

Submit 1 Copy 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

Form C-103

October 13, 2009

RECEIVED

JUN 02 2011

HOBBSD

DERIVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-025-28198

5. Indicate Type of Lease

STATE ☐

FEE ☒

6. State Oil & Gas Lease No.

601649

7. Lease Name or Unit Agreement Name

Barnhill

8. Well Number

1

9. OGRID Number

280401

10. Pool name or Wildcat

King Wolfcamp

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.)

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

2. Name of Operator

NMR Energy LLC

3. Address of Operator

800 Bering, Ste 250, Houston Texas 77057

4. Well Location

Unit Letter L : 1650 feet from the South line and 990 feet from the West line

Section 1 Township 14 S Range 37 E NMPM Lea County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3831

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐

PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐

CHANGE PLANS ☐

PULL OR ALTER CASING ☐

MULTIPLE COMPL ☐

DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☒

ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐

P AND A ☐

CASING/CEMENT JOB ☐

OTHER: ☐

OTHER: ☐

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 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

After reviewing the files it has come to our attention that additional work preformed to this wellbore was not filed by the previous operator.

Attached the Wellbore Diagram, Reports and any invoices that could be located, also I have attached C-101, which was filed on 7/2/2000.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

TITLE Consulting Engineer

DATE May 31/2011

Type or print name

For State Use Only

E-mail address:

hlamb@helmsoil.com

PHONE: 432-682-1122

APPROVED BY:

TITLE STATE MGR

DATE 6-2-2011

Conditions of Approval (if any):

District I

1625 N. French Dr., Hobbs, NM 88240

District II

811 South First, Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural ResourcesOIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505Form C-101
Revised March 12, 1999Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies☐ AMENDED REPORT

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

¹ Operator Name and Address. Lindenmuth & Associates, Inc. 510 Hearn Street Austin, Texas 78703		² OGRID Number 013343
		³ API Number 30 - 025-28198
⁴ Property Code 013912	⁵ Property Name Barnhill	⁶ Well No. 1

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	1	145	37E		1650	South	990	West	Lea

⁸ Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
⁹ Proposed Pool 1 King Wolfcamp					¹⁰ Proposed Pool 2				

¹¹ Work Type Code D	¹² Well Type Code M	¹³ Cable/Rotary	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 3831 GR
¹⁶ Multiple	¹⁷ Proposed Depth	¹⁸ Formation Strawn / Wolfcamp	¹⁹ Contractor	²⁰ Spud Date

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2	13 3/8		405	500	
12 1/4	8 5/8		4668	2200	
7 7/8	5 1/2		12744	2975	

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Lindenmuth & Associates, Inc. proposes to test the Strawn & Middle Wolfcamp in the following manner (current interval 9403'-9453'--Upper Wolfcamp):

- 1). Perforate and acidize the Strawn from 11,134-11,140 w/ 4 SPF & 1000 gal. HCL. Swab to test.
- 2). If the Strawn is commercial, return to production from Strawn. If uncommercial, set CIBP @ 11,000' +/- & dump 15 sx cement on top.
- 3). Perforate and acidize the Middle Wolfcamp from 10,084'-88', and 10,018'-26' w/ 4 SPF and 1500 gal. HCL. Swab to test.
- 4). If the Middle Wolfcamp is commercial, return to production from Middle and Upper Wolfcamp. If uncommercial, set CIBP @ 10,000' +/- & dump 15 sx cement on top. Return to production from Upper Wolfcamp.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name: Gordon H. Deen

Title: Operations Manager

Date: 7/2/00

Phone: 512-322-9779

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

Conditions of Approval:

Attached ☐

Permit Expires 1 Year From Approval
Date Unless Drilling Underway

Deepening

ELG 5-31-2011

Barnhill No. 1

1650' FSL & 990' FWL
L, Sec 1, T-14-S, R-37-E
Lea County, NM
API# 30-025-28198

Well Type: Active (Wolfcamp)

Spud Date: (5/17/83)

