

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico

Form C-101
Revised December 16, 2011

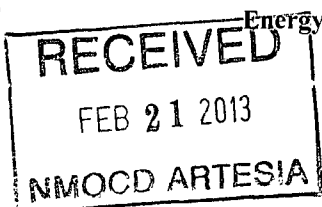
Energy Minerals and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Permit



APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address		² OGRID Number
Lynx Petroleum Consultants, Inc. P.O. Box 1708 Hobbs, NM 88240		13645
		³ API Number
		30-015-20200
⁴ Property Code	⁵ Property Name	⁶ Well No
36099	EDDY 'BD' STATE	001

⁷ Surface Location

U/L - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
P	32	20S	30E		660	SOUTH	990	EAST	EDDY

⁸ Pool Information

WC-015G-07 S20303P; B.S. 98008

Additional Well Information

⁹ Work Type Plugback	¹⁰ Well Type Oil	¹¹ Cable/Rotary	¹² Lease Type State	¹³ Ground Level Elevation 3358' GL
¹⁴ Multiple	¹⁵ Proposed Depth 10065' PBTD	¹⁶ Formation Bone Spring	¹⁷ Contractor	¹⁸ Spud Date 1/21/69
Depth to Ground water: Avg: 189, Min: 150, Max: 225		Distance from nearest fresh water well Approximately 1320'		Distance to nearest surface water Approximately 15 miles

¹⁹ Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	20	16	65	435	600	Circ Surf
Int	15	11 3/4	42	1614	1050	Circ Surf
Int	11	8 5/8	32	4209	1075	Circ Surf
Prod	7 7/8	5 1/2	17 & 20	11074	300	TOC 8760

Casing/Cement Program: Additional Comments

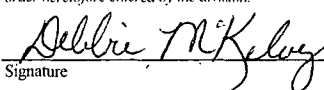
NO CHANGE

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	Shaffer

I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		OIL CONSERVATION DIVISION	
I further certify that the drilling pit will be constructed according to NMOC D guidelines <input type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input checked="" type="checkbox"/> .			
Signature: <i>Debbie McKelvey</i>		Approved By: <i>J. C. Shugard</i>	
Printed name: Debbie McKelvey		Title: <i>Geologist</i>	
Title: Agent		Approved Date: <i>2/25/2013</i> Expiration Date: <i>2/25/2015</i>	
E-mail Address: debmckelvey@earthlink.net			
Date: 2/20/13	Phone: 575-392-3575	Conditions of Approval Attached	

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

16					17 OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> <div><div></div><div>02/19/13</div></div> <div>Signature</div> <div>Date</div> <div>DEBBIE MCKELVEY, AGENT</div> <div>Printed Name</div> <div>debmkelvey@earthlink.net</div> <div>E-mail Address</div>
					18 SURVEYOR CERTIFICATION <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i> 12/30/1968 Date of Survey Signature and Seal of Professional Surveyor: John West ON FILE 676 Certificate Number

660'

990'

**Eddy 'BD' State No. 1
Bone Springs Recompletion Procedure**

API No.: 30-015-20200

Location: 660' FSL & 990' FEL Section 32, T-20S, R-30E
Eddy County, New Mexico

Elevation: 3358' GL **KB:** +15'

TD: 11,171' **PBTD:** 11,035'

Casing & Cement:

16", 65#/ft., H-40, ST&C @ 435' cmt. w/600 sx. circulated

11-3/4", 42#/ft., H-40, ST&C @ 1600' cmt. w/1614 sx. circulated

8-5/8", 32#/ft., K-55, ST&C @ 4209' cmt. in two stages w/1075 sx. circulated

DV tool in 8-5/8" @ 2076'

5-1/2", 17#/ft. & 20#/ft., N-80, LT&C @ 11,074' cmt. w/300 sx. TOC @ 8,760'
by temp svy

Tubing:

2-7/8", 6.5#/ft., L-80, EUE @ 10,100' KB

Existing Perforations:

Strawn: Open hole 11,074'-11,171'

Strawn: 10,980'-98', 11,006'-11,011' squeezed w/64 sx. class H cement under
retainer 11/17/2000

Strawn: 10,980-98' w/4 JSPF reperfed w/4 JSPF (72 holes) 1/16/2001

Wolfcamp: 10230'-35', 10242'-54', 10324'-26', 10380'-86', 10132'-62'

CIBP: 11,060' w/2 sx. cement on top
10,960'

Proposed Perfs:

Bone Spring Zone 1: 8737'-48' -

Bone Spring Zone 2: 7583'-92', 7600'-04', 7608'-12', 7626', 7632', 7646'-
50', 7652'-60', 7662'-70', 7674'-76', 7687'-90', 7695'-98', 7733', 7737'

Procedure:

1. MIRU pulling unit. ND wellhead. NUBOP.
2. Circulate hole clean w/2% KCL TFW. Tally tubing OOH.
3. Bleed any pressure from 5-1/2" x 8-5/8" annulus into frac tank to 0 psig.
4. RU E&P wireline. TIH w/bailer and spot 35' cement on top of CIBP located at 10,960'. TIH and set 5-1/2" CIBP above Wolfcamp perfs at 10,100'. TIH w/bailer and spot 35' cement on top of CIBP located at 10,100'. RU and run GR/CBL/CCL from 9000' to 300' above TOC. RU full lubricator. TIH w/perforating gun and perforate 4 squeeze holes at 90° phasing at 150' above TOC. If no pressure/flow noted on casing RD E&P wireline. Proceed to Step 6.
5. If pressure/flow noted in step 4 above, PU wireline set 5-1/2", 17#/ft. cement retainer. TIH and set at +/-100' above squeeze holes. RD E&P wireline. TIH w/tubing. Sting into retainer. Establish injection rate and/or circulation on 5-1/2" x 8-5/8" annulus. Proceed to step 9.

Eddy 'BD' State No. 1
Bone Springs Recompletion Procedure

6. If no pressure/flow noted in step 4 above, PU 5-1/2", 17#/ft. treating packer. TIH and set packer at +/-100' above squeeze holes. Attempt to establish circulation on 5-1/2" x 8-5/8" annulus or, if no circulation, attempt to establish injection rate.
7. With injection rate or circulation established, release treating packer and TOOH.
8. PU 5-1/2", 17#/ft. cement retainer on 2-7/8" tubing. TIH and set retainer at +/-100' above squeeze holes
9. If circulation established cement 5-1/2" x 7-7/8" annulus w/800 ft³ class C cement. Close annulus valve at surface and attempt to obtain squeeze pressure w/last 100 ft³.
10. If no circulation established squeeze perforations w/100 sx. class C cement.
11. Sting out of retainer and reverse out any excess cement still in tubing. TOOH.
12. WOC for 48 hours.
13. RU E&P wireline services. Run GR/CBL/CCL from cement retainer to TOC.
14. If no circulation additional cement procedure TBD depending on where TOC is located with CBL log.

THE FOLLOWING ASSUMES CIRCULATION ACHIEVED

1. MIRU reverse unit. PU 4-5/8" bit, 3-1/2" DCs, and tubing.
2. Drill out cement retainer and cement. Circulate hole clean w/2% KCL TFW. Test casing to 1500 psi.
3. Spot 2 bbls. 15% HCL-NE-FE acid at 8770'. TOOH. LD DCs and RD reverse unit.
4. RU E&P wireline. Perforate 3rd Bone Spring carbonate w/4 JSPF 8737'-48' (48 holes total).
5. PU 5-1/2" treating packer. TIH and set packer at +/-8650'. Breakdown formation and displace spot acid.
6. RU swab and test. If sufficiently encouraged, re-acidize with 1500 gals. 15%-HCL-NE-FE acid plus 50 ballsealers.
7. If Bone Spring zone 1 is commercial then release treating packer. TOOH. PU 5-1/2" flow thru bridge plug. TIH and set FTBP at +/-8650'. Dump 3 sx. sand on top of FTBP. TOOH. Proceed to step 9.
8. If Bone Spring zone 1 is non-commercial then release treating packer. TOOH. RU E&P wireline. Pick up and run new CIBP and set at +/-8700'. Dump bail 35' cement on top.
9. ND BOP. NU Frac wellhead.
10. Perforate Bone Spring Zone 2 w/4 JSPF per the **proposed perfs** program (232 holes total).
11. Fracture stimulate Bone Spring 1st sand per Baker Hughes procedure.
12. RU flowback manifold and testers. Flow well down and test.
13. When well dies, ND Frac wellhead. NU BOP. PU 4-5/8" bit, 3 DCs, and tubing. TIH and tag, gently, FTBP set in Step 7. Circulate sand off of FTBP.
14. TOOH. LD bit and collars. Run production tubing w/1 joint bull plugged mud anchor, perforated sub, SN, sufficient tubing to land TAC above 7583', TAC, and tubing.

