15-095-21867

13-30s-7w



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Company**

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

13-30s-7w Kingman

Sprague #2

Start Date: 2004.01.23 @ 16:00:09

End Date: 2004.01.24 @ 00:40:39

Job Ticket #: 18012 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

DRILL STEM TEST REPORT

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18012 **DST#: 1**

Test Start: 2004.01.23 @ 16:00:09

GENERAL INFORMATION:

Formation: **Kansas City "I"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:25:09
Time Test Ended: 00:40:39

Test Type: Conventional Bottom Hole
Tester: Nathan
Unit No: 16

Interval: 3660.00 ft (KB) To 3685.00 ft (KB) (TVD)
Total Depth: 3685.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

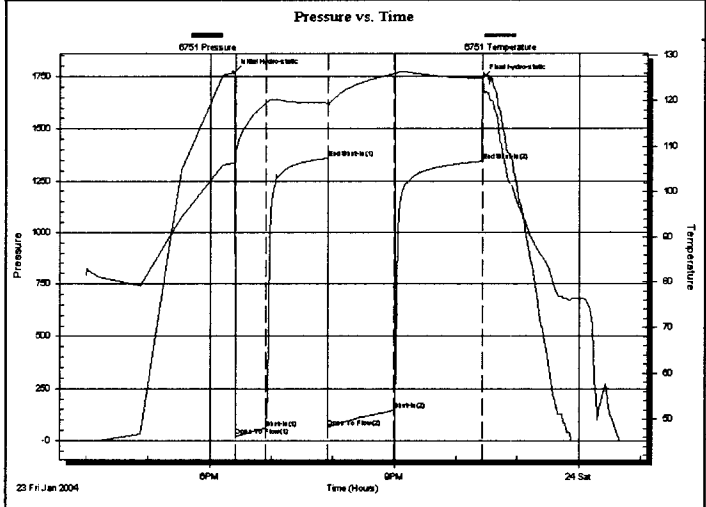
Reference Elevations: 1422.00 ft (KB)
1416.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 6751 **Inside**

Press@RunDepth: 146.96 psig @ 3661.00 ft (KB)
Start Date: 2004.01.23 End Date: 2004.01.24
Start Time: 16:00:19 End Time: 00:40:38

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2004.01.23 @ 18:22:54
Time Off Btm: 2004.01.23 @ 22:25:54

TEST COMMENT: IF- Good blow building O.B.B. in 1minute 10seconds
ISI- Weak surface blow building to 1.25 inches
FF- Good blow building O.B.B. in 1minute 25seconds; GTS in 59 minutes too small to measure
FSI- Wea



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1768.33	106.31	Initial Hydro-static
3	20.53	108.83	Open To Flow (1)
32	62.10	119.52	Shut-In(1)
92	1358.01	119.50	End Shut-In(1)
93	64.57	119.04	Open To Flow (2)
157	146.96	125.87	Shut-In(2)
243	1344.25	124.85	End Shut-In(2)
243	1742.27	124.94	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	GOCMW 44%oil 25%gas 16%water 15%	1.74
124.00	GOCMW 74%water 16%gas 6%mud 4%	1.74
62.00	gassy saltwater 96%water 4%gas	0.87
0.00	3340 feet of gas in pipe	0.00

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18012 **DST#: 1**

Test Start: 2004.01.23 @ 16:00:09

Tool Information

Drill Pipe:	Length:	3650.00 ft	Diameter:	3.80 inches	Volume:	51.20 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	
					Total Volume:	51.20 bbl	

Drill Pipe Above KB:	17.00 ft
Depth to Top Packer:	3660.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	25.00 ft
Tool Length:	52.00 ft
Number of Packers:	2
Diameter:	6.75 inches

Tool Weight:	2400.00 lb
Weight set on Packer:	22000.00 lb
Weight to Pull Loose:	80000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	68000.00 lb
Final	70000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3634.00		
Shut In Tool	5.00			3639.00		
Hydraulic tool	5.00			3644.00		
Jars	5.00			3649.00		
Safety Joint	2.00			3651.00		
Packer	4.00			3655.00	27.00	Bottom Of Top Packer
Packer	5.00			3660.00		
Stubb	1.00			3661.00		
Recorder	0.00	6751	Inside	3661.00		
Perforations	21.00			3682.00		
Recorder	0.00	13630	Outside	3682.00		
Bullnose	3.00			3685.00	25.00	Bottom Packers & Anchor
Total Tool Length:	**52.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18012 **DST#: 1**

Test Start: 2004.01.23 @ 16:00:09

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	10.00 lb/gal	Cushion Length:	ft	Water Salinity:	123000 ppm
Viscosity:	46.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	11.91 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	0.02 inches				

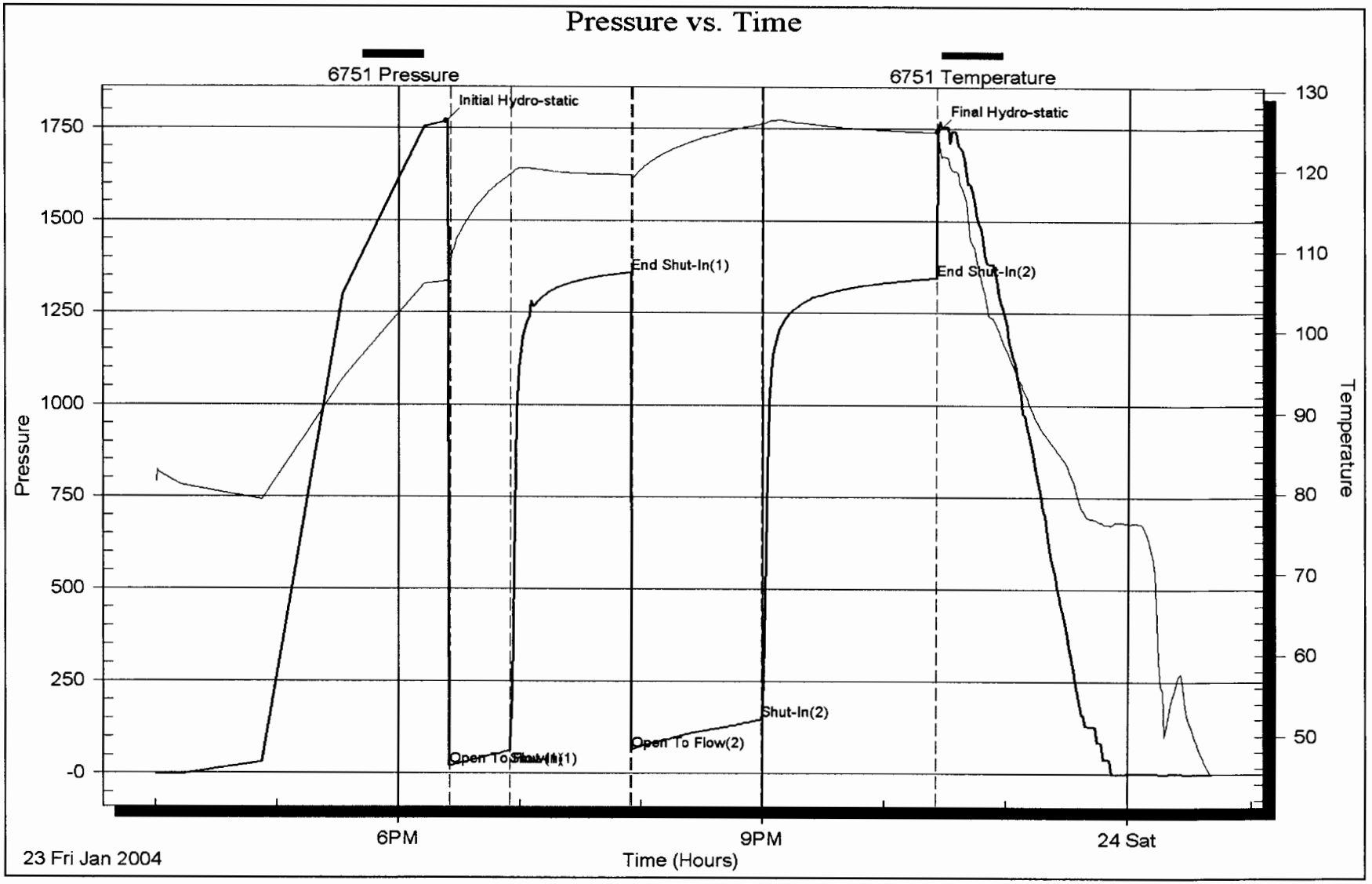
Recovery Information

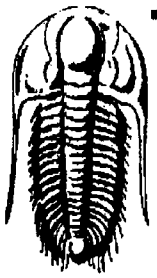
Recovery Table

Length ft	Description	Volume bbl
124.00	GOCMW 44%oil 25%gas 16%water 15%mud	1.739
124.00	GOCMW 74%water 16%gas 6%mud 4%oil	1.739
62.00	gassy saltwater 96%water 4%gas	0.870
0.00	3340 feet of gas in pipe	0.000

Total Length: 310.00 ft Total Volume: 4.348 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:


Pressure vs. Time
6751 Pressure
6751 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Open To Flow(2)
1750
1500
1250
1000
750
500
250
-0
130
120
110
100
90
80
70
60
50
Pressure
Temperature
6PM
9PM
24 Sat
23 Fri Jan 2004
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Company**

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

13-30s-7w Kingman

Sprague #2

Start Date: 2004.01.25 @ 07:26:41

End Date: 2004.01.25 @ 15:44:11

Job Ticket #: 18013 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

DRILL STEM TEST REPORT

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18013 **DST#: 2**

Test Start: 2004.01.25 @ 07:26:41

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:12:41
Time Test Ended: 15:44:11

Test Type: Conventional Bottom Hole
Tester: Nathan
Unit No: 16

Interval: 4099.00 ft (KB) To 4109.00 ft (KB) (TVD)
Total Depth: 4109.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

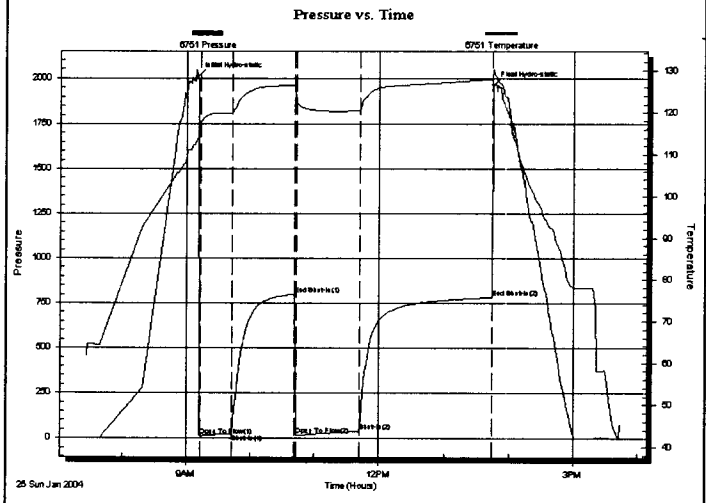
Reference Elevations: 1422.00 ft (KB)
1416.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 6751 **Inside**

