



**PHOENIX
TECHNOLOGY SERVICES**

July 30, 2019

Oil Conservation Division
State of New Mexico
1625 N. French Drive
District 1 - Hobbs
Hobbs, New Mexico 88240

HOBBS OCD

AUG 05 2019

RECEIVED

Attention: Regulatory Department

Re: Conoco Phillips
Zia Hills 19 Fed Com 110H
Lea County, NM
API #30-025-44237
Job No. 64342

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Nathan Tatum	110H	1,315	22,313	4/22/19	7/15/19	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Brittany Carley

Brittany Carley
Operations Administrator

SURVEY DATA CERTIFICATION



PHOENIX
TECHNOLOGY SERVICES

Job #: 64342
 Client: ConocoPhillips
 County & State: Lea, NM
 Well: Zia Hills 19 Fed Com 110H
 API No: 30-025-44237
 Proposed Direction: 359.63°

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
1050.00 ft	1049.95 ft	0.91°	237.21°	407. S	5.63 W	Gyros
Data Source Company:						MS Directional

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
22-Apr-19	1,315 ft	1.22°	263.69°

Last Survey Date	Last Survey Depth	INC	AZM
15-Jul-19	22,313 ft	90.21°	1.43°

Survey Instrument Type
Velocity UTX

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
15-Jul-19	22,348 ft	90.21°	1.43°

CORRECTION INFORMATION

Magnetic Declination Used	6.75 degrees
Grid Convergence Used	0.33 degrees
Total Correction	6.42 degrees

Corrected to True/Grid North
Grid North

Nathan Tatum

TO THE BEST OF MY KNOWLEDGE, I CERTIFY THIS SURVEY DATA TO BE TRUE AND CORRECT.

Signature _____

7/15/2019

Date _____

**ConocoPhillips MCBU -
Permian-Panhandle Gold Data**

Planning - NM East State Zone - 3001

ZIA HILLS 19 110H

ZIA HILLS 19 110H

OH/ 64260 / 64342

Survey: 1_ZIA_HILLS_19_110H

Standard Survey Report

16 July, 2019

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference: Well ZIA HILLS 19 110H
Project: Planning - NM East State Zone - 3001	TVD Reference: RKB @ 3210.00ft (Patterson 256)
Site: ZIA HILLS 19 110H	MD Reference: RKB @ 3210.00ft (Patterson 256)
Well: ZIA HILLS 19 110H	North Reference: Grid
Wellbore: OH/ 64260 / 64342	Survey Calculation Method: Minimum Curvature
Design: Surveys (Patterson 256)	Database: EDT 14 Central Planning

Project	Planning - NM East State Zone - 3001, Permian Basin - New Mexico - East/South East, Planning Project for Permian wells in NM Zone 3001		
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		Using geodetic scale factor

Site	ZIA HILLS 19 110H				
Site Position:		Northing:	374,653.160 usft	Latitude:	32° 1' 42.743 N
From:	Map	Easting:	690,908.400 usft	Longitude:	103° 43' 2.293 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.33 °

Well	ZIA HILLS 19 110H					
Well Position	+N/-S	0.00 ft	Northing:	374,653.160 usft	Latitude:	32° 1' 42.743 N
	+E/-W	0.00 ft	Easting:	690,908.400 usft	Longitude:	103° 43' 2.293 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,181.50 ft

Wellbore	OH/ 64260 / 64342				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	BGGM2018	2/4/2019	(°) 6.92	(°) 59.78	(nT) 47,670.96464095

Design	Surveys (Patterson 256)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	359.63	

Survey Program	Date 7/16/2019				
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
120.00	1,050.00	0_ZIA_HILLS_19_110H (OH/ 64260 / 6434	GOOD GYRO	GOOD GYRO	
1,315.00	22,348.00	1_ZIA_HILLS_19_110H (OH/ 64260 / 6434	MWD+IFR1+MS_CoP	Fixed:v2:Eagleford, crustal dec + 3-axis corr.	

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)	
1,050.00	0.91	237.21	1,049.95	-4.07	-5.63	-4.03	0.00	0.00	0.00	
1,315.00	1.22	263.69	1,314.91	-5.52	-10.20	-5.45	0.22	0.12	9.99	
First Phoenix MWD Survey										
1,406.00	1.52	257.26	1,405.88	-5.89	-12.34	-5.81	0.37	0.33	-7.07	
1,498.00	1.92	259.29	1,497.84	-6.45	-15.05	-6.35	0.44	0.43	2.21	
1,591.00	0.90	213.88	1,590.81	-7.34	-16.99	-7.23	1.55	-1.10	-48.83	
1,683.00	0.72	164.68	1,682.80	-8.50	-17.24	-8.39	0.75	-0.20	-53.48	
1,779.00	0.66	166.53	1,778.80	-9.62	-16.95	-9.51	0.07	-0.06	1.93	
1,874.00	1.07	125.10	1,873.79	-10.66	-16.09	-10.56	0.76	0.43	-43.61	

ConocoPhillips

Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 110H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3210.00ft (Patterson 256)
Site:	ZIA HILLS 19 110H	MD Reference:	RKB @ 3210.00ft (Patterson 256)
Well:	ZIA HILLS 19 110H	North Reference:	Grid
Wellbore:	OH/ 64260 / 64342	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 256)	Database:	EDT 14 Central Planning

