

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

HOBBS OCOIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

DEC 18 2013

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-41460
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator OXY USA Inc.		6. State Oil & Gas Lease No. 10-5638
3. Address of Operator P.O. Box 50250 Midland, TX 79710		7. Lease Name or Unit Agreement Name Copperhead 18 State
4. Well Location Unit Letter <u>D</u> : <u>340</u> feet from the <u>north</u> line and <u>660</u> feet from the <u>west</u> line Section <u>18</u> Township <u>24S</u> Range <u>33E</u> NMPM County <u>Lea</u>		8. Well Number 2H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3570'		9. OGRID Number 16696
		10. Pool name or Wildcat Triple X Bone Springs, W.

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: Amend APD ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

OXY USA Inc. respectfully requests to amend the APD for the Copperhead 18 State #2H, API No. 30-025-41460.

1. Amend the proposed TD of the horizontal lateral to 15423'M 11130'V.
2. See attached for an amended proposed directional plan.
3. The Pilot Hole will remain the same.
4. The planned cementing volumes will not be affected.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE David Stewart TITLE Sr. Regulatory Advisor DATE 12/16/13

Type or print name David Stewart E-mail address: david_stewart@oxy.com PHONE: 432-685-5717

For State Use Only

APPROVED BY: [Signature] TITLE Petroleum Engineer DATE DEC 19 2013

Conditions of Approval (if any):

DEC 19 2013



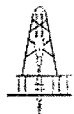
C18S 2H
Lea County, New Mexico
Northing: 445907.50
Easting: 721463.20
Design #2



To convert a Magnetic Direction to a Grid Direction, Add 6.94°
To convert a True Direction to a Grid Direction, Subtract 0.38°

Azimuths to Grid North
True North: -0.38°
Magnetic North: 6.94°

Magnetic Field
Strength: 48378.9snT
Dip Angle: 60.12°
Date: 10/7/2013
Model: IGRF2010



KB @ 3593.50
Gr @ 3569.50

HOBBS OCD

DEC 18 2013

RECEIVED

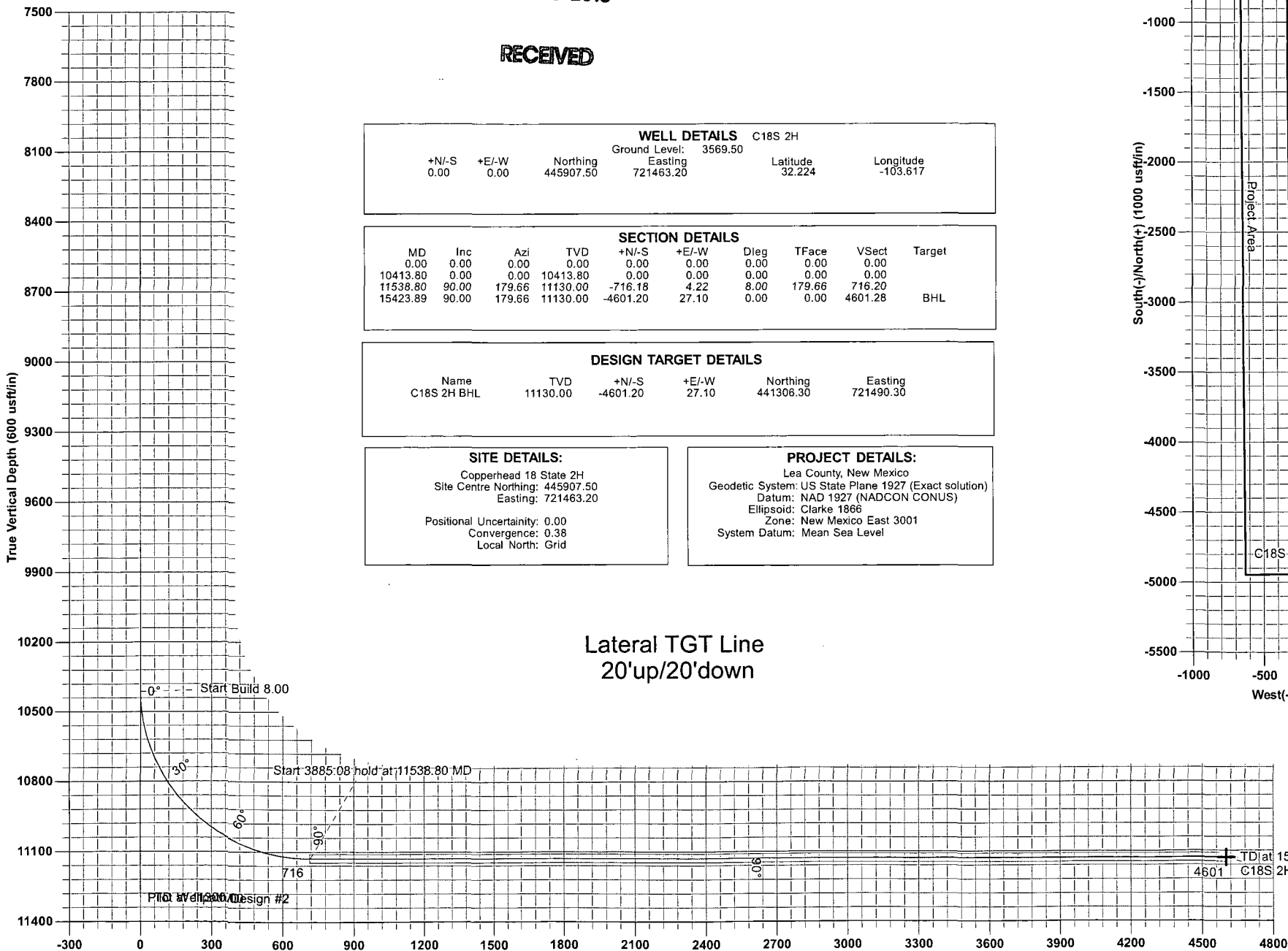
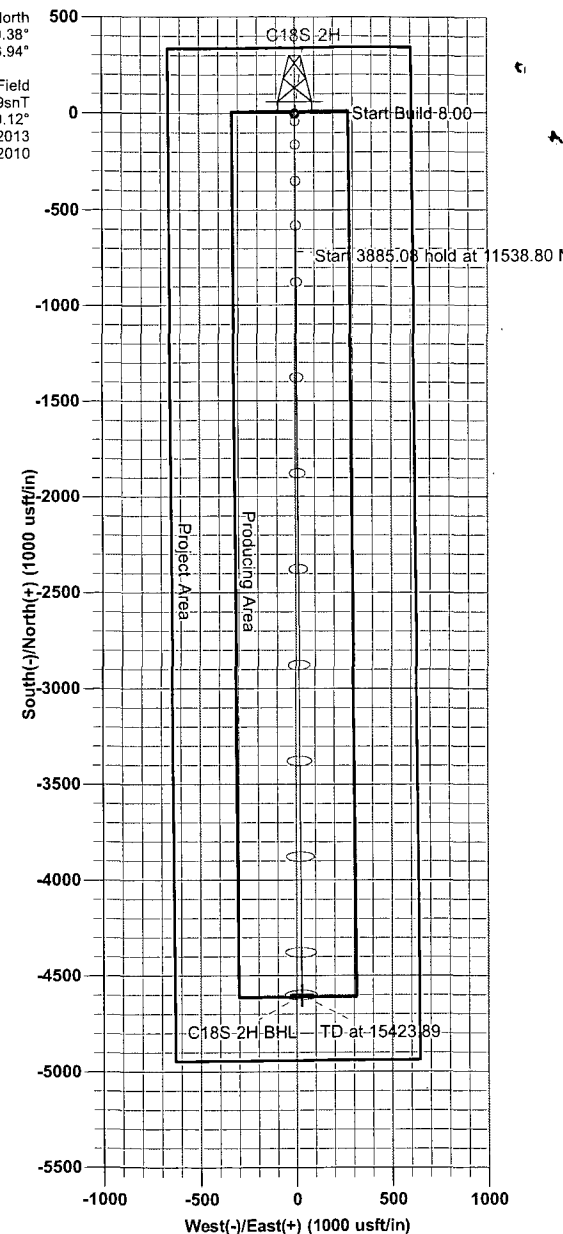
WELL DETAILS C18S 2H					
Ground Level: 3569.50					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	445907.50	721463.20	32.224	-103.617

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10413.80	0.00	0.00	10413.80	0.00	0.00	0.00	0.00	0.00	
11538.80	90.00	179.66	11130.00	-716.18	4.22	8.00	179.66	716.20	
15423.89	90.00	179.66	11130.00	-4601.20	27.10	0.00	0.00	4601.28	BHL

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
C18S 2H BHL	11130.00	-4601.20	27.10	441306.30	721490.30

SITE DETAILS:	
Copperhead 18 State 2H	
Site Centre Northing: 445907.50	
Easting: 721463.20	
Positional Uncertainty: 0.00	
Convergence: 0.38	
Local North: Grid	

PROJECT DETAILS:	
Lea County, New Mexico	
Geodetic System: US State Plane 1927 (Exact solution)	
Datum: NAD 1927 (NADCON CONUS)	
Ellipsoid: Clarke 1866	
Zone: New Mexico East 3001	
System Datum: Mean Sea Level	



Jody Barclay
13:05, December 10 2013

Scientific Drilling
2740 N. Highway 287



Scientific Drilling
Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well C18S 2H
Company:	OXY	TVD Reference:	KB @ 3593.50usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3593.50usft
Site:	Copperhead 18 State 2H	North Reference:	Grid
Well:	C18S:2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellpath		
Design:	Design #2		

Project	Lea County, 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	Copperhead 18 State 2H			
Site Position:		Northing:	445,907.50 usft	Latitude: 32.224
From:	Map	Easting:	721,463.20 usft	Longitude: -103.617
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.38 °

Well	C18S 2H			
Well Position	+N/-S	0.00 usft	Northing:	445,907.50 usft
	+E/-W	0.00 usft	Easting:	721,463.20 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level: 3,569.50 usft

Wellbore	Original Wellpath				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/7/2013	7.32	60.12	48,379

Design	Design #2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.66

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
10,413.80	0.00	0.00	10,413.80	0.00	0.00	0.00	0.00	0.00	0.00	
11,538.80	90.00	179.66	11,130.00	-716.18	4.22	8.00	8.00	0.00	179.66	
15,423.89	90.00	179.66	11,130.00	-4,601.20	27.10	0.00	0.00	0.00	0.00	C18S 2H BHL



Scientific Drilling

Planning Report



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Company:	OXY	TVD Reference:	KB @ 3593.50usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3593.50usft
Site:	Copperhead 18 State 2H	North Reference:	Grid
Well:	C18S 2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellpath		
Design:	Design #2		

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
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00



Scientific Drilling

Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well C18S 2H
Company:	OXY	TVD Reference:	KB @ 3593.50usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3593.50usft
Site:	Copperhead 18 State 2H	North Reference:	Grid
Well:	C18S 2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellpath		
Design:	Design #2		

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)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00	0.00	0.00
10,413.80	0.00	0.00	10,413.80	0.00	0.00	0.00	0.00	0.00	0.00
10,450.00	2.90	179.66	10,449.98	-0.91	0.01	0.91	8.00	8.00	0.00
10,500.00	6.90	179.66	10,499.79	-5.18	0.03	5.18	8.00	8.00	0.00



Scientific Drilling

Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well C18S 2H
Company:	OXY	TVD Reference:	KB @ 3593.50usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3593.50usft
Site:	Copperhead 18 State 2H	North Reference:	Grid
Well:	C18S 2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellpath		
Design:	Design #2		

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)
10,550.00	10.90	179.66	10,549.18	-12.91	0.08	12.91	8.00	8.00	0.00
10,600.00	14.90	179.66	10,597.91	-24.07	0.14	24.07	8.00	8.00	0.00
10,650.00	18.90	179.66	10,645.74	-38.60	0.23	38.60	8.00	8.00	0.00
10,700.00	22.90	179.66	10,692.44	-56.43	0.33	56.43	8.00	8.00	0.00
10,750.00	26.90	179.66	10,737.79	-77.47	0.46	77.47	8.00	8.00	0.00
10,800.00	30.90	179.66	10,781.55	-101.62	0.60	101.63	8.00	8.00	0.00
10,850.00	34.90	179.66	10,823.53	-128.77	0.76	128.78	8.00	8.00	0.00
10,900.00	38.90	179.66	10,863.51	-158.79	0.94	158.79	8.00	8.00	0.00
10,950.00	42.90	179.66	10,901.29	-191.51	1.13	191.52	8.00	8.00	0.00
11,000.00	46.90	179.66	10,936.71	-226.80	1.34	226.80	8.00	8.00	0.00
11,050.00	50.90	179.66	10,969.57	-264.46	1.56	264.47	8.00	8.00	0.00
11,100.00	54.90	179.66	10,999.73	-304.33	1.79	304.34	8.00	8.00	0.00
11,150.00	58.90	179.66	11,027.03	-346.21	2.04	346.21	8.00	8.00	0.00
11,200.00	62.90	179.66	11,051.35	-389.88	2.30	389.89	8.00	8.00	0.00
11,250.00	66.90	179.66	11,072.56	-435.15	2.56	435.16	8.00	8.00	0.00
11,300.00	70.90	179.66	11,090.56	-481.79	2.84	481.79	8.00	8.00	0.00
11,350.00	74.90	179.66	11,105.26	-529.56	3.12	529.57	8.00	8.00	0.00
11,400.00	78.90	179.66	11,116.59	-578.25	3.41	578.26	8.00	8.00	0.00
11,450.00	82.90	179.66	11,124.50	-627.61	3.70	627.62	8.00	8.00	0.00
11,500.00	86.90	179.66	11,128.95	-677.40	3.99	677.41	8.00	8.00	0.00
11,538.80	90.00	179.66	11,130.00	-716.18	4.22	716.20	8.00	8.00	0.00
11,600.00	90.00	179.66	11,130.00	-777.38	4.58	777.39	0.00	0.00	0.00
11,700.00	90.00	179.66	11,130.00	-877.38	5.17	877.39	0.00	0.00	0.00
11,800.00	90.00	179.66	11,130.00	-977.38	5.76	977.39	0.00	0.00	0.00
11,900.00	90.00	179.66	11,130.00	-1,077.38	6.35	1,077.39	0.00	0.00	0.00
12,000.00	90.00	179.66	11,130.00	-1,177.37	6.93	1,177.39	0.00	0.00	0.00
12,100.00	90.00	179.66	11,130.00	-1,277.37	7.52	1,277.39	0.00	0.00	0.00
12,200.00	90.00	179.66	11,130.00	-1,377.37	8.11	1,377.39	0.00	0.00	0.00
12,300.00	90.00	179.66	11,130.00	-1,477.37	8.70	1,477.39	0.00	0.00	0.00
12,400.00	90.00	179.66	11,130.00	-1,577.37	9.29	1,577.39	0.00	0.00	0.00
12,500.00	90.00	179.66	11,130.00	-1,677.37	9.88	1,677.39	0.00	0.00	0.00
12,600.00	90.00	179.66	11,130.00	-1,777.36	10.47	1,777.39	0.00	0.00	0.00
12,700.00	90.00	179.66	11,130.00	-1,877.36	11.06	1,877.39	0.00	0.00	0.00
12,800.00	90.00	179.66	11,130.00	-1,977.36	11.65	1,977.39	0.00	0.00	0.00
12,900.00	90.00	179.66	11,130.00	-2,077.36	12.24	2,077.39	0.00	0.00	0.00
13,000.00	90.00	179.66	11,130.00	-2,177.36	12.82	2,177.39	0.00	0.00	0.00
13,100.00	90.00	179.66	11,130.00	-2,277.36	13.41	2,277.39	0.00	0.00	0.00
13,200.00	90.00	179.66	11,130.00	-2,377.35	14.00	2,377.39	0.00	0.00	0.00
13,300.00	90.00	179.66	11,130.00	-2,477.35	14.59	2,477.39	0.00	0.00	0.00
13,400.00	90.00	179.66	11,130.00	-2,577.35	15.18	2,577.39	0.00	0.00	0.00
13,500.00	90.00	179.66	11,130.00	-2,677.35	15.77	2,677.39	0.00	0.00	0.00
13,600.00	90.00	179.66	11,130.00	-2,777.35	16.36	2,777.39	0.00	0.00	0.00
13,700.00	90.00	179.66	11,130.00	-2,877.34	16.95	2,877.39	0.00	0.00	0.00
13,800.00	90.00	179.66	11,130.00	-2,977.34	17.54	2,977.39	0.00	0.00	0.00
13,900.00	90.00	179.66	11,130.00	-3,077.34	18.12	3,077.39	0.00	0.00	0.00
14,000.00	90.00	179.66	11,130.00	-3,177.34	18.71	3,177.39	0.00	0.00	0.00
14,100.00	90.00	179.66	11,130.00	-3,277.34	19.30	3,277.39	0.00	0.00	0.00
14,200.00	90.00	179.66	11,130.00	-3,377.34	19.89	3,377.39	0.00	0.00	0.00
14,300.00	90.00	179.66	11,130.00	-3,477.33	20.48	3,477.39	0.00	0.00	0.00
14,400.00	90.00	179.66	11,130.00	-3,577.33	21.07	3,577.39	0.00	0.00	0.00
14,500.00	90.00	179.66	11,130.00	-3,677.33	21.66	3,677.39	0.00	0.00	0.00
14,600.00	90.00	179.66	11,130.00	-3,777.33	22.25	3,777.39	0.00	0.00	0.00
14,700.00	90.00	179.66	11,130.00	-3,877.33	22.84	3,877.39	0.00	0.00	0.00
14,800.00	90.00	179.66	11,130.00	-3,977.33	23.43	3,977.39	0.00	0.00	0.00



Scientific Drilling
Planning Report



Database:	CompassC	Local Co-ordinate Reference:	Well C18S 2H
Company:	OXY	TVD Reference:	KB @ 3593.50usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3593.50usft
Site:	Copperhead 18 State 2H	North Reference:	Grid
Well:	C18S 2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellpath		
Design:	Design #2		

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)
14,900.00	90.00	179.66	11,130.00	-4,077.32	24.01	4,077.39	0.00	0.00	0.00
15,000.00	90.00	179.66	11,130.00	-4,177.32	24.60	4,177.39	0.00	0.00	0.00
15,100.00	90.00	179.66	11,130.00	-4,277.32	25.19	4,277.39	0.00	0.00	0.00
15,200.00	90.00	179.66	11,130.00	-4,377.32	25.78	4,377.39	0.00	0.00	0.00
15,300.00	90.00	179.66	11,130.00	-4,477.32	26.37	4,477.39	0.00	0.00	0.00
15,400.00	90.00	179.66	11,130.00	-4,577.32	26.96	4,577.39	0.00	0.00	0.00
15,423.89	90.00	179.66	11,130.00	-4,601.20	27.10	4,601.28	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
C18S 2H BHL	0.00	0.00	11,130.00	-4,601.20	27.10	441,306.30	721,490.30	32.211	-103.617
- plan hits target center									
- Point									