



PHOENIX
TECHNOLOGY SERVICES

March 6, 2019

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

RECEIVED

MAR 18 2019

Dear District 2 - Artesia

DISTRICT II-ARTESIA O.C.D.

Attention: Regulatory Department

Re: Marathon Oil
Kyle 34 Federal #5H
Eddy County, New Mexico
API #30-015-43295
Job No. 60399

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	
Jack Miller	5H	536	14,291	6/14/17	7/1/17	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 #: 60399
Client: Marathon Oil
County & State: Eddy, New Mexico
Well: Kyle 34 Federal #5H
API No: 30-015-43295
Proposed Direction: 359.26

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
460.00	459.98	.69	192.10	2.08	-1.87	Gyro
Data Source Company:						Gyrodatta

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
14-Jun-17	536 ft	0.56°	161.65°

Last Survey Date	Last Survey Depth	INC	AZM
1-Jul-17	14,291 ft	89.77°	2.82°

Survey Instrument Type

Phoenix MWD

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
1-Jul-17	14,347 ft	89.77°	2.82°

CORRECTION INFORMATION

Magnetic Declination Used	7.33	degrees
Grid Convergence Used	0.14	degrees
Total Correction	7.19	degrees

Corrected to True/Grid North

Grid

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

Jack Miller

Signature

March 6, 2019

Date



PHOENIX
TECHNOLOGY SERVICES

Marathon Oil EF LLC

**Eddy County, NM (NAD83)
Kyle 34 Federal
#5H**

OH / Job #60399

Design: Surveys (Patterson 244)

Standard Survey Report

06 March, 2019



Marathon Oil
Corporation.

Company:	Marathon Oil EF LLC	Local Co-ordinate Reference:	Well #5H
Project:	Eddy County, NM (NAD83)	TVD Reference:	GL + KB @ 3021.50usft (Patterson 244)
Site:	Kyle 34 Federal	MD Reference:	GL + KB @ 3021.50usft (Patterson 244)
Well:	#5H	North Reference:	Grid
Wellbore:	OH / Job #60399	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 244)	Database:	USA Compass

Project	Eddy County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Kyle 34 Federal		
Site Position:		Northing:	424,643.00 usft
From:	Map	Easting:	622,917.10 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 10' 1.72920 N
		Longitude:	104° 4' 10.86310 W
		Grid Convergence:	0.14 °

Well	#5H		
Well Position	+N/-S	0.00 usft	Northing: 424,643.00 usft
	+E/-W	0.00 usft	Easting: 622,917.10 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 10' 1.72920 N
		Longitude:	104° 4' 10.86310 W
		Ground Level:	2,993.00 usft

Wellbore	OH / Job #60399		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/30/2017	7.25	59.98	48,095.40000000

Design	Surveys (Patterson 244)		
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Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.26

Survey Program		Date: 3/6/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
536.00	2,604.00	Phoenix MWD Surveys (IFR + MSA) (OH	MWD+IFR1+MS	OWSG Rev. 2 MWD + IFR1 + Multi-Station Corre	
2,736.00	14,347.00	Phoenix MWD Surveys (HDGM+MSA) (OI	MWD+HDGM+MS	OWSG Rev.2 MWD + HDGM + Multi-Station Con	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
460.00	0.69	192.10	459.98	2.08	-1.87	2.10	0.00	0.00	0.00	
536.00	0.56	161.65	535.97	1.28	-1.85	1.30	0.46	-0.17	-40.07	
First Phoenix MWD Survey										
598.00	0.63	188.66	597.97	0.66	-1.80	0.68	0.46	0.11	43.56	
690.00	0.90	187.91	689.96	-0.56	-1.98	-0.53	0.29	0.29	-0.82	
781.00	0.69	188.20	780.95	-1.81	-2.15	-1.78	0.23	-0.23	0.32	
873.00	1.03	209.82	872.94	-3.08	-2.64	-3.04	0.50	0.37	23.50	
965.00	0.89	228.16	964.93	-4.27	-3.59	-4.22	0.36	-0.15	19.93	
1,056.00	1.09	224.66	1,055.91	-5.36	-4.72	-5.30	0.23	0.22	-3.85	
1,147.00	1.30	254.52	1,146.90	-6.25	-6.33	-6.17	0.71	0.23	32.81	

Company:	Marathon Oil EF LLC	Local Co-ordinate Reference:	Well #5H
Project:	Eddy County, NM (NAD83)	TVD Reference:	GL + KB @ 3021.50usft (Patterson 244)
Site:	Kyle 34 Federal	MD Reference:	GL + KB @ 3021.50usft (Patterson 244)
Well:	#5H	North Reference:	Grid
Wellbore:	OH / Job #60399	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 244)	Database:	USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
1,239.00	2.51	264.58	1,238.84	-6.72	-9.34	-6.60	1.36	1.32	10.93
1,331.00	0.23	330.78	1,330.81	-6.75	-11.43	-6.60	2.64	-2.48	71.96
1,423.00	0.93	81.27	1,422.81	-6.47	-10.78	-6.33	1.12	0.76	120.10
1,515.00	0.96	84.72	1,514.80	-6.29	-9.28	-6.17	0.07	0.03	3.75
1,609.00	0.97	66.30	1,608.78	-5.90	-7.77	-5.79	0.33	0.01	-19.60
1,702.00	0.93	81.43	1,701.77	-5.47	-6.30	-5.38	0.27	-0.04	16.27
1,797.00	0.86	61.80	1,796.76	-5.01	-4.91	-4.95	0.33	-0.07	-20.66
1,891.00	1.10	87.69	1,890.75	-4.65	-3.39	-4.60	0.53	0.26	27.54
1,986.00	1.88	85.06	1,985.71	-4.47	-0.92	-4.46	0.82	0.82	-2.77
2,080.00	1.67	168.27	2,079.68	-5.68	0.89	-5.69	2.51	-0.22	88.52
2,174.00	2.36	190.41	2,173.62	-8.93	0.82	-8.94	1.09	0.73	23.55
2,269.00	1.80	110.01	2,268.58	-11.36	1.87	-11.39	2.86	-0.59	-84.63
2,364.00	3.19	101.78	2,363.49	-12.41	5.86	-12.49	1.51	1.46	-8.66
2,458.00	0.90	192.50	2,457.43	-13.67	8.26	-13.77	3.54	-2.44	96.51
2,552.00	1.37	228.71	2,551.42	-15.13	7.26	-15.22	0.89	0.50	38.52
2,604.00	1.27	224.04	2,603.40	-15.95	6.39	-16.04	0.28	-0.19	-8.98
2,736.00	1.70	218.81	2,735.36	-18.53	4.15	-18.58	0.34	0.33	-3.96
2,831.00	2.33	223.12	2,830.30	-21.04	1.94	-21.06	0.68	0.66	4.54
2,925.00	2.98	210.29	2,924.20	-24.54	-0.60	-24.53	0.93	0.69	-13.65
3,020.00	3.69	209.46	3,019.04	-29.34	-3.35	-29.29	0.75	0.75	-0.87
3,114.00	4.53	193.47	3,112.80	-35.58	-5.70	-35.51	1.50	0.89	-17.01
3,208.00	5.64	190.51	3,206.42	-43.73	-7.41	-43.63	1.21	1.18	-3.15
3,303.00	5.39	192.35	3,300.99	-52.68	-9.21	-52.56	0.32	-0.26	1.94
3,397.00	5.85	185.97	3,394.53	-61.76	-10.65	-61.62	0.82	0.49	-6.79
3,491.00	4.92	186.62	3,488.12	-70.53	-11.62	-70.37	0.99	-0.99	0.69
3,585.00	6.03	186.99	3,581.69	-79.43	-12.68	-79.26	1.18	1.18	0.39
3,680.00	5.74	188.66	3,676.19	-89.08	-14.00	-88.89	0.35	-0.31	1.76
3,775.00	5.68	187.33	3,770.72	-98.44	-15.32	-98.23	0.15	-0.06	-1.40
3,869.00	5.35	186.54	3,864.28	-107.41	-16.41	-107.19	0.36	-0.35	-0.84
3,964.00	5.06	185.54	3,958.89	-115.98	-17.32	-115.74	0.32	-0.31	-1.05
4,059.00	4.74	187.58	4,053.54	-124.04	-18.24	-123.79	0.38	-0.34	2.15
4,154.00	4.72	188.34	4,148.22	-131.80	-19.33	-131.54	0.07	-0.02	0.80
4,249.00	4.65	188.41	4,242.90	-139.47	-20.46	-139.20	0.07	-0.07	0.07
4,343.00	4.70	191.00	4,336.59	-147.02	-21.75	-146.73	0.23	0.05	2.76
4,437.00	3.92	193.07	4,430.32	-153.93	-23.21	-153.62	0.85	-0.83	2.20
4,531.00	2.99	184.36	4,524.15	-159.51	-24.12	-159.18	1.13	-0.99	-8.27
4,626.00	2.26	172.53	4,619.05	-163.84	-24.07	-163.51	0.95	-0.77	-12.45
4,720.00	0.99	144.56	4,713.01	-166.34	-23.36	-166.02	1.55	-1.35	-29.76
4,814.00	1.07	145.33	4,807.00	-167.72	-22.39	-167.42	0.09	0.09	0.82
4,908.00	0.57	103.46	4,900.99	-168.55	-21.43	-168.26	0.80	-0.53	-44.54
5,003.00	0.23	128.55	4,995.99	-168.78	-20.83	-168.50	0.39	-0.36	26.41
5,097.00	0.35	145.96	5,089.98	-169.13	-20.52	-168.85	0.16	0.13	18.52
5,192.00	0.25	150.77	5,184.98	-169.56	-20.25	-169.28	0.11	-0.11	5.06

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Site:	Kyle 34 Federal	MD Reference:	GL + KB @ 3021.50usft (Patterson 244)
Well:	#5H	North Reference:	Grid
Wellbore:	OH / Job #60399	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 244)	Database:	USA Compass

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,286.00	0.37	214.44	5,278.98	-169.99	-20.32	-169.71	0.36	0.13	67.73
5,381.00	0.41	226.61	5,373.98	-170.47	-20.75	-170.19	0.10	0.04	12.81
5,475.00	0.51	201.49	5,467.98	-171.09	-21.14	-170.80	0.24	0.11	-26.72
5,569.00	0.26	319.68	5,561.98	-171.32	-21.43	-171.03	0.72	-0.27	125.73
5,664.00	0.27	315.06	5,656.97	-171.00	-21.73	-170.70	0.02	0.01	-4.86
5,758.00	0.01	37.93	5,750.97	-170.83	-21.88	-170.53	0.29	-0.28	88.16
5,852.00	0.27	303.98	5,844.97	-170.70	-22.06	-170.40	0.29	0.28	-99.95
5,946.00	0.05	206.14	5,938.97	-170.62	-22.26	-170.31	0.30	-0.23	-104.09
6,041.00	0.46	165.60	6,033.97	-171.02	-22.19	-170.72	0.45	0.43	-42.67
6,135.00	0.35	187.32	6,127.97	-171.67	-22.13	-171.37	0.20	-0.12	23.11
6,230.00	0.69	197.08	6,222.97	-172.51	-22.33	-172.20	0.37	0.36	10.27
6,324.00	0.34	256.55	6,316.96	-173.11	-22.77	-172.80	0.63	-0.37	63.27
6,418.00	0.59	257.97	6,410.96	-173.28	-23.52	-172.96	0.27	0.27	1.51
6,512.00	0.70	295.14	6,504.95	-173.14	-24.51	-172.80	0.45	0.12	39.54
6,606.00	0.88	300.23	6,598.94	-172.53	-25.65	-172.18	0.21	0.19	5.41
6,700.00	1.61	321.62	6,692.92	-171.13	-27.10	-170.76	0.91	0.78	22.76
6,794.00	0.98	312.83	6,786.90	-169.55	-28.51	-169.16	0.70	-0.67	-9.35
6,888.00	0.88	301.77	6,880.89	-168.62	-29.71	-168.22	0.22	-0.11	-11.77
6,981.00	2.30	319.18	6,973.85	-166.83	-31.54	-166.41	1.60	1.53	18.72
7,076.00	2.54	334.66	7,068.76	-163.49	-33.68	-163.04	0.73	0.25	16.29
7,170.00	2.34	334.62	7,162.68	-159.87	-35.40	-159.40	0.21	-0.21	-0.04
7,264.00	0.79	279.11	7,256.64	-158.04	-36.86	-157.54	2.13	-1.65	-59.05
7,358.00	0.68	221.42	7,350.64	-158.35	-37.87	-157.85	0.76	-0.12	-61.37
7,453.00	1.13	228.04	7,445.63	-159.40	-38.94	-158.88	0.49	0.47	6.97
7,547.00	0.33	303.75	7,539.62	-159.87	-39.85	-159.34	1.17	-0.85	80.54
7,641.00	1.85	5.97	7,633.60	-158.21	-39.92	-157.68	1.83	1.62	66.19
7,735.00	2.80	32.83	7,727.53	-154.77	-38.52	-154.26	1.51	1.01	28.57
7,831.00	0.29	40.92	7,823.48	-152.62	-37.09	-152.12	2.62	-2.61	8.43
7,925.00	0.55	94.65	7,917.48	-152.47	-36.48	-151.99	0.47	0.28	57.16
8,019.00	1.32	76.21	8,011.47	-152.25	-34.98	-151.79	0.87	0.82	-19.62
8,114.00	1.70	117.06	8,106.44	-152.63	-32.66	-152.20	1.17	0.40	43.00
8,208.00	1.60	138.00	8,200.40	-154.24	-30.54	-153.83	0.65	-0.11	22.28
8,302.00	1.44	140.00	8,294.37	-156.12	-28.91	-155.73	0.18	-0.17	2.13
8,396.00	1.55	178.06	8,388.34	-158.30	-28.10	-157.92	1.04	0.12	40.49
8,490.00	1.18	192.31	8,482.31	-160.51	-28.27	-160.13	0.53	-0.39	15.16
8,585.00	1.79	173.42	8,577.28	-162.94	-28.31	-162.56	0.82	0.64	-19.88
8,679.00	2.23	177.76	8,671.22	-166.23	-28.07	-165.85	0.49	0.47	4.62
8,773.00	1.25	105.87	8,765.18	-168.34	-27.01	-167.97	2.33	-1.04	-76.48
8,868.00	2.67	104.81	8,860.13	-169.19	-23.87	-168.86	1.50	1.49	-1.12
8,962.00	1.75	120.90	8,954.06	-170.48	-20.52	-170.20	1.17	-0.98	17.12
8,974.00	1.75	126.69	8,966.05	-170.69	-20.22	-170.41	1.47	0.00	48.25
9,021.00	1.68	116.05	9,013.03	-171.42	-19.02	-171.16	0.69	-0.15	-22.64
9,068.00	2.87	85.23	9,059.99	-171.62	-17.23	-171.38	3.55	2.53	-65.57

