

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-101
Revised March 17, 1999

Submit 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 Permian Resources, Inc. P.O. Box 590, Midland, TX 79702		² OGRID Number 25797
		³ API Number 30-025-29349
⁴ Property Code 25993	⁵ Property Name Hilburn	⁶ Well No. 2

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
C	13	16S	35E		1190	North	1980	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
D	13	16S	35E		660	North	660	West	Lea

⁹ Proposed Pool 1 North Shoe Bar (Strawn)	¹⁰ Proposed Pool 2
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¹¹ Work Type Code D	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code P	¹⁵ Ground Level Elevation 3967'
¹⁶ Multiple N	¹⁷ Proposed Depth 11,370 TVD	¹⁸ Formation Strawn	¹⁹ Contractor NA	²⁰ Spud Date 4/1/01

²¹ 12,750 MVD 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"	61 & 54.4	405	425	Circ. 75 SX
* 12-1/4"	8-5/8"	32 & 24	4146	2380	Circ 200 SX
* 7-7/8"	5-1/2"	20 & 17	11,500	760	7770' TS
4-5/8"	4" FJ liner	11.6	11,330	100	

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.

* Existing casing strings

See attached proposed procedure & existing wellbore diagram
Permit Expires 1 Year From Approval
Date Unless Drilling Underway
Deepen

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

Signature:

Printed name: Robert H. Marshall

Title: President

Date: 3-19-01

Phone: (915) 685-0113

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date: MAR 20 2001

Expiration Date:

Conditions of Approval:

Attached ☐

Permian Resources, Inc

Hilburn No. 2

Procedure to re-complete and deepen utilizing directional drilling from North Shoe Bar (Wolfcamp) Pool to North Shoe Bar (Strawn) Pool.

Current Surface Location

1190' FNL & 1980' FWL
Section 13, T16S, R35E
Lea County, New Mexico

Existing Wellbore Conditions

17-1/2" hole	13-3/8" 61 & 54.5 #/ft casing @ 405'	Cmt'd w/ 425 sx. Circ 75 sx.
12-1/4" hole	8-5/8" 32 & 24 #/ft casing @ 4,146'	Cmt'd w/ 2030 sx Lite lead + 350 sx "C" + 2% CaCl tail. Circ 250 sx.
7-7/8" hole	5-1/2" 20 & 17 #/ft casing @ 11,500'	Cmt'd w/ 485 sx "H". TOC @ 7,770' by TS PBTD @ 11,403'

Perforations Wolfcamp 10,448-50', 10,454-74' & 10,484-86' w/ 1 spf

Proposed New Bottom Hole Location

660' FNL and 660' FWL
Section 13, T16S, R35E
Lea County, New Mexico

Proposed Procedure

1. Contract John West Surveys to re-survey confirming surface location as originally permitted and providing latitude and longitude. MIRU well service unit. POOH w/ rods and tbg. Set 5-1/2" CIBP @ $\pm 11,200'$. Set CICR @ $\pm 10,410'$. Squeeze cement existing Wolfcamp perforations 10,448-50', 10,454-74' and 10,484-86'. D/O CICR and cement to top of CIBP. Test squeeze job and casing to 1,000 psig. If no test, re-squeeze and repeat until successful. RD well service unit. Disassemble and move BPU. Clean, level and dress location.
2. MIRU rotary drilling rig. ND tbghead and install flange. NU 5000#, 6", double ram hydraulic BOP w/ 5000# hydril. Install rotating head. RU & NU choke manifold, choke lines, gas buster and flare line. Test BOP, choke manifold and associated lines. RU directional drilling equipment and MWD equipment. Set 5-1/2", 20#/ft whip stock per directional drilling contractor specs on top of CIBP @ 11,200'.
3. PU mill, motor, BHA and RIH on DP. Cut window in 5-1/2" casing. POOH and PU 4-5/8" Bit and RIH on motor, BHA and DP. Kick off out window, build angle and begin drilling to encounter Strawn porosity @ $\pm 11,360'$ TVD. Upon encountering Strawn porosity continue drilling in porosity to BHL at 660' FNL & 660' FWL, Section 13, T16S, R35E. Control well and record orientation, depth, angle, and coordinates per directional drilling contractor and NMOCD requirements. Anticipate 9.2 to 9.3 PPG cut brine drilling fluid with additives to control fluid loss and viscosity.
4. Upon reaching BHL target estimate TVD @ 11,370', MVD @ 12,750', total displacement $\pm 1,422'$. Condition hole and RU open hole loggers. Log 4-5/8" open hole from MVD to 5-1/2" casing window with GR / CNL/FDL and GR / DLL w/ MSFL. If encounter productive hydrocarbons, run 4" FJ Liner from $\pm 11,180'$ through build angle and shale to Strawn

Permian Resources, Inc.
Hilburn No. 2
Re-completion to North Shoe Bar (Strawn)
19 March 2001 – Page 2

porosity. Cement liner and D/O if required by hole conditions. Lay down DP & BHA. RD rotary drilling rig.

5. RU well service unit. NU BOP and RIH w/ Pkr. and tbg. Set pkr. and acid stimulate as required. Test well. Complete as flowing completion or install BPU if required. RD well service unit. Restore location.

LOCATION: UNIT C, SEC 13, T-16S, R-35E
1190' FNL & 1980' FNL

TD: 11,500'
ELEV: 3967' GL

SPUD: 8/15/85

COMPL: PERF WOLFCAMP (3 BROTHERS BANK)

W/1 JSPP @ 10,448'-50', 10,454'-74', 10,484'-186'

ACIDIZED W/7500 gals 15% NE-FE gelled
acid & CO₂ (65% acid / 35% CO₂)

ISIP = 20 PSI

IPF 264 BPPD, 13 BWPD, 528 MCFGPD

TUBING: 2 7/8", 6.5#, L-80, EVE 8rd @ 10,556

ANCHOR: @ 10,372' IN 14,000 # TENSION

RODS: 168-7/8" steel rods + 165-12" Fiberflex Fm rods

PUMP: 1 1/4" x 2 1/2" x 38' RHBC HF

TOPS: YATES ~ 3137'

QUEEN ~ 3090'

SAN ANDRES ~ 4766'

GLORIETA ~ 6302'

TUBB ~ 7514'

ABO ~ 8216'

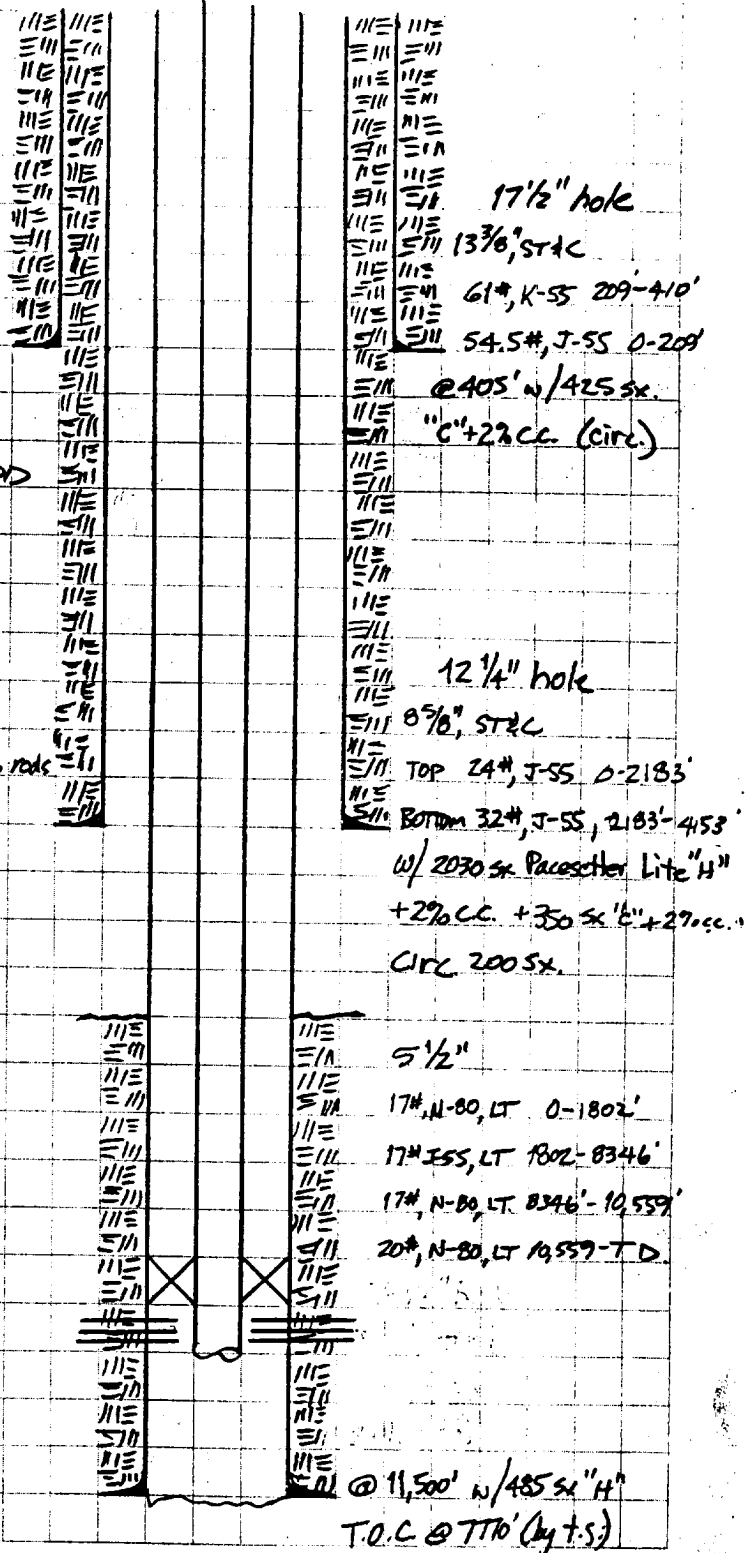
WOLFCAMP ~ 9591'

WC 3 BROTHERS ~ 10,310'

WC BANK ~ 10,425'

STRAWN ~ 11,306'

ATOKA ~ 11,404'



Made By BAH

Checked By

Date 5/23/89

Page of

Conoco Inc.
Calculation Sheet

Title HILBURN NO. 2
WELLBORE DIAGRAM

Job No.

Field SHEDAR WOLFCAMP, N.

State 100 AC SPACING

District I
PO Box 1980, Hobbs, NM 88241-1980
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 Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-29349		² Pool Code 56270		³ Pool Name North Shoebar (Strawn)	
⁴ Property Code 25993		⁵ Property Name Hilburn			⁶ Well Number 2
⁷ OGRID No. 25797		⁸ Operator Name Permian Resources, Inc.			⁹ Elevation 3967'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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¹¹ 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
D	13	16-S	35-E		660	North	660	West	Lea

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
160	Y		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

		<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</p> <p><i>Robert H. Marshall</i></p> <p>Signature</p> <p>Robert H. Marshall</p> <p>Printed Name</p> <p>President</p> <p>Title</p> <p>3-19-01</p> <p>Date</p>	
<p>Existing Surface Location Hilburn No. 2 NSL Order-1919</p>		<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>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.</p> <p>March 19, 2001</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p><i>Max A. Schumann, Jr.</i></p> <p>Max A. Schumann, Jr.</p> <p>1510</p> <p>Certificate Number</p>	
<p>Existing Location Hilburn No. 1 1980' FNL & 660' FWL North Shoebar (Strawn) North Shoebar (Wolfcamp) DHC Permit - 885</p>		<p>Job No. 66,434</p>	

New Mexico Oil Conservation Division
C-102 Instructions

IF THIS IS AN AMENDED REPORT, CHECK THE BOX LABELED "AMENDED REPORT" AT THE TOP OF THIS DOCUMENT.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed contact the appropriate OCD district office. Independent subdivision surveys will not be acceptable.

horizontal hole show that portion of the well bore that is open within this pool.

Show all lots, lot numbers, and their respective acreage.

If more than one lease has been dedicated to this completion, outline each one and identify the ownership as to both working interest and royalty.

1. The OCD assigned API number for this well
2. The pool code for this (proposed) completion
3. The pool name for this (proposed) completion
4. The property code for this (proposed) completion
5. The property name (well name) for this (proposed) completion
6. The well number for this (proposed) completion
7. Operator's OGRID number
8. The operator's name
9. The ground level elevation of this well
10. The surveyed surface location of this well measured from the section lines NOTE: If the United States government survey designates a Lot Number for this location use that number in the 'UL or lot no.' box. Otherwise use the OCD unit letter.
11. Proposed bottom hole location. If this is a horizontal hole indicate the location of the end of the hole.
12. The calculated acreage dedicated to this completion to the nearest hundredth of an acre
13. Put a Y if more than one completion will be sharing this same acreage or N if this is the only completion on this acreage
14. If more than one lease of different ownership has been dedicated to the well show the consolidation code from the following table:

C	Communitization
U	Unitization
F	Forced pooling
O	Other
P	Consolidation pending
15. Write in the OCD order(s) approving a non-standard location, non-standard spacing, or directional or horizontal drilling
16. This grid represents a standard section. You may superimpose a non-standard section over this grid. Outline the dedicated acreage and the separate leases within that dedicated acreage. Show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. (Note: A legal location is determined from the perpendicular distance to the edge of the tract.) If this is a high angle or
17. The signature, printed name, and title of the person authorized to make this report, and the date this document was signed.
18. The registered surveyors certification. This section does not have to be completed if this form has been previously accepted by the OCD and is being filed for a change of pool or dedicated acreage.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION!