| DATE 06/15/09 | SUSPENSE | ENGINEER T. Warnell | LOGGED IN 06/15/09 | TYPE IPI | APP NO. pKAA0916655970 |
|---|---|---|---|---|---|

RECEIVED

2009 JUN 15 PM 1 34

ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505

30-025-28064
Ling Federal #1
Fasken
15T416

# ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

**[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]**
**[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]**
**[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]**
**[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]**
**[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]**
**[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]**

IPI-345

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**Note: Statement must be completed by an individual with managerial and/or supervisory capacity.**

| Kim Tyson | Kim Tyson | Regulatory Analyst | 6-11-09 |
|---|---|---|---|
| Print or Type Name | Signature | Title | Date |

kimt@forl.com
e-mail Address

1136 / SE

## Injection Permit Checklist (7/8/08)

Case _____ R-_____ SWD 1142 WFX _____ PMX _____ IPI 345 Permit Date _____ UIC Qtr _____

# Wells 1 Well Name: Ling Federal Well No. 1

API Num: (30-) 025-28064 Spud Date: 12/1982 New/Old: N (UIC primacy March 7, 1982)

Footages 1980' FNL 1980' FEL Unit _____ Sec 31 Tsp 19S Rge 34E County Lea

Operator: Faskon Oil & Ranch, Ltd. Contact Kim Tyson

OGRID: 151416 RULE 40 Compliance (Wells) _____ (Finan Assur) _____

Operator Address: 300 West Wall Ave., Suite 1800

Current Status of Well: SWD

Planned Work to Well: Drilled as a Morrow Gas Well Planned Tubing Size/Depth: 2 3/8 / 5652'

| | Sizes Hole.....Pipe | Setting Depths | Cement Sx or Cf | Cement Top and Determination Method |
|---|---|---|---|---|
| Existing ___ Surface | 17 1/2 13 3/8 | 408' | 450 Sxs | Surf / Circulated |
| Existing ___ Intermediate | 12 1/4 9 5/8 | 5221 | 2600 Sxs | " / " |
| Existing ___ Long String | 8 3/4 5 1/2 | 13690 | 3025 Sxs | 3920 / Temp Survey |

DV Tool 9367 Liner 5 1/2 Open Hole — Total Depth 13690 PBTD 9375

Well File Reviewed yes

Diagrams: Before Conversion ___ After Conversion ___ Elogs in Imaging File: ✓

| Intervals: | Depths | Formation | Producing (Yes/No) | |
|---|---|---|---|---|
| Above (Name and Top) | | | | |
| Above (Name and Top) | | | | |
| Injection..... Interval TOP: | 5679' | Delaware | | 1497 PSI Max. WHIP |
| Injection..... Interval BOTTOM: | 8303 | | | N Open Hole (Y/N) |
| Below (Name and Top) | 8303 | Bone Spring | | N Deviated Hole? |

BLM Carlsbad

Sensitive Areas: Capitan Reef NE Edge Cliff House — Salt Depths 1456'

.... Potash Area (R-111-P) _____ Potash Lessee _____ Noticed? ___

Ogallala

Fresh Water: Depths: 275' Wells(Y/N) ___ Analysis Included (Y/N): ___ Affirmative Statement ✓

Salt Water: Injection Water Types: BS and Morrow Analysis? _____

Injection Interval.....Water Analysis: _____ Hydrocarbon Potential _____

Notice: Newspaper(Y/N) ___ Surface Owner _____ Mineral Owner(s) _____

RULE 701B(2) Affected Parties: _____

Area of Review: Adequate Map (Y/N) ___ and Well List (Y/N) _____

Active Wells ___ Num Repairs ___ Producing in Injection Interval in AOR _____

..P&A Wells ___ Num Repairs ___ All Wellbore Diagrams Included? _____

Questions to be Answered:

Required Work on This Well: _____ Request Sent ___ Reply: ___

AOR Repairs Needed: _____ Request Sent ___ Reply: ___

_____ Request Sent ___ Reply: ___

FASKEN OIL AND RANCH, LTD.

303 WEST WALL AVENUE, SUITE 1800
MIDLAND, TEXAS 79701-5116

(432) 687-1777
kimt@forl.com

RECEIVED
2009 JUN 8 PM 1 12

**Kim Tyson**
**Regulatory Analyst**

June 4, 2009

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Attn: Terry Warnell,

Re: Ling Federal #1
API # 30-025-28064
Lease # NM-14496
Delaware Mountain Group Pool
Lea County

Dear Mr. Warnell,

On 5-21-09 Fasken Oil and Ranch, Ltd. performed a step rate test on the Ling Federal No. 1 to increase the injection allowable. I submitted the original and three copies to the Oil Conservation Division in Hobbs on 5-22-09. I did not realize that I needed to send the original to the Oil Conservation Division in Santa Fe.

The engineer did some more calculations and based on the step rate analysis, Fasken Oil and Ranch, Ltd. request that the maximum allowable bottom hole pressure for the Ling Federal No. 1 be equal to 4,485 psi bottom hole and 1547 psi surface.

I have attached an amended step rate test as well as the original one that I submitted only to the Oil Conservation Division in Hobbs. Sorry for any confusion that might have been caused by this.

Thank you for your help concerning this matter.

If you have any questions please call or e-mail me.

Yours truly,

Kimberley A. Tyson

Kimberley A. Tyson
Regulatory Analyst

Submit, 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO.
30-025-28064

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.
NM-14496

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Ling Federal

1. Type of Well: Oil Well ☐ Gas Well ☒ Other SWD

8. Well Number 1

2. Name of Operator
Fasken Oil and Ranch, Ltd.

9. OGRID Number
151416

3. Address of Operator
303 W. Wall, Suite 1800, Midland, TX 79701

10. Pool name or Wildcat
Delaware Mountain Group

4. Well Location
Unit Letter G : 1980' feet from the North line and 1980' feet from the East line
Section 31 Township 19S Range 34E NMPM County Lea

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
3629.6' GR

**Pit or Below-grade Tank Application ☐ or Closure ☐**

**Pit type** _____ **Depth to Groundwater** _____ **Distance from nearest fresh water well** _____ **Distance from nearest surface water** _____

**Pit Liner Thickness:** _____ **mil** **Below-Grade Tank: Volume** _____ **bbls; Construction Material** _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO: | | SUBSEQUENT REPORT OF: | |
|---|---|---|---|
| PERFORM REMEDIAL WORK ☐ | PLUG AND ABANDON ☐ | REMEDIAL WORK ☐ | ALTERING CASING ☐ |
| TEMPORARILY ABANDON ☐ | CHANGE PLANS ☐ | COMMENCE DRILLING OPNS. ☐ | P AND A ☐ |
| PULL OR ALTER CASING ☐ | MULTIPLE COMPL ☐ | CASING/CEMENT JOB ☐ | |
| OTHER: ☐ | | OTHER: Step Rate Test - Amended ☒ | |

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

5-21-09

RU Gray WL and Basic kill truck and RIW to 6850' FS with BHP bomb. Ran step rate test as follows:

| RATE BPM | Date | Time | BH Press | Surface Pressure | Temperature |
|---|---|---|---|---|---|
| 0 | 5/20/2009 | 10:00 AM | 2938 | 0 | 111.0° |
| 0.5 | 5/20/2009 | 10:30 AM | 4281 | 1100 | 110.8 |
| 1 | 5/20/2009 | 11:00 AM | 4480 | 1280 | 109.8 |
| 1.5 | 5/20/2009 | 11:30 AM | 4549 | 1400 | 108.7 |
| 2 | 5/20/2009 | 12:00 PM | 4587 | 1550 | 107.2 |
| 2.5 | 5/20/2009 | 12:30 PM | 4593 | 1740 | 104.4 |
| | | ISIP | 4485 | 1547 | |

NMOCD representative Mark Whitaker witnessed the last 15 min of test. SICP- 850 psi at end of test, bled pressure down and casing dead with tubing at 1090 psi. Please see attached test summary.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE Kim Tyson TITLE Regulatory Analyst DATE 6-4-09

Type or print name Kim Tyson E-mail address: kimt@forl.com Telephone No. (432) 687-1777

