

HOBBS OCD

SEP 29 2016

RECEIVED

Endurance Resources LLC

HALLIBURTON
Sperry Drilling Services

Project: Lea County, NM (NAD 83)
Site: Jaguar 18 State
Well: Jaguar 18 State 4H
Wellbore: Wellbore #1
Plan: Plan #1
Rig: McVay 6

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	
11627.04	0.00	0.00	11627.04	0.00	0.00	0.00	0.00	0.00	Start Build
12527.04	90.00	179.57	12200.00	-572.94	4.25	10.00	179.57	572.96	End Build
16566.61	90.00	179.57	12200.00	-4612.40	34.25	0.00	0.00	4612.53	TD

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Jaguar 18 State 4H PBHL	12200.00	-4612.40	34.25	473110.94	766342.00	32° 17' 54.798 N	103° 36' 18.444 W

Surface Location:

US State Plane 1983
New Mexico Eastern Zone
Elevation: GE 3713.1' + KB 18' @ 3731.10usft (McVay 6)
Northing: 477723.34 Easting: 766307.79 Latitude: 32° 18' 40.441 N Longitude: 103° 36' 18.478 W

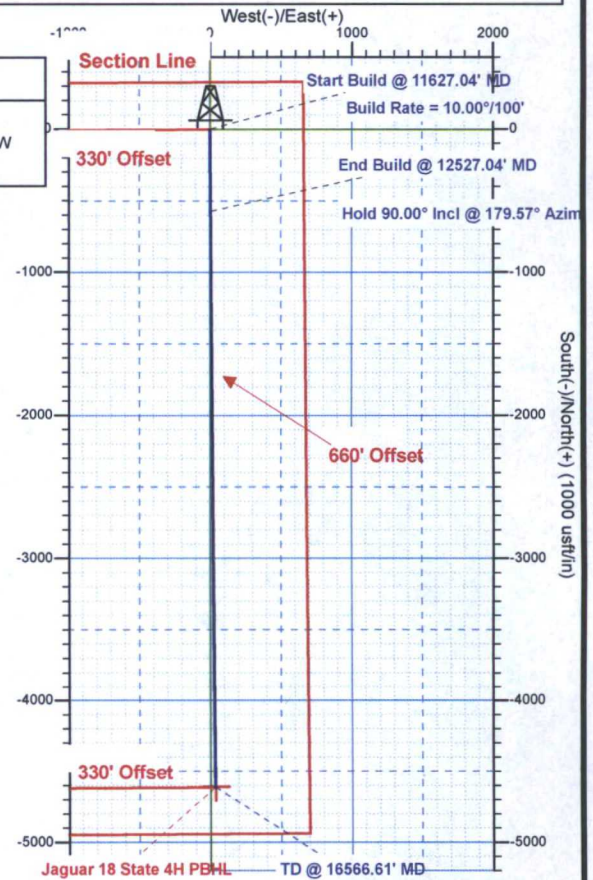
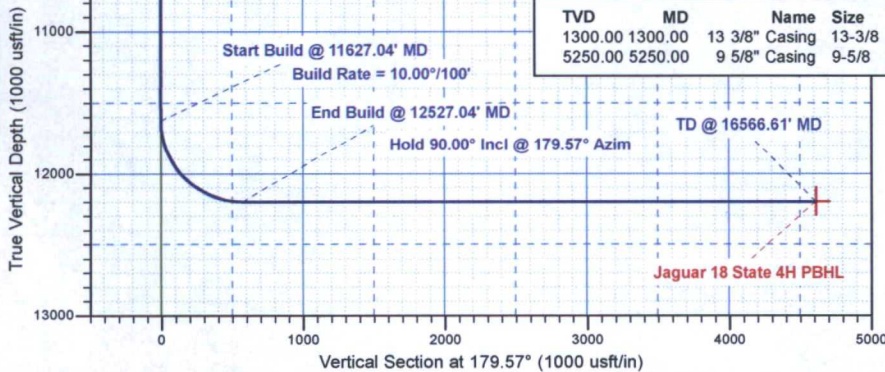
To convert a Magnetic Direction to a Grid Direction, Add 7.05°

