



PHOENIX
TECHNOLOGY SERVICES

December 13, 2016

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

NM OIL CONSERVATION

ARTESIA DISTRICT

DEC 22 2016

RECEIVED

Dear District 2 - Artesia

Attention: Regulatory Department

Re: BC Operating
Red Light 27-34 State Com 2H
Eddy County, NM
→ API #30-015-43917
Job No. 60566

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	
Larry Seebeck	2H	502	15,974	11/26/16	12/8/16	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

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 60566

ENERGY COMPANY BC Operating

WELL NAME Red Light 27-34 State Com 2H

COUNTY & STATE

Eddy, New Mexico

API WELL NUMBER 30-015-43917

PROPOSED DIRECTION 179.91

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
443.00 ft	442.96 ft	1.30	89.01	3.76 ft	1.58 ft	Gyro

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
26-Nov-16	502.00 ft	0.90	77.70

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
8-Dec-16	15,974.00 ft	89.09	178.95

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

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
8-Dec-16	16,026.00 ft	89.09	178.95

Larry Seebeck

PRINT YOUR NAME ABOVE

Larry Seebeck
SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.51
DECLINATION OR GRID	GRID

8-Dec

TODAY'S DATE

MWD SUPERVISOR 1

Larry Seebeck

DIRECTIONAL DRILLER 1

Ruben Cano

MWD SUPERVISOR 2

Clinton Kelly

DIRECTIONAL DRILLER 2

Vinn Adams

12329 Cutten Rd., Houston, Texas 777066

(713)337-0600 (Voice), (713)337-0599 (Fax)



NM OIL CONSERVATION

ARTESIA DISTRICT

DEC 22 2016

RECEIVED

BC Operating, Inc.

Eddy County, New Mexico (NAD27)

Red Light 27-34 State Com

2H

OH / Job #60566

Survey: Phoenix MWD Surveys

Standard Survey Report

09 December, 2016



Company: BC Operating, Inc.
Project: Eddy County, New Mexico (NAD27)
Site: Red Light 27-34 State Com
Well: 2H
Wellbore: OH / Job #60566
Design: Surveys (Patterson 244)

Local Co-ordinate Reference: Well 2H
TVD Reference: GL + KB @ 3341.50usft (Patterson 244)
MD Reference: GL + KB @ 3341.50usft (Patterson 244)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

Project	Eddy County, New Mexico (NAD27)		
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		

Site Red Light 27-34 State Com

Site Position: **From:** Map **Northing:** 466,299.24 usft **Latitude:** 32° 16' 55.07195 N
Position Uncertainty: 0.00 usft **Easting:** 514,646.58 usft **Longitude:** 104° 17' 9.38360 W
Slot Radius: 13-3/16 " **Grid Convergence:** 0.03 °

Well 2H

Well Position **+N/-S** 0.00 usft **Northing:** 466,299.24 usft **Latitude:** 32° 16' 55.07195 N
+E/-W 0.00 usft **Easting:** 514,646.58 usft **Longitude:** 104° 17' 9.38360 W
Position Uncertainty 0.00 usft **Wellhead Elevation:** 0.00 usft **Ground Level:** 3,313.00 usft

Wellbore OH / Job #60566

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/20/2016	7.53	60.05	48,130

Design Surveys (Patterson 244)

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	179.91

Survey Program Date 12/9/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
115.24	443.00	Phoenix Gyro Surveys (OH / Job #60566)	PHX_SPT_GTD	PHX Continuous north-seeking gyro
502.00	16,026.00	Phoenix MWD Surveys (OH / Job #60566)	MWD+HDGM	OWSG Rev.2 MWD + HDGM

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)
443.00	1.30	89.01	442.96	3.76	1.58	-3.76	0.00	0.00	0.00
502.00	0.90	77.70	501.95	3.87	2.70	-3.86	0.77	-0.68	-19.17
First Phoenix MWD Survey									
691.00	1.40	92.50	690.91	4.08	6.46	-4.07	0.31	0.26	7.83
876.00	1.40	14.40	875.87	6.18	9.28	-6.16	0.95	0.00	-42.22
1,061.00	1.90	47.90	1,060.80	10.42	12.12	-10.40	0.58	0.27	18.11
1,246.00	2.30	47.80	1,245.68	14.97	17.15	-14.94	0.22	0.22	-0.05
1,431.00	3.70	17.90	1,430.43	23.14	21.73	-23.11	1.11	0.76	-16.16
1,616.00	1.20	265.50	1,615.30	28.68	21.63	-28.64	2.33	-1.35	-60.76
1,800.00	1.80	251.30	1,799.24	27.60	16.98	-27.57	0.38	0.33	-7.72

