



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1204382
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

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

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

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

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ 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: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

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

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1204382

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

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

CASING RECORD <input 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift 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 <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 169

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-25-14	9	9	24	Graham	KS		7:15 PM

Location Walceoney Red line w to 190 4 N

Lease	Hildebrand Heirs	Well No.	1-9	Owner	
Contractor	Discovery #1	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	Charge To <u>Downing Nelson</u>			
Hole Size	12 1/4	T.D.	220'	Street	
Csg.	8 5/8	Depth		City	State
Tbg. Size		Depth		The above was done to satisfaction and supervision of owner agent or contractor.	
Tool		Depth		Cement Amount Ordered <u>150 com 3% cc 2% Gel</u>	
Cement Left in Csg.	20'	Shoe Joint	20'		
Meas Line		Displace	12 3/4 bbl		

EQUIPMENT

Pumptrk	5	No.	Cementer		Common	150
			Helper	David	Poz. Mix	
Bulktrk	13	No.	Driver	Chad	Gel.	3
			Driver		Calcium	5
Bulktrk	Pu	No.	Driver	Brett		

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38

Sand
Handling 158
Mileage

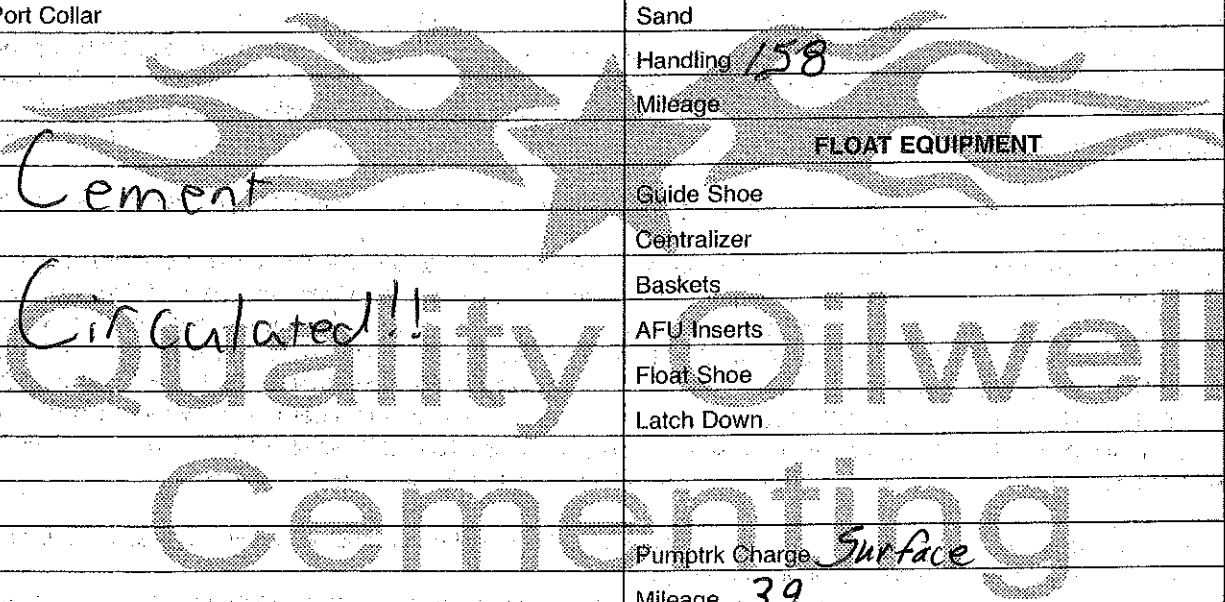
FLOAT EQUIPMENT

Guide Shoe
Centralizer
Baskets
AFU Inserts
Float Shoe
Latch Down

Pumptrk Charge Surface
Mileage 39

Tax
Discount
Total Charge

X Signature [Signature]



QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 214

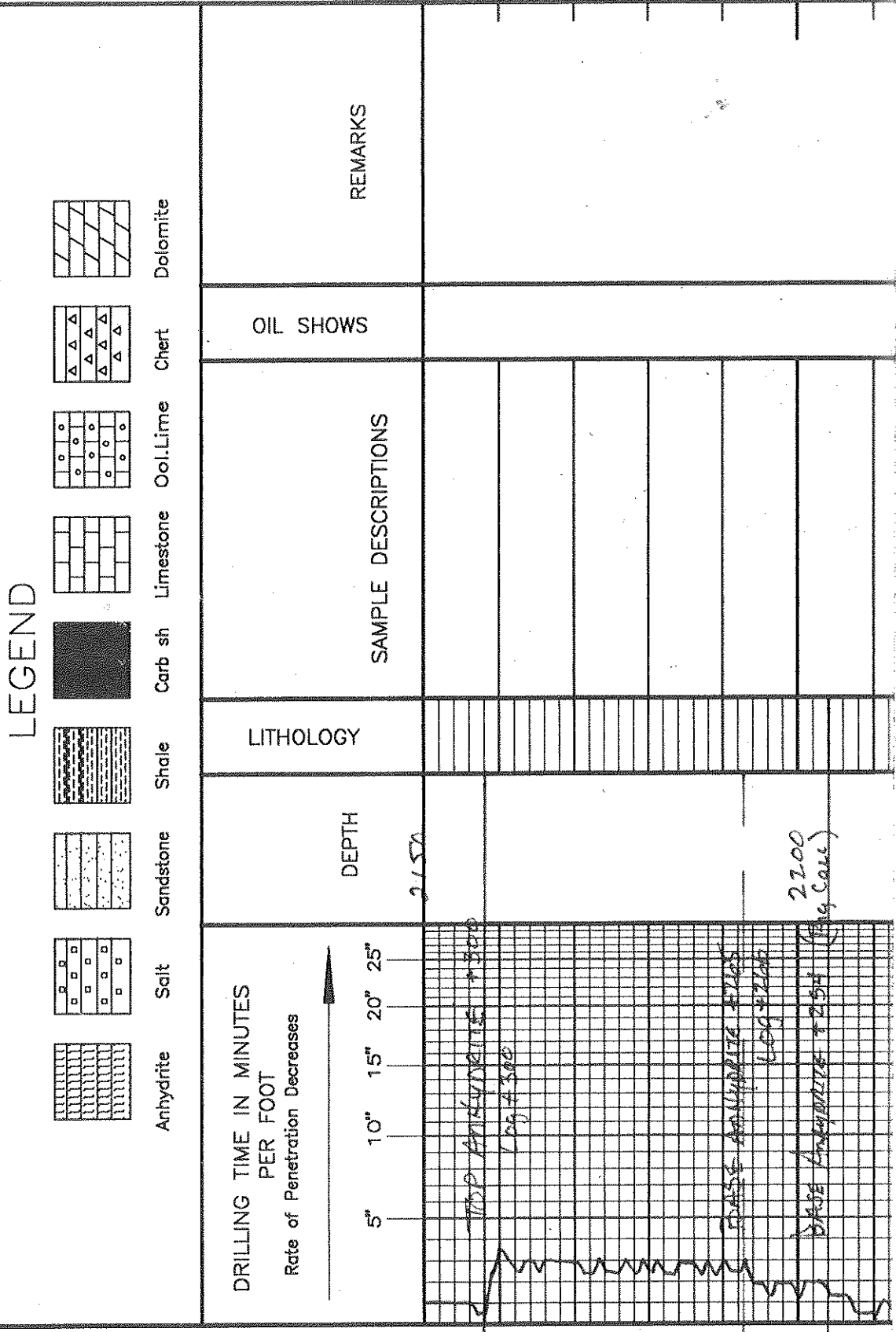
Date	5-1-14	Sec.	9	Twp.	9	Range	24	County	Graham	State	Ks	On Location		Finish	6:00AM
Lease								Hildebrand Heirs		Well No.		1-9			
Contractor								Discovery #1		Owner					
Type Job										To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.					
Hole Size								T.D.		Charge To					
Csg.								Depth		Downing Nelson					
Tbg. Size								Depth		Street					
Tool								Depth		City					
Cement Left in Csg.								Shoe Joint		State					
Meas Line								Displace		The above was done to satisfaction and supervision of owner agent or contractor.					
EQUIPMENT										Cement Amount Ordered 220sx 60/40 4% gel, 1/4" Flow					
Pumptrk 19								No.		Common 132					
Bulktrk 14								No.		Poz. Mix 88					
Bulktrk P4								No.		Gel. 8					
JOB SERVICES & REMARKS										Calcium					
Remarks:										Hulls					
Rat Hole										Salt					
Mouse Hole										Flowseal 55#					
Centralizers										Kol-Seal					
Baskets										Mud CLR 48					
D/V or Port Collar										CFL-117 or CD110 CAF 38					
25sx at 2170										Sand					
100sx at 1275										Handling 228					
40sx at 270										Mileage					
10sx at 40 with plug										FLOAT EQUIPMENT					
30sx Rat										Guide Shoe					
15sx Mouse										Centralizer					
										Baskets					
										AFU Inserts					
										Float Shoe					
										Latch Down					
										1 wood plug					
										Pumptrk Charge plug					
										Mileage 39					
										Tax					
										Discount					
										Total Charge					
X Signature										Cliff Mayfield					