Magnetic Model: BGGM2013 Date: 13-Sep-13
Azimuths to Grid North



CASING DETAILS

TVD	MD	Name	Size
1300.00	1300.00	13 3/8" Casing	13-3/8
5250.00	5250.00	9 5/8" Casing	9-5/8



Created By: Mike Moreno

Endurance Resources LLC

Lea County, NM (NAD 83)

Jaguar 18 State

Jaguar 18 State 4H

Wellbore #1

Plan: Plan #1

Sperry Drilling Services Standard Report

13 September, 2013

Well Coordinates: 477,723.34 N, 766,307.79 E (32° 18' 40.44" N, 103° 36' 18.48" W)
Ground Level: 3,713.10 usft

Local Coordinate Origin:	Centered on Well Jaguar 18 State 4H
Viewing Datum:	GE 3713.1' + KB 18' @ 3731.10usft (McVay 6)
TVDs to System:	N
North Reference:	Grid
Unit System:	API - US Survey Feet

Version: 5000.1 Build: 65

HALLIBURTON

Plan Report for Jaguar 18 State 4H - Plan #1

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

Plan Report for Jaguar 18 State 4H - Plan #1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
5,000.00	0.00	0.00	5,000.00	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
5,200.00	0.00	0.00	5,200.00	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
5,400.00	0.00	0.00	5,400.00	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
5,600.00	0.00	0.00	5,600.00	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
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	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
6,100.00	0.00	0.00	6,100.00	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
6,300.00	0.00	0.00	6,300.00	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
6,500.00	0.00	0.00	6,500.00	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
6,700.00	0.00	0.00	6,700.00	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
6,900.00	0.00	0.00	6,900.00	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
7,100.00	0.00	0.00	7,100.00	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
7,300.00	0.00	0.00	7,300.00	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
7,500.00	0.00	0.00	7,500.00	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
7,700.00	0.00	0.00	7,700.00	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
7,900.00	0.00	0.00	7,900.00	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
8,100.00	0.00	0.00	8,100.00	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
8,300.00	0.00	0.00	8,300.00	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
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,900.00	0.00	0.00	0.00	0.00

