



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1275490
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: _____

1275490

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No 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: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
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Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

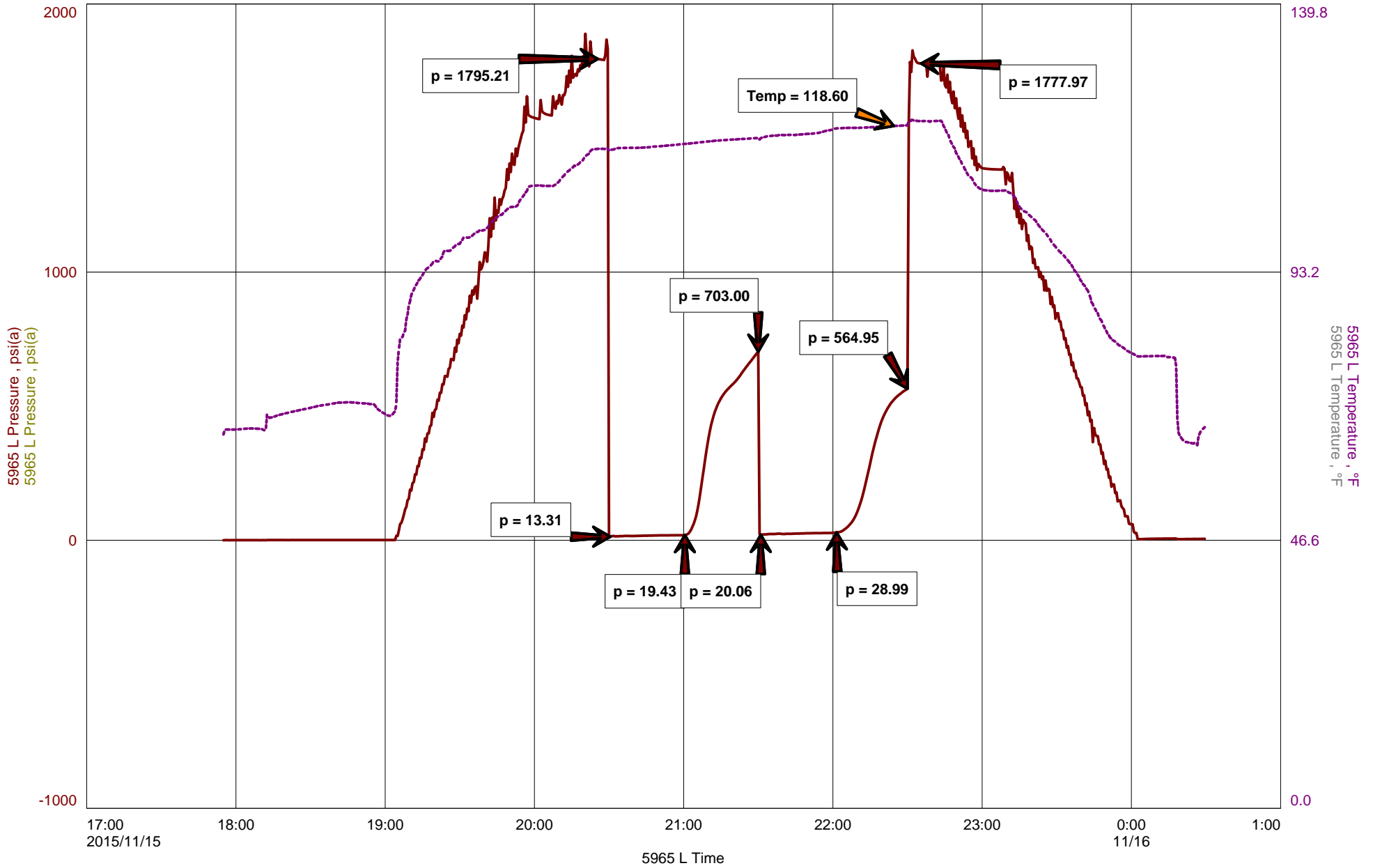
DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	L. D. Drilling, Inc.
Well Name	LIMITED 2-31
Doc ID	1275490

Tops

Name	Top	Datum
ANHYDRITE	2019	+600
BASE ANHYDRITE	2051	+568
STOTLER	3252	-633
HEEBNER	3628	-1009
LANSING	3666	-1047
STARK	3906	-1287
MARMATON	4002	-1381
FORT SCOTT	4156	-1537
CHEROKEE	4181	-1562
MISSISSIPPI SPERGEN	4258	-1639

Limited 2-31 DST 1





Diamond Testing General Report

Wilbur Steinbeck
TESTER
CELL: 620-282-1573

General Information

Company Name	LD Drilling	Job Number	W218
Contact	Kim Shoemaker	Representative	Wilbur Steinbeck
Well Name	Limited 2-31 DST 1	Well Operator	LD 1
Unique Well ID	DST 1 L/KC H 3813-3840	Report Date	2015/11/15
Surface Location	31-14s-29w Gove/Kans	Prepared By	Wilbur Steinbeck
Field	Wildcat	Qualified By	Kim Shoemaker

Test Information

Test Type	Conventional		
Formation	L/KC H		
Well Fluid Type	01 Oil		
Test Purpose (AEUB)	Initial Test		
Start Test Date	2015/11/15	Start Test Time	17:55:00
Final Test Date	2015/11/16	Final Test Time	00:30:00

Test Recovery

Recovery 1' Free oil
 15' Mud with oil spots
 16' Total Fluid

Tool Sample=Mud with oil spots



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: Limited 2-31 DST 1

TIME ON: 17:55
TIME OFF: 00:30

Company LD Drilling Lease & Well No. Limited 2-31
Contractor LD Charge to LD
Elevation 2619 KB Formation L/KC H Effective Pay _____ Ft. Ticket No. W218
Date 11-15-15 Sec. 31 Twp. _____ 14 S Range _____ 29 W County _____ Gove State KANSAS
Test Approved By Kim Shoemaker Diamond Representative Wilbur Steinbeck

Formation Test No. 1 Interval Tested from 3813 ft. to 3840 ft. Total Depth 3840 ft.

Packer Depth 3808 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Packer Depth 3813 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3799 ft. Recorder Number 5965 Cap. 5000 P.S.I.

Bottom Recorder Depth (Outside) 3814 ft. Recorder Number 5587 Cap. 5,000 P.S.I.

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 62 Drill Collar Length 0 ft. I.D. 2 1/4 in.

Weight 8.9 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.

Chlorides 1000 P.P.M. Drill Pipe Length 3785 ft. I.D. 3 1/2 in.

Jars: Make STERLING Serial Number 7 Test Tool Length 28 ft. Tool Size 3 1/2-IF in.

Did Well Flow? No Reversed Out No Anchor Length 27 ft. Size 4 1/2-FH in.

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Built to 1" No Return

2nd Open: No Blow No Return

Recovered 1 ft. of Free oil

Recovered 15 ft. of Mud with oil spots

Recovered 16 ft. of Total Fluid

Recovered _____ ft. of _____

Recovered _____ ft. of _____ 65 Miles RT

Recovered _____ ft. of _____

Remarks: Tool Sample=Mud with oil spots

Time Set Packer(s) 20:30 A.M. P.M. Time Started Off Bottom 22:30 A.M. P.M. Maximum Temperature 119

Initial Hydrostatic Pressure..... (A) 1795 P.S.I.

Initial Flow Period..... Minutes 30 (B) 13 P.S.I. to (C) 19 P.S.I.

Initial Closed In Period..... Minutes 30 (D) 703 P.S.I.

Final Flow Period..... Minutes 30 (E) 20 P.S.I. to (F) 29 P.S.I.

Final Closed In Period..... Minutes 30 (G) 565 P.S.I.

Final Hydrostatic Pressure..... (H) 1778 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



Diamond Testing General Report

Wilbur Steinbeck
TESTER
CELL: 620-282-1573

General Information

Company Name	LD Drilling	Kim Shoemaker	Job Number	W219
Contact		Limited 2-31 DST 2	Representative	Wilbur Steinbeck
Well Name		DST 2 L/KC I-J 3845-3895	Well Operator	LD 1
Unique Well ID		31-14s-29w Gove/Kans	Report Date	2015/11/16
Surface Location		Wildcat	Prepared By	Wilbur Steinbeck
Field			Qualified By	Kim Shoemaker

Test Information

Test Type	Conventional
Formation	L/KC I-J
Well Fluid Type	01 Oil
Test Purpose (AEUB)	Initial Test

Start Test Date	2015/11/16	Start Test Time	09:15:00
Final Test Date	2015/11/16	Final Test Time	16:39:00

Test Recovery

Recovery 65' Gassy Free Oil
 90' WMCO 5%W 20%M 75%O
 125' GOMCW 15%G 15%O 25%M 45%W
 280' Total Fluid
 600' GIP
Tool Sample=GMOCW 10%G 25%M 30%O 35%W

Corrected Gravity=33.2

RW=52



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: Limited 2-31 DST 2

TIME ON: 9:15
TIME OFF: 16:39

Company LD Drilling Lease & Well No. Limited 2-31
Contractor LD Charge to LD
Elevation 2619 KB Formation L/KC I-J Effective Pay _____ Ft. Ticket No. W219
Date 11-16-15 Sec. 31 Twp. 14 S Range 29 W County Gove State KANSAS
Test Approved By Kim Shoemaker Diamond Representative Wilbur Steinbeck

Formation Test No. 2 Interval Tested from 3845 ft. to 3895 ft. Total Depth 3895 ft.
Packer Depth 3831 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 3845 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3831 ft. Recorder Number 5965 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 3846 ft. Recorder Number 5587 Cap. 5,000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 58 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.0 Water Loss 7.4 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 1500 P.P.M. Drill Pipe Length 3817 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 7 Test Tool Length 28 ft. Tool Size 3 1/2-IF in.
Did Well Flow? No Reversed Out No Anchor Length 50 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: BOB in 8 min Built to 1 1/2"
2nd Open: BOB in 10 min Built to 5 1/2"

Recovered 65 ft. of Gassy Free Oil
Recovered 90 ft. of WMCO 5%W 20%M 75%O
Recovered 125 ft. of GOMCW 15%G 15%O 25%M 45%W
Recovered 280 ft. of Total Fluid

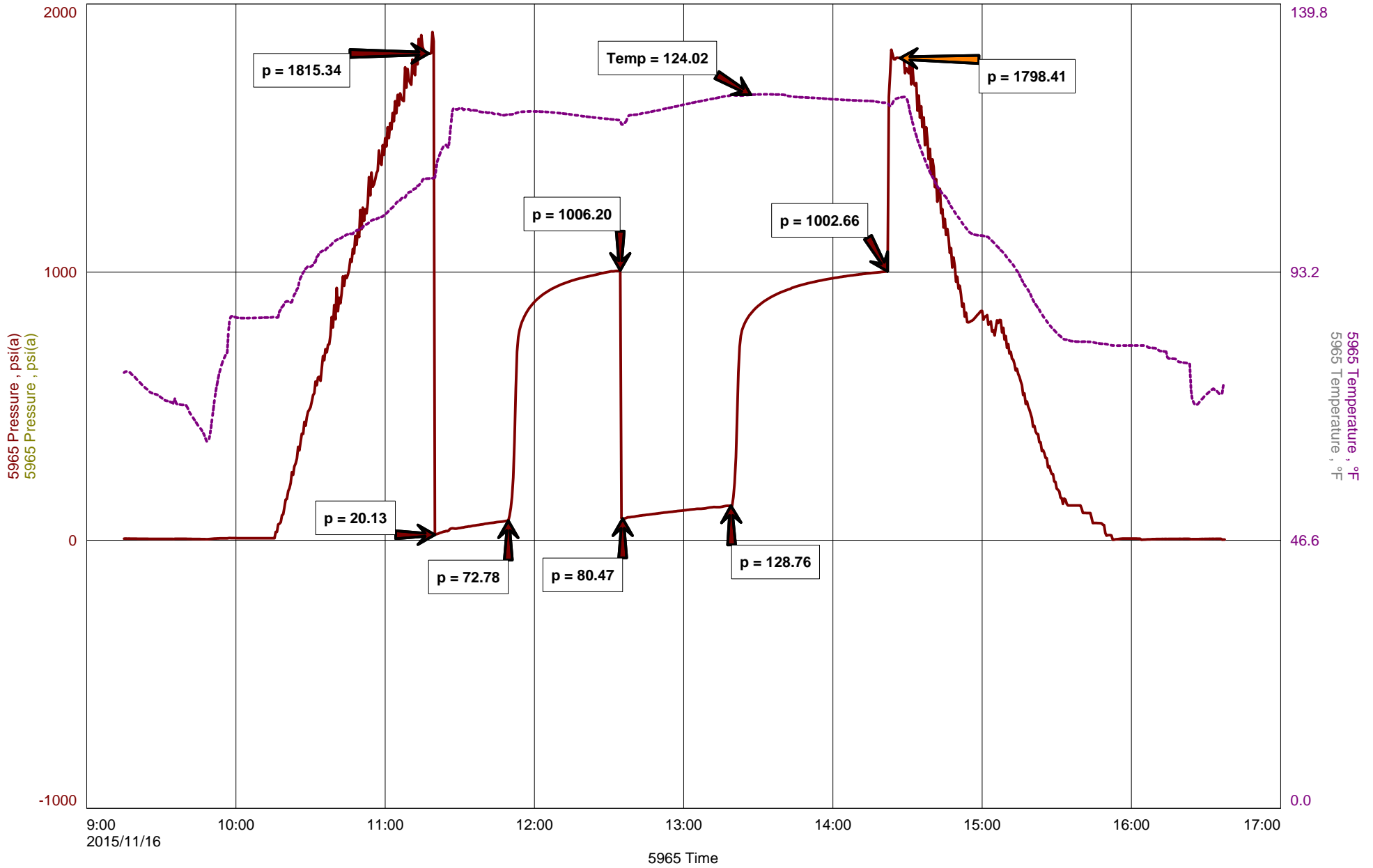
Recovered <u>600</u> ft. of <u>GIP</u>	<u>65 Miles RT</u>	Price Job
Recovered _____ ft. of _____		Other Charges
Remarks: <u>Tool Sample=GMOCW 10%G 25%M 30%O 35%W</u>		Insurance
<u>Corrected Gravity=33.2</u>		
<u>RW=52,000</u>		Total

Time Set Packer(s) 11:20 A.M. P.M. Time Started Off Bottom 14:20 A.M. P.M. Maximum Temperature 124

Initial Hydrostatic Pressure..... (A) 1815 P.S.I.
Initial Flow Period..... Minutes 30 (B) 20 P.S.I. to (C) 73 P.S.I.
Initial Closed In Period..... Minutes 45 (D) 1006 P.S.I.
Final Flow Period..... Minutes 45 (E) 80 P.S.I. to (F) 129 P.S.I.
Final Closed In Period..... Minutes 60 (G) 1003 P.S.I.
Final Hydrostatic Pressure..... (H) 1798 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

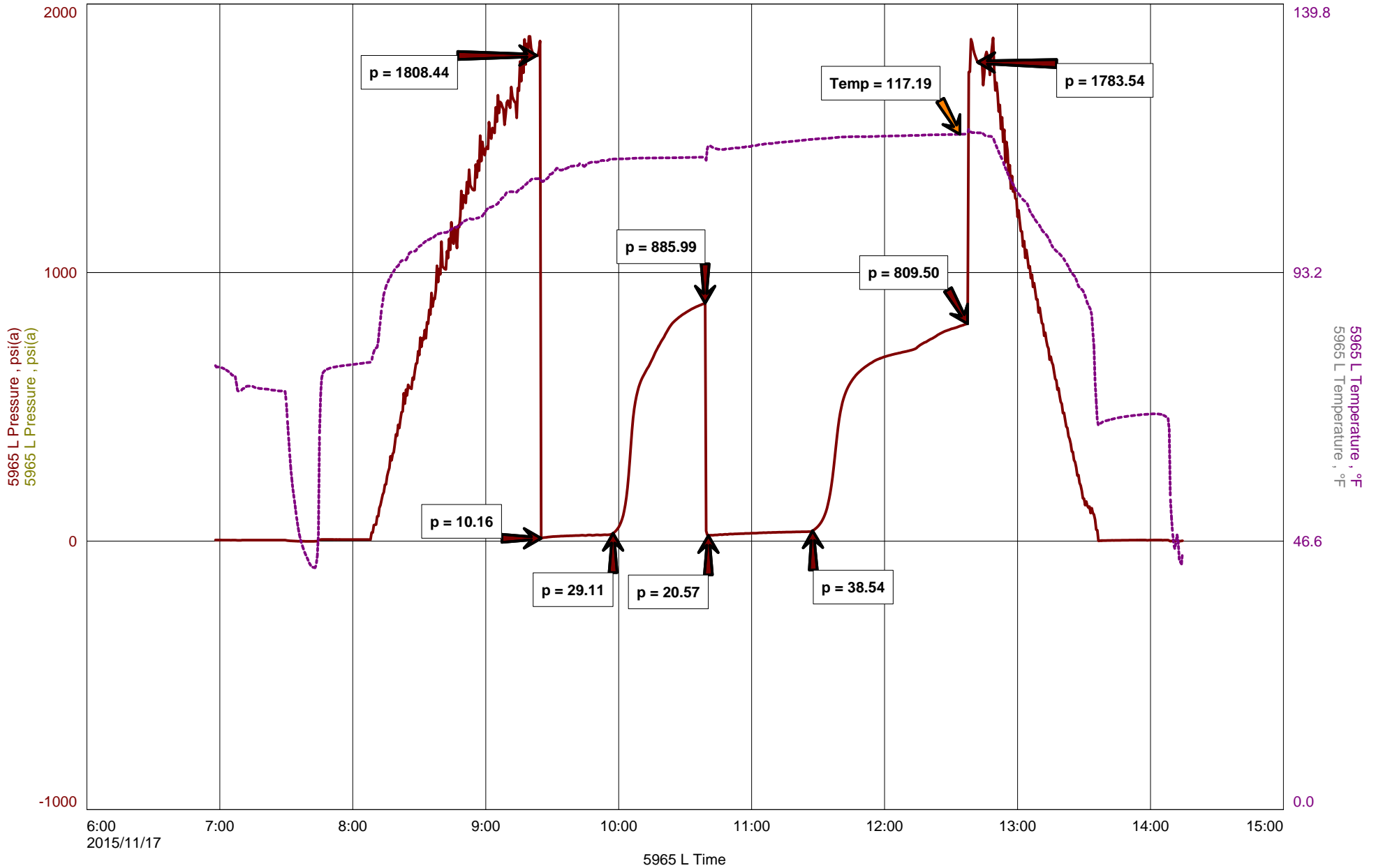
Limited 2-31 DST 2



LD Drilling
DST 3 L/KC K 3900-3930
Start Test Date: 2015/11/17
Final Test Date: 2015/11/17

Limited 2-31 DST 3
Formation: L/KC K
Job Number: W220

Limited 2-31 DST 3





Diamond Testing General Report

Wilbur Steinbeck
TESTER
CELL: 620-282-1573

General Information

Company Name	LD Drilling	Job Number	W220
Contact	Kim Shoemaker	Representative	Wilbur Steinbeck
Well Name	Limited 2-31 DST 3	Well Operator	LD 1
Unique Well ID	DST 3 L/KC K 3900-3930	Report Date	2015/11/17
Surface Location	31-14s-29w Gove/Kans	Prepared By	Wilbur Steinbeck
Field	Wildcat	Qualified By	Kim Shoemaker

Test Information

Test Type	Conventional		
Formation	L/KC K		
Well Fluid Type	01 Oil		
Test Purpose (AEUB)	Initial Test		
Start Test Date	2015/11/17	Start Test Time	06:58:00
Final Test Date	2015/11/17	Final Test Time	14:15:00

Test Recovery

Recovery 1' Free Oil
 45' GOCM 10%G 30%O 60%M
 46' Total Fluid
 240' GIP
Tool Sample=GMOCW 5%G 25%O 70%M



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: Limited 2-31 DST 3

TIME ON: 6:58
TIME OFF: 14:15

Company LD Drilling Lease & Well No. Limited 2-31
Contractor LD Charge to LD
Elevation 2619 KB Formation L/KC K Effective Pay _____ Ft. Ticket No. W220
Date 11-17-15 Sec. 31 Twp. _____ 14 S Range _____ 29 W County Gove State KANSAS
Test Approved By Kim Shoemaker Diamond Representative Wilbur Steinbeck

Formation Test No. 3 Interval Tested from 3900 ft. to 3930 ft. Total Depth 3930 ft.

Packer Depth 3895 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Packer Depth 3900 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3886 ft. Recorder Number 5965 Cap. 5000 P.S.I.

Bottom Recorder Depth (Outside) 3901 ft. Recorder Number 5587 Cap. 5,000 P.S.I.

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 55 Drill Collar Length 0 ft. I.D. 2 1/4 in.

Weight 9.0 Water Loss 7.2 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.

Chlorides 1500 P.P.M. Drill Pipe Length 3872 ft. I.D. 3 1/2 in.

Jars: Make STERLING Serial Number 7 Test Tool Length 28 ft. Tool Size 3 1/2-IF in.

Did Well Flow? Yes Reversed Out No Anchor Length 30 ft. Size 4 1/2-FH in.

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Built to 3 1/2" Surface blow

2nd Open: Built to 4 1/2" No Return

Recovered 1 ft. of Free Oil

Recovered 45 ft. of GOCM 10%G 30%O 60%M

Recovered 46 ft. of Total Fluid

Recovered 240 ft. of GIP

Recovered _____ ft. of _____ 65 Miles RT Price Job _____

Recovered _____ ft. of _____ Other Charges _____

Remarks: Tool Sample=GOCM 5%G 25%O 70%M Insurance _____

_____ Total _____

Time Set Packer(s) 9:25 A.M. Time Started Off Bottom 12:25 P.M. Maximum Temperature 117

Initial Hydrostatic Pressure..... (A) 1808 P.S.I.

Initial Flow Period..... Minutes 30 (B) 10 P.S.I. to (C) 29 P.S.I.

Initial Closed In Period..... Minutes 45 (D) 886 P.S.I.

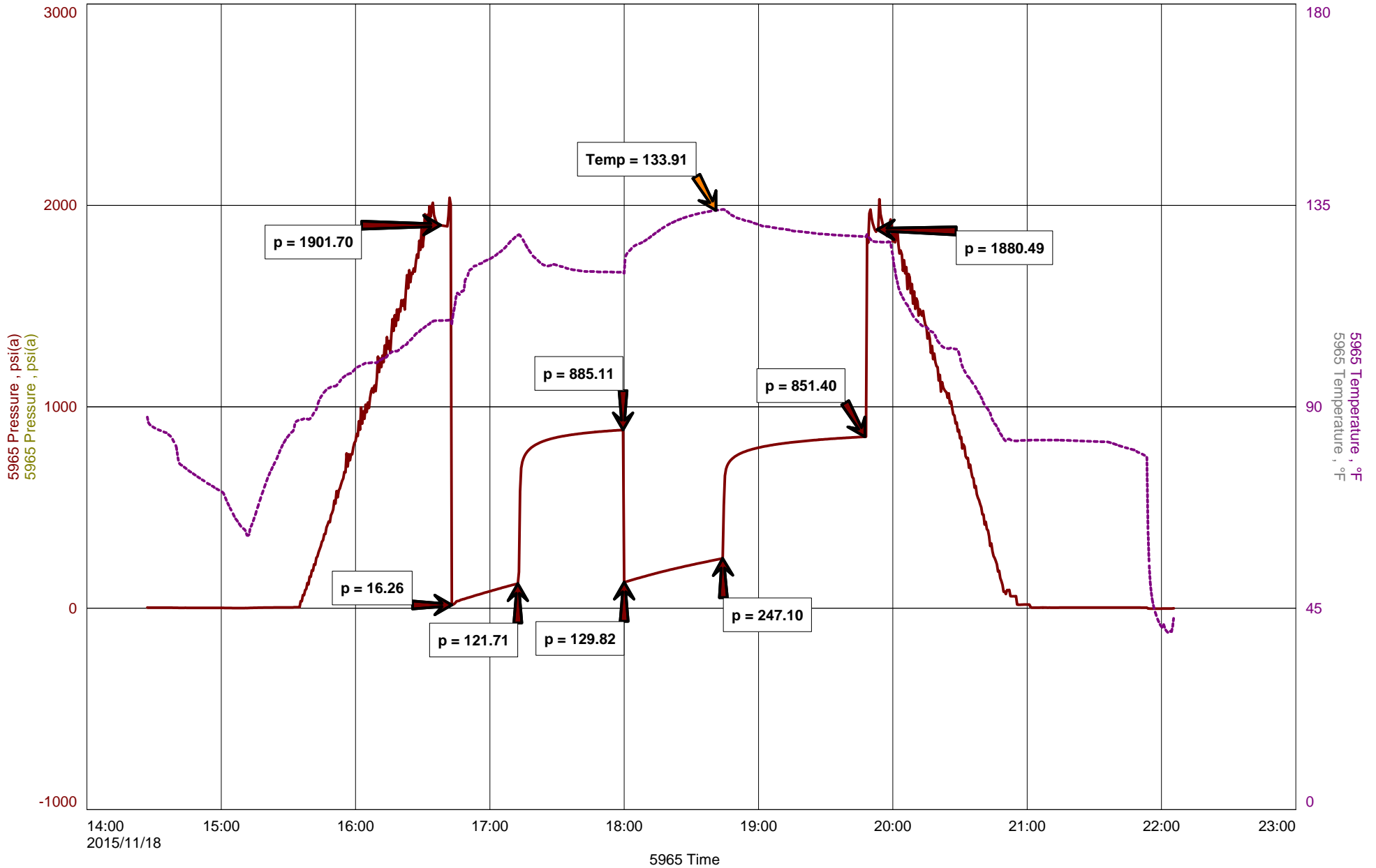
Final Flow Period..... Minutes 45 (E) 21 P.S.I. to (F) 39 P.S.I.

Final Closed In Period..... Minutes 60 (G) 810 P.S.I.

Final Hydrostatic Pressure..... (H) 1784 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Limited 2-31 DST 4





Diamond Testing General Report

Wilbur Steinbeck
TESTER
CELL: 620-282-1573

General Information

Company Name	LD Drilling	Kim Shoemaker	Job Number	W221
Contact		Limited 2-31 DST 4	Representative	Wilbur Steinbeck
Well Name		DST 4 Paw/Myric 4087-4145	Well Operator	LD 1
Unique Well ID		31-14s-29w Gove/Kans	Report Date	2015/11/18
Surface Location		Wildcat	Prepared By	Wilbur Steinbeck
Field			Qualified By	Kim Shoemaker

Test Information

Test Type	Conventional		
Formation	Paw/Myric		
Well Fluid Type	01 Oil		
Test Purpose (AEUB)	Initial Test		
Start Test Date	2015/11/18	Start Test Time	14:27:00
Final Test Date	2015/11/18	Final Test Time	22:07:00

Test Recovery

Recovery 3' Free Oil
 50' WOCM 10%W 25%O 65%M
 420' MCW 30%M 70%W
 473' Total Fluid

Tool Sample=MCW 25%M 75%W

RW=38



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: Limited 2-31 DST 4

TIME ON: 14:27
TIME OFF: 22:07

Company LD Drilling Lease & Well No. Limited 2-31
Contractor LD Charge to LD
Elevation 2619 KB Formation _____ Paw/Myric Effective Pay _____ Ft. Ticket No. W221
Date 11-18-15 Sec. 31 Twp. _____ 14 S Range _____ 29 W County _____ Gove State KANSAS
Test Approved By Kim Shoemaker Diamond Representative _____ Wilbur Steinbeck

Formation Test No. 4 Interval Tested from 4087 ft. to 4145 ft. Total Depth 4145 ft.

Packer Depth 4082 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Packer Depth 4087 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4073 ft. Recorder Number _____ 5965 Cap. _____ 5000 P.S.I.

Bottom Recorder Depth (Outside) 4088 ft. Recorder Number _____ 5587 Cap. _____ 5,000 P.S.I.

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 51 Drill Collar Length _____ 0 ft. I.D. 2 1/4 in.

Weight 9.1 Water Loss 7.4 cc. Weight Pipe Length _____ 0 ft. I.D. 2 7/8 in.

Chlorides 1400 P.P.M. Drill Pipe Length 4054 ft. I.D. 3 1/2 in.

Jars: Make STERLING Serial Number 7 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.

Did Well Flow? Yes Reversed Out No Anchor Length 58 ft. Size 4 1/2-FH in.

Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: BOB in 13 min No Return

2nd Open: BOB in 15 min No Return

Recovered 3 ft. of Free Oil

Recovered 50 ft. of WOCM 10%W 25%O 65%M

Recovered 420 ft. of MCW 30%M 70%W

Recovered 473 ft. of Total Fluid

Recovered _____ ft. of _____ 65 Miles RT

Recovered _____ ft. of _____

Remarks: Tool Sample=MCW 25%M 75%W

RW=38,000

Time Set Packer(s) 16:45 A.M. P.M. Time Started Off Bottom 19:45 A.M. P.M. Maximum Temperature 134

Initial Hydrostatic Pressure..... (A) 1902 P.S.I.

Initial Flow Period..... Minutes 30 (B) 16 P.S.I. to (C) 122 P.S.I.

Initial Closed In Period..... Minutes 45 (D) 885 P.S.I.

Final Flow Period..... Minutes 45 (E) 130 P.S.I. to (F) 247 P.S.I.

Final Closed In Period..... Minutes 60 (G) 851 P.S.I.

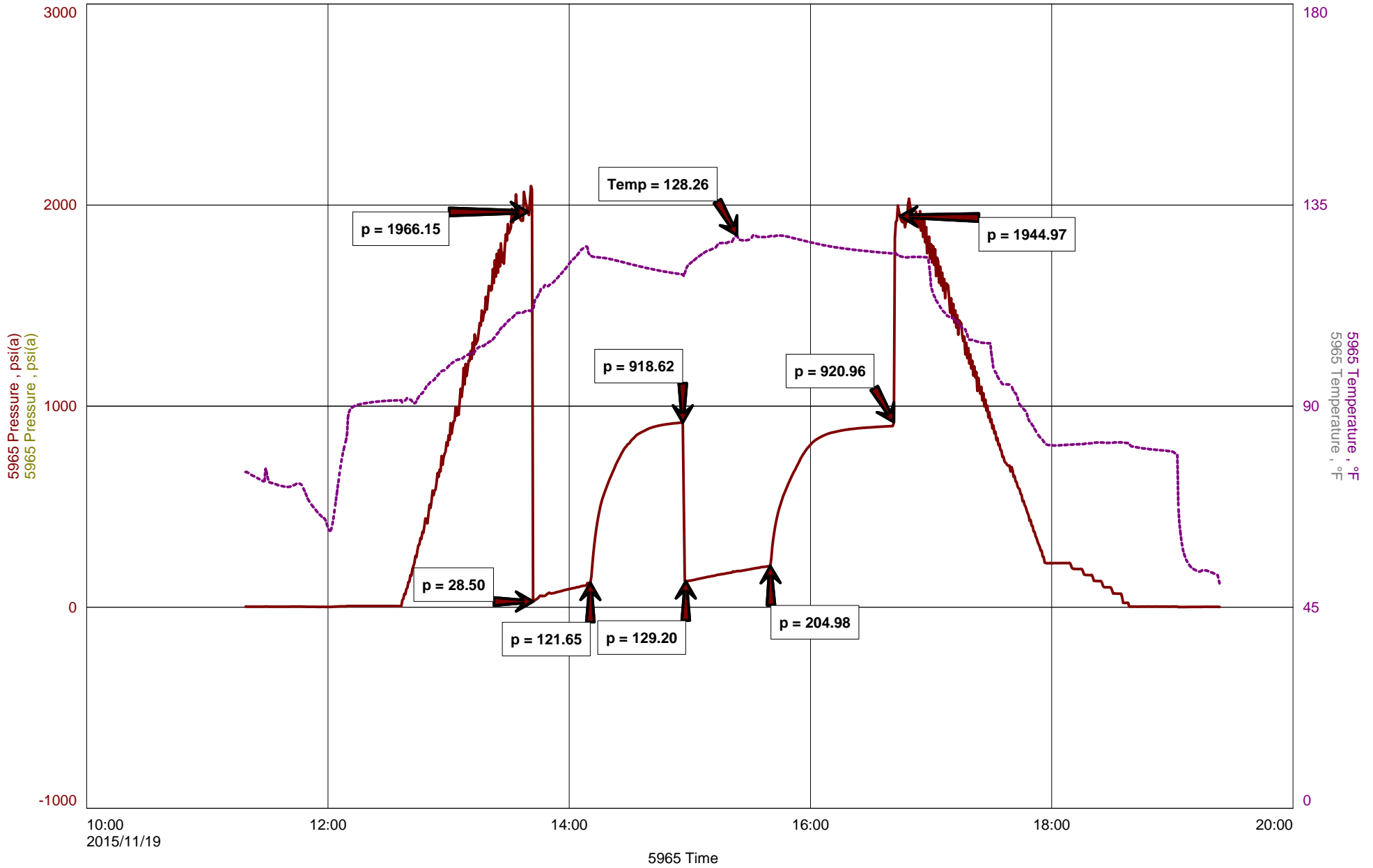
Final Hydrostatic Pressure..... (H) 1880 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

LD Drilling
DST 5 Ft. Scott/Johnson 4142-4242
Start Test Date: 2015/11/19
Final Test Date: 2015/11/19

Limited 2-31
Formation: Ft. Scott/Johnson
Job Number: W222

Limited 2-31 DST 5





Diamond Testing General Report

Wilbur Steinbeck
TESTER
CELL: 620-282-1573

General Information

Company Name	LD Drilling	Kim Shoemaker	Job Number	W222
Contact		Limited 2-31	Representative	Wilbur Steinbeck
Well Name		DST 5 Ft. Scott/Johnson 4142-4242	Well Operator	LD 1
Unique Well ID		31-14s-29w Gove/Kans	Report Date	2015/11/19
Surface Location		Wildcat	Prepared By	Wilbur Steinbeck
Field			Qualified By	Kim Shoemaker

Test Information

Test Type	Conventional		
Formation	Ft. Scott/Johnson		
Well Fluid Type	01 Oil		
Test Purpose (AEUB)	Initial Test		
Start Test Date	2015/11/19	Start Test Time	11:19:00
Final Test Date	2015/11/19	Final Test Time	19:24:00

