KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1148414

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: Coffeyville Resources

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 #:

05/22/2013	05/28/2013	05/29/2013
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-051-26525-00-00
Spot Description:
SW - NE - NE - SW Sec. 19 Twp. 14 S. R. 18 [ ] East [x] West
2005 Feet from [ ] North / [x] South Line of Section
2280 Feet from [ ] East / [x] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[ ] NE [ ] NW [ ] SE [x] SW
County: Ellis
Lease Name: Georgine Staab Well #: 1-19
Field Name:
Producing Formation: LKC
Elevation: Ground: 2104 Kelly Bushing: 2112
Total Depth: 3830 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 638 Feet
Multiple Stage Cementing Collar Used? [x] Yes [ ] No
If yes, show depth set: 1352 Feet
If Alternate II completion, cement circulated from: 1352
feet depth to: 0 w/ 155 sx cmt.

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

Chloride content: 24000 ppm Fluid volume: 160 bbls
Dewatering method used: Haul Off Pit

Location of fluid disposal if hauled offsite:

Operator Name: Blackhawk Production Company
Lease Name: Brull(SWD) License #: 32504
Quarter NW Sec. 30 Twp. 14 S. R. 18 [ ] East [x] 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:**
- [x] **Wireline Log Received**
- [x] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [ ] I [x] II [ ] III **Approved by:** Deanna Garrison **Date:** 09/10/2013

Side Two

[redacted]

1148414

Operator Name: Downing-Nelson Oil Co Inc Lease Name: Georgine Staab Well #: 1-19

Sec. 19 Twp. 14 S. R. 18 ☐ 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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

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	638	Common	275	2% Gel & 3% CC
Production Casing	7.875	5.5	14	3827.19	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	3597' to 3602'	250 gallons Mud Acid	3597' to 3602'
		750 gallons 15% NE	3597' to 3602'

TUBING RECORD: Size: 2.375 Set At: 3790 Packer At:

Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 07/02/2013

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	25	0	0		

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:

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	Georgine Staab 1-19
Doc ID	1148414

All Electric Logs Run

Sonic
Micro
Dual Induction
Compensated Density/Neutron

Form	ACO1 - Well Completion
Operator	Downing-Nelson Oil Co Inc
Well Name	Georgine Staab 1-19
Doc ID	1148414

Tops

Name	Top	Datum
Top Anhydrite	1360'	+752
Base Anhydrite	1401'	+711
Topeka	3127'	-1015
Heebner	3382'	-1270
Toronto	3402'	-1290
LKC	3432'	-1320
BKC	3659'	-1547
Arbuckle	3774'	-1662

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Home Office P.O. Box 32 Russell, KS 67665 No. 6953

Cell 785-324-1041

	Sec.	Twp.	Range	County	State	On Location	Finish
Date 5-23-13	19	14	18	ELLIS	KANSAS		3:00 AM

Location HAYS - 5 TO MUNSTER RD. - 2½W - N/INTO

Lease GOEDGINE STAAB Well No. #1-19

Owner DOWNING & NELSON

Contractor D.D #4

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

Hole Size 12¼" T.D. 638'

Csg. 8⅝-23LB-NEW Depth 638'

Charge To DOWNING & NELSON

Street P.O. BOX 1019

Tbg. Size Depth

City HAYS State KS, 67601

Tool Depth

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Left in Csg. Shoe Joint 15'

Cement Amount Ordered 275 com 3% cc - 2% GEL

Meas Line Displace 39½ BBLS

EQUIPMENT

Pumptrk #9 No. Cementer Helper TRAVIS H.

Bulktrk #1 No. Driver Driver DAVID L.

Bulktrk P/U No. Driver Driver CISCO A.

JOB SERVICES & REMARKS

Remarks:

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

CEMENT DID CIRCULATE!

THANK YOU!

X Signature

Common	275
Poz. Mix	
Gel.	5
Calcium	10
Hulls	
Salt	
Flowseal	
Koi-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	290
Mileage	

FLOAT EQUIPMENT

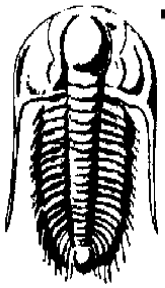
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge	Long Surface
Mileage	7
Tax	
Discount	
Total Charge	

JOB LOG — SWIFT Services, Inc.

DATE 5-28-13 | PAGE NO. 1

CUSTOMER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
Downing & Nelson	1-19	Georgine Staab	Cement Longstring	24344

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								TD 3830'
5/28	2110					14#/ft	5½	On location - Float Equip
	2130							Start 5½" - 14#/ft. Casing 3827'
								Insert Float Shoe w/ fillup
								D.V. L.D. Baffle - 5J - 16' = 93 BBL
								Cent - 1-3-5-7-9-11-59
								Cent Basket #60
								D.V. Tool #60 collar @ 1352' = 33 BBL
								Drop ball - 5 Jts ant
5/28	2300							Fin run casing - Tag
	2315							Start circ / Rotate casing
								Fin circ
		6					250	1st Stage - Start 500 gal mud flush
		6	12/32				250	Pump 20 BBL KCL flush
		4½					200	Start 150 sks EA-2 cmt.
			36				Vac	Fin cmt - Wash pump & lines
		9					300	Drop D.V. L.D Plug - Start Displ
			60/70					60/H2O - 33 mud / 70 cmt to pit
5/29	0030		93				800/1400	Plug Down - Held Release & Held (SMD)
	0032		9/5			~		Drop D.V. open Tool - Plug RH 14 BBL
	0045	6	20				1050/1400	Open D.V - Fin flush & circulating
		5					250	2nd Stage - Start 155 sks SMD
			86					Fin cmt - Drop D.V. Closing Plug
							950	Start Displ
	0120		33				500/1400	Plug down - 30 sks cmt circ to pit
								Release & Held
	0130							Job Complete
								Washup & Rackup
								Thanks
								Don, Jon & Rob



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Georgine Staab #1-19

19-14s-18w Ellis KS

Start Date: 2013.05.26 @ 23:23:00
End Date: 2013.05.27 @ 07:02:30
Job Ticket #: 52199 DST #: 1

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

Printed: 2013.05.31 @ 11:13:33

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

19-14s-18w Ellis KS

Georgine Staab #1-19

Job Ticket: 52199 **DST#: 1**

Test Start: 2013.05.26 @ 23:23:00

GENERAL INFORMATION:

Formation: **LKC H-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:04:15
Time Test Ended: 07:02:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Cody Bloedorn
Unit No: 43

Interval: 3538.00 ft (KB) To 3614.00 ft (KB) (TVD)
Total Depth: 3614.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

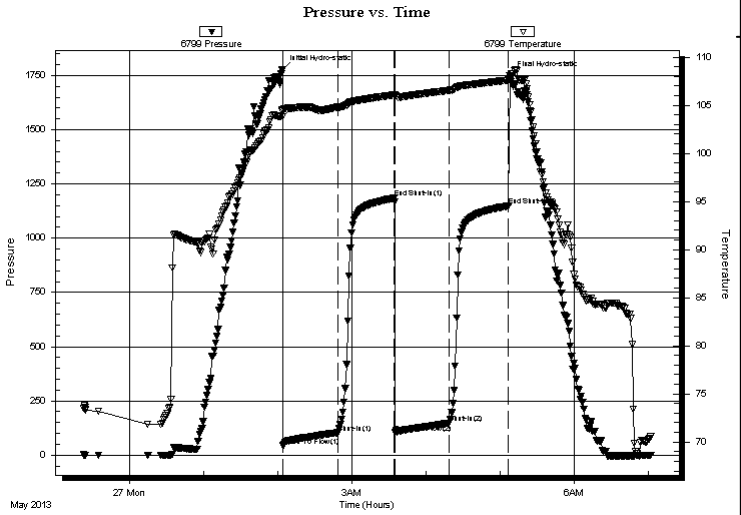
Reference Elevations: 2105.00 ft (KB)
2097.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 147.69 psig @ 3606.00 ft (KB)
Start Date: 2013.05.26 End Date: 2013.05.27
Start Time: 23:23:05 End Time: 07:02:29

Capacity: 8000.00 psig
Last Calib.: 2013.05.27
Time On Btm: 2013.05.27 @ 02:04:00
Time Off Btm: 2013.05.27 @ 05:07:45

TEST COMMENT: 45 - IF- B.O.B. in 13 Minutes.
45 - ISI- Surface return
45 - FF- B.O.B. in 4 Minutes
45 - FSI- 5" return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1777.98	104.52	Initial Hydro-static
1	42.78	103.78	Open To Flow (1)
45	102.53	104.80	Shut-In(1)
91	1184.06	106.09	End Shut-In(1)
91	102.93	105.85	Open To Flow (2)
135	147.69	106.54	Shut-In(2)
183	1148.93	107.61	End Shut-In(2)
184	1748.14	108.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	HOCM, 40%O, 60%M	0.59
124.00	GHOCM, 20%M, 40%O, 40%G	1.74
124.00	GMCO, 5%G, 40%M, 55%O	1.74
0.00	248' of G.I.P.	0.00

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

19-14s-18w Ellis KS

Georgine Staab #1-19

Job Ticket: 52199 **DST#: 1**

Test Start: 2013.05.26 @ 23:23:00

GENERAL INFORMATION:

Formation: **LKC H-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 02:04:15
Time Test Ended: 07:02:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Cody Bloedorn
Unit No: 43

Interval: 3538.00 ft (KB) To 3614.00 ft (KB) (TVD)
Total Depth: 3614.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

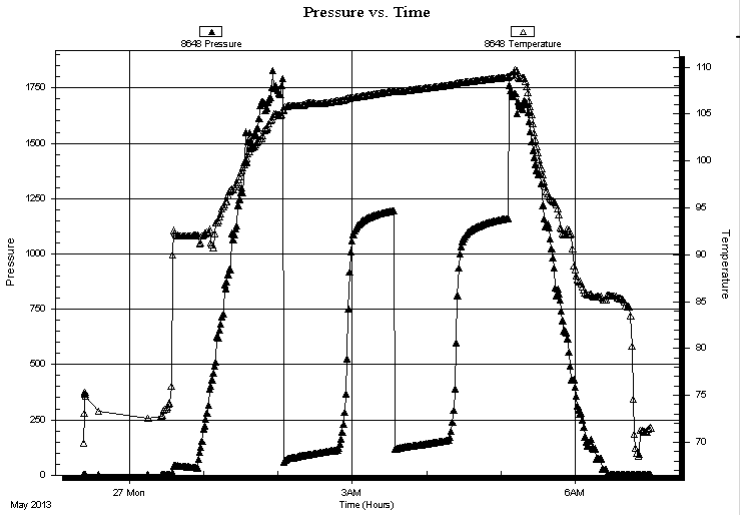
Reference Elevations: 2105.00 ft (KB)
2097.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8648 **Inside**

Press@RunDepth: psig @ 3606.00 ft (KB)
Start Date: 2013.05.26 End Date: 2013.05.27
Start Time: 23:23:05 End Time: 07:01:14

Capacity: 8000.00 psig
Last Calib.: 2013.05.27
Time On Btm:
Time Off Btm:

TEST COMMENT: 45 - IF- B.O.B. in 13 Minutes.
45 - ISI- Surface return
45 - FF- B.O.B. in 4 Minutes
45 - FSI- 5" return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	HOCM, 40%O, 60%M	0.59
124.00	GHOCM, 20%M, 40%O, 40%G	1.74
124.00	GMCO, 5%G, 40%M, 55%O	1.74
0.00	248' of G.I.P.	0.00

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co Inc

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

19-14s-18w Ellis KS

Georgine Staab #1-19

Job Ticket: 52199 **DST#: 1**

Test Start: 2013.05.26 @ 23:23:00

Tool Information

Drill Pipe:	Length:	3507.00 ft	Diameter:	3.80 inches	Volume:	49.19 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	31.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:		56000.00 lb
					Total Volume:	49.34 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		21.00 ft					String Weight:	Initial	50000.00 lb
Depth to Top Packer:		3538.00 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			3518.00		
Shut In Tool	5.00			3523.00		
Hydraulic tool	5.00			3528.00		
Packer	5.00			3533.00	21.00	Bottom Of Top Packer
Packer	5.00			3538.00		
Stubb	1.00			3539.00		
Perforations	3.00			3542.00		
Change Over Sub	1.00			3543.00		
Drill Pipe	62.00			3605.00		
Change Over Sub	1.00			3606.00		
Recorder	0.00	6799	Inside	3606.00		
Recorder	0.00	8648	Inside	3606.00		
Perforations	5.00			3611.00		
Bullnose	3.00			3614.00	76.00	Bottom Packers & Anchor
Total Tool Length:	**97.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

19-14s-18w Ellis KS

Georgine Staab #1-19

Job Ticket: 52199 **DST#: 1**

Test Start: 2013.05.26 @ 23:23:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	inches				