Plan Report for Jaguar 18 State 4H - Plan #1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
10,000.00	0.00	0.00	10,000.00	0.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,100.00	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,200.00	0.00	0.00	0.00	0.00
10,300.00	0.00	0.00	10,300.00	0.00	0.00	0.00	0.00
10,400.00	0.00	0.00	10,400.00	0.00	0.00	0.00	0.00
10,500.00	0.00	0.00	10,500.00	0.00	0.00	0.00	0.00
10,600.00	0.00	0.00	10,600.00	0.00	0.00	0.00	0.00
10,700.00	0.00	0.00	10,700.00	0.00	0.00	0.00	0.00
10,800.00	0.00	0.00	10,800.00	0.00	0.00	0.00	0.00
10,900.00	0.00	0.00	10,900.00	0.00	0.00	0.00	0.00
11,000.00	0.00	0.00	11,000.00	0.00	0.00	0.00	0.00
11,100.00	0.00	0.00	11,100.00	0.00	0.00	0.00	0.00
11,200.00	0.00	0.00	11,200.00	0.00	0.00	0.00	0.00
11,300.00	0.00	0.00	11,300.00	0.00	0.00	0.00	0.00
11,400.00	0.00	0.00	11,400.00	0.00	0.00	0.00	0.00
11,500.00	0.00	0.00	11,500.00	0.00	0.00	0.00	0.00
11,600.00	0.00	0.00	11,600.00	0.00	0.00	0.00	0.00
11,627.04	0.00	0.00	11,627.04	0.00	0.00	0.00	0.00
11,650.00	2.30	179.57	11,649.99	-0.46	0.00	0.46	10.00
11,700.00	7.30	179.57	11,699.80	-4.64	0.03	4.64	10.00
11,750.00	12.30	179.57	11,749.06	-13.14	0.10	13.14	10.00
11,800.00	17.30	179.57	11,797.39	-25.91	0.19	25.91	10.00
11,850.00	22.30	179.57	11,844.42	-42.84	0.32	42.84	10.00
11,900.00	27.30	179.57	11,889.79	-63.80	0.47	63.80	10.00
11,950.00	32.30	179.57	11,933.17	-88.63	0.66	88.64	10.00
12,000.00	37.30	179.57	11,974.21	-117.16	0.87	117.16	10.00
12,050.00	42.30	179.57	12,012.62	-149.15	1.11	149.15	10.00
12,100.00	47.30	179.57	12,048.09	-184.37	1.37	184.37	10.00
12,150.00	52.30	179.57	12,080.35	-222.54	1.65	222.55	10.00
12,200.00	57.30	179.57	12,109.17	-263.38	1.96	263.39	10.00
12,250.00	62.30	179.57	12,134.31	-306.58	2.28	306.59	10.00
12,300.00	67.30	179.57	12,155.60	-351.80	2.61	351.81	10.00
12,350.00	72.30	179.57	12,172.86	-398.71	2.96	398.72	10.00
12,400.00	77.30	179.57	12,185.97	-446.94	3.32	446.96	10.00
12,450.00	82.30	179.57	12,194.83	-496.14	3.68	496.15	10.00
12,500.00	87.30	179.57	12,199.36	-545.91	4.05	545.93	10.00
12,527.04	90.00	179.57	12,200.00	-572.94	4.25	572.96	10.00
12,600.00	90.00	179.57	12,200.00	-645.90	4.80	645.92	0.00
12,700.00	90.00	179.57	12,200.00	-745.90	5.54	745.92	0.00
12,800.00	90.00	179.57	12,200.00	-845.89	6.28	845.92	0.00
12,900.00	90.00	179.57	12,200.00	-945.89	7.02	945.92	0.00
13,000.00	90.00	179.57	12,200.00	-1,045.89	7.77	1,045.92	0.00
13,100.00	90.00	179.57	12,200.00	-1,145.89	8.51	1,145.92	0.00
13,200.00	90.00	179.57	12,200.00	-1,245.88	9.25	1,245.92	0.00
13,300.00	90.00	179.57	12,200.00	-1,345.88	9.99	1,345.92	0.00
13,400.00	90.00	179.57	12,200.00	-1,445.88	10.74	1,445.92	0.00
13,500.00	90.00	179.57	12,200.00	-1,545.88	11.48	1,545.92	0.00
13,600.00	90.00	179.57	12,200.00	-1,645.87	12.22	1,645.92	0.00
13,700.00	90.00	179.57	12,200.00	-1,745.87	12.96	1,745.92	0.00
13,800.00	90.00	179.57	12,200.00	-1,845.87	13.71	1,845.92	0.00
13,900.00	90.00	179.57	12,200.00	-1,945.86	14.45	1,945.92	0.00

Plan Report for Jaguar 18 State 4H - Plan #1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
14,000.00	90.00	179.57	12,200.00	-2,045.86	15.19	2,045.92	0.00
14,100.00	90.00	179.57	12,200.00	-2,145.86	15.93	2,145.92	0.00
14,200.00	90.00	179.57	12,200.00	-2,245.86	16.68	2,245.92	0.00
14,300.00	90.00	179.57	12,200.00	-2,345.85	17.42	2,345.92	0.00
14,400.00	90.00	179.57	12,200.00	-2,445.85	18.16	2,445.92	0.00
14,500.00	90.00	179.57	12,200.00	-2,545.85	18.90	2,545.92	0.00
14,600.00	90.00	179.57	12,200.00	-2,645.84	19.65	2,645.92	0.00
14,700.00	90.00	179.57	12,200.00	-2,745.84	20.39	2,745.92	0.00
14,800.00	90.00	179.57	12,200.00	-2,845.84	21.13	2,845.92	0.00
14,900.00	90.00	179.57	12,200.00	-2,945.84	21.87	2,945.92	0.00
15,000.00	90.00	179.57	12,200.00	-3,045.83	22.62	3,045.92	0.00
15,100.00	90.00	179.57	12,200.00	-3,145.83	23.36	3,145.92	0.00
15,200.00	90.00	179.57	12,200.00	-3,245.83	24.10	3,245.92	0.00
15,300.00	90.00	179.57	12,200.00	-3,345.83	24.84	3,345.92	0.00
15,400.00	90.00	179.57	12,200.00	-3,445.82	25.59	3,445.92	0.00
15,500.00	90.00	179.57	12,200.00	-3,545.82	26.33	3,545.92	0.00
15,600.00	90.00	179.57	12,200.00	-3,645.82	27.07	3,645.92	0.00
15,700.00	90.00	179.57	12,200.00	-3,745.81	27.82	3,745.92	0.00
15,800.00	90.00	179.57	12,200.00	-3,845.81	28.56	3,845.92	0.00
15,900.00	90.00	179.57	12,200.00	-3,945.81	29.30	3,945.92	0.00
16,000.00	90.00	179.57	12,200.00	-4,045.81	30.04	4,045.92	0.00
16,100.00	90.00	179.57	12,200.00	-4,145.80	30.79	4,145.92	0.00
16,200.00	90.00	179.57	12,200.00	-4,245.80	31.53	4,245.92	0.00
16,300.00	90.00	179.57	12,200.00	-4,345.80	32.27	4,345.92	0.00
16,400.00	90.00	179.57	12,200.00	-4,445.80	33.01	4,445.92	0.00
16,500.00	90.00	179.57	12,200.00	-4,545.79	33.76	4,545.92	0.00
16,566.61	90.00	179.57	12,200.00	-4,612.40	34.25	4,612.53	0.00

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,627.04	11,627.04	0.00	0.00	Start Build @ 11627.04' MD
11,627.04	11,627.04	0.00	0.00	Build Rate = 10.00°/100'
12,527.04	12,200.00	-572.94	4.25	End Build @ 12527.04' MD
12,527.04	12,200.00	-572.94	4.25	Hold 90.00° Incl @ 179.57° Azim
16,566.61	12,200.00	-4,612.40	34.25	TD @ 16566.61' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	+N/-S (usft)	+E/-W (usft)	Start TVD (usft)
TD	No Target (Freehand)	179.57	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	16,566.61	Plan #1	MWD+SC

Plan Report for Jaguar 18 State 4H - Plan #1

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,300.00	1,300.00	13 3/8" Casing	13-3/8	17-1/2
5,250.00	5,250.00	9 5/8" Casing	9-5/8	12-1/4

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Jaguar 18 State 4H - plan hits target center - Point	0.00	0.00	12,200.00	-4,612.40	34.25	473,110.94	766,342.04	32° 17' 54.798 N	103° 36' 18.444 W

North Reference Sheet for Jaguar 18 State - Jaguar 18 State 4H - 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 GE 3713.1' + KB 18' @ 3731.10usft (McVay 6). Northing and Easting are relative to Jaguar 18 State 4H

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° 20' 0.000 W°, 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: 0.99996706

Grid Coordinates of Well: 477,723.34 usft N, 766,307.79 usft E

Geographical Coordinates of Well: 32° 18' 40.44" N, 103° 36' 18.48" W

Grid Convergence at Surface is: 0.39°

Based upon Minimum Curvature type calculations, at a Measured Depth of 16,566.61usft the Bottom Hole Displacement is 4,612.53usft in the Direction of 179.57° (Grid).

Magnetic Convergence at surface is: -7.05° (13 September 2013, , BGGM2013)