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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

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)
1,867.00	0.50	279.50	1,866.22	27.31	15.69	-27.28	2.06	-1.94	42.09
1,980.00	0.61	294.50	1,979.22	27.64	14.66	-27.62	0.16	0.10	13.27
2,074.00	0.46	287.99	2,073.21	27.96	13.84	-27.94	0.17	-0.16	-6.93
2,168.00	0.44	301.66	2,167.21	28.27	13.18	-28.25	0.12	-0.02	14.54
2,262.00	0.44	280.44	2,261.21	28.52	12.51	-28.50	0.17	0.00	-22.57
2,355.00	0.38	287.83	2,354.21	28.68	11.87	-28.66	0.09	-0.06	7.95
2,449.00	0.38	279.75	2,448.20	28.83	11.27	-28.81	0.06	0.00	-8.60
2,543.00	0.39	290.16	2,542.20	28.99	10.66	-28.98	0.08	0.01	11.07
2,637.00	0.23	298.11	2,636.20	29.19	10.19	-29.18	0.18	-0.17	8.46
2,731.00	0.43	293.16	2,730.20	29.42	9.70	-29.41	0.21	0.21	-5.27
2,826.00	0.43	303.29	2,825.20	29.76	9.07	-29.74	0.08	0.00	10.66
2,920.00	0.34	302.78	2,919.19	30.10	8.55	-30.09	0.10	-0.10	-0.54
3,014.00	0.39	292.72	3,013.19	30.38	8.02	-30.36	0.09	0.05	-10.70
3,109.00	0.40	292.11	3,108.19	30.63	7.41	-30.61	0.01	0.01	-0.64
3,203.00	0.33	22.71	3,202.19	31.00	7.21	-30.99	0.55	-0.07	96.38
3,297.00	0.57	45.80	3,296.19	31.58	7.65	-31.56	0.32	0.26	24.56
3,391.00	0.61	57.68	3,390.18	32.17	8.41	-32.16	0.14	0.04	12.64
3,485.00	0.56	52.33	3,484.18	32.72	9.20	-32.70	0.08	-0.05	-5.69
3,578.00	0.70	50.01	3,577.17	33.36	9.99	-33.34	0.15	0.15	-2.49
3,672.00	0.70	71.14	3,671.16	33.91	10.97	-33.90	0.27	0.00	22.48
3,766.00	0.81	67.91	3,765.16	34.35	12.13	-34.33	0.13	0.12	-3.44
3,861.00	1.25	66.33	3,860.14	35.02	13.70	-35.00	0.46	0.46	-1.66
3,955.00	0.37	120.26	3,954.13	35.28	14.91	-35.25	1.14	-0.94	57.37
4,049.00	0.27	129.46	4,048.13	34.98	15.34	-34.96	0.12	-0.11	9.79
4,144.00	0.36	108.60	4,143.13	34.75	15.79	-34.72	0.15	0.09	-21.96
4,238.00	0.34	78.33	4,237.13	34.71	16.35	-34.68	0.20	-0.02	-32.20
4,332.00	0.35	94.09	4,331.12	34.74	16.91	-34.72	0.10	0.01	16.77
4,426.00	0.51	210.40	4,425.12	34.36	16.98	-34.34	0.78	0.17	123.73
4,520.00	0.60	198.64	4,519.12	33.54	16.61	-33.51	0.15	0.10	-12.51
4,614.00	1.12	229.40	4,613.11	32.47	15.76	-32.45	0.72	0.55	32.72
4,708.00	1.18	227.63	4,707.09	31.22	14.34	-31.20	0.07	0.06	-1.88
4,803.00	0.96	219.93	4,802.07	29.95	13.11	-29.93	0.28	-0.23	-8.11
4,897.00	0.66	234.09	4,896.06	29.03	12.17	-29.01	0.38	-0.32	15.06
4,992.00	0.59	210.84	4,991.06	28.29	11.47	-28.27	0.27	-0.07	-24.47
5,086.00	0.67	193.24	5,085.05	27.34	11.10	-27.32	0.22	0.09	-18.72
5,180.00	0.86	199.69	5,179.04	26.14	10.74	-26.12	0.22	0.20	6.86
5,274.00	0.98	199.98	5,273.03	24.72	10.22	-24.70	0.13	0.13	0.31
5,368.00	1.26	153.99	5,367.02	23.04	10.40	-23.02	0.97	0.30	-48.93
5,462.00	2.10	169.12	5,460.97	20.42	11.18	-20.40	1.00	0.89	16.10
5,556.00	1.53	218.90	5,554.93	17.75	10.72	-17.73	1.72	-0.61	52.96
5,650.00	2.06	247.78	5,648.89	16.13	8.37	-16.12	1.10	0.56	30.72
5,744.00	1.62	291.52	5,742.84	15.98	5.56	-15.97	1.52	-0.47	46.53
5,839.00	1.35	321.07	5,837.81	17.34	3.61	-17.34	0.84	-0.28	31.11

