



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

KTM Unit #1-20

20-20s-20w Pawnee,KS

Start Date: 2012.02.16 @ 09:00:06

End Date: 2012.02.16 @ 15:18:30

Job Ticket #: 46845 DST #: 1

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

Printed: 2012.02.17 @ 16:17:42

Downing-Nelson Oil Co Inc
20-20s-20w Pawnee,KS
KTM Unit #1-20
DST # 1
Miss
2012.02.16



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

20-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

KTM Unit #1-20

Job Ticket: 46845

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.02.16 @ 09:00:06

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:22:01

Time Test Ended: 15:18:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 42

Interval: 4290.00 ft (KB) To 4348.00 ft (KB) (TVD)

Reference Elevations: 2196.00 ft (KB)

Total Depth: 4348.00 ft (KB) (TVD)

2188.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6625 Inside

Press @ Run Depth: 50.64 psig @ 4294.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.16

End Date: 2012.02.16

Last Calib.: 2012.02.16

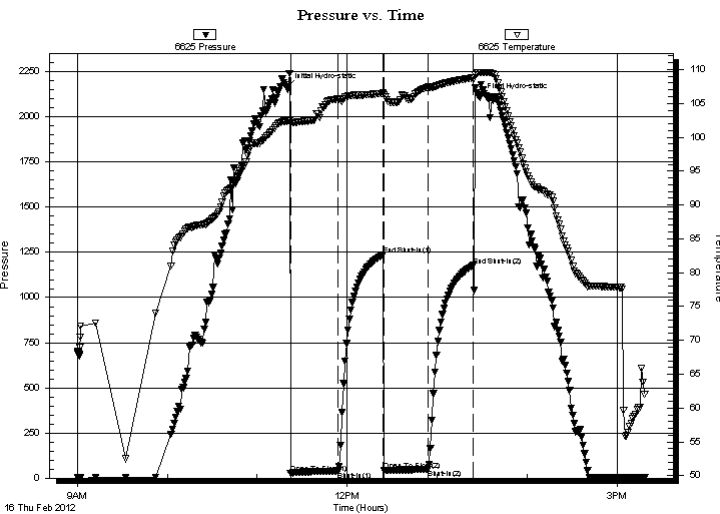
Start Time: 09:00:06

End Time: 15:18:30

Time On Btm: 2012.02.16 @ 11:20:01

Time Off Btm: 2012.02.16 @ 13:28:30

TEST COMMENT: 30-IFP-w k bl 1/4"to 3/4"bl
30-ISIP-no bl
30-FFP-w k bl 3/4"bl
30-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2160.44	102.38	Initial Hydro-static
2	26.32	102.02	Open To Flow (1)
34	39.66	105.68	Shut-In(1)
64	1237.21	106.50	End Shut-In(1)
65	42.29	106.24	Open To Flow (2)
94	50.64	107.42	Shut-In(2)
124	1177.38	108.79	End Shut-In(2)
129	2105.35	109.56	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	SOCM 1%O99%M	0.57

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

20-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

KTM Unit #1-20

Job Ticket: 46845

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.02.16 @ 09:00:06

Tool Information

Drill Pipe:	Length: 4261.00 ft	Diameter: 3.80 inches	Volume: 59.77 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.92 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4290.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4263.00	
Shut In Tool	5.00			4268.00	
Hydraulic tool	5.00			4273.00	
Jars	5.00			4278.00	
Safety Joint	2.00			4280.00	
Packer	5.00			4285.00	28.00 Bottom Of Top Packer
Packer	5.00			4290.00	
Stubb	1.00			4291.00	
Perforations	3.00			4294.00	
Recorder	0.00	6625	Inside	4294.00	
Recorder	0.00	8700	Outside	4294.00	
Blank Spacing	31.00			4325.00	
Perforations	20.00			4345.00	
Bullnose	3.00			4348.00	58.00 Bottom Packers & Anchor

Total Tool Length: 86.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

20-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

KTM Unit #1-20

Job Ticket: 46845

DST#: 1

ATTN: Ron Nelson

Test Start: 2012.02.16 @ 09:00:06

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:

ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.73 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	SOCM 1%O99%M	0.568

Total Length: 60.00 ft Total Volume: 0.568 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6625

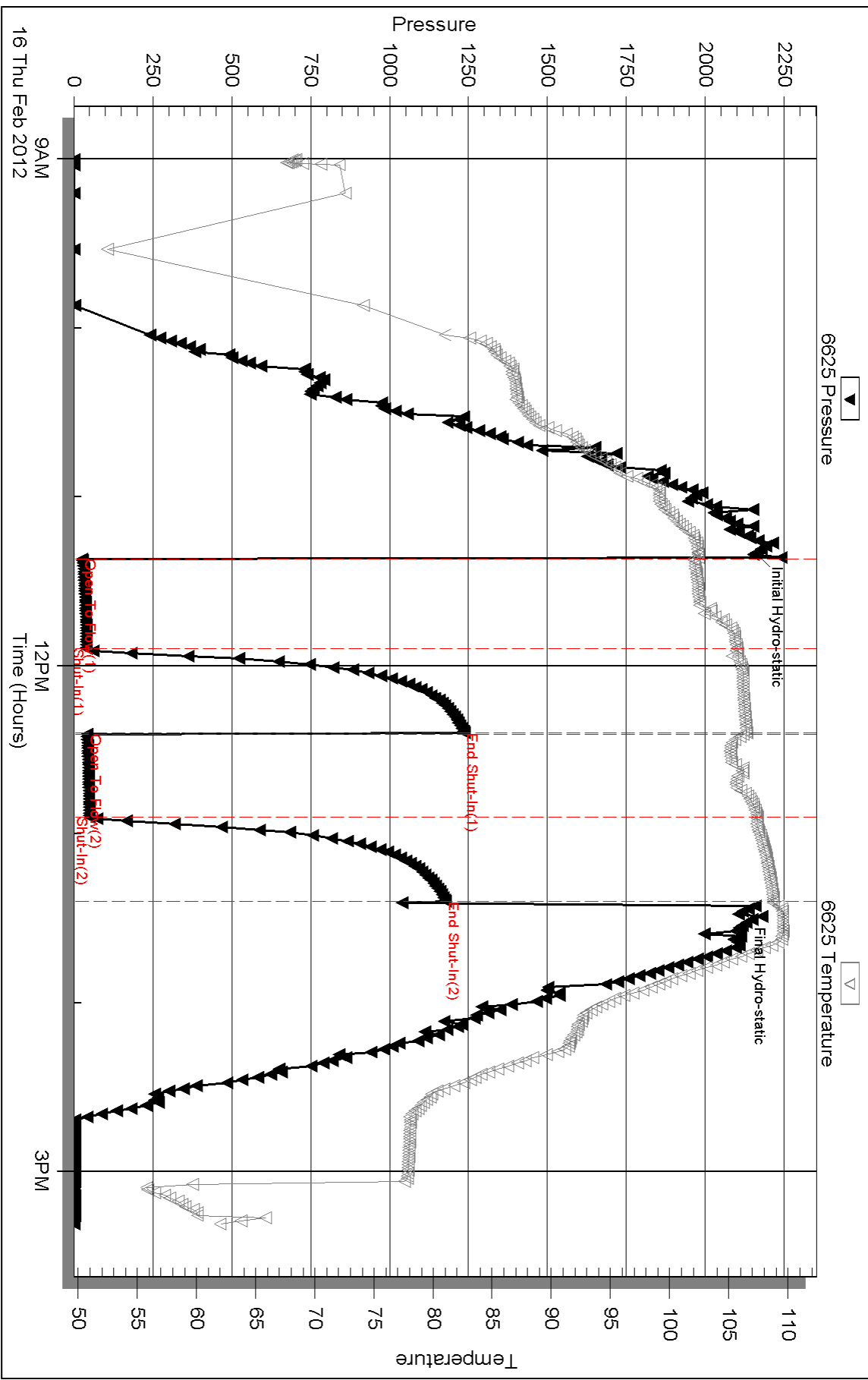
Inside

Dow nging-Nelson Oil Co Inc

KTM Unit #1-20

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 46845

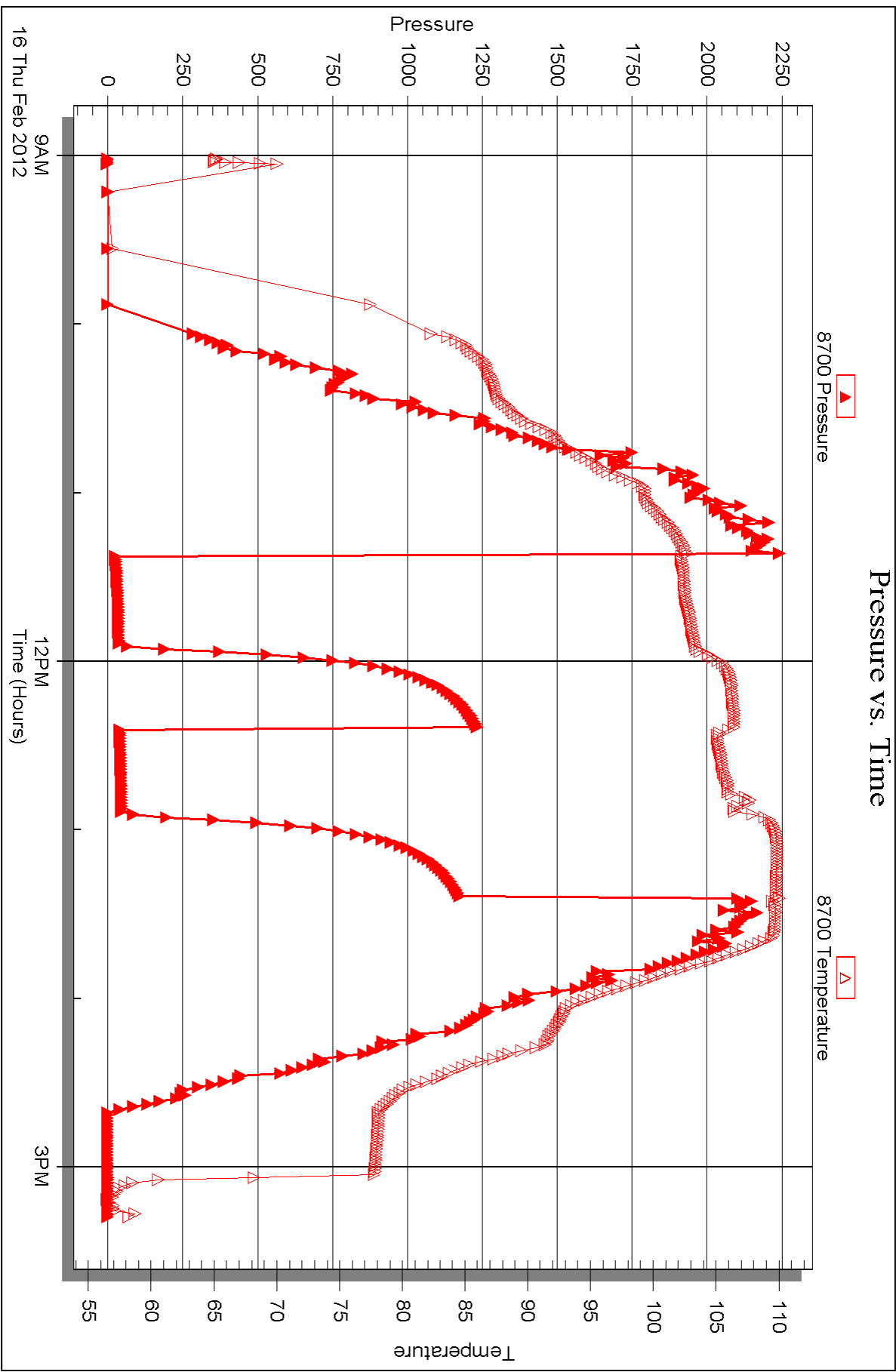
Printed: 2012.02.17 @ 16:17:44

Serial #: 8700

Outside Dow nmg-Nelson Oil Co Inc

KTM Unit #1-20

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Co Inc**

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

KTM Unit #1-20

20-20s-20w Pawnee,KS

Start Date: 2012.02.16 @ 23:45:36

End Date: 2012.02.17 @ 06:55:00

Job Ticket #: 46846 DST #: 2

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

Printed: 2012.02.17 @ 16:14:37



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

20-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

KTM Unit #1-20

Job Ticket: 46846

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.02.16 @ 23:45:36

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:48:31

Time Test Ended: 06:55:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: 4348.00 ft (KB) To 4371.00 ft (KB) (TVD)

Reference Elevations: 2196.00 ft (KB)

Total Depth: 4371.00 ft (KB) (TVD)

2188.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6625 Inside

Press @RunDepth: 349.48 psig @ 4349.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.02.16

End Date:

2012.02.17

Last Calib.:

2012.02.17

Start Time: 23:45:36

End Time:

06:55:00

Time On Btm:

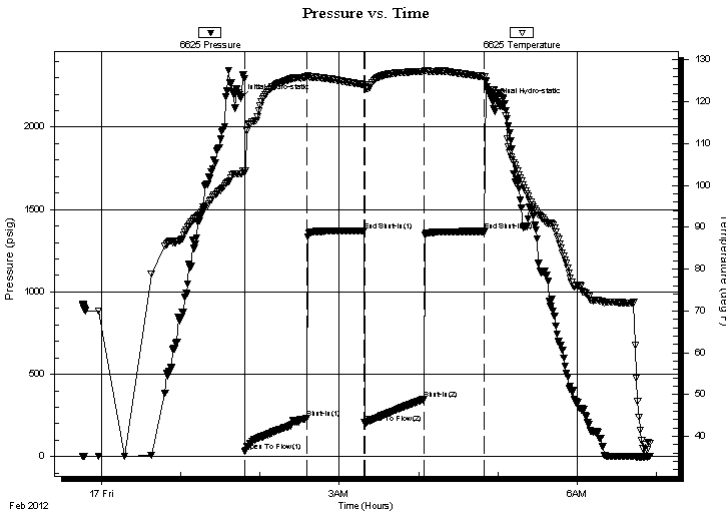
2012.02.17 @ 01:45:31

Time Off Btm:

2012.02.17 @ 04:56:30

TEST COMMENT: 45-IFP-w k to strg in 18 min
45-ISIP-no bl
45-FFP-w k to strg in 3 min
45-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2175.30	102.72	Initial Hydro-static
3	33.40	103.01	Open To Flow (1)
50	233.82	125.82	Shut-In(1)
93	1371.84	124.04	End Shut-In(1)
94	205.93	123.53	Open To Flow (2)
139	349.48	127.22	Shut-In(2)
185	1367.45	125.93	End Shut-In(2)
191	2149.70	122.77	Final Hydro-static

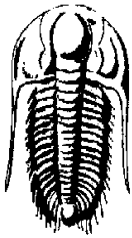
Recovery

Length (ft)	Description	Volume (bbl)
105.00	SOCMW 1%O15%M84%W	1.20
600.00	Water	8.42

