

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No 1004-0137  
Expires March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an**  
**abandoned well. Use Form 3160-3 (APD) for such proposals.**

RECEIVED  
NOV 17 2009  
HOBBS

5. Lease Serial No.  
NM-14496

6. If Indian, Allottee or Tribe Name

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

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

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

3a. Address  
303 West Wall St., Suite 1800, Midland, TX 79701

3b. Phone No. (include area code)  
432-687-1777

4. Location of Well (Footage, Sec., T, R., M., or Survey Description)  
1660' FSL & 2310' FEL, Sec 31, T-19-S, R-34-E

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.  
Ling Federal No. 4

9. API Well No.  
30-025-38748

10. Field and Pool or Exploratory Area  
Apache Ridge; Bone Springs

11. Country or Parish, State  
Lea, New Mexico

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Downhole</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<u>Commingle</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Fasken Oil and Ranch, Ltd. proposes to down-hole commingle the Tonto Wolfcamp with the Apache Ridge; Bone Springs pool.

The percentages of Oil and Gas from each zone are listed below as requested in the Conditions of Approval.

	Oil		Gas	
Wolfcamp	9.6 mbo	20%	28,000 mcf	31%
Bone Springs	39 mbo	80%	63,600 mcf	69%

Please see attached procedure as requested in the Conditions of Approval.

This for you information only.

SUBJECT TO LIKE  
APPROVAL BY STATE



DHC - 4216

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)  
Kim Tyson

Title Regulatory Analyst

Signature Kim Tyson

Date 10/01/2009

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

PETROLEUM ENGINEER

DEC 09 2009

Office KZ

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Fasken Oil and Ranch, Ltd.  
 Ling Federal No. 4  
 1660' FSL & 2310' FEL  
 Sec 31, T19S R34E  
 AFE 1715

<b>OBJECTIVE:</b>	Recomplete to Bone Springs
<b>WELL DATA:</b>	
13-3/8" 54.5#K55&48# H40 casing:	Set at 1586.5' KB, Cmt w/600 sx "C" w/ 2% CaCl <sub>2</sub> (13.5 ppg, 1.74 cuft/sx) + 400 sx "C" w/ 2% CaCl <sub>2</sub> (14.8 ppg, 1/32 ft <sup>3</sup> /sx).
9-5/8" 40# HCK55&36#J55 csg:	Set at 5172.2' KB, DV @ 3480.66' KB, Cmt 1 <sup>st</sup> stage 400sx HLC (12.6ppg, 2.01ft <sup>3</sup> /sx)+300sx "C" (14.8ppg, 1.32 cuft/sk). Circ 61 sx thru DV. 2 <sup>nd</sup> stage 1200sx HLC (12.6ppg, 2.01ft <sup>3</sup> /sx) +300sx "C" (14.8ppg, 1.32 cuft/sk). 9-5/8" TOC surf, circ154sx.
6-1/2" 17#&20# N-80:	Set at 13,569.67' KB, DV @ 10,662' KB, Cmt 1 <sup>st</sup> stage 270sx Econocem "H" Modified(11.9ppg, 2.45cuft/sk) + 375' sx Super "H" Mod (13.2 ppg, 1.63 ft <sup>3</sup> /sx), Circ mudflush thru DV. Cmt 2 <sup>nd</sup> stage 860sx Halliburton Lite "H" (12.4 ppg, 2.03 ft <sup>3</sup> /sx) + 380sx Super "H" Modified (13.2 ppg, 1.63 ft <sup>3</sup> /sx). 5-1/2" TOC 3463' by Temp
	Marker Jts (drig tally): 11.87' @13,097.55', 11.50' @ 9208.42'
Tubing:	2-3/8" EUE 8rd N-80.
Perfs:	Morrow 13,190'-13,398'. Atoka - 12,516'-12,524', Wolfcamp 11,022'-12,160'
TD:	13,577'
PBTD:	12,480' CIBP w/ 35' class "H" cmt on top.

1. Check with Jimmy Carlile or Kim Tyson beforehand to make sure we have pit permit and approval to recomplete.
2. Set and receive half-frac flowback tank and one set of pipe racks on location. Build flowline from wellhead to workover tank.
3. RUPU. Unseat pump and POW with rods and pump. Send pump into shop for inspection. LD X amount of rods and send to Fasken yard.
4. NDWH and NU 7-1/16" 5k manual BOP equipped with 2-3/8" pipe rams and blind rams.
5. Unseat TAC, POW and LD all but 10,150' of 2-3/8" N-80 EUE 8rd tubing.
6. RIW with 5-1/2" RBP, setting tool, and 2-3/8" tubing and set RBP @ +/- 10,500'. Displace well with 2% KCl water and test RBP to 2,000 psi for 10". PU 5' off of RBP and pump 5 sx of sand and leave on top of RBP. POW with tubing.
7. POW and spot 250 gallons of 15% NEFE HCl acid containing clay stabilizer @ 10,115'. POW with tubing.