Eddy 'BD' State No. 1

Bone Springs Recompletion Procedure

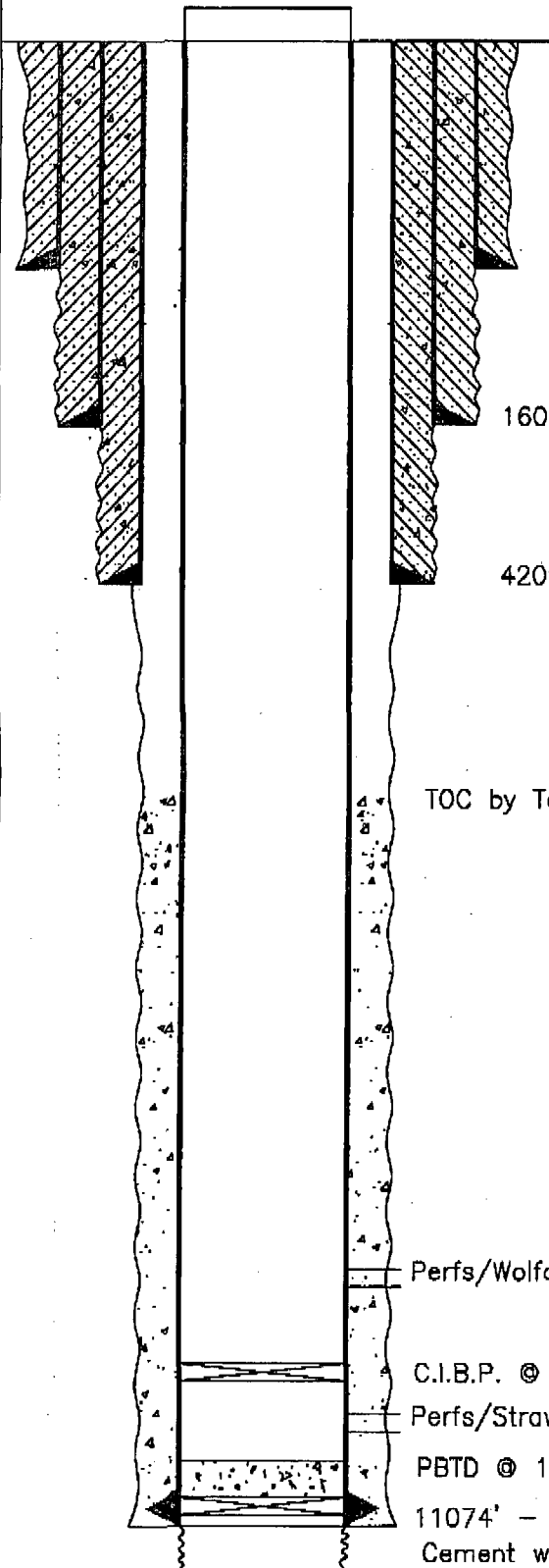
15. ND BOP. NU wellhead. Run pump and rods. Hang well off and return to production.

Prepared By: _____

Date: _____

Current Wellbore Schematic
02/14/13

Elevation: 3358GL KB: +15'



20" Hole
435' - 16", H-40, 65#, ST&C Casing
Cemented w/600 sxs. Circulated to Surf.

15" Hole
1600' - 11-3/4", H-40, 42#, ST&C Casing.
Cemented w/1614 sxs. Circulated to Surface

11" Hole
4209' - 8-5/8", K-55, 32#, ST&C Casing.
Cemented w/1075 sxs. Circulated to Surface

TOC by Temp Svy 8760'

7-7/8" Hole

Perfs/Wolfcamp 10132'-62', 10230'-35', 10242'-54'
10324'-26', 10380'-86'

C.I.B.P. @ 10960'

Perfs/Strawn 10980'-98', 11006'-11'

PBTD @ 11035'

