



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

20-27S-18W Kiowa
Randel 3-20
 Job Ticket: 57757 **DST#: 2**
 Test Start: 2014.09.08 @ 09:47:57

GENERAL INFORMATION:

Formation: **KC "I & J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 11:24:12
 Tester: Leal Cason
 Time Test Ended: 17:34:57
 Unit No: 74
 Interval: **4422.00 ft (KB) To 4444.00 ft (KB) (TVD)**
 Reference Elevations: 2201.00 ft (KB)
 Total Depth: 4422.00 ft (KB) (TVD) 2188.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

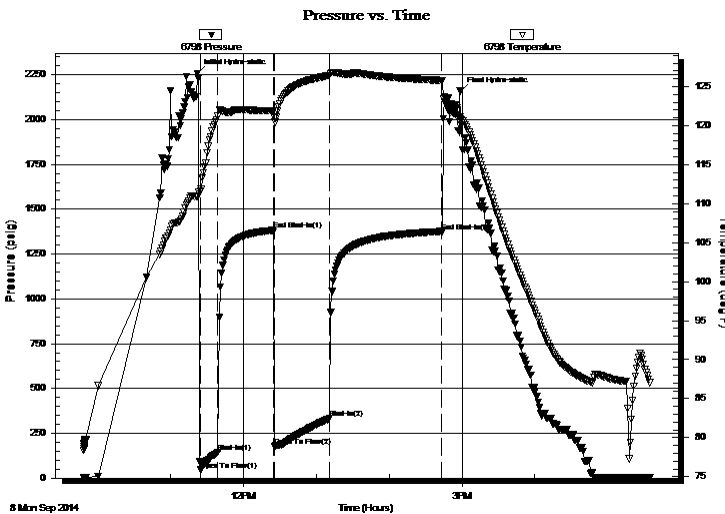
Serial #: 6798

Inside

Press @ Run Depth: 333.98 psig @ 4423.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.09.08 End Date: 2014.09.08 Last Calib.: 1899.12.30
 Start Time: 09:47:58 End Time: 17:34:57 Time On Btm: 2014.09.08 @ 11:21:42
 Time Off Btm: 2014.09.08 @ 14:58:12

TEST COMMENT: IF: Strong Blow , BOB in 45 seconds
 IS: Blow Back Built to 6 inches
 FF: Strong Blow , BOB in 3 minutes, GTS in 40 minutes, TSTM
 FS: 5 inch Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2258.43	110.86	Initial Hydro-static
3	46.45	111.63	Open To Flow (1)
17	144.11	121.28	Shut-In(1)
63	1383.25	121.88	End Shut-In(1)
64	177.03	120.95	Open To Flow (2)
109	333.98	126.43	Shut-In(2)
202	1376.51	125.78	End Shut-In(2)
217	2158.88	121.13	Final Hydro-static

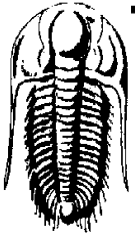
Recovery

Length (ft)	Description	Volume (bbl)
0.00	3685 GIP	0.00
444.00	Water	3.24
124.00	GSY SOCW 10%G 10%O 80%W	1.74
155.00	GSY MOCW 30%G 5%M 31%O 34%W	2.17

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

20-27S-18W Kiowa

Randel 3-20

Job Ticket: 57757 DST#: 2

Test Start: 2014.09.08 @ 09:47:57

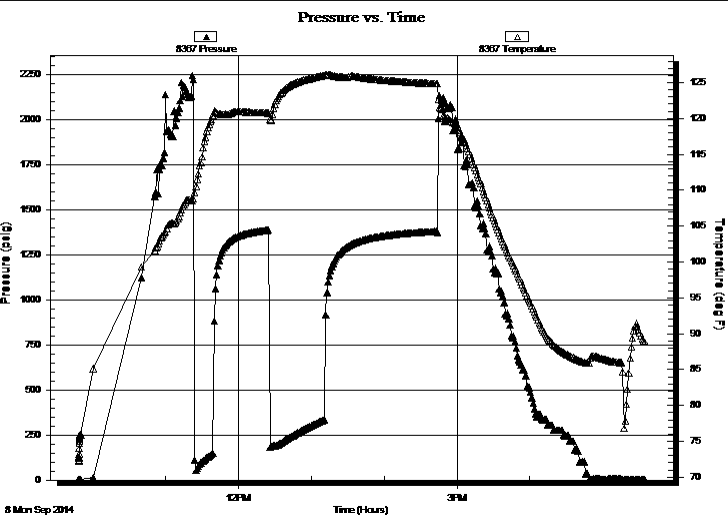
GENERAL INFORMATION:

Formation: **KC "I & J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 11:24:12 Tester: Leal Cason
 Time Test Ended: 17:34:57 Unit No: 74
 Interval: **4422.00 ft (KB) To 4444.00 ft (KB) (TVD)** Reference Elevations: 2201.00 ft (KB)
 Total Depth: 4422.00 ft (KB) (TVD) 2188.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 13.00 ft

Serial #: **8367** Outside

Press @ RunDepth:	psig @ 4423.00 ft (KB)	Capacity:	8000.00 psig
Start Date:	2014.09.08 End Date: 2014.09.08	Last Calib.:	2014.09.08
Start Time:	09:47:58 End Time: 17:35:12	Time On Btm:	
		Time Off Btm:	

TEST COMMENT: IF: Strong Blow , BOB in 45 seconds
 IS: Blow Back Built to 6 inches
 FF: Strong Blow , BOB in 3 minutes, GTS in 40 minutes, TSTM
 FS: 5 inch Blow Back



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

Recovery

Length (ft)	Description	Volume (bbl)
0.00	3685 GIP	0.00
444.00	Water	3.24
124.00	GSY SOCW 10%G 10%O 80%W	1.74
155.00	GSY MOCW 30%G 5%M 31%O 34%W	2.17

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC
 PO Box 838
 Lawrenceville, IL 62439
 ATTN: Jon Christensen

20-27S-18W Kiowa
Randel 3-20
 Job Ticket: 57757 **DST#: 2**
 Test Start: 2014.09.08 @ 09:47:57

Mud and Cushion Information

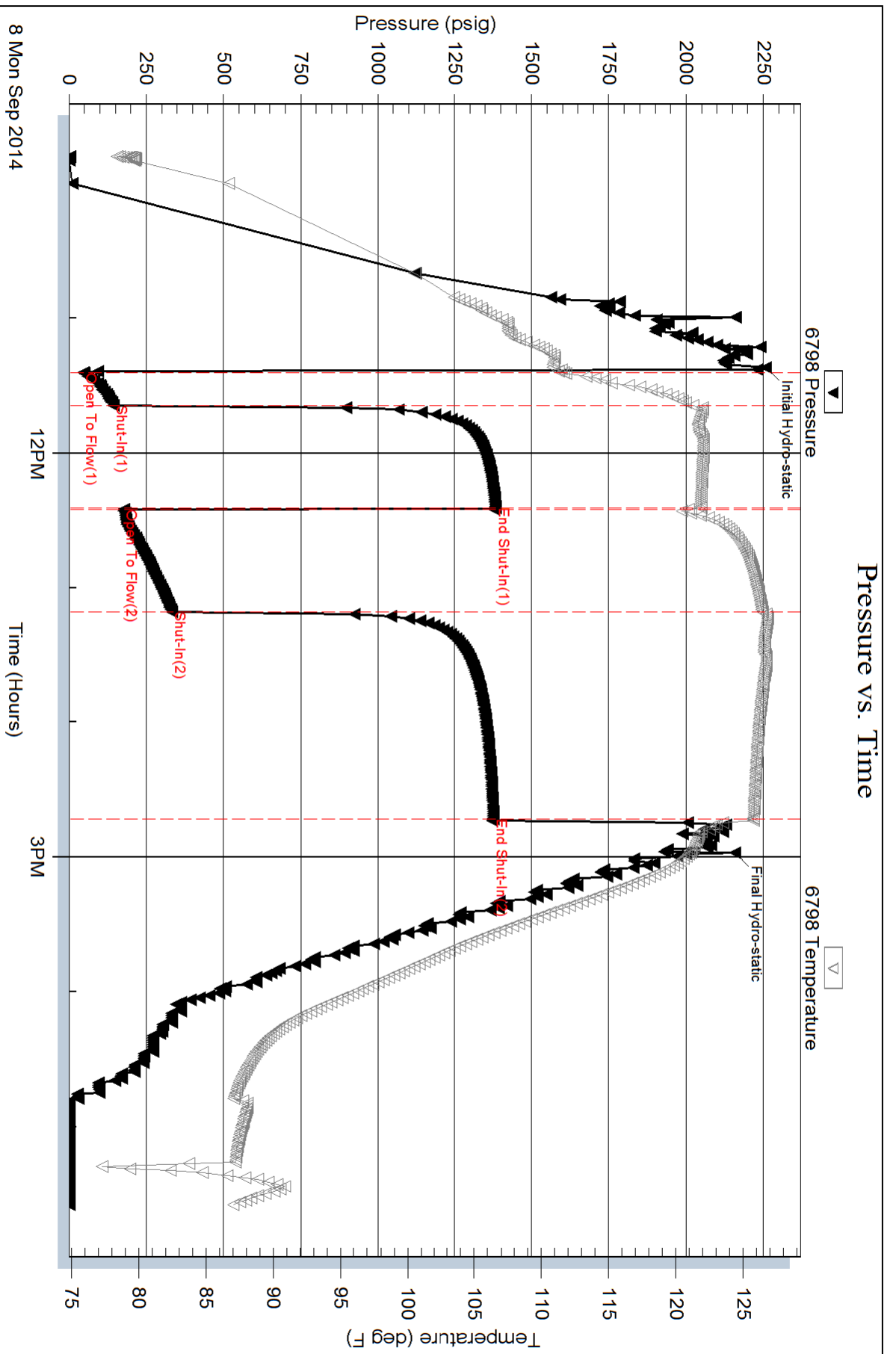
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	70000 ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3685 GIP	0.000
444.00	Water	3.240
124.00	GSY SOCW 10%G 10%O 80%W	1.739
155.00	GSY MOCW 30%G 5%M 31%O 34%W	2.174

Total Length: 723.00 ft Total Volume: 7.153 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: RW w as .095 @ 82 degrees



Serial #: 8367

Outside Herran L Loeb LLC

Randel 3-20

DST Test Number: 2

