

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS

Carlsbad Field Office
OEB Artesia

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

Lease Serial No.
NM81586

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

8. Well Name and No.
CEDAR CANYON 22 FEDERAL COM 4H9. API Well No.
30-015-43708-00-X110. Field and Pool, or Exploratory
CEDAR CANYON11. County or Parish, and State
EDDY COUNTY, NM1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
OXY USA INCORPORATED
Contact: DAVID STEWART
E-Mail: david_stewart@oxy.com3a. Address
5 GREENWAY PLAZA SUITE 110
HOUSTON, TX 77046-05213b. Phone No. (include area code)
Ph: 432.685.57174. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 22 T24S R29E NESE 2540FSL 260FEL

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

OXY USA Inc. respectfully requests approval for the following changes to the approved APD:

1. Amend casing/cementing program - Amend for current casing inventories and updated directional plan.

Surface Casing
10-3/4" 40.5# J55 BTC new csg @ 0-480' 14-3/4" hole
SF Coll-7.6 SF Burst-1.54 SF Ten-2.89Intermediate Casing - 7-5/8" new casing @ 0-8200'M, 9-7/8" hole
a. 7-5/8" 26.4# L-80 BTC new csg @ 0-6700'M
SF Coll-1.19 SF Burst-1.29 SF Ten-1.88NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 19 2016

SEE ATTACHED FOR
CONDITIONS OF APPROVAL RECEIVED

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #351435 verified by the BLM Well Information System For OXY USA INCORPORATED, sent to the Carlsbad Committed to AFMSS for processing by DEBORAH MCKINNEY on 09/19/2016 (16DLM0922SE)	
Name (Printed/Typed) DAVID STEWART	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 09/15/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By MUSTAFA HAQUE	Title PETROLEUM ENGINEER	Date 10/13/2016
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office Carlsbad

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Additional data for EC transaction #351435 that would not fit on the form

32. Additional remarks, continued

b. 7-5/8" 29.7# L-80 BTC new csg @ 6700-8200'M

SF Coll-1.13 SF Burst-1.43 SF Ten-3.43

OXY requests the option to set casing shallower yet still below the salts if losses or hole conditions require this. Cement volumes may be adjusted if casing is set shallower and a DV tool will be run at +/- 3101' in case a contingency second stage is required for cement to reach surface. If cement circulates on 1st stage, cancellation cone will be dropped.

Production Casing

a. 5-1/2" 20# P-110 USF new csg @ 0-8900'M. 6-3/4" hole

SF Coll-1.7 SF Burst-1.2 SF Ten-2.23

b. 4-1/2" 13.5# P-110 DQX new csg @ 8900-13538'M. 6-3/4" hole

SF Coll-1.7 SF Burst-1.2 SF Ten-1.96

Surface - Cement w/ 314sx PP cement w/ 2% CaCl₂, 14.8ppg 1.35 yield, 500# CS in 6.5hr, 50% Excess

Intermediate - Circulate cement w/ 865sx Tuned Light (TM) system cmt w/ 3#/sx Kol-Seal + .125#/sx Poly-E-Flake + .8% HR-601, 10.2ppg 3.05 yield, 500# CS in 15.07hr, 75% Excess followed by 163sx Super H cmt w/ 3#/sx salt + .1% HR-800 + .3% CFR-3 + .5% HR-344 + 2#/sx Kol-Seal, 13.2ppg 1.65 yield, 500# CS in 12.57hr, 20% Excess.

Contingency 2nd Stage - Circulate cement to surface w/ 492sx HES light PP cmt w/ 5% Salt + .35% HR-800 + 3#/sx Kol-Seal + .125#/sx Poly-E-Flake, 12.9ppg 1.85 yield, 500# CS in 12.44hr, 75% Excess followed by 182sx PP cmt, 14.8ppg 1.33 yield, 500# CS in 6.31hr, 125% Excess.