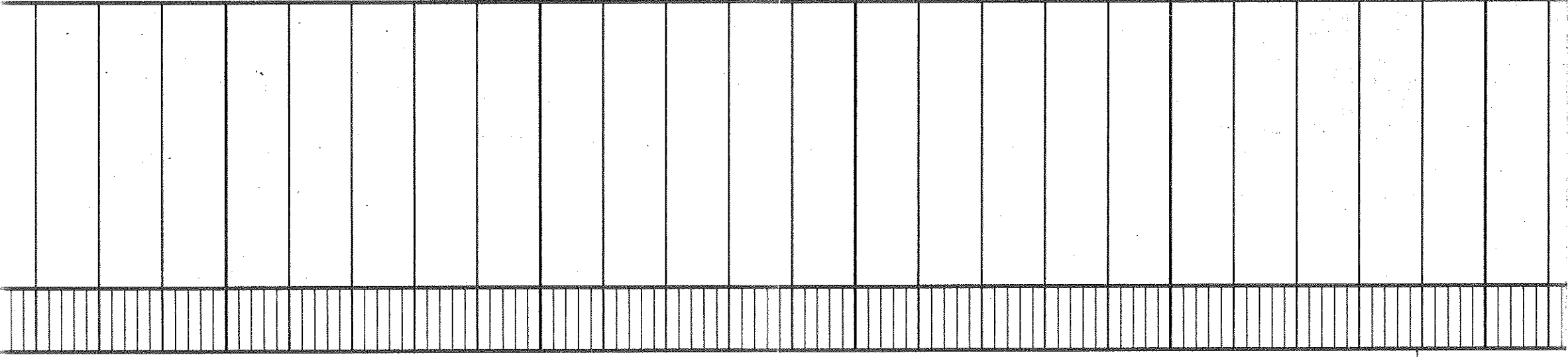
DRILL STEM TESTS

No.	Interval	IFP/Time	ISIP/Time	FFP/Time	FSP/Time	INH-FHH	RECOVERY

MARKS AND RECOMMENDATIONS LOWER STRUCTURE THAN SEISMIC ANTICIPATED. Plugged.

