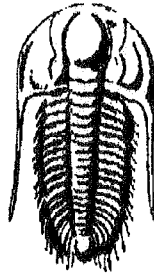


15-039-21117

23-25-30w

IND



**TRILOBITE  
TESTING, INC.**

### DRILL STEM TEST REPORT

Prepared For: **Cholla Production LLC.**

7851 S. Elatist Ste. 201  
Littleton CO 80120

ATTN: Bill Goff

**23 2 30 Decatur KS**

**May-Jording 1-23**

Start Date: 2010.06.04 @ 20:05:00

End Date: 2010.06.05 @ 01:04:00

Job Ticket #: 38286                      DST #: 1

RECEIVED  
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KCC WICHITA

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Cholla Production LLC.

May-Jording 1-23

23 2 30 Decatur KS

DST # 1

LKC-A

2010.06.04



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Cholla Production LLC.

7851 S. Elatist Ste. 201  
Littleton CO 80120

ATTN: Bill Goff

**May-Jording 1-23**

**23 2 30 Decatur KS**

Job Ticket: 38286

**DST#: 1**

Test Start: 2010.06.04 @ 20:05:00

## GENERAL INFORMATION:

Formation: **LKC-A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:41:00

Time Test Ended: 01:04:00

Test Type: Conventional Bottom Hole

Tester: Chuck Kreutzer Jr.

Unit No: 36

Interval: **3774.00 ft (KB) To 3840.00 ft (KB) (TVD)**

Total Depth: 3840.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2835.00 ft (KB)

2831.00 ft (CF)

KB to GR/CF: 4.00 ft

**Serial #: 6672** Inside

Press@RunDepth: psig @ 3780.00 ft (KB)

Start Date: 2010.06.04

End Date: 2010.06.05

Capacity: 8000.00 psig

Last Calib.: 2010.06.05

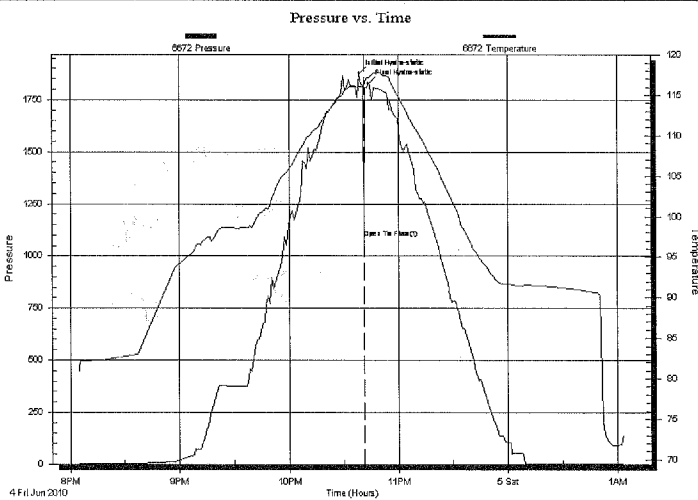
Start Time: 20:05:05

End Time: 01:03:59

Time On Btm: 2010.06.04 @ 22:38:30

Time Off Btm: 2010.06.04 @ 22:43:30

TEST COMMENT: Mis-Run



## PRESSURE SUMMARY

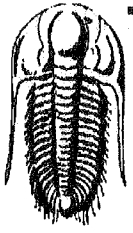
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1875.68	116.07	Initial Hydro-static
3	1084.53	115.79	Open To Flow (1)
5	1829.70	117.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
200.00	mud-100%	1.69

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cholla Production LLC.

**May-Jording 1-23**

7851 S. Elatist Ste. 201  
Littleton CO 80120

**23 2 30 Decatur KS**

Job Ticket: 38286

**DST#: 1**

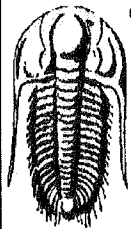
ATTN: Bill Goff

Test Start: 2010.06.04 @ 20:05:00

## Tool Information

Drill Pipe:	Length: 3652.00 ft	Diameter: 3.80 inches	Volume: 51.23 bbl	Tool Weight: 28000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 45000.00 lb
			<b>Total Volume: 51.83 bbl</b>	Tool Chased 2.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3774.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	66.00 ft			
Tool Length:	96.00 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			3749.00	
Sampler	2.00			3751.00	
Hydraulic tool	5.00			3756.00	
Jars	5.00			3761.00	
Safety Joint	3.00			3764.00	
Packer	5.00			3769.00	30.00 Bottom Of Top Packer
Packer	5.00			3774.00	
Stubb	1.00			3775.00	
Perforations	4.00			3779.00	
Change Over Sub	1.00			3780.00	
Recorder	0.00	6672	Inside	3780.00	
Recorder	0.00	6752	Inside	3780.00	
Blank Spacing	31.00			3811.00	
Change Over Sub	1.00			3812.00	
Perforations	25.00			3837.00	
Bullnose	3.00			3840.00	66.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>96.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Cholla Production LLC.

**May-Jording 1-23**

7851 S. Elatist Ste. 201  
Littleton CO 80120

**23 2 30 Decatur KS**

Job Ticket: 38286

**DST#: 1**

ATTN: Bill Goff

Test Start: 2010.06.04 @ 20:05:00

**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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
200.00	mud-100%	1.685

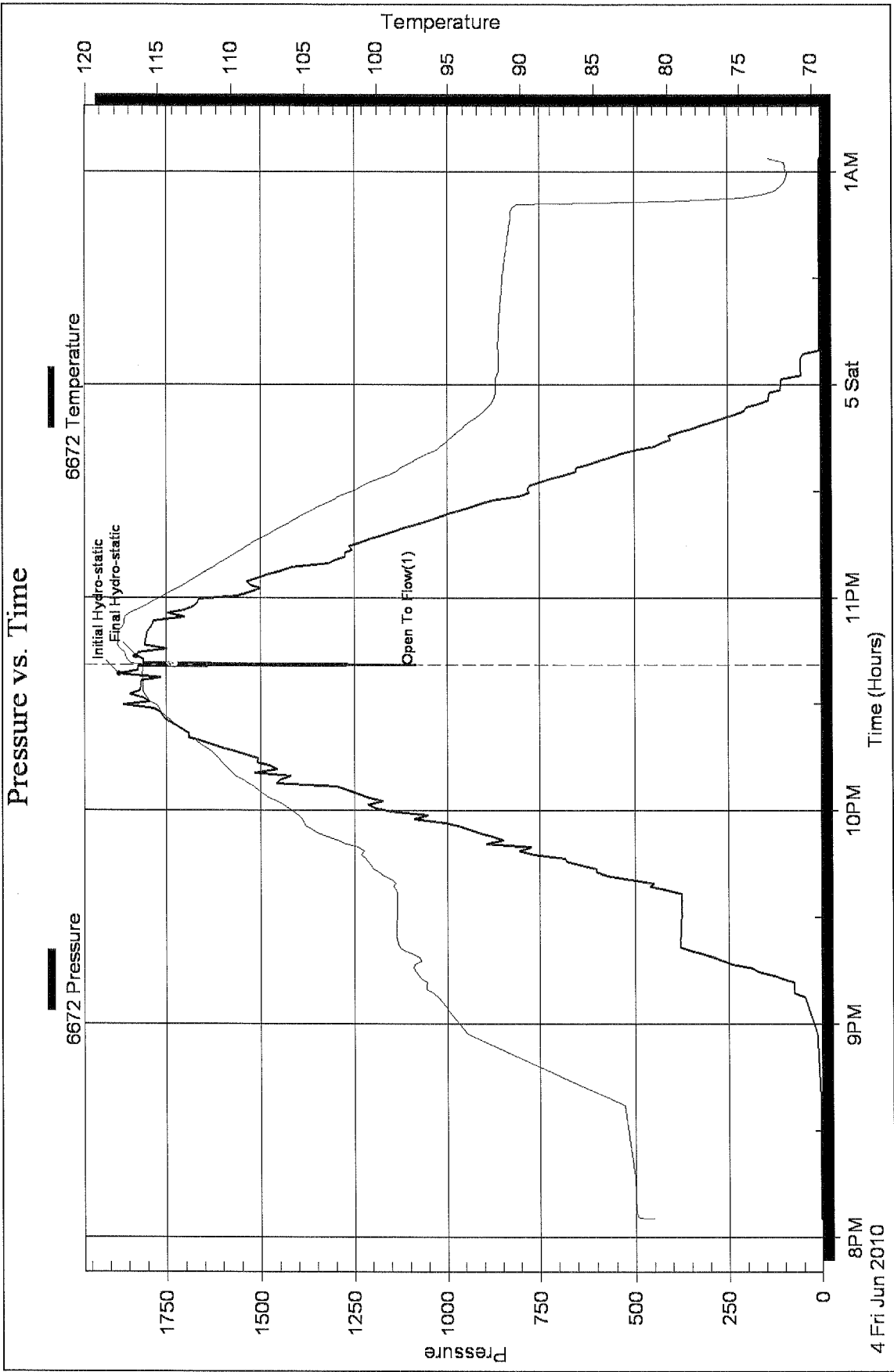
Total Length: 200.00 ft      Total Volume: 1.685 bbl