**For State Use Only**

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Fasken Oil & Ranch, Ltd.
Ling Federal No. 1
S31, T19S, R33E
Lea County, New Mexico

## Ling Federal No. 1 Step-Rate Test Summary

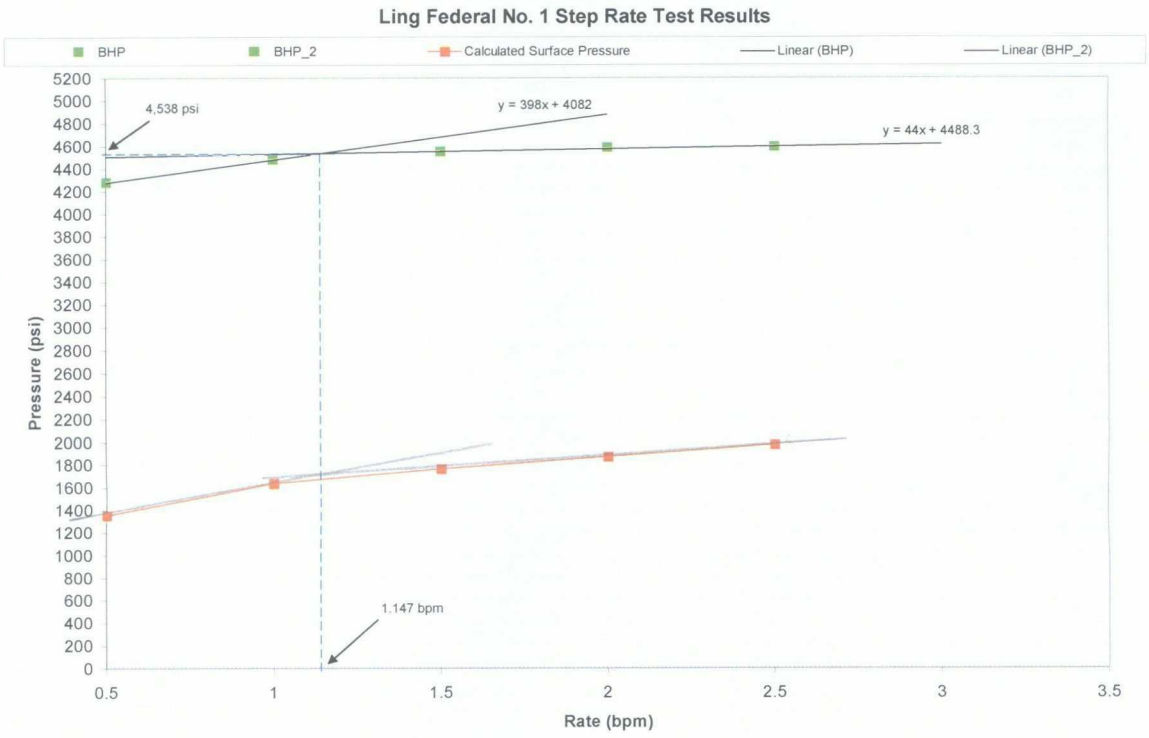
A step rate test was performed on the Ling Federal No. 1 well located in Section 31, Township 19S, Range 33E of Lea County, New Mexico in an effort to determine the fracture parting pressure of the Delaware injection zone. The test was performed on May 20, 2009 from 10:00 a.m. to 12:30 p.m. MST, with Mark Whitaker of the NMOCD witnessing the last 15 minutes of the test.

Gray wireline ran a pressure bomb to 6850', which recorded both bottom hole pressure and bottom hole temperature throughout the step-rate test. A pressure transducer installed in the injection line recorded surface pressures and temperatures

The initial static bottomhole pressure was measured at 2938 psi, while the static surface pressure was 0 psi. Five step-rate intervals of injecting produced water were eventually performed with the results shown below:

| Rate (bpm) | Time | Bottom Hole Pressure (psi) | Measured Surface Pressure (psi) | Temperature (deg F) | Estimated Friction Pressure (psi) | Calculated Surface Pressure (psi) |
|---|---|---|---|---|---|---|
| 0 | 10:00 AM | 2938 | 0 | 111.0 | 0 | 0 |
| 0.5 | 10:30 AM | 4281 | 1100 | 110.8 | 0 | 1343 |
| 1 | 11:00 AM | 4480 | 1280 | 109.8 | 85 | 1627 |
| 1.5 | 11:30 AM | 4549 | 1400 | 108.7 | 142 | 1753 |
| 2 | 12:00 PM | 4587 | 1550 | 107.2 | 210 | 1859 |
| 2.5 | 12:30 PM | 4593 | 1740 | 104.4 | 312 | 1967 |
| | **ISIP** | **4485** | 1176 | | | **1547** |

As depicted above, five step-rate intervals were performed with each step lasting exactly 30 minutes each. The instantaneous shut down pressure was 4,485 psi, which calculates to a 1,547 psi surface pressure and represents the minimum fracture parting pressure of this Delaware reservoir. The actual formation parting pressure observed during the test was 4,538 psi, which is within 1.17% of the observed ISIP. A graphical representation of the formation parting pressure and accompanying calculations are shown below:




As shown above, the slope of the bottom hole pressure line changed while pumping the 1 bpm stage. To calculate the parting pressure, a straight line was fitted to the differing slopes for the bottomhole pressure curve. To figure out a theoretical parting injection rate, the linear equations for each line were set equal to each other in order to find the rate corresponding to the intersection point.

$$y = 398x + 4082 = 44x + 4488.3$$

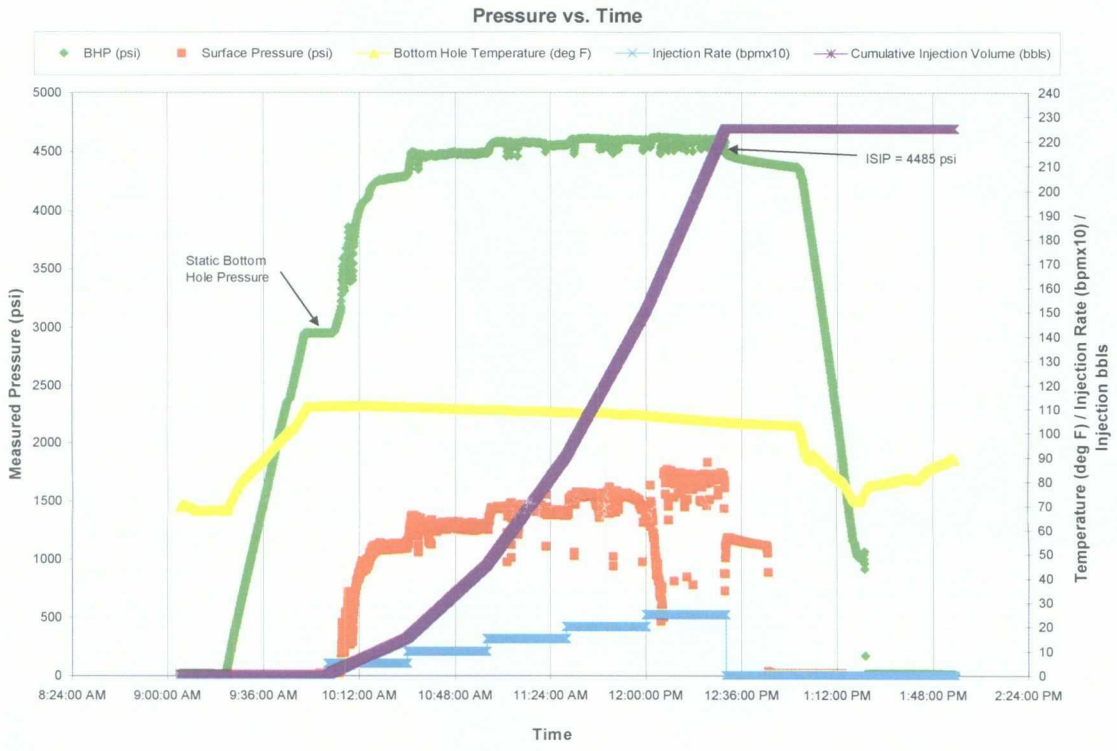
$x$ = 1.147 bpm

After finding the parting injection rate, the corresponding formation parting pressure was calculated by using the rate solved for above:

$$y = (398 * 1.147) + 4082$$

$y$ = 4,538 psi

Furthermore, a graphical presentation of bottom hole pressure, surface pressure, bottomhole temperature, injection rate, and cumulative injection volume versus time is shown below:




In conclusion, we feel that this step-rate test successfully determined the actual formation parting pressure of the subject Delaware reservoir and is equal to 4485 psi bottomhole and 1547 psi surface. Therefore, Fasken Oil and Ranch, Ltd. request that the maximum allowable surface injection pressure for the Ling Federal No. 1 be raised from 1135 psi to 1547 psi.

Submit 3 Copies To Appropriate District Office
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO.
30-025-28064

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.
NM-14496

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7. Lease Name or Unit Agreement Name
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1. Type of Well: Oil Well ☐ Gas Well ☒ Other SWD

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2. Name of Operator
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4. Well Location
Unit Letter G : 1980' feet from the North line and 1980' feet from the East line
Section 31 Township 19S Range 34E NMPM County Lea

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*
3629.6' GR

**Pit or Below-grade Tank Application ☐ or Closure ☐**

**Pit type** _____ **Depth to Groundwater** _____ **Distance from nearest fresh water well** _____ **Distance from nearest surface water** _____

**Pit Liner Thickness:** _____ **mil** **Below-Grade Tank: Volume** _____ **bbls; Construction Material** _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

| NOTICE OF INTENTION TO: | | | | SUBSEQUENT REPORT OF: | | | |
|---|---|---|---|---|---|---|---|
| PERFORM REMEDIAL WORK | ☐ | PLUG AND ABANDON | ☐ | REMEDIAL WORK | ☐ | ALTERING CASING | ☐ |
| TEMPORARILY ABANDON | ☐ | CHANGE PLANS | ☐ | COMMENCE DRILLING OPNS. | ☐ | P AND A | ☐ |
| PULL OR ALTER CASING | ☐ | MULTIPLE COMPL | ☐ | CASING/CEMENT JOB | ☐ | | |
| OTHER: | ☐ | | | OTHER: Step Rate Test | ☒ | | |

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

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I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE Kim Tyson TITLE Regulatory Analyst DATE 5-22-09

Type or print name Kim Tyson E-mail address: kimt@forl.com Telephone No. (432) 687-1777

**For State Use Only**

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

# FASKEN OIL AND RANCH, LTD.

303 WEST WALL AVENUE, SUITE 1800
MIDLAND, TEXAS 79701-5116

(432) 687-1777
kimt@forl.com

**Kim Tyson**
**Regulatory Analyst**


June 11, 2009

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Attn: Terry Warnell

Re: Additional data requested for the Ling Federal No. 1 Step Rate Test
API # 30-025-28064
Lease # NM-14496
Delaware Mountain Group Pool
Lea County

Dear Mr. Warnell,

Enclosed is the additional data that was requested concerning the Step Rate Test for the Ling Federal No. 1. A step rate test summary is attached that states the particulars of the well and the well test, the details of the existing pressure limit, and the new pressure limit that Fasken Oil and Ranch, Ltd. is requesting. There is also an Administrative Checklist Application attached as well.

Please feel free to contact me by phone or email if any additional data is needed.

Thank you for your help concerning this matter.

Yours truly,

Kimberley A. Tyson

Kimberley A. Tyson
Regulatory Analyst

Fasken Oil & Ranch, Ltd.
Ling Federal No. 1
S31, T19S, R33E
Lea County, New Mexico

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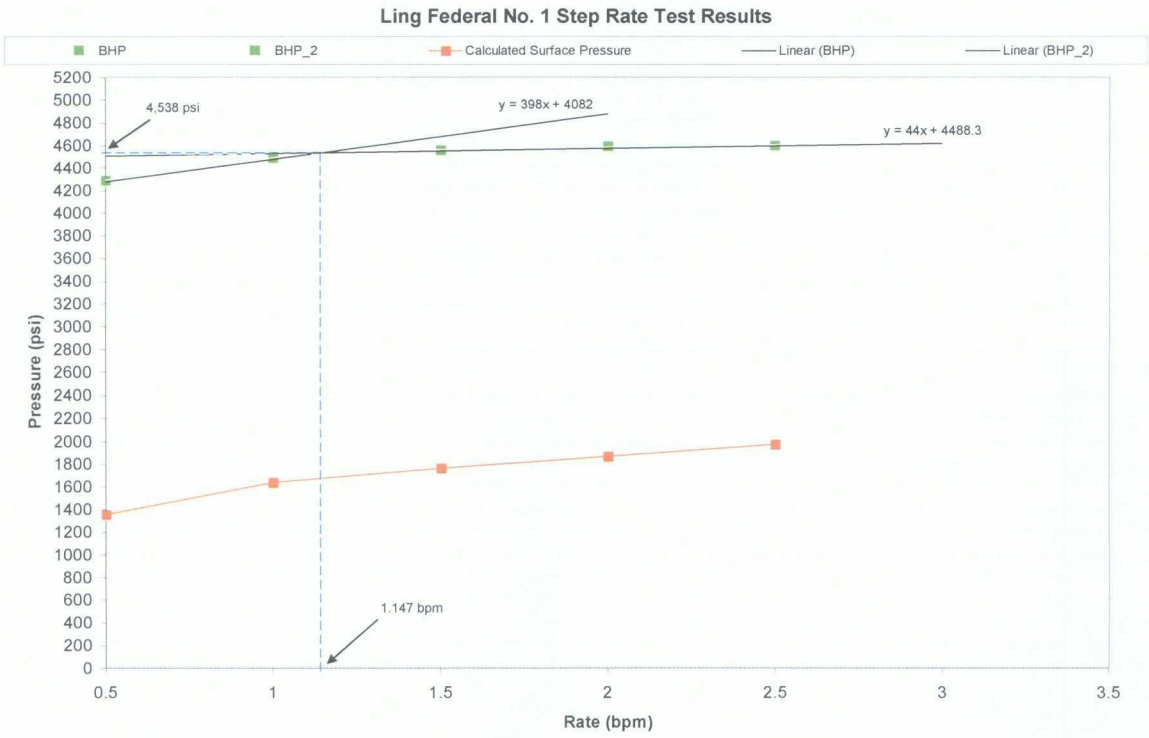


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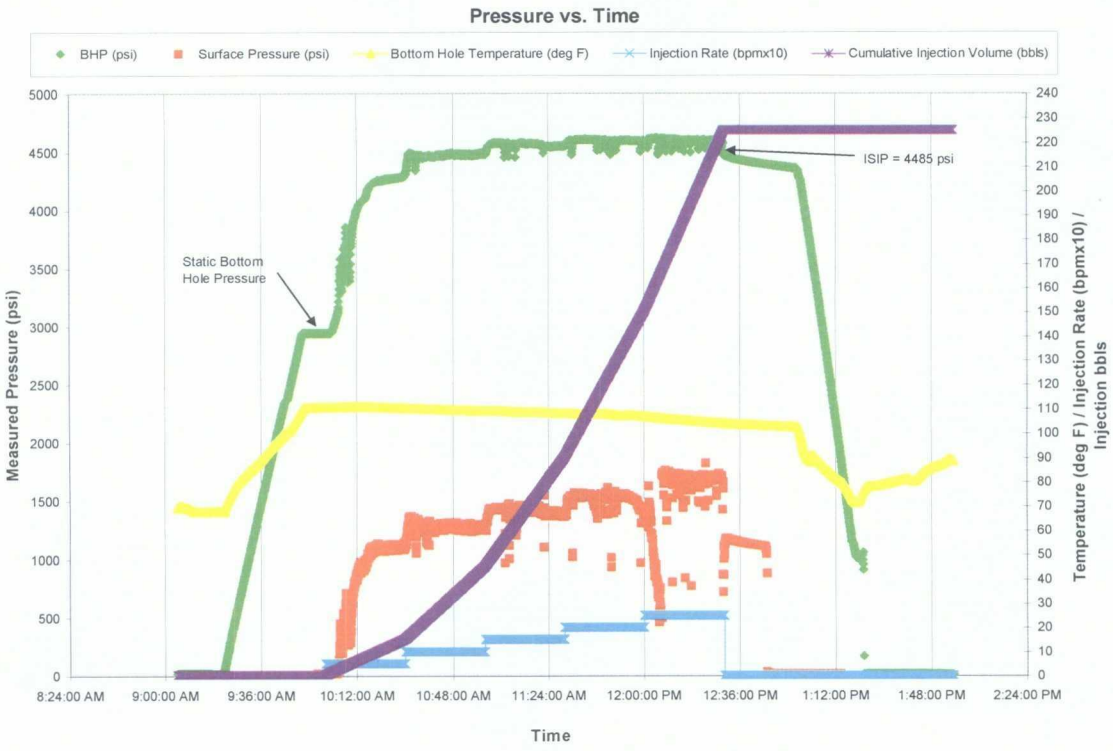


