

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010**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.*5. Lease Serial No.  
NMNM109756

6. If Indian, Allottee or Tribe Name

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

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

## 1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

## 8. Well Name and No.

PEACHES 19 FEDERAL 3H

## 2. Name of Operator

OXY USA INCORPORATED

Contact: DAVID STEWART

## 9. API Well No.

30-015-42446-00-X1

## 3a. Address

5 GREENWAY PLAZA STE 110  
HOUSTON, TX 77046-0521

## 3b. Phone No. (include area code)

Ph: 432.685.5717

## 10. Field and Pool, or Exploratory

COTTONWOOD DRAW

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 19 T25S R27E SESW 0730FSL 1980FWL  
32.110024 N Lat, 104.230748 W Lon

## 11. County or Parish, and State

EDDY COUNTY, NM

## 12. CHECK 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
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

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 recompleate 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

OXY USA Inc. respectfully requests approval for the following changes to the drilling plan:

Proposed TD - 12211'M 7760'V

1. Request casing design modification, to drill the well with smaller bit sizes:  
14-3/4" surface hole w/ 10-3/4" csg, 9-7/8" intermediate hole w/ 7-5/8" csg and 6-3/4" production  
hole w/ 5-1/2" & 4-1/2" csg. Details are below.

## a. Surface Casing

10-3/4" 45.5# J-55 BT&amp;C new csg @ 0-350', 14-3/4" hole w/ 8.4# mud

Coll Rating (psi)-2090 Burst Rating (psi)-3580

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL  
NM OIL CONSERVATION  
ARTESIA DISTRICT

AUG 11 2015

Accepted for record  
IRD NMCD 8/12/15

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

Electronic Submission #308050 verified by the BLM Well Information System

For OXY USA INCORPORATED, sent to the Carlsbad

Committed to AFMSS for processing by CHRISTOPHER WALLS on 08/06/2015 (15CRW0090SE)

Name (Printed/Typed) DAVID STEWART

Title REGULATORY ADVISOR

Signature (Electronic Submission)

Date 07/06/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

RECEIVED

APPROVED

Approved By

Title

Date

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.

Office

AUG - 7 2015

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.

CARLSBAD FIELD OFFICE

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

**Additional data for EC transaction #308050 that would not fit on the form**

**32. Additional remarks, continued**

SF Coll-15.98 SF Burst-1.42 SF Ten-5.94

**b. Intermediate Casing**

7-5/8" 26 4# J-55 BT&C new csg @ 0-1900', 9-7/8" hole w/ 10.0# mud

Coll Rating (psi)-3400 Burst Rating (psi)-6020

SF Coll-8.17 SF Burst-1.39 SF Ten-4.23

**c. Production Casing**

5-1/2" 20# P-110 USF new csg @ 0-8182'M, 6-3/4" hole w/ 9.2# mud

Coll Rating (psi)-11100 Burst Rating (psi)-12600

SF Coll-2.67 SF Burst-1.26 SF Ten-2.30

4-1/2" 13.5# P-110 BT&C new csg @ 8183-12211'M, 6-3/4" hole w/ 9.2# mud

Coll Rating (psi)-10670 Burst Rating (psi)-12410

SF Coll-2.57 SF Burst-1.25 SF Ten-3.05

Collapse and burst loads calculated using Stress Check with anticipated loads, see attached for design assumptions

2. Cement program adjustment to the new bit/casing sizes. Cement program modifications detailed below.

a. Surface - Circulate cement to surface w/ 380sx PP cmt w/ 2% CaCl<sub>2</sub>, 14.8ppg 1.35 yield 1415# 24hr CS 150% Excess.

b. Intermediate - Circulate cement to surface w/ 330sx HES light PP cmt w/ 5% Salt + .1% HR-800, 12.9ppg 1.85 yield 824# 24hrs CS 125% Excess followed by 200sx PP cmt, 14.8ppg 1.33 yield 1789# 24hr CS 125% Excess.

c. Production - Cement w/ 210sx Tuned Light (TM) system cmt w/ 3#/sx Kol-Seal + .125#/sx Poly-E-Flake + .8% HR-800, 10.2ppg 3.05 yield 555# 24hr CS 25% Excess followed by 490sx Super H cmt w/ 3#/sx salt + .1% HR-800 + .3% CFR-3 + .5% Halad(R)-344 + 2#/sx Kol-Seal, 13.2ppg 1.65 yield 1462# 24hr CS 25% Excess. Estimated TOC @ 1000'.

Description of Cement Additives: Calcium Chloride, Salt (Accelerator); CFR-3 (Dispersant); Kol-Seal, Poly-E-Flake (Lost Circulation Additive); Halad-344 (Low Fluid Loss Control); HR-601, HR-800 (Retarder)

The above cement volumes could be revised pending the caliper measurement.

**3. Mud Program**

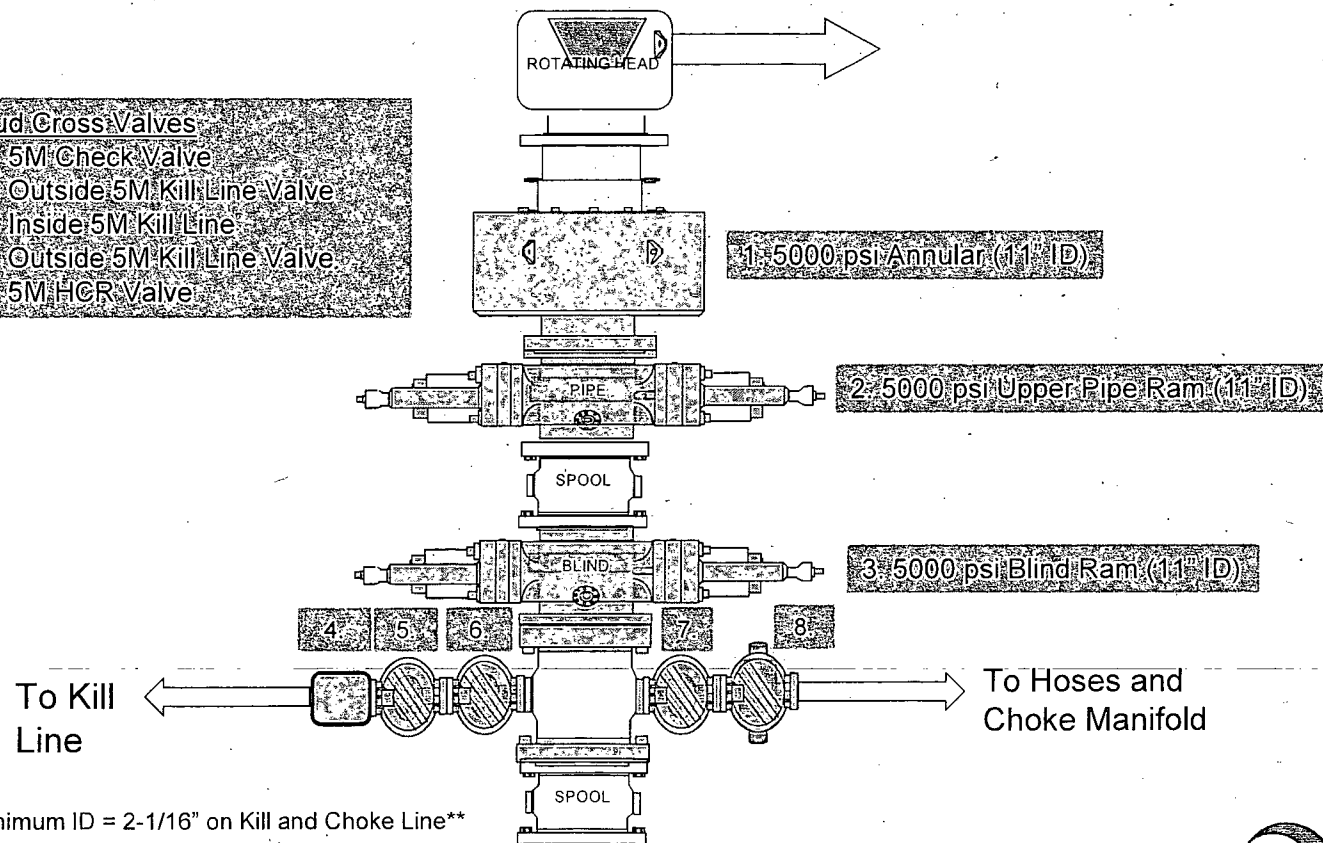
Depth	Mud WT	Vis Sec	Fluid Loss	Type
0-350'	8.5-9.0	40-55	50-75cc/30min	EnerSeal Spud Mud (MMH)
350-1900'	9.8-10	28-32	NC	NaCl Brine
1900-TD	8.8-9.6	38-50	50-75cc/30min	EnerSeal (MMH)

4. The Operator will connect the BOP choke outlet to the choke manifold using a hose that meets all BLM requirements and will be inspected and approved by BLM personnel prior to spud.

# 5M BOP Stack

## Mud Cross Valves

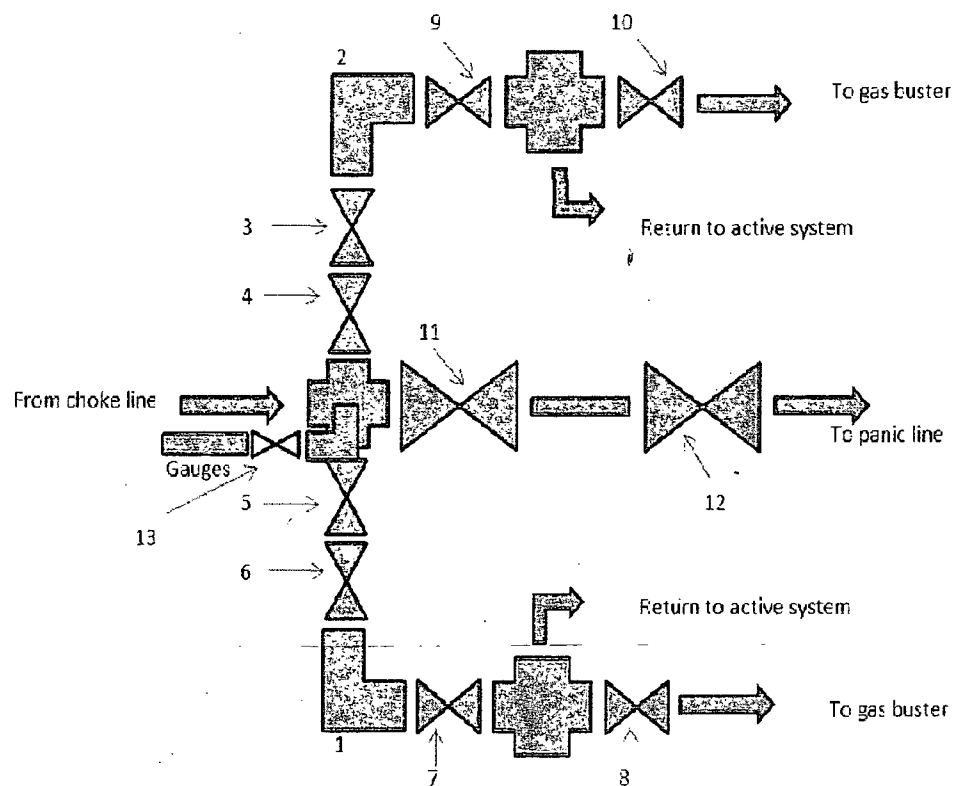
- 4 5M Check Valve
- 5 Outside 5M Kill Line Valve
- 6 Inside 5M Kill Line
- 7 Outside 5M Kill Line Valve
- 8 5M HCR Valve



**\*\* Minimum ID = 2-1/16" on Kill and Choke Line\*\***



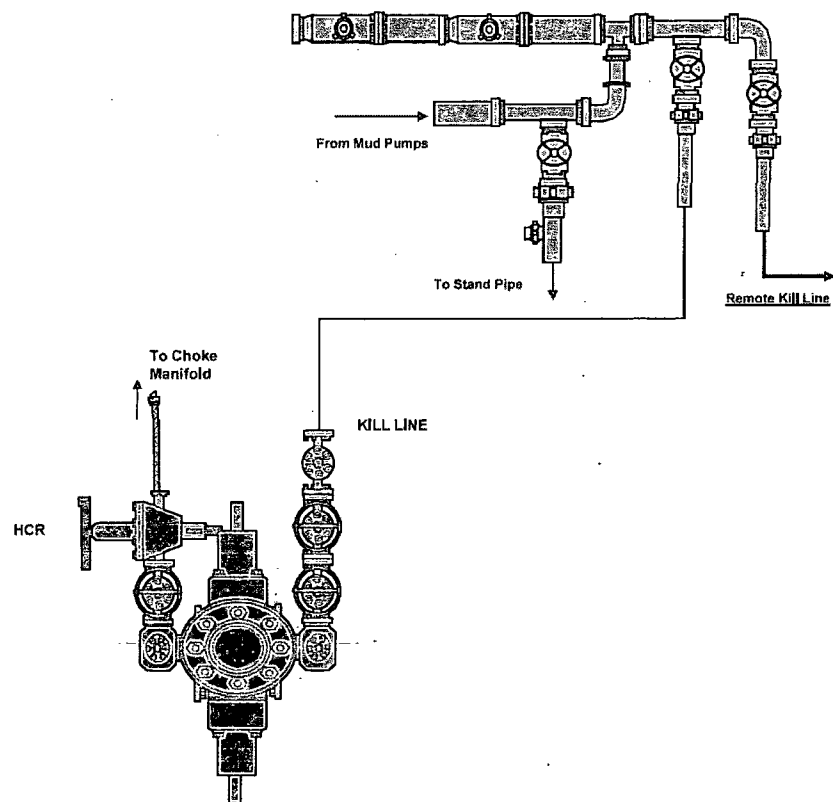
# 5M Choke Panel



- 1- POWER CHOKE
- 2- MANUAL CHOKE
- 3- 2 1/16" CHOKEMANIFOLD VALVE
- 4- 2 1/16" CHOKEMANIFOLD VALVE
- 5- 2 1/16" CHOKEMANIFOLD VALVE
- 6- 2 1/16" CHOKEMANIFOLD VALVE
- 7- 2 1/16" CHOKEMANIFOLD VALVE
- 8- 2 1/16" CHOKEMANIFOLD VALVE
- 9- 2 1/16" CHOKEMANIFOLD VALVE
- 10- 2 1/16" CHOKEMANIFOLD VALVE
- 11- 3" CHOKEMANIFOLD VALVE
- 12- 3" CHOKEMANIFOLD VALVE
- 13- 2 1/16" CHOKE MANIFOLD VALVE

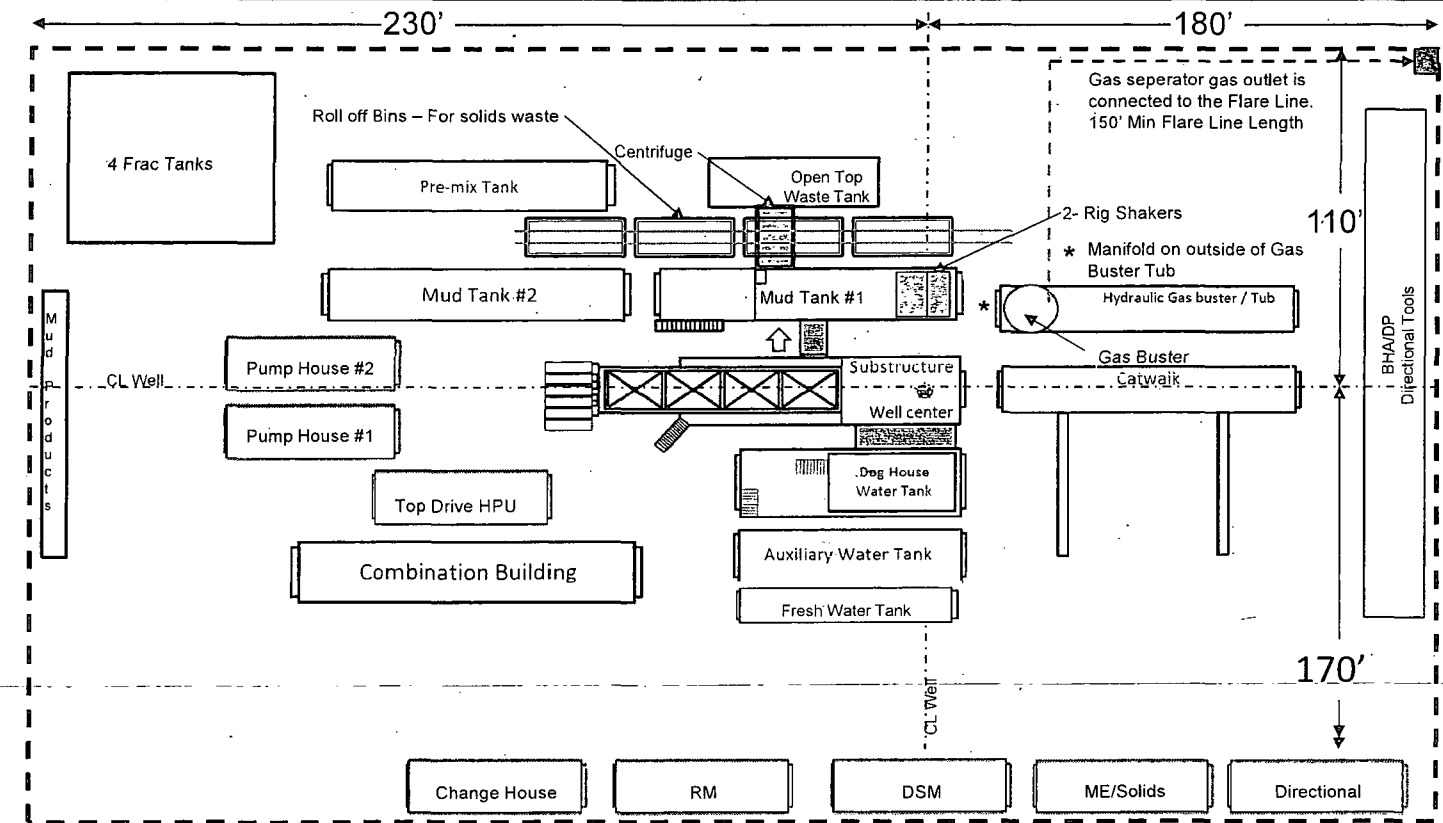


# 10M Remote Kill Line Schematic

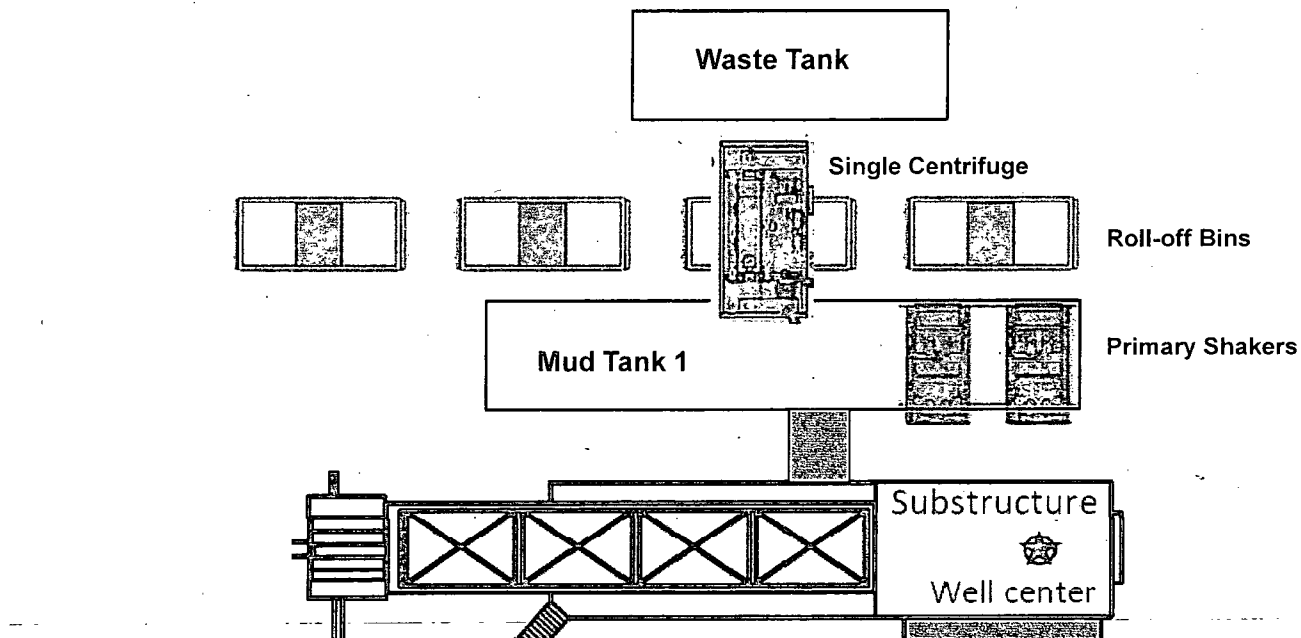


# Oxy Single Centrifuge - Closed Loop System

## New Mexico - Canelson Drilling Rig



Oxy Single Centrifuge - Closed Loop System  
New Mexico - Canelson Drilling Rig



**OXY**

**Eddy County, NM (NAD 27 NME)**

**Peaches 19 Fed 3H**

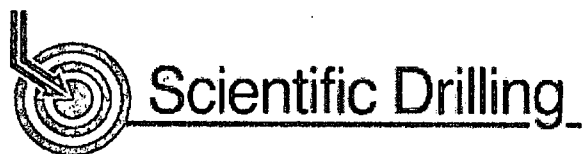
**Peaches 19 Fed 3H**

**Original Wellbore**

**Plan: Design #2**

## **Standard Planning Report**

**03 March, 2015**



[www.scientificdrilling.com](http://www.scientificdrilling.com)





KB @ 3195.30usft (H&P 474)  
Gr: 3171.30

**Peaches 19 Fed 3H**  
**Eddy County, NM (NAD 27 NME)**  
**Northing: 403764.90**  
**Easting: 531762.80**  
**Design #2**

**WELL DETAILS: Peaches 19 Fed 3H**

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude
0.00	0.00	403764.90	3171.30	531762.80	32° 6' 36.088 N	104° 13' 50.694 W

**SECTION DETAILS:**

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dlog	TFace	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
2215.00	4.30	178.53	2214.80	-8.06	0.21	2.00	178.53	-8.06
7004.08	4.30	178.53	6990.40	-367.02	9.42	0.00	0.00	-367.14
8182.83	90.00	358.63	7760.30	346.96	-7.58	8.00	-179.90	347.04
12210.59	90.00	358.63	7760.30	4373.56	-103.98	0.00	0.00	4374.80

**DESIGN TARGET DETAILS:**

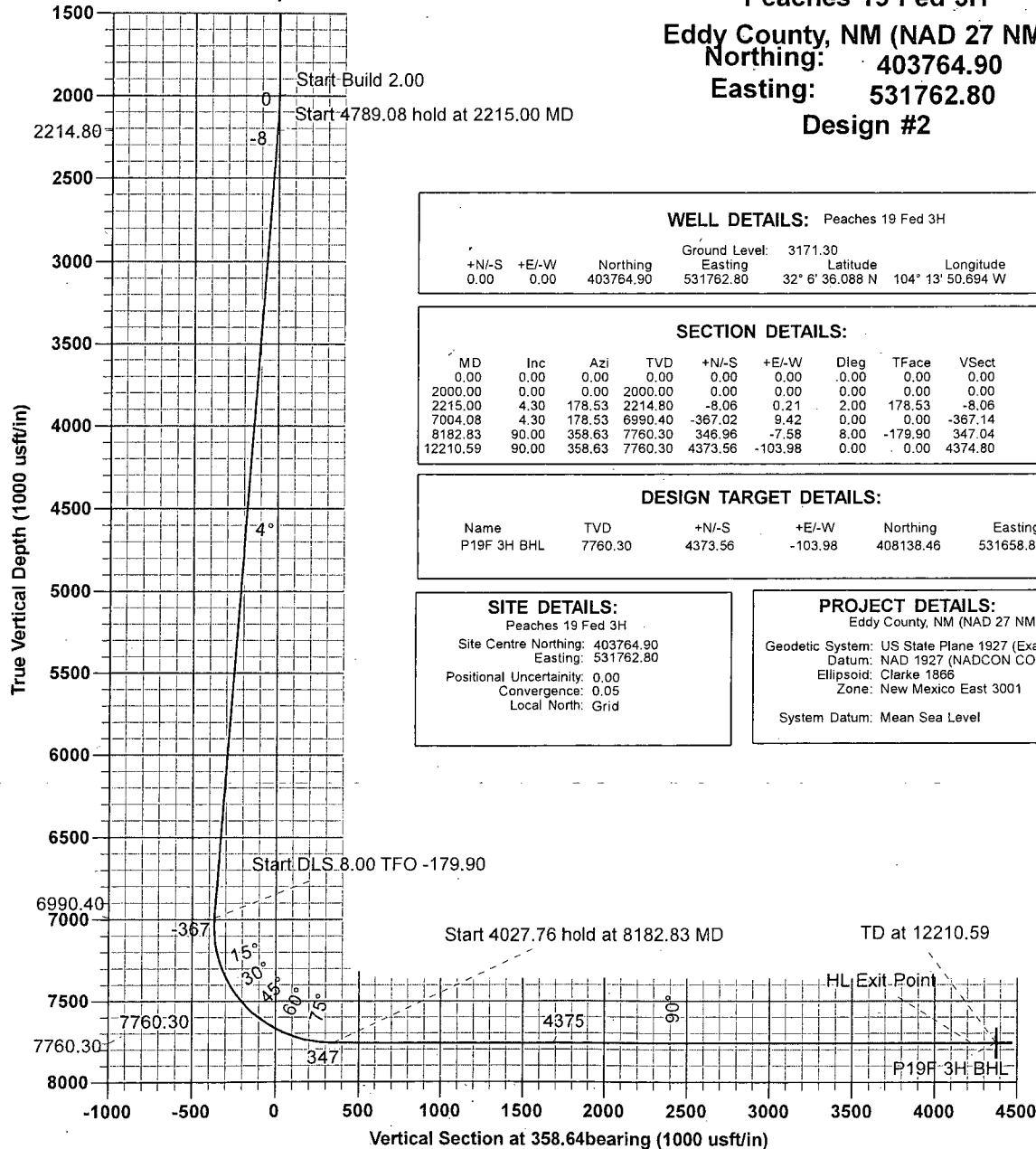
Name	TVD	+N/-S	+E/-W	Northing	Easting
P19F 3H BHL	7760.30	4373.56	-103.98	408138.46	531658.82

**SITE DETAILS:**

Peaches 19 Fed 3H  
Site Centre Northing: 403764.90  
Easting: 531762.80  
Positional Uncertainty: 0.00  
Convergence: 0.05  
Local North: Grid

