



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

29-9s-31w Thomas,KS

Geerdes Albers Unit #1-29

Start Date: 2013.09.15 @ 19:20:00

End Date: 2013.09.16 @ 02:28:53

Job Ticket #: 54630 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.09.19 @ 09:41:48

Downing Nelson Oil Company

Geerdes Albers Unit #1-29

29-9s-31w Thomas,KS

DST # 1

LKC H-J

2013.09.15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing Nelson Oil Company

Geerdes Albers Unit #1-29

PO Box 1019
Hays KS 67601

29-9s-31w Thomas,KS

Job Ticket: 54630

DST#: 1

ATTN: Marc Downing

Test Start: 2013.09.15 @ 19:20:00

GENERAL INFORMATION:

Formation: **LKC H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:11:08

Time Test Ended: 02:28:53

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 55

Interval: 4196.00 ft (KB) To 4278.00 ft (KB) (TVD)

Reference Elevations: 3033.00 ft (KB)

Total Depth: 4278.00 ft (KB) (TVD)

3025.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 6667

Inside

Press @ Run Depth: 101.92 psig @ 4263.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.15

End Date:

2013.09.16

Last Calib.:

2013.09.16

Start Time: 19:20:15

End Time:

02:28:53

Time On Btm:

2013.09.15 @ 21:09:53

Time Off Btm:

2013.09.16 @ 00:15:08

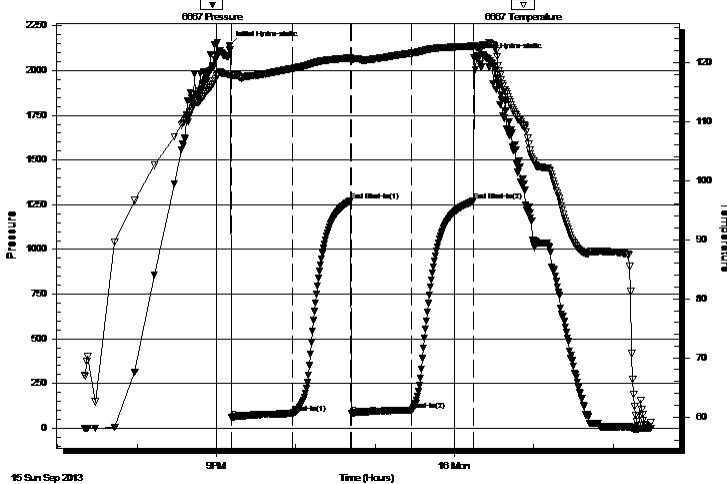
TEST COMMENT: 45- IF WSB built to 8 1/2 "

45- ISI No blow back

45- FF - S.S.B.- B.O.B. 28 min

45- FSI - No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2137.59	118.10	Initial Hydro-static
2	57.76	117.42	Open To Flow (1)
48	82.95	119.00	Shut-In(1)
92	1272.34	120.80	End Shut-In(1)
92	80.12	120.41	Open To Flow (2)
138	101.92	121.60	Shut-In(2)
185	1269.78	122.80	End Shut-In(2)
186	2074.19	122.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
32.00	OCM 30% OIL 60% MUD	0.16
95.00	HOCM 40% OIL 60% MUD	1.33
0.00	315' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

Geerdes Albers Unit #1-29

PO Box 1019
Hays KS 67601

29-9s-31w Thomas, KS

ATTN: Marc Downing

Job Ticket: 54630

DST#: 1

Test Start: 2013.09.15 @ 19:20:00

Tool Information

Drill Pipe:	Length: 4169.00 ft	Diameter: 3.80 inches	Volume: 58.48 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 58.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4196.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	82.00 ft			
Tool Length:	102.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4177.00	
Shut In Tool	5.00			4182.00	
Hydraulic tool	5.00			4187.00	
Packer	5.00			4192.00	20.00 Bottom Of Top Packer
Packer	4.00			4196.00	
Stubb	1.00			4197.00	
Perforations	1.00			4198.00	
Change Over Sub	1.00			4199.00	
Drill Pipe	63.00			4262.00	
Change Over Sub	1.00			4263.00	
Recorder	0.00	6667	Inside	4263.00	
Recorder	0.00	8368	Outside	4263.00	
Perforations	10.00			4273.00	
Bullnose	5.00			4278.00	82.00 Bottom Packers & Anchor

