



DRILL STEM TEST REPORT

Prepared For: **Culbreath Oil & Gas**

3501 S Yale Ave.
Tulsa, OK 74135

ATTN: Anthony Luna

Minney #1-2

2-5s-36w Rawlins, KS

Start Date: 2015.07.20 @ 17:40:00

End Date: 2015.07.21 @ 00:14:30

Job Ticket #: 53446 DST #: 1

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

Printed: 2015.07.24 @ 12:00:06



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Culbreath Oil & Gas

2-5s-36w Rawlins, KS

3501 S Yale Ave.
Tulsa, OK 74135

Minney #1-2

Job Ticket: 53446

DST#: 1

ATTN: Anthony Luna

Test Start: 2015.07.20 @ 17:40:00

GENERAL INFORMATION:

Formation: **LKC "H"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:13:30

Time Test Ended: 00:14:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

Interval: 4190.00 ft (KB) To 4226.00 ft (KB) (TVD)

Reference Elevations: 3178.00 ft (KB)

Total Depth: 4226.00 ft (KB) (TVD)

3168.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8653 Outside

Press@RunDepth: 22.88 psig @ 4191.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.20

End Date:

2015.07.21

Last Calib.: 2015.07.21

Start Time: 17:41:00

End Time:

00:14:30

Time On Btm: 2015.07.20 @ 20:13:00

Time Off Btm: 2015.07.20 @ 22:18:30

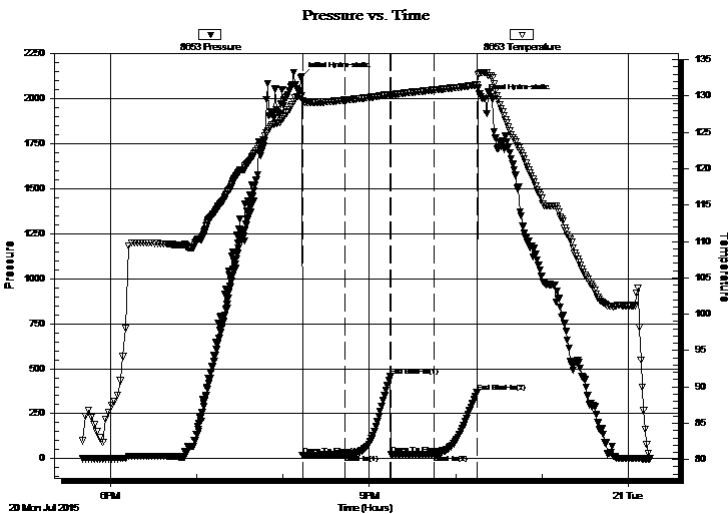
TEST COMMENT: 30 - FF- Surface Blow died in 18 min.

30 - ISI- No Return

30 - FF- No Blow

30 - FSI- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2121.48	130.07	Initial Hydro-static
1	19.16	129.38	Open To Flow (1)
30	21.69	129.42	Shut-In(1)
62	457.47	130.22	End Shut-In(1)
62	22.26	130.09	Open To Flow (2)
92	22.88	130.81	Shut-In(2)
122	366.88	131.51	End Shut-In(2)
126	1998.76	133.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02

Gas Rates

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



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Minney #1-2

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Unit No: 82

Interval: 4190.00 ft (KB) To 4226.00 ft (KB) (TVD)

Reference Elevations: 3178.00 ft (KB)

Total Depth: 4226.00 ft (KB) (TVD)

3168.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8520 Inside

Press@RunDepth: psig @ 4191.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.20

End Date:

2015.07.21

Last Calib.:

2015.07.21

Start Time: 17:41:00

End Time:

00:15:30

Time On Btm:

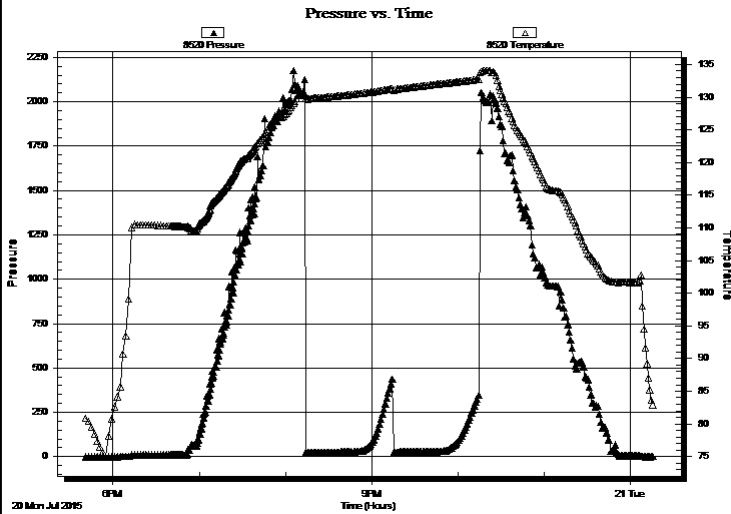
Time Off Btm:

TEST COMMENT: 30 - FF- Surface Blow died in 18 min.

30 - ISI- No Return

30 - FF- No Blow

30 - FSI- No Return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Culbreath Oil & Gas

2-5s-36w Rawlins, KS

3501 S Yale Ave.
Tulsa, OK 74135

Minney #1-2

Job Ticket: 53446

DST#: 1

ATTN: Anthony Luna

Test Start: 2015.07.20 @ 17:40:00

Tool Information

Drill Pipe:	Length: 4074.00 ft	Diameter: 3.80 inches	Volume: 57.15 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 57.75 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4190.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	64.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4163.00	
Shut In Tool	5.00			4168.00	
Hydraulic tool	5.00			4173.00	
Jars	5.00			4178.00	
Safety Joint	3.00			4181.00	
Packer	5.00			4186.00	28.00 Bottom Of Top Packer
Packer	4.00			4190.00	
Stubb	1.00			4191.00	
Recorder	0.00	8653	Outside	4191.00	
Recorder	0.00	8520	Inside	4191.00	
Perforations	30.00			4221.00	
Bullnose	5.00			4226.00	36.00 Bottom Packers & Anchor

Total Tool Length: 64.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Culbreath Oil & Gas

2-5s-36w Rawlins, KS

3501 S Yale Ave.
Tulsa, OK 74135

Minney #1-2

Job Ticket: 53446

DST#: 1

ATTN: Anthony Luna

Test Start: 2015.07.20 @ 17:40:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

