

Endurance Resources, LLC

Lea County, NM (NAD 83)

Duo Sonic 29 Fed

Duo Sonic 29 Fed 104H

Wellbore #1

Plan: Plan #1

Sperry Drilling Services Proposal Report

15 March, 2016

Well Coordinates: 399,591.85 N, 835,639.63 E (32° 05' 41.97" N, 103° 22' 58.70" W)

Ground Level: 3,219.70 usft

Local Coordinate Origin:

Centered on Well Duo Sonic 29 Fed 104H

Viewing Datum:

GL 3219.7' + KB 25' @ 3244.70usft (TBD)

TVDs to System:

N

North Reference:

Grid

Unit System:

API - US Survey Feet

Version: 5000.1 Build: 81B

HALLIBURTON

HALLIBURTON**Plan Report for Duo Sonic 29 Fed 104H - Plan #1**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

HALLIBURTON**Plan Report for Duo Sonic 29 Fed 104H - Plan #1**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,461.04	0.00	0.00	8,461.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build @ 8461.04' MD - Dogleg = 10.00°/100'										
8,500.00	3.90	358.83	8,499.97	1.32	-0.03	1.32	10.00	10.00	0.00	358.83
8,550.00	8.90	358.83	8,549.64	6.89	-0.14	6.89	10.00	10.00	0.00	0.00
8,600.00	13.90	358.83	8,598.64	16.76	-0.34	16.77	10.00	10.00	0.00	0.00
8,650.00	18.90	358.83	8,646.59	30.87	-0.63	30.88	10.00	10.00	0.00	0.00
8,700.00	23.90	358.83	8,693.13	49.10	-1.00	49.11	10.00	10.00	0.00	0.00
8,750.00	28.90	358.83	8,737.91	71.32	-1.45	71.33	10.00	10.00	0.00	0.00
8,800.00	33.90	358.83	8,780.57	97.35	-1.98	97.37	10.00	10.00	0.00	0.00
8,850.00	38.90	358.83	8,820.81	127.00	-2.58	127.03	10.00	10.00	0.00	0.00
8,900.00	43.90	358.83	8,858.30	160.05	-3.26	160.08	10.00	10.00	0.00	0.00
8,950.00	48.90	358.83	8,892.77	196.24	-3.99	196.28	10.00	10.00	0.00	0.00
9,000.00	53.90	358.83	8,923.96	235.29	-4.79	235.34	10.00	10.00	0.00	0.00
9,050.00	58.90	358.83	8,951.63	276.91	-5.64	276.97	10.00	10.00	0.00	0.00
9,100.00	63.90	358.83	8,975.56	320.79	-6.53	320.85	10.00	10.00	0.00	0.00
9,150.00	68.90	358.83	8,995.57	366.58	-7.46	366.66	10.00	10.00	0.00	0.00
9,200.00	73.90	358.83	9,011.52	413.94	-8.42	414.03	10.00	10.00	0.00	0.00
9,250.00	78.90	358.83	9,023.27	462.51	-9.41	462.61	10.00	10.00	0.00	0.00
9,300.00	83.90	358.83	9,030.75	511.93	-10.42	512.03	10.00	10.00	0.00	0.00
9,350.00	88.90	358.83	9,033.89	561.80	-11.43	561.92	10.00	10.00	0.00	0.00
9,361.04	90.00	358.83	9,034.00	572.84	-11.66	572.96	10.00	10.00	0.00	0.00
End Build @ 9361.04' MD - Hold Angle = 90.00°										
9,400.00	90.00	358.83	9,034.00	611.79	-12.45	611.92	0.00	0.00	0.00	0.00
9,500.00	90.00	358.83	9,034.00	711.77	-14.48	711.92	0.00	0.00	0.00	0.00
9,600.00	90.00	358.83	9,034.00	811.75	-16.52	811.92	0.00	0.00	0.00	0.00
9,700.00	90.00	358.83	9,034.00	911.73	-18.55	911.92	0.00	0.00	0.00	0.00
9,800.00	90.00	358.83	9,034.00	1,011.71	-20.59	1,011.92	0.00	0.00	0.00	0.00
9,900.00	90.00	358.83	9,034.00	1,111.69	-22.62	1,111.92	0.00	0.00	0.00	0.00
10,000.00	90.00	358.83	9,034.00	1,211.66	-24.66	1,211.92	0.00	0.00	0.00	0.00
10,100.00	90.00	358.83	9,034.00	1,311.64	-26.69	1,311.92	0.00	0.00	0.00	0.00
10,200.00	90.00	358.83	9,034.00	1,411.62	-28.73	1,411.92	0.00	0.00	0.00	0.00
10,300.00	90.00	358.83	9,034.00	1,511.60	-30.76	1,511.92	0.00	0.00	0.00	0.00
10,400.00	90.00	358.83	9,034.00	1,611.58	-32.80	1,611.92	0.00	0.00	0.00	0.00