Total Tool Length: 102.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

Geerdes Albers Unit #1-29

PO Box 1019
Hays KS 67601

29-9s-31w Thomas, KS

Job Ticket: 54630

DST#: 1

ATTN: Marc Downing

Test Start: 2013.09.15 @ 19:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
32.00	OCM 30% OIL 60%MUD	0.157
95.00	HOCM 40% OIL 60% MUD	1.333
0.00	315' GIP	0.000

Total Length: 127.00 ft

Total Volume: 1.490 bbl

Num Fluid Samples: 0

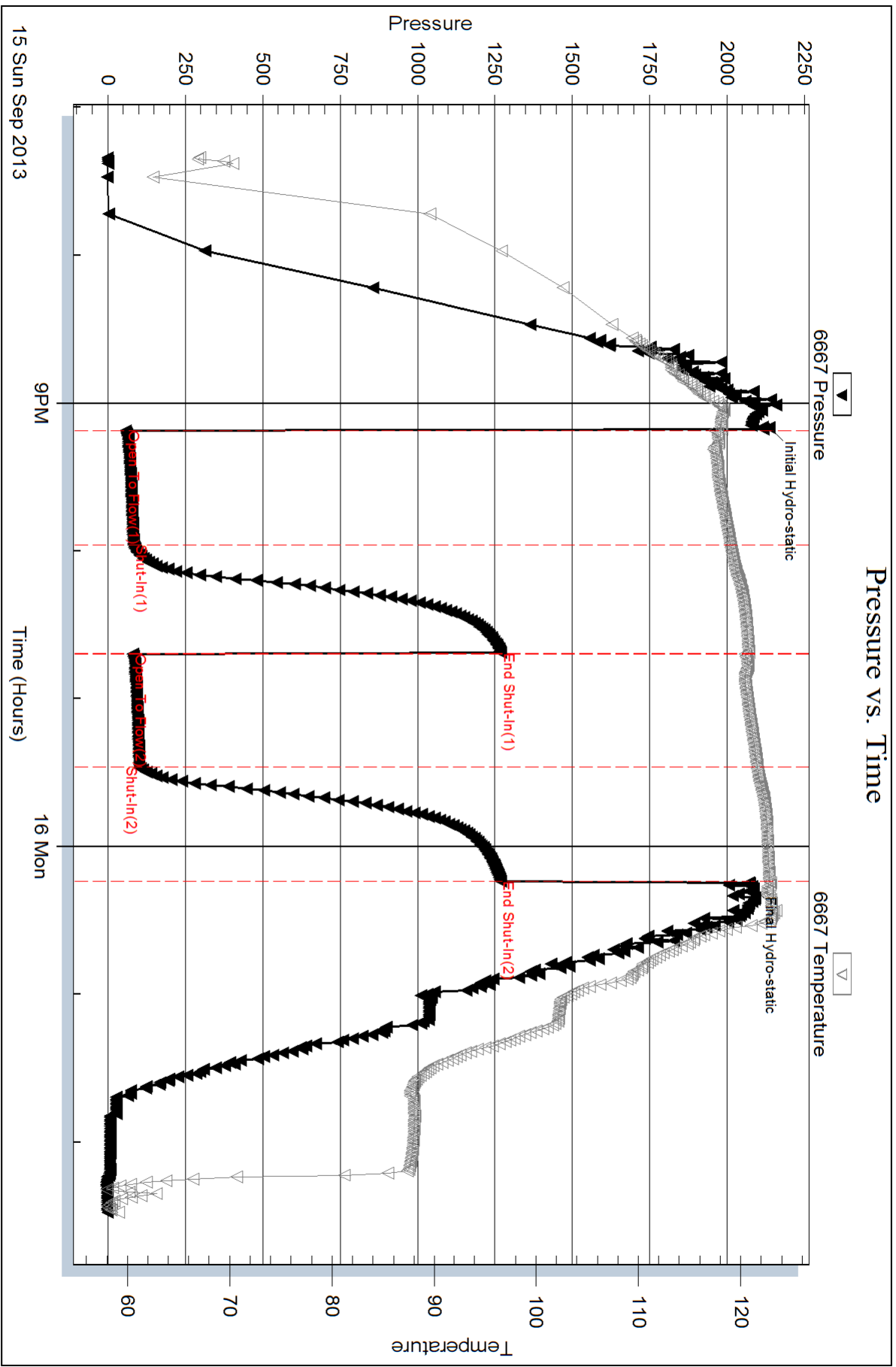
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

