

BC  OPERATING, INC.

HOBBS OOD

DEC 08 2014

RECEIVED

B.C Operating, Inc.

Lea County

Nighthawk State Com #3H

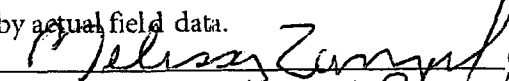
30-025-41950

Survey: Nighthawk State Com #3H

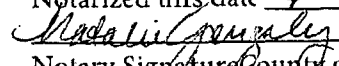
MOJO Standard Survey

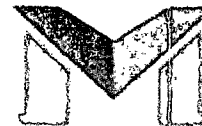
04 December, 2014

This survey is correct to the best of my knowledge and is supported
by actual field data.

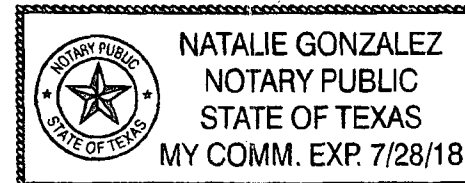
 (Signature)

Notarized this date 4 of December 2014


Notary Signature County of Collin State of Texas
Denton



MOJO
AGRICULTURAL CORPORATION



MAY 26 2015

Company:	B.C. Operating, Inc.	Local Co-ordinate Reference:	Well Nighthawk State Com #3H
Project:	Lea County	TVD Reference:	WELL @ 3941.0usft (Original Well Elev)
Site:	Nighthawk State Com #3H	MD Reference:	WELL @ 3941.0usft (Original Well Elev)
Well:	Nighthawk State Com #3H	North Reference:	Grid
Wellbore:	Nighthawk State Com #3H	Survey Calculation Method:	Minimum Curvature
Design:	Nighthawk State Com #3H	Database:	EDM 5000.1 Single User Db

Project	Lea County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Nighthawk State Com #3H							
Site Position:		Northing:		629,131.60	usft	Latitude:		32° 43' 35.788 N	
From:	Map	Easting:		804,208.53	usft	Longitude:		103° 28' 42.719 W	
Position Uncertainty:		0.0	usft	Slot Radius:		13-3/16	"	Grid Convergence:	0.46 °

Well		Nighthawk State Com #3H				
Well Position	+N/-S	0.0 usft	Northing:	629,131.60 usft	Latitude:	32° 43' 35.788 N
	+E/-W	0.0 usft	Easting:	804,208.53 usft	Longitude:	103° 28' 42.719 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,919.0 usft	

Wellbore	Nighthawk State Com #3H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	29/09/2014	7.17	60.58	48,595

Design:	Nighthawk State Com #3H				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth: From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	177.30	

Survey Program		Date 04/12/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	14,896.0	Nighthawk State Com #3H (Nighthawk Sta		

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Wellbore:	Nighthawk State Com #3H	Survey Calculation Method:	Minimum Curvature
Design:	Nighthawk State Com #3H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
0.0	0.00	0.00	0.0	-3,941.0	0.0	0.0	0.0	0.00	629,131.60	804,208.53	
100.0	0.16	18.52	100.0	-3,841.0	0.1	0.0	-0.1	0.16	629,131.73	804,208.57	
200.0	0.15	7.47	200.0	-3,741.0	0.4	0.1	-0.4	0.03	629,131.99	804,208.64	
300.0	0.25	30.90	300.0	-3,641.0	0.7	0.2	-0.7	0.13	629,132.31	804,208.76	
400.0	0.33	42.72	400.0	-3,541.0	1.1	0.5	-1.1	0.10	629,132.71	804,209.07	
500.0	0.35	47.74	500.0	-3,441.0	1.5	1.0	-1.5	0.04	629,133.13	804,209.49	
600.0	0.34	57.56	600.0	-3,341.0	1.9	1.4	-1.8	0.06	629,133.49	804,209.97	
700.0	0.42	57.08	700.0	-3,241.0	2.3	2.0	-2.2	0.08	629,133.85	804,210.53	
800.0	0.56	61.05	800.0	-3,141.0	2.7	2.7	-2.6	0.14	629,134.29	804,211.26	
900.0	0.56	60.06	900.0	-3,041.0	3.2	3.6	-3.0	0.01	629,134.77	804,212.11	
1,000.0	0.62	56.55	1,000.0	-2,941.0	3.7	4.5	-3.5	0.07	629,135.31	804,212.99	
1,100.0	0.73	47.32	1,100.0	-2,841.0	4.4	5.4	-4.2	0.15	629,136.04	804,213.91	
1,200.0	0.84	49.92	1,200.0	-2,741.0	5.3	6.4	-5.0	0.12	629,136.94	804,214.94	
1,300.0	1.04	51.01	1,299.9	-2,641.1	6.4	7.7	-6.0	0.20	629,137.99	804,216.20	
1,400.0	1.13	49.24	1,399.9	-2,541.1	7.6	9.1	-7.2	0.10	629,139.20	804,217.66	
1,500.0	1.11	54.19	1,499.9	-2,441.1	8.8	10.7	-8.3	0.10	629,140.41	804,219.19	
1,600.0	0.96	59.04	1,599.9	-2,341.1	9.8	12.2	-9.2	0.17	629,141.41	804,220.69	
1,700.0	0.81	53.08	1,699.9	-2,241.1	10.7	13.4	-10.0	0.18	629,142.26	804,221.98	
1,799.6	0.86	57.05	1,799.5	-2,141.5	11.5	14.6	-10.8	0.08	629,143.09	804,223.17	
Rustler											
1,800.0	0.86	57.06	1,799.9	-2,141.1	11.5	14.6	-10.8	0.08	629,143.10	804,223.17	
1,842.0	0.89	59.37	1,841.9	-2,099.1	11.8	15.2	-11.1	0.11	629,143.43	804,223.72	
13 3/8"											
1,900.0	0.93	62.32	1,899.9	-2,041.1	12.3	16.0	-11.5	0.11	629,143.88	804,224.52	
1,959.6	0.94	65.77	1,959.4	-1,981.6	12.7	16.9	-11.9	0.10	629,144.31	804,225.39	
Top Salt											
2,000.0	0.95	68.07	1,999.8	-1,941.2	13.0	17.5	-12.1	0.10	629,144.57	804,226.01	
2,100.0	0.89	66.67	2,099.8	-1,841.2	13.6	19.0	-12.7	0.06	629,145.19	804,227.49	

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Design:	Nighthawk State Com #3H	Database:	EDM 5000.1 Single User Db

Survey											
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2,200.0	0.76	65.16	2,199.8	-1,741.2	14.2	20.3	-13.2	0.13	629,145.77	804,228.80	
2,300.0	0.66	63.62	2,299.8	-1,641.2	14.7	21.4	-13.7	0.10	629,146.31	804,229.92	
2,400.0	0.58	65.74	2,399.8	-1,541.2	15.2	22.4	-14.1	0.08	629,146.77	804,230.90	
2,500.0	0.61	67.97	2,499.8	-1,441.2	15.6	23.3	-14.5	0.04	629,147.18	804,231.85	
2,600.0	0.66	70.60	2,599.8	-1,341.2	16.0	24.4	-14.8	0.06	629,147.57	804,232.89	
2,700.0	0.87	59.38	2,699.8	-1,241.2	16.5	25.6	-15.3	0.26	629,148.15	804,234.09	
2,800.0	1.35	48.53	2,799.8	-1,141.2	17.7	27.1	-16.4	0.52	629,149.31	804,235.62	
2,900.0	1.63	52.18	2,899.7	-1,041.3	19.4	29.1	-18.0	0.30	629,150.97	804,237.63	
3,000.0	1.80	55.52	2,999.7	-941.3	21.1	31.5	-19.6	0.20	629,152.73	804,240.05	
3,099.3	1.75	58.68	3,099.0	-842.0	22.8	34.1	-21.2	0.11	629,154.40	804,242.63	
Base Salt											
3,100.0	1.75	58.70	3,099.6	-841.4	22.8	34.1	-21.2	0.11	629,154.41	804,242.65	
3,200.0	1.22	55.99	3,199.6	-741.4	24.2	36.3	-22.5	0.53	629,155.80	804,244.83	
3,239.3	1.15	56.86	3,238.9	-702.1	24.6	37.0	-22.9	0.19	629,156.25	804,245.51	
Yates											
3,300.0	1.04	58.45	3,299.6	-641.4	25.3	38.0	-23.5	0.19	629,156.87	804,246.49	
3,380.0	0.99	53.53	3,379.6	-561.4	26.1	39.1	-24.2	0.12	629,157.66	804,247.67	
9 5/8"											
3,400.0	0.98	52.23	3,399.6	-541.4	26.3	39.4	-24.4	0.12	629,157.87	804,247.94	
3,500.0	1.09	49.66	3,499.6	-441.4	27.4	40.8	-25.5	0.12	629,159.01	804,249.34	
3,600.0	0.91	40.22	3,599.5	-341.5	28.6	42.0	-26.6	0.24	629,160.23	804,250.58	
3,700.0	0.90	41.27	3,699.5	-241.5	29.8	43.1	-27.8	0.02	629,161.42	804,251.61	
3,714.1	0.88	41.59	3,713.6	-227.4	30.0	43.2	-27.9	0.15	629,161.59	804,251.75	
Seven Rivers											
3,800.0	0.75	43.92	3,799.5	-141.5	30.9	44.1	-28.8	0.15	629,162.49	804,252.58	
3,900.0	0.78	29.50	3,899.5	-41.5	32.0	44.8	-29.8	0.19	629,163.55	804,253.37	
4,000.0	0.84	26.71	3,999.5	58.5	33.2	45.5	-31.0	0.07	629,164.80	804,254.04	
4,100.0	0.94	31.88	4,099.5	158.5	34.5	46.3	-32.3	0.13	629,166.15	804,254.80	

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Design: Nighthawk State Com #3H		Database:				EDM 5000.1 Single User Db	

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
4,200.0	1.05	32.44	4,199.5	258.5	36.0	47.2	-33.8	0.11	629,167.62	804,255.72	
4,300.0	0.89	19.80	4,299.5	358.5	37.5	47.9	-35.2	0.27	629,169.12	804,256.48	
4,400.0	1.06	18.97	4,399.4	458.4	39.1	48.5	-36.8	0.17	629,170.73	804,257.04	
4,463.7	1.15	17.85	4,463.2	522.2	40.3	48.9	-37.9	0.14	629,171.89	804,257.43	
Queen											
4,500.0	1.20	17.28	4,499.4	558.4	41.0	49.1	-38.6	0.14	629,172.60	804,257.65	
4,600.0	1.11	14.14	4,599.4	658.4	42.9	49.7	-40.6	0.11	629,174.54	804,258.20	
4,700.0	1.26	13.07	4,699.4	758.4	45.0	50.2	-42.5	0.15	629,176.55	804,258.69	
4,733.5	1.25	12.78	4,732.9	791.9	45.7	50.3	-43.2	0.04	629,177.27	804,258.85	
Penrose											
4,800.0	1.22	12.18	4,799.4	858.4	47.1	50.6	-44.6	0.04	629,178.66	804,259.16	
4,900.0	1.22	11.28	4,899.3	958.3	49.1	51.1	-46.7	0.02	629,180.75	804,259.59	
5,000.0	1.35	8.62	4,999.3	1,058.3	51.4	51.4	-48.9	0.14	629,182.96	804,259.98	
5,038.3	1.36	9.26	5,037.6	1,096.6	52.3	51.6	-49.8	0.05	629,183.85	804,260.12	
Grayburg											
5,100.0	1.38	10.26	5,099.3	1,158.3	53.7	51.8	-51.2	0.05	629,185.31	804,260.37	
5,200.0	1.34	15.03	5,199.3	1,258.3	56.0	52.4	-53.5	0.12	629,187.62	804,260.89	
5,300.0	1.26	21.57	5,299.2	1,358.2	58.2	53.1	-55.6	0.17	629,189.77	804,261.59	
5,400.0	1.16	25.13	5,399.2	1,458.2	60.1	53.9	-57.5	0.13	629,191.71	804,262.43	
5,500.0	1.20	21.79	5,499.2	1,558.2	62.0	54.7	-59.4	0.08	629,193.60	804,263.25	
5,600.0	1.24	20.70	5,599.2	1,658.2	64.0	55.5	-61.3	0.05	629,195.58	804,264.02	
5,700.0	1.25	26.97	5,699.1	1,758.1	66.0	56.4	-63.2	0.14	629,197.57	804,264.89	
5,797.8	1.22	28.88	5,796.9	1,855.9	67.8	57.4	-65.1	0.05	629,199.43	804,265.88	
Delaware Sands											
5,800.0	1.22	28.92	5,799.1	1,858.1	67.9	57.4	-65.1	0.05	629,199.47	804,265.90	
5,900.0	1.11	34.08	5,899.1	1,958.1	69.6	58.4	-66.8	0.15	629,201.21	804,266.96	
6,000.0	1.05	34.61	5,999.1	2,058.1	71.2	59.5	-68.3	0.06	629,202.76	804,268.02	

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6,100.0	1.08	40.84	6,099.1	2,158.1	72.6	60.6	-69.7	0.12	629,204.23	804,269.16	
6,200.0	1.09	40.09	6,199.0	2,258.0	74.1	61.9	-71.1	0.02	629,205.67	804,270.39	
6,300.0	1.33	43.28	6,299.0	2,358.0	75.6	63.3	-72.6	0.25	629,207.24	804,271.80	
6,400.0	1.41	42.08	6,399.0	2,458.0	77.4	64.9	-74.3	0.08	629,209.00	804,273.42	
6,500.0	1.38	46.39	6,499.0	2,558.0	79.1	66.6	-75.9	0.11	629,210.75	804,275.11	
6,600.0	1.40	49.54	6,598.9	2,657.9	80.8	68.4	-77.5	0.08	629,212.37	804,276.92	
6,700.0	1.37	58.40	6,698.9	2,757.9	82.2	70.3	-78.8	0.22	629,213.79	804,278.86	
6,800.0	1.31	59.58	6,798.9	2,857.9	83.4	72.3	-79.9	0.07	629,214.99	804,280.87	
6,900.0	1.85	69.06	6,898.8	2,957.8	84.5	74.8	-80.9	0.60	629,216.15	804,283.36	
7,000.0	2.18	77.20	6,998.8	3,057.8	85.5	78.2	-81.8	0.44	629,217.15	804,286.72	
7,100.0	2.43	81.29	7,098.7	3,157.7	86.3	82.1	-82.3	0.30	629,217.89	804,290.67	
7,200.0	2.46	79.50	7,198.6	3,257.6	87.0	86.3	-82.8	0.08	629,218.60	804,294.88	
7,242.5	2.45	74.75	7,241.0	3,300.0	87.4	88.1	-83.2	0.48	629,219.01	804,296.65	
Bone Spring Lime											
7,300.0	2.47	68.34	7,298.5	3,357.5	88.2	90.5	-83.8	0.48	629,219.79	804,298.99	
7,400.0	2.28	60.66	7,398.4	3,457.4	90.0	94.2	-85.4	0.37	629,221.56	804,302.73	
7,500.0	2.23	57.90	7,498.4	3,557.4	92.0	97.6	-87.3	0.12	629,223.57	804,306.11	
7,600.0	2.20	58.70	7,598.3	3,657.3	94.0	100.9	-89.1	0.04	629,225.60	804,309.40	
7,700.0	2.42	58.56	7,698.2	3,757.2	96.1	104.3	-91.1	0.22	629,227.70	804,312.84	
7,800.0	2.54	56.76	7,798.1	3,857.1	98.4	108.0	-93.2	0.14	629,230.01	804,316.49	
7,900.0	2.73	53.34	7,898.0	3,957.0	101.0	111.7	-95.7	0.25	629,232.65	804,320.26	
8,000.0	2.59	55.38	7,997.9	4,056.9	103.8	115.5	-98.2	0.17	629,235.35	804,324.03	
8,100.0	2.39	57.68	8,097.8	4,156.8	106.2	119.1	-100.4	0.22	629,237.75	804,327.65	
8,200.0	2.22	52.26	8,197.7	4,256.7	108.5	122.4	-102.6	0.28	629,240.05	804,330.94	
8,300.0	1.86	74.32	8,297.7	4,356.7	110.1	125.5	-104.0	0.86	629,241.68	804,334.04	
8,400.0	2.11	65.19	8,397.6	4,456.6	111.3	128.7	-105.1	0.40	629,242.89	804,337.27	
8,500.0	3.01	52.21	8,497.5	4,556.5	113.7	132.5	-107.3	1.07	629,245.27	804,341.02	

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Design: Nighthawk State Com #3H		Database:				EDM 5000.1 Single User Db	