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5,933.00	0.40	259.17	5,931.80	18.14	2.59	-18.14	1.29	-1.01	-65.85
6,027.00	0.76	227.62	6,025.80	17.66	1.81	-17.66	0.50	0.38	-33.56
6,121.00	1.36	249.19	6,119.78	16.85	0.31	-16.84	0.76	0.64	22.95
6,216.00	0.88	239.92	6,214.76	16.08	-1.38	-16.08	0.54	-0.51	-9.76
6,310.00	0.60	238.13	6,308.76	15.46	-2.42	-15.46	0.30	-0.30	-1.90
6,404.00	0.63	252.16	6,402.75	15.04	-3.33	-15.04	0.16	0.03	14.93
6,498.00	1.08	235.10	6,496.74	14.37	-4.55	-14.38	0.54	0.48	-18.15
6,592.00	0.25	274.43	6,590.73	13.88	-5.48	-13.89	0.96	-0.88	41.84
6,686.00	1.03	19.29	6,684.73	14.70	-5.40	-14.70	1.19	0.83	111.55
6,780.00	0.71	40.77	6,778.72	15.93	-4.74	-15.94	0.48	-0.34	22.85
6,875.00	0.11	217.15	6,873.71	16.31	-4.42	-16.31	0.86	-0.63	185.66
6,969.00	0.07	287.44	6,967.71	16.25	-4.52	-16.26	0.12	-0.04	74.78
7,063.00	0.58	249.83	7,061.71	16.11	-5.03	-16.11	0.56	0.54	-40.01
7,157.00	1.35	229.84	7,155.70	15.23	-6.32	-15.24	0.88	0.82	-21.27
7,251.00	0.67	246.15	7,249.68	14.29	-7.67	-14.30	0.78	-0.72	17.35
7,345.00	0.26	136.62	7,343.68	13.91	-8.02	-13.93	0.85	-0.44	-116.52
7,439.00	0.74	156.38	7,437.68	13.20	-7.63	-13.22	0.54	0.51	21.02
7,533.00	1.77	166.42	7,531.65	11.24	-7.05	-11.25	1.12	1.10	10.68
7,627.00	0.10	346.49	7,625.64	9.90	-6.73	-9.91	1.99	-1.78	-191.41
7,721.00	0.40	215.49	7,719.64	9.72	-6.94	-9.73	0.50	0.32	-139.36
7,816.00	0.63	237.52	7,814.64	9.17	-7.57	-9.18	0.32	0.24	23.19
7,909.00	0.53	173.52	7,907.63	8.46	-7.95	-8.48	0.67	-0.11	-68.82
8,004.00	0.84	158.77	8,002.62	7.38	-7.65	-7.39	0.37	0.33	-15.53
8,108.00	1.23	184.79	8,106.61	5.56	-7.47	-5.57	0.58	0.38	25.02
8,155.00	3.70	189.72	8,153.56	3.56	-7.77	-3.57	5.27	5.26	10.49
8,202.00	8.44	179.82	8,200.29	-1.39	-8.01	1.38	10.29	10.09	-21.06
8,250.00	14.08	177.88	8,247.34	-10.75	-7.79	10.74	11.77	11.75	-4.04
8,297.00	18.71	177.98	8,292.42	-24.01	-7.31	24.00	9.85	9.85	0.21
8,344.00	23.30	178.21	8,336.28	-40.84	-6.75	40.83	9.77	9.77	0.49
8,390.00	27.95	177.54	8,377.75	-60.71	-6.00	60.71	10.13	10.11	-1.46
8,438.00	32.69	177.66	8,419.17	-84.92	-4.99	84.91	9.88	9.88	0.25
8,485.00	36.31	177.83	8,457.90	-111.51	-3.95	111.51	7.70	7.70	0.36
8,532.00	40.17	178.67	8,494.81	-140.59	-3.07	140.58	8.29	8.21	1.79
8,579.00	44.03	178.64	8,529.67	-172.08	-2.33	172.08	8.21	8.21	-0.06
8,591.00	44.96	178.92	8,538.23	-180.49	-2.15	180.49	7.93	7.76	2.32
Hardline Crossing - 8591' MD									
8,626.00	47.68	179.68	8,562.40	-205.80	-1.84	205.79	7.93	7.77	2.18
8,672.00	51.14	180.06	8,592.33	-240.72	-1.77	240.72	7.55	7.52	0.83
8,720.00	55.54	180.03	8,620.98	-279.22	-1.80	279.22	9.17	9.17	-0.06
8,767.00	60.12	179.48	8,646.00	-318.99	-1.62	318.99	9.79	9.74	-1.17
8,814.00	63.89	179.67	8,668.06	-360.48	-1.32	360.48	8.03	8.02	0.40
8,861.00	66.97	178.62	8,687.60	-403.22	-0.67	403.22	6.86	6.55	-2.23
8,908.00	71.20	178.84	8,704.37	-447.10	0.30	447.10	9.01	9.00	0.47
8,955.00	75.19	178.99	8,717.96	-492.08	1.15	492.08	8.49	8.49	0.32