Production - Cement w/ 347sx Super H cmt w/ 3#/sx salt + .1% HR-800 + .4% CFR-3 + .5% HR-344, 13.2ppg 1.63 yield, 500# CS in 15.15hr, 15% Excess. TOC @ 7700'

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

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

2. Mud program -

Depth	Mud WT	Vis Sec	Fluid Loss	Type
0 - 480'	8.4-8.6	40-60	N/C	EnerSeal (MMH)
480-3101'	9.8-10.0	35-45	N/C	Brine
3101-8200'	8.8-9.6	38-50	N/C	EnerSeal (MMH)
8200'-13538'	8.8-9.6	35-50	N/C	OBM

3. Start mudlogging from the intermediate casing shoe to TD.

4. Plan to drill the three well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.

**PECOS DISTRICT
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	OXY USA Inc.
LEASE NO.:	NMMN-81586
WELL NAME & NO.:	Cedar Canyon 22 Federal Com 4H
SURFACE HOLE FOOTAGE:	2540' FSL & 0260' FEL
BOTTOM HOLE FOOTAGE:	2570' FSL & 0080' FWL
LOCATION:	Section 22, T. 24 S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

All previous COAs still apply, except for the following:

A. CASING

Intermediate casing shall be kept fluid filled to meet the minimum collapse requirement.

1. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is:

Operator has proposed DV tool at depth of 3101', 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.**

If operator circulates cement on the first stage, operator is approved to run the DV tool cancellation plug and cancel the second stage of the proposed cement plan. If cement does not circulate, operator will proceed with the second stage.

- b. Second stage above DV tool:

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

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

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

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

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

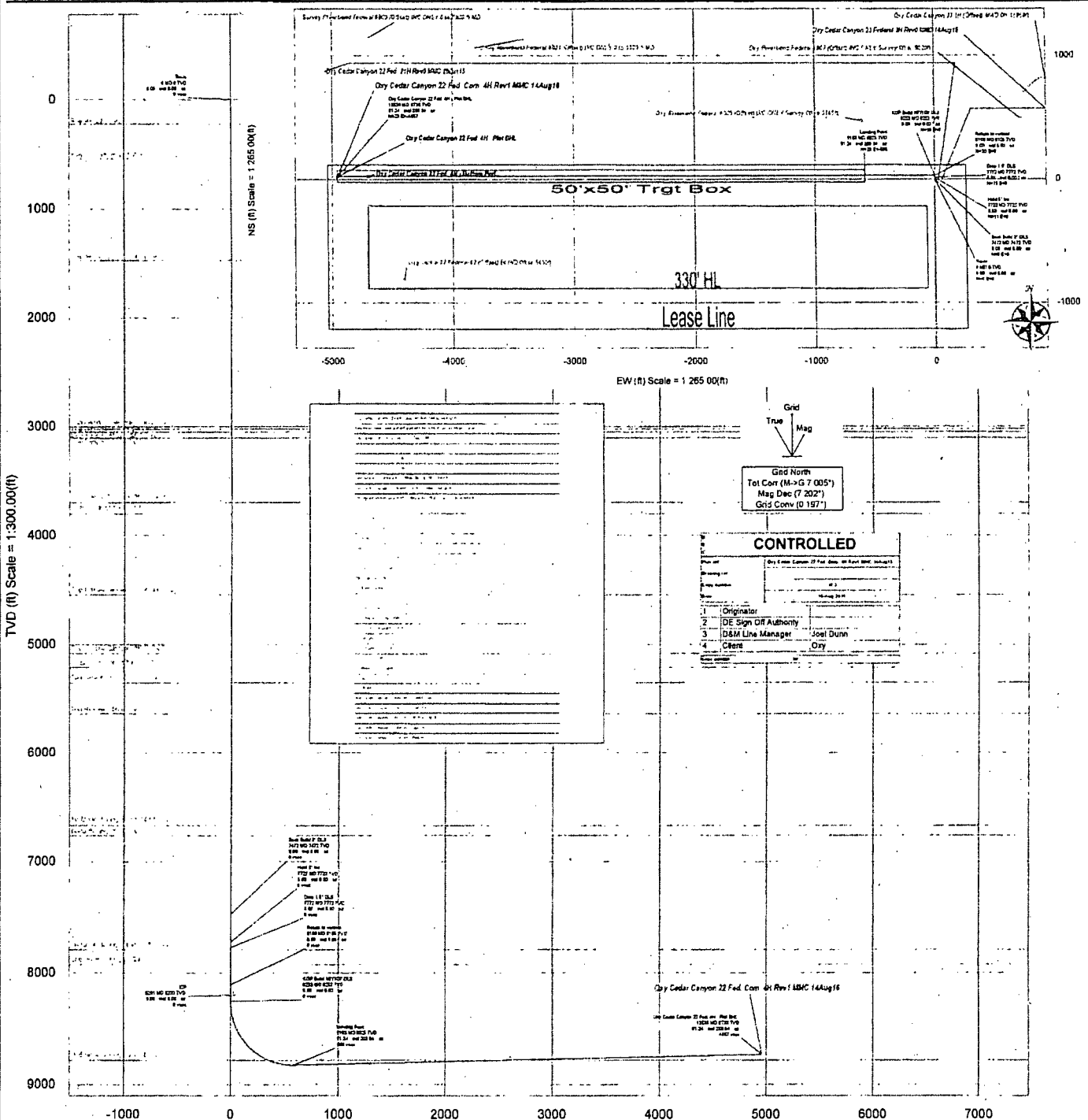
- ☒ Cement as proposed by operator. Operator shall provide method of verification.
Excess calculates to 13% - Additional cement will be required.

