

Endurance Resources LLC

HALLIBURTON

Sperry Drilling Services

SURFACE LOCATION

US State Plane 1983
New Mexico Eastern Zone
Elevation: GL 3509.0' + KB 29.0' @ 3538.00usft (Noram 23)
Northing 477833.17 Easting 794648.18 Latitude 32° 18' 39.502 N Longitude 103° 30' 48.252 W



Project: Lea County, NM (NAD 83)
Site: Starcaster 18 Fed
Well: Starcaster 18 Fed 1H
Wellbore: Wellbore #1
Design: Plan #2
Rig: Noram 23

HOBBS OCD

AUG 18 2016

RECEIVED

To convert a Magnetic Direction to a Grid Direction, Add 6.73°

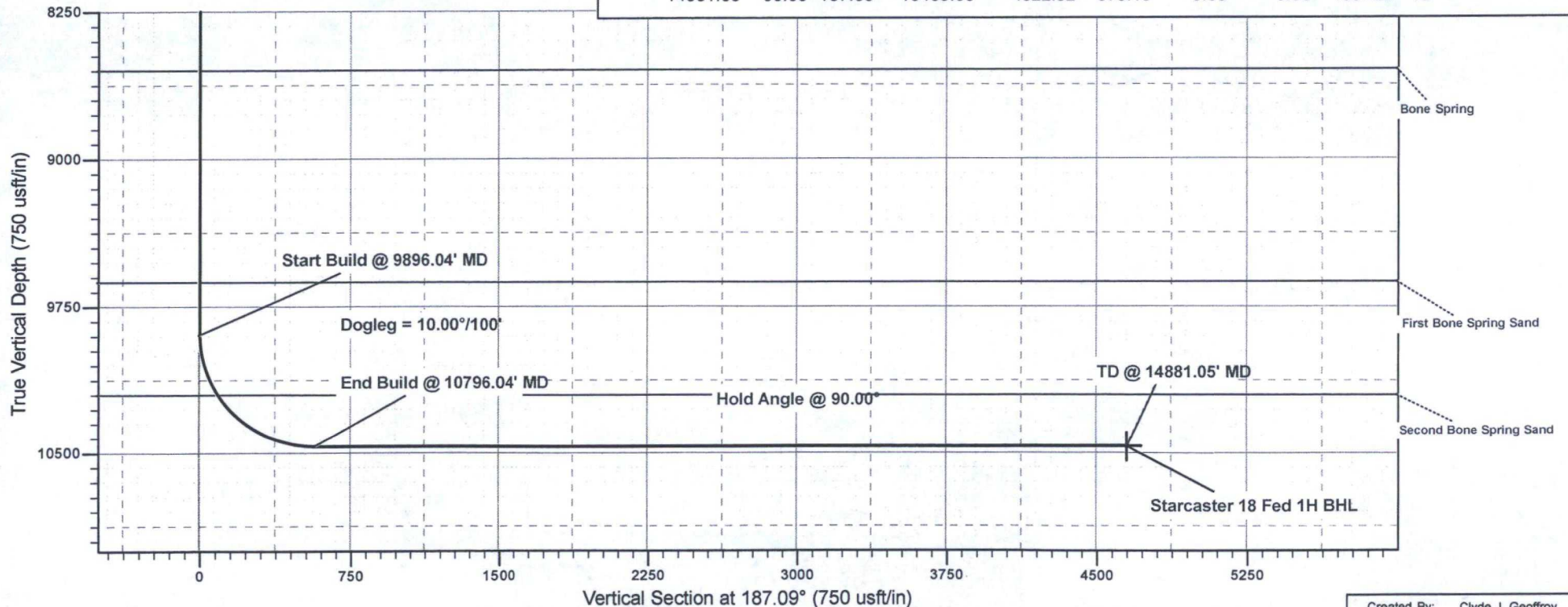
Magnetic Model: BGGM2015 Date: 14-Jan-16
Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Starcaster 18 Fed 1H BHL	10469.00	-4622.32	-575.18	473210.85	794073.00	32° 17' 53.808 N	103° 30' 55.364 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9896.04	0.00	0.00	9896.04	0.00	0.00	0.00	0.00	0.00	Start Build
10796.04	90.00	187.09	10469.00	-568.57	-70.75	10.00	187.09	572.96	End Build
14881.05	90.00	187.09	10469.00	-4622.32	-575.18	0.00	0.00	4657.97	TD



Created By: Clyde J. Geoffroy

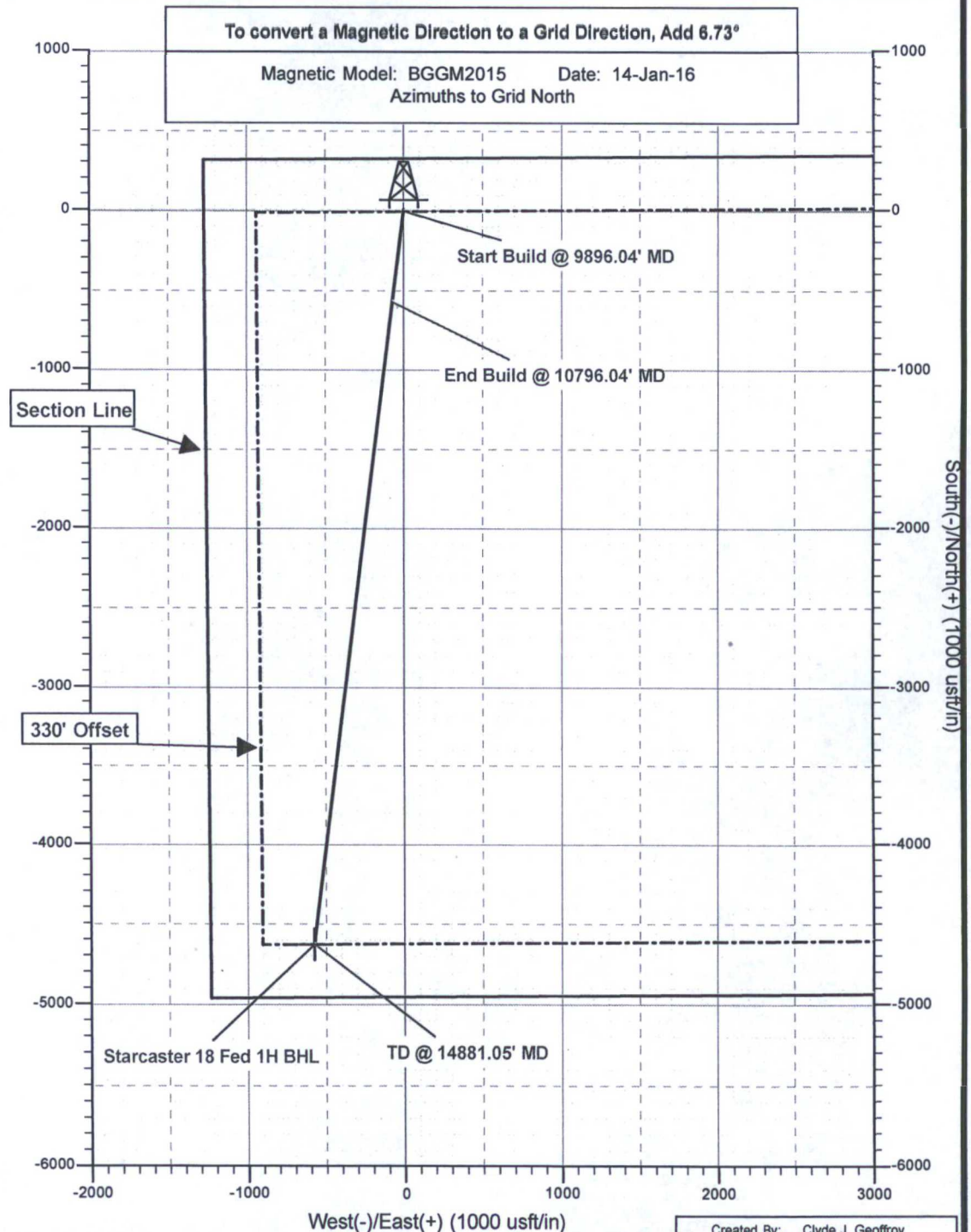
Project: Lea County, NM (NAD 83)
Site: Starcaster 18 Fed
Well: Starcaster 18 Fed 1H
Wellbore: Wellbore #1
Design: Plan #2
Rig: Noram 23

SURFACE LOCATION

US State Plane 1983
 New Mexico Eastern Zone
 Elevation: GL 3509.0' + KB 29.0' @ 3538.00usft (Noram 23)
 Northing: 477833.17 Easting: 794648.18 Latitude: 32° 18' 39.502 N Longitude: 103° 30' 48.252 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Starcaster 18 Fed 1H BHL	10469.00	-4622.32	-575.18	473210.85	794073.00	32° 17' 53.808 N	103° 30' 55.364 W



Endurance Resources LLC

Lea County, NM (NAD 83)

Starcaster 18 Fed

Starcaster 18 Fed 1H

HOBBS OCD

AUG 18 2016

RECEIVED

Wellbore #1

Plan: Plan #2

Sperry Drilling Services Proposal Report

17 January, 2016

Well Coordinates: 477,833.17 N, 794,648.18 E (32° 18' 39.50" N, 103° 30' 48.25" W)

Ground Level: 3,509.00 usft

Local Coordinate Origin: Centered on Well Starcaster 18 Fed 1H

Viewing Datum: GL 3509.0' + KB 29.0' @ 3538.00usft (Noram 23)

TVDs to System: N

North Reference: Grid

Unit System: API - US Survey Feet

Version: 5000.1 Build: 76

HALLIBURTON

Plan Report for Starcaster 18 Fed 1H - Plan #2

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
979.00	0.00	0.00	979.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler										
1,416.00	0.00	0.00	1,416.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt										
4,943.00	0.00	0.00	4,943.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar										
5,025.00	0.00	0.00	5,025.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon										
6,049.00	0.00	0.00	6,049.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon										
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon										
8,551.00	0.00	0.00	8,551.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring										
9,626.00	0.00	0.00	9,626.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
First Bone Spring Sand										
9,896.04	0.00	0.00	9,896.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build @ 9896.04' MD - Dogleg = 10.00°/100'										
9,900.00	0.40	187.09	9,900.00	-0.01	0.00	0.01	10.00	10.00	0.00	187.09
10,000.00	10.40	187.09	9,999.43	-9.33	-1.16	9.41	10.00	10.00	0.00	0.00
10,100.00	20.40	187.09	10,095.72	-35.65	-4.44	35.92	10.00	10.00	0.00	0.00
10,200.00	30.40	187.09	10,185.94	-78.15	-9.72	78.75	10.00	10.00	0.00	0.00
10,217.62	32.16	187.09	10,201.00	-87.23	-10.85	87.90	10.00	10.00	0.00	0.00
Second Bone Spring Sand										
10,300.00	40.40	187.09	10,267.36	-135.56	-16.87	136.60	10.00	10.00	0.00	0.00
10,400.00	50.40	187.09	10,337.49	-206.12	-25.65	207.71	10.00	10.00	0.00	0.00
10,500.00	60.40	187.09	10,394.21	-287.69	-35.80	289.91	10.00	10.00	0.00	0.00
10,600.00	70.40	187.09	10,435.79	-377.80	-47.01	380.72	10.00	10.00	0.00	0.00
10,700.00	80.40	187.09	10,460.97	-473.71	-58.95	477.36	10.00	10.00	0.00	0.00
10,796.04	90.00	187.09	10,469.00	-568.57	-70.75	572.96	10.00	10.00	0.00	0.00
End Build @ 10796.04' MD - Hold Angle @ 90.00°										
10,800.00	90.00	187.09	10,469.00	-572.50	-71.24	576.92	0.00	0.00	0.00	0.00
10,900.00	90.00	187.09	10,469.00	-671.73	-83.59	676.92	0.00	0.00	0.00	0.00
11,000.00	90.00	187.09	10,469.00	-770.97	-95.94	776.92	0.00	0.00	0.00	0.00
11,100.00	90.00	187.09	10,469.00	-870.20	-108.28	876.92	0.00	0.00	0.00	0.00
11,200.00	90.00	187.09	10,469.00	-969.44	-120.63	976.92	0.00	0.00	0.00	0.00
11,300.00	90.00	187.09	10,469.00	-1,068.67	-132.98	1,076.92	0.00	0.00	0.00	0.00
11,400.00	90.00	187.09	10,469.00	-1,167.91	-145.33	1,176.92	0.00	0.00	0.00	0.00
11,500.00	90.00	187.09	10,469.00	-1,267.14	-157.68	1,276.92	0.00	0.00	0.00	0.00
11,600.00	90.00	187.09	10,469.00	-1,366.38	-170.03	1,376.92	0.00	0.00	0.00	0.00
11,700.00	90.00	187.09	10,469.00	-1,465.61	-182.37	1,476.92	0.00	0.00	0.00	0.00
11,800.00	90.00	187.09	10,469.00	-1,564.85	-194.72	1,576.92	0.00	0.00	0.00	0.00
11,900.00	90.00	187.09	10,469.00	-1,664.08	-207.07	1,676.92	0.00	0.00	0.00	0.00
12,000.00	90.00	187.09	10,469.00	-1,763.32	-219.42	1,776.92	0.00	0.00	0.00	0.00
12,100.00	90.00	187.09	10,469.00	-1,862.55	-231.77	1,876.92	0.00	0.00	0.00	0.00
12,200.00	90.00	187.09	10,469.00	-1,961.79	-244.12	1,976.92	0.00	0.00	0.00	0.00
12,300.00	90.00	187.09	10,469.00	-2,061.02	-256.46	2,076.92	0.00	0.00	0.00	0.00
12,400.00	90.00	187.09	10,469.00	-2,160.25	-268.81	2,176.92	0.00	0.00	0.00	0.00
12,500.00	90.00	187.09	10,469.00	-2,259.49	-281.16	2,276.92	0.00	0.00	0.00	0.00
12,600.00	90.00	187.09	10,469.00	-2,358.72	-293.51	2,376.92	0.00	0.00	0.00	0.00
12,700.00	90.00	187.09	10,469.00	-2,457.96	-305.86	2,476.92	0.00	0.00	0.00	0.00
12,800.00	90.00	187.09	10,469.00	-2,557.19	-318.21	2,576.92	0.00	0.00	0.00	0.00
12,900.00	90.00	187.09	10,469.00	-2,656.43	-330.55	2,676.92	0.00	0.00	0.00	0.00
13,000.00	90.00	187.09	10,469.00	-2,755.66	-342.90	2,776.92	0.00	0.00	0.00	0.00
13,100.00	90.00	187.09	10,469.00	-2,854.90	-355.25	2,876.92	0.00	0.00	0.00	0.00
13,200.00	90.00	187.09	10,469.00	-2,954.13	-367.60	2,976.92	0.00	0.00	0.00	0.00

