

HOBBS OGD
OGD Hobbs

JUL 01 2015

RECEIVED

ATS-15-26

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM-045706
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Endurance Resources, LLC 270329		7. If Unit or CA Agreement, Name and No.
3a. Address 203 West Wall Suite 1000 Midland, Tx 79701		8. Lease Name and Well No. Jazzbass 34 Fed 2H 313614
3b. Phone No. (include area code) 432-242-4680		9. API Well No. 30-025-42668 97088
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 330' FSL & 1980' FWL (N) At proposed prod. zone 330' FNL & 1980' FWL (C)		10. Field and Pool, or Exploratory WC-025G-08 52585340, B5
14. Distance in miles and direction from nearest town or post office* 9 miles southwest of Jal, New Mexico		11. Sec., T. R. M. or Blk. and Survey or Area Sec 34-25s-35e
15. Distance from proposed* 330' location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of acres in lease 1,400 ac	12. County or Parish Lea
17. Spacing Unit dedicated to this well 160 ac	18. Distance from proposed location* 1320' to nearest well, drilling, completed, applied for, on this lease, ft.	13. State NM
19. Proposed Depth MD: 16,694' TVD: 12,320'	20. BLM/BIA Bond No. on file NMB000640 1220	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3180.9' GL	22. Approximate date work will start* 02/01/2015	23. Estimated duration 45 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature L. A. Sirgo III	Name (Printed/Typed) M.A. Sirgo III	Date 07/14/2014
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Title
VP Operations

Approved by George MacDonell	Name (Printed/Typed)	Date JUN 29 2015
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Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
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Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

JUL 07 2015



HOBBSOCD

JUL 01 2015

RECEIVED

Endurance Resources LLC

DRILLING & OPERATIONS PROGRAM

Jazzbass 34 Federal #2H

SHL: 330' FSL & 1980' FWL (N)

BHL: 330' FNL & 1980' FWL (C)

Sec 34-25S-35E

Lea Co, NM

1. Geological Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geological Markers

Rustler	920'	
Top of Salt	1,258'	
Castile	3,760'	
Lamar	5,225'	
Bell Canyon	5,254'	Oil
Cherry Canyon	6,270'	Oil
Brushy Canyon	7,726'	Oil
Bone Spring	9,280'	Oil
1 st Bone Spring	10,330'	Oil
2 nd Bone Spring	10,600'	Oil
3 rd Bone Spring	11,950'	Oil
TVD: 12,320'; MD: 16,694'		

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas

The estimated depths at which water, oil and gas will be encountered are as follows:

Water: Average depth to water: 300'. Minimum depth: 0'. Max: 600'. As reported from the New Mexico Office of the State Engineer website.

Oil & Gas: 5,254' – 12,320' (Delaware through Bone Spring)

No other formations are expected to give up oil, gas, or fresh water in measurable quantities.



4. Proposed Casing Program:

See COA

Casing	Hole Size	Interval	Casing OD	Casing Interval	Weight	Collar	Grade
Surface	17.5"	0'-970' 1020'	13.375"	0'-970'	54.5#	STC	J-55
Intermediate I	12.25"	970'-5304'	9.625"	0'-4350'	40#	STC	J-55
Intermediate II	12.25"	970'-5304' 5350'	9.625"	4350'-5304'	40#	LTC	HCL-80
Production	8.75"	5304'-TD	5.5"	0'-16694'	20#	BTC	HCP-110

Casing	Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
Surface	13.375"	2.49	6.02	9.72
Intermediate	9.625" (J-55)	1.14	1.75	2.60
Intermediate	9.625" (HCL-80)	1.54	2.09	3.95
Production	5.5"	1.92	2.15	2.00

NOTE: ALL CASING IS NEW & API APPROVED. WHILE RUNNING CASING, PIPE WILL BE KEPT A MINIMUM OF 1/3 FULL AT ALL TIMES TO AVOID APPROACHING COLLAPSE PRESSURE OF THE CASING. SURFACE CASING WILL BE WATCHED & NECESSARY ADJUSTMENTS MADE TO ENSURE PIPE IF FULL DUE TO LOST CIRCULATION ZONES THAT MAY OCCUR. CENTRALIZERS WILL BE USED ON SURFACE CASING

5. Proposed Cement Program:

Casing / Wellbore Description: Surface - 13 3/8" x 17 1/2" (54# / J-55 / BTC)					
Stage	Slurry Description	Weight (ppg)	Yield (ft. ³ /sk)	Sacks	% Excess
Lead	Class C, 4% Bentonite, 2% Calcium Chlorid	13.7	1.68	390	100 (OH)
Tail	Class C	14.8	1.33	550	100
Casing / Wellbore Description: Intermediate 9 5/8" x 12 1/4" (40# / J-55, L-80 / STC, LTC)					
Stage	Slurry Description	Weight	Yield	Sacks	% Excess
Lead	65% Class C, 35% Poz, 6% Bentonite, .125 lb/sk Poly-E-Flake, .4% HR-800	12.9	1.77	1345	75 (OH)
Tail	Class C Cement	14.8	1.33	230	75
Casing / Wellbore Description: Production 5 1/2" x 8 3/4" (20# / HCP-110 / BTC)					
Stage	Slurry Description	Weight	Yield	Sacks	% Excess
Lead	50% Class H, 50% Poz, 10% Bentonite, .1% Fe-2, 5% Cal-Seal 60, .25 lb D-Air 5000	11.5	2.63	970	15 (OH)
Tail	50% Class H, 50% Poz, 2% Bentonite .5% Halad-9, .2% Econolite, 3% KCL, .2% HR-601	14.2	1.31	1145	15

NOTE: THE ABOVE CEMENT VOLUMES COULD BE REVISED PENDING FLUID CALIPER & CALIPER LOG DATA. ALL VOLUMES ARE DESIGNED TO CIRCULATE TO SURFACE. PRODUCTION CEMENT WILL BE CIRCULATED TO AT LEAST 200' ABOVE INTERMEDIATE CASING SHOE.



6. Minimum Specifications for Pressure Control:

See CCA
SM required
The system used for the intermediate (12.25" hole) and production (8.75" hole) will consist of a 13-5/8 (3M) working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 3000# annular type preventer (please see BOP schematic). A 3M choke manifold & 120 gallon accumulator with floor and remote operating stations & auxiliary power system. Rotating head as needed. A Kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be NU and operated at least once a day while drilling and the blind rams will be operated when out of the hole during trips. From the base of the 13-3/8" csg through running of production casing, the well will be equipped with a 3M BOP system and HCR valve, remote kill line, & annular to match. The remote kill line will be installed prior to testing the system & tested to stack pressure.

Before drilling out of the 13-3/8 surface casing, BOP will be tested by an independent surface company to 250 psi low & 3000 psi high. Annular Preventer will be tested to 250 psi low and 1500 psi high. Before drilling out the 9-5/8 intermediate shoe BOP will be tested by an independent service company to 250psi low and 3000 psi high. Annular Preventer will be tested to 250 psi low and 2500 psi high. These low pressure tests from 250 to 300 psi will be held a minimum of 10 minutes if test is done with a test plug or 30 minutes if conducted without a test plug. ~~Annular Preventer will be tested to 250 psi low and 2500 psi high. These low pressure tests from 250 to 300 psi will be held a minimum of 10 minutes if test is done with a test plug or 30 minutes if conducted without a test plug.~~

7. