10.04 @ 11:47:30

TEST COMMENT: 1ST Opening 30 Minutes weak blow/w weak surface blow all the way through out open  
1ST Shut-In 45 Minutes no blow back  
2ND Opening 30 Minutes blow dead/flushed tool/blow blew for 4 minutes and died  
2ND Shut-In 45 Minutes no blow back

Pressure vs. Time



### PRESSURE SUMMARY

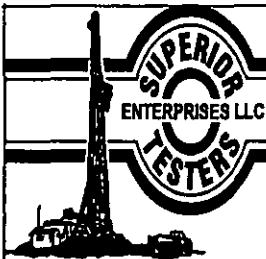
Time (Mn.)	Pressure (psia)	Temp (deg F)	Annotation
0	2537.77	113.42	Initial Hydro-static
2	51.77	113.66	Open To Flow (1)
33	66.64	114.04	Shut-In(1)
74	892.79	115.33	End Shut-In(1)
76	59.81	115.47	Open To Flow (2)
107	79.47	116.91	Shut-In(2)
147	464.52	117.67	End Shut-In(2)
148	2464.91	117.52	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud-100%/ very light skim of oil	0.15

### Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
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# DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc.  
 8100 East 22nd Street North # 700 Wichita,  
 Kansas 67278+  
 3188  
 ATTN: Dave Williams

Derstein 10 BC #1  
 10/28S/22W Ford Co.  
 Job Ticket: 18681      DST#: 2  
 Test Start: 2011.10.04 @ 07:43:00

### Tool Information

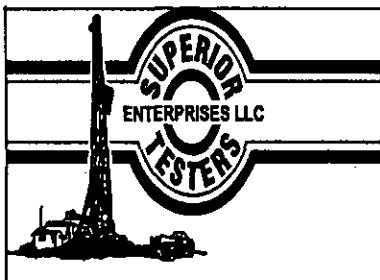
Drill Pipe:	Length: 4830.00 ft	Diameter: 3.80 inches	Volume: 67.75 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 238.60 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 12000.00 lb
			<u>Total Volume: 68.92 bbl</u>	Tool Chased: 0.00 ft
Drill Pipe Above KB:	23.60 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	5074.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	74.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: On the first tore up one packer

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			5046.00	
Shut-In Tool	5.00			5051.00	
Hydroic Tool	5.00			5056.00	
Jars	6.00			5062.00	
Safety Joint	2.00			5064.00	
Packer	5.00			5069.00	29.00      Bottom Of Top Packer
Packer	5.00			5074.00	
Perforations	40.00			5114.00	
Recorder	1.00	6731	Inside	5115.00	
Recorder	1.00	6666	Outside	5116.00	
Bullnose	3.00			5119.00	45.00      Bottom Packers & Anchor

**Total Tool Length: 74.00**



# DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc.  
 8100 East 22nd Street North # 700 Wichita,  
 Kansas 67278+  
 3188  
 ATTN: Dave Williams

Derstain 10 BC #1  
 10/28S/22W Ford Co.  
 Job Ticket: 18681      DST#: 2  
 Test Start: 2011.10.04 @ 07:43:00

## 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: bbl		
Water Loss: 8.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 6000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud-100%/ very light skim of oil	0.148

Total Length: 30.00 ft      Total Volume: 0.148 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