Wolf Rec (2/90)

GL: 3831' KB:

17 1/2"
hole

13 3/8" 48#, 54# & 72# @ 405' w/ 500 sx
TOC: Circulated to Surface

Current Eqpt

Tbg 299 jts 2-3/8", TAC, 4 jts, SN, PS, BPMA
Rods 3/4"x6' sub, 362 - 3/4", 16 - 7/8"
Pump 2-1/2x1-1/2"x22' RHBC
BPU Cabqt 320D, SN D320 40B, 84" SL (84"-43", 5 holes)

TOC: 2760' by temp survey (5/83)

12 1/4"
hole

8 5/8" 32# @ 4668' w/ 2200 sx

Formation Tops	
T/Yates	3168
T/SA	4600
T/Wolf	9402
T/Atoka	11,424
T/Mssp	11,607
T/Dev	12,644

TOC: 6400' by temp survey (7/83)

Wolfcamp Perfs 9,406'-08, 9,414-18', 9,425-27', 9,432-36', 9,440-44' & 9,448-52' (1/90)
Acid w/ 100 g spot + 1900 g 15% w/ 104 BS. ReAcid w/ 5000 g 20% w/ 50 BS

DV tool @ 9985'

M/Wfmp Perfs 10,018'- 10,026' (7/00)

RBP @ 10119'. Acid w/ 250 spot. Swbd wtr. ReAcid w/ 750 gals. Pkr failed. Swbd wtr w/ ssg
Recover RBP & DH commingle Strawn, M/Wfmp & Wfmp. POP.

Strawn Perfs 11,130'- 11,136' (7/00)

Acid w/ 250 spot + 500 gal + 750 gals w/ BS. Swbd dry
CIBP @ 11,300' (7/00)

Plug Back to 12,590' w/ CIBP (1/90)

Perfs 12,657'- 70' (2 JSPF) Acid w/ 100 gal 15% POP

CICR @ 12,690'

Perfs 12,706-18' (1 SPF) Acid w/ 100 gal 15%. Swbd 26 BW in 10 hrs
5 1/2" 17# & 20# @ 12,744' w/ 2975 sx in two stages

7 7/8"
hole

TD: 12,745'
PBTD: 12,590' (2/90)

281 SLT @ 20" LTH @ 3000'
LTH @ 8600' Rec. 85 BBls wtr.
Slight gas blow after each run.
SDJN.

282 SLT @ Vac. LTH @ 4500'
LTH @ 9400' Rec. 61 BBls wtr.
Al for 30 min. Fluid level increase
of 600'. SDJN.

283 SLT @ Vac. LTH @ 5700' Made 2 runs
Rec. 6 BBls wtr. Release plug and RTH
to RBP. Release plug & RTH. RTH & RTH
w/2 Hs and laid down. RTH w/MA, P.5,
5N, 4 Hs, 5 1/2 TAC & 299 Hs. Remode B.O.P.
Set TAC w/10 Hs tension. Flanged up and
SDJN.

284 RTH w/Pump (2 x 1 1/4 x 24) Rods (13-7/8, 365-3/4)
Pony Rods (1-8', 6', 4' & 2-2' 7/8) Hung well
RTH w/12 BBls. RU Down. Put well in prod.

Cont. 227. R/H and retrieved 50. Lu to Swab.
Rec. 20 BBls w/te. S.D.F.N.

228 Lu to Swab. No SL Pres.
IT@ 1400' IT@ 4400' Rec. 20 BBls.
Release packer and P.H. Changed out
packer and R/H to 9936'. Lu to Swab.
IT@ 1200' IT@ 8000 Rec. 54 BBls w/te.
No gas or oil signs. S.D.F.N.

231 Lu to Swab. No SL Pres.
IT@ 2800' IT@ 5000' Rec. 10 BBls w/te.
Lu. to Acid well. Pumped 750 gals w/36
BBls 2% HCl Flush. Pumped 27 BBls
before pres. increases to 4100⁺ Decreased rate
to 1 BPM. Acid. on formation @ .81 BPM.
4800⁺ pres. With 49 BBls pumped packer gave
way. Pumped 4 BBls to clear acid from Tbg.
SD Qsup @ 2280* 5 min. 1250* 10 min @ 640*
15 min - 220*. Max Pres @ 4900' Over Pres @ 4820'
Over Rate @ .81 BPM. Total head 56 BBls.
Lu to Swab. IT@ 50 Swab well down to
7200' Rec 70 BBls Next run IT@ 6500'
Rec. total 90 BBls w/light gas Blow. S.D.F.N.

Cont. ²⁵ 5 min - O - Pres Total Prod. 56 BBls

Run To Seal. $QF @ 100'$ $33K @ 10,700'$

Rec. 43 BBls Seal well dev.

S.D.F.N.

²⁶ $QF @ 0$ Run to seal. $QF @ 9500'$

Release packer. Run to 11140 to clean plug.

Run to 11072 & reset packer. Run to seal.

$QF @ 3600'$ Rec. 36 BBls w/le. Seal Dry to 10800'. Release Packer & Pot. w/ SBG & packer.

S.D.F.N.

²⁷ Run Rotary Wireline ran 2000' correlation log. Adjusted 20' uphole to open hole log.

Ref. 10018-10026 @ 45FF. Pot. w/ wireline

Run LBP & PKE Run to 10119 & set LBP.

Set PKE & test Plug to 500#. Release PKE

Run to 10026 and spotted 250 gal. acid.

Run to 9700' & set Packer. Starting Pumping

acid. Pres. drop from 1360# to 1050# @ 2.75

BPM. Started flush. With 20 BBls pumped

started circulating fluid out Csg. Shut Csg

and monitored Pres. Pumped remaining flush

away @ Avee. 32 BPM @ 2400#. Flowed Csg down

No fluid return from TBG. Release PKE. Pot. to

9281 and reset. Loaded Backside w/ 6 BBls and

tested to 550#. Dropped 50 Test tlg to 1000#

Pres.

07/21 500 gals 15% 112 FE Pumped 10 BBls of 2% RCL.
Cont. Shut By-Pass and put acid away. Flushed
to BTM Perf. Max Pres: 1010" Aque Pres: 400
Aque Rate 2BPM. Isup - 560" 5 min: 360
10 min: 220 15 min: 90 Total Prod: 112 BBls.
Rig up to Swab 23 @ 800' 33 @ 4600'
Rec 45 BBls RTR - 67 BBls.

7/22 SLTP @ 120" Lu. To Swab 23 @ 1400' 33 @ 8000'
Rec. 20 BBls RTR 47 BBls 112 Oct 5D.

07/24 SLTP @ 50" 23 @ 8000' Just sample indicated
20% oil Cut. Lu & RIN w/5 qts to 11201 and
set PKE Would not load and pres. Release PKE
RIN to 11232 Set PKE. would not load. Dropped
5D. Loaded w/21 BBls Test tlg to 500". To H
w/359 qts & packer. Lu Rotary Workline RIN
and set C/BP @ 11300'. Lu & RIN w/5 1/2 packer
w/353 qts 5 D 37.

07/25 RIN w/extra 6 qts to 11232' Set Packer
Test plug to 600" To H to 11030' and set
Packer. Open By-Pass Pumped Acid to spot.
Shut By-Pass Pumped 750 gals 15% w/48 BBls 2%
w/Ball sealers. No Ball out But good Ball action
seen. Max Pres - 3060" Aque 850 Isup 360"
N.I.

Rosenkrantz & Associates

Barkhill

Well #1

7/18/2000

OP-18 - Made in Exercise Well Success

OP-19 Run Unit Pok w/ rods (2-2', 1-4', 1-6' & 1-8' & 7/8
Long Rods, 365-2 1/4 & 13-7/8) Pump (2-1 1/4 & 2 1/4)
Release TAC, & Slange up BOP. RIN w/ paraffin
Knife and cut paraffin for 3 1/2 hrs. POK
w/ log string (299-2 3/8, 5 1/2 TAC, 4-2 3/8, 5N, P.S
& T.M.A.) SDAT.

OP-20 Pull & RIN w/ 1 1/4 Bit & Scraper. Injected Hg
in hole @ 7000'. Pull entire 56 Hs
and RIN to 11,300'. Total Hs RIN @ 359
Pok and laid down 2 Hs. POK w/ rest of Hg.
Hard down Bit & scraper. SDAT.

OP-21 Run Rotary Wireline RIN w/ 1/4" log guns
Correlated w/ Barkhill and perf 11130 - 11136
w/ 45 ft. POK w/ guns Pull and RIN w/ 5 1/2
Baker packer & 356 Hs to 11130'. Run
MacLuskey. Pumped 250 gal of 15% Flushed
to Perf. w/ 43 BB6 2% KC. Pulled packer to
11030'. Pumped 5 BB6 2% KC down log. to clear
Packer Set Packer. Open By-Pass Pumped

Cont:

Rotary Wire Line SERVICE, INC.

"Specializing in Pipe Recovery"

P.O. Box 2735 • Phone (505) 397-6302
HOBBS, NEW MEXICO 88241

INVOICE 10188

CUSTOMER LINDENMUTH & ASSOCIATES

DATE AUGUST 11, 2000

ADDRESS 510 HEARN STREET, SUITE 200

P. O. NO. _____

AUSTIN, TEXAS 78703

RONNIE ROGERS

Statement of Charges for Furnishing Personnel and Equipment to Perform the Following Itemized Services on Your Lease.

ITEM NO.	DESCRIPTION OF SERVICES	CHARGES
	WORK ORDER # 11727 BARNHILL # 1 JEA COUNTY, NEW MEXICO 07-21-00	
	PERFORATE 5 1/2" CASING FROM 11130' - 36' 4 SHOTS PER FOOT TOTAL 24 HOLES 07-24-00	
	SET 5 1/2" CAST IRON BRIDGE PLUG @ 11,300' 07-27-00	
	RUN GAMMA RAY CORRELATION LOG FROM 10200' TO 8300'	
	PERFORATE 5 1/2" CASING 4 SHOT PER FOOT FROM 10118' - 10126' TOTAL 32 HOLES	
	PRICE QUOTE	5,643.00
	6.0% TAX	338.58
	TOTAL DUE	\$5,981.58

7/23/00
THANK YOU!

7/17/00

905-394-2901

①

Bornhill #1 Workover

Ronnie,

Attached is my procedure for the Bornhill recompletion.
A couple of general points.

- 1.) I have shown shooting the 11,130' zone w/ a casing gun. If we cannot load the hole (if the current perms drain all the fluid) this may not be a good idea, we will probably want to perf through the g with a spiral strip sho-gun.
- 2.) I spec a lot-set packer. Talk to your packer man about this. The only problem is we may have trouble unsetting it if the the g / csq are out of balance because it doesn't have an equalizing valve.
- 3.) I will overnight you the correlation log from 11,000' down, & the open log if we do the upper zone for correlating a new log to.
- 4.) I would like to get at least 2 bids on the items on the "bid list" page.

5.) The Tubing is at Crozier pipe in Monahans. Ken Crozier is expecting your call about hauling it over there.
915-943-6797.

6.) If we put any of the deeper zones on pump, I will run a new rod design and forward it for the additional rods needed. This will be tricky & depend on the fluid rates.

Read this over and give me a call. I am open to suggestion.

Gordon
Cell (512)-940-9877

Barnhill #1

Current Downhole

Tbg: 2 $\frac{3}{8}$ " N-80 8rd EUE - 299 jts, TAC, 4 jts, SN, Mud Anchor

Rods: 7/8" - 2x2' sub, 2x4' sub, 1x6' sub, 16 rods. 3/4" - 362

Csg: 5 $\frac{1}{2}$ " 17 $\pm$ 20 lb @ 12,744'

PBTD: CIBP @ 12,590'

Perfs - Upper Wolfcap: 9406-08, 9414-18, 9425-27, 9432-36

9440-44, 9448-52.

