

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural
Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 173642
HOBBS OCD

SEP 20 2013

RECEIVED

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address ENDURANCE RESOURCES LLC 15455 Dallas Parkway Addison, TX 75234		2. OGRID Number 270329
4. Property Code 40147		3. API Number 30-025-41427
5. Property Name JAGUAR 18 STATE		6. Well No. 001H

7. Surface Location									
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	18	23S	33E	1	330	N	660	W	LEA

8. Proposed Bottom Hole Location									
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	18	23S	33E	4	330	S	660	W	Lea

9. Pool Information	
CRUZ,BONE SPRING /	14865

Additional Well Information				
11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3716
16. Multiple N	17. Proposed Depth 16574	18. Formation Bone Spring	19. Contractor	20. Spud Date
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program						
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1300	900	
Int1	12.24	9.625	40	5250	11125	
Prod	8.75	5.5	20	16574	3000	1000

Casing/Cement Program: Additional Comments
Plan to drill a 17-1/2" hole to 1300' with Fresh Water. Run 13-3/8", 54.5#, J-55 csg and cement to surface. Drill 12-1/4" hole to 5250' with Brine, and run 9-5/8", 40.0#, L-80 csg and cement to surface. Drill 8-3/4" hole to KOP at ~11627' drill a 10"/100' curve and a ~4047' lateral to TD of ~16,574'. Run 5-1/2", 20#, P-110 csg and cement to 1,000' in 1 stage.

22. Proposed Blowout Prevention Program			
Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐ if applicable.		OIL CONSERVATION DIVISION	
Signature: <i>John Logemann</i>		Approved by: <i>[Signature]</i>	
Printed Name: John Logemann		Title: <i>Dist. MGR</i>	
Title: Drilling Engineer		Approved Date: <i>9-25-2013</i>	
Email Address: john@enduranceresourcesllc.com		Expiration Date: <i>9-25-2015</i>	
Date: <i>9/19/2013</i>	Phone: <i>(422) 705-1372</i>	Conditions of Approval Attached	

SEP 26 2013

HOBBS OCD

SEP 20 2013

RECEIVED

Endurance Resources LLC

Lea County, NM (NAD 83)

Jaguar 18 State

Jaguar 18 State 1H

Wellbore #1

Plan: Plan #1

Sperry Drilling Services

Standard Report

13 September, 2013

Well Coordinates: 477,706.87 N, 762,420.74 E (32° 18' 40.54" N, 103° 37' 03.77" W)

Ground Level: 3,716.30 usft

Local Coordinate Origin:

Centered on Well Jaguar 18 State 1H

Viewing Datum:

GE 3716.3' + KB 18' @ 3734.30usft (McVay 6)

TVDs to System:

N

North Reference:

Grid

Unit System:

API - US Survey Feet

Version: 5000.1 Build: 65

HALLIBURTON

Endurance Resources LLC

HALLIBURTON

Sperry Drilling Services

Project: Lea County, NM (NAD 83)

Site: Jaguar 18 State

Well: Jaguar 18 State 1H

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	179.65	12200.00	-572.95	3.46	10.00	179.65	567.92	End Build
16570.81	90.00	179.65	12200.00	-4616.64	27.84	0.00	0.00	4576.17	TD

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Jaguar 18 State 1H PBHL	12200.00	-4616.64	27.84	473090.23	762448.52	32° 17' 54.853 N	103° 37' 3.805 W

US State Plane 1983

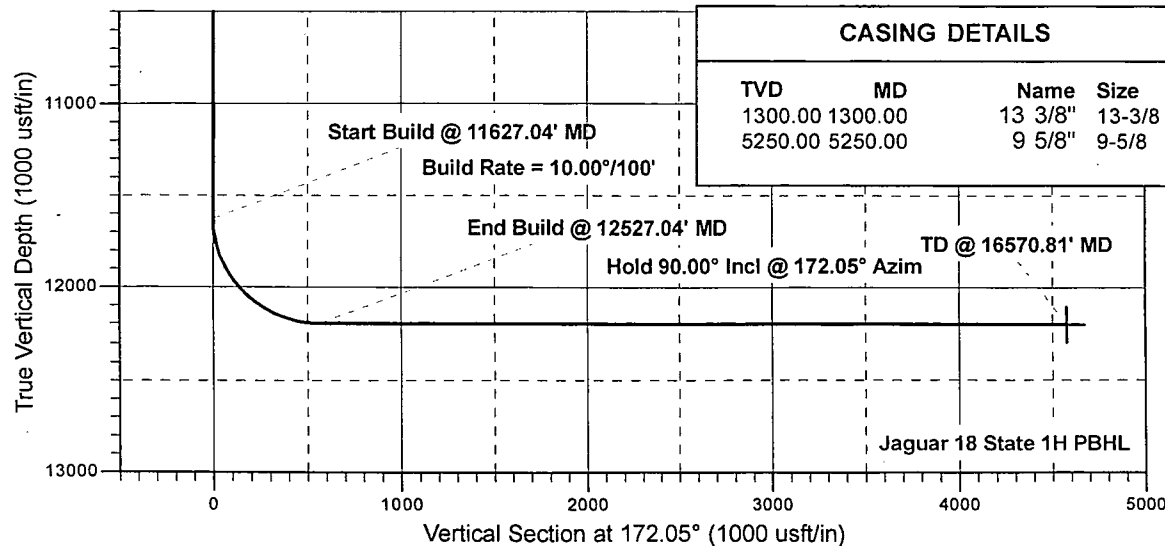
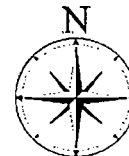
New Mexico Eastern Zone

Elevation: GE 3716.3' + KB 18' @ 3734.30usft (McVay 6)

Northing	Easting	Latitude	Longitude
477706.87	762420.74	32° 18' 40.537 N	103° 37' 3.771 W

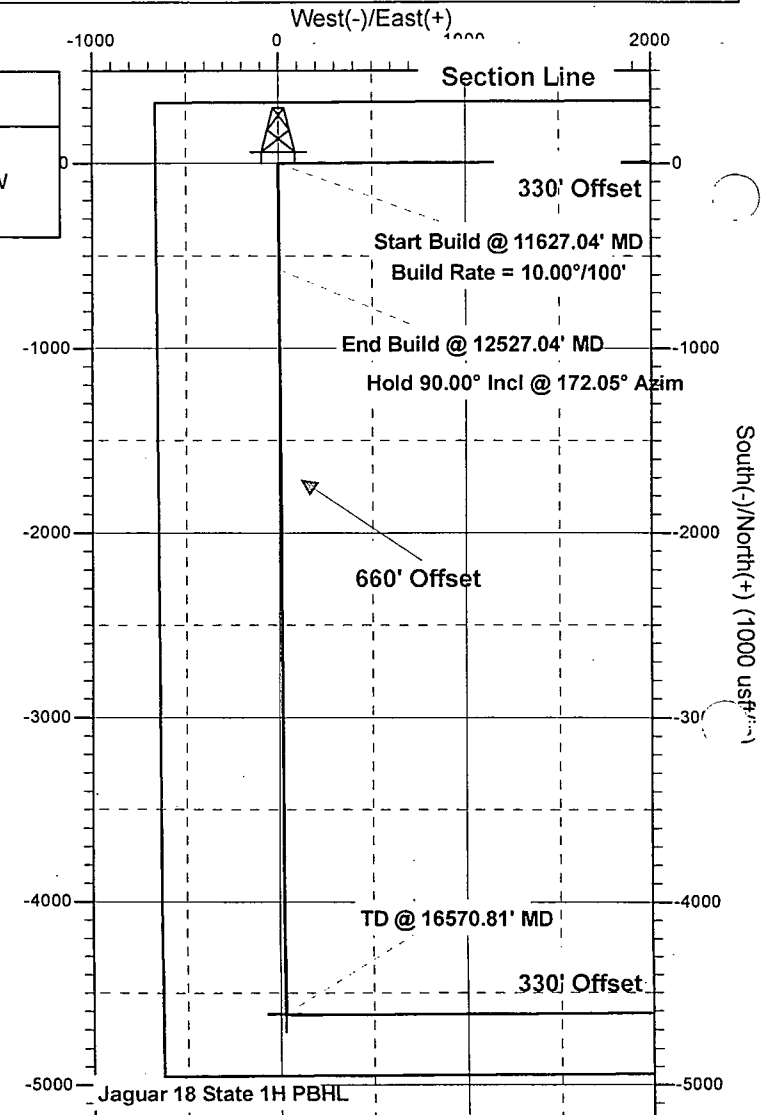
To convert a Magnetic Direction to a Grid Direction, Add 7.06°

Magnetic Model: BGGM2013 Date: 11-Sep-13
Azimuths to Grid North



CASING DETAILS

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



Created By: Mike Moreno

Plan Report for Jaguar 18 State 1H - 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 1H - 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 1H - 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	179.65	11,649.99	-0.46	0.00	0.46	10.00
11,700.00	7.30	179.65	11,699.80	-4.64	0.03	4.60	10.00
11,750.00	12.30	179.65	11,749.06	-13.14	0.08	13.03	10.00
11,800.00	17.30	179.65	11,797.39	-25.91	0.16	25.68	10.00
11,850.00	22.30	179.65	11,844.42	-42.84	0.26	42.46	10.00
11,900.00	27.30	179.65	11,889.79	-63.80	0.38	63.24	10.00
11,950.00	32.30	179.65	11,933.17	-88.64	0.53	87.86	10.00
12,000.00	37.30	179.65	11,974.21	-117.16	0.71	116.13	10.00
12,050.00	42.30	179.65	12,012.62	-149.15	0.90	147.84	10.00
12,100.00	47.30	179.65	12,048.09	-184.37	1.11	182.75	10.00
12,150.00	52.30	179.65	12,080.35	-222.54	1.34	220.59	10.00
12,200.00	57.30	179.65	12,109.17	-263.38	1.59	261.08	10.00
12,250.00	62.30	179.65	12,134.31	-306.58	1.85	303.89	10.00
12,300.00	67.30	179.65	12,155.60	-351.81	2.12	348.72	10.00
12,350.00	72.30	179.65	12,172.86	-398.71	2.40	395.22	10.00
12,400.00	77.30	179.65	12,185.97	-446.95	2.70	443.03	10.00
12,450.00	82.30	179.65	12,194.83	-496.14	2.99	491.79	10.00
12,500.00	87.30	179.65	12,199.36	-545.92	3.29	541.13	10.00
12,527.04	90.00	179.65	12,200.00	-572.95	3.46	567.92	10.00
12,600.00	90.00	179.65	12,200.00	-645.91	3.90	640.24	0.00
12,700.00	90.00	179.65	12,200.00	-745.90	4.50	739.37	0.00
12,800.00	90.00	179.65	12,200.00	-845.90	5.10	838.49	0.00
12,900.00	90.00	179.65	12,200.00	-945.90	5.70	937.61	0.00
13,000.00	90.00	179.65	12,200.00	-1,045.90	6.31	1,036.73	0.00
13,100.00	90.00	179.65	12,200.00	-1,145.90	6.91	1,135.85	0.00
13,200.00	90.00	179.65	12,200.00	-1,245.90	7.51	1,234.97	0.00
13,300.00	90.00	179.65	12,200.00	-1,345.89	8.12	1,334.10	0.00
13,400.00	90.00	179.65	12,200.00	-1,445.89	8.72	1,433.22	0.00
13,500.00	90.00	179.65	12,200.00	-1,545.89	9.32	1,532.34	0.00
13,600.00	90.00	179.65	12,200.00	-1,645.89	9.93	1,631.46	0.00
13,700.00	90.00	179.65	12,200.00	-1,745.89	10.53	1,730.58	0.00
13,800.00	90.00	179.65	12,200.00	-1,845.88	11.13	1,829.70	0.00
13,900.00	90.00	179.65	12,200.00	-1,945.88	11.73	1,928.83	0.00

Plan Report for Jaguar 18 State 1H - 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	179.65	12,200.00	-2,045.88	12.34	2,027.95	0.00
14,100.00	90.00	179.65	12,200.00	-2,145.88	12.94	2,127.07	0.00
14,200.00	90.00	179.65	12,200.00	-2,245.88	13.54	2,226.19	0.00
14,300.00	90.00	179.65	12,200.00	-2,345.88	14.15	2,325.31	0.00
14,400.00	90.00	179.65	12,200.00	-2,445.87	14.75	2,424.43	0.00
14,500.00	90.00	179.65	12,200.00	-2,545.87	15.35	2,523.56	0.00
14,600.00	90.00	179.65	12,200.00	-2,645.87	15.96	2,622.68	0.00
14,700.00	90.00	179.65	12,200.00	-2,745.87	16.56	2,721.80	0.00
14,800.00	90.00	179.65	12,200.00	-2,845.87	17.16	2,820.92	0.00
14,900.00	90.00	179.65	12,200.00	-2,945.86	17.76	2,920.04	0.00
15,000.00	90.00	179.65	12,200.00	-3,045.86	18.37	3,019.16	0.00
15,100.00	90.00	179.65	12,200.00	-3,145.86	18.97	3,118.29	0.00
15,200.00	90.00	179.65	12,200.00	-3,245.86	19.57	3,217.41	0.00
15,300.00	90.00	179.65	12,200.00	-3,345.86	20.18	3,316.53	0.00
15,400.00	90.00	179.65	12,200.00	-3,445.86	20.78	3,415.65	0.00
15,500.00	90.00	179.65	12,200.00	-3,545.85	21.38	3,514.77	0.00
15,600.00	90.00	179.65	12,200.00	-3,645.85	21.99	3,613.89	0.00
15,700.00	90.00	179.65	12,200.00	-3,745.85	22.59	3,713.01	0.00
15,800.00	90.00	179.65	12,200.00	-3,845.85	23.19	3,812.14	0.00
15,900.00	90.00	179.65	12,200.00	-3,945.85	23.79	3,911.26	0.00
16,000.00	90.00	179.65	12,200.00	-4,045.84	24.40	4,010.38	0.00
16,100.00	90.00	179.65	12,200.00	-4,145.84	25.00	4,109.50	0.00
16,200.00	90.00	179.65	12,200.00	-4,245.84	25.60	4,208.62	0.00
16,300.00	90.00	179.65	12,200.00	-4,345.84	26.21	4,307.74	0.00
16,400.00	90.00	179.65	12,200.00	-4,445.84	26.81	4,406.87	0.00
16,500.00	90.00	179.65	12,200.00	-4,545.84	27.41	4,505.99	0.00
16,570.81	90.00	179.65	12,200.00	-4,616.64	27.84	4,576.17	0.00

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
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	-572.95	3.46	End Build @ 12527.04' MD
12,527.04	12,200.00	-572.95	3.46	Hold 90.00° Incl @ 172.05° Azim
16,570.81	12,200.00	-4,616.64	27.84	TD @ 16570.81' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	+E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	172.05	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	16,570.81	Plan #1	MWD+SC

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

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,300.00	1,300.00	13 3/8"	13-3/8	17-1/2
5,250.00	5,250.00	9 5/8"	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 1H I - plan hits target center - Point	0.00	0.00	12,200.00	-4,616.64	27.84	473,090.23	762,448.58	32° 17' 54.853 N	103° 37' 3.805 W

North Reference Sheet for Jaguar 18 State - Jaguar 18 State 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 GE 3716.3' + KB 18' @ 3734.30usft (McVay 6). Northing and Easting are relative to Jaguar 18 State 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° 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: 0.99996507

Grid Coordinates of Well: 477,706.87 usft N, 762,420.74 usft E

Geographical Coordinates of Well: 32° 18' 40.54" N, 103° 37' 03.77" W

Grid Convergence at Surface is: 0.38°

Based upon Minimum Curvature type calculations, at a Measured Depth of 16,570.81usft
the Bottom Hole Displacement is 4,616.72usft in the Direction of 179.65° (Grid).

Magnetic Convergence at surface is: -7.06° (11 September 2013, , BGGM2013)