**PROJECT DETAILS:**

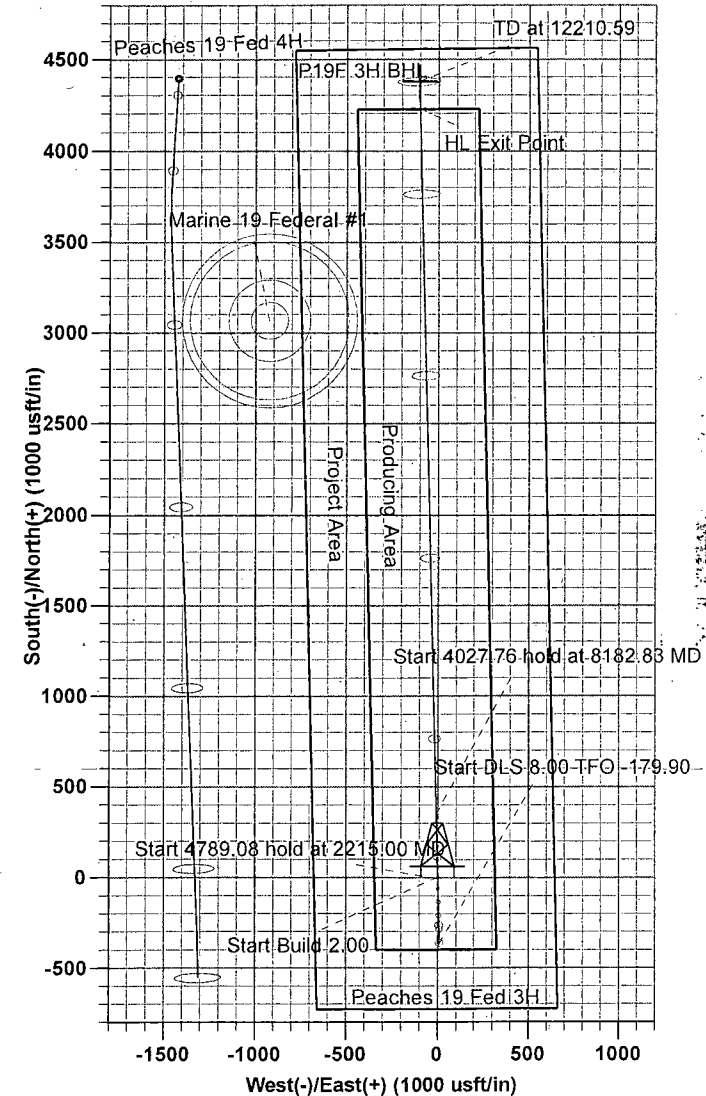
Eddy County, NM (NAD 27 NME)  
Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1886  
Zone: New Mexico East 3001  
System Datum: Mean Sea Level



To convert Magnetic North to Grid, Add 7.61°  
To convert True North to Grid, Subtract 0.05°

Azimuths to Grid North  
True North: -0.05°  
Magnetic North: 7.61°

Magnetic Field  
Strength: 48223.9snT  
Dip Angle: 59.88°  
Date: 3/3/2015  
Model: HDGM



# Planning Report

Database:	Midland District	Local Co-ordinate/Reference:	Well: Peaches 19 Fed 3H
Company:	OXY	TVD Reference:	KB @ 3195.30usft (H&P 474)
Project:	Eddy County, NM (NAD 27 NME)	MD Reference:	KB @ 3195.30usft (H&P 474)
Site:	Peaches 19 Fed 3H	North Reference:	Grid
Well:	Peaches 19 Fed 3H	Survey/Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Design #2		

Project:	Eddy County, NM (NAD 27 NME), New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Peaches 19 Fed 3H		
Site Position:	From:	Map	
Northing:	403,764.90 usft	Latitude:	32° 6' 36.088 N
Easting:	531,762.80 usft	Longitude:	104° 13' 50.694 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
Grid Convergence:			0.05 °

Well:	Peaches 19 Fed 3H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	
			Ground Level:

Wellbore:	Original Wellbore		
Magnetics	Model Name	Sample Date	Declination
	HDGM	3/3/2015	7.67
			Dip Angle
			59.88
			Field Strength
			48,224

Design:	Design #2		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(bearing)
			358.64

Plan Sections:										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(bearing)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,215.00	4.30	178.53	2,214.80	-8.06	0.21	2.00	2.00	0.00	178.53	
7,004.08	4.30	178.53	6,990.40	-367.02	9.42	0.00	0.00	0.00	0.00	
8,182.83	90.00	358.63	7,760.30	346.96	-7.58	8.00	7.27	-15.26	-179.90	
12,210.59	90.00	358.63	7,760.30	4,373.56	-103.98	0.00	0.00	0.00	0.00	P19F 3H BHL

# Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well: Peaches 19 Fed 3H
Company:	OXY	TVD Reference:	KB @ 3195.30usft (H&P 474)
Project:	Eddy County NM (NAD:27 NME)	MD Reference:	KB @ 3195.30usft (H&P 474)
Site:	Peaches 19 Fed 3H	North Reference:	Grid
Well:	Peaches 19 Fed 3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Design #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
2,100.00	2.00	178.53	2,099.98	-1.74	0.04	-1.75	2.00	2.00	0.00	
2,200.00	4.00	178.53	2,199.84	-6.98	0.18	-6.98	2.00	2.00	0.00	
2,215.00	4.30	178.53	2,214.80	-8.06	0.21	-8.06	2.00	2.00	0.00	
Start 4789.08 hold at 2215.00 MD										
2,300.00	4.30	178.53	2,299.56	-14.43	0.37	-14.44	0.00	0.00	0.00	
2,400.00	4.30	178.53	2,399.28	-21.93	0.56	-21.94	0.00	0.00	0.00	
2,500.00	4.30	178.53	2,499.00	-29.42	0.76	-29.43	0.00	0.00	0.00	
2,600.00	4.30	178.53	2,598.71	-36.92	0.95	-36.93	0.00	0.00	0.00	
2,700.00	4.30	178.53	2,698.43	-44.41	1.14	-44.43	0.00	0.00	0.00	
2,800.00	4.30	178.53	2,798.15	-51.91	1.33	-51.93	0.00	0.00	0.00	
2,900.00	4.30	178.53	2,897.87	-59.40	1.52	-59.42	0.00	0.00	0.00	
3,000.00	4.30	178.53	2,997.59	-66.90	1.72	-66.92	0.00	0.00	0.00	
3,100.00	4.30	178.53	3,097.31	-74.40	1.91	-74.42	0.00	0.00	0.00	
3,200.00	4.30	178.53	3,197.03	-81.89	2.10	-81.92	0.00	0.00	0.00	
3,300.00	4.30	178.53	3,296.74	-89.39	2.29	-89.42	0.00	0.00	0.00	
3,400.00	4.30	178.53	3,396.46	-96.88	2.49	-96.91	0.00	0.00	0.00	
3,500.00	4.30	178.53	3,496.18	-104.38	2.68	-104.41	0.00	0.00	0.00	
3,600.00	4.30	178.53	3,595.90	-111.87	2.87	-111.91	0.00	0.00	0.00	
3,700.00	4.30	178.53	3,695.62	-119.37	3.06	-119.41	0.00	0.00	0.00	
3,800.00	4.30	178.53	3,795.34	-126.86	3.26	-126.91	0.00	0.00	0.00	
3,900.00	4.30	178.53	3,895.06	-134.36	3.45	-134.40	0.00	0.00	0.00	
4,000.00	4.30	178.53	3,994.77	-141.85	3.64	-141.90	0.00	0.00	0.00	
4,100.00	4.30	178.53	4,094.49	-149.35	3.83	-149.40	0.00	0.00	0.00	
4,200.00	4.30	178.53	4,194.21	-156.85	4.02	-156.90	0.00	0.00	0.00	
4,300.00	4.30	178.53	4,293.93	-164.34	4.22	-164.39	0.00	0.00	0.00	
4,400.00	4.30	178.53	4,393.65	-171.84	4.41	-171.89	0.00	0.00	0.00	
4,500.00	4.30	178.53	4,493.37	-179.33	4.60	-179.39	0.00	0.00	0.00	
4,600.00	4.30	178.53	4,593.08	-186.83	4.79	-186.89	0.00	0.00	0.00	
4,700.00	4.30	178.53	4,692.80	-194.32	4.99	-194.39	0.00	0.00	0.00	
4,800.00	4.30	178.53	4,792.52	-201.82	5.18	-201.88	0.00	0.00	0.00	
4,900.00	4.30	178.53	4,892.24	-209.31	5.37	-209.38	0.00	0.00	0.00	
5,000.00	4.30	178.53	4,991.96	-216.81	5.56	-216.88	0.00	0.00	0.00	

# Planning Report

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Well:	Peaches 19 Fed 3H	Survey/Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Design #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,100.00	4.30	178.53	5,091.68	-224.30	5.76	-224.38	0.00	0.00	0.00	
5,200.00	4.30	178.53	5,191.40	-231.80	5.95	-231.88	0.00	0.00	0.00	
5,300.00	4.30	178.53	5,291.11	-239.29	6.14	-239.37	0.00	0.00	0.00	
5,400.00	4.30	178.53	5,390.83	-246.79	6.33	-246.87	0.00	0.00	0.00	
5,500.00	4.30	178.53	5,490.55	-254.29	6.53	-254.37	0.00	0.00	0.00	
5,600.00	4.30	178.53	5,590.27	-261.78	6.72	-261.87	0.00	0.00	0.00	
5,700.00	4.30	178.53	5,689.99	-269.28	6.91	-269.36	0.00	0.00	0.00	
5,800.00	4.30	178.53	5,789.71	-276.77	7.10	-276.86	0.00	0.00	0.00	
5,900.00	4.30	178.53	5,889.43	-284.27	7.29	-284.36	0.00	0.00	0.00	
6,000.00	4.30	178.53	5,989.14	-291.76	7.49	-291.86	0.00	0.00	0.00	
6,100.00	4.30	178.53	6,088.86	-299.26	7.68	-299.36	0.00	0.00	0.00	
6,200.00	4.30	178.53	6,188.58	-306.75	7.87	-306.85	0.00	0.00	0.00	
6,300.00	4.30	178.53	6,288.30	-314.25	8.06	-314.35	0.00	0.00	0.00	
6,400.00	4.30	178.53	6,388.02	-321.74	8.26	-321.85	0.00	0.00	0.00	
6,500.00	4.30	178.53	6,487.74	-329.24	8.45	-329.35	0.00	0.00	0.00	
6,600.00	4.30	178.53	6,587.46	-336.73	8.64	-336.85	0.00	0.00	0.00	
6,700.00	4.30	178.53	6,687.17	-344.23	8.83	-344.34	0.00	0.00	0.00	
6,800.00	4.30	178.53	6,786.89	-351.73	9.03	-351.84	0.00	0.00	0.00	
6,900.00	4.30	178.53	6,886.61	-359.22	9.22	-359.34	0.00	0.00	0.00	
7,004.08	4.30	178.53	6,990.40	-367.02	9.42	-367.14	0.00	0.00	0.00	
Start DLS 8:00 TFO 179.90										
7,050.00	0.63	177.95	7,036.27	-368.99	9.47	-369.12	8.00	-8.00	-1.26	
7,100.00	3.37	358.75	7,086.24	-367.80	9.45	-367.92	8.00	5.49	-358.39	
7,150.00	7.37	358.69	7,136.01	-363.12	9.34	-363.24	8.00	8.00	-0.14	
7,200.00	11.37	358.67	7,185.34	-354.98	9.16	-355.09	8.00	8.00	-0.04	
7,250.00	15.37	358.66	7,233.97	-343.42	8.88	-343.53	8.00	8.00	-0.02	
7,300.00	19.37	358.65	7,281.68	-328.50	8.53	-328.61	8.00	8.00	-0.01	
7,350.00	23.37	358.65	7,328.23	-310.28	8.10	-310.39	8.00	8.00	-0.01	
7,400.00	27.37	358.64	7,373.40	-288.87	7.60	-288.97	8.00	8.00	-0.01	
7,450.00	31.37	358.64	7,416.96	-264.35	7.02	-264.45	8.00	8.00	0.00	
7,500.00	35.37	358.64	7,458.71	-236.86	6.36	-236.95	8.00	8.00	0.00	
7,550.00	39.37	358.64	7,498.44	-206.53	5.64	-206.60	8.00	8.00	0.00	
7,600.00	43.37	358.64	7,535.95	-173.49	4.86	-173.56	8.00	8.00	0.00	
7,650.00	47.37	358.64	7,571.07	-137.93	4.01	-137.98	8.00	8.00	0.00	
7,700.00	51.37	358.63	7,603.62	-100.00	3.10	-100.04	8.00	8.00	0.00	
7,750.00	55.37	358.63	7,633.44	-59.89	2.15	-59.92	8.00	8.00	0.00	
7,800.00	59.37	358.63	7,660.39	-17.80	1.14	-17.82	8.00	8.00	0.00	
7,850.00	63.37	358.63	7,684.34	26.07	0.10	26.06	8.00	8.00	0.00	
7,900.00	67.37	358.63	7,705.17	71.50	-0.99	71.50	8.00	8.00	0.00	
7,950.00	71.37	358.63	7,722.78	118.27	-2.11	118.29	8.00	8.00	0.00	
8,000.00	75.37	358.63	7,737.09	166.16	-3.25	166.19	8.00	8.00	0.00	
8,050.00	79.37	358.63	7,748.01	214.92	-4.42	214.97	8.00	8.00	0.00	
8,100.00	83.37	358.63	7,755.51	264.33	-5.60	264.39	8.00	8.00	0.00	
8,150.00	87.37	358.63	7,759.54	314.15	-6.79	314.22	8.00	8.00	0.00	
8,182.83	90.00	358.63	7,760.30	346.96	-7.58	347.04	8.00	8.00	0.00	
Start 4027.76 hold at 8182.83 MD										
8,200.00	90.00	358.63	7,760.30	364.12	-7.99	364.21	0.00	0.00	0.00	
8,300.00	90.00	358.63	7,760.30	464.09	-10.38	464.21	0.00	0.00	0.00	
8,400.00	90.00	358.63	7,760.30	564.06	-12.77	564.21	0.00	0.00	0.00	
8,500.00	90.00	358.63	7,760.30	664.03	-15.17	664.21	0.00	0.00	0.00	
8,600.00	90.00	358.63	7,760.30	764.00	-17.56	764.21	0.00	0.00	0.00	
8,700.00	90.00	358.63	7,760.30	863.98	-19.95	864.21	0.00	0.00	0.00	
8,800.00	90.00	358.63	7,760.30	963.95	-22.35	964.21	0.00	0.00	0.00	
8,900.00	90.00	358.63	7,760.30	1,063.92	-24.74	1,064.21	0.00	0.00	0.00	

# Planning Report

Database:	Midland District	Local Co-ordinate Reference:	Well Peaches 19 Fed 3H
Company:	OXY	TVD Reference:	KB @ 3195.30usft (H&P 474)
Project:	Eddy County NM (NAD 27-NME)	MD Reference:	KB @ 3195.30usft (H&P 474)
Site:	Peaches 19 Fed 3H	North Reference:	Grid
Well:	Peaches 19 Fed 3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Design #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,000.00	90.00	358.63	7,760.30	1,163.89	-27.13	1,164.21	0.00	0.00	0.00
9,100.00	90.00	358.63	7,760.30	1,263.86	-29.53	1,264.21	0.00	0.00	0.00
9,200.00	90.00	358.63	7,760.30	1,363.83	-31.92	1,364.21	0.00	0.00	0.00
9,300.00	90.00	358.63	7,760.30	1,463.80	-34.32	1,464.21	0.00	0.00	0.00
9,400.00	90.00	358.63	7,760.30	1,563.78	-36.71	1,564.21	0.00	0.00	0.00
9,500.00	90.00	358.63	7,760.30	1,663.75	-39.10	1,664.21	0.00	0.00	0.00
9,600.00	90.00	358.63	7,760.30	1,763.72	-41.50	1,764.21	0.00	0.00	0.00
9,700.00	90.00	358.63	7,760.30	1,863.69	-43.89	1,864.21	0.00	0.00	0.00
9,800.00	90.00	358.63	7,760.30	1,963.66	-46.28	1,964.21	0.00	0.00	0.00
9,900.00	90.00	358.63	7,760.30	2,063.63	-48.68	2,064.21	0.00	0.00	0.00
10,000.00	90.00	358.63	7,760.30	2,163.60	-51.07	2,164.21	0.00	0.00	0.00
10,100.00	90.00	358.63	7,760.30	2,263.58	-53.46	2,264.21	0.00	0.00	0.00
10,200.00	90.00	358.63	7,760.30	2,363.55	-55.86	2,364.21	0.00	0.00	0.00
10,300.00	90.00	358.63	7,760.30	2,463.52	-58.25	2,464.21	0.00	0.00	0.00
10,400.00	90.00	358.63	7,760.30	2,563.49	-60.64	2,564.21	0.00	0.00	0.00
10,500.00	90.00	358.63	7,760.30	2,663.46	-63.04	2,664.21	0.00	0.00	0.00
10,600.00	90.00	358.63	7,760.30	2,763.43	-65.43	2,764.21	0.00	0.00	0.00
10,700.00	90.00	358.63	7,760.30	2,863.40	-67.82	2,864.21	0.00	0.00	0.00
10,800.00	90.00	358.63	7,760.30	2,963.37	-70.22	2,964.21	0.00	0.00	0.00
10,900.00	90.00	358.63	7,760.30	3,063.35	-72.61	3,064.21	0.00	0.00	0.00
11,000.00	90.00	358.63	7,760.30	3,163.32	-75.00	3,164.21	0.00	0.00	0.00
11,100.00	90.00	358.63	7,760.30	3,263.29	-77.40	3,264.21	0.00	0.00	0.00
11,200.00	90.00	358.63	7,760.30	3,363.26	-79.79	3,364.21	0.00	0.00	0.00
11,300.00	90.00	358.63	7,760.30	3,463.23	-82.19	3,464.21	0.00	0.00	0.00
11,400.00	90.00	358.63	7,760.30	3,563.20	-84.58	3,564.21	0.00	0.00	0.00
11,500.00	90.00	358.63	7,760.30	3,663.17	-86.97	3,664.21	0.00	0.00	0.00
11,600.00	90.00	358.63	7,760.30	3,763.15	-89.37	3,764.21	0.00	0.00	0.00
11,700.00	90.00	358.63	7,760.30	3,863.12	-91.76	3,864.21	0.00	0.00	0.00
11,800.00	90.00	358.63	7,760.30	3,963.09	-94.15	3,964.21	0.00	0.00	0.00
11,900.00	90.00	358.63	7,760.30	4,063.06	-96.55	4,064.21	0.00	0.00	0.00
12,000.00	90.00	358.63	7,760.30	4,163.03	-98.94	4,164.21	0.00	0.00	0.00
12,060.58	90.00	358.63	7,760.30	4,223.59	-100.39	4,224.79	0.00	0.00	0.00
HL Exit Point									
12,100.00	90.00	358.63	7,760.30	4,263.00	-101.33	4,264.21	0.00	0.00	0.00
12,200.00	90.00	358.63	7,760.30	4,362.97	-103.73	4,364.21	0.00	0.00	0.00
12,210.59	90.00	358.63	7,760.30	4,373.56	-103.98	4,374.80	0.00	0.00	0.00
TD at 12210.59									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Hit/miss target									
Shape									
P19F 3H BHL	0.00	0.00	7,760.30	4,373.56	-103.98	408,138.46	531,658.82	32° 7' 19.372 N	104° 13' 51.854 W
- plan hits target center									
- Point									

# Planning Report

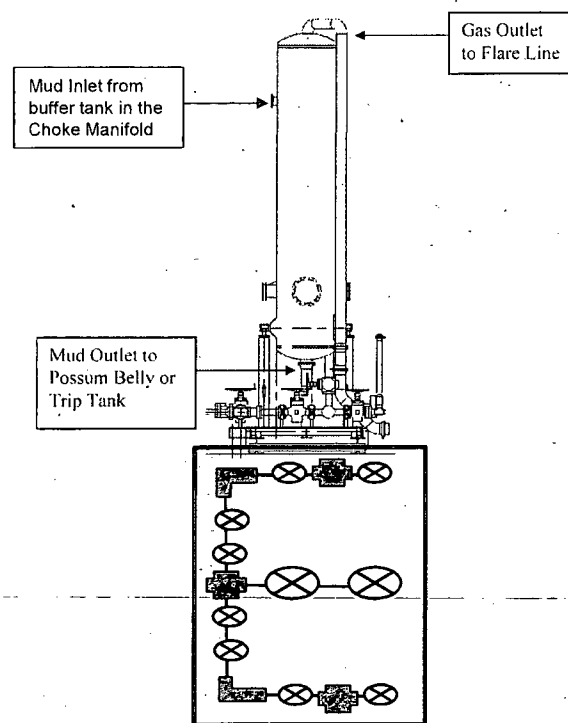
Database:	Midland District	Local Co-ordinate Reference:	Well Peaches 19 Fed 3H
Company:	OXY	TVD Reference:	KB @ 3195.30usft (H&P 474)
Project:	Eddy County NM (NAD 27 NME)	MD Reference:	KB @ 3195.30usft (H&P 474)
Site:	Peaches 19 Fed 3H	North Reference:	Grid
Well:	Peaches 19 Fed 3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Design #2		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
2,000.00	2,000.00	0.00	0.00	Start Build 2.00
2,215.00	2,214.80	-8.06	0.21	Start 4789.08 hold at 2215.00 MD
7,004.08	6,990.40	-367.02	9.42	Start DLS 8.00 TFO -179.90
8,182.83	7,760.30	346.96	-7.58	Start 4027.76 hold at 8182.83 MD
12,060.58	7,760.30	4,223.59	-100.39	HL Exit Point
12,210.59	7,760.30	4,373.56	-103.98	TD at 12210.59

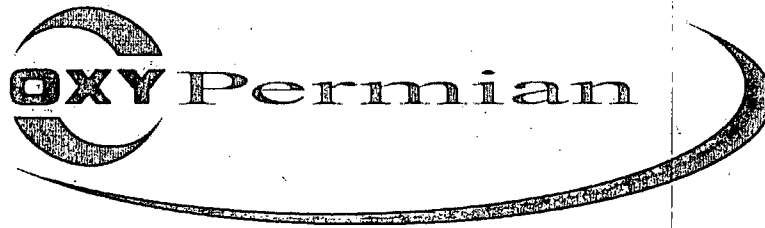
# Choke Manifold – Gas Separator

New Mexico – Canelson Drilling Rig

Choke Manifold – Gas Separator (Side View)







## **Permian Drilling Hydrogen Sulfide Drilling Operations Plan Peaches 19 Federal 3H**

Open drill site. No homes or buildings are near the proposed location.

### **1. Escape**

Personnel shall escape upwind of wellbore in the event of an emergency gas release. Escape can take place through the lease road on the NORTHWEST side of the location. Personnel need to move to a safe distance and block the entrance to location. If the primary route is not an option due to the wind direction, then a secondary egress route should be taken.





**OXY USA Inc.**  
**Peaches 19 Federal**

**Casing Design Assumptions:**

**Burst Loads**

**CSG Test (Surface)**

- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from section TD to surface

**CSG Test (Intermediate)**

- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from the Intermediate hole TD to Surface CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

**CSG Test (Production)**

- Internal: Fresh water displacement fluid + 80% CSG Burst rating
- External: Pore Pressure from the well TD the Intermediate CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

**Gas Kick (Surface/Intermediate)**

- Internal: Gas Kick based on Pore Pressure or Fracture Gradient @ CSG shoe with a gas 0.115psi/ft Gas gradient to surface while drilling the next hole section (e.g. Gas Kick while drilling the production hole section is a burst load used to design the intermediate CSG)
- External: Pore Pressure from section TD to previous CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

**Stimulation (Production)**

- Internal: Displacement fluid + Max Frac treating pressure (not to exceed 80% CSG Burst rating)
- External: Pore Pressure from the well TD to the Intermediate CSG shoe and 8.5 ppg MWE to surface

**Collapse Loads**

**Lost Circulation (Surface/Intermediate)**

- Internal: Losses experienced while drilling the next hole section (e.g. losses while drilling the production hole section are used as a collapse load to design the intermediate CSG). After losses there will be a column of mud inside the CSG with an equivalent weight to the Pore Pressure of the lost circulation zone
- External: MW of the drilling mud that was in the hole when the CSG was run

**Cementing (Surface/Intermediate/Production)**

- Internal: Displacement Fluid
- External: Cement Slurries to TOC, MW to surface

**Full Evacuation (Production)**

- Internal: Atmospheric Pressure
- External: MW of the drilling mud that was in the hole when the CSG was run

**Tension Loads**

**Running CSG (Surface/Intermediate/Production)**

- Axial load of the buoyant weight of the string plus either 100 klb over-pull or string weight in air, whichever is less

**Green Cement (Surface/Intermediate/Production)**

- Axial load of the buoyant weight of the string plus the cement plug bump pressure (Final displacement pressure + 500 psi )

Burst, Collapse and Tensile SF are calculated using Landmark's Stress Check (Casing Design) software.

## PECOS DISTRICT CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>OXY USA Inc.</b>
<b>LEASE NO.:</b>	<b>NMNM-109756</b>
<b>WELL NAME &amp; NO.:</b>	<b>Peaches 19 Federal 3H</b>
<b>SURFACE HOLE FOOTAGE:</b>	<b>0730' FSL &amp; 1980' FWL</b>
<b>BOTTOM HOLE FOOTAGE:</b>	<b>0180' FNL &amp; 1980' FWL</b>
<b>LOCATION:</b>	<b>Section 19, T. 25 S., R 27 E., NMPM</b>
<b>COUNTY:</b>	<b>Eddy County, New Mexico</b>

### **A. DRILLING OPERATIONS REQUIREMENTS**

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. Operator has stated that they will have monitoring equipment in place prior to drilling out of the surface shoe. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The top and bottom of Salt are to be recorded on the Completion Report.**

## **B. CASING**

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

### **Medium Cave/Karst**

**Possible water flows in the Castile.**

**Possible lost circulation in the Salado and Delaware.**

1. The **10-3/4** inch surface casing shall be set at approximately **350** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

**Formation below the 10-3/4 inch shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.**

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing, which shall be set at approximately **1900** feet, is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

**If cement does not circulate to surface on the intermediate casing, the cement on the production casing must come to surface.**

**Formation below the 7-5/8 inch shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.**

3. The minimum required fill of cement behind the **5-1/2 X 4-1/2** inch production casing is:

☒ Cement as proposed by operator. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

### **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.**
  - a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
  - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
  - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
  - d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
  - e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

**5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
  - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock with a corresponding chart (i.e. two hour clock-two hour chart, one hour clock-one hour chart).
  - d. The results of the test shall be reported to the appropriate BLM office.
  - e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
  - f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.



#### **E. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on location during fracturing operations or any other crew-intensive operations.

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