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)
1,970.00	1.39	111.72	1,969.77	-11.61	-14.28	-11.52	0.45	0.33	-13.94
2,066.00	1.14	110.67	2,065.74	-12.38	-12.30	-12.30	0.26	-0.26	-1.09
2,161.00	0.92	139.90	2,160.73	-13.29	-10.93	-13.22	0.59	-0.23	30.77
2,353.00	0.69	138.63	2,352.71	-15.34	-9.17	-15.28	0.12	-0.12	-0.66
2,448.00	0.75	159.95	2,447.70	-16.35	-8.58	-16.30	0.29	0.06	22.44
2,544.00	0.67	160.32	2,543.69	-17.47	-8.18	-17.42	0.08	-0.08	0.39
2,639.00	0.73	19.05	2,638.69	-17.42	-7.79	-17.37	1.39	0.06	-148.71
2,735.00	1.50	14.02	2,734.67	-15.63	-7.29	-15.58	0.81	0.80	-5.24
2,830.00	1.35	12.96	2,829.64	-13.33	-6.74	-13.29	0.16	-0.16	-1.12
2,926.00	1.04	14.32	2,925.62	-11.38	-6.27	-11.34	0.32	-0.32	1.42
3,021.00	0.88	353.55	3,020.61	-9.82	-6.13	-9.78	0.40	-0.17	-21.86
3,117.00	0.62	2.13	3,116.60	-8.57	-6.20	-8.53	0.29	-0.27	8.94
3,212.00	0.89	24.82	3,211.59	-7.39	-5.87	-7.35	0.42	0.28	23.88
3,307.00	0.89	45.17	3,306.58	-6.20	-5.04	-6.17	0.33	0.00	21.42
3,403.00	0.74	34.42	3,402.57	-5.16	-4.16	-5.14	0.22	-0.16	-11.20
3,499.00	0.60	50.04	3,498.56	-4.33	-3.42	-4.31	0.24	-0.15	16.27
3,594.00	0.64	70.98	3,593.56	-3.84	-2.54	-3.82	0.24	0.04	22.04
3,690.00	1.39	102.14	3,689.54	-3.91	-0.89	-3.90	0.94	0.78	32.46
3,786.00	2.15	117.21	3,785.50	-4.97	1.85	-4.99	0.92	0.79	15.70
3,881.00	3.30	126.31	3,880.39	-7.41	5.63	-7.44	1.29	1.21	9.58
3,977.00	1.77	139.43	3,976.29	-10.17	8.83	-10.23	1.69	-1.59	13.67
4,072.00	1.48	150.10	4,071.26	-12.35	10.39	-12.42	0.44	-0.31	11.23
4,168.00	1.62	142.00	4,167.22	-14.49	11.84	-14.57	0.27	0.15	-8.44
4,263.00	0.42	157.04	4,262.20	-15.87	12.81	-15.95	1.28	-1.26	15.83
4,358.00	0.23	223.95	4,357.20	-16.33	12.81	-16.41	0.41	-0.20	70.43
4,454.00	0.57	251.89	4,453.20	-16.62	12.22	-16.70	0.40	0.35	29.10
4,549.00	0.58	244.40	4,548.20	-16.97	11.34	-17.04	0.08	0.01	-7.88
4,645.00	0.59	275.42	4,644.19	-17.13	10.41	-17.20	0.33	0.01	32.31
4,740.00	0.46	254.68	4,739.19	-17.19	9.56	-17.25	0.24	-0.14	-21.83
4,836.00	0.92	258.50	4,835.18	-17.44	8.43	-17.50	0.48	0.48	3.98
4,931.00	0.86	264.79	4,930.17	-17.66	6.97	-17.71	0.12	-0.06	6.62
5,027.00	1.29	274.94	5,026.15	-17.63	5.18	-17.67	0.49	0.45	10.57
5,122.00	1.15	266.38	5,121.13	-17.60	3.16	-17.62	0.24	-0.15	-9.01
5,218.00	1.27	270.20	5,217.11	-17.66	1.13	-17.67	0.15	0.13	3.98
5,314.00	1.86	229.41	5,313.07	-18.67	-1.11	-18.66	1.27	0.61	-42.49
5,410.00	2.70	208.01	5,409.00	-21.68	-3.36	-21.66	1.23	0.88	-22.29
5,505.00	3.29	195.19	5,503.87	-26.29	-5.12	-26.25	0.94	0.62	-13.49
5,601.00	4.04	184.55	5,599.67	-32.31	-6.11	-32.27	1.05	0.78	-11.08
5,697.00	4.03	173.42	5,695.44	-39.04	-5.99	-39.00	0.81	-0.01	-11.59
5,792.00	4.02	170.45	5,790.20	-45.64	-5.06	-45.60	0.22	-0.01	-3.13
5,887.00	3.87	171.07	5,884.98	-52.09	-4.01	-52.06	0.16	-0.16	0.65
5,983.00	4.16	168.34	5,980.74	-58.70	-2.80	-58.68	0.36	0.30	-2.84

