

COG Operating, LLC

Lea County, NM
Sec 28, T22S, R34E
Smalls Federal 2H

Wellbore #1

Plan: Design #1

DDC Well Planning Report

07 July, 2015



FEB 11 2016



HP
Well Planning Report



Database:	Compass	Local Co-ordinate Reference:	Well Smalls Federal 2H
Company:	COG Operating, LLC	TVD Reference:	Well @ 3437.0usft (Ensign #772)
Project:	Lea County, NM	MD Reference:	Well @ 3437.0usft (Ensign #772)
Site:	Sec 28, T22S, R34E	North Reference:	Grid
Well:	Smalls Federal 2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Lea County, NM		
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	Sec 28, T22S, R34E		
Site Position:	From: Map	Northing:	494,242.70 usft
		Easting:	767,268.60 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"
		Latitude:	32° 21' 20.947 N
		Longitude:	103° 28' 4.141 W
		Grid Convergence:	0.46 °

Well	Smalls Federal 2H		
Well Position	+N/-S	-11.8 usft	Northing:
	+E/-W	-1,419.7 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Latitude:	32° 21' 20.944 N
		Longitude:	103° 28' 20.691 W
		Ground Level:	3,406.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	7/7/2015	7.13
			Dip Angle (°)
			60.23
			Field Strength (nT)
			48,228

Design	Design #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°)
			359.63

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
10,602.5	0.00	0.00	10,602.5	0.0	0.0	0.00	0.00	0.00	0.00	
11,352.5	90.00	359.63	11,080.0	477.5	-3.1	12.00	12.00	-0.05	359.63	
15,631.0	90.00	359.63	11,080.0	4,755.9	-30.8	0.00	0.00	0.00	0.00	PBHL Smalls Federal



HP
Well Planning Report



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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)
KOP 12°/100'									
10,602.5	0.00	0.00	10,602.5	0.0	0.0	0.0	0.00	0.00	0.00
10,700.0	11.70	359.63	10,699.3	9.9	-0.1	9.9	12.00	12.00	0.00
10,800.0	23.70	359.63	10,794.4	40.3	-0.3	40.3	12.00	12.00	0.00
10,900.0	35.70	359.63	10,881.1	89.7	-0.6	89.7	12.00	12.00	0.00
11,000.0	47.70	359.63	10,955.6	156.1	-1.0	156.1	12.00	12.00	0.00
11,100.0	59.70	359.63	11,014.7	236.6	-1.5	236.6	12.00	12.00	0.00
11,200.0	71.70	359.63	11,055.8	327.5	-2.1	327.5	12.00	12.00	0.00
11,300.0	83.70	359.63	11,077.1	425.1	-2.8	425.1	12.00	12.00	0.00
End of Curve / 90° Inc / 359.63° Azm / 11080' TVD									
11,352.5	90.00	359.63	11,080.0	477.5	-3.1	477.5	12.00	12.00	0.00
11,400.0	90.00	359.63	11,080.0	525.0	-3.4	525.0	0.00	0.00	0.00
11,500.0	90.00	359.63	11,080.0	625.0	-4.0	625.0	0.00	0.00	0.00
11,600.0	90.00	359.63	11,080.0	724.9	-4.7	725.0	0.00	0.00	0.00
11,700.0	90.00	359.63	11,080.0	824.9	-5.3	825.0	0.00	0.00	0.00
11,800.0	90.00	359.63	11,080.0	924.9	-6.0	925.0	0.00	0.00	0.00
11,900.0	90.00	359.63	11,080.0	1,024.9	-6.6	1,025.0	0.00	0.00	0.00
12,000.0	90.00	359.63	11,080.0	1,124.9	-7.3	1,125.0	0.00	0.00	0.00
12,100.0	90.00	359.63	11,080.0	1,224.9	-7.9	1,225.0	0.00	0.00	0.00
12,200.0	90.00	359.63	11,080.0	1,324.9	-8.6	1,325.0	0.00	0.00	0.00
12,300.0	90.00	359.63	11,080.0	1,424.9	-9.2	1,425.0	0.00	0.00	0.00
12,400.0	90.00	359.63	11,080.0	1,524.9	-9.9	1,525.0	0.00	0.00	0.00
12,500.0	90.00	359.63	11,080.0	1,624.9	-10.5	1,625.0	0.00	0.00	0.00
12,600.0	90.00	359.63	11,080.0	1,724.9	-11.2	1,725.0	0.00	0.00	0.00
12,700.0	90.00	359.63	11,080.0	1,824.9	-11.8	1,825.0	0.00	0.00	0.00
12,800.0	90.00	359.63	11,080.0	1,924.9	-12.5	1,925.0	0.00	0.00	0.00
12,900.0	90.00	359.63	11,080.0	2,024.9	-13.1	2,025.0	0.00	0.00	0.00
13,000.0	90.00	359.63	11,080.0	2,124.9	-13.8	2,125.0	0.00	0.00	0.00
13,100.0	90.00	359.63	11,080.0	2,224.9	-14.4	2,225.0	0.00	0.00	0.00
13,200.0	90.00	359.63	11,080.0	2,324.9	-15.1	2,325.0	0.00	0.00	0.00
13,300.0	90.00	359.63	11,080.0	2,424.9	-15.7	2,425.0	0.00	0.00	0.00
13,400.0	90.00	359.63	11,080.0	2,524.9	-16.4	2,525.0	0.00	0.00	0.00
13,500.0	90.00	359.63	11,080.0	2,624.9	-17.0	2,625.0	0.00	0.00	0.00
13,600.0	90.00	359.63	11,080.0	2,724.9	-17.6	2,725.0	0.00	0.00	0.00
13,700.0	90.00	359.63	11,080.0	2,824.9	-18.3	2,825.0	0.00	0.00	0.00
13,800.0	90.00	359.63	11,080.0	2,924.9	-18.9	2,925.0	0.00	0.00	0.00
13,900.0	90.00	359.63	11,080.0	3,024.9	-19.6	3,025.0	0.00	0.00	0.00
14,000.0	90.00	359.63	11,080.0	3,124.9	-20.2	3,125.0	0.00	0.00	0.00
14,100.0	90.00	359.63	11,080.0	3,224.9	-20.9	3,225.0	0.00	0.00	0.00
14,200.0	90.00	359.63	11,080.0	3,324.9	-21.5	3,325.0	0.00	0.00	0.00
14,300.0	90.00	359.63	11,080.0	3,424.9	-22.2	3,425.0	0.00	0.00	0.00
14,400.0	90.00	359.63	11,080.0	3,524.9	-22.8	3,525.0	0.00	0.00	0.00
14,500.0	90.00	359.63	11,080.0	3,624.9	-23.5	3,625.0	0.00	0.00	0.00
14,600.0	90.00	359.63	11,080.0	3,724.9	-24.1	3,725.0	0.00	0.00	0.00
14,700.0	90.00	359.63	11,080.0	3,824.9	-24.8	3,825.0	0.00	0.00	0.00
14,800.0	90.00	359.63	11,080.0	3,924.9	-25.4	3,925.0	0.00	0.00	0.00
14,900.0	90.00	359.63	11,080.0	4,024.9	-26.1	4,025.0	0.00	0.00	0.00
15,000.0	90.00	359.63	11,080.0	4,124.9	-26.7	4,125.0	0.00	0.00	0.00
15,100.0	90.00	359.63	11,080.0	4,224.9	-27.4	4,225.0	0.00	0.00	0.00
15,200.0	90.00	359.63	11,080.0	4,324.9	-28.0	4,325.0	0.00	0.00	0.00
15,300.0	90.00	359.63	11,080.0	4,424.9	-28.7	4,425.0	0.00	0.00	0.00
15,400.0	90.00	359.63	11,080.0	4,524.9	-29.3	4,525.0	0.00	0.00	0.00
15,500.0	90.00	359.63	11,080.0	4,624.9	-30.0	4,625.0	0.00	0.00	0.00
15,600.0	90.00	359.63	11,080.0	4,724.9	-30.6	4,725.0	0.00	0.00	0.00



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Well Planning Report



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Well:	Smalls Federal 2H	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)
PBHL @ 15631' MD / 11080' TVD									
15,631.0	90.00	359.63	11,080.0	4,755.9	-30.8	4,756.0	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									
PBHL Smalls Federal 2H	0.00	0.00	11,080.0	4,755.9	-30.8	498,986.80	765,818.10	32° 22' 8.006 N	103° 28' 20.604 W
- plan hits target center									
- Point									

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,854.0	5,854.0	Rustler		0.00	359.63
6,117.0	6,117.0	TOS		0.00	359.63
7,076.0	7,076.0	BOS / Tansill		0.00	359.63
7,147.0	7,147.0	Yates		0.00	359.63
7,282.0	7,282.0	Seven Rivers		0.00	359.63
7,451.0	7,451.0	Captain Reef		0.00	359.63
8,648.0	8,648.0	Base of Reef (BLCN)		0.00	359.63
9,339.0	9,339.0	CYCN		0.00	359.63
10,542.0	10,542.0	BYCN		0.00	359.63

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,602.5	10,602.5	0.0	0.0	KOP 12°/100'
11,352.5	11,080.0	477.5	-3.1	End of Curve / 90° Inc / 359.63° Azm / 11080' TVD
15,631.0	11,080.0	4,755.9	-30.8	PBHL @ 15631' MD / 11080' TVD



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Lea County, NM

Sec 28, T22S, R34E

Smalls Federal 2H

Wellbore #1

Design #1

DDC Anticollision Report

07 July, 2015





HP
Anticollision Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Smalls Federal 2H
Project:	Lea County, NM	TVD Reference:	Well @ 3437.0usft (Ensign #772)
Reference Site:	Sec 28, T22S, R34E	MD Reference:	Well @ 3437.0usft (Ensign #772)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Smalls Federal 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference:	Design #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date 7/7/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	15,631.0	Design #1 (Wellbore #1)	MWD default	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec 28, T22S, R34E						
Smalls Federal 6H - Wellbore #1 - Design #1	9,837.2	9,837.2	29.9	-14.0	0.681	Level 1, CC, ES, SF

Offset Design												Offset Site Error:		0.0 usft
Survey Program: 0-MWD default												Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface - (°)	Offset Wellbore Centre +N-S (usft)	Centre +E/-W (usft)	Distance		Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)				
0.0	0.0	0.0	0.0	0.0	0.0	-90.96	-0.5	-29.9	29.9					
100.0	100.0	100.0	100.0	0.1	0.1	-90.96	-0.5	-29.9	29.9	29.7	192.820			
200.0	200.0	200.0	200.0	0.3	0.3	-90.96	-0.5	-29.9	29.9	29.3	49.459			
300.0	300.0	300.0	300.0	0.5	0.5	-90.96	-0.5	-29.9	29.9	28.9	28.368			
400.0	400.0	400.0	400.0	0.8	0.8	-90.96	-0.5	-29.9	29.9	28.4	19.887			
500.0	500.0	500.0	500.0	1.0	1.0	-90.96	-0.5	-29.9	29.9	28.0	15.310			
600.0	600.0	600.0	600.0	1.2	1.2	-90.96	-0.5	-29.9	29.9	27.5	12.446			
700.0	700.0	700.0	700.0	1.4	1.4	-90.96	-0.5	-29.9	29.9	27.1	10.484			
800.0	800.0	800.0	800.0	1.7	1.7	-90.96	-0.5	-29.9	29.9	26.6	9.057			
900.0	900.0	900.0	900.0	1.9	1.9	-90.96	-0.5	-29.9	29.9	26.2	7.972			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.96	-0.5	-29.9	29.9	25.7	7.119			
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-90.96	-0.5	-29.9	29.9	25.3	6.430			
1,200.0	1,200.0	1,200.0	1,200.0	2.5	2.5	-90.96	-0.5	-29.9	29.9	24.8	5.864			
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.96	-0.5	-29.9	29.9	24.4	5.389			
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.96	-0.5	-29.9	29.9	23.9	4.985			
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	-90.96	-0.5	-29.9	29.9	23.5	4.637			
1,600.0	1,600.0	1,600.0	1,600.0	3.4	3.4	-90.96	-0.5	-29.9	29.9	23.0	4.335			
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-90.96	-0.5	-29.9	29.9	22.6	4.070			
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-90.96	-0.5	-29.9	29.9	22.1	3.835			
1,900.0	1,900.0	1,900.0	1,900.0	4.1	4.1	-90.96	-0.5	-29.9	29.9	21.7	3.626			
2,000.0	2,000.0	2,000.0	2,000.0	4.3	4.3	-90.96	-0.5	-29.9	29.9	21.2	3.439			
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-90.96	-0.5	-29.9	29.9	20.8	3.270			
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-90.96	-0.5	-29.9	29.9	20.3	3.117			
2,300.0	2,300.0	2,300.0	2,300.0	5.0	5.0	-90.96	-0.5	-29.9	29.9	19.9	2.977			
2,400.0	2,400.0	2,400.0	2,400.0	5.2	5.2	-90.96	-0.5	-29.9	29.9	19.4	2.850			
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-90.96	-0.5	-29.9	29.9	19.0	2.733			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



HP
Anticollision Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Smalls Federal 2H
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Reference Site:	Sec 28, T22S, R34E	MD Reference:	Well @ 3437.0usft (Ensign #772)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Smalls Federal 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD default												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-90.96	-0.5	-29.9	29.9	18.5	2.625		
2,700.0	2,700.0	2,700.0	2,700.0	5.9	5.9	-90.96	-0.5	-29.9	29.9	18.1	2.525		
2,800.0	2,800.0	2,800.0	2,800.0	6.1	6.1	-90.96	-0.5	-29.9	29.9	17.6	2.433		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-90.96	-0.5	-29.9	29.9	17.2	2.347		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-90.96	-0.5	-29.9	29.9	16.7	2.267		
3,100.0	3,100.0	3,100.0	3,100.0	6.8	6.8	-90.96	-0.5	-29.9	29.9	16.3	2.192		
3,200.0	3,200.0	3,200.0	3,200.0	7.0	7.0	-90.96	-0.5	-29.9	29.9	15.8	2.122		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-90.96	-0.5	-29.9	29.9	15.4	2.057		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-90.96	-0.5	-29.9	29.9	14.9	1.995		
3,500.0	3,500.0	3,500.0	3,500.0	7.7	7.7	-90.96	-0.5	-29.9	29.9	14.5	1.937		
3,600.0	3,600.0	3,600.0	3,600.0	7.9	7.9	-90.96	-0.5	-29.9	29.9	14.0	1.882		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-90.96	-0.5	-29.9	29.9	13.6	1.830		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-90.96	-0.5	-29.9	29.9	13.1	1.781		
3,900.0	3,900.0	3,900.0	3,900.0	8.6	8.6	-90.96	-0.5	-29.9	29.9	12.7	1.735		
4,000.0	4,000.0	4,000.0	4,000.0	8.8	8.8	-90.96	-0.5	-29.9	29.9	12.2	1.691		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-90.96	-0.5	-29.9	29.9	11.8	1.649		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-90.96	-0.5	-29.9	29.9	11.3	1.609		
4,300.0	4,300.0	4,300.0	4,300.0	9.5	9.5	-90.96	-0.5	-29.9	29.9	10.9	1.571		
4,400.0	4,400.0	4,400.0	4,400.0	9.7	9.7	-90.96	-0.5	-29.9	29.9	10.4	1.535		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-90.96	-0.5	-29.9	29.9	10.0	1.500		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-90.96	-0.5	-29.9	29.9	9.5	1.467	Level 3	
4,700.0	4,700.0	4,700.0	4,700.0	10.4	10.4	-90.96	-0.5	-29.9	29.9	9.1	1.435	Level 3	
4,800.0	4,800.0	4,800.0	4,800.0	10.6	10.6	-90.96	-0.5	-29.9	29.9	8.6	1.405	Level 3	
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-90.96	-0.5	-29.9	29.9	8.2	1.376	Level 3	
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-90.96	-0.5	-29.9	29.9	7.7	1.348	Level 3	
5,100.0	5,100.0	5,100.0	5,100.0	11.3	11.3	-90.96	-0.5	-29.9	29.9	7.3	1.321	Level 3	
5,200.0	5,200.0	5,200.0	5,200.0	11.5	11.5	-90.96	-0.5	-29.9	29.9	6.8	1.296	Level 3	
5,300.0	5,300.0	5,300.0	5,300.0	11.8	11.8	-90.96	-0.5	-29.9	29.9	6.4	1.271	Level 3	
5,400.0	5,400.0	5,400.0	5,400.0	12.0	12.0	-90.96	-0.5	-29.9	29.9	5.9	1.247	Level 2	
5,500.0	5,500.0	5,500.0	5,500.0	12.2	12.2	-90.96	-0.5	-29.9	29.9	5.5	1.224	Level 2	
5,600.0	5,600.0	5,600.0	5,600.0	12.4	12.4	-90.96	-0.5	-29.9	29.9	5.0	1.202	Level 2	
5,700.0	5,700.0	5,700.0	5,700.0	12.7	12.7	-90.96	-0.5	-29.9	29.9	4.6	1.181	Level 2	
5,800.0	5,800.0	5,800.0	5,800.0	12.9	12.9	-90.96	-0.5	-29.9	29.9	4.1	1.160	Level 2	
5,900.0	5,900.0	5,900.0	5,900.0	13.1	13.1	-90.96	-0.5	-29.9	29.9	3.7	1.140	Level 2	
6,000.0	6,000.0	6,000.0	6,000.0	13.3	13.3	-90.96	-0.5	-29.9	29.9	3.2	1.121	Level 2	
6,100.0	6,100.0	6,100.0	6,100.0	13.6	13.6	-90.96	-0.5	-29.9	29.9	2.8	1.102	Level 2	
6,200.0	6,200.0	6,200.0	6,200.0	13.8	13.8	-90.96	-0.5	-29.9	29.9	2.3	1.084	Level 2	
6,300.0	6,300.0	6,300.0	6,300.0	14.0	14.0	-90.96	-0.5	-29.9	29.9	1.9	1.067	Level 2	
6,400.0	6,400.0	6,400.0	6,400.0	14.2	14.2	-90.96	-0.5	-29.9	29.9	1.4	1.050	Level 2	
6,500.0	6,500.0	6,500.0	6,500.0	14.5	14.5	-90.96	-0.5	-29.9	29.9	1.0	1.034	Level 2	
6,600.0	6,600.0	6,600.0	6,600.0	14.7	14.7	-90.96	-0.5	-29.9	29.9	0.5	1.018	Level 2	
6,700.0	6,700.0	6,700.0	6,700.0	14.9	14.9	-90.96	-0.5	-29.9	29.9	0.1	1.003	Level 2	
6,800.0	6,800.0	6,800.0	6,800.0	15.1	15.1	-90.96	-0.5	-29.9	29.9	-0.4	0.988	Level 1	
6,900.0	6,900.0	6,900.0	6,900.0	15.4	15.4	-90.96	-0.5	-29.9	29.9	-0.8	0.973	Level 1	
7,000.0	7,000.0	7,000.0	7,000.0	15.6	15.6	-90.96	-0.5	-29.9	29.9	-1.3	0.959	Level 1	
7,100.0	7,100.0	7,100.0	7,100.0	15.8	15.8	-90.96	-0.5	-29.9	29.9	-1.7	0.946	Level 1	
7,200.0	7,200.0	7,200.0	7,200.0	16.0	16.0	-90.96	-0.5	-29.9	29.9	-2.2	0.932	Level 1	
7,300.0	7,300.0	7,300.0	7,300.0	16.3	16.3	-90.96	-0.5	-29.9	29.9	-2.6	0.920	Level 1	
7,400.0	7,400.0	7,400.0	7,400.0	16.5	16.5	-90.96	-0.5	-29.9	29.9	-3.1	0.907	Level 1	
7,500.0	7,500.0	7,500.0	7,500.0	16.7	16.7	-90.96	-0.5	-29.9	29.9	-3.5	0.895	Level 1	
7,600.0	7,600.0	7,600.0	7,600.0	16.9	16.9	-90.96	-0.5	-29.9	29.9	-4.0	0.883	Level 1	
7,700.0	7,700.0	7,700.0	7,700.0	17.2	17.2	-90.96	-0.5	-29.9	29.9	-4.4	0.871	Level 1	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



HP
Anticollision Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Smalls Federal 2H
Project:	Lea County, NM	TVD Reference:	Well @ 3437.0usft (Ensign #772)
Reference Site:	Sec 28, T22S, R34E	MD Reference:	Well @ 3437.0usft (Ensign #772)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Smalls Federal 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Sec 28, T22S, R34E - Smalls Federal 6H - Wellbore #1 - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-MWD default													
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
7,800.0	7,800.0	7,800.0	7,800.0	17.4	17.4	-90.96	-0.5	-29.9	29.9	-4.9	0.860	Level 1	
7,900.0	7,900.0	7,900.0	7,900.0	17.6	17.6	-90.96	-0.5	-29.9	29.9	-5.3	0.849	Level 1	
8,000.0	8,000.0	8,000.0	8,000.0	17.8	17.8	-90.96	-0.5	-29.9	29.9	-5.8	0.838	Level 1	
8,100.0	8,100.0	8,100.0	8,100.0	18.1	18.1	-90.96	-0.5	-29.9	29.9	-6.2	0.828	Level 1	
8,200.0	8,200.0	8,200.0	8,200.0	18.3	18.3	-90.96	-0.5	-29.9	29.9	-6.7	0.818	Level 1	
8,300.0	8,300.0	8,300.0	8,300.0	18.5	18.5	-90.96	-0.5	-29.9	29.9	-7.1	0.808	Level 1	
8,400.0	8,400.0	8,400.0	8,400.0	18.7	18.7	-90.96	-0.5	-29.9	29.9	-7.6	0.798	Level 1	
8,500.0	8,500.0	8,500.0	8,500.0	19.0	19.0	-90.96	-0.5	-29.9	29.9	-8.0	0.789	Level 1	
8,600.0	8,600.0	8,600.0	8,600.0	19.2	19.2	-90.96	-0.5	-29.9	29.9	-8.5	0.779	Level 1	
8,700.0	8,700.0	8,700.0	8,700.0	19.4	19.4	-90.96	-0.5	-29.9	29.9	-8.9	0.770	Level 1	
8,800.0	8,800.0	8,800.0	8,800.0	19.6	19.6	-90.96	-0.5	-29.9	29.9	-9.4	0.762	Level 1	
8,900.0	8,900.0	8,900.0	8,900.0	19.9	19.9	-90.96	-0.5	-29.9	29.9	-9.8	0.753	Level 1	
9,000.0	9,000.0	9,000.0	9,000.0	20.1	20.1	-90.96	-0.5	-29.9	29.9	-10.3	0.745	Level 1	
9,100.0	9,100.0	9,100.0	9,100.0	20.3	20.3	-90.96	-0.5	-29.9	29.9	-10.7	0.736	Level 1	
9,200.0	9,200.0	9,200.0	9,200.0	20.5	20.5	-90.96	-0.5	-29.9	29.9	-11.2	0.728	Level 1	
9,300.0	9,300.0	9,300.0	9,300.0	20.8	20.8	-90.96	-0.5	-29.9	29.9	-11.6	0.720	Level 1	
9,400.0	9,400.0	9,400.0	9,400.0	21.0	21.0	-90.96	-0.5	-29.9	29.9	-12.1	0.713	Level 1	
9,500.0	9,500.0	9,500.0	9,500.0	21.2	21.2	-90.96	-0.5	-29.9	29.9	-12.5	0.705	Level 1	
9,600.0	9,600.0	9,600.0	9,600.0	21.4	21.4	-90.96	-0.5	-29.9	29.9	-13.0	0.698	Level 1	
9,700.0	9,700.0	9,700.0	9,700.0	21.7	21.7	-90.96	-0.5	-29.9	29.9	-13.4	0.690	Level 1	
9,800.0	9,800.0	9,800.0	9,800.0	21.9	21.9	-90.96	-0.5	-29.9	29.9	-13.9	0.683	Level 1	
9,837.2	9,837.2	9,837.2	9,837.2	22.0	22.0	-89.74	0.1	-29.9	29.9	-14.0	0.681	Level 1, CC, ES, SF	
9,900.0	9,900.0	9,899.1	9,898.7	22.1	22.1	-76.21	7.3	-29.9	30.8	-13.4	0.697	Level 1	
10,000.0	10,000.0	9,991.3	9,987.2	22.3	22.3	-42.53	32.6	-29.9	46.1	1.4	1.032	Level 2	
10,100.0	10,100.0	10,071.5	10,059.0	22.6	22.5	-23.73	68.0	-29.9	84.9	39.9	1.887		
10,200.0	10,200.0	10,138.3	10,113.6	22.8	22.6	-15.71	106.4	-29.9	140.3	95.0	3.095		
10,300.0	10,300.0	10,192.7	10,153.8	23.0	22.8	-11.82	143.1	-29.9	206.7	161.1	4.531		
10,400.0	10,400.0	10,236.9	10,183.2	23.2	22.9	-9.65	176.0	-29.9	280.9	235.0	6.119		
10,500.0	10,500.0	10,275.0	10,206.0	23.5	23.0	-8.25	206.5	-29.9	360.5	314.4	7.809		
10,602.5	10,602.5	10,300.0	10,219.6	23.7	23.1	-7.50	227.5	-29.9	446.4	400.0	9.616		
10,625.0	10,625.0	10,309.3	10,224.4	23.7	23.1	-6.39	235.4	-29.9	465.4	418.9	10.019		
10,650.0	10,649.9	10,316.3	10,227.9	23.8	23.1	-5.79	241.5	-29.9	486.0	439.7	10.484		
10,675.0	10,674.7	10,325.0	10,232.1	23.8	23.2	-5.26	249.1	-29.9	506.1	460.0	10.967		
10,700.0	10,699.3	10,325.0	10,232.1	23.9	23.2	-4.92	249.1	-29.9	525.7	479.9	11.477		
10,725.0	10,723.7	10,338.7	10,238.5	24.0	23.2	-4.48	261.3	-29.9	544.6	499.3	12.007		
10,750.0	10,747.7	10,350.0	10,243.5	24.0	23.3	-4.13	271.4	-30.0	563.0	518.3	12.572		
10,775.0	10,771.3	10,350.0	10,243.5	24.1	23.3	-3.92	271.4	-30.0	580.8	536.7	13.175		
10,800.0	10,794.4	10,362.7	10,248.8	24.1	23.3	-3.64	282.9	-30.0	597.9	554.6	13.816		
10,825.0	10,817.0	10,375.0	10,253.6	24.2	23.4	-3.41	294.2	-30.0	614.4	572.1	14.507		
10,850.0	10,839.1	10,375.0	10,253.6	24.2	23.4	-3.27	294.2	-30.0	630.3	588.9	15.258		
10,875.0	10,860.4	10,387.9	10,258.4	24.3	23.4	-3.08	306.2	-30.0	645.4	605.2	16.068		
10,900.0	10,881.1	10,400.0	10,262.6	24.3	23.5	-2.92	317.6	-30.0	659.8	620.9	16.955		
10,925.0	10,901.0	10,400.0	10,262.6	24.4	23.5	-2.83	317.6	-30.0	673.6	636.1	17.938		
10,950.0	10,920.1	10,414.0	10,267.1	24.4	23.5	-2.69	330.9	-30.0	686.6	650.5	19.014		
10,975.0	10,938.3	10,425.0	10,270.3	24.5	23.6	-2.59	341.4	-30.0	698.9	664.3	20.215		
11,000.0	10,955.6	10,425.0	10,270.3	24.6	23.6	-2.52	341.4	-30.0	710.5	677.6	21.574		
11,025.0	10,972.0	10,440.9	10,274.6	24.6	23.7	-2.42	356.6	-30.0	721.3	690.0	23.088		
11,050.0	10,987.3	10,450.0	10,276.8	24.7	23.7	-2.35	365.5	-30.0	731.3	701.8	24.821		
11,075.0	11,001.6	10,459.1	10,278.8	24.8	23.8	-2.28	374.4	-30.0	740.6	713.0	26.812		
11,100.0	11,014.7	10,475.0	10,282.0	24.9	23.8	-2.21	390.0	-30.0	749.2	723.5	29.109		
11,125.0	11,026.8	10,475.0	10,282.0	24.9	23.8	-2.18	390.0	-30.0	756.9	733.1	31.825		
11,150.0	11,037.7	10,486.8	10,284.0	25.0	23.9	-2.13	401.5	-30.0	763.8	742.0	35.012		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



HP
Anticollision Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Smalls Federal 2H
Project:	Lea County, NM	TVD Reference:	Well @ 3437.0usft (Ensign #772)
Reference Site:	Sec 28, T22S, R34E	MD Reference:	Well @ 3437.0usft (Ensign #772)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Smalls Federal 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design Sec 28, T22S, R34E - Smalls Federal 6H - Wellbore #1 - Design #1											Offset Site Error:	0.0 usft
Survey Program: 0-MWD default											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
11,175.0	11,047.3	10,500.0	10,285.9	25.1	24.0	-2.08	414.6	-30.0	770.0	750.1	38.811	
11,200.0	11,055.8	10,500.0	10,285.9	25.2	24.0	-2.06	414.6	-30.0	775.3	757.5	43.461	
11,225.0	11,063.0	10,514.7	10,287.6	25.4	24.1	-2.03	429.3	-30.0	779.9	763.9	49.008	
11,250.0	11,069.0	10,525.0	10,288.5	25.5	24.1	-2.00	439.5	-30.0	783.6	769.5	55.753	
11,275.0	11,073.7	10,533.5	10,289.1	25.6	24.2	-1.98	448.0	-30.0	786.5	774.2	63.770	
11,300.0	11,077.1	10,550.0	10,289.8	25.7	24.3	-1.96	464.5	-30.0	788.7	777.9	72.508	
11,325.0	11,079.2	10,550.0	10,289.8	25.9	24.3	-1.96	464.5	-30.0	790.0	780.2	81.245	
11,352.5	11,080.0	10,563.0	10,290.0	26.0	24.3	-1.95	477.5	-30.0	790.5	781.4	86.797	
11,400.0	11,080.0	10,610.5	10,290.0	26.3	24.6	-1.93	525.0	-30.0	790.4	780.9	82.796	
11,500.0	11,080.0	10,710.5	10,290.0	27.0	25.4	-1.88	625.0	-30.0	790.4	779.9	74.859	
11,600.0	11,080.0	10,810.5	10,290.0	27.7	26.2	-1.84	725.0	-30.0	790.4	778.7	67.740	
11,700.0	11,080.0	10,910.5	10,290.0	28.6	27.1	-1.79	824.9	-30.1	790.4	777.5	61.509	
11,800.0	11,080.0	11,010.5	10,290.0	29.5	28.1	-1.75	924.9	-30.1	790.4	776.3	56.112	
11,900.0	11,080.0	11,110.5	10,290.0	30.6	29.2	-1.70	1,024.9	-30.1	790.3	775.0	51.448	
12,000.0	11,080.0	11,210.5	10,290.0	31.7	30.4	-1.66	1,124.9	-30.1	790.3	773.7	47.411	
12,100.0	11,080.0	11,310.5	10,290.0	32.9	31.6	-1.61	1,224.9	-30.1	790.3	772.3	43.900	
12,200.0	11,080.0	11,410.5	10,290.0	34.1	32.9	-1.56	1,324.9	-30.2	790.3	770.9	40.833	
12,300.0	11,080.0	11,510.5	10,290.0	35.4	34.2	-1.52	1,424.9	-30.2	790.3	769.6	38.138	
12,400.0	11,080.0	11,610.5	10,290.0	36.7	35.5	-1.47	1,524.9	-30.2	790.3	768.2	35.756	
12,500.0	11,080.0	11,710.5	10,290.0	38.1	37.0	-1.43	1,624.9	-30.2	790.2	766.8	33.639	
12,600.0	11,080.0	11,810.5	10,290.0	39.5	38.4	-1.38	1,724.9	-30.2	790.2	765.3	31.748	
12,700.0	11,080.0	11,910.5	10,290.0	40.9	39.9	-1.34	1,824.9	-30.2	790.2	763.9	30.049	
12,800.0	11,080.0	12,010.5	10,290.0	42.4	41.4	-1.29	1,924.9	-30.3	790.2	762.5	28.517	
12,900.0	11,080.0	12,110.5	10,290.0	43.9	42.9	-1.25	2,024.9	-30.3	790.2	761.1	27.129	
13,000.0	11,080.0	12,210.5	10,290.0	45.4	44.5	-1.20	2,124.9	-30.3	790.2	759.6	25.866	
13,100.0	11,080.0	12,310.5	10,290.0	46.9	46.0	-1.15	2,224.9	-30.3	790.2	758.2	24.712	
13,200.0	11,080.0	12,410.5	10,290.0	48.5	47.6	-1.11	2,324.9	-30.3	790.1	756.7	23.654	
13,300.0	11,080.0	12,510.5	10,290.0	50.0	49.2	-1.06	2,424.9	-30.4	790.1	755.3	22.681	
13,400.0	11,080.0	12,610.5	10,290.0	51.6	50.8	-1.02	2,524.9	-30.4	790.1	753.9	21.784	
13,500.0	11,080.0	12,710.4	10,290.0	53.2	52.5	-0.97	2,624.9	-30.4	790.1	752.4	20.953	
13,600.0	11,080.0	12,810.4	10,290.0	54.9	54.1	-0.93	2,724.9	-30.4	790.1	751.0	20.183	
13,700.0	11,080.0	12,910.4	10,290.0	56.5	55.8	-0.88	2,824.9	-30.4	790.1	749.5	19.466	
13,800.0	11,080.0	13,010.4	10,290.0	58.1	57.4	-0.83	2,924.9	-30.5	790.1	748.1	18.798	
13,900.0	11,080.0	13,110.4	10,290.0	59.8	59.1	-0.79	3,024.9	-30.5	790.1	746.6	18.173	
14,000.0	11,080.0	13,210.4	10,290.0	61.5	60.8	-0.74	3,124.9	-30.5	790.1	745.1	17.588	
14,100.0	11,080.0	13,310.4	10,290.0	63.1	62.5	-0.70	3,224.9	-30.5	790.1	743.7	17.039	
14,200.0	11,080.0	13,410.4	10,290.0	64.8	64.2	-0.65	3,324.9	-30.5	790.1	742.2	16.523	
14,300.0	11,080.0	13,510.4	10,290.0	66.5	65.9	-0.61	3,424.9	-30.5	790.0	740.8	16.037	
14,400.0	11,080.0	13,610.4	10,290.0	68.2	67.6	-0.56	3,524.9	-30.6	790.0	739.3	15.578	
14,500.0	11,080.0	13,710.4	10,290.0	69.9	69.3	-0.52	3,624.9	-30.6	790.0	737.9	15.145	
14,600.0	11,080.0	13,810.4	10,290.0	71.6	71.0	-0.47	3,724.9	-30.6	790.0	736.4	14.735	
14,700.0	11,080.0	13,910.4	10,290.0	73.3	72.8	-0.42	3,824.9	-30.6	790.0	735.0	14.346	
14,800.0	11,080.0	14,010.4	10,290.0	75.1	74.5	-0.38	3,924.9	-30.6	790.0	733.5	13.977	
14,900.0	11,080.0	14,110.4	10,290.0	76.8	76.2	-0.33	4,024.9	-30.7	790.0	732.0	13.626	
15,000.0	11,080.0	14,210.4	10,290.0	78.5	78.0	-0.29	4,124.9	-30.7	790.0	730.6	13.293	
15,100.0	11,080.0	14,310.4	10,290.0	80.2	79.7	-0.24	4,224.9	-30.7	790.0	729.1	12.975	
15,200.0	11,080.0	14,410.4	10,290.0	82.0	81.5	-0.20	4,324.9	-30.7	790.0	727.7	12.672	
15,300.0	11,080.0	14,510.4	10,290.0	83.7	83.2	-0.15	4,424.9	-30.7	790.0	726.2	12.382	
15,400.0	11,080.0	14,610.4	10,290.0	85.5	85.0	-0.11	4,524.9	-30.8	790.0	724.7	12.106	
15,500.0	11,080.0	14,710.4	10,290.0	87.2	86.7	-0.06	4,624.9	-30.8	790.0	723.3	11.841	
15,600.0	11,080.0	14,810.4	10,290.0	89.0	88.5	-0.01	4,724.9	-30.8	790.0	721.8	11.588	
15,621.5	11,080.0	14,832.0	10,290.0	89.3	88.9	0.00	4,746.4	-30.8	790.0	721.5	11.535	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



HP
Anticollision Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Smalls Federal 2H
Project:	Lea County, NM	TVD Reference:	Well @ 3437.0usft (Ensign #772)
Reference Site:	Sec 28, T22S, R34E	MD Reference:	Well @ 3437.0usft (Ensign #772)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Smalls Federal 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design - Sec 28, T22S, R34E - Smalls Federal 6H - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD default												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
15,631.0	11,080.0	14,841.4	10,290.0	89.5	89.0	0.00	4,755.9	-30.8	790.0	721.4	11.511		
15,631.5	11,080.0	14,841.4	10,290.0	89.5	89.0	0.00	4,755.9	-30.8	790.0	721.4	11.511		



HP
Anticollision Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Smalls Federal 2H
Project:	Lea County, NM	TVD Reference:	Well @ 3437.0usft (Ensign #772)
Reference Site:	Sec 28, T22S, R34E	MD Reference:	Well @ 3437.0usft (Ensign #772)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Smalls Federal 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 3437.0usft (Ensign #772)

Offset Depths are relative to Offset Datum

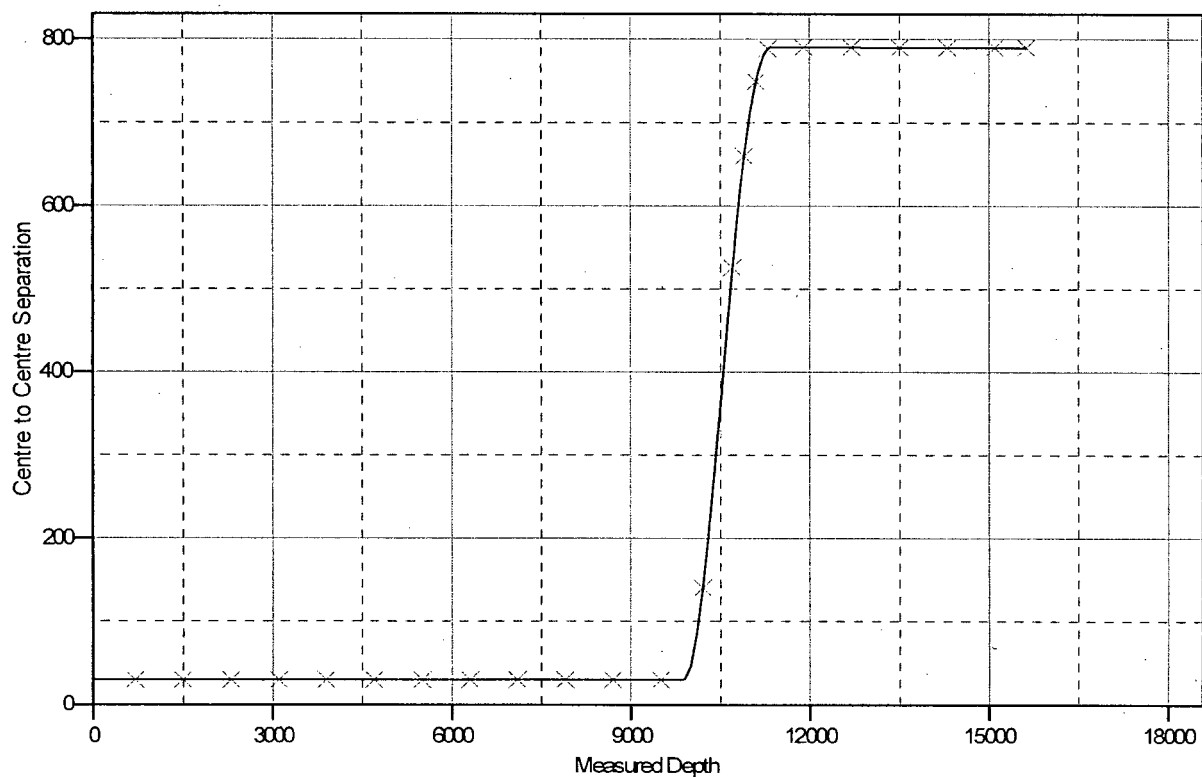
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Smalls Federal 2H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.46°

Ladder Plot



LEGEND

✕ Smalls Federal 6H, Wellbore #1, Design #1 V0



HP
Anticollision Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well Smalls Federal 2H
Project:	Lea County, NM	TVD Reference:	Well @ 3437.0usft (Ensign #772)
Reference Site:	Sec 28, T22S, R34E	MD Reference:	Well @ 3437.0usft (Ensign #772)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Smalls Federal 2H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Compass
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to Well @ 3437.0usft (Ensign #772)

Offset Depths are relative to Offset Datum

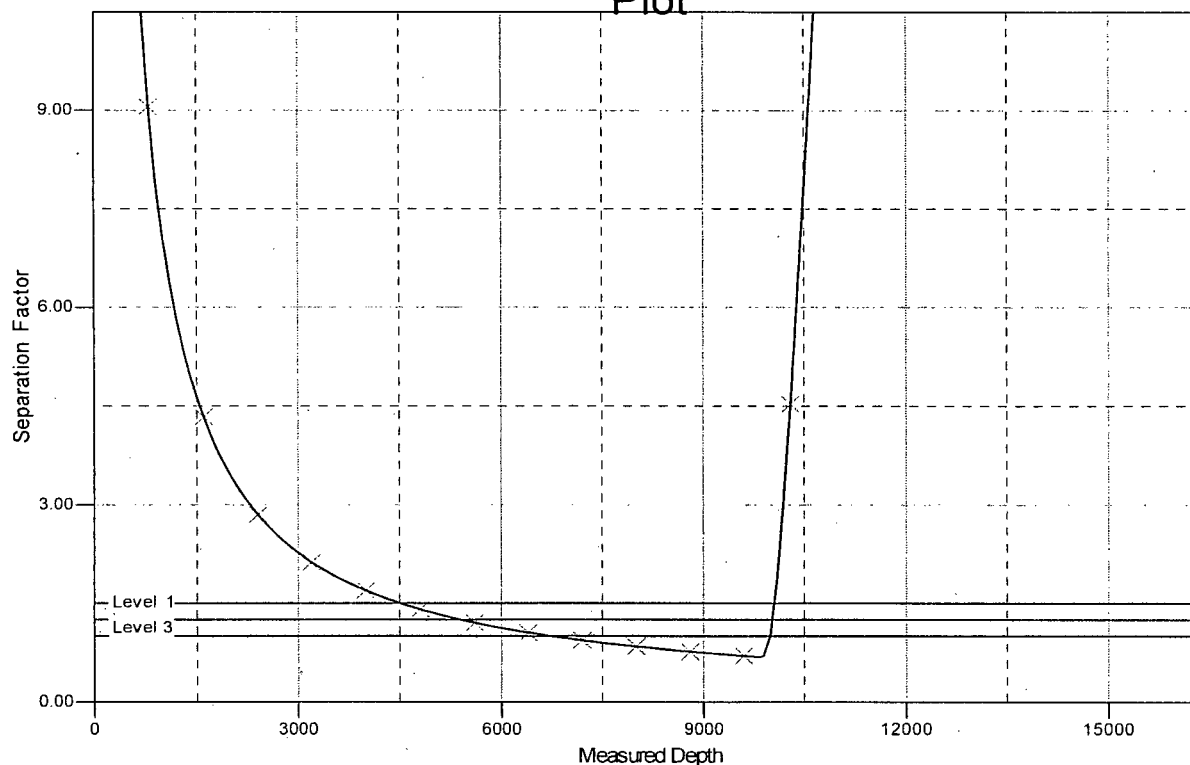
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Smalls Federal 2H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.46°

Separation Factor Plot

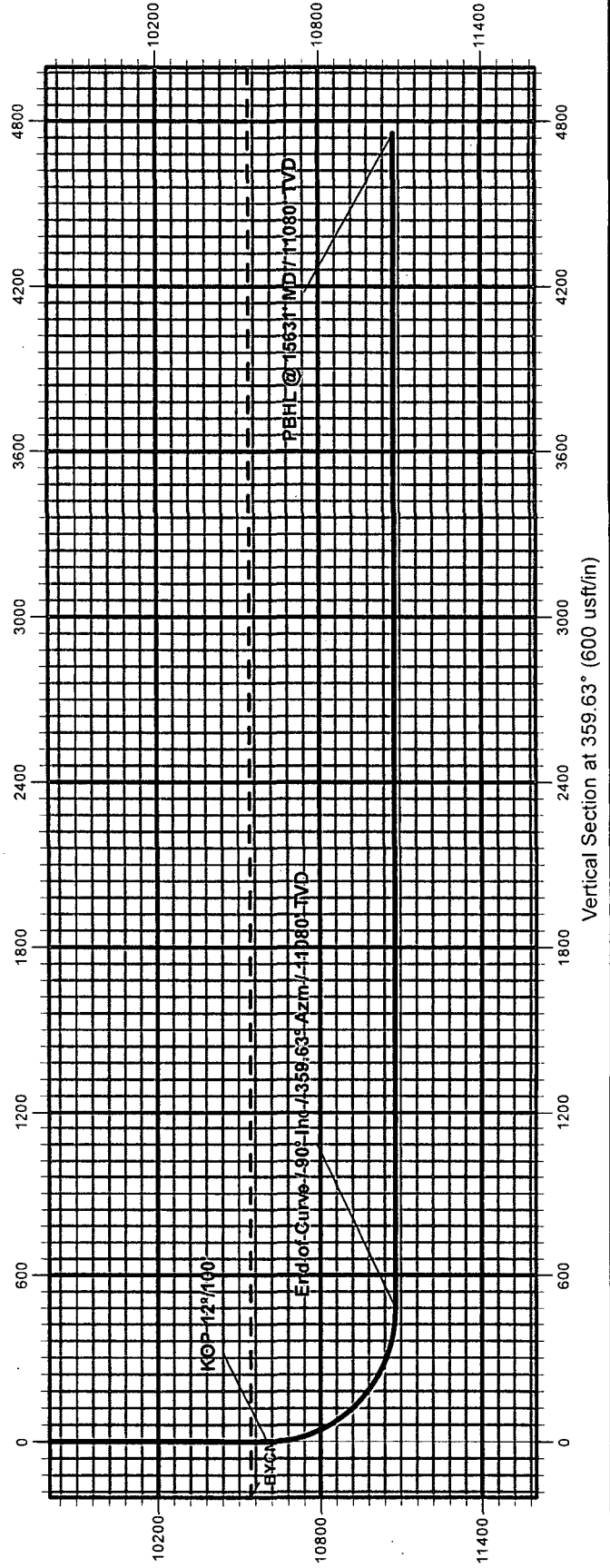


LEGEND

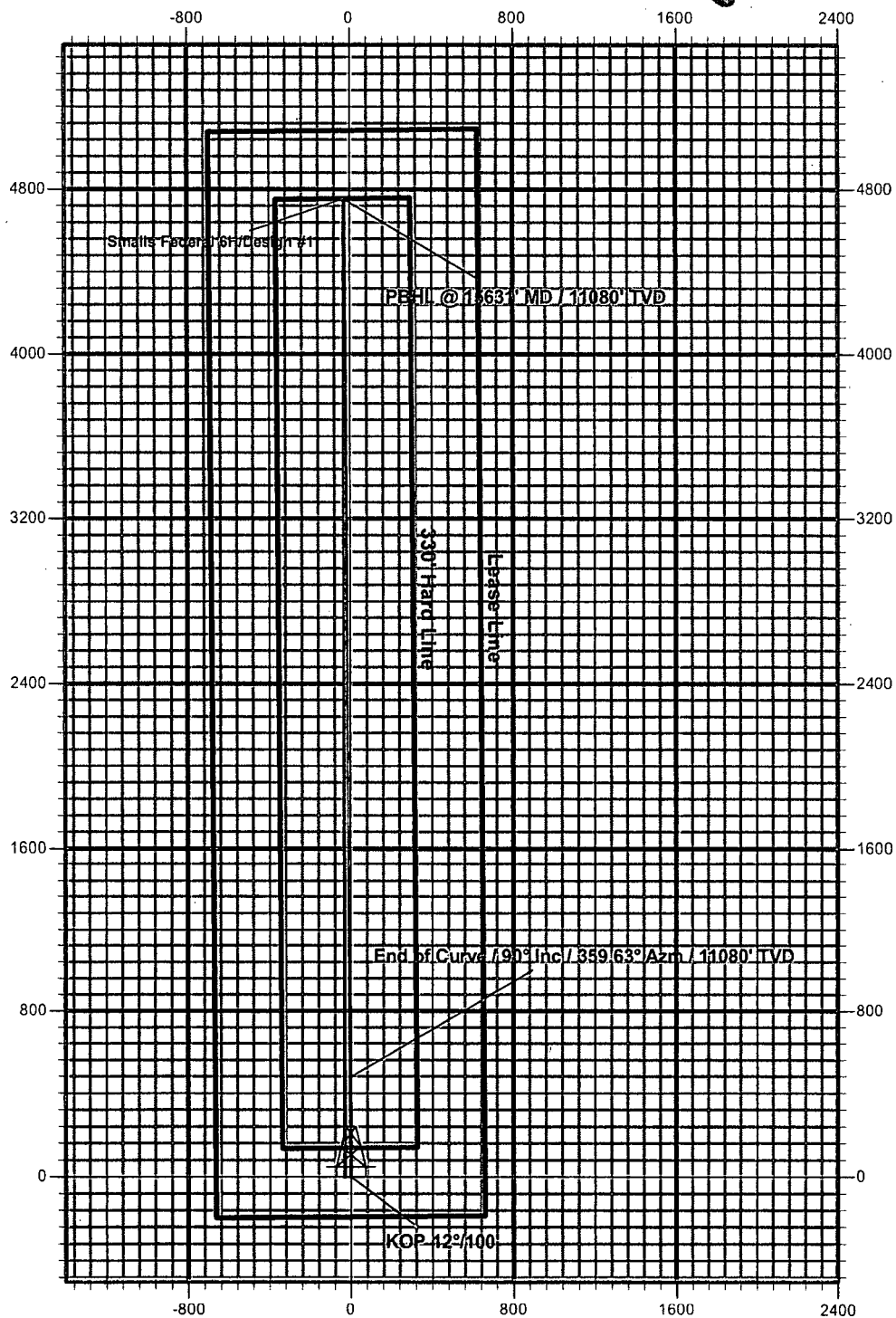
✕ Smalls Federal 6H, Wellbore #1, Design #1 V0



Lea County, NM
Sec 28, T22S, R34E
Smalls Federal 2H
Design #1



Lea County, NM
Sec 28, T22S, R34E
Smalls Federal 2H
Design #1





New Mexico Office of the State Engineer **Water Column/Average Depth to Water**

No records found.

PLSS Search:

Section(s): 28

Township: 22S

Range: 34E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

6/5/15 9:26 AM

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WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the
POD suffix indicates the
POD has been replaced
& no longer serves a
water right file.)

(R=POD has
been replaced,
O=orphaned,

C=the file is
closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00380			LE	4	2	11	22S	34E		647245	3586739*	45	30	15
CP 00596			LE	4	2	11	22S	34E		647245	3586739*	50		
CP 00597			LE	2	2	08	22S	34E		642410	3587074*	35		
CP 00598			LE	4	1	23	22S	34E		646480	3583511*	70		
CP 00599			LE	1	1	12	22S	34E		647642	3587147*	62	50	12
CP 00604			LE	1	4	4	01	22S	34E	648743	3587666*	135		
CP 00704			LE	2	4	22	22S	34E		645681	3583097*	600		
CP 00744			LE	1	2	09	22S	34E		643618	3587091*	460		
CP 00751			LE	4	2	11	22S	34E		647245	3586739*		45	
CP 00865			LE	4	1	3	20	22S	34E	641957	3583146	885	605	280
CP 00933			LE	1	1	1	12	22S	34E	647541	3587246*	60		
CP 00934			LE	2	1	2	01	22S	34E	648682	3588822	60	42	18
CP 01362 POD1			LE	3	4	4	18	22S	34E	640809	3584182	1032	613	419
CP 01455 POD1			LE	4	1	4	18	22S	34E	640574	3584515	1033	615	418

Average Depth to Water: **285 feet**

Minimum Depth: **30 feet**

Maximum Depth: **615 feet**

Record Count: 14

PLSS Search:

Township: 22S

Range: 34E

*UTM location was derived from PLSS - see Help

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