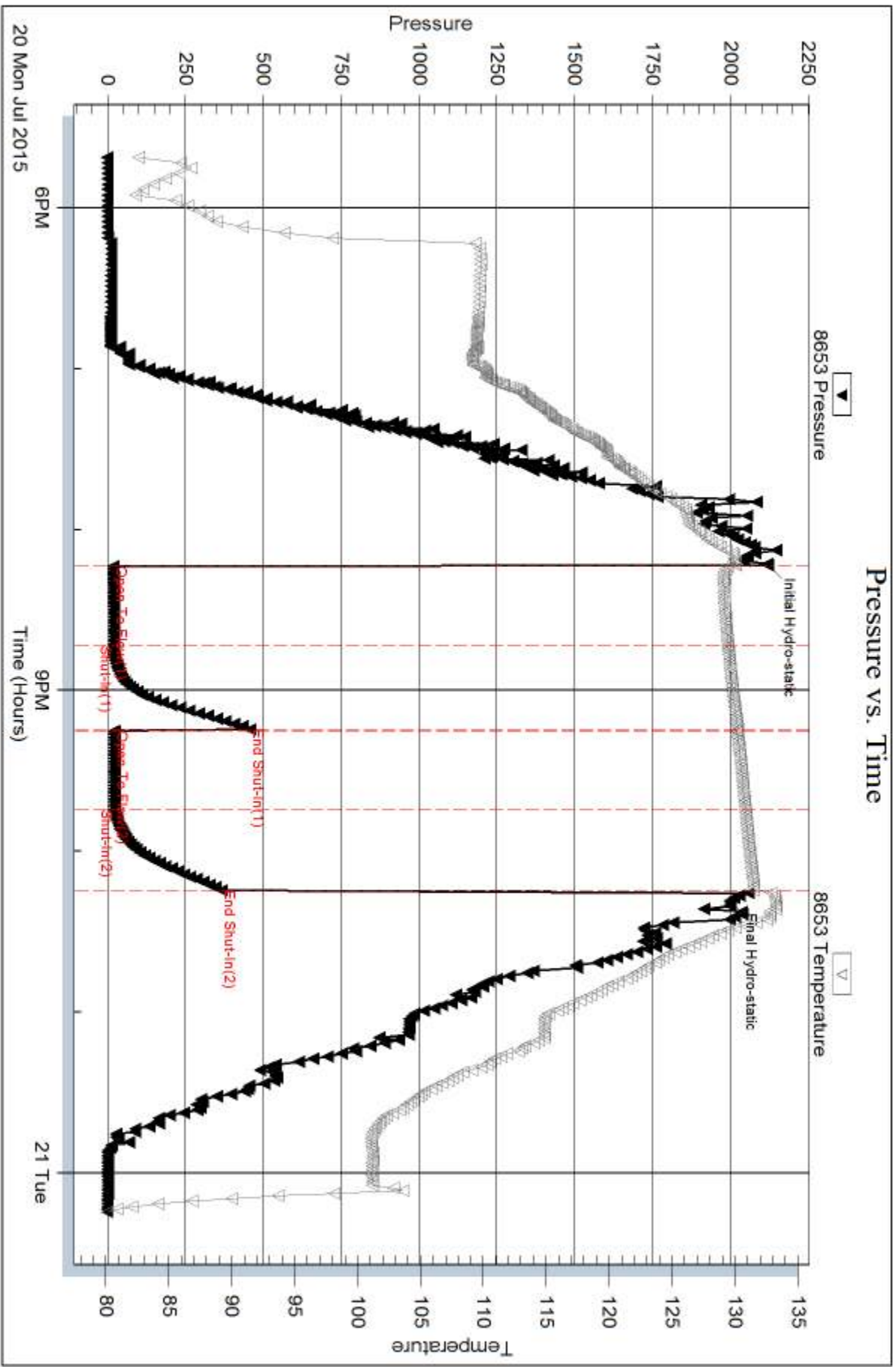
Recovery Comments:

