



KANSAS CORPORATION COMMISSION 1067054
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 SLOW
 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 #: _____
10/17/2011 10/25/2011 10/26/2011
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 15-051-26173-00-00
Spot Description: _____
NE NW SE NE Sec. 18 Twp. 13 S. R. 20 East West
1620 Feet from North / South Line of Section
940 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Ellis
Lease Name: Kohl Well #: 1-18
Field Name: Raynesford
Producing Formation: None
Elevation: Ground: 2198 Kelly Bushing: 2206
Total Depth: 3957 Plug Back Total Depth: _____
Amount of Surface Pipe Set and Cemented at: 222 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: 16000 ppm Fluid volume: 320 bbls
Dewatering method used: Hauled to Disposal
Location of fluid disposal if hauled offsite:
Operator Name: Blackhawk Production Company
Lease Name: Bruhl #2 License #: 32504
Quarter NW Sec. 30 Twp. 14 S. R. 18 East West
County: Ellis Permit #: D26232

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 Gensior Date: 11/10/2011



1067054

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Kohl Well #: 1-18
 Sec. 18 Twp. 13 S. R. 20 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 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 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 <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: Attached	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum Attached Attached Attached
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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 pipe	12.25	8.625	23	221.69	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 (Explain) _____	
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)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Kohl 1-18
Doc ID	1067054

All Electric Logs Run

Micro
Sonic
Dual Induction
Compensated Neutron Density

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Kohl 1-18
Doc ID	1067054

Tops

Tope Anhydrite	1542'	+664
Base Anhydrite	1584'	+622
Topeka	3236'	-1030
Heebner	3465'	-1259
Toronto	3486'	-1280
LKC	3502'	-1296
BKC	3746'	-1540
Marmaton	3798'	-1592
Conglomerate Sand	3872'	-1666
Arbuckle	3889'	-1683

ALLIED CEMENTING CO., LLC. 038348

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

SERVICE POINT:

Russell

DATE <u>10/24/11</u>	SEC <u>18</u>	TWP. <u>13</u>	RANGE <u>20</u>	CALLED OUT	ON LOCATION	JOB START <u>8:30 AM</u>	JOB FINISH <u>9:30 AM</u>
LEASE <u>Roh</u>	WELL # <u>1-18</u>	LOCATION <u>Ellis + Hwy 40 1 mi</u>			COUNTY <u>Ellis</u>	STATE <u>Ks</u>	
OLD OR NEW (Circle one)		<u>15 1/4 in Sints</u>					

CONTRACTOR Discovery Drilling Ry #3 OWNER _____

TYPE OF JOB PTA

HOLE SIZE 2 7/8 TD. 3857' CEMENT AMOUNT ORDERED 245 cu yds 426 cu

CASINO SIZE _____ DEPTH _____

TUBING SIZE _____ DEPTH _____

DRILL PIPE 4 1/2 DEPTH 3888'

TOOL _____ DEPTH _____

PREP. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. _____

PERFS. _____

DISPLACEMENT _____

EQUIPMENT

PUMP TRUCK CEMENTER Steve

403 HELPER Ron

BULK TRUCK _____

477 DRIVER Nick

BULK TRUCK _____

_____ DRIVER _____

REMARKS:

3888' 25 skt

1556' 25 skt

225' 100 skt

221' 40 skt

90' 10 skt

Rat Hole 30skt

Moose Hole 15skt

CHARGE TO: Deanna Walker

STREET _____

CITY _____ STATE _____ ZIP _____

Thanks!

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.

PRINTED NAME GALEN GASCHLER

SIGNATURE Galen Gaschler

CEMENT AMOUNT ORDERED 245 cu yds 426 cu

4456

COMMON 147 @ 16.25 2388.75

POZMIX 98 @ 8.50 833.00

ORL 8 @ 21.25 170.00

CHLORIDE _____ @ _____

ASC _____ @ _____

Flu Sol 61# @ 2.20 164.70

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

HANDLING 257 @ 2.25 569.25

MILEAGE 1440/21.6 1191.03

TOTAL 5266.73

SERVICE

DEPTH OF JOB _____

PUMP TRUCK CHARGE _____ 1250.00

EXTRA FOOTAGE _____ @ _____

MILEAGE 41 @ 21.00 282.00

MANIFOLD _____ @ _____

_____ @ _____

CU 41 @ 4.00 164.00

TOTAL 1701.00

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

Arg Hole Arg @ NC

_____ @ _____

_____ @ _____

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES 6967.73

DISCOUNT 201 IF PAID IN 30 DAYS

QUALITY OILWELL CEMENTING, INC.

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665
 Cell 785-324-1041

No. 5020

Date <u>10-17-11</u>	Sec.	Twp.	Range	County <u>Ellis</u>	State <u>Kansas</u>	On Location	Finish <u>8:15 PM</u>
Lease <u>Hchl</u>	Well No. <u>1-18</u>			Location <u>Ellis W 15 1/2 S 34 W Strub</u>			
Contractor <u>Discovery Drilling Rig 3</u>				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 <u>Surface</u>				Charge To <u>Dewaring Nelson Oil Co</u>			
Hole Size <u>12 1/4</u>	T.D. <u>222</u>			Depth <u>222</u>			
Csg. <u>8 3/8</u>	Depth <u>222</u>			Street			
Tbg. Size	Depth			City			
Tool	Depth			State			
Cement Left in Csg. <u>10-15</u>	Shoe Joint			The above was done to satisfaction and supervision of owner agent or contractor.			
Meas Line	Displace <u>13 1/4</u>			Cement Amount Ordered <u>150 Common</u>			
EQUIPMENT				3000 2660			
Pumptrk <u>5</u>	No.	Cementor		Common <u>150</u>			
		Helper	<u>Steve</u>				
Bulktrk <u>14</u>	No.	Driver	<u>Chris</u>	Poz. Mix			
		Driver	<u>Chris</u>				
Bulktrk	No.	Driver	<u>Doug</u>	Gel. <u>3</u>			
		Driver	<u>Doug</u>	Calcium <u>5</u>			
JOB SERVICES & REMARKS				Hulls			
Remarks:				Salt			
Rat Hole				Flowseal			
Mouse Hole				Kol-Seal			
Centralizers				Mud CLR 48			
Baskets				CFL-117 or CD110 CAF 38			
D/V or Port Collar				Sand			
<u>Cement did Circulate</u>				Handling <u>138</u>			
				Mileage			
FLOAT EQUIPMENT				Guide Shoe			
				Centralizer			
				Baskets			
Quality Oilwell Cementing				AFU Inserts			
				Float Shoe			
				Latch Down			
<u>Mark [Signature]</u>				Pumptrk Charge <u>Surface</u>			
				Mileage <u>19</u>			
				Tax			
				Discount			
X Signature <u>[Signature]</u>				Total Charge			

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 Kahl #1-18

FIELD Raynesford

LOCATION 1670' FNL & 940' FEL

SEC. 18 TWP. 13s RGE. 20w

COUNTY Ellis

STATE Kansas

OPERATOR DNOCI

CONTRACTOR Discovery Drilling Rig #3

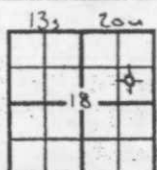
CONM: 10-17-11 COMP: 10-25-11

CASING RECORD

SURF: 8 3/4" @ 220' PROD: None

TOTAL DEPTH DRILLERS: 3957

TOTAL DEPTH LOG 3957



PRODUCTION D&A

ELEVATION KB 2204

DF

GL 2198

Drilling Measured From: KB

Samples Saved From 2950 To: TD

Drilling Time From 3100 To: TD

Samples Examined From: 3450 To: TD

Geological Supervision From 3100 To Total Depth

Wellsite Geologist Marc Downing

Electrical Surveys Superior

CNL/CDL

DIL

MEL

Sonic

DAILY PENETRATION

DATE	DEPTH	NO	SIZE	MAKE	TYPE	DEPTH OUT	FEET	HOURS

BIT RECORD

FORMATION	INTERVAL	DESCRIPTION OF SHOW	LOG ANALYSIS	
			#	SW

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Top Anhydrite	NA	1542	+664	-4
Base Anhydrite	NA	1584	+622	NA
Tapoka	3237	3236	-1030	NA
HEARLED	3466	3465	-1259	-4
Taranta	3489	3486	-1280	NA
LKC	3503	3502	-1296	-4
BKC	3747	3746	-1540	-2
Marmaton	3798	3798	-1592	NA
Consolidate Sand	3871	3872	-1666	NA
Artisole	3889	3889	-1683	+18

