Magpie Operating, Inc.

Well Name: **Bunker 8-4H**

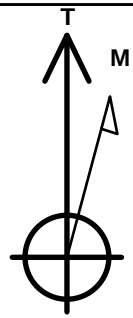
Surface Location: Bunker 8 Well Pad Sec.29-T5N-R68W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 4991.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	377786.17	3130398.13	40.369480	-105.032010	

Original Well Elev WELL @ 5007.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 2050'FSL, 2275'FWL, SEC.29	1.0	0.0	0.0	Point
BHL 1762'FSL, 1984'FEL, SEC.30	4575.0	-280.1	-4257.8	Point
LPL 1779'FSL, 652'FEL, SEC.29	4680.0	-291.3	2312.8	Point



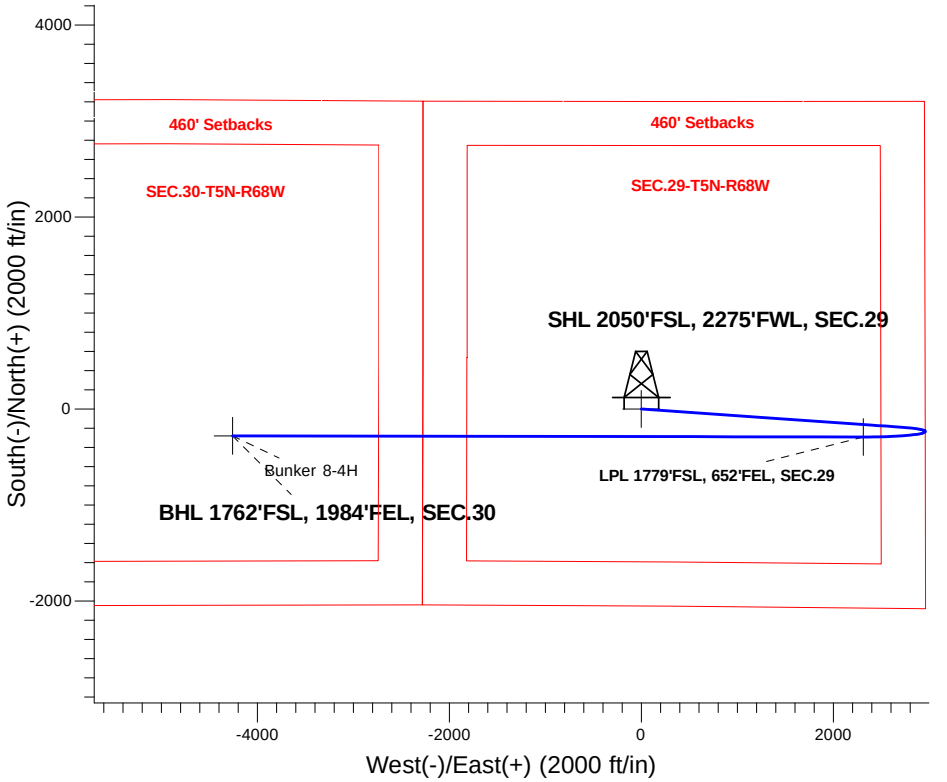
Azimuths to True North
Magnetic North: 8.37°

Magnetic Field
Strength: 52204.5snT
Dip Angle: 66.62°
Date: 12/7/2018
Model: HDGM

Bunker 8 Well Pad Sec.29-T5N-R68W
Bunker 8-4H
Plan #2 (12-06-18)
9:32, December 07 2018

ANNOTATIONS

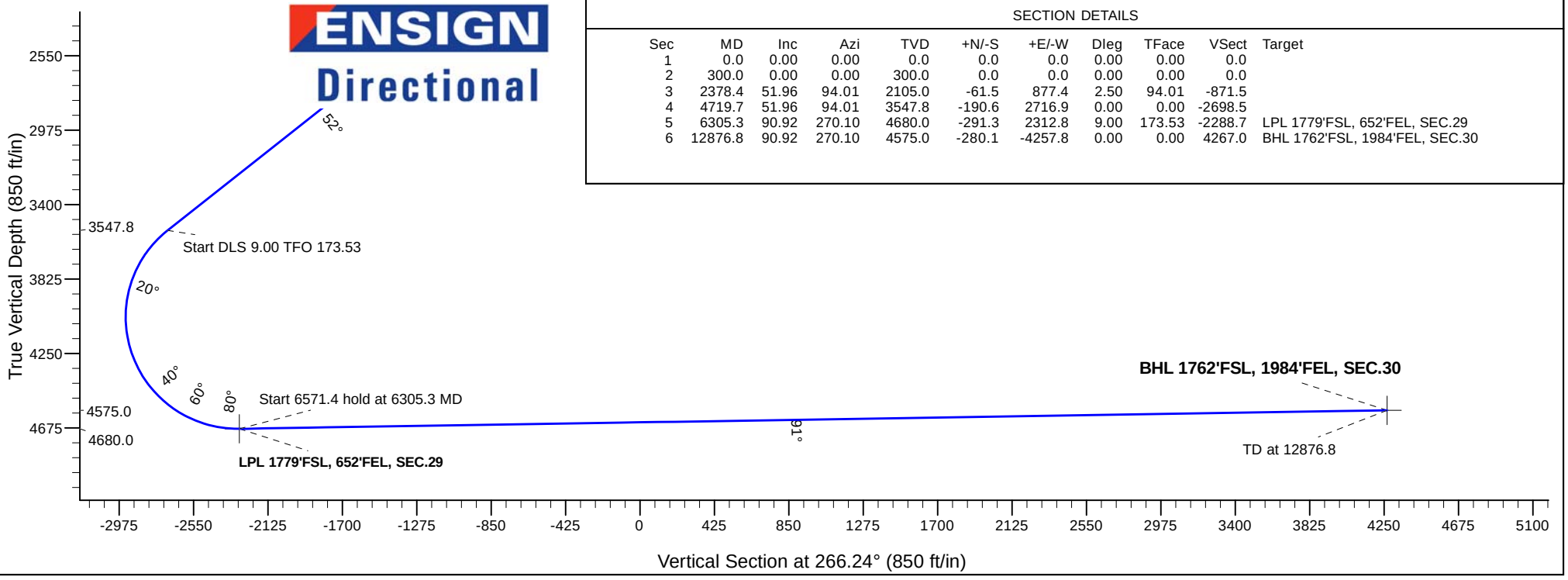
TVD	MD	Annotation
300.0	300.0	KOP - Start Build 2.50
2105.0	2378.4	Start 2341.4 hold at 2378.4 MD
3547.8	4719.7	Start DLS 9.00 TFO 173.53
4680.0	6305.3	Start 6571.4 hold at 6305.3 MD
4575.0	12876.8	TD at 12876.8



ENSIGN Directional

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	2378.4	51.96	94.01	2105.0	-61.5	877.4	2.50	94.01	-871.5	
4	4719.7	51.96	94.01	3547.8	-190.6	2716.9	0.00	0.00	-2698.5	
5	6305.3	90.92	270.10	4680.0	-291.3	2312.8	9.00	173.53	-2288.7	LPL 1779'FSL, 652'FEL, SEC.29
6	12876.8	90.92	270.10	4575.0	-280.1	-4257.8	0.00	0.00	4267.0	BHL 1762'FSL, 1984'FEL, SEC.30



Magpie Operating, Inc.

SEC.29-T5N-R68W
Bunker 8 Well Pad Sec.29-T5N-R68W
Bunker 8-4H

Wellbore #1

Plan: Plan #2 (12-06-18)

Standard Planning Report

07 December, 2018

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Company:	Magpie Operating, Inc.	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**North Reference:**	True
Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (12-06-18)		

Project SEC.29-T5N-R68W, Laramier County, CO

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site Bunker 8 Well Pad Sec.29-T5N-R68W

Site Position:		**Northing:**	1,377,695.11 usft	**Latitude:**	40.369230
From:	Lat/Long	**Easting:**	3,130,398.62 usft	**Longitude:**	-105.032010
Position Uncertainty:	0.0 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.30 °

Well Bunker 8-4H

Well Position	**+N/-S**	91.1 ft	**Northing:**	1,377,786.17 usft	**Latitude:**	40.369480
	+E/-W	0.0 ft	**Easting:**	3,130,398.13 usft	**Longitude:**	-105.032010
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	0.0 ft	**Ground Level:**	4,991.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/7/2018	8.37	66.62	52,205

Design Plan #2 (12-06-18)

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	266.24

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,378.4	51.96	94.01	2,105.0	-61.5	877.4	2.50	2.50	0.00	94.01	
4,719.7	51.96	94.01	3,547.8	-190.6	2,716.9	0.00	0.00	0.00	0.00	
6,305.3	90.92	270.10	4,680.0	-291.3	2,312.8	9.00	2.46	11.11	173.53	LPL 1779'FSL, 652'FE
12,876.8	90.92	270.10	4,575.0	-280.1	-4,257.8	0.00	0.00	0.00	0.00	BHL 1762'FSL, 1984'I

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Company:	Magpie Operating, Inc.	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**North Reference:**	True
Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (12-06-18)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.50									
400.0	2.50	94.01	400.0	-0.2	2.2	-2.2	2.50	2.50	0.00
500.0	5.00	94.01	499.7	-0.6	8.7	-8.6	2.50	2.50	0.00
600.0	7.50	94.01	599.1	-1.4	19.6	-19.4	2.50	2.50	0.00
700.0	10.00	94.01	698.0	-2.4	34.7	-34.5	2.50	2.50	0.00
800.0	12.50	94.01	796.0	-3.8	54.2	-53.8	2.50	2.50	0.00
900.0	15.00	94.01	893.2	-5.5	77.9	-77.4	2.50	2.50	0.00
1,000.0	17.50	94.01	989.2	-7.4	105.8	-105.1	2.50	2.50	0.00
1,100.0	20.00	94.01	1,083.9	-9.7	137.9	-136.9	2.50	2.50	0.00
1,200.0	22.50	94.01	1,177.0	-12.2	174.0	-172.9	2.50	2.50	0.00
1,300.0	25.00	94.01	1,268.6	-15.0	214.2	-212.8	2.50	2.50	0.00
1,400.0	27.50	94.01	1,358.3	-18.1	258.3	-256.6	2.50	2.50	0.00
1,500.0	30.00	94.01	1,445.9	-21.5	306.3	-304.2	2.50	2.50	0.00
1,600.0	32.50	94.01	1,531.4	-25.1	358.0	-355.6	2.50	2.50	0.00
1,700.0	35.00	94.01	1,614.5	-29.0	413.5	-410.7	2.50	2.50	0.00
1,800.0	37.50	94.01	1,695.2	-33.1	472.4	-469.2	2.50	2.50	0.00
1,900.0	40.00	94.01	1,773.2	-37.5	534.9	-531.3	2.50	2.50	0.00
2,000.0	42.50	94.01	1,848.3	-42.1	600.6	-596.6	2.50	2.50	0.00
2,100.0	45.00	94.01	1,920.6	-47.0	669.6	-665.1	2.50	2.50	0.00
2,200.0	47.50	94.01	1,989.7	-52.0	741.7	-736.7	2.50	2.50	0.00
2,300.0	50.00	94.01	2,055.6	-57.3	816.7	-811.1	2.50	2.50	0.00
2,378.4	51.96	94.01	2,105.0	-61.5	877.4	-871.5	2.50	2.50	0.00
Start 2341.4 hold at 2378.4 MD									
2,400.0	51.96	94.01	2,118.3	-62.7	894.4	-888.3	0.00	0.00	0.00
2,500.0	51.96	94.01	2,179.9	-68.3	973.0	-966.4	0.00	0.00	0.00
2,600.0	51.96	94.01	2,241.6	-73.8	1,051.5	-1,044.4	0.00	0.00	0.00
2,700.0	51.96	94.01	2,303.2	-79.3	1,130.1	-1,122.4	0.00	0.00	0.00
2,800.0	51.96	94.01	2,364.8	-84.8	1,208.6	-1,200.5	0.00	0.00	0.00
2,900.0	51.96	94.01	2,426.4	-90.3	1,287.2	-1,278.5	0.00	0.00	0.00
3,000.0	51.96	94.01	2,488.0	-95.8	1,365.8	-1,356.5	0.00	0.00	0.00
3,100.0	51.96	94.01	2,549.7	-101.3	1,444.3	-1,434.6	0.00	0.00	0.00
3,200.0	51.96	94.01	2,611.3	-106.8	1,522.9	-1,512.6	0.00	0.00	0.00
3,300.0	51.96	94.01	2,672.9	-112.3	1,601.5	-1,590.6	0.00	0.00	0.00
3,400.0	51.96	94.01	2,734.5	-117.9	1,680.0	-1,668.7	0.00	0.00	0.00
3,500.0	51.96	94.01	2,796.1	-123.4	1,758.6	-1,746.7	0.00	0.00	0.00
3,600.0	51.96	94.01	2,857.8	-128.9	1,837.2	-1,824.7	0.00	0.00	0.00
3,700.0	51.96	94.01	2,919.4	-134.4	1,915.7	-1,902.8	0.00	0.00	0.00
3,800.0	51.96	94.01	2,981.0	-139.9	1,994.3	-1,980.8	0.00	0.00	0.00
3,900.0	51.96	94.01	3,042.6	-145.4	2,072.9	-2,058.8	0.00	0.00	0.00
4,000.0	51.96	94.01	3,104.3	-150.9	2,151.4	-2,136.9	0.00	0.00	0.00
4,100.0	51.96	94.01	3,165.9	-156.4	2,230.0	-2,214.9	0.00	0.00	0.00
4,200.0	51.96	94.01	3,227.5	-161.9	2,308.6	-2,292.9	0.00	0.00	0.00
4,300.0	51.96	94.01	3,289.1	-167.5	2,387.1	-2,371.0	0.00	0.00	0.00
4,400.0	51.96	94.01	3,350.7	-173.0	2,465.7	-2,449.0	0.00	0.00	0.00
4,500.0	51.96	94.01	3,412.4	-178.5	2,544.3	-2,527.0	0.00	0.00	0.00
4,600.0	51.96	94.01	3,474.0	-184.0	2,622.8	-2,605.1	0.00	0.00	0.00
4,700.0	51.96	94.01	3,535.6	-189.5	2,701.4	-2,683.1	0.00	0.00	0.00
4,719.7	51.96	94.01	3,547.8	-190.6	2,716.9	-2,698.5	0.00	0.00	0.00
Start DLS 9.00 TFO 173.53									

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Bunker 8-4H
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Project:	SEC.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**North Reference:**	True
Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (12-06-18)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.0	44.79	95.16	3,601.1	-195.3	2,776.7	-2,757.8	9.00	-8.94	1.44
4,900.0	35.87	97.09	3,677.2	-202.1	2,840.9	-2,821.5	9.00	-8.91	1.93
5,000.0	27.01	100.08	3,762.4	-209.8	2,892.5	-2,872.5	9.00	-8.87	2.99
5,100.0	18.26	105.68	3,854.7	-218.0	2,930.0	-2,909.4	9.00	-8.75	5.60
5,200.0	9.95	120.54	3,951.6	-226.6	2,952.6	-2,931.3	9.00	-8.31	14.86
5,300.0	5.11	184.97	4,050.9	-235.5	2,959.6	-2,937.8	9.00	-4.84	64.44
5,400.0	10.71	241.93	4,150.0	-244.3	2,951.0	-2,928.6	9.00	5.61	56.96
5,500.0	19.11	255.12	4,246.6	-252.9	2,927.0	-2,904.0	9.00	8.39	13.18
5,600.0	27.87	260.32	4,338.2	-261.0	2,888.0	-2,864.6	9.00	8.77	5.20
5,700.0	36.75	263.16	4,422.6	-268.5	2,835.2	-2,811.4	9.00	8.87	2.84
5,800.0	45.66	265.02	4,497.8	-275.2	2,769.7	-2,745.7	9.00	8.92	1.86
5,900.0	54.60	266.39	4,561.8	-280.9	2,693.2	-2,669.0	9.00	8.94	1.36
6,000.0	63.55	267.48	4,613.2	-285.5	2,607.7	-2,583.3	9.00	8.95	1.09
6,100.0	72.51	268.41	4,650.5	-288.8	2,515.1	-2,490.7	9.00	8.96	0.93
6,200.0	81.47	269.25	4,673.0	-290.7	2,417.8	-2,393.5	9.00	8.96	0.84
6,300.0	90.44	270.06	4,680.1	-291.3	2,318.1	-2,294.0	9.00	8.96	0.80
6,305.3	90.92	270.10	4,680.0	-291.3	2,312.8	-2,288.7	9.00	8.96	0.80
Start 6571.4 hold at 6305.3 MD									
6,400.0	90.92	270.10	4,678.5	-291.2	2,218.1	-2,194.2	0.00	0.00	0.00
6,500.0	90.92	270.10	4,676.9	-291.0	2,118.1	-2,094.5	0.00	0.00	0.00
6,600.0	90.92	270.10	4,675.3	-290.8	2,018.2	-1,994.7	0.00	0.00	0.00
6,700.0	90.92	270.10	4,673.7	-290.7	1,918.2	-1,895.0	0.00	0.00	0.00
6,800.0	90.92	270.10	4,672.1	-290.5	1,818.2	-1,795.2	0.00	0.00	0.00
6,900.0	90.92	270.10	4,670.5	-290.3	1,718.2	-1,695.4	0.00	0.00	0.00
7,000.0	90.92	270.10	4,668.9	-290.1	1,618.2	-1,595.7	0.00	0.00	0.00
7,100.0	90.92	270.10	4,667.3	-290.0	1,518.2	-1,495.9	0.00	0.00	0.00
7,200.0	90.92	270.10	4,665.7	-289.8	1,418.2	-1,396.1	0.00	0.00	0.00
7,300.0	90.92	270.10	4,664.1	-289.6	1,318.2	-1,296.4	0.00	0.00	0.00
7,400.0	90.92	270.10	4,662.5	-289.5	1,218.3	-1,196.6	0.00	0.00	0.00
7,500.0	90.92	270.10	4,660.9	-289.3	1,118.3	-1,096.9	0.00	0.00	0.00
7,600.0	90.92	270.10	4,659.3	-289.1	1,018.3	-997.1	0.00	0.00	0.00
7,700.0	90.92	270.10	4,657.7	-289.0	918.3	-897.3	0.00	0.00	0.00
7,800.0	90.92	270.10	4,656.1	-288.8	818.3	-797.6	0.00	0.00	0.00
7,900.0	90.92	270.10	4,654.5	-288.6	718.3	-697.8	0.00	0.00	0.00
8,000.0	90.92	270.10	4,652.9	-288.4	618.3	-598.1	0.00	0.00	0.00
8,100.0	90.92	270.10	4,651.3	-288.3	518.4	-498.3	0.00	0.00	0.00
8,200.0	90.92	270.10	4,649.7	-288.1	418.4	-398.5	0.00	0.00	0.00
8,300.0	90.92	270.10	4,648.1	-287.9	318.4	-298.8	0.00	0.00	0.00
8,400.0	90.92	270.10	4,646.5	-287.8	218.4	-199.0	0.00	0.00	0.00
8,500.0	90.92	270.10	4,644.9	-287.6	118.4	-99.3	0.00	0.00	0.00
8,600.0	90.92	270.10	4,643.3	-287.4	18.4	0.5	0.00	0.00	0.00
8,700.0	90.92	270.10	4,641.7	-287.3	-81.6	100.3	0.00	0.00	0.00
8,800.0	90.92	270.10	4,640.1	-287.1	-181.6	200.0	0.00	0.00	0.00
8,900.0	90.92	270.10	4,638.5	-286.9	-281.5	299.8	0.00	0.00	0.00
9,000.0	90.92	270.10	4,636.9	-286.7	-381.5	399.5	0.00	0.00	0.00
9,100.0	90.92	270.10	4,635.3	-286.6	-481.5	499.3	0.00	0.00	0.00
9,200.0	90.92	270.10	4,633.7	-286.4	-581.5	599.1	0.00	0.00	0.00
9,300.0	90.92	270.10	4,632.2	-286.2	-681.5	698.8	0.00	0.00	0.00
9,400.0	90.92	270.10	4,630.6	-286.1	-781.5	798.6	0.00	0.00	0.00
9,500.0	90.92	270.10	4,629.0	-285.9	-881.5	898.3	0.00	0.00	0.00
9,600.0	90.92	270.10	4,627.4	-285.7	-981.5	998.1	0.00	0.00	0.00
9,700.0	90.92	270.10	4,625.8	-285.5	-1,081.4	1,097.9	0.00	0.00	0.00
9,800.0	90.92	270.10	4,624.2	-285.4	-1,181.4	1,197.6	0.00	0.00	0.00
9,900.0	90.92	270.10	4,622.6	-285.2	-1,281.4	1,297.4	0.00	0.00	0.00

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Company:	Magpie Operating, Inc.	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**North Reference:**	True
Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (12-06-18)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.0	90.92	270.10	4,621.0	-285.0	-1,381.4	1,397.1	0.00	0.00	0.00
10,100.0	90.92	270.10	4,619.4	-284.9	-1,481.4	1,496.9	0.00	0.00	0.00
10,200.0	90.92	270.10	4,617.8	-284.7	-1,581.4	1,596.7	0.00	0.00	0.00
10,300.0	90.92	270.10	4,616.2	-284.5	-1,681.4	1,696.4	0.00	0.00	0.00
10,400.0	90.92	270.10	4,614.6	-284.4	-1,781.4	1,796.2	0.00	0.00	0.00
10,500.0	90.92	270.10	4,613.0	-284.2	-1,881.3	1,895.9	0.00	0.00	0.00
10,600.0	90.92	270.10	4,611.4	-284.0	-1,981.3	1,995.7	0.00	0.00	0.00
10,700.0	90.92	270.10	4,609.8	-283.8	-2,081.3	2,095.5	0.00	0.00	0.00
10,800.0	90.92	270.10	4,608.2	-283.7	-2,181.3	2,195.2	0.00	0.00	0.00
10,900.0	90.92	270.10	4,606.6	-283.5	-2,281.3	2,295.0	0.00	0.00	0.00
11,000.0	90.92	270.10	4,605.0	-283.3	-2,381.3	2,394.7	0.00	0.00	0.00
11,100.0	90.92	270.10	4,603.4	-283.2	-2,481.3	2,494.5	0.00	0.00	0.00
11,200.0	90.92	270.10	4,601.8	-283.0	-2,581.2	2,594.3	0.00	0.00	0.00
11,300.0	90.92	270.10	4,600.2	-282.8	-2,681.2	2,694.0	0.00	0.00	0.00
11,400.0	90.92	270.10	4,598.6	-282.7	-2,781.2	2,793.8	0.00	0.00	0.00
11,500.0	90.92	270.10	4,597.0	-282.5	-2,881.2	2,893.5	0.00	0.00	0.00
11,600.0	90.92	270.10	4,595.4	-282.3	-2,981.2	2,993.3	0.00	0.00	0.00
11,700.0	90.92	270.10	4,593.8	-282.1	-3,081.2	3,093.1	0.00	0.00	0.00
11,800.0	90.92	270.10	4,592.2	-282.0	-3,181.2	3,192.8	0.00	0.00	0.00
11,900.0	90.92	270.10	4,590.6	-281.8	-3,281.2	3,292.6	0.00	0.00	0.00
12,000.0	90.92	270.10	4,589.0	-281.6	-3,381.1	3,392.3	0.00	0.00	0.00
12,100.0	90.92	270.10	4,587.4	-281.5	-3,481.1	3,492.1	0.00	0.00	0.00
12,200.0	90.92	270.10	4,585.8	-281.3	-3,581.1	3,591.9	0.00	0.00	0.00
12,300.0	90.92	270.10	4,584.2	-281.1	-3,681.1	3,691.6	0.00	0.00	0.00
12,400.0	90.92	270.10	4,582.6	-281.0	-3,781.1	3,791.4	0.00	0.00	0.00
12,500.0	90.92	270.10	4,581.0	-280.8	-3,881.1	3,891.1	0.00	0.00	0.00
12,600.0	90.92	270.10	4,579.4	-280.6	-3,981.1	3,990.9	0.00	0.00	0.00
12,700.0	90.92	270.10	4,577.8	-280.4	-4,081.1	4,090.7	0.00	0.00	0.00
12,800.0	90.92	270.10	4,576.2	-280.3	-4,181.0	4,190.4	0.00	0.00	0.00
12,876.8	90.92	270.10	4,575.0	-280.1	-4,257.8	4,267.0	0.00	0.00	0.00
TD at 12876.8									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 2050'FSL, 2275'FW - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,377,786.18	3,130,398.13	40.369480	-105.032010
BHL 1762'FSL, 1984'FE - plan hits target center - Point	0.00	0.00	4,575.0	-280.1	-4,257.8	1,377,483.58	3,126,142.07	40.368710	-105.047290
LPL 1779'FSL, 652'FEL, - plan hits target center - Point	0.00	0.00	4,680.0	-291.3	2,312.8	1,377,507.07	3,132,712.34	40.368680	-105.023710

Database:	US_EDM	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Company:	Magpie Operating, Inc.	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Project:	SEC.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**North Reference:**	True
Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (12-06-18)		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.0	300.0	0.0	0.0	KOP - Start Build 2.50
2,378.4	2,105.0	-61.5	877.4	Start 2341.4 hold at 2378.4 MD
4,719.7	3,547.8	-190.6	2,716.9	Start DLS 9.00 TFO 173.53
6,305.3	4,680.0	-291.3	2,312.8	Start 6571.4 hold at 6305.3 MD
12,876.8	4,575.0	-280.1	-4,257.8	TD at 12876.8

ENSIGN Directional

Magpie Operating, Inc.

SEC.29-T5N-R68W
Bunker 8 Well Pad Sec.29-T5N-R68W
Bunker 8-4H

Wellbore #1
Plan #2 (12-06-18)

Anticollision Report

07 December, 2018

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Reference Plan #2 (12-06-18)

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 800.0 ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.45 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 12/7/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,876.8	Plan #2 (12-06-18) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Bunker 8 Well Pad Sec.29-T5N-R68W						
Bunker 8-1H - Wellbore #1 - Plan #2 (12-06-18)	164.5	170.5	91.1	90.4	140.719	CC
Bunker 8-1H - Wellbore #1 - Plan #2 (12-06-18)	200.0	205.8	91.1	90.2	108.382	ES
Bunker 8-1H - Wellbore #1 - Plan #2 (12-06-18)	1,900.0	1,740.2	582.3	561.1	27.434	SF
Bunker 8-2H - Wellbore #1 - Plan #2 (12-06-18)	265.6	268.6	58.3	57.1	48.749	CC
Bunker 8-2H - Wellbore #1 - Plan #2 (12-06-18)	400.0	402.3	58.7	56.8	30.852	ES
Bunker 8-2H - Wellbore #1 - Plan #2 (12-06-18)	12,876.8	13,064.5	798.4	283.7	1.551	SF
Bunker 8-3H - Wellbore #1 - Plan #2 (12-06-18)	166.3	167.3	29.1	28.5	45.301	CC
Bunker 8-3H - Wellbore #1 - Plan #2 (12-06-18)	12,876.8	12,762.3	407.8	-73.2	0.848	Level 1, ES, SF
Bunker 8-5H - Wellbore #1 - Plan #2 (12-06-18)	200.0	198.0	29.1	28.3	35.520	CC
Bunker 8-5H - Wellbore #1 - Plan #2 (12-06-18)	12,876.8	12,916.0	465.4	-33.8	0.932	Level 1, ES, SF
Bunker 8-6H - Wellbore #1 - Plan #2 (12-06-18)	200.0	196.0	61.9	61.1	75.991	CC
Bunker 8-6H - Wellbore #1 - Plan #2 (12-06-18)	300.0	295.7	62.2	60.8	45.793	ES
Bunker 8-6H - Wellbore #1 - Plan #2 (12-06-18)	4,800.0	4,735.0	556.8	391.7	3.372	SF
Bunker 8-7H - Wellbore #1 - Plan #2 (12-06-18)	300.0	294.0	91.1	89.7	66.960	CC, ES
Bunker 8-7H - Wellbore #1 - Plan #2 (12-06-18)	4,600.0	4,505.3	799.2	645.8	5.211	SF
Bunker 8-8H - Wellbore #1 - Plan #2 (12-06-18)	300.0	292.0	120.2	118.9	88.744	CC
Bunker 8-8H - Wellbore #1 - Plan #2 (12-06-18)	400.0	392.0	120.4	118.5	63.650	ES
Bunker 8-8H - Wellbore #1 - Plan #2 (12-06-18)	3,500.0	3,397.8	788.5	693.6	8.304	SF
Bunker 8-9H - Wellbore #1 - Plan #2 (12-16-18)	200.0	191.0	149.4	148.6	186.426	CC, ES
Bunker 8-9H - Wellbore #1 - Plan #2 (12-16-18)	3,000.0	2,784.6	788.0	715.5	10.859	SF

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-1H - Wellbore #1 - Plan #2 (12-06-18)

Survey Program: 0-MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	6.0	6.0	0.0	0.0	180.00	-91.1	0.0	91.1	91.1	0.01	N/A	
100.0	100.0	106.0	106.0	0.1	0.2	180.00	-91.1	0.0	91.1	90.8	0.29	312.074	
164.5	164.5	170.5	170.5	0.3	0.3	180.00	-91.1	0.0	91.1	90.4	0.65	140.719	CC
200.0	200.0	205.8	205.8	0.4	0.4	180.00	-91.1	0.0	91.1	90.2	0.84	108.382	ES
300.0	300.0	302.9	302.9	0.7	0.7	179.61	-92.8	0.6	92.9	91.5	1.36	68.490	
400.0	400.0	400.0	399.8	1.0	0.9	85.70	-97.6	2.4	97.7	95.8	1.87	52.246	
500.0	499.7	496.2	495.7	1.2	1.2	87.40	-105.4	5.3	105.4	103.0	2.41	43.736	
600.0	599.1	592.0	590.8	1.5	1.5	90.20	-116.2	9.2	116.2	113.2	3.01	38.550	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-1H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
700.0	698.0	687.0	684.6	1.9	1.9	93.58	-129.9	14.2	130.5	126.8	3.71	35.186	
800.0	796.0	780.9	776.9	2.4	2.4	97.10	-146.2	20.2	148.6	144.0	4.51	32.903	
900.0	893.2	873.6	867.4	2.9	2.9	100.43	-165.1	27.1	170.5	165.1	5.45	31.315	
1,000.0	989.2	964.9	955.9	3.6	3.4	103.40	-186.4	34.9	196.5	190.0	6.51	30.202	
1,100.0	1,083.9	1,054.6	1,042.0	4.3	4.0	105.95	-209.9	43.5	226.5	218.8	7.70	29.425	
1,200.0	1,177.0	1,142.6	1,125.7	5.2	4.7	108.06	-235.4	52.8	260.4	251.4	9.01	28.887	
1,300.0	1,268.6	1,228.7	1,206.8	6.2	5.4	109.76	-262.7	62.8	298.1	287.7	10.45	28.523	
1,400.0	1,358.3	1,313.2	1,285.4	7.3	6.1	111.10	-291.7	73.4	339.5	327.5	12.01	28.266	
1,500.0	1,445.9	1,401.8	1,367.5	8.6	6.9	112.46	-323.1	84.8	383.6	369.9	13.71	27.984	
1,600.0	1,531.4	1,489.0	1,448.2	9.9	7.7	113.83	-354.0	96.1	429.8	414.3	15.48	27.758	
1,700.0	1,614.5	1,574.5	1,527.4	11.4	8.5	115.15	-384.3	107.2	478.2	460.9	17.33	27.588	
1,800.0	1,695.2	1,658.3	1,605.0	13.1	9.2	116.38	-414.0	118.1	529.0	509.8	19.25	27.481	
1,900.0	1,773.2	1,740.2	1,680.8	14.8	10.0	117.50	-443.0	128.7	582.3	561.1	21.23	27.434	SF
2,000.0	1,848.3	1,820.0	1,754.7	16.7	10.8	118.50	-471.3	139.1	638.1	614.8	23.25	27.440	
2,100.0	1,920.6	1,897.5	1,826.5	18.7	11.5	119.36	-498.8	149.1	696.5	671.1	25.34	27.490	
2,200.0	1,989.7	1,972.7	1,896.1	20.8	12.2	120.06	-525.4	158.9	757.4	730.0	27.47	27.573	

