

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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

OCD Artesia

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM88137
2. Name of Operator OXY USA INCORPORATED		6. If Indian, Allottee or Tribe Name
3a. Address 5 GREENWAY PLAZA STE 110 HOUSTON, TX 77046-0521		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 432.685.5717		8. Well Name and No. CEDAR CANYON 15 FEDERAL COM 5H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 15 T24S R29E NWNW 1095FNL 290FWL 32.221751 N Lat, 103.979488 W Lon		9. API Well No. 30-015-42421-00-X1
		10. Field and Pool, or Exploratory PIERCE CROSSING
		11. County or Parish, and State EDDY COUNTY, NM

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 drilling plan:

1. Extend the BHL approximately 150' past the east hardline to allow for our shoe track, see attached for amended C-102 plat and amended directional drilling plan.

Proposed TD - 13555'M 8815'V

2. Adjust production casing and cementing to amended TMD. Also the production casing string will include 36 Optipor Valves spaced throughout the lateral. As shown in the schematic the tool body OD is 7.020" and has ridges that function as centralizers with a max OD of 7.20".

Production Casing

Accepted for record
NMOCD-tes
10-27-14
NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 27 2014

14. I hereby certify that the foregoing is true and correct. Electronic Submission #258207 verified by the BLM Well Information System For OXY USA INCORPORATED, sent to the Carlsbad Committed to AFMSS for processing by CHRISTOPHER WALLS on 10/23/2014 (15CRW0015SE)	
Name (Printed/Typed) DAVID STEWART	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 08/25/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____	Title _____	Date OCT 23 2014
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.		Is/ Chris Walls
Office _____		BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE

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 #258207 that would not fit on the form

32. Additional remarks, continued

5-1/2" 17# L-80 BT&C new csg @ 0-13555'M, 7-7/8" hole w/ 9.2# mud

Coll Rating (psi)-6290 Burst Rating (psi)-7740
SF Coll-1.49 SF Burst-1.22 SF Ten-1.65

Production Cement - Cement w/ 630sx Tuned Light cmt w/ .125#/sx Poly-E-Flake + .2#/sx HR-800 + 3#/sx Kol-Seal, 10.2ppg 2.94 yield 947# 24hr CS 100% Excess followed by 770sx Super H cmt w/ 3#/sx salt + .4% CFR-3 + .5% Halad-344 + .2% HR-800 + .125#/sx Poly-E-Flake, 13.2ppg 1.64 yield 1275# 24hr CS 30% Excess,
Calculated TOC @ 2500'.

Description of Cement Additives: Salt (Accelerator); CFR-3 (Dispersant); Kol-Seal, Poly-E-Flake (Lost Circulation Additive); Halad-344 (Low Fluid Loss Control); HR-800 (Retarder)
The above cement volumes could be revised pending the caliper measurement.

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax (505) 748-9720

DISTRICT III
1000 Rio Grande Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-42421	Pool Code 96473	Pool Name Pierce Crossing Bone Spring East
Property Code 313340	Property Name CEDAR CANYON 15 FEDERAL COM	Well Number 5H
OGRID No. 16696	Operator Name OXY U.S.A. INC.	Elevation 2927'

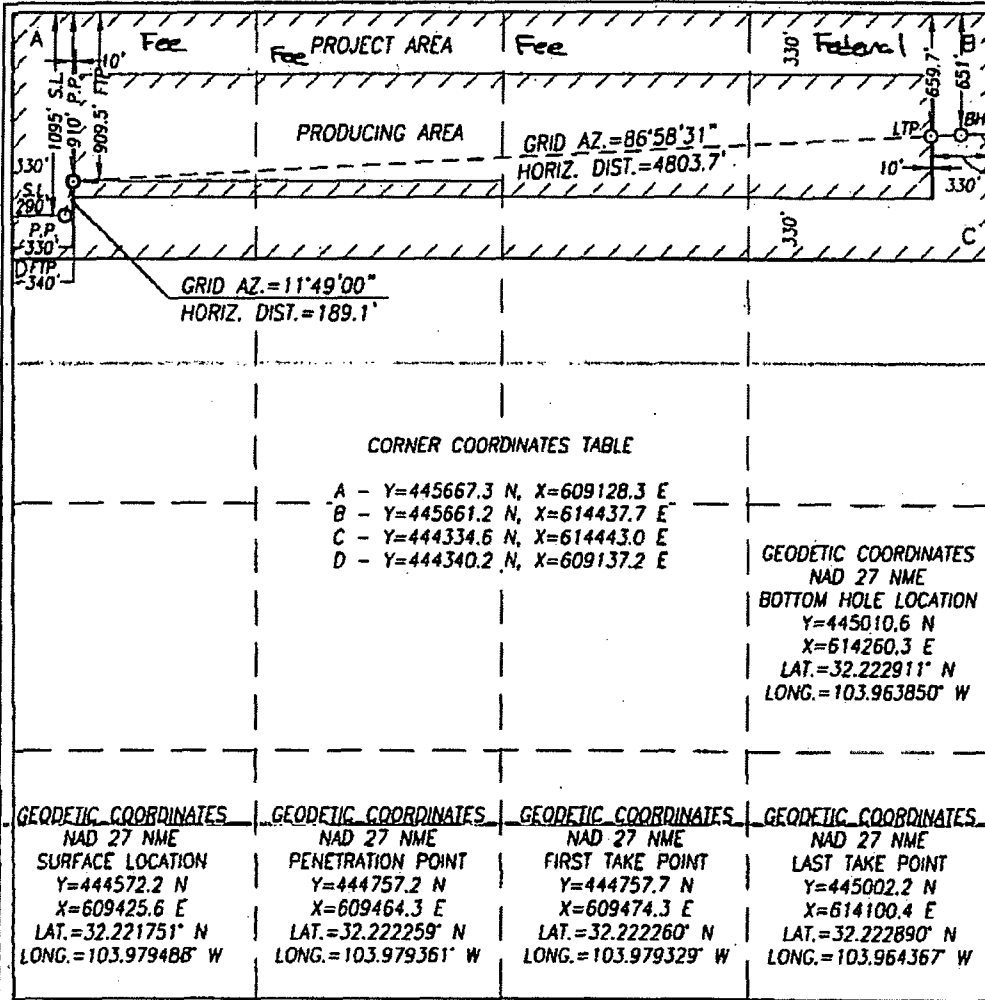
Surface Location									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	15	24-S	29-E		1095	NORTH	290	WEST	EDDY

Bottom Hole Location If Different From Surface									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	15	24-S	29-E		651	NORTH	180	EAST	EDDY

Penetration point									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	15	24-S	29-E		910	NORTH	330	WEST	EDDY

Dedicated Acres 160	Joint or Infill N	Consolidation Code	Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *[Signature]* Date: **8/25/14**

Printed Name: **David Stewart Sr. Reg. Mgr.**

E-mail Address: **david_stewart@oxy.com**

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

MARCH 29, 2013

Date of Survey

Signature & Seal of Professional Surveyor:

GARY G. EIDSON
NEW MEXICO
12641

Surveyor Number: **12641**
Surveyor Name: **Gary G. Eidson**
Surveyor Address: **3239**

ACK: REVIEWED BY: **SWSC W.O. 1413 0428**



Cedar Canyon 15 Federal Com 5H
Eddy County, New Mexico
Northing: 444572.20
Easting: 609425.60
Design #1

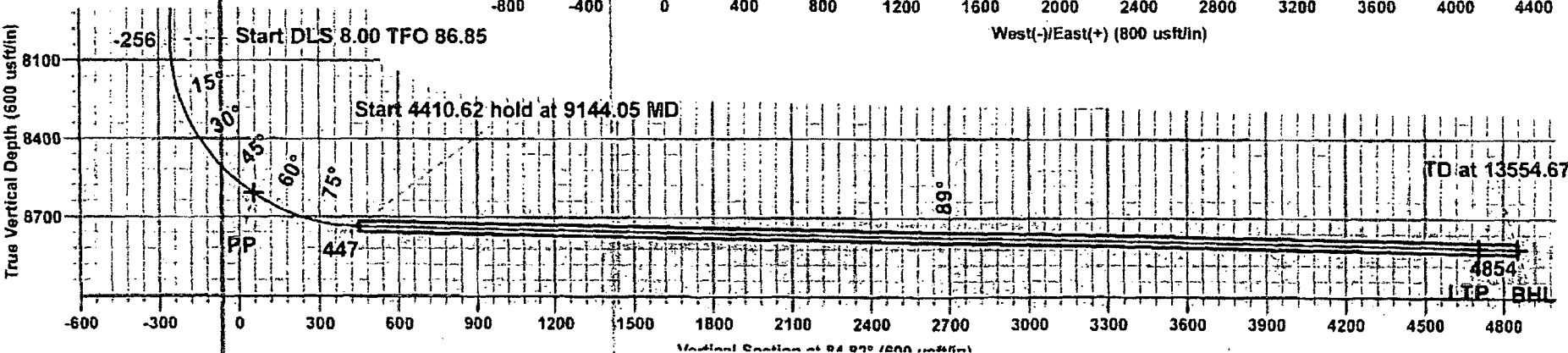
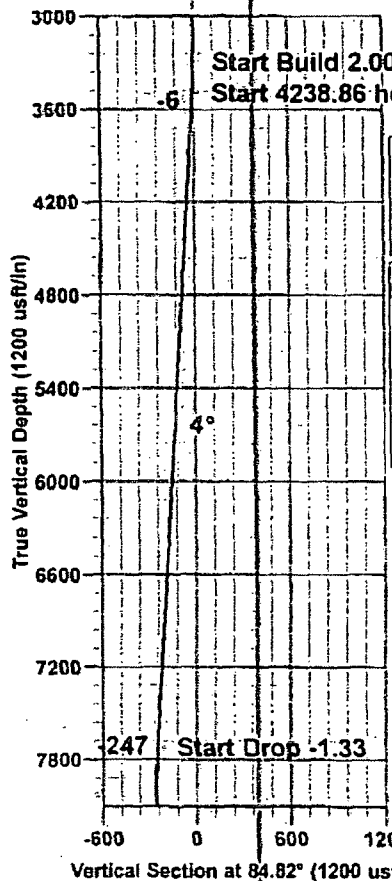


Azimuths to Grid Nor
True North: -0.1°
Magnetic North: 7.2°

Magnetic File
Strength: 48293.2sn
Dip Angle: 60.0°
Date: 04/07/201
Model: IGRF201

To convert a Magnetic Direction to a Grid Direction, Add 7.24°
To convert a True Direction to a Grid Direction, Subtract 0.19°

KB @ 2952.00usft
Gr @ 2927.00



WELL DETAILS CC 15 FC 5H					
Ground Level: 2927.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	444572.20	609425.60	32.222	-103.979

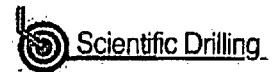
SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3292.02	0.00	0.00	3292.00	0.00	0.00	0.00	0.00	0.00
3492.02	4.00	300.00	3491.85	3.49	-6.04	2.00	300.00	-5.71
7730.88	4.00	300.00	7720.39	151.34	-262.14	0.00	0.00	-247.42
8031.65	0.00	0.00	8020.92	156.59	-271.23	1.33	180.00	-256.00
9144.05	88.99	86.85	8737.01	195.30	431.30	8.00	86.85	-447.16
13554.67	88.99	86.85	8814.64	437.95	4834.55	0.00	0.00	4854.35

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
CC 15 FC 5H PP	8611.06	185.00	38.70	444757.20	609464.30
CC 15 FC 5H LTP	8812.00	429.70	4684.80	445001.90	614110.40
CC 15 FC 5H BHL	8814.64	437.95	4834.55	445010.15	614260.15

PROJECT DETAILS:		SITE DETAILS:	
Eddy County, New Mexico		Cedar Canyon 15 Federal Com 5H	
Geodetic System: US State Plane 1927 (Exact solution)		Site Centre Northing: 444572.20	
Datum: NAD 1927 (NADCON CONUS)		Easting: 609425.60	
Ellipsoid: Clarke 1866		Positional Uncertainty: 0.00	
Zone: New Mexico East 3001		Convergence: 0.19	
System Datum: Mean Sea Level		Local North: Grid	



Scientific Drilling Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well CC 15 FC 5H
Company:	OXY	TVD Reference:	KB @ 2952.00usft
Project:	Eddy County, New Mexico	MD Reference:	KB @ 2952.00usft
Site:	Cedar Canyon 15 Federal Com 5H	North Reference:	Grid
Well:	CC 15 FC 5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project:	Eddy County, New Mexico, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

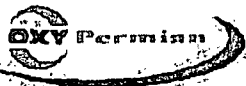
Site:	Cedar Canyon 15 Federal Com 5H		
Site Position:	Northing:	444,572.20 usft	Latitude: 32.222
From: Map	Easting:	609,425.60 usft	Longitude: -103.979
Position Uncertainty:	0.00 usft	Slot Radius: 13-3/16"	Grid Convergence: 0.19°

Well:	CC 15 FC 5H		
Well Position	+N/-S	0.00 usft	Northing: 444,572.20 usft
	+E/-W	0.00 usft	Easting: 609,425.60 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
			Ground Level: 2,927.00 usft

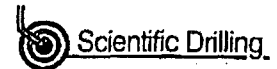
Wellbore:	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	04/07/14	7.43
			Dip Angle
			60.05
			Field Strength
			48,293

Design:	Design #1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	1.00	0.00	0.00
			Direction
			84.82

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,292.00	0.00	0.00	3,292.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,492.02	4.00	300.00	3,491.85	3.49	-6.04	2.00	2.00	0.00	300.00	
7,730.88	4.00	300.00	7,720.39	151.34	-262.14	0.00	0.00	0.00	0.00	
8,031.65	0.00	0.00	8,020.92	156.59	-271.23	1.33	-1.33	0.00	180.00	
9,144.05	88.99	86.85	8,737.01	195.30	431.30	8.00	8.00	7.81	86.85	
13,554.67	88.99	86.85	8,814.64	437.95	4,834.55	0.00	0.00	0.00	0.00	CC 15 FC 5H BHL



Scientific Drilling Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well CC15 FC 5H
Company:	OXY	TVD Reference:	KB @ 2952.00usft
Project:	Eddy County, New Mexico	MD Reference:	KB @ 2952.00usft
Site:	Cedar Canyon 15 Federal Com 5H	North Reference:	Gnd
Well:	CC 15 FC 5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	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	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	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	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	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	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	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	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	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	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	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	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,292.00	0.00	0.00	3,292.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.16	300.00	3,300.00	0.01	-0.01	-0.01	2.00	2.00	0.00
3,400.00	2.16	300.00	3,399.97	1.02	-1.76	-1.66	2.00	2.00	0.00
3,492.02	4.00	300.00	3,491.85	3.49	-6.04	-5.71	2.00	2.00	0.00
3,500.00	4.00	300.00	3,499.82	3.77	-6.53	-6.16	0.00	0.00	0.00
3,600.00	4.00	300.00	3,599.57	7.26	-12.57	-11.86	0.00	0.00	0.00
3,700.00	4.00	300.00	3,699.33	10.74	-18.61	-17.56	0.00	0.00	0.00
3,800.00	4.00	300.00	3,799.09	14.23	-24.65	-23.27	0.00	0.00	0.00
3,900.00	4.00	300.00	3,898.84	17.72	-30.69	-28.97	0.00	0.00	0.00
4,000.00	4.00	300.00	3,998.60	21.21	-36.74	-34.67	0.00	0.00	0.00
4,100.00	4.00	300.00	4,098.36	24.70	-42.78	-40.37	0.00	0.00	0.00
4,200.00	4.00	300.00	4,198.11	28.18	-48.82	-46.08	0.00	0.00	0.00
4,300.00	4.00	300.00	4,297.87	31.67	-54.86	-51.78	0.00	0.00	0.00
4,400.00	4.00	300.00	4,397.63	35.16	-60.90	-57.48	0.00	0.00	0.00
4,500.00	4.00	300.00	4,497.38	38.65	-66.94	-63.18	0.00	0.00	0.00
4,600.00	4.00	300.00	4,597.14	42.14	-72.98	-68.89	0.00	0.00	0.00
4,700.00	4.00	300.00	4,696.89	45.62	-79.03	-74.59	0.00	0.00	0.00
4,800.00	4.00	300.00	4,796.65	49.11	-85.07	-80.29	0.00	0.00	0.00
4,900.00	4.00	300.00	4,896.41	52.60	-91.11	-85.99	0.00	0.00	0.00
5,000.00	4.00	300.00	4,996.16	56.09	-97.15	-91.69	0.00	0.00	0.00
5,100.00	4.00	300.00	5,095.92	59.58	-103.19	-97.40	0.00	0.00	0.00



Scientific Drilling Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well CC-15 FC 5H
Company:	OXY	TVD Reference:	KB @ 2952.00usft
Project:	Eddy County, New Mexico	MD Reference:	KB @ 2952.00usft
Site:	Cedar Canyon, 15 Federal Com 5H	North Reference:	Gnd
Well:	CC, 15 FC 5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N-S (usft)	E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.00	4.00	300.00	5,195.68	63.06	-109.23	-103.10	0.00	0.00	0.00
5,300.00	4.00	300.00	5,295.43	66.55	-115.28	-108.80	0.00	0.00	0.00
5,400.00	4.00	300.00	5,395.19	70.04	-121.32	-114.50	0.00	0.00	0.00
5,500.00	4.00	300.00	5,494.95	73.53	-127.36	-120.21	0.00	0.00	0.00
5,600.00	4.00	300.00	5,594.70	77.02	-133.40	-125.91	0.00	0.00	0.00
5,700.00	4.00	300.00	5,694.46	80.50	-139.44	-131.61	0.00	0.00	0.00
5,800.00	4.00	300.00	5,794.21	83.99	-145.48	-137.31	0.00	0.00	0.00
5,900.00	4.00	300.00	5,893.97	87.48	-151.53	-143.02	0.00	0.00	0.00
6,000.00	4.00	300.00	5,993.73	90.97	-157.57	-148.72	0.00	0.00	0.00
6,100.00	4.00	300.00	6,093.48	94.46	-163.61	-154.42	0.00	0.00	0.00
6,200.00	4.00	300.00	6,193.24	97.94	-169.65	-160.12	0.00	0.00	0.00
6,300.00	4.00	300.00	6,293.00	101.43	-175.69	-165.82	0.00	0.00	0.00
6,400.00	4.00	300.00	6,392.75	104.92	-181.73	-171.53	0.00	0.00	0.00
6,500.00	4.00	300.00	6,492.51	108.41	-187.78	-177.23	0.00	0.00	0.00
6,600.00	4.00	300.00	6,592.27	111.90	-193.82	-182.93	0.00	0.00	0.00
6,700.00	4.00	300.00	6,692.02	115.39	-199.86	-188.63	0.00	0.00	0.00
6,800.00	4.00	300.00	6,791.78	118.87	-205.90	-194.34	0.00	0.00	0.00
6,900.00	4.00	300.00	6,891.53	122.36	-211.94	-200.04	0.00	0.00	0.00
7,000.00	4.00	300.00	6,991.29	125.85	-217.98	-205.74	0.00	0.00	0.00
7,100.00	4.00	300.00	7,091.05	129.34	-224.03	-211.44	0.00	0.00	0.00
7,200.00	4.00	300.00	7,190.80	132.83	-230.07	-217.15	0.00	0.00	0.00
7,300.00	4.00	300.00	7,290.56	136.31	-236.11	-222.85	0.00	0.00	0.00
7,400.00	4.00	300.00	7,390.32	139.80	-242.15	-228.55	0.00	0.00	0.00
7,500.00	4.00	300.00	7,490.07	143.29	-248.19	-234.25	0.00	0.00	0.00
7,600.00	4.00	300.00	7,589.83	146.78	-254.23	-239.95	0.00	0.00	0.00
7,700.00	4.00	300.00	7,689.59	150.27	-260.27	-245.66	0.00	0.00	0.00
7,730.88	4.00	300.00	7,720.39	151.34	-262.14	-247.42	0.00	0.00	0.00
7,800.00	3.08	300.00	7,789.38	153.48	-265.84	-250.91	1.33	-1.33	0.00
7,900.00	1.75	300.00	7,889.29	155.58	-269.49	-254.35	1.33	-1.33	0.00
8,000.00	0.42	300.00	7,989.27	156.53	-271.13	-255.90	1.33	-1.33	0.00
8,031.65	0.00	0.00	8,020.92	156.59	-271.23	-256.00	1.33	-1.33	0.00
8,050.00	1.47	86.85	8,039.26	156.60	-271.00	-255.76	8.00	8.00	0.00
8,100.00	5.47	86.85	8,089.16	156.77	-267.98	-252.74	8.00	8.00	0.00
8,150.00	9.47	86.85	8,138.73	157.13	-261.49	-246.25	8.00	8.00	0.00
8,200.00	13.47	86.85	8,187.72	157.67	-251.57	-236.31	8.00	8.00	0.00
8,250.00	17.47	86.85	8,235.90	158.41	-238.25	-222.99	8.00	8.00	0.00
8,300.00	21.47	86.85	8,283.03	159.32	-221.62	-206.34	8.00	8.00	0.00
8,350.00	25.47	86.85	8,328.89	160.42	-201.74	-186.45	8.00	8.00	0.00
8,400.00	29.47	86.85	8,373.24	161.69	-178.72	-163.40	8.00	8.00	0.00
8,450.00	33.47	86.85	8,415.88	163.12	-152.66	-137.32	8.00	8.00	0.00
8,500.00	37.47	86.85	8,456.59	164.72	-123.70	-108.33	8.00	8.00	0.00
8,550.00	41.47	86.85	8,495.18	166.47	-91.97	-76.58	8.00	8.00	0.00
8,600.00	45.47	86.85	8,531.46	168.36	-57.63	-42.21	8.00	8.00	0.00
8,650.00	49.47	86.85	8,565.26	170.39	-20.85	-5.40	8.00	8.00	0.00
8,700.00	53.47	86.85	8,596.40	172.54	18.19	33.68	8.00	8.00	0.00
8,750.00	57.47	86.85	8,624.74	174.80	59.31	74.84	8.00	8.00	0.00
8,800.00	61.47	86.85	8,650.13	177.17	102.31	117.87	8.00	8.00	0.00
8,850.00	65.47	86.85	8,672.46	179.64	146.96	162.57	8.00	8.00	0.00
8,900.00	69.47	86.85	8,691.62	182.18	193.07	208.72	8.00	8.00	0.00
8,950.00	73.47	86.85	8,707.51	184.78	240.39	256.08	8.00	8.00	0.00
9,000.00	77.47	86.85	8,720.05	187.45	288.71	304.44	8.00	8.00	0.00
9,050.00	81.47	86.85	8,729.19	190.15	337.78	353.56	8.00	8.00	0.00
9,100.00	85.47	86.85	8,734.88	192.88	387.37	403.19	8.00	8.00	0.00
9,144.05	88.99	86.85	8,737.01	195.30	431.30	447.16	8.00	8.00	0.00

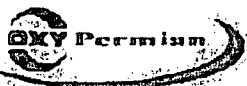


Scientific Drilling Planning Report

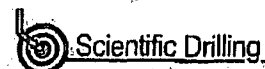


Database:	CompassC	Local Co-ordinate Reference:	Well CC 15 FC 5H
Company:	OXY	TVD Reference:	KB @ 2952.00usft
Project:	Eddy County New Mexico	MD Reference:	KB @ 2952.00usft
Site:	Cedar Canyon 15 Federal Com 5H	North Reference:	Grid
Well:	CC 15 FC 5H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,200.00	88.99	86.85	8,737.99	198.38	487.15	503.07	0.00	0.00	0.00	
9,300.00	88.99	86.85	8,739.75	203.88	586.99	602.99	0.00	0.00	0.00	
9,400.00	88.99	86.85	8,741.51	209.38	686.82	702.91	0.00	0.00	0.00	
9,500.00	88.99	86.85	8,743.27	214.89	786.65	802.83	0.00	0.00	0.00	
9,600.00	88.99	86.85	8,745.03	220.39	886.49	902.75	0.00	0.00	0.00	
9,700.00	88.99	86.85	8,746.79	225.89	986.32	1,002.68	0.00	0.00	0.00	
9,800.00	88.99	86.85	8,748.55	231.39	1,086.15	1,102.60	0.00	0.00	0.00	
9,900.00	88.99	86.85	8,750.31	236.89	1,185.99	1,202.52	0.00	0.00	0.00	
10,000.00	88.99	86.85	8,752.07	242.39	1,285.82	1,302.44	0.00	0.00	0.00	
10,100.00	88.99	86.85	8,753.83	247.89	1,385.65	1,402.37	0.00	0.00	0.00	
10,200.00	88.99	86.85	8,755.59	253.40	1,485.48	1,502.29	0.00	0.00	0.00	
10,300.00	88.99	86.85	8,757.35	258.90	1,585.32	1,602.21	0.00	0.00	0.00	
10,400.00	88.99	86.85	8,759.11	264.40	1,685.15	1,702.13	0.00	0.00	0.00	
10,500.00	88.99	86.85	8,760.87	269.90	1,784.98	1,802.05	0.00	0.00	0.00	
10,600.00	88.99	86.85	8,762.63	275.40	1,884.82	1,901.98	0.00	0.00	0.00	
10,700.00	88.99	86.85	8,764.39	280.90	1,984.65	2,001.90	0.00	0.00	0.00	
10,800.00	88.99	86.85	8,766.15	286.40	2,084.48	2,101.82	0.00	0.00	0.00	
10,900.00	88.99	86.85	8,767.91	291.91	2,184.32	2,201.74	0.00	0.00	0.00	
11,000.00	88.99	86.85	8,769.67	297.41	2,284.15	2,301.67	0.00	0.00	0.00	
11,100.00	88.99	86.85	8,771.43	302.91	2,383.98	2,401.59	0.00	0.00	0.00	
11,200.00	88.99	86.85	8,773.19	308.41	2,483.82	2,501.51	0.00	0.00	0.00	
11,300.00	88.99	86.85	8,774.95	313.91	2,583.65	2,601.43	0.00	0.00	0.00	
11,400.00	88.99	86.85	8,776.71	319.41	2,683.48	2,701.36	0.00	0.00	0.00	
11,500.00	88.99	86.85	8,778.47	324.91	2,783.31	2,801.28	0.00	0.00	0.00	
11,600.00	88.99	86.85	8,780.24	330.42	2,883.15	2,901.20	0.00	0.00	0.00	
11,700.00	88.99	86.85	8,782.00	335.92	2,982.98	3,001.12	0.00	0.00	0.00	
11,800.00	88.99	86.85	8,783.76	341.42	3,082.81	3,101.04	0.00	0.00	0.00	
11,900.00	88.99	86.85	8,785.52	346.92	3,182.65	3,200.97	0.00	0.00	0.00	
12,000.00	88.99	86.85	8,787.28	352.42	3,282.48	3,300.89	0.00	0.00	0.00	
12,100.00	88.99	86.85	8,789.04	357.92	3,382.31	3,400.81	0.00	0.00	0.00	
12,200.00	88.99	86.85	8,790.80	363.42	3,482.15	3,500.73	0.00	0.00	0.00	
12,300.00	88.99	86.85	8,792.56	368.93	3,581.98	3,600.66	0.00	0.00	0.00	
12,400.00	88.99	86.85	8,794.32	374.43	3,681.81	3,700.58	0.00	0.00	0.00	
12,500.00	88.99	86.85	8,796.08	379.93	3,781.64	3,800.50	0.00	0.00	0.00	
12,600.00	88.99	86.85	8,797.84	385.43	3,881.48	3,900.42	0.00	0.00	0.00	
12,700.00	88.99	86.85	8,799.60	390.93	3,981.31	4,000.34	0.00	0.00	0.00	
12,800.00	88.99	86.85	8,801.36	396.43	4,081.14	4,100.27	0.00	0.00	0.00	
12,900.00	88.99	86.85	8,803.12	401.93	4,180.98	4,200.19	0.00	0.00	0.00	
13,000.00	88.99	86.85	8,804.88	407.44	4,280.81	4,300.11	0.00	0.00	0.00	
13,100.00	88.99	86.85	8,806.64	412.94	4,380.64	4,400.03	0.00	0.00	0.00	
13,200.00	88.99	86.85	8,808.40	418.44	4,480.48	4,499.96	0.00	0.00	0.00	
13,300.00	88.99	86.85	8,810.16	423.94	4,580.31	4,599.88	0.00	0.00	0.00	
13,400.00	88.99	86.85	8,811.92	429.44	4,680.14	4,699.80	0.00	0.00	0.00	
13,500.00	88.99	86.85	8,813.68	434.94	4,779.98	4,799.72	0.00	0.00	0.00	
13,554.67	88.99	86.85	8,814.64	437.95	4,834.55	4,854.35	0.00	0.00	0.00	



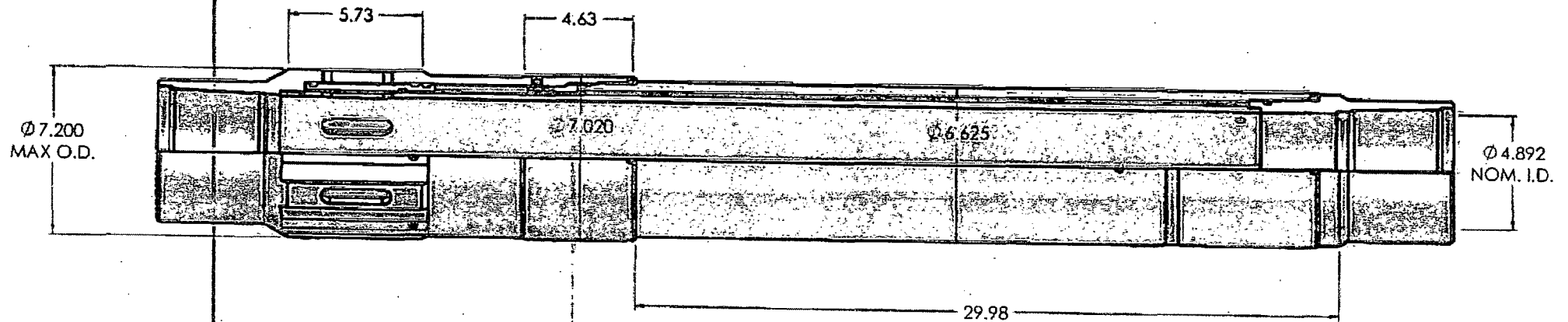
Scientific Drilling
Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well CC 15 FC 5H
Company:	OXY	TVD Reference:	KB @ 2952.00usft
Project:	Eddy County, New Mexico	MD Reference:	KB @ 2952.00usft
Site:	Cedar Canyon 15 Federal Com 5H	North Reference:	Grid
Well:	CC 15 FC 5H	Survey/Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Design Targets									
Target Name	Dip/Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Shape									
CC 15 FC 5H PP	0.00	0.00	8,611.06	185.00	38.70	444,757.20	609,464.30	32.222	-103.979
- plan misses target center by 11.32usft at 8725.75usft MD (8611.35 TVD, 173.69 N, 39.12 E)									
- Point									
CC 15 FC 5H LTP	0.00	0.00	8,612.00	429.70	4,684.80	445,001.90	614,110.40	32.223	-103.964
- plan hits target center									
- Point									
CC 15 FC 5H BHL	1.01	86.85	8,614.64	437.95	4,834.55	445,010.15	614,260.15	32.223	-103.964
- plan hits target center									
- Rectangle (sides W150.00 H4,410.62 D40.00)									

5-1/2" OPTIPORT MAX O.D. TURNED DOWN TO 7.20"



OXY USA Inc.

Cedar Canyon 15 Federal Com. #5H

Casing Design Assumptions:

Burst Loads

CSG Test (Surface)

- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from section TD to surface

CSG Test (Intermediate)

- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from the Intermediate hole TD to Surface CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

CSG Test (Production)

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

Gas Kick (Surface/Intermediate)

- Internal: Gas Kick based on Pore Pressure or Fracture Gradient @ CSG shoe with a gas 0.115psi/ft Gas gradient to surface while drilling the next hole section (e.g. Gas Kick while drilling the production hole section is a burst load used to design the intermediate CSG)
- External: Pore Pressure from section TD to previous CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

Stimulation (Production)

- Internal: Displacement fluid + Max Frac treating pressure (not to exceed 80% CSG Burst rating)
- External: Pore Pressure from the well TD to the Intermediate CSG shoe and 8.5 ppg MWE to surface

Collapse Loads

Lost Circulation (Surface/Intermediate)

- Internal: Losses experienced while drilling the next hole section (e.g. losses while drilling the production hole section are used as a collapse load to design the intermediate CSG). After losses there will be a column of mud inside the CSG with an equivalent weight to the Pore Pressure of the lost circulation zone
- External: MW of the drilling mud that was in the hole when the CSG was run

Cementing (Surface/Intermediate/Production)

- Internal: Displacement Fluid
- External: Cement Slurries to TOC, MW to surface

Full Evacuation (Production)

- Internal: Atmospheric Pressure
- External: MW of the drilling mud that was in the hole when the CSG was run

Tension Loads

Running CSG (Surface/Intermediate/Production)

- Axial load of the buoyant weight of the string plus either 100 klb over-pull or string weight in air, whichever is less

Green Cement (Surface/Intermediate/Production)

- Axial load of the buoyant weight of the string plus the cement plug bump pressure (Final displacement pressure + 500 psi)

Burst, Collapse and Tensile SF are calculated using Landmark's Stress Check (Casing Design) software.