ConocoPhillips
Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 110H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3210.00ft (Patterson 256)
Site:	ZIA HILLS 19 110H	MD Reference:	RKB @ 3210.00ft (Patterson 256)
Well:	ZIA HILLS 19 110H	North Reference:	Grid
Wellbore:	OH/ 64260 / 64342	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 256)	Database:	EDT 14 Central Planning

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)
6,078.00	4.09	167.77	6,075.50	-65.38	-1.39	-65.37	0.09	-0.07	-0.60
6,174.00	3.89	167.90	6,171.26	-71.91	0.02	-71.91	0.21	-0.21	0.14
6,268.00	4.71	165.66	6,265.00	-78.77	1.64	-78.78	0.89	0.87	-2.38
6,364.00	4.95	160.73	6,360.66	-86.50	3.99	-86.52	0.50	0.25	-5.14
6,460.00	4.65	161.04	6,456.32	-94.09	6.62	-94.13	0.31	-0.31	0.32
6,555.00	4.72	161.86	6,551.00	-101.45	9.09	-101.50	0.10	0.07	0.86
6,650.00	4.49	163.44	6,645.70	-108.72	11.36	-108.80	0.28	-0.24	1.66
6,746.00	3.48	160.28	6,741.46	-115.07	13.42	-115.15	1.08	-1.05	-3.29
6,842.00	2.37	151.61	6,837.34	-119.56	15.34	-119.65	1.24	-1.16	-9.03
6,936.00	2.24	155.25	6,931.26	-122.94	17.04	-123.04	0.21	-0.14	3.87
7,032.00	1.34	161.87	7,027.21	-125.71	18.17	-125.82	0.96	-0.94	6.90
7,128.00	0.76	168.39	7,123.20	-127.40	18.65	-127.51	0.62	-0.60	6.79
7,223.00	0.89	179.53	7,218.19	-128.75	18.78	-128.87	0.22	0.14	11.73
7,319.00	0.75	184.08	7,314.18	-130.12	18.74	-130.24	0.16	-0.15	4.74
7,414.00	0.64	184.56	7,409.17	-131.27	18.66	-131.39	0.12	-0.12	0.51
7,510.00	1.01	184.94	7,505.16	-132.65	18.54	-132.77	0.39	0.39	0.40
7,605.00	1.03	162.62	7,600.15	-134.30	18.72	-134.42	0.42	0.02	-23.49
7,700.00	1.27	165.47	7,695.13	-136.13	19.24	-136.26	0.26	0.25	3.00
7,796.00	1.30	186.02	7,791.10	-138.25	19.40	-138.37	0.48	0.03	21.41
7,891.00	1.29	177.55	7,886.08	-140.39	19.33	-140.51	0.20	-0.01	-8.92
7,987.00	0.70	155.83	7,982.06	-142.00	19.62	-142.13	0.72	-0.61	-22.63
8,082.00	0.73	163.82	8,077.06	-143.11	20.02	-143.24	0.11	0.03	8.41
8,178.00	0.63	148.85	8,173.05	-144.15	20.47	-144.28	0.21	-0.10	-15.59
8,274.00	0.66	159.03	8,269.04	-145.12	20.94	-145.25	0.12	0.03	10.60
8,370.00	1.24	358.01	8,365.04	-144.60	21.10	-144.73	1.95	0.60	-167.73
8,466.00	1.66	354.37	8,461.01	-142.18	20.93	-142.31	0.45	0.44	-3.79
8,562.00	0.81	339.19	8,556.98	-140.16	20.55	-140.29	0.94	-0.89	-15.81
8,657.00	0.55	320.51	8,651.98	-139.18	20.02	-139.30	0.36	-0.27	-19.66
8,753.00	0.54	314.97	8,747.97	-138.50	19.41	-138.62	0.06	-0.01	-5.77
8,849.00	0.50	298.70	8,843.97	-137.98	18.72	-138.10	0.16	-0.04	-16.95
8,944.00	0.41	290.52	8,938.97	-137.66	18.04	-137.78	0.12	-0.09	-8.61
9,039.00	0.52	285.32	9,033.96	-137.43	17.30	-137.54	0.12	0.12	-5.47
9,134.00	0.42	301.60	9,128.96	-137.13	16.59	-137.24	0.17	-0.11	17.14
9,229.00	0.18	354.23	9,223.96	-136.80	16.28	-136.91	0.36	-0.25	55.40
9,324.00	0.29	320.07	9,318.96	-136.47	16.11	-136.57	0.18	0.12	-35.96
9,420.00	0.25	320.20	9,414.96	-136.12	15.82	-136.22	0.04	-0.04	0.14
9,515.00	0.21	280.06	9,509.96	-135.93	15.52	-136.03	0.17	-0.04	-42.25
9,610.00	0.13	313.69	9,604.96	-135.83	15.27	-135.92	0.13	-0.08	35.40
9,705.00	0.35	339.52	9,699.96	-135.48	15.09	-135.58	0.25	0.23	27.19
9,800.00	0.35	17.12	9,794.95	-134.93	15.07	-135.03	0.24	0.00	39.58
9,896.00	0.29	34.28	9,890.95	-134.45	15.29	-134.55	0.12	-0.06	17.88
9,991.00	0.33	57.45	9,985.95	-134.11	15.66	-134.20	0.14	0.04	24.39
10,084.00	0.74	88.65	10,078.95	-133.95	16.49	-134.05	0.53	0.44	33.55