HALLIBURTON**Plan Report for Starcaster 18 Fed 1H - Plan #2**

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 (°)
13,300.00	90.00	187.09	10,469.00	-3,053.37	-379.95	3,076.92	0.00	0.00	0.00	0.00
13,400.00	90.00	187.09	10,469.00	-3,152.60	-392.30	3,176.92	0.00	0.00	0.00	0.00
13,500.00	90.00	187.09	10,469.00	-3,251.84	-404.64	3,276.92	0.00	0.00	0.00	0.00
13,600.00	90.00	187.09	10,469.00	-3,351.07	-416.99	3,376.92	0.00	0.00	0.00	0.00
13,700.00	90.00	187.09	10,469.00	-3,450.31	-429.34	3,476.92	0.00	0.00	0.00	0.00
13,800.00	90.00	187.09	10,469.00	-3,549.54	-441.69	3,576.92	0.00	0.00	0.00	0.00
13,900.00	90.00	187.09	10,469.00	-3,648.78	-454.04	3,676.92	0.00	0.00	0.00	0.00
14,000.00	90.00	187.09	10,469.00	-3,748.01	-466.38	3,776.92	0.00	0.00	0.00	0.00
14,100.00	90.00	187.09	10,469.00	-3,847.24	-478.73	3,876.92	0.00	0.00	0.00	0.00
14,200.00	90.00	187.09	10,469.00	-3,946.48	-491.08	3,976.92	0.00	0.00	0.00	0.00
14,300.00	90.00	187.09	10,469.00	-4,045.71	-503.43	4,076.92	0.00	0.00	0.00	0.00
14,400.00	90.00	187.09	10,469.00	-4,144.95	-515.78	4,176.92	0.00	0.00	0.00	0.00
14,500.00	90.00	187.09	10,469.00	-4,244.18	-528.13	4,276.92	0.00	0.00	0.00	0.00
14,600.00	90.00	187.09	10,469.00	-4,343.42	-540.47	4,376.92	0.00	0.00	0.00	0.00
14,700.00	90.00	187.09	10,469.00	-4,442.65	-552.82	4,476.92	0.00	0.00	0.00	0.00
14,800.00	90.00	187.09	10,469.00	-4,541.89	-565.17	4,576.92	0.00	0.00	0.00	0.00
14,881.05	90.00	187.09	10,469.00	-4,622.32	-575.18	4,657.97	0.00	0.00	0.00	0.00

TD @ 14881.05' MD - Starcaster 18 Fed 1H BHL

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
9,896.04	9,896.04	0.00	0.00	Start Build @ 9896.04' MD
9,896.04	9,896.04	0.00	0.00	Dogleg = 10.00°/100'
10,796.04	10,469.00	-568.57	-70.75	End Build @ 10796.04' MD
10,796.04	10,469.00	-568.57	-70.75	Hold Angle @ 90.00°
14,881.05	10,469.00	-4,622.32	-575.18	TD @ 14881.05' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	+E/-W (usft)	Start TVD (usft)
TD	No Target (Freehand)	187.09	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	14,881.05	Plan #2	MWD+SC

Plan Report for Starcaster 18 Fed 1H - Plan #2

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
979.00	979.00	Rustler		0.00	187.09
1,416.00	1,416.00	Top of Salt		0.00	187.09
4,943.00	4,943.00	Lamar		0.00	187.09
5,025.00	5,025.00	Bell Canyon		0.00	187.09
6,049.00	6,049.00	Cherry Canyon		0.00	187.09
7,300.00	7,300.00	Brushy Canyon		0.00	187.09
8,551.00	8,551.00	Bone Spring		0.00	187.09
9,626.00	9,626.00	First Bone Spring Sand		0.00	187.09
10,217.62	10,201.00	Second Bone Spring Sand		0.00	187.09

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Starcaster 18 Fed 1H BHL	10,469.00	-4,622.32	-575.18	Point

HALLIBURTON**North Reference Sheet for Starcaster 18 Fed - Starcaster 18 Fed 1H - 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 3509.0' + KB 29.0' @ 3538.00usft (Noram 23). Northing and Easting are relative to Starcaster 18 Fed 1H

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: 0.99998258

Grid Coordinates of Well: 477,833.17 usft N, 794,648.18 usft E

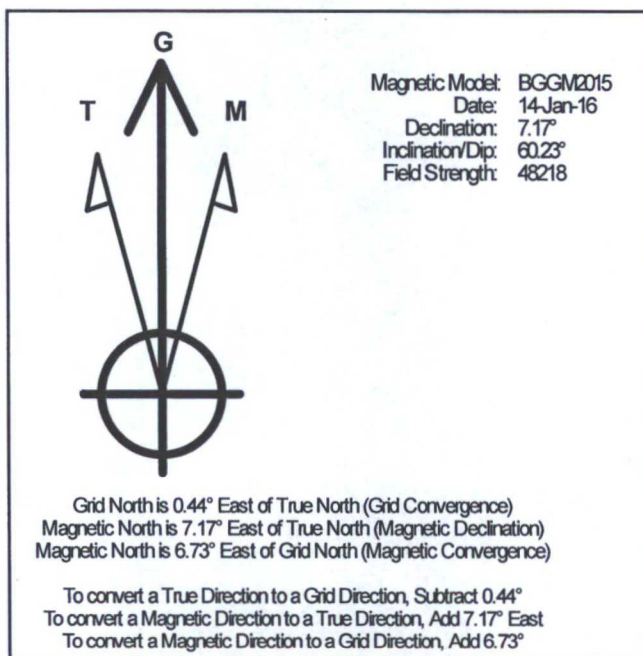
Geographical Coordinates of Well: 32° 18' 39.50" N, 103° 30' 48.25" W

Grid Convergence at Surface is: 0.44°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,881.05usft