Recovery Information

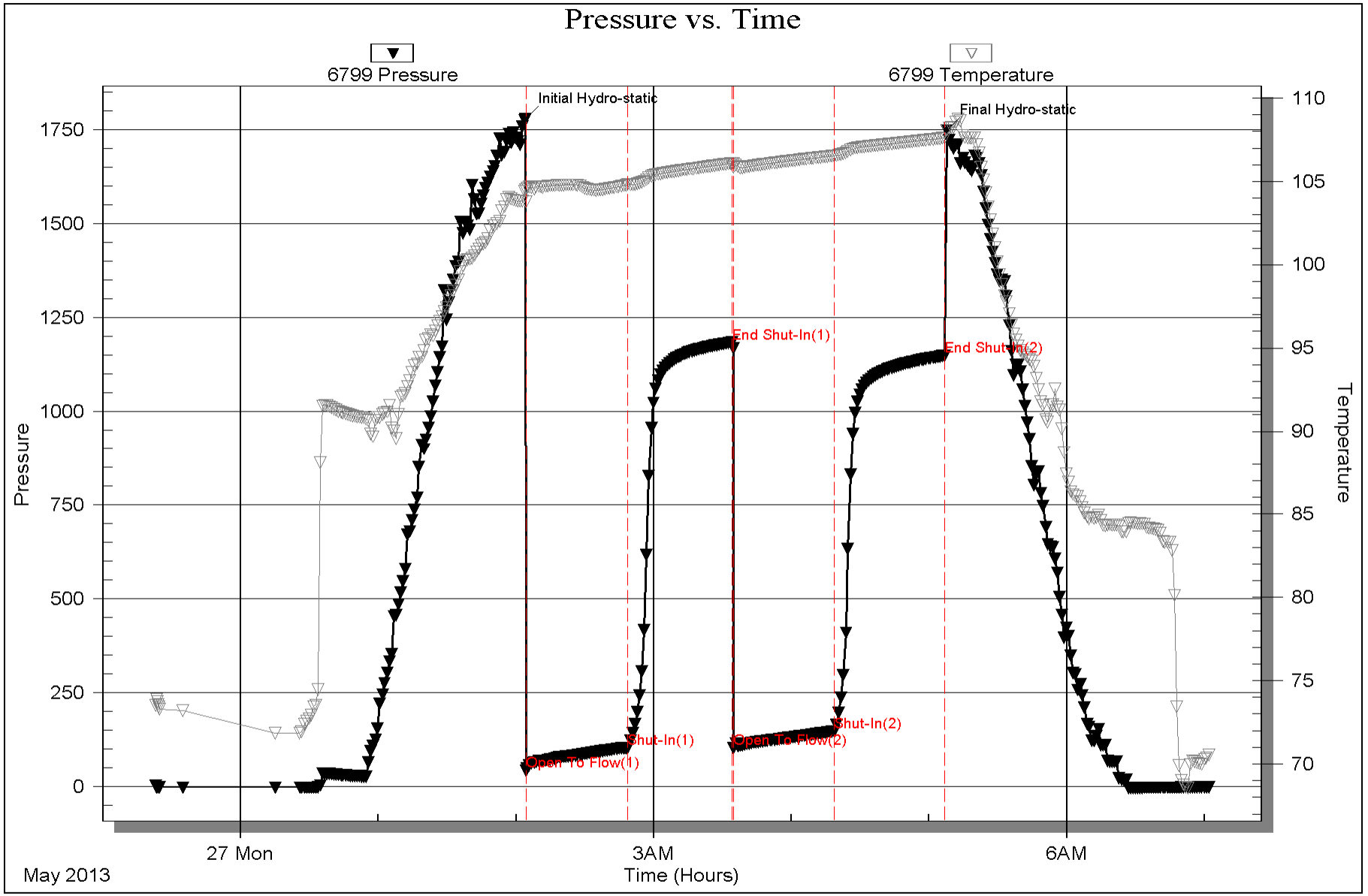
Recovery Table

Length ft	Description	Volume bbl
62.00	HOCM, 40%O, 60%M	0.587
124.00	GHOCM, 20%M, 40%O, 40%G	1.739
124.00	GMCO, 5%G, 40%M, 55%O	1.739
0.00	248' of G.I.P.	0.000

Total Length: 310.00 ft Total Volume: 4.065 bbl

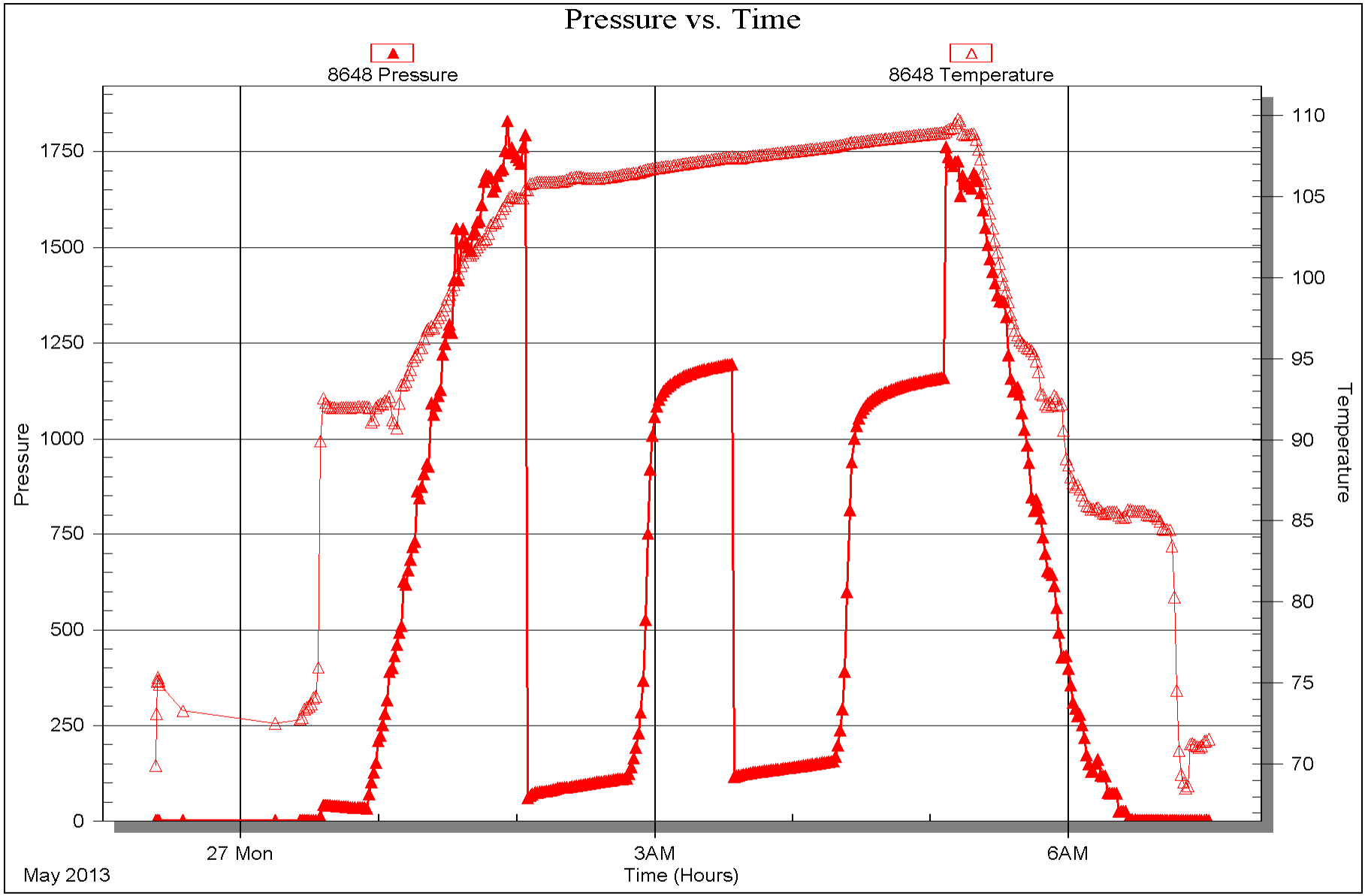
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6799 **Inside** Dow ning Nelson Oil Co Inc Georgine Staab #1-19 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 52199 Printed: 2013.05.31 @ 11:13:36

Serial #: 8648 **Inside** Dow ning Nelson Oil Co Inc Georgine Staab #1-19 DST Test Number: 1



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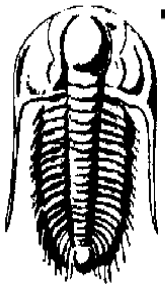


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

Georgine Staab #1-19

19-14s-18w Ellis KS

Start Date: 2013.05.27 @ 13:34:00
End Date: 2013.05.27 @ 19:51:45
Job Ticket #: 52200 DST #: 2

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

Printed: 2013.05.31 @ 11:12:53

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

19-14s-18w Ellis KS

Georgine Staab #1-19

Job Ticket: 52200 **DST#: 2**

Test Start: 2013.05.27 @ 13:34:00

GENERAL INFORMATION:

Formation: **Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:31:45
Time Test Ended: 19:51:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Cody Bloedorn
Unit No: 43

Interval: 3610.00 ft (KB) To 3633.00 ft (KB) (TVD)
Total Depth: 3633.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

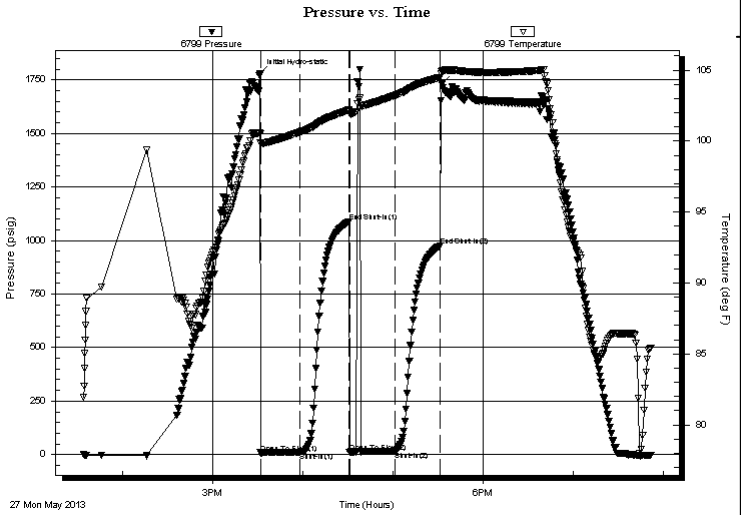
Reference Elevations: 2105.00 ft (KB)
2097.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 15.83 psig @ 3615.00 ft (KB)
Start Date: 2013.05.27 End Date: 2013.05.27
Start Time: 13:34:05 End Time: 19:51:44

Capacity: 8000.00 psig
Last Calib.: 2013.05.27
Time On Btm: 2013.05.27 @ 15:31:30
Time Off Btm: 2013.05.27 @ 17:32:15

TEST COMMENT: 30 - IF- Surface blow , died in 18 min.
30 - ISI- No return
30 - FF- No blow for 5 minutes, flushed tool, surged and died
30 - FSI- No return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1777.64	100.51	Initial Hydro-static
1	8.06	99.86	Open To Flow (1)
27	11.81	100.63	Shut-In(1)
59	1087.04	102.19	End Shut-In(1)
60	12.30	101.92	Open To Flow (2)
90	15.83	103.21	Shut-In(2)
120	975.86	104.49	End Shut-In(2)
121	1732.57	104.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w / show of oil 100%M	0.07

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

Downing Nelson Oil Co Inc

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

19-14s-18w Ellis KS

Georgine Staab #1-19

Job Ticket: 52200 **DST#: 2**

Test Start: 2013.05.27 @ 13:34:00

GENERAL INFORMATION:

Formation: **Sand**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:31:45
Time Test Ended: 19:51:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Cody Bloedorn
Unit No: 43

Interval: 3610.00 ft (KB) To 3633.00 ft (KB) (TVD)
Total Depth: 3633.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

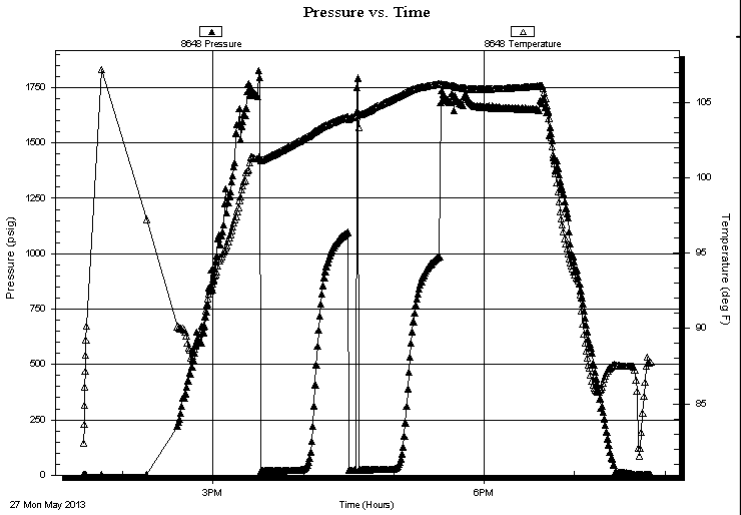
Reference Elevations: 2105.00 ft (KB)
2097.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8648 **Inside**

Press@RunDepth: psig @ 3615.00 ft (KB)
Start Date: 2013.05.27 End Date: 2013.05.27
Start Time: 13:34:05 End Time: 19:50:29

Capacity: 8000.00 psig
Last Calib.: 2013.05.27
Time On Btm:
Time Off Btm:

TEST COMMENT: 30 - IF- Surface blow , died in 18 min.
30 - ISI- No return
30 - FF- No blow for 5 minutes, flushed tool, surged and died
30 - FSI- No return



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud w / show of oil 100%M	0.07