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
8,600.0	3.35	50.64	8,597.3	4,656.3	117.1	136.8	-110.6	0.35	629,248.73	804,345.35	
8,700.0	2.40	36.40	8,697.2	4,756.2	120.7	140.3	-113.9	1.18	629,252.27	804,348.85	
8,772.3	1.34	31.40	8,769.4	4,828.4	122.6	141.7	-115.8	1.48	629,254.21	804,350.19	
First Bone Spring Sand											
8,800.0	0.94	26.50	8,797.2	4,856.2	123.1	141.9	-116.3	1.48	629,254.69	804,350.46	
8,862.2	1.07	20.93	8,859.4	4,918.4	124.1	142.4	-117.2	0.26	629,255.69	804,350.90	
2nd Carbonate											
8,900.0	1.15	18.17	8,897.1	4,956.1	124.8	142.6	-117.9	0.26	629,256.38	804,351.14	
9,000.0	1.30	30.33	8,997.1	5,056.1	126.7	143.5	-119.8	0.30	629,258.31	804,352.03	
9,036.0	1.21	29.37	9,033.1	5,092.1	127.4	143.9	-120.5	0.26	629,258.99	804,352.42	
9,072.0	1.50	1.80	9,069.1	5,128.1	128.2	144.1	-121.3	1.96	629,259.79	804,352.62	
9,097.0	1.02	14.78	9,094.1	5,153.1	128.7	144.2	-121.8	2.23	629,260.34	804,352.69	
KOP@9097RMD											
9,104.0	0.90	20.80	9,101.1	5,160.1	128.8	144.2	-121.9	2.23	629,260.45	804,352.72	
9,136.0	3.10	164.90	9,133.1	5,192.1	128.2	144.5	-121.3	12.08	629,259.85	804,353.04	
9,168.0	6.80	179.60	9,165.0	5,224.0	125.5	144.7	-118.6	12.13	629,257.12	804,353.28	
9,200.0	10.60	177.00	9,196.6	5,255.6	120.7	144.9	-113.7	11.94	629,252.28	804,353.44	
9,232.0	11.40	177.90	9,228.0	5,287.0	114.6	145.2	-107.6	2.56	629,246.18	804,353.71	
9,239.0	11.65	179.55	9,234.9	5,293.9	113.2	145.2	-106.2	5.89	629,244.78	804,353.74	
Second Bone Spring Sand											
9,264.0	12.60	184.90	9,259.3	5,318.3	107.9	145.0	-101.0	5.89	629,239.54	804,353.53	
9,296.0	14.20	187.40	9,290.4	5,349.4	100.6	144.2	-93.7	5.32	629,232.17	804,352.73	
9,327.0	17.10	187.50	9,320.3	5,379.3	92.3	143.1	-85.4	9.36	629,223.88	804,351.64	
9,359.0	20.10	185.00	9,350.6	5,409.6	82.1	142.0	-75.4	9.70	629,213.74	804,350.55	
9,392.0	23.90	181.00	9,381.2	5,440.2	69.8	141.4	-63.1	12.37	629,201.40	804,349.94	
9,423.0	26.20	176.00	9,409.3	5,468.3	56.7	141.8	-49.9	10.08	629,188.29	804,350.30	
9,455.0	28.20	177.40	9,437.7	5,496.7	42.1	142.6	-35.3	6.56	629,173.69	804,351.14	

Company:	B.C. Operating, Inc.	Local Co-ordinate Reference:	Well Nighthawk State Com #3H
Project:	Lea County	TVD Reference:	WELL @ 3941.0usft (Original Well Elev)
Site:	Nighthawk State Com #3H	MD Reference:	WELL @ 3941.0usft (Original Well Elev)
Well:	Nighthawk State Com #3H	North Reference:	Grid
Wellbore:	Nighthawk State Com #3H	Survey Calculation Method:	Minimum Curvature
Design:	Nighthawk State Com #3H	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
9,551.0	34.00	174.90	9,519.9	5,578.9	-7.3	146.0	14.2	6.19	629,124.25	804,354.56
9,584.0	37.50	174.80	9,546.7	5,605.7	-26.5	147.8	33.5	10.61	629,105.05	804,356.29
9,615.0	41.60	174.70	9,570.6	5,629.6	-46.2	149.6	53.2	13.23	629,085.40	804,358.10
9,647.0	46.80	173.90	9,593.5	5,652.5	-68.4	151.8	75.5	16.34	629,063.21	804,360.32
9,679.0	53.00	174.40	9,614.1	5,673.1	-92.7	154.3	99.9	19.41	629,038.87	804,362.81
9,711.0	59.30	174.40	9,631.9	5,690.9	-119.2	156.9	126.4	19.69	629,012.43	804,365.40
9,743.0	63.10	175.10	9,647.4	5,706.4	-147.1	159.4	154.4	12.03	628,984.52	804,367.96
9,775.0	64.80	175.30	9,661.4	5,720.4	-175.7	161.8	183.2	5.34	628,955.87	804,370.37
9,807.0	66.10	175.50	9,674.7	5,733.7	-204.7	164.2	212.3	4.10	628,926.86	804,372.70
9,839.0	68.90	175.10	9,686.9	5,745.9	-234.2	166.6	241.8	8.83	628,897.39	804,375.12
9,871.0	72.40	174.20	9,697.5	5,756.5	-264.3	169.4	271.9	11.25	628,867.34	804,377.94
9,903.0	74.40	175.20	9,706.7	5,765.7	-294.8	172.2	302.6	6.93	628,836.81	804,380.77
9,935.0	76.50	174.60	9,714.7	5,773.7	-325.6	175.0	333.5	6.81	628,805.96	804,383.53
9,967.0	79.50	173.80	9,721.4	5,780.4	-356.8	178.2	364.8	9.69	628,774.82	804,386.69
9,999.0	82.00	172.50	9,726.5	5,785.5	-388.1	181.9	396.3	8.78	628,743.46	804,390.46
10,030.0	85.60	173.20	9,729.9	5,788.9	-418.7	185.8	427.0	11.83	628,712.89	804,394.29
10,062.0	88.90	175.30	9,731.4	5,790.4	-450.5	189.0	458.9	12.22	628,681.09	804,397.49
10,094.0	89.20	176.20	9,731.9	5,790.9	-482.4	191.3	490.9	2.96	628,649.19	804,399.86
10,125.0	89.20	175.80	9,732.4	5,791.4	-513.3	193.5	521.9	1.29	628,618.27	804,402.03
10,157.0	90.60	177.00	9,732.4	5,791.4	-545.3	195.5	553.9	5.76	628,586.33	804,404.04
10,182.0	90.99	178.95	9,732.1	5,791.1	-570.3	196.4	578.9	7.97	628,561.35	804,404.92
Cross North Hard Boundary @ 10182ft MD										
10,189.0	91.10	179.50	9,732.0	5,791.0	-577.2	196.5	585.9	7.97	628,554.35	804,405.01
10,220.0	91.60	179.90	9,731.2	5,790.2	-608.2	196.6	616.8	2.07	628,523.36	804,405.18
10,251.0	91.70	179.30	9,730.3	5,789.3	-639.2	196.9	647.8	1.96	628,492.37	804,405.39
10,282.0	92.20	179.90	9,729.3	5,788.3	-670.2	197.1	678.7	2.52	628,461.39	804,405.61
10,296.0	92.00	179.70	9,728.8	5,787.8	-684.2	197.1	692.7	2.02	628,447.40	804,405.66

