KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1070986

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:

- [x] New Well [ ] Re-Entry [ ] Workover
- [x] 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 #:

12/08/2011	12/14/2011	12/15/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-051-26229-00-00
Spot Description:
NW - SE - SW - SE Sec. 12 Twp. 14 S. R. 19 [ ] East [x] West
420 Feet from [ ] North / [x] South Line of Section
1800 Feet from [x] East / [ ] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[ ] NE [ ] NW [x] SE [ ] SW
County: Ellis
Lease Name: Verna Herl Well #: 2-12
Field Name: Ridge Hill
Producing Formation: Arbuckle
Elevation: Ground: 2144 Kelly Bushing: 2152
Total Depth: 3850 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 222 Feet
Multiple Stage Cementing Collar Used? [x] Yes [ ] No
If yes, show depth set: 1377 Feet
If Alternate II completion, cement circulated from: 1377
feet depth to: 0 w/ 130 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 17000 ppm Fluid volume: 960 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: Cla-Mar Oil Company
Lease Name: Dechant License #: 6509
Quarter SW Sec. 17 Twp. 14 S. R. 18 [ ] East [x] West
County: Ellis Permit #: D24904

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:
- [x] Wireline Log Received
- [x] Geologist Report Received
- [ ] UIC Distribution

ALT [ ] I [x] II [ ] III Approved by: Deanna Garrison Date: 02/08/2012

Side Two

1070986

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Verna Herl Well #: 2-12

Sec. 12 Twp. 14 S. R. 19 ☐ East ☑ West County: Ellis

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 (Attach Additional Sheets)	☑ Yes	☐ No
Samples Sent to Geological Survey	☐ Yes	☑ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Electric Log Submitted Electronically (If no, Submit Copy)	☑ Yes	☐ No

List All E. Logs Run:
Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ 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 Pipe	12.25	8.625	23	222.29	Common	150	2% Gel & 3% CC
Production String	7.875	5.5	14	3849	EA/2	150	

ADDITIONAL CEMENTING / SQUEEZE RECORD

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

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4	3493' to 3496'	250 gallons 15% Mud Acid	3493' to 3496
4	3475' to 3479'	250 gallons 15% Mud Acid	3475' to 3479
4	3577' to 3580'	250 gallons 15% Mud Acid	3598' to 3602 & 3609' to
4	3598' to 3602 & 3609' to 3611'	250 gallons 15% Mud Acid	3577' to 3580
4	3619' to 3621'	2250 gallons 15% NE Acid	3577' to 3580', 3598' to 3

TUBING RECORD: Size:	Set At:	Packer At:	Liner Run:
2.375	3773		☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR.	Producing Method:
01/27/2012	☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	8	0	30		

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease (If vented, Submit ACO-18.)	☐ Open Hole ☑ Perf. ☐ Dually Comp. (Submit ACO-5) ☐ Commingled (Submit ACO-4) ☐ Other (Specify)	

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Verna Herl 2-12
Doc ID	1070986

All Electric Logs Run

Micro
Sonic
Dual Indcution
Compensated Density / Neutron

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Verna Herl 2-12
Doc ID	1070986

Tops

Name	Top	Datum
Top Anhydrite	1405'	+747
Base Anhydrite	1446'	+706
Topeka	3151'	-999
Heebner	3400'	-1248
Toronto	3420'	-1268
LKC	3450'	-1298
BKC	3675'	-1523
Arbuckle	3774'	-1622

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 092
Cell 785-324-1041

Date	Sec.	Twp.	Range	County	State	On Location	Finish
12-8-11	12	14	19	Ellis	KS		10:45 P.M.

Lease Vering Heirl Well No. Location Hays 2s 2 1/2w 1 1/4n

Contractor L.D. Drilling #3
Type Job Surface
Hole Size 12 1/4 T.D. 223
Csg. 8 5/8 Depth 222
Tbg. Size Depth
Tool Depth
Cement Left in Csg. 15' Shoe Joint
Meas Line Displace 13 BBL

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.
Charge To Downing / Nelson
Street
City State
The above was done to satisfaction and supervision of owner agent or contractor.
Cement Amount Ordered 150 com 3% cc 2% gel

EQUIPMENT

Pumptrk 9 No. Cementer Craig
Helper
Bulktrk No. Driver Paul
Driver
Bulktrk 8 No. Driver
Driver Carl

JOB SERVICES & REMARKS

Remarks:
Rat Hole
Mouse Hole
Centralizers
Baskets
D/V or Port Collar
8 5/8 on bottom. Est Circulation
Mix 150 sk + Displace
Cement Circulated

Common	150
Poz. Mix	
Gel.	3
Calcium	5
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	158
Mileage	

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Surface
Mileage	5
Tax	
Discount	
Total Charge	

X Signature John Dowling

JOB LOG — **SWIFT Services, Inc.** — DATE 12-15-11 — PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Downing-Nelson	2-12	Verna Herl	Cement 2-Stage L.S.	20121

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	TD-3850' DESCRIPTION OF OPERATION AND MATERIALS
	1645							On location w/ Float Equip - Rig change over to run casing LD-RH/MH
	1750							Start 5½" casing to 3850'
								Insert Float Shoe w/ Auto-Fill
								D.V. L.D. Baffle - SJ-21' @ 3828 = 93½ BBL
								Cent - 1-3-5-7-9-11-58
								Cement Basket #58
								D.V #59 collar @ 1378' = 33½ BBL
								Drop Ball up Ball 5 Jts ant
	1915							Fin run casing
	1930							Start Cir / Rotate Casing
	2000							Fin cir - Hook up for 1st Stage
		5	12				350	Pump 500 gal Mud Flush
		5½	20 (32)				350	Pump 20 BBL KCL flush
		4					300	Start 150 sks EA-2 cmt
			36				Vac	Fin cmt - Wash out Pump & Lines
	2020	9						Drop D.V. L.D. Plug - Start Disp H2O
		8	60				300	Start 15 BBL Mud
		7	75				400	Start KCL flush for Top stage
	2035	0	93½				800/1500	Plug Down - Held - Release & Held.
	2040							Drop D.V. opening tool
								Plug RH - 30 sks SMD MH 15 sks SMD
	2055	0/6	2				1200/650	Open D.V - KCL flush 2 BBL - 2nd Stage
		5½					250	Start 130 sks SMD cmt.
	2115		75				~~Vac~~	Fin cmt - Drop D.V. Closing Plug
		6					250	Start Disp (33½ BBL)
		5½	15				350	
		5½	20				400	cmt cir to Pit
	2130		33½				450/1500	Plug Down - D.V. Closed - Release OK
								25 sks cmt circulate to Pit
	2130							Job Complete
								Wash up & Pack up
								Thanks Don, Brian & David

Marc Downing

Consulting Petroleum Geologist
1411 Washington Circle
Hays, Ks 67601
Phone: 620-428-1356 (cell) 785-621-2286

GEOLOGIC REPORT LOG

COMPANY Downing-Nelson Oil Co, Inc.

WELL Verna Heel #2-12

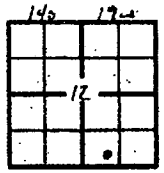
FIELD Wildcat

LOCATION 420' FSL + 1900' FEL

SEC. 12 TWP. 14s RGE. 19w

COUNTY Ellis

STATE Kansas



PRODUCTION LKC

ELEVATION KB 2152
DF
GL 2144

Drilling Measured From: KB

Samples Saved From 3150 To: TD
Drilling Time From 3050 To: TD
Samples Examined From: 3150 To: TD
Geological Supervision From 3050 To Total Depth
Wellsite Geologist Marc Downing
Electrical Surveys Superior
CNL/CDL
DIL
MEL
Sonic

OPERATOR DNOCI
CONTRACTOR Discovery Drilling, Rig #3
COMM: COMP: 12-15-11

CASING RECORD

SURF: 8⅝" @ 222 PROD: 5½" @ 3950'
TOTAL DEPTH DRILLERS: 3950'
TOTAL DEPTH LOG 3952'

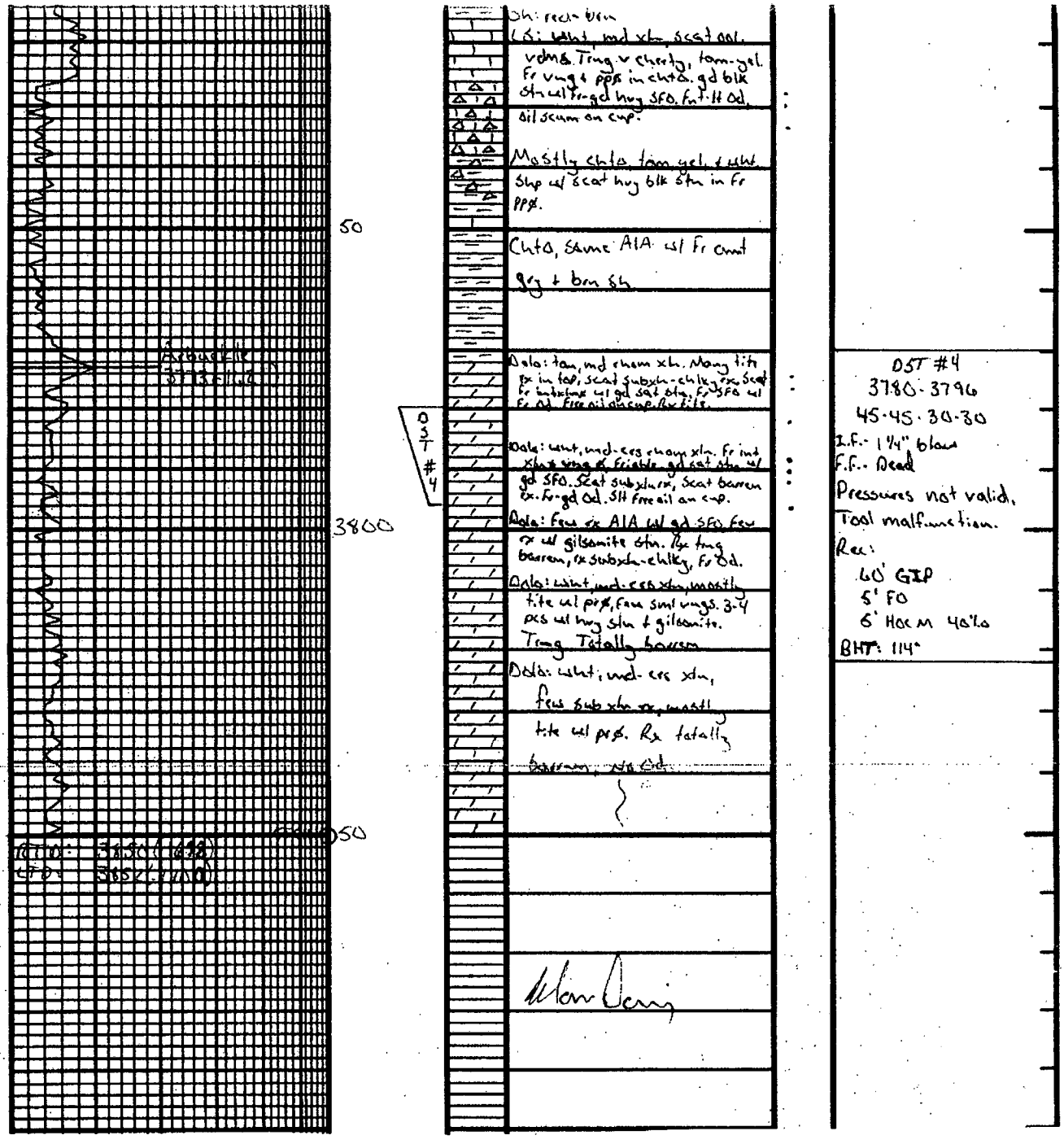
FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Top Anhydrite	NA	1405	+747	-9
Base Anhydrite	NA	1446	+706	-3
Topeka	3153	3151	-999	-3
HEEBNER	3400	3400	-1249	-5
Toronto	3420	3420	-1269	-6
LKC	3450	3450	-1299	-7
BKC	3675	3675	-1523	-5
Arbuckle	3773	3774	-1622	-29

