



PHOENIX
TECHNOLOGY SERVICES

30-025-44239

August 28, 2019

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

Attention: Regulatory Department

Re: Conoco Phillips
Zia Hills 19 Fed Com 112H
Lea County, NM
API #30-025-44239
Job No. 64340

HOBBS OCD
SEP 10 2019
RECEIVED

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	
Paul Davis	112H	1,257	22,289	3/7/19	8/17/19	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 #: 64340
Client: Conoco Phillips
County & State: Lea, NM
Well: Zia Hills 19 Fed Com 112H
API No: 30-025-44239
Proposed Direction: 359.63°

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
1051.00 ft	1050.87 ft	0.80°	24.90°	2.46 S	10.55 W	Gyros
Data Source Company:						MS Directional

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
7-Mar-19	1,257 ft	0.32°	36.16°

Last Survey Date	Last Survey Depth	INC	AZM
17-Aug-19	22,289 ft	88.30°	356.10°

Survey Instrument Type
Velocity UTX

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
17-Aug-19	22,322 ft	88.30°	356.10°

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

Paul Davis

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

Signature

8/17/2019

Date

ConocoPhillips MCBU - Permian-Panhandle Gold Data

Planning - NM East State Zone - 3001

ZIA HILLS 19 112H

ZIA HILLS 19 112H

OH/ 64262 / 64340

Survey: 1_ZIA_HILLS_19_112H

Standard Survey Report

19 August, 2019

ConocoPhillips

Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 112H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3210.00ft (Patterson 256)
Site:	ZIA HILLS 19 112H	MD Reference:	RKB @ 3210.00ft (Patterson 256)
Well:	ZIA HILLS 19 112H	North Reference:	Grid
Wellbore:	OH/ 64262 / 64340	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 112H		
Site Position:		Northing:	374,653.470 usft
From:	Map	Easting:	690,974.380 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 42.742 N
		Longitude:	103° 43' 1.526 W
		Grid Convergence:	0.33 °

Well	ZIA HILLS 19 112H		
Well Position	+N-S	0.00 ft	Northing:
	+E-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	32° 1' 42.742 N
		Longitude:	103° 43' 1.526 W
		Ground Level:	3,181.50 ft

Wellbore	OH/ 64262 / 64340				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2018	2/4/2019	6.92	59.78	47,670.98381303

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

Survey Program	Date 8/19/2019			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
121.00	1,051.00	0_ZIA_HILLS_19_112H (OH/ 64262 / 6434	GOOD GYRO	GOOD GYRO
1,257.00	22,322.00	1_ZIA_HILLS_19_112H (OH/ 64262 / 6434	MWD+IFR1+MS_CoP	Fixed:v2:Eagleford, crustal dec + 3-axis corr.

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)	
1,051.00	0.80	24.90	1,050.87	-2.46	-10.55	-2.39	0.00	0.00	0.00	
1,257.00	0.32	36.16	1,256.86	-0.69	-9.60	-0.63	0.24	-0.23	5.47	
First Phoenix MWD Survey										
1,318.00	0.58	344.68	1,317.86	-0.25	-9.59	-0.19	0.75	0.43	-84.39	
1,409.00	0.45	292.38	1,408.85	0.33	-10.04	0.39	0.52	-0.14	-57.47	
1,501.00	0.82	279.59	1,500.85	0.57	-11.02	0.65	0.43	0.40	-13.90	
1,594.00	1.45	286.85	1,593.83	1.03	-12.80	1.11	0.69	0.68	7.81	
1,686.00	1.05	87.99	1,685.82	1.39	-13.08	1.48	2.68	-0.43	175.15	
1,782.00	1.50	95.31	1,781.80	1.31	-10.95	1.38	0.50	0.47	7.63	

ConocoPhillips

Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 112H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3210.00ft (Patterson 256)
Site:	ZIA HILLS 19 112H	MD Reference:	RKB @ 3210.00ft (Patterson 256)
Well:	ZIA HILLS 19 112H	North Reference:	Grid
Wellbore:	OH/ 64262 / 64340	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)	Bulld Rate (°/100ft)	Turn Rate (°/100ft)
1,877.00	1.43	81.39	1,876.77	1.37	-8.53	1.42	0.38	-0.07	-14.65
1,973.00	1.29	93.98	1,972.74	1.47	-6.27	1.51	0.34	-0.15	13.11
2,069.00	1.56	92.33	2,068.71	1.35	-3.89	1.37	0.28	0.28	-1.72
2,164.00	1.21	85.95	2,163.68	1.36	-1.60	1.37	0.40	-0.37	-8.72
2,260.00	0.84	119.84	2,259.67	1.09	0.03	1.09	0.72	-0.39	35.30
2,356.00	1.06	135.22	2,355.65	0.11	1.26	0.10	0.35	0.23	16.02
2,451.00	0.92	178.07	2,450.64	-1.28	1.91	-1.29	0.77	-0.15	45.11
2,547.00	1.06	178.80	2,546.63	-2.94	1.98	-2.95	0.15	0.15	-1.32
2,642.00	0.86	188.63	2,641.61	-4.52	1.92	-4.53	0.30	-0.21	12.45
2,738.00	0.95	188.90	2,737.60	-6.02	1.72	-6.03	0.10	0.09	-1.80
2,833.00	1.13	116.92	2,832.59	-7.23	2.46	-7.24	1.27	0.19	-73.66
2,929.00	1.45	103.61	2,928.56	-7.94	4.48	-7.97	0.45	0.33	-13.86
3,024.00	1.35	103.78	3,023.54	-8.49	6.74	-8.54	0.11	-0.11	0.18
3,120.00	1.38	100.64	3,119.51	-8.97	8.97	-9.03	0.08	0.03	-3.27
3,215.00	1.80	85.36	3,214.47	-9.07	11.59	-9.14	0.62	0.44	-16.08
3,310.00	1.95	93.81	3,309.42	-9.05	14.69	-9.15	0.33	0.16	8.89
3,406.00	2.13	91.45	3,405.36	-9.21	18.10	-9.32	0.21	0.19	-2.46
3,502.00	1.96	91.75	3,501.30	-9.30	21.52	-9.44	0.18	-0.18	0.31
3,597.00	1.95	89.99	3,596.25	-9.35	24.76	-9.51	0.06	-0.01	-1.85
3,693.00	2.40	96.07	3,692.18	-9.56	28.40	-9.75	0.53	0.47	6.33
3,789.00	2.50	100.98	3,788.09	-10.17	32.45	-10.38	0.24	0.10	5.11
3,884.00	3.06	103.58	3,882.98	-11.16	36.95	-11.40	0.60	0.59	2.74
3,980.00	3.33	114.93	3,978.83	-12.94	41.97	-13.21	0.71	0.28	11.82
4,075.00	3.35	114.08	4,073.67	-15.24	47.00	-15.54	0.06	0.02	-0.89
4,171.00	3.06	111.22	4,169.52	-17.31	51.95	-17.64	0.34	-0.30	-2.98
4,266.00	2.96	108.15	4,264.39	-18.99	56.65	-19.36	0.20	-0.11	-3.23
4,361.00	2.84	100.42	4,359.26	-20.18	61.29	-20.58	0.43	-0.13	-8.14
4,457.00	2.96	103.04	4,455.14	-21.17	66.05	-21.60	0.19	0.13	2.73
4,552.00	3.01	99.65	4,550.01	-22.14	70.90	-22.60	0.19	0.05	-3.57
4,648.00	3.05	97.04	4,645.88	-22.88	75.91	-23.37	0.15	0.04	-2.72
4,743.00	3.37	90.12	4,740.73	-23.19	81.22	-23.72	0.53	0.34	-7.28
4,839.00	3.57	88.77	4,838.55	-23.13	87.03	-23.69	0.23	0.21	-1.41
4,934.00	3.65	85.82	4,931.36	-22.85	93.00	-23.45	0.21	0.08	-3.11
5,030.00	3.51	85.89	5,027.18	-22.42	98.98	-23.05	0.15	-0.15	0.07
5,126.00	3.79	87.00	5,122.98	-22.04	105.08	-22.72	0.30	0.29	1.16
5,221.00	4.18	93.59	5,217.75	-22.09	111.67	-22.81	0.63	0.41	6.94
5,317.00	4.48	105.16	5,313.48	-23.29	118.78	-24.06	0.96	0.31	12.05
5,413.00	4.63	110.28	5,409.18	-25.62	126.03	-26.43	0.45	0.16	5.33
5,508.00	4.92	104.83	5,503.85	-27.99	133.57	-28.85	0.57	0.31	-5.74
5,604.00	4.88	106.59	5,599.50	-30.21	141.46	-31.12	0.16	-0.04	1.83
5,700.00	5.11	102.21	5,695.13	-32.28	149.55	-33.24	0.46	0.24	-4.56
5,795.00	4.86	98.18	5,789.77	-33.74	157.67	-34.76	0.45	-0.26	-4.24

