



KANSAS CORPORATION COMMISSION 1078622
OIL & GAS CONSERVATION DIVISION

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 30717
Name: Downing-Nelson Oil Co Inc
Address 1: PO BOX 1019
Address 2: _____
City: HAYS State: KS Zip: 67601 + _____
Contact Person: Ron Nelson
Phone: (785) 621-2610
CONTRACTOR: License # 31548
Name: Discovery Drilling
Wellsite Geologist: Marc Downing
Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
 Oil WSW SWD SIOW
 Gas D&A ENHR SIGW
 OG GSW Temp. Abd.
 CM (Coal Bed Methane)
 Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____
Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____

03/24/2012 04/01/2012 04/02/2012
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 15-195-22759-00-00

Spot Description: _____

NW SE NE NE Sec. 30 Twp. 12 S. R. 21 East West
675 Feet from North / South Line of Section
335 Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: Trego

Lease Name: Patty Well #: 1-30

Field Name: Wildcat

Producing Formation: None

Elevation: Ground: 2309 Kelly Bushing: 2317

Total Depth: 4060 Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: 2223 Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: 17000 ppm Fluid volume: 400 bbls

Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received
Date: _____
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: Deanna Gerrico Date: 04/26/2012



1078622

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Patty Well #: 1-30
Sec. 30 Twp. 12 S. R. 21 East West County: Trego

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

| | | | | |
|--|---|---|----------------------------------|---------------------------------|
| Drill Stem Tests Taken <i>(Attach Additional Sheets)</i> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> Log | Formation (Top), Depth and Datum | <input type="checkbox"/> Sample |
| Samples Sent to Geological Survey | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | Name Attached | Top Attached | Datum Attached |
| Cores Taken | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No | | | |
| Electric Log Run | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| Electric Log Submitted Electronically <i>(If no, Submit Copy)</i> | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | |
| List All E. Logs Run: Attached | | | | |

| CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used | | | | | | | |
|---|-------------------|---------------------------|-------------------|---------------|----------------|--------------|----------------------------|
| Report all strings set-conductor, surface, intermediate, production, etc. | | | | | | | |
| Purpose of String | Size Hole Drilled | Size Casing Set (In O.D.) | Weight Lbs. / Ft. | Setting Depth | Type of Cement | # Sacks Used | Type and Percent Additives |
| Surface | 12.2500 | 8.6250 | 23 | 222.72 | Common | 150 | 2% Gel & 3% CC |
| | | | | | | | |
| | | | | | | | |

| ADDITIONAL CEMENTING / SQUEEZE RECORD | | | | |
|---------------------------------------|------------------|----------------|--------------|----------------------------|
| Purpose: | Depth Top Bottom | Type of Cement | # Sacks Used | Type and Percent Additives |
| ___ Perforate | | | | |
| ___ Protect Casing | - | | | |
| ___ Plug Back TD | | | | |
| ___ Plug Off Zone | - | | | |

| Shots Per Foot | PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated | Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i> | Depth |
|----------------|---|--|-------|
| | | | |
| | | | |
| | | | |
| | | | |

| | | | |
|---|-----------|--|-----------------------------------|
| TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ | | Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No | |
| Date of First, Resumed Production, SWD or ENHR. _____ | | Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____ | |
| Estimated Production Per 24 Hours | Oil Bbls. | Gas Mcf | Water Bbls. Gas-Oil Ratio Gravity |

| | | |
|---|---|--|
| DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i> | METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ | PRODUCTION INTERVAL: _____ _____ |
|---|---|--|

| | |
|-----------|---------------------------|
| Form | ACO1 - Well Completion |
| Operator | Downing-Nelson Oil Co Inc |
| Well Name | Patty 1-30 |
| Doc ID | 1078622 |

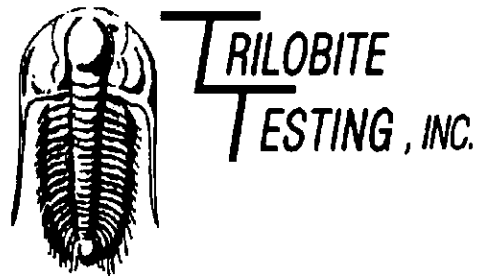
All Electric Logs Run

| |
|-------------------------------|
| |
| Sonic |
| Micro |
| Dual Induction |
| Compensated Density / Neutron |

| | |
|-----------|---------------------------|
| Form | ACO1 - Well Completion |
| Operator | Downing-Nelson Oil Co Inc |
| Well Name | Patty 1-30 |
| Doc ID | 1078622 |

Tops

| | | |
|----------------|-------|-------|
| Top Anhydrite | 1739' | +578 |
| Base Anhydrite | 1782' | +535 |
| Topeka | 3354' | -1037 |
| Heebner | 3376' | -1059 |
| Toronto | 3596' | -1279 |
| LKC | 3608' | -1291 |
| BKC | 3847' | -1530 |
| Marmaton | 3929' | -1612 |
| Arbuckle | 4008' | -1691 |



DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.03.28 @ 21:50:22

End Date: 2012.03.29 @ 04:18:52

Job Ticket #: 47305 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.04.04 @ 10:53:09

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 303

| | | | | | | | | | | | | | | | |
|---------------------|--------------|----------|-----|------|------------|-------|--|--------|-------|-------|----|-------------|--|--------|---------|
| Date | 3-24-12 | Sec. | 30 | Twp. | 12 | Range | 21 | County | Trego | State | KS | On Location | | Finish | 10:00pm |
| Lease | 1st | Well No. | 130 | | Location | | Ogallah 2E Ninto | | | | | | | | |
| Contractor | Discovery #4 | | | | Owner | | To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. | | | | | | | | |
| Type Job | Surface | | | | T.D. | | 223 | | | | | | | | |
| Hole Size | 12 1/4 | | | | Depth | | 223 | | | | | | | | |
| Csg. | 8 5/8 | | | | Depth | | Downing/Nelson | | | | | | | | |
| Tbg. Size | | | | | Street | | | | | | | | | | |
| Tool | | | | | City | | State | | | | | | | | |
| Cement Left in Csg. | 15' | | | | Shoe Joint | | The above was done to satisfaction and supervision of owner agent or contractor. | | | | | | | | |
| Meas Line | | | | | Displace | | 133C Cement Amount Ordered 150 com 3/24/12 | | | | | | | | |

EQUIPMENT

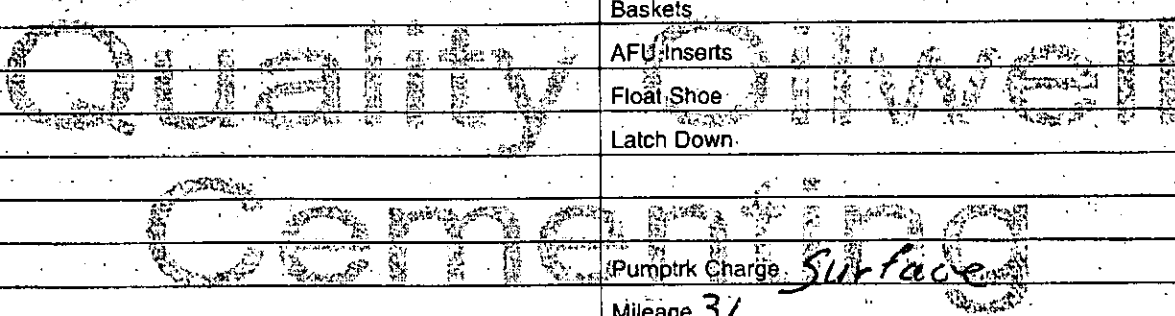
| | | | | | |
|----------|---|-----|----------|----------|-----|
| Pumptrk. | 9 | No. | Cementer | Common | 150 |
| | | | Helper | | |
| Bulktrk | | No. | Driver | Poz. Mix | |
| | | | Driver | | |
| Bulktrk | 8 | No. | Driver | Gel. | 3 |
| | | | Driver | | |

JOB SERVICES & REMARKS

| | |
|--------------------------------------|-------------------------|
| Remarks: | Hulls |
| Rat Hole | Salt |
| Mouse Hole | Flowseal |
| Centralizers | Kol-Seal |
| Baskets | Mud CLR 48 |
| D/V or Port Collar | CFL-117 or CD110 CAF 38 |
| 8 5/8 on bottom Est. Circulation Mix | Sand |
| 150 SK + Displace | Handling 158 |
| Cement (Change) | Mileage |

FLOAT EQUIPMENT

| | |
|-------------|--|
| Guide Shoe | |
| Centralizer | |
| Baskets | |
| AFU Inserts | |
| Float Shoe | |
| Latch Down | |



| | |
|----------------|------------------|
| Pumptrk Charge | Surface |
| Mileage | 31 |
| Signature | Michael Shuckler |
| Tax | |
| Discount | |
| Total Charge | |

ALLIED CEMENTING CO., LLC. 035264

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:

Dakota

| | | | | | | | |
|-------------------------|--------------------|--|------------------|------------|---------------------|------------------------|---------------------------|
| DATE <u>4-1-12</u> | SEC. <u>30</u> | TWP. <u>12S</u> | RANGE <u>21W</u> | CALLED OUT | ON LOCATION | JOB START <u>12:00</u> | JOB FINISH <u>1:00 PM</u> |
| LEASE <u>Patty</u> | WELL # <u>1-30</u> | LOCATION <u>Ogallah NE 1/4 N Winto</u> | | | COUNTY <u>Trego</u> | STATE <u>KS</u> | |
| OLD OR NEW (Circle one) | | | | | | | |

CONTRACTOR Discovery 4
 TYPE OF JOB PTA
 HOLE SIZE 7 7/8 I.D. 4060'
 CASING SIZE _____ DEPTH _____
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE 4 1/2 DEPTH 3929'
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. _____
 PERFS. _____
 DISPLACEMENT _____

OWNBR same
 CEMENT AMOUNT ORDERED 245 sks 6940 4 bagel
14 FLO-5006

| | | | | |
|---------------------|--------------------|---|--------------|----------------|
| COMMON | <u>142 sks</u> | @ | <u>16.25</u> | <u>2308.75</u> |
| POZMIX | <u>98 sks</u> | @ | <u>8.00</u> | <u>784.00</u> |
| GEL | <u>8 sks</u> | @ | <u>21.25</u> | <u>170.00</u> |
| CHLORIDE | | @ | | |
| ASC | | @ | | |
| <u>FLO-5006 61#</u> | | @ | <u>2.70</u> | <u>164.70</u> |
| HANDLING | <u>255 sks</u> | @ | <u>2.25</u> | <u>573.75</u> |
| MILEAGE | <u>118 sk/mile</u> | | | <u>1542.75</u> |
| TOTAL | | | | <u>5672.90</u> |

EQUIPMENT

PUMP TRUCK CEMENTER Andrew
 # 423-281 HELPER Jerry
 BULK TRUCK DRIVER Brandon
 # 347
 BULK TRUCK DRIVER _____
 # _____

REMARKS:

- 25 sks 3929'
- 25 sks 1765'
- 100 sks 960'
- 40 sks 225'
- 10 sks 40'
- 15 sks mouse hole
- 30 sks Rat hole

thankyou

CHARGE TO: Downing + Nelson
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE

| | | | | |
|---------------------------|--------------|---|---------------------------|----------------|
| DEPTH OF JOB | <u>3929'</u> | | | |
| PUMP TRUCK CHARGE | | | <u>1280.00</u> | |
| EXTRA FOOTAGE | | @ | | |
| MILEAGE | <u>55 mi</u> | @ | <u>2.00</u> <u>395.00</u> | |
| MANIFOLD | | @ | | |
| <u>Light vehicle 55mz</u> | | @ | <u>4.00</u> <u>220.00</u> | |
| TOTAL | | | | <u>1955.00</u> |

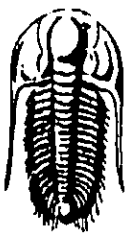
PLUG & FLOAT EQUIPMENT

| | | | | |
|------------------------|---|--|--------------|--------------|
| <u>8 1/2"</u> | | | | |
| <u>1 dry hole plug</u> | @ | | <u>22.00</u> | |
| | @ | | | |
| | @ | | | |
| | @ | | | |
| TOTAL | | | | <u>22.00</u> |

To Allied Cementing Co., LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) _____
 TOTAL CHARGES _____
 DISCOUNT _____ IF PAID IN 30 DAYS

PRINTED NAME _____
 SIGNATURE [Signature]



**TRIBOLITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47305

DST#: 1

ATTN: Marc Downing

Test Start: 2012.03.28 @ 21:50:22

GENERAL INFORMATION:

Formation: LKC-"A"

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 23:36:07

Time Test Ended: 04:18:52

Test Type: Conventional Bottom Hole (Initial)

Tester: Jason McLemore

Unit No: 54

Interval: 3600.00 ft (KB) To 3620.00 ft (KB) (TVD)

Total Depth: 3620.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2316.00 ft (KB)

2308.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8366

Inside

Press@RunDepth: 72.40 psig @ 3602.00 ft (KB)

Start Date: 2012.03.28

End Date:

2012.03.29

Start Time: 21:50:24

End Time:

04:18:52

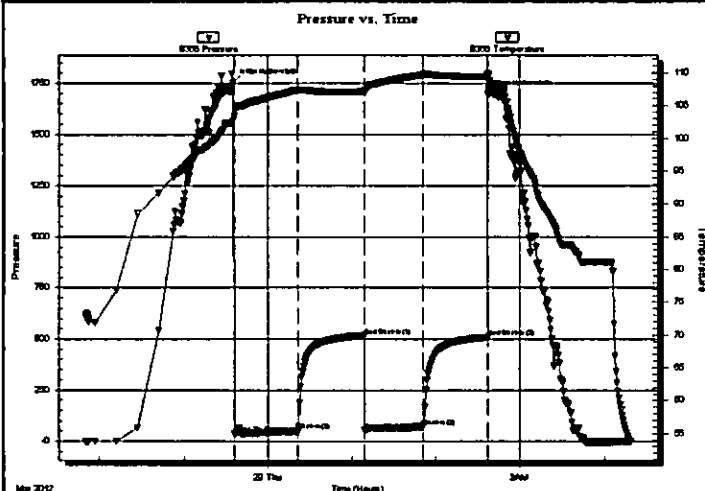
Capacity: 8000.00 psig

Last Calib.: 2012.03.29

Time On Btm: 2012.03.28 @ 23:35:22

Time Off Btm: 2012.03.29 @ 02:37:22

TEST COMMENT: IFF-Fair Blow, Built to 6"
ISI-Dead
FFP-Fair Blow, Built to 5-1/2"
FSI-Dead



PRESSURE SUMMARY

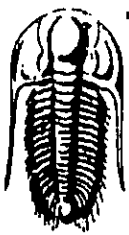
| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1754.71 | 102.75 | Initial Hydro-static |
| 1 | 37.77 | 103.37 | Open To Flow (1) |
| 47 | 49.78 | 107.35 | Shut-In(1) |
| 94 | 516.19 | 107.15 | End Shut-In(1) |
| 95 | 53.94 | 106.87 | Open To Flow (2) |
| 136 | 72.40 | 109.70 | Shut-In(2) |
| 182 | 509.33 | 109.37 | End Shut-In(2) |
| 182 | 1698.91 | 109.88 | Final Hydro-static |

Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------------|--------------|
| 95.00 | VSOCMW-5%O-70%W-25%M | 1.06 |
| 10.00 | Free Oil | 0.14 |
| 0.00 | 30' Gas In Pipe | 0.00 |
| | | |
| | | |

Gas Rates

| | Choke (inches) | Pressure (psig) | Gas Rate (Mc/d) |
|--|----------------|-----------------|-----------------|
| | | | |



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Company

30-12s-21w Trego,KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47305

DST#: 1

ATTN: Marc Downing

Test Start: 2012.03.28 @ 21:50:22

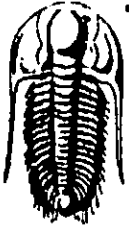
Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3575.00 ft | Diameter: 3.80 inches | Volume: 50.15 bbl | Tool Weight: 2000.00 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: 30.00 ft | Diameter: 2.25 inches | Volume: 0.15 bbl | Weight to Pull Loose: 80000.00 lb |
| | | | <u>Total Volume: 50.30 bbl</u> | Tool Chased 6.00 ft |
| Drill Pipe Above KB: | 26.00 ft | | | String Weight: Initial 50000.00 lb |
| Depth to Top Packer: | 3600.00 ft | | | Final 50000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 20.00 ft | | | |
| Tool Length: | 41.00 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 | | | 3580.00 | |
| Shut In Tool | 5.00 | | | 3585.00 | |
| Hydraulic tool | 5.00 | | | 3590.00 | |
| Packer | 5.00 | | | 3595.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3600.00 | |
| Stubb | 1.00 | | | 3601.00 | |
| Perforations | 1.00 | | | 3602.00 | |
| Recorder | 0.00 | 8366 | Inside | 3602.00 | |
| Recorder | 0.00 | 8289 | Outside | 3602.00 | |
| Perforations | 15.00 | | | 3617.00 | |
| Bullnose | 3.00 | | | 3620.00 | 20.00 Bottom Packers & Anchor |

Total Tool Length: 41.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47305

DST#: 1

ATTN: Marc Downing

Test Start: 2012.03.28 @ 21:50:22

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length: ft

Water Salinity: 33000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------------|---------------|
| 95.00 | VSOCMW-5%O-70%W-25%M | 1.059 |
| 10.00 | Free Oil | 0.140 |
| 0.00 | 30' Gas In Pipe | 0.000 |

Total Length: 105.00 ft Total Volume: 1.199 bbl

Num Fluid Samples: 0

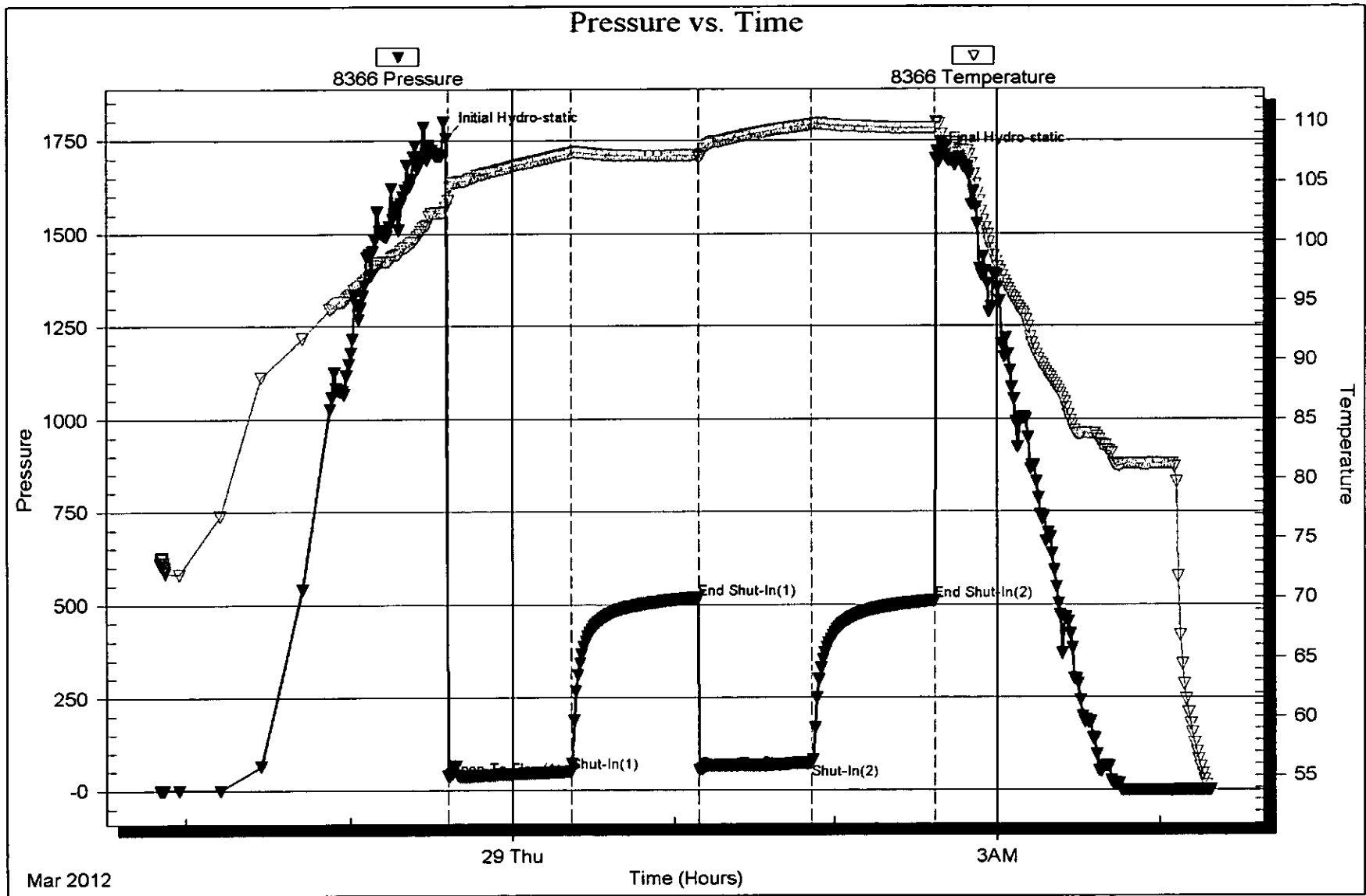
Num Gas Bombs: 0

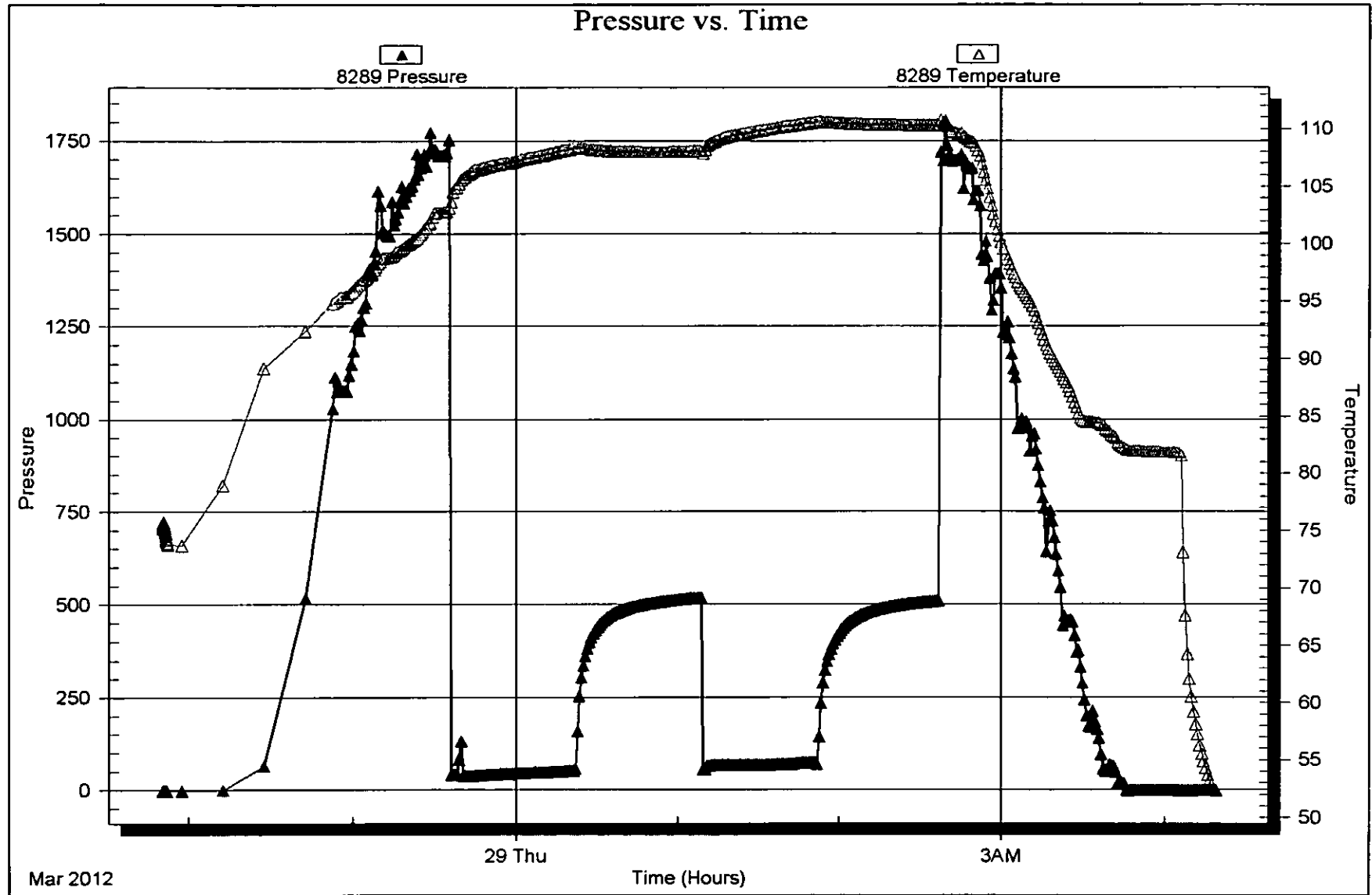
Serial #:

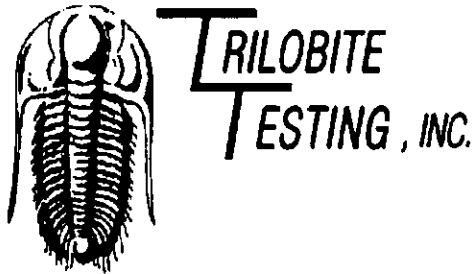
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.03.29 @ 11:57:21

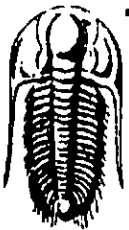
End Date: 2012.03.29 @ 17:36:21

Job Ticket #: 47306 DST #: 2

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

Printed: 2012.04.04 @ 10:42:28

Downing-Nelson Oil Company
30-12s-21w Trego,KS
Patty #1-30
DST # 2
LKC "C"
2012.03.29



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47306

DST#: 2

ATTN: Marc Downing

Test Start: 2012.03.29 @ 11:57:21

GENERAL INFORMATION:

Formation: LKC "C"

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 13:42:06

Time Test Ended: 17:36:21

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Interval: 3630.00 ft (KB) To 3657.00 ft (KB) (TVD)

Total Depth: 3657.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2316.00 ft (KB)

2308.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8366

Inside

Press@RunDepth: 514.06 psig @ 3634.00 ft (KB)

Start Date: 2012.03.29

End Date:

2012.03.29

Start Time: 11:57:23

End Time:

17:36:21

Capacity: 8000.00 psig

Last Calib.: 2012.03.29

Time On Btm: 2012.03.29 @ 13:41:51

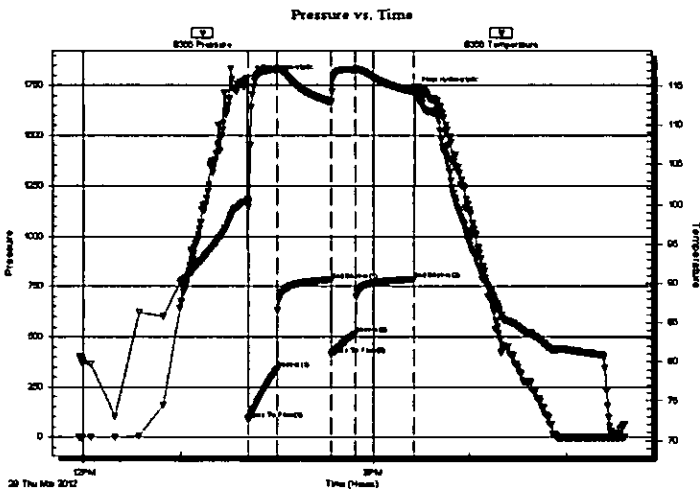
Time Off Btm: 2012.03.29 @ 15:25:36

TEST COMMENT: IFP-Strong Blow, BOB in 2 Mn.

ISI-Dead

FFP-Strong Blow, BOB in 3-1/2 Mn

FSI-Dead



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1783.93 | 100.72 | Initial Hydro-static |
| 1 | 87.75 | 99.65 | Open To Flow (1) |
| 18 | 338.16 | 117.11 | Shut-In(1) |
| 52 | 782.52 | 113.01 | End Shut-In(1) |
| 52 | 409.77 | 112.89 | Open To Flow (2) |
| 67 | 514.06 | 117.10 | Shut-In(2) |
| 104 | 786.30 | 114.32 | End Shut-In(2) |
| 104 | 1722.48 | 114.70 | Final Hydro-static |

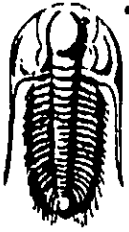
Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 990.00 | Salt Water | 13.61 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47306

DST#: 2

ATTN: Marc Downing

Test Start: 2012.03.29 @ 11:57:21

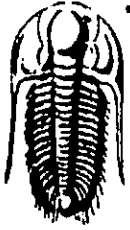
Tool Information

| | | | | |
|---------------------------|--------------------|--------------------------------|-------------------|------------------------------------|
| Drill Pipe: | Length: 3606.00 ft | Diameter: 3.80 inches | Volume: 50.58 bbl | Tool Weight: 2000.00 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: 30.00 ft | Diameter: 2.25 inches | Volume: 0.15 bbl | Weight to Pull Loose: 70000.00 lb |
| | | <u>Total Volume: 50.73 bbl</u> | | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 27.00 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 3630.00 ft | | | Final 64000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 27.00 ft | | | |
| Tool Length: | 48.00 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 | | | 3610.00 | |
| Shut In Tool | 5.00 | | | 3615.00 | |
| Hydraulic tool | 5.00 | | | 3620.00 | |
| Packer | 5.00 | | | 3625.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3630.00 | |
| Stubb | 1.00 | | | 3631.00 | |
| Perforations | 3.00 | | | 3634.00 | |
| Recorder | 0.00 | 8366 | Inside | 3634.00 | |
| Recorder | 0.00 | 8289 | Outside | 3634.00 | |
| Perforations | 20.00 | | | 3654.00 | |
| Bullnose | 3.00 | | | 3657.00 | 27.00 Bottom Packers & Anchor |

Total Tool Length: 48.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47306

DST#: 2

ATTN: Marc Downing

Test Start: 2012.03.29 @ 11:57:21

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: 35000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 990.00 | Salt Water | 13.614 |

Total Length: 990.00 ft Total Volume: 13.614 bbl

Num Fluid Samples: 0

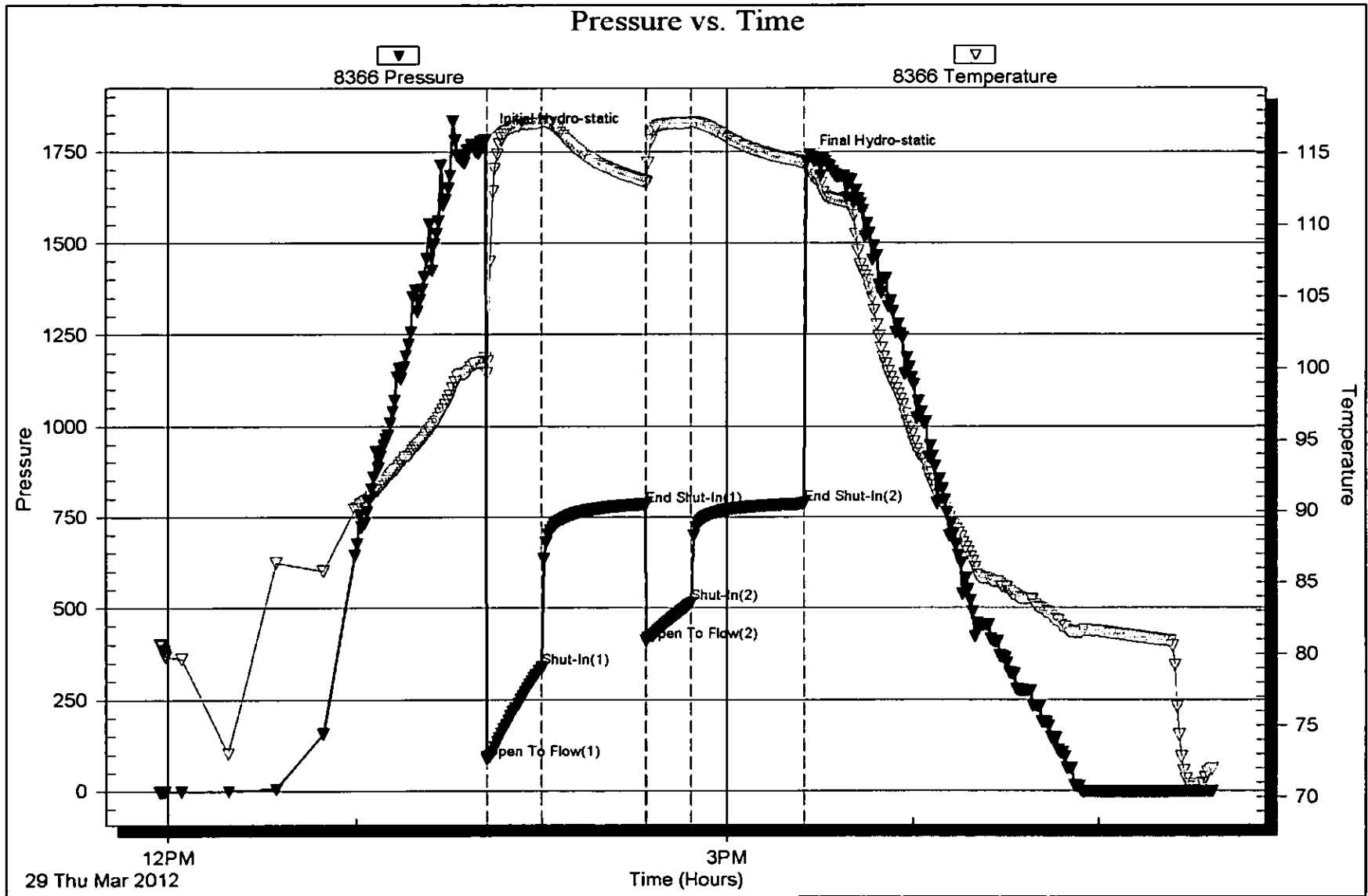
Num Gas Bombs: 0

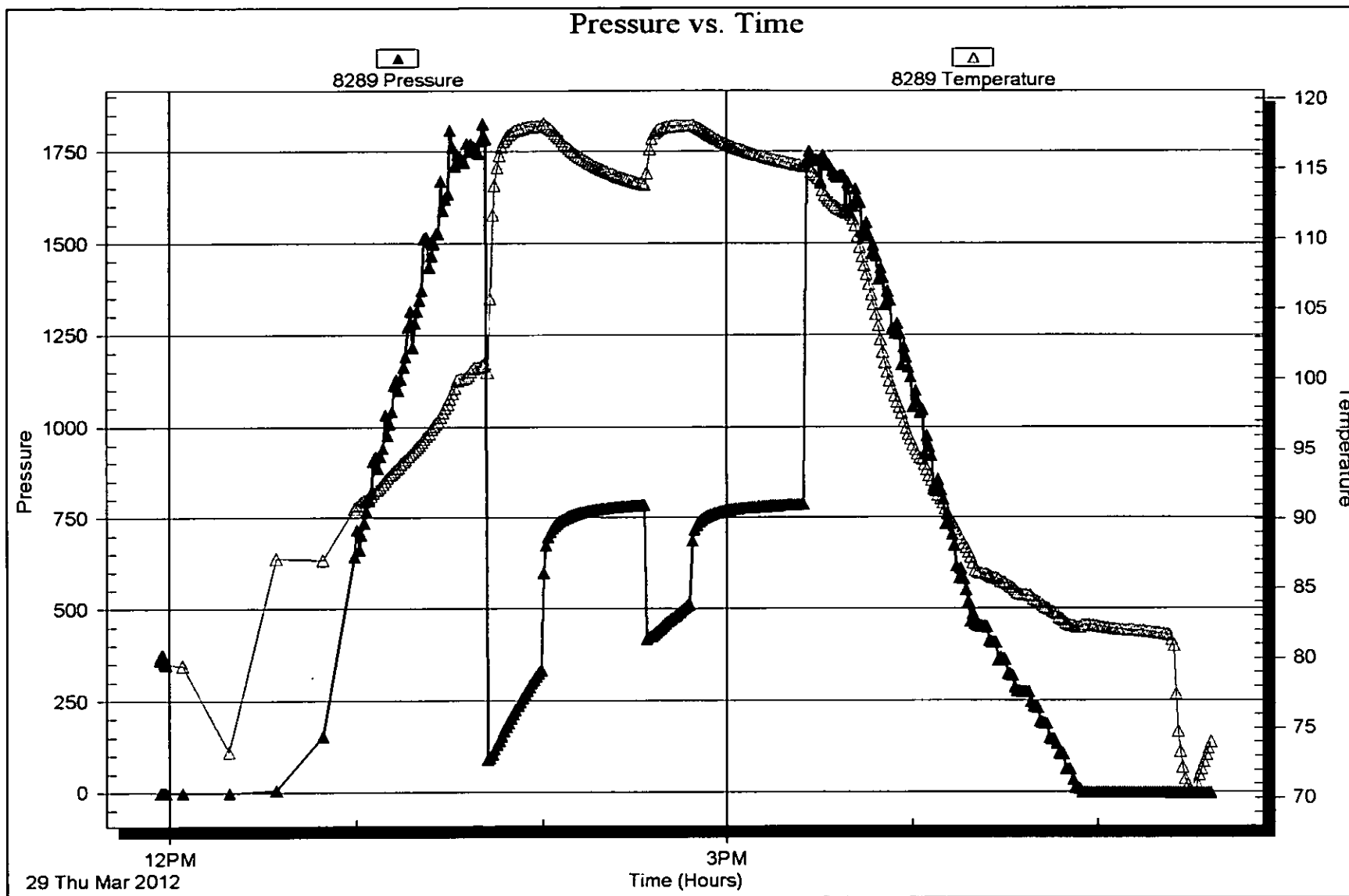
Serial #:

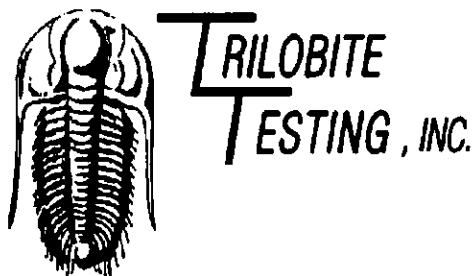
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.03.30 @ 09:13:18

End Date: 2012.03.30 @ 14:52:03

Job Ticket #: 47307 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.04.04 @ 10:41:48

Downing-Nelson Oil Company 30-12s-21w Trego,KS Patty #1-30 DST # 3 LKC "J" 2012.03.30



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47307

DST#: 3

ATTN: Marc Downing

Test Start: 2012.03.30 @ 09:13:18

GENERAL INFORMATION:

Formation: **LKC "J"**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 11:00:33

Time Test Ended: 14:52:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Interval: **3780.00 ft (KB) To 3801.00 ft (KB) (TVD)**

Total Depth: 3801.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2316.00 ft (KB)

2308.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8366

Inside

Press@RunDepth: 45.02 psig @ 3783.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.03.30

End Date: 2012.03.30

Last Calib.: 2012.03.30

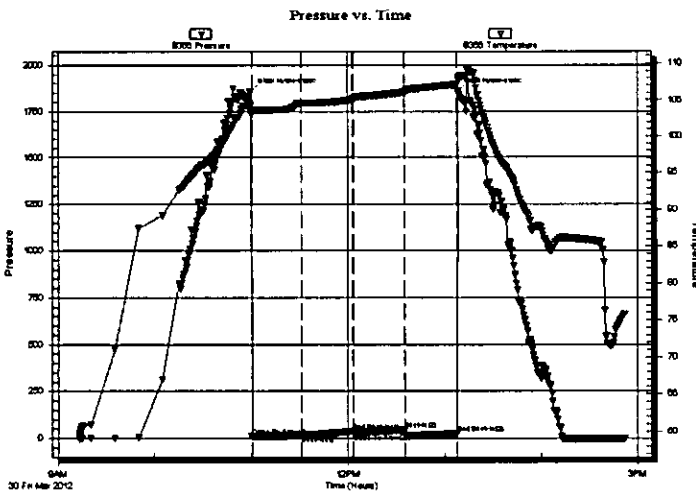
Start Time: 09:13:20

End Time: 14:52:03

Time On Btm: 2012.03.30 @ 11:00:18

Time Off Btm: 2012.03.30 @ 13:08:48

TEST COMMENT: IFF-Weak Surface Blow
ISI-Dead
FFP-Dead
FSI-Dead



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1856.81 | 104.22 | Initial Hydro-static |
| 1 | 9.87 | 103.05 | Open To Flow (1) |
| 31 | 14.90 | 104.52 | Shut-In(1) |
| 63 | 35.98 | 104.99 | End Shut-In(1) |
| 63 | 27.99 | 105.01 | Open To Flow (2) |
| 95 | 45.02 | 106.05 | Shut-In(2) |
| 128 | 25.44 | 107.10 | End Shut-In(2) |
| 129 | 1858.22 | 107.96 | Final Hydro-static |

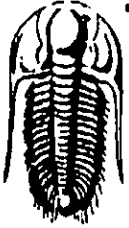
Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|----------------|--------------|
| 10.00 | VSOCM-3%O-97%M | 0.05 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47307

DST#: 3

ATTN: Marc Downing

Test Start: 2012.03.30 @ 09:13:18

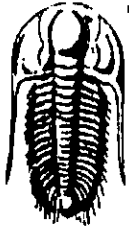
Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|-------------------|------------------------------------|
| Drill Pipe: | Length: 3761.00 ft | Diameter: 3.80 inches | Volume: 52.76 bbl | Tool Weight: 2000.00 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: 30.00 ft | Diameter: 2.25 inches | Volume: 0.15 bbl | Weight to Pull Loose: 65000.00 lb |
| | | Total Volume: | 52.91 bbl | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 32.00 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 3780.00 ft | | | Final 60000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 21.00 ft | | | |
| Tool Length: | 42.00 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 | | | 3760.00 | |
| Shut In Tool | 5.00 | | | 3765.00 | |
| Hydraulic tool | 5.00 | | | 3770.00 | |
| Packer | 5.00 | | | 3775.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3780.00 | |
| Stubb | 1.00 | | | 3781.00 | |
| Perforations | 2.00 | | | 3783.00 | |
| Recorder | 0.00 | 8366 | Inside | 3783.00 | |
| Recorder | 0.00 | 8289 | Outside | 3783.00 | |
| Perforations | 15.00 | | | 3798.00 | |
| Bullnose | 3.00 | | | 3801.00 | 21.00 Bottom Packers & Anchor |

Total Tool Length: 42.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

30-12s-21w Trego,KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47307

DST#: 3

ATTN: Marc Downing

Test Start: 2012.03.30 @ 09:13:18

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: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|----------------|---------------|
| 10.00 | VSOCM-3%O-97%M | 0.049 |