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# Ling Federal No. 1

**Current as of 6-9-09**

GL: 3629.6'

KB: 3652'

Operator: **Fasken Oil and Ranch, Ltd.**
Location: 1980' FNL and 1980' FEL
Sec 31, T19S, R34E
Lea County, NM
Compl.: 3/23/1983 released rig
API #: 30-025-28064
TD: 13,690'
PBTD: 12165' (CIBP 12200'w/35'cmt)

Casing: **13-3/8" 48# H-40** @ 408.46'
w/300sxHLW w/2%CaCl2 (12.7ppg, 1.32 cuft/sk)
Plus 150sx "C" w/2%CaCl2 (14.8ppg, 1.32 cuft/sk)
TOC Surf, circ 19sx
**9-5/8" 36&40# K-55** @ 5221.06' KB
w/2300sxHalliburton Light w/15#salt (11.8ppg, 2.05 cuft/sk)
Plus 300sx "C" w/2%CaCl2 (14.8ppg, 1.32 cuft/sk)
TOC Surf, circ 892sx
**5-1/2" 17&20# N-80** @ 13,690'
325sx HLW "H" w/5#salt (12.4pg, 1.97cuft/sk)
+300sx "H" (15.6ppg, 1.22 cuft/sk)

DV: 9367' Dd not circ cmt thru DV
2nd stg 1100 sx HLW "C" w/5#salt (12.4ppg,1.97cuftsk)
+ 200 sx "C" (14.1ppg, 1.51cuft/sk)

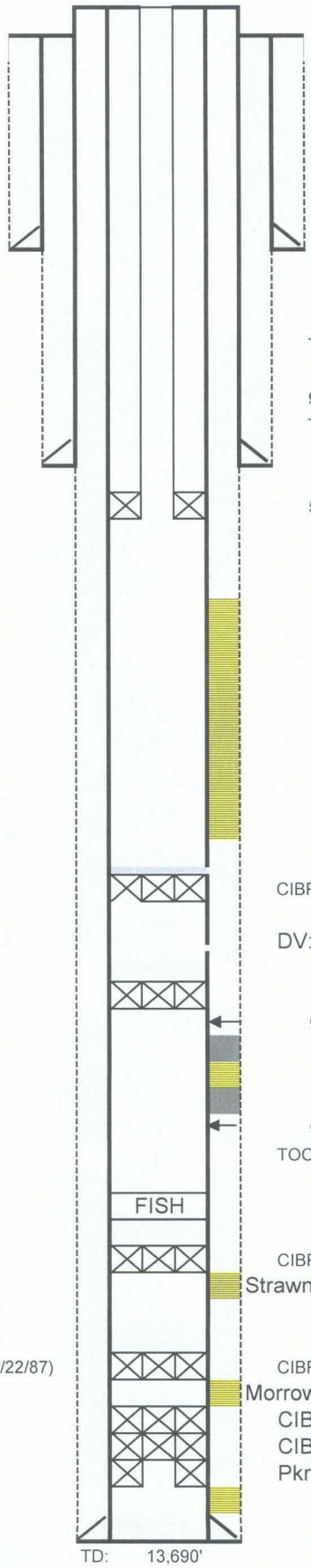
2nd stg 1100 sx BJ Lite "C"