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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
10,500.00	90.00	358.83	9,034.00	1,711.56	-34.83	1,711.92	0.00	0.00	0.00	0.00
10,600.00	90.00	358.83	9,034.00	1,811.54	-36.87	1,811.92	0.00	0.00	0.00	0.00
10,700.00	90.00	358.83	9,034.00	1,911.52	-38.90	1,911.92	0.00	0.00	0.00	0.00
10,800.00	90.00	358.83	9,034.00	2,011.50	-40.93	2,011.92	0.00	0.00	0.00	0.00
10,900.00	90.00	358.83	9,034.00	2,111.48	-42.97	2,111.92	0.00	0.00	0.00	0.00
11,000.00	90.00	358.83	9,034.00	2,211.46	-45.00	2,211.92	0.00	0.00	0.00	0.00
11,100.00	90.00	358.83	9,034.00	2,311.44	-47.04	2,311.92	0.00	0.00	0.00	0.00
11,200.00	90.00	358.83	9,034.00	2,411.42	-49.07	2,411.92	0.00	0.00	0.00	0.00
11,300.00	90.00	358.83	9,034.00	2,511.40	-51.11	2,511.92	0.00	0.00	0.00	0.00
11,400.00	90.00	358.83	9,034.00	2,611.37	-53.14	2,611.92	0.00	0.00	0.00	0.00
11,500.00	90.00	358.83	9,034.00	2,711.35	-55.18	2,711.92	0.00	0.00	0.00	0.00
11,600.00	90.00	358.83	9,034.00	2,811.33	-57.21	2,811.92	0.00	0.00	0.00	0.00
11,700.00	90.00	358.83	9,034.00	2,911.31	-59.25	2,911.92	0.00	0.00	0.00	0.00
11,800.00	90.00	358.83	9,034.00	3,011.29	-61.28	3,011.92	0.00	0.00	0.00	0.00
11,900.00	90.00	358.83	9,034.00	3,111.27	-63.32	3,111.92	0.00	0.00	0.00	0.00
12,000.00	90.00	358.83	9,034.00	3,211.25	-65.35	3,211.92	0.00	0.00	0.00	0.00
12,100.00	90.00	358.83	9,034.00	3,311.23	-67.38	3,311.92	0.00	0.00	0.00	0.00
12,200.00	90.00	358.83	9,034.00	3,411.21	-69.42	3,411.92	0.00	0.00	0.00	0.00
12,300.00	90.00	358.83	9,034.00	3,511.19	-71.45	3,511.92	0.00	0.00	0.00	0.00
12,400.00	90.00	358.83	9,034.00	3,611.17	-73.49	3,611.92	0.00	0.00	0.00	0.00
12,500.00	90.00	358.83	9,034.00	3,711.15	-75.52	3,711.92	0.00	0.00	0.00	0.00
12,600.00	90.00	358.83	9,034.00	3,811.13	-77.56	3,811.92	0.00	0.00	0.00	0.00
12,700.00	90.00	358.83	9,034.00	3,911.11	-79.59	3,911.92	0.00	0.00	0.00	0.00
12,800.00	90.00	358.83	9,034.00	4,011.09	-81.63	4,011.92	0.00	0.00	0.00	0.00
12,900.00	90.00	358.83	9,034.00	4,111.06	-83.66	4,111.92	0.00	0.00	0.00	0.00
13,000.00	90.00	358.83	9,034.00	4,211.04	-85.70	4,211.92	0.00	0.00	0.00	0.00
13,100.00	90.00	358.83	9,034.00	4,311.02	-87.73	4,311.92	0.00	0.00	0.00	0.00
13,200.00	90.00	358.83	9,034.00	4,411.00	-89.77	4,411.92	0.00	0.00	0.00	0.00
13,300.00	90.00	358.83	9,034.00	4,510.98	-91.80	4,511.92	0.00	0.00	0.00	0.00
13,400.00	90.00	358.83	9,034.00	4,610.96	-93.83	4,611.92	0.00	0.00	0.00	0.00
13,412.52	90.00	358.83	9,034.00	4,623.48	-94.09	4,624.43	0.00	0.00	0.00	0.00

TD @ 13412.52' MD - Duo Sonic 29 Fed 104H BHL

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,461.04	8,461.04	0.00	0.00	Start Build @ 8461.04' MD
8,461.04	8,461.04	0.00	0.00	Dogleg = 10.00°/100'
9,361.04	9,034.00	572.84	-11.66	End Build @ 9361.04' MD
9,361.04	9,034.00	572.84	-11.66	Hold Angle = 90.00°
13,412.52	9,034.00	4,623.48	-94.09	TD @ 13412.52' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	+N/-S (usft)	+E/-W (usft)	Start TVD (usft)
TD	No Target (Freehand)	358.83	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	13,412.52	Plan #1	MWD

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Plan Report for Duo Sonic 29 Fed 104H - Plan #1

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Duo Sonic 29 Fed 104H BHL	9,034.00	4,623.48	-94.09	Point

HALLIBURTON**North Reference Sheet for Duo Sonic 29 Fed - Duo Sonic 29 Fed 104H - Wellbore #1**

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GL 3219.7' + KB 25' @ 3244.70usft (TBD). Northing and Easting are relative to Duo Sonic 29 Fed 104H Coordinate System is US State Plane 1983, New Mexico Eastern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -104.33°, Longitude Origin: 0° 0' 0.000 E°, Latitude Origin: 0° 0' 0.000 N°

False Easting: 541,337.50usft, False Northing: 0.00usft, Scale Reduction: 1.00000829

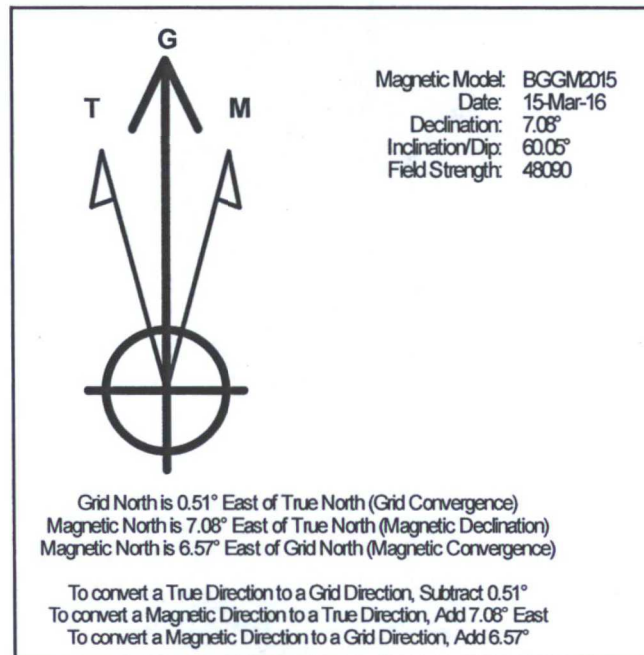
Grid Coordinates of Well: 399,591.85 usft N, 835,639.63 usft E