Serial #: 8653

Outside Culbreath Oil & Gas

Minney #1-2

DST Test Number: 1



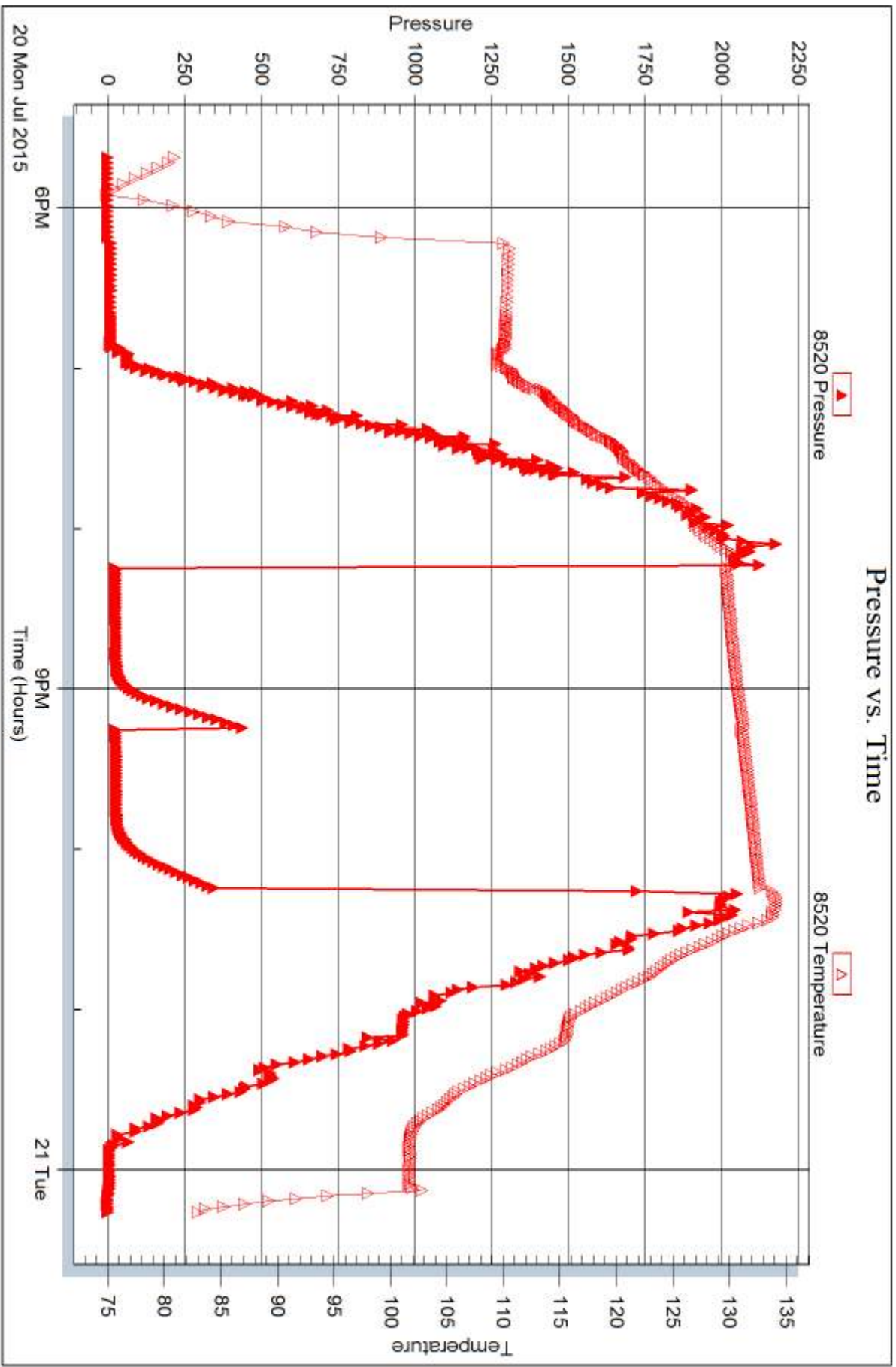
Serial #: 8520

Inside

Culbreath Oil & Gas

Minney #1-2

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Culbreath Oil & Gas**

3501 S Yale Ave.
Tulsa, OK 74135

ATTN: Anthony Luna

Minney #1-2

2-5s-36w Rawlins, KS

Start Date: 2015.07.22 @ 08:45:00

End Date: 2015.07.22 @ 14:36:00

Job Ticket #: 53447 DST #: 2

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

Printed: 2015.07.24 @ 11:58:57



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DRILL STEM TEST REPORT

Culbreath Oil & Gas

2-5s-36w Rawlins, KS

3501 S Yale Ave.
Tulsa, OK 74135

Minney #1-2

Job Ticket: 53447

DST#: 2

ATTN: Anthony Luna

Test Start: 2015.07.22 @ 08:45:00

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:43:20

Time Test Ended: 14:36:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

Interval: 4436.00 ft (KB) To 4470.00 ft (KB) (TVD)

Reference Elevations: 3178.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3168.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8653 Outside

Press@RunDepth: 21.15 psig @ 4437.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.22 End Date: 2015.07.22

Last Calib.: 2015.07.22

Start Time: 08:46:00 End Time: 14:36:00

Time On Btm: 2015.07.22 @ 10:43:10

Time Off Btm: 2015.07.22 @ 12:49:30

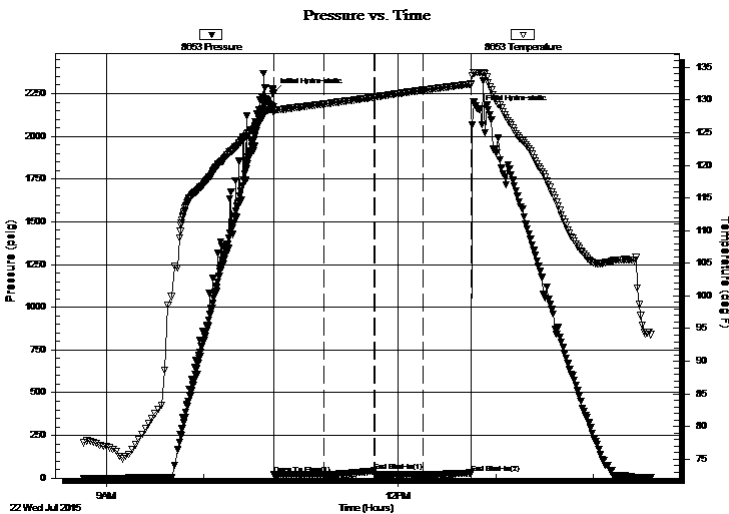
TEST COMMENT: 30 - IF- Surface Bow bt to 1/8" then died in 25 min.

