

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, 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

RECEIVED

SEP 24 2009

HOBBSOCD

Form C-101
June 16, 2008

Submit to appropriate District Office

☐ AMENDED REPORT

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

¹ Operator Name and Address MANZANO, LLC P.O. Box 2107 Roswell, NM 88202-2107		⁴ OGRID Number 231429
³ Property Code 37838	⁵ Property Name RED RAIDER 3 STATE	⁶ API Number 30-025-39523
⁹ Proposed Pool 1 TULK; WOLF CAMP		¹⁰ Proposed Pool 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
A	3	15-S	32-E		660	NORTH	175	EAST	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	3	15-S	32-E		660	NORTH	330	WEST	LEA

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code O	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4293'
¹⁶ Multiple No	¹⁷ Proposed Depth 8995'TVD 13000'MD	¹⁸ Formation Wolfcamp	¹⁹ Contractor	²⁰ Spud Date 10/15/09

²¹ Proposed Casing and Cement Program

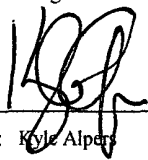
Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17.5"	13.375"	54.5	450'	500	SURFACE
12.25"	9.625"	40	4050'	1500	SURFACE
8.75"	7"	26	8300'	750	SURFACE
6.125"	4.5"	11.6	12750'	n/a	n/a

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.

Drill 17.5" hole to 450' w/FW mud system. Set 13.375" 54.5#/ft casing to TD and cement to surface. NU 5000# BOP & test to 500#. WOC 12 hrs prior to drilling on shoe. Drill 12.25" hole to 4050' w/BW mud system. Set 9.625" 40#/ft casing to TD and cement to surface. NU 5000# BOP & test to 1000#. WOC 12 hrs prior to drilling on shoe. Drill 8.75" hole to 9300'. Run open hole logs. Pump cement plug in open hole from 8300'-9300'. Set 7" 26#/ft casing to 8300' and cement to surface. Dress off cement plug to 8450'. Pick up directional tools & drill 6.125" curve at 10-12 degrees per 100' to end of curve at 9325'MD/8995' TVD (see attached Weatherford Drilling Services Well Plan). Plan is to penetrate Wolfcamp pay @ location 660' FNL & 725' FEL of section 3-T14S-R32E & drill horizontal lateral to BHL of 660' FNL & 330' FWL of same section. Drill 6.125" lateral to MD of 13000'/8995' TVD. Run multi-stage packer system on 4.5" 11.6#/ft casing liner w/liner top @ 8250'MD.

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

Signature:



Printed name: Kyle Alpers

Title: Engineer

E-mail Address: ksalpers@qwestoffice.net

Date: 9/23/09

Phone: 575-623-1996

OIL CONSERVATION DIVISION

Approved by:



Title:

PETROLEUM ENGINEER

Approval Date: SEP 25 2009

Expiration Date:

Conditions of Approval Attached ☐

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



MEMO 575-625-2620

DATE: 9/25/09

TO: Kyle Alpers

FROM: Cindy Herrera

- | | |
|---|---|
| ☒ For Your Files | ☐ Prepare a Reply for My Signature |
| ☐ For Your Review and Return | ☐ For Your Information |
| ☐ For Your Handling | ☐ For Your Approval |
| ☐ As Per Your Request | ☐ For Your Signature |
| ☐ Please Advise | ☐ For Your Attention |

Oil Conservation Division * 1625 N. French Dr.*

* Hobbs, New Mexico 88240

* Phone: (505) 393-6161 * Fax (505) 392-0720* <http://www.emnrd.state.nm.us>



DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II

1301 W. GRAND AVENUE, 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 Department

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-39523	Pool Code 60420	Pool Name TOLK; Wolfcamp
Property Code 37838	Property Name RED RAIDER STATE 3	Well Number 1H
OGRID No. 231429	Operator Name MANZANO, LLC	Elevation 4293'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	3	15-S	32-E		660	NORTH	175	EAST	LEA

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	3	15-S	32-E		660	NORTH	330	WEST	LEA
Dedicated Acres 48 190.88	Joint or Infill	Consolidation Code	Order No.						

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

GRID. AZ -269°40'52" HORZ. DIST. -4778.1' Minimum Penetration Point @ T/Wolfcamp will be 330' FEL GEODETC COORDINATES NAD 27 NME SURFACE LOCATION Y=746981.6 N X=694976.2 E LAT.=33.051889° N LONG.=103.697001° W BOTTOM HOLE LOCATION Y=746955.0 N X=690199.4 E	OPERATOR CERTIFICATION I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement, or a compulsory pooling order heretofore entered by the division. <i>[Signature]</i> 9/24/09 Signature Date Kyle Alpers Printed Name SURVEYOR CERTIFICATION 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. SEP 24 2009 Date Surveyed Signature & Seal of Professional Surveyor <i>[Signature]</i> Certificate No. RONALD EIDSON 3239
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Weatherford®

Drilling Services

PROPOSAL

MANZANO, LLC

RED RAIDER STATE-3 #1H

LEA COUNTY, NM

WELL FILE: PLAN 1

SEPTEMBER 9, 2009

Weatherford Drilling Services
P.O. Box 61028
Midland, Texas 79711 USA
+1.432.561.8892 Main
+1.432.561.8895 Fax
www.weatherford.com

MANZANO, LLC
RED RAIDER STATE-3 #1H
LEA COUNTY, NM



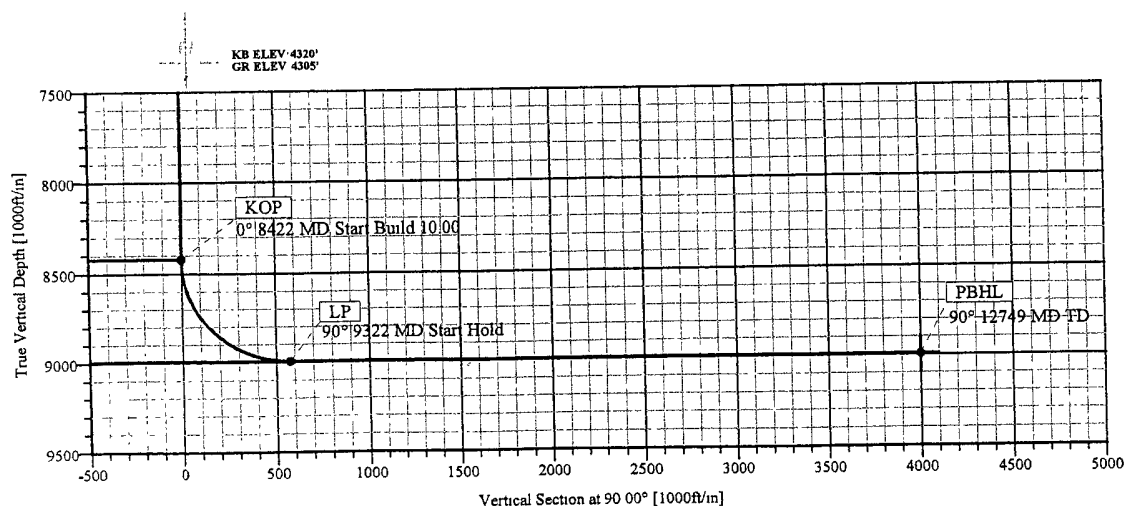
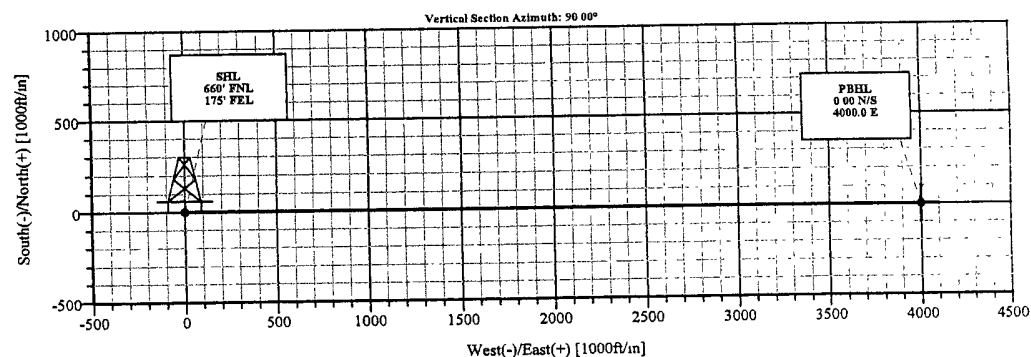
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	90.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8422.04	0.00	90.00	8422.04	0.00	0.00	0.00	0.00	0.00	
3	9322.04	90.00	90.00	8995.00	0.00	572.96	10.00	90.00	572.96	
4	12749.08	90.00	90.00	8995.00	0.00	4000.00	0.00	0.00	4000.00	PBHL

WELL DETAILS					
Name	+N/-S	+E/-W	Latitude	Longitude	Slot
#1H	0.00	0.00	30°59'18.404N	106°03'38.987W	N/A

TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	8995.00	0.00	4000.00	00°00'00.000S	000°00'00.000W	Point

SITE DETAILS		
Red Raider State-3 #1H		
660' FNL & 175' FEL		
Ground Level: 4305.00		
Positional Uncertainty: 0.00		
Convergence: 0.00		

FIELD DETAILS	
LEA CO. NM (NAD 83)	
Geodetic System: US State Plane Coordinate System 1983	
Ellipsoid: GRS 1980	
Zone: New Mexico, Eastern Zone	
Magnetic Model: Igrt200510	
System Datum: Mean Sea Level	
Local North: True North	



Plan: Plan #1 (#1H/1)
Created By: Jayme Wilson
Date: 9/9/2009



Company: Manzano	Date: 9/9/2009	Time: 10:30:03	Page: 1
Field: LEA CO. NM (NAD 83)	Co-ordinate(NE) Reference: Well: #1H, True North		
Site: Red Raider State-3 #1H	Vertical (TVD) Reference: SITE 4320.0		
Well: #1H	Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Plan: Plan #1	Date Composed: 9/9/2009
Principal: Yes	Version: 1
	Tied-to: From Surface

Field: LEA CO. NM (NAD 83)

Map System: US State Plane Coordinate System 1983
 Geo Datum: GRS 1980
 Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
 Coordinate System: Well Centre
 Geomagnetic Model: igrf200510

Site: Red Raider State-3 #1H

660' FNL & 175' FEL

Site Position:	From: Local Only	Position Uncertainty: 0.00 ft	Ground Level: 4305.00 ft	Northing: ft	Easting: ft	Latitude: ft	Longitude: ft	North Reference: True deg	Grid Convergence: deg
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Well: #1H

Slot Name:

Well Position:	+N/-S 0.00 ft	Northing: ft	Latitude: ft
	+E/-W 0.00 ft	Easting: ft	Longitude: ft
Position Uncertainty:	0.00 ft		

Wellpath: 1

Current Datum: SITE	Height 4320.00 ft	Drilled From: Surface
Magnetic Data: 9/9/2009		Tie-on Depth: 0.00 ft
Field Strength: 0 nT		Above System Datum: Mean Sea Level
Vertical Section: Depth From (TVD)	+N/-S ft	Declination: 0.00 deg
		Mag Dip Angle: 0.00 deg
		+E/-W ft
		Direction deg
	0.00	0.00
	0.00	0.00
	0.00	90.00

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8422.04	0.00	90.00	8422.04	0.00	0.00	0.00	0.00	0.00	0.00	
9322.04	90.00	90.00	8995.00	0.00	572.96	10.00	10.00	0.00	90.00	
12749.08	90.00	90.00	8995.00	0.00	4000.00	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
8400.00	0.00	90.00	8400.00	0.00	0.00	0.00	0.00	0.00	0.00	90.00	
8422.04	0.00	90.00	8422.04	0.00	0.00	0.00	0.00	0.00	0.00	90.00	KOP
8500.00	7.80	90.00	8499.76	0.00	5.30	5.30	10.00	0.00	10.00	0.00	
8600.00	17.80	90.00	8597.15	0.00	27.41	27.41	10.00	0.00	10.00	0.00	
8700.00	27.80	90.00	8689.22	0.00	66.11	66.11	10.00	0.00	10.00	0.00	
8800.00	37.80	90.00	8773.18	0.00	120.21	120.21	10.00	0.00	10.00	0.00	
8900.00	47.80	90.00	8846.46	0.00	188.06	188.06	10.00	0.00	10.00	0.00	
9000.00	57.80	90.00	8906.85	0.00	267.61	267.61	10.00	0.00	10.00	0.00	
9100.00	67.80	90.00	8952.51	0.00	356.43	356.43	10.00	0.00	10.00	0.00	
9200.00	77.80	90.00	8982.05	0.00	451.84	451.84	10.00	0.00	10.00	0.00	
9300.00	87.80	90.00	8994.58	0.00	550.92	550.92	10.00	0.00	10.00	0.00	
9322.04	90.00	90.00	8995.00	0.00	572.96	572.96	10.00	0.00	10.00	0.00	LP
9400.00	90.00	90.00	8995.00	0.00	650.92	650.92	0.00	0.00	0.00	0.00	
9500.00	90.00	90.00	8995.00	0.00	750.92	750.92	0.00	0.00	0.00	0.00	
9600.00	90.00	90.00	8995.00	0.00	850.92	850.92	0.00	0.00	0.00	0.00	
9700.00	90.00	90.00	8995.00	0.00	950.92	950.92	0.00	0.00	0.00	0.00	
9800.00	90.00	90.00	8995.00	0.00	1050.92	1050.92	0.00	0.00	0.00	0.00	



