,			OCD Arte	sia			13	-321
Form 3160-3 (March 2012)					FORM	APPROVED No. 1004-0137		
UNIT	ED				Expires (Detober 31, 201	4	-165
DEPARTMEN BUREAU OF	F OF THE INT	ERIOR			5. Lease Serial No. NMLC-0065729			6/1/201
APPLICATION FOR PE	ERMIT TO DR	ILL OR	REENTER		6. If Indian, Allotee	or Tribe Na	me	5/24/0-
la. Type of work: 🗹 DRILL	REENTER		<u></u>		7. If Unit or CA Agr	eement, Nam	e and No	
the Type of Wells 🔽 Oil Weil 🗖 Gas Well	Other	الحالة	de Zone 🗖 Multir	ale Zone	8. Lease Name and	Well No.	INIT #2	
2. Name of Operator OXY USA WTP LIMITED	PARTNERSHIP		19741	2 ->	9. API Well No.		<u></u>	
10 Addime D.O. DOX 4204	125	Phone No.	-11010.	5/	50-0	<u> 15 - 4</u>	157	<u>le</u>
HOUSTON, TX 77210	71	3-513-66	(<i>include area code)</i> 40		ARTESIA; GLORI	EXPloratory	> ८	968307
 Location of Well (Report location clearly and in a At surface 2344' FNL & 1944' FEL 	ecordance with any Sta	te requiremen	11s.*)		11. Sec., T. R. M. or F G; SEC 20, T17S,	3lk.and Surve R28E	y or Are	
At proposed prod. zone	.							
4. Distance in miles and direction from nearest town of 15 MILES EAST OF ARTESIA,NM	or post office*		- <u> </u>		12. County or Parish EDDY COUNTY, I	NM I	3. State NM	
5 Distance from proposed*	16	, No. of ac	res in lease	17. Spacin	ig Unit dedicated to this	well		
property or lease line, ft. (Also to nearest drig, unit line, if any)	80)		40				
 Distance from proposed location* to nearest well, drilling, completed, 428' applied for, on this lease, ft. 	19 51	Proposed 100' MD /	Depth 5100' TVD	20. BLM/ ESB000	BIA Bond No. on file			
1. Elevations (Show whether DF, KDB, RT, GL, et 3633.8' GL	e.) 22 0	. Approxim 7/10/2013	ate date work will sta s	rt*	23. Estimated duration	on		<u> </u>
The following, completed in accordance with the requir 1. Well plat certified by a registered surveyor. 2. A Drilling Plan. 3. A Surface like line (if the leasting is an National	ements of Onshore O	il and Gas C	 A. Bond to cover t ltem 20 above). 	ttached to the operation	is form: ons unless covered by a	niexisting bo	id on file	: (see
SUPO must be filed with the appropriate Forest Ser	vice Office).	us, me	 Such other site BLM. 	specific inf	ormation and/or plans a	is may be req	uired by	the
25. Signature		Name (Printed/Typed)		orte@ouru.com)	Date		
itle GIV MC SULWY		JEININ		u	ane@oxy.com	03/13/20		·
REGULATORY ANALYST	Donell	Name	Printed/Tynedi			Date		
			1			MAY	13	2013
itle FIELD MANAGER		Office	Ċ	ARLSB	AD FIELD OFFIC	Ê		
Application approval does not warrant or certify that t onduct operations thereon. Conditions of approval, if any, are attached.	he applicant holds le	gal or equit	able title to those righ	PPRO	bject lease which would /AL FOR TW	entitle the ap	plicant to RS	
itle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section tates any false, fictitious or fraudulent statements or r	1212, make it a crime epresentations as to a	for any peny matter w	rson knowingly and i thin its jurisdiction.	willfully to	make to any department	or agency of	the Uni	ted
				<u> </u>	·····			
(Continued on page 2)	<u> </u>				*(Ins	tructions	on pag	e 2)
(Continued on page 2)	-				*(Ins Approvat Subj & Specia	tructions ect to Ge I Stipulat	on pag neral f ions A	^{c 2)} Réquirements ttached
Roswell Controlled Water Basi	n d	M	nt be i	n Co.	Approvat Subj & Specia	ect to Ge I Stipulat	on pag neral f ions A	$c^{2})$ Requirements ttached
Roswell Controlled Water Basi	n IVED	Ma Ru	st be in	n Co, befi	*(Ins Approvat Subj & Specia Mpliance The place	itructions ect to Ge I Stipulat	on pag neral f ions A NN	c 2) Requirements ttached DOCA UCM
Roswell Controlled Water Basi	n IVED 6 2013	Ma Ru pu	st be in le 5.9 duction	n Co, befi	*(Ins Approvat Subj & Specia mpliance ne plac	ect to Ge I Stipulat	on pag neral f ions A WM	e 2) Requirements ttached POCA UCM
Roswell Controlled Water Basi RECE MAY 1	n IVED 6 2013	Ma Ru pri	st be in le 5.9 duction SEE AT	n Co, befi TACH	*(Ins Approvat Subj & Specia mpliance me place HED FOR	ect to Ge I Stipulat	on pag neral f ions A WM	c 2) Requirements ttached POCA UCA
Roswell Controlled Water Basi Rece MAY 1 NMOCD	n IVED 6 2013 ARTESIA	Ma Rus pri	st be in le 5.9 duction SEE AT CONDIT	n Co befi TACH TION	*(Ins Approvat Subj & Specia mpleance me plac IED FOR S OF APPR	ect to Ge I Stipulat	on pag neral f ions A WM WM	c 2) Requirements ttached IOCA II M

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District J. 1031 N. Freezish Lu, Hobba, KM 88240 Photics (355) 393-6161 Faz: (375) 393-0720 <u>District II</u> 811 S. Ferri St.; Astustin, NM 80210 Photms (375) 744-1203 Faz: (375) 746-8720 <u>District II</u> 7007 Kiki Branes Road, Azine, NM 8740 Photm: (305) 334-6178 Faz: (305) 334-6170 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505 Photm: (304) 476-3420 Faz: (305) 478-3420

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State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT



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.

			<u>۲</u>		OPERATOR CERTIFICATION
					Therefy certify that the information constituent herein is one and
	1				computers to the dest of my knowledge and balled and their this
	1	1			argunitation either owns a working internal or wolenced mineral
					intoina la the land inclusing the proposal boshisi kale kostian ar
	1	0/1	* *		has a right to drill this well of this location personnt to a contrast
		5	234		with an awner of such a mineral or working interest, or to a
		1 1	-		valuation pooling apresentation a computery pooling arder
	BOTTOM HOLE COLATION NEW MEXICO EAST NAD 1927 Y=652363.3 X=342433.1 LAT.: N 32.8208479 LONC: W 104.1951340				In Bioleart 3/13/13
	K			1970'	Jonniter Nuarte
					Printed Name
	$\frac{GRID}{1} \frac{AZ}{175.87} = \frac{351^{-}29^{-}48}{48}$			1944	Arcal Address
				-	
	SURFACE LOCATION NEW MEXICO EAST NAD 1927 Y=662180.4 X=542481.97 LAT: N 32.8203697 LONG: W 104.19505007			· 	SURVEYOR CERTIFICATION I hereby certification of the terminal terms in this plai was plotted from the second surveyor made by metry under any supervision and that the same is brack and correct to the best of my verify 15079 Date of Survey 1 Signature and Second WALLAND Signature and Second WALLAND
-					Certilicate Number 15079 Wolf 120726WL-g (Rev. A) (KA)

OPERATOR CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 15m day of January, 2013.

Name:Anthony D'Addieco
Position:Reservoir Management Team Leader
Address:5 Greenway Plaza, Suite 110, Houston, TX 77046

Position: Reser Address: ____5 Gre Telephone: ____713-350-4964_ E-mail: (optional): _____Anthony_DAddieco@oxy.com____ Company: _____Occidental Permian LP / OXY USA Inc / OXY USA WTP LP_____ Field Representative (if not above signatory): _____Dusty Weaver _____ Address (If different from above): P.O. Box 50250 Midland, TX 79710 Telephone (if different from above): _____432-685-5723_ E-mail (if different from above): _____calvin_weaver@oxy.com_____

United States Department of the Interior Bureau of Land Management Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220

RE: Artesia Yeso Federal Unit 25 Section 20, 17S-28E Eddy County, New Mexico

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

OPERATOR NAME:	OXY USA WTP Limited Partnership
ADDRESS:	P.O. Box 27570
	Houston, Texas 77227-9804

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

LEASE NO.:

NMLC-0065729 (80 Acres)

LEGAL DESCRIPTION:

SL: 2344' FNL & 1944' FEL SWNE (G) Section 20, T17S-R28E Eddy County, New Mexico

FORMATIONS:

Yeso

BOND COVERAGE:

BLM BOND FILE NO.:

ESB000226

Nationwide

OXY USA WTP Limited Partnership

AUTHORIZED SIGNATURE:

MW

Tiffany Pollock

TITLE:

DATE:

January 2, 2013

Land Negotiator

LOCATION VERIFICATION MAP



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VICINITY MAP



PROPOSED ROAD AND GO SOUTH FOR 27.6 FEET TO LOCATION.

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CK: \DRAFTING\Brian \2012 \Oxy USA Inc \12111976 Stoke Elect ROW

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ANOPEWS

OCD Artesia

New Mexico ddy & Lea Counties Oxy Wells with

Public Access Point Oxy WELL Interstate Highway US Highway State Highway

Artesia Yeso Federal Unit Wells Flowline Routing



4" SDR 7 polyethylene production flowline (oil, gas and produced water) to be laid on surface from all the Artesia Yeso Federal Unit Central Tank Battery. Operating pressure < 125 psig.

Artesia Yeso Federal Unit 15: 3,000ft Artesia Yeso Federal Unit 16: 1,200ft Artesia Yeso Federal Unit 17: 400ft Artesia Yeso Federal Unit 18: 2,250ft Artesia Yeso Federal Unit 19: 1,250ft Artesia Yeso Federal Unit 20: 2,250ft Artesia Yeso Federal Unit 21: 2,700ft Artesia Yeso Federal Unit 22: 2,500ft Artesia Yeso Federal Unit 23: 3,000ft Artesia Yeso Federal Unit 24: 3,350ft Artesia Yeso Federal Unit 25: 4,700ft Artesia Yeso Federal Unit 26: 4,150ft Artesia Yeso Federal Unit 27: 5,950ft Artesia Yeso Federal Unit 28: 6,000ft Artesia Yeso Federal Unit 29: 7,250ft Artesia Yeso Federal Unit 30: 7,650ft

APD DATA - DRILLING PLAN -

OPERATOR NAME / NUMBER: OXY USA WTP LP

LEASE NAME / NUMBER: Artesia Yeso Federal Unit 25

STATE: NM COUNTY: Eddy

SURFACE LOCATION: 2344' FNL & 1944' FEL, Sec 20, T 17S, R 28E SURFACE LOCATION: 2170' FNL & 1970' FEL, Sec 20, T 17S, R 28E

C-102 PLAT APPROX GR ELEV: 3633.8'

EST KB ELEV: 3647.8' (14' 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
Rustler	Surface	Fresh Water
	Outcropping	
Yates	410	-
Seven Rivers	604	-
Queen	1170	-
Grayburg	1640	Oil
San Andres	1749	Oil/Water
Glorietta	3350	Oil
Paddock	3440	Oil
Blinebry	3900	Oil
Tubb – Base of Yeso	4820	Oil
TD	5100	TD

- A. Based on the State Engineer Website, there no known nearby water wells drilled in the area.
- B. The 16" conductor pipe will be set at 80' prior to spud.

GREATEST PROJECTED TD 5100' MD / 5100' TVD OBJECTIVE: Yeso

3. CASING PROGRAM

Surface Casing: 8.625" casing set at \pm 400' MD/ 400' TVD in a 11" hole filled with 8.4 ppg mud

Interval	Length	Wt	Gr	Condition	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'- 400'	400'	24	J-55	New	ST&C	1370	2950	381	8.097	7.972	10.17	1.72	45.54

Production Casing: 5.5	" casing set at \pm 5100'MD	/ 5100'TVD in a 7.875" hole filled 9.6 ppg mud
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						Coll	Burst						
				Condition		Rating	Rating	Jt Str	ID	Drift	SF	SF	SF
Interval	Length	Wt	Gr	·	Cplg	(psi)	(psi)	(M-lbs)	(in)	(in)	Coll	Burst	Ten
0'- 5100'	5100'	17	L-80	New	LT&C	6290	7740	338	4.892	4.767	1.93	2.61	4.57

Collapse and burst loads calculated using Stress Check with actual anticipated loads.

4. CEMENT PROGRAM:

Surface Interval

Interval	Amount sx	Ft of Fill	Туре	Gal/Sk	PPG	Ft ³ /sk	24 Hr Comp
Surface (TOC:	0' - 400')						
Lead: 0' - 400' (125% Excess)	190	400'	Premium Plus Cement: 1 % Calcium Chloride - Flake	6.36	14.8	1.34	1608 psi

Production Interval

Interval	Amount sx	Ft of Fill	Туре	Gal/Sk	PPG	Ft ³ /sk	24 Hr Comp
Production (TO	DC: 0' - 5100'))					
Lead: 0' - 3200' (98 % Excess)	420	3200'	Interfill C: 0.4% HR-800, 0.25% D-AIR 5000	14.34	11.9	2.48	327 psi
·							·
Tail: 3200' – 5100' (98 % Excess)	440	1900'	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), HR-800 (Retarder), D-Air 5000 (Defoamer), Halad ®-344 (Low Fluid Loss Control), WellLife 734 (Cement Enhancer), Microbond (Expander), Econolite (Ligh Weight Additive), CFR-3 (Dispersant)

If a caliper log is run, cement volumes will be adjusted to caliper volume + 35% excess for the production hole.

5. PRESSURE CONTROL EQUIPMENT

Surface: 0 – 400' None.

Production: 0 - 5100' 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 10 minutes and charted, except the annular, which will be tested to 70% of working pressure. This is to be in compliance with the Onshore Order # 2 which states the BOPE shall be tested to 70 % of the yield of the casing when the BOP and casing are not isolated.
- 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. Oxy requests a variance if Savanna 415 is used to drill this well to use a co-flex line between the BOP and choke manifold. See attached schematic.