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Co Inc

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

19-14s-18w Ellis KS

Georgine Staab #1-19

Job Ticket: 52200 **DST#: 2**

Test Start: 2013.05.27 @ 13:34:00

Tool Information

Drill Pipe:	Length:	3568.00 ft	Diameter:	3.80 inches	Volume:	50.05 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		30000.00 lb
Drill Collar:	Length:	31.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:		54000.00 lb
					Total Volume:	50.20 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		10.00 ft					String Weight:	Initial	50000.00 lb
Depth to Top Packer:		3610.00 ft						Final	50000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		23.00 ft							
Tool Length:		44.00 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			3590.00		
Shut In Tool	5.00			3595.00		
Hydraulic tool	5.00			3600.00		
Packer	5.00			3605.00	21.00	Bottom Of Top Packer
Packer	5.00			3610.00		
Stubb	1.00			3611.00		
Perforations	4.00			3615.00		
Recorder	0.00	6799	Inside	3615.00		
Recorder	0.00	8648	Inside	3615.00		
Perforations	15.00			3630.00		
Bullnose	3.00			3633.00	23.00	Bottom Packers & Anchor
Total Tool Length:	**44.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Co Inc

PO Box 1019
Hays KS 67601

ATTN: Marc Downing

19-14s-18w Ellis KS

Georgine Staab #1-19

Job Ticket: 52200 **DST#: 2**

Test Start: 2013.05.27 @ 13:34:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.98 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4000.00 ppm				
Filter Cake:	inches				

Recovery Information

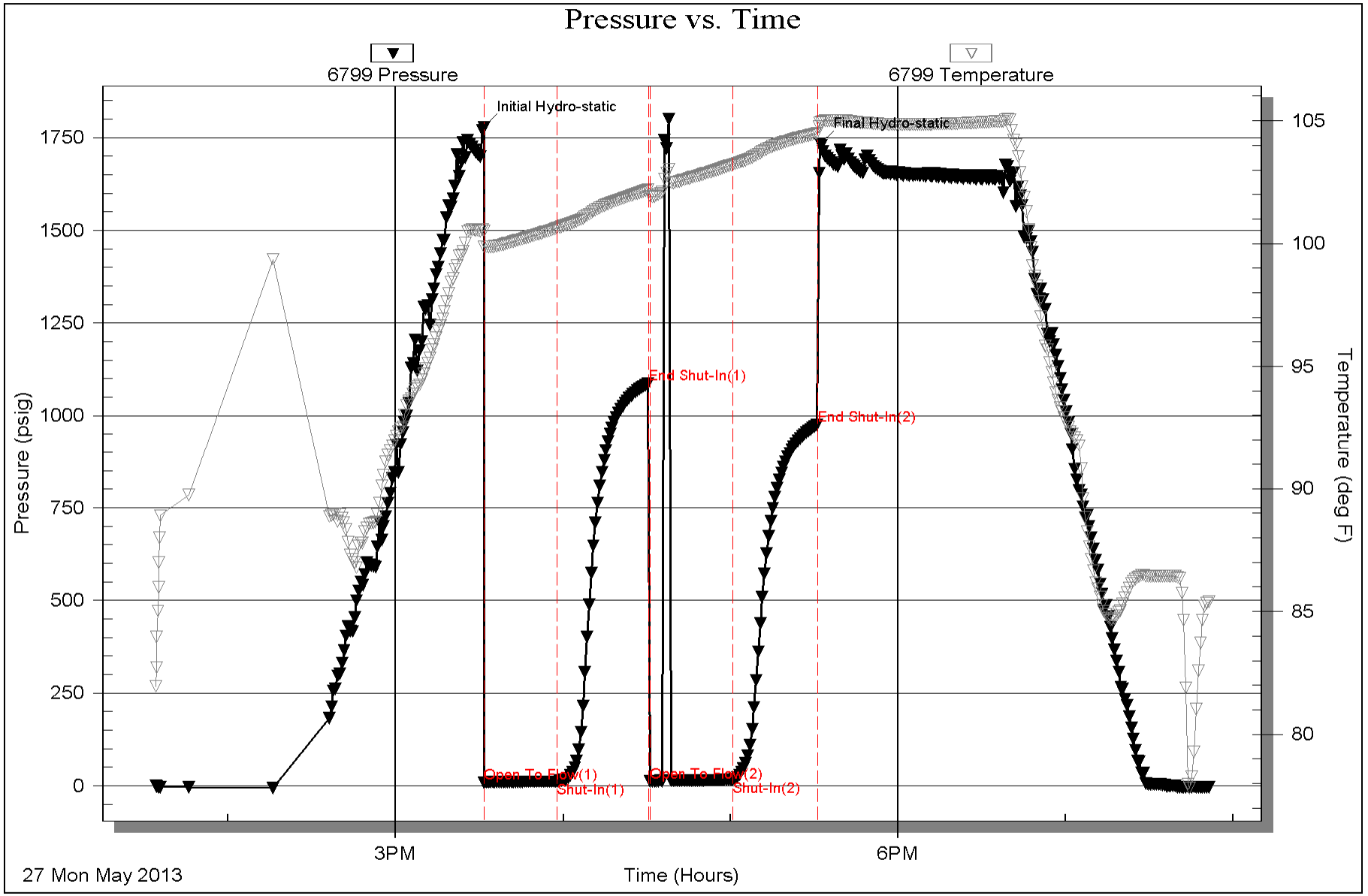
Recovery Table

Length ft	Description	Volume bbl
15.00	Mud w / show of oil 100%M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