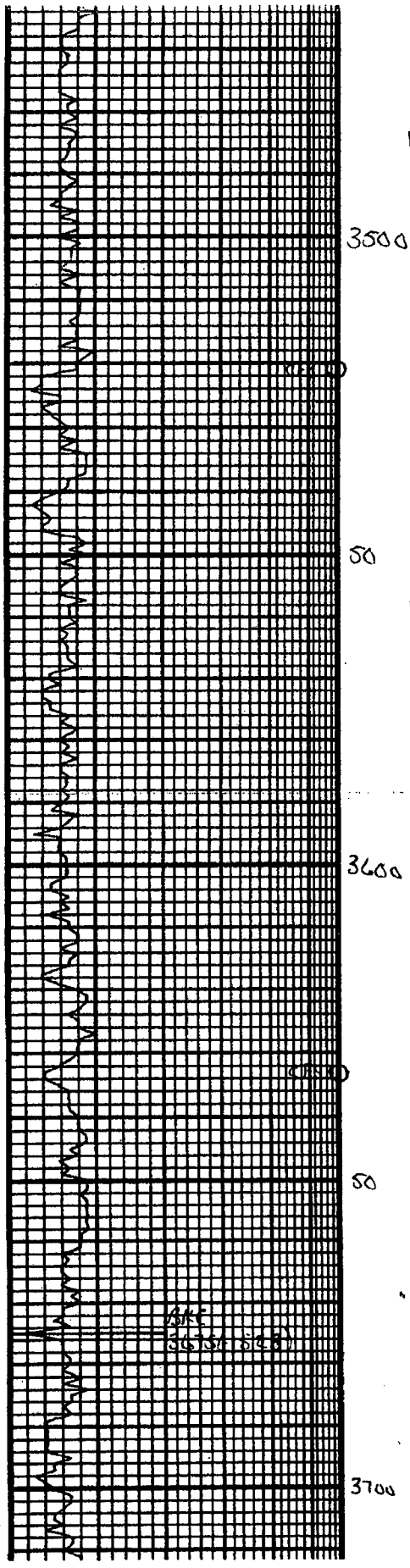
REFERENCE WELL FOR STRUCTURE DNOCI
Verna Heel #1-12 350' FSL & 990' FEL Sec. 12 - 14s - 19w

DAILY PENETRATION		BIT RECORD						
DATE	DEPTH	NO	SIZE	MAKE	TYPE	DEPTH OUT	FEET	HOURS

FORMATION	INTERVAL	DESCRIPTION OF SHOW	LOG ANALYSIS O	LOG ANALYSIS S W



DST #4
3780-3796
45-45-30-30
I.F.- 1¼" blow
F.F.- Dead
Pressures not valid,
Tool malfunction.
Rec:
60' GIP
5' FO
6' Hocm 40%o
BHT: 114°



Sh: lt grey

LS: wht, fn-md xln, mostly dns, scat subxln-ox 1-2 fx wl pr-fr stn, NSFO, No Od.

Sh: grey

LS: wht, md xln, Foss, delam in prt; pr-fr intxln & wl spnl vugs. Fr-gd lt brn stn, spttd SFO, lt-fr Od.

Sh: Black Carb

Sh: grey

LS: wht, fn-md xln, delam wl foss. pr-fr intxln ppx. lt brn stn, rare SFO, fnt lt Od. Rr tite, subxln in prt.

LS: wht, md xln, slty delam. Fr intxln wl brn SFO mostly chlky

LS: wht-tan, v fn-mic xln, vdns, No visx

LS: wht, fn-md xln, Few Foss, slty mtld, subxln-chlky. Few ox & blk specks. All NS

LS: wht-tan, fn-md xln, All tite wl ppx.

Sh: dk grey

Sh: grey

LS: wht, fn xln, scat foss. pr intxln ppx, scat ppx, wl lt brn stn, rare SFO, fnt lt Od. fr amt subxln-chlky ox

Sh: grey

LS: tan-wht, md xln, delam, Trace Tot Foss, brg foss. fr intxln & scat vugs. Fr-gd brn cut stn, fr SFO, lt-fr Od. Slt free oil on cup.

Sh: grey

LS: wht, v fn-xln, fr vugs wl poss fr ac pln. Fr blk stn wl fr SFO. Rr slty tite. Mod fr free oil on cup, lt Odor.

Sh: grey

LS: wht, cal, tite & pr oc ppx barren wl No Od.

LS: wht, fn xln, few cal wl ppx, tite, NS, Rr long subxln shlky wl depth

LS: wht, fn-md xln, scat cal & foss subxln in prt, All NS

LS: wht, fn-md xln, subxln, ppx, NS.

Sh: grey

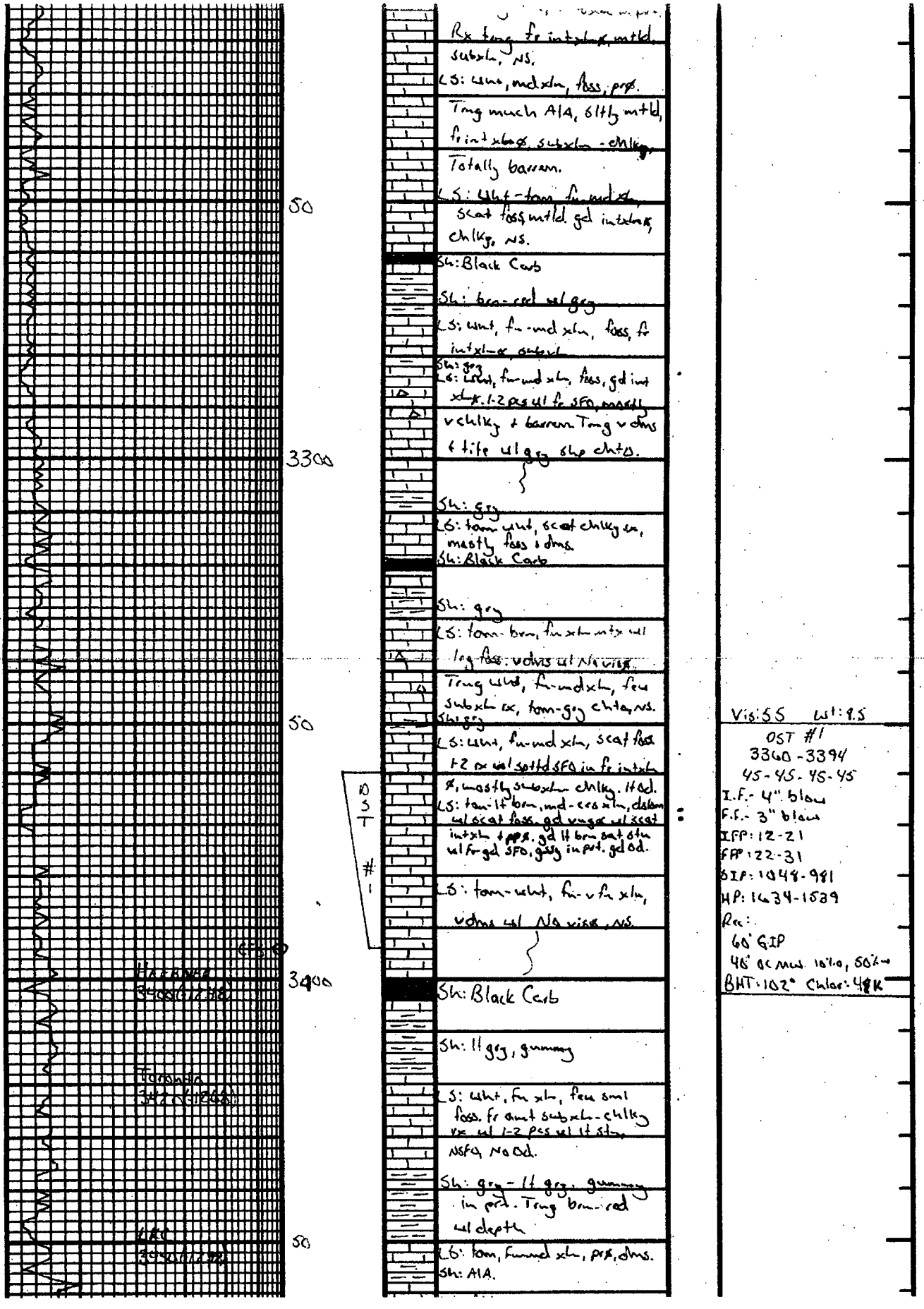
LS: tan-wht, fn-md xln, dns

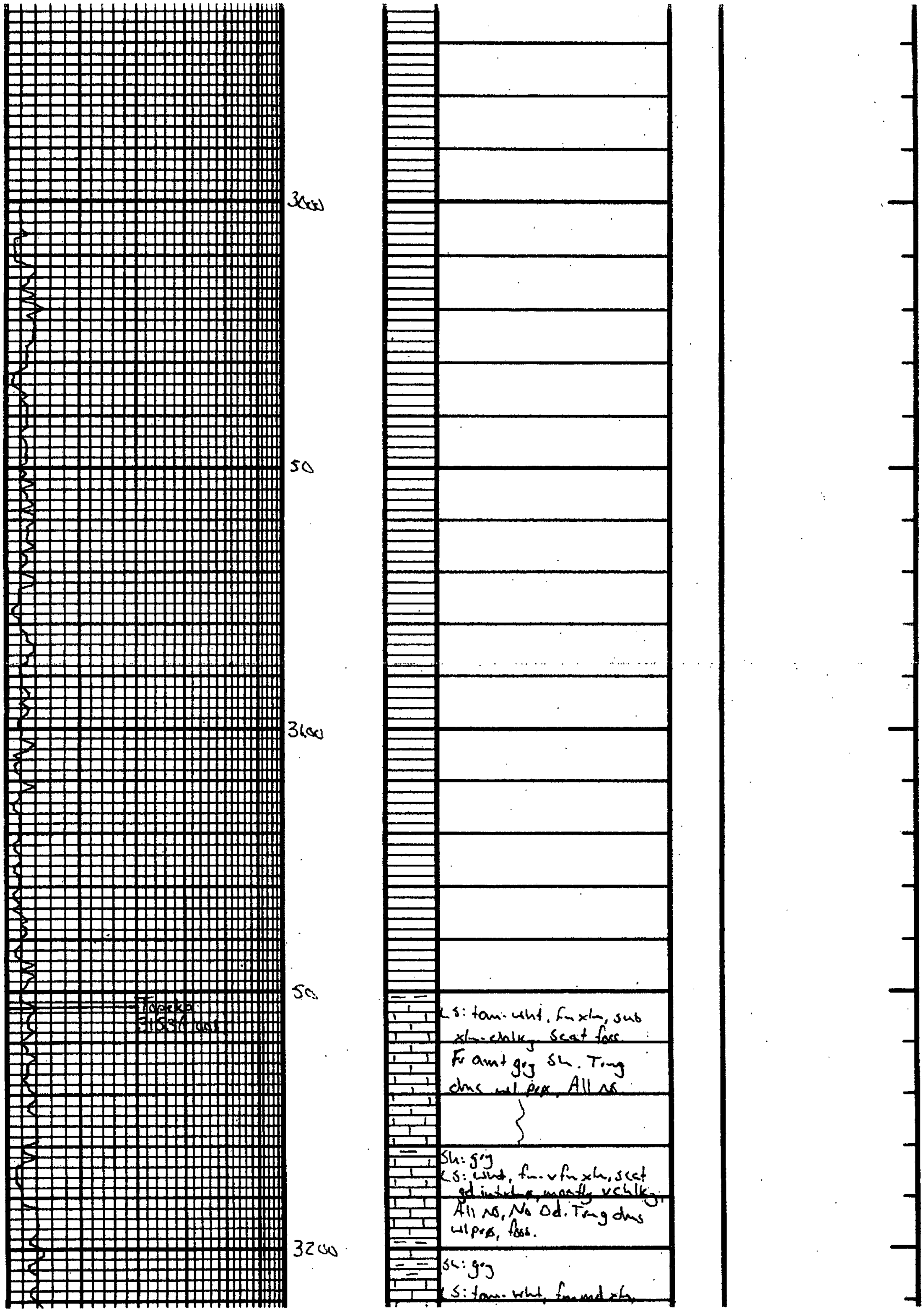
Sh: grey-lt grey wl brn

LS: tan, md xln, dns

DST #1
Vis: 50 wt: 9.0
3483 - 3521
45-45-45-45
I.F.- BOB 19 min
F.F.- 4" blow
IFP: 17-44
FFP: 52-64
SIP: 249-212
HP: 1732-1691
Rec:
180' GIP
115' sl cm wtr 67.0, 65% wtr
BHT: 108° Chlor: 46K

DST #2
Vis: 51 wt: 9.1
3557 - 3633
45-46-46-45
I.F.- BOB 8 min/½" SIB
F.F.- BOB 2 min/ Surf SIB
IFP: 34-46
FFP: 72-95
SIP: 907-855
HP: 1796-1762
Rec:
840' GIP
146' GMO 55% g, 30% o
BHT: 107°


Rx tang fr int xln, mtld, subxln, NS.
LS: wkst, md xln, foss, prp.
Tmg much A/A, slt lg mtld, fr int xln pp, subxln - chlky.
Totally barren.
LS: wkst - tan, fn-md xln, scat foss, mtld. gd int xln, chlky, NS.
Sh: Black Carb
Sh: brn-red w/ grn
LS: wkst, fn-md xln, foss, fr int xln-pp, subxln
Sh: grn
LS: wkst, fn-md xln, foss, gd int xln. 1-2 pcs wl fr SFO, mostly v chlky & barren. Tmg v dms & tite wl grn shp cht nds.
Sh: grn
LS: tan wkst, scat chlky ex, mostly foss & dms.
Sh: Black Carb
Sh: grn
LS: tan-brn, fn xln mtx wl leg foss: v dms wl NS vugs.
Tmg wkst, fn-md xln, few subxln ex, tan-grn cht nds, NS.
Sh: grn
LS: wkst, fn-md xln, scat foss 1-2 ex wl spttd SFO in fr int xln pp, mostly subxln chlky. Hard.
LS: tan-lt brn, md-crs xln, dolom wl scat foss, gd vugs wl scat int xln & pp. gd lt brn sat stn wl fr-gd SFO, grdg in prt. gd od.
LS: tan-wkst, fn-v fn xln, v dms wl NS vugs, NS.
Sh: Black Carb
Sh: lt grn, gummy
LS: wkst, fn xln, few sml foss. fr amt subxln-chlky ex wl 1-2 pcs wl lt stn, NSFO, No od.
Sh: grn-lt grn, gummy in prt. Tmg brn-red wl depth
LS: tan, fn md xln, prp, dms.
Sh: A/A.
DST #1
50
3300
50
3400
50
Vis: 55 wt: 9.5
DST #1
3360-3394
45-45-45-45
I.F.- 4" blow
F.F.- 3" blow
IFP: 12-21
FFP: 22-31
SIP: 1048-981
HP: 1634-1589
Rec:
60' GIP
40' OCM w. 10%o, 50%w
BHT: 102° Chlor: 48K


3000
50
3100
50
Topeka
3153'
3200
LS: tan-wht, f-xln, sub xln-chlky, Scat foss. Fr amt g-y Sh. Trng dns w/ pos. All ns.
Sh: g-y
LS: wht, f-vf xln, scat gd intxln, mostly vchlky. All ns, No Od. Trng dns w/ pos, foss.
Sh: g-y
LS: tan-wht, f-md xln

7515

DRILL STEM TESTS

No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	HH-PMI	RECOVERY

REMARKS AND RECOMMENDATIONS

LOG 7710

LEGEND

DRILLING TIME IN MINUTES PER FOOT

Rate of Penetration Decreases

5" 10" 15" 20" 25"

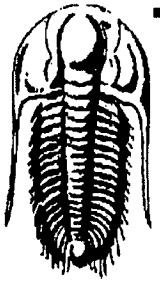
DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

OIL SHOWS

REMARKS



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Verna Herl #2-12

12-14s-19w Ellis,KS

Start Date: 2011.12.12 @ 07:05:36
End Date: 2011.12.12 @ 14:10:21
Job Ticket #: 44703 DST #: 1

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

Printed: 2011.12.19 @ 11:07:56

DRILL STEM TEST REPORT

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44703 **DST#: 1**

Test Start: 2011.12.12 @ 07:05:36

GENERAL INFORMATION:

Formation: **Plattsmouth**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 09:25:36
Time Test Ended: 14:10:21

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

Interval: 3360.00 ft (KB) To 3394.00 ft (KB) (TVD)
Total Depth: 3394.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

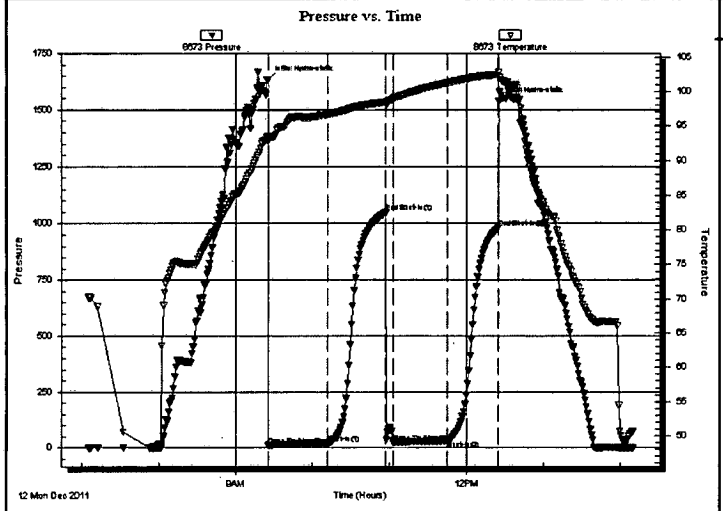
Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8673 **Inside**

Press@RunDepth: 30.78 psig @ 3363.00 ft (KB)
Start Date: 2011.12.12 End Date: 2011.12.12
Start Time: 07:05:38 End Time: 14:10:21

Capacity: 8000.00 psig
Last Calib.: 2011.12.12
Time On Btm: 2011.12.12 @ 09:25:21
Time Off Btm: 2011.12.12 @ 12:25:06

TEST COMMENT: IFP-Weak Blow ,Built to 4"
ISI-Dead
FFP-Weak Blow , Built to 3"
FSI-Dead



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1633.54	93.49	Initial Hydro-static
1	11.66	92.78	Open To Flow (1)
47	20.85	96.68	Shut-In(1)
92	1047.95	98.46	End Shut-In(1)
98	22.10	99.05	Open To Flow (2)
140	30.78	101.23	Shut-In(2)
180	981.09	102.43	End Shut-In(2)
180	1539.23	102.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	OCMW-10%O-50%W-40%M	0.56
0.00	60' Gas In Pipe	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44703 **DST#: 1**

Test Start: 2011.12.12 @ 07:05:36

GENERAL INFORMATION:

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Time Tool Opened: 09:25:36
Time Test Ended: 14:10:21

Test Type: Conventional Bottom Hole (Initial)
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Unit No: 54

Interval: 3360.00 ft (KB) To 3394.00 ft (KB) (TVD)
Total Depth: 3394.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

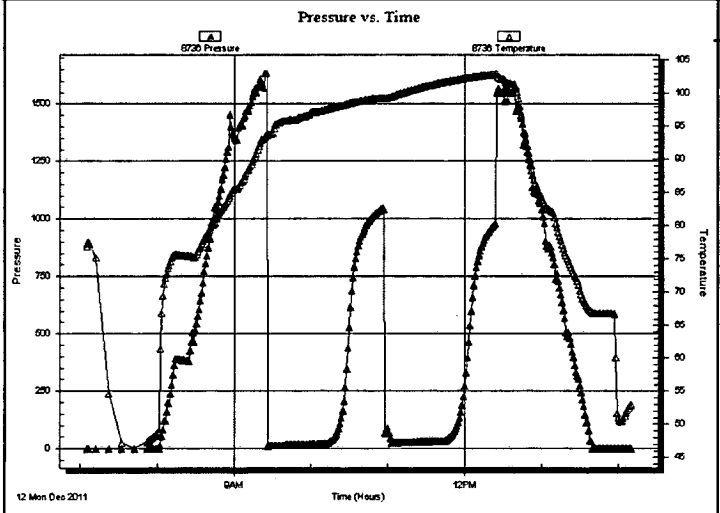
Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8736 **Outside**

Press@RunDepth: psig @ 3363.00 ft (KB)
Start Date: 2011.12.12 End Date: 2011.12.12
Start Time: 07:05:11 End Time: 14:10:05

Capacity: 8000.00 psig
Last Calib.: 2011.12.12
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak Blow ,Built to 4"
ISI-Dead
FFP-Weak Blow , Built to 3"
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
40.00	OCMW-10%O-50%W-40%M	0.56
0.00	60' Gas In Pipe	0.00

Gas Rates

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

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44703 **DST#: 1**

Test Start: 2011.12.12 @ 07:05:36

Tool Information

Drill Pipe:	Length:	3359.00 ft	Diameter:	3.80 inches	Volume:	47.12 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:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	55000.00 lb
					Total Volume:	47.12 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		20.00 ft					String Weight: Initial	51000.00 lb
Depth to Top Packer:		3360.00 ft					Final	51000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		34.00 ft						
Tool Length:		55.00 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			3340.00		
Shut In Tool	5.00			3345.00		
Hydraulic tool	5.00			3350.00		
Packer	5.00			3355.00	21.00	Bottom Of Top Packer
Packer	5.00			3360.00		
Stubb	1.00			3361.00		
Perforations	2.00			3363.00		
Recorder	0.00	8673	Inside	3363.00		
Recorder	0.00	8736	Outside	3363.00		
Perforations	28.00			3391.00		
Bullnose	3.00			3394.00	34.00	Bottom Packers & Anchor
Total Tool Length:	**55.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44703 **DST#: 1**

Test Start: 2011.12.12 @ 07:05:36

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	8.00 lb/gal	Cushion Length:	ft	Water Salinity:	48000 ppm
Viscosity:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	OCMW-10%O-50%W-40%M	0.561
0.00	60' Gas In Pipe	0.000

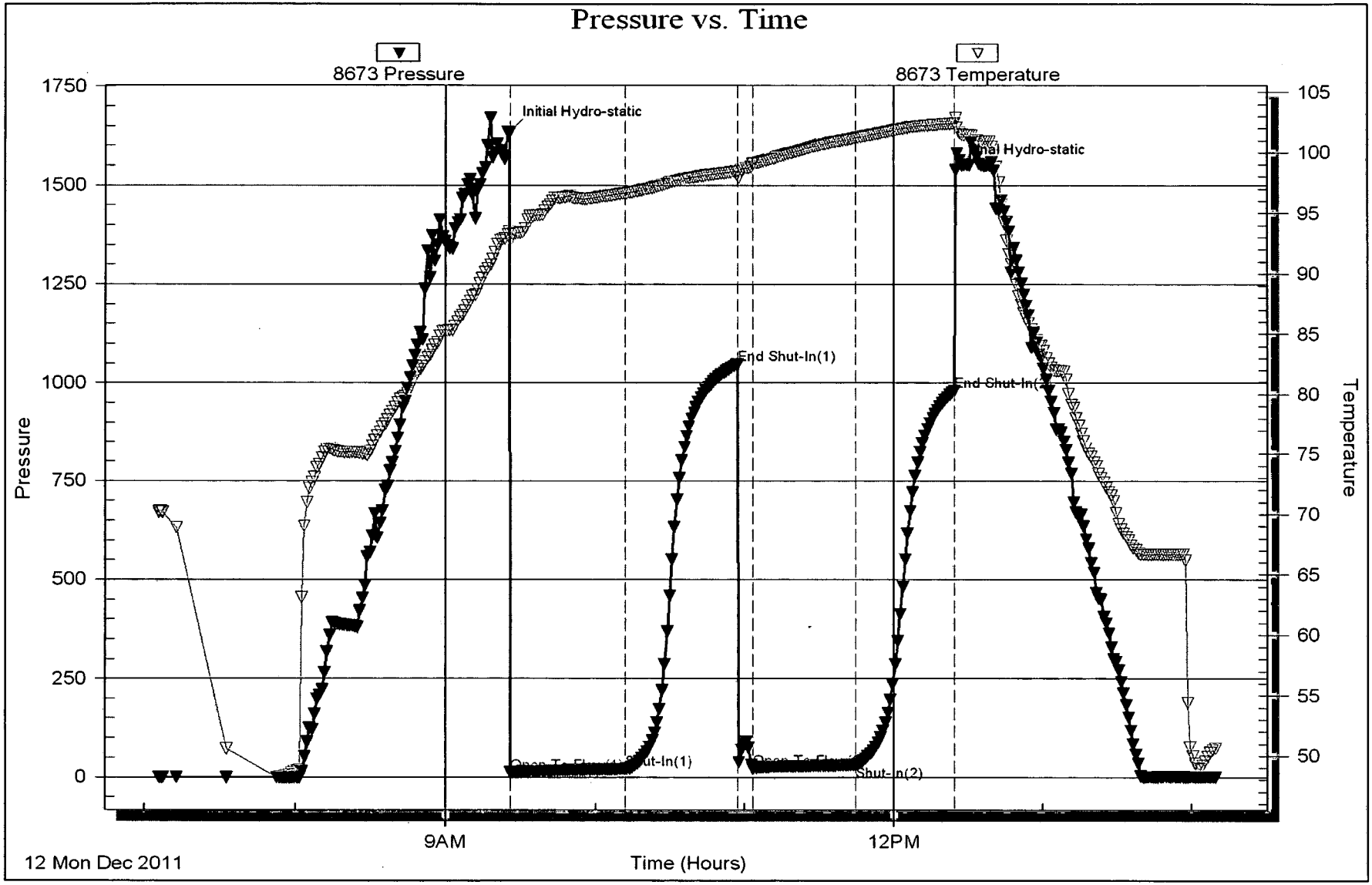
Total Length: 40.00 ft Total Volume: 0.561 bbl