Manufacturer: <u>Hebei Ouya Ltd.</u> Serial Number: 1642343-04

Serial Number: 1042343-04

Length: <u>39</u>" Size: <u>3</u>" Ends: flanges

WP rating: 3000 psi Anchors required by manufacturer: No

e. See attached BOP & Choke manifold diagrams.

6. 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	28 - 40	10 - 20	Brine Water / Salt Gel

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.

A. 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. A Kelly cock will be in the drill string at all times.
- **b.** A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.

c. 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 BLM

8. LOGGING / CORING AND TESTING PROGRAM:

- A. Mud Logger: Log from 3000' to TD.
- B. DST's: None.
- C. Cased Hole Logs as follows: Gamma Ray / Neutron from surface casing to TD. See COA

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 bottomhole pressure is anticipated to be 2545 psi.
- C. No abnormal temperatures or pressures are anticipated. The highest anticipated pressure gradient is **0.50 psi/ft.** 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 BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM 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. COMPANY PERSONNEL:

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Name	Title	Office Phone
Anthony Tschacher	Drilling Engineer	713-985-6949
Sebastian Millan	Drilling Engineer Supervisor	713-350-4950
Roger Allen	Drilling Superintendent	713-215-7617
Douglas Chester	Drilling Manager	713-366-5194

Occidental Petroleum Corporation

Halliburton

Sperry Drilling Services

Project: Eddy County, NM Site: Artesia Yeso Federal Unit Well: Artesia Yeso Federal Unit #25 Wellbore: Wellbore #1 Plan: Plan #1 Rig: Savannah 415

US State Plane 1927 (Exact solution)							
	New M	exico East 3001					
Elevation:	GE 3633.8' +	KB 14' @ 3647.80ft	(Savannah 415)				
Northing	Easting	Latitude	Longitude				
662189.40	542481.10	32° 49' 13.331 N	104° 11' 42.180 W				

Surface Location:

		WELLBORE TA	ARGET DET	AILS (MAP C	O-ORDINA1	ES AND LA	T/LONG)		
Ta Ta I	Name urget 1 (AYFU 25) 3 urget 2 (AYFU 25) 3 PBHL (AYFU 25) 5	TVD +N/-S 000.00 113.50 300.00 153.50 100.00 173.90	+E/-W 0 -14.50 0 -25.20 0 -26.00	Northing 662302.90 662342.90 662363.30	Easting 542466.6 542455.9 542455.1	Latii 0 32° 49' 0 32° 49' 0 32° 49'	tude I 4.455 N 104° 4.851 N 104° 15.052 N 104°	ongitude 11' 42.348 W 11' 42.473 W 11' 42.482 W	Point Point
		· · ·		SECTION	DETAILS				
1000-	MD 0.00 2040.00 2302.12 2953.11 3007.45 3310.30 3569.84 5111.12	Inc Azi 0.00 0.00 0.00 0.00 7.86 352.98 7.86 345.02 7.86 345.02 7.86 345.02 0.17 49.55 0.17 49.55	TVD 0.00 2040.00 2301.30 2946.16 3000.00 3300.00 3558.73 5100.00	+N/-S 0.00 0.00 17.82 106.22 113.50 153.50 170.92 173.90	+E/-W 0.00 -2.20 -13.09 -14.50 -25.20 -29.50 -26.00	DLeg TF 0.00 (3.00 352 0.00 (2.00 -94 0.00 (3.00 178 0.00 (ace VSec 0.00 0.00 0.00 0.00 0.00 0.00 2.98 17:95 0.00 106:99 4.21 114.40 0.00 155:54 3.86 173.40 0.00 175.83	Annotation Start Build End Build Start Turn End Turn Start Drop End Drop TD	
	Star	t Build @ 2040.00' f	AD	To conv	ert a Magne	tic Direction	to a Grid Dire	ction, Add 7.	74°
		End Build @ 2302.	100: - 12' MD ° Incl		Magnetic Moc	lel: BGGM201 Azimuths to	2 Date: 1 Grid North	2-Mar-13	
True Vertical Depth (1000 ft/in) 0000 0000		Start Turn @ 2953 End Turn @ 3007 Hold 7.1 Target 1 (AYF Start Drop @ 3310. Drop 3.00°/ End Drop @ 3569.84 Hold 0.17°	L11' MD 10°/100' L45' MD 36° Incl 	-200 PBHL (AYFL arget 2 (AYFU Target 1 (AY	West(-)/East(+) (20() ft/in) 200 () 3569.84' MD Drop 3.00°/100' Start Drop @ 3 	400 310.30' MD aloid 7.86° Incl 3007.45' MD rm 2.00°/100' - 2953.11' MD aloid 7.86° Incl 2302.12' MB aloid 3.00°/100' - 400	-490 South(-)/North(+) (200 fVin)

Occidental Petroleum Corporation

Eddy County, NM Artesia Yeso Federal Unit Artesia Yeso Federal Unit #25

Wellbore #1

Plan: Plan #1

Sperry Drilling Services Standard Report

12 March, 2013

Well Coordinates: 662,189.40 N, 542,481.10 E (32° 49' 13.33" N; 104° 11' 42.18" W) Ground Level: 3,633.80 ft

Local Coordinate Origin: Viewing Datum: TVDs to System: North Reference: Unit System:

Centered on Well Artesia Yeso Federal Unit #25 GE 3633.8' + KB 14' @ 3647.80ft (Savannah 415) N Grid API - US Survey Feet

Version: 2003.16 Build: 431

HALLIBURTON

HALLIBURTON

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Occidental Petroleum Corporation

Eddy County, NM

Plan Report for Artesia Yeso Federal Unit #25 - Plan #1

Measured Depth In	clination	Azimuth	Vertical Depth	a +N∕-S	+E/-W	/ertical Section	Dôgleg Rate	
					(11) ಕ್ಷಾಮದಿಂದ ಕಾರ್ಯಗಳು ಜನಗಳ ಮತ್ತು ಸ್ವತ್ತಿ ಮಾಡಿದ್ದ ಸ	(III) A. M. Marine	(*/100m) ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	
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100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	• 0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	
600.00	, 0.00	0.00	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	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	
1,100.00	0.00	0.00	1,100.00	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	
1,300.00	0.00	0.00	1,300.00	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	
1 500 00	0.00	0.00	1 500 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	
1,700,00	0.00	0.00	1 700 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	
1,900.00	0.00	0.00	1,900.00	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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	
Start Build @ 2	040 00 00	Build 3 00°/1	2,040.00 nn	1000 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000	کې کې کې د د بې شو مړي کې کې کې کې کې	0.00 Asia (241)	0.00	
2.100.00	1.80	352.98	2.099.99	0.94	-0.12	0.94	3.00	
2,200.00	4.80	352.98	2,199.81	6.65	-0.82	6.70	3.00	
2,302,12	7.86	352.98	2.301.30	17.82	-2.20	17.95	3.00	
End Build @ 23	302.12' MD - I	Hold 7:86° Ind		THE SHERE THE		MANY RE THE LAST		
0.400.00		000.00	0.000.00	04.40	0.00	04.04	0.00	
2,400.00	7,86	352.98	2,398.20	31.12	-3.83	31.34	0.00	
2,500.00	7.00	352.98	2,497.32	44.09	-0.01	45.02	0.00	
2,000.00	7.00	352.98	2,090.38	38.27 74.95	-7.10	20.09	0.00	
2,700.00	7.00	352.90	2,095.44	71.00	-0,00	96.05	0.00	
2,000.00	7.00	552.50	2,754.50	00.40	-10.52	60.05	0.00	
2,900.00	7.86	352.98	2,893.56	99.01	-12.20	99.72	0.00	
2,953.11	7.86	352.98	2,946.17	106.22	-13.09	106.99	0.00	
Start-Turn @ 2	953:11 MD	Turn 2:00°/10	0.2					
3,007.45	7.86	345.02	3,000.00	113.50	-14,50	114.40	2.00	
	07.45 WD/4F	1010 7.85 INC	2 (Not 6) 2 001 69	106 70 Ale 2010 - 2010	· (가지) 이 아이지 않는	196.07	0.00	
3,100.00	7.00	345.02	3,091.00	125.72	-17.77	120.97	0.00	
5,200.00	7.00	545.02	5,150.74	130.55	-21.50	140.00	0.00	
3,300.00	7.86	345.02	3,289.80	152.14	-24.84	154.14	0.00	
3,310.30	7.80	345.02	3,300.00	153.50	-25.20	155.54	0.00	
2 400 00	510:30 WD -	245 62	2 280 12	162.24	27 70	165.65	3.00	
3,400.00	0.17	340.02 348.00	3,309,12 3,488 00	103.34	-21.19	172.03	3.00	
3,500.00	0.17	40.00	3 558 73	170 92	-29.50	173.40	3.00	
End Dropi@35	69.84' MD	Höld 0.17% Ind	0,000.70 ISSN 378	n 0.02 An Albert Mill Media and	- 20.00 Seguarde Taldo	24 (20 20) (20 20)	0.00	
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3,800.00	0.17	49.00	3,100.00 2 000 00	171.50	-20,90 20 75	173.70	0.00	
3,900.00	0.17	49.00	3,000.00	00.171	-20./0	173.92	. 0.00	