REFERENCE WELL FOR STRUCTURE Imperial Drilling Co
Stebbins 'A' #1 SE-SF-NE Sec 18-13s-20w

DRILL STEM TESTS

No.	Interval	IPP/Time	ISIP/Time	FFP/Time	PSIP/Time	NO-PHI	RECOVERY

REMARKS AND RECOMMENDATIONS

LEGEND



Achydrife



Soft



Sandstone



Shale



Carb sh



Limestone



Coarse Lime




Clay



Detonita

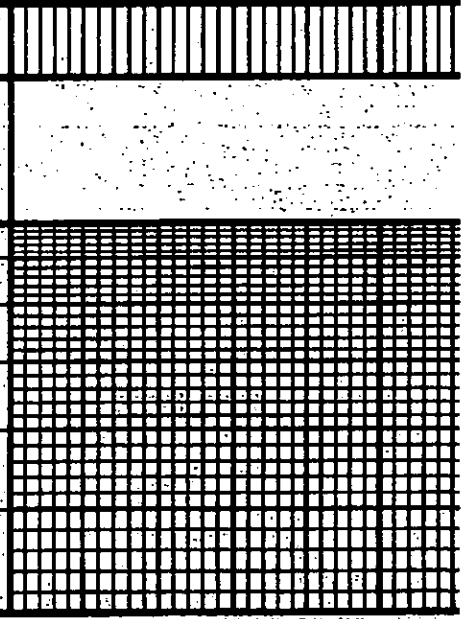
DRILLING TIME IN MINUTES
PER FOOT
Rate of Penetration Decreases



5' 10' 15' 20' 25'

DEPTH

LITHOLOGY

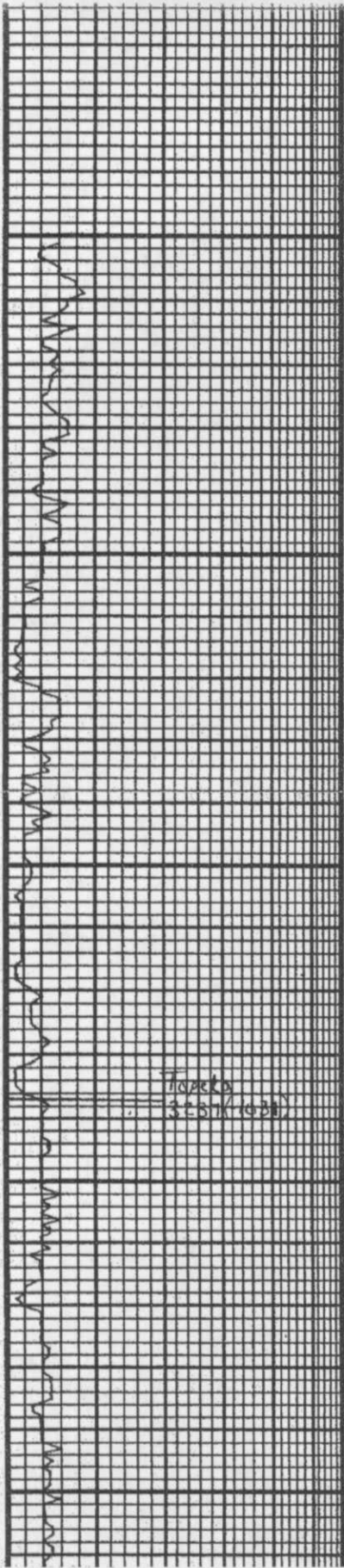


SAMPLE DESCRIPTIONS

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OIL SHOW

REMARKS



3100

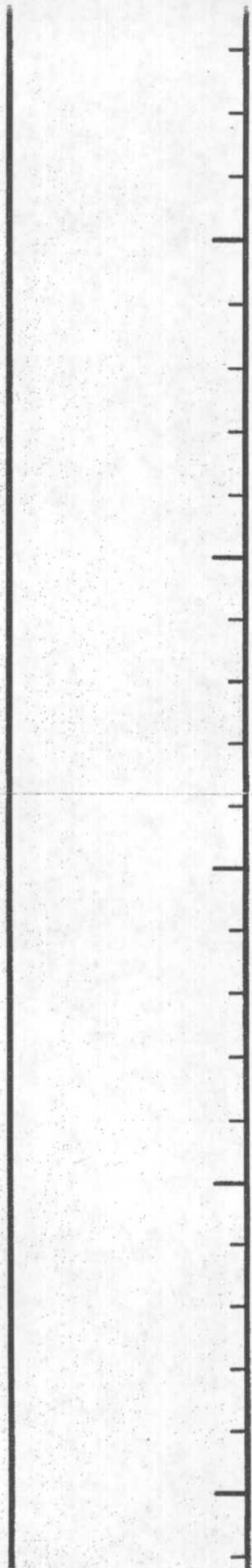
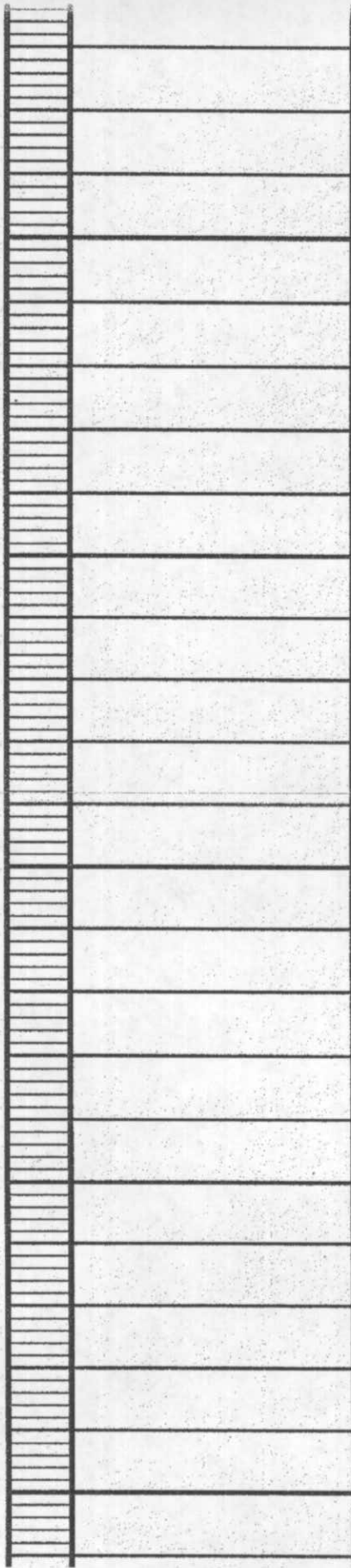
50