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9,002.00	79.79	179.04	8,728.13	-537.94	1.94	537.94	9.79	9.79	0.11
9,128.00	87.42	177.07	8,742.16	-662.99	6.20	662.99	6.25	6.06	-1.56
9,174.00	87.60	176.36	8,744.16	-708.87	8.83	708.88	1.59	0.39	-1.54
9,267.00	93.09	178.69	8,743.60	-801.74	12.85	801.76	6.41	5.90	2.51
9,358.00	91.11	180.84	8,740.26	-892.66	13.22	892.68	3.21	-2.18	2.36
9,453.00	91.20	180.67	8,738.35	-987.64	11.97	987.65	0.20	0.09	-0.18
9,547.00	90.40	180.41	8,737.04	-1,081.62	11.08	1,081.64	0.89	-0.85	-0.28
9,641.00	89.87	180.68	8,736.81	-1,175.62	10.19	1,175.63	0.63	-0.56	0.29
9,734.00	87.68	179.47	8,738.80	-1,268.59	10.07	1,268.60	2.69	-2.35	-1.30
9,829.00	89.07	176.89	8,741.50	-1,363.49	13.08	1,363.51	3.08	1.46	-2.72
9,923.00	91.32	176.62	8,741.18	-1,457.34	18.40	1,457.36	2.41	2.39	-0.29
10,016.00	91.55	177.42	8,738.85	-1,550.18	23.24	1,550.21	0.89	0.25	0.86
10,110.00	89.81	176.84	8,737.73	-1,644.05	27.94	1,644.09	1.95	-1.85	-0.62
10,204.00	92.10	176.47	8,736.17	-1,737.87	33.43	1,737.92	2.47	2.44	-0.39
10,298.00	90.62	175.85	8,733.93	-1,831.63	39.72	1,831.69	1.71	-1.57	-0.66
10,392.00	89.93	177.18	8,733.48	-1,925.45	45.43	1,925.52	1.59	-0.73	1.41
10,485.00	88.24	176.18	8,734.97	-2,018.28	50.82	2,018.36	2.11	-1.82	-1.08
10,579.00	92.35	180.09	8,734.48	-2,112.19	53.88	2,112.27	6.03	4.37	4.16
10,674.00	89.41	178.29	8,733.03	-2,207.16	55.22	2,207.24	3.63	-3.09	-1.89
10,768.00	90.98	182.35	8,732.71	-2,301.13	54.70	2,301.21	4.63	1.67	4.32
10,862.00	89.10	181.48	8,732.64	-2,395.07	51.56	2,395.15	2.20	-2.00	-0.93