Test Recovery

Recovery 180' Free Oil
 250' GMCO 10%G 40%M 50%O
 430' Total Fluid
 1000' GIP

Tool Sample=MCO 45%M 55%O

Corrected Gravity=33.6



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: Limited 2-31 DST 5

TIME ON: 11:19
TIME OFF: 19:24

Company LD Drilling Lease & Well No. Limited 2-31
Contractor LD Charge to LD
Elevation 2619 KB Formation Ft. Scott/Johnson Effective Pay _____ Ft. Ticket No. W222
Date 11-19-15 Sec. 31 Twp. 14 S Range 29 W County Gove State KANSAS
Test Approved By Kim Shoemaker Diamond Representative Wilbur Steinbeck

Formation Test No. 5 Interval Tested from 4142 ft. to 4242 ft. Total Depth 4242 ft.
Packer Depth 4137 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 4142 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4128 ft. Recorder Number 5965 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 4143 ft. Recorder Number 5587 Cap. 5,000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 55 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.1 Water Loss 7.6 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 1500 P.P.M. Drill Pipe Length 4109 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 7 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? Yes Reversed Out No Anchor Length 100 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: BOB in 6 min **No Return**
2nd Open: BOB in 6 min **BOB in 40 min**

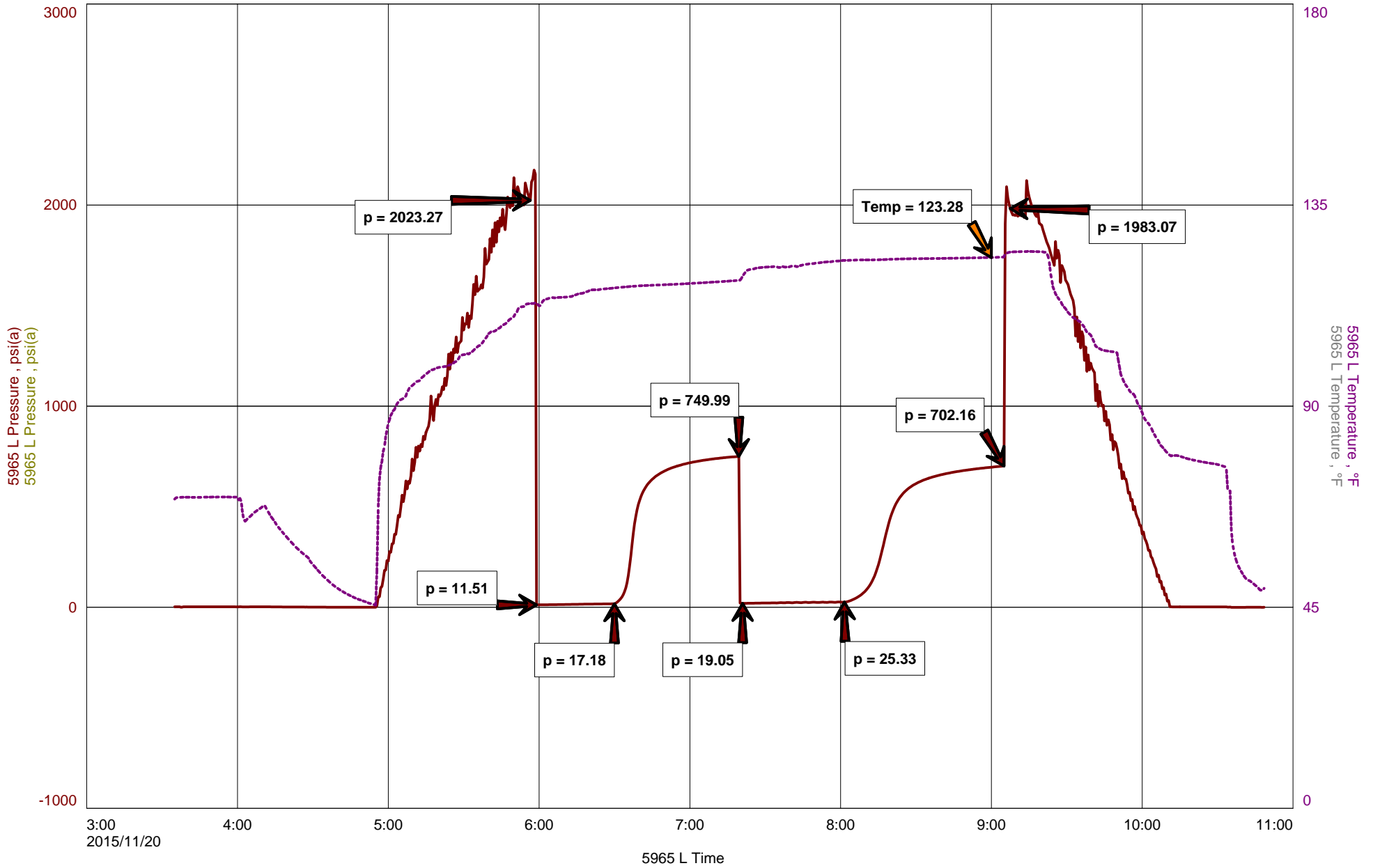
Recovered 180 ft. of Gassy Free Oil
Recovered 250 ft. of GMCO 10%G 40%M 50%O
Recovered 430 ft. of Total Fluid
Recovered 1000 ft. of GIP

Recovered _____ ft. of _____	65 Miles RT	Price Job
Recovered _____ ft. of _____		Other Charges
Remarks: <u>Tool Sample=MCO 45%M 55%O</u>		Insurance
<u>Corrected Gravity=33.6</u>		Total

Time Set Packer(s) 13:40 A.M. P.M. Time Started Off Bottom 16:45 A.M. P.M. Maximum Temperature 128
Initial Hydrostatic Pressure..... (A) 1966 P.S.I.
Initial Flow Period..... Minutes 30 (B) 29 P.S.I. to (C) 122 P.S.I.
Initial Closed In Period..... Minutes 45 (D) 919 P.S.I.
Final Flow Period..... Minutes 45 (E) 129 P.S.I. to (F) 205 P.S.I.
Final Closed In Period..... Minutes 60 (G) 921 P.S.I.
Final Hydrostatic Pressure..... (H) 1945 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Limited 2-31 DST 6





Diamond Testing General Report

Wilbur Steinbeck
TESTER
CELL: 620-282-1573

General Information

Company Name	LD Drilling	Job Number	W223
Contact	Kim Shoemaker	Representative	Wilbur Steinbeck
Well Name	Limited 2-31	Well Operator	LD 1
Unique Well ID	DST 6 Miss 4255-4277	Report Date	2015/11/20
Surface Location	31-14s-29w Gove/Kans	Prepared By	Wilbur Steinbeck
Field	Wildcat	Qualified By	Kim Shoemaker

Test Information

Test Type	Conventional		
Formation	Mississippi		
Well Fluid Type	01 Oil		
Test Purpose (AEUB)	Initial Test		
Start Test Date	2015/11/20	Start Test Time	03:35:00
Final Test Date	2015/11/20	Final Test Time	10:49:00

Test Recovery

Recovery 2' Free Oil
 25' GWOCM 10%G 10%W 30%M 50%O
 27' Total Fluid
 400' GIP

Tool Sample=GWOCM 5%G 10%W 35%O 50%M



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: Limited 2-31 DST 6

TIME ON: 3:35
TIME OFF: 10:49

Company LD Drilling Lease & Well No. Limited 2-31
Contractor LD Charge to LD
Elevation 2619 KB Formation Mississippi Effective Pay _____ Ft. Ticket No. w223
Date 11-20-15 Sec. 31 Twp. _____ 14 S Range _____ 29 W County _____ Gove State KANSAS
Test Approved By Kim Shoemaker Diamond Representative _____ Wilbur Steinbeck