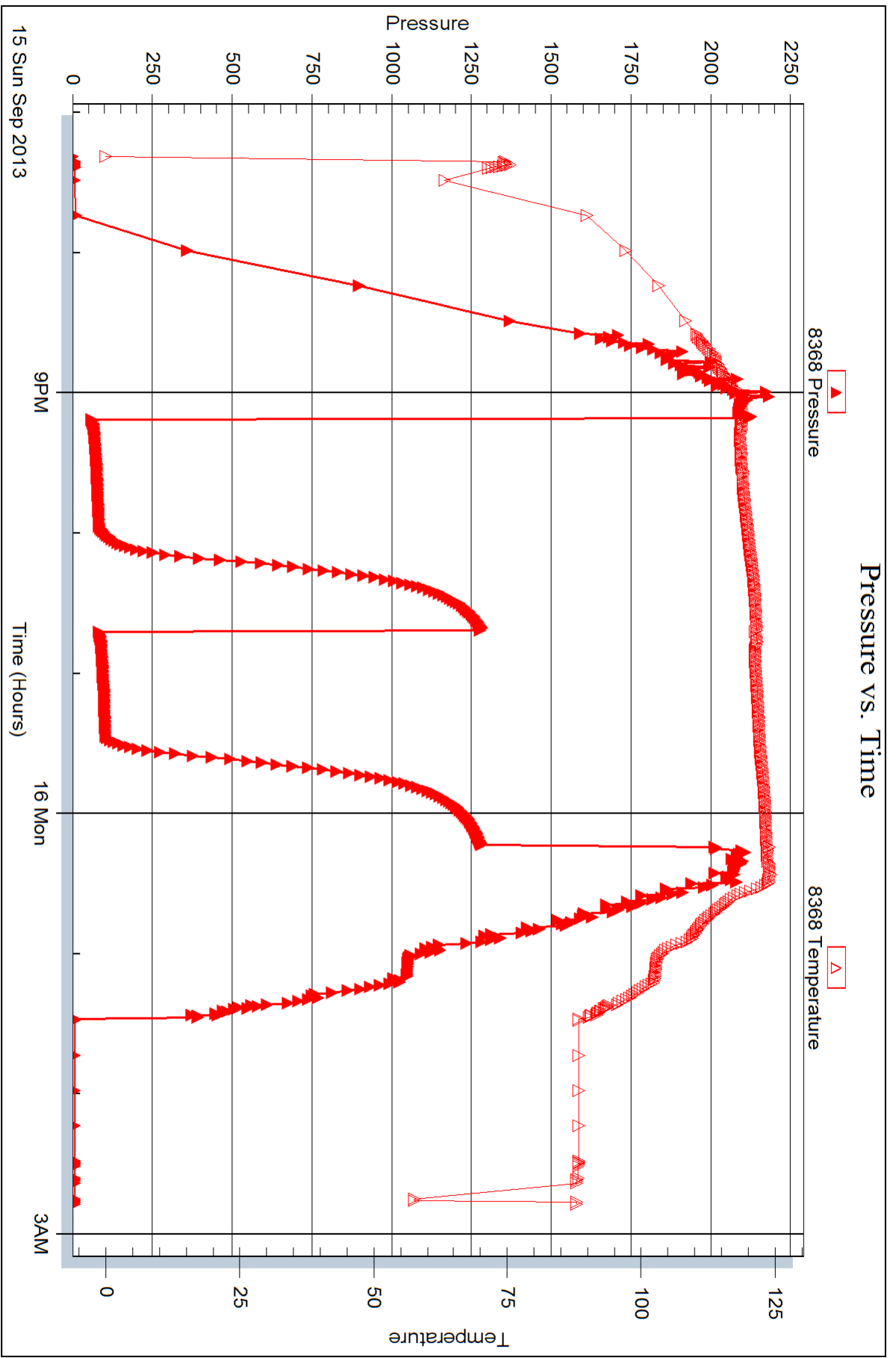


Serial #: 8368

Outside Dow nting Nelson Oil Company

29-95-31w Thomas, KS

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54630

Printed: 2013.09.19 @ 09:41:50



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

29-9s-31w Thomas,KS

Geerdes Albers Unit #1-29

Start Date: 2013.09.16 @ 13:50:00

End Date: 2013.09.16 @ 22:09:15

Job Ticket #: 54361 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.09.19 @ 09:41:04

Downing Nelson Oil Company

Geerdes Albers Unit #1-29

29-9s-31w Thomas,KS

DST # 2

LKC "L"

