

## DRILL STEM TEST REPORT

Prepared For: **Larson Operating,co.**

562 W.Highway 4  
Olmitz,Kansas.67564-8561

ATTN: Tom Larson

**21-31S-15W**

**Bear Creek Ranch #1-21**

Start Date: 2004.02.26 @ 19:45:37

End Date: 2004.02.27 @ 03:54:07

Job Ticket #: 18634                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Larson Operating,co.  
562 W.Highw ay 4  
Olmitz,Kansas.67564-8561  
ATTN: TomLarson

**Bear Creek Ranch #1-21**  
**21-31S-15W**  
Job Ticket: 18634      **DST#: 1**  
Test Start: 2004.02.26 @ 19:45:37

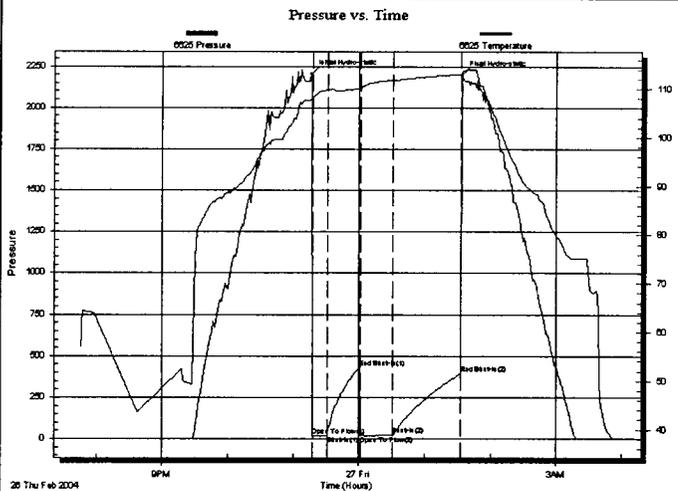
## GENERAL INFORMATION:

Formation: **Marmaton**  
Deviated: **No** Whipstock: **ft (KB)**  
Time Tool Opened: 23:17:52  
Time Test Ended: 03:54:07  
Test Type: **Conventional Bottom Hole**  
Tester: **Darren L.Amerine**  
Unit No: **19**  
Interval: **4541.00 ft (KB) To 4565.00 ft (KB) (TVD)**  
Reference Elevations: **1847.00 ft (KB)**  
Total Depth: **4565.00 ft (KB) (TVD)**  
**1836.00 ft (CF)**  
Hole Diameter: **7.88 inches**Hole Condition: **Fair**  
KB to GR/CF: **11.00 ft**

## Serial #: 6625

Press@RunDepth: 23.26 psig @ ft (KB) Capacity: 7000.00 psig  
Start Date: 2004.02.26 End Date: 2004.02.27 Last Calib.: 2004.02.27  
Start Time: 19:45:42 End Time: 03:54:06 Time On Btm: 2004.02.26 @ 23:16:22  
Time Off Btm: 2004.02.27 @ 01:33:22

TEST COMMENT: IF:Fair blow b.o.b in 90 sec.  
IS:Bled down n for 2 mins.no blow back.  
FF:Strong blow b.o.b in 30 sec.  
FS:Bled down n fo 2 mins.no blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2205.75	107.79	Initial Hydro-static
2	15.80	108.22	Open To Flow (1)
15	17.72	109.82	Shut-In(1)
45	432.08	110.06	End Shut-In(1)
46	20.10	110.04	Open To Flow (2)
75	23.26	111.80	Shut-In(2)
137	392.88	113.07	End Shut-In(2)
137	2199.70	113.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	1660' of gip	0.00
40.00	SG&OCM 10%gas 20%oil 70%mud	0.56

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Larson Operating,co.

**Bear Creek Ranch #1-21**

562 W.Highway 4  
Olmitz,Kansas.67564-8561

**21-31S-15W**

Job Ticket: 18634

**DST#: 1**

ATTN: Tom Larson

Test Start: 2004.02.26 @ 19:45:37

### Tool Information

Drill Pipe:	Length: 4552.00 ft	Diameter: 3.80 inches	Volume: 63.85 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 69000.00 lb
			<u>Total Volume: 63.85 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4541.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	45.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4526.00	
Hydraulic tool	5.00			4531.00	
Packer	5.00			4536.00	20.00 Bottom Of Top Packer
Packer	5.00			4541.00	
Stubb	1.00			4542.00	
Anchor	5.00			4547.00	
Recorder	0.00	6625	Inside	4547.00	
Anchor	16.00			4563.00	
Recorder	0.00	10991	Outside	4563.00	
Bullnose	3.00			4566.00	25.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>45.00</b>				



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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Larson Operating,co.  
562 W.Highw ay 4  
Olmitz,Kansas.67564-8561  
ATTN: Tom Larson

**Bear Creek Ranch #1-21**  
**21-31S-15W**  
Job Ticket: 18634      **DST#: 1**  
Test Start: 2004.02.26 @ 19:45:37

**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: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 12.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 1.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 6000.00 ppm			
Filter Cake: 0.32 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
0.00	1660'of gip	0.000
40.00	SG&OCM 10%gas 20%oil 70%mud	0.561

Total Length: 40.00 ft      Total Volume: 0.561 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

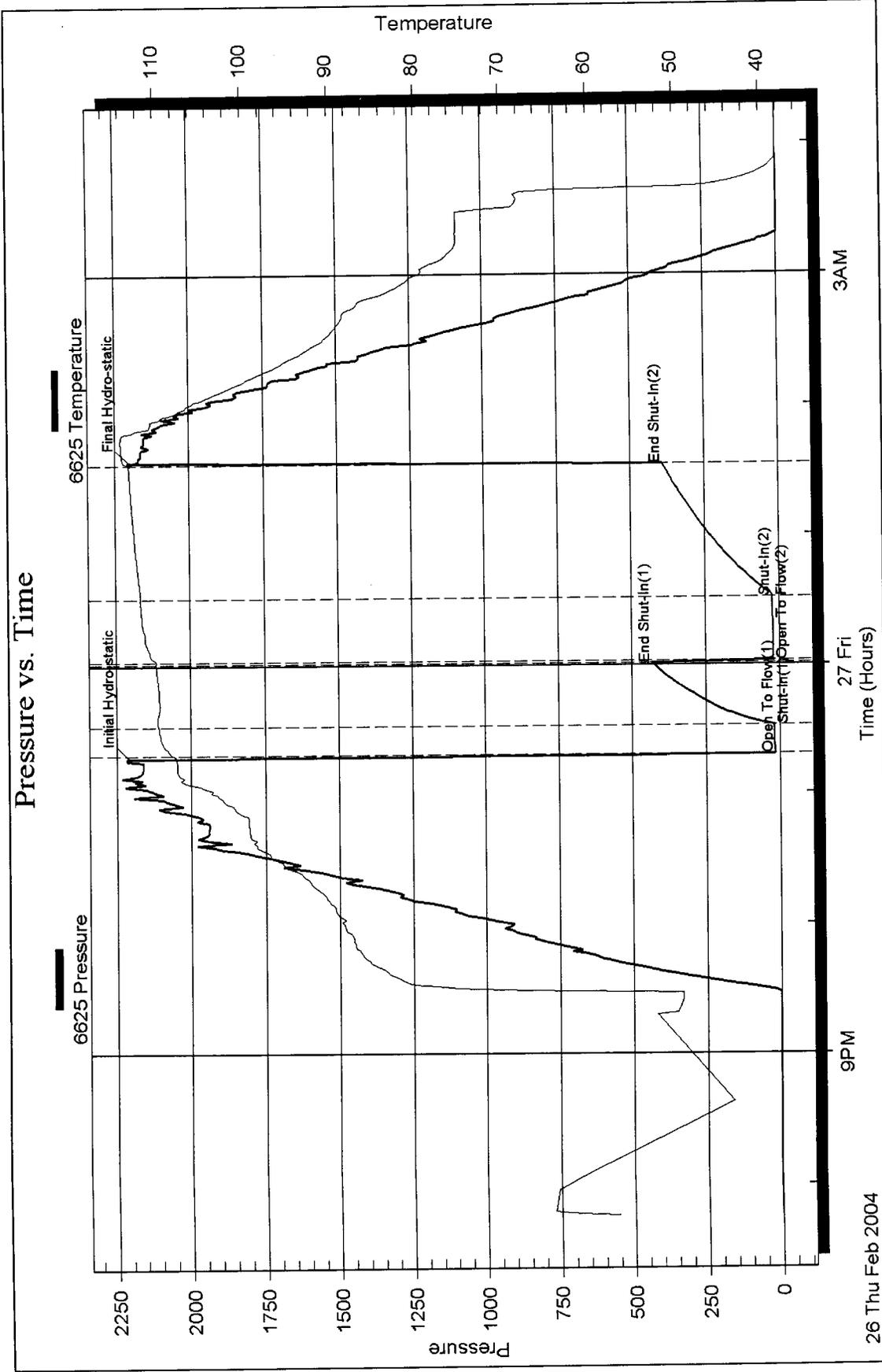
Serial #: 6625

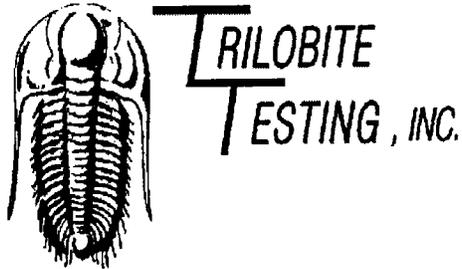
Larson Operating,co.

21-31S-15W

DST Test Number: 1

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Larson Operating,co.**

562 W.Highway 4  
Olmitz,Kansas.67564-8561

ATTN: Tom Larson

**21-31S-15W**

**Bear Creek Ranch #1-21**

Start Date: 2004.02.27 @ 15:39:44

End Date: 2004.02.27 @ 21:42:29

Job Ticket #: 18635                      DST #: 2

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PO Box 362 Hays, KS 67601

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

Larson Operating,co.

Bear Creek Ranch #1-21

21-31S-15W

DST # 2

Cherokee

2004.02.27



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# DRILL STEM TEST REPORT

Larson Operating,co.  
562 W.Highw ay 4  
Olmitz,Kansas.67564-8561  
ATTN: Tom Larson

**Bear Creek Ranch #1-21**  
**21-31S-15W**  
Job Ticket: 18635      **DST#: 2**  
Test Start: 2004.02.27 @ 15:39:44

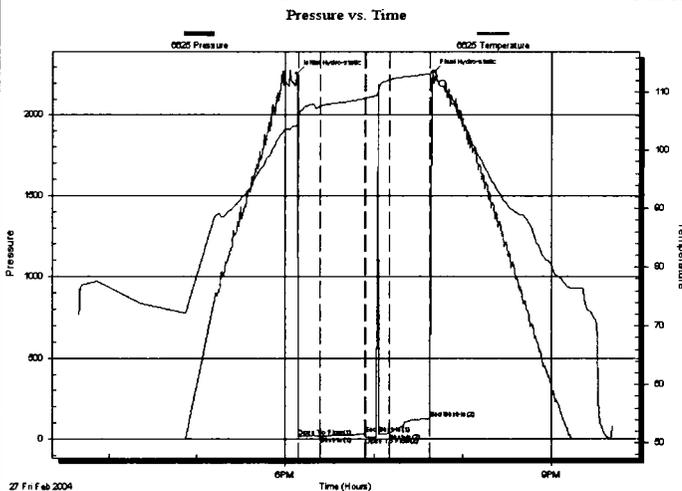
## GENERAL INFORMATION:

Formation: **Cherokee**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 18:08:59  
Time Test Ended: 21:42:29  
Interval: **4600.00 ft (KB) To 4620.00 ft (KB) (TVD)**  
Total Depth: 4620.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Poor  
Test Type: Conventional Bottom Hole  
Tester: Darren L.Amerine  
Unit No: 19  
Reference Elevations: 1847.00 ft (KB)  
1836.00 ft (CF)  
KB to GR/CF: 11.00 ft

## Serial #: 6625

Press@RunDepth: 39.14 psig @ ft (KB) Capacity: 7000.00 psig  
Start Date: 2004.02.27 End Date: 2004.02.27 Last Calib.: 2004.02.27  
Start Time: 15:39:49 End Time: 21:42:28 Time On Btm: 2004.02.27 @ 18:07:14  
Time Off Btm: 2004.02.27 @ 19:39:44

**TEST COMMENT:** IF:Weak surface blow built to 1/2"slow ly died off to 1/4" in H2O bucket.  
IS:Bled down n for 2 mins.no blow back.  
FF:Dead blow wait 7 mins.flush tool weak blow built to 3/4"slow ly died off to 1/4-1/2"



## PRESSURE SUMMARY

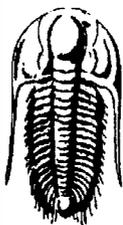
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2257.17	104.26	Initial Hydro-static
2	16.01	105.98	Open To Flow (1)
16	18.40	107.49	Shut-In(1)
46	28.62	108.89	End Shut-In(1)
48	12.98	108.98	Open To Flow (2)
63	39.14	112.12	Shut-In(2)
91	127.77	113.16	End Shut-In(2)
93	2263.59	113.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	trace of gip	0.00
35.00	VSGCM 2%gas 98%mud	0.49

## Gas Rates

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



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TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Larson Operating,co.  
562 W.Highway 4  
Olmitz,Kansas.67564-8561  
ATTN: TomLarson

**Bear Creek Ranch #1-21**  
**21-31S-15W**  
Job Ticket: 18635      **DST#: 2**  
Test Start: 2004.02.27 @ 15:39:44

### Tool Information

Drill Pipe:	Length: 4584.00 ft	Diameter: 3.80 inches	Volume: 64.30 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 64.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	4.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4600.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4585.00	
Hydraulic tool	5.00			4590.00	
Packer	5.00			4595.00	20.00      Bottom Of Top Packer
Packer	5.00			4600.00	
Stubb	2.00			4602.00	
Recorder	0.00	6625	Inside	4602.00	
Anchor	15.00			4617.00	
Recorder	0.00	10991	Outside	4617.00	
Bullnose	3.00			4620.00	20.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>40.00</b>				



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ATTN: Tom Larson

**Bear Creek Ranch #1-21**  
**21-31S-15W**  
Job Ticket: 18635      **DST#: 2**  
Test Start: 2004.02.27 @ 15:39:44

### 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: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 12.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 1.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 6500.00 ppm			
Filter Cake: 0.32 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	trace of gip	0.000
35.00	VSGCM 2%gas 98%mud	0.491

Total Length: 35.00 ft      Total Volume: 0.491 bbl

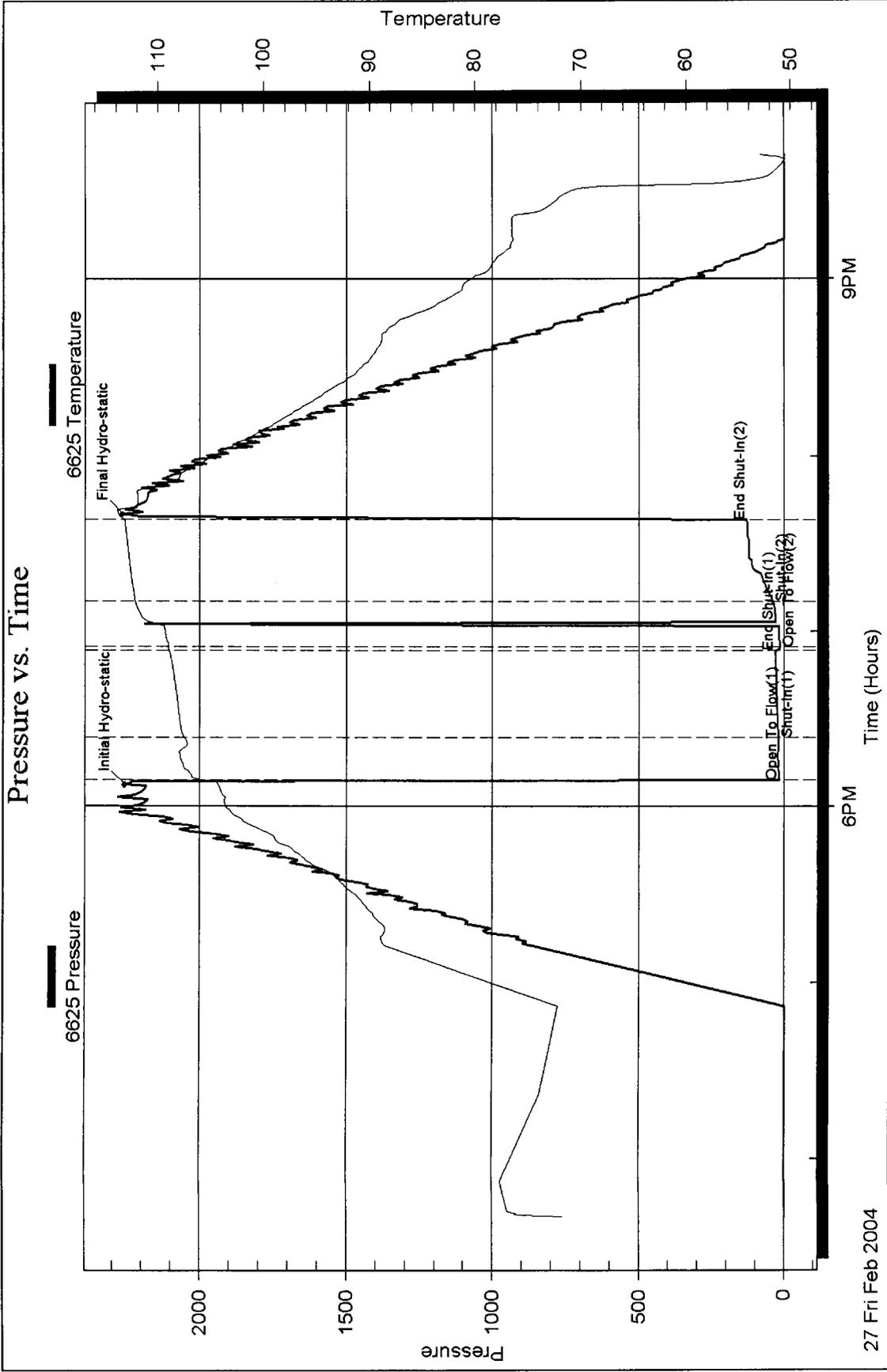
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

Serial #: 6625

Larson Operating,co.

21-31S-15W

DST Test Number: 2

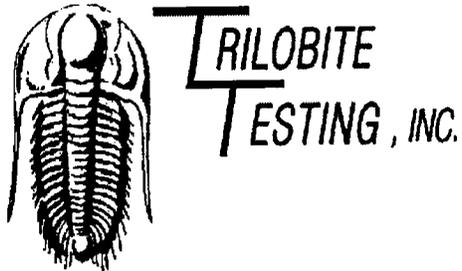


27 Fri Feb 2004

Triobite Testing, Inc

Ref. No: 18635

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## DRILL STEM TEST REPORT

Prepared For: **Larson Operating,co.**

562 W.Highway 4  
Olmitz,Kansas.67564-8561

ATTN: Tom Larson

**21-31S-15W**

**Bear Creek Ranch #1-21**

Start Date: 2004.02.28 @ 08:14:25

End Date: 2004.02.28 @ 14:58:25

Job Ticket #: 18636                      DST #: 3

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

Larson Operating,co.

Bear Creek Ranch #1-21

21-31S-15W

DST # 3

Mississippian

2004.02.28



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# DRILL STEM TEST REPORT

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562 W.Highw ay 4  
Olmitz,Kansas.67564-8561  
ATTN: Tom Larson

**Bear Creek Ranch #1-21**  
**21-31S-15W**  
Job Ticket: 18636      **DST#: 3**  
Test Start: 2004.02.28 @ 08:14:25

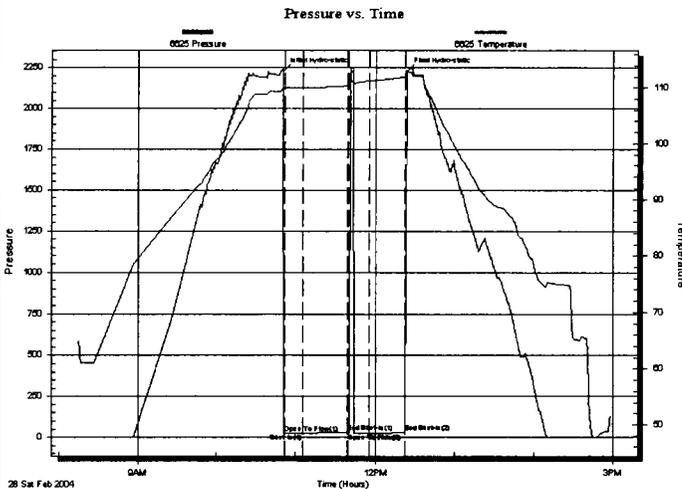
## GENERAL INFORMATION:

Formation: **Mississippian**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 10:51:40  
Time Test Ended: 14:58:25  
Interval: **4622.00 ft (KB) To 4660.00 ft (KB) (TVD)**  
Total Depth: 4660.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inchesHole Condition: Fair  
Test Type: Conventional Bottom Hole  
Tester: Darren L.Amerine  
Unit No: 19  
Reference Elevations: 1847.00 ft (KB)  
1836.00 ft (CF)  
KB to GR/CF: 11.00 ft