Formation Test No. 6 Interval Tested from 4255 ft. to 4277 ft. Total Depth 4277 ft.
Packer Depth 4250 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth 4255 ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4242 ft. Recorder Number 5965 Cap. 5000 P.S.I.
Bottom Recorder Depth (Outside) 4256 ft. Recorder Number 5587 Cap. 5,000 P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type Chem Viscosity 55 Drill Collar Length 0 ft. I.D. 2 1/4 in.
Weight 9.1 Water Loss 7.6 cc. Weight Pipe Length 0 ft. I.D. 2 7/8 in.
Chlorides 1500 P.P.M. Drill Pipe Length 4222 ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number 7 Test Tool Length 33 ft. Tool Size 3 1/2-IF in.
Did Well Flow? Yes Reversed Out No Anchor Length 22 ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Blow: 1st Open: Built to 3" Surface Blow
2nd Open: Built to 3" No Return

Recovered 2 ft. of Gassy Free Oil
Recovered 25 ft. of GWOCM 10%G 10%G 30%O 50%M
Recovered 27 ft. of Total Fluid
Recovered 400 ft. of GIP

Recovered _____ ft. of _____	65 Miles RT	Price Job
Recovered _____ ft. of _____		Other Charges
Remarks: <u>Tool Sample=GWOCM 5%G 10%W 35%M 50%O</u>		Insurance
		Total

Time Set Packer(s) 6:00 A.M. P.M. Time Started Off Bottom 9:00 A.M. P.M. Maximum Temperature 123
Initial Hydrostatic Pressure..... (A) 2033 P.S.I.
Initial Flow Period..... Minutes 30 (B) 12 P.S.I. to (C) 17 P.S.I.
Initial Closed In Period..... Minutes 45 (D) 750 P.S.I.
Final Flow Period..... Minutes 45 (E) 19 P.S.I. to (F) 25 P.S.I.
Final Closed In Period..... Minutes 60 (G) 702 P.S.I.
Final Hydrostatic Pressure..... (H) 1983 P.S.I.

Diamond Testing shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-684-9709 WICHITA, KS

GEOLOGIST'S REPORT

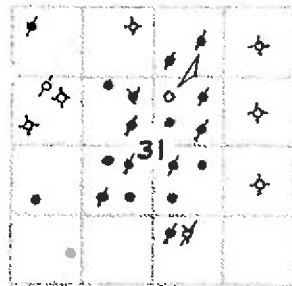
DRILLING TIME AND SAMPLE LOG

COMPANY L. D. DRILLING, INC.
 LEASE # 2-31 LIMITED
 FIELD LUNDGREN
 LOCATION 1775' FNL & 2310' FEL
 SEC 31 TWP 19s RGE 29W
 COUNTY GOVE STATE KANSAS
 CONTRACTOR L. D. DRILLING, INC.
 SPUD 11-10-15 COMP 11-21-15
 RTD 4388 LTD 4389
 MUD WGT 3403 TYPE MUD CHEMICAL

ELEVATIONS
 KB 2619
 DF _____
 GL 2614
 Measurements Are All From 2619 KB
 CASING
 SURFACE 8 5/8" @ 316'
 PRODUCTION 5 1/2" @
 ELECTRICAL SURVEYS
 DUAL IND., DENS FN. MICRO

SAMPLES SAVED FROM 3400 TO 4388
 DRILLING TIME KEPT FROM 3200 TO 4388
 SAMPLES EXAMINED FROM 3400 TO 4388
 GEOLOGICAL SUPERVISION FROM 3600 TO 4388
 GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	2019+600	2020+599
B/ANH.	2051+568	2051+568
STOTLER	3252-633	3250-631
HEEBNER	3628-1009	3622-1003
LANSING	3666-1047	3660-1041
STARK	3906-1287	3903-1284
MARMATON	4002-1381	3997-1378
FORT SCOTT	4156-1537	4152-1533
CHEROKEE	4181-1562	4178-1559
MISSISSIPPI SPERGEN	4258-1639	4258-1639



REMARKS

API: 15-063-22271

11-10-15 - SPUD
 11-11 @ 319'
 11-12 @ 1550'
 11-13 @ 2590'
 11-14 @ 3200'
 11-15 @ 3750'
 11-16 @ 3895'
 11-17 @ 3930'
 11-18 @ 4115'
 11-19 @ 4220'
 11-20 @ 4277'
 11-21 @ 4388'

LEGEND

- Dolomite
- Chert
- Concretions
- Limestones
- Carb. sh.
- Shale
- Sandstone
- Silt.
- Anhydrite

DRILLING TIME IN MINUTES
 PER FOOT
 Rate of Penetration Increases

DEPTH
 2000

REMARKS

SAMPLE DESCRIPTIONS

ANHYDRITE 2020+599

B/ANH. 2051+568

LITHOLOGY

3200

MT 5.32
MT 5.95
CH 12.00

STOTLER 3250-631

3300

3400

SAMPLES ARE LAMPED

15. mt. 5.32-5.95

15. mt. 5.32-5.95

15. mt. 5.32-5.95

15. mt. 5.32-5.95

15. mt. 5.32-5.95

15. mt. 5.32-5.95

15. mt. 5.32-5.95

3600

3600

3700

3800

ls. m. chly.
 sh. v. chly.
 ls. m. chly. calc.
 sh. ls. chly. silty. Sp. m. calc. sub. P.
 ls. to Ench. Sec. Sil. Dolomitic
 sh. chly.
 ls. m. chly.
 ls. to y. -ool. Foss.
 ls. y. -Dol.
 ls. m. chly. Foss. Sil. Chly.
 ls. G. B. SIL. Foss. Sil. Chly.
 HEBNER 3622-7003
 sh. Bl. Calc.
 ls. Bl. y. -Sil. Foss.
 sh. LI. Blue. G.
 ls. m. Foss. Sil.
 LANSING 3660-1091
 sh. m. G.
 ls. F. m. ool. sil. chly.
 ls. m. chly.
 ls. m. chly.
 ls. Foss. Sil. Foss. Sil. Chly.
 sh. Blue. G.
 ls. m. V. m. x. m. / A. Foss. P. to P. P.
 ls. Bl. Sil. Sil. Foss. Dol. Foss. Dolomitic.
 ls. to V. m. x. m. Sil.
 ls. to Foss. Sil. Sil. Dolomitic
 ls. to Foss. Calc. ls. Foss. ool.
 ls. G. - Dol. Calc.
 ls. G. - V. Sil. Foss. V. Sil. Chly.
 ls. G. - Dol. V. Sil. Chly.
 MUNICIE CREEK 3814-1195
 sh. Bl. Calc.
 ls. Bl. Sil. Foss. Calc. P. to P.
 ls. Bl. Sil. Foss. Sil. V. Sil. Foss. Dolomitic
 V. Sil. Foss.

TORONTO

3650

3750

3850

3850

3850

3850

DST (1)

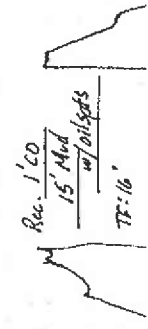
J. MCLOUG

DST (1) 3813-3840

1st open: Blow built to 1"

2nd open: No Blow

30-30-30-30



Rec. 1' CO

15' Mud

10' Oil Spgs

TF: 16'



Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

PRESSURE PUMPING

Job Log

Customer:	LD DRILLING	Cement Pump No.:	38119-19570	Operator TRK No.:	78940
Address:		Ticket #:	1717-06638	Bulk TRK No.:	14354-19578 30463-37547
City, State, Zip:		Job Type:	Z42 - Production Casing		
Service District:		Well Type:	OIL		
Well Name and No.:	Limited #2-31	Well Location:	31,14,29	County:	Gove State: Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
AA2	175	10% Salt, 10% Gypsum .8% FLA-322, 1/4# Cellflake, 6# Gilsonite	14354-19578	Front	
A Con	300	3% Calcium Chloride, 1/4# Cellflake	30463-37547	Front	Back
60/ 40 Poz	30		14354-19578		Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	14.8	1.54	6.52	269.5	Man Hours:	10
Tail:	11.6	2.77	16.75	831	# of Men on Job:	4

Time (am/pm)	(BPM)	Volume (BBLs)	Pumps		Pressure (PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
6:00							Called out for Job
10:00							On Location- Site assesment
10:15 AM							Spot equipment- Rig up
2:00 PM							Start FE & CSG
4:30 PM							Casing on Bottom Hook up PC & Circ w/ rig
17:00							Safety meeting- JSA
							Circ. To pit
6:00 PM							Thru Circ hook Iron to PT
18:10						3000	PSI Test Lines
18:12	6	24				200	Pump Mud Flush
18:17	6	5				200	Pump Fresh Water Spacer
18:20	6	48				150	Pump 175sx AA-2 @ 14.8#/Gal
18:30							Shut Down Clean Lines & Stuff Plug
18:35	7	60				100	Pump Displacement H2O
18:45	7	46.6				500	Pump Displacement Mud
18:40	7	72				250	BBLs in Start Lifting Cement
18:55	2	96				700	BBLs in Slow Rate
19:00		106.6				1200	Land Plug
19:05							Release Float ----- Helt
19:07							Drop Opening Plug
19:15	4	6				50	Plug rat hole w/30 sx 60/40 Poz
19:25						800	Open Stage Tool
19:30							Thru Circ hook Iron to PT

Size Hole	7 7/8"	Depth	4388'		TYPE	
Size & Wt. Csg.	5 1/2" 14#	Depth	4383'	New / Used	Packer	Depth
DV	54 jt	Depth	2098'		Retainer	Depth
Top Plugs		Type			Perfs	CIBP

Customer Signature:	Basic Representative:	A Olvera
	Basic Signature:	
	Date of Service:	11/21/2015

L. D. DRILLING, INC.

7 SW 26th Avenue
GREAT BEND, KS 67530

TD-4388

Customer L.D. Drilling INC Order _____

Lease Limited #2-31 Date _____

Description of Pipe New 5 1/2"

Amount 112

Jts.	Ft.	Ins.	Ft.	Ins.	Ft.	Ins.	Ft.	Ins.	Ft.	Ins.
1	42	86	42	88	41	37	41	26		
2	41	31	42	87	42	90	42	90		
3	41	35	42	88	38	41	42	88		
4	42	86	42	38	41	49	41	45		
5	41	41	38	88	42	88	42	89		
6	42	90	42	89	42	89	42	25		
7	42	88	42	88	42	87	42	89		
8	42	78	42	86	41	80	42	89		
9	41	40	41	41	42	92	41	22		
10	41	40	41	40	41	86	41	37		
11	41	37	38	03	41	81	42	90		
12	42	86	36	18	42	91	42	91		
13	41	36	41	39	35	86	42	89		
14	42	90	42	89	42	37	42	91		
15	41	59	42	93	42	92	42	88	OUT	
16	41	34	42	96	42	90	42	91	4 OUT Bed	
17	42	89	42	89	38	56	33	93	OUT 1/2	
18	42	88	42	98	42	92	42	11	OUT	
19	42	91	42	90	41	55	43	00	OUT	
20	38	57	42	89	41	54	42	61	OUT	
21	41	42	42	90	42	91				
22	41	56	38	80	36	57				
23	42	90	38	90	42	88				
24	42	89	42	86	42	31				
25	42	89	41	30	42	89				
26	42	90	42	86	42	92				
27	42	83	41	18	41	80				
28	42	91	42	87	42	92				
29	41	38	41	24	42	71			ST-13	80
30	42	89	41	30	42	70			OUT	13 53
Total										

TOTAL PIECES _____ LENGTH _____ FEET _____ INCHES _____

RECEIVED BY _____ TALLIED BY _____

TD-4388'

5 1/2 SET AT 4383' - 105 JTS

13' SIDE JOINT

LSP AT 4370'

DV TOOL AT 2098' TOP OF #54

CIRCULATE CEMENT ON TOP SPACE.

PLUG DOWN AT 08:15 SATURDAY 11/21/15

Customer <i>L.O. Drilling Limited</i>	Lease No. <i>2-31</i>	Date <i>11-11-15</i>	
Lease <i>Limited</i>	Well # <i>2-31</i>	County <i>JOVE</i> State <i>KS</i>	
Field Order # <i>12917</i>	Station <i>PRA-H</i>	Casing <i>8 5/8</i>	Depth <i>319'</i>
Type Job <i>CNW 8 5/8</i>	Formation	Legal Description <i>31.14.29</i>	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>8 5/8</i>				Pre Pad	Max		5 Min.	
Depth <i>319'</i>	Depth	From	To	Pad	Min		10 Min.	
Volume <i>19</i>	Volume	From	To	Frac	Avg		15 Min.	
Max Press <i>300</i>	Max Press	From	To		HHP Used		Annulus Pressure	
Well Connection <i>Swagel</i>	Annulus Vol.	From	To	Flush	Gas Volume		Total Load	
Plug Depth <i>299'</i>	Packer Depth	From	To					

Customer Representative	Station Manager <i>DAVE SCOTT</i>	Treater <i>Robert Fuller</i>
Service Units <i>37900 78982 86779 19903 19860</i>		
Driver Names <i>Sullivan Franklin EDAM</i>		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>8:00 pm</i>					<i>on loc</i>
					<i>CASING on Bottom</i>
					<i>Pipe Break circ.</i>
<i>12:01</i>			<i>3</i>	<i>5</i>	<i>1st SPACER</i>
			<i>64</i>	<i>4</i>	<i>mix cont 300 sk 60% 40 percent</i>
					<i>cont mix @</i>
				<i>4.5</i>	<i>START DISP</i>
<i>12:30</i>			<i>19</i>		<i>plug down</i>
					<i>circ 12 BBL cont pit</i>
					<i>SOB Complete</i>
					<i>Thank you</i>