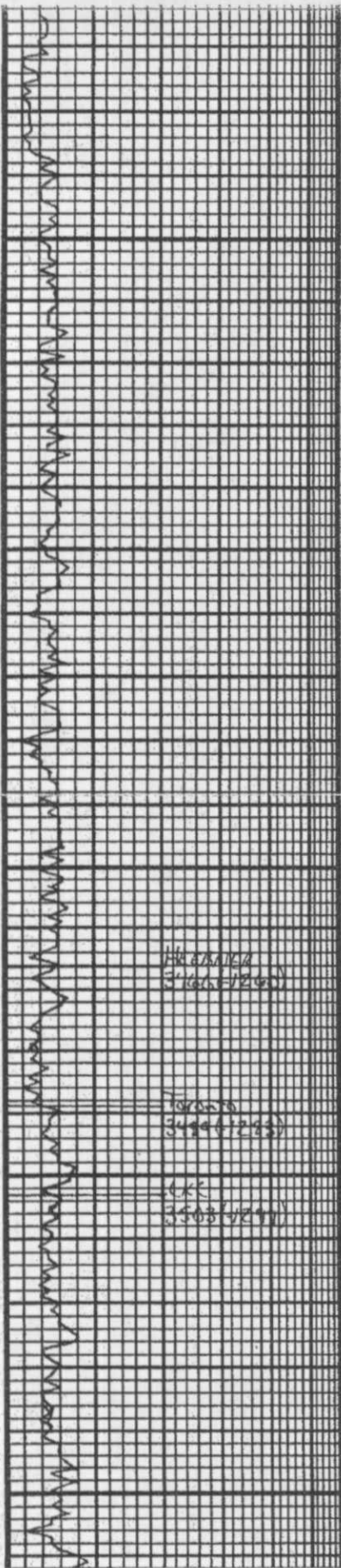
3200

TIPACKA
3.8.11.10.2011

50

3300





50

3400

50

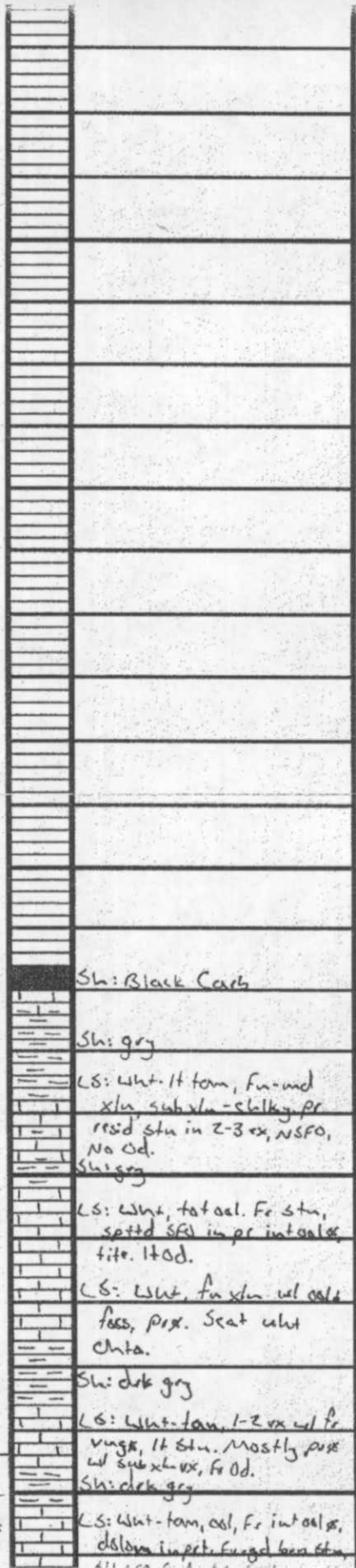
HAR...
(3400-3420)

F...
(3420-3440)

L...
(3500-3520)

3500

50



Sh: Black Carb

Sh: gry

LS: Whit. lt tan, fine and
xln, subxln - shaly, pr
resid stu in 2-3 ex, NSFO,
No Od.

Sh: gry

LS: Whit, total. Fr stu,
settled sh in pr intervals
fite. It Od.

LS: Whit, fine xln w/ calc
foss, prx. Scat wht
chnta.

Sh: dk gry

LS: Whit-tan, 1-2 ex w/ fr
vngs, lt stu. Mostly pure
w/ subxln, fr Od.

Sh: dk gry

LS: Whit-tan, cal, Fr intervals,
delays imp. Fungal ben stu

0
5

1

Vis: 50 Lt: 9.0

DST #1

3544-3566

45-45-45-45

IFP: 19-49

FFP: 52-73

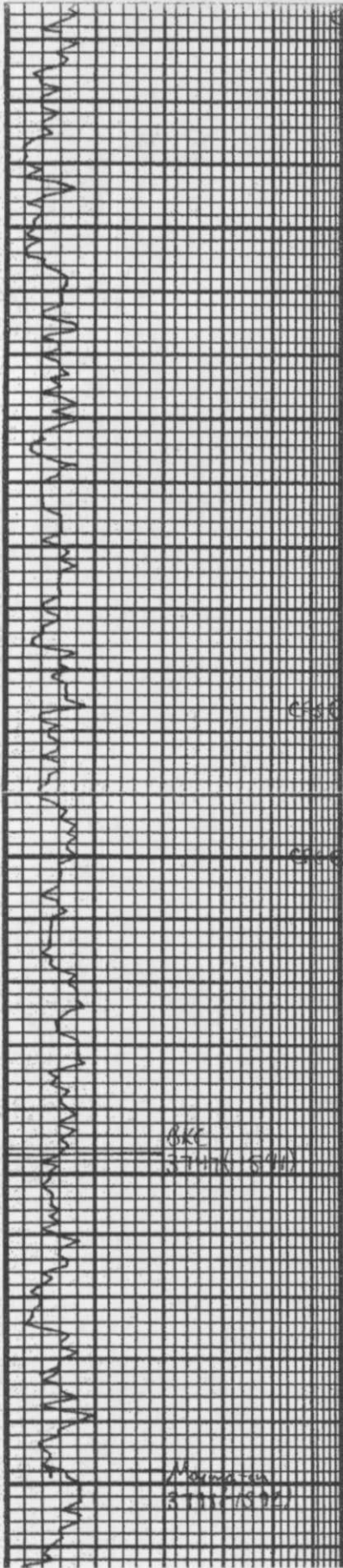
SIP: 643-632

HP: 1673-1651

Rec:

90' W

BHT: 113° Chlor: 6.8K



3600

3700

3800

Sh: Black Carb

Sh: Jy

LS: wht, 1-2 ex w/ gd int xln, fass. gd sat w/ sfo, mostly sub xln

LS: wht, med xln. Tot fass. gd int fass, scat spotted sfo, mostly barren gd Od.

LS: wht. Fin. v. Fin xln. gd int xln, friable. Mostly all barren, scat stu in pbs ex w/ death gel Od.

LS: wht; fin-med xln. scat fass. All dns w/ pss.

Sh: Black Carb

Sh: gry

LS: wht - tan, Fin. med xln

2-3 ex w/ Fr. brn stu in pr int xln, NSFO, 11-Fr Od. Rx mostly sub xln.

Sh: drk gry

LS: tan-brn, Fin xln, Tot sat blk w/ Fr-gd int xln, Fr sfo. Scat suc ex in base w/ Fr stu. 11-Fr Od.

Sh: gry

LS: wht, Fin-med xln, sat. pr. No s. tile w/ Fr stu. Fr-gd gry sfo w/ brn, 11-Fr Od. Rx sub xln in prt.

Sh: lt gry, gummy

LS: wht Fin xln, mostly sub xln chky, scat fr int xln. Trng dns, All NS, No od.

Sh: drk gry

LS: wht, Fin-med xln w/ scat sml fass. Few pcs w/ fr int xln, All NS, No Od.