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Well:	#5H	North Reference:	Grid
Wellbore:	OH / Job #80399	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 244)	Database:	USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
9,115.00	6.46	17.94	9,106.86	-169.01	-15.24	-168.80	12.70	7.64	-143.17
9,162.00	11.94	358.65	9,153.24	-161.62	-14.54	-161.42	13.22	11.66	-41.04
9,209.00	17.86	356.53	9,198.64	-149.56	-15.09	-149.35	12.65	12.60	-4.51
9,256.00	23.29	359.00	9,242.63	-133.06	-15.69	-132.85	11.70	11.55	5.26
9,303.00	28.25	0.26	9,284.94	-112.64	-15.81	-112.42	10.62	10.55	2.68
9,350.00	32.53	0.38	9,325.48	-88.87	-15.67	-88.65	9.11	9.11	0.26
9,397.00	37.69	358.36	9,363.91	-61.85	-16.00	-61.64	11.25	10.98	-4.30
9,445.00	43.14	358.15	9,400.45	-30.75	-16.95	-30.53	11.36	11.35	-0.44
9,492.00	46.65	358.34	9,433.73	2.40	-17.96	2.63	7.47	7.47	0.40
9,539.00	50.42	0.26	9,464.85	37.61	-18.38	37.84	8.58	8.02	4.09
9,586.00	54.43	0.60	9,493.51	74.85	-18.09	75.08	8.55	8.53	0.72
9,622.00	57.80	0.31	9,513.58	104.73	-17.86	104.95	9.38	9.36	-0.80
FTP									
9,633.00	58.83	0.23	9,519.35	114.09	-17.81	114.31	9.38	9.36	-0.76
9,680.00	61.94	359.93	9,542.58	154.94	-17.76	155.16	6.64	6.62	-0.64
9,727.00	64.50	359.43	9,563.75	196.90	-17.99	197.11	5.53	5.45	-1.06
9,808.00	68.35	359.20	9,596.14	271.12	-18.88	271.34	4.76	4.75	-0.28
9,855.00	71.77	359.59	9,612.17	315.29	-19.35	315.52	7.32	7.28	0.83
9,902.00	74.35	358.03	9,625.86	360.24	-20.29	360.47	6.34	5.49	-3.32
9,949.00	78.11	355.71	9,636.65	405.90	-22.79	406.16	11.21	10.13	-4.94
9,996.00	82.37	356.92	9,644.21	452.18	-25.77	452.48	7.39	6.94	2.57
10,043.00	86.94	356.80	9,648.59	498.89	-28.33	499.22	9.73	9.72	-0.26
10,090.00	89.72	357.20	9,649.96	545.80	-30.79	546.16	5.98	5.91	0.85
10,185.00	88.76	358.34	9,651.22	640.72	-34.49	641.11	1.57	-1.01	1.20
10,278.00	90.34	358.88	9,651.95	733.69	-36.74	734.10	1.80	1.70	0.58
10,373.00	90.16	2.28	9,651.53	828.67	-35.78	829.06	3.58	-0.19	3.58
10,467.00	89.83	2.66	9,651.54	922.58	-31.73	922.91	0.54	-0.35	0.40
10,560.00	91.71	3.07	9,650.29	1,015.45	-27.08	1,015.72	2.07	2.02	0.44
10,655.00	90.18	2.62	9,648.72	1,110.32	-22.37	1,110.52	1.68	-1.61	-0.47
10,749.00	88.72	359.69	9,649.63	1,204.28	-20.47	1,204.45	3.48	-1.55	-3.12
10,843.00	88.76	359.50	9,651.69	1,298.26	-21.14	1,298.42	0.21	0.04	-0.20
10,937.00	89.90	358.24	9,652.79	1,392.23	-22.99	1,392.41	1.81	1.21	-1.34
11,031.00	88.47	357.51	9,654.13	1,486.15	-26.48	1,486.37	1.71	-1.52	-0.78
11,125.00	89.74	358.85	9,655.60	1,580.09	-29.46	1,580.34	1.96	1.35	1.43
11,218.00	90.25	359.14	9,655.61	1,673.07	-31.09	1,673.34	0.63	0.55	0.31
11,312.00	90.82	358.75	9,654.73	1,767.05	-32.82	1,767.33	0.73	0.61	-0.41
11,406.00	89.71	0.16	9,654.29	1,861.04	-33.72	1,861.33	1.91	-1.18	1.50
11,500.00	89.12	359.21	9,655.25	1,955.04	-34.23	1,955.32	1.19	-0.63	-1.01
11,595.00	90.50	0.15	9,655.57	2,050.03	-34.76	2,050.31	1.76	1.45	0.99
11,689.00	91.84	0.90	9,653.65	2,144.01	-33.90	2,144.26	1.63	1.43	0.80
11,783.00	89.80	359.37	9,652.30	2,237.99	-33.68	2,238.24	2.71	-2.17	-1.63
11,877.00	90.57	359.02	9,652.00	2,331.98	-35.00	2,332.23	0.90	0.82	-0.37
11,972.00	90.50	356.71	9,651.11	2,426.90	-38.54	2,427.20	2.43	-0.07	-2.43
12,066.00	91.05	356.95	9,649.84	2,520.75	-43.74	2,521.10	0.64	0.59	0.26