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle
Gold Data
Project: Planning - NM East State Zone - 3001
Site: ZIA HILLS 19 112H
Well: ZIA HILLS 19 112H
Wellbore: OH/ 64282 / 64340
Design: Surveys (Patterson 256)

Local Co-ordinate Reference: Well ZIA HILLS 19 112H
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)
5,890.00	4.51	93.98	5,884.46	-34.58	165.38	-35.64	0.52	-0.37	-4.42
5,985.00	4.45	92.48	5,979.17	-34.99	172.79	-36.11	0.14	-0.06	-1.58
6,081.00	4.43	95.35	6,074.88	-35.50	180.20	-36.66	0.23	-0.02	2.99
6,177.00	4.46	92.41	6,170.59	-36.00	187.62	-37.21	0.24	0.03	-3.06
6,271.00	4.26	104.85	6,264.32	-37.05	194.65	-38.31	1.03	-0.21	13.23
6,367.00	4.30	109.90	6,360.05	-39.19	201.48	-40.49	0.39	0.04	5.26
6,463.00	4.57	104.88	6,455.77	-41.40	208.56	-42.74	0.49	0.28	-5.23
6,558.00	4.44	108.79	6,550.47	-43.55	215.70	-44.95	0.35	-0.14	4.12
6,654.00	4.59	104.78	6,646.17	-45.73	222.93	-47.17	0.36	0.16	-4.18
6,749.00	4.52	110.38	6,740.88	-48.00	230.11	-49.49	0.47	-0.07	5.89
6,844.00	4.70	109.09	6,835.57	-50.58	237.30	-52.11	0.22	0.19	-1.36
6,939.00	4.57	108.44	6,930.26	-53.05	244.57	-54.63	0.15	-0.14	-0.68
7,036.00	4.34	112.36	7,028.96	-55.67	251.63	-57.29	0.39	-0.24	4.04
7,132.00	4.50	93.60	7,122.68	-57.29	258.75	-58.96	1.51	0.17	-19.54
7,227.00	4.68	92.26	7,217.38	-57.68	266.34	-59.39	0.22	0.19	-1.41
7,322.00	4.23	94.01	7,312.09	-58.07	273.71	-59.84	0.49	-0.47	1.84
7,417.00	3.81	89.04	7,406.86	-58.27	280.36	-60.07	0.57	-0.44	-5.23
7,512.00	4.34	94.14	7,501.82	-58.47	287.10	-60.32	0.68	0.56	5.37
7,608.00	4.66	98.74	7,597.32	-59.33	294.58	-61.23	0.50	0.33	4.79
7,703.00	4.66	98.15	7,692.01	-60.46	302.21	-62.41	0.05	0.00	-0.62
7,799.00	4.32	102.87	7,787.71	-61.82	309.60	-63.82	0.52	-0.35	4.92
7,894.00	4.07	104.46	7,882.46	-63.46	316.35	-65.50	0.29	-0.26	1.67
7,989.00	3.78	106.46	7,977.24	-65.19	322.62	-67.27	0.34	-0.31	2.11
8,085.00	3.33	108.03	8,073.05	-66.95	328.30	-69.06	0.48	-0.47	1.64
8,180.00	3.93	111.88	8,167.86	-69.01	333.95	-71.17	0.68	0.63	4.05
8,276.00	4.78	107.99	8,263.58	-71.47	340.80	-73.67	0.94	0.89	-4.05
8,372.00	4.86	101.42	8,359.24	-73.52	348.59	-75.76	0.58	0.08	-6.84
8,468.00	4.47	100.67	8,454.93	-75.01	356.26	-77.31	0.41	-0.41	-0.78
8,564.00	4.29	98.97	8,550.65	-76.27	363.48	-78.61	0.23	-0.19	-1.77
8,659.00	4.04	94.77	8,645.39	-77.10	370.32	-79.49	0.41	-0.26	-4.42
8,756.00	4.03	94.70	8,742.15	-77.66	377.13	-80.09	0.01	-0.01	-0.07
8,851.00	5.10	97.49	8,836.85	-78.49	384.64	-80.97	1.15	1.13	2.94
8,947.00	5.15	98.17	8,932.47	-79.65	393.14	-82.19	0.08	0.05	0.71
9,042.00	4.91	99.04	9,027.10	-80.90	401.37	-83.49	0.27	-0.25	0.92
9,136.00	4.92	98.74	9,120.76	-82.14	409.33	-84.78	0.03	0.01	-0.32
9,232.00	4.91	103.75	9,216.40	-83.74	417.39	-86.44	0.45	-0.01	5.22
9,327.00	5.24	105.57	9,311.03	-85.88	425.52	-88.62	0.39	0.35	1.92
9,423.00	6.12	107.63	9,406.56	-88.60	434.62	-91.41	0.94	0.92	2.15
9,517.00	5.27	107.49	9,500.09	-91.42	443.51	-94.28	0.90	-0.90	-0.15
9,629.00	4.99	99.83	9,611.65	-93.79	453.21	-96.72	0.66	-0.25	-6.84
9,724.00	5.02	92.31	9,706.29	-94.67	461.44	-97.65	0.69	0.03	-7.92
9,820.00	6.12	91.67	9,801.83	-94.99	470.75	-98.02	1.15	1.15	-0.67
9,916.00	6.11	95.35	9,897.28	-95.61	480.95	-98.72	0.41	-0.01	3.83

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle
Gold Data
Project: Planning - NM East State Zone - 3001
Site: ZIA HILLS 19 112H
Well: ZIA HILLS 19 112H
Wellbore: OH/ 64262 / 64340
Design: Surveys (Patterson 256)

Local Co-ordinate Reference: Well ZIA HILLS 19 112H
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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)
10,011.00	6.26	95.27	9,991.73	-96.56	491.14	-99.73	0.16	0.16	-0.08
10,107.00	7.93	96.95	10,086.99	-97.84	502.93	-101.09	1.75	1.74	1.75
10,202.00	7.95	100.61	10,181.08	-99.84	515.89	-103.17	0.53	0.02	3.85
10,298.00	7.08	99.24	10,276.26	-102.02	528.26	-105.43	0.93	-0.91	-1.43
10,394.00	6.69	98.67	10,371.57	-103.81	539.82	-107.29	0.41	-0.41	-0.59
10,489.00	6.42	98.77	10,465.94	-105.45	550.34	-109.00	0.28	-0.28	0.11
10,584.00	6.43	100.29	10,560.35	-107.21	560.83	-110.83	0.18	0.01	1.60
10,680.00	5.78	102.71	10,655.80	-109.24	570.83	-112.92	0.73	-0.68	2.52
10,775.00	4.80	103.39	10,750.40	-111.21	579.37	-114.95	1.03	-1.03	0.72
10,870.00	4.12	102.65	10,845.11	-112.88	586.56	-116.66	0.72	-0.72	-0.78
10,965.00	3.72	101.13	10,939.89	-114.22	592.92	-118.05	0.43	-0.42	-1.60
11,060.00	2.87	100.40	11,034.73	-115.24	598.28	-119.11	0.90	-0.89	-0.77
11,120.00	2.69	100.35	11,094.66	-115.77	601.14	-119.65	0.30	-0.30	-0.08
11,156.00	2.37	99.19	11,130.62	-116.04	602.71	-119.93	0.90	-0.89	-3.22
11,204.00	2.49	61.47	11,178.58	-115.70	604.60	-119.60	3.28	0.25	-78.58
11,252.00	2.60	46.02	11,226.54	-114.45	606.30	-118.36	1.44	0.23	-32.19
11,300.00	3.95	26.70	11,274.46	-112.21	607.83	-116.13	3.60	2.81	-40.25
11,348.00	5.35	18.64	11,322.30	-108.61	609.29	-112.55	3.21	2.92	-16.79
11,396.00	7.10	10.29	11,370.02	-103.57	610.53	-107.52	4.10	3.65	-17.40
11,443.00	8.87	9.00	11,416.56	-97.14	611.62	-101.09	3.78	3.77	-2.74
11,491.00	11.13	9.93	11,463.83	-88.92	613.00	-92.87	4.72	4.71	1.94
11,538.00	13.87	12.47	11,509.71	-78.95	615.00	-82.92	5.94	5.83	5.40
11,586.00	16.87	13.75	11,555.99	-66.56	617.89	-70.55	6.29	6.25	2.67
11,634.00	19.61	14.47	11,601.57	-51.99	621.56	-56.01	5.73	5.71	1.50
11,682.00	22.85	13.09	11,646.31	-35.11	625.69	-39.15	6.83	6.75	-2.88
11,730.00	26.48	12.06	11,689.92	-15.56	630.04	-19.63	7.62	7.56	-2.15
11,777.00	30.05	10.26	11,731.31	6.27	634.32	2.17	7.81	7.60	-3.83
11,824.00	34.55	7.05	11,771.03	31.09	638.06	26.97	10.24	9.57	-6.83
11,872.00	39.67	4.04	11,809.30	59.90	640.81	55.76	11.32	10.67	-6.27
11,920.00	45.96	0.60	11,844.50	92.48	642.07	88.33	13.98	13.10	-7.17
11,968.00	53.38	358.68	11,875.54	129.04	641.81	124.89	15.75	15.46	-4.00
12,015.00	59.13	358.41	11,901.64	168.09	640.81	163.95	12.24	12.23	-0.57
12,062.00	64.97	358.32	11,923.66	209.57	639.63	205.44	12.43	12.43	-0.19
12,111.00	71.73	358.16	11,941.73	255.07	638.23	250.94	13.80	13.80	-0.33
12,159.00	76.97	357.61	11,954.67	301.24	636.52	297.12	10.97	10.92	-1.15
12,207.00	81.57	357.96	11,963.60	348.35	634.70	344.25	9.61	9.58	0.73
12,255.00	86.11	357.89	11,968.75	396.03	632.97	391.94	9.46	9.46	-0.15
12,301.00	88.50	356.94	11,970.92	441.93	630.90	437.85	5.59	5.20	-2.07
12,339.00	90.10	356.78	11,971.38	479.87	628.82	475.80	4.23	4.21	-0.42
12,430.00	91.90	356.78	11,969.79	570.71	623.71	566.67	1.98	1.98	0.00
12,521.00	92.53	356.28	11,966.28	661.47	618.20	657.47	0.88	0.69	-0.55
12,618.00	93.41	356.75	11,961.25	758.16	612.31	754.19	1.03	0.91	0.48

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle
Gold Data
Project: Planning - NM East State Zone - 3001
Site: ZIA HILLS 19 112H
Well: ZIA HILLS 19 112H
Wellbore: OH/ 64262 / 64340
Design: Surveys (Patterson 256)

Local Co-ordinate Reference: Well ZIA HILLS 19 112H
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)
12,710.00	89.25	358.08	11,959.12	850.02	608.17	846.08	4.75	-4.52	1.45
12,805.00	88.42	357.08	11,961.05	944.92	604.16	940.99	1.37	-0.87	-1.05
12,900.00	88.10	357.65	11,963.93	1,039.77	599.79	1,035.88	0.69	-0.34	0.60
12,996.00	87.06	357.49	11,967.98	1,135.60	595.72	1,131.73	1.10	-1.08	-0.17
13,092.00	89.62	358.27	11,970.77	1,231.48	592.18	1,227.63	2.79	2.67	0.81
13,187.00	90.13	358.70	11,970.97	1,326.45	589.66	1,322.61	0.70	0.54	0.45
13,283.00	89.81	357.89	11,971.02	1,422.41	586.81	1,418.59	0.91	-0.33	-0.84
13,379.00	91.02	359.63	11,970.33	1,518.38	584.73	1,514.57	2.21	1.26	1.81
13,474.00	90.56	1.58	11,969.02	1,613.36	585.73	1,609.54	2.11	-0.48	2.05
13,569.00	90.52	2.02	11,968.12	1,708.30	588.72	1,704.47	0.47	-0.04	0.46
13,664.00	90.41	2.64	11,967.35	1,803.22	592.58	1,799.36	0.66	-0.12	0.65
13,760.00	89.13	1.60	11,967.74	1,899.15	596.13	1,895.26	1.72	-1.33	-1.08
13,856.00	87.34	0.74	11,970.69	1,995.08	598.09	1,991.18	2.07	-1.86	-0.90
13,952.00	88.68	0.64	11,974.03	2,091.02	599.25	2,087.10	1.40	1.40	-0.10
14,047.00	89.08	0.80	11,975.88	2,185.99	600.44	2,182.07	0.45	0.42	0.17
14,143.00	88.96	0.53	11,977.53	2,281.97	601.55	2,278.04	0.31	-0.13	-0.28
14,241.00	89.56	0.89	11,978.79	2,379.95	602.77	2,376.01	0.71	0.61	0.37
14,331.00	89.25	0.25	11,979.73	2,469.94	603.66	2,465.99	0.79	-0.34	-0.71
14,426.00	90.10	2.56	11,980.27	2,564.91	605.99	2,560.94	2.59	0.89	2.43
14,521.00	90.56	358.37	11,979.72	2,659.88	606.76	2,655.91	4.44	0.48	-4.41
14,617.00	89.62	357.81	11,979.57	2,755.82	603.56	2,751.87	1.14	-0.98	-0.58
14,713.00	90.12	359.50	11,979.78	2,851.79	601.31	2,847.85	1.84	0.52	1.76
14,808.00	89.92	358.87	11,979.75	2,946.78	599.96	2,942.85	0.70	-0.21	-0.66
14,904.00	89.99	357.80	11,979.83	3,042.74	597.17	3,038.82	1.12	0.07	-1.11
15,000.00	90.15	359.49	11,979.71	3,138.71	594.90	3,134.80	1.77	0.17	1.76
15,095.00	90.05	358.61	11,979.54	3,233.70	593.32	3,229.80	0.93	-0.11	-0.93
15,191.00	90.16	359.31	11,979.37	3,329.68	591.58	3,325.79	0.74	0.11	0.73
15,287.00	90.10	358.13	11,979.15	3,425.65	589.44	3,421.78	1.23	-0.06	-1.23
15,382.00	90.15	358.88	11,978.94	3,520.62	586.96	3,516.76	0.79	0.05	0.79
15,477.00	89.67	358.53	11,979.09	3,615.60	584.81	3,611.74	0.63	-0.51	-0.37
15,573.00	89.99	358.54	11,979.38	3,711.56	582.36	3,707.73	0.33	0.33	0.01
15,669.00	90.22	359.61	11,979.20	3,807.55	580.81	3,803.72	1.14	0.24	1.11
15,764.00	89.78	357.92	11,979.20	3,902.52	578.76	3,898.71	1.84	-0.46	-1.78
15,859.00	89.84	357.56	11,979.52	3,997.45	575.01	3,993.65	0.38	0.06	-0.38
15,955.00	89.88	0.02	11,979.75	4,093.42	572.99	4,089.64	2.56	0.04	2.56
16,050.00	90.65	0.91	11,979.31	4,188.42	573.76	4,184.62	1.24	0.81	0.94
16,146.00	90.18	1.05	11,978.62	4,284.40	575.40	4,280.59	0.51	-0.49	0.15
16,241.00	90.42	0.63	11,978.12	4,379.39	576.79	4,375.57	0.51	0.25	-0.44
16,337.00	89.93	359.23	11,977.83	4,475.38	576.68	4,471.57	1.55	-0.51	-1.46
16,433.00	90.79	0.46	11,977.22	4,571.38	576.42	4,567.56	1.56	0.90	1.28
16,528.00	90.67	359.45	11,976.01	4,666.37	576.34	4,662.55	1.07	-0.13	-1.06
16,623.00	90.52	0.61	11,975.03	4,761.36	576.39	4,757.54	1.23	-0.16	1.22
16,718.00	90.32	0.33	11,974.33	4,856.36	577.17	4,852.53	0.36	-0.21	-0.29

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle
Gold Data
Project: Planning - NM East State Zone - 3001
Site: ZIA HILLS 19 112H
Well: ZIA HILLS 19 112H
Wellbore: OH/ 64262 / 64340
Design: Surveys (Patterson 256)

Local Co-ordinate Reference: Well ZIA HILLS 19 112H
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)
16,814.00	90.39	359.78	11,973.73	4,952.35	577.26	4,948.52	0.58	0.07	-0.57
16,910.00	90.50	0.65	11,972.99	5,048.35	577.62	5,044.51	0.91	0.11	0.91
17,005.00	89.76	1.01	11,972.77	5,143.34	579.00	5,139.49	0.87	-0.78	0.38
17,100.00	90.62	1.08	11,972.46	5,238.32	580.73	5,234.46	0.91	0.91	0.07
17,196.00	90.18	359.60	11,971.79	5,334.31	581.30	5,330.45	1.61	-0.46	-1.54
17,292.00	89.98	0.81	11,971.65	5,430.31	581.64	5,426.44	1.28	-0.21	1.26
17,386.00	90.75	0.18	11,971.05	5,524.31	582.46	5,520.43	1.06	0.82	-0.67
17,481.00	88.91	0.29	11,971.34	5,619.30	582.85	5,615.42	1.94	-1.94	0.12
17,577.00	89.42	0.87	11,972.74	5,715.28	583.82	5,711.40	0.80	0.53	0.60
17,672.00	88.07	358.72	11,974.82	5,810.25	583.48	5,806.36	2.67	-1.42	-2.26
17,768.00	88.56	359.75	11,977.64	5,906.20	582.20	5,902.32	1.19	0.51	1.07
17,864.00	89.65	359.07	11,979.14	6,002.18	581.21	5,998.30	1.34	1.14	-0.71
17,959.00	90.91	358.88	11,978.67	6,097.16	579.51	6,093.30	1.34	1.33	-0.20
18,054.00	90.73	357.86	11,977.31	6,192.12	576.81	6,188.26	1.09	-0.19	-1.07
18,150.00	90.13	357.37	11,976.59	6,288.03	572.81	6,284.20	0.81	-0.63	-0.51
18,246.00	89.42	358.87	11,976.97	6,383.97	569.66	6,380.16	1.73	-0.74	1.56
18,341.00	90.69	357.43	11,976.88	6,478.92	566.60	6,475.12	2.02	1.34	-1.52
18,437.00	89.99	357.42	11,976.31	6,574.82	562.28	6,571.05	0.73	-0.73	-0.01
18,533.00	89.96	358.28	11,976.35	6,670.75	558.68	6,667.00	0.90	-0.03	0.90
18,628.00	89.73	357.54	11,976.61	6,765.69	555.22	6,761.96	0.82	-0.24	-0.78
18,724.00	89.25	358.02	11,977.46	6,861.61	551.50	6,857.91	0.71	-0.50	0.50
18,819.00	89.99	359.24	11,978.09	6,956.58	549.23	6,952.89	1.50	0.78	1.28
18,915.00	89.39	0.23	11,978.61	7,052.57	548.78	7,048.88	1.21	-0.63	1.03
19,011.00	89.78	0.56	11,979.31	7,148.57	549.45	7,144.87	0.53	0.41	0.34
19,106.00	89.84	359.54	11,979.62	7,243.57	549.53	7,239.87	1.08	0.06	-1.07
19,201.00	90.15	0.23	11,979.63	7,338.57	549.34	7,334.87	0.80	0.33	0.73
19,297.00	90.72	359.32	11,978.90	7,434.56	548.96	7,430.86	1.12	0.59	-0.95
19,392.00	90.39	0.10	11,977.98	7,529.56	548.48	7,525.86	0.89	-0.35	0.82
19,488.00	89.59	359.87	11,978.00	7,625.55	548.45	7,621.85	0.87	-0.83	-0.24
19,584.00	90.75	1.09	11,977.71	7,721.55	549.26	7,717.84	1.75	1.21	1.27
19,679.00	90.67	0.07	11,976.54	7,816.53	550.22	7,812.82	1.08	-0.08	-1.07
19,775.00	90.32	0.56	11,975.71	7,912.53	550.75	7,908.81	0.63	-0.36	0.51
19,870.00	89.29	359.16	11,976.03	8,007.52	550.52	8,003.80	1.83	-1.08	-1.47
19,966.00	86.92	359.76	11,979.21	8,103.46	549.61	8,099.74	2.55	-2.47	0.63
20,061.00	88.78	1.27	11,982.77	8,198.38	550.47	8,194.66	2.52	1.96	1.59
20,157.00	90.70	1.25	11,983.21	8,294.35	552.58	8,290.61	2.00	2.00	-0.02
20,252.00	90.50	359.91	11,982.21	8,389.34	553.54	8,385.59	1.43	-0.21	-1.41
20,346.00	90.13	359.01	11,981.69	8,483.33	552.65	8,479.59	1.04	-0.39	-0.96
20,442.00	90.52	359.72	11,981.15	8,579.33	551.59	8,575.59	0.84	0.41	0.74
20,538.00	91.24	0.54	11,979.68	8,675.31	551.81	8,671.57	1.14	0.75	0.85
20,633.00	91.01	359.85	11,977.81	8,770.29	552.13	8,766.55	0.77	-0.24	-0.73
20,729.00	90.52	2.05	11,976.53	8,866.27	553.72	8,862.51	2.35	-0.51	2.29

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle
Gold Data
Project: Planning - NM East State Zone - 3001
Site: ZIA HILLS 19 112H
Well: ZIA HILLS 19 112H
Wellbore: OH/ 64262 / 64340
Design: Surveys (Patterson 256)

Local Co-ordinate Reference: Well ZIA HILLS 19 112H
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)
20,825.00	90.65	359.71	11,975.55	8,962.24	555.20	8,958.47	2.44	0.14	-2.44
20,920.00	90.98	0.60	11,974.20	9,057.23	555.45	9,053.46	1.00	0.35	0.94
21,015.00	91.74	359.68	11,971.94	9,152.20	555.68	9,148.42	1.26	0.80	-0.97
21,111.00	90.75	1.80	11,969.86	9,248.17	556.92	9,244.38	2.44	-1.03	2.21
21,206.00	90.85	358.96	11,968.53	9,343.14	557.55	9,339.35	2.99	0.11	-2.99
21,302.00	87.90	359.80	11,969.58	9,439.12	556.52	9,435.33	3.20	-3.07	0.88
21,397.00	90.90	0.50	11,970.57	9,534.10	556.76	9,530.31	3.24	3.16	0.74
21,493.00	90.42	359.31	11,969.46	9,630.10	556.60	9,626.30	1.34	-0.50	-1.24
21,588.00	90.41	1.16	11,968.78	9,725.09	556.99	9,721.29	1.95	-0.01	1.95
21,683.00	89.53	2.83	11,968.83	9,820.03	560.30	9,816.20	1.89	-0.93	1.76
21,778.00	90.35	3.20	11,968.93	9,914.89	565.30	9,911.04	0.95	0.86	0.39
21,874.00	87.08	0.59	11,971.10	10,010.80	568.47	10,006.92	4.37	-3.43	-2.72
21,967.00	88.50	1.08	11,974.70	10,103.71	569.83	10,099.82	1.64	1.55	0.53
22,062.00	90.64	0.83	11,975.41	10,198.69	571.41	10,194.79	2.27	2.25	-0.26
22,157.00	91.67	358.00	11,973.50	10,293.66	570.44	10,289.76	3.17	1.08	-2.98
22,253.00	88.93	355.81	11,972.99	10,389.50	565.26	10,385.63	3.65	-2.85	-2.28
22,289.00	88.30	356.10	11,973.86	10,425.40	562.72	10,421.55	1.93	-1.75	0.81
Final Phoenix MWD Survey									
22,322.00	88.30	356.10	11,974.84	10,458.31	560.48	10,454.47	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	2,416.34	4 1/2" x 5"	10-3/4	14-3/4
9,416.50	9,400.10	4 1/2" x 5"	8-5/8	10-5/8
22,090.25	11,975.02	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)	
1,257.00	1,256.86	-0.69	-9.60	First Phoenix MWD Survey
22,289.00	11,973.86	10,425.40	562.72	Final Phoenix MWD Survey
22,322.00	11,974.84	10,458.31	560.48	Projection to TD