



DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd St N #700
Box 783188
Wichita, KS 67278+3188

ATTN: John Goldsmith

Beagly 24C #1

24-15S-36W Logan,KS

Start Date: 2017.07.25 @ 12:27:00

End Date: 2017.07.25 @ 18:26:00

Job Ticket #: 62628 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.07.28 @ 16:12:29



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration Inc
 8100 E 22nd St N #700
 Box 783188
 Wichita, KS 67278+3188
 ATTN: John Goldsmith

24-15S-36W Logan, KS

Beagly 24C #1

Job Ticket: 62628

DST#: 1

Test Start: 2017.07.25 @ 12:27:00

GENERAL INFORMATION:

Formation: **Altamont A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:29:30

Time Test Ended: 18:26:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4438.00 ft (KB) To 4470.00 ft (KB) (TVD)

Reference Elevations: 3281.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3276.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8354

Inside

Press@RunDepth: 19.08 psig @ 4439.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.25

End Date:

2017.07.25

Last Calib.:

2017.07.25

Start Time: 12:27:05

End Time:

18:25:59

Time On Btm:

2017.07.25 @ 14:29:00

Time Off Btm:

2017.07.25 @ 16:32:00

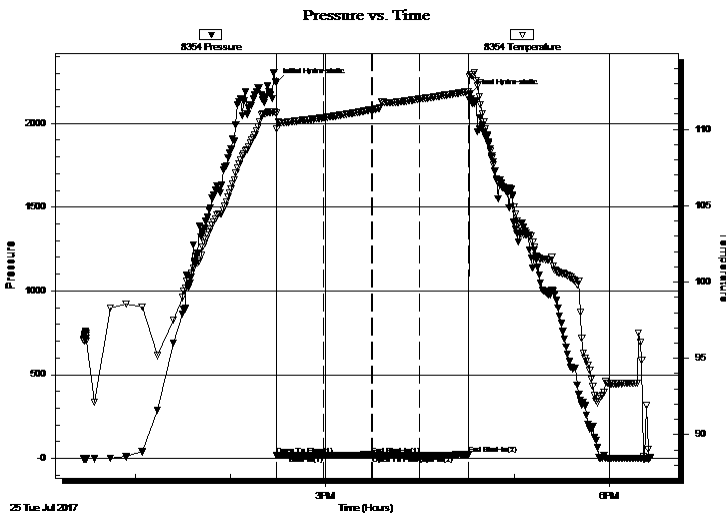
TEST COMMENT: IFP 30 Minutes Weak surface blow died in 4 minutes

ISI 30 Minutes No blow back

FFP 30 Minutes No blow / Flush tool no help

FSI 30 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2242.96	111.06	Initial Hydro-static
1	18.27	110.03	Open To Flow (1)
30	17.11	110.75	Shut-In(1)
60	21.72	111.27	End Shut-In(1)
61	16.25	111.29	Open To Flow (2)
91	19.08	111.98	Shut-In(2)
122	22.25	112.46	End Shut-In(2)
123	2175.61	113.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration Inc
8100 E 22nd St N #700
Box 783188
Wichita, KS 67278+3188
ATTN: John Goldsmith

24-15S-36W Logan, KS

Beagly 24C #1

Job Ticket: 62628

DST#: 1

Test Start: 2017.07.25 @ 12:27:00

GENERAL INFORMATION:

Formation: **Altamont A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:29:30

Time Test Ended: 18:26:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 72

Interval: 4438.00 ft (KB) To 4470.00 ft (KB) (TVD)

Reference Elevations: 3281.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3276.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8960 Outside

Press@RunDepth: 22.30 psig @ 4440.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.07.25 End Date: 2017.07.25

Last Calib.: 2017.07.25

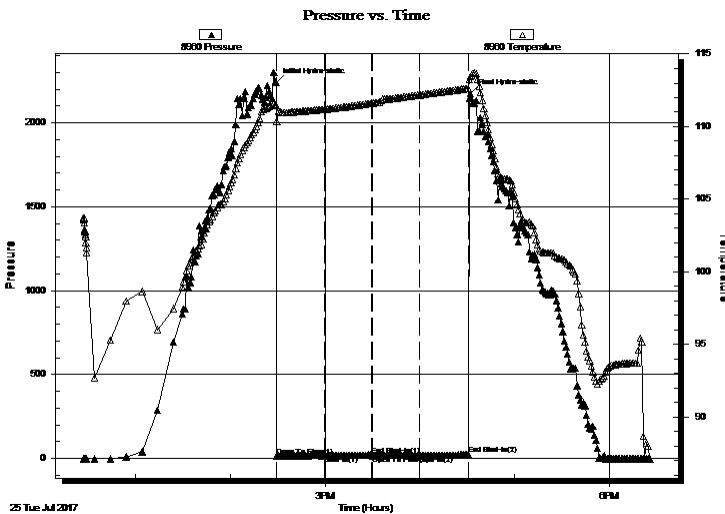
Start Time: 12:27:05 End Time: 18:25:59

Time On Btm: 2017.07.25 @ 14:29:00

Time Off Btm: 2017.07.25 @ 16:32:00

TEST COMMENT: IFP 30 Minutes Weak surface blow died in 4 minutes
ISI 30 Minutes No blow back
FFP 30 Minutes No blow / Flush tool no help
FSI 30 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2241.23	111.45	Initial Hydro-static
1	15.88	110.32	Open To Flow (1)
31	16.71	111.19	Shut-In(1)
60	21.68	111.60	End Shut-In(1)
61	16.26	111.61	Open To Flow (2)
91	18.13	112.18	Shut-In(2)
122	22.30	112.63	End Shut-In(2)
123	2174.44	113.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud 100%	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc

24-15S-36W Logan,KS

8100 E 22nd St N #700
Box 783188
Wichita, KS 67278+3188
ATTN: John Goldsmith

Beagly 24C #1

Job Ticket: 62628

DST#: 1

Test Start: 2017.07.25 @ 12:27:00

Tool Information

Drill Pipe:	Length: 4296.00 ft	Diameter: 3.80 inches	Volume: 60.26 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 60.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4438.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	32.00 ft			
Tool Length:	59.00 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			4416.00	
Hydraulic tool	5.00			4421.00	
Jars	5.00			4426.00	
Safety Joint	2.00			4428.00	
Top Packer	5.00			4433.00	
Packer	5.00			4438.00	27.00 Bottom Of Top Packer
Recorder	1.00	8354	Inside	4439.00	
Recorder	1.00	8960	Outside	4440.00	
Anchor	27.00			4467.00	
Bullnose	3.00			4470.00	32.00 Anchor Tool
Total Tool Length:	59.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

24-15S-36W Logan,KS

8100 E 22nd St N #700
Box 783188
Wichita, KS 67278+3188
ATTN: John Goldsmith

Beagly 24C #1

Job Ticket: 62628

DST#: 1

Test Start: 2017.07.25 @ 12:27:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 58.00 sec/qt

Water Loss: 7.99 in³

Resistivity: ohm.m

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud 100%	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

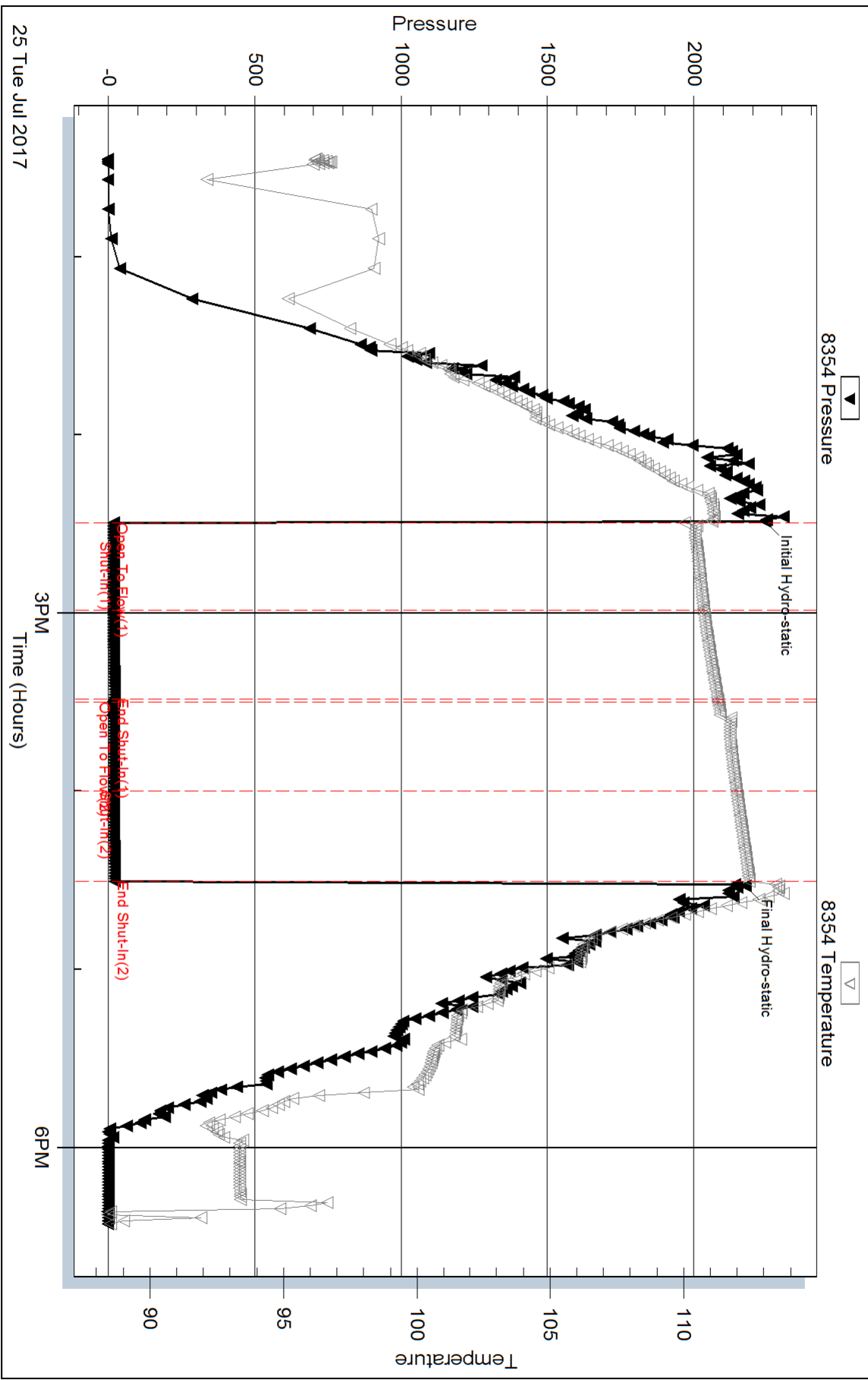
Serial #:

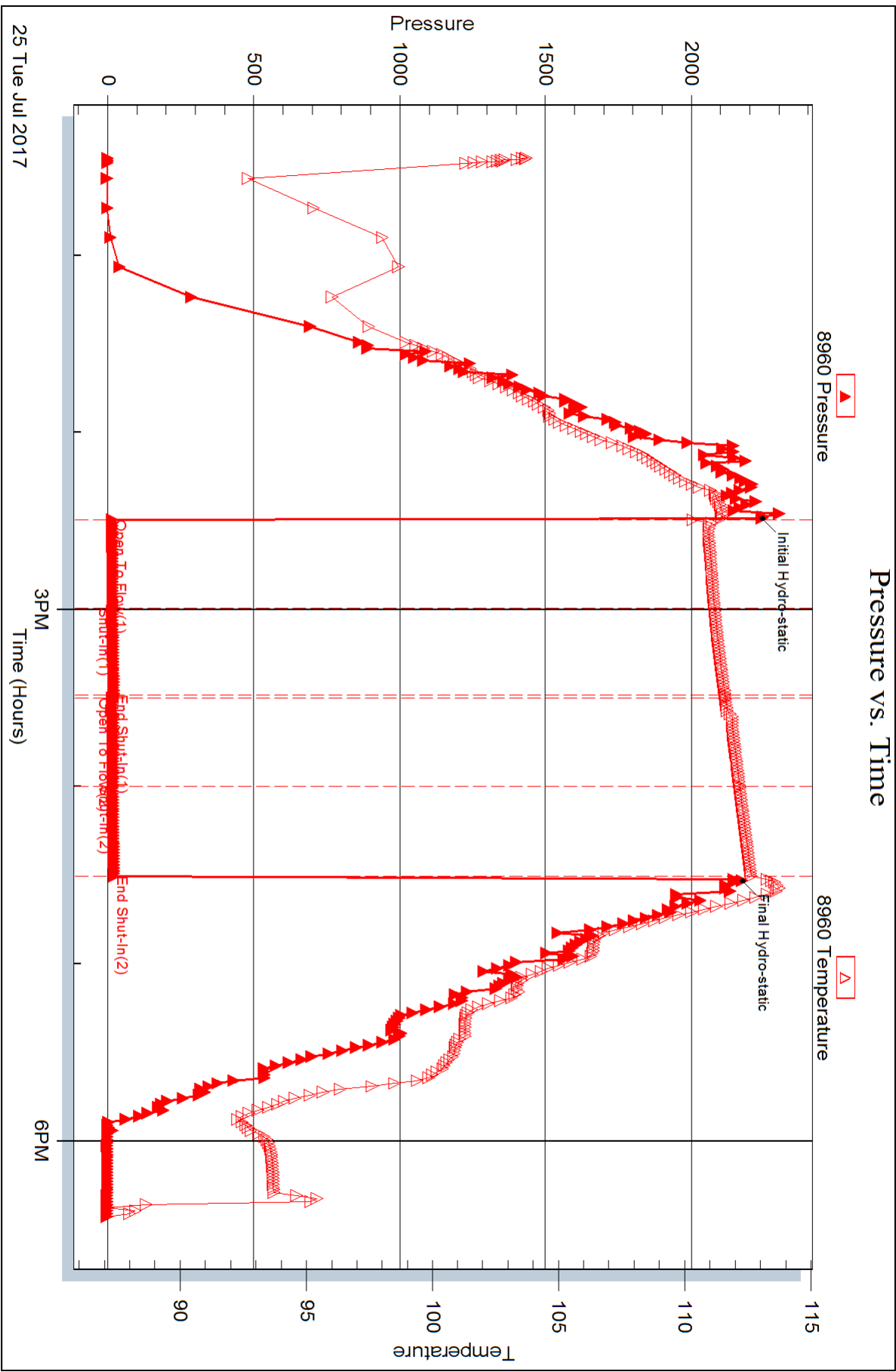
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Ritchie Exploration Inc**

8100 E 22nd St N #700
Box 783188
Wichita, KS 67278+3188

ATTN: John Goldsmith

Beagly 24C #1

24-15S-36W Logan,KS

Start Date: 2017.07.26 @ 05:49:00

End Date: 2017.07.26 @ 11:35:30

Job Ticket #: 62629 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2017.07.28 @ 16:11:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Ritchie Exploration Inc
 8100 E 22nd St N #700
 Box 783188
 Wichita, KS 67278+3188
 ATTN: John Goldsmith

24-15S-36W Logan, KS

Beagly 24C #1

Job Ticket: 62629

DST#: 2

Test Start: 2017.07.26 @ 05:49:00

GENERAL INFORMATION:

Formation: **Altamont B - C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:46:00
 Time Test Ended: 11:35:30
 Interval: **4468.00 ft (KB) To 4514.00 ft (KB) (TVD)**
 Total Depth: 4514.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ken Swinney
 Unit No: 72
 Reference Elevations: 3281.00 ft (KB)
 3276.00 ft (CF)
 KB to GR/CF: 5.00 ft

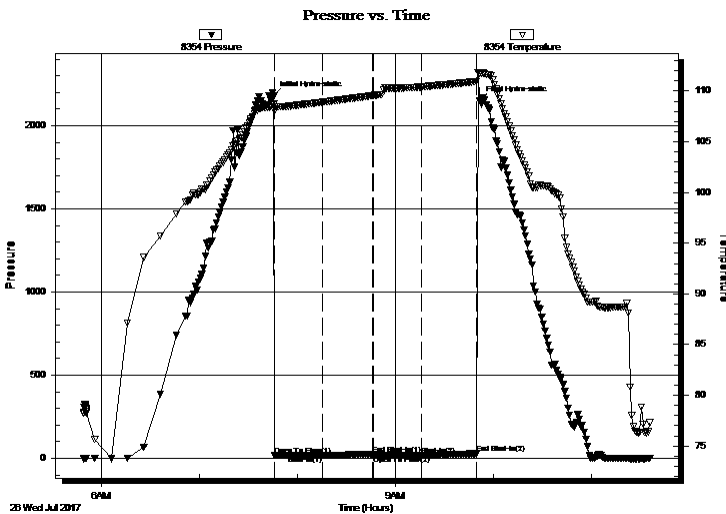
Serial #: 8354

Inside

Press@RunDepth: 18.38 psig @ 4469.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.07.26 End Date: 2017.07.26 Last Calib.: 2017.07.26
 Start Time: 05:49:05 End Time: 11:35:29 Time On Btm: 2017.07.26 @ 07:45:30
 Time Off Btm: 2017.07.26 @ 09:51:30