Company:	Marathon Oil EF LLC	Local Co-ordinate Reference:	Well #5H
Project:	Eddy County, NM (NAD83)	TVD Reference:	GL + KB @ 3021.50usft (Patterson 244)
Site:	Kyle 34 Federal	MD Reference:	GL + KB @ 3021.50usft (Patterson 244)
Well:	#5H	North Reference:	Grid
Wellbore:	OH / Job #80399	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Patterson 244)	Database:	USA Compass

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,160.00	90.92	358.85	9,648.23	2,614.67	-47.18	2,615.06	2.03	-0.14	2.02
12,254.00	87.78	359.99	9,649.29	2,708.64	-48.14	2,709.04	3.55	-3.34	1.21
12,349.00	87.22	0.15	9,653.44	2,803.55	-48.02	2,803.94	0.61	-0.59	0.17
12,443.00	88.88	356.92	9,656.64	2,897.45	-50.42	2,897.86	3.86	1.77	-3.44
12,537.00	90.01	357.60	9,657.55	2,991.34	-54.92	2,991.80	1.40	1.20	0.72
12,631.00	89.81	359.01	9,657.69	3,085.29	-57.70	3,085.78	1.52	-0.21	1.50
12,726.00	89.88	358.69	9,657.95	3,180.27	-59.60	3,180.78	0.34	0.07	-0.34
12,821.00	90.29	358.28	9,657.81	3,275.24	-62.11	3,275.77	0.61	0.43	-0.43
12,915.00	89.59	357.82	9,657.91	3,369.18	-65.31	3,369.75	0.89	-0.74	-0.49
13,010.00	89.15	357.21	9,658.95	3,464.09	-69.43	3,464.70	0.79	-0.46	-0.64
13,103.00	90.52	0.41	9,659.22	3,557.05	-71.36	3,557.68	3.74	1.47	3.44
13,198.00	90.40	0.08	9,658.46	3,652.05	-70.96	3,652.66	0.37	-0.13	-0.35
13,293.00	90.70	0.32	9,657.55	3,747.04	-70.62	3,747.64	0.40	0.32	0.25
13,387.00	90.22	359.66	9,656.79	3,841.04	-70.64	3,841.63	0.87	-0.51	-0.70
13,481.00	89.93	0.00	9,656.67	3,935.04	-70.92	3,935.63	0.48	-0.31	0.36
13,576.00	89.41	358.86	9,657.22	4,030.03	-71.86	4,030.62	1.32	-0.55	-1.20
13,670.00	89.97	356.54	9,657.72	4,123.95	-75.64	4,124.58	2.54	0.60	-2.47
13,765.00	89.36	356.39	9,658.28	4,218.76	-81.49	4,219.47	0.66	-0.64	-0.16
13,859.00	89.06	354.70	9,659.58	4,312.47	-88.79	4,313.26	1.83	-0.32	-1.80
13,953.00	88.85	353.87	9,661.29	4,405.98	-98.15	4,406.89	0.91	-0.22	-0.88
14,047.00	91.32	357.70	9,661.15	4,499.71	-105.06	4,500.69	4.85	2.63	4.07
14,142.00	91.57	2.60	9,658.75	4,594.65	-104.81	4,595.62	5.16	0.26	5.16
14,236.00	91.24	4.19	9,656.45	4,688.45	-99.25	4,689.34	1.73	-0.35	1.69
14,291.00	89.77	2.82	9,655.96	4,743.34	-95.89	4,744.19	3.65	-2.67	-2.49
Final Phoenix MWD Survey									
14,347.00	89.77	2.82	9,656.19	4,799.27	-93.13	4,800.08	0.00	0.00	0.00
Projection to TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
536.00	535.97	1.28	-1.85	First Phoenix MWD Survey
9,622.00	9,513.58	104.73	-17.86	FTP
14,291.00	9,655.96	4,743.34	-95.89	Final Phoenix MWD Survey
14,347.00	9,656.19	4,799.27	-93.13	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 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 KYLE 34 FEDERAL		⁶ Well Number 5H
⁷ OGRID No. 160825	⁸ Operator Name B.C. OPERATING, INC.		⁹ Elevation 2994

" Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	34	T24S	R28E		225	SOUTH	990	EAST	EDDY

" Bottom Hole Location If Different From Surface

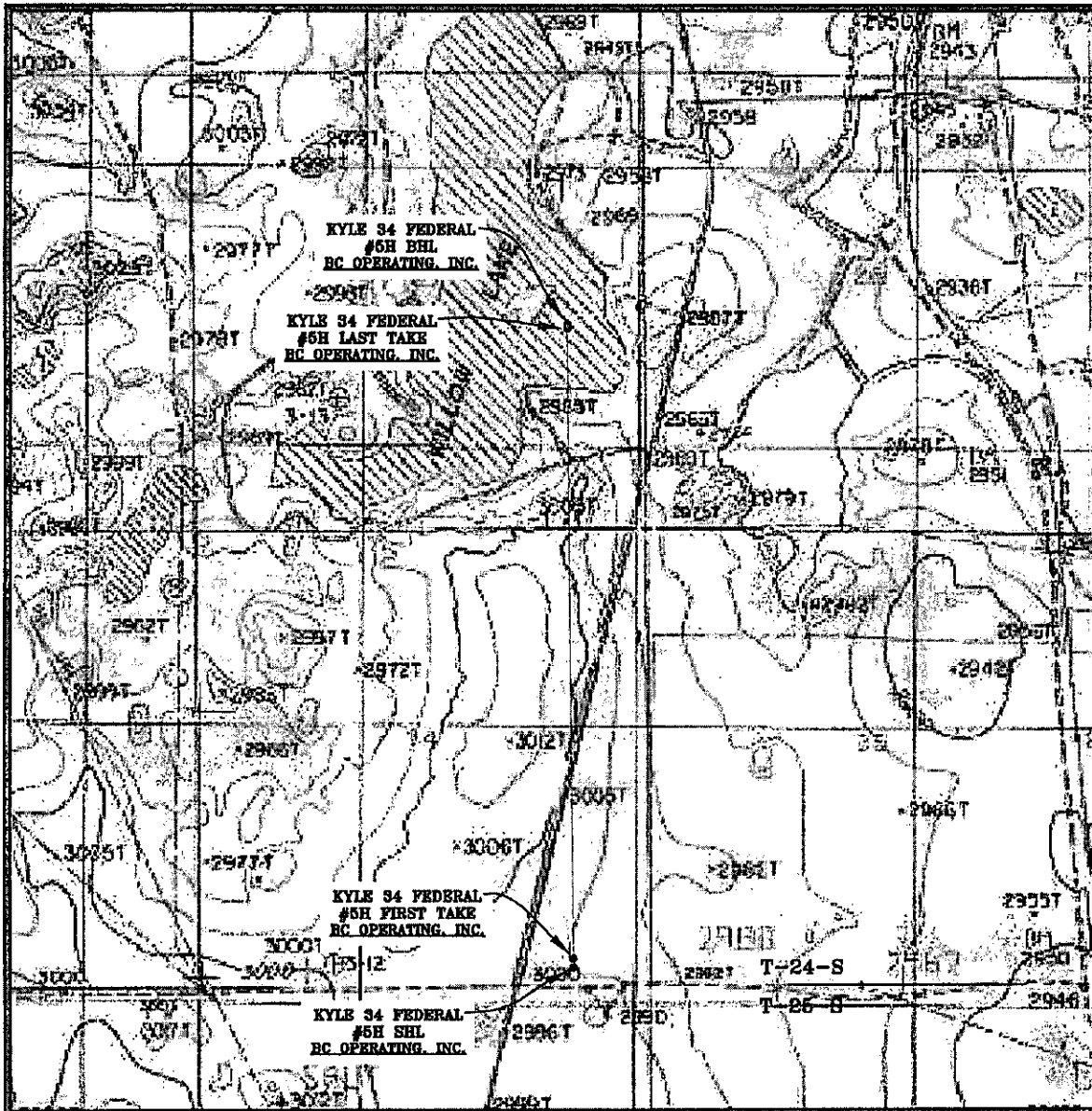
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	27	T24S	R28E		2400	SOUTH	990	EAST	EDDY

¹² Dedicated Acres 240.00	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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.

SECTION 21 SECTION 28 BOTTOM HOLE LOCATION 2400' FSL 990' FEL, SECTION 27 NAD 83, SPCS NM EAST Y432188.66 / X622839.72 LAT3218788977N / LON104.06987457W NAD 27, SPCS NM EAST Y432130.25 / X581635.98 LAT3218776769N / LON104.06938354W LAST TAKE POINT 2350' FSL 990' FEL, SECTION 27 NAD 83, SPCS NM EAST Y432138.54 / X622840.22 LAT3218775198N / LON104.06987333W NAD 27, SPCS NM EAST Y432080.13 / X581656.48 LAT3218762990N / LON104.06938230W SECTION 28 SECTION 33 FIRST TAKE POINT 330' FSL 990' FEL, SECTION 34 NAD 83, SPCS NM EAST Y424718.06 / X622915.83 LAT3216743579N / LON104.06968747W NAD 27, SPCS NM EAST Y424689.00 / X581731.93 LAT3216731343N / LON104.06919708W SURFACE HOLE LOCATION 825' FSL 990' FEL, SECTION 34 NAD 83, SPCS NM EAST Y424643.00' / X622917.10' LAT3216714699N / LON104.06968420W NAD 27, SPCS NM EAST Y424584.74' / X581733.20' LAT3216702465N / LON104.06919382W T-24-S SECTION 33 T-25-S SECTION 4 CORNER COORDINATES NAD 83, SPCS NM EAST A - Y: 432467.29 / X: 622490.37 B - Y: 432472.07 / X: 623826.91 C - Y: 424422.82 / X: 623909.23 D - Y: 424416.39 / X: 622568.02		SECTION 22 SECTION 27 SECTION 26 SECTION 28 SECTION 34 SECTION 35 SECTION 3 SECTION 2 CORNER COORDINATES NAD 27, SPCS NM EAST A - Y: 432408.88 / X: 581306.65 B - Y: 432413.65 / X: 582643.16 C - Y: 424364.33 / X: 582725.30 D - Y: 424358.14 / X: 581384.12		" 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. Date of Survey _____ Signature of Registered Professional Surveyor _____ PRELIMINARY THIS DOCUMENT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, RECORDATION, OR ANY SALE OR THE BASIS FOR THE GRANTING OF A PERMIT. Certificate Number _____
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LOCATION VERIFICATION MAP

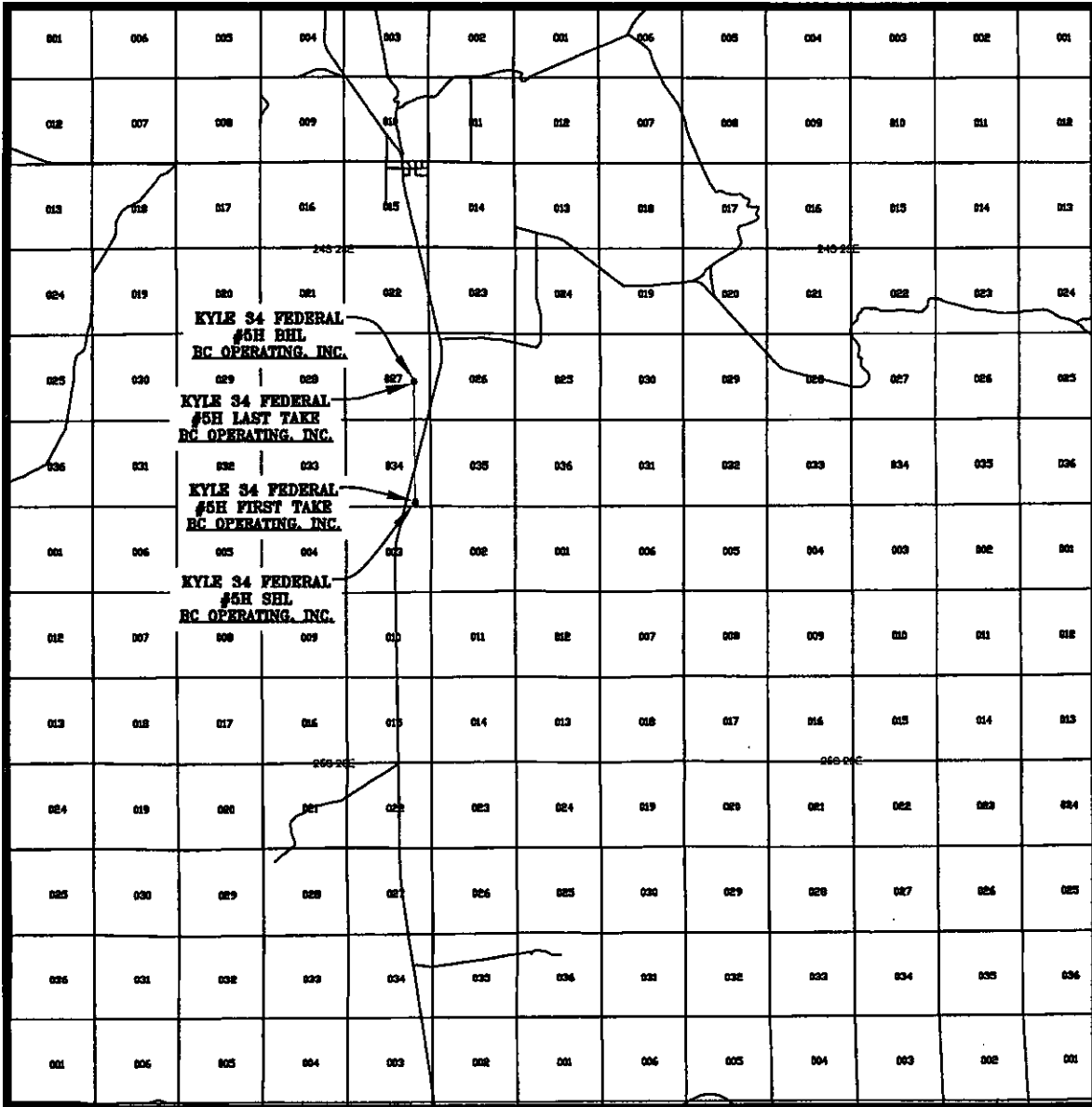


SEC. 34 TWP. 24-S RGE. 28-E
 SURVEY: N.M.P.M.
 COUNTY: EDDY
 DESCRIPTION: 225' FSL & 990' FEL
 ELEVATION: 2994'
 OPERATOR: B.C. OPERATING, INC.
 LEASE: KYLE 34 FEDERAL
 U.S.G.S. TOPOGRAPHIC MAP: MALAGA, N.M.

SCALE: 1" = 2000'
 CONTOUR INTERVAL = 20'

PREPARED BY:
 R-SQUARED GLOBAL, LLC
 1309 LOUISVILLE AVENUE, MONROE, LA 71201
 318-323-6900 OFFICE
 JOB No. R3881-01

VICINITY MAP



SEC. 34 TWP. 24-S RGE. 28-E
 SURVEY: N.M.P.M.
 COUNTY: EDDY
 DESCRIPTION: 225' FSL & 990' FEL
 ELEVATION: 2994'
 OPERATOR: B.C. OPERATING, INC.
 LEASE: KYLE 34 FEDERAL
 U.S.G.S. TOPOGRAPHIC MAP: MALAGA, N.M.

SCALE: 1" = 2 MILES

PREPARED BY:
 R-SQUARED GLOBAL, LLC
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 JOB No. RS661-01