Company:	B.C Operating, Inc.	Local Co-ordinate Reference:	Well Nighthawk State Com #3H
Project:	Lea County	TVD Reference:	WELL @ 3941.0usft (Original Well Elev)
Site:	Nighthawk State Com #3H	MD Reference:	WELL @ 3941.0usft (Original Well Elev)
Well:	Nighthawk State Com #3H	North Reference:	Grid
Wellbore:	Nighthawk State Com #3H	Survey Calculation Method:	Minimum Curvature
Design:	Nighthawk State Com #3H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
10,315.0	91.40	179.40	9,728.2	5,787.2	-703.2	197.3	711.7	3.53	628,428.41	804,405.81	
10,347.0	88.50	179.60	9,728.2	5,787.2	-735.2	197.6	743.7	9.08	628,396.42	804,406.09	
10,378.0	86.50	179.90	9,729.6	5,788.6	-766.2	197.7	774.6	6.52	628,365.45	804,406.22	
10,410.0	86.60	180.60	9,731.5	5,790.5	-798.1	197.6	806.5	2.21	628,333.51	804,406.08	
10,441.0	86.60	179.90	9,733.3	5,792.3	-829.0	197.4	837.4	2.25	628,302.56	804,405.95	
10,473.0	86.50	179.50	9,735.3	5,794.3	-861.0	197.6	869.3	1.29	628,270.62	804,406.11	
10,505.0	86.70	179.30	9,737.2	5,796.2	-892.9	197.9	901.3	0.88	628,238.68	804,406.45	
10,537.0	86.40	179.10	9,739.1	5,798.1	-924.9	198.4	933.2	1.13	628,206.74	804,406.89	
10,568.0	86.30	178.90	9,741.1	5,800.1	-955.8	198.9	964.1	0.72	628,175.81	804,407.43	
10,600.0	86.40	179.40	9,743.1	5,802.1	-987.7	199.4	996.0	1.59	628,143.88	804,407.91	
10,632.0	86.90	179.10	9,745.0	5,804.0	-1,019.7	199.8	1,027.9	1.82	628,111.93	804,408.33	
10,663.0	87.10	179.60	9,746.6	5,805.6	-1,050.6	200.1	1,058.9	1.74	628,080.98	804,408.68	
10,695.0	87.00	179.70	9,748.2	5,807.2	-1,082.6	200.3	1,090.8	0.44	628,049.02	804,408.87	
10,727.0	87.10	179.90	9,749.9	5,808.9	-1,114.5	200.5	1,122.7	0.70	628,017.06	804,408.98	
10,758.0	87.30	179.50	9,751.4	5,810.4	-1,145.5	200.6	1,153.7	1.44	627,986.10	804,409.15	
10,790.0	87.50	179.20	9,752.9	5,811.9	-1,177.5	201.0	1,185.6	1.13	627,954.14	804,409.51	
10,885.0	86.80	179.10	9,757.6	5,816.6	-1,272.3	202.4	1,280.5	0.74	627,859.26	804,410.92	
10,917.0	86.70	179.30	9,759.4	5,818.4	-1,304.3	202.8	1,312.4	0.70	627,827.32	804,411.36	
10,981.0	87.80	179.10	9,762.5	5,821.5	-1,368.2	203.7	1,376.3	1.75	627,763.40	804,412.25	
11,044.0	88.70	178.60	9,764.4	5,823.4	-1,431.2	205.0	1,439.2	1.63	627,700.44	804,413.52	
11,076.0	89.20	178.60	9,765.0	5,824.0	-1,463.1	205.8	1,471.2	1.56	627,668.46	804,414.30	
11,108.0	88.80	179.10	9,765.5	5,824.5	-1,495.1	206.4	1,503.2	2.00	627,636.47	804,414.94	
11,171.0	89.30	179.40	9,766.6	5,825.6	-1,558.1	207.2	1,566.1	0.93	627,573.48	804,415.77	
11,203.0	89.70	178.50	9,766.9	5,825.9	-1,590.1	207.8	1,598.1	3.08	627,541.49	804,416.35	
11,266.0	90.00	178.60	9,767.0	5,826.0	-1,653.1	209.4	1,661.1	0.50	627,478.51	804,417.95	
11,293.0	90.50	179.00	9,766.9	5,825.9	-1,680.1	210.0	1,688.1	2.37	627,451.52	804,418.51	
11,330.0	89.70	178.90	9,766.8	5,825.8	-1,717.1	210.7	1,725.1	2.18	627,414.52	804,419.19	