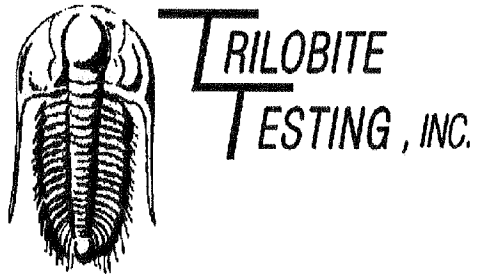
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Cholla Production LLC.**

7851 S. Elatist Ste. 201  
Littleton CO 80120

ATTN: Bill Goff

**23 2 30 Decatur KS**

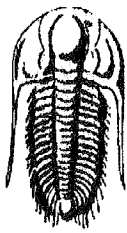
**May-Jording 1-23**

Start Date: 2010.06.05 @ 10:50:00

End Date: 2010.06.05 @ 18:12:30

Job Ticket #: 38287                      DST #: 2

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Cholla Production LLC.  
7851 S. Elatist Ste. 201  
Littleton CO 80120  
ATTN: Bill Goff

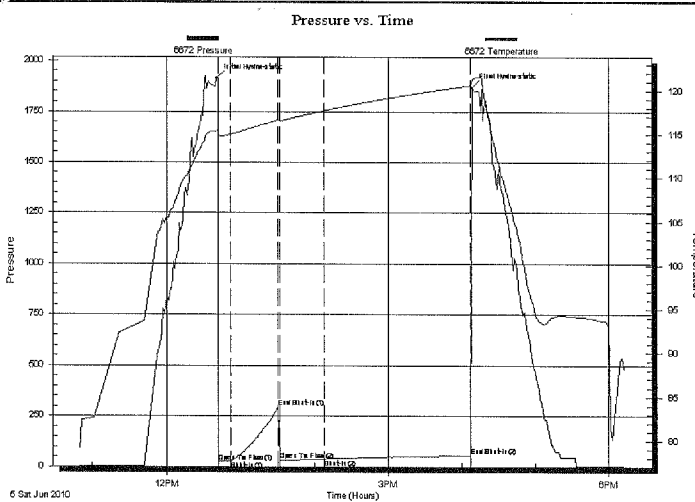
**May-Jording 1-23**  
**23 2 30 Decatur KS**  
Job Ticket: 38287      DST#: 2  
Test Start: 2010.06.05 @ 10:50:00

## GENERAL INFORMATION:

Formation: **LKC-G**  
Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**  
Time Tool Opened: **12:42:00** Tester: **Chuck Kreutzer Jr.**  
Time Test Ended: **18:12:30** Unit No: **36**  
Interval: **3870.00 ft (KB) To 3915.00 ft (KB) (TVD)** Reference Elevations: **2835.00 ft (KB)**  
Total Depth: **3915.00 ft (KB) (TVD)** **2831.00 ft (CF)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good** KB to GR/CF: **4.00 ft**

**Serial #: 6672**      **Inside**  
Press@RunDepth: **36.89 psig @ 3877.00 ft (KB)** Capacity: **8000.00 psig**  
Start Date: **2010.06.05** End Date: **2010.06.05** Last Calib.: **2010.06.05**  
Start Time: **10:50:05** End Time: **18:12:29** Time On Btm: **2010.06.05 @ 12:40:30**  
Time Off Btm: **2010.06.05 @ 16:08:29**

**TEST COMMENT:** IF: Weak blow built to 1/2 in over 10 mins  
ISI: No blow back over 40 mins  
FF: Weak blow built to 1/4 in over 40 mins  
FSI: No blow back over 120 mins



## PRESSURE SUMMARY

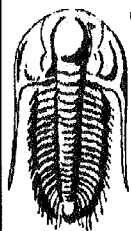
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1913.12	115.40	Initial Hydro-static
2	25.27	114.84	Open To Flow (1)
12	29.05	115.04	Shut-In(1)
50	293.86	116.67	End Shut-In(1)
52	30.88	116.56	Open To Flow (2)
88	36.89	117.73	Shut-In(2)
207	55.21	120.64	End Shut-In(2)
208	1870.26	121.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	HOCM-45%o55%m	0.30
0.00	200ml.Oil- sampler	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cholla Production LLC.

**May-Jording 1-23**

7851 S. Elatist Ste. 201  
Littleton CO 80120

**23 2 30 Decatur KS**

Job Ticket: 38287

**DST#: 2**

ATTN: Bill Goff

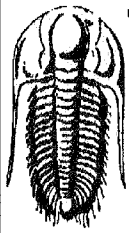
Test Start: 2010.06.05 @ 10:50:00

### Tool Information

Drill Pipe:	Length: 3748.00 ft	Diameter: 3.80 inches	Volume: 52.57 bbl	Tool Weight: 28000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 53.17 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3870.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	75.00 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			3845.00	
Sampler	2.00			3847.00	
Hydraulic tool	5.00			3852.00	
Jars	5.00			3857.00	
Safety Joint	3.00			3860.00	
Packer	5.00			3865.00	30.00 Bottom Of Top Packer
Packer	5.00			3870.00	
Stubb	1.00			3871.00	
Perforations	5.00			3876.00	
Change Over Sub	1.00			3877.00	
Recorder	0.00	6672	Inside	3877.00	
Recorder	0.00	6752	Inside	3877.00	
Blank Spacing	31.00			3908.00	
Change Over Sub	1.00			3909.00	
Perforations	3.00			3912.00	
Bullnose	3.00			3915.00	45.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>75.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Cholla Production LLC.  
7851 S. Elatist Ste. 201  
Littleton CO 80120  
ATTN: Bill Goff

**May-Jording 1-23**  
**23 2 30 Decatur KS**  
Job Ticket: 38287      **DST#: 2**  
Test Start: 2010.06.05 @ 10:50:00

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API: 34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.79 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1000.00 ppm		
Filter Cake: 2.00 inches		

