



**PHOENIX
TECHNOLOGY SERVICES**

May 4, 2020

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

RECEIVED
JUN 26 2020
HOBBS OCD

Attention: Regulatory Department

Re: Conoco Phillips
Zia Hills 19 Federal Com 105H
Lea County, NM
API #30-025-44219
Job No. 65856

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	
Efrain Silva	105H	1,314	21,850	1/21/20	4/25/20	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 #: 65856
 Client: Conoco Phillips
 County & State: Lea, NM
 Well: Zia Hills 19 Federal Corn 105H
 API No: 30-025-44219
 Proposed Direction: 179.41°

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
1103.00 ft	1102.82 ft	1.24°	252.58°	7.58 N	14.06 W	Gyro
Data Source Company:						VES Survey International

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
21-Jan-20	1,314 ft	1.00°	266.50°

Last Survey Date	Last Survey Depth	INC	AZM
25-Apr-20	21,850 ft	88.81°	182.13°

Survey Instrument Type
Velocity

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
25-Apr-20	21,910 ft	88.81°	182.13°

CORRECTION INFORMATION

Magnetic Declination Used	6.67 degrees
Grid Convergence Used	0.32 degrees
Total Correction	6.35 degrees

Corrected to True/Grid North
Grid North

Efrain Silva

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

Signature

Date

26-Apr

ConocoPhillips MCBU - Permian-Panhandle Gold Data

Planning - NM East State Zone - 3001

ZIA HILLS 19 Federal Com 105H

ZIA HILLS 19 Federal Com 105H

OH / 65856

Survey: Phoenix MWD Surveys

Standard Survey Report

29 April, 2020

ConocoPhillips Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 Federal Com 105H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3208.70ft (Nabors 894)
Site:	ZIA HILLS 19 Federal Com 105H	MD Reference:	RKB @ 3208.70ft (Nabors 894)
Well:	ZIA HILLS 19 Federal Com 105H	North Reference:	Grid
Wellbore:	OH / 65856	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors 894)	Database:	EDT 15 Central Prod

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 Federal Com 105H				
Site Position:		Northing:	374,520.420 usft	Latitude:	32° 1' 41.497 N
From:	Map	Easting:	689,706.650 usft	Longitude:	103° 43' 16.261 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well	ZIA HILLS 19 Federal Com 105H					
Well Position	+N-S	0.00 ft	Northing:	374,520.420 usft	Latitude:	32° 1' 41.497 N
	+E-W	0.00 ft	Easting:	689,706.650 usft	Longitude:	103° 43' 16.261 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	3,178.20 ft

Wellbore	OH / 65856				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2018	2/18/2020	6.82	59.74	47,558.65375828

Design	Surveys (Nabors 894)				
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	181.83	

Survey Program	Date 4/27/2020			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
80.00	1,103.00	VES Gyro Surveys (OH / 65856)	GOOD GYRO	GOOD GYRO
1,103.00	21,910.00	Phoenix MWD Surveys (OH / 65856)	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)	
1,103.00	1.24	252.58	1,102.82	7.58	-14.06	-7.13	0.00	0.00	0.00	
Tie In										
1,314.00	1.00	266.50	1,313.78	6.78	-18.08	-6.20	0.17	-0.11	6.60	
First Phoenix MWD Survey										
1,405.00	1.23	272.60	1,404.76	6.78	-19.84	-6.14	0.28	0.25	6.70	
1,496.00	1.37	282.44	1,495.73	7.06	-21.88	-6.36	0.29	0.15	10.81	
1,586.00	0.30	275.92	1,585.72	7.31	-23.17	-6.57	1.19	-1.19	-7.24	
1,677.00	1.06	113.27	1,676.72	7.01	-22.63	-6.28	1.48	0.84	-176.74	
1,767.00	1.08	110.54	1,766.70	6.38	-21.07	-5.70	0.06	0.02	-3.03	

ConocoPhillips

Survey Report

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Site:	ZIA HILLS 19 Federal Com 105H	MD Reference:	RKB @ 3208.70ft (Nabors 894)
Well:	ZIA HILLS 19 Federal Com 105H	North Reference:	Grid
Wellbore:	OH / 65856	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors 894)	Database:	EDT 15 Central Prod

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)
1,861.00	1.18	115.24	1,860.69	5.66	-19.37	-5.04	0.14	0.11	5.00
1,955.00	1.35	132.88	1,954.66	4.49	-17.68	-3.92	0.45	0.18	18.77
2,049.00	1.42	144.73	2,048.64	2.79	-16.20	-2.27	0.31	0.07	12.61
2,143.00	0.69	358.04	2,142.63	2.40	-15.53	-1.90	2.16	-0.78	-154.99
2,238.00	0.74	340.13	2,237.62	3.55	-15.75	-3.05	0.25	0.05	-19.91
2,332.00	0.67	293.02	2,331.61	4.34	-16.46	-3.81	0.60	-0.07	-50.12
2,426.00	0.70	265.54	2,425.61	4.51	-17.54	-3.94	0.35	0.03	-29.23
2,520.00	0.75	246.68	2,519.60	4.22	-18.68	-3.62	0.26	0.05	-20.06
2,614.00	0.61	215.70	2,613.59	3.57	-19.54	-2.94	0.41	-0.15	-32.96
2,707.00	0.62	200.75	2,706.59	2.70	-20.00	-2.06	0.17	0.01	-16.08
2,802.00	0.92	109.75	2,801.58	1.96	-19.47	-1.33	1.18	0.32	-95.79
2,895.00	1.40	93.67	2,894.56	1.63	-17.63	-1.07	0.62	0.52	-17.29
2,990.00	1.35	97.04	2,989.54	1.42	-15.36	-0.93	0.10	-0.05	3.55
3,084.00	1.21	88.80	3,083.51	1.31	-13.27	-0.88	0.25	-0.15	-8.77
3,176.00	1.32	84.00	3,175.49	1.44	-11.25	-1.08	0.17	0.12	-5.22
3,270.00	1.41	74.38	3,269.46	1.86	-9.06	-1.57	0.26	0.10	-10.23
3,365.00	0.12	155.64	3,364.45	2.09	-7.89	-1.83	1.47	-1.36	85.54
3,459.00	1.24	252.91	3,458.45	1.70	-8.82	-1.41	1.34	1.19	103.48
3,552.00	0.51	229.34	3,551.44	1.13	-10.10	-0.81	0.86	-0.78	-25.34
3,646.00	0.65	148.36	3,645.43	0.41	-10.12	-0.09	0.83	0.15	-88.28
3,740.00	0.72	238.43	3,739.43	-0.34	-10.33	0.67	1.05	0.07	97.95
3,834.00	1.59	254.44	3,833.41	-1.00	-12.09	1.38	0.98	0.93	17.03
3,928.00	1.19	228.46	3,927.38	-1.99	-14.07	2.44	0.78	-0.43	-27.64
4,022.00	1.03	270.67	4,021.36	-2.63	-15.65	3.13	0.87	-0.17	44.90
4,116.00	1.16	258.70	4,115.35	-2.81	-17.43	3.36	0.28	0.14	-12.73
4,211.00	1.79	281.81	4,210.32	-2.69	-19.82	3.32	0.90	0.66	24.33
4,305.00	3.55	295.34	4,304.21	-1.15	-23.89	1.91	1.98	1.87	14.39
4,400.00	5.56	309.86	4,398.91	3.06	-30.08	-2.10	2.42	2.12	15.28
4,493.00	6.47	314.70	4,491.40	9.64	-37.26	-8.44	1.12	0.98	5.20
4,587.00	6.36	313.98	4,584.81	16.98	-44.77	-15.54	0.14	-0.12	-0.77
4,681.00	6.62	317.27	4,678.21	24.57	-52.20	-22.89	0.48	0.28	3.50
4,776.00	6.72	321.16	4,772.56	32.92	-59.40	-31.01	0.49	0.11	4.09
4,870.00	6.75	321.90	4,865.92	41.55	-66.26	-39.42	0.10	0.03	0.79
4,965.00	6.78	322.54	4,960.25	50.40	-73.11	-48.04	0.09	0.03	0.67
5,059.00	6.63	322.77	5,053.61	59.12	-79.77	-56.55	0.16	-0.16	0.24
5,153.00	6.90	318.06	5,146.96	67.64	-86.83	-64.84	0.66	0.29	-5.01
5,247.00	7.03	315.20	5,240.26	75.93	-94.65	-72.87	0.39	0.14	-3.04
5,342.00	7.18	313.61	5,334.53	84.15	-103.05	-80.81	0.26	0.16	-1.67
5,436.00	7.93	311.51	5,427.72	92.50	-112.16	-88.87	0.85	0.80	-2.23
5,530.00	8.77	313.74	5,520.72	101.75	-122.19	-97.79	0.96	0.89	2.37
5,625.00	9.29	316.88	5,614.54	112.35	-132.67	-108.06	0.75	0.55	3.31
5,719.00	9.27	316.56	5,707.31	123.39	-143.06	-118.76	0.06	-0.02	-0.34
5,814.00	9.15	316.94	5,801.09	134.46	-153.48	-129.49	0.14	-0.13	0.40

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Wellbore:	OH / 65856	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors 894)	Database:	EDT 15 Central Prod

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)
5,908.00	8.82	317.10	5,893.94	145.20	-163.48	-139.91	0.35	-0.35	0.17
6,002.00	8.69	317.37	5,986.84	155.71	-173.20	-150.10	0.15	-0.14	0.29
6,096.00	8.23	316.98	6,079.82	165.85	-182.60	-159.93	0.49	-0.49	-0.41
6,189.00	7.84	317.33	6,171.90	175.38	-191.44	-169.18	0.42	-0.42	0.38
6,283.00	7.45	315.20	6,265.07	184.42	-200.08	-177.94	0.51	-0.41	-2.27
6,377.00	8.03	310.56	6,358.21	193.01	-209.36	-186.23	0.91	0.62	-4.94
6,471.00	8.41	309.04	6,451.25	201.61	-219.69	-194.49	0.47	0.40	-1.62
6,565.00	7.98	310.58	6,544.29	210.19	-229.98	-202.73	0.51	-0.46	1.64
6,660.00	8.49	314.68	6,638.31	219.41	-239.98	-211.63	0.82	0.54	4.32
6,754.00	9.72	317.86	6,731.12	230.17	-250.24	-222.06	1.41	1.31	3.38
6,848.00	9.32	316.97	6,823.83	241.62	-260.75	-233.17	0.45	-0.43	-0.95
6,942.00	8.52	314.47	6,916.69	252.06	-270.92	-243.28	0.95	-0.85	-2.66
7,036.00	8.01	314.86	7,009.71	261.56	-280.53	-252.47	0.55	-0.54	0.41
7,130.00	8.18	314.48	7,102.78	270.86	-289.94	-261.47	0.19	0.18	-0.40
7,224.00	8.20	315.58	7,195.82	280.34	-299.41	-270.63	0.17	0.02	1.17
7,317.00	7.55	312.68	7,287.94	289.22	-308.54	-279.21	0.82	-0.70	-3.12
7,411.00	7.11	308.83	7,381.17	297.05	-317.61	-286.75	0.70	-0.47	-4.10
7,505.00	6.68	307.69	7,474.49	304.04	-326.47	-293.46	0.48	-0.46	-1.21
7,598.00	5.94	312.33	7,566.93	310.59	-334.31	-299.75	0.97	-0.80	4.99
7,693.00	5.54	312.37	7,661.45	316.99	-341.33	-305.93	0.42	-0.42	0.04
7,786.00	3.90	311.42	7,754.13	322.11	-347.02	-310.86	1.77	-1.76	-1.02
7,878.00	3.26	308.79	7,845.95	325.81	-351.40	-314.43	0.72	-0.70	-2.86
7,972.00	2.29	310.45	7,939.84	328.71	-354.92	-317.21	1.04	-1.03	1.77
8,066.00	1.71	319.81	8,033.79	331.00	-357.25	-319.42	0.71	-0.62	9.96
8,161.00	1.51	317.85	8,128.75	333.01	-359.01	-321.37	0.22	-0.21	-2.06
8,255.00	1.48	318.06	8,222.72	334.83	-360.65	-323.14	0.03	-0.03	0.22
8,349.00	1.34	323.26	8,316.69	336.61	-362.12	-324.88	0.20	-0.15	5.53
8,442.00	1.14	315.58	8,409.67	338.14	-363.41	-326.37	0.28	-0.22	-8.26
8,536.00	1.01	309.87	8,503.65	339.34	-364.70	-327.52	0.18	-0.14	-6.07
8,630.00	0.39	25.43	8,597.64	340.16	-365.20	-328.33	1.05	-0.66	80.38
8,725.00	0.47	88.99	8,692.64	340.46	-364.67	-328.64	0.48	0.08	66.91
8,819.00	0.34	319.08	8,786.64	340.68	-364.47	-328.87	0.78	-0.14	-138.20
8,913.00	0.65	303.05	8,880.64	341.18	-365.10	-329.35	0.36	0.33	-17.05
9,007.00	0.82	276.56	8,974.63	341.55	-366.22	-329.68	0.40	0.18	-28.18
9,101.00	0.49	266.47	9,068.62	341.60	-367.29	-329.70	0.37	-0.35	-10.73
9,195.00	0.65	101.95	9,162.62	341.47	-367.17	-329.57	1.20	0.17	-175.02
9,289.00	1.38	108.68	9,256.61	341.03	-365.56	-329.18	0.78	0.78	5.03
9,383.00	0.90	109.37	9,350.59	340.46	-363.78	-328.67	0.51	-0.51	2.86
9,477.00	0.67	109.72	9,444.58	340.03	-362.57	-328.28	0.24	-0.24	0.37
9,572.00	0.51	123.91	9,539.57	339.61	-361.69	-327.88	0.23	-0.17	14.94
9,667.00	0.47	149.16	9,634.57	339.04	-361.14	-327.33	0.23	-0.04	26.58
9,761.00	0.48	137.74	9,728.57	338.41	-360.68	-326.72	0.10	0.01	-12.15

ConocoPhillips

Survey Report

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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)
9,855.00	0.65	156.37	9,822.56	337.63	-380.20	-325.96	0.26	0.18	19.82
9,949.00	0.57	139.16	9,916.56	336.79	-359.68	-325.13	0.21	-0.09	-18.31
10,044.00	0.45	108.54	10,011.55	336.32	-359.02	-324.68	0.31	-0.13	-32.23
10,139.00	0.76	59.53	10,106.55	338.52	-358.12	-324.91	0.61	0.33	-51.59
10,234.00	0.72	79.23	10,201.54	336.95	-356.99	-325.38	0.27	-0.04	20.74
10,328.00	0.36	120.44	10,295.54	336.91	-356.16	-325.36	0.54	-0.38	43.84
10,420.00	0.55	150.32	10,387.53	336.38	-355.69	-324.85	0.32	0.21	32.48
10,514.00	0.71	176.16	10,481.53	335.41	-355.43	-323.88	0.34	0.17	27.49
10,609.00	1.11	166.55	10,576.52	333.92	-355.17	-322.41	0.45	0.42	-10.12
10,703.00	1.53	166.53	10,670.49	331.82	-354.67	-320.32	0.45	0.45	-0.02
10,797.00	1.40	167.66	10,764.46	329.48	-354.13	-318.00	0.14	-0.14	1.20
10,905.00	1.67	175.26	10,872.42	326.62	-353.72	-315.16	0.31	0.25	7.04
11,000.00	2.95	180.68	10,967.34	322.79	-353.63	-311.34	1.37	1.35	5.71
11,047.00	4.86	186.02	11,014.23	319.60	-353.86	-308.14	4.13	4.06	11.36
11,094.00	7.84	186.02	11,080.94	314.44	-354.40	-302.96	6.34	6.34	0.00
11,141.00	11.86	186.46	11,107.24	306.45	-355.28	-294.94	8.55	8.55	0.94
11,188.00	16.65	186.99	11,152.78	294.98	-356.65	-283.42	10.20	10.19	1.13
11,235.00	22.02	186.75	11,197.11	279.51	-358.50	-267.92	11.43	11.43	-0.51
11,282.00	26.61	187.37	11,239.93	260.31	-360.89	-248.66	9.78	9.77	1.32
11,329.00	31.16	187.29	11,281.07	237.80	-363.78	-226.06	9.68	9.68	-0.17
11,377.00	34.92	186.57	11,321.30	211.83	-366.93	-200.00	7.88	7.83	-1.50
11,424.00	38.16	186.71	11,359.06	184.03	-370.17	-172.12	6.90	6.89	0.30
11,471.00	41.24	186.17	11,395.21	154.20	-373.53	-142.20	6.59	6.55	-1.15
11,518.00	44.66	185.69	11,429.61	122.36	-376.84	-110.26	7.31	7.28	-1.02
11,565.00	47.93	185.82	11,462.08	88.56	-380.24	-76.37	6.96	6.96	0.28
11,628.00	52.42	186.12	11,502.42	40.45	-385.28	-28.12	7.14	7.13	0.48
11,706.00	57.85	185.89	11,546.99	-23.18	-391.97	35.68	6.97	6.96	-0.29
11,737.00	61.17	185.08	11,562.72	-49.76	-394.52	62.34	10.94	10.71	-2.61
11,767.00	64.62	184.27	11,576.38	-76.38	-398.69	89.01	11.75	11.50	-2.70
11,814.00	70.10	182.95	11,594.47	-119.65	-399.41	132.35	11.94	11.66	-2.81
11,858.00	71.92	182.76	11,608.79	-161.20	-401.48	173.94	4.16	4.14	-0.43
11,905.00	72.80	182.92	11,623.03	-205.94	-403.70	218.73	1.90	1.87	0.34
11,948.00	75.01	183.17	11,634.95	-247.19	-405.90	260.03	5.17	5.14	0.58
11,995.00	75.07	183.16	11,647.08	-292.53	-408.40	305.42	0.13	0.13	-0.02
12,039.00	74.80	183.52	11,658.52	-334.95	-410.88	347.90	1.00	-0.61	0.82
12,086.00	79.17	183.83	11,669.10	-380.63	-413.81	393.85	9.32	9.30	0.66
12,129.00	84.03	183.88	11,675.38	-423.06	-416.87	436.15	11.30	11.30	0.12
12,176.00	86.12	183.60	11,679.42	-469.79	-419.73	482.85	4.49	4.45	-0.60
12,222.00	87.42	182.32	11,682.01	-515.65	-422.10	528.87	3.98	2.83	-2.78
12,269.00	88.13	181.72	11,683.83	-562.59	-423.75	575.83	1.98	1.51	-1.28
12,316.00	89.64	180.15	11,684.75	-609.57	-424.52	622.81	4.63	3.21	-3.34
12,410.00	90.82	179.27	11,684.37	-703.56	-424.04	716.75	1.57	1.26	-0.94
12,503.00	90.79	178.52	11,683.06	-796.54	-422.25	809.61	0.81	-0.03	-0.81

ConocoPhillips Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 Federal Com 105H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3208.70ft (Nabors 894)
Site:	ZIA HILLS 19 Federal Com 105H	MD Reference:	RKB @ 3208.70ft (Nabors 894)
Well:	ZIA HILLS 19 Federal Com 105H	North Reference:	Grid
Wellbore:	OH / 65856	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors 894)	Database:	EDT 15 Central Prod

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)
12,597.00	91.48	179.41	11,681.20	-890.50	-420.55	903.48	1.20	0.73	0.95
12,691.00	89.72	179.37	11,680.22	-984.49	-419.55	997.38	1.87	-1.87	-0.04
12,785.00	90.32	179.25	11,680.18	-1,078.48	-418.42	1,091.29	0.65	0.64	-0.13
12,879.00	89.98	180.24	11,679.94	-1,172.48	-418.00	1,185.23	1.11	-0.36	1.05
12,974.00	90.67	179.98	11,679.40	-1,267.47	-418.19	1,280.18	0.78	0.73	-0.27
13,069.00	91.22	180.54	11,677.83	-1,362.46	-418.62	1,375.13	0.83	0.58	0.59
13,163.00	90.75	180.37	11,676.22	-1,456.44	-419.36	1,469.09	0.53	-0.50	-0.18
13,257.00	90.35	181.00	11,675.31	-1,550.43	-420.49	1,563.07	0.79	-0.43	0.67
13,365.00	90.70	179.13	11,674.32	-1,658.42	-420.61	1,671.01	1.76	0.32	-1.73
13,460.00	90.36	178.43	11,673.45	-1,753.39	-418.59	1,765.87	0.82	-0.36	-0.74
13,554.00	90.28	179.67	11,672.92	-1,847.38	-417.03	1,859.75	1.32	-0.09	1.32
13,648.00	90.64	179.23	11,672.17	-1,941.37	-416.13	1,953.67	0.60	0.38	-0.47
13,741.00	89.92	180.83	11,671.71	-2,034.37	-416.17	2,046.62	1.89	-0.77	1.72
13,835.00	91.47	179.07	11,670.57	-2,128.35	-416.09	2,140.55	2.49	1.65	-1.87
13,930.00	90.38	178.98	11,669.04	-2,223.32	-414.48	2,235.43	1.15	-1.15	-0.09
14,024.00	90.91	179.35	11,667.98	-2,317.31	-413.11	2,329.32	0.69	0.56	0.39
14,118.00	90.81	178.80	11,666.57	-2,411.29	-411.59	2,423.20	0.59	-0.11	-0.59
14,212.00	90.79	179.40	11,665.26	-2,505.26	-410.11	2,517.08	0.64	-0.02	0.64
14,305.00	90.50	178.41	11,664.21	-2,598.24	-408.34	2,609.95	1.11	-0.31	-1.06
14,399.00	89.50	180.13	11,664.21	-2,692.23	-407.14	2,703.86	2.12	-1.06	1.83
14,493.00	90.52	180.48	11,664.19	-2,786.22	-407.64	2,797.82	1.15	1.09	0.37
14,586.00	90.21	178.58	11,663.60	-2,879.22	-406.88	2,890.74	2.07	-0.33	-2.04
14,679.00	90.48	177.74	11,663.04	-2,972.16	-403.89	2,983.55	0.95	0.29	-0.90
14,774.00	90.81	176.89	11,661.97	-3,067.05	-399.44	3,078.24	0.96	0.35	-0.89
14,868.00	90.44	178.08	11,660.95	-3,160.96	-395.32	3,171.97	1.33	-0.39	1.27
14,963.00	90.50	178.11	11,660.17	-3,255.90	-392.16	3,266.76	0.07	0.06	0.03
15,057.00	90.50	178.94	11,659.35	-3,349.86	-389.74	3,360.60	0.88	0.00	0.88
15,245.00	90.48	178.69	11,657.74	-3,537.82	-385.85	3,548.33	0.13	-0.01	-0.13
15,339.00	90.73	178.33	11,656.75	-3,631.78	-383.41	3,642.17	0.47	0.27	-0.38
15,433.00	89.48	177.98	11,656.57	-3,725.73	-380.38	3,735.98	1.38	-1.33	-0.37
15,528.00	90.59	180.55	11,656.52	-3,820.71	-379.16	3,830.87	2.95	1.17	2.71
15,622.00	89.98	181.31	11,656.05	-3,914.70	-380.69	3,924.86	1.04	-0.65	0.81
15,810.00	90.39	180.97	11,655.44	-4,102.66	-384.43	4,112.84	0.28	0.22	-0.18
15,905.00	90.16	180.63	11,654.98	-4,197.65	-385.75	4,207.83	0.43	-0.24	-0.36
16,093.00	90.05	180.92	11,654.64	-4,385.63	-388.30	4,395.79	0.16	-0.06	0.15
16,187.00	90.08	181.52	11,654.53	-4,479.61	-390.30	4,489.79	0.64	0.03	0.64
16,281.00	91.88	183.21	11,652.93	-4,573.51	-394.18	4,583.76	2.63	1.91	1.80
16,374.00	91.48	182.26	11,650.20	-4,666.36	-398.61	4,676.71	1.11	-0.43	-1.02
16,468.00	90.99	181.64	11,648.17	-4,760.28	-401.81	4,770.69	0.84	-0.52	-0.66
16,563.00	91.01	181.70	11,646.52	-4,855.23	-404.58	4,865.67	0.07	0.02	0.06
16,658.00	91.08	182.17	11,644.78	-4,950.16	-407.78	4,960.66	0.50	0.07	0.49
16,751.00	90.50	181.26	11,643.50	-5,043.11	-410.57	5,053.64	1.16	-0.62	-0.98

ConocoPhillips

Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 Federal Com 105H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3208.70ft (Nabors 894)
Site:	ZIA HILLS 19 Federal Com 105H	MD Reference:	RKB @ 3208.70ft (Nabors 894)
Well:	ZIA HILLS 19 Federal Com 105H	North Reference:	Grid
Wellbore:	OH / 65856	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors 894)	Database:	EDT 15 Central Prod

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)	
16,845.00	89.88	180.51	11,643.19	-5,137.09	-412.02	5,147.63	1.04	-0.66	-0.80	
16,940.00	92.13	181.97	11,641.52	-5,232.05	-414.07	5,242.60	2.82	2.37	1.54	
17,034.00	91.42	181.37	11,638.61	-5,325.96	-416.81	5,336.56	0.99	-0.76	-0.64	
17,128.00	91.81	181.36	11,635.96	-5,419.90	-419.05	5,430.51	0.42	0.41	-0.01	
17,222.00	90.88	180.55	11,633.75	-5,513.86	-420.62	5,524.48	1.31	-0.99	-0.86	
17,317.00	89.55	179.99	11,633.40	-5,608.85	-421.06	5,619.44	1.52	-1.40	-0.59	
17,411.00	89.96	180.07	11,633.80	-5,702.85	-421.11	5,713.39	0.44	0.44	0.09	
17,505.00	90.07	180.38	11,633.78	-5,796.85	-421.48	5,807.35	0.35	0.12	0.33	
17,545.00	90.62	180.60	11,633.53	-5,836.85	-421.82	5,847.34	1.48	1.38	0.55	
17,598.00	90.98	180.38	11,632.79	-5,889.84	-422.28	5,900.32	0.80	0.68	-0.42	
17,691.00	90.62	179.24	11,631.50	-5,982.83	-421.97	5,993.25	1.29	-0.39	-1.23	
17,785.00	89.39	177.26	11,631.49	-6,076.78	-419.10	6,087.06	2.48	-1.31	-2.11	
17,879.00	91.13	176.57	11,631.06	-6,170.64	-414.04	6,180.71	1.99	1.85	-0.73	
17,974.00	92.22	176.42	11,628.28	-6,265.42	-408.23	6,275.26	1.16	1.15	-0.16	
18,067.00	93.02	176.10	11,624.03	-6,358.12	-402.17	6,367.72	0.93	0.86	-0.34	
18,161.00	93.26	175.88	11,618.88	-6,451.75	-395.61	6,461.09	0.35	0.26	-0.23	
18,261.00	90.59	177.39	11,615.53	-6,551.51	-389.75	6,560.62	3.07	-2.67	1.51	
18,355.00	88.61	179.45	11,616.18	-6,645.46	-387.15	6,654.44	3.04	-2.11	2.19	
18,450.00	87.87	180.30	11,619.10	-6,740.42	-386.95	6,749.34	1.19	-0.78	0.89	
18,543.00	87.95	179.52	11,622.49	-6,833.35	-386.80	6,842.22	0.84	0.09	-0.84	
18,637.00	89.05	179.07	11,624.95	-6,927.31	-385.65	6,936.09	1.26	1.17	-0.48	
18,826.00	89.52	179.82	11,627.31	-7,116.29	-383.81	7,124.91	0.47	0.25	0.40	
18,921.00	91.01	178.44	11,626.87	-7,211.27	-382.37	7,219.80	2.14	1.57	-1.45	
19,014.00	88.93	178.08	11,626.92	-7,304.22	-379.55	7,312.62	2.27	-2.24	-0.39	
19,108.00	90.56	180.85	11,627.34	-7,398.20	-378.67	7,406.52	3.42	1.73	2.95	
19,202.00	88.70	179.47	11,627.95	-7,492.20	-378.93	7,500.48	2.46	-1.98	-1.47	
19,388.00	87.56	179.73	11,634.05	-7,679.09	-377.63	7,687.23	0.63	-0.61	0.14	
19,483.00	87.58	179.18	11,638.03	-7,773.00	-376.74	7,781.07	0.58	0.02	-0.59	
19,578.00	89.78	178.25	11,640.22	-7,867.94	-374.61	7,875.89	2.51	2.32	-0.98	
19,672.00	91.45	177.72	11,639.21	-7,961.88	-371.30	7,969.67	1.86	1.78	-0.56	
19,766.00	91.24	178.64	11,637.01	-8,055.80	-368.32	8,063.46	1.00	-0.22	0.98	
19,860.00	91.90	179.32	11,634.43	-8,149.75	-366.64	8,157.30	1.01	0.70	0.72	
20,048.00	89.72	178.35	11,631.77	-8,337.57	-359.54	8,344.79	1.96	-1.16	-1.58	
20,142.00	89.98	176.62	11,632.02	-8,431.39	-353.78	8,438.39	0.40	0.28	0.29	
20,236.00	90.33	178.09	11,631.76	-8,525.28	-349.44	8,532.10	1.61	0.37	1.56	
20,330.00	91.13	174.33	11,630.57	-8,619.05	-343.23	8,625.62	4.09	0.85	-4.00	
20,424.00	90.38	174.52	11,629.33	-8,712.80	-334.10	8,718.83	0.82	-0.80	0.20	
20,516.00	91.36	176.84	11,627.93	-8,804.32	-327.17	8,810.28	2.74	1.07	2.52	
20,610.00	91.57	178.06	11,625.53	-8,898.20	-322.99	8,903.97	1.32	0.22	1.30	
20,704.00	88.49	177.57	11,625.48	-8,992.12	-319.41	8,997.73	3.32	-3.28	-0.52	
20,799.00	91.53	180.83	11,625.46	-9,087.08	-318.08	9,092.61	4.69	3.20	3.43	
20,893.00	93.53	182.74	11,621.31	-9,180.94	-321.00	9,186.50	2.94	2.13	2.03	
20,987.00	91.19	181.92	11,617.44	-9,274.77	-324.82	9,280.41	2.64	-2.49	-0.87	

ConocoPhillips

Survey Report

Company:	ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference:	Well ZIA HILLS 19 Federal Com 105H
Project:	Planning - NM East State Zone - 3001	TVD Reference:	RKB @ 3208.70ft (Nabors 894)
Site:	ZIA HILLS 19 Federal Com 105H	MD Reference:	RKB @ 3208.70ft (Nabors 894)
Well:	ZIA HILLS 19 Federal Com 105H	North Reference:	Grid
Wellbore:	OH / 65856	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors 894)	Database:	EDT 15 Central Prod

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)
21,081.00	88.99	181.11	11,617.29	-9,368.73	-327.31	9,374.41	2.49	-2.34	-0.86
21,175.00	90.21	182.92	11,617.95	-9,462.67	-330.61	9,468.40	2.32	1.30	1.93
21,269.00	93.65	183.55	11,614.78	-9,556.45	-335.91	9,562.30	3.72	3.66	0.67
21,363.00	95.58	183.27	11,607.22	-9,649.97	-341.48	9,655.96	2.07	2.05	-0.30
21,457.00	94.25	183.51	11,599.17	-9,743.46	-347.02	9,749.57	1.44	-1.41	0.26
21,551.00	93.60	184.17	11,592.73	-9,837.03	-353.30	9,843.29	0.98	-0.69	0.70
21,644.00	91.93	182.41	11,588.25	-9,929.76	-358.63	9,936.15	2.61	-1.80	-1.89
21,737.00	90.64	181.72	11,586.16	-10,022.67	-361.98	10,029.12	1.57	-1.39	-0.74
21,831.00	89.21	182.07	11,586.28	-10,116.62	-365.09	10,123.12	1.57	-1.52	0.37
21,850.00	88.81	182.13	11,586.61	-10,135.60	-365.79	10,142.12	2.13	-2.11	0.32
Final Phoenix MWD Survey									
21,910.00	88.81	182.13	11,587.86	-10,195.55	-368.02	10,202.10	0.00	0.00	0.00
Projection to TD									

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									
VT - Zia Hills 19 Fed Co	0.00	0.01	7,949.00	-51.37	-429.49	374,469.050	689,277.180	32° 1' 41.012 N	103° 43' 21.253 W
- survey misses target center by 387.43ft at 7973.74ft MD (7941.59 TVD, 328.75 N, -354.97 E)									
- Point									
ZIA HILLS 19 105H_WP	0.00	0.01	10,885.6	-51.37	-429.49	374,469.050	689,277.180	32° 1' 41.012 N	103° 43' 21.253 W
1									
- survey misses target center by 384.92ft at 10933.33ft MD (10900.74 TVD, 325.70 N, -353.66 E)									
- Point									
BHL - Zia Hills 19 Fed C	0.00	0.01	11,681.00	-10,178.35	-326.17	364,342.600	689,380.500	32° 0' 0.794 N	103° 43' 20.718 W
- survey misses target center by 102.18ft at 21893.19ft MD (11587.51 TVD, -10178.76 N, -367.39 E)									
- Point									
LTP - Zia Hills 19 Fed C	0.00	0.00	11,681.00	-9,898.41	-329.25	364,622.520	689,377.420	32° 0' 3.564 N	103° 43' 20.735 W
- survey misses target center by 95.54ft at 21606.58ft MD (11589.73 TVD, -9892.41 N, -356.83 E)									
- Point									
FTP - Zia Hills 19 Fed C	0.00	0.00	11,683.00	-374.03	-426.75	374,146.410	689,279.920	32° 1' 37.819 N	103° 43' 21.243 W
- survey misses target center by 19.89ft at 12083.52ft MD (11668.63 TVD, -378.20 N, -413.65 E)									
- Point									
LTP v1 - Zia Hills 19 Fed	0.00	0.00	11,683.00	-10,128.99	-326.91	364,391.953	689,379.757	32° 0' 1.282 N	103° 43' 20.723 W
- survey misses target center by 103.98ft at 21843.63ft MD (11586.49 TVD, -10129.24 N, -365.55 E)									
- Point									
BHL v1 - Zia Hills 19 Fed	0.00	0.00	11,683.00	-10,218.34	-325.76	364,302.608	689,380.907	32° 0' 0.398 N	103° 43' 20.716 W
- survey misses target center by 106.57ft at 21910.00ft MD (11587.86 TVD, -10195.55 N, -368.02 E)									
- Point									
ZIA HILLS 19 105H_WP	0.00	0.01	11,685.59	-10,178.35	-326.17	364,342.600	689,380.500	32° 0' 0.794 N	103° 43' 20.718 W
- survey misses target center by 106.40ft at 21893.29ft MD (11587.51 TVD, -10178.85 N, -367.40 E)									
- Point									

ConocoPhillips

Survey Report

Company: ConocoPhillips MCBU - Permian-Panhandle Gold Data	Local Co-ordinate Reference: Well ZIA HILLS 19 Federal Com 105H
Project: Planning - NM East State Zone - 3001	TVD Reference: RKB @ 3208.70ft (Nabors 894)
Site: ZIA HILLS 19 Federal Com 105H	MD Reference: RKB @ 3208.70ft (Nabors 894)
Well: ZIA HILLS 19 Federal Com 105H	North Reference: Grid
Wellbore: OH / 65856	Survey Calculation Method: Minimum Curvature
Design: Surveys (Nabors 894)	Database: EDT 15 Central Prod

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
11,680.34	11,533.00	9 5/8"	9-5/8	12-1/4
21,577.00	11,591.21	5 1/2"	5-1/2	8-1/2

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,103.00	1,102.82	7.58	-14.06	Tie In
1,314.00	1,313.78	6.78	-18.08	First Phoenix MWD Survey
21,850.00	11,586.61	-10,135.60	-365.79	Final Phoenix MWD Survey
21,910.00	11,587.86	-10,195.55	-368.02	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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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 Brazos 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 API Number	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name ZIA HILLS 19 FEDERAL COM	⁶ Well Number 105H
⁷ OGRID No.	⁸ Operator Name ConocoPhillips Company	⁹ Elevation 3176.6'

"Surface Location

UL or lot no. 2	Section 19	Township 26S	Range 32E	Lot Ida	Feet from the 2627	North/South line NORTH	Feet from the 430	East/West line WEST	County LEA
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"Bottom Hole Location If Different From Surface

UL or lot no. 2	Section 31	Township 26S	Range 32E	Lot Ida	Feet from the 50	North/South line SOUTH	Feet from the 0	East/West line WEST	County LEA
¹⁰ Dedicated Acres 323.93	¹¹ Joint or Infill	¹² Consolidation Code	¹³ 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.

