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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-41520	53250	Atoka; Glorieta-Yeso

Property Code	Property Name	Well Number
301948	ROGERS "23" FEE	12

OGRID No.	Operator Name	Elevation
16696	OXY USA INC.	3308.8'

Surface Location

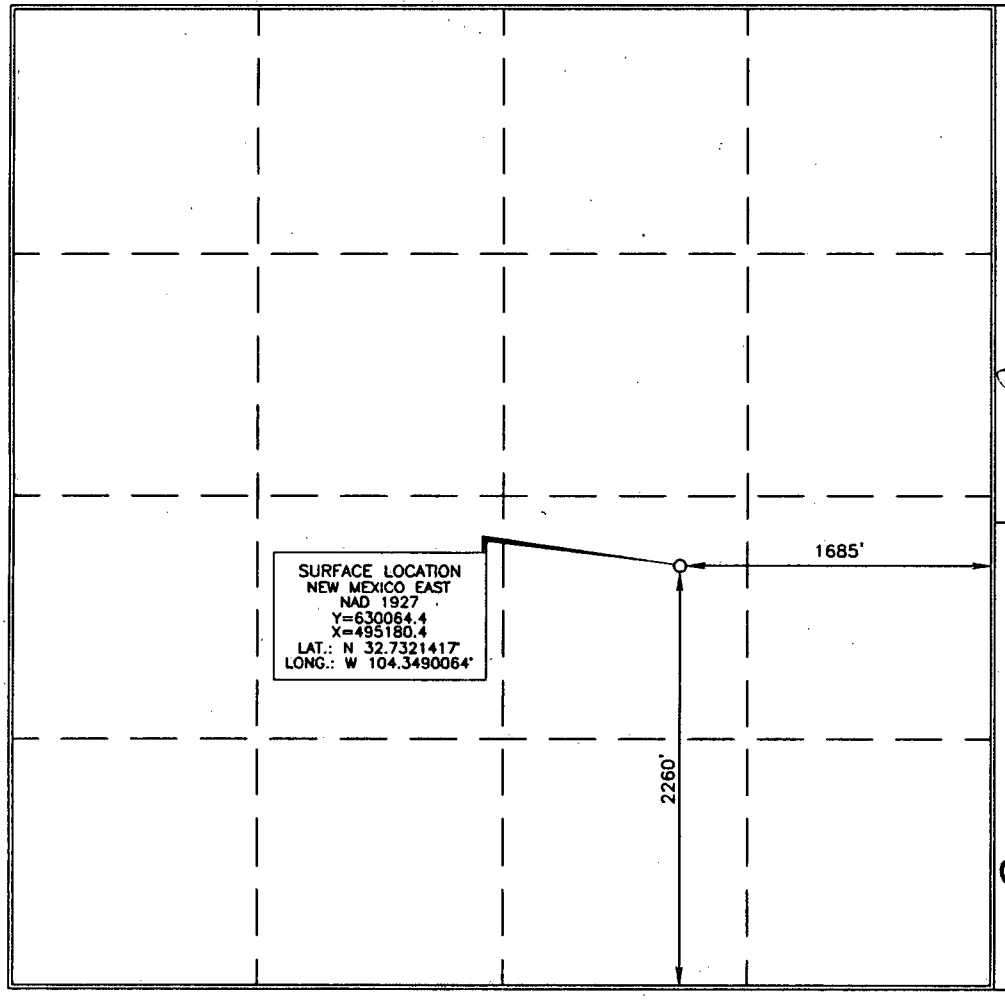
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	23	18 SOUTH	26 EAST, N.M.P.M.		2260'	SOUTH	1685'	EAST	EDDY

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 — Date: 7/5/13

Printed Name: Jennifer Duarte

E-mail Address: jennifer_duarte@oxy.com

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 14, 2013
Date of Survey

Signature and Seal of Professional Surveyor: JERRY J. ASEL, NEW MEXICO, 15079, PROFESSIONAL LAND SURVEYOR

Certificate Number 15079

WO# 130514WL-b (KA)