MHH 10132016

Structure: **H&P 639**

Station above
 Stat: Oxy Cedar Canyon TVD Ref: ROLA (2324.9ft above MSL)
 Plan: Oxy Cedar Canyon 22 Fed. Corn 4N Rev1 MAMC 14Aug18

Comments	Survey MD (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Sub-Spa TVD	VS (ft)	NS (ft)	EV (ft)	Latitude (deg)	Longitude (deg)	Easting (ftUS)	Northing (ftUS)	DLS (ft/100ft)	Tool Face (deg)
Tie-In	0 00	0 00	0 00	0 00	-2984 90	0 00	0 00	0 00	N 32 12	9 014 W 103 57 50 790	614205 88	437586 73		0 00
Back Build 2" DLS	7472 00	0 00	0 00	7472 00	4487 10	0 00	0 00	0 00	N 32 12	9 014 W 103 57 50 790	614205 88	437586 73	0 00	0 00
Hold 5" Inc	7722 19	5 00	0 00	7721 88	4736 98	0 05	10 92	0 00	N 32 12	9 122 W 103 57 50 789	614205 88	437597 65	2 00	0 00
Drop 15" DLS	7772 34	5 00	0 00	7771 83	4786 93	0 08	15 29	0 00	N 32 12	9 165 W 103 57 50 789	614205 88	437602 02	0 00	0 00
Return to vertical	8105 93	0 00	0 00	8105 05	5120 10	0 15	29 85	0 00	N 32 12	9 309 W 103 57 50 789	614205 88	437616 58	1 50	0 00
ICP	8200 93	0 00	0 00	8200 00	5215 10	0 15	29 85	0 00	N 32 12	9 309 W 103 57 50 789	614205 88	437616 58	0 00	0 00
KOP Build 10"/100 DLS	8252 93	0 00	0 00	8252 00	5267 10	0 15	29 85	0 00	N 32 12	9 309 W 103 57 50 789	614205 88	437616 58	0 00	269 94
Landing Point	9165 37	91 24	269 94	8824 82	5839 92	585 54	29 28	-585 39	N 32 12	9 324 W 103 57 57 601	613620 53	437616 01	10 00	0 00
Oxy Cedar Canyon 22 Fed. 4H - Plat BHL	13538 21	91 24	269 94	8729 90	5745 00	4957 26	25 00	-4957 20	N 32 12	9 426 W 103 58 48 479	609249 07	437611 73	0 00	



Vertical Section (ft) Azim = 270.289° Scale = 1:300.00(ft) Origin = 0N/-S, 0E/-W



Geodetic Report

(Non-Def Plan)

Report Date: August 15 2016 - 05:26 PM
 Client: OXY
 Field: NM Eddy County (NAD 27)
 Structure / Slot: Oxy Cedar Canyon 22 Fed. Com 4H / Oxy Cedar Canyon 22 Fed. Com 4H
 Well: Oxy Cedar Canyon 22 Fed. Com 4H-Orig. Borehole
 Borehole: Oxy Cedar Canyon 22 Fed. Com 4H-Orig. Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Cedar Canyon 22 Fed. Com 4H Rev1 MMC 14Aug16
 Survey Date: October 28, 2015
 Tort / AHD / DDX / ERO Ratio: 101.252 / 4987.049 N / 5.869 / 0.565
 Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone US Feet
 Location Lat / Long: N 32° 12' 0.1410" W 103° 57' 50.7833"
 Location Grid N/E Y/X: N 437586 730 RUS, E 614205 880 RUS
 CRS Grid Convergence Angle: 0.1968°
 Grid Scale Factor: 0.99992403
 Version / Patch: 2.9.370

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 270.289° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 2994.900 ft above MSL
 Seabed / Ground Elevation: 2358.400 ft above MSL
 Magnetic Declination: 7.202°
 Total Gravity Field Strength: 998.4073mgm / 9.80665 Based
 Gravity Model: GARM
 Total Magnetic Field Strength: 48212.664 nT
 Magnetic Dip Angle: 60.052°
 Deviation Date: August 14, 2016
 Magnetic Declination Model: HOGM 2016
 North Reference: Grid North
 Grid Convergence Used: 0.1968°
 Total Cor Mag North-Grid North: 7.0049°
 Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azin Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northings (m/s)	Eastings (m/s)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5800.00	0.00	0.00	5800.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	5900.00	0.00	0.00	5900.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6000.00	0.00	0.00	6000.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6100.00	0.00	0.00	6100.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6200.00	0.00	0.00	6200.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6300.00	0.00	0.00	6300.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6400.00	0.00	0.00	6400.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6500.00	0.00	0.00	6500.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6600.00	0.00	0.00	6600.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6700.00	0.00	0.00	6700.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6800.00	0.00	0.00	6800.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	6900.00	0.00	0.00	6900.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	7000.00	0.00	0.00	7000.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	7100.00	0.00	0.00	7100.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	7200.00	0.00	0.00	7200.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	7300.00	0.00	0.00	7300.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	7400.00	0.00	0.00	7400.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
Back Build 2' DLS	7472.00	0.00	0.00	7472.00	0.00	0.00	0.00	0.00	437586.73	614205.88	N 32 12 0.01	W 103 57 50.79
	7500.00	0.58	0.00	7500.00	0.00	0.14	0.00	2.00	437586.87	614205.88	N 32 12 0.02	

Comments	MD (ft)	Incl (°)	Asm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	OKS (ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	10200.00	91.24	269.94	6602.56	1619.90	28.27	-1819.78	0.00	437814.99	612506.23	N 32 12 0.35 W 103 58 9.64	
	10300.00	91.24	269.94	6600.19	1719.88	28.17	-1719.76	0.00	437814.90	612486.25	N 32 12 0.35 W 103 58 10.60	
	10400.00	91.24	269.94	6796.02	1819.85	28.07	-1819.73	0.00	437814.60	612368.29	N 32 12 0.35 W 103 58 11.97	
	10500.00	91.24	269.94	6795.65	1919.83	27.97	-1919.71	0.00	437814.70	612256.32	N 32 12 0.36 W 103 58 13.13	
	10600.00	91.24	269.94	6793.68	2019.80	27.87	-2019.58	0.00	437814.60	612158.35	N 32 12 0.36 W 103 58 14.29	
	10700.00	91.24	269.94	6791.51	2119.77	27.78	-2119.56	0.00	437814.50	612056.38	N 32 12 0.36 W 103 58 15.46	
	10800.00	91.24	269.94	6789.34	2219.75	27.68	-2219.64	0.00	437814.41	611956.42	N 32 12 0.36 W 103 58 16.62	
	10900.00	91.24	269.94	6787.17	2319.72	27.58	-2319.81	0.00	437814.31	611856.45	N 32 12 0.37 W 103 58 17.78	
	11000.00	91.24	269.94	6785.00	2419.70	27.48	-2419.59	0.00	437814.21	611756.48	N 32 12 0.37 W 103 58 18.95	
	11100.00	91.24	269.94	6782.83	2519.67	27.39	-2519.57	0.00	437814.11	611656.51	N 32 12 0.37 W 103 58 20.11	
	11200.00	91.24	269.94	6780.66	2619.65	27.29	-2619.54	0.00	437814.02	611556.54	N 32 12 0.37 W 103 58 21.27	
	11300.00	91.24	269.94	6778.49	2719.62	27.19	-2719.52	0.00	437813.92	611456.57	N 32 12 0.37 W 103 58 22.44	
	11400.00	91.24	269.94	6776.31	2819.60	27.09	-2819.50	0.00	437813.82	611356.60	N 32 12 0.38 W 103 58 23.60	
	11500.00	91.24	269.94	6774.14	2919.57	26.99	-2919.47	0.00	437813.72	611256.64	N 32 12 0.38 W 103 58 24.76	
	11600.00	91.24	269.94	6771.97	3019.55	26.90	-3019.45	0.00	437813.62	611156.67	N 32 12 0.38 W 103 58 25.93	
	11700.00	91.24	269.94	6769.80	3119.52	26.80	-3119.43	0.00	437813.53	611056.70	N 32 12 0.38 W 103 58 27.09	
	11800.00	91.24	269.94	6767.63	3219.50	26.70	-3219.40	0.00	437813.43	610956.73	N 32 12 0.39 W 103 58 28.25	
	11900.00	91.24	269.94	6765.46	3319.47	26.60	-3319.38	0.00	437813.33	610856.76	N 32 12 0.39 W 103 58 29.42	
	12000.00	91.24	269.94	6763.29	3419.44	26.51	-3419.35	0.00	437813.23	610756.79	N 32 12 0.39 W 103 58 30.58	
	12100.00	91.24	269.94	6761.12	3519.42	26.41	-3519.33	0.00	437813.14	610656.82	N 32 12 0.39 W 103 58 31.75	
	12200.00	91.24	269.94	6758.95	3619.39	26.31	-3619.31	0.00	437813.04	610556.86	N 32 12 0.40 W 103 58 32.91	
	12300.00	91.24	269.94	6756.78	3719.37	26.21	-3719.28	0.00	437812.94	610456.89	N 32 12 0.40 W 103 58 34.07	
	12400.00	91.24	269.94	6754.61	3819.34	26.11	-3819.26	0.00	437812.84	610356.92	N 32 12 0.40 W 103 58 35.24	
	12500.00	91.24	269.94	6752.44	3919.32	26.02	-3919.24	0.00	437812.75	610256.95	N 32 12 0.40 W 103 58 36.40	
	12600.00	91.24	269.94	6750.27	4019.29	25.92	-4019.21	0.00	437812.65	610156.99	N 32 12 0.40 W 103 58 37.56	
	12700.00	91.24	269.94	6748.10	4119.27	25.82	-4119.19	0.00	437812.55	610057.01	N 32 12 0.41 W 103 58 38.73	
	12800.00	91.24	269.94	6745.92	4219.24	25.72	-4219.17	0.00	437812.45	609957.04	N 32 12 0.41 W 103 58 39.89	
	12900.00	91.24	269.94	6743.75	4319.22	25.63	-4319.14	0.00	437812.35	609857.07	N 32 12 0.41 W 103 58 41.05	
	13000.00	91.24	269.94	6741.58	4419.19	25.53	-4419.12	0.00	437812.26	609757.11	N 32 12 0.41 W 103 58 42.22	
	13100.00	91.24	269.94	6739.41	4519.17	25.43	-4519.09	0.00	437812.16	609657.14	N 32 12 0.42 W 103 58 43.38	
	13200.00	91.24	269.94	6737.24	4619.14	25.33	-4619.07	0.00	437812.06	609557.17	N 32 12 0.42 W 103 58 44.54	
	13300.00	91.24	269.94	6735.07	4719.11	25.23	-4719.05	0.00	437811.96	609457.20	N 32 12 0.42 W 103 58 45.71	
	13400.00	91.24	269.94	6732.90	4819.09	25.14	-4819.02	0.00	437811.87	609357.23	N 32 12 0.42 W 103 58 46.87	
	13500.00	91.24	269.94	6730.73	4919.06	25.04	-4919.00	0.00	437811.77	609257.26	N 32 12 0.43 W 103 58 48.03	
Oxy Cedar Canyon 22 Fed. 4H - Plat BHL	13538.21	91.24	269.94	6729.90	4957.28	25.00	-4957.20	0.00	437811.73	609249.07	N 32 12 0.43 W 103 58 48.48	