30 - IS- No Return

30 - FF- No Blow

30 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2257.77	129.00	Initial Hydro-static
1	20.86	128.04	Open To Flow (1)
31	20.84	129.39	Shut-In(1)
62	42.02	130.43	End Shut-In(1)
63	19.58	130.44	Open To Flow (2)
92	21.15	131.50	Shut-In(2)
122	30.52	132.46	End Shut-In(2)
127	2158.62	134.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M (oil spots)	0.02
0.00	Show of oil spots in tool	0.00

Gas Rates

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



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Culbreath Oil & Gas

2-5s-36w Rawlins, KS

3501 S Yale Ave.
Tulsa, OK 74135

Minney #1-2

Job Ticket: 53447

DST#: 2

ATTN: Anthony Luna

Test Start: 2015.07.22 @ 08:45:00

GENERAL INFORMATION:

Formation: **Pawnee**

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Time Tool Opened: 10:43:20

Time Test Ended: 14:36:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 82

Interval: 4436.00 ft (KB) To 4470.00 ft (KB) (TVD)

Reference Elevations: 3178.00 ft (KB)

Total Depth: 4470.00 ft (KB) (TVD)

3168.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

Serial #: 8520 Inside

Press@RunDepth: psig @ 4437.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.07.22 End Date: 2015.07.22

Last Calib.: 2015.07.22

Start Time: 08:46:00 End Time: 14:37:00

Time On Btm:

Time Off Btm:

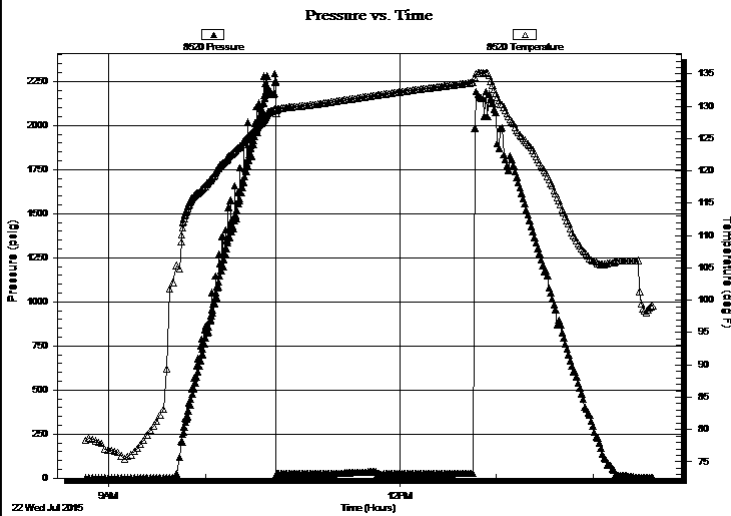
TEST COMMENT: 30 - IF- Surface Bow bt to 1/8" then died in 25 min.

30 - ISI- No Return

30 - FF- No Blow

30 - FSI- No Return

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100M (oil spots)	0.02
0.00	Show of oil spots in tool	0.00

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Culbreath Oil & Gas

2-5s-36w Rawlins, KS

3501 S Yale Ave.
Tulsa, OK 74135

Minney #1-2

Job Ticket: 53447

DST#: 2

ATTN: Anthony Luna

Test Start: 2015.07.22 @ 08:45:00

Tool Information

Drill Pipe:	Length: 4292.00 ft	Diameter: 3.80 inches	Volume: 60.21 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 121.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 72000.00 lb
			<u>Total Volume: 60.81 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4436.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4409.00	
Shut In Tool	5.00			4414.00	
Hydraulic tool	5.00			4419.00	
Jars	5.00			4424.00	
Safety Joint	3.00			4427.00	
Packer	5.00			4432.00	28.00 Bottom Of Top Packer
Packer	4.00			4436.00	
Stubb	1.00			4437.00	
Recorder	0.00	8653	Outside	4437.00	
Recorder	0.00	8520	Inside	4437.00	
Perforations	28.00			4465.00	
Bullnose	5.00			4470.00	34.00 Bottom Packers & Anchor