Van Nelson





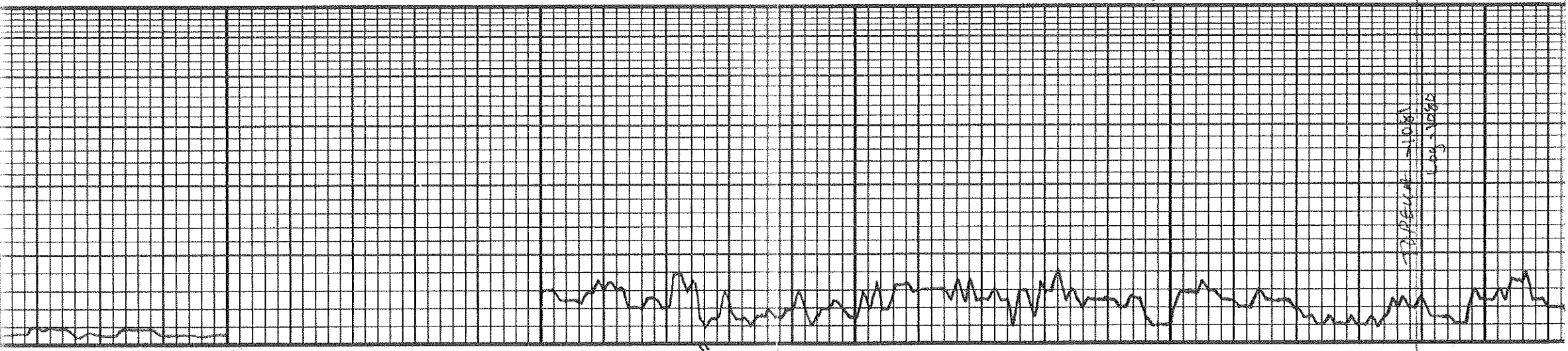
2250

3400

50

3500

50



SPRINKLE 1108A
LOG 1108A

3600

50

3700

50

3800

sh. blue-gray
DMS mic. xylm tan ls

95 BRN VOLK QTY

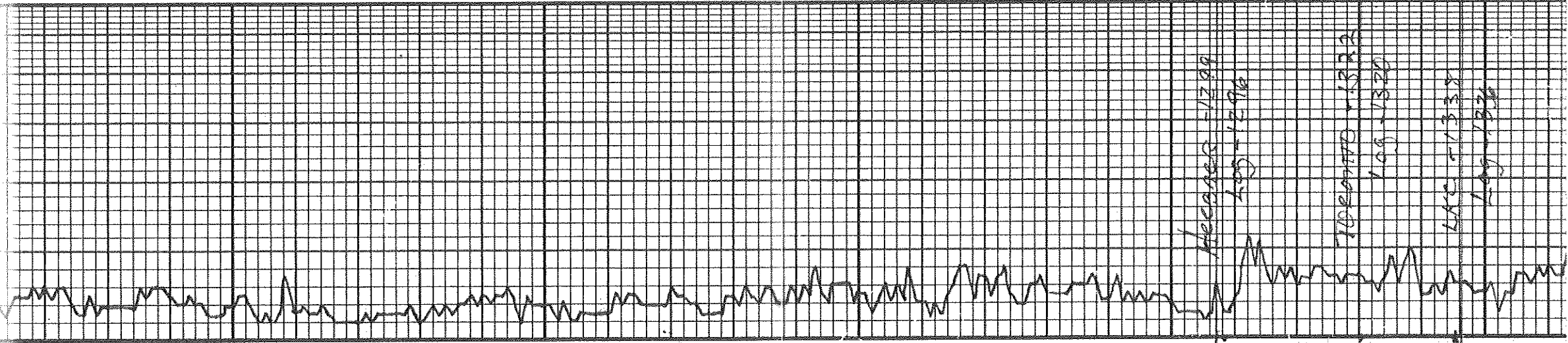
94% ROSS

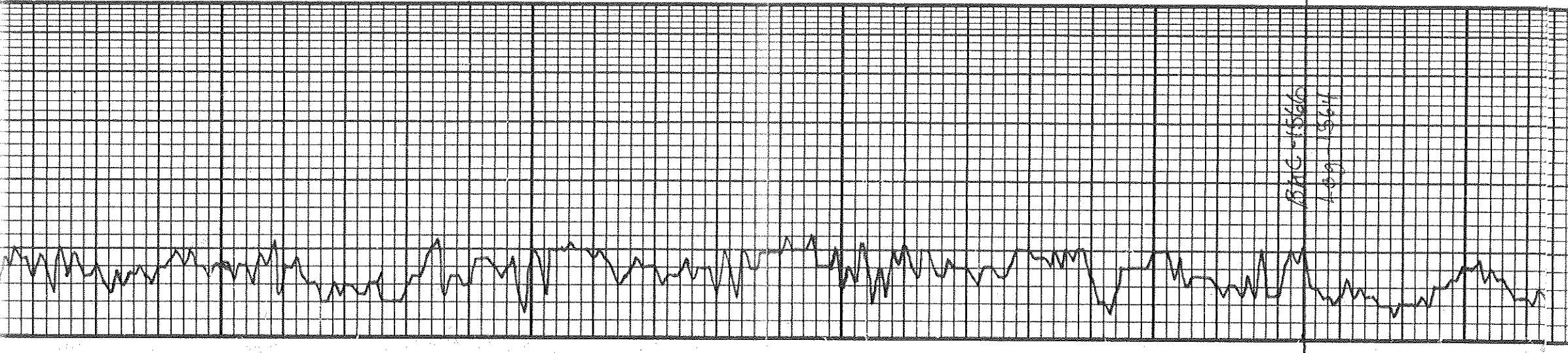
LSWH - TAN, ALL VFA - MIC
XYLN DMS PR 10/10 NS
AA W/WH CRT

MEGACOR - 1299
200 - 1296

TORONTO - 1322
100 - 1320

LAC - 1338
200 - 1326





50

3900

50

4000

50

BAG-15660

400-1564

ROSH LSTAN-Wh, A, P, S, 80' fms where sedd. BASSIN WSTB NO 50' for to not loss. 80' W/wh cont. then ROXGRYSH	MIC xyln v. udas wh LS pp NS	w/SM wh. cont. from cont.	BLK CARB. SH	SH 9-10 LS tan tan pro xyln fumes on top of sh. out of bed LS wh-rim, fr. xyln med. dms frag loss fr. succ. xyln med. v. ud not loss fr. tan. xyln fr. sh. in bed, 10 B.D. 550 w/1974 sh	LS wh. sm. loss. sh. out fossils NOT friable, N50 N50	MIC xyln v. udas wh tan NS w/wh. sh.	SH BLK	SH RO BCR GRY	VANISH MIC xyln v. ud fossils not friable, N50 N50. wood ROXGRYSH, N10'S BLK	LS Benth. succ. xyln, fr. ppt. 1000 SM W/1000' 9d. 00. BCR 50' STN 550. - rainbow sh.	SH abraded d.k. g.y. gray rd BPM	LS Whit-tan mst. fr. xyln-Wh xyln, primary NS.	SH BUCKARY SH RO BCR	LS tan mst. fr. xyln/frag. sh. frag. od. fossils & ppt. & hole friable, tan. barren road frag. mic xyln v. ud NS	SH BUCKARY	CARBY TAN - MDRYKUS SM Chky imp. fr. rubble NS frag. v. xyln dms. p. xyln NS	SH RO BCR	SH M., Gummy sh. 9A	w/wh. fossil dms tan BAG
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DST# 2
STRADDLE
3845'-3900'
45"-45"-45"-45"
1st of 10"
2nd of 8"
NO 5I BLOW
IFP 25-70
FFP 75-118
SIP 875-860
HP 1976-1990
REL 220' MCW

DST# 1
3941'-3960'
45"-45"-45"-45"
1st of 10" BOB 20"
NO 5I BLOW
2nd of 8" BOB 45"
NO 5I BLOW
IFP 19-90
FFP 93-148
SIP 362-360
HP 2007-1989
REL 30' Gassy oil
260' MCW
BHT 1190
GRAVITY 36.0

DST# 2

DST# 1

	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS				

OPERATOR DAVOCI
LEASE Hickman No. 19 IP DIA
ELEVATION 2458' KB RTD 4075

LOCATION 335' FUL 3 1650' FUL
SEC 9 TWP 9 S RNG 24 W
COUNTY Graves STATE Kansas



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

9-9s-24w Graham,KS

Hildebrand Heirs #1-19

Start Date: 2014.04.29 @ 14:39:06

End Date: 2014.04.29 @ 22:26:45

Job Ticket #: 57573 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.01 @ 14:45:20

Downing Nelson Oil Company

Hildebrand Heirs #1-19

9-9s-24w Graham,KS

DST # 1

"1"

