



HOBBS OCD

OCT 27 2016

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Chevron

Lea County, NM (NAD27 NME)

SD WE 23 Fed P25

4H

OH

Plan: Plan 1 04-20-16

Standard Planning Report

20 April, 2016





Phoenix Technology Services

Planning Report



Database: Compass 5000 GCR
 Company: Chevron
 Project: Lea County, NM (NAD27 NME)
 Site: SD WE 23 Fed P25
 Well: 4H
 Wellbore: OH
 Design: Plan 1 04-20-16

Local Co-ordinate Reference: Well 4H
 TVD Reference: RKB @ 3156.00usft (Pace X30)
 MD Reference: RKB @ 3156.00usft (Pace X30)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD27 NME)		
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	SD WE 23 Fed P25				
Site Position:		Northing:	372,222.00 usft	Latitude:	32° 1' 17.35050 N
From:	Map	Easting:	713,232.00 usft	Longitude:	103° 38' 43.16343 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.36 °

Well	4H					
Well Position	+N/-S	0.00 usft	Northing:	372,222.00 usft	Latitude:	32° 1' 17.34577 N
	+E/-W	75.00 usft	Easting:	713,307.00 usft	Longitude:	103° 38' 42.29230 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,123.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/20/2016	6.97	59.73	48,020

Design	Plan 1 04-20-16			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	5.09

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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,486.63	7.30	102.77	1,485.32	-6.84	30.19	1.50	1.50	0.00	102.77	
8,458.10	7.30	102.77	8,400.28	-202.68	894.04	0.00	0.00	0.00	0.00	
9,374.28	89.97	359.71	8,985.16	370.13	964.08	10.00	9.02	-11.25	-102.96	
19,269.28	89.97	359.71	8,990.00	10,265.00	914.00	0.00	0.00	0.00	0.00	BHL - SD WE P25 4H



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 MD Reference: RKB @ 3156.00usft (Pace X30)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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
KOP1, Start Build 1.50°/100'									
1,100.00	1.50	102.77	1,099.99	-0.29	1.28	-0.18	1.50	1.50	0.00
1,200.00	3.00	102.77	1,199.91	-1.16	5.11	-0.70	1.50	1.50	0.00
1,300.00	4.50	102.77	1,299.69	-2.60	11.48	-1.57	1.50	1.50	0.00
1,400.00	6.00	102.77	1,399.27	-4.63	20.41	-2.80	1.50	1.50	0.00
1,486.63	7.30	102.77	1,485.32	-6.84	30.19	-4.14	1.50	1.50	0.00
Hold 7.3° Inc at 102.77° Azm									
1,500.00	7.30	102.77	1,498.58	-7.22	31.85	-4.37	0.00	0.00	0.00
1,600.00	7.30	102.77	1,597.77	-10.03	44.24	-6.07	0.00	0.00	0.00
1,700.00	7.30	102.77	1,696.96	-12.84	56.63	-7.76	0.00	0.00	0.00
1,800.00	7.30	102.77	1,796.15	-15.65	69.02	-9.46	0.00	0.00	0.00
1,900.00	7.30	102.77	1,895.33	-18.46	81.41	-11.16	0.00	0.00	0.00
2,000.00	7.30	102.77	1,994.52	-21.27	93.80	-12.86	0.00	0.00	0.00
2,100.00	7.30	102.77	2,093.71	-24.07	106.19	-14.56	0.00	0.00	0.00
2,200.00	7.30	102.77	2,192.90	-26.88	118.59	-16.26	0.00	0.00	0.00
2,300.00	7.30	102.77	2,292.09	-29.69	130.98	-17.96	0.00	0.00	0.00
2,400.00	7.30	102.77	2,391.28	-32.50	143.37	-19.66	0.00	0.00	0.00
2,500.00	7.30	102.77	2,490.47	-35.31	155.76	-21.36	0.00	0.00	0.00
2,600.00	7.30	102.77	2,589.66	-38.12	168.15	-23.06	0.00	0.00	0.00
2,700.00	7.30	102.77	2,688.85	-40.93	180.54	-24.76	0.00	0.00	0.00
2,800.00	7.30	102.77	2,788.04	-43.74	192.93	-26.45	0.00	0.00	0.00
2,900.00	7.30	102.77	2,887.23	-46.55	205.32	-28.15	0.00	0.00	0.00
3,000.00	7.30	102.77	2,986.42	-49.36	217.71	-29.85	0.00	0.00	0.00
3,100.00	7.30	102.77	3,085.61	-52.16	230.11	-31.55	0.00	0.00	0.00
3,200.00	7.30	102.77	3,184.80	-54.97	242.50	-33.25	0.00	0.00	0.00
3,300.00	7.30	102.77	3,283.99	-57.78	254.89	-34.95	0.00	0.00	0.00
3,400.00	7.30	102.77	3,383.18	-60.59	267.28	-36.65	0.00	0.00	0.00
3,500.00	7.30	102.77	3,482.37	-63.40	279.67	-38.35	0.00	0.00	0.00
3,600.00	7.30	102.77	3,581.56	-66.21	292.06	-40.05	0.00	0.00	0.00
3,700.00	7.30	102.77	3,680.75	-69.02	304.45	-41.75	0.00	0.00	0.00
3,800.00	7.30	102.77	3,779.94	-71.83	316.84	-43.44	0.00	0.00	0.00
3,900.00	7.30	102.77	3,879.13	-74.64	329.23	-45.14	0.00	0.00	0.00
4,000.00	7.30	102.77	3,978.32	-77.45	341.63	-46.84	0.00	0.00	0.00
4,100.00	7.30	102.77	4,077.50	-80.26	354.02	-48.54	0.00	0.00	0.00
4,200.00	7.30	102.77	4,176.69	-83.06	366.41	-50.24	0.00	0.00	0.00
4,300.00	7.30	102.77	4,275.88	-85.87	378.80	-51.94	0.00	0.00	0.00
4,400.00	7.30	102.77	4,375.07	-88.68	391.19	-53.64	0.00	0.00	0.00
4,500.00	7.30	102.77	4,474.26	-91.49	403.58	-55.34	0.00	0.00	0.00
4,600.00	7.30	102.77	4,573.45	-94.30	415.97	-57.04	0.00	0.00	0.00
4,700.00	7.30	102.77	4,672.64	-97.11	428.36	-58.74	0.00	0.00	0.00
4,800.00	7.30	102.77	4,771.83	-99.92	440.76	-60.43	0.00	0.00	0.00
4,900.00	7.30	102.77	4,871.02	-102.73	453.15	-62.13	0.00	0.00	0.00
5,000.00	7.30	102.77	4,970.21	-105.54	465.54	-63.83	0.00	0.00	0.00



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5,100.00	7.30	102.77	5,069.40	-108.35	477.93	-65.53	0.00	0.00	0.00
5,200.00	7.30	102.77	5,168.59	-111.16	490.32	-67.23	0.00	0.00	0.00
5,300.00	7.30	102.77	5,267.78	-113.96	502.71	-68.93	0.00	0.00	0.00
5,400.00	7.30	102.77	5,366.97	-116.77	515.10	-70.63	0.00	0.00	0.00
5,500.00	7.30	102.77	5,466.16	-119.58	527.49	-72.33	0.00	0.00	0.00
5,600.00	7.30	102.77	5,565.35	-122.39	539.88	-74.03	0.00	0.00	0.00
5,700.00	7.30	102.77	5,664.54	-125.20	552.28	-75.73	0.00	0.00	0.00
5,800.00	7.30	102.77	5,763.73	-128.01	564.67	-77.43	0.00	0.00	0.00
5,900.00	7.30	102.77	5,862.92	-130.82	577.06	-79.12	0.00	0.00	0.00
6,000.00	7.30	102.77	5,962.11	-133.63	589.45	-80.82	0.00	0.00	0.00
6,100.00	7.30	102.77	6,061.30	-136.44	601.84	-82.52	0.00	0.00	0.00
6,200.00	7.30	102.77	6,160.49	-139.25	614.23	-84.22	0.00	0.00	0.00
6,300.00	7.30	102.77	6,259.68	-142.06	626.62	-85.92	0.00	0.00	0.00
6,400.00	7.30	102.77	6,358.86	-144.86	639.01	-87.62	0.00	0.00	0.00
6,500.00	7.30	102.77	6,458.05	-147.67	651.41	-89.32	0.00	0.00	0.00
6,600.00	7.30	102.77	6,557.24	-150.48	663.80	-91.02	0.00	0.00	0.00
6,700.00	7.30	102.77	6,656.43	-153.29	676.19	-92.72	0.00	0.00	0.00
6,800.00	7.30	102.77	6,755.62	-156.10	688.58	-94.42	0.00	0.00	0.00
6,900.00	7.30	102.77	6,854.81	-158.91	700.97	-96.11	0.00	0.00	0.00
7,000.00	7.30	102.77	6,954.00	-161.72	713.36	-97.81	0.00	0.00	0.00
7,100.00	7.30	102.77	7,053.19	-164.53	725.75	-99.51	0.00	0.00	0.00
7,200.00	7.30	102.77	7,152.38	-167.34	738.14	-101.21	0.00	0.00	0.00
7,300.00	7.30	102.77	7,251.57	-170.15	750.53	-102.91	0.00	0.00	0.00
7,400.00	7.30	102.77	7,350.76	-172.95	762.93	-104.61	0.00	0.00	0.00
7,500.00	7.30	102.77	7,449.95	-175.76	775.32	-106.31	0.00	0.00	0.00
7,600.00	7.30	102.77	7,549.14	-178.57	787.71	-108.01	0.00	0.00	0.00
7,700.00	7.30	102.77	7,648.33	-181.38	800.10	-109.71	0.00	0.00	0.00
7,800.00	7.30	102.77	7,747.52	-184.19	812.49	-111.41	0.00	0.00	0.00
7,900.00	7.30	102.77	7,846.71	-187.00	824.88	-113.10	0.00	0.00	0.00
8,000.00	7.30	102.77	7,945.90	-189.81	837.27	-114.80	0.00	0.00	0.00
8,100.00	7.30	102.77	8,045.09	-192.62	849.66	-116.50	0.00	0.00	0.00
8,200.00	7.30	102.77	8,144.28	-195.43	862.05	-118.20	0.00	0.00	0.00
8,300.00	7.30	102.77	8,243.47	-198.24	874.45	-119.90	0.00	0.00	0.00
8,400.00	7.30	102.77	8,342.66	-201.05	886.84	-121.60	0.00	0.00	0.00
8,458.10	7.30	102.77	8,400.28	-202.68	894.04	-122.59	0.00	0.00	0.00
KOP2, Start Build-Turn 10.00°/100'									
8,500.00	7.55	69.97	8,441.85	-202.32	899.22	-121.77	10.00	0.60	-78.30
8,550.00	10.35	42.78	8,491.26	-197.90	905.36	-116.82	10.00	5.61	-54.37
8,600.00	14.39	28.80	8,540.10	-189.15	911.41	-107.57	10.00	8.08	-27.96
8,650.00	18.89	21.09	8,588.00	-176.14	917.32	-94.09	10.00	8.99	-15.41
8,700.00	23.58	16.31	8,634.59	-158.98	923.05	-76.49	10.00	9.39	-9.56
8,750.00	28.38	13.06	8,679.53	-137.79	928.55	-54.90	10.00	9.59	-6.51
8,800.00	33.23	10.69	8,722.47	-112.74	933.78	-29.48	10.00	9.70	-4.75
8,850.00	38.11	8.86	8,763.07	-84.02	938.70	-0.43	10.00	9.77	-3.66
8,900.00	43.02	7.39	8,801.04	-51.83	943.27	32.03	10.00	9.82	-2.94
8,950.00	47.95	6.17	8,836.09	-16.44	947.46	67.65	10.00	9.85	-2.44
9,000.00	52.88	5.13	8,867.94	21.89	951.24	106.17	10.00	9.87	-2.09
9,050.00	57.82	4.21	8,896.36	62.88	954.58	147.29	10.00	9.89	-1.83
9,100.00	62.77	3.39	8,921.13	106.20	957.44	190.70	10.00	9.90	-1.64
9,150.00	67.73	2.64	8,942.05	151.53	959.82	236.06	10.00	9.91	-1.50
9,200.00	72.68	1.94	8,958.98	198.52	961.69	283.03	10.00	9.91	-1.40
9,250.00	77.64	1.27	8,971.78	246.82	963.04	331.26	10.00	9.92	-1.33
9,300.00	82.60	0.63	8,980.36	296.06	963.86	380.38	10.00	9.92	-1.28
9,350.00	87.56	0.01	8,984.64	345.86	964.14	430.00	10.00	9.92	-1.25



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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)
9,374.28	89.97	359.71	8,985.16	370.13	964.08	454.17	10.00	9.92	-1.24
LP, 89.97° Inc at 359.71° Azm									
9,400.00	89.97	359.71	8,985.18	395.85	963.95	479.78	0.00	0.00	0.00
9,500.00	89.97	359.71	8,985.23	495.85	963.45	579.34	0.00	0.00	0.00
9,600.00	89.97	359.71	8,985.27	595.85	962.94	678.90	0.00	0.00	0.00
9,700.00	89.97	359.71	8,985.32	695.85	962.43	778.46	0.00	0.00	0.00
9,800.00	89.97	359.71	8,985.37	795.85	961.93	878.02	0.00	0.00	0.00
9,900.00	89.97	359.71	8,985.42	895.84	961.42	977.58	0.00	0.00	0.00
10,000.00	89.97	359.71	8,985.47	995.84	960.92	1,077.14	0.00	0.00	0.00
10,100.00	89.97	359.71	8,985.52	1,095.84	960.41	1,176.70	0.00	0.00	0.00
10,200.00	89.97	359.71	8,985.57	1,195.84	959.90	1,276.26	0.00	0.00	0.00
10,300.00	89.97	359.71	8,985.62	1,295.84	959.40	1,375.82	0.00	0.00	0.00
10,400.00	89.97	359.71	8,985.67	1,395.84	958.89	1,475.38	0.00	0.00	0.00
10,500.00	89.97	359.71	8,985.71	1,495.84	958.39	1,574.94	0.00	0.00	0.00
10,600.00	89.97	359.71	8,985.76	1,595.83	957.88	1,674.50	0.00	0.00	0.00
10,700.00	89.97	359.71	8,985.81	1,695.83	957.37	1,774.06	0.00	0.00	0.00
10,800.00	89.97	359.71	8,985.86	1,795.83	956.87	1,873.62	0.00	0.00	0.00
10,900.00	89.97	359.71	8,985.91	1,895.83	956.36	1,973.18	0.00	0.00	0.00
11,000.00	89.97	359.71	8,985.96	1,995.83	955.85	2,072.74	0.00	0.00	0.00
11,100.00	89.97	359.71	8,986.01	2,095.83	955.35	2,172.30	0.00	0.00	0.00
11,200.00	89.97	359.71	8,986.06	2,195.83	954.84	2,271.86	0.00	0.00	0.00
11,300.00	89.97	359.71	8,986.11	2,295.83	954.34	2,371.42	0.00	0.00	0.00
11,400.00	89.97	359.71	8,986.15	2,395.82	953.83	2,470.98	0.00	0.00	0.00
11,500.00	89.97	359.71	8,986.20	2,495.82	953.32	2,570.54	0.00	0.00	0.00
11,600.00	89.97	359.71	8,986.25	2,595.82	952.82	2,670.10	0.00	0.00	0.00
11,700.00	89.97	359.71	8,986.30	2,695.82	952.31	2,769.66	0.00	0.00	0.00
11,800.00	89.97	359.71	8,986.35	2,795.82	951.81	2,869.22	0.00	0.00	0.00
11,900.00	89.97	359.71	8,986.40	2,895.82	951.30	2,968.78	0.00	0.00	0.00
12,000.00	89.97	359.71	8,986.45	2,995.82	950.79	3,068.34	0.00	0.00	0.00
12,100.00	89.97	359.71	8,986.50	3,095.82	950.29	3,167.90	0.00	0.00	0.00
12,200.00	89.97	359.71	8,986.55	3,195.81	949.78	3,267.46	0.00	0.00	0.00
12,300.00	89.97	359.71	8,986.59	3,295.81	949.27	3,367.02	0.00	0.00	0.00
12,400.00	89.97	359.71	8,986.64	3,395.81	948.77	3,466.58	0.00	0.00	0.00
12,500.00	89.97	359.71	8,986.69	3,495.81	948.26	3,566.14	0.00	0.00	0.00
12,600.00	89.97	359.71	8,986.74	3,595.81	947.76	3,665.70	0.00	0.00	0.00
12,700.00	89.97	359.71	8,986.79	3,695.81	947.25	3,765.25	0.00	0.00	0.00
12,800.00	89.97	359.71	8,986.84	3,795.81	946.74	3,864.81	0.00	0.00	0.00
12,900.00	89.97	359.71	8,986.89	3,895.81	946.24	3,964.37	0.00	0.00	0.00
13,000.00	89.97	359.71	8,986.94	3,995.80	945.73	4,063.93	0.00	0.00	0.00
13,100.00	89.97	359.71	8,986.99	4,095.80	945.23	4,163.49	0.00	0.00	0.00
13,200.00	89.97	359.71	8,987.03	4,195.80	944.72	4,263.05	0.00	0.00	0.00
13,300.00	89.97	359.71	8,987.08	4,295.80	944.21	4,362.61	0.00	0.00	0.00
13,400.00	89.97	359.71	8,987.13	4,395.80	943.71	4,462.17	0.00	0.00	0.00
13,500.00	89.97	359.71	8,987.18	4,495.80	943.20	4,561.73	0.00	0.00	0.00
13,600.00	89.97	359.71	8,987.23	4,595.80	942.69	4,661.29	0.00	0.00	0.00
13,700.00	89.97	359.71	8,987.28	4,695.79	942.19	4,760.85	0.00	0.00	0.00
13,800.00	89.97	359.71	8,987.33	4,795.79	941.68	4,860.41	0.00	0.00	0.00
13,900.00	89.97	359.71	8,987.38	4,895.79	941.18	4,959.97	0.00	0.00	0.00
14,000.00	89.97	359.71	8,987.43	4,995.79	940.67	5,059.53	0.00	0.00	0.00
14,100.00	89.97	359.71	8,987.47	5,095.79	940.16	5,159.09	0.00	0.00	0.00
14,200.00	89.97	359.71	8,987.52	5,195.79	939.66	5,258.65	0.00	0.00	0.00
14,300.00	89.97	359.71	8,987.57	5,295.79	939.15	5,358.21	0.00	0.00	0.00
14,400.00	89.97	359.71	8,987.62	5,395.79	938.65	5,457.77	0.00	0.00	0.00



Phoenix Technology Services

Planning Report



Database: Compass 5000 GCR
Company: Chevron
Project: Lea County, NM (NAD27 NME)
Site: SD WE 23 Fed P25
Well: 4H
Wellbore: OH
Design: Plan 1 04-20-16

Local Co-ordinate Reference: Well 4H
TVD Reference: RKB @ 3156.00usft (Pace X30)
MD Reference: RKB @ 3156.00usft (Pace X30)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
14,500.00	89.97	359.71	8,987.67	5,495.78	938.14	5,557.33	0.00	0.00	0.00
14,600.00	89.97	359.71	8,987.72	5,595.78	937.63	5,656.89	0.00	0.00	0.00
14,700.00	89.97	359.71	8,987.77	5,695.78	937.13	5,756.45	0.00	0.00	0.00
14,800.00	89.97	359.71	8,987.82	5,795.78	936.62	5,856.01	0.00	0.00	0.00
14,900.00	89.97	359.71	8,987.86	5,895.78	936.11	5,955.57	0.00	0.00	0.00
15,000.00	89.97	359.71	8,987.91	5,995.78	935.61	6,055.13	0.00	0.00	0.00
15,100.00	89.97	359.71	8,987.96	6,095.78	935.10	6,154.69	0.00	0.00	0.00
15,200.00	89.97	359.71	8,988.01	6,195.78	934.60	6,254.25	0.00	0.00	0.00
15,300.00	89.97	359.71	8,988.06	6,295.77	934.09	6,353.81	0.00	0.00	0.00
15,400.00	89.97	359.71	8,988.11	6,395.77	933.58	6,453.37	0.00	0.00	0.00
15,500.00	89.97	359.71	8,988.16	6,495.77	933.08	6,552.93	0.00	0.00	0.00
15,600.00	89.97	359.71	8,988.21	6,595.77	932.57	6,652.49	0.00	0.00	0.00
15,700.00	89.97	359.71	8,988.26	6,695.77	932.07	6,752.05	0.00	0.00	0.00
15,800.00	89.97	359.71	8,988.30	6,795.77	931.56	6,851.61	0.00	0.00	0.00
15,900.00	89.97	359.71	8,988.35	6,895.77	931.05	6,951.17	0.00	0.00	0.00
16,000.00	89.97	359.71	8,988.40	6,995.77	930.55	7,050.73	0.00	0.00	0.00
16,100.00	89.97	359.71	8,988.45	7,095.76	930.04	7,150.29	0.00	0.00	0.00
16,200.00	89.97	359.71	8,988.50	7,195.76	929.53	7,249.85	0.00	0.00	0.00
16,300.00	89.97	359.71	8,988.55	7,295.76	929.03	7,349.41	0.00	0.00	0.00
16,400.00	89.97	359.71	8,988.60	7,395.76	928.52	7,448.97	0.00	0.00	0.00
16,500.00	89.97	359.71	8,988.65	7,495.76	928.02	7,548.53	0.00	0.00	0.00
16,600.00	89.97	359.71	8,988.70	7,595.76	927.51	7,648.09	0.00	0.00	0.00
16,700.00	89.97	359.71	8,988.74	7,695.76	927.00	7,747.65	0.00	0.00	0.00
16,800.00	89.97	359.71	8,988.79	7,795.75	926.50	7,847.20	0.00	0.00	0.00
16,900.00	89.97	359.71	8,988.84	7,895.75	925.99	7,946.76	0.00	0.00	0.00
17,000.00	89.97	359.71	8,988.89	7,995.75	925.49	8,046.32	0.00	0.00	0.00
17,100.00	89.97	359.71	8,988.94	8,095.75	924.98	8,145.88	0.00	0.00	0.00
17,200.00	89.97	359.71	8,988.99	8,195.75	924.47	8,245.44	0.00	0.00	0.00
17,300.00	89.97	359.71	8,989.04	8,295.75	923.97	8,345.00	0.00	0.00	0.00
17,400.00	89.97	359.71	8,989.09	8,395.75	923.46	8,444.56	0.00	0.00	0.00
17,500.00	89.97	359.71	8,989.14	8,495.75	922.96	8,544.12	0.00	0.00	0.00
17,600.00	89.97	359.71	8,989.18	8,595.74	922.45	8,643.68	0.00	0.00	0.00
17,700.00	89.97	359.71	8,989.23	8,695.74	921.94	8,743.24	0.00	0.00	0.00
17,800.00	89.97	359.71	8,989.28	8,795.74	921.44	8,842.80	0.00	0.00	0.00
17,900.00	89.97	359.71	8,989.33	8,895.74	920.93	8,942.36	0.00	0.00	0.00
18,000.00	89.97	359.71	8,989.38	8,995.74	920.42	9,041.92	0.00	0.00	0.00
18,100.00	89.97	359.71	8,989.43	9,095.74	919.92	9,141.48	0.00	0.00	0.00
18,200.00	89.97	359.71	8,989.48	9,195.74	919.41	9,241.04	0.00	0.00	0.00
18,300.00	89.97	359.71	8,989.53	9,295.74	918.91	9,340.60	0.00	0.00	0.00
18,400.00	89.97	359.71	8,989.58	9,395.73	918.40	9,440.16	0.00	0.00	0.00
18,500.00	89.97	359.71	8,989.62	9,495.73	917.89	9,539.72	0.00	0.00	0.00
18,600.00	89.97	359.71	8,989.67	9,595.73	917.39	9,639.28	0.00	0.00	0.00
18,700.00	89.97	359.71	8,989.72	9,695.73	916.88	9,738.84	0.00	0.00	0.00
18,800.00	89.97	359.71	8,989.77	9,795.73	916.38	9,838.40	0.00	0.00	0.00
18,900.00	89.97	359.71	8,989.82	9,895.73	915.87	9,937.96	0.00	0.00	0.00
19,000.00	89.97	359.71	8,989.87	9,995.73	915.36	10,037.52	0.00	0.00	0.00
19,100.00	89.97	359.71	8,989.92	10,095.73	914.86	10,137.08	0.00	0.00	0.00
19,200.00	89.97	359.71	8,989.97	10,195.72	914.35	10,236.64	0.00	0.00	0.00
19,269.28	89.97	359.71	8,990.00	10,265.00	914.00	10,305.61	0.00	0.00	0.00

TD at 19269.28



Phoenix Technology Services
Planning Report



Database: Compass 5000 GCR
Company: Chevron
Project: Lea County, NM (NAD27 NME)
Site: SD WE 23 Fed P25
Well: 4H
Wellbore: OH
Design: Plan 1 04-20-16

Local Co-ordinate Reference: Well 4H
TVD Reference: RKB @ 3156.00usft (Pace X30)
MD Reference: RKB @ 3156.00usft (Pace X30)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

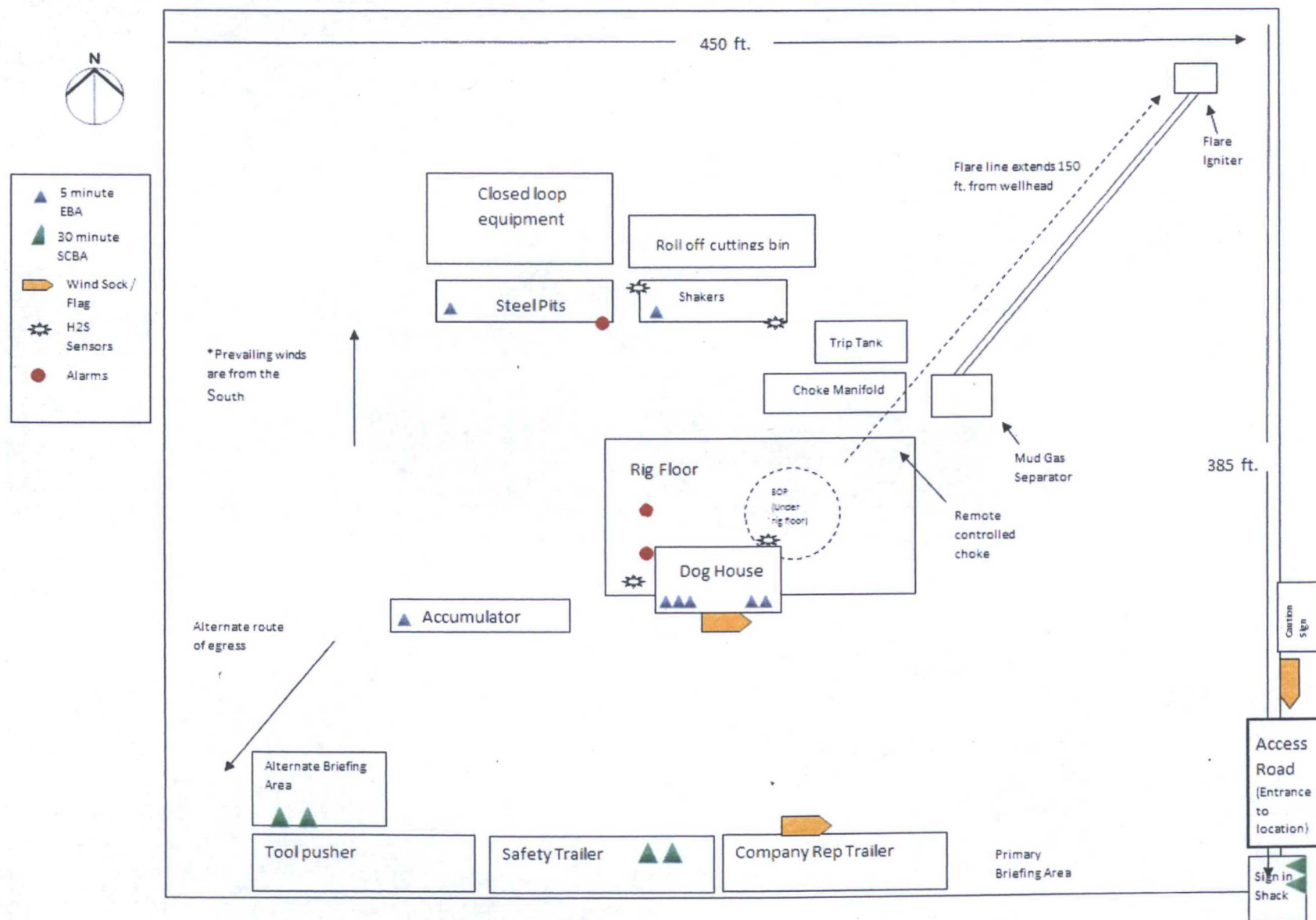
Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
BHL - SD WE P25 4H	0.00	0.00	8,990.00	10,265.00	914.00	382,487.00	714,221.00	32° 2' 58.87005 N	103° 38' 30.91300 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
1,000.00	1,000.00	0.00	0.00	KOP1, Start Build 1.50°/100'
1,486.63	1,485.32	-6.84	30.19	Hold 7.3° Inc at 102.77° Azm
8,458.10	8,400.28	-202.68	894.04	KOP2, Start Build-Turn 10.00°/100'
9,374.28	8,985.16	370.13	964.08	LP, 89.97° Inc at 359.71° Azm
19,269.28	8,990.00	10,265.00	914.00	TD at 19269.28

H₂S Preparedness and Contingency Plan Summary



RECEIVED

OCT 27 2016

HOBBS OGD



Project: Lea County, NM (NAD27 NME)
Site: SD WE 23 Fed P25
Well: 4H
Wellbore: OH
Design: Plan 1 04-20-16
Rig: Pace X30

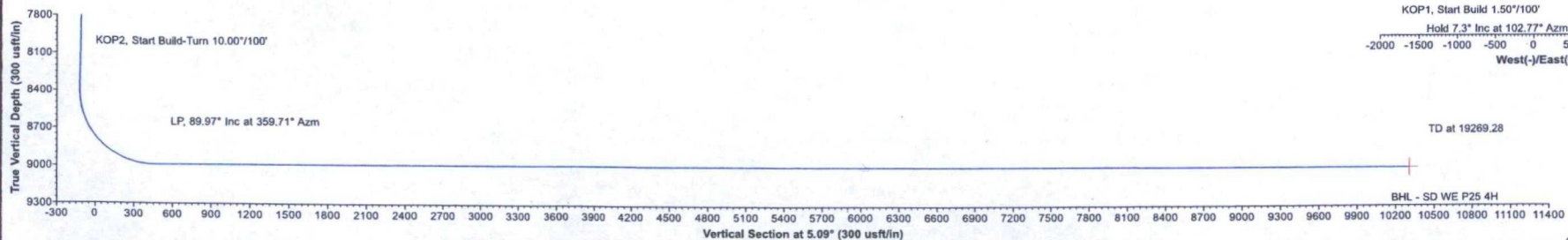
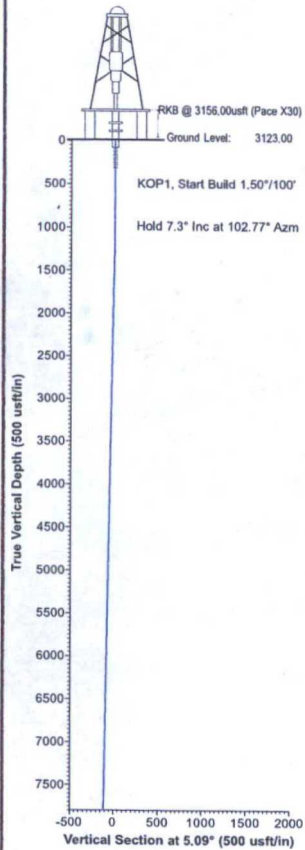


PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: -0.36°
Magnetic North: 6.60°

Magnetic Field
Strength: 48020.25nT
Dip Angle: 59.73°
Date: 4/20/2016
Model: HDGM



WELL DETAILS										
			Ground Level: 3123.00			Latitude		Longitude		
+N-S			+E-W			Northing		Easting		
0.00			0.00			372222.00		713307.00		32° 1' 17.34577 N 103° 38' 42.29230 W

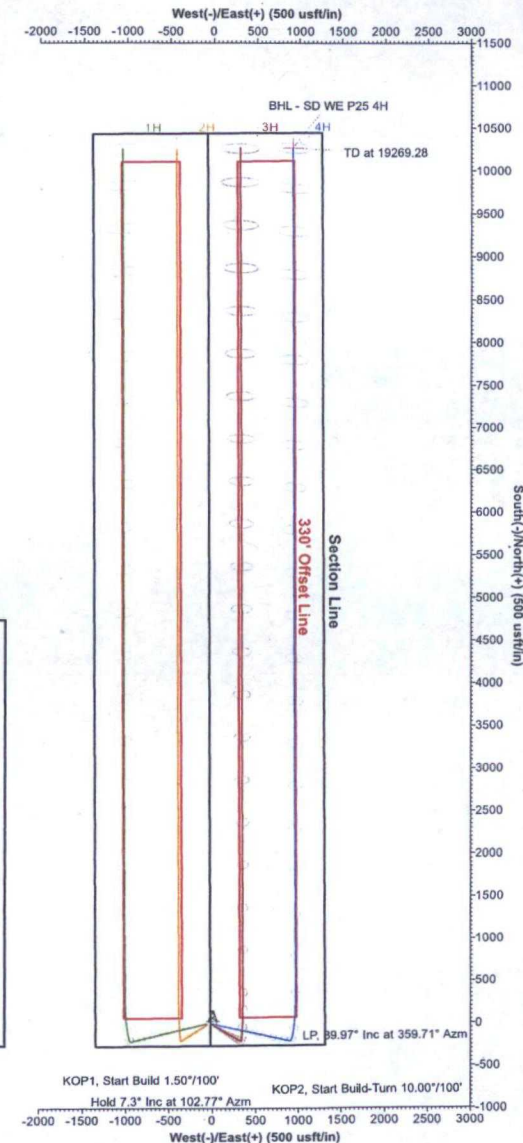
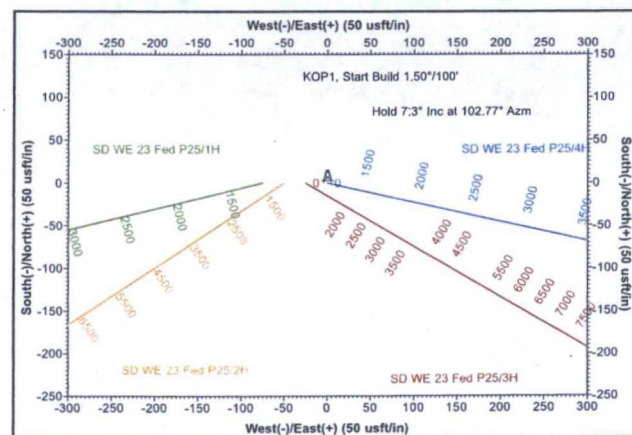
SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00		KOP1, Start Build 1.50°/100'
3	1486.63	7.30	102.77	1485.32	-6.84	30.19	1.50	102.77	-4.14		Hold 7.3° Inc at 102.77° Azm
4	8458.10	7.30	102.77	8400.28	-202.68	894.04	0.00	0.00	-122.59		KOP2, Start Build-Turn 10.00°/100'
5	9374.28	89.97	359.71	8985.16	370.13	964.08	10.00	-102.96	454.17		LP, 89.97° Inc at 359.71° Azm
6	19269.28	89.97	359.71	8990.00	10265.00	914.00	0.00	0.00	10305.61	BHL - SD WE P25 4H	TD at 19269.28

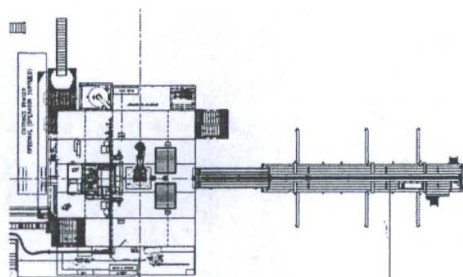
DESIGN TARGET DETAILS									
Name		TVD		+N-S		+E-W		Northing	
BHL - SD WE P25 4H		8990.00		10265.00		914.00		382487.00	
								Easting	
								32° 2' 58.87005 N	
								103° 38' 30.91300 W	

LEGEND	
—	3H, OH, Plan 1 04-20-16 V0
—	2H, OH, Plan 1 04-20-16 V0
—	1H, OH, Plan 1 04-20-16 V0
—	Plan 1 04-20-16

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: Well 4H, Grid North
Latitude: 32° 1' 17.34577 N
Longitude: 103° 38' 42.29230 W
Grid East: 713307.00
Grid North: 372222.00
Scale Factor: 1.000
Geomagnetic Model: HDGM
Sample Date: 20-Apr-16
Magnetic Declination: 6.97°
Dip Angle from Horizontal: 59.73°
Magnetic Field Strength: 48020
To convert a Magnetic Direction to a Grid Direction, Add 6.60°
To convert a Magnetic Direction to a True Direction, Add 6.97° East
To convert a True Direction to a Grid Direction, Subtract 0.36°

FORMATION TOP DETAILS
No formation data is available





For the latest performance data, always visit our website: www.tenaris.com

June 17 2015



Connection: TenarisXP™ BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

Size: 5.500 in.
Wall: 0.361 in.
Weight: 20.00 lbs/ft
Grade: P110-IC
Min. Wall Thickness: 87.5 %

PIPE BODY DATA

GEOMETRY

Nominal OD	5.500 in.	Nominal Weight	20.00 lbs/ft	Standard Drift Diameter	4.653 in.
Nominal ID	4.778 in.	Wall Thickness	0.361 in.	Special Drift Diameter	N/A
Plain End Weight	19.83 lbs/ft				

PERFORMANCE

Body Yield Strength	641 x 1000 lbs	Internal Yield	12630 psi	SMYS	110000 psi
Collapse	12100 psi				

TENARISXP™ BTC CONNECTION DATA

GEOMETRY

Connection OD	6.100 in.	Coupling Length	9.450 in.	Connection ID	4.766 in.
Critical Section Area	5.828 sq. in.	Threads per in.	5.00	Make-Up Loss	4.204 in.

PERFORMANCE

Tension Efficiency	100 %	Joint Yield Strength	641 x 1000 lbs	Internal Pressure Capacity ⁽¹⁾	12630 psi
Structural Compression Efficiency	100 %	Structural Compression Strength	641 x 1000 lbs	Structural Bending ⁽²⁾	92 °/100 ft
External Pressure Capacity	12100 psi				

ESTIMATED MAKE-UP TORQUES⁽³⁾

Minimum	11270 ft-lbs	Optimum	12520 ft-lbs	Maximum	13770 ft-lbs
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OPERATIONAL LIMIT TORQUES

Operating Torque	21500 ft-lbs	Yield Torque	23900 ft-lbs		
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BLANKING DIMENSIONSBlanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

(2) Structural rating, pure bending to yield (i.e no other loads applied)

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed.

For additional information, please contact us at contact-tenarishydril@tenaris.com