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7956 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EDU Freq (ft)	Hole Size Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/100.000	30.000	30.000	SLB_MWD-STD_HDGM-Depth Only	Oxy Cedar Canyon 22 Fed. Com 4H - Orig. Borehole / Oxy Cedar Canyon 22 Fed. Com 4H Rev1
	1	26.500	13538.205	1/100.000	30.000	30.000	SLB_MWD-STD_HDGM	Oxy Cedar Canyon 22 Fed. Com 4H - Orig. Borehole / Oxy Cedar

Oxy Cedar Canyon 22 Fed. Com 4H Rev1 MMC 14Aug16 Anti-Collision Summary Report

Borehole: Oxy Cedar Canyon 22 Fed Com 4H - Orig Borehole
Scan MD Range: 0 00ft - 13538 21ft

Database | Project us1153app452 dr sfb comidnrmg-NM Eddy County 2.0

Offset Trajectories Summary

Not performed!

Definitive Surveys - Definitive Plans Definitive surveys exclude definitive plans.

- All Non-Del Surveys when no Del-Survey is set in a borehole - All Non-Del Plans when no Del-Plan is set in a borehole

[illegible]

PERFORMANCE DATA

TMK Ultra Premium SF™

5.500 in

20.00 lbs/ft

P-110

Technical Data Sheet

Tubular Parameters

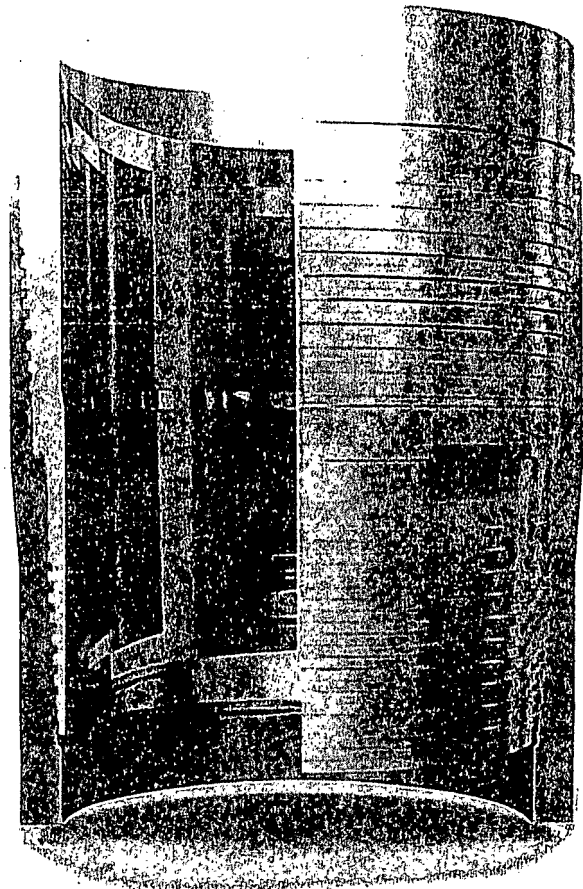
Size	5.500	in	Minimum Yield	110,000	psi
Nominal Weight	20.00	lbs/ft	Minimum Tensile	125,000	psi
Grade	P-110		Yield Load	641,000	lbs
PE Weight	19.81	lbs/ft	Tensile Load	728,000	lbs
Wall Thickness	0.361	in	Min. Internal Yield Pressure	12,600	psi
Nominal ID	4.778	in	Collapse Pressure	11,100	psi
Drift Diameter	4.653	in			
Nom. Pipe Body Area	5.828	in ²			