## Serial #: 6625

Press@RunDepth: 25.80 psig @ ft (KB) Capacity: 7000.00 psig  
Start Date: 2004.02.28 End Date: 2004.02.28 Last Calib.: 2004.02.28  
Start Time: 08:14:30 End Time: 14:58:24 Time On Btm: 2004.02.28 @ 10:50:40  
Time Off Btm: 2004.02.28 @ 12:23:40

TEST COMMENT: IF:Weak surface blow built to 1/2" in H2O bucket slowly died in 11 mins.  
IS:No blow back.  
FF:Dead blow wait 5 mins.flush tool surged and died.  
FS:No blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2230.05	110.03	Initial Hydro-static
1	26.07	109.97	Open To Flow (1)
15	25.20	110.03	Shut-in(1)
48	31.69	110.35	End Shut-in(1)
49	23.76	110.37	Open To Flow (2)
65	25.80	111.25	Shut-in(2)
92	28.47	111.95	End Shut-in(2)
93	2225.68	112.98	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	VVSGCM 1%gas 99%mud	0.21

## Gas Rates

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



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## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Larson Operating,co.  
562 W.Highw ay 4  
Olmitz,Kansas.67564-8561  
ATTN: TomLarson

**Bear Creek Ranch #1-21**  
**21-31S-15W**  
Job Ticket: 18636      **DST#: 3**  
Test Start: 2004.02.28 @ 08:14:25

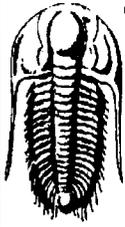
### Tool Information

Drill Pipe:	Length: 4615.00 ft	Diameter: 3.80 inches	Volume: 64.74 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 64.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4622.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval betw een Packers:	38.00 ft			
Tool Length:	63.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4602.00	
Hydraulic tool	5.00			4607.00	
Jars	5.00			4612.00	
Packer	5.00			4617.00	25.00      Bottom Of Top Packer
Packer	5.00			4622.00	
Stubb	2.00			4624.00	
Anchor	4.00			4628.00	
Recorder	0.00	6625	Inside	4628.00	
Anchor	29.00			4657.00	
Recorder	0.00	10991	Outside	4657.00	
Bullnose	3.00			4660.00	38.00      Bottom Packers & Anchor

**Total Tool Length: 63.00**



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ATTN: TomLarson

**Bear Creek Ranch #1-21**  
**21-31S-15W**  
Job Ticket: 18636      **DST#: 3**  
Test Start: 2004.02.28 @ 08:14:25

**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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 12.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.50 ohm.m	Gas Cushion Pressure: psig		
Salinity: 11000.00 ppm			
Filter Cake: 0.32 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
15.00	VVSGCM 1%gas 99%mud	0.210

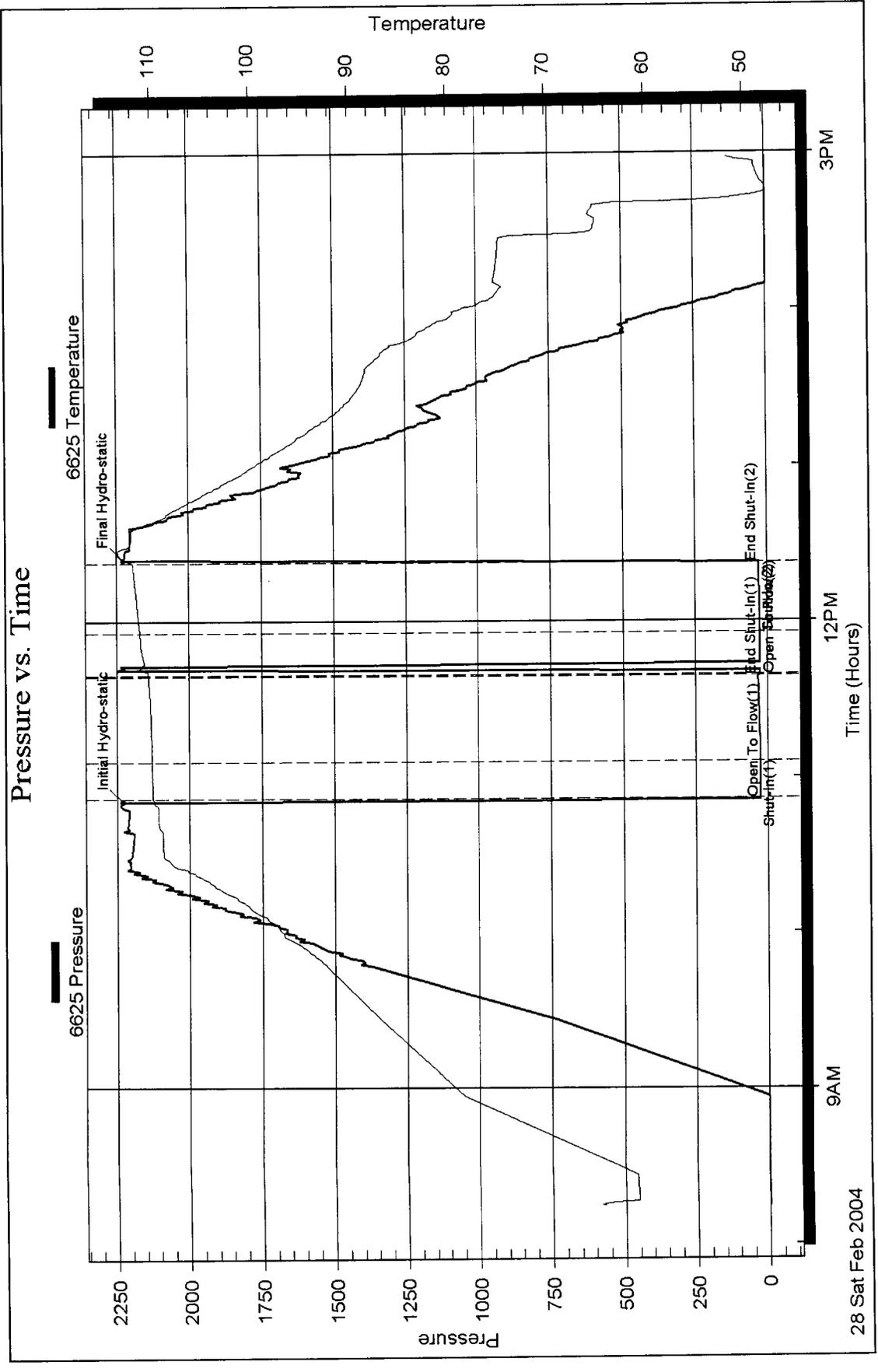
Total Length: 15.00 ft      Total Volume: 0.210 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

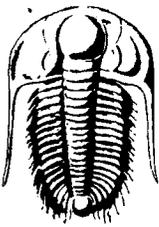
Serial #: 6625

Larson Operating, co.

21-31S-15W

DST Test Number: 3





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

INV  
6247

No 18634

05/03

## Test Ticket

Well Name & No. Bear Creek Ranch #1-21 Test No. #1 Date 2-26-04  
 Company Larson Operating Co. 562 W. Hwy. 4 Zone Tested Marmaton  
 Address Olmitz, KS. 67564 - 8561 Elevation 1847 KB 1836 GL  
 Co. Rep / Geo. Tom Larson Cont. Duke #1 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 21 Twp. 31S Rge. 15W Co. Barber, Co. State KS  
 No. of Copies 5 Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 4541' - 4565' Initial Str Wt./Lbs 62000 Unseated Str Wt/Lbs. 62000  
 Anchor Length 24' Wt. Set Lbs 20000 Wt. Pulled Loose/Lbs 69000  
 Top Packer Depth 4536' Tool Weight 2100  
 Bottom Packer Depth 4541' Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓  
 Total Depth 4565' Wt. Pipe Run N/A Drill Collar Run N/A  
 Mud Wt. 9.2 LCM 0 Vis. 46 WL 12.4 Drill Pipe Size 4 1/2 XH Ft. Run 4352.

Blow Description FF: Fair blow b.o.d in 90 sec.  
ISI: Bled down for 2 mins. No blow back  
FF: Average blow b.o.d in 30 sec.  
FF: Bled down for 2 mins. No blow back

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>40</u>	<u>1660'</u>	<u>N/A</u>	<u>40</u>
Rec. <u>40'</u>	Feet of <u>SGP 0cm</u>	<u>10</u> %gas	<u>20</u> %oil
Rec. <u>1660'</u>	Feet of <u>GIP</u>	%gas	%oil
Rec. _____	Feet of _____	%gas	%oil
Rec. _____	Feet of _____	%gas	%oil
Rec. _____	Feet of _____	%gas	%oil
BHT <u>113°</u>	°F Gravity _____	°API D @ _____	°F Corrected Gravity _____
RW _____	@ _____ °F	Chlorides _____ ppm	Recovery _____ Chlorides <u>6,000</u> ppm System

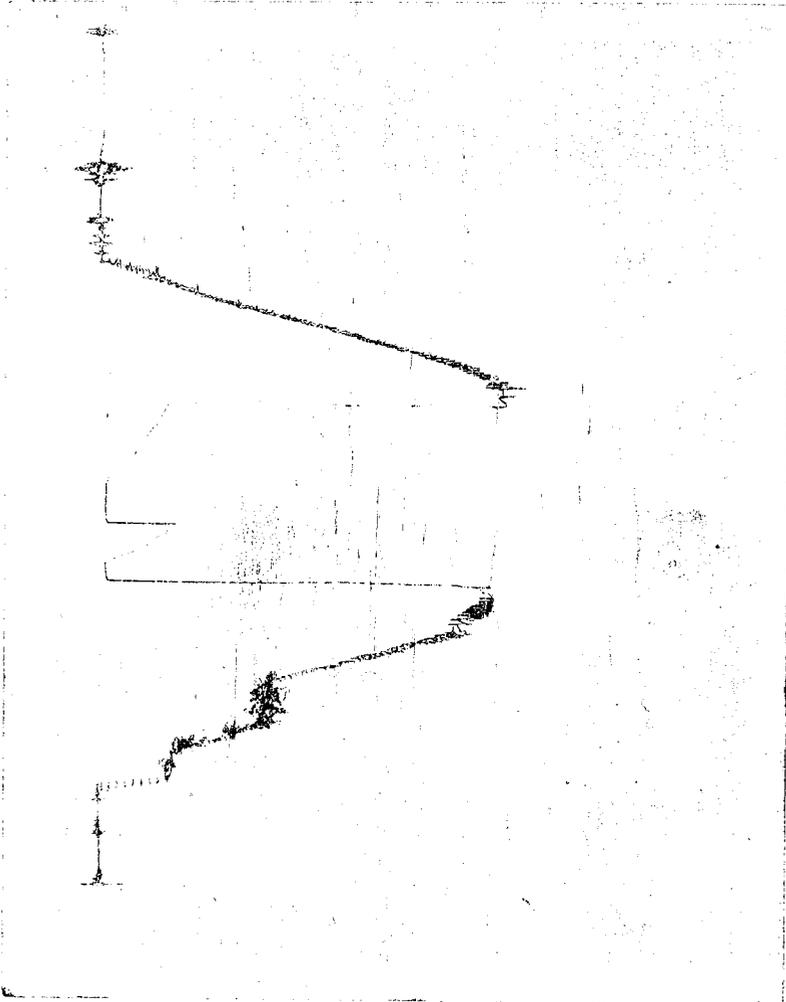
AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>2206</u> PSI	<u>6625</u>	<u>800</u> ✓
(B) First Initial Flow Pressure	<u>16</u> PSI	(depth) <u>4547'</u>	Elec. Rec. <u>150</u> ✓
(C) First Final Flow Pressure	<u>18</u> PSI	Recorder No. <u>10991</u>	Jars _____
(D) Initial Shut-In Pressure	<u>432</u> PSI	(depth) <u>4563'</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>20</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>23</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>393</u> PSI	Initial Opening <u>15</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>2200</u> PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
		Final Flow <u>30</u>	Shale Packer _____
		Final Shut-In <u>60</u>	Mileage <u>37(74) 62.90</u>
		T-On Location <u>1900</u>	Sub Total: <u>1012.90</u>
		T-Started <u>1945</u>	Std. By _____
		T-Open <u>4329</u>	Other _____
		T-Pulled <u>0139</u>	Total: _____
		T-Out <u>0354</u>	

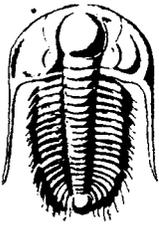
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Approved By T.C. Larson  
 Our Representative Dave J. Amrine

**CHART PAGE**

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

N<sup>o</sup> 18635

05/03

## Test Ticket

Well Name & No. Bear Creek Ranch #1-21 Test No. #2 Date 2-27-04  
 Company Larson Operating, Co. 562 W. Hwy 4 Zone Tested Cherokee  
 Address Olmitz, Kansas. 67564-8561 Elevation 1847 KB 1836 GL  
 Co. Rep / Geo. Tom Larson Cont. Duke #1 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 21 Twp. 31S Rge. 15W Co. Barber, Co. # State KS  
 No. of Copies \_\_\_\_\_ Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) - Evaluation (Y, N) -

Interval Tested 4600 - 4620' Initial Str Wt./Lbs. 62,000 Unseated Str Wt./Lbs. 6200  
 Anchor Length \_\_\_\_\_ Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 9500  
 Top Packer Depth 4595' Tool Weight 2100  
 Bottom Packer Depth 4600' Hole Size 7 7/8" ✓ Rubber Size 6 3/4" ✓  
 Total Depth 4620 Wt. Pipe Run N/A Drill Collar Run N/A

Mud Wt. 9.3 LCM 0 - Vis. 45 WL 12.4 Drill Pipe Size 4 1/2 x H Ft. Run \_\_\_\_\_  
 Blow Description IF: Weak surface blow built to 1/2" slowly died off to 1/4" in 160.  
ISI Bled down for 2 mins. No blow back.  
FF: No blow went 7 mins. flush tool (weak blow built to 3/4" slowly died off)  
F-SI Bled down for 2 mins. No blow back.

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>35'</u>	<u>N/A</u>	<u>N/A</u>	<u>35'</u>
Rec. _____ Feet of _____	<u>VSGCM</u>	<u>2</u> %gas	<u>98</u> %mud
Rec. _____ Feet of _____		%oil	%water
Rec. _____ Feet of _____		%oil	%water
Rec. _____ Feet of _____		%oil	%water
Rec. _____ Feet of _____		%oil	%water

BHT 113 °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 6500 ppm System

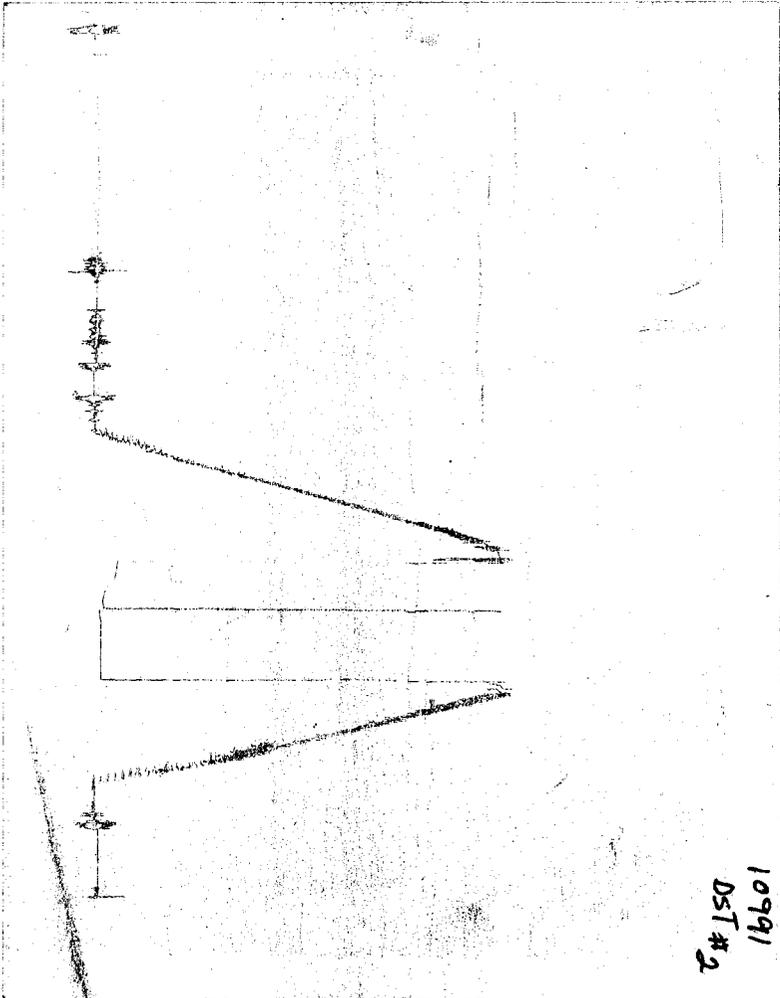
AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>2257</u> PSI	<u>6625</u>	✓
(B) First Initial Flow Pressure	<u>16</u> PSI	(depth) <u>4602'</u>	Elec. Rec. ✓
(C) First Final Flow Pressure	<u>18</u> PSI	Recorder No. <u>10991</u>	Jars _____
(D) Initial Shut-In Pressure	<u>29</u> PSI	(depth) <u>4617'</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>13</u> PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>39</u> PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>128</u> PSI	<b>Initial Opening</b> <u>15</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>2264</u> PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
		Final Flow <u>15 7 flush @</u>	Shale Packer _____
		Final Shut-In <u>30</u>	Mileage _____
		<b>T-On Location</b> <u>1445</u>	Sub Total: <u>1012.90</u>
		T-Started <u>1539</u>	Std. By _____
		T-Open <u>1805</u>	Other _____
		T-Pulled <u>1935</u>	Total: _____
		T-Out <u>2142</u>	