TOC: TOC below DV 11230' by CBL
TOC 5-12"X 9-5/8" annulus 3920'

TUBING & PACKER DETAIL:

| | |
|---|---|
| 2-7/8" x 4' fiberglass muleshoed sub | 3.83' |
| 5-1/2" x 2-7/8" Arrowset 1X injection pkr | 7.17' |
| 2-7/8" x 1.81" "F" S.S. profile nipple w/ T2 TOSSD | 1.73' |
| 178 jts 2-7/8" EUE 8rd J-55 polycore tubing | + 5623.04' |
| Sub Total | 5635.77' |
| Below KB | + 18.50' |
| Less Slack Off | - 1.85' |
| Total | 5652.42' |

| | | | |
|---|---|---|---|
| CIBP | CIBP @ 8375' w/35' "H" cmt | | |
| CIBP | CIBP @ 9455' w/35' "H" cmt | | |
| Fish | 5-1/2"CR+7jt(203.35') 2-3/8" fbrgls tbg | | |
| Perfs | Bone Spring | 9500' (4 sqz hls,10/7/199 | Resqzd 6/27/07 |
| | | 9587'-93' (6h, 10/14/1997 | 3' Sqzd 6/27/07 |
| | | 9608'-31' (23h, 7/3/07) | |
| | | 9638'-44' (6h, 10/14/1997 | 4' Sqzd 6/27/07 |
| | | 9800' (4 sqz hls) | 4spf sqz holes |
| CIBP | 12200' w/35' cmt | | |
| | Strawn | 12229'-40' (11h) | 1/6/1996 |
| CIBP | 13100' w/35' cmt | | 1/4/1996 |
| | Morrow | 13190'-223' (66h) | (4/23/87,11/9/87) |
| | | 13246'-48' | (12/3/83,10/22/87) |
| | | 13250'-71' (54h) | (12/3/83,2/3/84,10/22/87) |
| | | 13321'-25' (4h) | (5/12/88) |
| | | 13328'-45' (17h) | (5/12/88) |
| | | 13373'-80' (7h) | (5/12/88) |
| CIBP | 13397'-405' (8'cmt) | | (1/21/84) |
| CIBP | 13424'-440' (16'cmt) | | (12/9/83) |
| *Pkr* | *13454'-13473' (w/18'cmt)* | | (3/29/83) |
| | | 13514'-22' (8h) | (3/31/83) |
| Hole Sizes: | 17-1/2" 408' | 12-1/4" 400'-5222' | 8-3/4" 13,690' |




13-3/8" 48# H-40 @ 408.46'
TOC Surf, circ 19sx

TOC 5-12"X 9-5/8" annulus 3920'

9-5/8" 36&40# K-55 @ 5221.06' KB
TOC Surf, circ 892sx

5-1/2" x 2-7/8" Arrowset 1X injection pkr @ 5641'

**DELAWARE INJECTION ZONE PERFS**

5682'-5702', 5782'-5790'
6020'-6040', 6078'-6102
6188'-6196', 6210'-6234'
6370'-6394', 6490'-6502'
6626'-6640', 6744'-6752'
6874'-6890'
7464-7478', 7750'-7768'
7950'-7960', 7986'-8006'
8010'-8020'

CIBP @ 8375' w/ 35' "H" cmt

DV: 9367'
CIBP @ 9455' w/35' "H" cmt

9500' (4 sqz hls,10/7/1997)
9587'-93' Sqzd 6/27/07
9608'-31' (23h, 7/3/07)
9638'-44' Sqzd 6/27/07
9800' (4 sqz hls)
TOC below DV 11230' by CBL

5-1/2"CR+7jt(203.35') 2-3/8" fbrgls tbg

CIBP 12200' w/35' cmt
Strawn 12229'-40' (11h)

CIBP 13100' w/35' cmt
Morrow 13190'-13280'
CIBP 13397'-405' (8'cmt)
CIBP 13424'-440' (16'cmt)
Pkr 13454'-13473' (w/18'cmt)
13514'-22' (8h)
5-1/2" 17&20# N-80 @ 13,690'

cwb
9-14-07
Ling_Federal_1_Current_WBD.xls