

HOBBS OCD

MAR 07 2019

RECEIVED

**NGL WATER SOLUTIONS PERMIAN,
LLC**

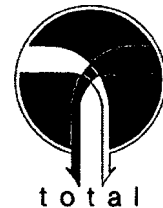
LEA COUNTY, NEW MEXICO (NAD 83)

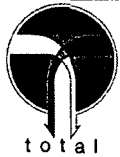
NW NW SEC. 20 T24S R34E

STRIKER 6 SWD #2

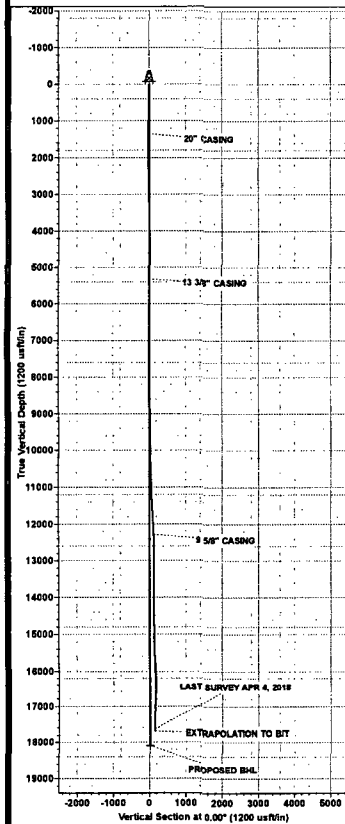
04 April, 2018

Survey: SURVEYS



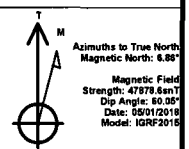


Project: LEA COUNTY, NEW MEXICO (NAD 83)
 Site: NW NW SEC. 20 T24S R34E
 Well: STRIKER 6 SWD #2
 Wellbore: JOB #2018-12-21
 Design: SURVEYS

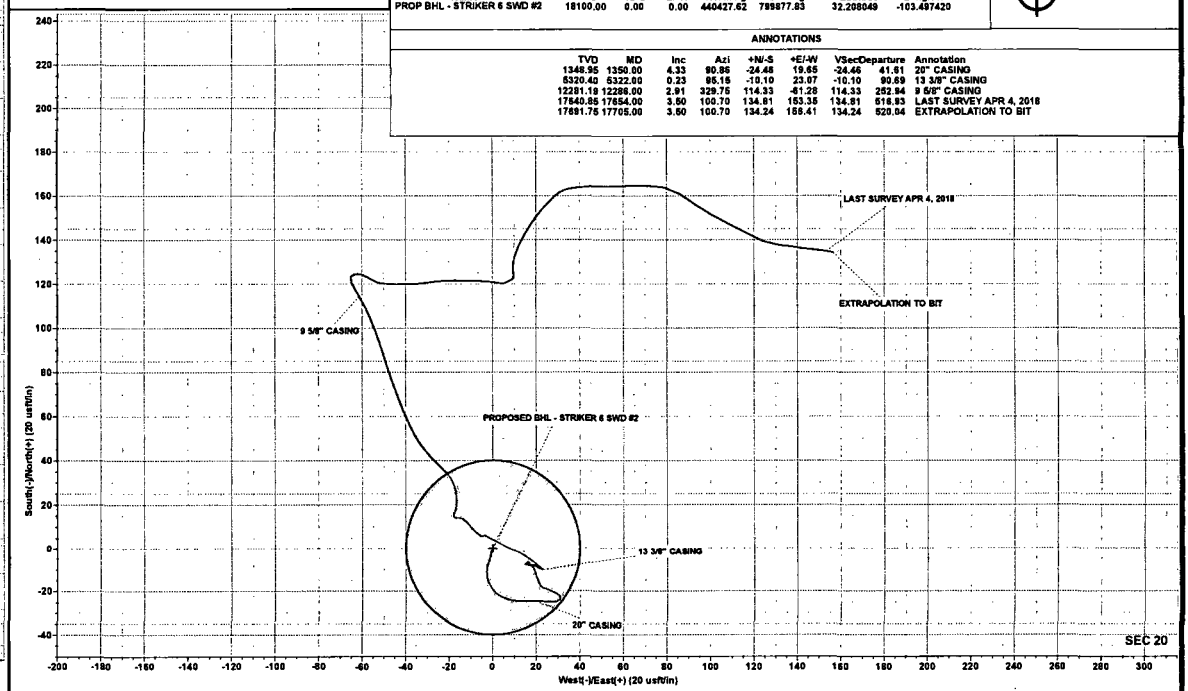


PROJECT DETAILS: LEA COUNTY, NEW MEXICO (NAD 83)
 Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 Padsite: NW NW SEC. 20 T24S R34E