ConocoPhillips

Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 110H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3210.00ft (Patterson 256)
Site:	ZIA HILLS 19 110H	MD Reference:	RKB @ 3210.00ft (Patterson 256)
Well:	ZIA HILLS 19 110H	North Reference:	Grid
Wellbore:	OH/ 64260 / 64342	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 256)	Database:	EDT 14 Central Planning

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)
10,180.00	0.76	67.25	10,174.94	-133.69	17.69	-133.80	0.29	0.02	-22.29
10,275.00	0.42	52.79	10,269.93	-133.23	18.55	-133.35	0.39	-0.36	-15.22
10,371.00	0.27	28.27	10,365.93	-132.82	18.94	-132.94	0.22	-0.16	-25.54
10,467.00	0.16	143.56	10,461.93	-132.73	19.13	-132.85	0.38	-0.11	120.09
10,562.00	0.79	168.35	10,556.93	-133.48	19.34	-133.60	0.68	0.66	26.09
10,658.00	1.29	173.68	10,652.91	-135.20	19.59	-135.32	0.53	0.52	5.55
10,754.00	1.25	182.50	10,748.89	-137.32	19.66	-137.44	0.21	-0.04	9.19
10,849.00	1.47	191.08	10,843.86	-139.55	19.38	-139.67	0.31	0.23	9.03
10,944.00	1.70	199.78	10,938.83	-142.07	18.67	-142.19	0.35	0.24	9.16
11,040.00	1.52	199.60	11,034.79	-144.61	17.76	-144.72	0.19	-0.19	-0.19
11,103.00	1.55	197.80	11,097.76	-146.21	17.22	-146.32	0.09	0.05	-2.86
11,157.00	1.56	204.63	11,151.75	-147.57	16.69	-147.68	0.34	0.02	12.65
11,189.00	1.16	240.75	11,183.74	-148.13	16.23	-148.23	2.89	-1.25	112.88
11,221.00	1.47	302.35	11,215.73	-148.07	15.60	-148.16	4.29	0.97	192.50
11,253.00	2.39	319.59	11,247.71	-147.34	14.82	-147.43	3.37	2.88	53.88
11,285.00	3.20	336.88	11,279.67	-146.01	14.04	-146.10	3.63	2.53	54.03
11,317.00	3.85	344.70	11,311.61	-144.15	13.40	-144.24	2.52	2.03	24.44
11,349.00	4.64	350.40	11,343.53	-141.84	12.90	-141.92	2.80	2.47	17.81
11,381.00	5.17	358.35	11,375.41	-139.12	12.65	-139.20	2.69	1.66	24.84
11,413.00	5.21	1.84	11,407.28	-136.23	12.65	-136.31	0.99	0.13	10.91
11,445.00	6.00	2.41	11,439.12	-133.11	12.77	-133.19	2.47	2.47	1.78
11,476.00	7.33	1.11	11,469.91	-129.51	12.87	-129.59	4.32	4.29	-4.19
11,508.00	8.85	0.70	11,501.59	-125.01	12.94	-125.09	4.75	4.75	-1.28
11,540.00	10.34	2.14	11,533.15	-119.68	13.08	-119.76	4.72	4.66	4.50
11,572.00	11.95	3.19	11,564.54	-113.50	13.37	-113.58	5.07	5.03	3.28
11,604.00	13.63	3.25	11,595.75	-106.42	13.77	-106.51	5.25	5.25	0.19
11,636.00	15.99	2.24	11,626.68	-98.26	14.16	-98.34	7.42	7.38	-3.16
11,668.00	19.21	1.21	11,657.18	-88.59	14.44	-88.68	10.11	10.06	-3.22
11,700.00	23.23	1.26	11,687.00	-77.01	14.69	-77.10	12.56	12.56	0.16
11,732.00	27.20	1.01	11,715.95	-63.38	14.96	-63.48	12.41	12.41	-0.78
11,763.00	31.98	359.79	11,742.90	-48.08	15.05	-48.17	15.54	15.42	-3.94
11,795.00	36.42	359.41	11,769.36	-30.10	14.92	-30.19	13.89	13.88	-1.19
11,827.00	40.90	359.55	11,794.34	-10.11	14.74	-10.21	14.00	14.00	0.44
11,859.00	45.72	359.83	11,817.62	11.83	14.63	11.74	15.07	15.06	0.88
11,890.00	49.33	359.69	11,838.55	34.69	14.53	34.60	11.65	11.65	-0.45
11,922.00	52.63	359.69	11,858.69	59.55	14.40	59.46	10.31	10.31	0.00
11,954.00	56.14	0.02	11,877.32	85.56	14.33	85.47	11.00	10.97	1.03
11,986.00	59.23	0.19	11,894.43	112.60	14.38	112.50	9.67	9.66	0.53
12,018.00	62.20	0.23	11,910.08	140.51	14.49	140.41	9.28	9.28	0.13
12,050.00	65.08	0.23	11,924.29	169.18	14.60	169.08	9.00	9.00	0.00
12,081.00	67.78	0.30	11,936.68	197.59	14.73	197.49	8.71	8.71	0.23
12,113.00	70.08	0.68	11,948.18	227.44	14.99	227.34	7.27	7.19	1.19