Company:	B.C. Operating, Inc.	Local Co-ordinate Reference:	Well Nighthawk State Com #3H.
Project:	Lea County	TVD Reference:	WELL @ 3941.0usft (Original Well Elev)
Site:	Nighthawk State Corn #3H	MD Reference:	WELL @ 3941.0usft (Original Well Elev)
Well:	Nighthawk State Corn #3H	North Reference:	Grid
Wellbore:	Nighthawk State Corn #3H	Survey Calculation Method:	Minimum Curvature
Design:	Nighthawk State Corn #3H	Database:	EDM 5000.1 Single User.Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northng (usft)	Easting (usft)	
11,360.0	88.50	179.20	9,767.3	5,826.3	-1,747.1	211.2	1,755.1	4.12	627,384.53	804,419.69	
11,392.0	86.80	179.20	9,768.6	5,827.6	-1,779.0	211.6	1,787.0	5.31	627,352.56	804,420.13	
11,424.0	86.60	178.90	9,770.5	5,829.5	-1,811.0	212.1	1,819.0	1.13	627,320.62	804,420.66	
11,455.0	86.80	178.80	9,772.2	5,831.2	-1,841.9	212.8	1,849.9	0.72	627,289.68	804,421.29	
11,487.0	87.30	179.00	9,773.9	5,832.9	-1,873.9	213.4	1,881.8	1.68	627,257.73	804,421.90	
11,519.0	87.40	178.50	9,775.4	5,834.4	-1,905.8	214.1	1,913.8	1.59	627,225.77	804,422.60	
11,550.0	86.40	178.70	9,777.0	5,836.0	-1,936.8	214.8	1,944.7	3.29	627,194.82	804,423.35	
11,582.0	86.40	178.60	9,779.1	5,838.1	-1,968.7	215.6	1,976.7	0.31	627,162.90	804,424.10	
11,614.0	86.90	178.70	9,780.9	5,839.9	-2,000.6	216.3	2,008.6	1.59	627,130.96	804,424.86	
11,646.0	87.00	178.60	9,782.6	5,841.6	-2,032.6	217.1	2,040.6	0.44	627,099.01	804,425.61	
11,742.0	87.30	178.40	9,787.4	5,846.4	-2,128.4	219.6	2,136.4	0.38	627,003.17	804,428.12	
11,831.0	87.50	178.00	9,791.4	5,850.4	-2,217.3	222.4	2,225.3	0.50	626,914.30	804,430.91	
11,868.0	87.30	178.30	9,793.1	5,852.1	-2,254.2	223.6	2,262.3	0.97	626,877.36	804,432.11	
11,900.0	87.20	177.40	9,794.7	5,853.7	-2,286.2	224.8	2,294.2	2.83	626,845.42	804,433.31	
11,929.0	87.40	177.50	9,796.0	5,855.0	-2,315.1	226.1	2,323.2	0.77	626,816.48	804,434.59	
11,965.0	87.20	177.60	9,797.7	5,856.7	-2,351.0	227.6	2,359.2	0.62	626,780.55	804,436.13	
11,996.0	87.00	178.30	9,799.3	5,858.3	-2,382.0	228.7	2,390.1	2.35	626,749.61	804,437.24	
12,023.0	85.90	178.90	9,801.0	5,860.0	-2,408.9	229.4	2,417.1	4.64	626,722.67	804,437.90	
12,059.0	85.80	178.60	9,803.6	5,862.6	-2,444.8	230.2	2,453.0	0.88	626,686.78	804,438.68	
12,091.0	86.00	178.60	9,805.9	5,864.9	-2,476.7	230.9	2,484.9	0.62	626,654.87	804,439.46	
12,121.0	85.80	178.30	9,808.0	5,867.0	-2,506.6	231.7	2,514.8	1.20	626,624.95	804,440.27	
12,155.0	86.00	178.40	9,810.4	5,869.4	-2,540.5	232.7	2,548.7	0.66	626,591.06	804,441.25	
12,186.0	86.60	179.00	9,812.4	5,871.4	-2,571.5	233.4	2,579.6	2.73	626,560.13	804,441.95	
12,215.0	86.50	178.90	9,814.2	5,873.2	-2,600.4	233.9	2,608.5	0.49	626,531.19	804,442.48	
12,247.0	86.80	178.40	9,816.0	5,875.0	-2,632.4	234.7	2,640.5	1.82	626,499.25	804,443.23	
12,278.0	87.50	178.60	9,817.6	5,876.6	-2,663.3	235.5	2,671.4	2.35	626,468.30	804,444.04	
12,310.0	87.80	179.00	9,818.9	5,877.9	-2,695.3	236.2	2,703.4	1.56	626,436.33	804,444.71	

Company: B.C Operating, Inc.		Local Co-ordinate Reference:		Well Nighthawk State Corn #3H	
Project: Lea County		TVD Reference:		WELL @ 3941.0usft (Original Well Elev)	
Site: Nighthawk State Corn #3H		MD Reference:		WELL @ 3941.0usft (Original Well Elev)	
Well: Nighthawk State Corn #3H		North Reference:		Grid	
Wellbore: Nighthawk State Corn #3H		Survey Calculation Method:		Minimum Curvature	
Design: Nighthawk State Corn #3H		Database:		EDM 5000.1 Single User Db	