10,956.00	89.63	181.89	8,733.68	-2,489.03	48.79	2,489.10	0.71	0.56	0.44
11,051.00	91.87	182.63	8,732.44	-2,583.94	45.05	2,584.01	2.48	2.36	0.78
11,144.00	88.38	181.66	8,732.24	-2,676.86	41.57	2,676.92	3.89	-3.75	-1.04
11,238.00	90.96	183.11	8,732.78	-2,770.76	37.65	2,770.82	3.15	2.74	1.54
11,332.00	91.31	182.00	8,730.91	-2,864.65	33.46	2,864.70	1.24	0.37	-1.18
11,426.00	90.78	181.25	8,729.20	-2,958.60	30.80	2,958.64	0.98	-0.56	-0.80
11,520.00	89.93	180.94	8,728.62	-3,052.58	29.00	3,052.62	0.96	-0.90	-0.33
11,614.00	92.87	181.56	8,726.32	-3,146.52	26.95	3,146.55	3.20	3.13	0.66
11,708.00	89.29	180.05	8,724.55	-3,240.47	25.63	3,240.51	4.13	-3.81	-1.61
11,803.00	89.02	179.97	8,725.95	-3,335.46	25.62	3,335.50	0.30	-0.28	-0.08
11,897.00	88.63	179.37	8,727.88	-3,429.44	26.16	3,429.48	0.76	-0.41	-0.64
11,991.00	89.86	179.54	8,729.12	-3,523.42	27.05	3,523.46	1.32	1.31	0.18
12,085.00	89.89	178.15	8,729.32	-3,617.40	28.95	3,617.44	1.48	0.03	-1.48
12,180.00	88.57	177.14	8,730.60	-3,712.31	32.85	3,712.36	1.75	-1.39	-1.06
12,274.00	91.66	177.53	8,730.41	-3,806.20	37.22	3,806.25	3.31	3.29	0.41
12,368.00	88.96	176.99	8,729.90	-3,900.08	41.71	3,900.14	2.93	-2.87	-0.57
12,462.00	90.03	177.73	8,730.73	-3,993.97	46.04	3,994.04	1.38	1.14	0.79
12,556.00	93.02	178.14	8,728.23	-4,087.87	49.43	4,087.94	3.21	3.18	0.44
12,650.00	92.13	178.72	8,724.01	-4,181.74	52.00	4,181.81	1.13	-0.95	0.62
12,745.00	89.66	178.46	8,722.52	-4,276.69	54.34	4,276.77	2.61	-2.60	-0.27
12,838.00	92.25	178.23	8,720.97	-4,369.63	57.02	4,369.71	2.80	2.78	-0.25
12,932.00	88.90	177.40	8,720.03	-4,463.54	60.61	4,463.63	3.67	-3.56	-0.88

Company: BC Operating, Inc.
Project: Eddy County, New Mexico (NAD27)
Site: Red Light 27-34 State Com
Well: 2H
Wellbore: OH / Job #60566
Design: Surveys (Patterson 244)

Local Co-ordinate Reference: Well 2H
TVD Reference: GL + KB @ 3341.50usft (Patterson 244)
MD Reference: GL + KB @ 3341.50usft (Patterson 244)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

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)
13,026.00	90.70	180.17	8,720.36	-4,557.51	62.60	4,557.60	3.51	1.91	2.95
13,120.00	91.22	180.23	8,718.78	-4,651.49	62.27	4,651.59	0.56	0.55	0.06
13,214.00	91.62	181.25	8,716.45	-4,745.46	61.06	4,745.55	1.17	0.43	1.09
13,309.00	89.99	184.41	8,715.12	-4,840.32	56.37	4,840.40	3.74	-1.72	3.33
13,402.00	87.69	183.58	8,717.00	-4,933.06	49.89	4,933.14	2.63	-2.47	-0.89
13,497.00	87.55	183.42	8,720.95	-5,027.80	44.10	5,027.87	0.22	-0.15	-0.17
13,591.00	86.87	183.34	8,725.52	-5,121.53	38.56	5,121.58	0.73	-0.72	-0.09
13,685.00	87.88	179.59	8,729.83	-5,215.38	36.16	5,215.43	4.13	1.07	-3.99
13,780.00	90.71	180.90	8,731.00	-5,310.36	35.76	5,310.41	3.28	2.98	1.38
13,874.00	90.00	180.18	8,730.41	-5,404.35	34.87	5,404.40	1.08	-0.76	-0.77
13,968.00	89.37	180.53	8,730.93	-5,498.35	34.29	5,498.40	0.77	-0.67	0.37
14,061.00	88.02	180.51	8,733.05	-5,591.32	33.44	5,591.37	1.45	-1.45	-0.02
14,156.00	91.98	181.25	8,733.05	-5,686.29	31.99	5,686.33	4.24	4.17	0.78
14,250.00	90.46	181.21	8,731.05	-5,780.24	29.97	5,780.28	1.62	-1.62	-0.04
14,344.00	88.03	180.53	8,732.29	-5,874.22	28.54	5,874.26	2.68	-2.59	-0.72
14,439.00	90.20	182.90	8,733.75	-5,969.15	25.70	5,969.18	3.38	2.28	2.49
14,533.00	88.65	181.82	8,734.70	-6,063.06	21.83	6,063.09	2.01	-1.65	-1.15
14,628.00	91.51	183.68	8,734.56	-6,157.94	17.27	6,157.96	3.59	3.01	1.96
14,721.00	89.86	183.48	8,733.45	-6,250.75	11.46	6,250.76	1.79	-1.77	-0.22
14,815.00	88.84	182.64	8,734.52	-6,344.61	6.45	6,344.61	1.41	-1.09	-0.89
14,910.00	90.34	184.14	8,735.20	-6,439.43	0.83	6,439.42	2.23	1.58	1.58
15,004.00	91.24	183.77	8,733.90	-6,533.20	-5.65	6,533.18	1.04	0.96	-0.39
15,099.00	90.04	183.27	8,732.84	-6,628.01	-11.49	6,627.98	1.37	-1.26	-0.53
15,193.00	90.93	183.49	8,732.05	-6,721.84	-17.03	6,721.81	0.98	0.95	0.23
15,287.00	88.73	182.28	8,732.32	-6,815.72	-21.76	6,815.67	2.67	-2.34	-1.29
15,381.00	92.01	181.19	8,731.72	-6,909.66	-24.60	6,909.61	3.68	3.49	-1.16
15,476.00	90.16	180.61	8,729.92	-7,004.62	-26.10	7,004.57	2.04	-1.95	-0.61
15,569.00	89.54	180.00	8,730.16	-7,097.62	-26.59	7,097.57	0.94	-0.67	-0.66
15,663.00	90.24	180.81	8,730.34	-7,191.62	-27.26	7,191.56	1.14	0.74	0.86
15,758.00	89.47	179.57	8,730.58	-7,286.61	-27.57	7,286.56	1.54	-0.81	-1.31
15,852.00	88.94	178.80	8,731.89	-7,380.59	-26.23	7,380.54	0.99	-0.56	-0.82
15,910.00	89.50	178.71	8,732.68	-7,438.57	-24.98	7,438.53	0.97	0.96	-0.15
Hardline Crossing - 15910' MD									
15,946.00	89.84	178.66	8,732.89	-7,474.56	-24.15	7,474.52	0.97	0.96	-0.15
15,974.00	89.09	178.95	8,733.15	-7,502.56	-23.57	7,502.51	2.87	-2.68	1.04
Final Phoenix MWD Survey									
16,026.00	89.09	178.95	8,733.98	-7,554.54	-22.61	7,554.50	0.00	0.00	0.00
Projection to TD									