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Eddy County, NM

Plan Report for Artesia Yeso Federal Unit #25 - Plan #1

Measured			Vertical			Vertical	Dogleg	
Depth (ft)	nclination + A	vzimuth (°)	** Depth- ;-* ** (ft)	(ft) €	+E/-W (ft)	Section ; (ft)	Rate (*/100ft)	
4,000.00	0.17	49.55	3,988.88	171.75	-28.52	174.08	0.00	
4,100.00	0.17	49.55	4,088.88	171.94	-28.29	174.24	0.00	
4,200.00	0.17	49.55	4,188.88	172.14	-28.07	174.40	0.00	
4,300.00	0.17	49.55	4,288.88	172.33	-27.84	174.55	0.00	
4,400.00	0,17	49.55	4,388.88	172.52	-27.61	174.71	0.00	
4,500.00	0.17	49.55	4,488.88	172.72	-27.39	174.87	0.00	
4,600.00	0.17	49.55	4,588.88	172.91	-27.16	175.03	0.00	
4,700.00	0.17	49.55	4;688.88	173.10	-26.93	175.18	0.00	
4,800.00	0.17	49.55	4,788.88	173.30	-26.71	175.34	0.00	
4,900.00	0.17	49.55	4,888.88	173.49	-26.48	175.50	0.00	
5,000.00	0.17	49.55	4,988.88	173.69	-26.25	175.66	0.00	
5,100.00	0.17	49.55	5,088.88	173.88	-26.03	175.82	0.00	
5,111.12	0.17	49.55	5,100.00	173.90	-26.00	175.83	0.00	

Plan Annotations

Measured	Vertical	Local Coor	dinates		
Depth	Depth	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
2,040.00	2,040.00	0.00	0.00	Start Build @ 2040.00' MD	
2,040.00	2,040.00	0.00	0.00	Build 3.00°/100'	
2,302.12	2,301.30	17.82	-2.20	End Build @ 2302.12' MD	
2,302.12	2,301.30	17.82	-2.20	Hold 7.86° Incl	
2,953.11	2,946.16	106.22	-13.09	Start Turn @ 2953.11' MD	
2,953.11	2,946.17	106.22	-13.09	Turn 2.00°/100'	
3,007.45	3,000.00	113.50	-14.50	End Turn @ 3007.45' MD	
3,007.45	3,000.00	113.50	-14.50	Hold 7.86° Incl	
3,310.30	3,300.00	153.50	-25.20	Start Drop @ 3310.30' MD	
3,310.30	3,300.00	153.50	-25.20	Drop 3.00°/100'	
3,569.84	3,558.72	170.92	-29.50	End Drop @ 3569.84' MD	
3,569.84	3,558.73	170.92	-29.50	Hold 0.17° Incl	
5,111.12	5,100.00	173.90	-26.00	TD @ 5111.12' MD	

Vertical Section Information

	Angle			Origin	Orig	in	Start
	Туре	Target	Azimuth (°)	Type	+N/_S (ft)	+E/-W (ft)	TVD (ft)
то		No Target (Freehand)	351.50	Slot	0.00	0.00	0.00
Survey tool pro	ogram_						
From (ft)	To (ft)		Survey/Plan			Surv	ey Tool
0.00	5,110.77	Plan #1			1	MWD+SC	
<u>Casing Details</u>							
Measured Depth (ft)	Vertical Depth (ft)		Name		Casing Diameter ('')	Hole Diamete ('')	er
400.00	400.00	8 5/8" Casing			8-5/8		11

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Eddy County, NM

Plan Report for Artesia Yeso Federal Unit #25 - Plan #1

<u>Targets</u>									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Target 1 (AYFU 25) - plan hits target - Point	0.00 center	0.00	3,000.00	113.50	-14.50	662,302.90	542,466.60	32° 49' 14.455 N	104° 11' 42.348 W
PBHL (AYFU 25) - plan hits target - Point	0.00 center	0.00	5,100.00	173.90	-26.00	662,363.30	542,455.10	32° 49' 15.052 N	104° 11' 42.482 W
Target 2 (AYFU 25) - plan hits target - Point	0.00 center	0.00	3,300.00	153.50	-25.20	662,342.90	542,455.90	32° 49' 14.851 N	104° 11' 42.473 W

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North Reference Sheet for Artesia Yeso Federal Unit - Artesia Yeso Federal Unit #25 - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GE 3633.8' + KB 14' @ 3647.80ft (Savannah 415). Northing and Easting are relative to Artesia Yeso Federal Unit #25 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866 Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:0° 0' 0.000 N°

False Easting: 500,000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99991116

Grid Coordinates of Well: 662,189.40 ft N, 542,481.10 ft E Geographical Coordinates of Well: 32° 49' 13.33" N, 104° 11' 42.18" W Grid Convergence at Surface is: 0.07°

Based upon Minimum Curvature type calculations, at a Measured Depth of 5,111.12ft the Bottom Hole Displacement is 175.83ft in the Direction of 351.50° (Grid).