Geographical Coordinates of Well: 32° 05' 41.97" N, 103° 22' 58.70" W

Grid Convergence at Surface is: 0.51°

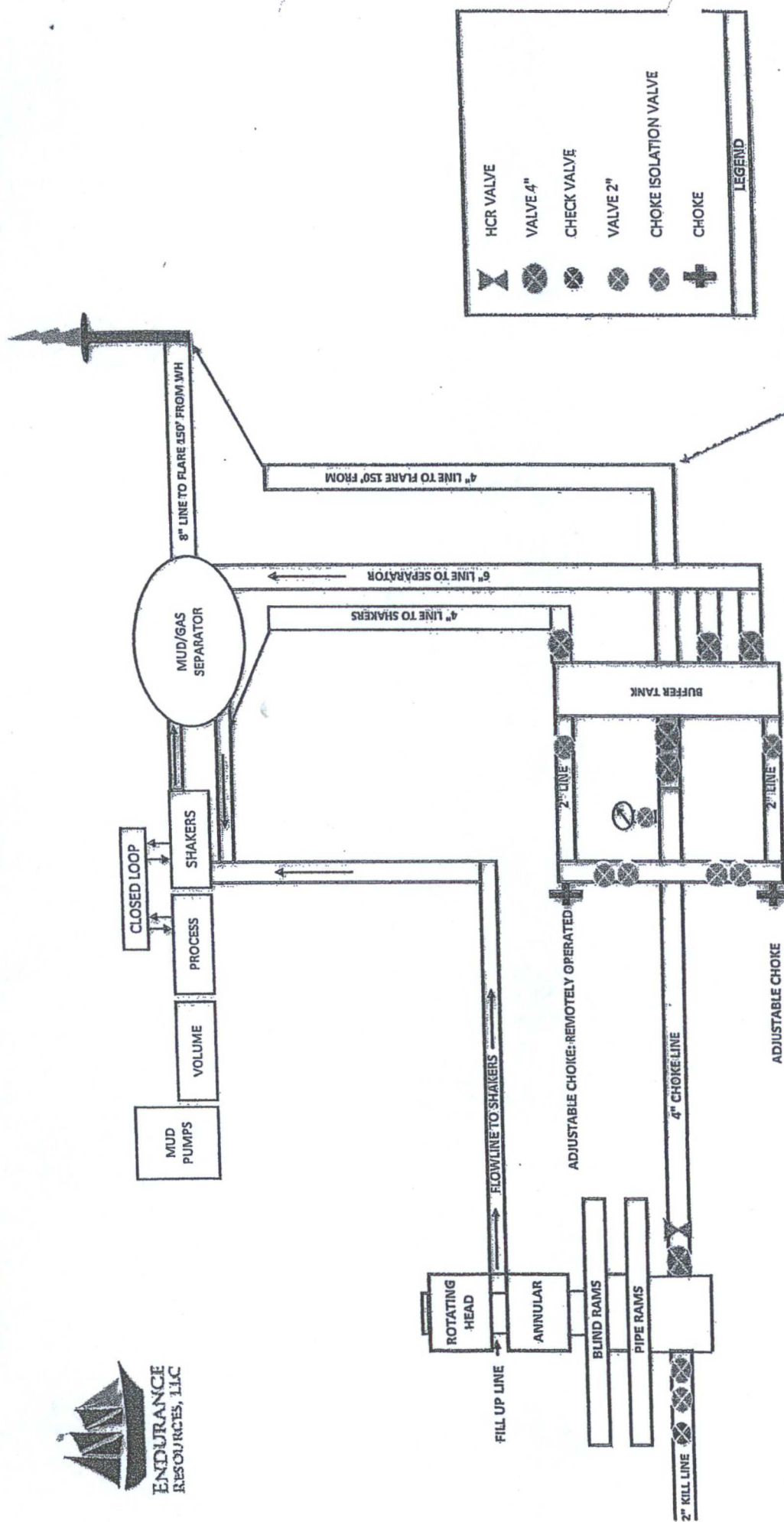
Based upon Minimum Curvature type calculations, at a Measured Depth of 13,412.52usft the Bottom Hole Displacement is 4,624.43usft in the Direction of 358.83° (Grid).

Magnetic Convergence at surface is: -6.57° (15 March 2016, , BGGM2015)



DuoSonic 29 Federal 104H

5M BOP, 5M CHOKES MANIFOLD, AND CLOSED LOOP EQUIPMENT SCHEMATIC FOR 13-5/8 BOP SYSTEM TESTED TO 300 PER ONSHORE ORDER #2



TARGETED T'S. ALL TURNS WILL BE TARGETED.
 OPTION TO USE FLEX HOUSE. TBD ONCE DRILLING RIG IS SECURED. WILL SUNDRY.
 ALL CHOKES LINES WILL BE STRAIGHT LINES UNLESS TURNS THAT USE TEE BLOCKS OR ARE
 TARGETED WITH RUNNING TEES, AND WILL BE ANCHORED TO PREVENT WHIP & REDUCE VIBRATION

	HCR VALVE
	VALVE 4"
	CHECK VALVE
	VALVE 2"
	CHOKE ISOLATION VALVE
	CHOKES
LEGEND	

