



Company: ConocoPhillips
 Site: MCA Unit
 Well: 562
 Project: Lea County, New Mexico (NAD 27)
 Rig Name: Precision 194



ANNOTATIONS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
2001.00	0.00	0.00	2001.00	0.00	0.00	0.00	0.00	KOP, 1.50"/100' Build
3149.62	17.23	299.97	3132.38	85.61	-148.49	171.40	171.40	Hold 17.23° Inc
4555.31	17.23	299.97	4475.00	293.58	-509.19	587.76	587.76	PBHL

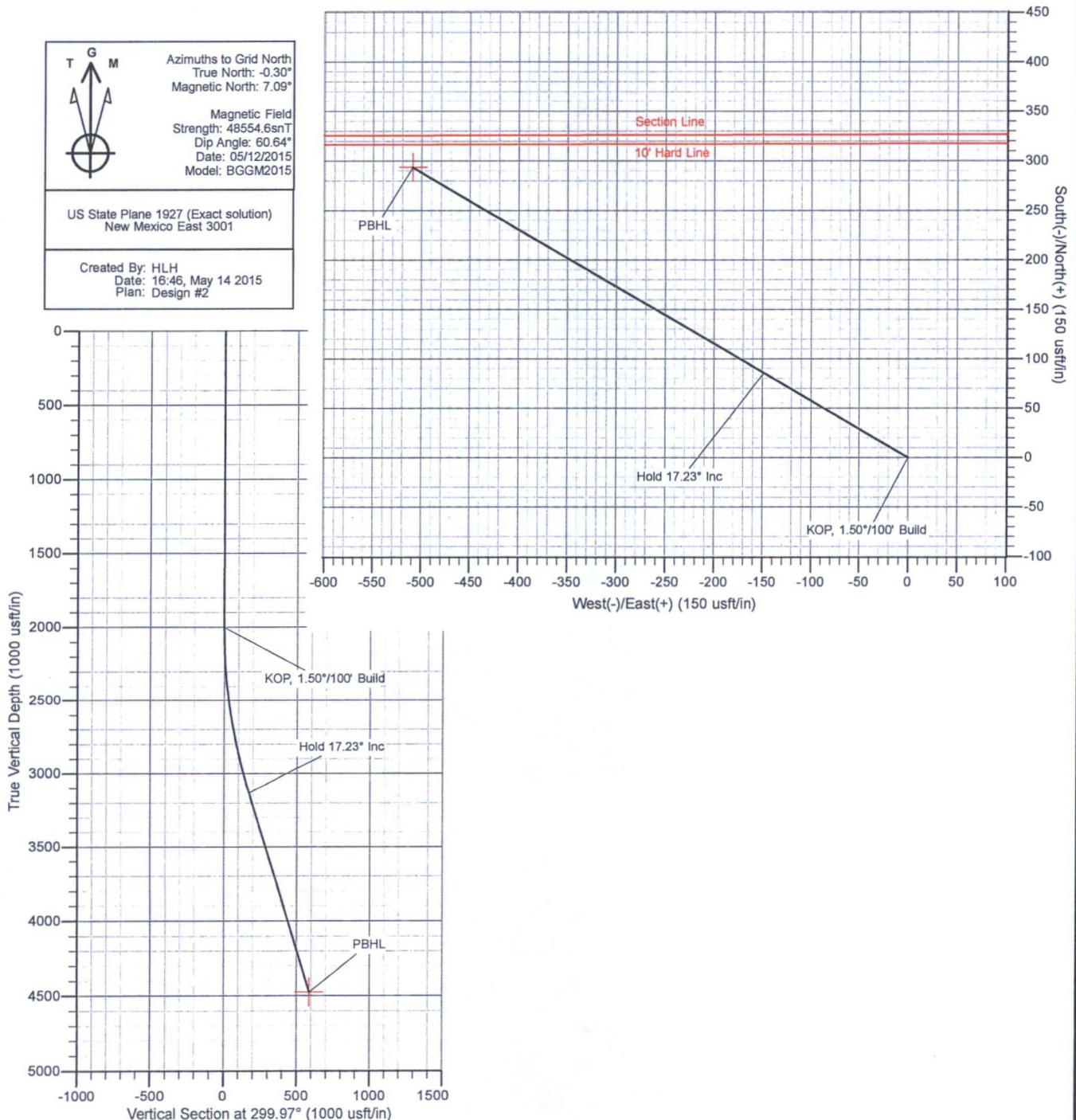


Azimuths to Grid North
 True North: -0.30°
 Magnetic North: 7.09°

Magnetic Field
 Strength: 48554.6snT
 Dip Angle: 60.64°
 Date: 05/12/2015
 Model: BGGM2015

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

Created By: HLH
 Date: 16:46, May 14 2015
 Plan: Design #2



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lease and hard lines represented.
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 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

562

Wellbore #1

Plan: Design #2

Standard Planning Report

14 May, 2015

Database:	EDM 5000.1 Conroe DB	Local Co-ordinate Reference:	Well 562
Company:	ConocoPhillips	TVD Reference:	WELL @ 3976.20usft (Precision 194)
Project:	Lea County, New Mexico (NAD 27)	MD Reference:	WELL @ 3976.20usft (Precision 194)
Site:	MCA Unit	North Reference:	Grid
Well:	562	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

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	562			
Well Position	+N/-S	656,886.20 usft	Northing:	656,886.20 usft
	+E/-W	672,694.64 usft	Easting:	672,694.64 usft
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft
			Latitude:	32° 48' 16.588 N
			Longitude:	103° 46' 16.625 W
			Ground Level:	3,962.20 usft

Wellbore	Wellbore #1			
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	05/12/15	7.39	60.64	48,555

Design	Design #2			
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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	299.97

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	
2,001.00	0.00	0.00	2,001.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,149.62	17.23	299.97	3,132.38	85.61	-148.49	1.50	1.50	-5.23	299.97	
4,555.31	17.23	299.97	4,475.00	293.58	-509.19	0.00	0.00	0.00	0.00	PBHL v2 - MCA Un

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Wellbore:	Wellbore #1		
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
2,001.00	0.00	0.00	2,001.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.50°/100' Build									
2,100.00	1.49	299.97	2,099.99	0.64	-1.11	1.28	1.50	1.50	0.00
2,200.00	2.99	299.97	2,199.91	2.59	-4.49	5.18	1.50	1.50	0.00
2,300.00	4.49	299.97	2,299.69	5.84	-10.13	11.70	1.50	1.50	0.00
2,400.00	5.99	299.97	2,399.27	10.40	-18.04	20.82	1.50	1.50	0.00
2,500.00	7.49	299.97	2,498.58	16.26	-28.20	32.55	1.50	1.50	0.00
2,600.00	8.99	299.97	2,597.55	23.41	-40.61	46.87	1.50	1.50	0.00
2,700.00	10.49	299.97	2,696.11	31.86	-55.25	63.78	1.50	1.50	0.00
2,800.00	11.99	299.97	2,794.19	41.59	-72.13	83.26	1.50	1.50	0.00
2,900.00	13.49	299.97	2,891.72	52.60	-91.23	105.31	1.50	1.50	0.00
3,000.00	14.99	299.97	2,988.65	64.88	-112.53	129.90	1.50	1.50	0.00
3,100.00	16.49	299.97	3,084.90	78.43	-136.02	157.01	1.50	1.50	0.00
3,149.62	17.23	299.97	3,132.38	85.61	-148.49	171.40	1.50	1.50	0.00
Hold 17.23° Inc									
3,200.00	17.23	299.97	3,180.51	93.07	-161.42	186.32	0.00	0.00	0.00
3,300.00	17.23	299.97	3,276.02	107.86	-187.08	215.94	0.00	0.00	0.00
3,400.00	17.23	299.97	3,371.53	122.66	-212.74	245.56	0.00	0.00	0.00
3,500.00	17.23	299.97	3,467.04	137.45	-238.40	275.18	0.00	0.00	0.00
3,600.00	17.23	299.97	3,562.56	152.25	-264.06	304.80	0.00	0.00	0.00
3,700.00	17.23	299.97	3,658.07	167.04	-289.72	334.42	0.00	0.00	0.00
3,800.00	17.23	299.97	3,753.58	181.83	-315.38	364.04	0.00	0.00	0.00
3,900.00	17.23	299.97	3,849.10	196.63	-341.04	393.66	0.00	0.00	0.00
4,000.00	17.23	299.97	3,944.61	211.42	-366.70	423.28	0.00	0.00	0.00
4,100.00	17.23	299.97	4,040.12	226.22	-392.36	452.90	0.00	0.00	0.00
4,200.00	17.23	299.97	4,135.63	241.01	-418.02	482.52	0.00	0.00	0.00
4,300.00	17.23	299.97	4,231.15	255.81	-443.68	512.14	0.00	0.00	0.00
4,400.00	17.23	299.97	4,326.66	270.60	-469.34	541.76	0.00	0.00	0.00
4,500.00	17.23	299.97	4,422.17	285.40	-495.00	571.38	0.00	0.00	0.00
4,555.31	17.23	299.97	4,475.00	293.58	-509.19	587.76	0.00	0.00	0.00
PBHL									

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Wellbore:	Wellbore #1		
Design:	Design #2		

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									
PBHL v2 - MCA Unit	0.00	0.00	4,475.00	293.58	-509.19	657,179.78	672,185.45	32° 48' 19.519 N	103° 46' 22.572 W
- plan hits target center									
- Point									

Casing Points

Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(usft)	(usft)		(")	(")
4,555.31	4,475.00	5 1/2"	5-1/2	6

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S	+E/-W	
(usft)	(usft)	(usft)	(usft)	
2,001.00	2,001.00	0.00	0.00	KOP, 1.50°/100' Build
3,149.62	3,132.38	85.61	-148.49	Hold 17.23° Inc
4,555.31	4,475.00	293.58	-509.19	PBHL