Total Tool Length: 62.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Culbreath Oil & Gas

2-5s-36w Rawlins, KS

3501 S Yale Ave.
Tulsa, OK 74135

Minney #1-2

Job Ticket: 53447

DST#: 2

ATTN: Anthony Luna

Test Start: 2015.07.22 @ 08:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 57.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure: psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100M (oil spots)	0.025
0.00	Show of oil spots in tool	0.000

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

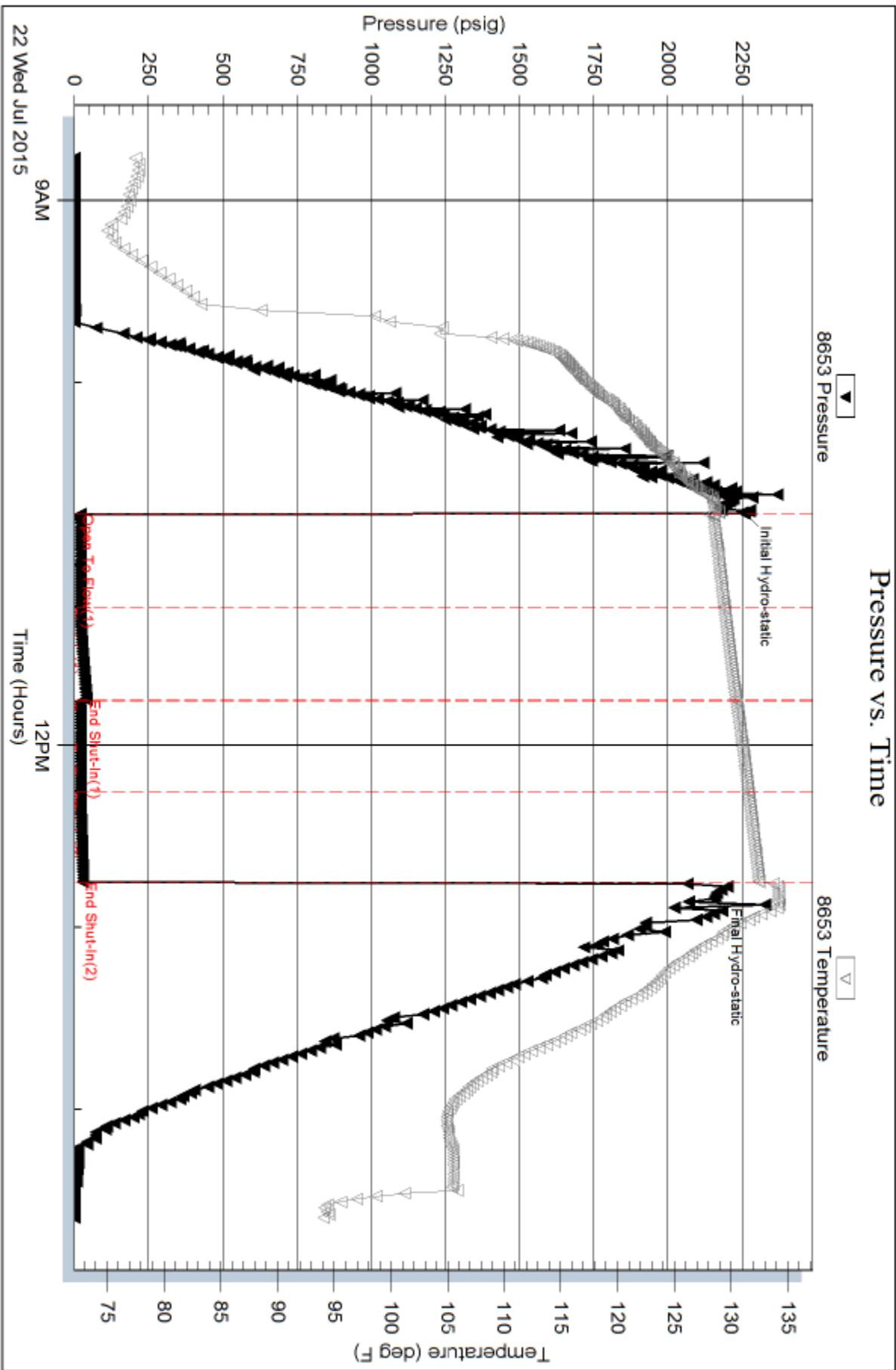
Recovery Comments:

Serial #: 8653

Outside Culbreath Oil & Gas

Minney #1-2

DST Test Number: 2



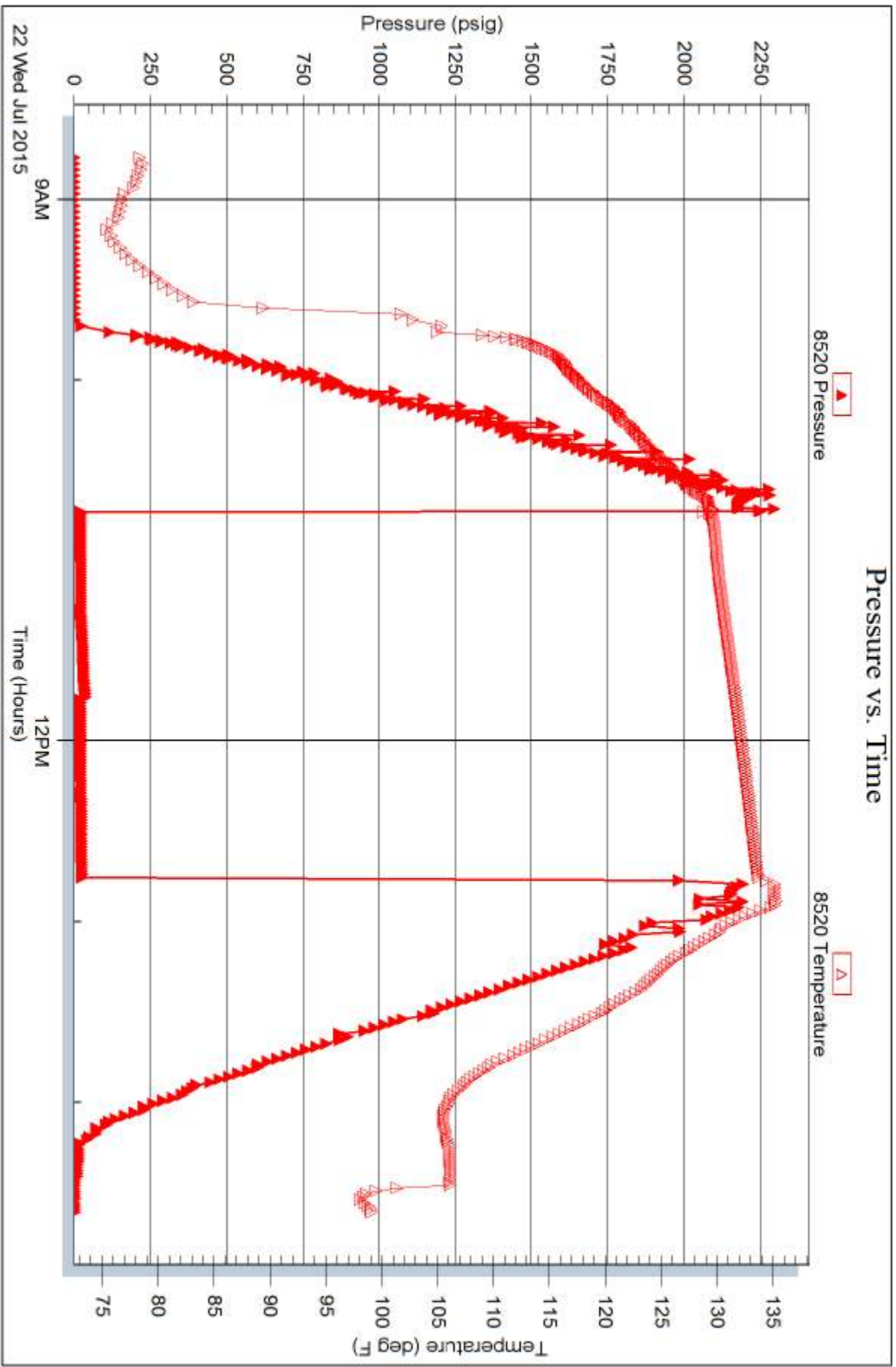
Serial #: 8520

Inside

Culbreath Oil & Gas

Minney #1-2

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 53447

Printed: 2015.07.24 @ 11:58:59



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53446

4/10

Well Name & No. Miner #1-2 Test No. 1 Date 7-20-15
 Company Culbreth Oil & Gas Elevation 3178 KB 3168 GL
 Address 3501 S Yale Ave. Tulsa, OK 74135
 Co. Rep / Geo. Anthony Luna Rig WW#4
 Location: Sec. 2 Twp. 5S Rge. 36W Co. Rawlins State KS

Interval Tested 4190-4226 Zone Tested LKC "H"
 Anchor Length 36' Drill Pipe Run 4074 Mud Wt. 9.2
 Top Packer Depth 4186 Drill Collars Run 121 Vis 53
 Bottom Packer Depth 4190 Wt. Pipe Run 0 WL 8.8
 Total Depth 4226 Chlorides 5000 ppm System LCM 3#

Blow Description IF - Surface Blow ditch in 18 min.
ISI - No Return
FF - No Blow
FSI - No Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</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	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 132 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2121 Test 1150 T-On Location 4:50 PM
 (B) First Initial Flow 19 Jars 250 T-Started 5:40 PM
 (C) First Final Flow 21 Safety Joint 75 T-Open 8:13 PM
 (D) Initial Shut-In 452 Circ Sub _____ T-Pulled 10:13 PM
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 12:15 AM
 (F) Second Final Flow 22 Mileage 120 RT 120
 (G) Final Shut-In 366 Sampler _____
 (H) Final Hydrostatic 1998 Straddle _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 30 Shale Packer _____ Ruined Packer _____
 Final Flow 30 Extra Packer _____ Extra Copies _____
 Final Shut-In 30 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1595
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1595