Connection Parameters

Connection OD	5.646	in
Connection ID	4.734	in
Make-Up Loss	5.526	in
Critical Section Area	5.289	in ²
Tension Efficiency	90.5	%
Compression Efficiency	90.5	%
Yield Load In Tension	580,000	lbs
Min. Internal Yield Pressure	12,600	psi
Collapse Pressure	11,100	psi

Make-Up Torques

Min. Make-Up Torque	10,100	ft-lbs
Opt. Make-Up Torque	10,600	ft-lbs
Max. Make-Up Torque	11,700	ft-lbs
Yield Torque	15,600	ft-lbs



Printed on: February-25-2014

NOTE:

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PERFORMANCE DATA

TMK UP ULTRA™ DQX
Technical Data Sheet

4.500 in

13.50 lbs/ft

P-110

Tubular Parameters

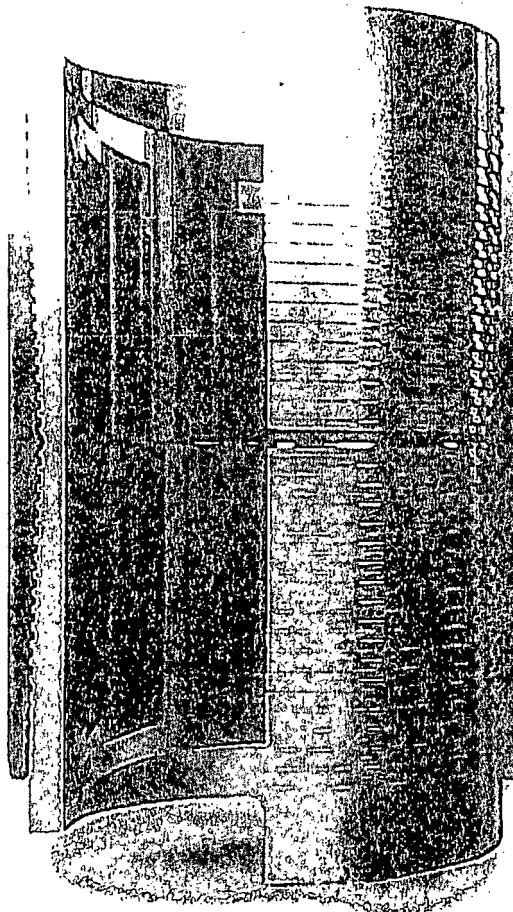
Size	4.500	in	Minimum Yield	110,000	psi
Nominal Weight	13.50	lbs/ft	Minimum Tensile	125,000	psi
Grade	P-110		Yield Load	422,000	lbs
PE Weight	13.04	lbs/ft	Tensile Load	479,000	lbs
Wall Thickness	0.290	in	Min. Internal Yield Pressure	12,400	psi
Nominal ID	3.920	in	Collapse Pressure	10,700	psi
Drift Diameter	3.795	in			
Nom. Pipe Body Area	3.836	in ²			

Connection Parameters

Connection OD	5.000	in
Connection ID	3.920	in
Make-Up Loss	3.772	in
Critical Section Area	3.836	in ²
Tension Efficiency	100.0	%
Compression Efficiency	100.0	%
Yield Load In Tension	422,000	lbs
Min. Internal Yield Pressure	12,400	psi
Collapse Pressure	10,700	psi
Uniaxial Bending	112	°/100 ft

Make-Up Torques

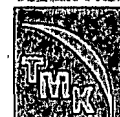
Min. Make-Up Torque	6.000	ft-lbs
Opt. Make-Up Torque	6.700	ft-lbs
Max. Make-Up Torque	7.300	ft-lbs
Yield Torque	10,800	ft-lbs



Printed on: October-22-2014

NOTE

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