

District I  
625 N. French Dr., Hobbs, NM 88240  
District II  
301 W. Grand Avenue, Artesia, NM 88210  
District III  
000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
220 S. St. Francis Dr., Santa Fe, NM 87505

Energy, Minerals & Natural Resources

HOBBS OCD

June 16, 2008

Oil Conservation Division  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505  
NOV 08 2012

Submit to appropriate District Office

☒ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address Occidental Permian Ltd. P.O. Box 4294, Houston, TX 77210-4294		<sup>2</sup> OGRID Number 157984
<sup>4</sup> Property Code 19520	<sup>5</sup> Property Name North Hobbs G/SA Unit	<sup>3</sup> API Number 30-025-40859
<sup>9</sup> Proposed Pool 1 Hobbs; Grayburg - San Andres		<sup>10</sup> Proposed Pool 2

Surface Location

UL or lot no	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
H	19	18-S	38-E		2361	North	1064	East	Lea

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
P	19	18-S	38-E		1201	South	1167	East	Lea

Additional Well Location

<sup>11</sup> Work Type Code New Well	<sup>12</sup> Well Type Code I	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code P	<sup>15</sup> Ground Level Elevation 3581.1'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 4500' TVD/5000' TMD	<sup>18</sup> Formation San Andres	<sup>19</sup> Contractor Savanna 413	<sup>20</sup> Spud Date January, 2013

<sup>1</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
12-1/4	9-5/8	36	1600	630	Surface
8-3/4	7	26	5000	770	Surface

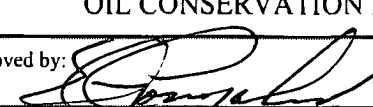
<sup>2</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Permit Expires 2 Years From Approval  
Date Unless Drilling Underway

See Attached

<sup>3</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief

Signature: Mark Stephens  
Printed name: Mark Stephens  
Title: Regulatory Compliance Analyst  
E-mail Address: Mark.Stephens@oxy.com  
Date: 11/7/12 Phone: (713) 366-5158

OIL CONSERVATION DIVISION	
Approved by: 	
Title: Dist. MGR	
Approval Date: 11-13-2012	Expiration Date: 11-13-2014
Conditions of Approval Attached <input type="checkbox"/>	

NOV 14 2012

# APD DATA – DRILLING PLAN

**OPERATOR NAME / NUMBER:** Occidental Permian Ltd. (157984)

**LEASE NAME / NUMBER:** North Hobbs G/SA Unit No. 945

**STATE:** NM                      **COUNTY:** Lea

**SURFACE LOCATION:**                      2361' FNL & 1064' FEL, UL H, Sec. 19, T-18-S, R-38-E

**SL:**              **Lat:**      32.7336154' N              **LONG:**    103.1822553' W  
                     **X:**              853967.8                      **Y:**              632523.0                      New Mexico East NAD 1927

**C-102 PLAT APPROX GR ELEV:** 3581.1'

**EST KB ELEV:** 3594.1' (13' KB)

**1. GEOLOGIC NAME OF SURFACE FORMATION**

a. Permian

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

Formation	TV Depth Top*	Expected Fluids
Base Red Beds	232	Fresh Water
Rustler	1533	Formation Fluid
Top of Salt	1635	Formation Fluid
Base of Salt	2710	Formation Fluid
Queen	3485	Formation Fluid
Grayburg	3815	Formation Fluid
Basal Grayburg	4005	Formation Fluid
San Andres	4105	Hydrocarbon
TD	4500	TD

\*Note: Depths are below GL.

A. Fresh Water formations will be covered with the 16" conductor pipe, which will be set at 53' prior to spud.

**GREATEST PROJECTED TD** 5000' MD / 4500' TVD              **OBJECTIVE:** San Andres

**3. CASING PROGRAM**

Surface Casing: 9.625", 36#, J-55, LT&C casing set at ± 1600' MD/ 1600' TVD in a 12.25" hole filled with 9.8 ppg mud

Long String Casing: 7", 26#, J-55, LT&C casing set at ± 5000' MD/ 4500' TVD in an 8.75" hole filled with 10.3 ppg mud

String	OD (in)	ID (in)	Coupling OD (in)	Drift (in)	Weight (#/ft)	Grade	CXN	Burst (psi)	Collapse (psi)	Tension (k-lbs)	Torque (ft-lbs)		
											Minimum	Optimum	Maximum
Conductor	16	15.25	17	14.5	65	H-40	Weld	1640	670	736	4390	4390	4390
Surface	9.625	8.921	10.625	8.765	36	J-55	LT&C	3520	2020	564	3400	4530	5660
Long-String	7	6.276	7.656	6.151	26	J-55	LT&C	4980	4320	415	2750	3670	4590

#### 4. CEMENT PROGRAM:

##### Surface Interval

Interval	Amount sks	Ft of Fill	Type	Gal/Sk	PPG	Ft <sup>3</sup> /sk	24 Hr Comp
<b>Surface (TOC: 0' – 1600')</b>							
<b>Lead:</b> 0' – 1172' 100% Excess	430	1172	Premium Plus Cement: 94 lbm/sk Premium Plus Cement 4 % Bentonite (Light Weight Additive) 1 % Calcium Chloride - Flake(Accelerator) 0.125 lbm/sk Poly-E-Flake (LC Additive) 2 lbm/sk Kol-Seal (LC Additive)	9.04	13.5	1.74	810 psi
<b>Tail:</b> 1172' – 1570' 100% Excess	200	397.5	Premium Plus Cement: 94 lbm/sk Premium Plus Cement, 1 % Calcium Chloride - Flake	6.36	14.8	1.34	2500 psi

##### Production Interval

Interval	Amount sks	Ft of Fill	Type	Gal/Sk	PPG	Ft <sup>3</sup> /sk	24 Hr Comp
<b>Long String (TOC: 0' – 5000')</b>							
<b>Stage 1</b> <b>Primary:</b> 3730'-4946' 85% Excess	270	1216	Premium Plus Cement 94 lbm/sk Premium Plus Cement 1 % LAP-1 (Low Fluid Loss Control) 0.4 % CFR-3 (Dispersant) 0.25 lbm/sk D-AIR 3000 (Defoamer) 0.2 % HR-800 (Retarder)	6.27	14.8	1.34	1180 psi
<b>Stage 2</b> <b>Lead:</b> 0' – 3378' 150 % Excess	400	3378	Interfill C 0.125 lbm/sk Poly-E-Flake (LC.) 3 lbm/sk Kol-Seal (LC Add.) 0.25 lbm/sk D-AIR 5000 (Defoamer)	13.77	11.9	2.46	470 psi
<b>Stage 2</b> <b>Tail:</b> 3378'-3730' 150 % Excess	100	352.5	Premium Plus Cement 94 lbm/sk Premium Plus Cement 0.125 lbm/sk Poly-E-Flake (LC)	6.32	14.8	1.33	1571

## 5. PRESSURE CONTROL EQUIPMENT

Surface: 0 – 1600' None.

**Production: 1600' - 4500' 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 (including annular).

Casing Size (in.)	Wellhead Flange		BOP Stack			Pressure Test (psi)			
	Size (in.)	Pressure (psi)	Type <sup>(1)</sup>	Size (in.)	Pressure (psi)	Initial		Subsequent	
						Rams	Ann	Rams	Ann
9- 5/8"	11"	3000	R, R, A, G	11"	5000	250/2300	250/2100	250/2300	250/2100

- The 11" 3000 psi blowout prevention equipment will be installed and operational after setting the 9-5/8" surface casing and the 9-5/8" SOW x 11" 3K wellhead.
- The BOP and auxiliary BOPE will be tested by a third party upon installation to the 9-5/8", 36#, J-55 surface casing. All equipment will be tested to 250/2300 psi for 10 minutes except the annular, which will be tested to 70% of working pressure (2100 psi).
- The pipe rams will be functionally tested during each 24 hour period; the blind rams will be functionally tested on each trip out of the hole. These functional tests will be documented on the Daily Driller's Log. Other accessory equipment (BOPE) will include a safety valve and subs as needed to fit all drill strings, and a 2" kill line and 3" choke line having a 3000 psi WP rating.
- See attached BOP & Choke manifold diagrams.

## 6. MUD PROGRAM:

Depth TVD (ft)	Mud Weight (ppg)	Viscosity (sec/qt)	Fluid Loss (cc's)	pH	Mud System
0 – 1400	8.5 – 9.3	28 – 32	NC	<9.0	Freshwater / Sweeps
1400 - 1580	8.8 – 9.2	32 – 38	< 25	<9.0	FW – Native Mud
1580 – 4000	9.8 – 10.1	28 – 32	NC	10.0 – 11.0	Brine Water / Sweeps
4000 - 4500	10.0 – 10.3	34 - 40	<10	10.5 – 11.0	Salt Gel / Starch

Remarks: Pump high viscosity sweeps as needed for hole cleaning. 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.

## 7. 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.
- Hydrogen sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the REGULATORY AGENCIES.

## 8. LOGGING / CORING AND TESTING PROGRAM:

- Mud Logger: None.
- DST's: None.
- Open Hole Logs not planned on this well.

## **9. POTENTIAL HAZARDS:**

- A. H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6.
- B. The MASP will be 1254psi and BOP test (MASP + 500) will be 1754psi
- C. No abnormal temperatures or pressures are anticipated. 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. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS**

Road and location construction will begin after the NMOCD has approved the APD. Anticipated spud date will be as soon as possible after approval and as soon as a rig will be available. Move in operations and drilling is expected to take 10 days. If long-string casing is run, then an additional 30-45 days will be needed to complete the well and construct surface facilities and/or lay injection lines in order to put the well on injection. Injection will not commence until Form C-108 has been approved by the NMOCD.

## **11. COMPANY PERSONNEL:**

<b>Name</b>	<b>Title</b>	<b>Office Phone</b>
Florencia Rubio	Drilling Engineer	713-366-5322
Mike Tessari	Drilling Engineer Supervisor	713-840-3092
Chad Frazier	Drilling Superintendent	713- 215-7357
Javier Gonzalez	Drilling Manager	713-366-5530