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

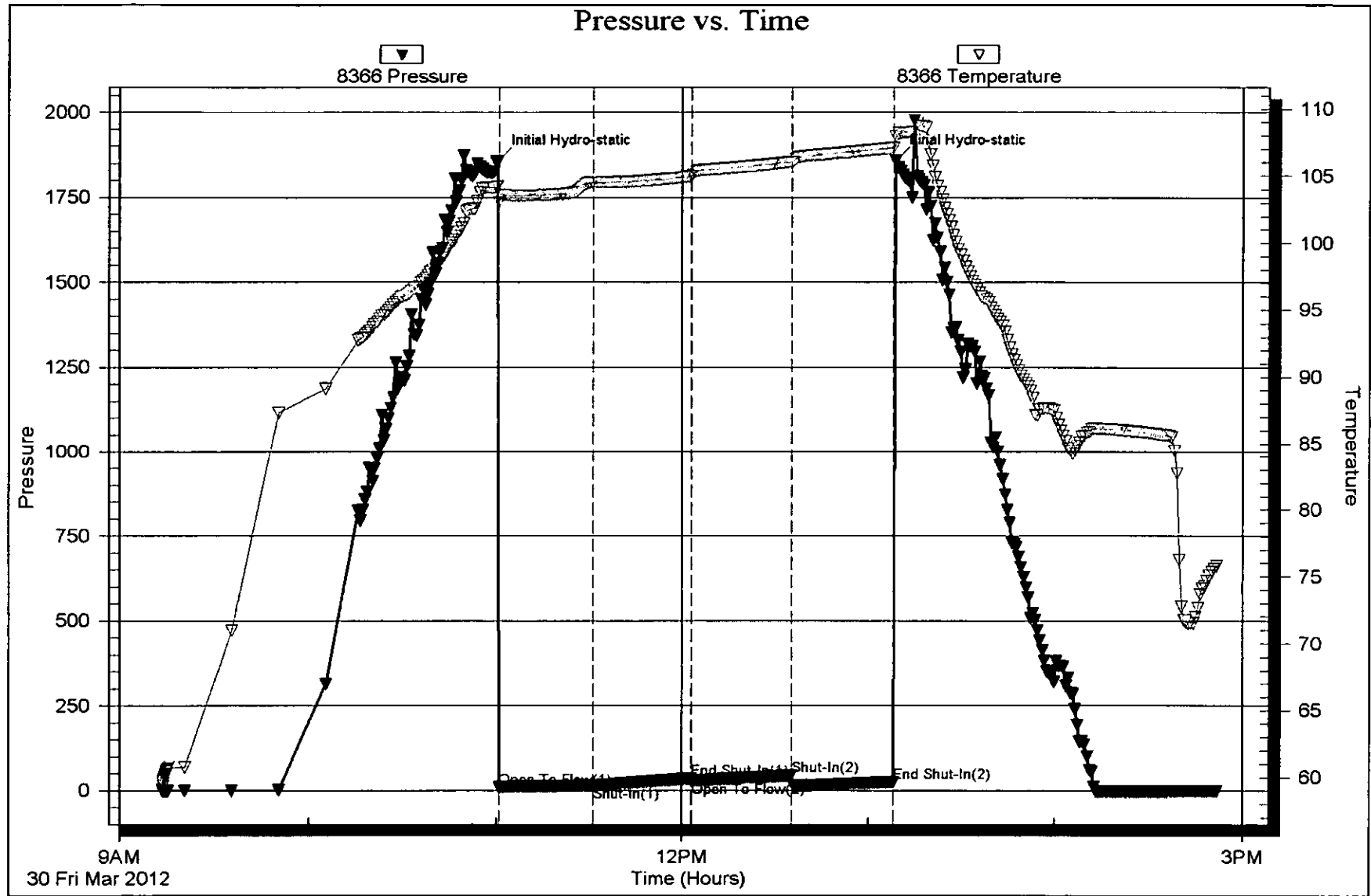
Num Gas Bombs: 0

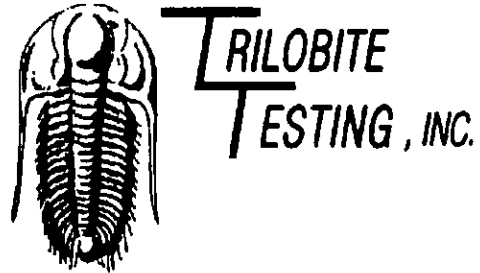
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.03.31 @ 09:29:46

End Date: 2012.03.31 @ 16:18:46

Job Ticket #: 47308 DST #: 4

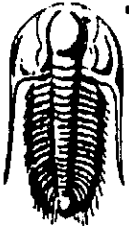
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.04.04 @ 10:40:07

Downing-Nelson Oil Company
30-12s-21w Trego,KS
Patty #1-30
DST # 4
Marmaton
2012.03.31



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47308

DST#: 4

ATTN: Marc Downing

Test Start: 2012.03.31 @ 09:29:46

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: 0.00 ft (KB)

Time Tool Opened: 11:21:01

Time Test Ended: 16:18:46

Test Type: Conventional Bottom Hole (Reset)

Tester: Jason McLemore

Unit No: 54

Interval: **3933.00 ft (KB) To 3965.00 ft (KB) (TVD)**

Total Depth: 3965.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2316.00 ft (KB)

2308.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8366 Inside

Press@RunDepth: 43.48 psig @ 3937.00 ft (KB)

Start Date: 2012.03.31

End Date: 2012.03.31

Start Time: 09:29:48

End Time: 16:18:46

Capacity: 8000.00 psig

Last Calib.: 2012.03.31

Time On Btm: 2012.03.31 @ 11:20:46

Time Off Btm: 2012.03.31 @ 14:32:46

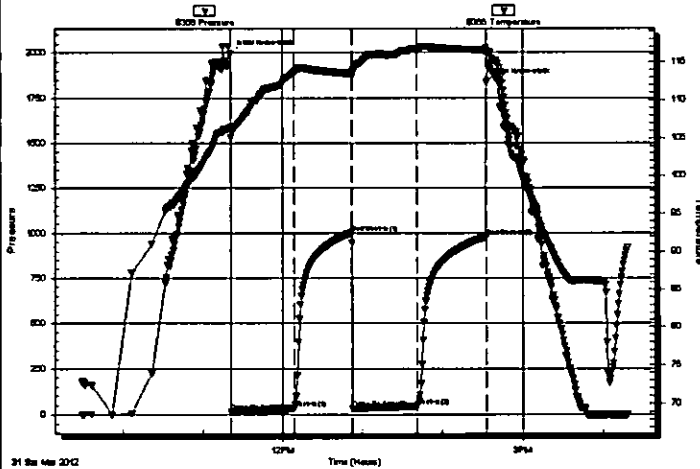
TEST COMMENT: FFP-Weak Blow, Built to 3"

IS-Dead

FFP-Weak Blow, Built to 1-1/2"

FFP-Dead

Pressure vs. Time



PRESSURE SUMMARY

| Time (Mn.) | Pressure (psig) | Temp (deg F) | Annotation |
|------------|-----------------|--------------|----------------------|
| 0 | 1994.87 | 106.38 | Initial Hydro-static |
| 1 | 15.09 | 105.01 | Open To Flow (1) |
| 48 | 31.56 | 113.69 | Shut-In(1) |
| 92 | 1000.35 | 113.52 | End Shut-In(1) |
| 92 | 33.56 | 113.15 | Open To Flow (2) |
| 141 | 43.48 | 116.78 | Shut-In(2) |
| 192 | 976.70 | 116.55 | End Shut-In(2) |
| 192 | 1836.88 | 116.89 | Final Hydro-static |

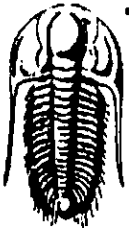
Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|-------------|--------------|
| 60.00 | Muddy Water | 0.57 |
| 10.00 | Free Oil | 0.14 |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47308

DST#: 4

ATTN: Marc Downing

Test Start: 2012.03.31 @ 09:29:46

Tool Information

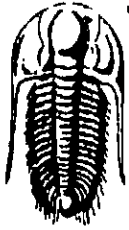
| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3887.00 ft | Diameter: 3.80 inches | Volume: 54.52 bbl | Tool Weight: 2000.00 lb |
| Heavy Wt. Pipe: | Length: 0.00 ft | Diameter: 2.70 inches | Volume: 0.00 bbl | Weight set on Packer: 25000.00 lb |
| Drill Collar: | Length: 30.00 ft | Diameter: 2.25 inches | Volume: 0.15 bbl | Weight to Pull Loose: 65000.00 lb |
| | | | <u>Total Volume: 54.67 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 5.00 ft | | | String Weight: Initial 60000.00 lb |
| Depth to Top Packer: | 3933.00 ft | | | Final 60000.00 lb |
| Depth to Bottom Packer: | ft | | | |
| Interval between Packers: | 32.00 ft | | | |
| Tool Length: | 53.00 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 | | | 3913.00 | |
| Shut In Tool | 5.00 | | | 3918.00 | |
| Hydraulic tool | 5.00 | | | 3923.00 | |
| Packer | 5.00 | | | 3928.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3933.00 | |
| Stubb | 1.00 | | | 3934.00 | |
| Perforations | 3.00 | | | 3937.00 | |
| Recorder | 0.00 | 8366 | inside | 3937.00 | |
| Recorder | 0.00 | 8289 | Outside | 3937.00 | |
| Perforations | 25.00 | | | 3962.00 | |
| Bullnose | 3.00 | | | 3965.00 | 32.00 Bottom Packers & Anchor |

Total Tool Length: 53.00



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Company

30-12s-21w Trego,KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47308

DST#: 4

ATTN: Marc Downing

Test Start: 2012.03.31 @ 09:29:46

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: 27000 ppm

Viscosity: 63.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 5000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|-------------|---------------|
| 60.00 | Muddy Water | 0.568 |
| 10.00 | Free Oil | 0.140 |