8. RUWL w/ packoff and RIW and perforate 2<sup>nd</sup> Bone Springs Stray Dolomite as follows w/ 3-1/8" casing gun:

**10,107'-12' w/ 2 JSPF, 60 degree phased, 0.42" EH, 10h**

Correlate to Enertech Wireline Services Perforating Depth Control Log w/Gamma Ray/CCL dated 12-2-2008. POW and RDWL.

9. RIW 5-1/2" HD-type treating packer, sn, and 2-3/8" tubing to 10,080' and reverse acid into tubing.
10. ND BOP and NUWH, setting packer @ 10,080' in 14 pts compression. RU pump truck and displace spot acid into perforations using 6 bbls of 2% KCl water.
11. Swab back spot acid to workover tank. Evaluate fluid entry rates and fluid cuts.
12. If further stimulation is warranted, RU Team CO2. Pressure tubing/casing annulus to 500 psi and monitor throughout job. Acidize 2<sup>nd</sup> Bone Springs Stray Dolomite with 1,000 gals of 75Q 15% NEFE HCl. Drop 20 7/8" RCN ball sealers evenly spaced for diversion. Record instantaneous, 5", 10", and 15" shut-in pressures.
13. Flow and swab well back to tank until all of acid load is recovered. Evaluate fluid entry rates and oil cut and report results to Midland office.
14. Kill well if necessary using 2% KCl water. Release packer and POW to put packer @ 9615'. Displace well with 2% KCl water, spotting 500 gallons of 15% NEFE double-inhibited HCl @ 9615'. POW with tubing.
15. RUWL and packoff and perforate 1<sup>st</sup> Bone Springs Orange Dolomite w/ 3-1/8" slick casing gun as follows:

**9604'-13' w/ 1 JSPF, 60 degree phased, 0.40" EH, 10h**

Total - 10 holes. Make note of any changes in fluid level after perforating. POW w/ WL, make sure all shots fired and RDWL.

16. RIW with 5-1/2" 10k RBP, setting tool, 10' tubing sub, 5-1/2" treating packer w/ mechanical collar locator, sn, and 2-3/8" tubing and set RBP @ +/- 9650'. PU 10' on tubing, set packer, and test RBP to 2,000 psi for 10". Release packer and POW to put EOT @ +/- 9575'. Reverse acid into tubing, and set packer @ +/- 9565' in 14 pts compression.
17. Displace spot acid into perforations using 12 bbls of 2% KCl water containing clay stabilizer. Max pressure = 3,000 psi. Record instantaneous, 5", 10", and 15" shut-in pressures. Report results to Midland Office.
18. Swab back spent acid and load water and evaluate hourly fluid entry rates. If possible, shut well in over weekend for pressure readings. (If a consistent fluid level is observed, pressure readings may be unnecessary). RU slickline

lubricator and obtain pressure readings every 1000' and at the seating nipple for the Orange Dolomite. Report results to Midland Office.

19. RU Team CO2. Pressure tubing/casing annulus to 500 psi and monitor throughout job. Acidize 1<sup>st</sup> Bone Springs Orange Dolomite with 2,000 gallons of 75Q 15% NEFE HCl acid containing clay stabilizer. Drop 20 7/8" RCN ball sealers evenly spaced for diversion. Record instantaneous, 5", 10", and 15" shut-in pressures. Report results to Midland Office.
20. Release packer and RIW and retrieve RBP @ 9650'. POW and reset RBP @ 9595' (correlated to log used for perforating above).
21. POW w/ EOT @ 9584'. Spot 500 gallons of 7-1/2% double-inhibited NEFE HCl containing clay stabilizer @ 9593'. Displace acid with 2% KCl water. POW with tubing and packer.
22. ND BOP and NU Downing isolation frac sleeve, adaptor flange, and 10K frac valve with 4 outlet goat head.
23. RU pump truck and pressure test 10k RBP, 5-1/2" casing, wellhead isolation sleeve, and 10k frac valve to 6,200 psi for 20". Notify Midland Office of the results.
24. RUWL and packoff. Perforate 1<sup>st</sup> Bone Springs Orange Sand with 3-1/8" slick casing gun as follows:

**9575'-84' w/ 2 JSPF, 60 degree phased, 0.40" EH, 20h**

Make note of any changes in fluid level after perforating. POW, make sure all shots fired, and RDWL.