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-2H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	3.0	3.0	0.0	0.0	-180.00	-58.3	0.0	58.3	58.3	0.00	N/A	
100.0	100.0	103.0	103.0	0.1	0.1	-180.00	-58.3	0.0	58.3	58.0	0.28	205.536	
200.0	200.0	203.0	203.0	0.4	0.4	-180.00	-58.3	0.0	58.3	57.5	0.83	69.869	
265.6	265.6	268.6	268.6	0.6	0.6	-180.00	-58.3	0.0	58.3	57.1	1.20	48.749	CC
300.0	300.0	303.0	303.0	0.7	0.7	180.00	-58.3	0.0	58.3	56.9	1.38	42.104	
400.0	400.0	402.3	402.3	1.0	1.0	85.93	-58.9	2.2	58.7	56.8	1.90	30.852	ES
500.0	499.7	501.7	501.4	1.2	1.2	86.00	-60.5	8.6	59.9	57.5	2.44	24.554	
600.0	599.1	601.0	600.2	1.5	1.5	86.19	-63.2	19.1	61.9	58.8	3.06	20.185	
700.0	698.0	700.0	698.0	1.9	1.9	86.47	-67.0	33.7	64.6	60.8	3.81	16.944	
800.0	796.0	799.6	795.6	2.4	2.4	86.83	-71.8	52.5	68.1	63.4	4.72	14.427	
900.0	893.2	898.8	892.0	2.9	2.9	87.24	-77.7	75.3	72.4	66.5	5.81	12.455	
1,000.0	989.2	998.0	987.2	3.6	3.6	87.67	-84.6	102.1	77.4	70.3	7.10	10.896	
1,100.0	1,083.9	1,097.1	1,081.1	4.3	4.3	88.11	-92.5	132.9	83.1	74.5	8.61	9.656	
1,200.0	1,177.0	1,196.1	1,173.5	5.2	5.2	88.53	-101.4	167.5	89.6	79.3	10.34	8.666	
1,300.0	1,268.6	1,295.1	1,264.2	6.2	6.2	88.93	-111.2	206.0	96.9	84.5	12.31	7.868	
1,400.0	1,358.3	1,394.0	1,353.0	7.3	7.3	89.30	-122.1	248.1	104.8	90.3	14.52	7.218	
1,500.0	1,445.9	1,492.9	1,439.7	8.6	8.5	89.63	-133.9	293.9	113.4	96.5	16.97	6.684	
1,600.0	1,531.4	1,591.6	1,524.3	9.9	9.9	89.93	-146.5	343.3	122.7	103.1	19.67	6.241	
1,700.0	1,614.5	1,690.3	1,606.6	11.4	11.3	90.18	-160.1	396.0	132.7	110.1	22.61	5.869	
1,800.0	1,695.2	1,788.9	1,686.4	13.1	12.9	90.40	-174.5	452.2	143.3	117.5	25.81	5.554	
1,900.0	1,773.2	1,887.4	1,763.5	14.8	14.6	90.58	-189.8	511.5	154.6	125.3	29.25	5.284	
2,000.0	1,848.3	1,985.8	1,837.9	16.7	16.5	90.73	-205.8	573.9	166.4	133.5	32.95	5.051	
2,100.0	1,920.6	2,084.2	1,909.4	18.7	18.4	90.84	-222.7	639.3	178.8	142.0	36.88	4.849	
2,200.0	1,989.7	2,182.5	1,977.8	20.8	20.5	90.93	-240.2	707.6	191.8	150.8	41.06	4.671	
2,300.0	2,055.6	2,280.7	2,043.2	23.1	22.7	90.99	-258.5	778.6	205.3	159.8	45.47	4.515	
2,378.4	2,105.0	2,358.1	2,092.9	24.9	24.5	91.19	-273.2	836.0	216.2	167.1	49.09	4.405	
2,400.0	2,118.3	2,379.5	2,106.7	25.5	25.0	91.41	-277.3	851.9	219.2	169.1	50.10	4.375	
2,500.0	2,179.9	2,478.4	2,170.2	27.9	27.3	92.33	-296.2	925.4	233.2	178.4	54.81	4.255	
2,600.0	2,241.6	2,577.4	2,233.7	30.3	29.6	93.15	-315.1	998.8	247.2	187.7	59.53	4.153	
2,700.0	2,303.2	2,676.3	2,297.3	32.7	31.9	93.88	-334.0	1,072.3	261.3	197.1	64.25	4.067	
2,800.0	2,364.8	2,775.3	2,360.8	35.2	34.2	94.53	-352.9	1,145.8	275.4	206.4	68.98	3.993	
2,900.0	2,426.4	2,874.2	2,424.3	37.6	36.6	95.12	-371.7	1,219.3	289.6	215.9	73.71	3.929	
3,000.0	2,488.0	2,973.2	2,487.8	40.1	38.9	95.66	-390.6	1,292.8	303.8	225.3	78.44	3.872	
3,100.0	2,549.7	3,072.1	2,551.4	42.5	41.3	96.15	-409.5	1,366.2	318.0	234.8	83.17	3.823	
3,200.0	2,611.3	3,171.1	2,614.9	45.0	43.6	96.60	-428.4	1,439.7	332.2	244.3	87.91	3.779	
3,300.0	2,672.9	3,270.0	2,678.4	47.5	45.9	97.01	-447.3	1,513.2	346.4	253.8	92.64	3.740	
3,400.0	2,734.5	3,369.0	2,742.0	49.9	48.3	97.38	-466.2	1,586.7	360.7	263.3	97.36	3.704	
3,500.0	2,796.1	3,467.9	2,805.5	52.4	50.6	97.73	-485.1	1,660.1	374.9	272.8	102.09	3.673	
3,600.0	2,857.8	3,566.9	2,869.0	54.8	53.0	98.05	-504.0	1,733.6	389.2	282.4	106.82	3.644	
3,700.0	2,919.4	3,665.8	2,932.5	57.3	55.3	98.35	-522.9	1,807.1	403.5	292.0	111.55	3.617	
3,800.0	2,981.0	3,764.8	2,996.1	59.8	57.7	98.63	-541.8	1,880.6	417.8	301.5	116.27	3.593	
3,900.0	3,042.6	3,863.7	3,059.6	62.2	60.0	98.90	-560.6	1,954.0	432.1	311.1	121.00	3.571	
4,000.0	3,104.3	3,962.7	3,123.1	64.7	62.4	99.14	-579.5	2,027.5	446.5	320.7	125.72	3.551	
4,100.0	3,165.9	4,061.7	3,186.7	67.2	64.7	99.37	-598.4	2,101.0	460.8	330.3	130.44	3.532	
4,200.0	3,227.5	4,160.6	3,250.2	69.6	67.1	99.59	-617.3	2,174.5	475.1	340.0	135.16	3.515	
4,300.0	3,289.1	4,259.6	3,313.7	72.1	69.4	99.79	-636.2	2,247.9	489.5	349.6	139.88	3.499	
4,400.0	3,350.7	4,358.5	3,377.2	74.6	71.8	99.98	-655.1	2,321.4	503.8	359.2	144.60	3.484	
4,500.0	3,412.4	4,457.5	3,440.8	77.1	74.1	100.16	-674.0	2,394.9	518.2	368.8	149.32	3.470	
4,600.0	3,474.0	4,556.4	3,504.3	79.5	76.5	100.33	-692.9	2,468.4	532.5	378.5	154.04	3.457	
4,700.0	3,535.6	4,655.4	3,567.8	82.0	78.9	100.49	-711.8	2,541.8	546.9	388.1	158.76	3.445	
4,719.7	3,547.8	4,674.9	3,580.4	82.5	79.3	100.52	-715.5	2,556.4	549.7	390.0	159.69	3.442	
4,750.0	3,567.0	4,704.9	3,599.6	83.2	80.0	100.60	-721.2	2,578.6	553.8	392.7	161.14	3.437	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-2H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,800.0	3,601.1	4,754.4	3,631.4	84.2	81.2	100.25	-730.7	2,615.4	559.8	396.3	163.49	3.424	
4,850.0	3,637.9	4,803.6	3,663.0	85.2	82.4	99.31	-740.1	2,651.9	564.5	398.7	165.82	3.405	
4,900.0	3,677.2	4,852.3	3,694.3	86.0	83.5	97.74	-749.4	2,688.1	568.3	400.2	168.09	3.381	
4,950.0	3,718.8	4,900.1	3,725.0	86.7	84.7	95.53	-758.5	2,723.6	571.3	401.1	170.22	3.356	
5,000.0	3,762.4	4,945.5	3,754.1	87.3	85.8	92.65	-767.1	2,757.3	573.7	401.5	172.13	3.333	
5,050.0	3,807.8	4,980.7	3,777.6	87.7	86.5	89.41	-774.1	2,782.6	576.3	402.8	173.43	3.323	
5,100.0	3,854.7	5,016.4	3,802.6	88.1	87.2	85.11	-781.6	2,806.8	579.5	405.0	174.49	3.321	
5,150.0	3,902.7	5,050.0	3,827.4	88.4	87.8	78.95	-788.9	2,828.3	583.5	408.2	175.30	3.328	
5,200.0	3,951.6	5,089.2	3,857.7	88.6	88.5	68.23	-797.9	2,851.6	588.2	412.2	175.96	3.343	
5,250.0	4,001.1	5,126.5	3,887.7	88.7	89.0	46.39	-806.8	2,871.9	593.8	417.4	176.38	3.366	
5,300.0	4,050.9	5,164.5	3,919.4	88.7	89.5	1.77	-816.3	2,890.6	600.1	423.5	176.63	3.398	
5,350.0	4,100.6	5,203.4	3,952.8	88.7	90.0	-38.52	-826.2	2,907.8	607.4	430.7	176.72	3.437	
5,400.0	4,150.0	5,243.3	3,988.1	88.7	90.4	-57.17	-836.7	2,923.1	615.5	438.9	176.67	3.484	
5,450.0	4,198.7	5,284.3	4,025.3	88.6	90.7	-66.55	-847.7	2,936.4	624.6	448.0	176.51	3.538	
5,500.0	4,246.6	5,326.6	4,064.4	88.5	91.0	-72.27	-859.3	2,947.5	634.4	458.2	176.25	3.599	
5,550.0	4,293.1	5,370.5	4,105.6	88.3	91.2	-76.26	-871.6	2,956.1	645.1	469.2	175.93	3.667	
5,600.0	4,338.2	5,416.1	4,149.1	88.2	91.4	-79.33	-884.5	2,961.8	656.5	481.0	175.55	3.740	
5,650.0	4,381.4	5,463.9	4,194.8	88.1	91.5	-81.84	-898.0	2,964.4	668.7	493.5	175.13	3.818	
5,700.0	4,422.6	5,514.2	4,242.9	88.1	91.5	-84.00	-912.3	2,963.2	681.4	506.7	174.70	3.900	
5,750.0	4,461.5	5,567.3	4,293.6	88.0	91.5	-85.93	-927.4	2,957.7	694.5	520.3	174.25	3.986	
5,800.0	4,497.8	5,624.0	4,346.9	88.0	91.5	-87.72	-943.2	2,947.0	708.0	534.2	173.81	4.073	
5,850.0	4,531.3	5,684.6	4,402.7	88.1	91.4	-89.40	-959.8	2,930.0	721.6	548.2	173.40	4.162	
5,900.0	4,561.8	5,750.0	4,460.8	88.2	91.3	-91.02	-977.0	2,905.7	735.2	562.2	173.02	4.249	
5,950.0	4,589.2	5,820.8	4,520.7	88.3	91.1	-92.59	-994.8	2,872.5	748.4	575.7	172.72	4.333	
6,000.0	4,613.2	5,897.8	4,581.4	88.5	91.0	-94.12	-1,012.8	2,828.7	760.9	588.4	172.53	4.410	
6,050.0	4,633.7	5,981.7	4,641.3	88.7	90.9	-95.56	-1,030.5	2,772.7	772.5	600.0	172.53	4.478	
6,100.0	4,650.5	6,072.8	4,697.7	89.0	91.0	-96.89	-1,047.2	2,703.2	782.7	609.9	172.79	4.530	
6,150.0	4,663.7	6,171.2	4,747.1	89.4	91.2	-98.02	-1,061.9	2,619.6	791.0	617.6	173.40	4.562	
6,200.0	4,673.0	6,275.9	4,785.6	89.7	91.6	-98.88	-1,073.2	2,523.0	797.1	622.7	174.44	4.570	
8,900.0	4,638.5	9,087.9	4,789.3	141.9	141.7	-100.64	-1,073.1	-285.6	800.0	521.6	278.41	2.873	
9,000.0	4,636.9	9,187.9	4,788.3	144.6	144.4	-100.69	-1,072.8	-385.6	799.9	516.2	283.73	2.819	
9,100.0	4,635.3	9,287.9	4,787.3	147.3	147.1	-100.73	-1,072.5	-485.6	799.9	510.8	289.11	2.767	
9,200.0	4,633.7	9,387.9	4,786.3	150.1	149.9	-100.78	-1,072.1	-585.6	799.8	505.3	294.54	2.716	
9,300.0	4,632.2	9,487.9	4,785.3	152.9	152.6	-100.82	-1,071.8	-685.6	799.8	499.8	300.03	2.666	
9,400.0	4,630.6	9,587.9	4,784.3	155.7	155.4	-100.87	-1,071.4	-785.6	799.7	494.2	305.56	2.617	
9,500.0	4,629.0	9,687.9	4,783.3	158.6	158.3	-100.91	-1,071.1	-885.6	799.7	488.6	311.14	2.570	
9,600.0	4,627.4	9,787.9	4,782.4	161.5	161.1	-100.96	-1,070.8	-985.6	799.6	482.9	316.76	2.524	
9,700.0	4,625.8	9,887.9	4,781.4	164.4	164.0	-101.00	-1,070.4	-1,085.6	799.6	477.2	322.42	2.480	
9,800.0	4,624.2	9,987.9	4,780.4	167.3	166.9	-101.05	-1,070.1	-1,185.6	799.6	471.4	328.12	2.437	
9,900.0	4,622.6	10,087.9	4,779.4	170.2	169.8	-101.10	-1,069.8	-1,285.6	799.5	465.7	333.86	2.395	
10,000.0	4,621.0	10,187.8	4,778.4	173.2	172.8	-101.14	-1,069.4	-1,385.6	799.5	459.8	339.63	2.354	
10,100.0	4,619.4	10,287.8	4,777.4	176.2	175.7	-101.19	-1,069.1	-1,485.6	799.4	454.0	345.43	2.314	
10,200.0	4,617.8	10,387.8	4,776.4	179.1	178.7	-101.23	-1,068.8	-1,585.5	799.4	448.1	351.26	2.276	
10,300.0	4,616.2	10,487.8	4,775.4	182.2	181.7	-101.28	-1,068.4	-1,685.5	799.3	442.2	357.13	2.238	
10,400.0	4,614.6	10,587.8	4,774.5	185.2	184.7	-101.32	-1,068.1	-1,785.5	799.3	436.3	363.02	2.202	
10,500.0	4,613.0	10,687.8	4,773.5	188.2	187.7	-101.37	-1,067.8	-1,885.5	799.2	430.3	368.94	2.166	
10,600.0	4,611.4	10,787.8	4,772.5	191.3	190.8	-101.41	-1,067.4	-1,985.5	799.2	424.3	374.88	2.132	
10,700.0	4,609.8	10,887.8	4,771.5	194.3	193.8	-101.46	-1,067.1	-2,085.5	799.2	418.3	380.84	2.098	
10,800.0	4,608.2	10,987.8	4,770.5	197.4	196.9	-101.50	-1,066.7	-2,185.5	799.1	412.3	386.83	2.066	
10,900.0	4,606.6	11,087.8	4,769.5	200.5	200.0	-101.55	-1,066.4	-2,285.5	799.1	406.2	392.84	2.034	
11,000.0	4,605.0	11,187.8	4,768.5	203.6	203.1	-101.59	-1,066.1	-2,385.5	799.0	400.2	398.87	2.003	
11,100.0	4,603.4	11,287.8	4,767.6	206.7	206.2	-101.64	-1,065.7	-2,485.5	799.0	394.1	404.92	1.973	

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-2H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,200.0	4,601.8	11,387.8	4,766.6	209.8	209.3	-101.68	-1,065.4	-2,585.5	799.0	388.0	410.99	1.944	
11,300.0	4,600.2	11,487.8	4,765.6	213.0	212.4	-101.73	-1,065.1	-2,685.5	798.9	381.9	417.07	1.916	
11,400.0	4,598.6	11,587.8	4,764.6	216.1	215.5	-101.77	-1,064.7	-2,785.5	798.9	375.7	423.17	1.888	
11,500.0	4,597.0	11,687.8	4,763.6	219.2	218.7	-101.82	-1,064.4	-2,885.5	798.9	369.6	429.28	1.861	
11,600.0	4,595.4	11,787.8	4,762.6	222.4	221.8	-101.86	-1,064.1	-2,985.4	798.8	363.4	435.41	1.835	
11,700.0	4,593.8	11,887.8	4,761.6	225.6	225.0	-101.91	-1,063.7	-3,085.4	798.8	357.2	441.56	1.809	
11,800.0	4,592.2	11,987.8	4,760.6	228.7	228.2	-101.96	-1,063.4	-3,185.4	798.7	351.0	447.72	1.784	
11,900.0	4,590.6	12,087.8	4,759.7	231.9	231.4	-102.00	-1,063.1	-3,285.4	798.7	344.8	453.89	1.760	
12,000.0	4,589.0	12,187.8	4,758.7	235.1	234.5	-102.05	-1,062.7	-3,385.4	798.7	338.6	460.07	1.736	
12,100.0	4,587.4	12,287.8	4,757.7	238.3	237.7	-102.09	-1,062.4	-3,485.4	798.6	332.4	466.26	1.713	
12,200.0	4,585.8	12,387.8	4,756.7	241.5	240.9	-102.14	-1,062.0	-3,585.4	798.6	326.1	472.47	1.690	
12,300.0	4,584.2	12,487.8	4,755.7	244.7	244.1	-102.18	-1,061.7	-3,685.4	798.6	319.9	478.68	1.668	
12,400.0	4,582.6	12,587.8	4,754.7	247.9	247.3	-102.23	-1,061.4	-3,785.4	798.5	313.6	484.91	1.647	
12,500.0	4,581.0	12,687.8	4,753.7	251.2	250.6	-102.27	-1,061.0	-3,885.4	798.5	307.4	491.14	1.626	
12,600.0	4,579.4	12,787.8	4,752.7	254.4	253.8	-102.32	-1,060.7	-3,985.4	798.5	301.1	497.39	1.605	
12,700.0	4,577.8	12,887.8	4,751.8	257.6	257.0	-102.36	-1,060.4	-4,085.4	798.4	294.8	503.64	1.585	
12,800.0	4,576.2	12,987.8	4,750.8	260.9	260.3	-102.41	-1,060.0	-4,185.4	798.4	288.5	509.90	1.566	
12,876.8	4,575.0	13,064.5	4,750.0	263.3	262.7	-102.44	-1,059.8	-4,262.1	798.4	283.7	514.71	1.551	SF

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-3H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-180.00	-29.1	0.0	29.1	29.1	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-180.00	-29.1	0.0	29.1	28.9	0.28	104.803	
166.3	166.3	167.3	167.3	0.3	0.3	-180.00	-29.1	0.0	29.1	28.5	0.64	45.301	CC
200.0	200.0	201.0	201.0	0.4	0.4	180.00	-29.1	0.0	29.1	28.3	0.83	35.171	
300.0	300.0	300.7	300.7	0.7	0.7	175.75	-29.5	2.2	29.6	28.2	1.37	21.621	
400.0	400.0	400.3	400.0	1.0	1.0	73.89	-30.5	8.6	31.0	29.1	1.90	16.303	
500.0	499.7	499.6	498.7	1.2	1.3	67.14	-32.1	19.3	33.3	30.8	2.49	13.382	
600.0	599.1	598.7	596.7	1.5	1.7	61.65	-34.4	34.2	36.3	33.1	3.15	11.502	
700.0	698.0	697.7	693.8	1.9	2.1	57.36	-37.3	53.2	39.8	35.9	3.91	10.190	
800.0	796.0	796.4	789.7	2.4	2.7	54.09	-40.8	76.3	43.7	39.0	4.75	9.206	
900.0	893.2	895.0	884.4	2.9	3.4	51.69	-45.0	103.4	48.0	42.3	5.70	8.422	
1,000.0	989.2	993.4	977.7	3.6	4.1	49.97	-49.7	134.4	52.6	45.8	6.77	7.767	
1,100.0	1,083.9	1,091.6	1,069.3	4.3	5.0	48.79	-55.1	169.3	57.4	49.4	7.97	7.197	
1,200.0	1,177.0	1,189.7	1,159.2	5.2	6.0	48.04	-61.0	207.9	62.4	53.0	9.32	6.689	
1,300.0	1,268.6	1,287.5	1,247.2	6.2	7.1	47.64	-67.5	250.3	67.5	56.7	10.83	6.231	
1,400.0	1,358.3	1,385.2	1,333.1	7.3	8.3	47.50	-74.5	296.2	72.8	60.3	12.53	5.811	
1,500.0	1,445.9	1,482.7	1,416.8	8.6	9.6	47.58	-82.1	345.7	78.3	63.9	14.43	5.427	
1,600.0	1,531.4	1,580.1	1,498.2	9.9	11.1	47.83	-90.2	398.5	83.9	67.4	16.54	5.074	
1,700.0	1,614.5	1,677.3	1,577.1	11.4	12.6	48.22	-98.8	454.5	89.7	70.8	18.87	4.751	
1,800.0	1,695.2	1,774.3	1,653.4	13.1	14.3	48.71	-107.9	513.8	95.5	74.1	21.44	4.455	
1,900.0	1,773.2	1,871.2	1,727.0	14.8	16.1	49.29	-117.4	576.1	101.5	77.3	24.26	4.185	
2,000.0	1,848.3	1,967.9	1,797.7	16.7	18.0	49.94	-127.4	641.3	107.6	80.3	27.33	3.939	
2,100.0	1,920.6	2,064.5	1,865.6	18.7	20.1	50.64	-137.8	709.3	113.9	83.2	30.65	3.714	
2,200.0	1,989.7	2,161.0	1,930.3	20.8	22.2	51.38	-148.7	779.9	120.2	85.9	34.24	3.510	
2,300.0	2,055.6	2,257.4	1,992.0	23.1	24.4	52.15	-159.9	853.1	126.6	88.5	38.09	3.325	
2,378.4	2,105.0	2,333.1	2,038.2	24.9	26.3	52.78	-169.0	912.4	131.7	90.4	41.29	3.191	
2,400.0	2,118.3	2,354.7	2,051.2	25.5	26.8	53.01	-171.6	929.5	133.1	90.9	42.24	3.151	
2,500.0	2,179.9	2,454.5	2,111.1	27.9	29.3	54.03	-183.7	1,008.3	139.5	92.8	46.67	2.988	
2,600.0	2,241.6	2,554.2	2,171.0	30.3	31.7	54.96	-195.7	1,087.2	145.9	94.7	51.16	2.851	
2,700.0	2,303.2	2,654.0	2,230.9	32.7	34.2	55.82	-207.8	1,166.1	152.3	96.6	55.68	2.735	
2,800.0	2,364.8	2,753.8	2,290.8	35.2	36.7	56.60	-219.9	1,244.9	158.7	98.5	60.25	2.635	
2,900.0	2,426.4	2,853.5	2,350.7	37.6	39.2	57.32	-232.0	1,323.8	165.2	100.4	64.84	2.548	
3,000.0	2,488.0	2,953.3	2,410.6	40.1	41.7	57.99	-244.1	1,402.6	171.7	102.3	69.46	2.473	
3,100.0	2,549.7	3,053.1	2,470.5	42.5	44.2	58.61	-256.2	1,481.5	178.3	104.2	74.10	2.406	
3,200.0	2,611.3	3,152.8	2,530.4	45.0	46.7	59.18	-268.2	1,560.4	184.8	106.1	78.76	2.347	
3,300.0	2,672.9	3,252.6	2,590.3	47.5	49.2	59.72	-280.3	1,639.2	191.4	108.0	83.44	2.294	
3,400.0	2,734.5	3,352.4	2,650.2	49.9	51.8	60.22	-292.4	1,718.1	198.0	109.9	88.12	2.247	
3,500.0	2,796.1	3,452.2	2,710.1	52.4	54.3	60.69	-304.5	1,797.0	204.6	111.8	92.82	2.204	
3,600.0	2,857.8	3,551.9	2,770.0	54.8	56.8	61.13	-316.6	1,875.8	211.2	113.7	97.53	2.165	
3,700.0	2,919.4	3,651.7	2,829.9	57.3	59.3	61.54	-328.7	1,954.7	217.8	115.6	102.25	2.130	
3,800.0	2,981.0	3,751.5	2,889.8	59.8	61.8	61.93	-340.7	2,033.6	224.5	117.5	106.97	2.098	
3,900.0	3,042.6	3,851.2	2,949.7	62.2	64.3	62.29	-352.8	2,112.4	231.1	119.4	111.71	2.069	
4,000.0	3,104.3	3,951.0	3,009.6	64.7	66.8	62.64	-364.9	2,191.3	237.8	121.3	116.44	2.042	
4,100.0	3,165.9	4,050.8	3,069.5	67.2	69.4	62.96	-377.0	2,270.1	244.4	123.2	121.19	2.017	
4,200.0	3,227.5	4,150.5	3,129.4	69.6	71.9	63.27	-389.1	2,349.0	251.1	125.2	125.93	1.994	
4,300.0	3,289.1	4,250.3	3,189.3	72.1	74.4	63.56	-401.2	2,427.9	257.8	127.1	130.68	1.972	
4,400.0	3,350.7	4,350.1	3,249.2	74.6	76.9	63.84	-413.3	2,506.7	264.4	129.0	135.44	1.952	
4,500.0	3,412.4	4,449.8	3,309.1	77.1	79.4	64.11	-425.3	2,585.6	271.1	130.9	140.20	1.934	
4,600.0	3,474.0	4,549.6	3,369.0	79.5	82.0	64.36	-437.4	2,664.5	277.8	132.9	144.96	1.917	
4,700.0	3,535.6	4,654.5	3,433.4	82.0	84.5	64.97	-450.4	2,746.2	284.1	133.9	150.19	1.892	
4,719.7	3,547.8	4,676.4	3,448.1	82.5	85.0	65.42	-453.4	2,762.2	285.0	133.5	151.56	1.881	
4,750.0	3,567.0	4,709.7	3,471.4	83.2	85.6	66.08	-458.1	2,785.5	286.4	132.6	153.80	1.862	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-3H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,800.0	3,601.1	4,764.3	3,512.1	84.2	86.6	67.17	-466.3	2,820.9	288.9	131.6	157.33	1.836	
4,850.0	3,637.9	4,818.2	3,555.2	85.2	87.5	68.20	-475.0	2,852.2	291.8	131.1	160.67	1.816	
4,900.0	3,677.2	4,871.6	3,600.1	86.0	88.2	69.11	-484.1	2,879.5	295.1	131.3	163.78	1.802	
4,950.0	3,718.8	4,924.3	3,646.5	86.7	88.7	69.79	-493.4	2,902.5	298.7	132.1	166.61	1.793	
5,000.0	3,762.4	4,976.4	3,694.1	87.3	89.2	70.12	-503.0	2,921.4	302.8	133.6	169.13	1.790	
5,050.0	3,807.8	5,027.8	3,742.4	87.7	89.5	69.84	-512.8	2,936.1	307.2	135.8	171.32	1.793	
5,100.0	3,854.7	5,078.7	3,791.2	88.1	89.8	68.53	-522.7	2,946.6	311.9	138.7	173.17	1.801	
5,150.0	3,902.7	5,129.0	3,840.1	88.4	89.9	65.24	-532.5	2,953.1	316.9	142.2	174.67	1.814	
5,200.0	3,951.6	5,178.7	3,888.7	88.6	90.0	57.59	-542.4	2,955.7	322.2	146.4	175.82	1.832	
5,250.0	4,001.1	5,227.9	3,936.9	88.7	90.0	38.66	-552.1	2,954.3	327.7	151.0	176.63	1.855	
5,300.0	4,050.9	5,276.6	3,984.4	88.7	90.0	-3.11	-561.7	2,949.3	333.3	156.2	177.12	1.882	
5,350.0	4,100.6	5,324.8	4,030.9	88.7	89.9	-40.63	-571.1	2,940.7	339.1	161.8	177.32	1.912	
5,400.0	4,150.0	5,372.6	4,076.1	88.7	89.8	-56.58	-580.3	2,928.6	344.9	167.7	177.24	1.946	
5,450.0	4,198.7	5,419.9	4,120.0	88.6	89.7	-63.36	-589.2	2,913.3	350.8	173.9	176.92	1.983	
5,500.0	4,246.6	5,466.9	4,162.3	88.5	89.6	-66.56	-597.7	2,894.9	356.6	180.2	176.40	2.022	
5,550.0	4,293.1	5,513.5	4,202.9	88.3	89.5	-68.14	-605.9	2,873.5	362.4	186.7	175.72	2.062	
5,600.0	4,338.2	5,559.7	4,241.5	88.2	89.5	-68.87	-613.7	2,849.3	368.0	193.1	174.90	2.104	
5,650.0	4,381.4	5,605.7	4,278.1	88.1	89.4	-69.14	-621.1	2,822.5	373.5	199.5	174.00	2.146	
5,700.0	4,422.6	5,650.0	4,311.5	88.1	89.4	-69.16	-627.9	2,794.2	378.7	205.6	173.04	2.188	
5,750.0	4,461.5	5,696.8	4,344.6	88.0	89.4	-68.99	-634.6	2,761.7	383.6	211.6	172.06	2.230	
5,800.0	4,497.8	5,742.0	4,374.2	88.0	89.4	-68.75	-640.6	2,728.2	388.3	217.1	171.11	2.269	
5,850.0	4,531.3	5,787.0	4,401.4	88.1	89.5	-68.47	-646.1	2,692.7	392.6	222.4	170.20	2.306	
5,900.0	4,561.8	5,831.9	4,425.9	88.2	89.6	-68.18	-651.1	2,655.5	396.5	227.1	169.38	2.341	
5,950.0	4,589.2	5,876.6	4,447.7	88.3	89.7	-67.90	-655.5	2,616.7	400.0	231.3	168.66	2.372	
6,000.0	4,613.2	5,921.1	4,466.8	88.5	89.9	-67.64	-659.4	2,576.7	403.1	235.0	168.07	2.398	
6,050.0	4,633.7	5,965.6	4,483.0	88.7	90.1	-67.41	-662.7	2,535.4	405.7	238.1	167.62	2.421	
6,100.0	4,650.5	6,010.0	4,496.3	89.0	90.4	-67.23	-665.4	2,493.2	407.9	240.6	167.33	2.438	
6,150.0	4,663.7	6,054.3	4,506.7	89.4	90.6	-67.09	-667.5	2,450.2	409.6	242.4	167.20	2.450	
6,200.0	4,673.0	6,100.0	4,514.4	89.7	91.0	-67.00	-669.0	2,405.1	410.8	243.6	167.25	2.456	
6,250.0	4,678.5	6,142.8	4,518.7	90.1	91.3	-66.97	-669.9	2,362.6	411.5	244.0	167.44	2.457	
6,300.0	4,680.1	6,187.0	4,520.1	90.5	91.7	-66.98	-670.2	2,318.3	411.7	243.9	167.81	2.453	
6,305.3	4,680.0	6,191.7	4,520.1	90.6	91.7	-66.99	-670.2	2,313.6	411.7	243.8	167.86	2.452	
6,400.0	4,678.5	6,285.6	4,518.4	91.4	92.5	-66.96	-669.9	2,219.8	411.6	242.1	169.49	2.428	
6,500.0	4,676.9	6,385.6	4,516.6	92.4	93.5	-66.92	-669.6	2,119.8	411.5	240.1	171.41	2.401	
6,600.0	4,675.3	6,485.6	4,514.8	93.6	94.6	-66.88	-669.2	2,019.8	411.5	237.9	173.55	2.371	
6,700.0	4,673.7	6,585.6	4,512.9	94.8	95.8	-66.84	-668.9	1,919.9	411.4	235.5	175.89	2.339	
6,800.0	4,672.1	6,685.6	4,511.1	96.1	97.1	-66.81	-668.6	1,819.9	411.3	232.9	178.42	2.305	
6,900.0	4,670.5	6,785.6	4,509.3	97.6	98.5	-66.77	-668.2	1,719.9	411.3	230.1	181.14	2.270	
7,000.0	4,668.9	6,885.6	4,507.5	99.1	100.1	-66.73	-667.9	1,619.9	411.2	227.2	184.04	2.234	
7,100.0	4,667.3	6,985.6	4,505.6	100.8	101.7	-66.69	-667.6	1,519.9	411.1	224.0	187.10	2.197	
7,200.0	4,665.7	7,085.6	4,503.8	102.5	103.4	-66.65	-667.2	1,419.9	411.1	220.8	190.32	2.160	
7,300.0	4,664.1	7,185.6	4,502.0	104.3	105.1	-66.61	-666.9	1,320.0	411.0	217.3	193.70	2.122	
7,400.0	4,662.5	7,285.6	4,500.2	106.2	107.0	-66.58	-666.6	1,220.0	411.0	213.7	197.22	2.084	
7,500.0	4,660.9	7,385.6	4,498.3	108.2	109.0	-66.54	-666.2	1,120.0	410.9	210.0	200.87	2.046	
7,600.0	4,659.3	7,485.6	4,496.5	110.2	111.0	-66.50	-665.9	1,020.0	410.8	206.2	204.65	2.007	
7,700.0	4,657.7	7,585.6	4,494.7	112.4	113.1	-66.46	-665.5	920.0	410.8	202.2	208.56	1.970	
7,800.0	4,656.1	7,685.6	4,492.9	114.5	115.2	-66.42	-665.2	820.0	410.7	198.1	212.57	1.932	
7,900.0	4,654.5	7,785.6	4,491.0	116.8	117.4	-66.39	-664.9	720.1	410.6	193.9	216.70	1.895	
8,000.0	4,652.9	7,885.6	4,489.2	119.1	119.7	-66.35	-664.5	620.1	410.6	189.7	220.92	1.859	
8,100.0	4,651.3	7,985.6	4,487.4	121.4	122.1	-66.31	-664.2	520.1	410.5	185.3	225.24	1.823	
8,200.0	4,649.7	8,085.6	4,485.6	123.8	124.4	-66.27	-663.9	420.1	410.5	180.8	229.65	1.787	
8,300.0	4,648.1	8,185.6	4,483.7	126.3	126.9	-66.23	-663.5	320.1	410.4	176.3	234.14	1.753	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-3H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,400.0	4,646.5	8,285.6	4,481.9	128.8	129.4	-66.19	-663.2	220.1	410.3	171.6	238.71	1.719	
8,500.0	4,644.9	8,385.6	4,480.1	131.3	131.9	-66.16	-662.9	120.2	410.3	166.9	243.36	1.686	
8,600.0	4,643.3	8,485.6	4,478.3	133.9	134.4	-66.12	-662.5	20.2	410.2	162.1	248.07	1.654	
8,700.0	4,641.7	8,585.6	4,476.4	136.5	137.0	-66.08	-662.2	-79.8	410.2	157.3	252.85	1.622	
8,800.0	4,640.1	8,685.6	4,474.6	139.2	139.7	-66.04	-661.8	-179.8	410.1	152.4	257.69	1.591	
8,900.0	4,638.5	8,785.6	4,472.8	141.9	142.4	-66.00	-661.5	-279.8	410.0	147.4	262.59	1.562	
9,000.0	4,636.9	8,885.6	4,471.0	144.6	145.1	-65.96	-661.2	-379.7	410.0	142.4	267.55	1.532	
9,100.0	4,635.3	8,985.6	4,469.1	147.3	147.8	-65.93	-660.8	-479.7	409.9	137.4	272.55	1.504	
9,200.0	4,633.7	9,085.6	4,467.3	150.1	150.6	-65.89	-660.5	-579.7	409.9	132.3	277.61	1.476	Level 3
9,300.0	4,632.2	9,185.6	4,465.5	152.9	153.4	-65.85	-660.2	-679.7	409.8	127.1	282.70	1.450	Level 3
9,400.0	4,630.6	9,285.6	4,463.7	155.7	156.2	-65.81	-659.8	-779.7	409.7	121.9	287.85	1.423	Level 3
9,500.0	4,629.0	9,385.6	4,461.8	158.6	159.1	-65.77	-659.5	-879.7	409.7	116.7	293.03	1.398	Level 3
9,600.0	4,627.4	9,485.6	4,460.0	161.5	161.9	-65.73	-659.2	-979.6	409.6	111.4	298.25	1.373	Level 3
9,700.0	4,625.8	9,585.6	4,458.2	164.4	164.8	-65.69	-658.8	-1,079.6	409.6	106.1	303.50	1.349	Level 3
9,800.0	4,624.2	9,685.6	4,456.4	167.3	167.7	-65.66	-658.5	-1,179.6	409.5	100.7	308.79	1.326	Level 3
9,900.0	4,622.6	9,785.6	4,454.5	170.2	170.7	-65.62	-658.1	-1,279.6	409.5	95.3	314.11	1.304	Level 3
10,000.0	4,621.0	9,885.6	4,452.7	173.2	173.6	-65.58	-657.8	-1,379.6	409.4	89.9	319.47	1.282	Level 3
10,100.0	4,619.4	9,985.6	4,450.9	176.2	176.6	-65.54	-657.5	-1,479.6	409.3	84.5	324.85	1.260	Level 3
10,200.0	4,617.8	10,085.6	4,449.1	179.1	179.6	-65.50	-657.1	-1,579.5	409.3	79.0	330.25	1.239	Level 2
10,300.0	4,616.2	10,185.6	4,447.3	182.2	182.6	-65.46	-656.8	-1,679.5	409.2	73.5	335.68	1.219	Level 2
10,400.0	4,614.6	10,285.6	4,445.4	185.2	185.6	-65.43	-656.5	-1,779.5	409.2	68.0	341.14	1.199	Level 2
10,500.0	4,613.0	10,385.6	4,443.6	188.2	188.6	-65.39	-656.1	-1,879.5	409.1	62.5	346.61	1.180	Level 2
10,600.0	4,611.4	10,485.6	4,441.8	191.3	191.7	-65.35	-655.8	-1,979.5	409.1	56.9	352.11	1.162	Level 2
10,700.0	4,609.8	10,585.6	4,440.0	194.3	194.7	-65.31	-655.5	-2,079.4	409.0	51.4	357.63	1.144	Level 2
10,800.0	4,608.2	10,685.6	4,438.1	197.4	197.8	-65.27	-655.1	-2,179.4	408.9	45.8	363.17	1.126	Level 2
10,900.0	4,606.6	10,785.6	4,436.3	200.5	200.9	-65.23	-654.8	-2,279.4	408.9	40.2	368.72	1.109	Level 2
11,000.0	4,605.0	10,885.6	4,434.5	203.6	204.0	-65.19	-654.4	-2,379.4	408.8	34.5	374.30	1.092	Level 2
11,100.0	4,603.4	10,985.6	4,432.7	206.7	207.1	-65.16	-654.1	-2,479.4	408.8	28.9	379.88	1.076	Level 2
11,200.0	4,601.8	11,085.6	4,430.8	209.8	210.2	-65.12	-653.8	-2,579.4	408.7	23.2	385.49	1.060	Level 2
11,300.0	4,600.2	11,185.6	4,429.0	213.0	213.4	-65.08	-653.4	-2,679.3	408.7	17.6	391.10	1.045	Level 2
11,400.0	4,598.6	11,285.6	4,427.2	216.1	216.5	-65.04	-653.1	-2,779.3	408.6	11.9	396.73	1.030	Level 2
11,500.0	4,597.0	11,385.6	4,425.4	219.2	219.6	-65.00	-652.8	-2,879.3	408.6	6.2	402.38	1.015	Level 2
11,600.0	4,595.4	11,485.6	4,423.5	222.4	222.8	-64.96	-652.4	-2,979.3	408.5	0.5	408.03	1.001	Level 2
11,700.0	4,593.8	11,585.6	4,421.7	225.6	226.0	-64.92	-652.1	-3,079.3	408.4	-5.2	413.70	0.987	Level 1
11,800.0	4,592.2	11,685.6	4,419.9	228.7	229.1	-64.88	-651.8	-3,179.3	408.4	-11.0	419.38	0.974	Level 1
11,900.0	4,590.6	11,785.6	4,418.1	231.9	232.3	-64.85	-651.4	-3,279.2	408.3	-16.7	425.06	0.961	Level 1
12,000.0	4,589.0	11,885.6	4,416.2	235.1	235.5	-64.81	-651.1	-3,379.2	408.3	-22.5	430.76	0.948	Level 1
12,100.0	4,587.4	11,985.6	4,414.4	238.3	238.7	-64.77	-650.8	-3,479.2	408.2	-28.2	436.46	0.935	Level 1
12,200.0	4,585.8	12,085.6	4,412.6	241.5	241.9	-64.73	-650.4	-3,579.2	408.2	-34.0	442.18	0.923	Level 1
12,300.0	4,584.2	12,185.6	4,410.8	244.7	245.1	-64.69	-650.1	-3,679.2	408.1	-39.8	447.90	0.911	Level 1
12,400.0	4,582.6	12,285.6	4,408.9	247.9	248.3	-64.65	-649.7	-3,779.1	408.1	-45.6	453.63	0.900	Level 1
12,500.0	4,581.0	12,385.6	4,407.1	251.2	251.5	-64.61	-649.4	-3,879.1	408.0	-51.3	459.36	0.888	Level 1
12,600.0	4,579.4	12,485.6	4,405.3	254.4	254.8	-64.58	-649.1	-3,979.1	408.0	-57.1	465.11	0.877	Level 1
12,700.0	4,577.8	12,585.6	4,403.5	257.6	258.0	-64.54	-648.7	-4,079.1	407.9	-62.9	470.86	0.866	Level 1
12,800.0	4,576.2	12,685.6	4,401.6	260.9	261.2	-64.50	-648.4	-4,179.1	407.9	-68.7	476.61	0.856	Level 1
12,876.8	4,575.0	12,762.3	4,400.2	263.3	263.7	-64.47	-648.1	-4,255.8	407.8	-73.2	481.03	0.848	Level 1, ES, SF

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-5H - Wellbore #1 - Plan #2 (12-06-18) — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	29.1	0.0	29.2				
100.0	100.0	98.0	98.0	0.1	0.1	0.00	29.1	0.0	29.1	28.9	0.27	106.918	
200.0	200.0	198.0	198.0	0.4	0.4	0.00	29.1	0.0	29.1	28.3	0.82	35.520	CC
205.4	205.4	203.4	203.4	0.4	0.4	0.00	29.1	0.0	29.1	28.3	0.85	34.289	
300.0	300.0	297.9	297.9	0.7	0.7	4.09	29.2	2.1	29.3	27.9	1.36	21.488	
400.0	400.0	397.6	397.4	1.0	1.0	-81.86	29.4	8.5	30.2	28.3	1.90	15.885	
500.0	499.7	497.1	496.3	1.2	1.3	-74.68	29.7	19.2	32.1	29.6	2.50	12.849	
600.0	599.1	596.4	594.4	1.5	1.7	-68.68	30.1	34.2	34.8	31.6	3.19	10.920	
700.0	698.0	695.5	691.7	1.9	2.1	-63.93	30.6	53.3	38.1	34.2	3.98	9.595	
800.0	796.0	794.5	787.8	2.4	2.7	-60.31	31.2	76.6	42.1	37.2	4.88	8.621	
900.0	893.2	893.2	882.7	2.9	3.4	-57.63	32.0	104.0	46.4	40.5	5.90	7.864	
1,000.0	989.2	991.8	976.1	3.6	4.1	-55.73	32.8	135.4	51.1	44.1	7.06	7.243	
1,100.0	1,083.9	1,090.2	1,068.0	4.3	5.0	-54.43	33.8	170.7	56.2	47.8	8.36	6.714	
1,200.0	1,177.0	1,188.4	1,158.0	5.2	6.0	-53.61	34.8	209.8	61.5	51.6	9.84	6.249	
1,300.0	1,268.6	1,286.4	1,246.2	6.2	7.0	-53.17	36.0	252.6	67.0	55.5	11.48	5.837	
1,400.0	1,358.3	1,384.2	1,332.2	7.3	8.2	-53.01	37.2	299.1	72.8	59.5	13.33	5.463	
1,500.0	1,445.9	1,481.9	1,416.1	8.6	9.6	-53.08	38.6	349.1	78.8	63.5	15.39	5.124	
1,600.0	1,531.4	1,579.4	1,497.6	9.9	11.0	-53.33	40.0	402.6	85.1	67.4	17.67	4.815	
1,700.0	1,614.5	1,676.7	1,576.6	11.4	12.6	-53.71	41.6	459.4	91.5	71.3	20.19	4.534	
1,800.0	1,695.2	1,773.9	1,653.1	13.1	14.2	-54.19	43.2	519.3	98.1	75.2	22.94	4.278	
1,900.0	1,773.2	1,870.9	1,726.8	14.8	16.0	-54.76	44.9	582.4	105.0	79.0	25.95	4.045	
2,000.0	1,848.3	1,967.8	1,797.6	16.7	17.9	-55.38	46.7	648.4	112.0	82.8	29.21	3.833	
2,100.0	1,920.6	2,064.5	1,865.5	18.7	19.9	-56.05	48.5	717.2	119.2	86.4	32.73	3.641	
2,200.0	1,989.7	2,162.4	1,931.5	20.8	22.1	-56.91	50.5	789.5	126.3	89.8	36.57	3.454	
2,300.0	2,055.6	2,262.1	1,998.2	23.1	24.3	-59.06	52.5	863.6	131.6	90.5	41.13	3.200	
2,378.4	2,105.0	2,340.2	2,050.4	24.9	26.0	-61.77	54.1	921.6	134.5	89.2	45.26	2.971	
2,400.0	2,118.3	2,361.7	2,064.8	25.5	26.5	-62.65	54.5	937.6	135.1	88.7	46.47	2.908	
2,500.0	2,179.9	2,461.1	2,131.4	27.9	28.7	-66.61	56.5	1,011.5	138.6	86.5	52.10	2.661	
2,600.0	2,241.6	2,560.6	2,197.9	30.3	31.0	-70.36	58.5	1,085.4	142.7	85.0	57.70	2.474	
2,700.0	2,303.2	2,660.1	2,264.5	32.7	33.2	-73.88	60.5	1,159.4	147.4	84.2	63.24	2.331	
2,800.0	2,364.8	2,759.6	2,331.0	35.2	35.5	-77.18	62.5	1,233.3	152.7	84.0	68.69	2.223	
2,900.0	2,426.4	2,859.1	2,397.6	37.6	37.7	-80.25	64.5	1,307.2	158.4	84.3	74.01	2.140	
3,000.0	2,488.0	2,958.6	2,464.1	40.1	40.0	-83.11	66.5	1,381.1	164.5	85.3	79.20	2.077	
3,100.0	2,549.7	3,058.1	2,530.7	42.5	42.2	-85.75	68.5	1,455.1	171.0	86.7	84.26	2.029	
3,200.0	2,611.3	3,157.6	2,597.2	45.0	44.5	-88.19	70.5	1,529.0	177.8	88.6	89.19	1.994	
3,300.0	2,672.9	3,257.0	2,663.8	47.5	46.7	-90.46	72.5	1,602.9	185.0	91.0	94.00	1.968	
3,400.0	2,734.5	3,356.5	2,730.3	49.9	49.0	-92.55	74.5	1,676.8	192.4	93.7	98.69	1.949	
3,500.0	2,796.1	3,456.0	2,796.9	52.4	51.2	-94.48	76.5	1,750.8	200.0	96.7	103.28	1.937	
3,600.0	2,857.8	3,555.5	2,863.4	54.8	53.5	-96.27	78.5	1,824.7	207.9	100.1	107.76	1.929	
3,700.0	2,919.4	3,655.0	2,930.0	57.3	55.7	-97.93	80.5	1,898.6	215.9	103.7	112.16	1.925	
3,800.0	2,981.0	3,754.5	2,996.5	59.8	58.0	-99.47	82.5	1,972.5	224.1	107.6	116.48	1.924	
3,900.0	3,042.6	3,854.0	3,063.1	62.2	60.3	-100.90	84.5	2,046.5	232.5	111.7	120.73	1.926	
4,000.0	3,104.3	3,953.5	3,129.6	64.7	62.5	-102.23	86.5	2,120.4	241.0	116.0	124.92	1.929	
4,100.0	3,165.9	4,052.9	3,196.2	67.2	64.8	-103.47	88.5	2,194.3	249.6	120.5	129.05	1.934	
4,200.0	3,227.5	4,152.4	3,262.7	69.6	67.0	-104.63	90.5	2,268.2	258.3	125.2	133.13	1.940	
4,300.0	3,289.1	4,251.9	3,329.3	72.1	69.3	-105.71	92.5	2,342.1	267.1	130.0	137.16	1.948	
4,400.0	3,350.7	4,351.4	3,395.8	74.6	71.6	-106.72	94.5	2,416.1	276.0	134.9	141.15	1.956	
4,500.0	3,412.4	4,450.9	3,462.4	77.1	73.8	-107.67	96.5	2,490.0	285.0	139.9	145.11	1.964	
4,600.0	3,474.0	4,550.4	3,528.9	79.5	76.1	-108.56	98.5	2,563.9	294.1	145.0	149.03	1.973	
4,700.0	3,535.6	4,649.9	3,595.5	82.0	78.4	-109.40	100.5	2,637.8	303.2	150.3	152.93	1.983	
4,719.7	3,547.8	4,669.5	3,608.6	82.5	78.8	-109.56	100.9	2,652.4	305.0	151.3	153.70	1.985	
4,750.0	3,567.0	4,699.6	3,628.8	83.2	79.5	-110.15	101.5	2,674.8	307.6	152.8	154.82	1.987	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-5H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,800.0	3,601.1	4,749.5	3,662.1	84.2	80.6	-110.59	102.5	2,711.8	311.2	154.1	157.08	1.981	
4,850.0	3,637.9	4,799.0	3,695.3	85.2	81.8	-110.41	103.5	2,748.7	314.0	154.1	159.84	1.964	
4,900.0	3,677.2	4,842.4	3,725.2	86.0	82.7	-110.19	104.4	2,779.9	316.5	154.1	162.41	1.949	
4,950.0	3,718.8	4,885.9	3,757.4	86.7	83.5	-110.18	105.3	2,809.2	319.4	154.6	164.75	1.939	
5,000.0	3,762.4	4,929.8	3,791.9	87.3	84.2	-110.51	106.4	2,836.4	322.6	155.8	166.86	1.934	
5,050.0	3,807.8	4,974.1	3,828.4	87.7	84.8	-111.42	107.6	2,861.4	326.3	157.6	168.73	1.934	
5,100.0	3,854.7	5,018.9	3,867.1	88.1	85.3	-113.35	108.8	2,884.0	330.3	160.0	170.35	1.939	
5,150.0	3,902.7	5,064.2	3,907.6	88.4	85.8	-117.22	110.1	2,904.0	334.7	163.0	171.70	1.949	
5,200.0	3,951.6	5,110.0	3,950.1	88.6	86.2	-125.42	111.5	2,921.3	339.5	166.7	172.79	1.965	
5,250.0	4,001.1	5,156.5	3,994.2	88.7	86.5	-144.86	112.9	2,935.7	344.7	171.1	173.62	1.985	
5,300.0	4,050.9	5,203.6	4,039.9	88.7	86.7	172.91	114.4	2,946.9	350.2	176.0	174.19	2.011	
5,350.0	4,100.6	5,251.4	4,087.1	88.7	86.9	134.96	116.0	2,954.9	356.1	181.5	174.51	2.040	
5,400.0	4,150.0	5,300.0	4,135.4	88.7	87.0	118.62	117.6	2,959.3	362.2	187.6	174.61	2.074	
5,450.0	4,198.7	5,349.5	4,184.8	88.6	87.0	111.49	119.2	2,960.0	368.6	194.0	174.52	2.112	
5,500.0	4,246.6	5,399.7	4,235.0	88.5	87.0	107.98	120.9	2,956.7	375.1	200.9	174.25	2.153	
5,550.0	4,293.1	5,451.0	4,285.6	88.3	86.9	106.13	122.7	2,949.3	381.8	208.0	173.83	2.197	
5,600.0	4,338.2	5,503.2	4,336.4	88.2	86.8	105.16	124.4	2,937.7	388.6	215.3	173.31	2.242	
5,650.0	4,381.4	5,556.4	4,387.1	88.1	86.7	104.69	126.2	2,921.5	395.4	222.7	172.72	2.290	
5,700.0	4,422.6	5,610.7	4,437.2	88.1	86.6	104.52	127.9	2,900.8	402.2	230.1	172.08	2.337	
5,750.0	4,461.5	5,666.1	4,486.3	88.0	86.4	104.54	129.7	2,875.2	408.8	237.4	171.45	2.385	
5,800.0	4,497.8	5,722.5	4,533.9	88.0	86.4	104.67	131.4	2,844.9	415.2	244.4	170.84	2.431	
5,850.0	4,531.3	5,780.1	4,579.5	88.1	86.3	104.86	133.0	2,809.8	421.4	251.1	170.30	2.474	
5,900.0	4,561.8	5,838.8	4,622.5	88.2	86.3	105.10	134.6	2,769.9	427.1	257.3	169.86	2.515	
5,950.0	4,589.2	5,898.6	4,662.3	88.3	86.3	105.34	136.1	2,725.4	432.4	262.9	169.55	2.551	
6,000.0	4,613.2	5,959.3	4,698.3	88.5	86.4	105.58	137.4	2,676.5	437.2	267.9	169.38	2.581	
6,050.0	4,633.7	6,021.0	4,729.9	88.7	86.6	105.80	138.7	2,623.6	441.4	272.1	169.39	2.606	
6,100.0	4,650.5	6,083.5	4,756.6	89.0	86.9	105.99	139.8	2,567.2	445.0	275.4	169.57	2.624	
6,150.0	4,663.7	6,146.6	4,777.9	89.4	87.2	106.14	140.7	2,507.7	447.8	277.9	169.92	2.636	
6,200.0	4,673.0	6,210.3	4,793.2	89.7	87.6	106.25	141.4	2,445.9	449.9	279.5	170.45	2.640	
6,250.0	4,678.5	6,274.4	4,802.3	90.1	88.1	106.31	141.9	2,382.5	451.2	280.1	171.14	2.637	
6,300.0	4,680.1	6,338.7	4,805.0	90.5	88.6	106.32	142.2	2,318.4	451.7	279.8	171.97	2.627	
6,305.3	4,680.0	6,344.6	4,805.0	90.6	88.6	106.32	142.2	2,312.4	451.7	279.7	172.06	2.626	
6,400.0	4,678.5	6,439.3	4,803.8	91.4	89.4	106.36	142.5	2,217.7	451.9	278.3	173.67	2.602	
6,500.0	4,676.9	6,539.3	4,802.5	92.4	90.4	106.39	142.8	2,117.8	452.1	276.6	175.58	2.575	
6,600.0	4,675.3	6,639.3	4,801.2	93.6	91.5	106.43	143.0	2,017.8	452.3	274.6	177.71	2.545	
6,700.0	4,673.7	6,739.3	4,800.0	94.8	92.7	106.47	143.3	1,917.8	452.5	272.5	180.06	2.513	
6,800.0	4,672.1	6,839.3	4,798.7	96.1	94.0	106.50	143.6	1,817.8	452.7	270.1	182.62	2.479	
6,900.0	4,670.5	6,939.3	4,797.4	97.6	95.4	106.54	143.9	1,717.8	452.9	267.6	185.38	2.443	
7,000.0	4,668.9	7,039.3	4,796.2	99.1	96.9	106.58	144.2	1,617.8	453.2	264.8	188.33	2.406	
7,100.0	4,667.3	7,139.3	4,794.9	100.8	98.5	106.61	144.5	1,517.8	453.4	261.9	191.46	2.368	
7,200.0	4,665.7	7,239.3	4,793.6	102.5	100.3	106.65	144.7	1,417.8	453.6	258.8	194.76	2.329	
7,300.0	4,664.1	7,339.3	4,792.4	104.3	102.0	106.68	145.0	1,317.8	453.8	255.5	198.22	2.289	
7,400.0	4,662.5	7,439.3	4,791.1	106.2	103.9	106.72	145.3	1,217.8	454.0	252.1	201.84	2.249	
7,500.0	4,660.9	7,539.3	4,789.9	108.2	105.9	106.76	145.6	1,117.8	454.2	248.6	205.61	2.209	
7,600.0	4,659.3	7,639.3	4,788.6	110.2	107.9	106.79	145.9	1,017.9	454.4	244.9	209.51	2.169	
7,700.0	4,657.7	7,739.3	4,787.3	112.4	110.0	106.83	146.2	917.9	454.6	241.0	213.54	2.129	
7,800.0	4,656.1	7,839.3	4,786.1	114.5	112.2	106.87	146.4	817.9	454.8	237.1	217.70	2.089	
7,900.0	4,654.5	7,939.3	4,784.8	116.8	114.4	106.90	146.7	717.9	455.0	233.0	221.97	2.050	
8,000.0	4,652.9	8,039.3	4,783.5	119.1	116.7	106.94	147.0	617.9	455.2	228.8	226.35	2.011	
8,100.0	4,651.3	8,139.3	4,782.3	121.4	119.0	106.97	147.3	517.9	455.4	224.6	230.84	1.973	
8,200.0	4,649.7	8,239.3	4,781.0	123.8	121.4	107.01	147.6	417.9	455.6	220.2	235.42	1.935	
8,300.0	4,648.1	8,339.3	4,779.7	126.3	123.9	107.05	147.9	317.9	455.8	215.7	240.09	1.899	

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-5H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,400.0	4,646.5	8,439.3	4,778.5	128.8	126.4	107.08	148.1	217.9	456.0	211.2	244.84	1.862	
8,500.0	4,644.9	8,539.3	4,777.2	131.3	128.9	107.12	148.4	117.9	456.2	206.5	249.68	1.827	
8,600.0	4,643.3	8,639.3	4,775.9	133.9	131.5	107.15	148.7	17.9	456.4	201.8	254.59	1.793	
8,700.0	4,641.7	8,739.3	4,774.7	136.5	134.1	107.19	149.0	-82.0	456.6	197.1	259.57	1.759	
8,800.0	4,640.1	8,839.3	4,773.4	139.2	136.7	107.22	149.3	-182.0	456.8	192.2	264.62	1.726	
8,900.0	4,638.5	8,939.3	4,772.2	141.9	139.4	107.26	149.6	-282.0	457.0	187.3	269.74	1.694	
9,000.0	4,636.9	9,039.3	4,770.9	144.6	142.1	107.30	149.8	-382.0	457.3	182.3	274.91	1.663	
9,100.0	4,635.3	9,139.3	4,769.6	147.3	144.9	107.33	150.1	-482.0	457.5	177.3	280.14	1.633	
9,200.0	4,633.7	9,239.3	4,768.4	150.1	147.7	107.37	150.4	-582.0	457.7	172.2	285.42	1.604	
9,300.0	4,632.2	9,339.3	4,767.1	152.9	150.5	107.40	150.7	-682.0	457.9	167.1	290.75	1.575	
9,400.0	4,630.6	9,439.3	4,765.8	155.7	153.3	107.44	151.0	-782.0	458.1	162.0	296.12	1.547	
9,500.0	4,629.0	9,539.3	4,764.6	158.6	156.2	107.47	151.3	-882.0	458.3	156.7	301.54	1.520	
9,600.0	4,627.4	9,639.3	4,763.3	161.5	159.0	107.51	151.5	-982.0	458.5	151.5	307.01	1.493	Level 3
9,700.0	4,625.8	9,739.3	4,762.0	164.4	161.9	107.55	151.8	-1,082.0	458.7	146.2	312.51	1.468	Level 3
9,800.0	4,624.2	9,839.3	4,760.8	167.3	164.9	107.58	152.1	-1,181.9	458.9	140.9	318.05	1.443	Level 3
9,900.0	4,622.6	9,939.3	4,759.5	170.2	167.8	107.62	152.4	-1,281.9	459.1	135.5	323.62	1.419	Level 3
10,000.0	4,621.0	10,039.3	4,758.2	173.2	170.8	107.65	152.7	-1,381.9	459.3	130.1	329.22	1.395	Level 3
10,100.0	4,619.4	10,139.3	4,757.0	176.2	173.7	107.69	152.9	-1,481.9	459.5	124.7	334.86	1.372	Level 3
10,200.0	4,617.8	10,239.3	4,755.7	179.1	176.7	107.72	153.2	-1,581.9	459.7	119.2	340.53	1.350	Level 3
10,300.0	4,616.2	10,339.3	4,754.5	182.2	179.7	107.76	153.5	-1,681.9	460.0	113.7	346.22	1.328	Level 3
10,400.0	4,614.6	10,439.3	4,753.2	185.2	182.8	107.79	153.8	-1,781.9	460.2	108.2	351.95	1.307	Level 3
10,500.0	4,613.0	10,539.3	4,751.9	188.2	185.8	107.83	154.1	-1,881.9	460.4	102.7	357.69	1.287	Level 3
10,600.0	4,611.4	10,639.3	4,750.7	191.3	188.9	107.86	154.4	-1,981.9	460.6	97.1	363.46	1.267	Level 3
10,700.0	4,609.8	10,739.3	4,749.4	194.3	191.9	107.90	154.6	-2,081.9	460.8	91.5	369.26	1.248	Level 2
10,800.0	4,608.2	10,839.3	4,748.1	197.4	195.0	107.93	154.9	-2,181.9	461.0	85.9	375.07	1.229	Level 2
10,900.0	4,606.6	10,939.3	4,746.9	200.5	198.1	107.97	155.2	-2,281.8	461.2	80.3	380.90	1.211	Level 2
11,000.0	4,605.0	11,039.3	4,745.6	203.6	201.2	108.00	155.5	-2,381.8	461.4	74.7	386.76	1.193	Level 2
11,100.0	4,603.4	11,139.3	4,744.3	206.7	204.3	108.04	155.8	-2,481.8	461.6	69.0	392.63	1.176	Level 2
11,200.0	4,601.8	11,239.3	4,743.1	209.8	207.4	108.07	156.1	-2,581.8	461.8	63.3	398.52	1.159	Level 2
11,300.0	4,600.2	11,339.3	4,741.8	213.0	210.6	108.11	156.3	-2,681.8	462.1	57.6	404.42	1.143	Level 2
11,400.0	4,598.6	11,439.3	4,740.5	216.1	213.7	108.14	156.6	-2,781.8	462.3	51.9	410.34	1.127	Level 2
11,500.0	4,597.0	11,539.3	4,739.3	219.2	216.9	108.18	156.9	-2,881.8	462.5	46.2	416.28	1.111	Level 2
11,600.0	4,595.4	11,639.3	4,738.0	222.4	220.0	108.21	157.2	-2,981.8	462.7	40.5	422.23	1.096	Level 2
11,700.0	4,593.8	11,739.2	4,736.7	225.6	223.2	108.25	157.5	-3,081.8	462.9	34.7	428.19	1.081	Level 2
11,800.0	4,592.2	11,839.2	4,735.5	228.7	226.4	108.28	157.8	-3,181.8	463.1	28.9	434.17	1.067	Level 2
11,900.0	4,590.6	11,939.2	4,734.2	231.9	229.6	108.32	158.0	-3,281.8	463.3	23.2	440.15	1.053	Level 2
12,000.0	4,589.0	12,039.2	4,733.0	235.1	232.7	108.35	158.3	-3,381.7	463.5	17.4	446.15	1.039	Level 2
12,100.0	4,587.4	12,139.2	4,731.7	238.3	235.9	108.39	158.6	-3,481.7	463.7	11.6	452.16	1.026	Level 2
12,200.0	4,585.8	12,239.2	4,730.4	241.5	239.2	108.42	158.9	-3,581.7	464.0	5.8	458.18	1.013	Level 2
12,300.0	4,584.2	12,339.2	4,729.2	244.7	242.4	108.46	159.2	-3,681.7	464.2	0.0	464.21	1.000	Level 1
12,400.0	4,582.6	12,439.2	4,727.9	247.9	245.6	108.49	159.5	-3,781.7	464.4	-5.9	470.25	0.988	Level 1
12,500.0	4,581.0	12,539.2	4,726.6	251.2	248.8	108.53	159.7	-3,881.7	464.6	-11.7	476.30	0.975	Level 1
12,600.0	4,579.4	12,639.2	4,725.4	254.4	252.0	108.56	160.0	-3,981.7	464.8	-17.5	482.36	0.964	Level 1
12,700.0	4,577.8	12,739.2	4,724.1	257.6	255.3	108.59	160.3	-4,081.7	465.0	-23.4	488.42	0.952	Level 1
12,800.0	4,576.2	12,839.2	4,722.8	260.9	258.5	108.63	160.6	-4,181.7	465.2	-29.3	494.49	0.941	Level 1
12,876.8	4,575.0	12,916.0	4,721.9	263.3	261.0	108.66	160.8	-4,258.4	465.4	-33.8	499.16	0.932	Level 1, ES, SF

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-6H - Wellbore #1 - Plan #2 (12-06-18) — **Offset Site Error:** 0.0 ft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	61.9	0.0	62.1				
100.0	100.0	96.0	96.0	0.1	0.1	0.00	61.9	0.0	61.9	61.7	0.27	229.515	
200.0	200.0	196.0	196.0	0.4	0.4	0.00	61.9	0.0	61.9	61.1	0.82	75.991	CC
300.0	300.0	295.7	295.7	0.7	0.7	1.83	62.1	2.0	62.2	60.8	1.36	45.793	ES
400.0	400.0	395.2	394.9	1.0	1.0	-88.45	62.8	8.3	63.2	61.3	1.90	33.333	
500.0	499.7	494.4	493.6	1.2	1.3	-84.97	63.8	18.8	65.2	62.8	2.49	26.189	
600.0	599.1	593.5	591.6	1.5	1.7	-81.85	65.3	33.5	68.2	65.0	3.19	21.393	
700.0	698.0	692.4	688.6	1.9	2.1	-79.18	67.2	52.4	72.0	68.0	4.01	17.949	
800.0	796.0	791.1	784.5	2.4	2.7	-76.95	69.5	75.4	76.7	71.7	4.99	15.375	
900.0	893.2	889.5	879.2	2.9	3.3	-75.17	72.2	102.4	82.1	75.9	6.12	13.400	
1,000.0	989.2	987.8	972.4	3.6	4.1	-73.78	75.3	133.4	88.1	80.7	7.44	11.852	
1,100.0	1,083.9	1,085.9	1,064.0	4.3	4.9	-72.74	78.8	168.2	94.9	85.9	8.94	10.615	
1,200.0	1,177.0	1,183.7	1,153.8	5.2	5.9	-72.00	82.7	206.8	102.2	91.6	10.64	9.610	
1,300.0	1,268.6	1,281.3	1,241.6	6.2	7.0	-71.52	86.9	249.1	110.2	97.6	12.55	8.783	
1,400.0	1,358.3	1,378.7	1,327.4	7.3	8.2	-71.23	91.5	295.0	118.7	104.0	14.67	8.090	
1,500.0	1,445.9	1,475.9	1,411.0	8.6	9.5	-71.11	96.5	344.4	127.7	110.7	17.02	7.503	
1,600.0	1,531.4	1,572.9	1,492.2	9.9	10.9	-71.11	101.8	397.1	137.3	117.7	19.61	7.002	
1,700.0	1,614.5	1,669.7	1,571.0	11.4	12.4	-71.22	107.4	453.0	147.4	125.0	22.44	6.570	
1,800.0	1,695.2	1,766.2	1,647.1	13.1	14.0	-71.41	113.3	512.1	158.0	132.5	25.50	6.195	
1,900.0	1,773.2	1,862.6	1,720.6	14.8	15.8	-71.65	119.5	574.2	169.0	140.2	28.81	5.866	
2,000.0	1,848.3	1,958.8	1,791.2	16.7	17.7	-71.94	126.0	639.2	180.5	148.2	32.37	5.578	
2,100.0	1,920.6	2,054.8	1,858.8	18.7	19.6	-72.26	132.8	706.9	192.5	156.3	36.17	5.322	
2,200.0	1,989.7	2,150.6	1,923.5	20.8	21.7	-72.59	139.9	777.3	204.9	164.7	40.21	5.095	
2,300.0	2,055.6	2,246.2	1,985.0	23.1	23.9	-72.94	147.2	850.1	217.7	173.2	44.48	4.893	
2,378.4	2,105.0	2,321.1	2,031.0	24.9	25.7	-73.22	153.1	908.9	228.0	180.0	47.98	4.751	
2,400.0	2,118.3	2,341.9	2,043.5	25.5	26.2	-73.35	154.8	925.5	230.9	181.9	48.99	4.713	
2,500.0	2,179.9	2,441.0	2,102.6	27.9	28.6	-73.86	162.7	1,004.6	244.4	190.7	53.69	4.551	
2,600.0	2,241.6	2,540.0	2,161.6	30.3	31.1	-74.33	170.6	1,083.7	257.9	199.5	58.43	4.415	
2,700.0	2,303.2	2,639.1	2,220.7	32.7	33.5	-74.74	178.6	1,162.8	271.5	208.3	63.18	4.297	
2,800.0	2,364.8	2,738.2	2,279.8	35.2	36.0	-75.12	186.5	1,241.9	285.1	217.1	67.95	4.195	
2,900.0	2,426.4	2,837.2	2,338.9	37.6	38.4	-75.46	194.4	1,321.0	298.6	225.9	72.74	4.106	
3,000.0	2,488.0	2,936.3	2,398.0	40.1	40.9	-75.77	202.4	1,400.1	312.2	234.7	77.53	4.027	
3,100.0	2,549.7	3,035.3	2,457.1	42.5	43.4	-76.06	210.3	1,479.2	325.8	243.5	82.33	3.957	
3,200.0	2,611.3	3,134.4	2,516.2	45.0	45.8	-76.32	218.2	1,558.3	339.4	252.3	87.15	3.895	
3,300.0	2,672.9	3,233.5	2,575.3	47.5	48.3	-76.57	226.2	1,637.5	353.1	261.1	91.97	3.839	
3,400.0	2,734.5	3,332.5	2,634.4	49.9	50.8	-76.79	234.1	1,716.6	366.7	269.9	96.79	3.788	
3,500.0	2,796.1	3,431.6	2,693.5	52.4	53.3	-77.00	242.0	1,795.7	380.3	278.7	101.62	3.742	
3,600.0	2,857.8	3,530.6	2,752.6	54.8	55.7	-77.20	250.0	1,874.8	393.9	287.5	106.45	3.701	
3,700.0	2,919.4	3,629.7	2,811.7	57.3	58.2	-77.38	257.9	1,953.9	407.6	296.3	111.29	3.662	
3,800.0	2,981.0	3,728.7	2,870.7	59.8	60.7	-77.55	265.8	2,033.0	421.2	305.1	116.13	3.627	
3,900.0	3,042.6	3,827.8	2,929.8	62.2	63.2	-77.71	273.8	2,112.1	434.9	313.9	120.97	3.595	
4,000.0	3,104.3	3,926.9	2,988.9	64.7	65.7	-77.86	281.7	2,191.2	448.5	322.7	125.82	3.565	
4,100.0	3,165.9	4,025.9	3,048.0	67.2	68.1	-78.00	289.7	2,270.3	462.1	331.5	130.67	3.537	
4,200.0	3,227.5	4,125.0	3,107.1	69.6	70.6	-78.13	297.6	2,349.4	475.8	340.3	135.52	3.511	
4,300.0	3,289.1	4,224.0	3,166.2	72.1	73.1	-78.25	305.5	2,428.5	489.4	349.1	140.37	3.487	
4,400.0	3,350.7	4,323.1	3,225.3	74.6	75.6	-78.37	313.5	2,507.6	503.1	357.9	145.22	3.464	
4,500.0	3,412.4	4,422.2	3,284.4	77.1	78.1	-78.48	321.4	2,586.7	516.8	366.7	150.08	3.443	
4,600.0	3,474.0	4,521.2	3,343.5	79.5	80.6	-78.59	329.3	2,665.8	530.4	375.5	154.93	3.424	
4,700.0	3,535.6	4,627.1	3,409.4	82.0	83.0	-79.07	338.2	2,748.2	543.7	383.7	160.00	3.398	
4,719.7	3,547.8	4,648.7	3,424.2	82.5	83.5	-79.36	340.2	2,763.7	546.1	385.0	161.08	3.390	
4,750.0	3,567.0	4,681.5	3,447.7	83.2	84.1	-80.46	343.4	2,786.3	549.9	387.2	162.69	3.380	
4,800.0	3,601.1	4,735.0	3,488.5	84.2	85.0	-82.43	349.0	2,820.4	556.8	391.7	165.13	3.372	SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-6H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,850.0	3,637.9	4,787.7	3,531.4	85.2	85.8	-84.60	354.9	2,850.6	564.4	397.1	167.29	3.374	
4,900.0	3,677.2	4,839.7	3,575.9	86.0	86.4	-87.01	361.1	2,876.7	572.7	403.5	169.19	3.385	
4,950.0	3,718.8	4,891.0	3,621.7	86.7	86.9	-89.72	367.5	2,898.8	581.7	410.9	170.80	3.405	
5,000.0	3,762.4	4,941.5	3,668.4	87.3	87.3	-92.84	374.0	2,916.9	591.2	419.0	172.15	3.434	
5,050.0	3,807.8	4,991.3	3,715.7	87.7	87.6	-96.59	380.7	2,931.0	601.2	428.0	173.23	3.471	
5,100.0	3,854.7	5,040.6	3,763.4	88.1	87.8	-101.37	387.4	2,941.2	611.7	437.6	174.07	3.514	
5,150.0	3,902.7	5,089.2	3,811.1	88.4	88.0	-108.10	394.1	2,947.6	622.6	447.9	174.67	3.564	
5,200.0	3,951.6	5,137.3	3,858.6	88.6	88.0	-119.13	400.8	2,950.3	633.7	458.7	175.06	3.620	
5,250.0	4,001.1	5,184.9	3,905.7	88.7	88.1	-141.38	407.5	2,949.4	645.1	469.8	175.26	3.681	
5,300.0	4,050.9	5,232.0	3,952.2	88.7	88.0	173.63	414.1	2,945.0	656.6	481.3	175.30	3.746	
5,350.0	4,100.6	5,278.8	3,997.8	88.7	88.0	133.00	420.7	2,937.2	668.2	493.0	175.19	3.814	
5,400.0	4,150.0	5,325.2	4,042.4	88.7	87.9	114.05	427.1	2,926.2	679.7	504.8	174.97	3.885	
5,450.0	4,198.7	5,371.3	4,085.9	88.6	87.8	104.41	433.3	2,912.0	691.2	516.5	174.66	3.957	
5,500.0	4,246.6	5,417.2	4,127.9	88.5	87.7	98.49	439.4	2,894.8	702.4	528.1	174.29	4.030	
5,550.0	4,293.1	5,462.8	4,168.4	88.3	87.6	94.35	445.2	2,874.6	713.4	539.5	173.88	4.103	
5,600.0	4,338.2	5,508.3	4,207.3	88.2	87.6	91.20	450.9	2,851.7	724.1	550.6	173.47	4.174	
5,650.0	4,381.4	5,553.6	4,244.3	88.1	87.5	88.69	456.3	2,826.1	734.3	561.2	173.07	4.243	
5,700.0	4,422.6	5,600.0	4,280.2	88.1	87.5	86.60	461.6	2,797.3	744.1	571.4	172.71	4.308	
5,750.0	4,461.5	5,644.0	4,312.3	88.0	87.5	84.85	466.3	2,767.5	753.3	580.9	172.42	4.369	
5,800.0	4,497.8	5,689.1	4,342.9	88.0	87.5	83.35	470.8	2,734.8	761.9	589.7	172.20	4.425	
5,850.0	4,531.3	5,734.1	4,371.2	88.1	87.6	82.07	475.0	2,699.9	769.9	597.8	172.08	4.474	
5,900.0	4,561.8	5,779.2	4,396.9	88.2	87.7	80.97	478.9	2,663.2	777.2	605.2	172.08	4.517	
5,950.0	4,589.2	5,824.3	4,420.1	88.3	87.9	80.04	482.4	2,624.7	783.8	611.6	172.18	4.552	
6,000.0	4,613.2	5,869.4	4,440.4	88.5	88.1	79.26	485.5	2,584.6	789.6	617.2	172.41	4.580	
6,050.0	4,633.7	5,914.5	4,458.0	88.7	88.3	78.63	488.2	2,543.1	794.5	621.8	172.75	4.599	
6,100.0	4,650.5	5,959.7	4,472.5	89.0	88.5	78.13	490.6	2,500.4	798.6	625.4	173.21	4.611	

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-7H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.01	91.1	0.0	91.3				
100.0	100.0	94.0	94.0	0.1	0.1	0.01	91.1	0.0	91.1	90.8	0.27	340.996	
200.0	200.0	194.0	194.0	0.4	0.4	0.01	91.1	0.0	91.1	90.3	0.81	112.512	
300.0	300.0	294.0	294.0	0.7	0.7	0.01	91.1	0.0	91.1	89.7	1.36	66.960	CC, ES
400.0	400.0	393.3	393.2	1.0	0.9	-94.19	91.5	1.9	91.6	89.7	1.89	48.577	
500.0	499.7	492.5	492.2	1.2	1.2	-94.40	92.7	7.9	93.3	90.9	2.43	38.393	
600.0	599.1	591.6	590.9	1.5	1.5	-94.63	94.8	18.2	96.2	93.1	3.06	31.455	
700.0	698.0	690.8	688.9	1.9	1.9	-94.87	97.7	32.6	100.2	96.4	3.81	26.343	
800.0	796.0	789.8	786.1	2.4	2.3	-95.10	101.5	51.1	105.4	100.7	4.70	22.414	
900.0	893.2	888.8	882.4	2.9	2.9	-95.32	106.1	73.7	111.8	106.0	5.78	19.337	
1,000.0	989.2	987.7	977.5	3.6	3.5	-95.52	111.6	100.3	119.3	112.2	7.05	16.909	
1,100.0	1,083.9	1,086.5	1,071.2	4.3	4.2	-95.68	117.8	130.9	127.9	119.3	8.54	14.981	
1,200.0	1,177.0	1,185.2	1,163.3	5.2	5.1	-95.81	124.9	165.4	137.6	127.3	10.24	13.441	
1,300.0	1,268.6	1,283.7	1,253.8	6.2	6.0	-95.90	132.7	203.7	148.4	136.2	12.16	12.200	
1,400.0	1,358.3	1,382.0	1,342.3	7.3	7.1	-95.96	141.3	245.6	160.2	145.9	14.32	11.190	
1,500.0	1,445.9	1,480.3	1,428.8	8.6	8.3	-95.98	150.6	291.2	173.1	156.4	16.71	10.361	
1,600.0	1,531.4	1,578.3	1,513.0	9.9	9.6	-95.97	160.6	340.3	187.0	167.7	19.33	9.671	
1,700.0	1,614.5	1,676.2	1,594.9	11.4	11.0	-95.92	171.3	392.8	201.9	179.7	22.20	9.093	
1,800.0	1,695.2	1,773.9	1,674.3	13.1	12.5	-95.84	182.7	448.5	217.7	192.4	25.31	8.603	
1,900.0	1,773.2	1,871.4	1,751.1	14.8	14.1	-95.74	194.8	507.4	234.5	205.8	28.65	8.183	
2,000.0	1,848.3	1,968.7	1,825.1	16.7	15.9	-95.61	207.4	569.4	252.1	219.9	32.23	7.821	
2,100.0	1,920.6	2,065.9	1,896.2	18.7	17.8	-95.46	220.7	634.2	270.6	234.5	36.05	7.507	
2,200.0	1,989.7	2,162.8	1,964.4	20.8	19.7	-95.28	234.5	701.8	289.9	249.8	40.09	7.231	
2,300.0	2,055.6	2,259.7	2,029.4	23.1	21.8	-95.09	248.8	772.0	310.0	265.7	44.36	6.988	
2,378.4	2,105.0	2,335.4	2,078.2	24.9	23.5	-94.92	260.4	828.9	326.3	278.4	47.86	6.818	
2,400.0	2,118.3	2,356.3	2,091.3	25.5	24.0	-94.97	263.7	844.8	330.9	282.0	48.85	6.773	
2,500.0	2,179.9	2,453.5	2,150.8	27.9	26.3	-94.88	279.1	920.1	352.1	298.6	53.48	6.583	
2,600.0	2,241.6	2,551.2	2,210.3	30.3	28.6	-94.74	294.6	996.0	373.4	315.2	58.17	6.419	
2,700.0	2,303.2	2,648.9	2,269.8	32.7	31.0	-94.61	310.1	1,072.0	394.7	331.8	62.88	6.277	
2,800.0	2,364.8	2,746.6	2,329.3	35.2	33.3	-94.49	325.6	1,147.9	415.9	348.3	67.59	6.154	
2,900.0	2,426.4	2,844.3	2,388.8	37.6	35.7	-94.39	341.2	1,223.8	437.2	364.9	72.32	6.046	
3,000.0	2,488.0	2,942.0	2,448.3	40.1	38.0	-94.29	356.7	1,299.8	458.5	381.5	77.06	5.950	
3,100.0	2,549.7	3,039.8	2,507.8	42.5	40.4	-94.20	372.2	1,375.7	479.8	398.0	81.80	5.865	
3,200.0	2,611.3	3,137.5	2,567.3	45.0	42.8	-94.12	387.7	1,451.6	501.1	414.5	86.55	5.789	
3,300.0	2,672.9	3,235.2	2,626.8	47.5	45.1	-94.05	403.2	1,527.6	522.4	431.1	91.31	5.721	
3,400.0	2,734.5	3,332.9	2,686.3	49.9	47.5	-93.98	418.7	1,603.5	543.7	447.6	96.07	5.659	
3,500.0	2,796.1	3,430.6	2,745.8	52.4	49.9	-93.92	434.3	1,679.4	565.0	464.1	100.83	5.603	
3,600.0	2,857.8	3,528.3	2,805.3	54.8	52.2	-93.86	449.8	1,755.4	586.2	480.6	105.60	5.552	
3,700.0	2,919.4	3,626.0	2,864.8	57.3	54.6	-93.81	465.3	1,831.3	607.5	497.2	110.36	5.505	
3,800.0	2,981.0	3,723.7	2,924.3	59.8	57.0	-93.76	480.8	1,907.2	628.8	513.7	115.13	5.462	
3,900.0	3,042.6	3,821.4	2,983.8	62.2	59.4	-93.71	496.3	1,983.2	650.1	530.2	119.91	5.422	
4,000.0	3,104.3	3,919.1	3,043.2	64.7	61.7	-93.67	511.8	2,059.1	671.4	546.7	124.68	5.385	
4,100.0	3,165.9	4,016.8	3,102.7	67.2	64.1	-93.63	527.3	2,135.0	692.7	563.2	129.46	5.351	
4,200.0	3,227.5	4,114.5	3,162.2	69.6	66.5	-93.59	542.9	2,211.0	714.0	579.8	134.24	5.319	
4,300.0	3,289.1	4,212.2	3,221.7	72.1	68.9	-93.56	558.4	2,286.9	735.3	596.3	139.01	5.289	
4,400.0	3,350.7	4,309.9	3,281.2	74.6	71.2	-93.52	573.9	2,362.8	756.6	612.8	143.79	5.262	
4,500.0	3,412.4	4,407.6	3,340.7	77.1	73.6	-93.49	589.4	2,438.8	777.9	629.3	148.58	5.236	
4,600.0	3,474.0	4,505.3	3,400.2	79.5	76.0	-93.46	604.9	2,514.7	799.2	645.8	153.36	5.211	SF

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-8H - Wellbore #1 - Plan #2 (12-06-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	120.2	0.0	120.5				
100.0	100.0	92.0	92.0	0.1	0.1	0.00	120.2	0.0	120.2	120.0	0.26	454.779	
200.0	200.0	192.0	192.0	0.4	0.4	0.00	120.2	0.0	120.2	119.4	0.80	149.527	
300.0	300.0	292.0	292.0	0.7	0.7	0.00	120.2	0.0	120.2	118.9	1.35	88.744	CC
400.0	400.0	392.0	392.0	1.0	0.9	-95.04	120.2	0.0	120.4	118.5	1.89	63.650	ES
500.0	499.7	490.5	490.5	1.2	1.2	-97.24	120.8	1.7	121.6	119.2	2.43	50.114	
600.0	599.1	589.1	588.8	1.5	1.5	-99.40	122.7	7.4	124.7	121.7	3.01	41.388	
700.0	698.0	687.7	687.0	1.9	1.8	-101.43	125.9	17.1	129.6	125.9	3.69	35.122	
800.0	796.0	786.4	784.6	2.4	2.1	-103.26	130.5	30.8	136.4	131.9	4.49	30.359	
900.0	893.2	885.1	881.5	2.9	2.6	-104.84	136.4	48.5	144.9	139.5	5.45	26.615	
1,000.0	989.2	983.8	977.5	3.6	3.1	-106.15	143.6	70.1	155.3	148.7	6.57	23.622	
1,100.0	1,083.9	1,082.4	1,072.4	4.3	3.7	-107.19	152.2	95.7	167.3	159.4	7.89	21.206	
1,200.0	1,177.0	1,181.0	1,166.0	5.2	4.4	-107.98	162.0	125.0	181.0	171.6	9.41	19.241	
1,300.0	1,268.6	1,279.4	1,258.0	6.2	5.2	-108.54	173.0	158.1	196.2	185.1	11.13	17.631	
1,400.0	1,358.3	1,377.7	1,348.3	7.3	6.1	-108.89	185.3	194.8	213.1	200.0	13.07	16.298	
1,500.0	1,445.9	1,475.8	1,436.8	8.6	7.1	-109.07	198.7	235.1	231.4	216.2	15.24	15.188	
1,600.0	1,531.4	1,573.8	1,523.1	9.9	8.3	-109.11	213.4	278.9	251.3	233.6	17.63	14.253	
1,700.0	1,614.5	1,671.5	1,607.3	11.4	9.5	-109.02	229.1	326.0	272.5	252.3	20.25	13.459	
1,800.0	1,695.2	1,769.0	1,689.0	13.1	10.9	-108.82	245.9	376.4	295.1	272.0	23.10	12.778	
1,900.0	1,773.2	1,866.2	1,768.2	14.8	12.4	-108.54	263.8	429.9	319.1	292.9	26.18	12.190	
2,000.0	1,848.3	1,963.2	1,844.8	16.7	14.0	-108.19	282.6	486.4	344.3	314.8	29.48	11.678	
2,100.0	1,920.6	2,060.0	1,918.6	18.7	15.7	-107.77	302.5	545.7	370.8	337.8	33.02	11.229	
2,200.0	1,989.7	2,156.5	1,989.5	20.8	17.5	-107.31	323.2	607.8	398.5	361.7	36.78	10.834	
2,300.0	2,055.6	2,252.8	2,057.5	23.1	19.4	-106.80	344.8	672.5	427.3	386.5	40.76	10.483	
2,378.4	2,105.0	2,328.1	2,108.6	24.9	20.9	-106.37	362.3	725.0	450.6	406.6	44.03	10.235	
2,400.0	2,118.3	2,348.8	2,122.3	25.5	21.4	-106.41	367.2	739.7	457.1	412.2	44.95	10.170	
2,500.0	2,179.9	2,444.9	2,184.1	27.9	23.5	-106.24	390.5	809.4	487.2	437.9	49.31	9.881	
2,600.0	2,241.6	2,540.4	2,243.0	30.3	25.7	-105.69	414.4	880.8	517.2	463.4	53.81	9.612	
2,700.0	2,303.2	2,635.7	2,301.3	32.7	27.9	-105.15	438.2	952.3	547.2	488.9	58.34	9.380	
2,800.0	2,364.8	2,731.0	2,359.6	35.2	30.1	-104.67	462.1	1,023.7	577.3	514.4	62.89	9.179	
2,900.0	2,426.4	2,826.2	2,417.9	37.6	32.4	-104.24	486.0	1,095.2	607.4	540.0	67.46	9.004	
3,000.0	2,488.0	2,921.5	2,476.2	40.1	34.6	-103.85	509.8	1,166.7	637.5	565.5	72.03	8.851	
3,100.0	2,549.7	3,016.8	2,534.5	42.5	36.8	-103.49	533.7	1,238.1	667.7	591.1	76.61	8.716	
3,200.0	2,611.3	3,112.0	2,592.8	45.0	39.1	-103.16	557.6	1,309.6	697.9	616.7	81.19	8.596	
3,300.0	2,672.9	3,207.3	2,651.1	47.5	41.3	-102.86	581.4	1,381.1	728.1	642.3	85.78	8.488	
3,400.0	2,734.5	3,302.6	2,709.4	49.9	43.6	-102.59	605.3	1,452.5	758.3	667.9	90.37	8.391	
3,500.0	2,796.1	3,397.8	2,767.7	52.4	45.8	-102.33	629.2	1,524.0	788.5	693.6	94.96	8.304	SF

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Offset Design Bunker 8 Well Pad Sec.29-T5N-R68W - Bunker 8-9H - Wellbore #1 - Plan #2 (12-16-18)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

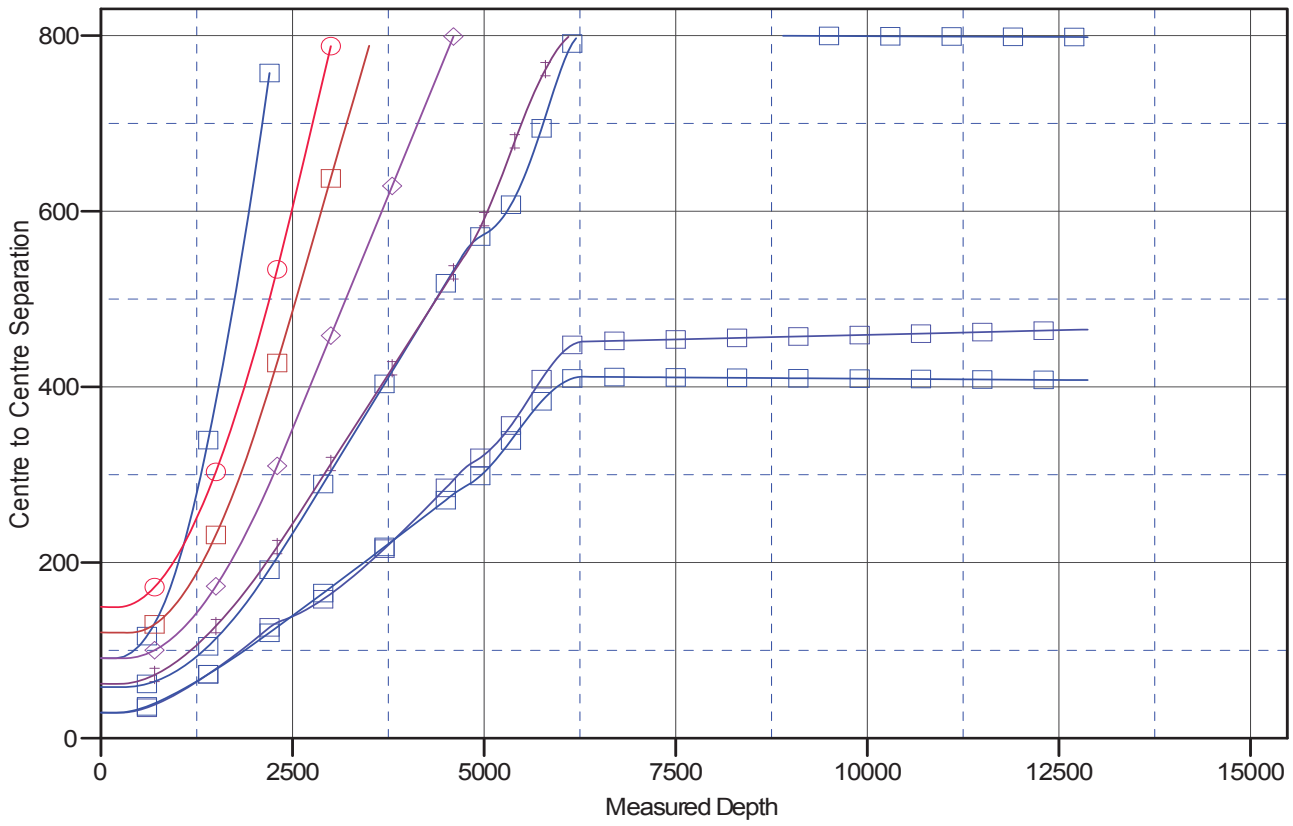
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.01	149.4	0.0	149.6				
100.0	100.0	91.0	91.0	0.1	0.1	0.01	149.4	0.0	149.4	149.1	0.26	568.016	
200.0	200.0	191.0	191.0	0.4	0.4	0.01	149.4	0.0	149.4	148.6	0.80	186.426	CC, ES
300.0	300.0	288.7	288.7	0.7	0.7	0.60	150.0	1.6	150.1	148.7	1.34	111.832	
400.0	400.0	386.0	385.8	1.0	0.9	-92.13	152.3	6.9	152.6	150.7	1.88	81.193	
500.0	499.7	483.1	482.3	1.2	1.2	-91.04	156.2	16.1	157.2	154.7	2.46	63.839	
600.0	599.1	579.8	578.1	1.5	1.6	-90.16	161.6	28.9	163.7	160.5	3.14	52.193	
700.0	698.0	676.3	672.9	1.9	2.0	-89.49	168.6	45.4	172.1	168.1	3.93	43.784	
800.0	796.0	772.4	766.4	2.4	2.6	-89.01	177.0	65.5	182.3	177.5	4.87	37.442	
900.0	893.2	868.0	858.6	2.9	3.2	-88.70	187.0	89.1	194.4	188.5	5.97	32.543	
1,000.0	989.2	963.3	949.2	3.6	3.9	-88.53	198.3	116.0	208.3	201.1	7.26	28.700	
1,100.0	1,083.9	1,058.0	1,038.1	4.3	4.6	-88.47	211.1	146.2	224.0	215.2	8.73	25.650	
1,200.0	1,177.0	1,152.2	1,125.0	5.2	5.5	-88.49	225.2	179.6	241.3	230.9	10.40	23.203	
1,300.0	1,268.6	1,245.9	1,209.9	6.2	6.5	-88.55	240.6	216.1	260.4	248.1	12.27	21.219	
1,400.0	1,358.3	1,338.9	1,292.6	7.3	7.6	-88.65	257.2	255.4	281.1	266.7	14.35	19.593	
1,500.0	1,445.9	1,431.4	1,373.0	8.6	8.7	-88.76	275.0	297.5	303.4	286.8	16.63	18.246	
1,600.0	1,531.4	1,523.3	1,451.0	9.9	10.0	-88.86	293.9	342.3	327.3	308.1	19.12	17.120	
1,700.0	1,614.5	1,614.6	1,526.5	11.4	11.3	-88.96	313.8	389.6	352.6	330.8	21.81	16.168	
1,800.0	1,695.2	1,705.3	1,599.4	13.1	12.7	-89.03	334.8	439.3	379.5	354.8	24.71	15.358	
1,900.0	1,773.2	1,795.4	1,669.6	14.8	14.2	-89.08	356.7	491.2	407.8	380.0	27.82	14.659	
2,000.0	1,848.3	1,884.8	1,737.1	16.7	15.8	-89.09	379.6	545.3	437.4	406.3	31.13	14.052	
2,100.0	1,920.6	1,973.7	1,801.9	18.7	17.5	-89.08	403.2	601.4	468.4	433.7	34.64	13.523	
2,200.0	1,989.7	2,062.0	1,863.8	20.8	19.2	-89.03	427.7	659.3	500.6	462.3	38.33	13.059	
2,300.0	2,055.6	2,149.7	1,922.9	23.1	21.1	-88.94	452.9	719.1	534.0	491.8	42.21	12.649	
2,378.4	2,105.0	2,218.1	1,967.3	24.9	22.6	-88.86	473.2	767.1	561.0	515.6	45.38	12.363	
2,400.0	2,118.3	2,236.9	1,979.2	25.5	23.0	-89.02	478.8	780.5	568.5	522.2	46.29	12.283	
2,500.0	2,179.9	2,323.8	2,032.6	27.9	24.9	-89.53	505.5	843.5	604.2	553.7	50.50	11.963	
2,600.0	2,241.6	2,412.7	2,084.8	30.3	27.0	-89.71	533.4	909.8	640.8	586.0	54.81	11.691	
2,700.0	2,303.2	2,505.7	2,138.9	32.7	29.2	-89.81	562.9	979.5	677.6	618.4	59.23	11.440	
2,800.0	2,364.8	2,598.6	2,192.9	35.2	31.5	-89.91	592.3	1,049.2	714.4	650.7	63.67	11.221	
2,900.0	2,426.4	2,691.6	2,247.0	37.6	33.7	-90.00	621.7	1,118.9	751.2	683.1	68.11	11.029	
3,000.0	2,488.0	2,784.6	2,301.1	40.1	35.9	-90.08	651.1	1,188.5	788.0	715.5	72.57	10.859	SF

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5007.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Bunker 8-4H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.30°

Ladder Plot



LEGEND

Bunker 8-2H, Wellbore #1, Plan #2 (12-06-18) V0
Bunker 8-1H, Wellbore #1, Plan #2 (12-06-18) V0
Bunker 8-9H, Wellbore #1, Plan #2 (12-16-18) V0
Bunker 8-6H, Wellbore #1, Plan #2 (12-06-18) V0
Bunker 8-3H, Wellbore #1, Plan #2 (12-06-18) V0
Bunker 8-7H, Wellbore #1, Plan #2 (12-06-18) V0
Bunker 8-5H, Wellbore #1, Plan #2 (12-06-18) V0
Bunker 8-8H, Wellbore #1, Plan #2 (12-06-18) V0

Company:	Magpie Operating, Inc.	**Local Co-ordinate Reference:**	Well Bunker 8-4H
Project:	SEC.29-T5N-R68W	**TVD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Reference Site:	Bunker 8 Well Pad Sec.29-T5N-R68W	**MD Reference:**	WELL @ 5007.0ft (Original Well Elev)
Site Error:	0.0 ft	**North Reference:**	True
Reference Well:	Bunker 8-4H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 ft	**Output errors are at**	2.45 sigma
Reference Wellbore	Wellbore #1	**Database:**	US_EDM
Reference Design:	Plan #2 (12-06-18)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5007.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Bunker 8-4H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.30°