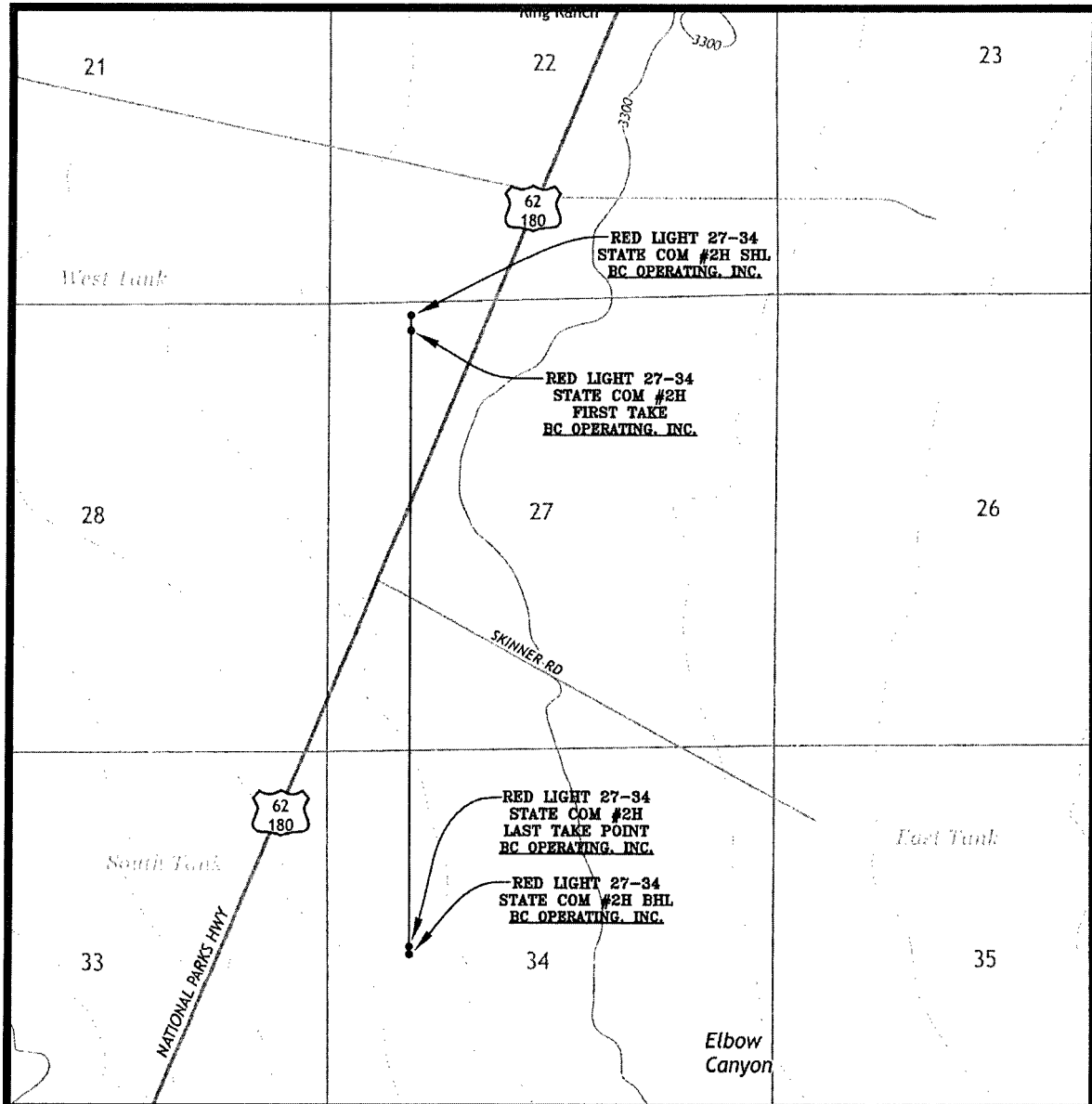
Company: BC Operating, Inc.
Project: Eddy County, New Mexico (NAD27)
Site: Red Light 27-34 State Com
Well: 2H
Wellbore: OH / Job #60566
Design: Surveys (Patterson 244)

Local Co-ordinate Reference: Well 2H
TVD Reference: GL + KB @ 3341.50usft (Patterson 244)
MD Reference: GL + KB @ 3341.50usft (Patterson 244)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Compass 5000 GCR

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
502.00	501.95	3.87	2.70	First Phoenix MWD Survey
8,591.00	8,538.23	-180.49	-2.15	Hardline Crossing - 8591' MD
15,910.00	8,732.68	-7,438.57	-24.98	Hardline Crossing - 15910' MD
15,974.00	8,733.15	-7,502.56	-23.57	Final Phoenix MWD Survey
16,026.00	8,733.98	-7,554.54	-22.61	Projection to TD

