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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 182650

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

1. Operator Name and Address	2. OGRID Number
OCCIDENTAL PERMIAN LTD PO Box 4294 Houston, TX 77210	157984
	3. API Number 30-015-42153
4. Property Code 309599	5. Property Name POOH 27 STATE
	6. Well No. 003

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
G	27	17S	28E		1731	N	1510	E	EDDY

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
G	27	17S	28E	G	1731	N	1510	E	Eddy

9. Pool Information

ARTESIA; GLORIETA-YESO (O)	96830

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3608
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	5200	Yeso		9/6/2014
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	11	8.625	24	400	210	0
Prod	7.875	5.5	17	5200	910	0

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	3000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☐ if applicable.

Signature: Jennifer Duarte

Printed Name: Jennifer Duarte

Title: Regulatory Specialist

Email Address: Jennifer_duarte@oxy.com

Date: 3-6-14 Phone: 713-513-6640

OIL CONSERVATION DIVISION

Approved By: T. C. Shepard

Title: "Geologist"

Approved Date: 3-13-2014 Expiration Date: 3-13-2016

Conditions of Approval Attached

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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
MAR 07 2014
NMOCD ARTESIA

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease- 4 Copies
Fee Lease- 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-42153	96830	ARTESIA; GLORIETA-YESO

Property Code	Property Name	Well Number
38785	POOH "27" STATE	3

OGRID No.	Operator Name	Elevation
157984	Occidental Permian LTD	3608.3'

Surface Location

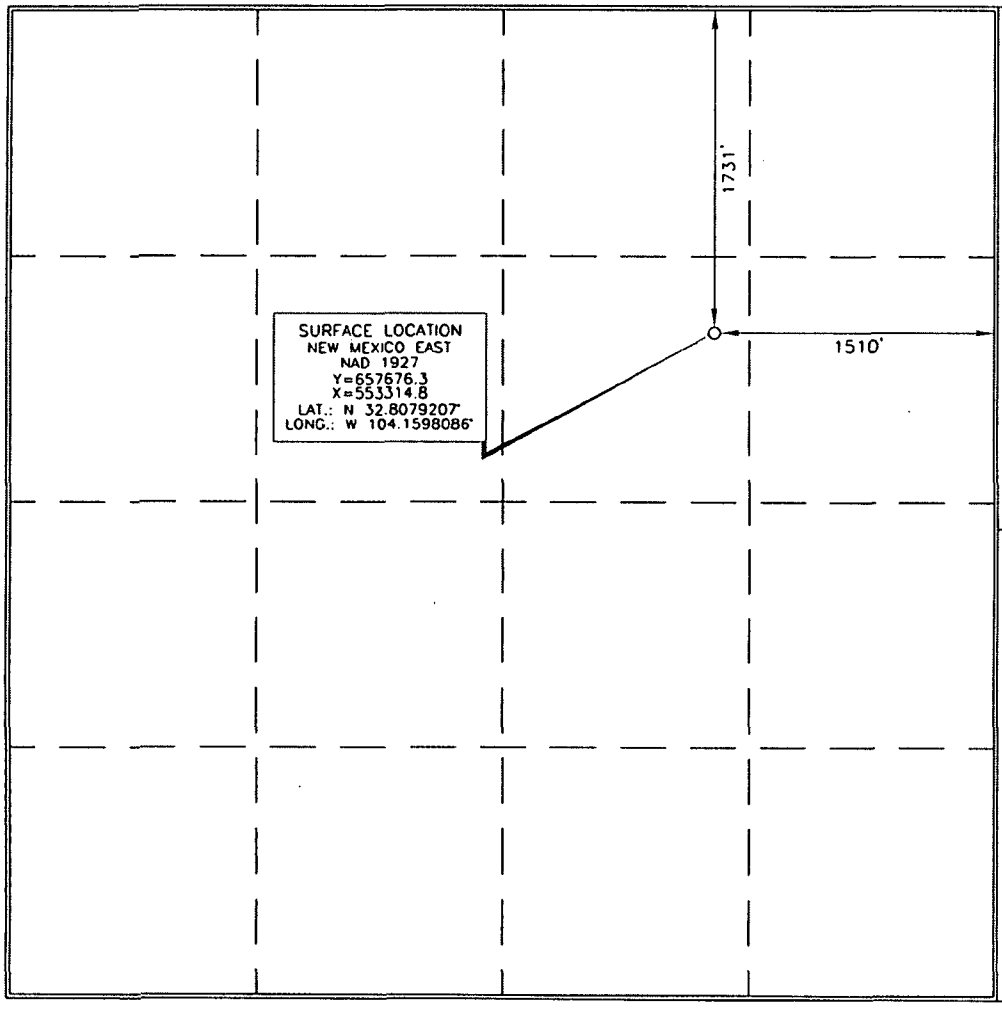
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	27	17 SOUTH	28 EAST, N.M.P.M.		1731'	NORTH	1510'	EAST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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.



OPERATOR CERTIFICATION

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.

Signature 3/6/14
Date

Jennifer Duarte
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.

MAY 26, 2011
Date of Survey

Signature and Seal of Professional Surveyor:

NEW MEXICO
15079
REGISTERED PROFESSIONAL LAND SURVEYOR
GARY L. JONES

3/27/2012

Certificate Number 15079

WO# 110526WL-1 (Rev. C) (KA)

APD Data

OPERATOR NAME / NUMBER: Occidental Permian LTD OGRID: 157984

LEASE NAME / NUMBER: Pooh 27 State 3

STATE: NM **COUNTY:** Eddy

SURFACE LOCATION: 1731' FNL & 1510' FEL, Sec 27, T17S, R28E

APPROX GR ELEV: 3608.3'

EST KB ELEV: 3622.3' (14' KB-GL)

1. GEOLOGIC NAME OF SURFACE FORMATION

a. Permian

2. ESTIMATED TOPS OF GEOLOGICAL MARKERS & DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS

Formation Name	Top TVD	Expected Fluids
Yates	520	-
Seven Rivers	712	-
Queen	1310	-
Grayburg	1725	Oil
San Andres	2005	Oil/Water
Glorieta	3430	Oil
Paddock	3510	Oil
Blinebry	3995	Oil
Tubb	5040	Oil
TD	**5200**	TD

A. Fresh Water formation is outcropping and will be covered with the 16" conductor pipe, which will be set at 80' prior to spud.

GREATEST PROJECTED TD: 5200' MD / TVD **OBJECTIVE:** Yeso

3. CASING PROGRAM

Surface Casing set at ± 400' MD/ 400' TVD in a 11" hole filled with 8.8 ppg mud

Interval (MD)	OD (in)	Wt (ppf)	Grade	Conn	ID (in)	Condition	Jt Str (M-lbs)	Burst (psi)	Collapse (psi)	**Burst SF**	**Coll SF**	**Ten SF**
0'- 400'	8.625	24	J55	LTC	8.097	New	244	2950	1370	1.42	10.42	2.26

Production Casing set at ± 5200'MD / TVD in a 7.875" hole filled 9.6 ppg mud

Interval (MD)	OD (in)	Wt (ppf)	Grade	Conn	ID (in)	Condition	Jt Str (M-lbs)	Burst (psi)	Collapse (psi)	**Burst SF**	**Coll SF**	**Ten SF**
0'- 5200'	5.5	17	L80	BTC	4.892	New	428	7740	6290	1.28	2.33	2.26

Casing Design Assumptions:

Burst Loads

CSG Test (Surface)

- Internal: Displacement fluid + one-third of its burst rating
- External: Pore Pressure from section TD to surface

CSG Test (Production)

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

Gas Kick (Surface)

- 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
- 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 surface CSG shoe and 8.5 ppg MWE to surface

Collapse Loads

Lost Circulation (Surface)

- 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 surface 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/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/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/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.

4. CEMENT PROGRAM:

Surface Interval

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft^3/sk	24 Hr Comp
Lead: 0' – 400' (150% Excess)	210	400	Premium Plus Cement: 2% Calcium Chloride – Flake	6.39	14.8	1.34	1648 psi

Production Interval

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft^3/sk	24 Hr Comp
Lead: 0' – 3000' (100% Excess)	410	3000	Econocem (TM) System: 0.25 lbm D-AIR 5000	13.88	11.9	2.43	258 psi
Tail: 3000' - 5200' (100% Excess)	500	2200	Premium Plus Cement: 0.5% Halad ®-344, 0.2% WellLife 734, 5 lbm Microbond, 0.3% Econolite, 0.3% CFR-3	7.72	14.2	1.55	1697 psi

Description of Cement Additives: Calcium Chloride – Flake (Accelerator), D-AIR 5000 (Defoamer), Halad ®-344 (Low Fluid Loss Control), WellLife 734 (Cement Enhancer), Microbond (Expander), Econolite (Light Weight Additive), CFR-3 (Dispersant)

The volumes indicated above may be revised depending on if a caliper measurement.

5. DIRECTIONAL PLAN

Vertical well: No directional plan

6. PRESSURE CONTROL EQUIPMENT

Surface: 0' – 400' None.

Production: 400' MD/TVD – 5200' MD / TVD The minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required to drill below the surface casing shoe shall be 3000 (3M) psi. Operator will be using an 11" 3M two ram stack with 3M annular preventer, & 3M Choke Manifold.

a. The 11" 3000 psi blowout prevention equipment will be installed and operational after setting the 8 5/8" surface casing and the 8 5/8" SOW x 11" 3K conventional wellhead; the rotating head body will be installed but the rubber will be installed when it becomes operationally necessary. The BOP and ancillary BOPE will be tested by a third party after setting surface casing. All equipment will be tested to 250/3000 psi for 10 minutes and charted, except the annular, which will be tested to 70% of working pressure.
b. The surface casing string will be tested to one-third of its burst rating for 30 minutes.
c. The BOPE test will be repeated within 21 days of the original test, on the first trip.
d. Other accessory BOP equipment will include a floor safety valve, choke lines, and choke manifold having a 3000 psi working pressure rating and tested to 3000 psi.
e. The Operator also requests a variance to connect the BOP choke outlet to the choke manifold using a 3" co-flex hose with a working pressure of 3000 psi.
f. BOP & Choke manifold diagrams attached.

7. MUD PROGRAM:

Depth	Mud Wt ppg	Vis Sec	Fluid Loss	Type System
0' – 400'	8.4 – 8.8	32 – 34	NC	Fresh Water / Spud Mud
400' – 4700'	9.6 – 10	28 – 32	NC	Brine Water / Salt Gel / Sweeps
4700' – TD	9.6 – 10	40 – 45	< 15	Brine Water / Salt Gel / Sweeps

Remarks: Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

8. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT

A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.

9. POTENTIAL HAZARDS:

a. Hydrogen Sulfide detection/ breathing equipment will be in operation and on location from drilling out the surface casing shoe until the production casing has been cemented.
b. No abnormal temperatures or pressures are anticipated. The highest anticipated pressure gradient is 0.5 psi/ft. Maximum anticipated bottom hole pressure is between 2000 - 2750 psi.
c. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

10. WIRELINE LOGGING / MUD LOGGING / LWD

a. OH logs: Spectral GR/Density/Neutron/PEF/Caliper/Laterolog from 2,000' to TD
b. Mud logging from 2000' to TD

COMPANY PERSONNEL:

Name	Title	Office Phone	Mobile Phone
Kacie Cruz	Drilling Engineer	(713)350-4889	(281) 433-6594
Sebastian Millan	Drilling Engineer Supervisor	(713)350-4950	(832) 528-3268
Roger Allen	Drilling Superintendent	(713)215-7617	(281) 682-3919
Oscar Quintero	Drilling Manager	(713)985-6343	(713) 689-4946

Permit Conditions of Approval

API: 30-015-42153

OCD Reviewer	Condition
CSHAPARD	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string