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

Laboratory Name: Laboratory Location:

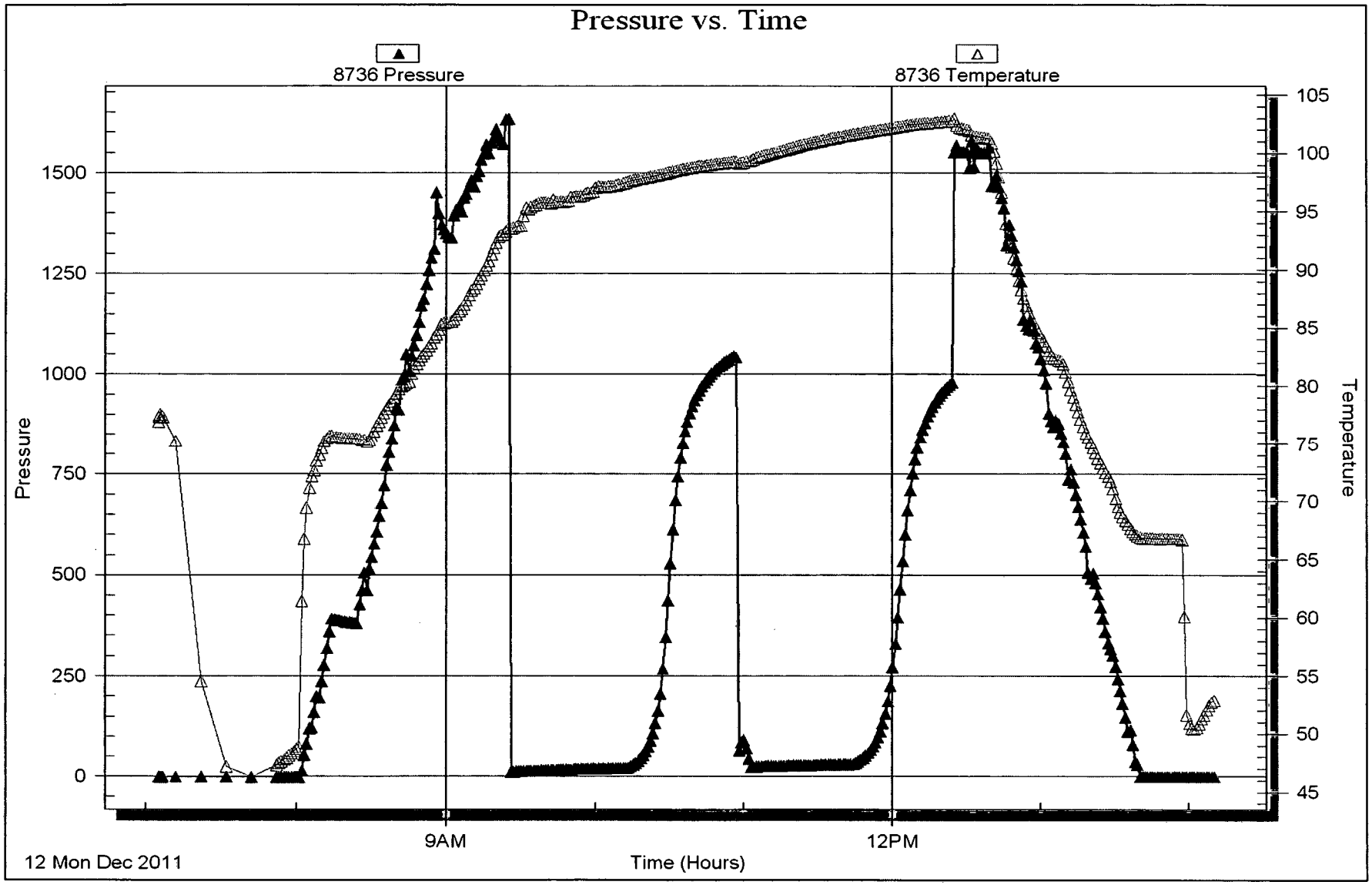
Recovery Comments:

Serial #: 8673 **Inside** Dow ning Nelson Oil Company Verna Herl #2-12 DST Test Number: 1

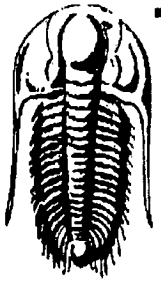


Trilobite Testing, Inc Ref. No: 44703 Printed: 2011.12.19 @ 11:07:58

Serial #: 8736 **Outside** Downing Nelson Oil Company Verna Herl #2-12 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 44703 Printed: 2011.12.19 @ 11:07:59



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Verna Herl #2-12

12-14s-19w Ellis,KS

Start Date: 2011.12.13 @ 02:44:17

End Date: 2011.12.13 @ 10:01:02

Job Ticket #: 44704 DST #: 2

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

Printed: 2011.12.19 @ 11:07:17

DRILL STEM TEST REPORT

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44704 **DST#: 2**

Test Start: 2011.12.13 @ 02:44:17

GENERAL INFORMATION:

Formation: **D-E**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:00:02
Time Test Ended: 10:01:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3483.00 ft (KB) To 3521.00 ft (KB) (TVD)
Total Depth: 3521.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

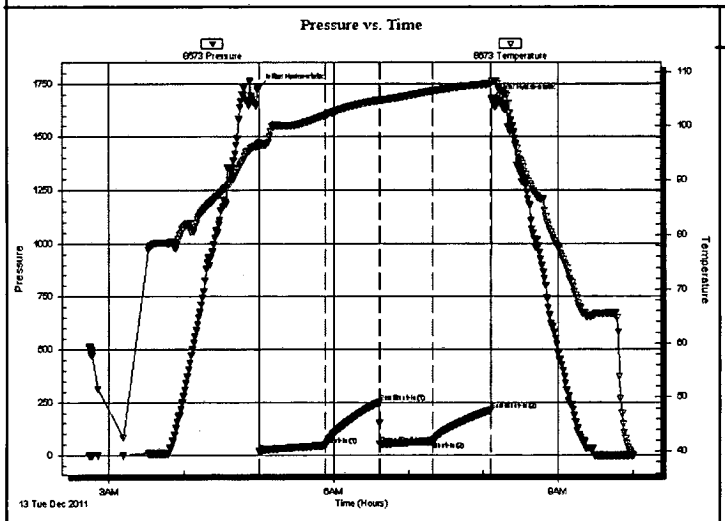
Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8673 **Inside**

Press@RunDepth: 63.97 psig @ 3488.00 ft (KB)
Start Date: 2011.12.13 End Date: 2011.12.13
Start Time: 02:44:19 End Time: 10:01:02

Capacity: 8000.00 psig
Last Calib.: 2011.12.13
Time On Btm: 2011.12.13 @ 04:59:47
Time Off Btm: 2011.12.13 @ 08:07:02

TEST COMMENT: IFP-Good Blow, BOB in 19 Min.
ISI-Dead
FFP-Fair Blow, Built to 6"
FSI Dead for 30 min surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1732.43	96.95	Initial Hydro-static
1	17.08	96.36	Open To Flow (1)
53	46.32	102.01	Shut-In(1)
97	248.46	104.75	End Shut-In(1)
97	51.92	104.70	Open To Flow (2)
140	63.97	106.46	Shut-In(2)
187	211.61	107.78	End Shut-In(2)
188	1681.02	108.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
115.00	SOCMW-5%O-65%W-30%M	1.61
0.00	130' Gas In Pipe	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44704 **DST#: 2**

Test Start: 2011.12.13 @ 02:44:17

GENERAL INFORMATION:

Formation: **D-E**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:00:02
Time Test Ended: 10:01:02

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

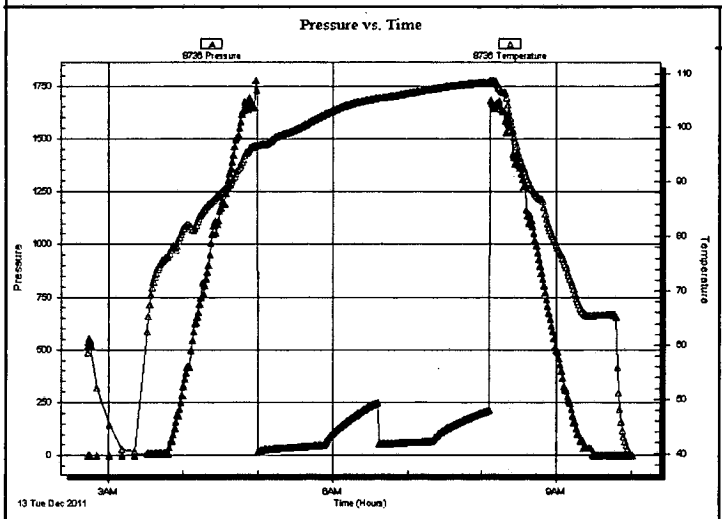
Interval: 3483.00 ft (KB) To 3521.00 ft (KB) (TVD)
Total Depth: 3521.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8736 **Outside**
Press@RunDepth: psig @ 3488.00 ft (KB)
Start Date: 2011.12.13 End Date: 2011.12.13
Start Time: 02:44:07 End Time: 10:01:01

Capacity: 8000.00 psig
Last Calib.: 2011.12.13
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Good Blow, BOB in 19 Min.
ISI-Dead
FFP-Fair Blow, Built to 6"
FSI Dead for 30 min surface blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
115.00	SOCMW-5%O-65%W-30%M	1.61
0.00	130' Gas In Pipe	0.00

* 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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44704 **DST#: 2**

Test Start: 2011.12.13 @ 02:44:17

Tool Information

Drill Pipe:	Length:	3484.00 ft	Diameter:	3.80 inches	Volume:	48.87 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:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		55000.00 lb
					Total Volume:	48.87 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		22.00 ft					String Weight:	Initial	52000.00 lb
Depth to Top Packer:		3483.00 ft						Final	52000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		38.00 ft							
Tool Length:		59.00 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			3463.00		
Shut In Tool	5.00			3468.00		
Hydraulic tool	5.00			3473.00		
Packer	5.00			3478.00	21.00	Bottom Of Top Packer
Packer	5.00			3483.00		
Stubb	1.00			3484.00		
Perforations	4.00			3488.00		
Recorder	0.00	8673	Inside	3488.00		
Recorder	0.00	8736	Outside	3488.00		
Perforations	30.00			3518.00		
Bullnose	3.00			3521.00	38.00	Bottom Packers & Anchor
Total Tool Length:	**59.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44704 **DST#: 2**

Test Start: 2011.12.13 @ 02:44:17

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:	46000 ppm
Viscosity:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3000.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
115.00	SOCMW-5%O-65%W-30%M	1.613
0.00	130' Gas In Pipe	0.000