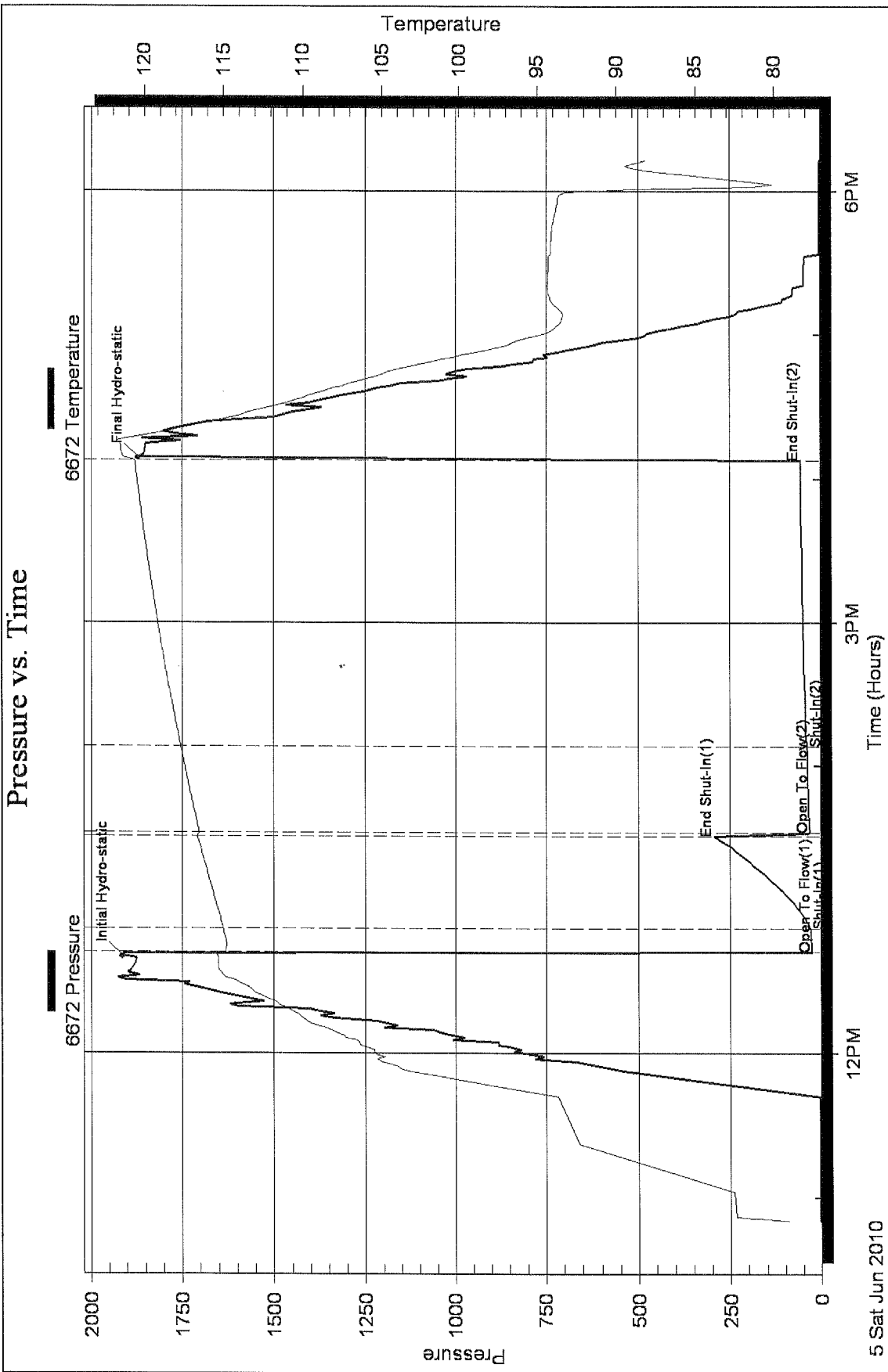
**Recovery Information**

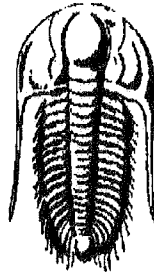
Recovery Table

Length ft	Description	Volume bbl
62.00	HOCM-45%o55%m	0.305
0.00	200ml.Oil- sampler	0.000

Total Length: 62.00 ft      Total Volume: 0.305 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

# Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Cholla Production LLC.**

7851 S. Elatist Ste. 201  
Littleton CO 80120

ATTN: Bill Goff

**23 2 30 Decatur KS**

**May-Jording 1-23**

Start Date: 2010.06.06 @ 02:50:00

End Date: 2010.06.06 @ 06:59:00

Job Ticket #: 38288                      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Cholla Production LLC.

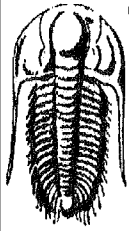
May-Jording 1-23

23 2 30 Decatur KS

DST # 3

LKC-H-J

2010.06.06



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Cholla Production LLC.  
7851 S. Elatist Ste. 201  
Littleton CO 80120  
ATTN: Bill Goff

**May-Jording 1-23**  
**23 2 30 Decatur KS**  
Job Ticket: 38288      **DST#: 3**  
Test Start: 2010.06.06 @ 02:50:00

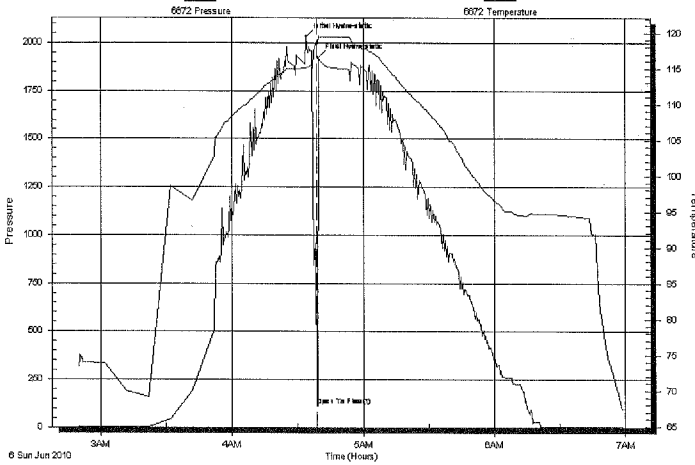
## GENERAL INFORMATION:

Formation: **LKC-H-J**  
Deviated: **No** Whipstock: **ft (KB)** Test Type: **Conventional Bottom Hole**  
Time Tool Opened: **04:38:30** Tester: **Chuck Kreutzer Jr.**  
Time Test Ended: **06:59:00** Unit No: **36**  
Interval: **3920.00 ft (KB) To 3990.00 ft (KB) (TVD)** Reference Elevations: **2835.00 ft (KB)**  
Total Depth: **3990.00 ft (KB) (TVD)** **2831.00 ft (CF)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good** KB to GR/CF: **4.00 ft**

**Serial #: 6672**      **Inside**  
Press@RunDepth:      psig @      3926.00 ft (KB)      Capacity:      8000.00 psig  
Start Date:      2010.06.06      End Date:      2010.06.06      Last Calib.:      2010.06.06  
Start Time:      02:50:05      End Time:      06:59:00      Time On Btm:      2010.06.06 @ 04:34:00  
Time Off Btm:      2010.06.06 @ 04:39:30

TEST COMMENT: MIS-RUN

Pressure vs. Time



## PRESSURE SUMMARY

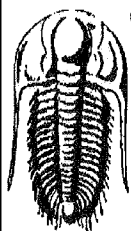
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2031.69	115.10	Initial Hydro-static
5	114.84	118.10	Open To Flow (1)
6	1923.35	119.55	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
200.00	mud-100%	1.69

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cholla Production LLC.

**May-Jording 1-23**

7851 S. Elatist Ste. 201  
Littleton CO 80120

**23 2 30 Decatur KS**

Job Ticket: 38288

**DST#: 3**

ATTN: Bill Goff

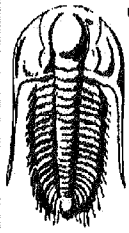
Test Start: 2010.06.06 @ 02:50:00

### Tool Information

Drill Pipe:	Length: 3783.00 ft	Diameter: 3.80 inches	Volume: 53.07 bbl	Tool Weight: 28000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 53.67 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3920.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	100.00 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			3895.00	
Sampler	2.00			3897.00	
Hydraulic tool	5.00			3902.00	
Jars	5.00			3907.00	
Safety Joint	3.00			3910.00	
Packer	5.00			3915.00	30.00 Bottom Of Top Packer
Packer	5.00			3920.00	
Stubb	1.00			3921.00	
Perforations	4.00			3925.00	
Change Over Sub	1.00			3926.00	
Recorder	0.00	6672	Inside	3926.00	
Recorder	0.00	6752	Inside	3926.00	
Blank Spacing	32.00			3958.00	
Change Over Sub	1.00			3959.00	
Perforations	28.00			3987.00	
Bullnose	3.00			3990.00	70.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>100.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Cholla Production LLC.  
7851 S. Elatist Ste. 201  
Littleton CO 80120  
ATTN: Bill Goff

**May-Jording 1-23**  
**23 2 30 Decatur KS**  
Job Ticket: 38288      **DST#: 3**  
Test Start: 2010.06.06 @ 02:50:00

**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: 48.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: 2.00 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
200.00	mud-100%	1.685

Total Length: 200.00 ft      Total Volume: 1.685 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

### Pressure vs. Time