OXY USA Inc
Rogers 23 Fee #12
APD Data

OPERATOR NAME / NUMBER: OXY USA Inc 16696

LEASE NAME / NUMBER: Rogers 23 Fee #12 **Federal Lease No:**

STATE: NM **COUNTY:** Eddy

SURFACE LOCATION: 2260' FSL & 1685' FEL, Sec 23, T18S, R26E

APPROX GR ELEV: 3308.8'

EST KB ELEV: 3322.8' (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	TVD	Expected Fluids
T. Seven Rivers	200	-
T. Queen	400	None
T. Grayburg	830	None
T. San Andres	1124	-
T. Glorieta	2700	Oil
T. Yeso	2860	Oil
TD	4500	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: 4500' MD / 4500' TVD

OBJECTIVE: Yeso

3. **CASING PROGRAM**

Surface Casing ran in a 11 " hole filled with 8.4 ppg mud

Hole Size (in)	Interval (ft)	OD (in)	Wt (ppf)	Grade	Conn	ID (in)	Condition	Jt Str (M-lbs)	Burst (psi)	Collapse (psi)	**Burst SF**	**Coll SF**	**Ten SF**
11	400	8.625	24	J55	STC	8.097	New	244	2950	1370	1.42	10.42	2.26

Production Casing ran in a 7.875" hole filled with 9.6 ppg mud

Hole Size (in)	Interval (ft)	OD (in)	Wt (ppf)	Grade	Conn	ID (in)	Condition	Jt Str (M-lbs)	Burst (psi)	Collapse (psi)	**Burst SF**	**Coll SF**	**Ten SF**
7.875	4500	5.5	17	L80	BTC	4.892	New	338	7740	6290	1.25	2.69	2.05

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 (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
Surface (TOC: 0' – 400')							
Lead: 0' – 400' (165% Excess)	210	400	Premium Plus Cement: 1 % Calcium Chloride - Flake	6.36	14.8	1.34	1608 psi

Production Interval

Interval	Amount sx	Ft of Fill	Type	Gal/Sk	PPG	Ft^3/sk	24 Hr Comp
Production (TOC: 0' – 4500')							
Lead: 0' – 2700' (100 % Excess)	480	2700	Halliburton Light Premium Plus: 5% Salt, 3 lbm/sk Kol-Seal, 0.125 lb/sx Poly-E-Flake, 0.35% HR-800	9.69	12.9	1.87	660 psi
Tail: 2700' - 4500' (100 % Excess)	410	1800	Premium Plus Cement: 0.5% Halad ®-344, 0.2% WellLife 734, 5 lbm/sk Microbond, 0.3% Econolite, 0.3% CFR-3	7.72	14.2	1.55	1914 psi

Description of Cement Additives: Calcium Chloride – Flake (Accelerator), Kol-Seal (Lost Circulation Additive), Poly-E-Flake (Lost Circulation Additive), HR-800 (Retarder), Halad ®-344 (Low Fluid Loss Control), WellLife 734 (Cement Enhancer), Microbond (Expander), Econolite (Ligh 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 – 4500' 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.

b. The BOP and ancillary BOPE will be tested by a third party upon installation to the 8 5/8" 24# J-55 surface casing. All equipment will be tested to 250/3000 psi for 5 minutes and charted, except the annular, which will be tested to 70% of working pressure.

c. 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. Oxy requests that the system be tested at 3,000 psi.

d. The operator will use a co-flex line between the BOP and choke manifold when using specs equal or higher than the following ratings below. See attached schematic.
Size: 3" Ends: Flanges WP Rating: 3,000 psi
Anchors required by manufacturer: No

e. BOP & Choke manifold diagrams attached.

7. **MUD PROGRAM:**

Depth	Mud Wt ppg	Vis Sec	Fluid Loss	Type System
0' – 400'	8.4 – 8.8	27 – 38	NC	Fresh Water / Spud Mud
400' – TD	9.6 – 10.0	28 – 40	NC	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. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.

   b. 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.

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.
   b. No abnormal temperatures or pressures are anticipated. The highest anticipated pressure gradient is **0.5 psi/ft.** Maximum anticipated bottom hole pressure is **2250 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. **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 NMOCD approval and as soon as a rig will be available. Move in operations and drilling is expected to take 15 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

11. **WIRELINE LOGGING / MUD LOGGING / LWD**

   a. NO open hole wireline logging
   b. NO mud logging

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