LOCATION VERIFICATION MAP

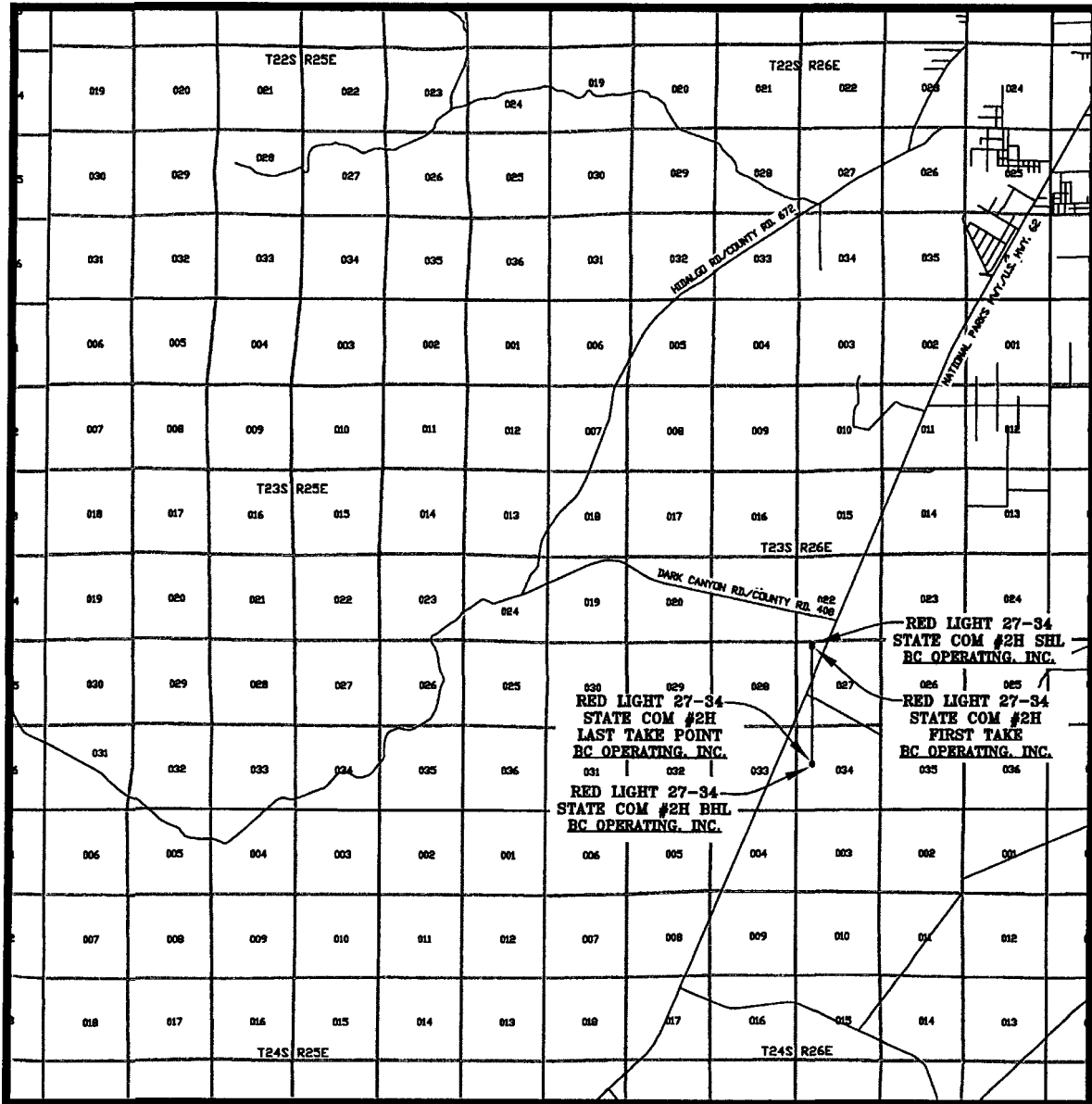


SEC. 27 TWP. 23 S RGE. 26 E
 SURVEY: N.M.P.M.
 COUNTY: EDDY
 DESCRIPTION: 150' FNL & 990' FWL
 ELEVATION: 3313'
 OPERATOR: B.C. OPERATING, INC.
 LEASE: RED LIGHT 27-34 STATE COM
 U.S.G.S. TOPOGRAPHIC MAP: KITCHEN COVE, N.M.

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

PREPARED BY:
 R-SQUARED GLOBAL, LLC
 1309 LOUISVILLE AVENUE, MONROE, LA 71201
 318-323-8900 OFFICE
 JOB No. R3842_002

VICINITY MAP



SEC. 27 TWP. 23 S RGE. 26 E
 SURVEY: N.M.P.M.
 COUNTY: EDDY
 DESCRIPTION: 150' FNL & 990' FWL
 ELEVATION: 3313'
 OPERATOR: B.C. OPERATING, INC.
 LEASE: RED LIGHT 27-34 STATE COM
 U.S.G.S. TOPOGRAPHIC MAP: KITCHEN COVE, N.M.

SCALE: 1" = 2 MILES

PREPARED BY:
 R-SQUARED GLOBAL, LLC
 1309 LOUISVILLE AVENUE, MONROE, LA 71201
 318-323-8800 OFFICE
 JOB No. R3642_002