Procedure

1.) POH w/ Rods: Pump. Send pump in for redress.

2.) ND W.H., NO BOPS. Unset TAC: POH w/ tbg. (Stop tbg.)

Send TAC in for redress. * Load H₂O w/ Field Salt Water *

3.) Run 4 $\frac{3}{4}$ " bit: scraper to 11,300' +/- . Use 2 $\frac{3}{8}$ " tbg from Crozier pipe to make up rest of string. Put new pipe on top.

4.) RV Wireline. Load 3 $\frac{3}{8}$ " csg gun 4SPF x 6'. RIH: correlate to Geonhart G121CCL dated 7-29-83.

Perf. 11,130-36. (Note: Short jts from 11,131'-68').

5.) PU 5 $\frac{1}{2}$ " 10K-set PKR, SN, : TIH on tbg. Hydrotest tbg to 7000 psi above the slips.

6.) Spot 250 gal 15% HCL w/ iron sequestering agent and corrosion inhibitor across perfs. Pull 6 jts tbg: flush backside w/ 2 bbls. FSW.

Burnhill

- (#6 Continued). Set pkr @ 10,956' +/- . Monitor backside & displace spot acid. Pump additional 500 gal 15% @ maximum rate 2 BPM & maximum pressure of 3000 psi.
- 7.) RV Swab. Swab log to test. If well begins to flow, flow @ max rate of 10 BPH. Monitor csq. Test until oil cut & pressure / or fluid level consistent.
 - 8.) If abandon 11,130' zone, RIH w/ W.L. set CIBP. Set @ 11,000' +/- .
 - 9.) RV Wireline. Run G12/CC correlation strip from 10,300' to 9300' (or their minimum interval).
 - 10.) Load 3 3/8" csq gun 4SPF x 8'. RIH & correlate to new log. Perf from 10,018' - 10,026'.
 - 12.) RIH w/ Lok-set pkr : SN. Spot 250 gal 15% HCl w/ iron sequestering agent & corrosion inhibitor across perf. Pull 6 jts log & flush backside w/ 2 bbls. FSW. Set pkr. @ 9846' +/- . Monitor backside & displace spot acid. Pump additional 500 gal 15% (w/ additives) @ maximum rate 2 BPM & maximum pressure of 3000 psi.
 - 13.) RV Swab. Swab log to test. If well flows, flow @ max rate of 10 BPH. Test until oil cut & pressure or fluid level consistent.
 - 14.) If 10,018-26 zone wet, set CIBP @ 9900' +/- and return to prod. as before.

Barnhill

Bid Items

Wireline

- (1) Perf 4SPF x 6' w/ 3 $\frac{3}{8}$ " CSG gun & premium charges from 11,130'-36' w/ pack-off on BOP.
- (2) Set CIBP @ 11,000' +/-
- (3) Run GR / CCL strip from 10,300' to 9300'
- (4) Perf as #1 but 8'

Acid

- (1) Pump 750 gal 15% HCL w/ iron sequestering agent & corrosion inhibitor 24 hrs @ 200°F

Tools

- (1) 5 $\frac{1}{2}$ " Lok-set pkr (17-20#)
- (2) 5 $\frac{1}{2}$ " scraper, used bit, crossover sub.

Tubing Testing

- (1) Test 11,150' 2 $\frac{3}{8}$ " N-80 EVE to 7000# above slp

Barnhill #1 - Downhole

Tbg

302 jts 2³/₈ W-80

5¹/₆" TAC (12pB TBN)

6 jts 2³/₈

SN

PS

MA

Rods

4'8' x 7/8 ponies

362 x 3/4"

16 x 7/8"

2" x 1¹/₁₆" x 20' RHBM (pump @ 9450')