WELL DETAILS: STRIKER 6 SWD #2						
Ground Level: 3542.00						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	440427.62	799877.83	32.208049	-103.497420	
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
PROP BHL - STRIKER 6 SWD #2	18100.00	0.00	0.00	440427.62	799877.83	32.208049



ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Departure	Annotation	
1346.95	1350.00	4.33	80.96	-24.46	19.66	-24.46	41.81	20"	CASING
9320.40	9322.00	0.23	86.16	-10.10	23.07	-10.10	80.69	13.30"	CASING
12291.16	12296.00	2.81	329.75	114.33	-41.20	114.33	452.94	8.50"	CASING
17640.86	17654.00	3.60	100.70	134.81	163.30	134.81	616.83	LAST SURVEY APR 4, 2016	
17691.76	17705.00	3.60	100.70	134.24	166.41	134.24	520.04	EXTRAPOLATION TO BIT	



Survey Report



Company:	NGL WATER SOLUTIONS PERMIAN	Local Co-ordinate Reference:	Well STRIKER 6 SWD #2
Project:	LEA COUNTY, NEW MEXICO (NAD 83)	TVD Reference:	KB @ 3570.00usft (LATSHAW 21)
Site:	NW NW SEC. 20 T24S R34E	MD Reference:	KB @ 3570.00usft (LATSHAW 21)
Well:	STRIKER 6 SWD #2	North Reference:	True
Wellbore:	JOB #2018-12-21	Survey Calculation Method:	Minimum Curvature
Design:	SURVEYS	Database:	EDM 5000.1 Single User Db

Project	LEA COUNTY, NEW MEXICO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	NW NW SEC. 20 T24S R34E		
Site Position:		Northing:	440,427.62 usft
From:	Lat/Long	Easting:	799,877.83 usft
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000 ft
		Latitude:	32.208049
		Longitude:	-103.497420
		Grid Convergence:	0.45 °

Well	STRIKER 6 SWD #2		
Well Position	+N/-S	0.00 usft	Northing: 440,427.62 usft
	+E/-W	0.00 usft	Easting: 799,877.83 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32.208049
		Longitude:	-103.497420
		Ground Level:	3,542.00 usft

Wellbore	JOB #2018-12-21		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	05/01/2018	6.86
			Dip Angle (°) 60.05
			Field Strength (nT) 47,879

Design	SURVEYS		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
		Direction (°)	0.00

Survey Program	Date 04/04/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
147.00	17,705.00	SURVEYS (JOB #2018-12-21)	MWD
			Description MWD - Standard

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	3,570.00	0.00	0.00	0.00	0.00	0.00	0.00
147.00	0.70	211.50	147.00	3,423.00	-0.77	-0.47	-0.77	0.48	0.48	0.00
269.00	0.90	180.10	268.98	3,301.02	-2.36	-0.86	-2.36	0.39	0.16	-25.74
415.00	0.80	198.00	414.97	3,155.03	-4.48	-1.18	-4.48	0.19	-0.07	12.26
536.00	0.80	197.30	535.96	3,034.04	-6.09	-1.69	-6.09	0.01	0.00	-0.58
690.00	1.20	199.70	689.93	2,880.07	-8.63	-2.55	-8.63	0.26	0.26	1.56
783.00	1.50	184.10	782.91	2,787.09	-10.76	-2.97	-10.76	0.51	0.32	-16.77
876.00	1.70	170.10	875.87	2,694.13	-13.33	-2.82	-13.33	0.47	0.22	-15.05
967.00	2.20	159.30	966.82	2,603.18	-16.30	-1.97	-16.30	0.68	0.55	-11.87
1,061.00	2.60	143.40	1,060.74	2,509.26	-19.70	-0.06	-19.70	0.82	0.43	-16.91
1,155.00	4.00	115.10	1,154.59	2,415.41	-22.80	4.18	-22.80	2.24	1.49	-30.11
1,250.00	4.80	93.50	1,249.31	2,320.69	-24.45	11.15	-24.45	1.92	0.84	-22.74
1,298.00	5.20	88.20	1,297.13	2,272.87	-24.50	15.33	-24.50	1.27	0.83	-11.04

Survey Report



Company:	NGL WATER SOLUTIONS PERMIAN	Local Co-ordinate Reference:	Well STRIKER 6 SWD #2
Project:	LEA COUNTY, NEW MEXICO (NAD 83)	TVD Reference:	KB @ 3570.00usft (LATSHAW 21)
Site:	NW NW SEC. 20 T24S R34E	MD Reference:	KB @ 3570.00usft (LATSHAW 21)
Well:	STRIKER 6 SWD #2	North Reference:	True
Wellbore:	JOB #2018-12-21	Survey Calculation Method:	Minimum Curvature
Design:	SURVEYS	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
20" CASING										
1,350.00	4.33	90.86	1,348.95	2,221.05	-24.46	19.65	-24.46	1.73	-1.68	5.11
1,425.00	3.10	97.30	1,423.79	2,146.21	-24.76	24.49	-24.76	1.73	-1.64	8.59
1,519.00	2.10	79.00	1,517.69	2,052.31	-24.75	28.70	-24.75	1.37	-1.06	-19.47
1,613.00	0.90	29.00	1,611.66	1,958.34	-23.78	30.75	-23.78	1.78	-1.28	-53.19
1,708.00	1.00	325.80	1,706.65	1,863.35	-22.44	30.64	-22.44	1.05	0.11	-66.53
1,801.00	0.90	296.20	1,799.64	1,770.36	-21.45	29.53	-21.45	0.53	-0.11	-31.83
1,895.00	1.30	294.80	1,893.62	1,676.38	-20.67	27.90	-20.67	0.43	0.43	-1.49
1,989.00	1.40	294.80	1,987.60	1,582.40	-19.74	25.89	-19.74	0.11	0.11	0.00
2,083.00	0.80	283.00	2,081.58	1,488.42	-19.11	24.21	-19.11	0.68	-0.64	-12.55
2,178.00	0.80	287.90	2,176.57	1,393.43	-18.76	22.93	-18.76	0.07	0.00	5.16
2,272.00	1.00	325.30	2,270.56	1,299.44	-17.89	21.84	-17.89	0.65	0.21	39.79
2,367.00	1.50	343.70	2,365.54	1,204.46	-16.01	21.02	-16.01	0.67	0.53	19.37
2,461.00	1.40	333.80	2,459.51	1,110.49	-13.80	20.17	-13.80	0.29	-0.11	-10.53
2,555.00	1.20	350.30	2,553.48	1,016.52	-11.80	19.50	-11.80	0.45	-0.21	17.55
2,650.00	0.70	332.30	2,648.47	921.53	-10.30	19.06	-10.30	0.61	-0.53	-18.95
2,745.00	0.50	337.80	2,743.46	826.54	-9.41	18.63	-9.41	0.22	-0.21	5.79
2,839.00	0.70	303.00	2,837.46	732.54	-8.71	18.00	-8.71	0.43	0.21	-37.02
2,933.00	0.80	284.40	2,931.45	638.55	-8.24	16.88	-8.24	0.28	0.11	-19.79
3,028.00	0.80	281.10	3,026.44	543.56	-7.95	15.58	-7.95	0.05	0.00	-3.47
3,123.00	0.20	261.30	3,121.44	448.56	-7.84	14.77	-7.84	0.65	-0.63	-20.84
3,217.00	0.10	55.80	3,215.44	354.56	-7.82	14.68	-7.82	0.31	-0.11	164.36
3,312.00	0.30	111.90	3,310.44	259.56	-7.87	14.98	-7.87	0.27	0.21	59.05
3,406.00	0.10	16.90	3,404.44	165.56	-7.88	15.23	-7.88	0.35	-0.21	-101.06
3,501.00	0.30	36.30	3,499.44	70.56	-7.60	15.40	-7.60	0.22	0.21	20.42
3,596.00	0.20	40.50	3,594.43	-24.43	-7.27	15.65	-7.27	0.11	-0.11	4.42
3,691.00	0.30	24.80	3,689.43	-119.43	-6.92	15.87	-6.92	0.13	0.11	-16.53
3,785.00	0.10	261.30	3,783.43	-213.43	-6.71	15.89	-6.71	0.39	-0.21	-131.38
3,879.00	0.10	154.70	3,877.43	-307.43	-6.80	15.84	-6.80	0.17	0.00	-113.40
3,974.00	0.20	79.20	3,972.43	-402.43	-6.84	16.04	-6.84	0.21	0.11	-79.47
4,069.00	0.20	106.30	4,067.43	-497.43	-6.86	16.36	-6.86	0.10	0.00	28.53
4,163.00	0.20	161.30	4,161.43	-591.43	-7.06	16.57	-7.06	0.20	0.00	58.51
4,257.00	0.10	187.60	4,255.43	-685.43	-7.30	16.61	-7.30	0.13	-0.11	27.98
4,351.00	0.00	13.00	4,349.43	-779.43	-7.38	16.60	-7.38	0.11	-0.11	0.00
4,446.00	0.30	209.50	4,444.43	-874.43	-7.59	16.48	-7.59	0.32	0.32	0.00
4,540.00	0.30	137.00	4,538.43	-968.43	-7.99	16.53	-7.99	0.38	0.00	-77.13
4,634.00	0.40	80.90	4,632.43	-1,062.43	-8.12	17.02	-8.12	0.36	0.11	-59.68
4,729.00	0.40	88.80	4,727.43	-1,157.43	-8.06	17.68	-8.06	0.06	0.00	8.32
4,823.00	0.60	103.30	4,821.42	-1,251.42	-8.16	18.48	-8.16	0.25	0.21	15.43
4,918.00	0.80	121.40	4,916.42	-1,346.42	-8.62	19.53	-8.62	0.31	0.21	19.05
5,012.00	0.60	113.60	5,010.41	-1,440.41	-9.16	20.55	-9.16	0.24	-0.21	-8.30
5,106.00	0.50	107.90	5,104.40	-1,534.40	-9.49	21.39	-9.49	0.12	-0.11	-6.06
5,200.00	0.50	119.30	5,198.40	-1,628.40	-9.81	22.14	-9.81	0.11	0.00	12.13
5,291.00	0.50	99.60	5,289.40	-1,719.40	-10.07	22.87	-10.07	0.19	0.00	-21.65
13 3/8" CASING										
5,322.00	0.23	95.15	5,320.40	-1,750.40	-10.10	23.07	-10.10	0.89	-0.88	-14.35
5,392.00	0.40	287.80	5,390.40	-1,820.40	-10.04	22.97	-10.04	0.89	0.25	-239.07
5,486.00	1.20	307.60	5,484.39	-1,914.39	-9.34	21.88	-9.34	0.89	0.85	21.06
5,580.00	1.60	307.20	5,578.36	-2,008.36	-7.94	20.05	-7.94	0.43	0.43	-0.43
5,674.00	1.40	310.00	5,672.33	-2,102.33	-6.41	18.13	-6.41	0.23	-0.21	2.98
5,767.00	1.20	304.80	5,765.30	-2,195.30	-5.13	16.46	-5.13	0.25	-0.22	-5.59
5,861.00	1.00	310.80	5,859.28	-2,289.28	-4.03	15.03	-4.03	0.25	-0.21	6.38
5,955.00	1.00	299.90	5,953.27	-2,383.27	-3.08	13.70	-3.08	0.20	0.00	-11.60

Survey Report



Company:	NGL WATER SOLUTIONS PERMIAN	Local Co-ordinate Reference:	Well STRIKER 6 SWD #2
Project:	LEA COUNTY, NEW MEXICO (NAD 83)	TVD Reference:	KB @ 3570.00usft (LATSHAW 21)
Site:	NW NW SEC. 20 T24S R34E	MD Reference:	KB @ 3570.00usft (LATSHAW 21)
Well:	STRIKER 6 SWD #2	North Reference:	True
Wellbore:	JOB #2018-12-21	Survey Calculation Method:	Minimum Curvature
Design:	SURVEYS	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,048.00	0.90	305.70	6,046.26	-2,476.26	-2.25	12.40	-2.25	0.15	-0.11	6.24
6,142.00	0.80	292.50	6,140.25	-2,570.25	-1.57	11.20	-1.57	0.23	-0.11	-14.04
6,236.00	0.90	292.50	6,234.24	-2,664.24	-1.04	9.91	-1.04	0.11	0.11	0.00
6,330.00	0.90	292.00	6,328.23	-2,758.23	-0.48	8.54	-0.48	0.01	0.00	-0.53
6,424.00	1.00	297.00	6,422.21	-2,852.21	0.17	7.13	0.17	0.14	0.11	5.32
6,513.00	0.90	303.30	6,511.20	-2,941.20	0.91	5.85	0.91	0.16	-0.11	7.08
6,607.00	1.00	301.60	6,605.19	-3,035.19	1.74	4.53	1.74	0.11	0.11	-1.81
6,702.00	0.80	298.40	6,700.18	-3,130.18	2.49	3.24	2.49	0.22	-0.21	-3.37
6,797.00	0.90	303.00	6,795.17	-3,225.17	3.21	2.04	3.21	0.13	0.11	4.84
6,892.00	0.90	297.60	6,890.15	-3,320.15	3.97	0.75	3.97	0.09	0.00	-5.68
6,986.00	0.70	293.70	6,984.14	-3,414.14	4.54	-0.43	4.54	0.22	-0.21	-4.15
7,080.00	0.50	287.60	7,078.14	-3,508.14	4.89	-1.35	4.89	0.22	-0.21	-6.49
7,174.00	0.60	300.90	7,172.14	-3,602.14	5.27	-2.16	5.27	0.17	0.11	14.15
7,268.00	0.40	310.70	7,266.13	-3,696.13	5.74	-2.83	5.74	0.23	-0.21	10.43
7,362.00	0.20	299.80	7,360.13	-3,790.13	6.03	-3.22	6.03	0.22	-0.21	-11.60
7,456.00	0.30	308.70	7,454.13	-3,884.13	6.27	-3.56	6.27	0.11	0.11	9.47
7,550.00	0.10	171.00	7,548.13	-3,978.13	6.34	-3.74	6.34	0.40	-0.21	-146.49
7,644.00	0.30	270.00	7,642.13	-4,072.13	6.26	-3.97	6.26	0.35	0.21	105.32
7,739.00	0.10	199.30	7,737.13	-4,167.13	6.18	-4.25	6.18	0.30	-0.21	-74.42
7,832.00	0.10	189.70	7,830.13	-4,260.13	6.03	-4.29	6.03	0.02	0.00	-10.32
7,927.00	0.20	257.40	7,925.13	-4,355.13	5.91	-4.46	5.91	0.20	0.11	71.26
8,021.00	0.30	262.50	8,019.13	-4,449.13	5.84	-4.87	5.84	0.11	0.11	5.43
8,115.00	0.30	277.90	8,113.13	-4,543.13	5.84	-5.35	5.84	0.09	0.00	16.38
8,209.00	0.30	309.90	8,207.12	-4,637.12	6.03	-5.79	6.03	0.18	0.00	34.04
8,302.00	0.40	307.50	8,300.12	-4,730.12	6.39	-6.23	6.39	0.11	0.11	-2.58
8,396.00	0.30	316.50	8,394.12	-4,824.12	6.76	-6.66	6.76	0.12	-0.11	9.57
8,490.00	0.30	298.70	8,488.12	-4,918.12	7.06	-7.05	7.06	0.10	0.00	-18.94
8,584.00	0.30	307.50	8,582.12	-5,012.12	7.33	-7.46	7.33	0.05	0.00	9.36
8,679.00	0.40	309.70	8,677.12	-5,107.12	7.69	-7.91	7.69	0.11	0.11	2.32
8,773.00	0.50	307.30	8,771.11	-5,201.11	8.15	-8.49	8.15	0.11	0.11	-2.55
8,867.00	0.50	325.90	8,865.11	-5,295.11	8.74	-9.05	8.74	0.17	0.00	19.79
8,961.00	0.40	305.20	8,959.11	-5,389.11	9.27	-9.54	9.27	0.20	-0.11	-22.02
9,055.00	0.40	324.60	9,053.10	-5,483.10	9.72	-10.00	9.72	0.14	0.00	20.64
9,150.00	0.30	311.00	9,148.10	-5,578.10	10.16	-10.38	10.16	0.14	-0.11	-14.32
9,244.00	0.70	323.00	9,242.10	-5,672.10	10.78	-10.91	10.78	0.44	0.43	12.77
9,338.00	0.80	315.20	9,336.09	-5,766.09	11.70	-11.72	11.70	0.15	0.11	-8.30
9,432.00	1.00	319.80	9,430.08	-5,860.08	12.79	-12.71	12.79	0.23	0.21	4.89
9,526.00	0.90	288.10	9,524.07	-5,954.07	13.65	-13.94	13.65	0.56	-0.11	-33.72
9,619.00	0.90	275.80	9,617.06	-6,047.06	13.95	-15.36	13.95	0.21	0.00	-13.23
9,714.00	0.90	268.60	9,712.04	-6,142.04	14.01	-16.85	14.01	0.12	0.00	-7.58
9,808.00	0.50	312.10	9,806.04	-6,236.04	14.27	-17.89	14.27	0.68	-0.43	46.28
9,901.00	1.00	16.00	9,899.03	-6,329.03	15.32	-17.97	15.32	0.97	0.54	68.71
9,994.00	1.20	25.10	9,992.01	-6,422.01	16.98	-17.34	16.98	0.28	0.22	9.78
10,087.00	1.20	11.40	10,084.99	-6,514.99	18.82	-16.73	18.82	0.31	0.00	-14.73
10,183.00	1.60	356.60	10,180.96	-6,610.96	21.14	-16.61	21.14	0.56	0.42	-15.42
10,278.00	1.50	355.10	10,275.93	-6,705.93	23.70	-16.80	23.70	0.11	-0.11	-1.58
10,372.00	1.60	348.80	10,369.90	-6,799.90	26.21	-17.16	26.21	0.21	0.11	-6.70
10,466.00	1.80	338.40	10,463.85	-6,893.85	28.87	-17.95	28.87	0.39	0.21	-11.06
10,559.00	1.90	333.11	10,556.81	-6,986.81	31.61	-19.19	31.61	0.21	0.11	-5.69
10,653.00	2.80	314.60	10,650.73	-7,080.73	34.61	-21.53	34.61	1.24	0.96	-19.69
10,747.00	2.70	312.00	10,744.62	-7,174.62	37.70	-24.81	37.70	0.17	-0.11	-2.77
10,842.00	2.60	318.00	10,839.52	-7,269.52	40.80	-27.91	40.80	0.31	-0.11	6.32
10,936.00	2.80	321.10	10,933.41	-7,363.41	44.17	-30.78	44.17	0.26	0.21	3.30

Survey Report



Company:	NGL WATER SOLUTIONS PERMIAN	Local Co-ordinate Reference:	Well STRIKER 6 SWD #2
Project:	LEA COUNTY, NEW MEXICO (NAD 83)	TVD Reference:	KB @ 3570.00usft (LATSHAW 21)
Site:	NW NW SEC. 20 T24S R34E	MD Reference:	KB @ 3570.00usft (LATSHAW 21)
Well:	STRIKER 6 SWD #2	North Reference:	True
Wellbore:	JOB #2018-12-21	Survey Calculation Method:	Minimum Curvature
Design:	SURVEYS	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,029.00	2.20	322.60	11,026.32	-7,456.32	47.36	-33.29	47.36	0.65	-0.65	1.61
11,123.00	2.70	329.70	11,120.24	-7,550.24	50.70	-35.51	50.70	0.62	0.53	7.55
11,217.00	3.10	335.20	11,214.12	-7,644.12	54.92	-37.69	54.92	0.52	0.43	5.85
11,311.00	3.40	335.30	11,307.97	-7,737.97	59.76	-39.92	59.76	0.32	0.32	0.11
11,405.00	3.50	338.70	11,401.80	-7,831.80	64.97	-42.13	64.97	0.24	0.11	3.62
11,498.00	3.70	339.40	11,494.61	-7,924.61	70.42	-44.21	70.42	0.22	0.22	0.75
11,592.00	3.90	340.00	11,588.41	-8,018.41	76.27	-46.37	76.27	0.22	0.21	0.64
11,686.00	3.80	342.00	11,682.19	-8,112.19	82.23	-48.43	82.23	0.18	-0.11	2.13
11,780.00	3.60	343.10	11,776.00	-8,206.00	88.02	-50.25	88.02	0.23	-0.21	1.17
11,876.00	3.60	341.30	11,871.81	-8,301.81	93.76	-52.09	93.76	0.12	0.00	-1.87
11,970.00	3.10	337.90	11,965.65	-8,395.65	98.91	-54.00	98.91	0.57	-0.53	-3.62
12,064.00	3.30	337.60	12,059.50	-8,489.50	103.76	-55.98	103.76	0.21	0.21	-0.32
12,159.00	3.00	334.30	12,154.36	-8,584.36	108.53	-58.10	108.53	0.37	-0.32	-3.47
12,253.00	3.00	329.40	12,248.23	-8,678.23	112.86	-60.42	112.86	0.27	0.00	-5.21
9 5/8" CASING										
12,286.00	2.91	329.75	12,281.19	-8,711.19	114.33	-61.28	114.33	0.28	-0.27	1.06
12,439.00	2.50	331.70	12,434.01	-8,864.01	120.63	-64.82	120.63	0.28	-0.27	1.27
12,533.00	1.50	38.70	12,527.97	-8,957.97	123.39	-65.02	123.39	2.51	-1.06	71.28
12,627.00	1.10	87.80	12,621.95	-9,051.95	124.39	-63.35	124.39	1.21	-0.43	52.23
12,721.00	1.20	83.80	12,715.93	-9,145.93	124.53	-61.47	124.53	0.14	0.11	-4.26
12,815.00	1.60	118.40	12,809.90	-9,239.90	124.01	-59.34	124.01	0.97	0.43	36.81
12,909.00	1.50	115.00	12,903.87	-9,333.87	122.87	-57.07	122.87	0.14	-0.11	-3.62
13,003.00	1.40	123.00	12,997.84	-9,427.84	121.72	-54.99	121.72	0.24	-0.11	8.51
13,098.00	1.30	109.10	13,092.81	-9,522.81	120.74	-53.00	120.74	0.36	-0.11	-14.63
13,192.00	1.20	94.30	13,186.79	-9,616.79	120.31	-51.01	120.31	0.36	-0.11	-15.74
13,286.00	2.20	96.50	13,280.74	-9,710.74	120.03	-48.24	120.03	1.07	1.06	2.34
13,380.00	2.20	87.80	13,374.68	-9,804.68	119.90	-44.64	119.90	0.35	0.00	-9.26
13,474.00	2.50	90.60	13,468.60	-9,898.60	119.95	-40.79	119.95	0.34	0.32	2.98
13,569.00	2.50	90.20	13,563.51	-9,993.51	119.92	-36.65	119.92	0.02	0.00	-0.42
13,663.00	2.60	81.60	13,657.41	-10,087.41	120.22	-32.49	120.22	0.42	0.11	-9.15
13,757.00	2.80	81.50	13,751.31	-10,181.31	120.87	-28.11	120.87	0.21	0.21	-0.11
13,852.00	3.40	87.50	13,846.17	-10,276.17	121.34	-23.00	121.34	0.72	0.63	6.32
13,946.00	3.30	88.50	13,940.01	-10,370.01	121.53	-17.51	121.53	0.12	-0.11	1.06
14,040.00	2.60	94.10	14,033.88	-10,463.88	121.45	-12.68	121.45	0.80	-0.74	5.96
14,134.00	2.70	89.00	14,127.78	-10,557.78	121.34	-8.34	121.34	0.27	0.11	-5.43
14,228.00	3.00	94.30	14,221.67	-10,651.67	121.19	-3.67	121.19	0.42	0.32	5.64
14,324.00	2.30	99.20	14,317.56	-10,747.56	120.69	0.74	120.69	0.77	-0.73	5.10
14,418.00	1.10	100.60	14,411.52	-10,841.52	120.23	3.49	120.23	1.28	-1.28	1.49
14,512.00	0.90	80.30	14,505.51	-10,935.51	120.19	5.10	120.19	0.43	-0.21	-21.60
14,607.00	0.90	54.90	14,600.50	-11,030.50	120.74	6.45	120.74	0.42	0.00	-26.74
14,701.00	0.80	71.10	14,694.49	-11,124.49	121.38	7.67	121.38	0.28	-0.11	17.23
14,795.00	0.40	66.40	14,788.48	-11,218.48	121.72	8.59	121.72	0.43	-0.43	-5.00
14,889.00	0.50	41.30	14,882.48	-11,312.48	122.16	9.16	122.16	0.23	0.11	-26.70
14,982.00	0.70	14.50	14,975.47	-11,405.47	123.02	9.57	123.02	0.36	0.22	-28.82
15,076.00	0.30	10.10	15,069.47	-11,499.47	123.81	9.76	123.81	0.43	-0.43	-4.68
15,171.00	0.50	337.00	15,164.47	-11,594.47	124.44	9.64	124.44	0.31	0.21	-34.84
15,264.00	1.10	351.60	15,257.46	-11,687.46	125.70	9.35	125.70	0.68	0.65	15.70
15,358.00	2.00	4.20	15,351.42	-11,781.42	128.22	9.34	128.22	1.02	0.96	13.40
15,453.00	2.50	15.60	15,446.35	-11,876.35	131.87	10.02	131.87	0.70	0.53	12.00
15,547.00	3.20	23.10	15,540.23	-11,970.23	136.26	11.60	136.26	0.84	0.74	7.98
15,641.00	3.80	28.80	15,634.06	-12,064.06	141.40	14.13	141.40	0.74	0.64	6.06
15,736.00	4.50	34.60	15,728.81	-12,158.81	147.23	17.76	147.23	0.86	0.74	6.11
15,830.00	5.50	39.50	15,822.45	-12,252.45	153.74	22.72	153.74	1.16	1.06	5.21

