# DIAMOND TESTING

General Information Report

**General Information**

| | | | |
|---|---|---|---|
| **Company Name** | **L.D. DRILLING, INC.** | **Representative** | **TIM VENTERS** |
| **Contact** | **L.D. DAVIS** | **Well Operator** | **L.D. DRILLING, INC.** |
| **Well Name** | **DARREL #2-31** | **Report Date** | **2012/12/03** |
| **Unique Well ID** | **DST #1, LEAV./TOR./LAN., 3663-3704** | **Prepared By** | **TIM VENTERS** |
| **Surface Location** | **SEC 31-14S-29W, GOVE CO. KS.** | | |
| **Field** | **LUNDGREN** | **Qualified By** | **KIM SHOEMAKER** |
| **Well Type** | **Vertical** | | |
| **Test Type** | **CONVENTIONAL** | | |
| **Formation** | **DST #1, LEAV./TOR./LAN.. 3663-3704** | | |
| **Well Fluid Type** | **01 Oil** | | |
| **Start Test Date** | **2012/12/02** | **Start Test Time** | **17:39:00** |
| **Final Test Date** | **2012/12/03** | **Final Test Time** | **01:01:00** |

**Test Recovery:**

**RECOVERED: 40' SOCM, 3% OIL, 97% MUD**

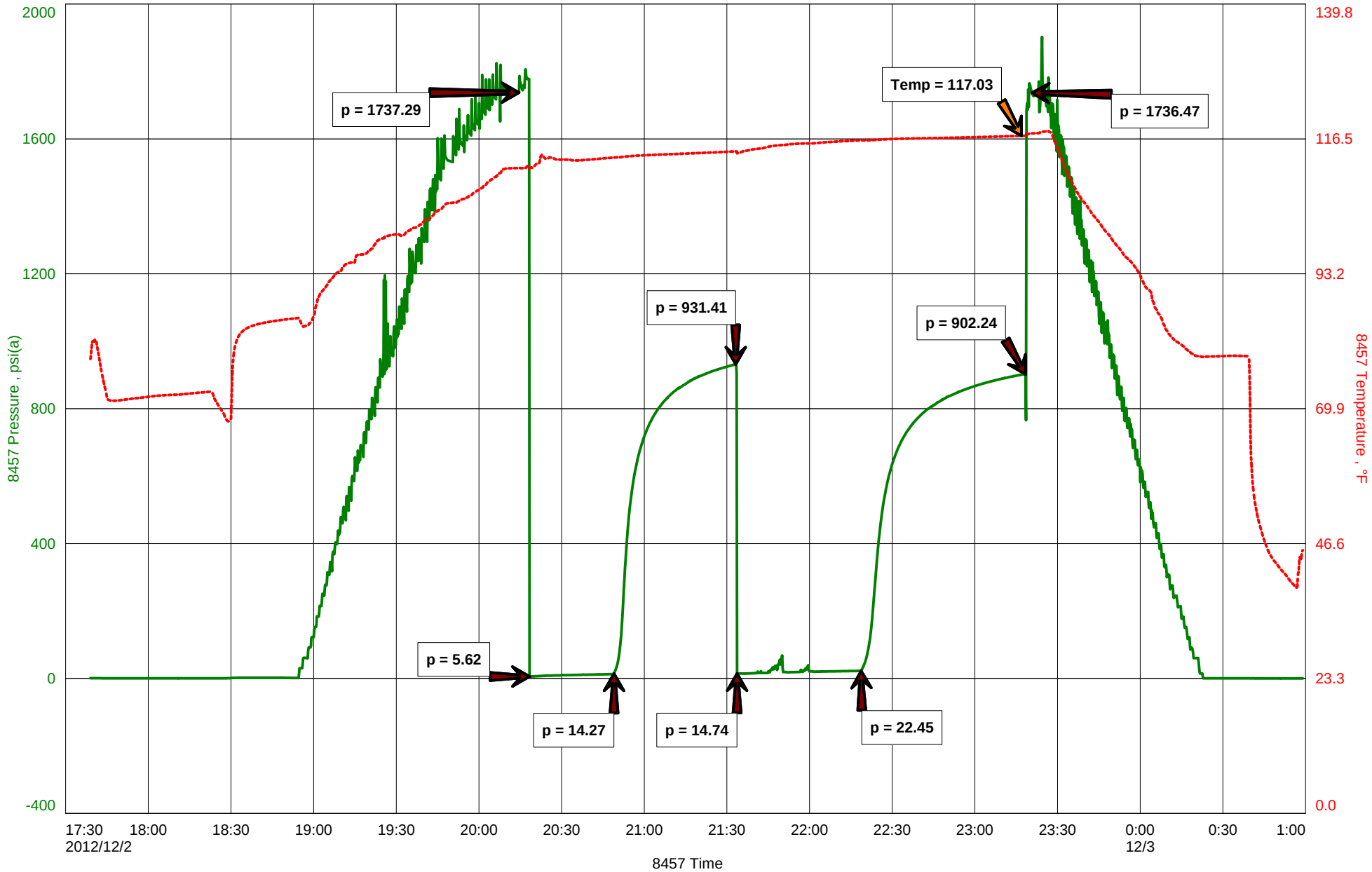
**TOOL SAMPLE: 21% OIL, 19% WATER, 60% MUD**

**CHLORIDES: 23,000 ppm**
**PH: 6.5**
**RW: .33 @ 87 deg**

L.D. DRILLING, INC.
DST #1, LEAV./TOR./LAN., 3663-3704
Start Test Date: 2012/12/02
Final Test Date: 2012/12/03

DARREL #2-31
Formation: DST #1, LEAV./TOR./LAN.. 3663-3704
Pool: LUNDGREN
Job Number: T129

# DARREL #2-31



**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313

**DRILL-STEM TEST TICKET**
FILE: DARREL2-31DST1

TIME ON: 17:39 12-2-12
TIME OFF: 01:01 12-3-12

Company: L.D. DRILLING, INC | Lease & Well No.: DARREL #2-31
Contractor: L.D. DRILLING, INC. RIG #1 | Charge to: L.D. DRILLING, INC.
Elevation: 2660 KB | Formation: LEAV./TOR./LANS. | Effective Pay: ____ Ft. | Ticket No.: T129
Date: 12-2-12 | Sec.: 31 | Twp.: 14 S | Range: 29 W | County: GOVE | State: KANSAS
Test Approved By: KIM SHOEMAKER | Diamond Representative: TIMOTHY T. VENTERS

Formation Test No.: 1 | Interval Tested from: 3663 ft. to: 3704 ft. | Total Depth: 3704 ft.
Packer Depth: 3658 ft. | Size: 6 3/4 in. | Packer depth: ____ ft. | Size: 6 3/4 in.
Packer Depth: 3663 ft. | Size: 6 3/4 in. | Packer depth: ____ ft. | Size: 6 3/4 in.
Depth of Selective Zone Set: ____

Top Recorder Depth (Inside): 3644 ft. | Recorder Number: 8457 | Cap.: 10,000 P.S.I.
Bottom Recorder Depth (Outside): 3701 ft. | Recorder Number: 11030 | Cap.: 5,025 P.S.I.
Below Straddle Recorder Depth: ____ ft. | Recorder Number: ____ | Cap.: ____ P.S.I.

Mud Type: CHEMICAL | Viscosity: 51 | Drill Collar Length: 0 ft. | I.D.: 2 1/4 in.
Weight: 9.1 | Water Loss: 8.8 cc. | Weight Pipe Length: 0 ft. | I.D.: 2 7/8 in.
Chlorides: 2,000 P.P.M. | Drill Pipe Length: 3630 ft. | I.D.: 3 1/2 in.
Jars: Make: STERLING | Serial Number: 4 | Test Tool Length: 33 ft. | Tool Size: 3 1/2-IF in.
Did Well Flow?: NO | Reversed Out: NO | Anchor Length: 41 ft. | Size: 4 1/2-FH in.
Main Hole Size: 7 7/8 | Tool Joint Size: 4 1/2 XH in. | Surface Choke Size: 1 in. | Bottom Choke Size: 5/8 in.

Blow: 1st Open: WEAK SURFACE BLOW, BUILDING TO 2 1/4 INCHES. (NOBB)
2nd Open: VERY WEAK SURFACE BLOW, BUILDING TO 2 1/2 INCHES. (NOBB)

Recovered: 40 ft. of SOCM, 3% OIL, 97% MUD
Recovered: ____ ft. of ____
Recovered: ____ ft. of ____
Recovered: ____ ft. of ____
Recovered: ____ ft. of CHLORIDES: 23,000 ppm
Recovered: ____ ft. of PH: 6.5
Remarks: RW: .33 @ 87 deg.

TOOL SAMPLE: 21% OIL, 19% WATER, 60% MUD

| | |
|---|---|
| Price Job | |
| Other Charges | |
| Insurance | |
| | |
| Total | |

Time Set Packer(s): 8:19 PM A.M. P.M. | Time Started Off Bottom: 11:19 PM A.M. P.M. | Maximum Temperature: 117 deg.

Initial Hydrostatic Pressure ..... (A) 1737 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 6 P.S.I. to (C) 14 P.S.I.
Initial Closed In Period ..... Minutes 45 (D) 931 P.S.I.
Final Flow Period ..... Minutes 45 (E) 15 P.S.I. to (F) 22 P.S.I.
Final Closed In Period ..... Minutes 60 (G) 902 P.S.I.
Final Hydrostatic Pressure ..... (H) 1736 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 Information Report

**General Information**

| | | | |
|---|---|---|---|
| **Company Name** | **L.D. DRILLING, INC.** | **Representative** | **TIM VENTERS** |
| **Contact** | **L.D. DAVIS** | **Well Operator** | **L.D. DRILLING, INC.** |
| **Well Name** | **DARREL #2-31** | **Report Date** | **2012/12/03** |
| **Unique Well ID** | **DST #2, LANSING "B", 3720-3742** | **Prepared By** | **TIM VENTERS** |
| **Surface Location** | **SEC 31-14S-29W, GOVE CO. KS.** | | |
| **Field** | **LUNDGREN** | **Qualified By** | **KIM SHOEMAKER** |
| **Well Type** | **Vertical** | | |
| **Test Type** | **CONVENTIONAL** | | |
| **Formation** | **DST #2, LANSING "B", 3720-3742** | | |
| **Well Fluid Type** | **01 Oil** | | |
| **Start Test Date** | **2012/12/03** | **Start Test Time** | **09:19:00** |
| **Final Test Date** | **2012/12/03** | **Final Test Time** | **17:52:00** |

**Test Recovery:**

**RECOVERED: 515' GAS IN PIPE**
**100' G,SMCO, 2% GAS, 96% OIL, 2% MUD, GRAVITY: 35**
**270' G,O&MCW, 7% GAS, 16% OIL, 58% WATER, 19% MUD**
**630' SO&MCW, 4% OIL, 91% WATER, 5% MUD**
**125' SO,WCM, 3% OIL, 37% WATER, 60% MUD**
**1125' TOTAL FLUID**

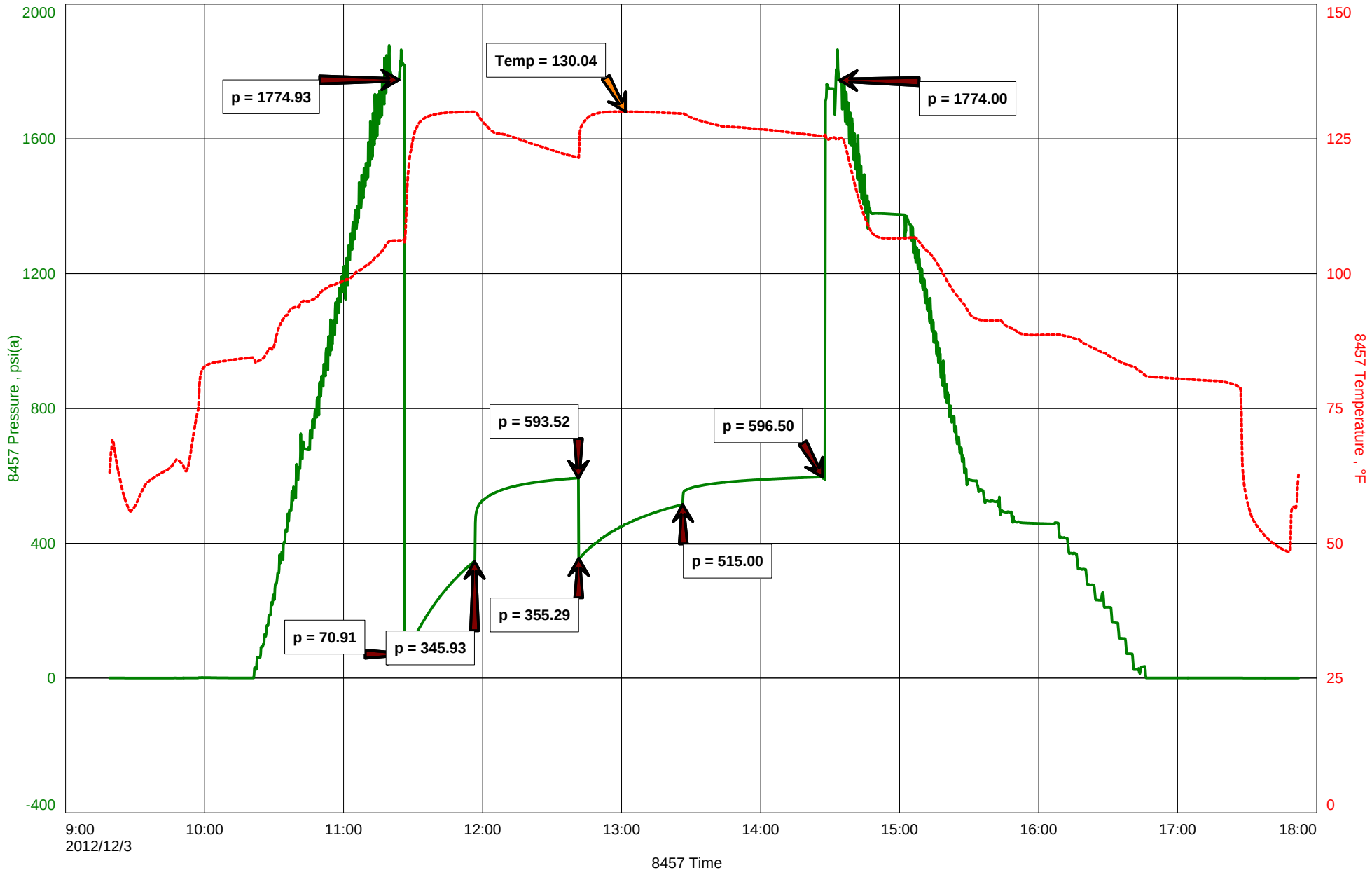
**TOOL SAMPLE: 5% OIL, 94% WATER, 1% MUD**

**CHLORIDES: 95,000 ppm**
**PH: 7.0**
**RW: .12 @ 73 deg.**

L.D. DRILLING, INC.
DST #2, LANSING "B", 3720-3742
Start Test Date: 2012/12/03
Final Test Date: 2012/12/03

DARREL #2-31
Formation: DST #2, LANSING "B", 3720-3742
Pool: LUNDGREN
Job Number: T130

# DARREL #2-31



**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313

**DRILL-STEM TEST TICKET**
FILE: DARREL2-31DST2

TIME ON: 09:19
TIME OFF: 17:52

Company L.D. DRILLING, INC | Lease & Well No. DARREL #2-31
Contractor L.D. DRILLING, INC. RIG #1 | Charge to L.D. DRILLING, INC.
Elevation 2660 KB | Formation LANSING "B" | Effective Pay ____ Ft. | Ticket No. T130
Date 12-3-12 | Sec. 31 | Twp. 14 S | Range 29 W | County GOVE | State KANSAS
Test Approved By KIM SHOEMAKER | Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 2 | Interval Tested from 3720 ft. to 3742 ft. | Total Depth 3742 ft.
Packer Depth 3715 ft. | Size 6 3/4 in. | Packer depth ____ ft. | Size 6 3/4 in.
Packer Depth 3720 ft. | Size 6 3/4 in. | Packer depth ____ ft. | Size 6 3/4 in.
Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 3701 ft. | Recorder Number 8457 | Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 3739 ft. | Recorder Number 11030 | Cap. 5,025 P.S.I.
Below Straddle Recorder Depth ____ ft. | Recorder Number ____ | Cap. ____ P.S.I.

Mud Type CHEMICAL | Viscosity 52 | Drill Collar Length 0 ft. | I.D. 2 1/4 in.
Weight 9.2 | Water Loss 9.6 cc. | Weight Pipe Length 0 ft. | I.D. 2 7/8 in
Chlorides 1,000 P.P.M. | Drill Pipe Length 3687 ft. | I.D. 3 1/2 in
Jars: Make STERLING | Serial Number 4 | Test Tool Length 33 ft. | Tool Size 3 1/2-IF in
Did Well Flow? NO | 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 XH in. | Surface Choke Size 1 in. | Bottom Choke Size 5/8 in

Blow: 1st Open: GOOD 2 INCH BLOW, BUILDING, REACHING BOB 3 MIN. (9"BB)
2nd Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 6 MIN. (5"BB)

Recovered 515 ft. of GAS IN PIPE
Recovered 100 ft. of G,SMCO, 2% GAS, 96% OIL, 2% MUD GRAVITY: 35
Recovered 270 ft. of G,O&MCW, 7% GAS, 16% OIL, 58% WATER, 19% MUD
Recovered 630 ft. of SO&MCW, 4% OIL, 91% WATER, 5% MUD
Recovered 125 ft. of SO,WCM, 35 OIL, 37% WATER, 60% MUD
Recovered 1125 ft. of TOTAL FLUID
CHLORIDES: 95,000 ppm
Remarks: PH: 7.0
RW: .12 @ 73 deg.
TOOL SAMPLE: 5% OIL, 94% WATER, 1% MUD

| | |
|---|---|
| Price Job | |
| Other Charges | |
| Insurance | |
| | |
| Total | |

Time Set Packer(s) 11:26 AM A.M. P.M. | Time Started Off Bottom 2:26 PM A.M. P.M. | Maximum Temperature 130 deg.

Initial Hydrostatic Pressure ..... (A) 1775 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 71 P.S.I. to (C) 346 P.S.I.
Initial Closed In Period ..... Minutes 45 (D) 594 P.S.I.
Final Flow Period ..... Minutes 45 (E) 355 P.S.I. to (F) 515 P.S.I.
Final Closed In Period ..... Minutes 60 (G) 597 P.S.I.
Final Hydrostatic Pressure ..... (H) 1774 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 Information Report

**General Information**

| | | | |
|---|---|---|---|
| **Company Name** | **L.D. DRILLING, INC.** | **Representative** | **TIM VENTERS** |
| **Contact** | **L.D. DAVIS** | **Well Operator** | **L.D. DRILLING, INC.** |
| **Well Name** | **DARREL #2-31** | **Report Date** | **2012/12/04** |
| **Unique Well ID** | **DST #3, LANSING "D", 3740-3790** | **Prepared By** | **TIM VENTERS** |
| **Surface Location** | **SEC 31-14S-29W, GOVE CO. KS.** | | |
| **Field** | **LUNDGREN** | **Qualified By** | **KIM SHOEMAKER** |
| **Well Type** | **Vertical** | | |
| **Test Type** | **CONVENTIONAL** | | |
| **Formation** | **DST #3, LANSING "D", 3740-3790** | | |
| **Well Fluid Type** | **01 Oil** | | |
| **Start Test Date** | **2012/12/04** | **Start Test Time** | **02:25:00** |
| **Final Test Date** | **2012/12/04** | **Final Test Time** | **09:27:00** |

**Test Recovery:**

**RECOVERED: 80' GAS IN PIPE**
**20' CLEAN OIL, GRAVITY: 35**
**470' SO,MW, 3% OIL, 68% WATER, 29% MUD**
**490' TOTAL FLUID**

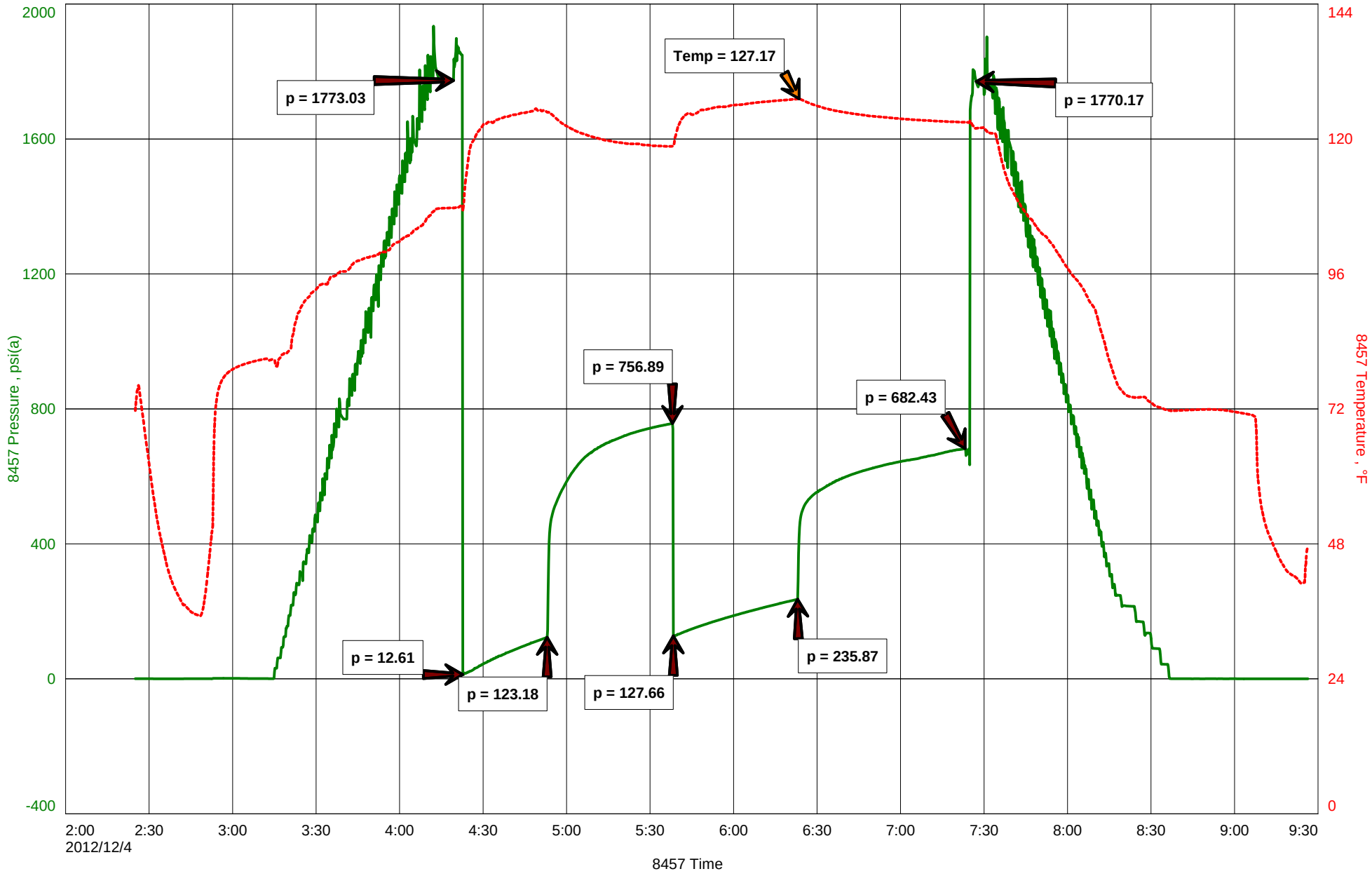
**TOOL SAMPLE: TRACE OIL, 100% WATER**

**CHLORIDES: 88,000 ppm**
**PH: 7.0**
**RW: .13 @ 79 deg.**

L.D. DRILLING, INC.
DST #3, LANSING "D", 3740-3790
Start Test Date: 2012/12/04
Final Test Date: 2012/12/04

DARREL #2-31
Formation: DST #3, LANSING "D", 3740-3790
Pool: LUNDGREN
Job Number: T131

# DARREL #2-31



**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313

**DRILL-STEM TEST TICKET**
FILE: DARREL2-31DST3

TIME ON: 02:25
TIME OFF: 09:27

Company L.D. DRILLING, INC | Lease & Well No. DARREL #2-31
Contractor L.D. DRILLING, INC. RIG #1 | Charge to L.D. DRILLING, INC.
Elevation 2660 KB | Formation LANSING "D" | Effective Pay ____ Ft. | Ticket No. T131
Date 12-4-12 | Sec. 31 | Twp. 14 S | Range 29 W | County GOVE | State KANSAS
Test Approved By KIM SHOEMAKER | Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 3 | Interval Tested from 3740 ft. to 3790 ft. | Total Depth 3790 ft.
Packer Depth 3735 ft. | Size 6 3/4 in. | Packer depth ____ ft. | Size 6 3/4 in.
Packer Depth 3740 ft. | Size 6 3/4 in. | Packer depth ____ ft. | Size 6 3/4 in.
Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 3726 ft. | Recorder Number 8457 | Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 3787 ft. | Recorder Number 11030 | Cap. 5,025 P.S.I.
Below Straddle Recorder Depth ____ ft. | Recorder Number ____ | Cap. ____ P.S.I.

Mud Type CHEMICAL | Viscosity 52 | Drill Collar Length 0 ft. | I.D. 2 1/4 in.
Weight 9.2 | Water Loss 9.6 cc. | Weight Pipe Length 0 ft. | I.D. 2 7/8 in
Chlorides 1,000 P.P.M. | Drill Pipe Length 3707 ft. | I.D. 3 1/2 in
Jars: Make STERLING | Serial Number 4 | Test Tool Length 33 ft. | Tool Size 3 1/2-IF in
Did Well Flow? NO | Reversed Out NO | Anchor Length 18 ft. | Size 4 1/2-FH in
32' DP IN ANCHOR
Main Hole Size 7 7/8 | Tool Joint Size 4 1/2 XH in. | Surface Choke Size 1 in. | Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK 1/2 INCH BLOW, BULDING, REACHING BOB 10 MIN. (1/4"BB)
2nd Open: WEAK 1 INCH BLOW, BUILDING, REACHING BOB 17 MIN. (WSBB)

Recovered 80 ft. of GAS IN PIPE
Recovered 20 ft. of CLEAN OIL, GRAVITY: 35
Recovered 470 ft. of SO,MW, 3% OIL, 68% WATER, 29% MUD
Recovered 490 ft. of TOTAL FLUID
Recovered ____ ft. of ____
Recovered ____ ft. of ____
Remarks: CHLORIDES: 88,000 ppm
PH: 7.0
RW: .13 @ 79 deg.
TOOL SAMPLE: TRACE OIL, 100% WATER

| | |
|---|---|
| Price Job | |
| Other Charges | |
| Insurance | |
| | |
| Total | |

Time Set Packer(s) 4:22 AM A.M. P.M. | Time Started Off Bottom 7:22 AM A.M. P.M. | Maximum Temperature 127 deg.

Initial Hydrostatic Pressure ..... (A) 1773 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 13 P.S.I. to (C) 123 P.S.I.
Initial Closed In Period ..... Minutes 45 (D) 757 P.S.I.
Final Flow Period ..... Minutes 45 (E) 128 P.S.I. to (F) 236 P.S.I.
Final Closed In Period ..... Minutes 60 (G) 682 P.S.I.
Final Hydrostatic Pressure ..... (H) 1770 P.S.I.

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# DIAMOND TESTING

General Information Report

**General Information**

| | | | |
|---|---|---|---|
| **Company Name** | **L.D. DRILLING, INC.** | **Representative** | **TIM VENTERS** |
| **Contact** | **L.D. DAVIS** | **Well Operator** | **L.D. DRILLING, INC.** |
| **Well Name** | **DARREL #2-31** | **Report Date** | **2012/12/05** |
| **Unique Well ID** | **DST #4, LKC "H-I-J", 3857-3940** | **Prepared By** | **TIM VENTERS** |
| **Surface Location** | **SEC 31-14S-29W, GOVE CO. KS.** | | |
| **Field** | **LUNDGREN** | **Qualified By** | **KIM SHOEMAKER** |
| **Well Type** | **Vertical** | | |
| **Test Type** | **CONVENTIONAL** | | |
| **Formation** | **DST #4, LKC "H-I-J", 3857-3940** | | |
| **Well Fluid Type** | **01 Oil** | | |
| **Start Test Date** | **2012/12/05** | **Start Test Time** | **01:21:00** |
| **Final Test Date** | **2012/12/05** | **Final Test Time** | **07:05:12** |

**Test Recovery:**

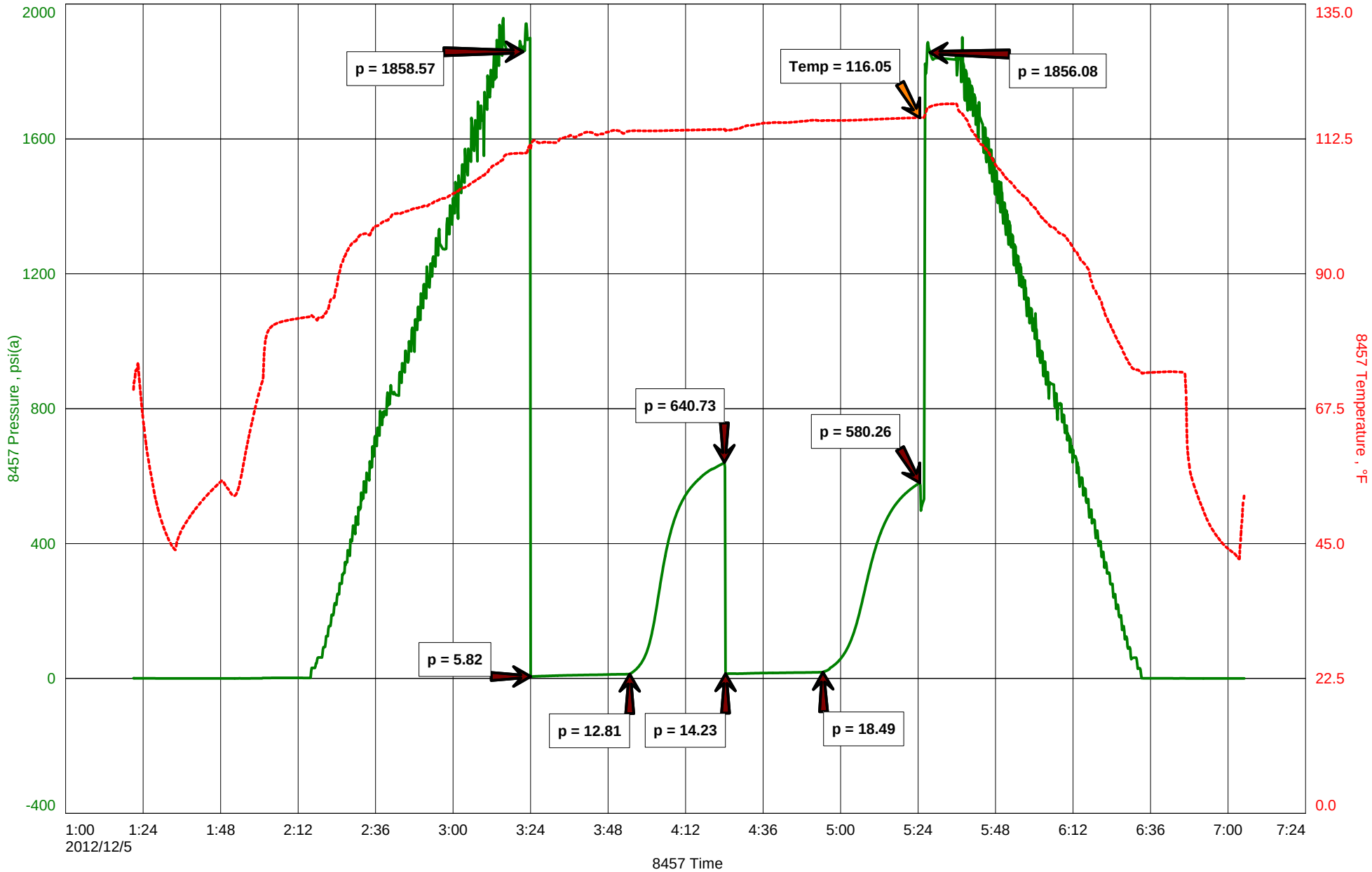
**RECOVERED: 30' M W/VSTR. O, VERY SLIGHT TRACE OIL, 100% MUD**

**TOOL SAMPLE: TRACE OIL, 100% MUD**

L.D. DRILLING, INC.
DST #4, LKC "H-I-J", 3857-3940
Start Test Date: 2012/12/05
Final Test Date: 2012/12/05

DARREL #2-31
Formation: DST #4, LKC "H-I-J", 3857-3940
Pool: LUNDGREN
Job Number: T132

# DARREL #2-31



**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313

**DRILL-STEM TEST TICKET**
FILE: DARREL2-31DST4

TIME ON: 01:21
TIME OFF: 07:05

Company L.D. DRILLING, INC — Lease & Well No. DARREL #2-31
Contractor L.D. DRILLING, INC. RIG #1 — Charge to L.D. DRILLING, INC.
Elevation 2660 KB — Formation LKC "H-I-J" — Effective Pay _____ Ft. — Ticket No. T132
Date 12-5-12 — Sec. 31 — Twp. 14 S — Range 29 W — County GOVE — State KANSAS
Test Approved By KIM SHOEMAKER — Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 4 — Interval Tested from 3857 ft. to 3940 ft. — Total Depth 3940 ft.
Packer Depth 3852 ft. — Size 6 3/4 in. — Packer depth _____ ft. — Size 6 3/4 in.
Packer Depth 3857 ft. — Size 6 3/4 in. — Packer depth _____ ft. — Size 6 3/4 in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3838 ft. — Recorder Number 8457 — Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 3937 ft. — Recorder Number 11030 — Cap. 5,025 P.S.I.
Below Straddle Recorder Depth _____ ft. — Recorder Number _____ — Cap. _____ P.S.I.

Mud Type CHEMICAL — Viscosity 50 — Drill Collar Length 0 ft. — I.D. 2 1/4 in.
Weight 9.2 — Water Loss 9.6 cc. — Weight Pipe Length 0 ft. — I.D. 2 7/8 in.
Chlorides 2,000 P.P.M. — Drill Pipe Length 3824 ft. — I.D. 3 1/2 in.
Jars: Make STERLING — Serial Number 4 — Test Tool Length 33 ft. — Tool Size 3 1/2-IF in.
Did Well Flow? NO — Reversed Out NO — Anchor Length 20 ft. — Size 4 1/2-FH in.
63' DP IN ANCHOR
Main Hole Size 7 7/8 — Tool Joint Size 4 1/2 XH in. — Surface Choke Size 1 in. — Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK 1/4 INCH BLOW, BULDING TO 2 INCHES. (NOBB)
2nd Open: WEAK SURFACE BLOW, BUILDING TO 1/2 INCH. (NOBB)

Recovered 30 ft. of M W/VSTR.O, VERY SLIGHT TRACE OIL, 100% MUD
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Remarks: _____

| | |
|---|---|
| Price Job | |
| Other Charges | |
| Insurance | |
| | |
| Total | |

TOOL SAMPLE: TRACE OIL, 100% MUD

Time Set Packer(s) 3:22 AM A.M. P.M. — Time Started Off Bottom 5:22 AM A.M. P.M. — Maximum Temperature 116 deg.

Initial Hydrostatic Pressure ..... (A) 1859 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 6 P.S.I. to (C) 13 P.S.I.
Initial Closed In Period ..... Minutes 30 (D) 641 P.S.I.
Final Flow Period ..... Minutes 30 (E) 14 P.S.I. to (F) 18 P.S.I.
Final Closed In Period ..... Minutes 30 (G) 580 P.S.I.
Final Hydrostatic Pressure ..... (H) 1856 P.S.I.

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# DIAMOND TESTING

General Information Report

**General Information**

| | | | |
|---|---|---|---|
| **Company Name** | **L.D. DRILLING, INC.** | **Representative** | **TIM VENTERS** |
| **Contact** | **L.D. DAVIS** | **Well Operator** | **L.D. DRILLING, INC.** |
| **Well Name** | **DARREL #2-31** | **Report Date** | **2012/12/06** |
| **Unique Well ID** | **DST #5, MYR./FT. SCT., 4168-4230** | **Prepared By** | **TIM VENTERS** |
| **Surface Location** | **SEC 31-14S-29W, GOVE CO. KS.** | | |
| **Field** | **LUNDGREN** | **Qualified By** | **KIM SHOEMAKER** |
| **Well Type** | **Vertical** | | |
| **Test Type** | **CONVENTIONAL** | | |
| **Formation** | **DST #5, MYR./FT. SC., 4168-4230** | | |
| **Well Fluid Type** | **01 Oil** | | |
| **Start Test Date** | **2012/12/06** | **Start Test Time** | **13:25:00** |
| **Final Test Date** | **2012/12/06** | **Final Test Time** | **20:32:00** |

**Test Recovery:**

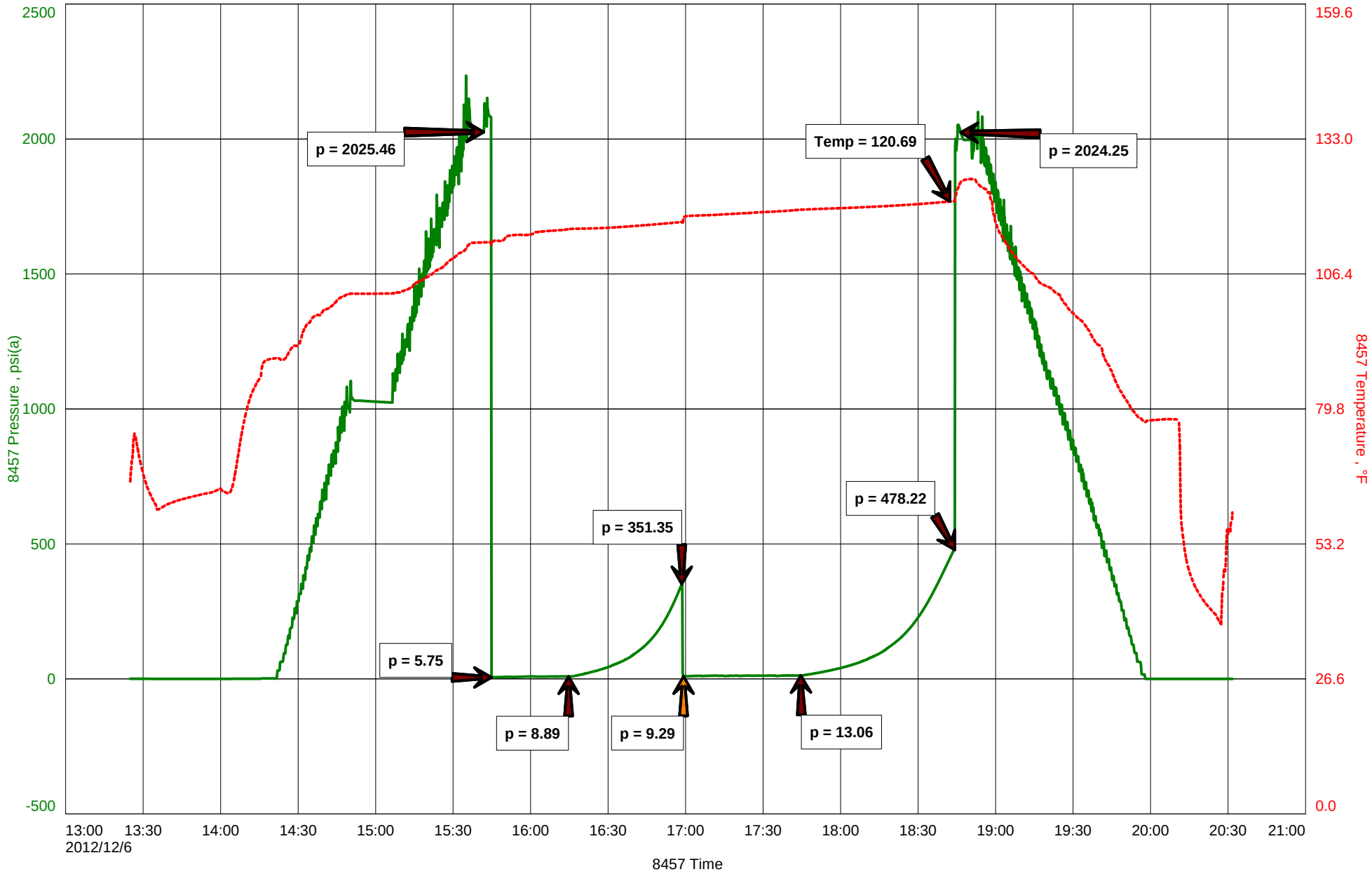
**RECOVERED: 15' SOCM, 15% OIL, 85% MUD**