Company: Manzano
Field: LEA CO. NM (NAD 83)
Site: Red Raider State-3 #1H
Well: #1H
Wellpath: 1

Date: 9/9/2009
Co-ordinate(NE) Reference: Well: #1H, True North
Vertical (TVD) Reference: SITE 4320.0
Section (VS) Reference: Well (0.00N,0.00E,90.00Azi)
Survey Calculation Method: Minimum Curvature

Page: 2
Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	Build deg/100ft	Turn deg/100ft	DLS deg/100ft	TFO deg	Comment
9900.00	90.00	90.00	8995.00	0.00	1150.92	1150.92	0.00	0.00	0.00	0.00	
10000.00	90.00	90.00	8995.00	0.00	1250.92	1250.92	0.00	0.00	0.00	0.00	
10100.00	90.00	90.00	8995.00	0.00	1350.92	1350.92	0.00	0.00	0.00	0.00	
10200.00	90.00	90.00	8995.00	0.00	1450.92	1450.92	0.00	0.00	0.00	0.00	
10300.00	90.00	90.00	8995.00	0.00	1550.92	1550.92	0.00	0.00	0.00	0.00	
10400.00	90.00	90.00	8995.00	0.00	1650.92	1650.92	0.00	0.00	0.00	0.00	
10500.00	90.00	90.00	8995.00	0.00	1750.92	1750.92	0.00	0.00	0.00	0.00	
10600.00	90.00	90.00	8995.00	0.00	1850.92	1850.92	0.00	0.00	0.00	0.00	
10700.00	90.00	90.00	8995.00	0.00	1950.92	1950.92	0.00	0.00	0.00	0.00	
10800.00	90.00	90.00	8995.00	0.00	2050.92	2050.92	0.00	0.00	0.00	0.00	
10900.00	90.00	90.00	8995.00	0.00	2150.92	2150.92	0.00	0.00	0.00	0.00	
11000.00	90.00	90.00	8995.00	0.00	2250.92	2250.92	0.00	0.00	0.00	0.00	
11100.00	90.00	90.00	8995.00	0.00	2350.92	2350.92	0.00	0.00	0.00	0.00	
11200.00	90.00	90.00	8995.00	0.00	2450.92	2450.92	0.00	0.00	0.00	0.00	
11300.00	90.00	90.00	8995.00	0.00	2550.92	2550.92	0.00	0.00	0.00	0.00	
11400.00	90.00	90.00	8995.00	0.00	2650.92	2650.92	0.00	0.00	0.00	0.00	
11500.00	90.00	90.00	8995.00	0.00	2750.92	2750.92	0.00	0.00	0.00	0.00	
11600.00	90.00	90.00	8995.00	0.00	2850.92	2850.92	0.00	0.00	0.00	0.00	
11700.00	90.00	90.00	8995.00	0.00	2950.92	2950.92	0.00	0.00	0.00	0.00	
11800.00	90.00	90.00	8995.00	0.00	3050.92	3050.92	0.00	0.00	0.00	0.00	
11900.00	90.00	90.00	8995.00	0.00	3150.92	3150.92	0.00	0.00	0.00	0.00	
12000.00	90.00	90.00	8995.00	0.00	3250.92	3250.92	0.00	0.00	0.00	0.00	
12100.00	90.00	90.00	8995.00	0.00	3350.92	3350.92	0.00	0.00	0.00	0.00	
12200.00	90.00	90.00	8995.00	0.00	3450.92	3450.92	0.00	0.00	0.00	0.00	
12300.00	90.00	90.00	8995.00	0.00	3550.92	3550.92	0.00	0.00	0.00	0.00	
12400.00	90.00	90.00	8995.00	0.00	3650.92	3650.92	0.00	0.00	0.00	0.00	
12500.00	90.00	90.00	8995.00	0.00	3750.92	3750.92	0.00	0.00	0.00	0.00	
12600.00	90.00	90.00	8995.00	0.00	3850.92	3850.92	0.00	0.00	0.00	0.00	
12700.00	90.00	90.00	8995.00	0.00	3950.92	3950.92	0.00	0.00	0.00	0.00	
12749.08	90.00	90.00	8995.00	0.00	4000.00	4000.00	0.00	0.00	0.00	0.00	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
PBHL			8995.00	0.00	4000.00			30	59	19.016 N	106	2	53.052 W

Formations

MD	TVD	Formations	Lithology	Dip Angle	Dip Direction

Annotation

MD ft	TVD ft	
8422.04	8422.04	KOP
9322.04	8995.00	LP
12749.08	8995.00	PBHL