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)	
12,342.0	88.00	177.90	9,820.1	5,879.1	-2,727.2	237.0	2,735.4	3.49	626,404.37	804,445.58	
12,373.0	88.20	178.70	9,821.1	5,880.1	-2,758.2	238.0	2,766.4	2.66	626,373.40	804,446.50	
12,405.0	88.40	178.80	9,822.0	5,881.0	-2,790.2	238.7	2,798.3	0.70	626,341.42	804,447.19	
12,437.0	87.90	178.60	9,823.1	5,882.1	-2,822.2	239.4	2,830.3	1.68	626,309.44	804,447.92	
12,469.0	87.40	178.60	9,824.4	5,883.4	-2,854.1	240.2	2,862.3	1.56	626,277.48	804,448.70	
12,500.0	87.70	178.40	9,825.7	5,884.7	-2,885.1	241.0	2,893.2	1.16	626,246.52	804,449.51	
12,532.0	88.10	178.40	9,826.9	5,885.9	-2,917.0	241.9	2,925.2	1.25	626,214.55	804,450.40	
12,567.0	87.40	178.90	9,828.3	5,887.3	-2,952.0	242.7	2,960.2	2.46	626,179.59	804,451.23	
12,598.0	86.50	179.70	9,829.9	5,888.9	-2,983.0	243.1	2,991.1	3.88	626,148.64	804,451.61	
12,645.0	86.00	179.30	9,833.0	5,892.0	-3,029.9	243.5	3,038.0	1.36	626,101.74	804,452.02	
12,692.0	86.20	180.30	9,836.2	5,895.2	-3,076.8	243.6	3,084.8	2.16	626,054.85	804,452.18	
12,742.0	86.30	179.90	9,839.5	5,898.5	-3,126.6	243.6	3,134.6	0.82	626,004.96	804,452.09	
12,789.0	86.60	179.30	9,842.4	5,901.4	-3,173.6	243.9	3,181.5	1.43	625,958.05	804,452.42	
12,836.0	87.00	179.30	9,845.0	5,904.0	-3,220.5	244.5	3,228.4	0.85	625,911.13	804,452.99	
12,884.0	87.20	178.80	9,847.4	5,906.4	-3,268.4	245.3	3,276.3	1.12	625,863.19	804,453.79	
12,931.0	87.00	179.50	9,849.8	5,908.8	-3,315.3	246.0	3,323.2	1.55	625,816.26	804,454.48	
12,973.0	87.40	179.10	9,851.8	5,910.8	-3,357.3	246.5	3,365.2	1.35	625,774.31	804,455.00	
13,031.0	87.70	178.90	9,854.3	5,913.3	-3,415.2	247.5	3,423.1	0.62	625,716.37	804,456.01	
13,081.0	87.80	178.80	9,856.3	5,915.3	-3,465.2	248.5	3,473.0	0.28	625,666.42	804,457.01	
13,132.0	87.80	178.70	9,858.2	5,917.2	-3,516.1	249.6	3,524.0	0.20	625,615.47	804,458.12	
13,174.0	87.50	178.50	9,860.0	5,919.0	-3,558.1	250.6	3,565.9	0.86	625,573.52	804,459.15	
13,224.0	87.70	178.90	9,862.1	5,921.1	-3,608.0	251.8	3,615.9	0.89	625,523.58	804,460.28	
13,271.0	87.70	178.50	9,863.9	5,922.9	-3,655.0	252.8	3,662.8	0.85	625,476.63	804,461.35	
13,317.0	87.70	178.80	9,865.8	5,924.8	-3,700.9	253.9	3,708.8	0.65	625,430.68	804,462.43	
13,366.0	87.60	178.40	9,867.8	5,926.8	-3,749.9	255.1	3,757.7	0.84	625,381.73	804,463.63	
13,417.0	87.50	178.10	9,870.0	5,929.0	-3,800.8	256.7	3,808.7	0.62	625,330.80	804,465.18	
13,461.0	87.70	177.80	9,871.8	5,930.8	-3,844.7	258.2	3,852.6	0.82	625,286.87	804,466.75	

Company: B.C. Operating, Inc.
Project: Lea County
Site: Nighthawk State Com #3H
Well: Nighthawk State Com #3H
Design: Nighthawk State Com #3H