#### **FRAC 1<sup>ST</sup> BONE SPRINGS SANDS**

25. Set 10 - 500 bbl clean frac tanks. Fill each to maximum capacity with 2% powdered KCl water. Have service company test water for fluid compatibility and add recommended amount of biocide to tanks the day before the frac.
26. RU Service Company. RU backside pump truck and pressure 5-1/2" x 9-5/8" annulus to 1,000 psi and monitor throughout job. Frac 1<sup>st</sup> Bone Springs in three stages via 5-1/2" casing according to frac proposal to follow. Max allowable surface treating pressure = 6,200 psi (80% of 17#/ft N-80 IYP of 7,740 psi):

#### **Stage 1:**

- a. Frac "Orange" Sand perms 9575'-84' according to frac design to follow. On flush spot 1,000 gallons 15% HCL acid (blend as above) at 8471'-9471'.
- b. RUWL. RIW w/ 5-1/2" composite plug and 3-1/8" slick casing gun and set 6k composite plug at +/- 9520'. Perforate 1<sup>st</sup> Bone Springs "B" Sand as follows:

**9442'-71' w/ 1 JSPF, 60 degree phased, 0.40" EH, 30h.**

Correlate perms to GR/CCL strip log obtained from above. POW w/ WL and make sure all shots fired.

### **Stage 2:**

- a. Frac "B" Sand perms 9442' - 71' according to frac design to follow. Flush to top perf + 2 bbls and spot 1,000 gallons of 15% HCl acid @ 9404'-8404'.
- b. RUWL. RIW with 5-1/2" composite plug and 3-1/8" slick casing gun and set 6k composite plug @ 9415'. Perforate 1<sup>st</sup> Bone Springs "A" Sand as follows:

**9380'-9404' & 9406'-12' w/1 JSPF, 60 degree phased, 0.40" EH, Total - 32 holes**

Correlate perms to GR/CCL strip log obtained from above. POW w/ WL and make sure all shots fired. RDWL.

### **Stage 3:**

- a. Frac "A" Sand perms 9380'-9404' according to frac design to follow. Flush to top perf.
27. RD frac company. Leave well shut-in 4 hours for resin-coated sand to set. NU 10k flowback manifold and flow back "A" sand to workover pit until well dies.
28. ND Frac Valve, wellhead isolation sleeve and adaptor flange and NU BOP. Set reverse tank and fill with 2% KCl water.
29. RIW with 4-3/4" mill, sn, and tubing to top of composite plug @ 9415'. NU BIW stripper rubber and power swivel. RU XH flowback manifold, chokes, and flowback iron with plug catcher on inlet side of manifold, and lay line to reverse pit, and test tank.
30. Drill out composite bridge plugs at 9415' & 9520'. Circulate well clean after each plug and check for sand entry while circulating. Continue RIW and clean out to 9590' and circulate well clean. Note flow rate and pressure after drilling each plug and report on daily drilling reports.
31. POW with tubing and LD BHA.
32. RIW with retrieving tool, sn, and 2-3/8" tubing to RBP @ 9595' and gently tag. RU pump truck and circulate out sand on top of RBP and latch on. Release RBP and POW with tubing and RBP.

33. RIW with production tubing and rods according to recommendation to follow.  
Hang well on bridle and put well back on production.

34. Clean location and wellhead. RDPU.

35. Report daily well test to Midland office on drilling reports.

**RESTORE WOLFCAMP AND ADD 1<sup>ST</sup> BONE SPRINGS DOLOMITE**

36. After well has pumped down and downhole commingle permit has been received, RUPU. Receive additional 2-3/8" tubing if needed. Check with Kim Tyson to make sure we have pit permit.

37. Unseat pump, and NU 5k manual BOP. Unseat TA and POW with tubing.

38. RIW with retrieving tool, sn, and 2-3/8" tubing to 10,500' and gently tag. RU pump truck and circulate out sand with 2% KCl water. Latch onto RBP and POW with tubing and RBP.

39. RUWL and packoff. RIW and perforate 1<sup>st</sup> Bone Springs Dolomite with 3-1/8" slick casing gun as follows:

9544'-9554' - 11 holes

9534'-9540' - 7 holes

9508'-9511' - 4 holes

All shots should be 1JSPF, 0.42" EH, 60° phased, 22 total holes. Make note of any changes in fluid level after perforating. POW, make sure all shots fired, and RDWL.

40. RIW with 5-1/2" RBP with ball catcher, 10' tubing sub, 5-1/2" HD type treating packer with bypass and MCCL, sn, and 2-3/8" tubing and set RBP @ 9565'. LD 1 jt, set packer and test RBP to 2000 psi. Release packer and POW and set packer @ 9490' in 14 pts compression.

41. RU Team CO2. Open packer bypass and spot acid to EOT. Close bypass and acidize 1<sup>st</sup> Bone Springs Dolomite with 1,000 gallons of 75Q 15% NEFE HCl. Drop 44 7/8" RCN ball sealers evenly spaced for diversion. Record instantaneous, 5", 10", and 15" shut-in pressures and report results to Midland Office.

42. Flow and swab well back to workover tank. Evaluate fluid entry and oil cut.

43. Kill well if necessary with 2% KCl water containing clay stabilizers.

44. RIW and retrieve RBP @ 9565' and POW with tubing, packer, and RBP.

45. RIW with production tubing and rods according to recommendation to follow.  
Hang well on bridle and put well back on production.

46. Clean location and wellhead. RDPU.

See  
COA

47. Report daily well test to Midland office on drilling reports

(CSL)