

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 173662

HOBBS OCD

SEP 20 2013

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
		3. API Number 30-025-41430
4. Property Code 40147	5. Property Name Jaguar 18 State	6. Well No. 004H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	18	23S	33E	A	330	N	660	E	LEA

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	18	23S	33E	P	330	S	660	E	Lea

9. Pool Information

CRUZ;BONE SPRING ✓	14865
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3713
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	12.25	9.625	40	5250	1125	
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" pilot hole 12,400' to run OH logs, then plug back and kick-off 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> Printed Name: John Logemann Title: Drilling Engineer Email Address: john@enduranceresourcesllc.com Date: 9/18/2013		Approved By: <i>[Signature]</i> Title: DIST MGR Approved Date: 9-25-2013 Expiration Date: 9-25-2015 Conditions of Approval Attached	

(432) 703-1377

PM

SEP 26 2013

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

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	766342.03	32° 17' 54.798 N	103° 36' 18.444 W

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

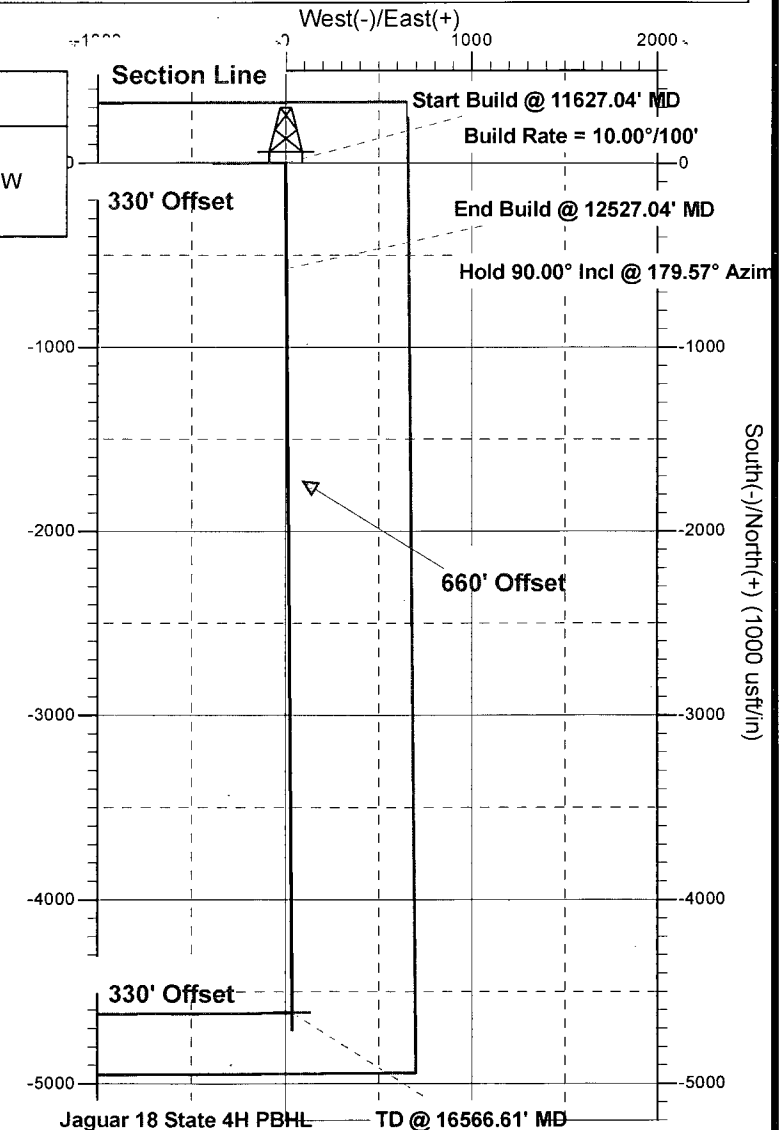
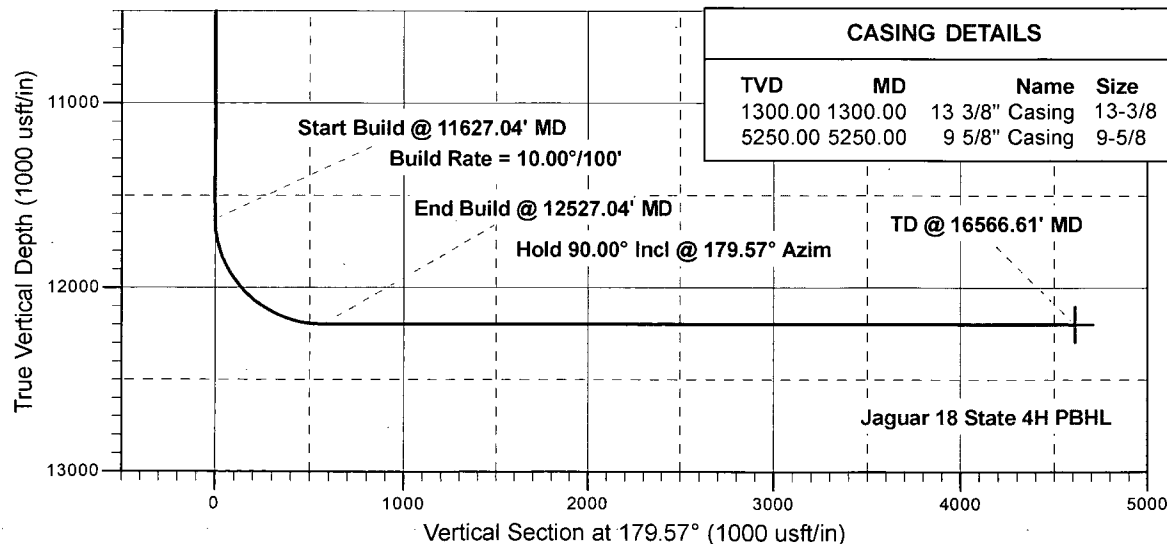
To convert a Magnetic Direction to a Grid Direction, Add 7.05°

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

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 +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	-572.94	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	Origin +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 I - 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)