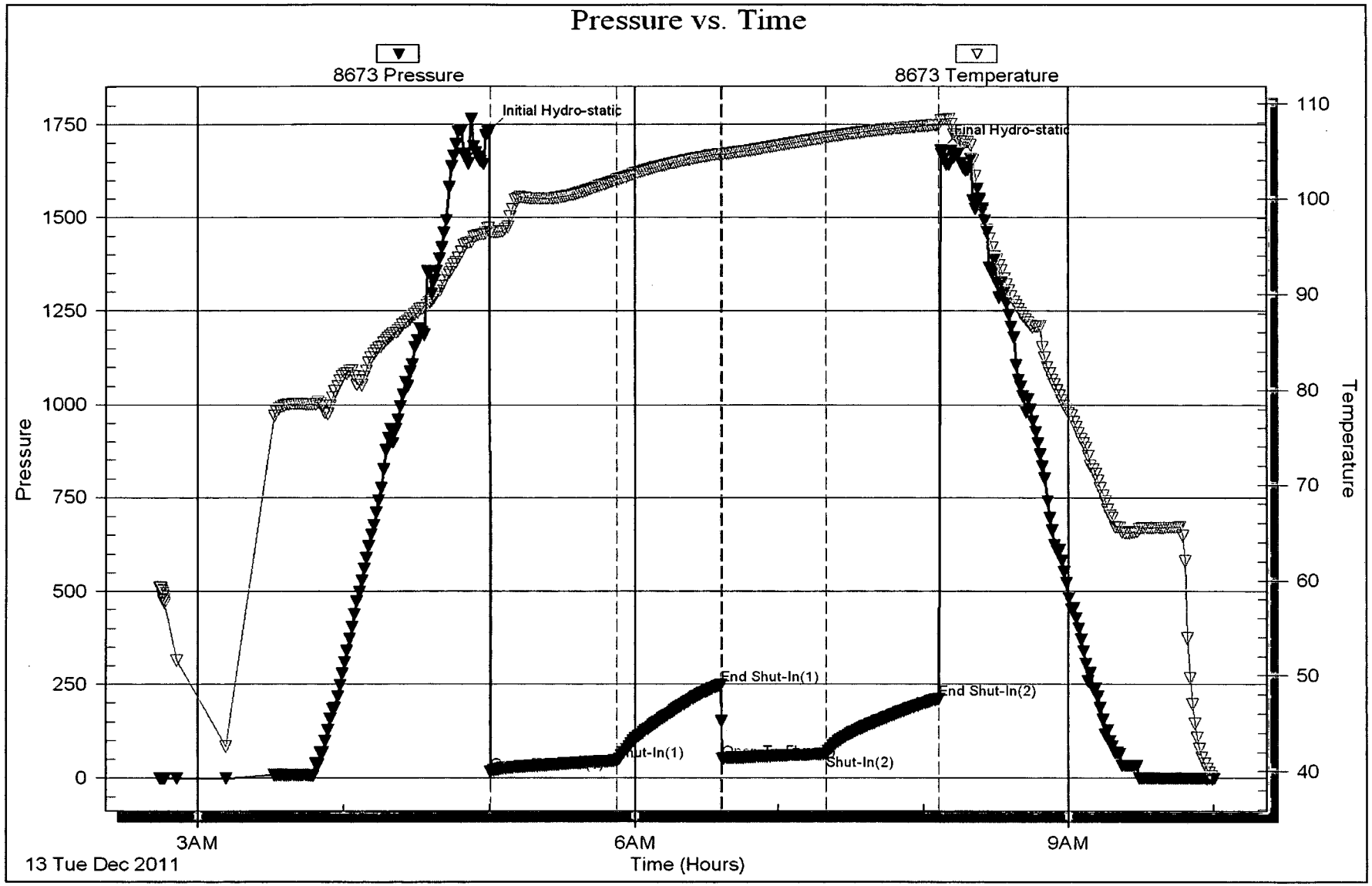
Total Length: 115.00 ft Total Volume: 1.613 bbl

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

Laboratory Name: Laboratory Location:

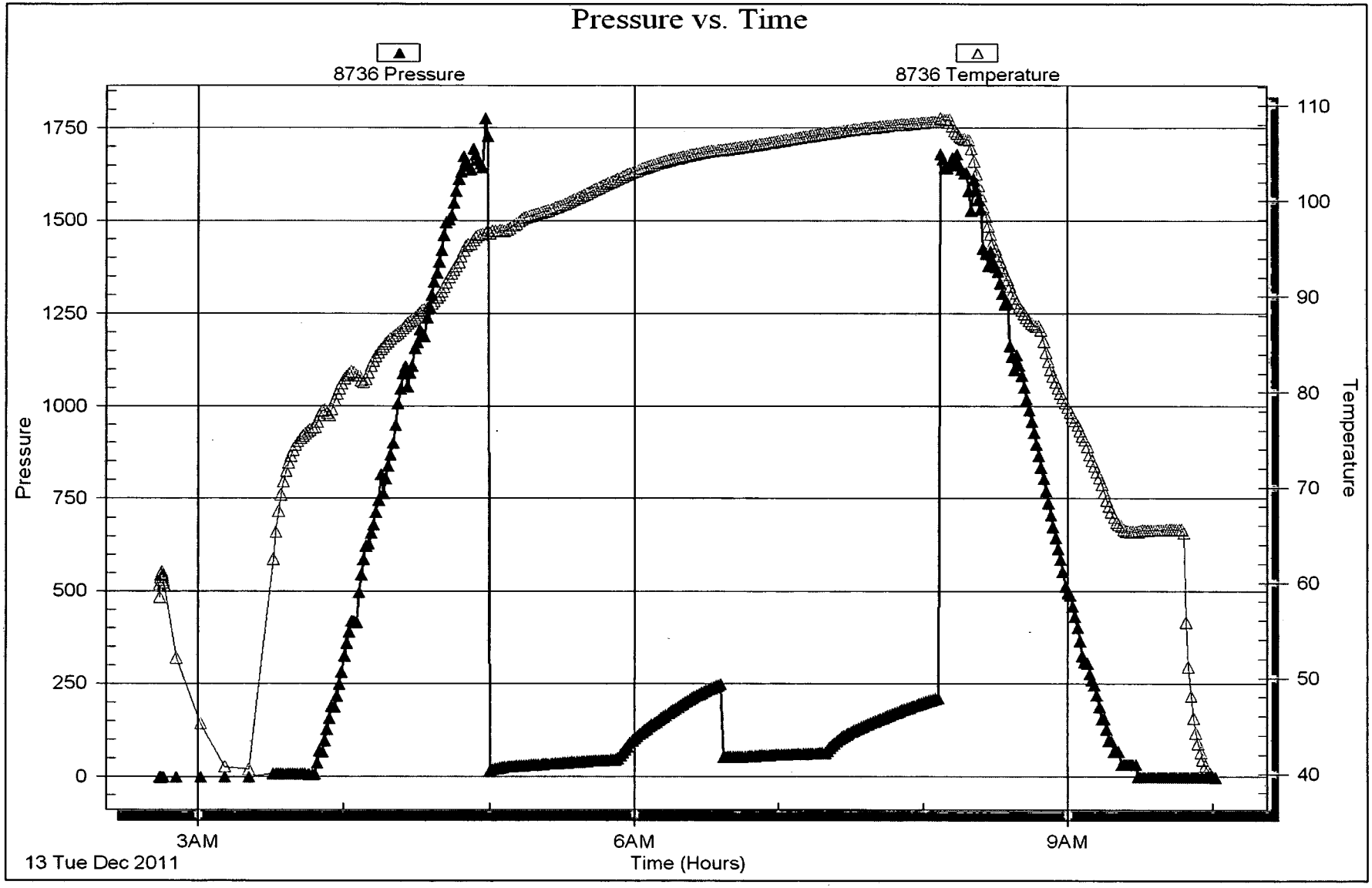
Recovery Comments:

Serial #: 8673 **Inside** Dow ning Nelson Oil Company Verna Herl #2-12 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 44704 Printed: 2011.12.19 @ 11:07:19

Serial #: 8736 **Outside** Dow ning Nelson Oil Company Verna Herl #2-12 DST Test Number: 2



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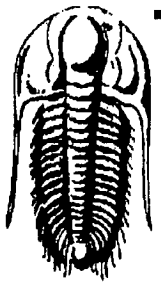


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Verna Herl #2-12

12-14s-19w Ellis,KS

Start Date: 2011.12.13 @ 21:58:46
End Date: 2011.12.14 @ 05:24:31
Job Ticket #: 44705 DST #: 3

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

Printed: 2011.12.19 @ 11:06:37

DRILL STEM TEST REPORT

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44705 **DST#: 3**

Test Start: 2011.12.13 @ 21:58:46

GENERAL INFORMATION:

Formation: **H-I-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:53:31
Time Test Ended: 05:24:31

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

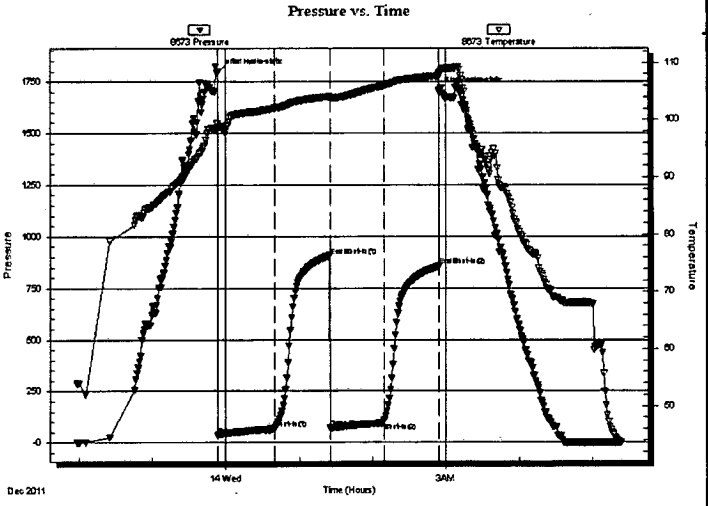
Interval: 3557.00 ft (KB) To 3633.00 ft (KB) (TVD)
Total Depth: 3633.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8673 **Inside**
Press@RunDepth: 95.13 psig @ 3600.00 ft (KB)
Start Date: 2011.12.13 End Date: 2011.12.14
Start Time: 21:58:48 End Time: 05:24:31

Capacity: 8000.00 psig
Last Calib.: 2011.12.14
Time On Btm: 2011.12.13 @ 23:53:16
Time Off Btm: 2011.12.14 @ 02:54:31

TEST COMMENT: IFP-Good Blow , BOB in 8Min.
ISI-Blow back Built to 1/2"
FFP-Strong, BOB in 2 Min.
FSI-Surface Bow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1795.38	99.41	Initial Hydro-static
1	33.51	98.34	Open To Flow (1)
47	66.35	101.99	Shut-In(1)
92	907.01	104.05	End Shut-In(1)
93	71.99	103.81	Open To Flow (2)
136	95.13	105.94	Shut-In(2)
181	855.29	107.67	End Shut-In(2)
182	1702.42	108.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
145.00	Gassy Muddy Oil-55%G-30%O-15%M	2.03
0.00	840' Gas In Pipe	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44705 **DST#: 3**

Test Start: 2011.12.13 @ 21:58:46

GENERAL INFORMATION:

Formation: **H-I-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 23:53:31
Time Test Ended: 05:24:31

Test Type: Conventional Bottom Hole (Reset)
Tester: Jason McLemore
Unit No: 54

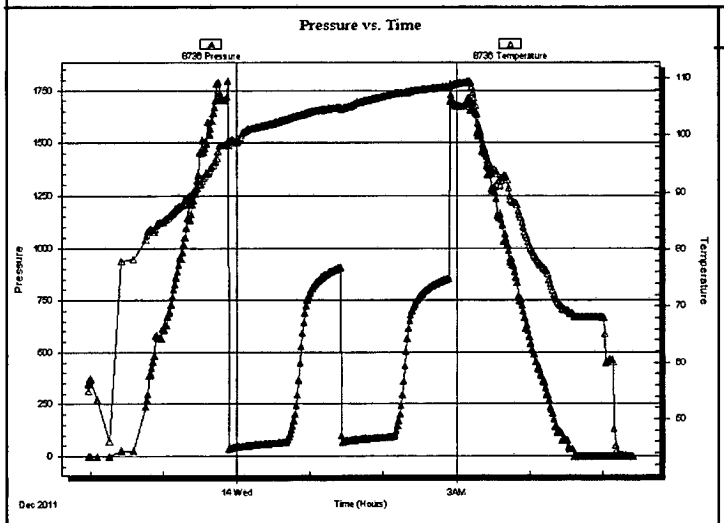
Interval: 3557.00 ft (KB) To 3633.00 ft (KB) (TVD)
Total Depth: 3633.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8736 **Outside**
Press@RunDepth: psig @ 3600.00 ft (KB)
Start Date: 2011.12.13 End Date: 2011.12.14
Start Time: 21:58:40 End Time: 05:24:34

Capacity: 8000.00 psig
Last Calib.: 2011.12.14
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Good Blow , BOB in 8Min.
ISI-Blow back Built to 1/2"
FFP-Strong, BOB in 2 Min.
FSI-Surface Bow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
145.00	Gassy Muddy Oil-55%G-30%O-15%M	2.03
0.00	840' Gas In Pipe	0.00

* 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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44705 **DST#: 3**

Test Start: 2011.12.13 @ 21:58:46

Tool Information

Drill Pipe:	Length:	3548.00 ft	Diameter:	3.80 inches	Volume:	49.77 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:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	60000.00 lb
					Total Volume:	49.77 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		12.00 ft					String Weight: Initial	52000.00 lb
Depth to Top Packer:		3557.00 ft					Final	53000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		76.00 ft						
Tool Length:		97.00 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			3537.00		
Shut In Tool	5.00			3542.00		
Hydraulic tool	5.00			3547.00		
Packer	5.00			3552.00	21.00	Bottom Of Top Packer
Packer	5.00			3557.00		
Stubb	1.00			3558.00		
Perforations	8.00			3566.00		
Change Over Sub	1.00			3567.00		
Blank Spacing	32.00			3599.00		
Change Over Sub	1.00			3600.00		
Recorder	0.00	8673	Inside	3600.00		
Recorder	0.00	8736	Outside	3600.00		
Perforations	30.00			3630.00		
Bullnose	3.00			3633.00	76.00	Bottom Packers & Anchor
Total Tool Length:	**97.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44705 **DST#: 3**

Test Start: 2011.12.13 @ 21:58:46

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:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5500.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
145.00	Gassy Muddy Oil-55%G-30%O-15%M	2.034
0.00	840' Gas In Pipe	0.000

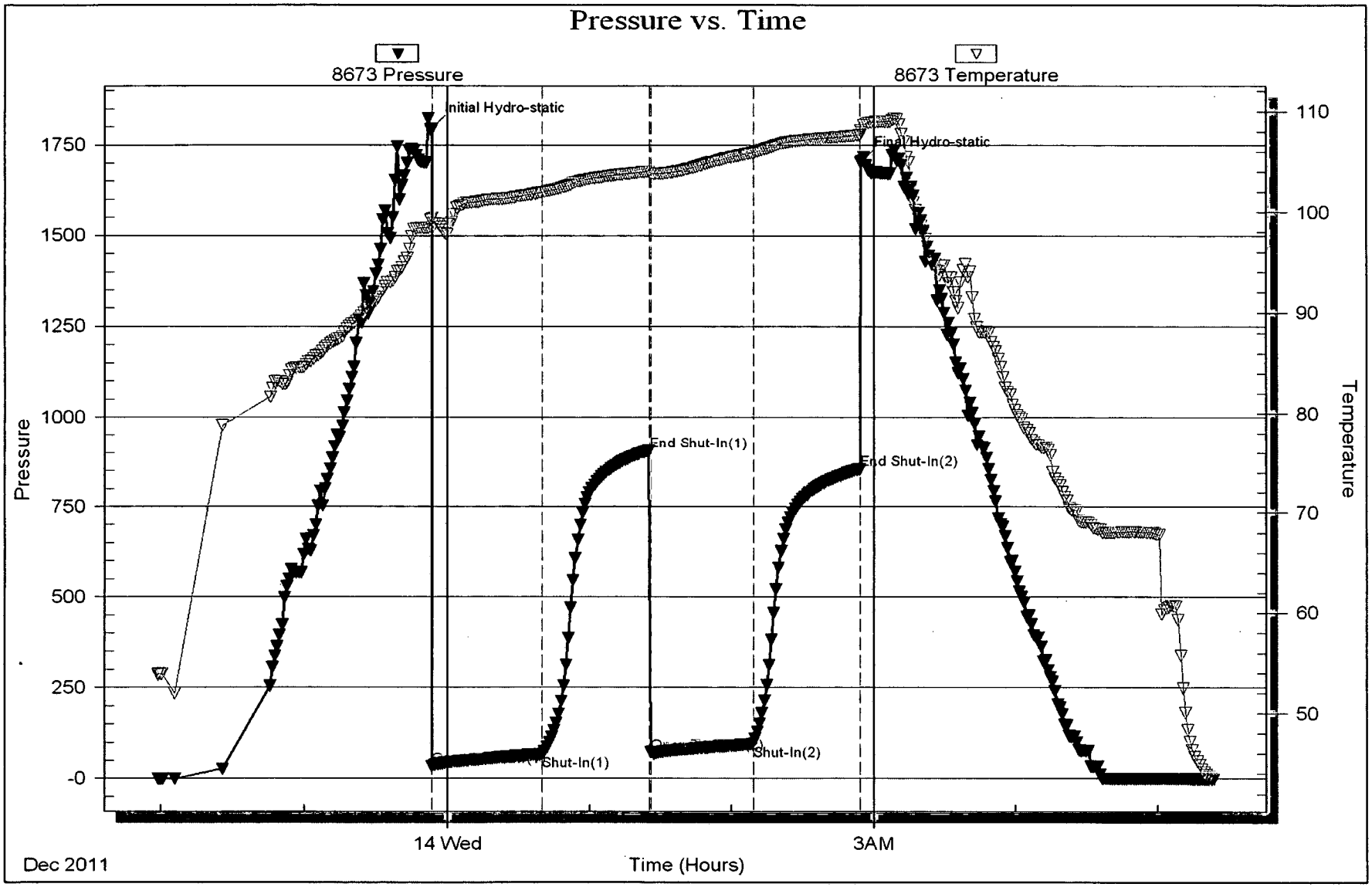
Total Length: 145.00 ft Total Volume: 2.034 bbl

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

Laboratory Name: Laboratory Location:

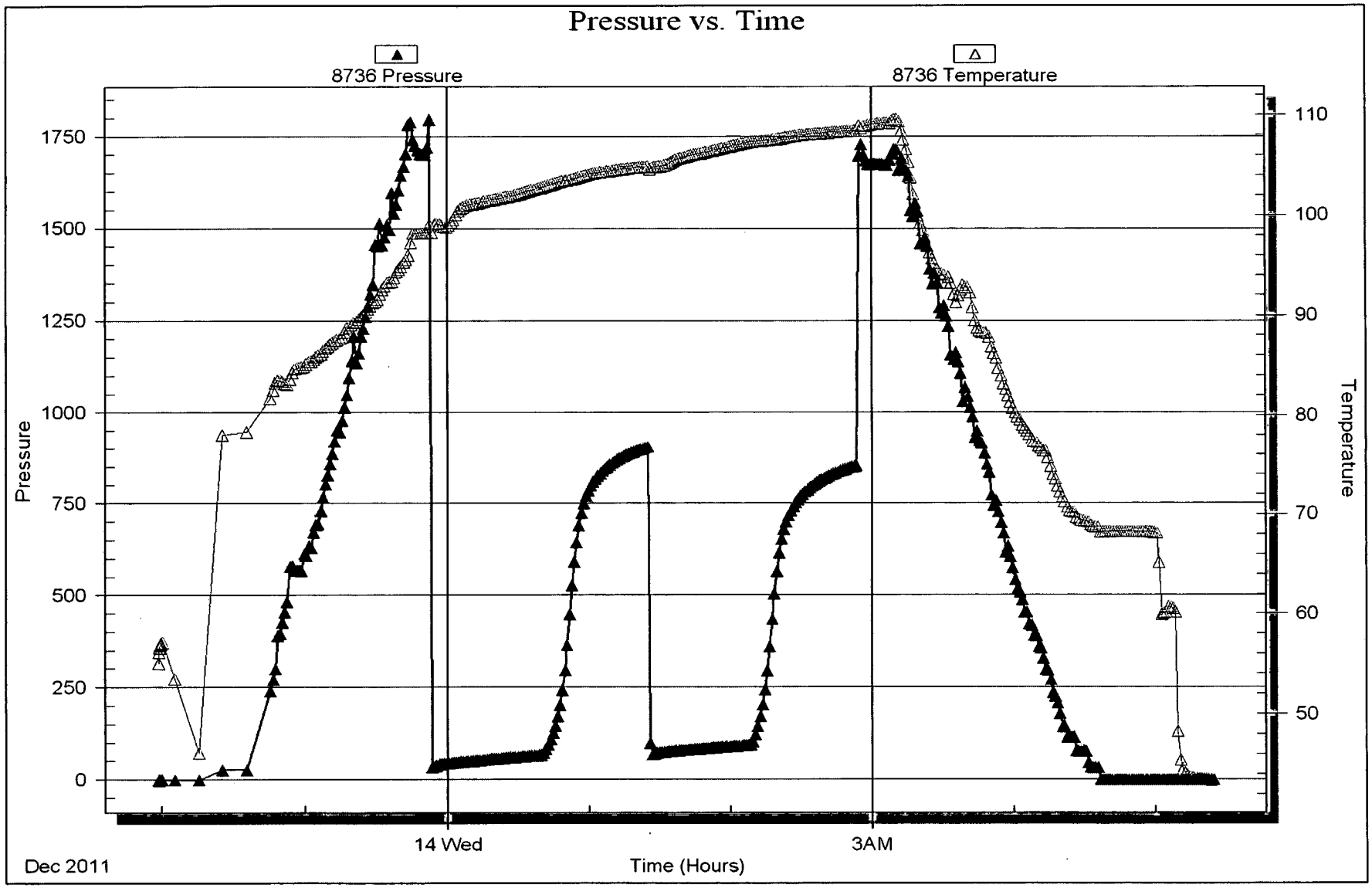
Recovery Comments:

Serial #: 8673 **Inside** Dow ning Nelson Oil Company Verna Herl #2-12 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 44705 Printed: 2011.12.19 @ 11:06:39

Serial #: 8736 **Outside** Dow ning Nelson Oil Company Verna Herl #2-12 DST Test Number: 3



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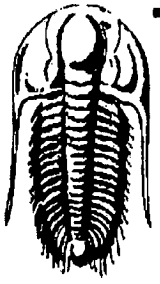


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

Verna Herl #2-12

12-14s-19w Ellis,KS

Start Date: 2011.12.15 @ 02:55:23
End Date: 2011.12.15 @ 10:47:38
Job Ticket #: 44706 DST #: 4

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

Printed: 2011.12.19 @ 11:05:59

DRILL STEM TEST REPORT

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44706 **DST#: 4**

Test Start: 2011.12.15 @ 02:55:23

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:54:23
Time Test Ended: 10:47:38

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3780.00 ft (KB) To 3796.00 ft (KB) (TVD)
Total Depth: 3851.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

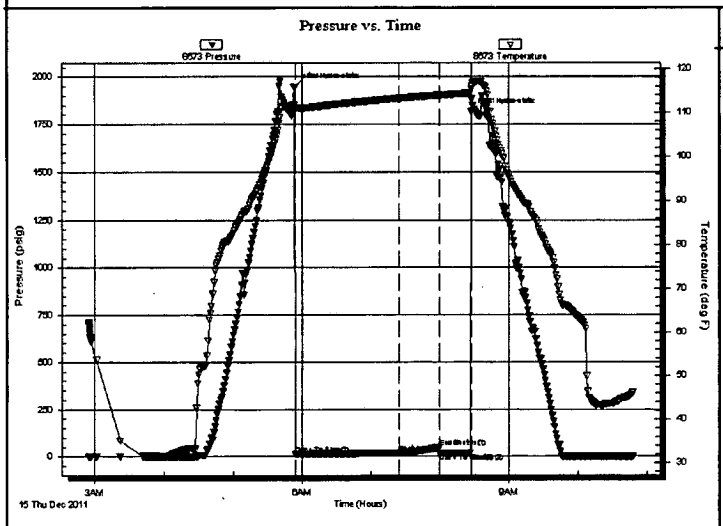
Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8673 **Inside**

Press@RunDepth: 15.98 psig @ 3782.00 ft (KB)
Start Date: 2011.12.15 End Date: 2011.12.15
Start Time: 02:55:25 End Time: 10:47:38

Capacity: 8000.00 psig
Last Calib.: 2011.12.19
Time On Btm: 2011.12.15 @ 05:53:53
Time Off Btm: 2011.12.15 @ 08:26:53

TEST COMMENT: IFP-Weak Blow , Built to 1-1/4"
ISI-Dead
FFP-Dead
FSI-Dead



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1945.66	111.67	Initial Hydro-static
1	12.89	110.84	Open To Flow (1)
91	15.98	113.15	Shut-In(1)
126	48.82	113.86	End Shut-In(1)
126	16.85	113.85	Open To Flow (2)
153	16.56	114.33	Shut-In(2)
153	1814.76	115.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Free Oil	0.07
5.00	HOCM-40%O-60%M	0.07
0.00	60' Gas In Pipe	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44706 **DST#: 4**

Test Start: 2011.12.15 @ 02:55:23

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:54:23
Time Test Ended: 10:47:38

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3780.00 ft (KB) To 3796.00 ft (KB) (TVD)
Total Depth: 3851.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

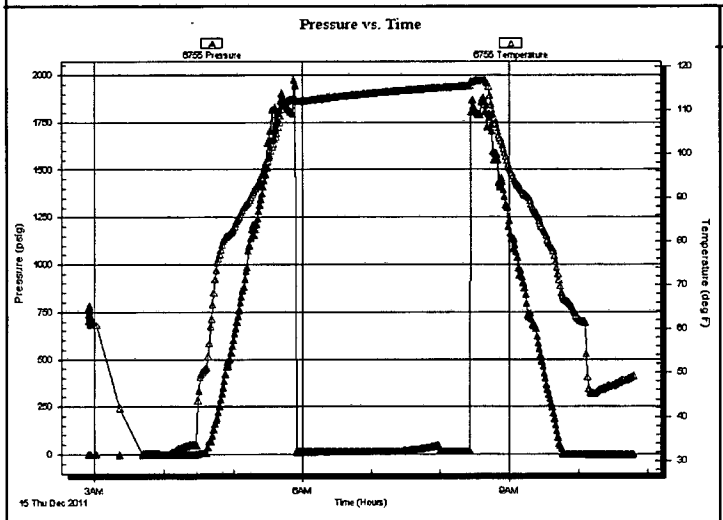
Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6755 **Outside**

Press@RunDepth: psig @ 3782.00 ft (KB)
Start Date: 2011.12.15 End Date: 2011.12.15
Start Time: 02:54:55 End Time: 10:47:53

Capacity: 8000.00 psig
Last Calib.: 2011.12.15
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak Blow , Built to 1-1/4"
ISI-Dead
FFP-Dead
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Free Oil	0.07
5.00	HOCM-40%O-60%M	0.07
0.00	60' Gas In Pipe	0.00

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44706 **DST#: 4**

Test Start: 2011.12.15 @ 02:55:23

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:54:23
Time Test Ended: 10:47:38

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

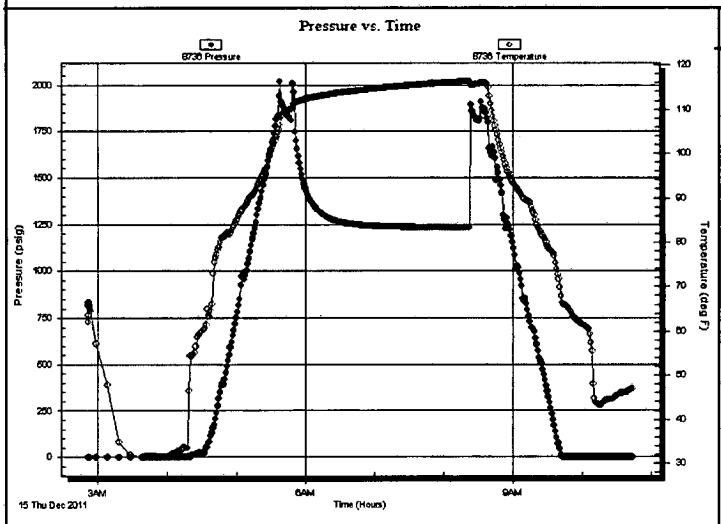
Interval: 3780.00 ft (KB) To 3796.00 ft (KB) (TVD)
Total Depth: 3851.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2164.00 ft (KB)
2156.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8736 **Below (Straddle)**
Press@RunDepth: psig @ 3812.00 ft (KB)
Start Date: 2011.12.15 End Date: 2011.12.15
Start Time: 02:51:45 End Time: 10:43:39

Capacity: 8000.00 psig
Last Calib.: 2011.12.15
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak Blow, Built to 1-1/4"
ISI-Dead
FFP-Dead
FSI-Dead



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Free Oil	0.07
5.00	HOCM-40%O-60%M	0.07
0.00	60' Gas In Pipe	0.00

* 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

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44706 **DST#: 4**

Test Start: 2011.12.15 @ 02:55:23

Tool Information

Drill Pipe:	Length:	3770.00 ft	Diameter:	3.80 inches	Volume:	52.88 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:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		62000.00 lb
					Total Volume:	52.88 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		11.00 ft					String Weight:	Initial	58000.00 lb
Depth to Top Packer:		3780.00 ft						Final	58000.00 lb
Depth to Bottom Packer:		3796.00 ft							
Interval between Packers:		16.00 ft							
Tool Length:		90.00 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			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	1.00			3782.00		
Recorder	0.00	8673	Inside	3782.00		
Recorder	0.00	6755	Outside	3782.00		
Perforations	10.00			3792.00		
Blank Off Sub	1.00			3793.00		
Blank Spacing	3.00			3796.00	16.00	Tool Interval
Packer	0.00			3796.00		
Perforations	15.00			3811.00		
Change Over Sub	1.00			3812.00		
Recorder	0.00	8736	Below	3812.00		
Blank Spacing	31.00			3843.00		
Change Over Sub	1.00			3844.00		
Perforations	2.00			3846.00		
Bullnose	3.00			3849.00	53.00	Bottom Packers & Anchor
Total Tool Length:	**90.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

PO Box 1019
Hays, KS 67601

ATTN: Marc Downing

12-14s-19w Ellis,KS

Verna Herl #2-12

Job Ticket: 44706 **DST#: 4**

Test Start: 2011.12.15 @ 02:55:23

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	8.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	inches				

Recovery Information

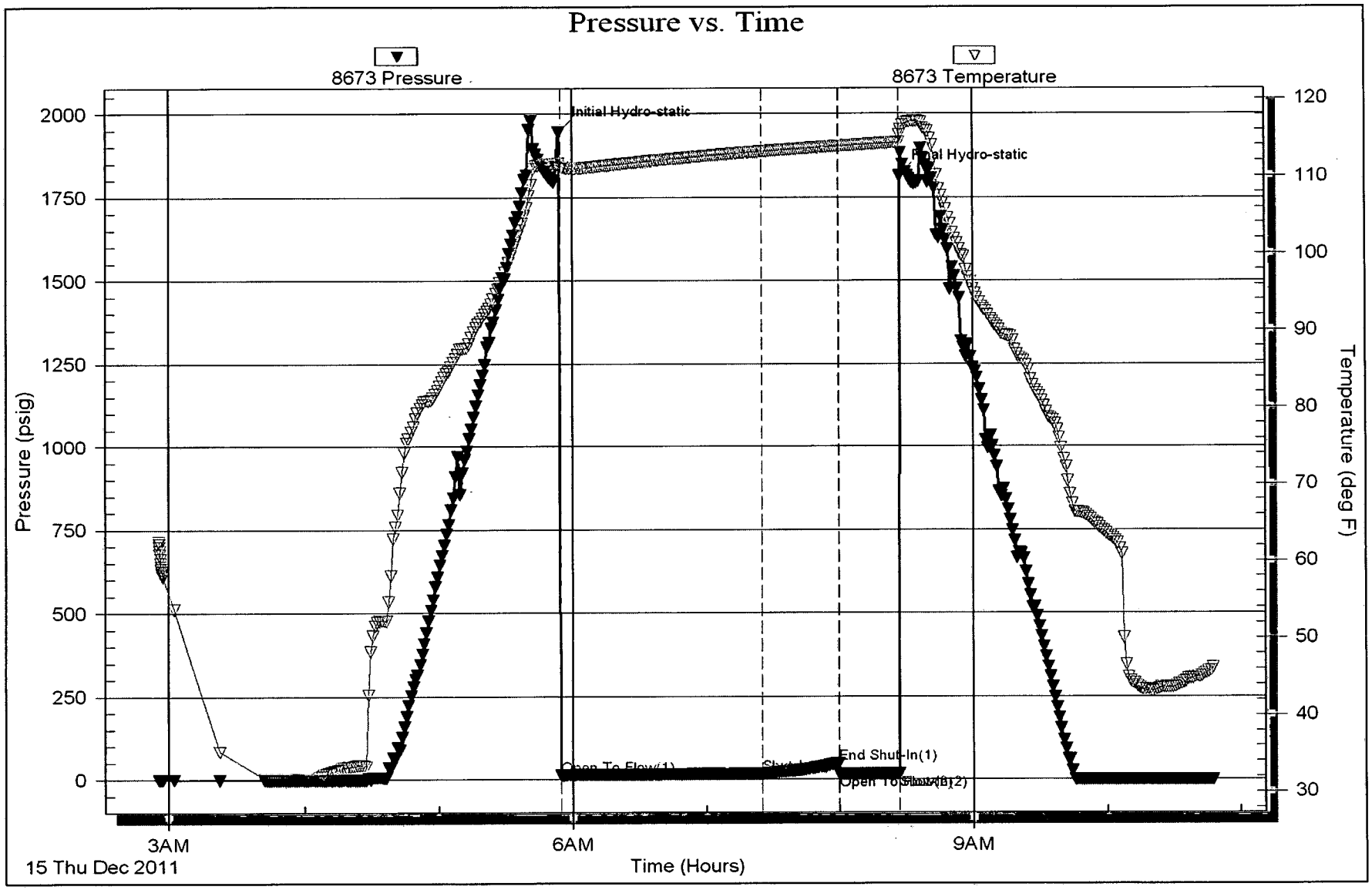
Recovery Table

Length ft	Description	Volume bbl
5.00	Free Oil	0.070
5.00	HOCM-40%O-60%M	0.070
0.00	60' Gas In Pipe	0.000

Total Length: 10.00 ft Total Volume: 0.140 bbl

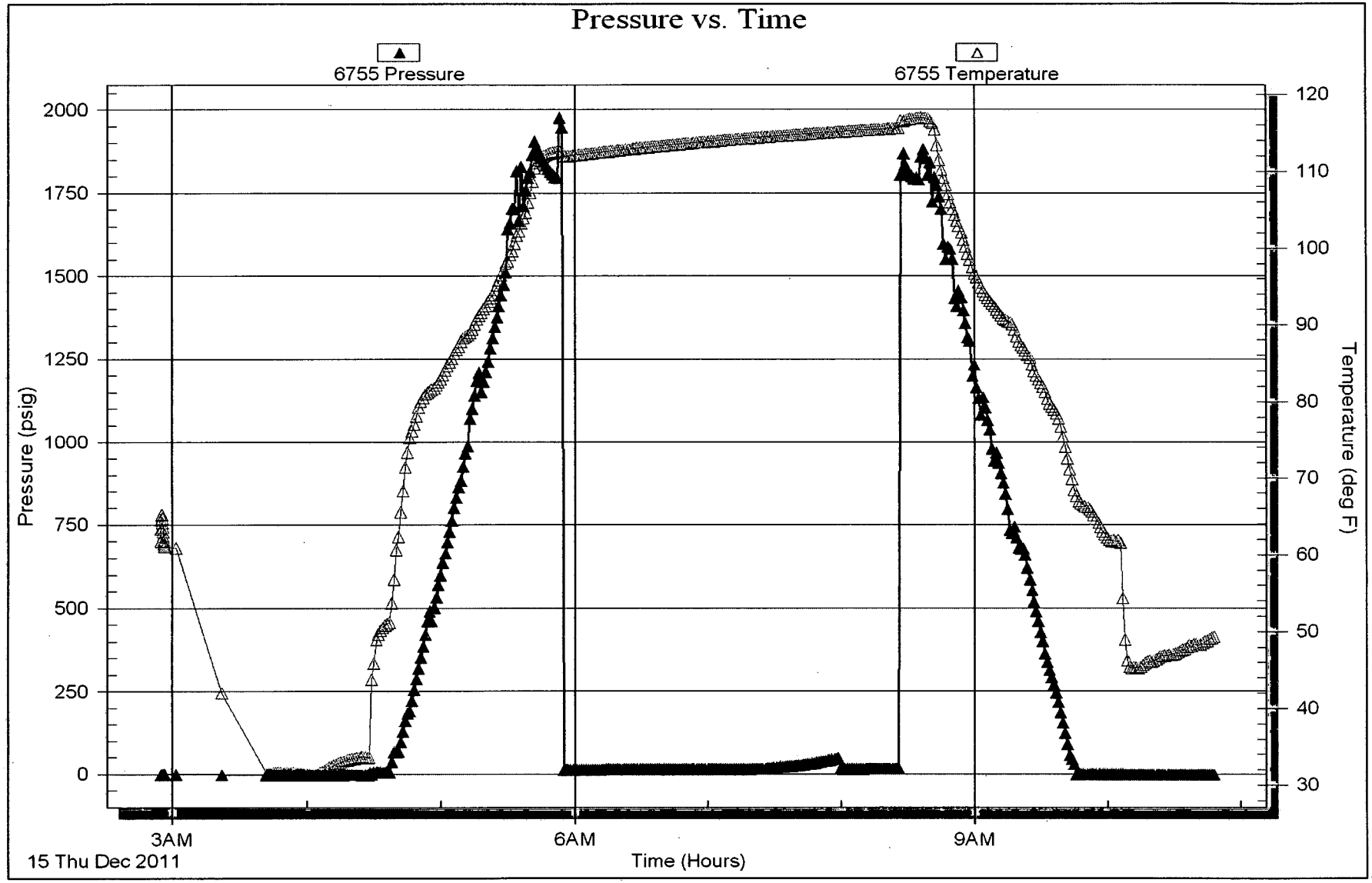
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8673 **Inside** Downing Nelson Oil Company Verna Herl #2-12 DST Test Number: 4