**TOOL SAMPLE: 48% OIL, 52% MUD**

L.D. DRILLING, INC.
DST #5, MYR./FT. SCT., 4168-4230
Start Test Date: 2012/12/06
Final Test Date: 2012/12/06

DARREL #2-31
Formation: DST #5, MYR./FT. SC., 4168-4230
Pool: LUNDGREN
Job Number: T133

# DARREL #2-31



**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313

**DRILL-STEM TEST TICKET**
FILE: DARREL2-31DST5

TIME ON: 13:25
TIME OFF: 20:32

Company L.D. DRILLING, INC — Lease & Well No. DARREL #2-31
Contractor L.D. DRILLING, INC. RIG #1 — Charge to L.D. DRILLING, INC.
Elevation 2660 KB — Formation MYRICK/FT. SCOTT — Effective Pay _____ Ft. — Ticket No. T133
Date 12-6-12 — Sec. 31 — Twp. 14 S — Range 29 W — County GOVE — State KANSAS
Test Approved By KIM SHOEMAKER — Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 5 — Interval Tested from 4168 ft. to 4230 ft. — Total Depth 4230 ft.
Packer Depth 4163 ft. — Size 6 3/4 in. — Packer depth _____ ft. — Size 6 3/4 in.
Packer Depth 4168 ft. — Size 6 3/4 in. — Packer depth _____ ft. — Size 6 3/4 in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4149 ft. — Recorder Number 8457 — Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 4227 ft. — Recorder Number 11030 — Cap. 5,025 P.S.I.
Below Straddle Recorder Depth _____ ft. — Recorder Number _____ — Cap. _____ P.S.I.

Mud Type CHEMICAL — Viscosity 56 — Drill Collar Length 0 ft. — I.D. 2 1/4 in.
Weight 9.4 — Water Loss 8.0 cc. — Weight Pipe Length 0 ft. — I.D. 2 7/8 in.
Chlorides 2,000 P.P.M. — Drill Pipe Length 4135 ft. — I.D. 3 1/2 in.
Jars: Make STERLING — Serial Number 4 — Test Tool Length 33 ft. — Tool Size 3 1/2-IF in.
Did Well Flow? NO — Reversed Out NO — Anchor Length 30 ft. — Size 4 1/2-FH in.
32' DP IN ANCHOR
Main Hole Size 7 7/8 — Tool Joint Size 4 1/2 XH in. — Surface Choke Size 1 in. — Bottom Choke Size 5/8 in.

Blow: 1st Open: WEAK SURFACE BLOW, BUILDING TO 1 1/2 INCHES. (NOBB)
2nd Open: WEAK 1/2 INCH BLOW, BUILDING TO 2 INCHES. (NOBB)

Recovered 15 ft. of SOCM, 15% OIL, 85% MUD
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____ — Price Job
Recovered _____ ft. of _____ — Other Charges
Remarks: _____ — Insurance
TOOL SAMPLE: 48% OIL, 52% MUD — Total

Time Set Packer(s) 3:43 PM A.M. P.M. — Time Started Off Bottom 6:43 PM A.M. P.M. — Maximum Temperature 121 deg.

Initial Hydrostatic Pressure ..... (A) 2025 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 6 P.S.I. to (C) 9 P.S.I.
Initial Closed In Period ..... Minutes 45 (D) 351 P.S.I.
Final Flow Period ..... Minutes 45 (E) 9 P.S.I. to (F) 13 P.S.I.
Final Closed In Period ..... Minutes 60 (G) 478 P.S.I.
Final Hydrostatic Pressure ..... (H) 2024 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 Information Report

**General Information**

| | | | |
|---|---|---|---|
| **Company Name** | **L.D. DRILLING, INC.** | **Representative** | **TIM VENTERS** |
| **Contact** | **L.D. DAVIS** | **Well Operator** | **L.D. DRILLING, INC.** |
| **Well Name** | **DARREL #2-31** | **Report Date** | **2012/12/07** |
| **Unique Well ID** | **DST #6. CHER./JOHNSON, 4227-4295** | **Prepared By** | **TIM VENTERS** |
| **Surface Location** | **SEC 31-14S-29W, GOVE CO. KS.** | | |
| **Field** | **LUNDGREN** | **Qualified By** | **KIM SHOEMAKER** |
| **Well Type** | **Vertical** | | |
| **Test Type** | **CONVENTIONAL** | | |
| **Formation** | **DST #6, CHER./JOHNSON, 4227-4295** | | |
| **Well Fluid Type** | **01 Oil** | | |
| **Start Test Date** | **2012/12/07** | **Start Test Time** | **07:55:00** |
| **Final Test Date** | **2012/12/07** | **Final Test Time** | **14:58:00** |

**Test Recovery:**

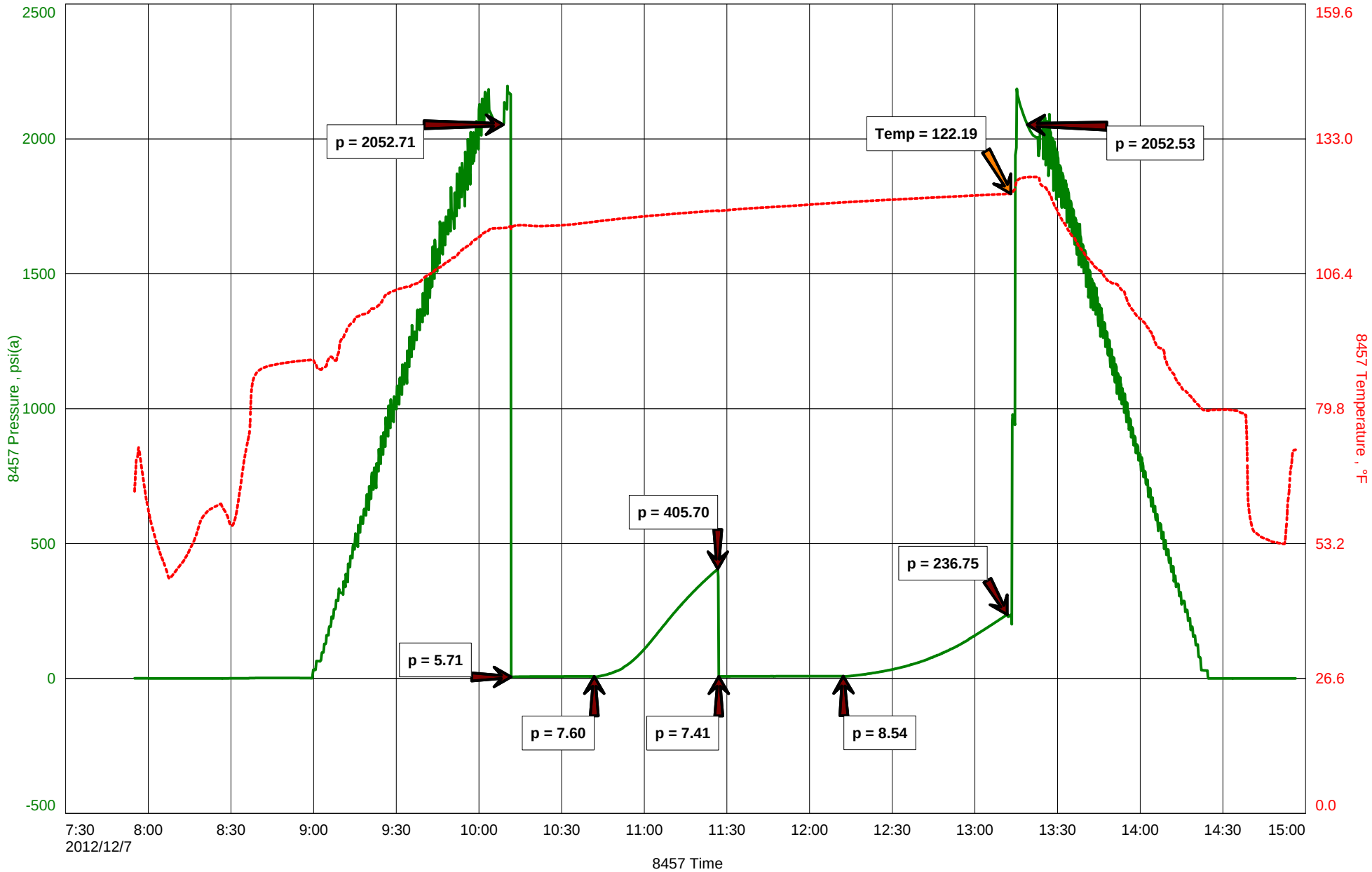
**RECOVERED: 5' MUD**

**TOOL SAMPLE: SPOTTY OIL, 100% MUD**

L.D. DRILLING, INC.
DST #6. CHER./JOHNSON, 4227-4295
Start Test Date: 2012/12/07
Final Test Date: 2012/12/07

DARREL #2-31
Formation: DST #6, CHER./JOHNSON, 4227-4295
Pool: LUNDGREN
Job Number: T134

# DARREL #2-31



**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313

**DRILL-STEM TEST TICKET**
FILE: DARREL2-31DST6

TIME ON: 07:55
TIME OFF: 14:58

Company L.D. DRILLING, INC | Lease & Well No. DARREL #2-31
Contractor L.D. DRILLING, INC. RIG #1 | Charge to L.D. DRILLING, INC.
Elevation 2660 KB | Formation CHEROKEE/JOHNSON | Effective Pay ____ Ft. | Ticket No. T134
Date 12-712 | Sec. 31 | Twp. 14 S | Range 29 W | County GOVE | State KANSAS
Test Approved By KIM SHOEMAKER | Diamond Representative TIMOTHY T. VENTERS

Formation Test No. 6 | Interval Tested from 4227 ft. to 4295 ft. | Total Depth 4295 ft.
Packer Depth 4222 ft. | Size 6 3/4 in. | Packer depth ____ ft. | Size 6 3/4 in.
Packer Depth 4227 ft. | Size 6 3/4 in. | Packer depth ____ ft. | Size 6 3/4 in.
Depth of Selective Zone Set ____

Top Recorder Depth (Inside) 4208 ft. | Recorder Number 8457 | Cap. 10,000 P.S.I.
Bottom Recorder Depth (Outside) 4292 ft. | Recorder Number 11030 | Cap. 5,025 P.S.I.
Below Straddle Recorder Depth ____ ft. | Recorder Number ____ | Cap. ____ P.S.I.

Mud Type CHEMICAL | Viscosity 54 | Drill Collar Length 0 ft. | I.D. 2 1/4 in.
Weight 9.4 | Water Loss 8.8 cc. | Weight Pipe Length 0 ft. | I.D. 2 7/8 in
Chlorides 2,500 P.P.M. | Drill Pipe Length 4194 ft. | I.D. 3 1/2 in
Jars: Make STERLING | Serial Number 4 | Test Tool Length 33 ft. | Tool Size 3 1/2-IF in
Did Well Flow? NO | Reversed Out NO | Anchor Length 36 ft. | Size 4 1/2-FH in
Main Hole Size 7 7/8 | Tool Joint Size 4 1/2 XH in. | 32' DP IN ANCHOR Surface Choke Size 1 in. | Bottom Choke Size 5/8 in

Blow: 1st Open: WEAK SURFACE BLOW, BUILDING TO 1 INCHES. (NOBB)
2nd Open: WEAK SURFACE BLOW THROUGHOUT PERIOD. (NOBB)

Recovered 5 ft. of MUD
Recovered ____ ft. of ____
Recovered ____ ft. of ____
Recovered ____ ft. of ____
Recovered ____ ft. of ____
Recovered ____ ft. of ____
Remarks: ____

| | |
|---|---|
| Price Job | |
| Other Charges | |
| Insurance | |
| | |
| Total | |

TOOL SAMPLE: SPOTTY OIL, 100% MUD

Time Set Packer(s) 10:11 AM A.M. P.M. | Time Started Off Bottom 1:11 PM A.M. P.M. | Maximum Temperature 122 deg.

Initial Hydrostatic Pressure ..... (A) 2053 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 6 P.S.I. to (C) 8 P.S.I.
Initial Closed In Period ..... Minutes 45 (D) 406 P.S.I.
Final Flow Period ..... Minutes 45 (E) 7 P.S.I. to (F) 9 P.S.I.
Final Closed In Period ..... Minutes 60 (G) 237 P.S.I.
Final Hydrostatic Pressure ..... (H) 2053 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 Information Report

**General Information**

| | | | |
|---|---|---|---|
| **Company Name** | **L.D. DRILLING, INC.** | **Representative** | **TIM VENTERS** |
| **Contact** | **L.D. DAVIS** | **Well Operator** | **L.D. DRILLING, INC.** |
| **Well Name** | **DARREL #2-31** | **Report Date** | **2012/12/08** |
| **Unique Well ID** | **DST #7, MISSISSIPPIAN, 4318-4343** | **Prepared By** | **TIM VENTERS** |
| **Surface Location** | **SEC 31-14S-29W, GOVE CO. KS.** | | |
| **Field** | **LUNDGREN** | **Qualified By** | **KIM SHOEMAKER** |
| **Well Type** | **Vertical** | | |
| **Test Type** | **CONVENTIONAL** | | |
| **Formation** | **DST #7, MISSISSIPPIAN, 4318-4343** | | |
| **Well Fluid Type** | **01 Oil** | | |
| **Start Test Date** | **2012/12/07** | **Start Test Time** | **22:47:00** |
| **Final Test Date** | **2012/12/08** | **Final Test Time** | **07:06:00** |

**Test Recovery:**

**RECOVERED: 135' GAS IN PIPE**
**10' CLEAN OIL, GRAVITY: 36**
**65' G,O,SWCM, 7% GAS, 25% OIL, 6% WATER, 62% MUD**
**120' TOTAL FLUID**

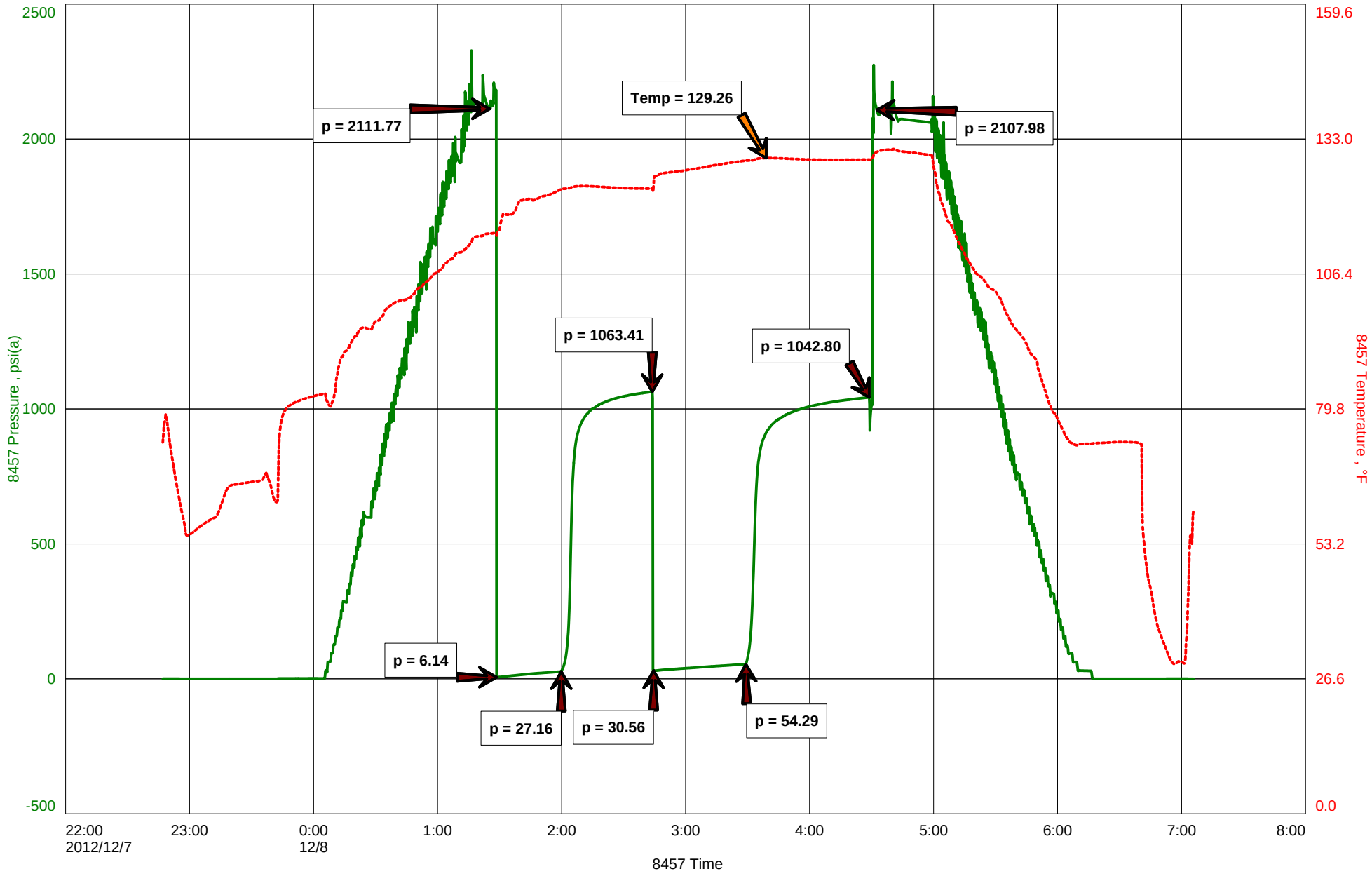
**TOOL SAMPLE: 8% GAS, 38% OIL, 2% WATER, 52% MUD**

**CHLORIDES: 18,000 ppm**
**PH: 7.0**
**RW: .52 @ 66 DEG.**

L.D. DRILLING, INC.
DST #7, MISSISSIPPIAN, 4318-4343
Start Test Date: 2012/12/07
Final Test Date: 2012/12/08

DARREL #2-31
Formation: DST #7, MISSISSIPPIAN, 4318-4343
Pool: LUNDGREN
Job Number: T135

# DARREL #2-31



**DIAMOND TESTING**
P.O. Box 157
**HOISINGTON, KANSAS 67544**
(800) 542-7313

**DRILL-STEM TEST TICKET**
FILE: DARREL2-31DST7

TIME ON: 22:47 12-7-12
TIME OFF: 07:06 12-8-12

Company: L.D. DRILLING, INC
Lease & Well No.: DARREL #2-31
Contractor: L.D. DRILLING, INC. RIG #1
Charge to: L.D. DRILLING, INC.
Elevation: 2660 KB Formation: MISSISSIPPIAN Effective Pay: _____ Ft. Ticket No.: T135
Date: 12-8-12 Sec.: 31 Twp.: 14 S Range: 29 W County: GOVE State: KANSAS
Test Approved By: KIM SHOEMAKER Diamond Representative: TIMOTHY T. VENTERS

Formation Test No.: 7 Interval Tested from: 4318 ft. to: 4343 ft. Total Depth: 4343 ft.
Packer Depth: 4313 ft. Size: 6 3/4 in. Packer depth: _____ ft. Size: 6 3/4 in.
Packer Depth: 4318 ft. Size: 6 3/4 in. Packer depth: _____ ft. Size: 6 3/4 in.
Depth of Selective Zone Set: _____

Top Recorder Depth (Inside): 4299 ft. Recorder Number: 8457 Cap.: 10,000 P.S.I.
Bottom Recorder Depth (Outside): 4340 ft. Recorder Number: 11030 Cap.: 5,025 P.S.I.
Below Straddle Recorder Depth: _____ ft. Recorder Number: _____ Cap.: _____ P.S.I.

Mud Type: CHEMICAL Viscosity: 54 Drill Collar Length: 0 ft. I.D.: 2 1/4 in.
Weight: 9.4 Water Loss: 8.8 cc. Weight Pipe Length: 0 ft. I.D.: 2 7/8 in.
Chlorides: 2,500 P.P.M. Drill Pipe Length: 4285 ft. I.D.: 3 1/2 in.
Jars: Make: STERLING Serial Number: 4 Test Tool Length: 33 ft. Tool Size: 3 1/2-IF in.
Did Well Flow?: NO Reversed Out: NO Anchor Length: 25 ft. Size: 4 1/2-FH in.
Main Hole Size: 7 7/8 Tool Joint Size: 4 1/2 XH in. Surface Choke Size: 1 in. Bottom Choke Size: 5/8 in.

Blow: 1st Open: WEAK 1/4 INCH BLOW, BUILDING TO 7 1/2 INCHES. (NOBB)
2nd Open: WEAK 1/2 INCH BLOW, BUILDING, REACHING BOB 37 MIN. (NOBB)

Recovered 135 ft. of GAS IN PIPE
Recovered 10 ft. of CLEAN OIL, GRAVITY: 36
Recovered 45 ft. of HOCM, 43% OIL, 57% MUD
Recovered 65 ft. of G,O,SWCM, 7% GAS, 25% OIL, 6% WATER, 62% MUD
Recovered 120 ft. of TOTAL FLUID
Recovered _____ ft. of _____
Remarks: CHLORIDES: 18,000 ppm
PH: 7.0
RW: .52 @ 66 deg.

| | |
|---|---|
| Price Job | |
| Other Charges | |
| Insurance | |
| | |
| Total | |

TOOL SAMPLE: 8% GAS, 38% OIL, 2% WATER, 52% MUD

Time Set Packer(s): 1:28 AM A.M. P.M. Time Started Off Bottom: 4;28 AM A.M. P.M. Maximum Temperature: 130 deg.

Initial Hydrostatic Pressure ..... (A) 2112 P.S.I.
Initial Flow Period ..... Minutes 30 (B) 6 P.S.I. to (C) 27 P.S.I.
Initial Closed In Period ..... Minutes 45 (D) 1063 P.S.I.
Final Flow Period ..... Minutes 45 (E) 31 P.S.I. to (F) 54 P.S.I.
Final Closed In Period ..... Minutes 60 (G) 1043 P.S.I.
Final Hydrostatic Pressure ..... (H) 2108 P.S.I.

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