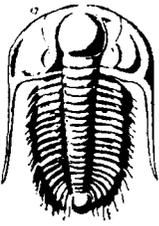
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Approved By \_\_\_\_\_  
 Our Representative Darryl J. Gmerin

**CHART PAGE**

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





# TRILOBITE TESTING INC.

P.O. Box 362 • Hays, Kansas 67601

No 18636

05/03

## Test Ticket

Well Name & No. Bear Creek Ranch #1-21 Test No. #3 Date 2-28-04  
 Company Larson Operating, Co. 562 W. Hwy 4 Zone Tested Mississippi  
 Address Olmitz, Kansas. 67564-8561 Elevation 1847 KB 1836 GL  
 Co. Rep / Geo. Tom Larson Cont. Duke #1 Est. Ft. of Pay \_\_\_\_\_ Por. \_\_\_\_\_ %  
 Location: Sec. 21 Twp. 31S Rge. 15W Co. Barber, Co. State KS  
 No. of Copies 5 Distribution Sheet (Y, N) \_\_\_\_\_ Turnkey (Y, N) \_\_\_\_\_ Evaluation (Y, N) \_\_\_\_\_

Interval Tested 4622' - 4660' Initial Str Wt./Lbs 62000 Unseated Str Wt./Lbs. 62000  
 Anchor Length \_\_\_\_\_ Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 75,000  
 Top Packer Depth 4617' Tool Weight 2100  
 Bottom Packer Depth 4622' Hole Size 7 7/8" Rubber Size 6 3/4" ✓  
 Total Depth 4660 Wt. Pipe Run N/A Drill Collar Run N/A

Mud Wt. 9.1 LCM 0 - Vis. 48 WL 12.4 Drill Pipe Size 4 1/2 x 11 Ft. Run 4615'  
 Blow Description IF: Weak surface blow built to 1/2" slowly died in 11 min.  
ISI: No blow back.  
FF: Dead blow 5 mins flush tool surged @ died.  
FSI No blow back

Recovery - Total Feet	GIP	Ft. in DC	Ft. in DP
<u>15'</u>	<u>N/A</u>	<u>N/A</u>	<u>15'</u>
Rec. <u>15'</u>	Feet of <u>VUSECM</u>	1 %gas	%oil %water <u>99</u> %mud
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

BHT 112° °F Gravity \_\_\_\_\_ °API D @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery \_\_\_\_\_ Chlorides 11,000 ppm System

	AK-1	Alpine	Recorder No.	Test
(A) Initial Hydrostatic Mud	<u>2231</u>	PSI	<u>6625</u>	✓ <u>800</u>
(B) First Initial Flow Pressure	<u>26</u>	PSI	(depth) <u>4628'</u>	Elec. Rec. ✓ <u>150</u>
(C) First Final Flow Pressure	<u>25</u>	PSI	Recorder No. <u>10991</u>	Jars ✓ <u>200</u>
(D) Initial Shut-In Pressure	<u>32</u>	PSI	(depth) <u>4657'</u>	Safety Jt. _____
(E) Second Initial Flow Pressure	<u>24</u>	PSI	Recorder No. _____	Circ Sub _____
(F) Second Final Flow Pressure	<u>26</u>	PSI	(depth) _____	Sampler _____
(G) Final Shut-In Pressure	<u>28</u>	PSI	Initial Opening <u>15</u>	Straddle _____
(Q) Final Hydrostatic Mud	<u>2226</u>	PSI	Initial Shut-In <u>30</u>	Ext. Packer _____
			Final Flow <u>5-10 flush</u>	Shale Packer _____
			Final Shut-In <u>30</u>	Mileage <u>74</u> <u>62.90</u>
			T-On Location <u>0745</u>	Sub Total: <u>1212.90</u>
			T-Started <u>0814</u>	Std. By _____
			T-Open <u>1048</u>	Other _____
			T-Pulled <u>1218</u>	Total: _____
			T-Out <u>1458</u>	

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Approved By \_\_\_\_\_  
 Our Representative Dawn J. Ameyne

# CHART PAGE

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