Magnetic Convergence at surface is: -7.74° (12 March 2013, , BGGM2012)



12 March, 2013 - 17:32

BOP Diagram



3M CHOKE MANIFOLD CONFIGURATION









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WELL SITE PLOT PLAN Artesia Yeso Federal Unit # 25

Flowline to Artesia Yeso Federal Unit CTB 4" SDR 7 Poly Pipeline with max pressure <125psi

North

SURFACE USE PLAN OF OPERATIONS

Operator Name/Number:	OXY USA WTP LIMITED PARTNERSHIP - 192463	
Lease Name/Number:	ARTESIA YESO FEDERAL UNIT #25	
Pool Name/Number:	ARTESIA; GLORIETA-YESO (96830)	
Surface Location:	G; SEC 20, T17S, R28E; 2344' FNL & 1944' FEL; EDDY COUNTY, NM	
Bottom Hole Location:	G; SEC 20, T17S, R28E; 2344' FNL & 1944' FEL; EDDY COUNTY, NM	

1. Existing Roads

- a. A copy of a USGS "_RED LAKE_, NM" quadrangle map is attached showing the proposed location. The well location is spotted on this map, which shows the existing road system.
- b. The well was staked by _Terry J Asel_Certificate No. _15079__ on _07-26-2012_, certified 09-13-2012_.
- c. Directions to Location:

BEGINNING IN LOCO HILLS AT THE INTERSECTION OF U.S. HWY. #82 AND COUNTY ROAD #217 (HAGERMAN CUTOFF ROAD), GO WEST ON U.S. HWY. #82 FOR 11.9 MILES, TURN RIGHT ON CALICHE ROAD AND GO NORTH FOR 1.5 MILES, TURN LEFT AND GO WEST FOR 0.2 MILES, TURN RIGHT AND GO NORTH FOR 0.2 MILES, TURN LEFT AND GO WEST FOR 0.1 MILES, TURN LEFT ON PROPOSED ROAD AND GO SOUTH FOR 27.6 FEET TO LOCATION.

2. New or Reconstructed Access Roads:

- a. A new access road will be built. The access road will run approximately _____27.6'_____ from an existing road to the location.
- b. The maximum width of the road will be 15'. It will be crowned and made up of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- c. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
- d. No cattle guards, grates or fence cuts will be required. No turnouts are planned.
- e. Blade, water & repair existing caliche road as required/needed.

3. Location of Existing Wells:

Existing wells within a one mile radius of the proposed well are shown on attached plat.

4. Location of Existing and/or Proposed Production Facilities.

- a. In the event the well is found productive, the production would be sent to the central tank battery located on the ARTESIA YESO FEDERAL UNIT CTB. The propose lines will be approximately 4700' of 4" SDR 7 Polethylene laid on surface from well the CTB and will be operating <125 psig. See-proposed Production Facilities-Layout diagram.
- b. The proposed route for the electric line has been surveyed and is attached.
- c. All flowlines will adhere to API Standards.

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5. Location and types of Water Supply.

This well will be drilled using a combination of water mud systems. It will be obtained from commercial water stations in the area and will be hauled to location by transport truck using existing and proposed roads.

6. Construction Materials:

All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

7. Methods of Handling Waste Material:

- a. A closed loop system will be utilized consisting of above ground steel tanks and haul-off bins. Disposal of liquids, drilling fluids and cuttings will be disposed of at an approved facility, see C-144 CLEZ.
 - 1. Solids CONTROL RECOVERY INC R9166
 - 2. Liquids SUNDANCE LANDFILL NM-01-003
- b. All trash, junk, and other waste material will be contained in trash cages or bins to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill.
- c. The supplier, including broken sacks, will pick up slats remaining after completion of well.
- d. A Porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- e. Disposal of fluids to be transported will be by the following companies:
 - 1. Solids CONTROL RECOVERY INC R9166
 - 2. Liquids SUNDANCE LANDFILL NM-01-003

8. Ancillary Facilities: None needed

9. Well Site Layout

See attached for the proposed well site layout with dimensions of the pad layout and equipment location.

V-Door NORTH CL Tanks 40' X 75' Pad 260' X 250'

10. Plans for Surface Reclamation:

a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography.

b. If the well is deemed commercially productive, caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography, and the area will be seeded with an approved BLM mixture to re-establish vegetation.

11. Surface Ownership

. **1**

The surface is owned by the U.S. Government and is administered by the BLM. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas. The surface is leased to: _____ Bogle LTD Co.

They will be notified of our intention to drill prior to any activity.