Sh: brn w/ gry

LS: tan-wht, Fin xln, pss

Sh: gry. long brn w/ red. Arg in prt.

LS: tan-wht, Fin-med xln. pss, dns.

Sh: gry w/ brn

LS: wht - tan, Fin-med xln, mostly dns. 2-3 ex w/ Fr stu spotted sfo in pr vng. 11 Fr Od.

LS: wht-ll tan, Fin xln, gd int

DST #2
3616-3676
30-30-30-30
I.F.P: 21-46
F.F.P: 54-64
S.I.P: 654-542
H.P: 1721-1705
Rec:
76' mud w/ shew w/ BHT: 109'

Vio: 52- Ut. 9.1
DST #3
3805-3835
30-30-30-30
I.F.P: 19-19
F.F.P: 21-23
S.I.P: 419-89
H.P: 1426-1402
Rec:

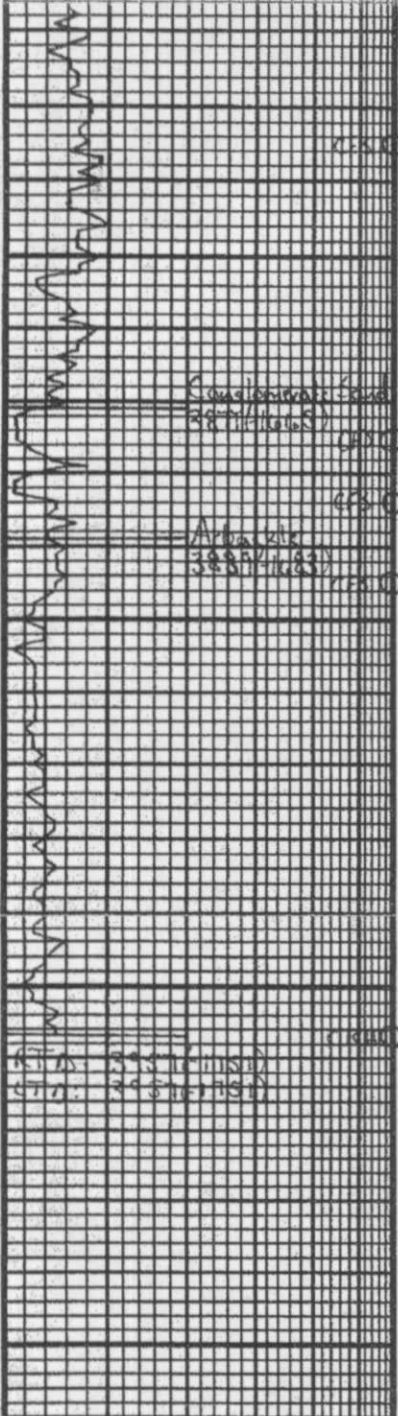
D
S
T

2

D
10

BKE
3710-3740

M...
3710-3740



#3
OST
#4
OST
#5
OST
#6
OST

50
30
3900
50
4000

sp. fr. sfo, fr rankbone sfo. It-fr Od, fr Amt. org. + wht-lau chlo

LS: wht-tan, Fr-med xlm, some AIA, Fr-gd intx-lgs w/ Fr-gd lt brn str. spotted sfo, lt-fr Od.

Sh: grj

LS: tan-wht, scat od, subxl-i. red.

Sh: grj-ltgrn

Sh: grj

ss: mgr. v. weathered w/ v. good rapd some total blk sat str. gd sfo (hand) w/ lots (yellow) red detrital red at str. top of bed of sand

Mostly Allicentia, org. tan. 1-2 ss cherty w/ gd fr + gd sfo. Wash sltly red, No Od.

Data: wht. Fr chert xlm pr-Fr intx-lgs, fite. Scat fr spotted sfo when broken, fr Amt barren ex. No Od.

Data: wht. Fr med chert xlm Fr intx-lgs w/ Fr-gd spotted sfo. Fr Amt chert, No Od.

Data: Scat ex AIA tang barren. Rx chky in prt, friable, All No Od, Scat gils.

Data: Rx tang med. crs ruan xlm. Mostly fr intx-lgs w/ scat chky ex, mostly barren.

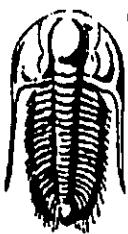
Data: wht, med-crs ruan xlm. Many v chky ex. NS.

W. J. D. J.

611: 113

OST #4
3830-3970
45-45-30-30
I.F. - 2 1/4" blue
F.F. - Surf - 1/2" blue
IFP: 23-44
FFP: 45-60
SIP: 758-603
HP: 1832-1904
Rec:
30' CO
60' MO 60%
BHT: 112 G=35

OST #5
3827-3894
15-30-15-30
I.F. - BOB 1 min / No sfb
F.F. - 8" blue
IFP: 145-194
FFP: 213-239
SIP: 552-608
HP: 1942-1792
Rec:
20' CO
140' OC Mm 220, 73%
375' M
BHT: 119"



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44755

DST#: 1

ATTN: Ron Nelson

Test Start: 2011.10.22 @ 12:50:48

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:56:43

Time Test Ended: 19:41:12

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 42

Interval: **3544.00 ft (KB) To 3466.00 ft (KB) (TVD)**

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3566.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6625 Inside

Press@RunDepth: 73.13 psig @ 3545.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.10.22

End Date:

2011.10.22

Last Calib.: 2011.10.22

Start Time: 12:50:48

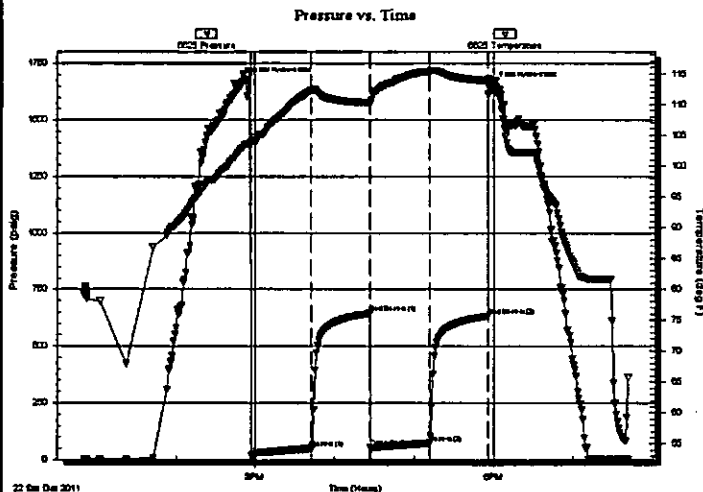
End Time:

19:41:12

Time On Btrm: 2011.10.22 @ 14:53:13

Time Off Btrm: 2011.10.22 @ 17:59:42

TEST COMMENT: 45-IFP-w k bl 1/4"to 2 1/2"bl
45-ISIP-no bl
45-FFP-w k bl surface to 1/4"bl
45-FSIP-no bl



PRESSURE SUMMARY

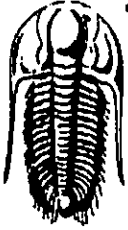
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1673.08	103.53	Initial Hydro-static
4	18.31	103.47	Open To Flow (1)
50	49.74	112.26	Shut-In(1)
94	643.66	110.27	End Shut-In(1)
94	52.64	110.18	Open To Flow (2)
139	73.13	115.44	Shut-In(2)
183	632.64	113.83	End Shut-In(2)
187	1651.92	112.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Water	0.99

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44755

DST#: 1

ATTN: Ron Nelson

Test Start: 2011.10.22 @ 12:50:48

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: 68000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	Water	0.989

Total Length: 90.00 ft Total Volume: 0.989 bbl

Num Fluid Samples: 0

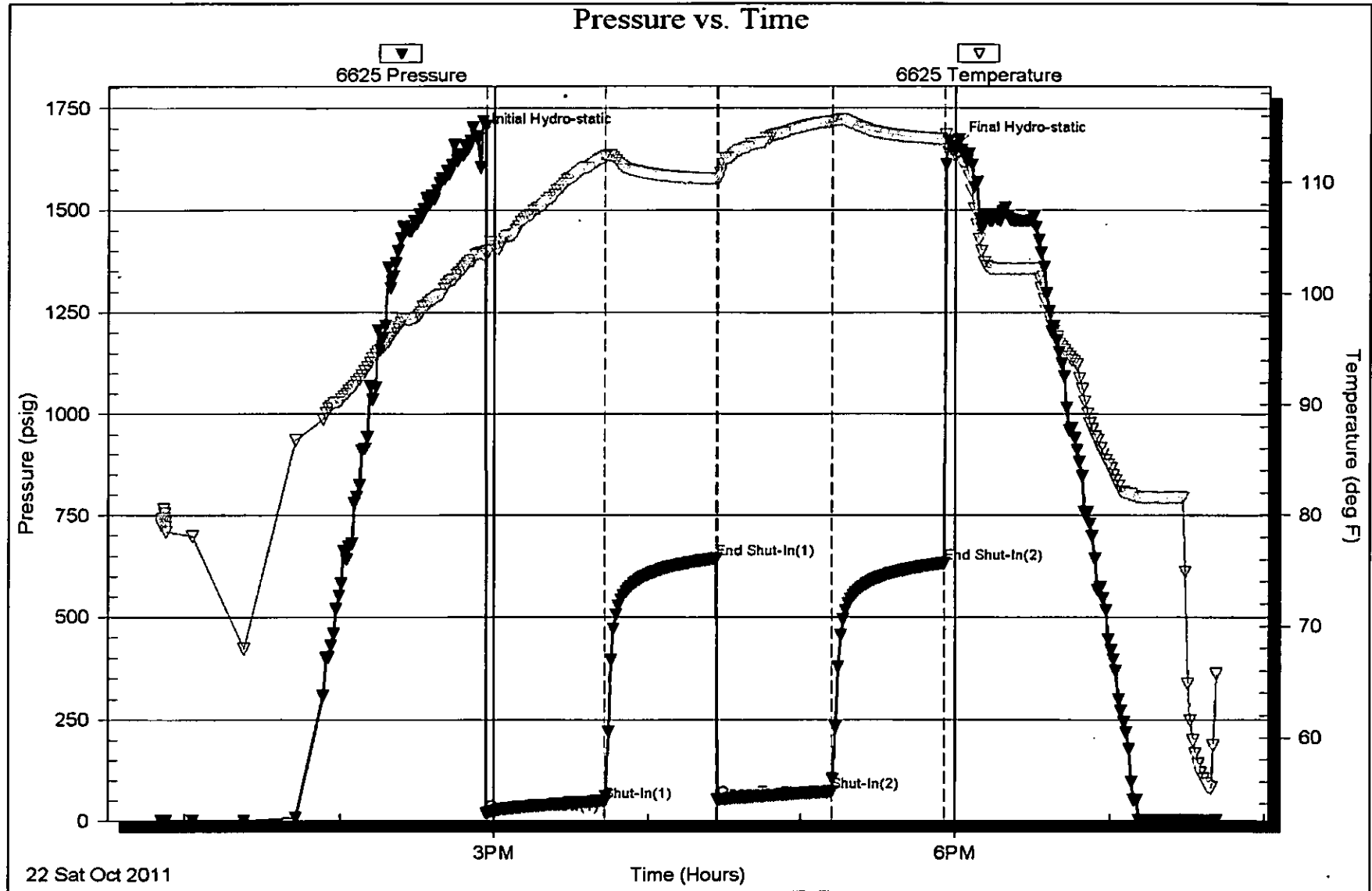
Num Gas Bombs: 0

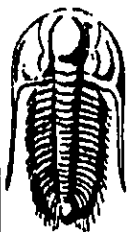
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .11@72F





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44756

DST#: 2

ATTN: Ron Nelson

Test Start: 2011.10.23 @ 10:50:24

GENERAL INFORMATION:

Formation: **LKC H-I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:49:49

Time Test Ended: 16:20:18

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: **3616.00 ft (KB) To 3676.00 ft (KB) (TVD)**

Total Depth: 3676.00 ft (KB) (TVD)

Hole Diameter: 7.85 inches Hole Condition: Fair

Reference Elevations: 2206.00 ft (KB)

2198.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 6625

Inside

Press@RunDepth: 66.88 psig @ 3622.00 ft (KB)

Start Date: 2011.10.23

End Date: 2011.10.23

Start Time: 10:50:24

End Time: 16:20:18

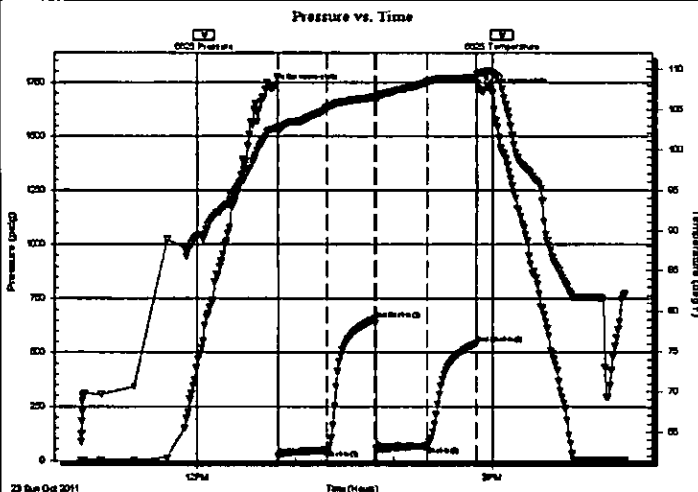
Capacity: 8000.00 psig

Last Calib.: 2011.10.23

Time On Btm: 2011.10.23 @ 12:46:49

Time Off Btm: 2011.10.23 @ 14:53:49

TEST COMMENT: 30-FFP-vy w k surface bl died in 15 min
30-ISIP-no bl
30-FFP-no bl , flushed tool, got good surge
30-FSIP-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1721.94	102.49	Initial Hydro-static
3	21.98	102.49	Open To Flow (1)
33	46.90	105.22	Shut-In(1)
62	654.92	106.52	End Shut-In(1)
63	54.56	106.38	Open To Flow (2)
94	66.88	108.40	Shut-In(2)
123	542.40	108.90	End Shut-In(2)
127	1705.19	109.58	Final Hydro-static

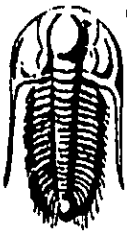
Recovery

Length (ft)	Description	Volume (bbl)
70.00	Mud w/show of oil	0.71

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44756

DST#: 2

ATTN: Ron Nelson

Test Start: 2011.10.23 @ 10:50:24

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: 50.00 sec/qt

Cushion Volume: bbl

Water Loss: 7.94 in³

Gas Cushion Type:

Resistivity: ohm-m

Gas Cushion Pressure: psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Mud w/show of oil	0.709

Total Length: 70.00 ft Total Volume: 0.709 bbl

Num Fluid Samples: 0

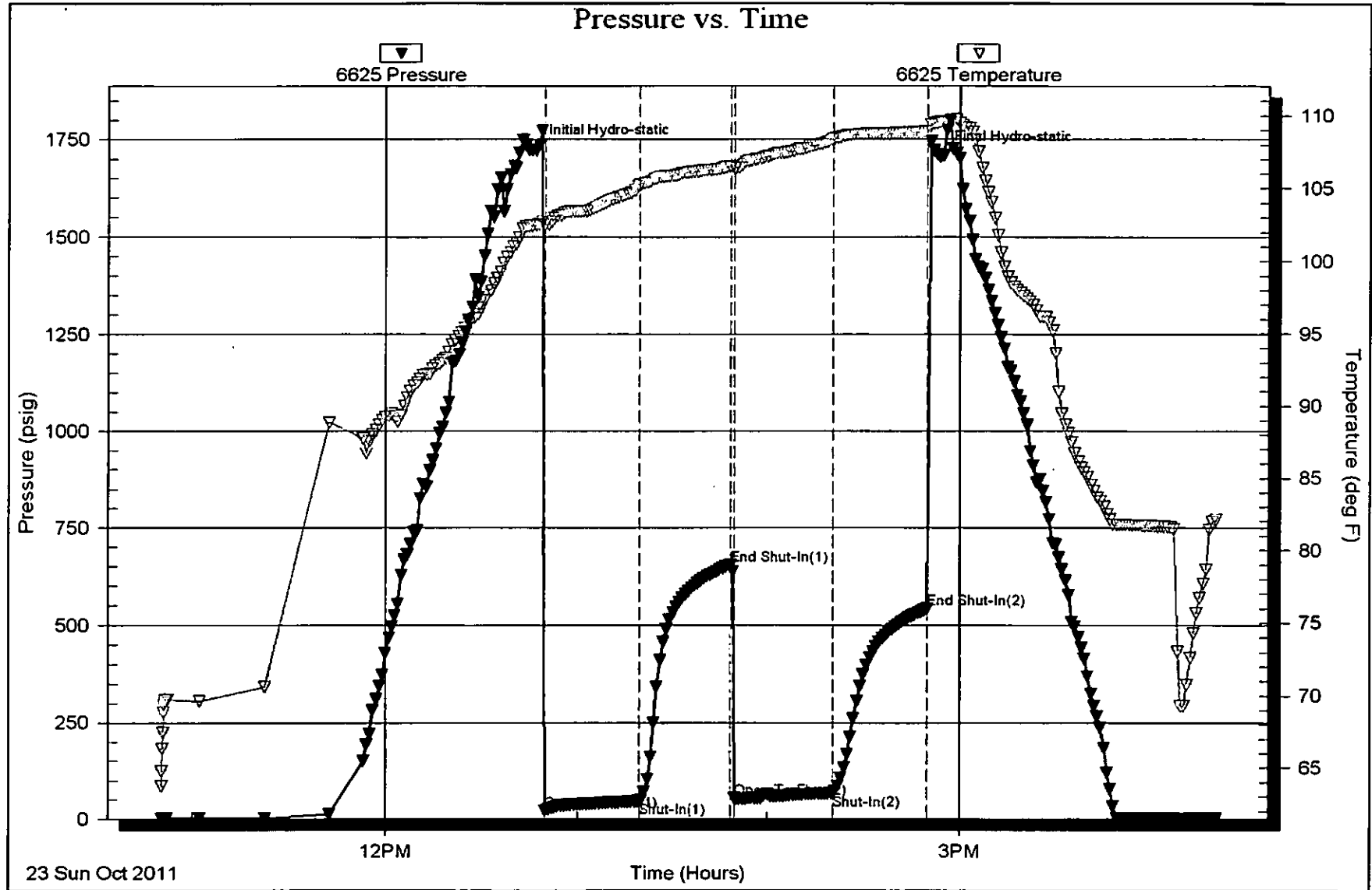
Num Gas Bombs: 0

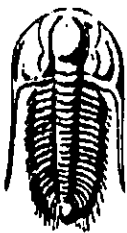
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 4757

DST#: 3

ATTN: Ron Nelson

Test Start: 2011.10.24 @ 07:05:38

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:15:33

Time Test Ended: 13:03:32

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: **3805.00 ft (KB) To 3835.00 ft (KB) (TVD)**

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3835.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6625 Inside

Press@RunDepth: 23.75 psig @ 3811.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.10.24

End Date: 2011.10.24

Last Calib.: 2011.10.24

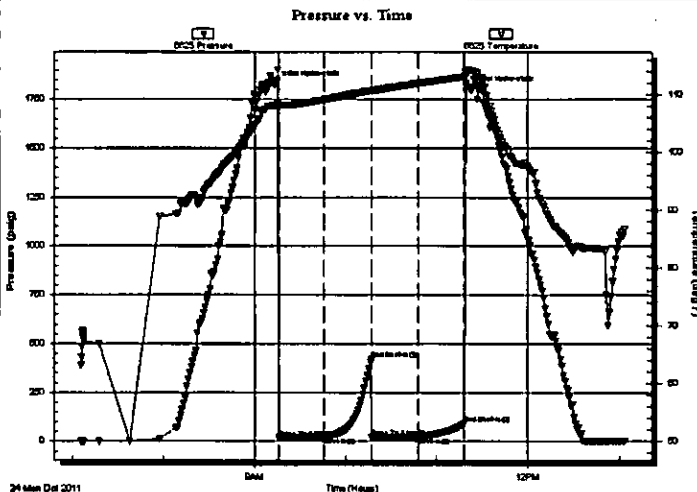
Start Time: 07:05:38

End Time: 13:03:32

Time On Btrr: 2011.10.24 @ 09:13:03

Time Off Btrr: 2011.10.24 @ 11:22:02

TEST COMMENT: 30-IFP-surface bl thru-out
30-ISIP-no bl
30-FFP-surface bl thru-out
30-FSIP-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1826.67	108.01	Initial Hydro-static
3	18.73	108.00	Open To Flow (1)
32	19.68	108.99	Shut-In(1)
64	419.24	110.62	End Shut-In(1)
64	21.17	110.52	Open To Flow (2)
95	23.75	111.85	Shut-In(2)
125	89.52	112.97	End Shut-In(2)
129	1802.86	114.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM 10% O90%M	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 4757

DST#: 3

ATTN: Ron Nelson

Test Start: 2011.10.24 @ 07:05:38

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: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OCM 10%O90%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

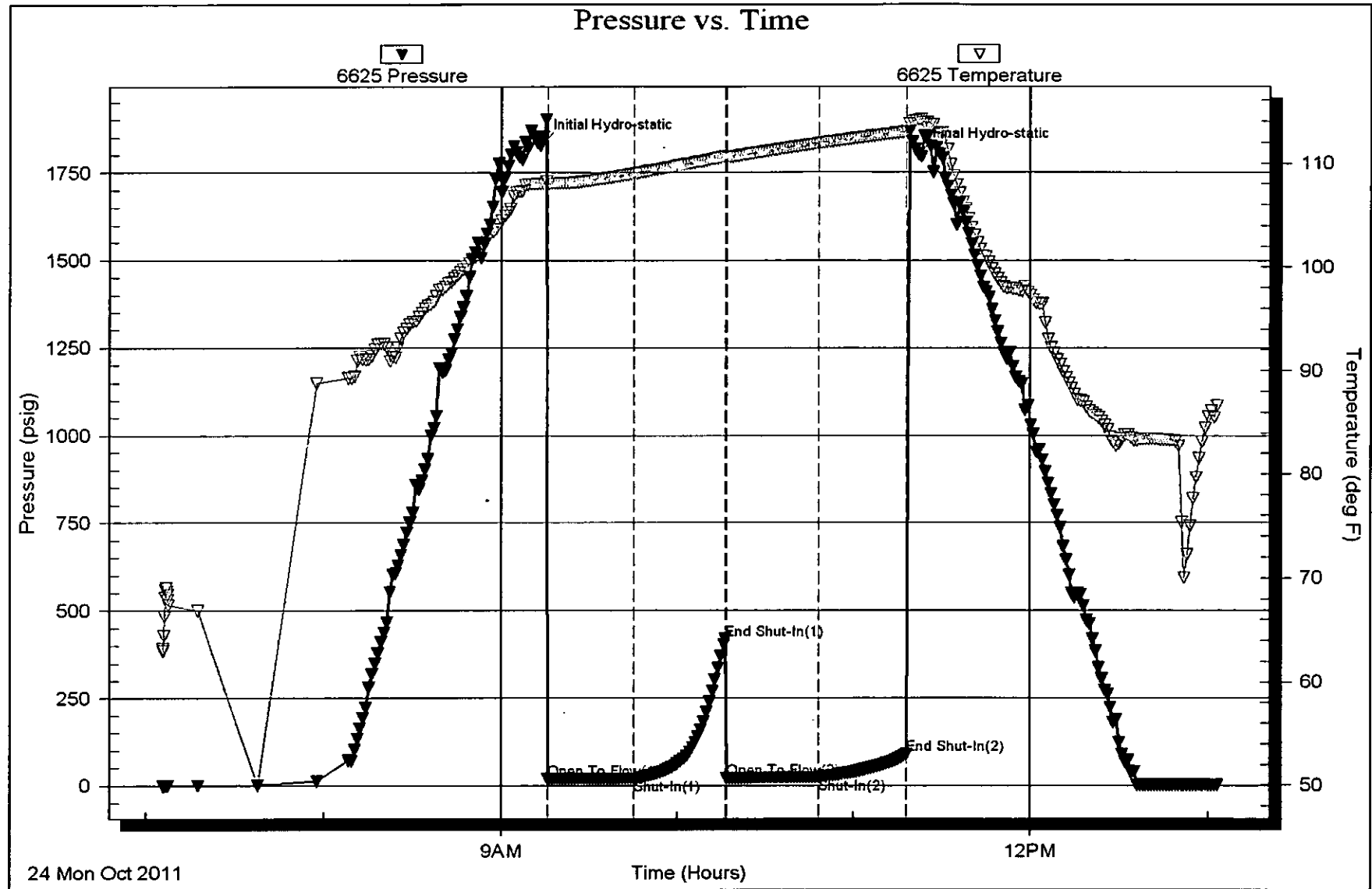
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44758

DST#: 4

ATTN: Ron Nelson

Test Start: 2011.10.24 @ 21:10:07

GENERAL INFORMATION:

Formation: **Congl Sd**

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

Time Tool Opened: 22:50:32

Time Test Ended: 03:23:31

Test Type: **Conventional Bottom Hole (Reset)**

Tester: **Ray Schwager**

Unit No: **42**

Interval: **3830.00 ft (KB) To 3875.00 ft (KB) (TVD)**

Total Depth: **3875.00 ft (KB) (TVD)**

Hole Diameter: **7.85 inches** Hole Condition: **Fair**

Reference Elevations: **2206.00 ft (KB)**

2198.00 ft (CF)

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

Serial #: 6625 **Inside**

Press@RunDepth: **60.18 psig @ 3839.00 ft (KB)**

Start Date: **2011.10.24**

End Date:

2011.10.25

Start Time: **21:10:07**

End Time:

03:23:31

Capacity: **8000.00 psig**

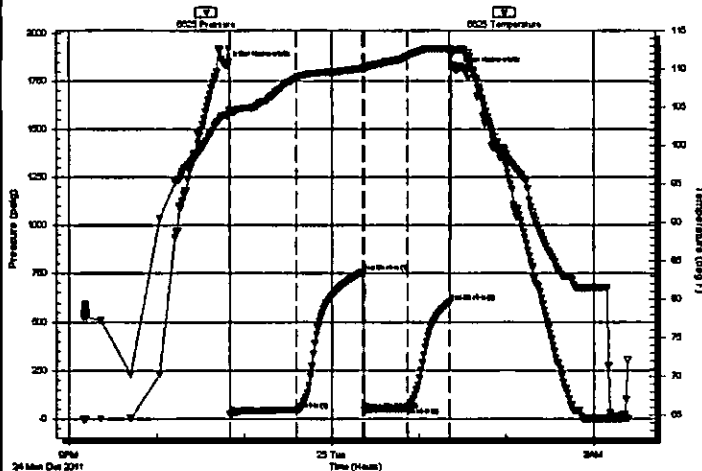
Last Calib.: **2011.10.25**

Time On Btm: **2011.10.24 @ 22:47:32**

Time Off Btm: **2011.10.25 @ 01:26:31**

TEST COMMENT: 45-IFP-w k bl , 1/2"to 2 1/4"bl
45-ISIP-no bl
30-FFP-w k bl ,surface to 1/2"bl
30-FSIP-no bl

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1832.72	103.94	Initial Hydro-static
3	23.33	104.33	Open To Flow (1)
48	44.41	108.79	Shut-in(1)
94	758.96	110.11	End Shut-in(1)
95	45.65	109.91	Open To Flow (2)
125	60.18	111.70	Shut-in(2)
154	603.75	112.64	End Shut-in(2)
159	1804.21	112.48	Final Hydro-static

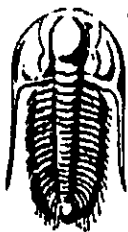
Recovery

Length (ft)	Description	Volume (bbl)
60.00	MO 40%M60%O	0.57
30.00	CO	0.42

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44758

DST#: 4

ATTN: Ron Nelson

Test Start: 2011.10.24 @ 21:10:07

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.92 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	MO 40%M60%O	0.568
30.00	CO	0.421

Total Length: 90.00 ft Total Volume: 0.989 bbl

Num Fluid Samples: 0

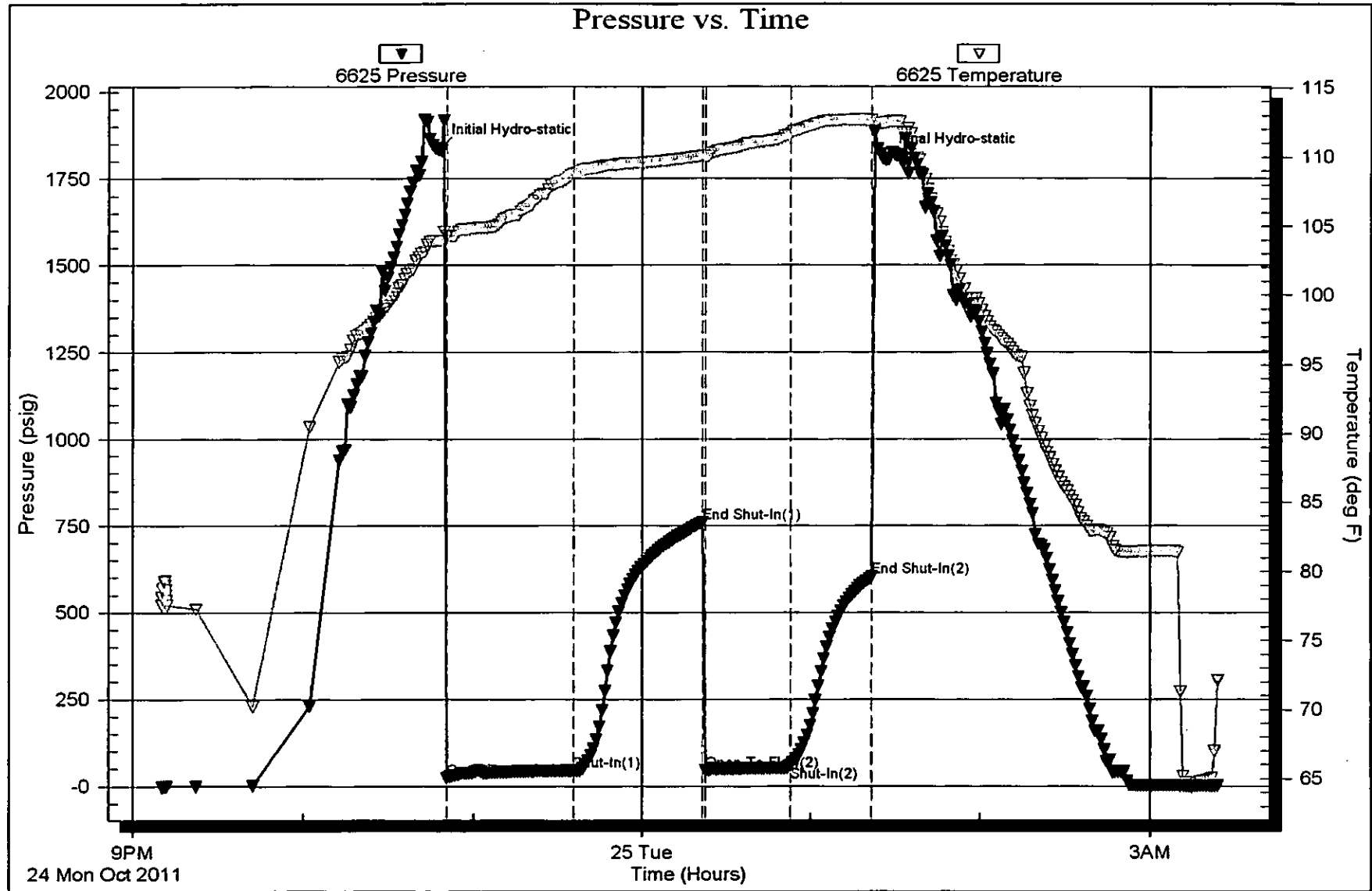
Num Gas Bombs: 0

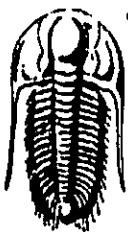
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44759

DST#: 5

ATTN: Ron Nelson

Test Start: 2011.10.25 @ 19:20:24

GENERAL INFORMATION:

Formation: **Congl Sd - Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:00:19

Time Test Ended: 00:47:48

Test Type: Conventional Straddle (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: **3827.00 ft (KB) To 3894.00 ft (KB) (TVD)**

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3957.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 6625 Inside

Press@RunDepth: 238.72 psig @ 3835.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.10.25

End Date: 2011.10.26

Last Calib.: 2011.10.26

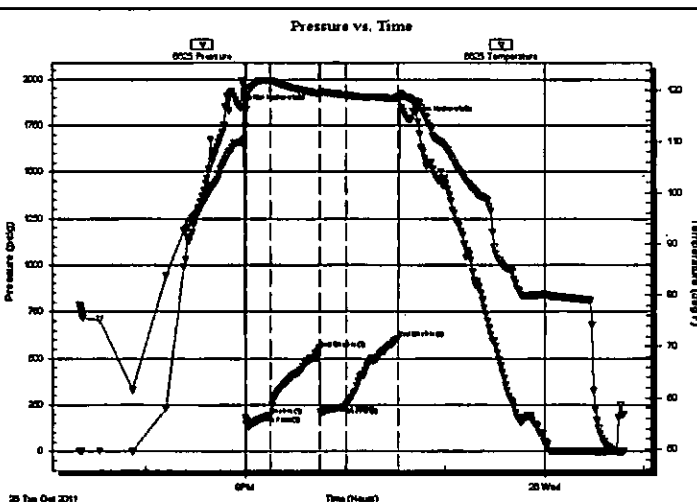
Start Time: 19:20:24

End Time: 00:47:48

Time On Btm: 2011.10.25 @ 20:56:49

Time Off Btm: 2011.10.25 @ 22:38:19

TEST COMMENT: 15-IFP-strg bl in 1 min
30-ISIP-no bl
15-FFP-w k to a gd bl 1/2" to 8" bl
30-FSIP-no bl



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1842.09	109.71	Initial Hydro-static
4	145.44	116.18	Open To Flow (1)
18	193.71	121.89	Shut-In(1)
48	552.43	119.50	End Shut-In(1)
48	212.84	119.40	Open To Flow (2)
64	238.72	119.06	Shut-In(2)
95	607.61	118.62	End Shut-In(2)
102	1782.14	118.51	Final Hydro-static

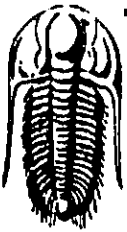
Recovery

Length (ft)	Description	Volume (bbl)
375.00	Water	4.99
140.00	SOCMW 2% O25% M73% W	1.96
20.00	CO	0.28

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44759

DST#: 5

ATTN: Ron Nelson

Test Start: 2011.10.25 @ 19:20:24

GENERAL INFORMATION:

Formation: **Congl Sd - Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:00:19

Time Test Ended: 00:47:48

Test Type: Conventional Straddle (Reset)

Tester: Ray Schwager

Unit No: 42

Interval: **3827.00 ft (KB) To 3894.00 ft (KB) (TVD)**

Reference Elevations: 2206.00 ft (KB)

Total Depth: 3957.00 ft (KB) (TVD)

2198.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8374 Below (Straddle)

Press@RunDepth: psig @ 3901.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.10.25

End Date: 2011.10.26

Last Calib.: 2011.10.26

Start Time: 19:20:21

End Time: 00:48:15

Time On Btrrc

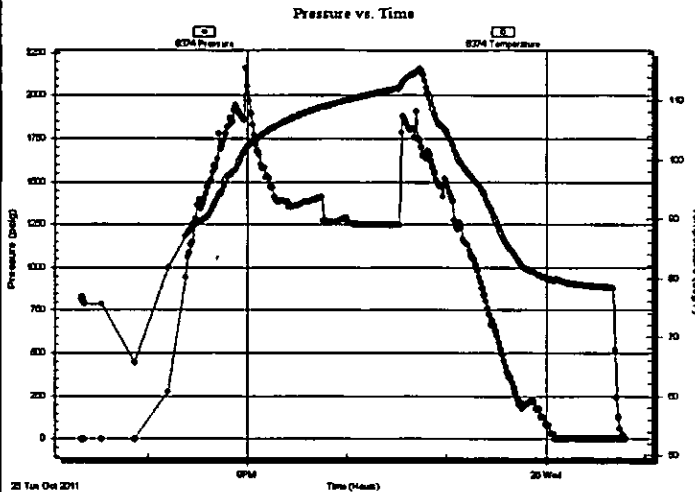
Time Off Btrrc

TEST COMMENT: 15-IFP-strg bl in 1 min

30-ISIP-no bl

15-FFP-w k to a gd bl 1/2" to 8" bl

30-FSIP-no bl



PRESSURE SUMMARY

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

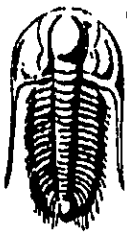
Recovery

Length (ft)	Description	Volume (bbl)
375.00	Water	4.99
140.00	SOCMW 2% O25% M73% W	1.96
20.00	CO	0.28

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Dow ning-Nelson Oil Co Inc

18-13s-20w Ellis

P O Box 1019
Hays Ks 67601

Kohls #1-18

Job Ticket: 44759

DST#: 5

ATTN: Ron Nelson

Test Start: 2011.10.25 @ 19:20:24

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

26000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 9.55 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
375.00	Water	4.987
140.00	SOCMW 2%O25%M73%W	1.964
20.00	CO	0.281

Total Length: 535.00 ft

Total Volume: 7.232 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .26@70F