Survey Report



Company:	NGL WATER SOLUTIONS PERMIAN	Local Co-ordinate Reference:	Well STRIKER 6 SWD #2
Project:	LEA COUNTY, NEW MEXICO (NAD 83)	TVD Reference:	KB @ 3570.00usft (LATSHAW 21)
Site:	NW NW SEC. 20 T24S R34E	MD Reference:	KB @ 3570.00usft (LATSHAW 21)
Well:	STRIKER 6 SWD #2	North Reference:	True
Wellbore:	JOB #2018-12-21	Survey Calculation Method:	Minimum Curvature
Design:	SURVEYS	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,919.00	5.10	49.00	15,911.07	-12,341.07	159.63	28.42	159.63	1.08	-0.45	10.67
16,014.00	4.00	78.60	16,005.78	-12,435.78	163.05	34.86	163.05	2.69	-1.16	31.16
16,072.00	4.00	83.90	16,063.64	-12,493.64	163.67	38.85	163.67	0.64	0.00	9.14
16,147.00	4.30	86.90	16,138.44	-12,568.44	164.10	44.26	164.10	0.49	0.40	4.00
16,241.00	4.00	92.10	16,232.20	-12,662.20	164.17	51.06	164.17	0.51	-0.32	5.53
16,335.00	4.30	86.60	16,325.95	-12,755.95	164.26	57.85	164.26	0.53	0.32	-5.85
16,429.00	4.20	89.40	16,419.69	-12,849.69	164.50	64.81	164.50	0.25	-0.11	2.98
16,524.00	4.10	92.20	16,514.44	-12,944.44	164.41	71.68	164.41	0.24	-0.11	2.95
16,618.00	4.50	98.30	16,608.18	-13,038.18	163.75	78.69	163.75	0.65	0.43	6.49
16,712.00	5.40	124.70	16,701.84	-13,131.84	160.70	85.98	160.70	2.58	0.96	28.09
16,806.00	5.40	123.30	16,795.42	-13,225.42	155.75	93.31	155.75	0.14	0.00	-1.49
16,900.00	5.50	119.50	16,889.00	-13,319.00	151.10	100.93	151.10	0.40	0.11	-4.04
16,995.00	5.70	116.20	16,983.55	-13,413.55	146.78	109.12	146.78	0.40	0.21	-3.47
17,090.00	5.20	117.30	17,078.12	-13,508.12	142.72	117.18	142.72	0.54	-0.53	1.16
17,184.00	4.00	114.40	17,171.81	-13,601.81	139.41	123.95	139.41	1.30	-1.28	-3.09
17,278.00	4.60	94.70	17,265.55	-13,695.55	137.75	130.69	137.75	1.69	0.64	-20.96
17,372.00	3.20	100.70	17,359.33	-13,789.33	136.96	137.03	136.96	1.55	-1.49	6.38
17,466.00	3.20	96.90	17,453.19	-13,883.19	136.15	142.21	136.15	0.23	0.00	-4.04
17,560.00	3.50	94.90	17,547.02	-13,977.02	135.59	147.68	135.59	0.34	0.32	-2.13
LAST SURVEY APR 4, 2018										
17,654.00	3.50	100.70	17,640.85	-14,070.85	134.81	153.35	134.81	0.38	0.00	6.17
EXTRAPOLATION TO BIT										
17,705.00	3.50	100.70	17,691.75	-14,121.75	134.24	156.41	134.24	0.00	0.00	0.00

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
PROPOSED BHL - S	0.00	0.00	18,100.00	0.00	0.00	440,427.62	799,877.83	32.208049	-103.497420
- survey misses target center by 457.33usft at 17705.00usft MD (17691.75 TVD, 134.24 N, 156.41 E)									
- Circle (radius 40.00)									

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,350.00	1,348.95	-24.46	19.65	20" CASING	
5,322.00	5,320.40	-10.10	23.07	13 3/8" CASING	
12,286.00	12,281.19	114.33	-61.28	9 5/8" CASING	
17,654.00	17,640.85	134.81	153.35	LAST SURVEY APR 4, 2018	
17,705.00	17,691.75	134.24	156.41	EXTRAPOLATION TO BIT	

Checked By: _____ Approved By: _____ Date: _____