2014.04.29



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning Nelson Oil Company

Hildebrand Heirs #1-19

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

ATTN: Ron Nelson

Job Ticket: 57573

DST#: 1

Test Start: 2014.04.29 @ 14:39:06

GENERAL INFORMATION:

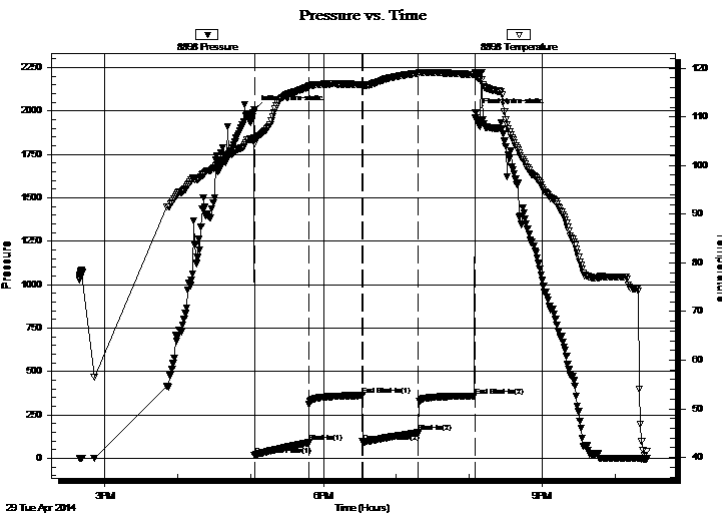
Formation: "I"
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 17:03:06
 Tester: Tate Lang
 Time Test Ended: 22:26:45
 Unit No: 49
 Interval: **3941.00 ft (KB) To 3860.00 ft (KB) (TVD)**
 Reference Elevations: 2463.00 ft (KB)
 Total Depth: 3960.00 ft (KB) (TVD)
 2455.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 8.00 ft

Serial #: 8898

Outside

Press@RunDepth: 147.80 psig @ 3942.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.29 End Date: 2014.04.29 Last Calib.: 2014.04.29
 Start Time: 14:39:07 End Time: 22:26:46 Time On Btm: 2014.04.29 @ 17:02:56
 Time Off Btm: 2014.04.29 @ 20:05:15

TEST COMMENT: B.O.B. In 30 mins
 Dead no blow back
 B.O.B. In 45 mins
 Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2006.95	105.63	Initial Hydro-static
1	18.52	104.63	Open To Flow (1)
45	89.90	116.19	Shut-In(1)
89	361.87	116.64	End Shut-In(1)
90	93.08	116.52	Open To Flow (2)
136	147.80	118.98	Shut-In(2)
182	359.70	118.66	End Shut-In(2)
183	1989.22	118.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
260.00	90%W 10%M	3.37
30.00	20%G 80%O	0.42

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Dow ning Nelson Oil Company

Hildebrand Heirs #1-19

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

ATTN: Ron Nelson

Job Ticket: 57573

DST#: 1

Test Start: 2014.04.29 @ 14:39:06

GENERAL INFORMATION:

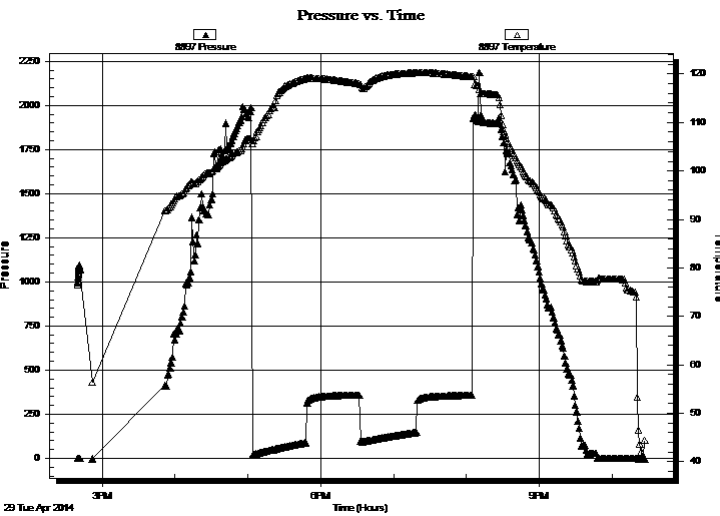
Formation: "I"	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock: ft (KB)	Tester: Tate Lang
Time Tool Opened: 17:03:06	Unit No: 49
Time Test Ended: 22:26:45	
Interval: 3941.00 ft (KB) To 3860.00 ft (KB) (TVD)	Reference Elevations: 2463.00 ft (KB)
Total Depth: 3960.00 ft (KB) (TVD)	2455.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Good
	KB to GR/CF: 8.00 ft

Serial #: 8897

Inside

Press@RunDepth: psig @ 3942.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2014.04.29	End Date: 2014.04.29
Start Time: 14:39:47	End Time: 22:27:26
	Last Calib.: 2014.04.29
	Time On Btm:
	Time Off Btm:

TEST COMMENT: B.O.B. In 30 mins
Dead no blow back
B.O.B. In 45 mins
Dead no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
260.00	90%W 10%M	3.37
30.00	20%G 80%O	0.42

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

Hildebrand Heirs #1-19

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

Job Ticket: 57573

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.04.29 @ 14:39:06

Tool Information

Drill Pipe:	Length: 3918.00 ft	Diameter: 3.80 inches	Volume: 54.96 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:	20000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	66000.00 lb
			<u>Total Volume: 55.11 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	56000.00 lb
Depth to Top Packer:	3941.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	19.00 ft				
Tool Length:	39.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3926.00	
Hydraulic tool	5.00			3931.00	
Packer	5.00			3936.00	20.00 Bottom Of Top Packer
Packer	5.00			3941.00	
Stubb	1.00			3942.00	
Recorder	0.00	8897	Inside	3942.00	
Recorder	0.00	8898	Outside	3942.00	
Perforations	15.00			3957.00	
Bullnose	3.00			3960.00	19.00 Bottom Packers & Anchor
Total Tool Length:	39.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

Hildebrand Heirs #1-19

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

Job Ticket: 57573

DST#: 1

ATTN: Ron Nelson

Test Start: 2014.04.29 @ 14:39:06

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

78000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
260.00	90%W 10%M	3.374
30.00	20%G 80%O	0.421

Total Length: 290.00 ft Total Volume: 3.795 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