Approved By _____ Our Representative

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 or 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.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53447

4/10

Well Name & No. Minney #12 Test No. 2 Date 7-22-15
 Company Culbreath Oil & Gas Elevation 3178 KB 3168 GL
 Address 3501 S Yale Ave. Tulsa, OK 74135
 Co. Rep / Geo. Anthony Luna Rig WW #4
 Location: Sec. 2 Twp. 5S Rge. 36W Co. Rawlins State KS

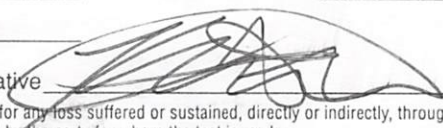
Interval Tested 4436-4470 Zone Tested Pawnee
 Anchor Length 34' Drill Pipe Run 4292 Mud Wt. 9.0
 Top Packer Depth 4432 Drill Collars Run 121 Vis 57
 Bottom Packer Depth 4436 Wt. Pipe Run 0 WL 8.0
 Total Depth 4470 Chlorides 5000 ppm System LCM 2.5 #

Blow Description IF - Surface blow built to 1/8" died at 25 min.
ISI - NO Return
FF - NO Blow
FSI - NO Return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
<u>0</u>	<u>Show of oil spots in tool</u>	<u>SPOTS</u>		<u>100</u>	

Rec Total 5 BHT 133 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2257 Test 1150 T-On Location 8:20 AM
 (B) First Initial Flow 20 Jars 250 T-Started 8:45 AM
 (C) First Final Flow 20 Safety Joint 75 T-Open 10:43 AM
 (D) Initial Shut-In 42 Circ Sub _____ T-Pulled 12:43 PM
 (E) Second Initial Flow 19 Hourly Standby _____ T-Out 2:37 PM
 (F) Second Final Flow 2' Mileage 120 RT 240 Comments Loaded tools
 (G) Final Shut-In 30 Sampler _____ 7-24-15 10:30 AM
 (H) Final Hydrostatic 2158 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 800
 Initial Shut-In 30 Day Standby XI 1.5d 8h Total 2395
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1595

Approved By _____ Our Representative 

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 or 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.