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle
 Gold Data
Project: Planning - NM East State Zone - 3001
Site: ZIA HILLS 19 110H
Well: ZIA HILLS 19 110H
Wellbore: OH/ 64260 / 64342
Design: Surveys (Patterson 256)

Local Co-ordinate Reference: Well ZIA HILLS 19 110H
TVD Reference: RKB @ 3210.00ft (Patterson 256)
MD Reference: RKB @ 3210.00ft (Patterson 256)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDT 14 Central Planning

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)
12,145.00	72.95	0.81	11,958.33	257.79	15.38	257.68	8.98	8.97	0.41
12,177.00	76.52	1.07	11,966.75	288.65	15.89	288.54	11.18	11.16	0.81
12,208.00	79.96	1.54	11,973.07	318.99	16.58	318.87	11.20	11.10	1.52
12,340.00	85.84	3.30	11,989.38	449.79	22.12	449.64	4.65	4.45	1.33
12,431.00	89.59	4.94	11,993.01	540.47	28.66	540.27	4.50	4.12	1.80
12,523.00	91.19	5.10	11,992.38	632.11	36.71	631.86	1.75	1.74	0.17
12,616.00	90.96	2.98	11,990.64	724.86	43.26	724.56	2.29	-0.25	-2.28
12,708.00	90.78	2.33	11,989.24	816.75	47.52	816.42	0.73	-0.20	-0.71
12,803.00	90.68	1.25	11,988.03	911.69	50.48	911.35	1.14	-0.11	-1.14
12,898.00	91.47	359.92	11,986.25	1,006.67	51.45	1,006.31	1.63	0.83	-1.40
12,994.00	90.53	357.94	11,984.57	1,102.63	49.66	1,102.29	2.28	-0.98	-2.06
13,090.00	90.68	357.68	11,983.56	1,198.55	45.99	1,198.23	0.31	0.16	-0.27
13,186.00	90.58	357.73	11,982.50	1,294.47	42.15	1,294.17	0.12	-0.10	0.05
13,281.00	90.58	357.67	11,981.54	1,389.39	38.34	1,389.11	0.06	0.00	-0.06
13,377.00	90.12	357.35	11,980.95	1,485.30	34.17	1,485.05	0.58	-0.48	-0.33
13,472.00	90.02	357.65	11,980.84	1,580.21	30.02	1,579.98	0.33	-0.11	0.32
13,567.00	90.15	357.77	11,980.70	1,675.13	26.23	1,674.93	0.19	0.14	0.13
13,663.00	90.13	357.74	11,980.46	1,771.06	22.47	1,770.87	0.04	-0.02	-0.03
13,758.00	90.07	357.92	11,980.30	1,865.99	18.87	1,865.83	0.20	-0.06	0.19
13,854.00	90.10	358.02	11,980.15	1,961.93	15.47	1,961.79	0.11	0.03	0.10
13,950.00	90.16	358.17	11,979.94	2,057.87	12.28	2,057.75	0.17	0.06	0.16
14,046.00	90.18	358.53	11,979.65	2,153.83	9.51	2,153.73	0.38	0.02	0.38
14,141.00	89.82	359.03	11,979.65	2,248.81	7.49	2,248.72	0.65	-0.38	0.53
14,237.00	90.18	0.09	11,979.65	2,344.81	6.75	2,344.72	1.17	0.38	1.10
14,333.00	90.05	0.56	11,979.46	2,440.81	7.30	2,440.71	0.51	-0.14	0.49
14,429.00	90.13	0.46	11,979.31	2,536.80	8.15	2,536.70	0.13	0.08	-0.10
14,523.00	90.07	0.23	11,979.14	2,630.80	8.72	2,630.69	0.25	-0.06	-0.24
14,619.00	89.58	0.38	11,979.44	2,726.80	9.23	2,726.68	0.53	-0.51	0.16
14,715.00	89.62	0.34	11,980.11	2,822.79	9.83	2,822.67	0.06	0.04	-0.04
14,811.00	89.62	0.16	11,980.74	2,918.79	10.25	2,918.66	0.19	0.00	-0.19
14,906.00	89.67	0.15	11,981.33	3,013.79	10.51	3,013.66	0.05	0.05	-0.01
15,002.00	89.59	0.36	11,981.95	3,109.79	10.94	3,109.65	0.23	-0.08	0.22
15,098.00	89.61	0.50	11,982.62	3,205.78	11.66	3,205.64	0.15	0.02	0.15
15,193.00	89.58	0.12	11,983.29	3,300.78	12.17	3,300.63	0.40	-0.03	-0.40
15,289.00	89.55	0.36	11,984.02	3,396.77	12.57	3,396.62	0.25	-0.03	0.25
15,385.00	89.67	0.51	11,984.68	3,492.77	13.30	3,492.61	0.20	0.13	0.16
15,480.00	90.33	359.84	11,984.68	3,587.77	13.59	3,587.60	0.99	0.69	-0.71
15,575.00	89.88	358.77	11,984.50	3,682.76	12.44	3,682.60	1.22	-0.47	-1.13
15,671.00	90.13	358.81	11,984.49	3,778.74	10.41	3,778.59	0.26	0.26	0.04
15,767.00	90.12	358.65	11,984.28	3,874.71	8.28	3,874.58	0.17	-0.01	-0.17
15,862.00	90.22	358.55	11,984.00	3,969.68	5.96	3,969.56	0.15	0.11	-0.11
15,957.00	90.27	358.45	11,983.60	4,064.65	3.48	4,064.54	0.12	0.05	-0.11
16,053.00	90.15	358.78	11,983.24	4,160.62	1.16	4,160.53	0.37	-0.13	0.34

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle
Gold Data
Project: Planning - NM East State Zone - 3001
Site: ZIA HILLS 19 110H
Well: ZIA HILLS 19 110H
Wellbore: OH/ 64260 / 64342
Design: Surveys (Patterson 256)

Local Co-ordinate Reference: Well ZIA HILLS 19 110H
TVD Reference: RKB @ 3210.00ft (Patterson 256)
MD Reference: RKB @ 3210.00ft (Patterson 256)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDT 14 Central Planning

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)
16,148.00	90.27	358.51	11,982.90	4,255.59	-1.09	4,255.51	0.31	0.13	-0.28
16,244.00	89.55	358.15	11,983.05	4,351.55	-3.89	4,351.49	0.84	-0.75	-0.38
16,339.00	89.65	358.32	11,983.71	4,446.50	-6.81	4,446.46	0.21	0.11	0.18
16,435.00	89.64	358.76	11,984.30	4,542.47	-9.26	4,542.44	0.46	-0.01	0.46
16,530.00	89.67	358.68	11,984.88	4,637.45	-11.38	4,637.42	0.09	0.03	-0.08
16,625.00	89.67	358.80	11,985.42	4,732.42	-13.47	4,732.41	0.13	0.00	0.13
16,721.00	89.59	359.00	11,986.04	4,828.40	-15.31	4,828.40	0.22	-0.08	0.21
16,816.00	89.59	358.87	11,986.72	4,923.38	-17.08	4,923.39	0.14	0.00	-0.14
16,912.00	89.62	358.83	11,987.39	5,019.36	-19.01	5,019.38	0.05	0.03	-0.04
17,007.00	89.24	359.64	11,988.33	5,114.35	-20.28	5,114.37	0.94	-0.40	0.85
17,103.00	89.68	0.51	11,989.24	5,210.34	-20.15	5,210.36	1.02	0.46	0.91
17,198.00	89.62	0.85	11,989.82	5,305.33	-19.02	5,305.34	0.36	-0.06	0.36
17,294.00	89.76	1.30	11,990.33	5,401.31	-17.22	5,401.31	0.49	0.15	0.47
17,388.00	89.45	0.67	11,990.98	5,495.30	-15.61	5,495.28	0.75	-0.33	-0.67
17,484.00	90.15	0.87	11,991.32	5,591.29	-14.32	5,591.26	0.76	0.73	0.21
17,579.00	90.25	0.75	11,990.99	5,686.28	-12.97	5,686.24	0.16	0.11	-0.13
17,675.00	90.53	0.68	11,990.33	5,782.27	-11.77	5,782.22	0.30	0.29	-0.07
17,771.00	90.64	0.68	11,989.35	5,878.26	-10.64	5,878.20	0.11	0.11	0.00
17,866.00	90.51	0.92	11,988.40	5,973.24	-9.31	5,973.18	0.29	-0.14	0.25
17,962.00	90.38	0.61	11,987.65	6,069.23	-8.03	6,069.16	0.35	-0.14	-0.32
18,057.00	90.61	0.05	11,986.83	6,164.22	-7.48	6,164.14	0.64	0.24	-0.59
18,152.00	90.47	0.09	11,985.94	6,259.22	-7.36	6,259.14	0.15	-0.15	0.04
18,248.00	90.48	0.69	11,985.14	6,355.21	-6.71	6,355.13	0.63	0.01	0.63
18,344.00	89.85	0.13	11,984.87	6,451.21	-6.02	6,451.11	0.88	-0.66	-0.58
18,439.00	89.98	0.80	11,985.01	6,546.21	-5.25	6,546.10	0.72	0.14	0.71
18,535.00	90.96	359.79	11,984.22	6,642.20	-4.76	6,642.09	1.47	1.02	-1.05
18,630.00	91.11	358.47	11,982.50	6,737.17	-6.20	6,737.07	1.40	0.16	-1.39
18,726.00	89.75	358.14	11,981.78	6,833.12	-9.04	6,833.04	1.46	-1.42	-0.34
18,822.00	90.13	358.66	11,981.88	6,929.09	-11.72	6,929.02	0.67	0.40	0.54
18,917.00	90.13	358.61	11,981.67	7,024.06	-13.98	7,024.00	0.05	0.00	-0.05
19,013.00	90.27	358.73	11,981.33	7,120.03	-16.21	7,119.99	0.19	0.15	0.13
19,108.00	90.25	358.77	11,980.90	7,215.01	-18.28	7,214.98	0.05	-0.02	0.04
19,203.00	90.32	359.03	11,980.43	7,309.99	-20.11	7,309.97	0.28	0.07	0.27
19,299.00	90.19	358.74	11,980.00	7,405.97	-21.98	7,405.96	0.33	-0.14	-0.30
19,394.00	90.25	359.16	11,979.64	7,500.95	-23.72	7,500.95	0.45	0.06	0.44
19,490.00	90.39	359.20	11,979.10	7,596.94	-25.09	7,596.95	0.15	0.15	0.04
19,586.00	91.08	0.32	11,977.87	7,692.93	-25.49	7,692.94	1.37	0.72	1.17
19,681.00	90.51	359.95	11,976.55	7,787.92	-25.27	7,787.92	0.72	-0.60	-0.39
19,777.00	90.47	359.69	11,975.73	7,883.92	-25.57	7,883.92	0.27	-0.04	-0.27
19,872.00	89.99	0.17	11,975.35	7,978.92	-25.69	7,978.92	0.71	-0.51	0.51
19,968.00	88.75	359.43	11,976.40	8,074.91	-26.02	8,074.91	1.50	-1.29	-0.77
20,063.00	88.33	359.15	11,978.82	8,169.87	-27.20	8,169.87	0.53	-0.44	-0.29

ConocoPhillips Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference: Well ZIA HILLS 19 110H
Project: Planning - NM East State Zone - 3001	TVD Reference: RKB @ 3210.00ft (Patterson 256)
Site: ZIA HILLS 19 110H	MD Reference: RKB @ 3210.00ft (Patterson 256)
Well: ZIA HILLS 19 110H	North Reference: Grid
Wellbore: OH/ 64260 / 64342	Survey Calculation Method: Minimum Curvature
Design: Surveys (Patterson 256)	Database: EDT 14 Central Planning

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)
20,162.00	88.19	359.10	11,981.83	8,268.81	-28.71	8,268.82	0.15	-0.14	-0.05
20,257.00	90.38	359.42	11,983.02	8,363.79	-28.94	8,363.81	2.33	2.31	0.34
20,351.00	92.19	357.25	11,980.91	8,457.72	-32.67	8,457.75	3.01	1.93	-2.31
20,447.00	91.25	357.47	11,978.03	8,553.57	-37.09	8,553.63	1.01	-0.98	0.23
20,543.00	91.51	356.42	11,975.71	8,649.41	-42.20	8,649.50	1.13	0.27	-1.09
20,638.00	91.11	359.60	11,973.54	8,744.31	-45.50	8,744.42	3.37	-0.42	3.35
20,734.00	91.62	359.54	11,971.26	8,840.28	-46.22	8,840.40	0.53	0.53	-0.06
20,830.00	91.05	0.28	11,969.02	8,936.25	-46.37	8,936.37	0.97	-0.59	0.77
20,925.00	91.34	359.53	11,967.04	9,031.23	-46.53	9,031.34	0.85	0.31	-0.79
21,020.00	91.24	358.71	11,964.90	9,126.20	-47.98	9,126.32	0.87	-0.11	-0.86
21,116.00	91.08	0.46	11,962.95	9,222.17	-48.68	9,222.29	1.83	-0.17	1.82
21,211.00	92.08	359.35	11,960.34	9,317.13	-48.84	9,317.25	1.57	1.05	-1.17
21,307.00	90.61	0.03	11,958.08	9,413.10	-49.36	9,413.22	1.69	-1.53	0.71
21,402.00	91.30	359.47	11,956.50	9,508.09	-49.77	9,508.21	0.94	0.73	-0.59
21,498.00	90.79	0.05	11,954.75	9,604.07	-50.17	9,604.19	0.80	-0.53	0.60
21,593.00	90.32	359.33	11,953.83	9,699.06	-50.69	9,699.19	0.91	-0.49	-0.76
21,688.00	90.24	358.51	11,953.36	9,794.04	-52.48	9,794.18	0.87	-0.08	-0.86
21,783.00	90.04	359.41	11,953.13	9,889.03	-54.20	9,889.17	0.97	-0.21	0.95
21,879.00	90.68	358.77	11,952.53	9,985.01	-55.73	9,985.16	0.94	0.67	-0.67
21,972.00	89.98	1.78	11,951.99	10,078.00	-55.28	10,078.14	3.32	-0.75	3.24
22,067.00	90.27	2.29	11,951.78	10,172.94	-51.91	10,173.06	0.62	0.31	0.54
22,162.00	90.93	1.25	11,950.79	10,267.88	-48.97	10,267.99	1.30	0.69	-1.09
22,258.00	90.15	1.50	11,949.89	10,363.85	-46.67	10,363.94	0.85	-0.81	0.26
22,313.00	90.21	1.43	11,949.71	10,418.83	-45.26	10,418.91	0.17	0.11	-0.13
Final Phoenix MWD Survey									
22,348.00	90.21	1.43	11,949.58	10,453.82	-44.39	10,453.89	0.00	0.00	0.00
Projection to TD									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
2,416.70	2,416.40	4 1/2" x 5"	10-3/4	14-3/4
9,416.50	9,411.46	4 1/2" x 5"	8-5/8	10-5/8
22,090.25	11,951.64	4 1/2" x 5"	5-1/2	7-7/8

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,315.00	1,314.91	-5.52	-10.20	First Phoenix MWD Survey
22,313.00	11,949.71	10,418.83	-45.26	Final Phoenix MWD Survey
22,348.00	11,949.58	10,453.82	-44.39	Projection to TD

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brizcos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 APT Number		2 Pool Code		3 Pool Name	
4 Property Code		5 Property Name ZIA HILLS 19 FEDERAL COM			6 Well Number 110H
7 GRID No.		8 Operator Name ConocoPhillips Company			9 Elevation 3182.5'

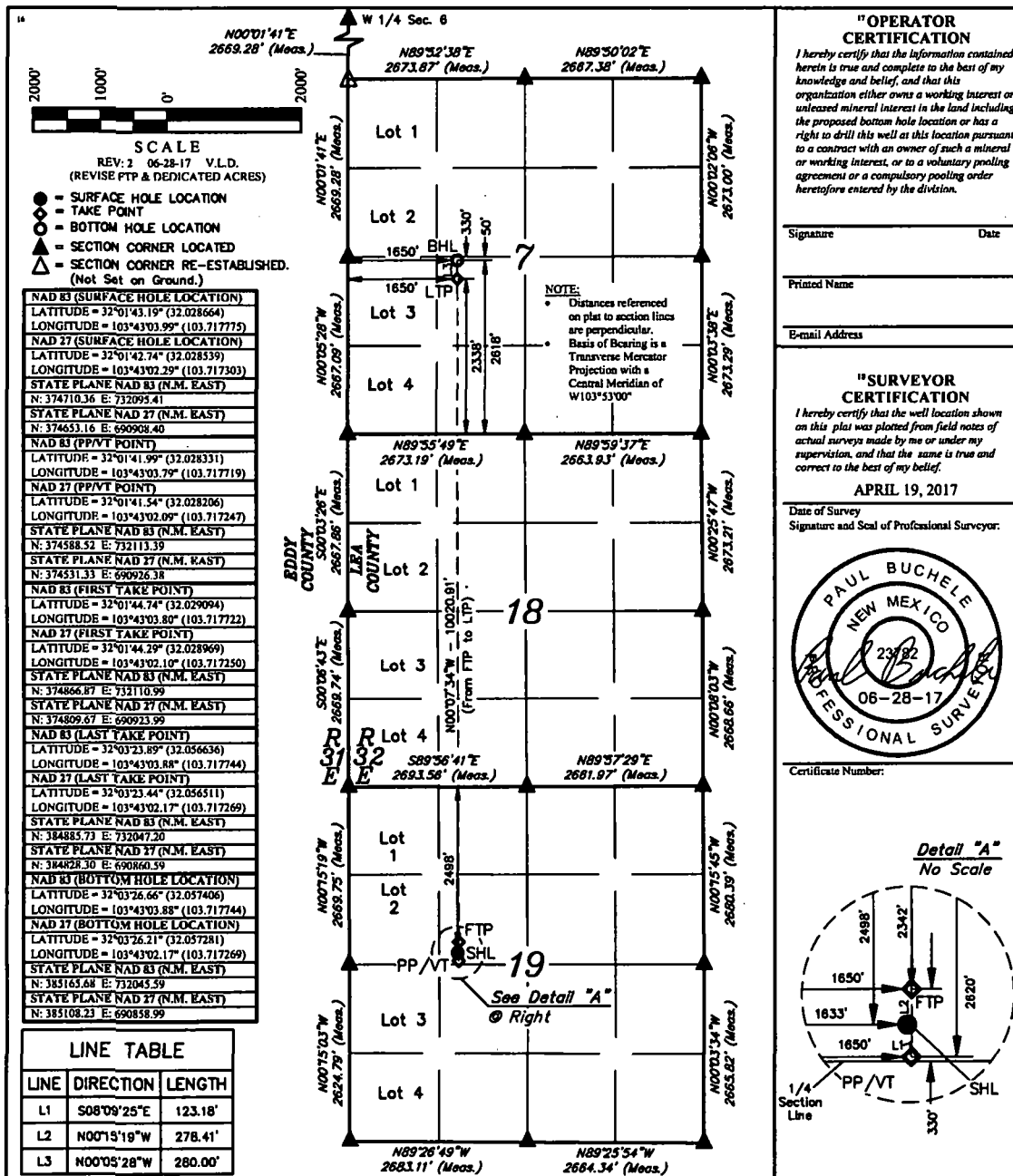
10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	19	26S	32E		2498	NORTH	1633	WEST	LEA

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	7	26S	32E		2618	SOUTH	1650	WEST	LEA
12 Dedicated Acres 320		13 Joint or Infill		14 Consolidation Code		15 Order No.			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



"OPERATOR CERTIFICATION"
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature _____ Date _____

Printed Name _____

E-mail Address _____

"SURVEYOR CERTIFICATION"
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

APRIL 19, 2017

Date of Survey _____
Signature and Seal of Professional Surveyor: _____