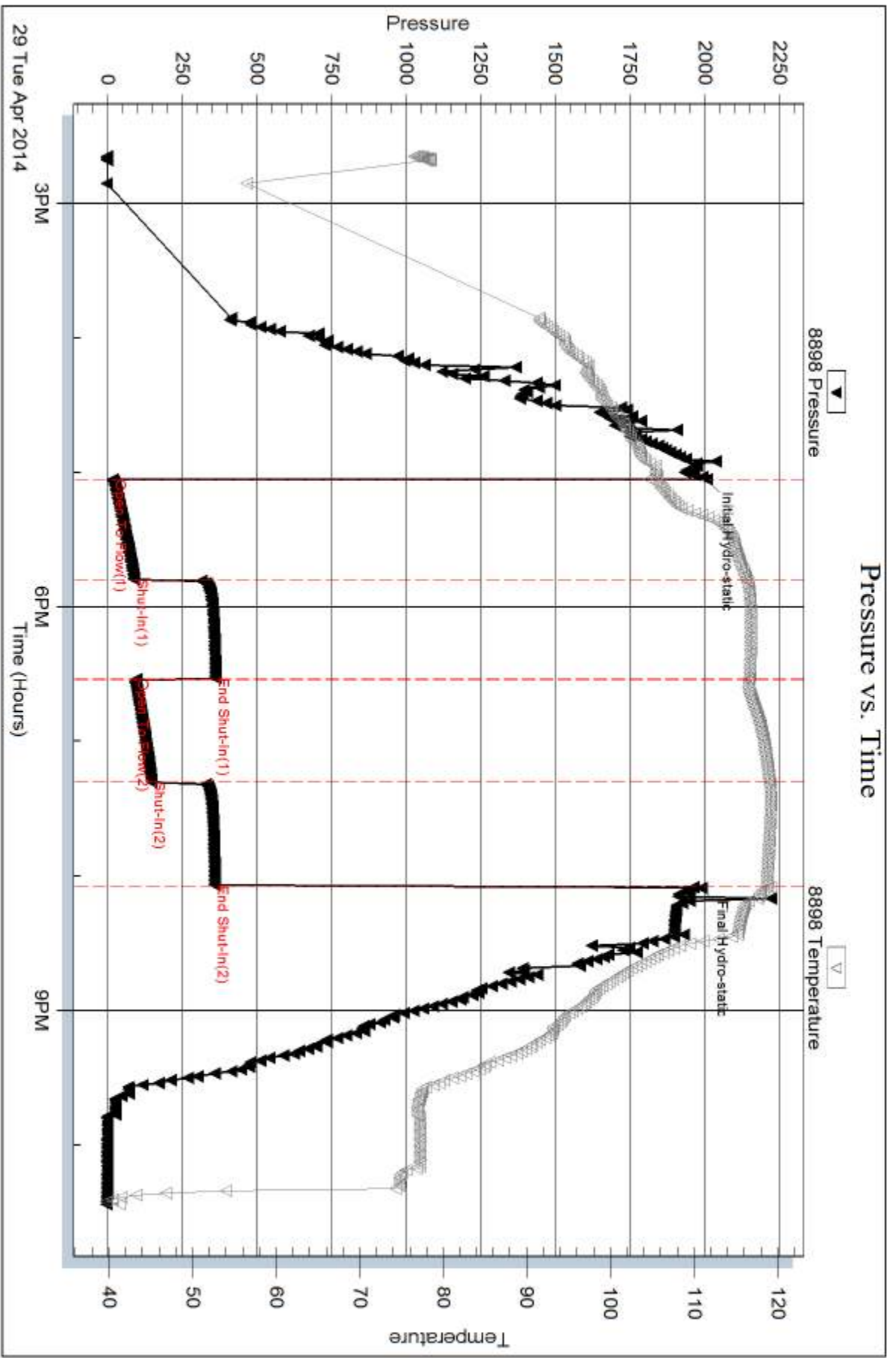
Recovery Comments:

Serial #: 8898

Outside Dow n ing Nelson Oil Company

9-9s-24w Graham,KS

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 57573

Printed: 2014.05.01 @ 14:45:21

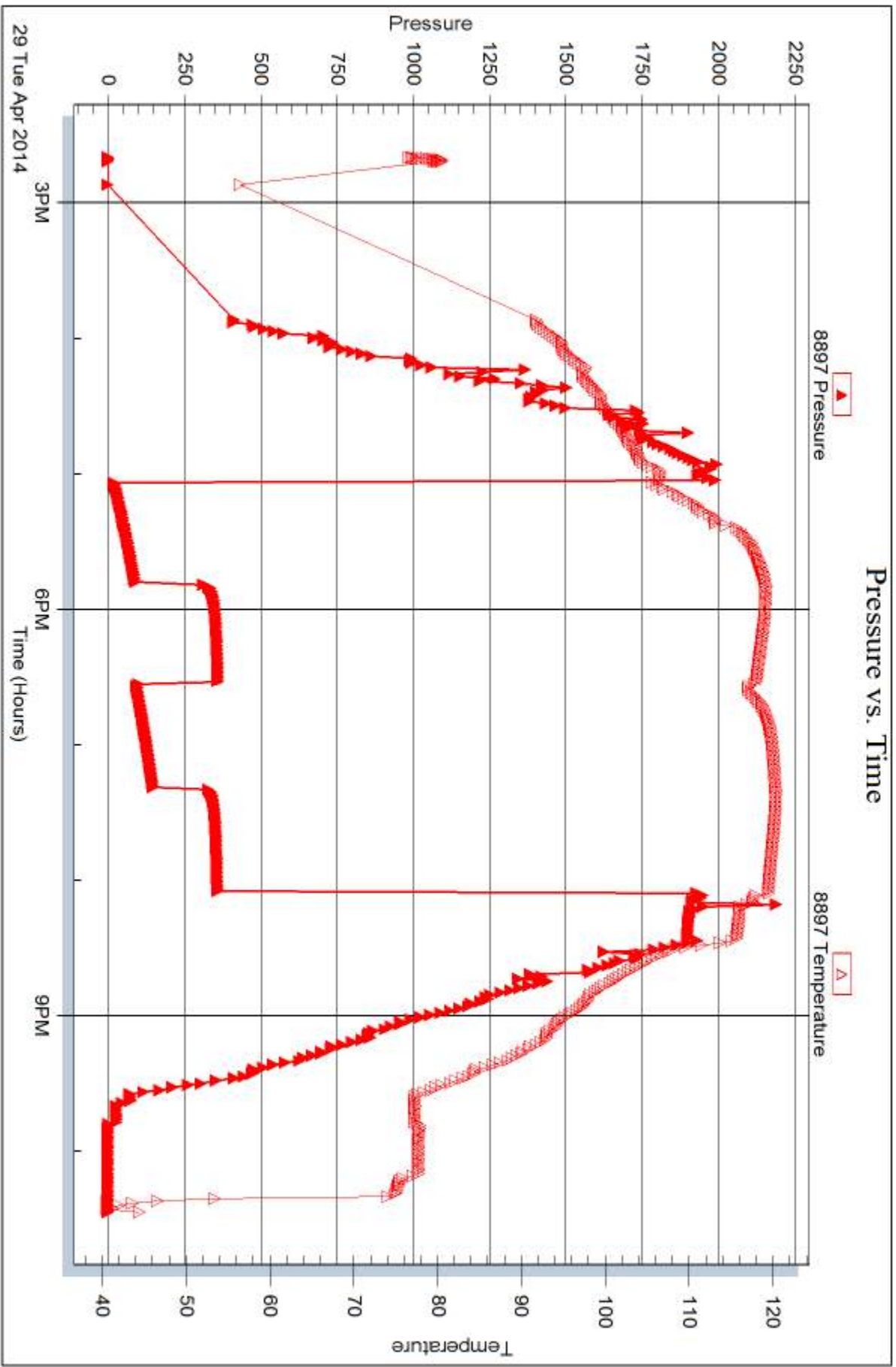
Serial #: 8897

Inside

Dow n ing Nelson Oil Company

9-9s-24w Graham,KS

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 57573

Printed: 2014.05.01 @ 14:45:21



DRILL STEM TEST REPORT

Prepared For: **Downing Nelson Oil Company**

PO Box 1019
Hays KS 67601

ATTN: Ron Nelson

9-9s-24w Graham,KS

Hildebrand Heirs #1-19

Start Date: 2014.04.30 @ 16:34:28

End Date: 2014.05.01 @ 00:06:48

Job Ticket #: 57574 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.21 @ 14:42:15



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Dow ning Nelson Oil Company

Hildebrand Heirs #1-19

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

ATTN: Ron Nelson

Job Ticket: 57574

DST#: 2

Test Start: 2014.04.30 @ 16:34:28

GENERAL INFORMATION:

Formation: **LKC E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:39:48

Time Test Ended: 00:06:48

Test Type: Conventional Straddle (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3845.00 ft (KB) To 3900.00 ft (KB) (TVD)

Reference Elevations: 2463.00 ft (KB)

Total Depth: 4074.00 ft (KB) (TVD)

2455.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8898 Outside

Press@RunDepth: 118.59 psig @ 3851.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.30

End Date:

2014.05.01

Last Calib.: 2014.05.01

Start Time: 16:34:29

End Time:

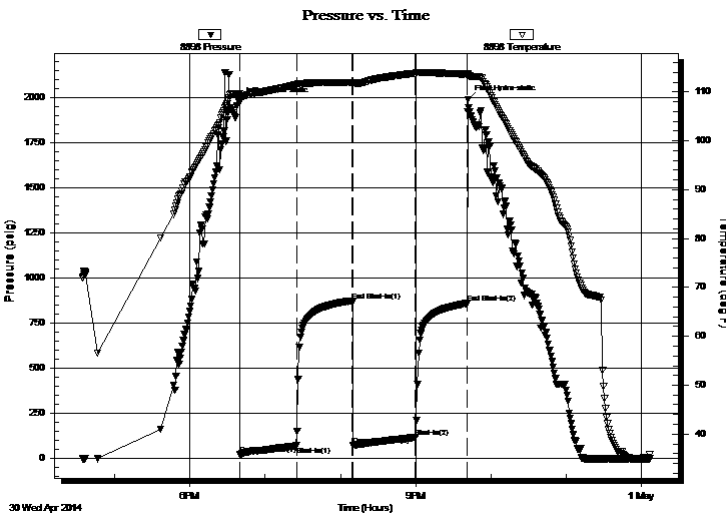
00:06:48

Time On Btm: 2014.04.30 @ 18:39:38

Time Off Btm: 2014.04.30 @ 21:41:28

TEST COMMENT: Strong blow built to 10"
Dead no blow back
Good blow built to 8"
Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1976.27	109.72	Initial Hydro-static
1	25.66	108.32	Open To Flow (1)
46	70.78	111.48	Shut-In(1)
90	875.84	111.94	End Shut-In(1)
91	75.15	111.75	Open To Flow (2)
140	118.59	113.83	Shut-In(2)
181	860.13	113.63	End Shut-In(2)
182	1990.80	113.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
220.00	85%W 15%M	2.81

* 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 Company

Hildebrand Heirs #1-19

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

ATTN: Ron Nelson

Job Ticket: 57574

DST#: 2

Test Start: 2014.04.30 @ 16:34:28

GENERAL INFORMATION:

Formation: **LKC E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:39:48

Time Test Ended: 00:06:48

Test Type: Conventional Straddle (Reset)

Tester: Tate Lang

Unit No: 49

Interval: 3845.00 ft (KB) To 3900.00 ft (KB) (TVD)

Total Depth: 4074.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2463.00 ft (KB)

2455.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8897

Inside

Press@RunDepth: psig @ 3851.00 ft (KB)

Start Date: 2014.04.30

End Date:

2014.05.01

Start Time: 16:34:20

End Time:

00:06:49

Capacity: 8000.00 psig

Last Calib.:

2014.05.01

Time On Btm:

Time Off Btm:

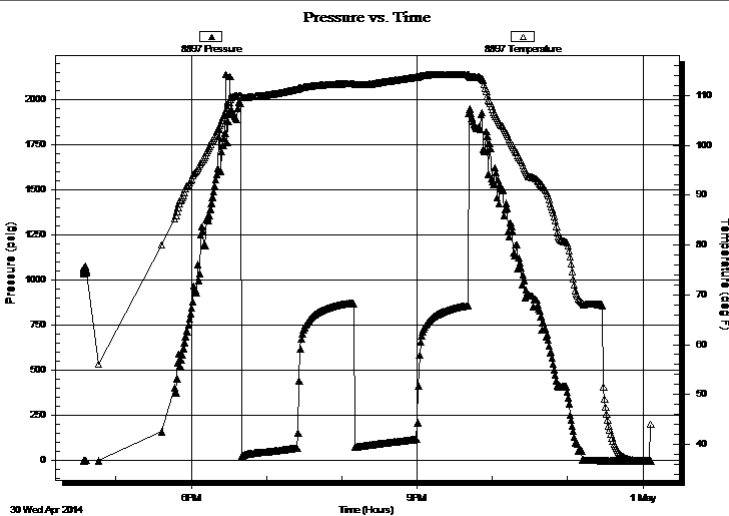
TEST COMMENT: Strong blow built to 10"

Dead no blow back

Good blow built to 8"

Dead no blow back

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
220.00	85%W 15%M	2.81

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Downing Nelson Oil Company

Hildebrand Heirs #1-19

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

Job Ticket: 57574

DST#: 2

ATTN: Ron Nelson

Test Start: 2014.04.30 @ 16:34:28

Tool Information

Drill Pipe:	Length: 3815.00 ft	Diameter: 3.80 inches	Volume: 53.51 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: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 53.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3845.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	3900.00 ft			
Interval between Packers:	55.00 ft			
Tool Length:	261.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3823.00	
Hydraulic tool	5.00			3828.00	
Jars	5.00			3833.00	
Safety Joint	2.00			3835.00	
Packer	5.00			3840.00	27.00 Bottom Of Top Packer
Packer	5.00			3845.00	
Stubb	1.00			3846.00	
Perforations	5.00			3851.00	
Recorder	0.00	8897	Inside	3851.00	
Recorder	0.00	8898	Outside	3851.00	
Change Over Sub	1.00			3852.00	
Drill Pipe	32.00			3884.00	
Change Over Sub	1.00			3885.00	
Perforations	10.00			3895.00	
Blank Off Sub	1.00			3896.00	
Blank Spacing	4.00			3900.00	55.00 Tool Interval
Packer	5.00			3905.00	
Stubb	1.00			3906.00	
Perforations	10.00			3916.00	
Recorder	0.00	8354	Below	3916.00	
Change Over Sub	1.00			3917.00	
Blank Spacing	158.00			4075.00	
Change Over Sub	1.00			4076.00	
Bullnose	3.00			4079.00	179.00 Bottom Packers & Anchor
Total Tool Length:	261.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Downing Nelson Oil Company

Hildebrand Heirs #1-19

PO Box 1019
Hays KS 67601

9-9s-24w Graham,KS

Job Ticket: 57574

DST#: 2

ATTN: Ron Nelson

Test Start: 2014.04.30 @ 16:34:28

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:

60000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
220.00	85%W 15%M	2.813

Total Length: 220.00 ft Total Volume: 2.813 bbl

Num Fluid Samples: 0

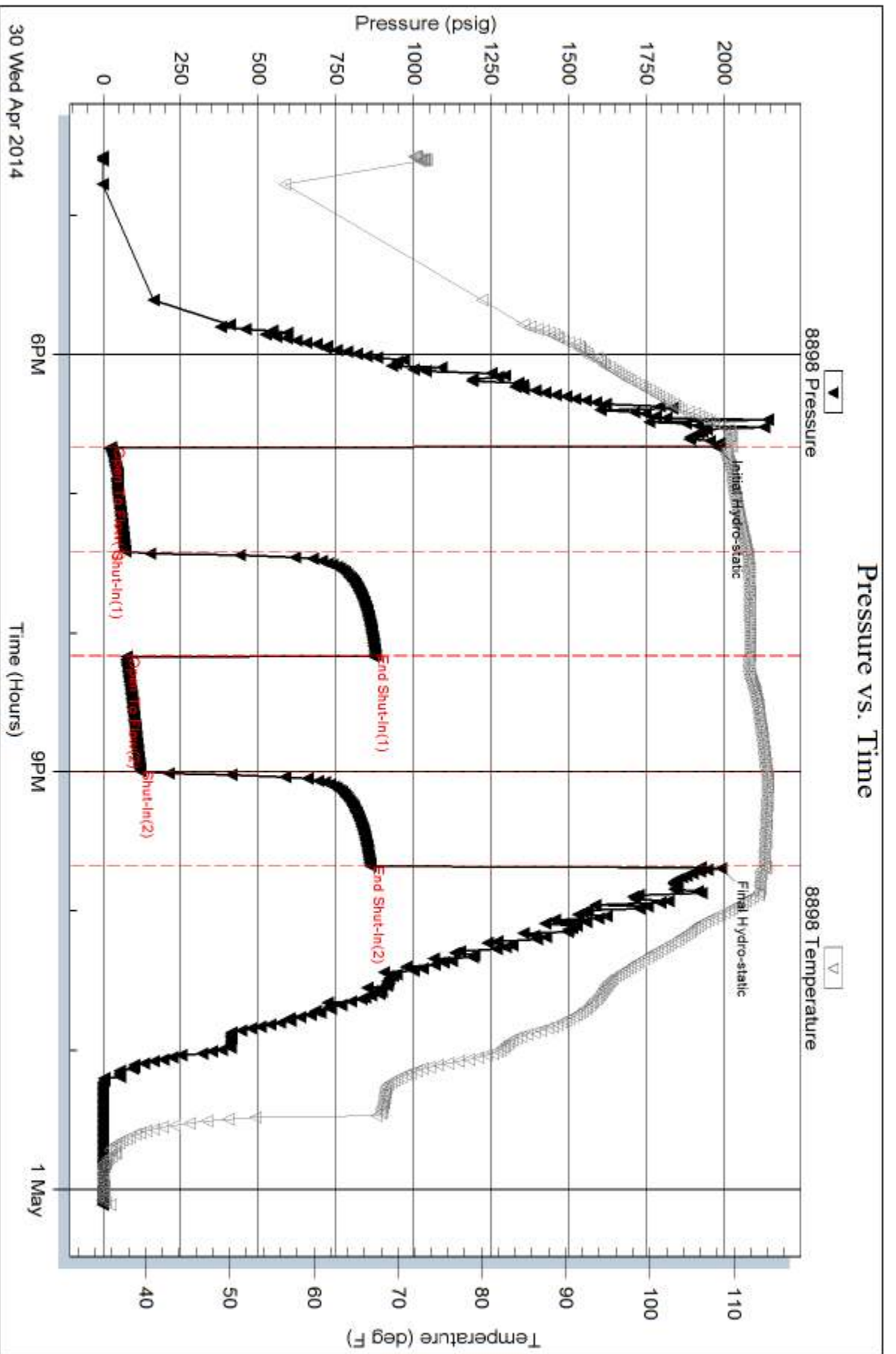
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Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



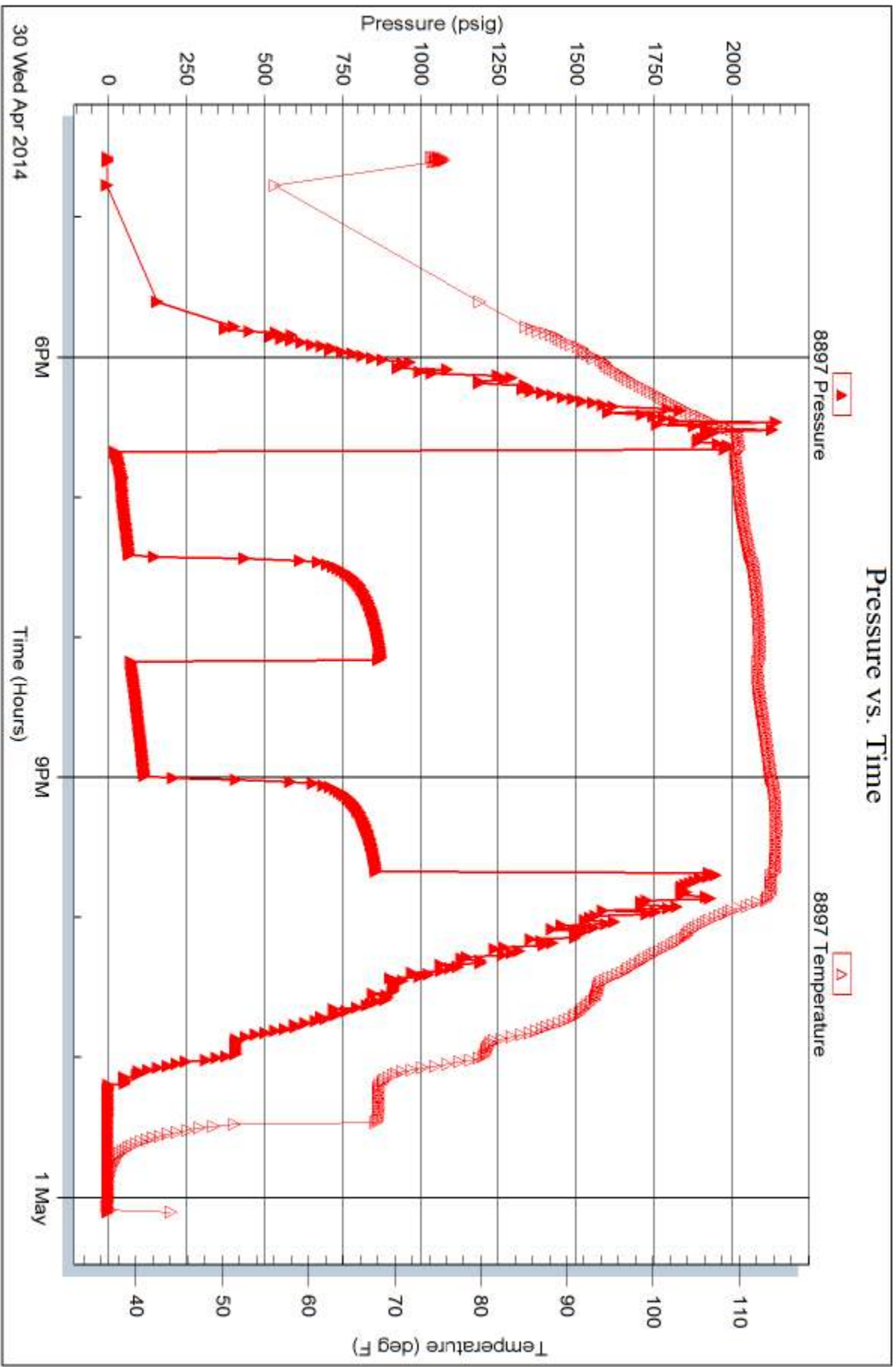
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Inside

Downing Nelson Oil Company

9-9s-24w Graham,KS

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 57574

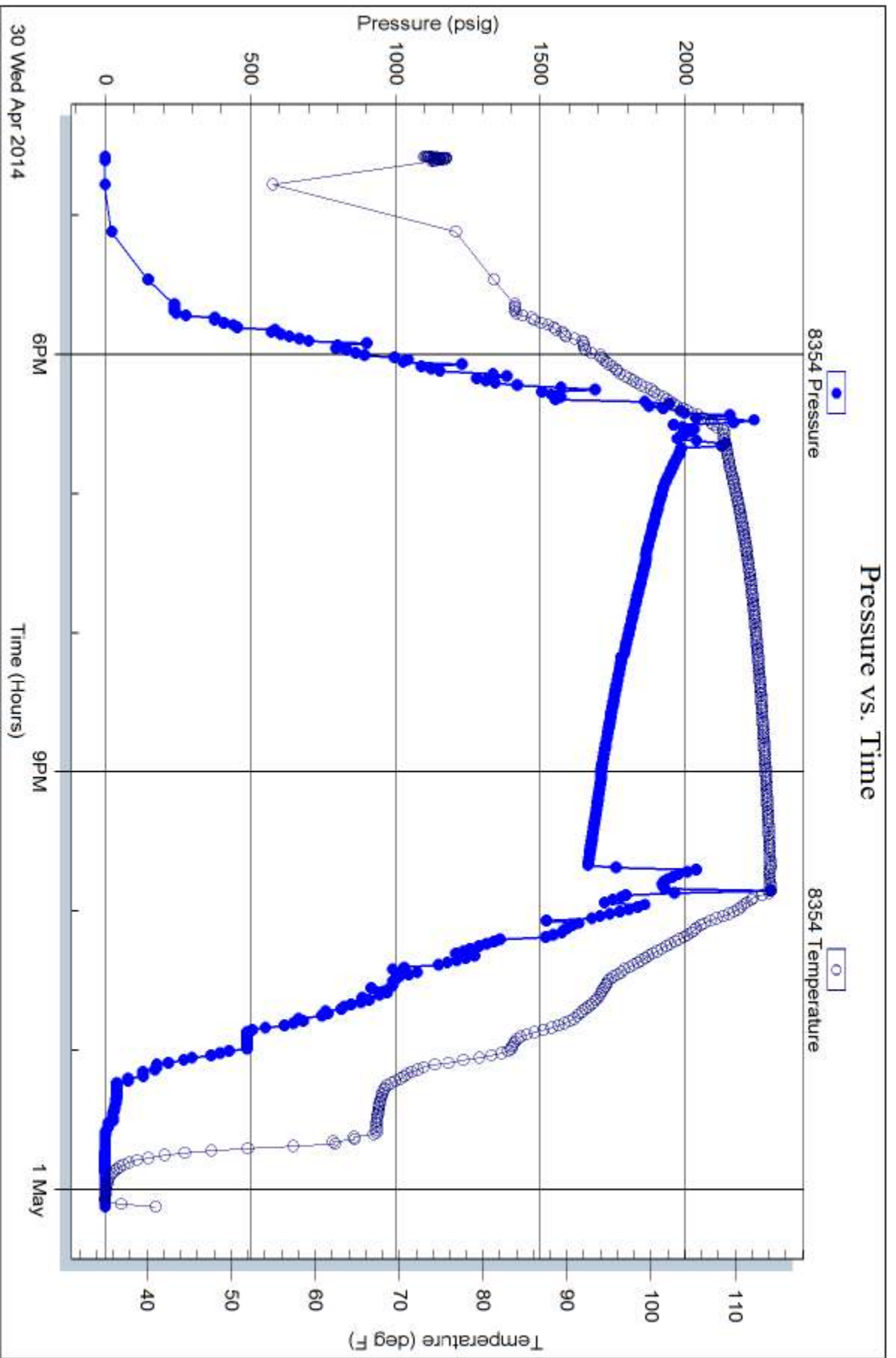
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Serial #: 8354

Below (Stratton) Nelson Oil Company

9-9s-24w Graham, KS

DST Test Number: 2



Tribble Testing, Inc

Ref. No: 57574

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