2013.09.16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning Nelson Oil Company

Geerdes Albers Unit #1-29

PO Box 1019
Hays KS 67601

29-9s-31w Thomas,KS

ATTN: Marc Dow ning

Job Ticket: 54361

DST#: 2

Test Start: 2013.09.16 @ 13:50:00

GENERAL INFORMATION:

Formation: **LKC "L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:41:00

Time Test Ended: 22:09:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 55

Interval: 4311.00 ft (KB) To 4340.00 ft (KB) (TVD)

Reference Elevations: 3033.00 ft (KB)

Total Depth: 4278.00 ft (KB) (TVD)

3025.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8368 Outside

Press @ Run Depth: 292.35 psig @ 4315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.16

End Date:

2013.09.16

Last Calib.:

2013.09.16

Start Time: 13:50:05

End Time:

22:09:14

Time On Btm:

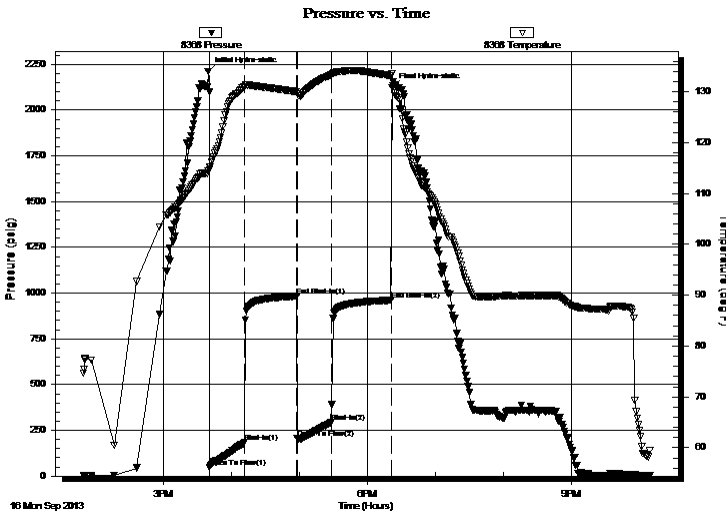
2013.09.16 @ 15:39:45

Time Off Btm:

2013.09.16 @ 18:21:45

TEST COMMENT: 30- IF - S.S.B. Built to B.O.B in 3 min
45- ISI - B.O.B. in 8 min
30- FF - S.S.B. Built to B.O.B. in 4 1/2 min
45- FSI - B.O.B. in 7 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2212.06	114.48	Initial Hydro-static
2	49.61	114.63	Open To Flow (1)
32	184.25	131.08	Shut-In(1)
78	983.37	130.02	End Shut-In(1)
79	208.26	129.69	Open To Flow (2)
109	292.35	133.30	Shut-In(2)
162	961.24	133.16	End Shut-In(2)
162	2121.92	133.63	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
602.00	CO 100% OIL	8.15
126.00	HMCO 30%MUD 70%OIL	1.77
0.00	2961' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

Geerdes Albers Unit #1-29

PO Box 1019
Hays KS 67601

29-9s-31w Thomas, KS

ATTN: Marc Downing

Job Ticket: 54361

DST#: 2

Test Start: 2013.09.16 @ 13:50:00

Tool Information

Drill Pipe:	Length: 4287.00 ft	Diameter: 3.80 inches	Volume: 60.14 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 60.30 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	4311.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	29.00 ft				
Tool Length:	49.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			4292.00	
Shut In Tool	5.00			4297.00	
Hydraulic tool	5.00			4302.00	
Packer	5.00			4307.00	20.00 Bottom Of Top Packer
Packer	4.00			4311.00	
Stubb	1.00			4312.00	
Perforations	3.00			4315.00	
Recorder	0.00	6667	Inside	4315.00	
Recorder	0.00	8368	Outside	4315.00	
Perforations	20.00			4335.00	
Bullnose	5.00			4340.00	29.00 Bottom Packers & Anchor

Total Tool Length: 49.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

Geerdes Albers Unit #1-29

PO Box 1019
Hays KS 67601

29-9s-31w Thomas, KS

Job Ticket: 54361

DST#: 2

ATTN: Marc Downing

Test Start: 2013.09.16 @ 13:50:00

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: bbl

Water Loss: 6.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
602.00	CO 100% OIL	8.153
126.00	HMCO 30%MUD 70%OIL	1.767
0.00	2961' GIP	0.000

Total Length: 728.00 ft Total Volume: 9.920 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

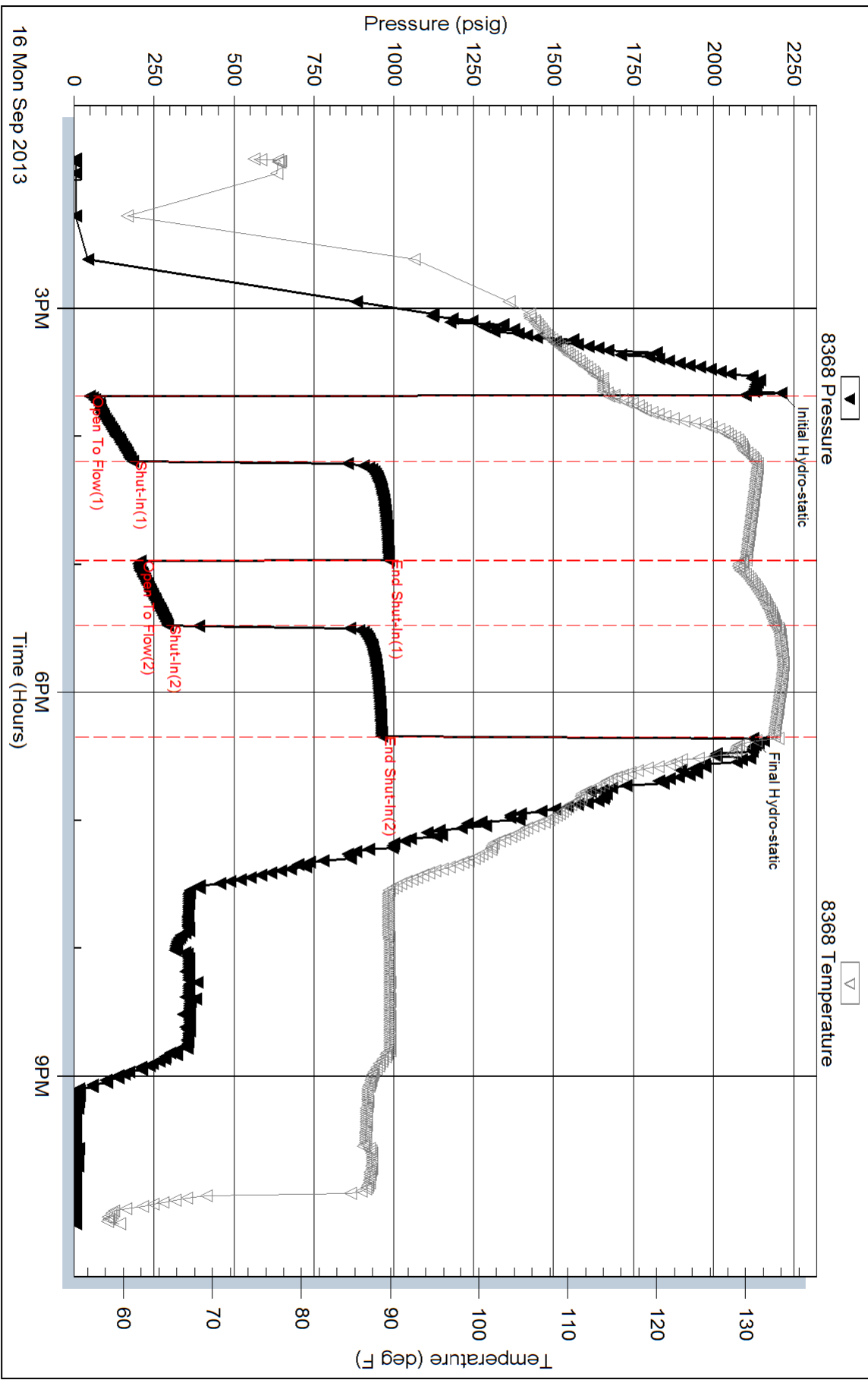
Serial #: 8368

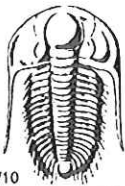
Outside Dow n ing Nelson Oil Company

29-95-31w Thomas,KS

DST Test Number: 2

Pressure vs. Time





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54630

Well Name & No. Geerdes-Albers unit #1-29 Test No. 1 Date 9-15-13
 Company Downing Nelson Elevation 3033 KB 3025 GL
 Address P.O. Box 1019 Hays 67601
 Co. Rep / Geo. Mark Downing Rig Discovery Rig #1
 Location: Sec. 29 Twp. 9 Rge. 31 Co. Thomas State KS

Interval Tested 4,196 - 4,278 Zone Tested L.K.C. H-J
 Anchor Length 82' Drill Pipe Run 4,169 Mud Wt. 9.1
 Top Packer Depth 4,191 Drill Collars Run 32 Vis 54
 Bottom Packer Depth 4,196 Wt. Pipe Run _____ WL 6.4
 Total Depth 4,278 Chlorides 4000 ppm System LCM 1-1/2

Blow Description 45-I, E, W, S, B. Built to 8 1/2 in 45 min
45-I, S, I - No Blow Back
45-F, K - S, S, B. B, O, B. in 28 min.
45-F, S, I - No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>315</u>	<u>GIP</u>				
<u>63</u>	<u>HOCm</u>		<u>40</u>		<u>60</u>
<u>63</u>	<u>HOCm</u>		<u>30</u>		<u>70</u>

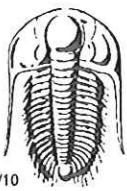
Rec Total 126 BHT 123 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2,138 Test 1250 T-On Location 18:05:00
 (B) First Initial Flow 58 Jars _____ T-Started 19:20:00
 (C) First Final Flow 83 Safety Joint _____ T-Open 21:13:00
 (D) Initial Shut-In 1272 Circ Sub _____ T-Pulled 00:13:00
 (E) Second Initial Flow 80 Hourly Standby _____ T-Out 02:30:00
 (F) Second Final Flow 102 Mileage 150 RT 232.50 Comments Thank you
 (G) Final Shut-In 1,270 Sampler _____
 (H) Final Hydrostatic 2,074 Straddle _____
 Shale Packer _____
 Ruined Shale Packer _____
 Ruined Packer _____

Initial Open 45 Extra Packer _____
 Initial Shut-In 45 Extra Recorder _____
 Final Flow 45 Day Standby _____
 Final Shut-In 45 Accessibility _____
 Sub Total 1482.50 MP/DST Disc't _____

Approved By _____ Our Representative Bob Hanna

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. 54631

Well Name & No. Geerdes-albers unit #1-29 Test No. 2 Date 9-16-13
 Company Downing Nelson Elevation 3033 KB 3025 GL
 Address P.O. Box 1019 Hays, 67601
 Co. Rep / Geo. Mark Downing Rig Discovery Rig #1
 Location: Sec. 29 Twp. 9 Rge. 31 Co. Thomas State KS.

Interval Tested 4,311-4,340 Zone Tested L.K.C. "L"
 Anchor Length 29 Drill Pipe Run 4,287 Mud Wt. 9.2
 Top Packer Depth 4,306 Drill Collars Run 32 Vis 53
 Bottom Packer Depth 4,311 Wt. Pipe Run ———— WL 6.8
 Total Depth 4,340 Chlorides 1,000 ppm System LCM 1#

Blow Description 30-I.F-S.S.B. B.O.B. in 3 min.
45-I.S.I-B.O.B. 8 min.
30-F.F-S.S.B. B.O.B. in 4 1/2 min.
45-F.S.I-B.O.B. 7 min.

Rec	Feet of	%gas	%oil	%water	%mud
32	CO	100			
570	CO	100			
126	HMCOD	70		30	
2901	GIP				
Rec Total	728 BHT 133	Gravity	38	API RW	@ 60 °F Chlorides

(A) Initial Hydrostatic 2,212 Test 1250 T-On Location 13:10:00
 (B) First Initial Flow 50 Jars T-Started 13:50:00
 (C) First Final Flow 184 Safety Joint T-Open 15:41:00
 (D) Initial Shut-In 983 Circ Sub T-Pulled 18:11:00
 (E) Second Initial Flow 208 Hourly Standby T-Out 22:10:00
 (F) Second Final Flow 292 Mileage 20 RT 465 Comments 45 min. to Drop Bar
 (G) Final Shut-In 961 Sampler PICKED UP TOOK 11:00
 (H) Final Hydrostatic 2122 Straddle S.M. 9-18-13
 Ruined Shale Packer
 Ruined Packer

Initial Open 30 Extra Packer
 Initial Shut-In 45 Extra Recorder
 Final Flow 30 Day Standby 1d 12.25h Sub Total 800
 Final Shut-In 45 Accessibility Total 2515
 Sub Total 1715 MP/DST Disc't

Approved By _____ Our Representative Bob Hamei

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.