

### DRILL STEM TEST REPORT

Prepared For: **Red Oak**

7701 E. Kellogg  
Wichita KS 67207

ATTN: Sean

**20 17 25 Ness KS**

**Lamer Trust 2-20**

Start Date: 2009.07.22 @ 07:52:14

End Date: 2009.07.22 @ 16:12:14

Job Ticket #: 36410                      DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Red Oak

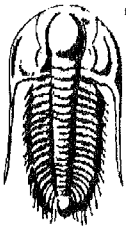
Lamer Trust 2-20

20 17 25 Ness KS

DST # 1

Miss.

2009.07.22



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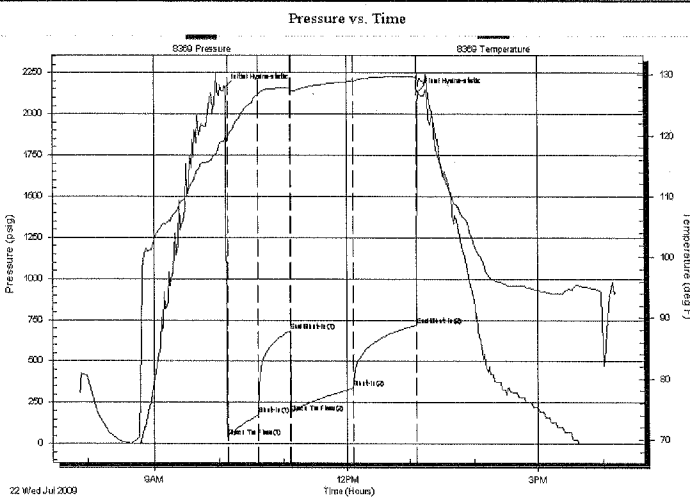
**Lamer Trust 2-20**  
**20 17 25 Ness KS**  
Job Ticket: 36410 **DST#: 1**  
Test Start: 2009.07.22 @ 07:52:14

## GENERAL INFORMATION:

Formation: **Miss.**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 10:07:44  
Time Test Ended: 16:12:14  
Test Type: Conventional Bottom Hole  
Tester: Brett Dickinson  
Unit No:  
Interval: **4407.00 ft (KB) To 4445.00 ft (KB) (TVD)**  
Reference Elevations: 2501.00 ft (KB)  
Total Depth: 4445.00 ft (KB) (TVD) 2496.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: KB to GR/CF: 5.00 ft

**Serial #: 8369** Inside  
Press@RunDepth: 338.36 psig @ 4410.00 ft (KB) Capacity: 7000.00 psig  
Start Date: 2009.07.22 End Date: 2009.07.22 Last Calib.: 2009.07.22  
Start Time: 07:52:19 End Time: 16:12:13 Time On Btm: 2009.07.22 @ 10:05:44  
Time Off Btm: 2009.07.22 @ 13:08:13

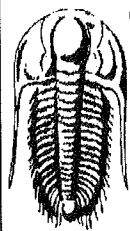
TEST COMMENT: IF-BOB in 5min  
IS- 2.25in blow  
FF- BOB in 6min  
FS- No blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2160.46	119.69	Initial Hydro-static
2	42.32	119.40	Open To Flow (1)
31	174.20	126.72	Shut-In(1)
61	682.99	127.82	End Shut-In(1)
62	188.48	127.59	Open To Flow (2)
121	338.36	128.97	Shut-In(2)
181	718.61	129.65	End Shut-In(2)
183	2135.59	128.15	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
740.00	VGO 30% G 70%O	10.38
120.00	VGOCM 30%G 10%O 60%M	1.68

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



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**TOOL DIAGRAM**

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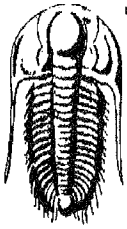
**Tool Information**

Drill Pipe:	Length: 4400.00 ft	Diameter: 3.80 inches	Volume: 61.72 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 72000.00 lb
			<b>Total Volume: 61.72 bbl</b>	Tool Chased: ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4407.00 ft			Final 69000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	58.00 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			4388.00	
Shut In Tool	5.00			4393.00	
Hydraulic tool	5.00			4398.00	
Packer	4.00			4402.00	20.00      Bottom Of Top Packer
Packer	5.00			4407.00	
Stubb	1.00			4408.00	
Perforations	1.00			4409.00	
Change Over Sub	1.00			4410.00	
Recorder	0.00	8319	Inside	4410.00	
Recorder	0.00	8369	Inside	4410.00	
Blank Spacing	31.00			4441.00	
Change Over Sub	1.00			4442.00	
Bullnose	3.00			4445.00	38.00      Bottom Packers & Anchor

**Total Tool Length: 58.00**



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### 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: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1300.00 ppm			
Filter Cake: inches			

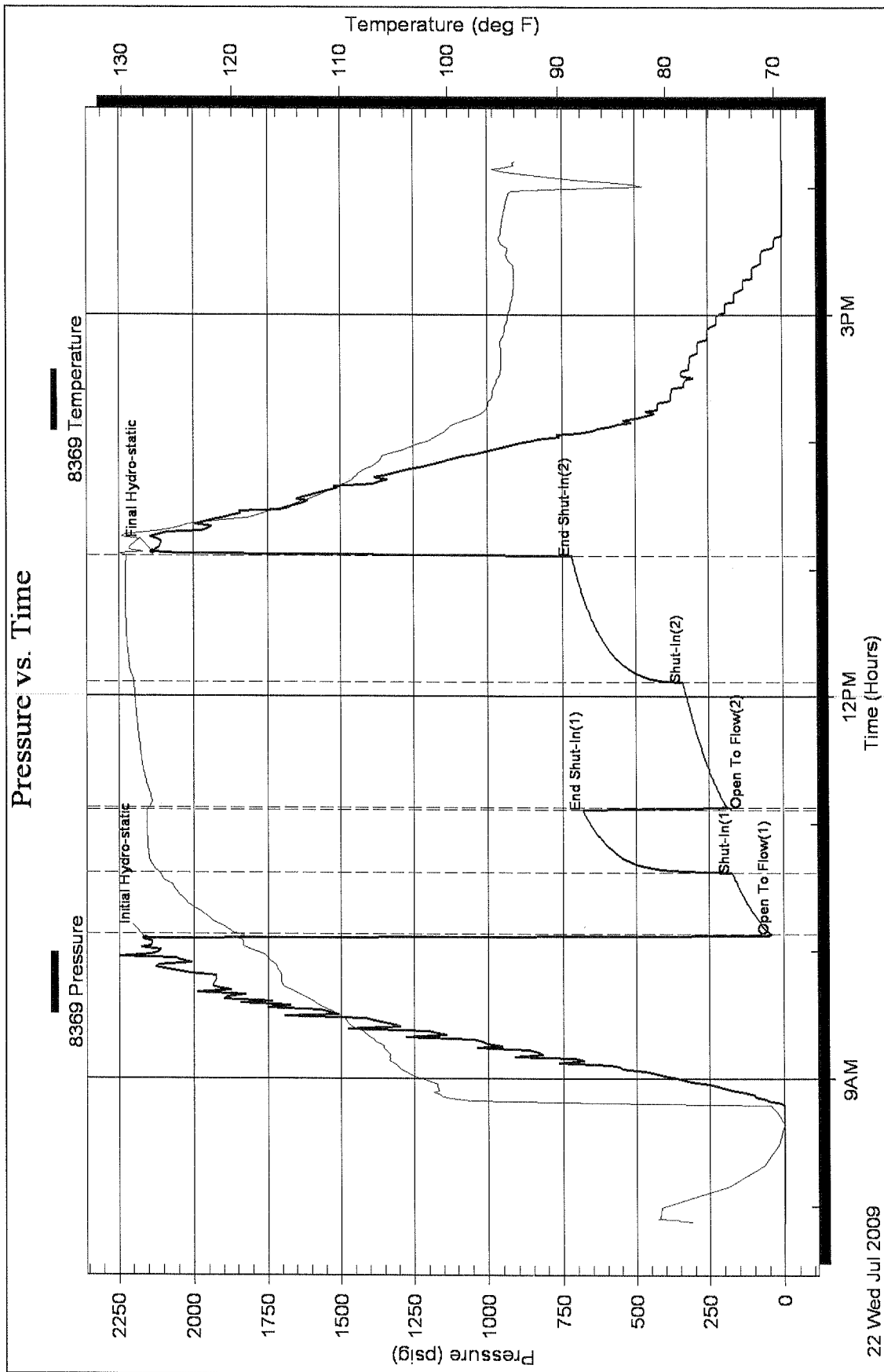
### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
740.00	VGO 30% G 70%O	10.380
120.00	VGOCM 30%G 10%O 60%M	1.683

Total Length: 860.00 ft      Total Volume: 12.063 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

# Pressure vs. Time



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