Press@RunDepth: 39.83 psig @ 4100.00 ft (KB)
Start Date: 2004.01.25 End Date: 2004.01.25
Start Time: 07:26:51 End Time: 15:44:11

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2004.01.25 @ 09:09:56
Time Off Btm: 2004.01.25 @ 13:44:56

TEST COMMENT: IF- Strong blow building O.B.B. in :30 seconds
ISI- Weak blow building to 1 inch
FF- Strong blow O.B.B. as soon as tool opened; GTS in 2.5 minutes
FSI- Weak blow building to 2 inches



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2009.42	113.96	Initial Hydro-static
3	12.28	117.12	Open To Flow (1)
33	23.81	119.80	Shut-In(1)
92	800.03	126.41	End Shut-In(1)
93	17.89	121.67	Open To Flow (2)
153	39.83	120.60	Shut-In(2)
274	782.47	127.97	End Shut-In(2)
275	1962.90	130.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	GOWCM 44%oil 38%mud 16%water 2%	0.87
62.00	GOWCM 58%mud 30%oil 10%water 2%	0.87

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	3.00	6.51
Last Gas Rate	0.13	12.00	9.88
Max. Gas Rate	0.13	12.00	9.88

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18013 **DST#: 2**

Test Start: 2004.01.25 @ 07:26:41

Tool Information

Drill Pipe:	Length:	4089.00 ft	Diameter:	3.80 inches	Volume:	57.36 bbl	Tool Weight:	2400.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	90000.00 lb
					Total Volume:	57.36 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		17.00 ft					String Weight: Initial	74000.00 lb
Depth to Top Packer:		4099.00 ft					Final	75000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		10.00 ft						
Tool Length:		37.00 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			4073.00		
Shut In Tool	5.00			4078.00		
Hydraulic tool	5.00			4083.00		
Jars	5.00			4088.00		
Safety Joint	2.00			4090.00		
Packer	4.00			4094.00	27.00	Bottom Of Top Packer
Packer	5.00			4099.00		
Stubb	1.00			4100.00		
Recorder	0.00	6751	Inside	4100.00		
Perforations	6.00			4106.00		
Recorder	0.00	13630	Outside	4106.00		
Bullnose	3.00			4109.00	10.00	Bottom Packers & Anchor
Total Tool Length:	**37.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18013 **DST#: 2**

Test Start: 2004.01.25 @ 07:26:41

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:	29000 ppm
Viscosity:	44.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.15 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4500.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	GOWCM 44%oil 38%mud 16%w ater 2%gas	0.870
62.00	GOWCM 58%mud 30%oil 10%w ater 2%gas	0.870

Total Length: 124.00 ft Total Volume: 1.740 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18013 **DST#: 2**

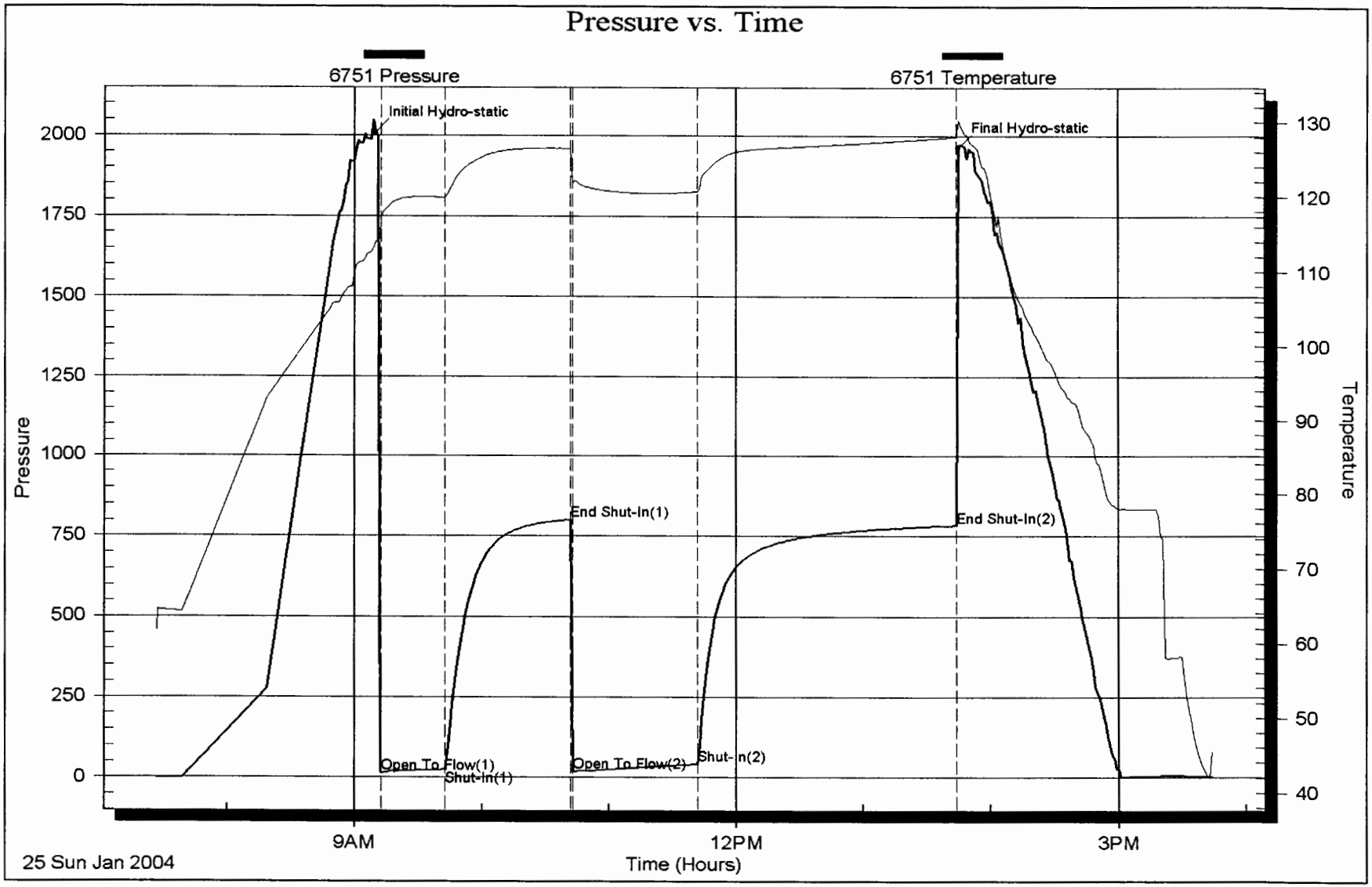
Test Start: 2004.01.25 @ 07:26:41

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m^3/d)
2	10	0.13	3.00	6.51
2	20	0.13	5.50	7.45
2	30	0.13	7.50	8.20
2	40	0.13	9.00	8.76
2	50	0.13	11.00	9.51
2	60	0.13	12.00	9.88


Pressure vs. Time
6751 Pressure
6751 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure
Temperature
2000
1750
1500
1250
1000
750
500
250
0
130
120
110
100
90
80
70
60
50
40
9AM
12PM
3PM
25 Sun Jan 2004
Time (Hours)



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Woolsey Operating Company**

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

13-30s-7w Kingman

Sprague #2

Start Date: 2004.01.25 @ 22:15:54

End Date: 2004.01.26 @ 06:55:39

Job Ticket #: 18014 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18014 **DST#: 3**

Test Start: 2004.01.25 @ 22:15:54

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:18:24
Time Test Ended: 06:55:39

Test Type: Conventional Bottom Hole
Tester: Nathan
Unit No: 16

Interval: 4110.00 ft (KB) To 4119.00 ft (KB) (TVD)
Total Depth: 4119.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

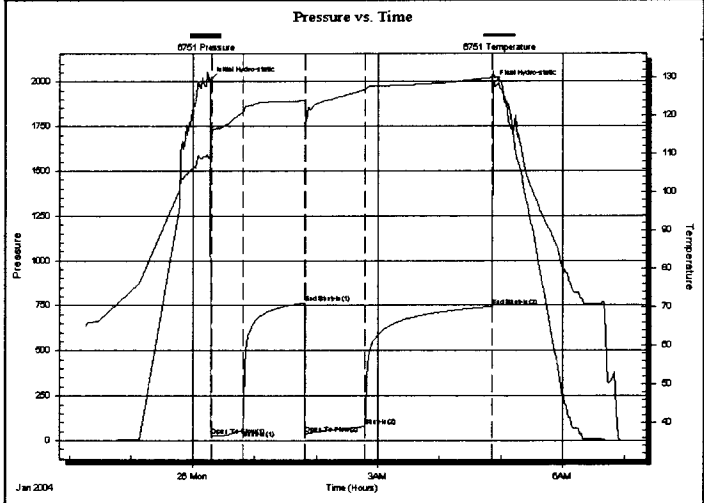
Reference Elevations: 1422.00 ft (KB)
1416.00 ft (CF)
KB to GR/CF: 6.00 ft

Serial #: 6751 **Inside**

Press@RunDepth: 78.85 psig @ 4111.00 ft (KB)
Start Date: 2004.01.25 End Date: 2004.01.26
Start Time: 22:16:04 End Time: 06:55:38

Capacity: 7000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2004.01.26 @ 00:16:54
Time Off Btm: 2004.01.26 @ 04:51:54

TEST COMMENT: IF- Strong blow building O.B.B. in 20 seconds; GTS in 8.5 minutes
ISI- Weak surface blow throughout
FF- Strong blow O.B.B. as soon as tool opened
FSI- Weak blow building to 1.5 inches



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2008.98	108.82	Initial Hydro-static
2	27.48	114.74	Open To Flow (1)
33	59.56	121.10	Shut-In(1)
92	764.74	123.93	End Shut-In(1)
93	37.91	118.53	Open To Flow (2)
151	78.85	126.72	Shut-In(2)
275	743.40	129.86	End Shut-In(2)
275	1984.69	131.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MWGCO 48%oil 28%gas 16%w ater 8%r	1.74
62.00	SMOGCW 84%w ater 10%mud 5%oil 1%	0.87

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	4.00	6.89
Last Gas Rate	0.25	4.00	29.19
Max. Gas Rate	0.13	18.50	12.31

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18014 **DST#: 3**

Test Start: 2004.01.25 @ 22:15:54

Tool Information

Drill Pipe:	Length:	4089.00 ft	Diameter:	3.80 inches	Volume:	57.36 bbl	Tool Weight:		2400.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		22000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		80000.00 lb
					Total Volume:	57.36 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		6.00 ft					String Weight:	Initial	72000.00 lb
Depth to Top Packer:		4110.00 ft						Final	75000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		9.00 ft							
Tool Length:		36.00 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			4084.00		
Shut In Tool	5.00			4089.00		
Hydraulic tool	5.00			4094.00		
Jars	5.00			4099.00		
Safety Joint	2.00			4101.00		
Packer	4.00			4105.00	27.00	Bottom Of Top Packer
Packer	5.00			4110.00		
Stubb	1.00			4111.00		
Recorder	0.00	6751	Inside	4111.00		
Perforations	5.00			4116.00		
Recorder	0.00	13630	Outside	4116.00		
Bullnose	3.00			4119.00	9.00	Bottom Packers & Anchor
Total Tool Length:	**36.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18014 **DST#: 3**

Test Start: 2004.01.25 @ 22:15:54

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:	118000 ppm
Viscosity:	44.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.16 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4500.00 ppm				
Filter Cake:	0.02 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	MWGCO 48%oil 28%gas 16%water 8%mud	1.739
62.00	SMOGCW 84%water 10%mud 5%oil 1%gas	0.870

Total Length: 186.00 ft Total Volume: 2.609 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Woolsey Operating Company

125 N. Market Suite 1000
Wichita, KS 67202

ATTN: Mike Maune

Sprague #2

13-30s-7w Kingman

Job Ticket: 18014 **DST#: 3**

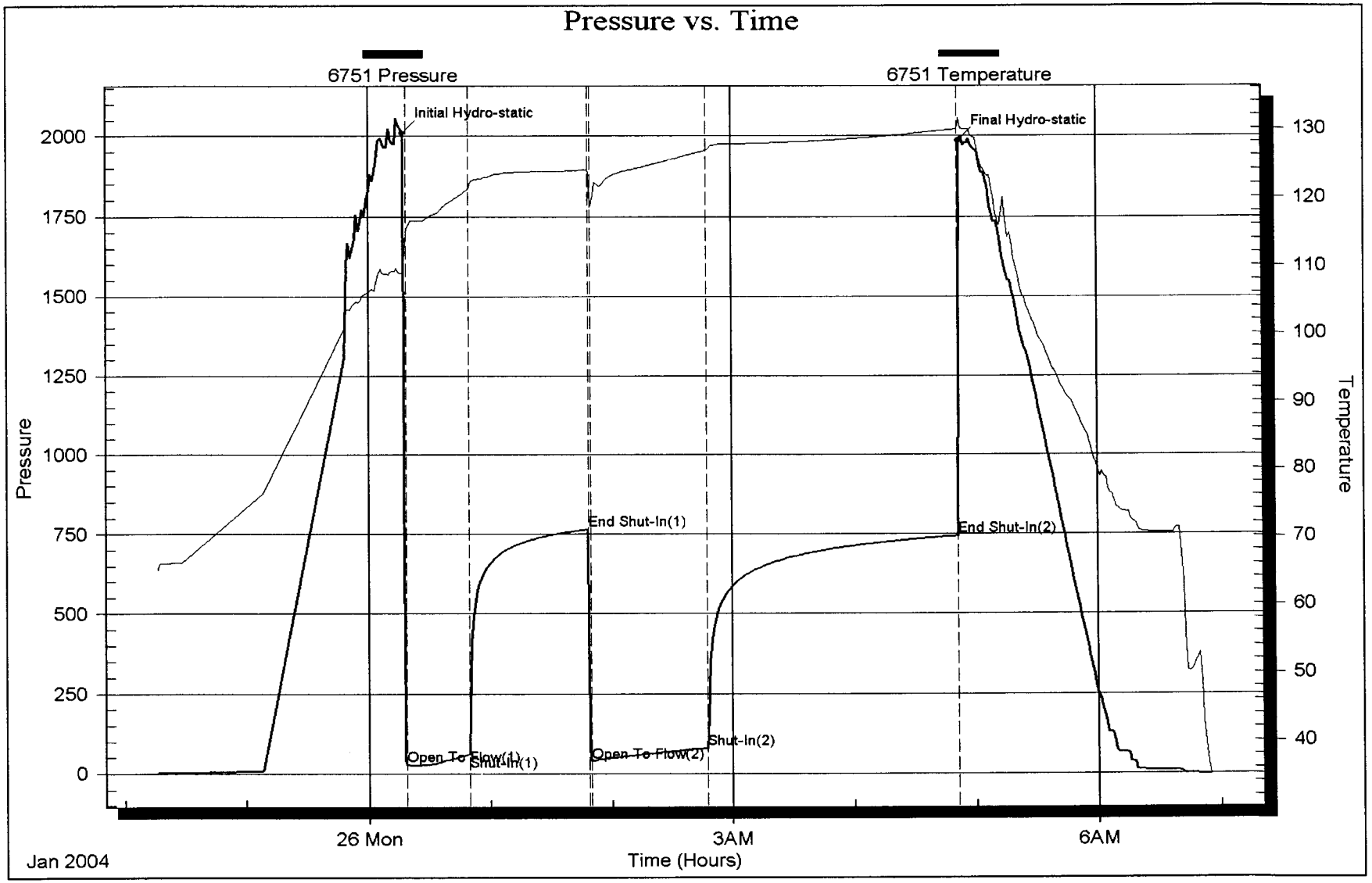
Test Start: 2004.01.25 @ 22:15:54

Gas Rates Information

Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m^3/d)
1	10	0.13	4.00	6.89
1	15	0.13	5.00	7.26
1	20	0.13	9.00	8.76
1	25	0.13	13.50	10.44
1	30	0.13	18.50	12.31
2	5	0.25	6.00	32.36
2	10	0.25	6.00	32.36
2	15	0.25	5.50	31.57
2	20	0.25	5.00	30.78
2	25	0.25	5.00	30.78
2	30	0.25	5.00	30.78
2	35	0.25	5.00	30.78
2	40	0.25	5.00	30.78
2	45	0.25	4.50	29.98
2	50	0.25	4.50	29.98
2	55	0.25	4.00	29.19
2	60	0.25	4.00	29.19


Pressure vs. Time
6751 Pressure
6751 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
2000
1750
1500
1250
1000
750
500
250
0
Pressure
130
120
110
100
90
80
70
60
50
40
Temperature
26 Mon
3AM
6AM
Jan 2004
Time (Hours)

TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV 6158

№ 18012

05/03

Test Ticket

Well Name & No. Sprague #2 Test No. 1 Date 1/23/04

Company Woolsey Operating Co. Zone Tested Kansas City I"

Address 125 N. Market Suite 1000 Wichita, Ks 67202 Elevation 1422 KB 1416 GL

Co. Rep / Geo. Mike Maune Cont. Duke Drlg #2 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 13 Twp. 30s Rge. 7w Co. Kingman State Ks

No. of Copies _____ Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 3600 - 3685 Initial Str Wt./Lbs 68,000 Unseated Str Wt/Lbs. 70,000

Anchor Length 25' Wt. Set Lbs. 22,000 Wt. Pulled Loose/Lbs. 80,000

Top Packer Depth 3655 Tool Weight 2400

Bottom Packer Depth 3660 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓

Total Depth 3685 Wt. Pipe Run -0- Drill Collar Run -0-

Mud Wt. 9.5 LCM -0- Vis. 46 WL 12.0 Drill Pipe Size 4½ Ft. Run 3650

Blow Description IF- Good Blow building O.B.B. in 1min 10sec.
ISI- Weak surface blow building to 1.25 inches
FF- Good Blow building O.B.B 1min. 25sec.; GTS in 59minutes
FSI- Weak Blow building to 4.25 inches

Recovery - Total Feet 310 GIP 3340 Ft. in DC -0- Ft. in DP 310

Rec. 124	Feet of GOCMW	25 %gas	44 %oil	16 %water	15 %mud
Rec. 124	Feet of GOCMW	16 %gas	4 %oil	74 %water	6 %mud
Rec. 62	Feet of gassy saltwater	4 %gas	%oil	96 %water	%mud
Rec.	Feet of	%gas	%oil	%water	%mud
Rec.	Feet of	%gas	%oil	%water	%mud

BHT 125 °F Gravity ~~ °API D @ _____ °F Corrected Gravity _____ °API

RW .144 @ 35.3 °F Chlorides 123,000 ppm Recovery _____ Chlorides 3,000 ppm System

	AK-1	Alpine					
(A) Initital Hydrostatic Mud		1768 PSI	Recorder No.	6751	Test bottom hole	700
(B) First Initial Flow Pressure		21 PSI	(depth)	3662	Elec. Rec. ✓	150
(C) First Final Flow Pressure		62 PSI	Recorder No.	13630	Jars ✓	200
(D) Initial Shut-In Pressure		1358 PSI	(depth)	3682	Safety Jt. ✓	50
(E) Second Initial Flow Pressure		65 PSI	Recorder No.		Circ Sub	
(F) Second Final Flow Pressure		147 PSI	(depth)		Sampler	
(G) Final Shut-In Pressure		1344 PSI	**Initial Opening**	30	Straddle	
(Q) Final Hydrostatic Mud		1742 PSI	Initial Shut-In	60	Ext. Packer	
			Final Flow	60	Shale Packer	
			Final Shut-In	90	Mileage 1½ 5ko	95.20
			T-On Location	13:15	Sub Total:	1195.20
			T-Started	16:00	Std. By 3½hr	105.00
			T-Open	18:24	Other	
			T-Pulled	22:24	Total:	1300.20
			T-Out	00:40		

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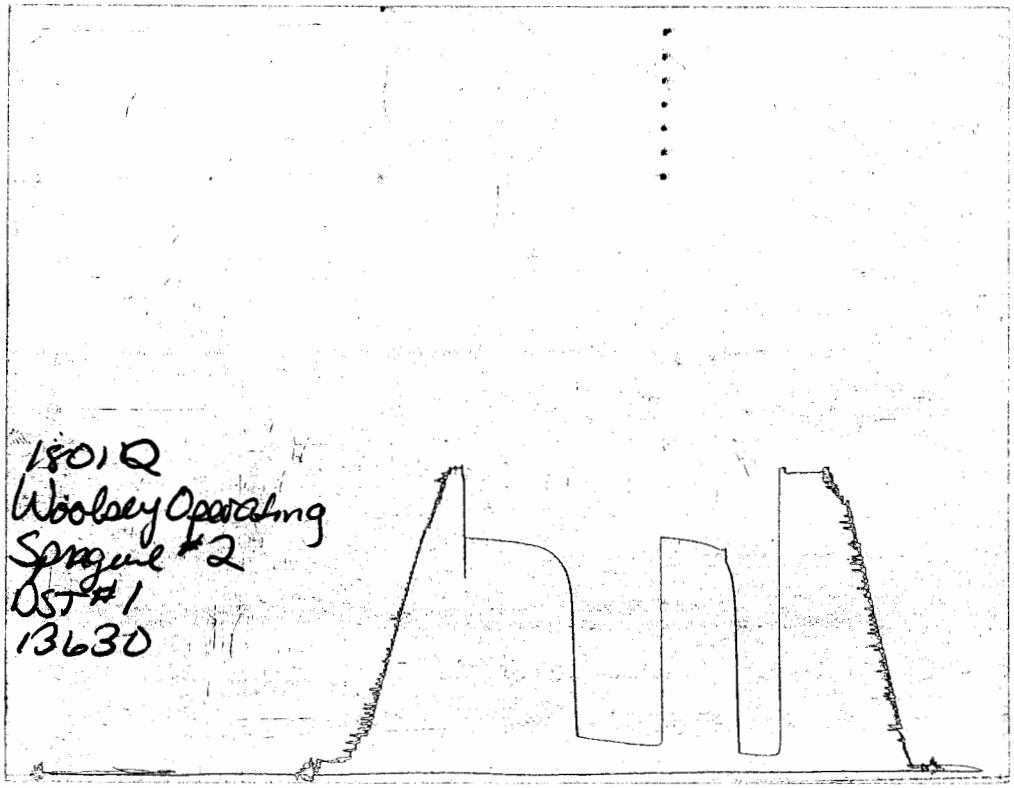
Approved By Mike K. Maune

Our Representative Thomas Buckley

CHART PAGE

This is a photocopy of the actual AK-1 recorder chart



TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

05/03

№ 18013

Test Ticket

Well Name & No. Sprague #2 Test No. 2 Date 1/25/04

Company Woolsey Operating Co. Zone Tested Miss

Address 125 N. Market Suite 1000 Wichita, Ks 67202 Elevation 1422 KB 1416 GL

Co. Rep / Geo. Mike Maune Cont. Duke Drlg #2 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 13 Twp. 30s Rge. 7w Co. Kingman State Ks

No. of Copies _____ Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4099 – 4109 Initial Str Wt./Lbs. 74,000 Unseated Str Wt/Lbs. 75,000

Anchor Length 10' Wt. Set Lbs. 22,000 Wt. Pulled Loose/Lbs. 90,000

Top Packer Depth 4094 Tool Weight 2400

Bottom Packer Depth 4099 Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓

Total Depth 4109 Wt. Pipe Run -0- Drill Collar Run -0-

Mud Wt. 9.3 LCM -0- Vis. 44 WL 9.2 Drill Pipe Size 4½ Ft. Run 4089

Blow Description IF- Strong blow O.B.B. in :30 seconds

ISI- Weak blow building to 1 inch

FF- Strong blow O.B.B as soon as tool opened: GTS in 2½ min

FSI- Weak blow building to 2 inches

Recovery - Total Feet 124 GIP 3969 Ft. in DC -0- Ft. in DP 124

Rec. ~~to2~~	Feet of ~~GOWCM~~	%gas	%oil	%water	%mud
Rec. ~~to2~~	Feet of ~~GOWCM~~	%gas	%oil	%water	%mud
Rec. to2	Feet of GOWCM	2 %gas	44 %oil	30 %water	24 %mud
Rec. to2	Feet of GOWCM	2 %gas	28 %oil	32 %water	38 %mud
Rec.	Feet of	%gas	%oil	%water	%mud

BHT 128 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API

RW .468 @ 37.1 °F Chlorides 29,000 ppm Recovery _____ Chlorides 4,500 ppm System

	AK-1	Alpine					
(A)Initial Hydrostatic Mud		2009 PSI	Recorder No.	6751	Test	bottom hole	800
(B) First Initial Flow Pressure		12 PSI	(depth)	4101	Elec. Rec.	✓	150
(C) First Final Flow Pressure		24 PSI	Recorder No.	13630	Jars	✓	200
(D) Initial Shut-In Pressure		800 PSI	(depth)	4106	Safety Jt.	✓	50
(E) Second Initial Flow Pressure		18 PSI	Recorder No.		Circ Sub		
(F) Second Final Flow Pressure		40 PSI	(depth)		Sampler		
(G) Final Shut-In Pressure		782 PSI	**Initial Opening**	30	Straddle		
(Q) Final Hydrostatic Mud		1963 PSI	Initial Shut-In	60	Ext. Packer		
			Final Flow	60	Shale Packer		
			Final Shut-In	120	Mileage	56	95.20
			T-On Location	7:15	Sub Total:		1295.20
			T-Started	7:26	Std. By		
			T-Open	9:11	Other		
			T-Pulled	13:41	Total:		
			T-Out	15:44			

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Approved By Mike K. Maune

Our Representative Thomas Bailey

TRILOBITE TESTING INC.
P.O. Box 362 • Hays, Kansas 67601 • (785) 625-4778

GAS VOLUME REPORT

Wooksey Operating Co. (OPERATOR) — Sprague #2 (WELL NAME AND NO.) — 2 (DST NO.)

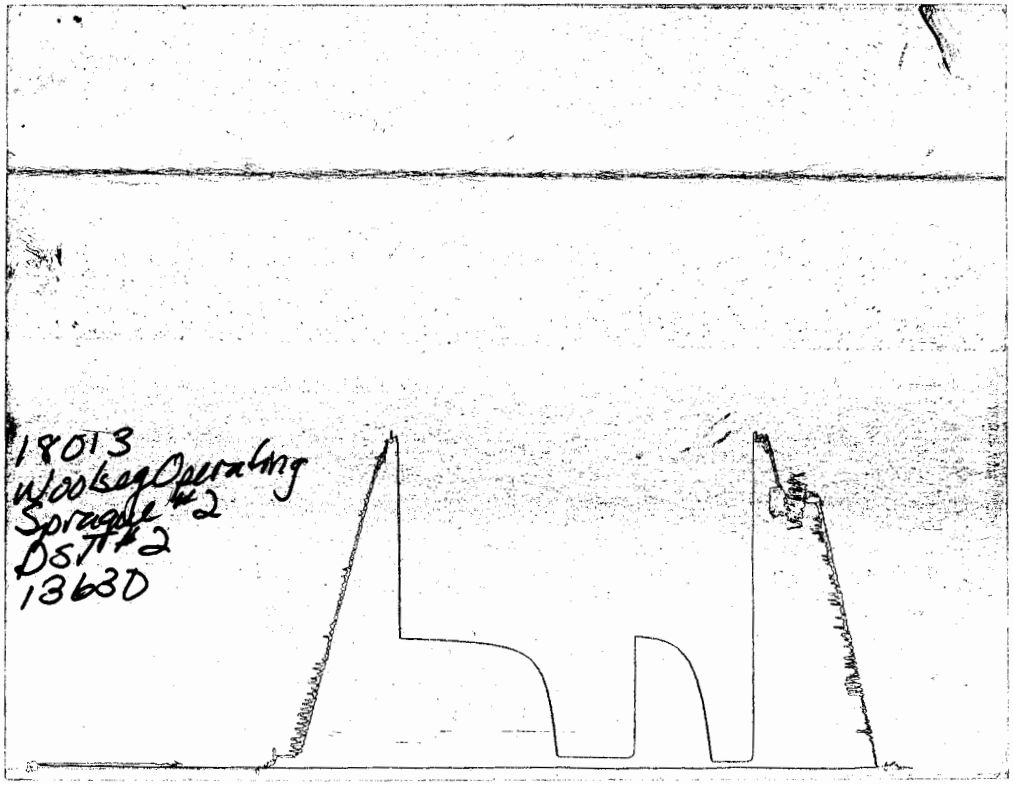
3 FF

Min.	Ins. of Water PSIG	Orifice Size	CF/D	Min.	Ins. of Water PSIG	Orifice Size	m CF/D
				10	3	1/8	6.513
				20	5.5	1/8	7.448
				30	7.5	1/8	8.197
				40	9	1/8	8.758
				50	11	1/8	9.507
				60	12	1/8	9.881

Remarks: FF- GTS in 2½ minutes

CHART PAGE

This is a photocopy of the actual AK-1 recorder chart



TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

Nº 18014

05/03

Test Ticket

Well Name & No. Sprague #2 Test No. 3 Date 1/25/04

Company Woolsey Operating Company Zone Tested Miss

Address 125 N. Market Suite 1000 Wichita, Ks 67202 Elevation 1422 KB 1416 GL

Co. Rep / Geo. Mike Maune Cont. Duke Drlg #2 Est. Ft. of Pay _____ Por. _____ %

Location: Sec. 13 Twp. 30s Rge. 7w Co. Kingman State Ks

No. of Copies _____ Disbtribution Sheet (Y, N) _____ Turnkey (Y, N) _____ Evaluation (Y, N) _____

Interval Tested 4110 – 4119

Anchor Length 9

Top Packer Depth 4105

Bottom Packer Depth 4110

Total Depth 4119

Mud Wt. 9.3 LCM -0- Vis. 44 WL 9.2

Initial Str Wt./Lbs. 72,000 Unseated Str Wt/Lbs. 75,000

Wt. Set Lbs. 22,000 Wt. Pulled Loose/Lbs. 80,000

Tool Weight 2400

Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓

Wt. Pipe Run -0- Drill Collar Run -0-

Drill Pipe Size 4½ Ft. Run 4089

Blow Description IF- Strong blow O.B.B in 20sec.; GTS in 8½ minutes

ISI- Weak surface blow throughout

FF- Strong blow O.B.B. as soon as tool opened

FSI- Weak blow building to 1½ inches

Recovery - Total Feet 186 GIP 3903 Ft. in DC -0- Ft. in DP 1860

Rec. 124	Feet of MWGCO	28 %gas	48 %oil	16 %water	8 %mud
Rec. 62	Feet of SMOGCW	1 %gas	5 %oil	84 %water	10 %mud
Rec.	Feet of	%gas	%oil	%water	%mud
Rec.	Feet of	%gas	%oil	%water	%mud
Rec.	Feet of	%gas	%oil	%water	%mud

BHT 130 °F Gravity _____ °API D @ _____ °F Corrected Gravity _____ °API

RW .214 @ 23.5 °F Chlorides 118,000 ppm Recovery _____ Chlorides 4,500 ppm System

	AK-1	Alpine				
(A) Initial Hydrostatic Mud		2009 PSI	Recorder No.	6751	Test	bottom hole 800
(B) First Initial Flow Pressure		27 PSI	(depth)	4111	Elec. Rec.	✓ 150
(C) First Final Flow Pressure		60 PSI	Recorder No.	13630	Jars	✓ 200
(D) Initial Shut-In Pressure		765 PSI	(depth)	4116	Safety Jt.	✓ 50
(E) Second Initial Flow Pressure		38 PSI	Recorder No.		Circ Sub	
(F) Second Final Flow Pressure		79 PSI	(depth)		Sampler	
(G) Final Shut-In Pressure		743 PSI	**Initial Opening**	30	Straddle	
(Q) Final Hydrostatic Mud		1985 PSI	Initial Shut-In	60	Ext. Packer	
			Final Flow	60	Shale Packer	
			Final Shut-In	120	Mileage	56 95.20
			T-On Location	22:00	Sub Total:	1295.20
			T-Started	22:15	Std. By	
			T-Open	0:17	Other	
			T-Pulled	4:47	Total:	
			T-Out	6:55		

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Approved By Michael K. Maune

Our Representative Thomas Budig

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GAS VOLUME REPORT

Woolsey Operating Co. (OPERATOR) — Sprague #2 (WELL NAME AND NO.) — 3 (DST NO.)

IF				FF			
Min.	Ins. of Water (PSIG)	Orifice Size	MCF/D	Min.	Ins. of Water (PSIG)	Orifice Size	MCF/D
10	4	1/8	6.887	5	6	1/4	32.363
15	5	1/8	7.261	10	6	1/4	32.363
20	9	1/8	8.758	15	5.5	1/4	31.569
25	13.5	1/8	10.442	20	5	1/4	30.776
30	18.5	1/8	12.314	25	5	1/4	30.776
				30	5	1/4	30.776
				35	5	1/4	30.776
				40	5	1/4	30.776
				45	4.5	1/4	29.983
				50	4.5	1/4	29.983
				55	4	1/4	29.190
				60	4	1/4	29.190

Remarks: IF-GTS in 8½ min.

CHART PAGE

This is a photocopy of the actual AK-1 recorder chart

