



Company: ConocoPhillips
 Site: MCA Unit
 Well: 534
 Project: Lea County, New Mexico (NAD 27)
 Rig Name: Precision 194



ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
2101.00	0.00	0.00	2101.00	0.00	0.00	0.00	0.00	KOP, 1.50°/100' Build
3521.05	21.30	50.28	3488.57	166.74	200.72	260.94	260.94	Hold 21.30° Inc
4736.52	21.30	50.28	4621.00	448.88	540.35	702.48	702.48	PBHL

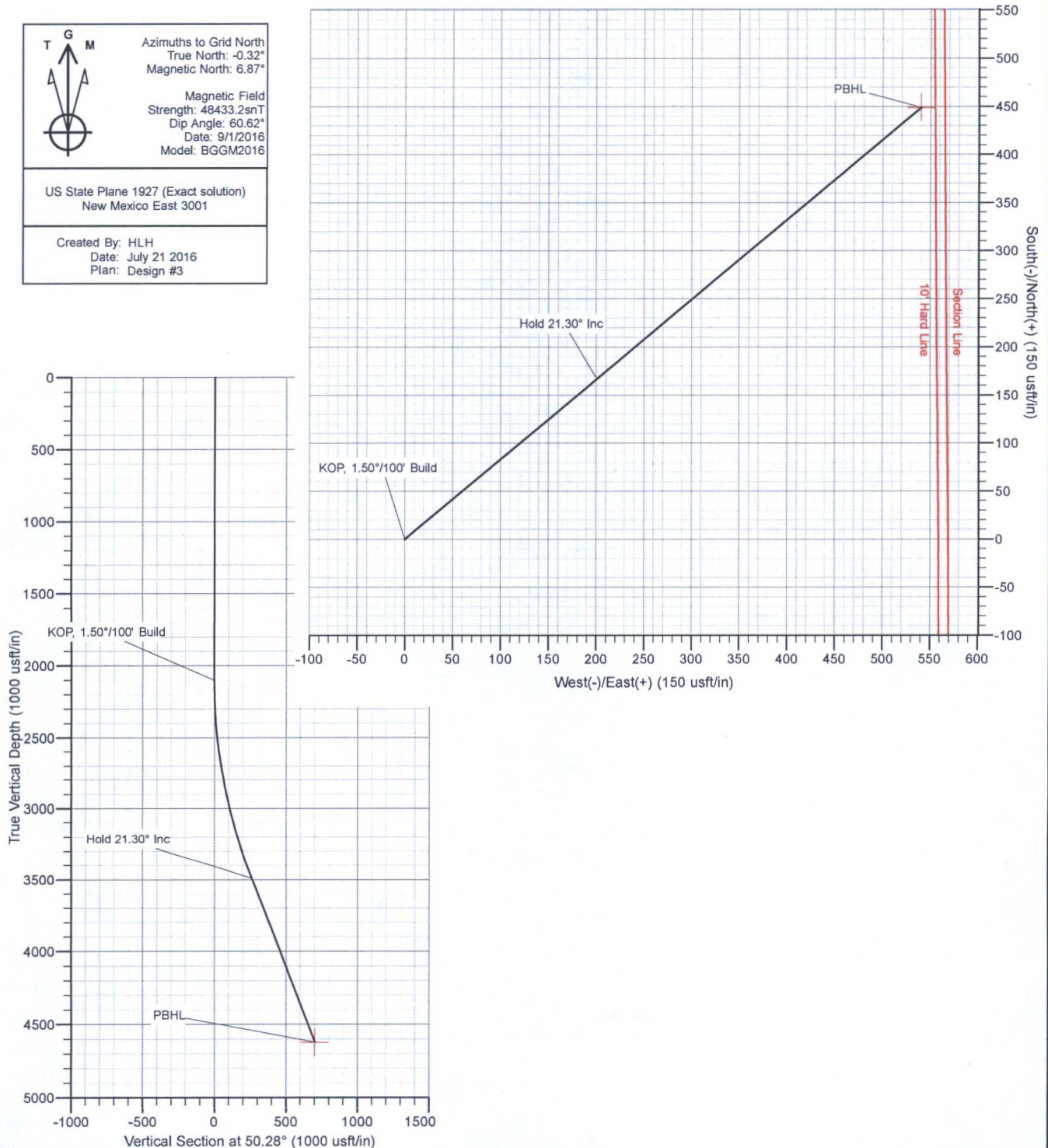


Azimuths to Grid North
 True North: -0.32°
 Magnetic North: 6.87°

Magnetic Field
 Strength: 48433.2snT
 Dip Angle: 60.62°
 Date: 9/1/2016
 Model: BGGM2016

US State Plane 1927 (Exact solution)
 New Mexico East 3001

Created By: HLH
 Date: July 21 2016
 Plan: Design #3



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented.
 Any decisions made or wells drilled utilizing this or any other information supplied by MS Energy are at the sole risk and responsibility of the customer.
 MS Energy is not responsible for the accuracy of this schematic or the information contained herein.



ConocoPhillips

Lea County, New Mexico (NAD 27)

MCA Unit

534

Wellbore #1

Plan: Design #3

Standard Planning Report

21 July, 2016

Database:	Conroe Server	Local Co-ordinate Reference:	Well 534
Company:	ConocoPhillips	TVD Reference:	WELL @ 3986.00usft (Precision 194)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	WELL @ 3986.00usft (Precision 194)
Site:	MCA Unit	North Reference:	Grid
Well:	534	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Project	Lea County, New Mexico (NAD 27)		
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		

Well	534			
Well Position	+N/-S	658,777.30 usft	Northing:	658,777.30 usft
	+E/-W	680,141.50 usft	Easting:	680,141.50 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	
			Latitude:	32° 48' 34.900 N
			Longitude:	103° 44' 49.255 W
			Ground Level:	3,972.00 usft

Wellbore	Wellbore #1			
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	9/1/2016	7.18	60.62	48,433

Design	Design #3			
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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	50.28

Plan Survey Tool Program	Date	7/19/2016		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	4,736.52	Design #3 (Wellbore #1)	MWD - OWSG R1
				MWD - OWSG R1

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	
2,101.00	0.00	0.00	2,101.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,521.05	21.30	50.28	3,488.57	166.74	200.72	1.50	1.50	0.00	50.28	
4,736.52	21.30	50.28	4,621.00	448.88	540.35	0.00	0.00	0.00	0.00	PBHL v3 - MCA Un

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Site:	MCA Unit	North Reference:	Grid
Well:	534	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	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	0.00
900.00	0.00	0.00	900.00	0.00	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	0.00
1,100.00	0.00	0.00	1,100.00	0.00	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	0.00
1,300.00	0.00	0.00	1,300.00	0.00	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	0.00
1,500.00	0.00	0.00	1,500.00	0.00	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	0.00
1,700.00	0.00	0.00	1,700.00	0.00	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	0.00
1,900.00	0.00	0.00	1,900.00	0.00	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	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,101.00	0.00	0.00	2,101.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.50°/100' Build										
2,200.00	1.49	50.28	2,199.99	0.82	0.99	1.28	1.50	1.50	1.50	0.00
2,300.00	2.99	50.28	2,299.91	3.31	3.99	5.18	1.50	1.50	1.50	0.00
2,400.00	4.49	50.28	2,399.69	7.47	9.00	11.70	1.50	1.50	1.50	0.00
2,500.00	5.99	50.28	2,499.27	13.30	16.02	20.82	1.50	1.50	1.50	0.00
2,600.00	7.49	50.28	2,598.58	20.80	25.04	32.55	1.50	1.50	1.50	0.00
2,700.00	8.99	50.28	2,697.55	29.95	36.05	46.87	1.50	1.50	1.50	0.00
2,800.00	10.49	50.28	2,796.11	40.75	49.06	63.78	1.50	1.50	1.50	0.00
2,900.00	11.99	50.28	2,894.19	53.20	64.05	83.26	1.50	1.50	1.50	0.00
3,000.00	13.49	50.28	2,991.72	67.29	81.00	105.31	1.50	1.50	1.50	0.00
3,100.00	14.99	50.28	3,088.65	83.00	99.92	129.90	1.50	1.50	1.50	0.00
3,200.00	16.49	50.28	3,184.90	100.33	120.78	157.01	1.50	1.50	1.50	0.00
3,300.00	17.99	50.28	3,280.41	119.26	143.57	186.64	1.50	1.50	1.50	0.00
3,400.00	19.49	50.28	3,375.11	139.79	168.27	218.76	1.50	1.50	1.50	0.00
3,500.00	20.99	50.28	3,468.93	161.89	194.88	253.35	1.50	1.50	1.50	0.00
3,521.05	21.30	50.28	3,488.57	166.74	200.72	260.94	1.50	1.50	1.50	0.00
Hold 21.30° Inc										
3,600.00	21.30	50.28	3,562.12	185.07	222.78	289.62	0.00	0.00	0.00	0.00
3,700.00	21.30	50.28	3,655.29	208.28	250.72	325.94	0.00	0.00	0.00	0.00
3,800.00	21.30	50.28	3,748.46	231.49	278.66	362.27	0.00	0.00	0.00	0.00
3,900.00	21.30	50.28	3,841.63	254.70	306.60	398.60	0.00	0.00	0.00	0.00
4,000.00	21.30	50.28	3,934.80	277.92	334.55	434.92	0.00	0.00	0.00	0.00
4,100.00	21.30	50.28	4,027.96	301.13	362.49	471.25	0.00	0.00	0.00	0.00
4,200.00	21.30	50.28	4,121.13	324.34	390.43	507.58	0.00	0.00	0.00	0.00
4,300.00	21.30	50.28	4,214.30	347.55	418.38	543.90	0.00	0.00	0.00	0.00
4,400.00	21.30	50.28	4,307.47	370.77	446.32	580.23	0.00	0.00	0.00	0.00
4,500.00	21.30	50.28	4,400.64	393.98	474.26	616.56	0.00	0.00	0.00	0.00
4,600.00	21.30	50.28	4,493.81	417.19	502.20	652.88	0.00	0.00	0.00	0.00
4,700.00	21.30	50.28	4,586.98	440.40	530.15	689.21	0.00	0.00	0.00	0.00
4,736.52	21.30	50.28	4,621.00	448.88	540.35	702.48	0.00	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Design #3		

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									

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 v3 - MCA Unit	0.00	0.00	4,621.00	448.88	540.35	659,226.18	680,681.85	32° 48' 39.312 N	103° 44' 42.895 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,101.00	2,101.00	0.00	0.00	KOP, 1.50°/100' Build
3,521.05	3,488.57	166.74	200.72	Hold 21.30° Inc
4,736.52	4,621.00	448.88	540.35	PBHL