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Nighthawk State Com #3H
WELL @ 3941.0usft (Original Well Elev)
WELL @ 3941.0usft (Original Well Elev)
Grid
Minimum Curvature
EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi/azimuth (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
13,515.0	87.60	177.10	9,874.0	5,933.0	-3,898.6	260.6	3,906.6	1.31	625,232.97	804,469.15
13,560.0	87.40	177.90	9,876.0	5,935.0	-3,943.5	262.6	3,951.5	1.83	625,188.06	804,471.12
13,612.0	87.60	177.70	9,878.3	5,937.3	-3,995.5	264.6	4,003.5	0.54	625,136.14	804,473.11
13,655.0	87.90	177.40	9,880.0	5,939.0	-4,038.4	266.4	4,046.5	0.99	625,093.22	804,474.95
13,703.0	86.60	178.10	9,882.3	5,941.3	-4,086.3	268.3	4,094.4	3.08	625,045.31	804,476.83
13,750.0	86.00	177.90	9,885.3	5,944.3	-4,133.2	269.9	4,141.3	1.35	624,998.44	804,478.47
13,800.0	85.80	177.30	9,888.9	5,947.9	-4,183.0	272.0	4,191.2	1.26	624,948.61	804,480.55
13,846.0	86.20	177.20	9,892.1	5,951.1	-4,228.8	274.2	4,237.0	0.90	624,902.77	804,482.76
13,892.0	86.80	177.10	9,894.9	5,953.9	-4,274.7	276.5	4,283.0	1.32	624,856.92	804,485.04
13,941.0	87.00	177.00	9,897.5	5,956.5	-4,323.5	279.0	4,331.9	0.46	624,808.05	804,487.56
13,988.0	87.30	175.90	9,899.9	5,958.9	-4,370.4	281.9	4,378.8	2.42	624,761.20	804,490.46
14,036.0	87.50	176.10	9,902.1	5,961.1	-4,418.2	285.3	4,426.8	0.59	624,713.37	804,493.81
14,089.0	86.90	176.20	9,904.6	5,963.6	-4,471.0	288.8	4,479.7	1.15	624,660.55	804,497.36
14,131.0	87.10	176.50	9,906.8	5,965.8	-4,512.9	291.5	4,521.6	1.06	624,618.69	804,500.00
14,209.0	87.40	176.70	9,910.6	5,969.6	-4,590.7	296.0	4,599.5	0.41	624,540.92	804,504.55
14,228.0	87.40	176.50	9,911.4	5,970.4	-4,609.6	297.1	4,618.5	1.05	624,521.97	804,505.67
14,277.0	88.00	175.50	9,913.4	5,972.4	-4,658.5	300.6	4,657.5	2.38	624,473.13	804,509.09
14,321.0	88.90	176.00	9,914.6	5,973.6	-4,702.3	303.8	4,711.4	2.34	624,429.27	804,512.35
14,368.0	88.60	176.30	9,915.6	5,974.6	-4,749.2	307.0	4,758.4	0.90	624,382.38	804,515.50
14,417.0	88.00	176.40	9,917.1	5,976.1	-4,798.1	310.1	4,807.4	1.24	624,333.50	804,518.62
14,469.0	88.20	177.10	9,918.8	5,977.8	-4,850.0	313.0	4,859.3	1.40	624,281.62	804,521.57
14,514.0	88.70	177.80	9,920.0	5,979.0	-4,894.9	315.0	4,904.3	1.91	624,236.68	804,523.57
14,609.0	88.50	178.20	9,922.3	5,981.3	-4,989.8	318.4	4,999.3	0.47	624,141.76	804,526.88
14,703.0	89.10	176.80	9,924.3	5,983.3	-5,083.7	322.5	5,093.3	1.62	624,047.88	804,530.98
14,797.0	89.70	176.60	9,925.3	5,984.3	-5,177.6	327.9	5,187.3	0.67	623,954.04	804,536.39
14,811.0	89.79	176.51	9,925.4	5,984.4	-5,191.5	328.7	5,201.3	0.90	623,940.06	804,537.24

Cross South Hard Boundary @14811RMD

Company:	B.C. Operating, Inc.	Local Co-ordinate Reference:	Well Nighthawk State Com #3H
Project:	Lea County	TVD Reference:	WELL @ 3941.0usft (Original Well Elev)
Site:	Nighthawk State Com #3H	MD Reference:	WELL @ 3941.0usft (Original Well Elev)
Well:	Nighthawk State Com #3H	North Reference:	Grid
Wellbore:	Nighthawk State Com #3H	Survey Calculation Method:	Minimum Curvature
Design:	Nighthawk State Com #3H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi.(azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (%/100usft)	Northing (usft)	Easting (usft)	
14,844.0	90.00	176.30	9,925.4	5,984.4	-5,224.5	330.8	5,234.3	0.90	623,907.13	804,539.30	
14,896.0	90.00	176.30	9,925.4	5,984.4	-5,276.4	334.1	5,286.2	0.00	623,855.24	804,542.66	
5 1/2"											

Formations			
Measured Depth (usft)	Vertical Depth (usft)	Name	Dip (°)
3,099.3	3,100.0	Base Salt	-2.60
4,733.5	4,735.0	Penrose	-2.60
3,239.3	3,240.0	Yates	-2.60
5,797.8	5,800.0	Delaware Sands	-2.60
4,463.7	4,465.0	Queen	-2.60
7,242.5	7,245.0	Bone Spring Lime	-2.60
1,959.6	1,960.0	Top Salt	-2.60
3,714.1	3,715.0	Seven Rivers	-2.60
8,862.2	8,865.0	2nd Carbonate	-2.60
1,799.6	1,800.0	Rustler	-2.60
9,239.0	9,240.0	Second Bone Spring Sand	-2.60
5,038.3	5,040.0	Grayburg	-2.60
8,772.3	8,775.0	First Bone Spring Sand	-2.60

Company:	B.C Operating, Inc.	Local Co-ordinate Reference:	Well Nighthawk State Com #3H
Project:	Lea County	TVD Reference:	WELL @ 3941.0usft (Original Well Elev)
Site:	Nighthawk State Com #3H	MD Reference:	WELL @ 3941.0usft (Original Well Elev)
Well:	Nighthawk State Com #3H	North Reference:	Grid
Wellbore:	Nighthawk State Com #3H	Survey Calculation Method:	Minimum Curvature
Design:	Nighthawk State Com #3H	Database:	EDM 5000.1 Single User Db

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,097.0	9,094.1	128.7	144.2	KOP@9097ftMD
10,182.0	9,732.1	-570.3	196.4	Cross North Hard Boundary @10182ftMD
14,811.0	9,925.4	-5,191.5	328.7	Cross South Hard Boundary @14811ftMD

Checked By:  Approved By:  Date: December 4, 2014