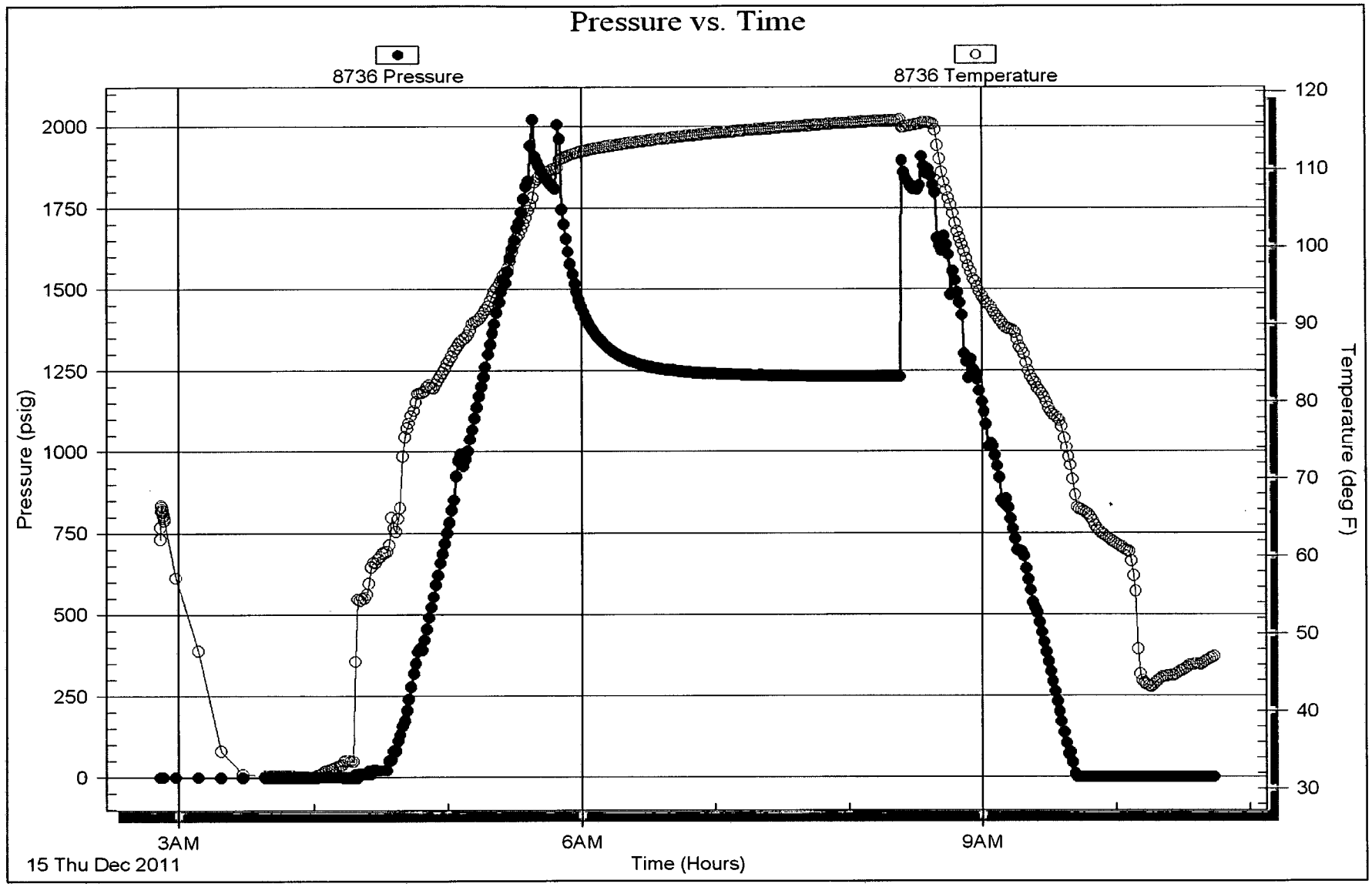
Trilobite Testing, Inc Ref. No: 44706 Printed: 2011.12.19 @ 11:06:01

Serial #: 6755 **Outside** Dow ning Nelson Oil Company Verna Herl #2-12 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 44706 Printed: 2011.12.19 @ 11:06:02

Serial #: 8736 Below (Straddle) Dowling Nelson Oil Company Verna Herl #2-12 DST Test Number: 4



Trilobite Testing, Inc Ref. No: 44706 Printed: 2011.12.19 @ 11:06:03

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

4/10

RECEIVED
DEC 16 2011
BY:

Test Ticket

NO. 44703

Well Name & No. Verna Herl #2-12 Test No. 1 Date 12-12-11

Company Downing Nelson Oil Company Elevation 2164 KB 2154 GL

Address PO Box 1019, Hays, KS. 67601

Co. Rep / Geo. Marc Downing Rig Discovery #3

Location: Sec. 12 Twp. 14s Rge. 19w Co. Ellis State KS

Interval Tested 3360 - 3394 Zone Tested Plattsmouth

Anchor Length 34' Drill Pipe Run 3359 Mud Wt. 8.5

Top Packer Depth 3355 Drill Collars Run 0 Vis 55

Bottom Packer Depth 3360 Wt. Pipe Run 0 WL 8.0

Total Depth 3394 Chlorides 2,000 ppm System LCM 2½#

Blow Description IFP - Weak Blow, Built to 4"

ISI - Dead

FFP - Weak Blow, Built to 3"

FSI - Dead

Rec 40	Feet of OCMW	%gas 10	%oil 50	%water 40	%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 60' GIP	%gas	%oil	%water	%mud	

Rec Total 40 BHT Gravity API RW .272 @ 45 °F Chlorides 48,000 ppm

(A) Initial Hydrostatic 1634	☑ Test 1125	T-On Location 4:55
(B) First Initial Flow 12	☐ Jars	T-Started 7:03
(C) First Final Flow 21	☐ Safety Joint	T-Open 9:20
(D) Initial Shut-In 1048	☐ Circ Sub	T-Pulled 12:20
(E) Second Initial Flow 22	☐ Hourly Standby ½hr 50	T-Out 14:10
(F) Second Final Flow 31	☒ Mileage 12 rt 16.80	Comments
(G) Final Shut-In 981	☐ Sampler	
(H) Final Hydrostatic 1539	☐ 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 1191.80
Final Shut-In 45	☐ Accessibility	MP/DST Disc't
	Sub Total 1191.80	

Approved By Our Representative Jason McLemore Thank You

TRILOBITE TESTING INC.
P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
DEC 16 2011
BY:

Test Ticket
NO. 44704

Well Name & No. Vesna Herl #2-12 Test No. 2 Date 12-13-11
Company Downing Nelson Oil Company Elevation 2164 KB 2156 GL
Address PO Box 1019, Hays, KS. 67601
Co. Rep / Geo. Marc Downing Rig Discovery #3
Location: Sec. 12 Twp. 14S Rge. 19W Co. Ellis State KS

Interval Tested 3483-3521 Zone Tested D-E
Anchor Length 38 Drill Pipe Run 3484 Mud Wt. 9.0
Top Packer Depth 3478 Drill Collars Run 0 Vis 50
Bottom Packer Depth 3483 Wt. Pipe Run 0 WL 8.0
Total Depth 3521 Chlorides 3,000 ppm System LCM 2#
Blow Description IFP- Good Blow, BOB in 19 min.
ISI- Dead
FFP- Fair Blow, Built to 6"
FSI- Dead For 30 min, Surface Blowback

Rec 115	Feet of SOCMW	%gas 5	%oil 65	%water 30	%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 130' GIP	%gas	%oil	%water	%mud

Rec Total 115 BHT Gravity API RW .290 @ 40 °F Chlorides 46,000 ppm

(A) Initial Hydrostatic 1732
(B) First Initial Flow 17
(C) First Final Flow 46
(D) Initial Shut-In 248
(E) Second Initial Flow 52
(F) Second Final Flow 64
(G) Final Shut-In 212
(H) Final Hydrostatic 1681

Initial Open 45
Initial Shut-In 45
Final Flow 45
Final Shut-In 45

- [x] Test 1125
- [ ] Jars
- [ ] Safety Joint
- [ ] Circ Sub
- [ ] Hourly Standby
- [x] Mileage 1 2RT 16.80
- [ ] Sampler
- [ ] Straddle
- [ ] Shale Packer
- [ ] Extra Packer
- [ ] Extra Recorder
- [ ] Day Standby
- [ ] Accessibility

Sub Total 1141.80

T-On Location 2:30
T-Started 2:42
T-Open 5:00
T-Pulled 8:00
T-Out 10:05

Comments

- [ ] Ruined Shale Packer
- [ ] Ruined Packer
- [ ] Extra Copies

Sub Total 0
Total 1141.80
MP/DST Disc't

Thank you

Approved By Our Representative Jason McLamore

TRILOBITE TESTING INC.
P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
DEC 16 2011
BY:

Test Ticket

NO. 44705

4/10

Well Name & No. Verna Herl #2-12 Test No. 3 Date 12-14-11
Company Downing Nelson Oil Company Elevation 2164 KB 2156 GL
Address PO Box 1019, Hays, KS. 67601
Co. Rep / Geo. Marc Downing Rig Discovery #3
Location: Sec. 12 Twp. 14s Rge. 19w Co. Ellis State KS

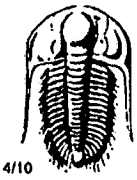
Interval Tested 3557-3633 Zone Tested H-I-J
Anchor Length 76 Drill Pipe Run 3548 Mud Wt. 9.1
Top Packer Depth 3552 Drill Collars Run 0 Vis 51
Bottom Packer Depth 3557 Wt. Pipe Run 0 WL 8.0
Total Depth 3633 Chlorides 5500 ppm System LCM 2#
Blow Description IFP- Good Blow, BOB in 8 min.
ISI- Blowback Built to 1/2"
FFP- Good Blow, BOB in 2 min.
FSI- Surface Blowback

Rec 145	Feet of GMO	55 %gas	30 %oil	%water	15 %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 840' GIP	%gas	%oil	%water	%mud	

Rec Total 145 BHT 107° Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1795	☑ Test 1125	T-On Location 21:32	
(B) First Initial Flow 34	☐ Jars	T-Started 21:56	
(C) First Final Flow 66	☐ Safety Joint	T-Open 23:48	
(D) Initial Shut-In 907	☐ Circ Sub	T-Pulled 2:48	
(E) Second Initial Flow 72	☐ Hourly Standby	T-Out 5:25	
(F) Second Final Flow 95	☑ Mileage 12 R/T 116.80	Comments	
(G) Final Shut-In 855	☐ Sampler		
(H) Final Hydrostatic 1702	☐ 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 1141.80	
Final Shut-In 45	☐ Accessibility	MP/DST Disc't	
	Sub Total 1141.80		

Approved By ____ Our Representative Jason McLemore



4/10

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
DEC 16 2011
BY:

Test Ticket

NO. 44706

Well Name & No. Verna Herl #2-12 Test No. 4 Date 12-15-11

Company Downing Nelson Oil Company Elevation 2164 KB 2156 GL

Address PO Box 1019, Hays, KS. 67601

Co. Rep / Geo. Marc Downing Rig Discovery #3

Location: Sec. 12 Twp. 14s Rge. 19w Co. Ellis State KS

Interval Tested 3780-3796 Zone Tested Arbuckle

Anchor Length 16' Drill Pipe Run 3770 Mud Wt. 9.0

Top Packer Depth 3775 Drill Collars Run 0 Vis 50

Bottom Packer Depth 3780 straddle @ 3796 Wt. Pipe Run 0 WL 8.8

Total Depth 3851 Chlorides 8500 ppm System LCM 1½#

Blow Description IFP- Weak Blow, Built to 1¼

ISI- Dead

FFP- Dead

FSI- Dead

Rec 5	Feet of Free Oil	%gas	%oil	%water	%mud
Rec 5	Feet of HOCM	%gas	40 %oil	%water	60 %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total ____ BHT ____ Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1946

(B) First Initial Flow 13

(C) First Final Flow 16

(D) Initial Shut-In 49

(E) Second Initial Flow 17

(F) Second Final Flow 17

(G) Final Shut-In ____

(H) Final Hydrostatic 1815

Initial Open 45

Initial Shut-In 45

Final Flow 30

Final Shut-In 30

- ☒ Test 1125
- ☐ Jars
- ☐ Safety Joint
- ☐ Circ Sub
- ☐ Hourly Standby
- ☒ Mileage 1 2 RT 16.80
- ☐ Sampler
- ☒ Straddle 1000
- ☐ Shale Packer
- ☐ Extra Packer
- ☐ Extra Recorder
- ☐ Day Standby
- ☐ Accessibility

Sub Total 1741.80

T-On Location 2:30

T-Started 2:51

T-Open 5:48

T-Pulled 8:18

T-Out 10:45

Comments

- ☐ Ruined Shale Packer
- ☐ Ruined Packer
- ☐ Extra Copies

Sub Total 0

Total 1741.80

MP/DST Disc't

Approved By ____ Our Representative Jason McLemore

Thank You