Total Length: 70.00 ft Total Volume: 0.708 bbl

Num Fluid Samples: 0

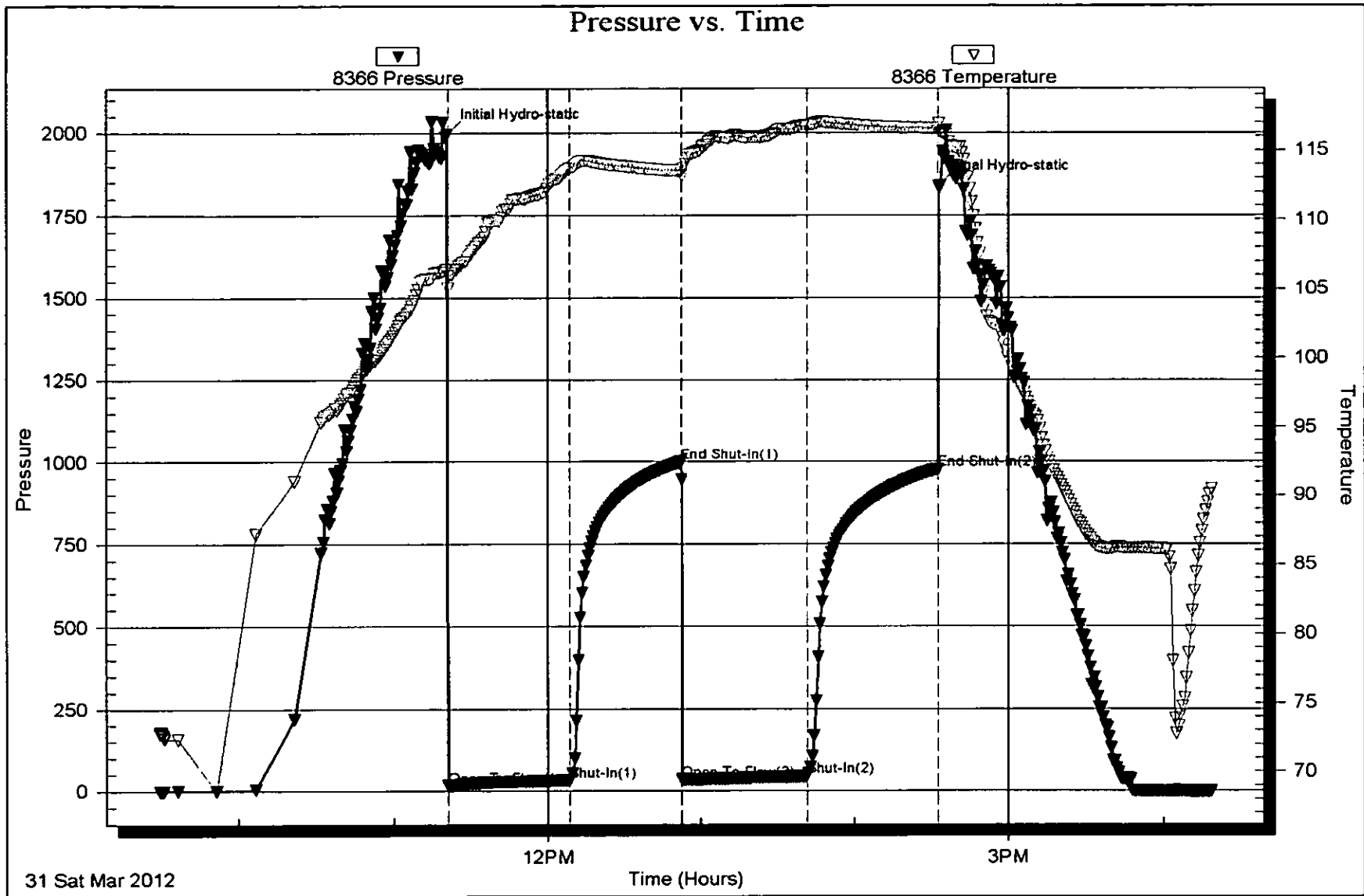
Num Gas Bombs: 0

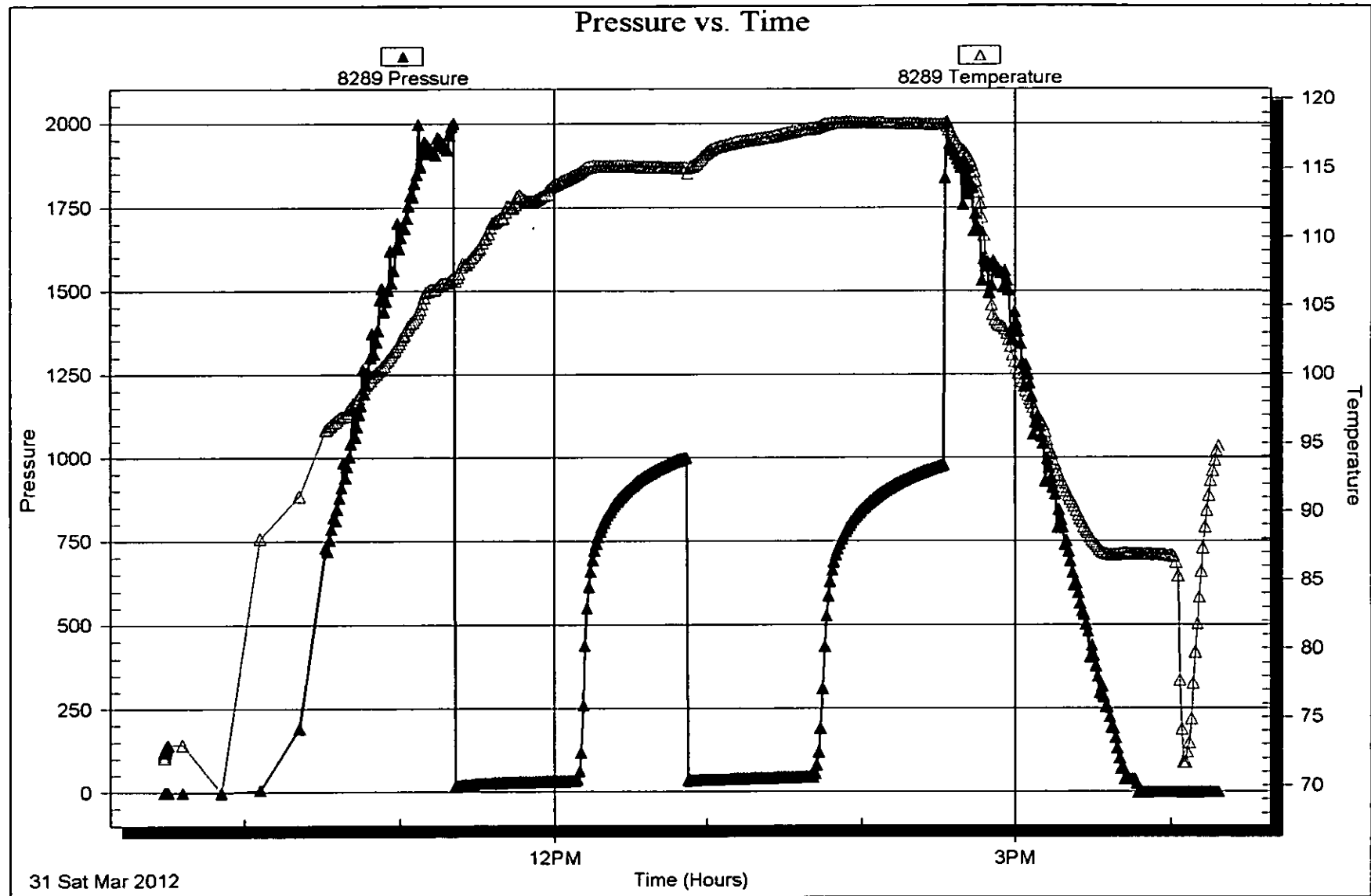
Serial #:

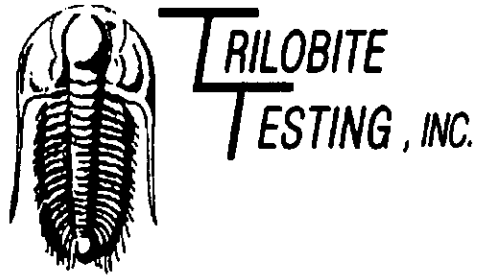
Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Downing-Nelson Oil Company**

PO Box 1019
Hays, KS.67601

ATTN: Marc Downing

Patty #1-30

30-12s-21w Trego,KS

Start Date: 2012.04.01 @ 10:24:35

End Date: 2012.04.01 @ 18:30:35

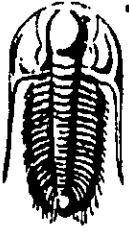
Job Ticket #: 47309 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.04.04 @ 10:39:23



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Downing-Nelson Oil Company

30-12s-21w Trego, KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47309

DST#: 5

ATTN: Marc Downing

Test Start: 2012.04.01 @ 10:24:35

GENERAL INFORMATION:

Formation: **D-E**

Deviated: **No** Whipstock: **0.00 ft (KB)**

Time Tool Opened: **13:00:50**

Time Test Ended: **18:30:35**

Test Type: **Conventional Straddle (Reset)**

Tester: **Jason McLemore**

Unit No: **54**

Interval: **3668.00 ft (KB) To 3690.00 ft (KB) (TVD)**

Total Depth: **4061.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2316.00 ft (KB)**

2308.00 ft (CF)

KB to GR/CF: **8.00 ft**

Serial #: 8366

Inside

Press@RunDepth: **79.96 psig @ 3671.00 ft (KB)**

Start Date: **2012.04.01**

End Date: **2012.04.01**

Start Time: **10:24:37**

End Time: **18:30:35**

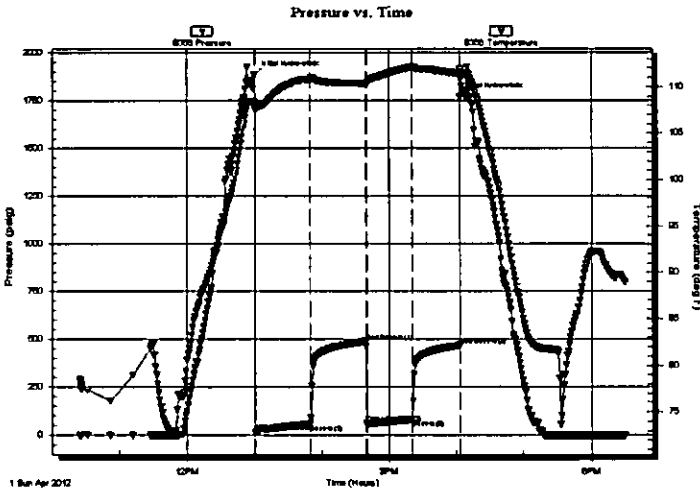
Capacity: **8000.00 psig**

Last Calib.: **2012.04.01**

Time On Btm: **2012.04.01 @ 13:00:35**

Time Off Btm: **2012.04.01 @ 16:03:20**

TEST COMMENT: IFF-Fair Blow , Built to 7-1/2"
IS-Dead
FFP-Weak Blow , Built to 3"
FS-Dead



PRESSURE SUMMARY

| Time (Min.) | Pressure (psig) | Temp (deg F) | Annotation |
|-------------|-----------------|--------------|----------------------|
| 0 | 1886.62 | 108.38 | Initial Hydro-static |
| 1 | 13.35 | 107.56 | Open To Flow (1) |
| 49 | 56.85 | 110.76 | Shut-in(1) |
| 98 | 487.76 | 110.35 | End Shut-in(1) |
| 99 | 58.12 | 110.23 | Open To Flow (2) |
| 140 | 79.96 | 112.14 | Shut-in(2) |
| 183 | 467.60 | 111.51 | End Shut-in(2) |
| 183 | 1771.74 | 111.91 | Final Hydro-static |

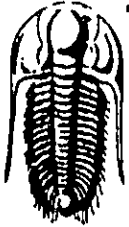
Recovery

| Length (ft) | Description | Volume (bbl) |
|-------------|------------------------|--------------|
| 150.00 | Muddy Water W/Oil Scum | 1.83 |
| | | |
| | | |
| | | |
| | | |

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing-Nelson Oil Company

30-12s-21w Trego,KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47309

DST#: 5

ATTN: Marc Downing

Test Start: 2012.04.01 @ 10:24:35

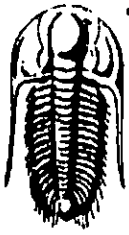
Tool Information

| | | | | |
|---------------------------|--------------------|-----------------------|--------------------------------|------------------------------------|
| Drill Pipe: | Length: 3639.00 ft | Diameter: 3.80 inches | Volume: 51.05 bbl | Tool Weight: 2000.00 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: 30.00 ft | Diameter: 2.25 inches | Volume: 0.15 bbl | Weight to Pull Loose: 70000.00 lb |
| | | | <u>Total Volume: 51.20 bbl</u> | Tool Chased 0.00 ft |
| Drill Pipe Above KB: | 22.00 ft | | | String Weight: Initial 64000.00 lb |
| Depth to Top Packer: | 3668.00 ft | | | Final 67000.00 lb |
| Depth to Bottom Packer: | 3690.00 ft | | | |
| Interval between Packers: | 22.00 ft | | | |
| Tool Length: | 411.00 ft | | | |
| Number of Packers: | 3 | Diameter: 6.75 inches | | |

Tool Comments:

| Tool Description | Length (ft) | Serial No. | Position | Depth (ft) | Accum. Lengths |
|------------------|-------------|------------|----------|------------|--------------------------------|
| Change Over Sub | 1.00 | | | 3648.00 | |
| Shut In Tool | 5.00 | | | 3653.00 | |
| Hydraulic tool | 5.00 | | | 3658.00 | |
| Packer | 5.00 | | | 3663.00 | 21.00 Bottom Of Top Packer |
| Packer | 5.00 | | | 3668.00 | |
| Stubb | 1.00 | | | 3669.00 | |
| Perforations | 2.00 | | | 3671.00 | |
| Recorder | 0.00 | 8366 | Inside | 3671.00 | |
| Recorder | 0.00 | 8289 | Outside | 3671.00 | |
| Perforations | 15.00 | | | 3686.00 | |
| Blank Off Sub | 1.00 | | | 3687.00 | |
| Blank Spacing | 3.00 | | | 3690.00 | 22.00 Tool Interval |
| Packer | 1.00 | | | 3691.00 | |
| Stubb | 1.00 | | | 3692.00 | |
| Perforations | 20.00 | | | 3712.00 | |
| Change Over Sub | 1.00 | | | 3713.00 | |
| Recorder | 0.00 | 8789 | Below | 3713.00 | |
| Blank Spacing | 341.00 | | | 4054.00 | |
| Change Over Sub | 1.00 | | | 4055.00 | |
| Bullnose | 3.00 | | | 4058.00 | 368.00 Bottom Packers & Anchor |

Total Tool Length: 411.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Company

30-12s-21w Trego,KS

PO Box 1019
Hays, KS.67601

Patty #1-30

Job Ticket: 47309

DST#: 5

ATTN: Marc Dow ning

Test Start: 2012.04.01 @ 10:24:35

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:

32000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

| Length ft | Description | Volume bbl |
|--------------|------------------------|---------------|
| 150.00 | Muddy Water W/Oil Scum | 1.831 |

Total Length: 150.00 ft

Total Volume: 1.831 bbl

Num Fluid Samples: 0

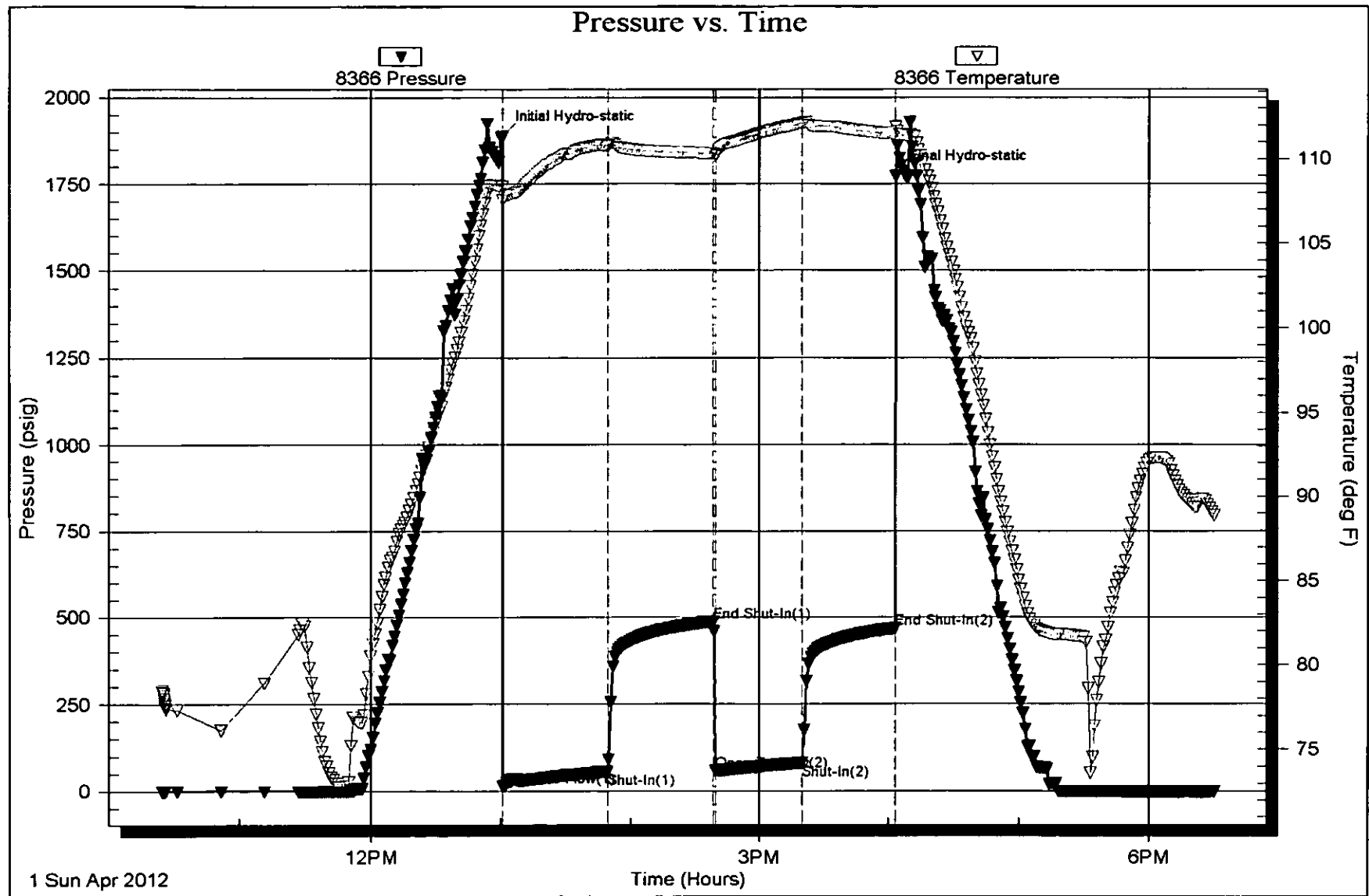
Num Gas Bombs: 0

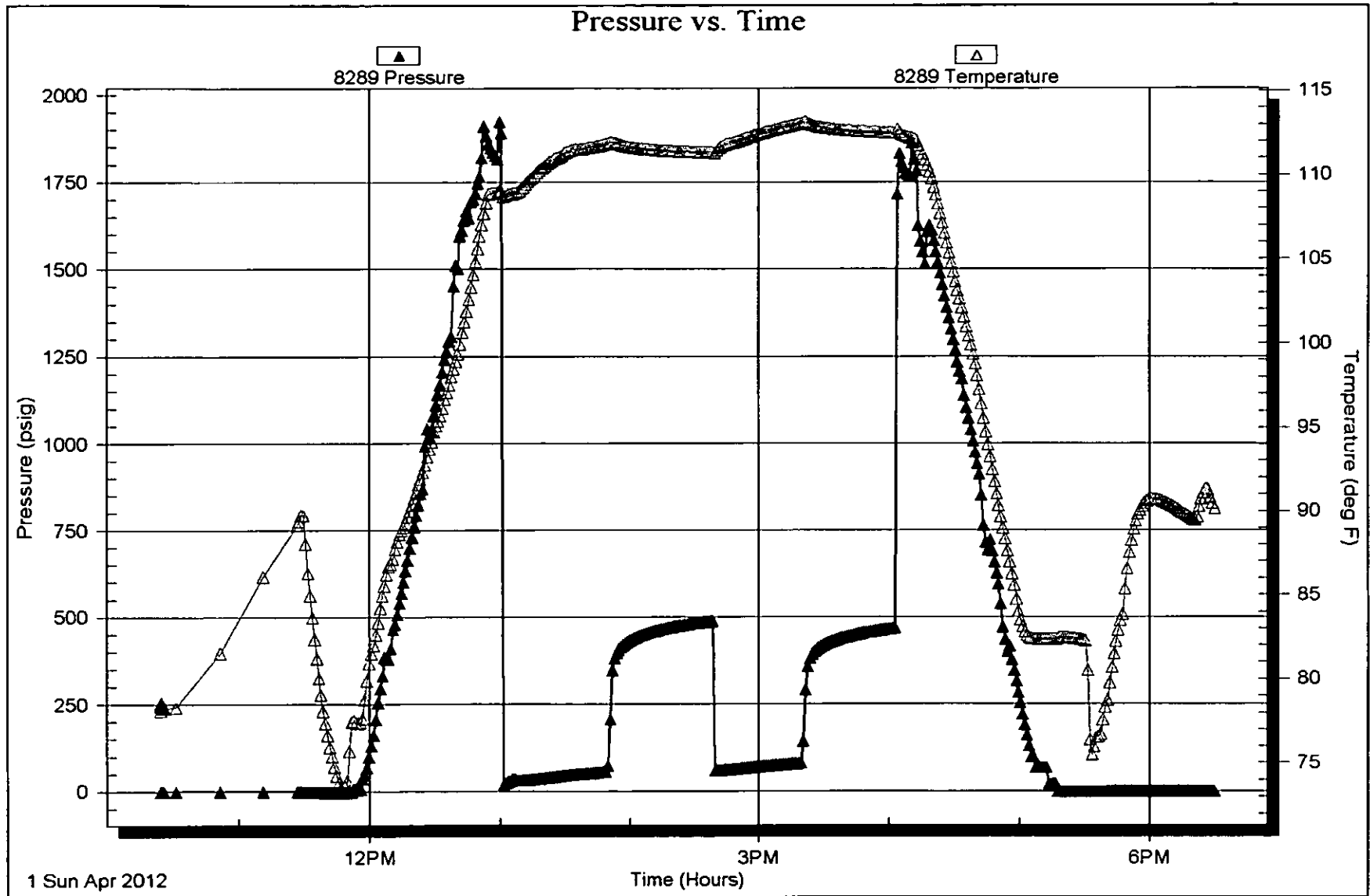
Serial #:

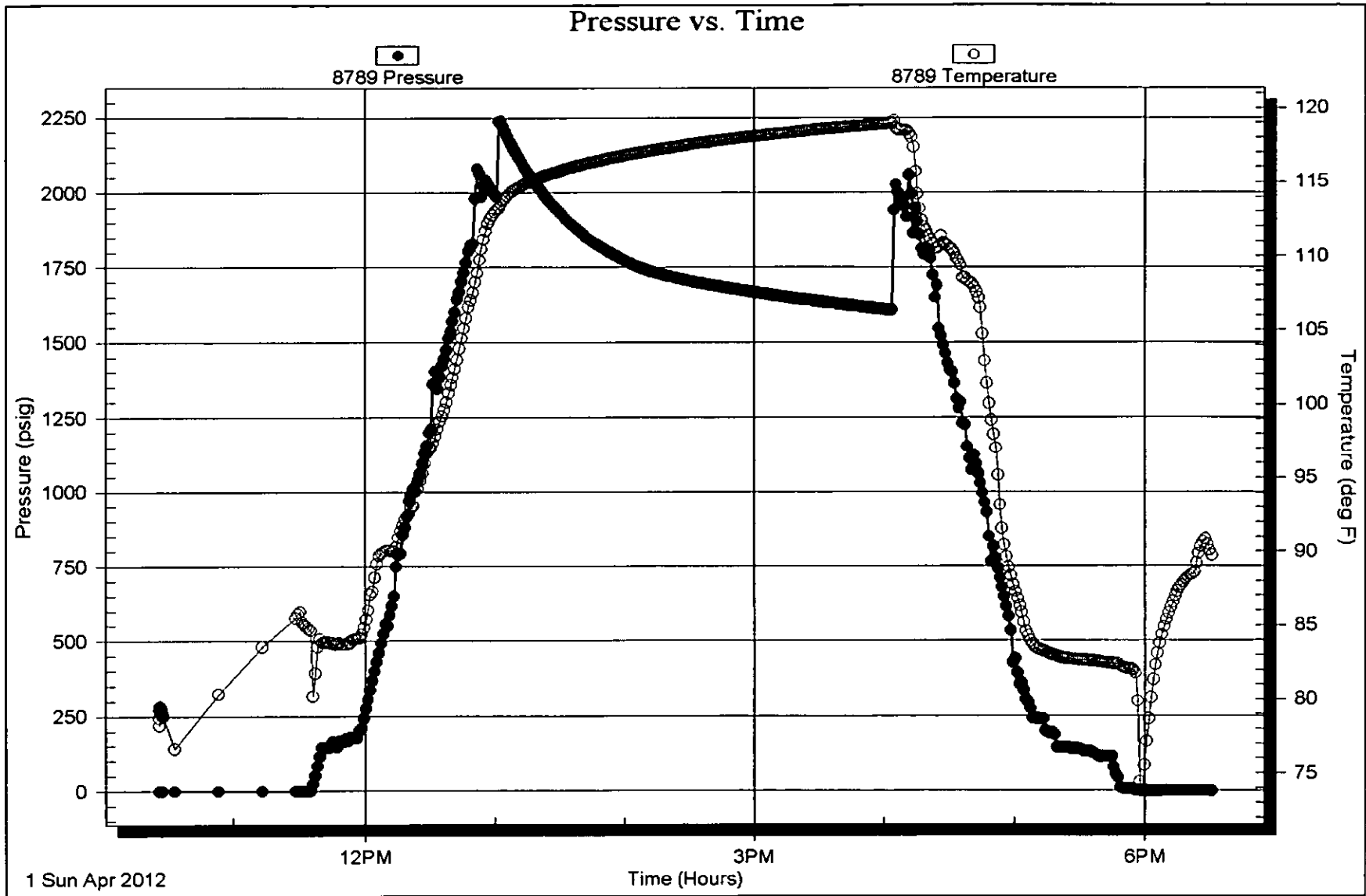
Laboratory Name:

Laboratory Location:

Recovery Comments:









TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

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APR 02 2012

Test Ticket

NO. 47305

Well Name & No. Patty #1-30 Test No. 1 Date 3-28-12
 Company Downing & Nelson Oil Company Elevation 2316 KB 2308 GL
 Address PO Box 1019, Hays, Ks. 67601
 Co. Rep/Geo. Marc Downing Rig Discovery #4
 Location: Sec. 30 Twp. 12S Rge. 21W Co. Trego State KS

Interval Tested 3600-3620 Zone Tested LKC 'A'
 Anchor Length 20 Drill Pipe Run 3575 Mud Wt. 8.9
 Top Packer Depth 3595 Drill Collars Run 30 Vis 47
 Bottom Packer Depth 3600 Wt. Pipe Run 0 WL 8.8
 Total Depth 3620 Chlorides 1,000 ppm System LCM 1 1/2 #
 Blow Description IFP - Fair Blow, Built to 6"
ISI - Dead
IFP - Fair Blow, Built to 5 1/2"
ISI - Dead

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|-----------------|------|----------|-----------|-----------|
| <u>10</u> | <u>Free Oil</u> | | | | |
| <u>95</u> | <u>USOC MW</u> | | <u>5</u> | <u>70</u> | <u>25</u> |
| | | | | | |
| | | | | | |
| | | | | | |

Rec Total 105 BIT 110° Gravity 38 API RW 310 @ 53 °F Chlorides 33,000 ppm
 (A) Initial Hydrostatic 1755 Test 1125' T-On Location 19:50
 (B) First Initial Flow 38 Jars _____ T-Started 21:48
 (C) First Final Flow 50 Safety Joint _____ T-Open 23:34
 (D) Initial Shut-In 516 Circ Sub _____ T-Pulled 2:34
 (E) Second Initial Flow 54 Hourly Standby _____ T-Out 4:26
 (F) Second Final Flow 72 Mileage 62 rt 86.80 Comments _____
 (G) Final Shut-In 509 Sampler _____
 (H) Final Hydrostatic 1699 Straddle _____
 Ruined Shale Packer _____

Initial Open 45 Shale Packer _____
 Initial Shut-In 45 Extra Packer _____
 Final Flow 45 Extra Recorder _____
 Final Shut-In 45 Day Standby _____
 Accessibility _____
 Sub Total 1211.80 Sub Total 1211.80
 Total 0 MP/DST Disc'l _____

Approved By _____ Our Representative Cason
 Trilobite Testing Inc. shall not be liable for damaged or 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.



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Test Ticket

NO. 47306

Well Name & No. Patty #1-30 Test No. 2 Date 3-29-12
 Company Downing & Nelson Oil Company, Inc Elevation 2316 KB 2308 GL
 Address PO Box 1019, Hays, KS. 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #7
 Location: Sec. 30 Twp. 12s Rge. 2 W Co. Trego State KS

Interval Tested 3630-3657 Zone Tested 'C'
 Anchor Length 3627 Drill Pipe Run 3606 Mud Wt. 8.7
 Top Packer Depth 3625 Drill Collars Run 30 Vis 47
 Bottom Packer Depth 3630 Wt. Pipe Run 0 WL 8.5
 Total Depth 3657 Chlorides 1,000 ppm System LCM 1 1/2
 Blow Description IFF - Strong. BOB in 2 min.
ISI - Dead
FFP - Strong. BOB in 3 1/2 min.
FSI - Dead

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|---------------------------|------|------|--------|------|
| <u>990</u> | <u>Feet of Salt Water</u> | | | | |
| 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 |

Rec Total 990 BHT 115° Gravity API RW - 15.7 @ 73 °F Chlorides 35,000 ppm
 (A) Initial Hydrostatic 1784 Test 1125' T-On Location 11:36
 (B) First Initial Flow 88 Jars _____ T-Started 11:55
 (C) First Final Flow 338 Safety Joint _____ T-Open 13:41
 (D) Initial Shut-In 783 Circ Sub _____ T-Pulled 15:11
 (E) Second Initial Flow 410 Hourly Standby _____ T-Out 17:45
 (F) Second Final Flow 514 Mileage 62 RT 86.80 Comments _____
 (G) Final Shut-In 786 Sampler _____
 (H) Final Hydrostatic 1722 Straddle _____
 Shale Packer _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 15
 Initial Shut-In 30
 Final Flow 15
 Final Shut-In 30
 Sub Total 0
 Total 1211.80
 MP/DST Disc'l _____

Approved By _____ Our Representative Jane McLawton *Thank you*

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Test Ticket

NO. 47307

Well Name & No. Patty #1-30 Test No. 3 Date 3-30-12
 Company Downing + Nelson Oil Company, Inc. Elevation 2316 KB 2308 GL
 Address PO Box 1019, Hays, KS. 67601
 Co. Rep / Geo. Mara Downing Itig Discovery #4
 Location: Sec. 30 Twp. 12s Rge. 21w Co. Trego State Ks

Interval Tested 3780-3801 Zone Tested 'J'
 Anchor Length 21' Drill Pipe Run 3761 Mud Wt. 9.0
 Top Packer Depth 3775 Drill Collars Run 30 Vis 46
 Bottom Packer Depth 3780 Wt. Pipe Run 8.8
 Total Depth 3801 Chlorides 4,000 ppm System LCM 1 1/2
 Blow Description IFA, Weak surface Blow
ISI - Dead
FFP - Dead
FSI - Dead

| Rec | Feet of | %gas | %oil | %water | %mud |
|------------|--------------|----------|------|-----------|------|
| <u>10'</u> | <u>USDCM</u> | <u>3</u> | | <u>97</u> | |
| 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 |

Rec Total 10 BIIT Gravity API RW @ F Chlorides ppm
 (A) Initial Hydrostatic 1857 1 1/2 Test 1125 T-On Location 8:56
 (B) First Initial Flow 10 Jars T-Started 9:11
 (C) First Final Flow 15 Safety Joint T-Open 10:00
 (D) Initial Shut-In 36 Circ Sub T-Pulled 13:00
 (E) Second Initial Flow 28 Hourly Standby T-Out 15:00
 (F) Second Final Flow 45 Mileage BART 80.80 Comments _____
 (G) Final Shut-In 25 Sampler _____
 (H) Final Hydrostatic 1858 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1211.80 MP/DST Disc'l _____
 Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30

Approved By _____ Our Representative Jason M. Jensen

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Thank you



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Test Ticket

NO. 47308

Well Name & No. Patty #1-30 Test No. 4 Date 3-31-12
 Company Downing Nelson Oil Company Elevation 2316 KB 2308 GL
 Address PO Box 1019, Hays, KS, 67601
 Co. Rep / Geo. Marc Downing Rig Discovery # 4
 Location: Sec. 30 Twp. 12s Rge. 21w Co. Trego State KS

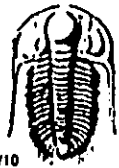
Interval Tested 3933-3965 Zone Tested Marmaton
 Anchor Length 32' Drill Pipe Run 3887 Mud Wt. 9.2
 Top Packer Depth 3928 Drill Collars Run 30 Vis 6.3
 Bottom Packer Depth 3933 Wt. Pipe Run 0 WL 8.0
 Total Depth 3965 Chlorides 5,000 ppm System LCM 1 1/2 #
 Blow Description IFP - Weak Blow, Built to 3'
FSI - Dead
FFP - Weak Blow, Built to 1 1/2"
FSI - Dead

| Rec | Feet of | %gas | %oil | %water | %mud |
|-----------|----------------------------|------|-----------|-----------|------|
| <u>10</u> | <u>Feet of Free Oil</u> | | | | |
| <u>60</u> | <u>Feet of Muddy Water</u> | | <u>65</u> | <u>35</u> | |
| | | | | | |
| | | | | | |
| | | | | | |

Rec Total 70 BIT Gravity 34 API RW 210 @ 88 °F Chlorides 27,000 ppm
 (A) Initial Hydrostatic 1995 Test 1125' T-On Location 9:05
 (B) First Initial Flow 15 Jars _____ T-Started 9:27
 (C) First Final Flow 32 Safety Joint _____ T-Open 11:20
 (D) Initial Shut-In 1000 Circ Sub _____ T-Pulled 14:20
 (E) Second Initial Flow 34 Hourly Standby _____ T-Out 16:20
 (F) Second Final Flow 43 Mileage WART 86.80 Comments _____
 (G) Final Shut-In 977 Sampler _____
 (H) Final Hydrostatic 1837 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1211.80
 Final Flow 45 Accessibility _____ MP/DST Disc'l _____
 Final Shut-In 45 Sub Total 1211.80

Approved By _____ Our Representative Jason Eric Jensen

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BY: _____

Test Ticket

NO. 47309

Well Name & No. Patty #1-30 Test No. 5 Date 4-1-12
 Company Downing Nelson Oil Company Elevation 2316 KB 2308 GL
 Address PO Box 1019, Hays, Ks. 67601
 Co. Rep / Geo. Marc Downing Rig Discovery #4
 Location: Sec. 30 Twp. 12s Rge. 2 E Co. Trego State KS

Interval Tested 3668-3690 Zone Tested D-E
 Anchor Length 22' Drill Pipe Run 3639 Mud Wt. 9.2
 Top Packer Depth 3663 Drill Collars Run 30 Vis 6.3
 Bottom Packer Depth 3668 start @ 3690 Wt. Pipe Run 0 Wt. 8.0
 Total Depth 4061 Chlorides 5,000 ppm System LCM 1 1/2"
 Blow Description I.F.P. - Fair Blow, Built to 7 1/2"
ISI - Dead
F.F.P. - Weak Blow, Built to 3"
F.S.I. - Dead

| Rec | Foot of | %gas | %oil | %water | %mud |
|------------|--------------------------------|------|------|--------|------|
| <u>150</u> | <u>Muddy water, w/oil scum</u> | | | | |
| Rec | Foot of | %gas | %oil | %water | %mud |
| Rec | Foot of | %gas | %oil | %water | %mud |
| Rec | Foot of | %gas | %oil | %water | %mud |
| Rec | Foot of | %gas | %oil | %water | %mud |

Rec Total 150 BIT Gravity API RW .170 @ 90 °F Chlorides 32,000 ppm
 (A) Initial Hydrostatic 1887 4 Test 1225 T-On Location 8:55
 (B) First Initial Flow 13 Jars T-Started 10:22
 (C) First Final Flow 57 Safety Joint T-Open 13:00
 (D) Initial Shut-In 488 Circ Sub T-Pulled 16:00
 (E) Second Initial Flow 58 Hourly Standby T-Out 18:36
 (F) Second Final Flow 80 Mileage 62 Rt 86.80 Comments _____
 (G) Final Shut-In 468 Sampler _____
 (H) Final Hydrostatic 1772 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1911.80
 Accessibility _____ MP/DST Disc't _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45
 Sub Total 1911.80

Approved By _____ Our Representative Jason Mc Loman

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Thank you