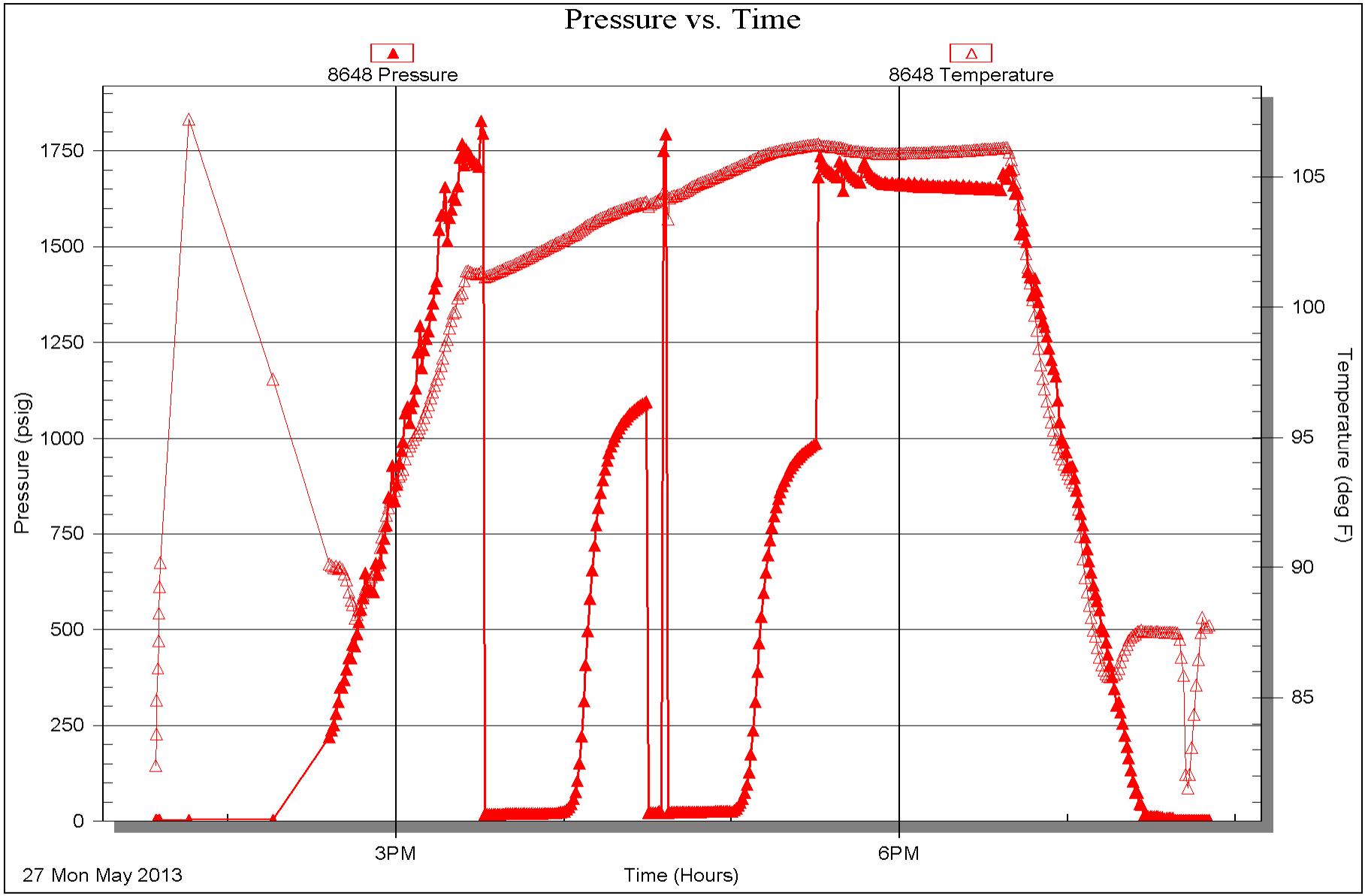
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 6799 **Inside** Downing Nelson Oil Co Inc Georgine Staab #1-19 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 52200 Printed: 2013.05.31 @ 11:12:56

Serial #: 8648 **Inside** Dow ning Nelson Oil Co Inc Georgine Staab #1-19 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 52200 Printed: 2013.05.31 @ 11:12:56

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 52199

Well Name & No. Georgine Staab #1-19 Test No. 1 Date 5-26-13

Company Downing-Nelson Oil Co Inc Elevation 2105 KB 2097 GL

Address Po Box 1019, Hays KS, 67601

Co. Rep / Geo. Marc Downing Rig Discovery #4

Location: Sec. 19 Twp. 14s Rge. 18w Co. Ellis State KS

Interval Tested 3538-3614 Zone Tested "H-J"

Anchor Length 76' Drill Pipe Run 3507' Mud Wt. 9.0

Top Packer Depth 3533 Drill Collars Run 31' Vis 60

Bottom Packer Depth 3538 Wt. Pipe Run — WL 8.0

Total Depth 3614 Chlorides 4,000 ppm System LCM —

Blow Description IF- B.O.B. in 13 Minutes

ISI- Surface return

FF- B.O.B. in 4 minutes

FSI- 5" return

Rec 62	Feet of HOCM	%gas	40 %oil	%water	60 %mud		
Rec 124	Feet of GHOCM	40 %gas	40 %oil	%water	20 %mud		
Rec 124	Feet of GMCO	5 %gas	55 %oil	%water	40 %mud		
Rec	Feet of	%gas	%oil	%water	%mud		
Rec	Feet of 248' of G.I.P.	%gas	%oil	%water	%mud		

Rec Total 310' BHT 107° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1777	☒ Test 1150	T-On Location 9:58pm	
(B) First Initial Flow 42	☐ Jars	T-Started 11:23pm	
(C) First Final Flow 162	☐ Safety Joint	T-Open 2:05am	
(D) Initial Shut-In 1184	☐ Circ Sub	T-Pulled 5:05am	
(E) Second Initial Flow 102	☐ Hourly Standby	T-Out 7:03am	
(F) Second Final Flow 147	☒ Mileage 22 RT 34.10	Comments	
(G) Final Shut-In 1148	☐ Sampler		
(H) Final Hydrostatic 1748	☐ 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 1184.10	
Final Shut-In 45	☐ Accessibility	MP/DST Disc't	
	Sub Total 1184.10		

Approved By Our Representative Cody Bell

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 52200

Well Name & No. Georgine Staab #1-19 Test No. 2 Date 5-27-13

Company Downing-Nelson Oil Co Inc Elevation 2105 KB 2097 GL

Address Po Box 1019, Hays KS, 67601

Co. Rep / Geo. Marc Downing Rig Discovery #4

Location: Sec. 19 Twp. 14s Rge. 18w Co. Ellis State KS

Interval Tested 3610 - 3633 Zone Tested Sand

Anchor Length 23' Drill Pipe Run 3568 Mud Wt. 9.0

Top Packer Depth 3605 Drill Collars Run 31' Vis 60

Bottom Packer Depth 3610 Wt. Pipe Run — WL 8.0

Total Depth 3633 Chlorides 4,000 ppm System LCM —

Blow Description IF - Surface blow, died in 18 minutes

ISI - No return

FF - No blow for 5 min. flushed tool, surged & died

FSI - No return

Rec 15	Feet of Mud, show of oil	%gas	%oil	%water 100	%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	%gas	%oil	%water	%mud

Rec Total 15' BHT 104° Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1777	☒ Test 1150	T-On Location 1:18 pm
(B) First Initial Flow 8	☐ Jars	T-Started 1:34 pm
(C) First Final Flow 11	☐ Safety Joint	T-Open 3:31 pm
(D) Initial Shut-In 1087	☐ Circ Sub	T-Pulled 5:31 pm
(E) Second Initial Flow 12	☒ Hourly Standby ~~1.5 hours~~	T-Out 7:51 pm
(F) Second Final Flow 15	☒ Mileage 22RT X2 68.20	Comments Rig wouldn't start. Had to fix it.
(G) Final Shut-In 975	☐ Sampler	Done 5-28-13 loaded @ 8:30 am
(H) Final Hydrostatic 1732	☐ Straddle	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open 30	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 30	☐ Extra Recorder	Sub Total 0
Final Flow 30	☐ Day Standby	Total 1218.20
Final Shut-In 30	☐ Accessibility	MP/DST Disc't
	Sub Total 1218.20	

Approved By _____ Our Representative Cody B

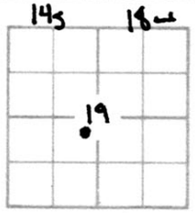
Marc Downing

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 Georgine Staab #1-19
FIELD Wildcat
LOCATION 2005' FSL & 2280' FWL
SEC. 19 TWP. 14s RGE. 18w
COUNTY Ellis
STATE Kansas



PRODUCTION LKC

ELEVATION KB 2112
DF
GL 2104

Drilling Measured From: KB

Samples Saved From 3100 To: TD
Drilling Time From 3050 To: TD
Samples Examined From: 3100 To: TD
Geological Supervision From 3050 To Total Depth
Wellsite Geologist Marc Downing
Electrical Surveys Nabors
CNL/CDL - DIL
MEL - Sonic

OPERATOR DNOCI
CONTRACTOR Discovery Drilling, Rig #4
COMM: 5-22-13 COMP: 5-28-13

CASING RECORD

SURF: 8 5/8" @ 437' PROD: 5 1/2" @ 3829'
TOTAL DEPTH DRILLERS: 3830'
TOTAL DEPTH LOG: 3834

FORMATION TOPS AND STRUCTURAL POSITION

FORMATION	SAMPLE TOP	ELECTRIC LOG TOP	SUB-SEA DATUM	STRUCTURAL POSITION
Top Anhydrite	1360	1360	+752	-10
Base Anhydrite	1401	1401	+711	NA
Topeka	3126	3127	-1015	NA
HEEBNER	3381	3382	-1270	+8
Toronto	3399	3402	-1290	+8
LKC	3431	3432	-1320	+7
BKC	3658	3659	-1547	NA
Arbuckle	3774	3774	-1662	+6

REFERENCE WELL FOR STRUCTURE Leben Drilling
Rohr #1 NW-NW-SE Sec. 19-14s-18w

DRILL STEM TESTS

No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSIP/Time	IHP-FHP	RECOVERY

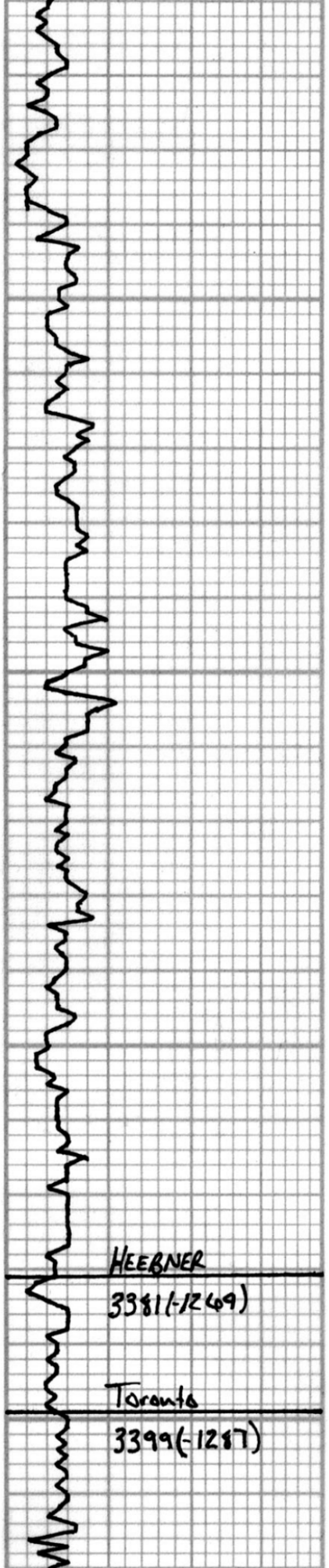
REMARKS AND RECOMMENDATIONS

Perforate "D" zone before abandonment.

LEGEND

Anhydrite | Salt | Sandstone | Shale | Carb sh | Limestone | Ool.Lime | Chert | Dolomite

DRILLING TIME IN MINUTES PER FOOT Rate of Penetration Decreases 5″ 10″ 15″	DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
	3050				
	3100				
Topeka 3126(-1014)			LS: wht, md xln, sltly suc wl sml frag fass Trng tan-brn, vfn xln mtx wl lrg fass. Rx chlky in part.		
	50		Sh: drk grg LS: wht - lt tan. Scat gd ppx wl rare rubble stn. Many chalky rx, mostly barren, No Od.		
			Sh: grg LS: tan-wht, fn-md xln, ppx, NS.		
	3200		LS: wht - lt tan. sltly suc, subxln. rubble stn, NSFo, No Od.		



LS: wht-tan, md xln, sltly sac. Trng v chlkg + mtld. Scat grg Fass cnts. All NS.

Sh: Black Carb

50

Sh: gry

LS: wht, vfn-min xln, prs.

Sh: gry

LS: AA, sltly chlkg.

LS: wht, fn xln, prs, Scat Fass. All NS.

Sh: gry

LS: wht-tan, fn-md xln, prs. tan Fass cnts.

3300

Sh: Black Carb

Sh: gry

LS: wht-lt tan, fn xln. Scat chlkg ox, mostly prs + dns. Totally barren, No Sd. Scat sml Fass.

Sh: gry

Sh: gry

50

LS: wht, fn-md xln, mostly chlkg. 1-2 ox wl fr vugs, fr-gd sat stn, fr SFO. fnt Sd.

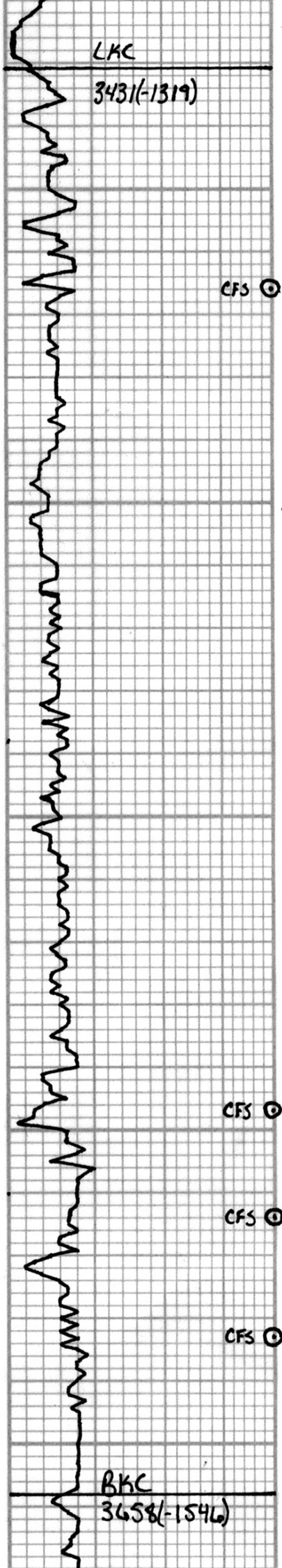
LS: wht, fn-md xln, Scat Fass. Trng sltly mtld + prs, NS.

Sh: Black Carb

Sh: gry

3400

LS: tan, md xln. Mostly prs + tite. 1-2 ox wl lt stn, pr sptd SFO, fnt-No Sd.



Sh: ltgrg w/ brn

LS: wht, fn xln. subxln in part, NS.

Sh: brn

LS: wht, fn-md xln. pr ϕ, NS.

Sh: grg

LS: wht, fn xln, chlky in prt. pr-fr ooϕ, scat rubus stn, NSFO, No Od.

Sh: grg

LS: brn-wht, md xln, scat foss. 1-2 ox wl fr vugϕ, mostly tite. fr stn, fr spotty SFO, fnt lt Od. Scat subxln-chlky ox.

Sh: grg

LS: wht, fn xln, ool. scat intooldϕ, mostly chlky. All NS, No Od.

LS: Mostly A/A, some prϕ-vug. tarry stn, NSFO

LS: wht, fn xln, subxln in part. All NS, trng prϕ.

Sh: Black Carb

DST #1

Sh: grg

LS: fn xln, prϕ. 1-2 ox wl pr edge stn, NSFO, No Od. Mostly prϕ, NS grg chts.

LS: tan, sml ool. pr int ool ϕ - tite. fr lt brn stn, rare SFO, No Od. Mostly tite.

LS: Mostly A/A, prϕ & tite

Sh: grg

LS: Tan fn v. good ooc of wl v. gd SFO, qsy - Total Blk scit stn - gd odor w/ oil on snpl cup

DST #2

Sh: grg

LS: wht, fn xln, chlky in prt. Mostly fr-gd ooϕ, scat brn stn, All wl rubus stn, rare SFO, fnt Od.

LS: wht, fn-md xln, scat foss & ool. No visϕ & NS.

Sh: grg

LS: tan-wht, prϕ

Vis: 60 Wt: 9.0

DST #1

3538 - 3614

45 - 45 - 45 - 45

I.F. - BOB 13 min / Surf SIB

F.F. - BOB 4 min / 5" SIB

IFP: 42-102

FFP: 102-147

SIP: 1184 - 1148

HP: 1777 - 1748

Rec:

248' GIP

124' GMCO 5%g, 55% o

124' GMO 40%g, 40%o

62' HOCM 40%o

BHT: 107°

DST #2

3610 - 3633

30 - 30 - 30 - 30

IFP: 8-11

FFP: 12-15

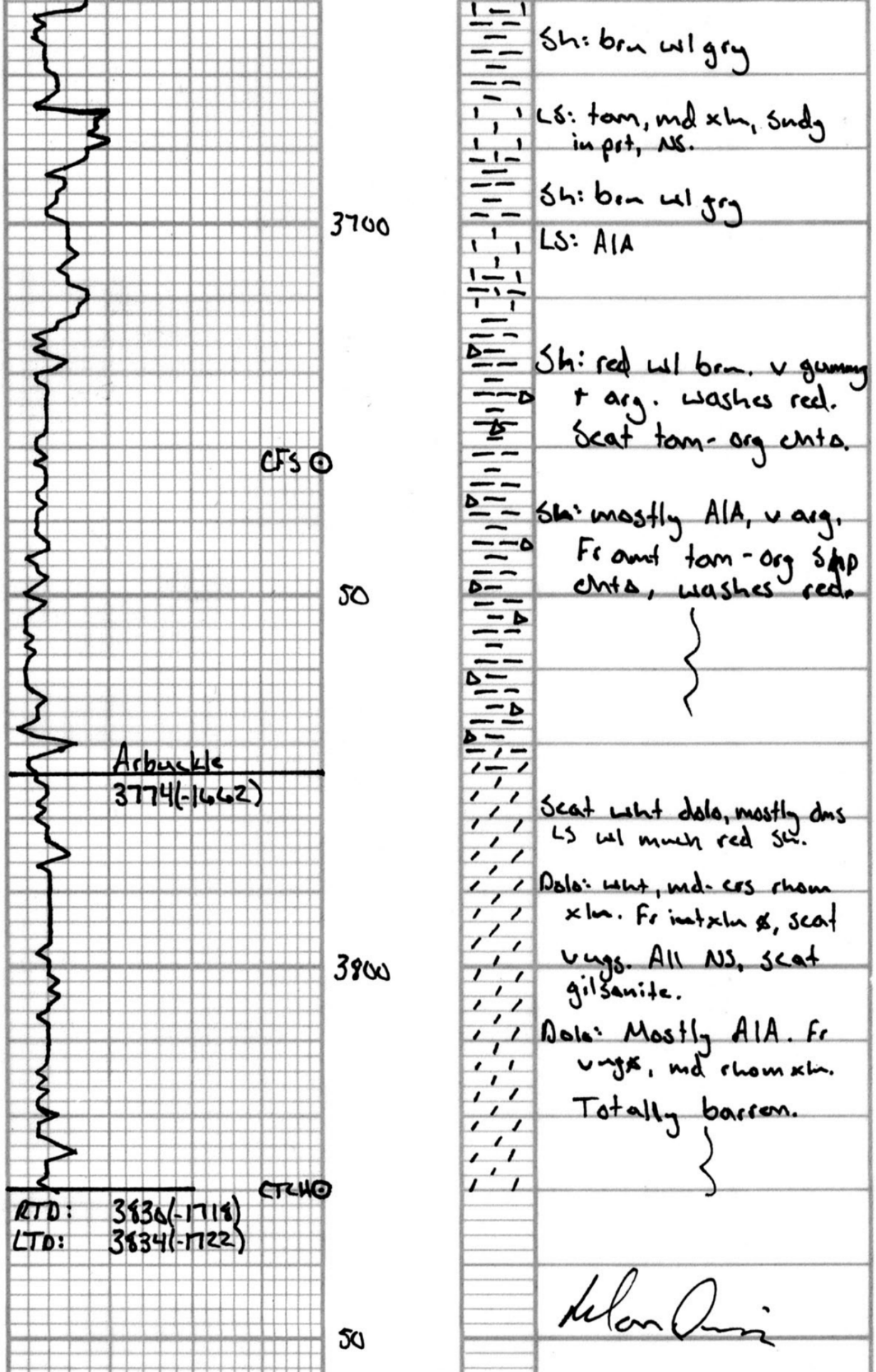
SIP: 1097 - 975

HP: 1777 - 1732

Rec:

15' mud w/ oil show

BHT: 104°


Sh: brn wl gry
LS: tan, md xln, sndy in part, NS.
Sh: brn wl gry
3700
LS: AIA
Sh: red wl brn. v gummy + arg. washes red. Scat tan-org cht.
CFS
Sh: mostly AIA, v arg. Fr amt tan-org Sh cht, washes red.
50
Arbuckle
3774(-1662)
Scat wht dolo, mostly dns LS wl much red Sh.
Dolo: wht, md-crs rhom xln. Fr int xln ⌀, scat v vgs. All NS, scat gilsonite.
3800
Dolo: Mostly AIA. Fr v vgs, md rhom xln. Totally barren.
CTCHO
RTD: 3830(-1718)
LTD: 3834(-1722)
50