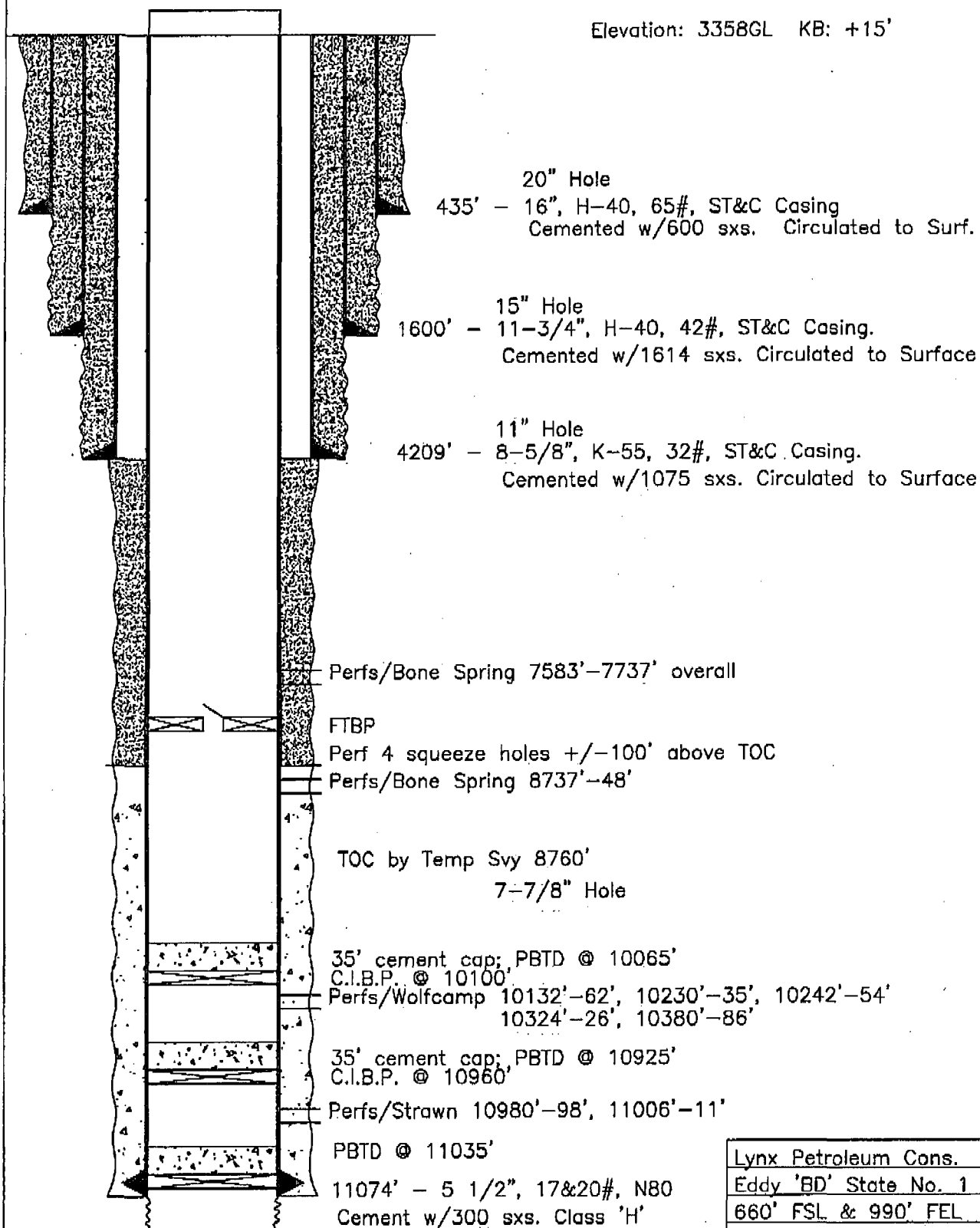
11074' - 5 1/2", 17&20#, N80
Cement w/300 sxs. Class 'H'

T.D. @ 11171

Lynx Petroleum Cons.
Eddy 'BD' State No. 1
660' FSL & 990' FEL
Sec. 32, T-20S, R-30E
Eddy County, N.M.

Proposed Bone Spring Recompletion Schematic 02/14/13

Elevation: 3358GL KB: +15'



T.D. © 11171

Lynx Petroleum Cons.
Eddy 'BD' State No. 1
660' FSL & 990' FEL
Sec. 32, T-20S, R-30E
Eddy County, N.M.

LYNX PETROLEUM CONSULTANTS, INC.
RECOMPLETION H₂S PRECAUTIONS
Eddy 'BD' STATE NO. 1

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

II. H₂S SAFETY EQUIPMENT AND SYSTEMS

1. Well Control Equipment :
 - A. A 5000 psig WP Blowout preventer with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit will be furnished.
2. H₂S detection and monitoring equipment :
 - A. 2 – portable H₂S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S levels of 20 ppm are reached.
3. Visual warning systems :
 - A. A wind direction indicator will be in place on the pulling unit doghouse.
4. Mud program :
 - A. The working fluid for this recompletion will be 2% KCL treated fresh water.

5. Metallurgy :

- A. Tubing, wellhead, and blowout preventers shall be suitable for H₂S service.
- B. All elastomers used for packing and seals shall be H₂S trim.

6. Communication :

- A. Communications in company vehicles are provided by cellular telephones.
Cell1: 575-390-9063 Cell2: 575-390-9065
- B. Land line (telephone) communications at Hobbs office.
Phone: 575-392-6950
- C: Emergency Numbers
911
Carlsbad Sheriff's Dept.: 575-887-1888
Carlsbad Hospital: 575-887-4100
Carlsbad Fire Dept.: 575-885-3125
Maljamar Fire Dept.: 575-676-4100
Hobbs Hospital: 575-492-5000
New Mexico State Police: 575-392-5588

8. Well testing :

- A. No drill stem tests are being contemplated during this operation.