TEST COMMENT: IFP 30 Minutes Light surge at open then dead
 ISI 30 Minutes No blow back
 FFP 30 Minutes No blow / Flush tool Light surge then dead
 FSI 30 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2178.80	108.78	Initial Hydro-static
1	18.26	108.01	Open To Flow (1)
30	17.20	108.91	Shut-In(1)
61	24.80	109.56	End Shut-In(1)
61	16.06	109.57	Open To Flow (2)
91	18.38	110.42	Shut-In(2)
124	27.97	110.95	End Shut-In(2)
126	2151.12	111.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w / light oil spots in tool/ Mud 100%	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Ritchie Exploration Inc
8100 E 22nd St N #700
Box 783188
Wichita, KS 67278+3188
ATTN: John Goldsmith

24-15S-36W Logan, KS

Beagly 24C #1

Job Ticket: 62629

DST#: 2

Test Start: 2017.07.26 @ 05:49:00

GENERAL INFORMATION:

Formation: **Altamont B - C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 07:46:00
 Time Test Ended: 11:35:30
 Interval: **4468.00 ft (KB) To 4514.00 ft (KB) (TVD)**
 Total Depth: 4514.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ken Swinney
 Unit No: 72
 Reference Elevations: 3281.00 ft (KB)
 3276.00 ft (CF)
 KB to GR/CF: 5.00 ft

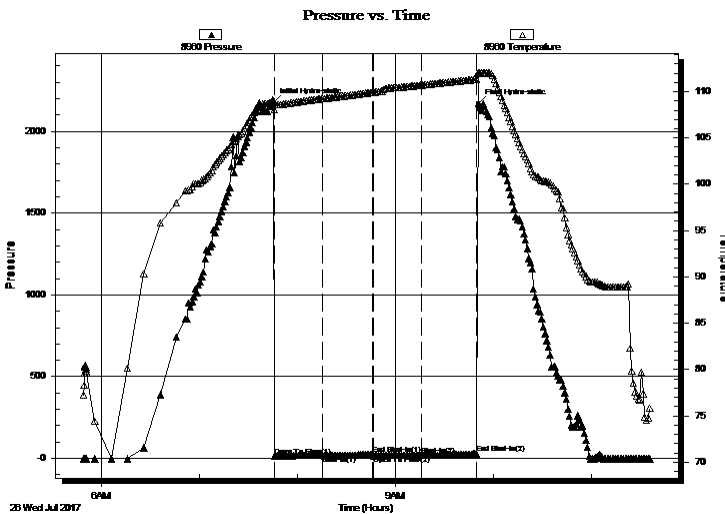
Serial #: 8960

Outside

Press@RunDepth: 28.26 psig @ 4470.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.07.26 End Date: 2017.07.26 Last Calib.: 2017.07.26
 Start Time: 05:49:05 End Time: 11:35:29 Time On Btm: 2017.07.26 @ 07:45:30
 Time Off Btm: 2017.07.26 @ 09:51:00

TEST COMMENT: IFP 30 Minutes Light surge at open then dead
 ISI 30 Minutes No blow back
 FFP 30 Minutes No blow / Flush tool Light surge then dead
 FSI 30 Minutes No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2176.25	108.97	Initial Hydro-static
1	15.61	108.05	Open To Flow (1)
30	17.14	109.25	Shut-In(1)
61	24.11	109.93	End Shut-In(1)
61	16.27	109.93	Open To Flow (2)
91	18.05	110.71	Shut-In(2)
124	28.26	111.34	End Shut-In(2)
126	2168.89	111.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	Mud w / light oil spots in tool/ Mud 100%	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Ritchie Exploration Inc

24-15S-36W Logan,KS

8100 E 22nd St N #700
Box 783188
Wichita, KS 67278+3188
ATTN: John Goldsmith

Beagly 24C #1

Job Ticket: 62629

DST#: 2

Test Start: 2017.07.26 @ 05:49:00

Tool Information

Drill Pipe:	Length: 4326.00 ft	Diameter: 3.80 inches	Volume: 60.68 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 61.27 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4468.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	46.27 ft			
Tool Length:	74.27 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			4445.00	
Hydraulic tool	5.00			4450.00	
Jars	6.00			4456.00	
Safety Joint	2.00			4458.00	
Top Packer	5.00			4463.00	
Packer	5.00			4468.00	28.00 Bottom Of Top Packer
Recorder	1.00	8354	Inside	4469.00	
Recorder	1.00	8960	Outside	4470.00	
Anchor	8.00			4478.00	
Change Over Sub	1.00			4479.00	
Drill Pipe	31.27			4510.27	
Change Over Sub	1.00			4511.27	
Bullnose	3.00			4514.27	46.27 Anchor Tool

Total Tool Length: 74.27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Ritchie Exploration Inc

24-15S-36W Logan,KS

8100 E 22nd St N #700
Box 783188
Wichita, KS 67278+3188
ATTN: John Goldsmith

Beagly 24C #1

Job Ticket: 62629

DST#: 2

Test Start: 2017.07.26 @ 05:49:00

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Mud w / light oil spots in tool/ Mud 100%	0.005

Total Length: 1.00 ft Total Volume: 0.005 bbl

Num Fluid Samples: 0

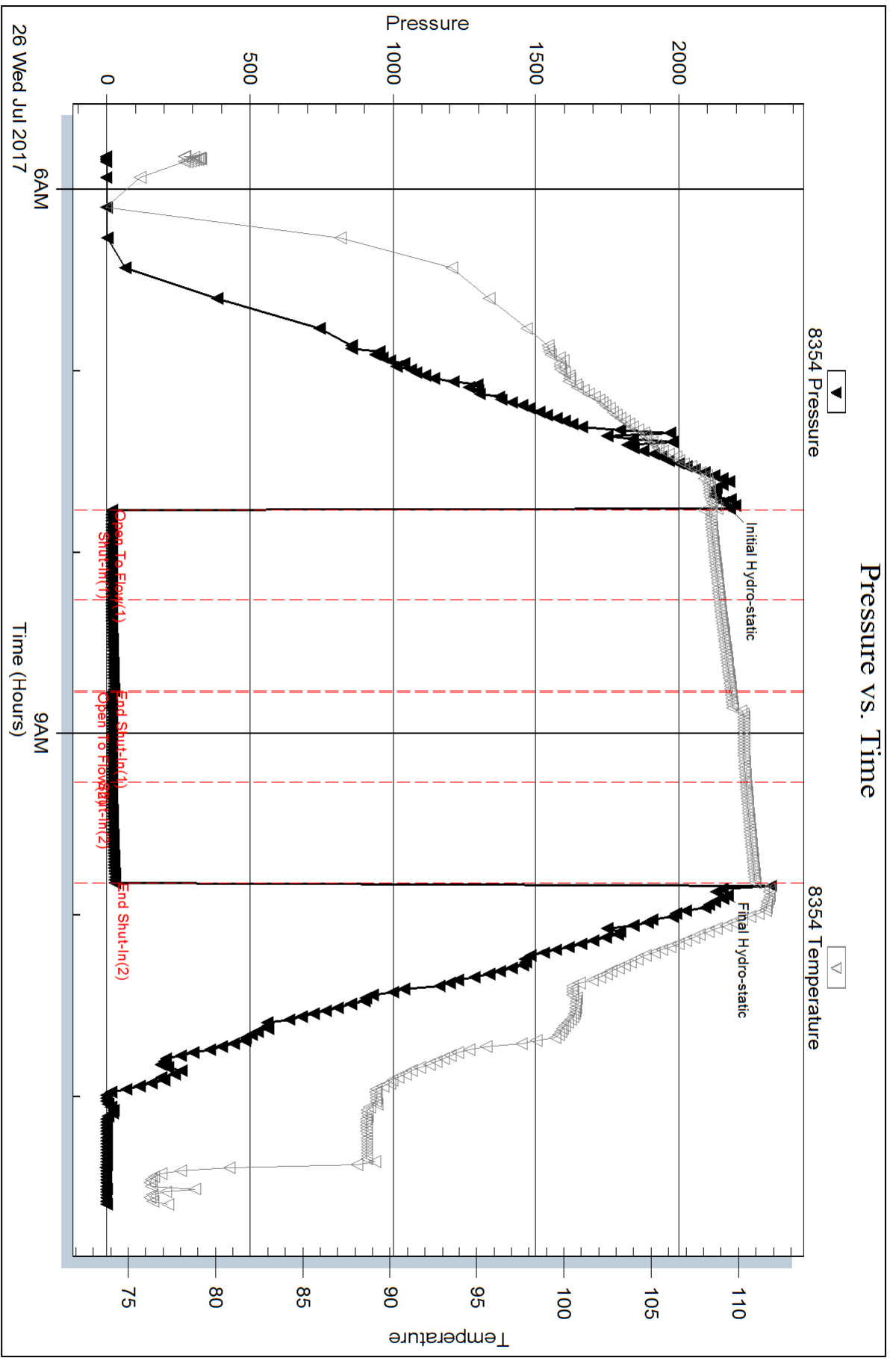
Num Gas Bombs: 0

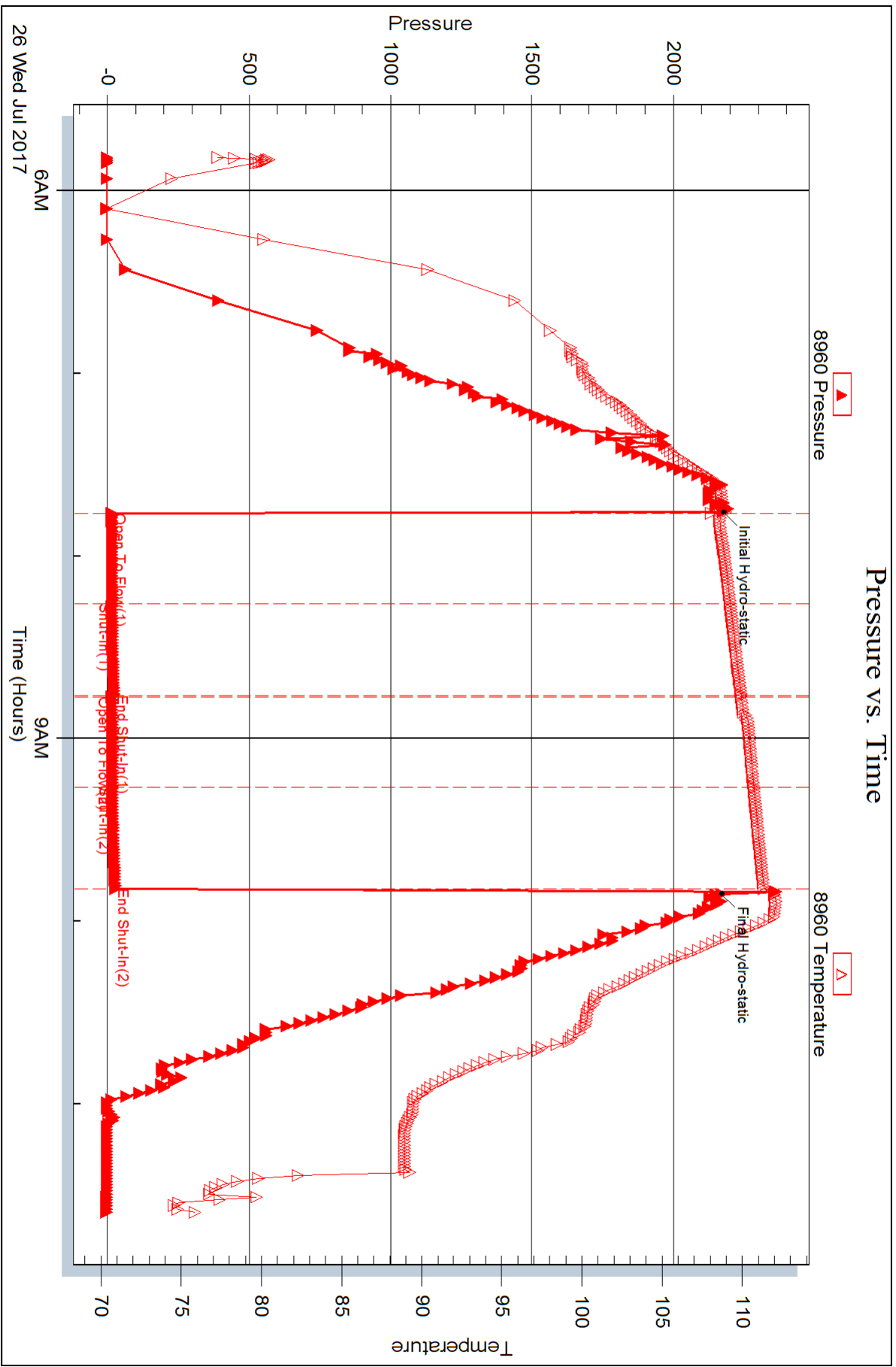
Serial #:

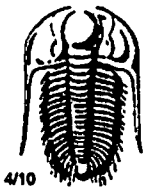
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62628

Well Name & No. Begly 24C #1 Test No. 1 Date 25 Jun 17
 Company Ritchie Exploration Inc. Elevation 3281 KB 3276 GL
 Address 8100 E 22nd St N #700 Box 783188 Wichita, KS 67278+3188
 Co. Rep / Geo. John Goldsmith Rig WW Rig 10
 Location: Sec. 24 Twp. 15S Rge. 36W Co. Logan State KS

Interval Tested 4438-4470 Zone Tested Altamont A
 Anchor Length 32 Drill Pipe Run 4296 Mud Wt. 9.2
 Top Packer Depth 4433 Drill Collars Run 120 Vis 58
 Bottom Packer Depth 4438 Wt. Pipe Run - WL 8.0
 Total Depth 4470 Chlorides 5000 ppm System LCM 1#

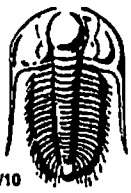
Blow Description I.F. Weak surface blow died in 4 minutes
I.S.E. No blow back
F.E. No blow / Flush tool no help
F.S.I. No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud</u>			<u>100</u>	

Rec Total 1 BHT 112 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2242</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>10:30 am</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>12:27 pm</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2:30 pm</u>
(D) Initial Shut-In <u>21</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>4:30 pm</u>
(E) Second Initial Flow <u>16</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>6:30 pm</u>
(F) Second Final Flow <u>19</u>	<input checked="" type="checkbox"/> Mileage <u>78</u> 58.50	Comments _____
(G) Final Shut-In <u>22</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2175</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1533.50</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1533.50</u>	

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62629

Well Name & No. Beagly 24C #1 Test No. 2 Date 26 JUL 17
 Company Ritchie Exploration Elevation 3281 KB 3276 GL
 Address 8100 E 22nd St #700 Box 783118 Wichita KS 67278+3188
 Co. Rep / Geo. John Goldsmith Rig WWRig 10
 Location: Sec. 24 Twp. 153 Rge. 36W Co. Logan State KS

Interval Tested 4468-4514 Zone Tested Altamont B4C
 Anchor Length 46 Drill Pipe Run 4326 Mud Wt. 9.2
 Top Packer Depth 4463 Drill Collars Run 120 Vis 58
 Bottom Packer Depth 4468 Wt. Pipe Run - WL 8.0
 Total Depth 4514 Chlorides 5000 ppm System LCM 1#

Blow Description I.F. Light surge at open then dead
F.S.I. No blow back
F.F. No blow / Flush tool light surge then dead
F.S.I. No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Mud w/oil spots in tool</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1 BHT 111 Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>2178</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>4:56 am</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>5:49 am</u>
(C) First Final Flow <u>17</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>7:45 am</u>
(D) Initial Shut-In <u>24</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>9:45 am</u>
(E) Second Initial Flow <u>16</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>11:35 am</u>
(F) Second Final Flow <u>18</u>	<input checked="" type="checkbox"/> Mileage <u>78</u> <u>117</u>	Comments <u>loaded tools 7/28 15:30</u>
(G) Final Shut-In <u>27</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>2151</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder	Total <u>1592</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby	MP/DST Disc't
	<input type="checkbox"/> Accessibility	
	Sub Total <u>1592</u>	

Approved By [Signature] Our Representative [Signature]

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