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

20-20s-20w Pawnee, KS

PO Box 1019
Hays KS 67601

KTM Unit #1-20

Job Ticket: 46846

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.02.16 @ 23:45:36

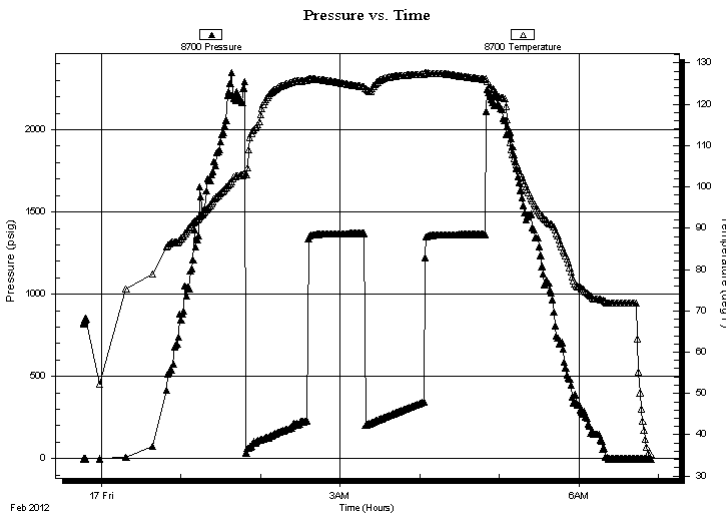
GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 01:48:31
 Time Test Ended: 06:55:00
Interval: 4348.00 ft (KB) To 4371.00 ft (KB) (TVD)
 Total Depth: 4371.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 42
 Reference Elevations: 2196.00 ft (KB)
 2188.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8700 Outside
 Press @ Run Depth: psig @ 4349.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.02.16 End Date: 2012.02.17 Last Calib.: 2012.02.17
 Start Time: 23:46:36 End Time: 06:54:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: 45-IFP-w k to strg in 18 min
 45-ISIP-no bl
 45-FFP-w k to strg in 3 min
 45-FSIP-no bl

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
105.00	SOCMW 1%O15%M84%W	1.20
600.00	Water	8.42

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Dow ning-Nelson Oil Co Inc

20-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

KTM Unit #1-20

Job Ticket: 46846

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.02.16 @ 23:45:36

Tool Information

Drill Pipe:	Length: 4320.00 ft	Diameter: 3.80 inches	Volume: 60.60 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.75 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	4348.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	51.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4321.00	
Shut In Tool	5.00			4326.00	
Hydraulic tool	5.00			4331.00	
Jars	5.00			4336.00	
Safety Joint	2.00			4338.00	
Packer	5.00			4343.00	28.00 Bottom Of Top Packer
Packer	5.00			4348.00	
Stubb	1.00			4349.00	
Recorder	0.00	6625	Inside	4349.00	
Recorder	0.00	8700	Outside	4349.00	
Perforations	19.00			4368.00	
Bullnose	3.00			4371.00	23.00 Bottom Packers & Anchor

Total Tool Length: 51.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co Inc

20-20s-20w Pawnee,KS

PO Box 1019
Hays KS 67601

KTM Unit #1-20

Job Ticket: 46846

DST#: 2

ATTN: Ron Nelson

Test Start: 2012.02.16 @ 23:45:36

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:

27000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbf

Water Loss: 8.69 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
105.00	SOCMW 1%O15%M84%W	1.200
600.00	Water	8.416

Total Length: 705.00 ft Total Volume: 9.616 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

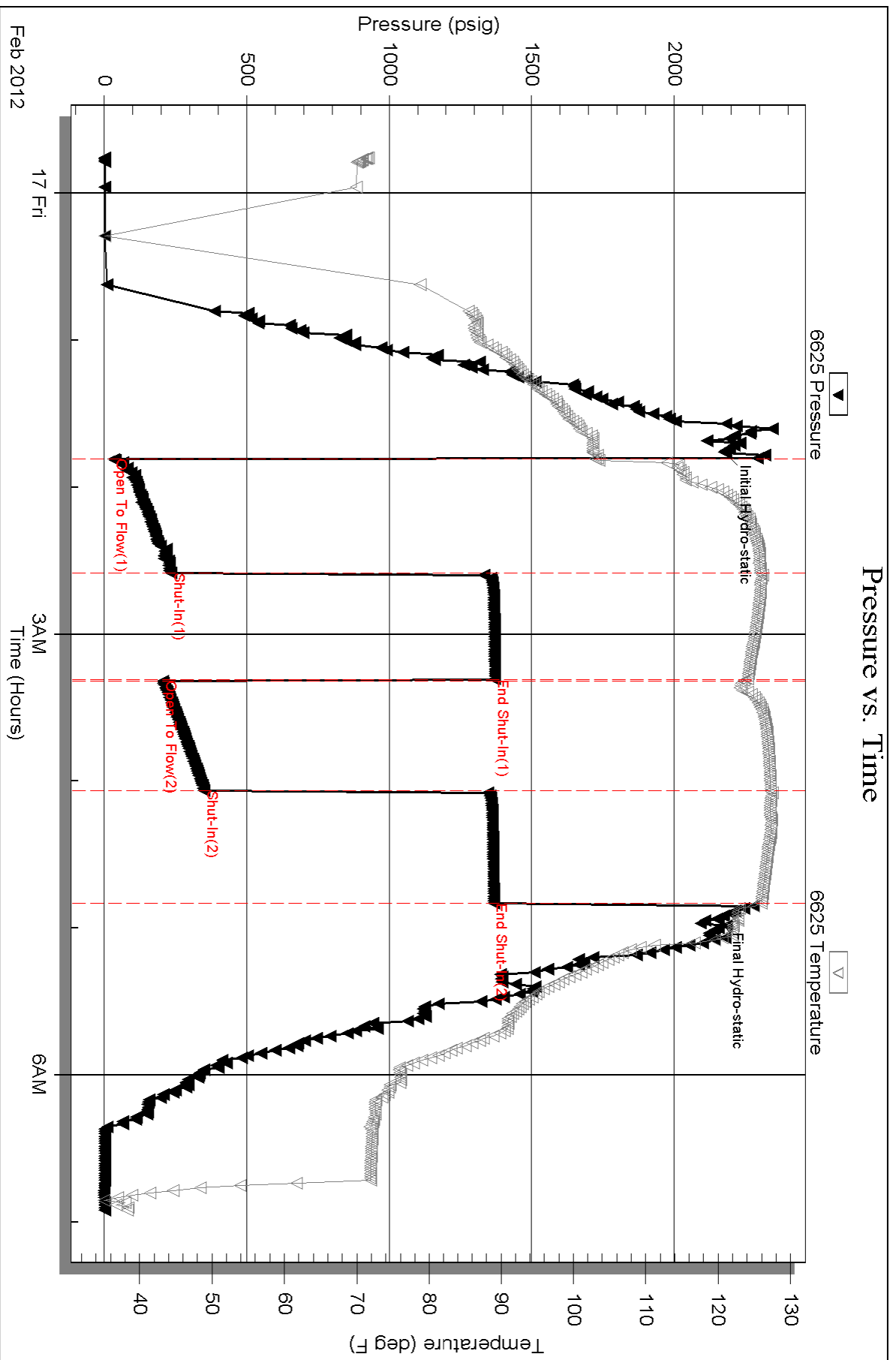
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .24@70F

Pressure vs. Time

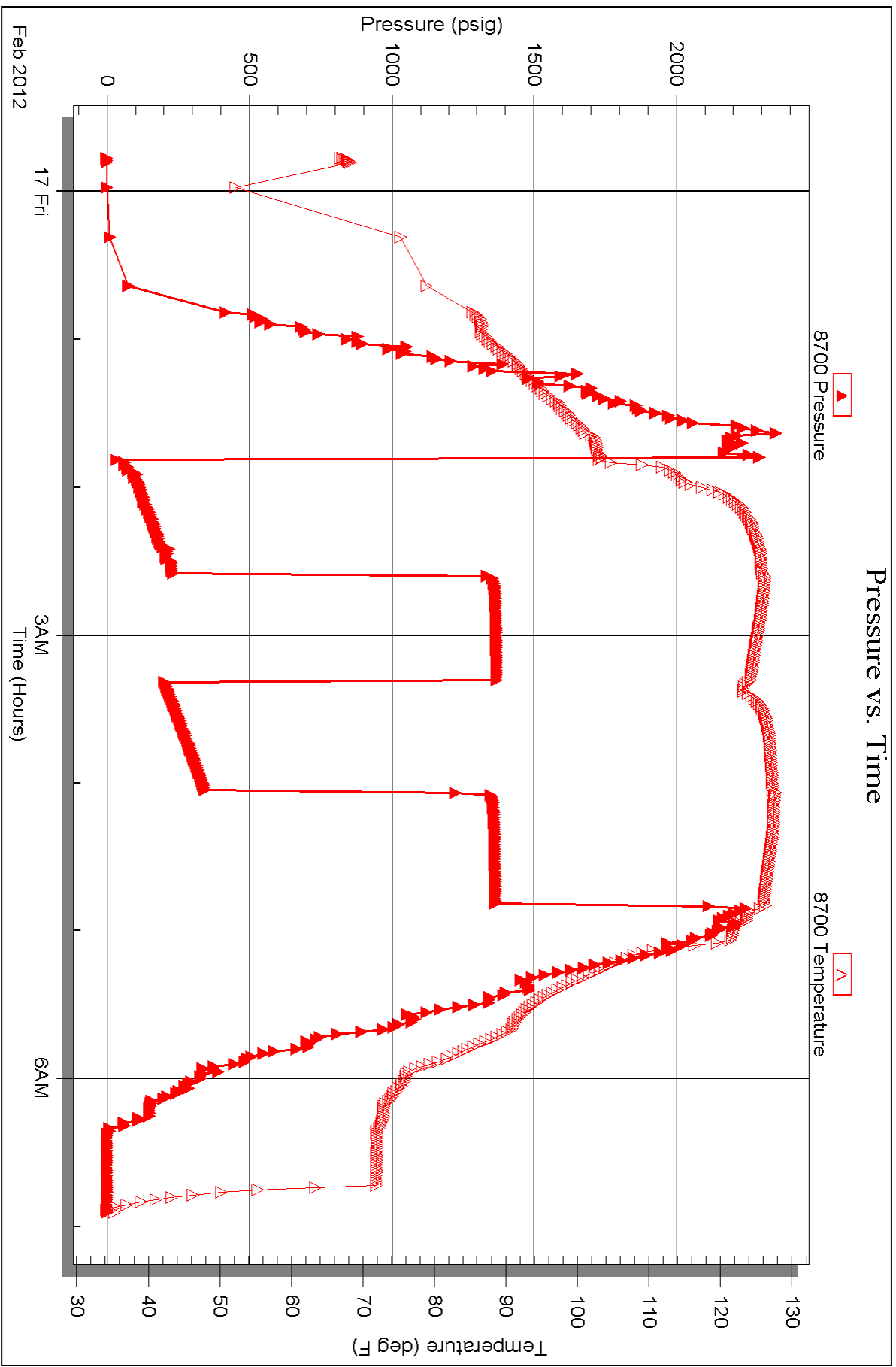


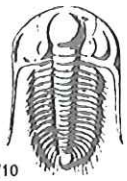
Serial #: 8700

Outside Dow nting-Nelson Oil Co Inc

KTM Unit #1-20

DST Test Number: 2





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
FEB 17 2012

Test Ticket

NO. 46845

4/10

BY: _____

Well Name & No. KTM Unit #1-20 Test No. 1 Date 2-16-12

Company Downing-Nelson Oil Co Inc Elevation 2196 KB 2188 GL _____

Address PO Box 1019 Hays Ks 67601

Co. Rep / Geo. MARC Downing Rig Discovery rig

Location: Sec. 20 Twp. 20^S Rge. 20^W Co. PAWNEE State K

Interval Tested 4290-4348 Zone Tested Miss

Anchor Length 58 Drill Pipe Run 4261 Mud Wt. 9.5

Top Packer Depth 4285 Drill Collars Run 30 Vis 60

Bottom Packer Depth 4290 Wt. Pipe Run - WL 8.8

Total Depth 4348 Chlorides 5800 ppm System LCM 1#

Blow Description IFP - WEAK Blow 1/4" To 3/4"

ISIP - NO Blow

FFP - WEAK Blow 3/4" Blow

F5IP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>50CM</u>	<u>1</u>		<u>99</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 60 BHT 109° Gravity - API RW - @ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 2160 Test 1225 T-On Location 0735

(B) First Initial Flow 26 Jars 250 T-Started 0900

(C) First Final Flow 39 Safety Joint 75' T-Open 1120

(D) Initial Shut-In 1237 Circ Sub _____ T-Pulled 1320

(E) Second Initial Flow 42 Hourly Standby _____ T-Out 1518

(F) Second Final Flow 50 Mileage 112 RT 156.80 Comments _____

(G) Final Shut-In 1177 Sampler _____

(H) Final Hydrostatic 2105 Straddle _____ Ruined Shale Packer _____

Shale Packer _____ Ruined Packer _____

Initial Open 30 Extra Packer _____ Extra Copies _____

Initial Shut-In 30 Extra Recorder _____ Sub Total 0

Final Flow 30 Day Standby _____ Total 1706.80

Final Shut-In 30 Accessibility _____ MP/DST Disc't _____

Sub Total 1706.80

Approved By _____ Our Representative Ray Schwager *Thank you*

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
FEB 17 2012

Test Ticket

NO. 46846

4/10

BY: _____

Well Name & No. KTM Unit #1-20 Test No. 2 Date 2-16-12
 Company Downing-Nelson Oil Co. Inc Elevation 2196 KB 2188 GL
 Address PO Box 1019 Hays, Ks 67601
 Co. Rep / Geo. MARC Downing Rig Discovery rig 4
 Location: Sec. 20 Twp. 20^s Rge. 20^w Co. PAWNEE State Ks

Interval Tested 4348-4371 Zone Tested MISS
 Anchor Length 23 Drill Pipe Run 4320 Mud Wt. 9.5
 Top Packer Depth 4343 Drill Collars Run 30 Vis 60
 Bottom Packer Depth 4348 Wt. Pipe Run - WL 8.8
 Total Depth 4371 Chlorides 5800 ppm System LCM 1#

Blow Description IFP - WEAK TO STRONG IN 18 MIN
ISIP - NO BLOW
FFP - WEAK TO STRONG IN 30 MIN
FSIP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>105</u>	<u>SOCC MW</u>	<u>1</u>	<u>84</u>	<u>15</u>	
<u>600</u>	<u>WATER</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 705 BHT 126 Gravity - API RW .24 @ 70 ° F Chlorides 27000 ppm

(A) Initial Hydrostatic 2175 Test 1225 T-On Location 2245
 (B) First Initial Flow 33 Jars 250 T-Started 2345
 (C) First Final Flow 233 Safety Joint 75 T-Open 0150
 (D) Initial Shut-In 1371 Circ Sub _____ T-Pulled 0450
 (E) Second Initial Flow 205 Hourly Standby _____ T-Out 0655
 (F) Second Final Flow 349 Mileage 112 RT 150.80 Comments _____
 (G) Final Shut-In 1367 Sampler _____
 (H) Final Hydrostatic 2149 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____

Initial Open 45 Extra Packer _____ Extra Copies _____
 Initial Shut-In 45 Extra Recorder _____ Sub Total 0
 Final Flow 45 Day Standby _____ Total 1706.80
 Final Shut-In 45 Accessibility _____ MP/DST Disc't _____
 Sub Total 1706.80

Approved By _____ Our Representative RAY SCHWAGER Thank you

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.