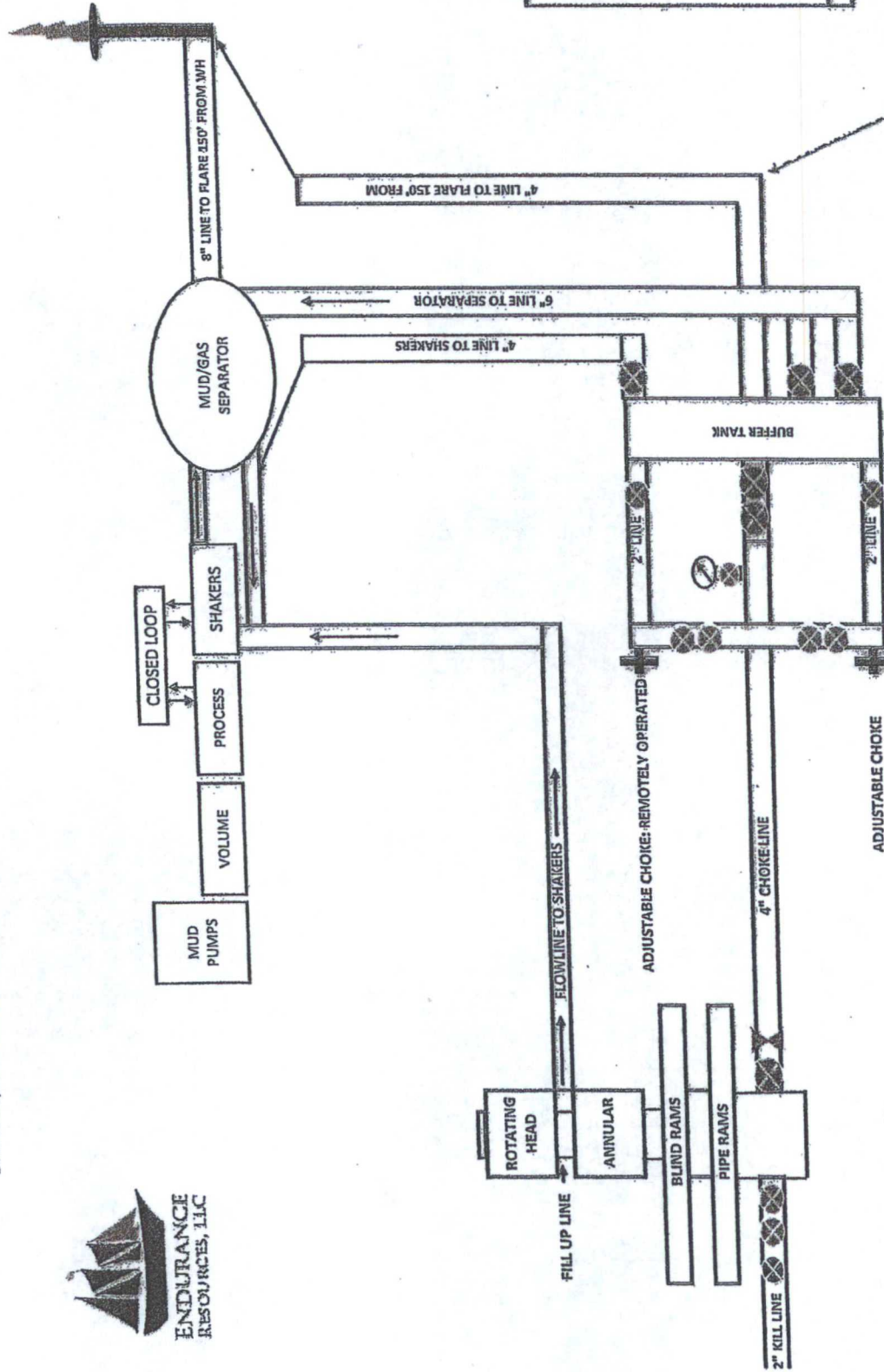
the Bottom Hole Displacement is 4,657.97usft in the Direction of 187.09° (Grid).

Magnetic Convergence at surface is: -6.73° (14 January 2016, , BGGM2015)



Starcaster 18 Feb #14

5M BOP, 5M CHOKE MANIFOLD, AND CLOSED LOOP EQUIPMENT SCHEMATIC FOR 13-5/8 BOP SYSTEM TESTED TO 3M 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 CHOKE 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

ENDURANCE RESOURCES LLC
RIG LOCATION LAYOUT & H2S SAFETY EQUIPMENT LOCATION
WELL PADS 420' X 350'
NOTE: DRAWING NOT TO SCALE