12. Other Information

- a. The vegetation cover is generally sparse consisting of mesquite, yucca, shinnery oak, sandsage and perennial. native range grass. The topsoil is sandy in nature. Wildlife in the area is also sparse consisting of deer, coyotes, rabbits, rodents, reptiles, dove and quail.
- b. There is no permanent or live water in the general proximity of the location.
- c. There are no dwellings within 2 miles of the proposed well site.
- d. A Cultural Resources Examination will be completed by Boone Archaeological Services, LLC and forwarded to the BLM office in Carlsbad, NM.

13. Bond Coverage:

Bond Coverage is Nationwide Bond No. ____ ESB000226

Operators Representatives:

The OXY Permian representatives responsible for ensuring compliance of the surface use plan are listed below.

Kim Moore Production Coordinator 1017 W. Stanolind Rd. Hobbs, NM 88240 Office Phone: 575-397-8236 Cellular: 575-706-1219

Allan Wells Drilling Superintendent P.O. Box 4294 Houston, TX 77210 Office Phone: 713-350-4810 Cellular: 713-569-8697

Juan Pinzon Drilling Engineering Supervisor P.O. Box 4294 Houston, TX 77210 Office Phone: 713-366-5058 Cellular: 713-503-3962 Charles Wagner Manager Field Operations 1502 West Commerce Dr. Carlsbad, NM 88220 Office Phone: 575-628-4151 Cellular: 575-725-8306

Calvin (Dusty) Weaver Operation Specialist P.O. Box 50250 Midland, TX 79710 Office Phone: 432-685-5723 Cellular: 806-893-3067

Carlos Mercado Drilling Engineer P.O. Box 4294 Houston, TX 77210 Office Phone: 713-366-5418 Cellular: 281-455-3481

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating
LEASE NO.:	LC054406
WELL NAME & NO.:	851 Burch Keely Unit
SURFACE HOLE FOOTAGE:	2316' FSL & 1967' FWL
BOTTOM HOLE FOOTAGE	2629' FNL & 1980' FWL
LOCATION:	Section 24, T.17 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- General Provisions
- Permit Expiration
 Archaeology, Paleontology, and Historical Sites

Noxious Weeds

Special Requirements

Lesser Prairie-Chicken Timing Stipulations Ground-level Abandoned Well Marker Unit Sign

Construction

Notification

Topsoil

Closed Loop System

Federal Mineral Material Pits

Well Pads

Roads

Road Section Diagram

🔀 Drilling

H2S requirement Logging requirement

Waste Material and Fluids

Production (Post Drilling) Well Structures & Facilities Pipelines

Interim Reclamation

Final Abandonment & Reclamation

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

<u>Ground-level Abandoned Well Marker to avoid raptor perching</u>: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-6235 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.



Figure 1 - Cross Sections and Plans For Typical Road Sections

VII. DRILLING

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. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the Grayburg formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values 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. The record of the drilling rate along with the GR/N well log run from TD to surface will 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 Rustler top and 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. 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.

Possible water and brine flows in the Salado and Artesia Group. Possible lost circulation in the Grayburg and San Andres formations.

- 1. The 13-3/8 inch surface casing shall be set at approximately 250 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.
- 2. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is: (Set casing below the salt at approximately 970')

As proposed. If cement does not circulate see B.1.a, c-d above.

Operator has proposed DV tool at depth of 350', but will adjust cement proportionately if moved. DV tool SHALL be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

- a. First stage to DV tool:
- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.
- b. Second stage above DV tool:
- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

As proposed. Operator shall provide method of verification.

Operator has proposed DV tool at depth of 2500', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range.

- a. First stage to DV tool:
- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve tie-back on the next stage.
- b. Second stage above DV tool:

Cement as proposed. 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. **Operator approved for either 13-5/8" or 11" BOP stack.**
- 2. In the case where the only BOP installed is an annular preventer, it shall be tested to a minimum of 2000 psi (which may require upgrading to 3M or 5M annular).

- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 2000 (2M) psi.
- 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 or where the float does not hold, the minimum wait time before cut-off is eight hours after bumping the plug or when the cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. BOP/BOPE testing can begin after the above conditions are satisfied.
 - 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.
 - d. 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.
 - e. 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.

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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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures

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The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 <u>et seq</u>. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the

release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, <u>et seq</u>. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, <u>et seq</u>.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

Activities of other parties including, but not limited to:

- (1) Land clearing.
- (2) Earth-disturbing and earth-moving work.
- (3) Blasting.
- (4) Vandalism and sabotage.
- c. Acts of God.

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The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. The pipeline shall be routed no farther than 6 feet from and parallel to existing roads. The authorized right-of-way width will be 20 feet. 14 feet of the right-of-way width will consist of existing disturbance (existing lease roads) and the remaining 6 feet will consist of area adjacent to the disturbance. All construction and maintenance activity will be confined to existing roads.

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7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the

holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

16. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IX. INTERIM RECLAMATION

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During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5):

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

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Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	l <u>b/acre</u>
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed