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DISTRICT II-ARTESIA O.C.D.

OXY

PRD NM DIRECTIONAL PLANS (NAD 1983)

Charlie Chocolate 14-15

Charlie Chocolate 14-15 Fed Com 31H

Pilot

Plan: Permitting Plan

Standard Planning Report

16 May, 2019

Oxy

Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Charlie Chocolate 14-15 Fed Com 31H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3290.20ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3290.20ft
Site:	Charlie Chocolate 14-15	North Reference:	Grid
Well:	Charlie Chocolate 14-15 Fed Com 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Permitting Plan		

Project	PRD NM DIRECTIONAL PLANS (NAD 1983)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Charlie Chocolate 14-15		
Site Position:		Northing:	574,700.48 usft
From:	Map	Easting:	600,645.96 usft
Position Uncertainty:	2.00 ft	Slot Radius:	13.200 in
		Latitude:	32° 34' 47.130378 N
		Longitude:	104° 8' 26.833530 W
		Grid Convergence:	0.10 °

Well	Charlie Chocolate 14-15 Fed Com 31H		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty		0.00 ft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Pilot		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	5/15/2019	7.28
			Dip Angle
			(°)
			60.32
			Field Strength
			(nT)
			47,984

Design	Permitting Plan		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			119.59

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,984.00	0.00	0.00	5,984.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,584.18	12.00	119.59	6,579.80	-30.93	54.47	2.00	2.00	0.00	119.59	
8,014.86	12.00	119.59	7,979.20	-177.87	313.20	0.00	0.00	0.00	0.00	
8,615.04	0.00	0.00	8,575.00	-208.80	367.67	2.00	-2.00	0.00	180.00	
10,390.04	0.00	0.00	10,350.00	-208.80	367.67	0.00	0.00	0.00	0.00	Pilot TD (Charlie)

Oxy

Planning Report

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Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3290.20ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3290.20ft
Site:	Charlie Chocolate 14-15	North Reference:	Grid
Well:	Charlie Chocolate 14-15 Fed Com 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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

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Well:	Charlie Chocolate 14-15 Fed Com 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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
5,984.00	0.00	0.00	5,984.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.32	119.59	6,000.00	-0.02	0.04	0.04	2.00	2.00	0.00
6,100.00	2.32	119.59	6,099.97	-1.16	2.04	2.35	2.00	2.00	0.00
6,200.00	4.32	119.59	6,199.80	-4.02	7.08	8.14	2.00	2.00	0.00
6,300.00	6.32	119.59	6,299.36	-8.60	15.14	17.41	2.00	2.00	0.00
6,400.00	8.32	119.59	6,398.54	-14.89	26.22	30.15	2.00	2.00	0.00
6,500.00	10.32	119.59	6,497.21	-22.89	40.30	46.34	2.00	2.00	0.00
6,584.18	12.00	119.59	6,579.80	-30.93	54.47	62.64	2.00	2.00	0.00
6,600.00	12.00	119.59	6,595.27	-32.56	57.33	65.93	0.00	0.00	0.00
6,700.00	12.00	119.59	6,693.09	-42.83	75.42	86.73	0.00	0.00	0.00
6,800.00	12.00	119.59	6,790.90	-53.10	93.50	107.52	0.00	0.00	0.00
6,900.00	12.00	119.59	6,888.71	-63.37	111.58	128.32	0.00	0.00	0.00
7,000.00	12.00	119.59	6,986.53	-73.64	129.67	149.12	0.00	0.00	0.00
7,100.00	12.00	119.59	7,084.34	-83.91	147.75	169.92	0.00	0.00	0.00
7,200.00	12.00	119.59	7,182.15	-94.18	165.84	190.71	0.00	0.00	0.00
7,300.00	12.00	119.59	7,279.97	-104.45	183.92	211.51	0.00	0.00	0.00
7,400.00	12.00	119.59	7,377.78	-114.72	202.01	232.31	0.00	0.00	0.00
7,500.00	12.00	119.59	7,475.59	-124.99	220.09	253.11	0.00	0.00	0.00
7,600.00	12.00	119.59	7,573.41	-135.26	238.18	273.90	0.00	0.00	0.00
7,700.00	12.00	119.59	7,671.22	-145.53	256.26	294.70	0.00	0.00	0.00
7,800.00	12.00	119.59	7,769.03	-155.80	274.35	315.50	0.00	0.00	0.00
7,900.00	12.00	119.59	7,866.85	-166.07	292.43	336.30	0.00	0.00	0.00
8,000.00	12.00	119.59	7,964.66	-176.34	310.52	357.09	0.00	0.00	0.00
8,014.86	12.00	119.59	7,979.20	-177.87	313.20	360.18	0.00	0.00	0.00
8,100.00	10.30	119.59	8,062.73	-186.00	327.52	376.65	2.00	-2.00	0.00
8,200.00	8.30	119.59	8,161.41	-193.98	341.57	392.81	2.00	-2.00	0.00
8,300.00	6.30	119.59	8,260.59	-200.25	352.62	405.52	2.00	-2.00	0.00
8,400.00	4.30	119.59	8,360.16	-204.81	360.66	414.76	2.00	-2.00	0.00
8,500.00	2.30	119.59	8,459.99	-207.66	365.66	420.51	2.00	-2.00	0.00
8,600.00	0.30	119.59	8,559.96	-208.78	367.64	422.78	2.00	-2.00	0.00
8,615.04	0.00	0.00	8,575.00	-208.80	367.67	422.82	2.00	-2.00	0.00
8,700.00	0.00	0.00	8,659.96	-208.80	367.67	422.82	0.00	0.00	0.00
8,800.00	0.00	0.00	8,759.96	-208.80	367.67	422.82	0.00	0.00	0.00
8,900.00	0.00	0.00	8,859.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,000.00	0.00	0.00	8,959.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,100.00	0.00	0.00	9,059.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,200.00	0.00	0.00	9,159.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,300.00	0.00	0.00	9,259.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,400.00	0.00	0.00	9,359.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,500.00	0.00	0.00	9,459.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,600.00	0.00	0.00	9,559.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,700.00	0.00	0.00	9,659.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,800.00	0.00	0.00	9,759.96	-208.80	367.67	422.82	0.00	0.00	0.00
9,900.00	0.00	0.00	9,859.96	-208.80	367.67	422.82	0.00	0.00	0.00
10,000.00	0.00	0.00	9,959.96	-208.80	367.67	422.82	0.00	0.00	0.00
10,100.00	0.00	0.00	10,059.96	-208.80	367.67	422.82	0.00	0.00	0.00
10,200.00	0.00	0.00	10,159.96	-208.80	367.67	422.82	0.00	0.00	0.00
10,300.00	0.00	0.00	10,259.96	-208.80	367.67	422.82	0.00	0.00	0.00

Oxy Planning Report

Database:	HOPSPP	Local Co-ordinate Reference:	Well Charlie Chocolate 14-15 Fed Com 31H
Company:	ENGINEERING DESIGNS	TVD Reference:	RKB=26.5' @ 3290.20ft
Project:	PRD NM DIRECTIONAL PLANS (NAD 1983)	MD Reference:	RKB=26.5' @ 3290.20ft
Site:	Charlie Chocolate 14-15	North Reference:	Grid
Well:	Charlie Chocolate 14-15 Fed Com 31H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Permitting Plan		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,390.04	0.00	0.00	10,350.00	-208.80	367.67	422.82	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Pilot TD (Charlie	0.00	0.00	10,350.00	-208.80	367.67	574,491.70	601,013.60	32° 34' 45.057802 N	104° 8' 22.541209
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,984.00	5,984.00	0.00	0.00	Build 2.00°/100'
6,584.18	6,579.80	-30.93	54.47	Hold 12.00° Tangent
8,014.86	7,979.20	-177.87	313.20	Drop 2.00°/100'
8,615.04	8,575.00	-208.80	367.67	Hold Vertical
10,390.04	10,350.00	-208.80	367.67	TD Pilot Hole at 10390.04' MD



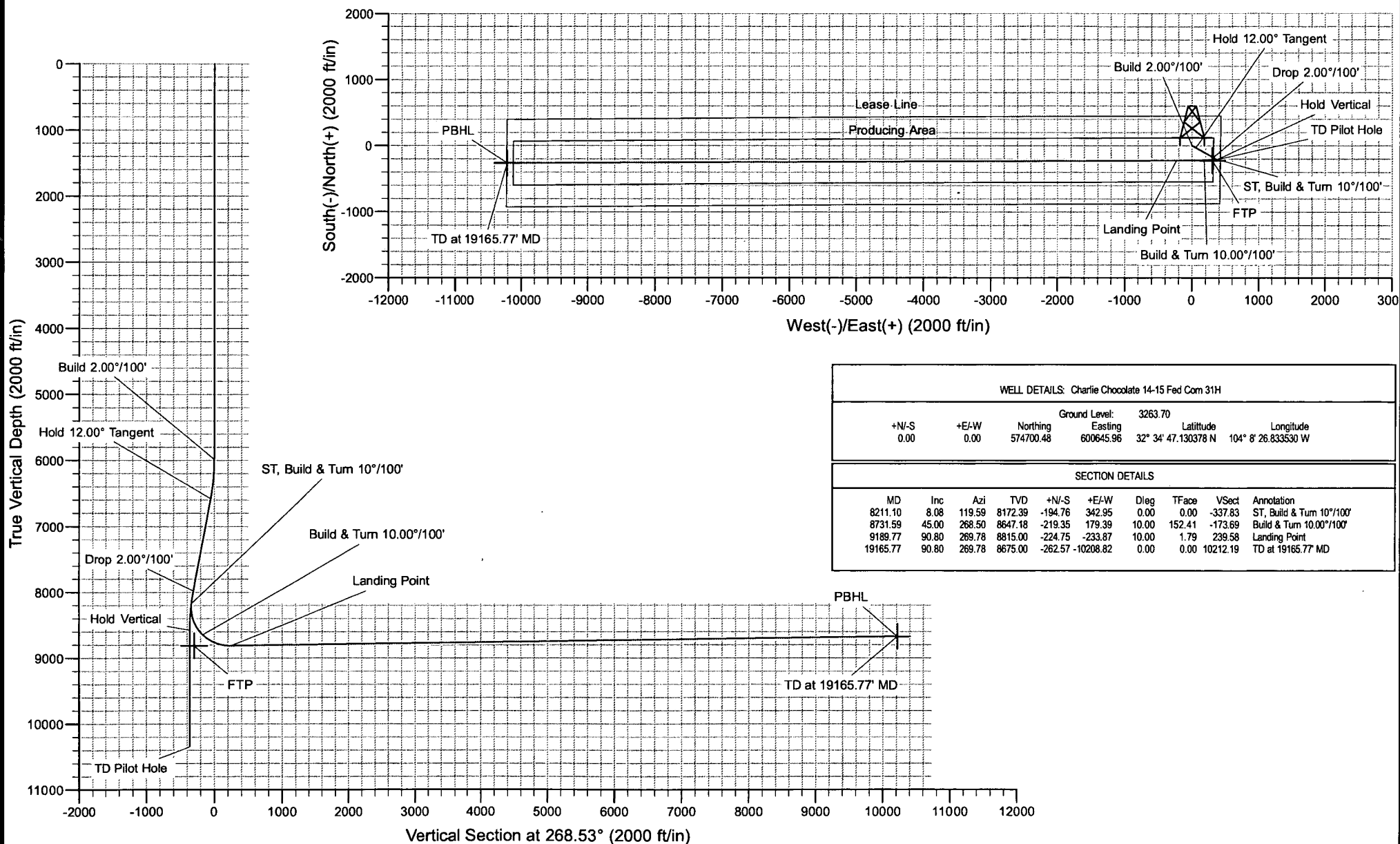
Project: PRD NM DIRECTIONAL PLANS (NAD 1983)
 Site: Charlie Chocolate 14-15
 Well: Charlie Chocolate 14-15 Fed Com 31H
 Wellbore: Wellbore #2
 Design: Permitting Plan

PROJECT DETAILS: NM DIRECTIONAL PLANS (NAD 1983)

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level



Azimuths to Grid North
 True North: -0.10°
 Magnetic North: 7.18°
 Magnetic Field
 Strength: 47983.8snT
 Dip Angle: 60.32°
 Date: 5/15/2019
 Model: HDGM



WELL DETAILS: Charlie Chocolate 14-15 Fed Com 31H

+N/-S	+E/-W	Ground Level:	3263.70	Latitude	Longitude
0.00	0.00	Northing	574700.48	32° 34' 47.130378 N	104° 8' 26.933530 W
		Eastings	600645.96		

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dieg	TFace	VSecl	Annotation
8211.10	8.08	119.59	8172.39	-194.76	342.95	0.00	0.00	-337.83	ST, Build & Turn 10°/100'
8731.59	45.00	268.50	8647.18	-219.35	179.39	10.00	152.41	-173.69	Build & Turn 10.00°/100'
9189.77	90.80	269.78	8815.00	-224.75	-233.87	10.00	1.79	239.58	Landing Point
19165.77	90.80	269.78	8675.00	-262.57	-10208.82	0.00	0.00	10212.19	TD at 19165.77' MD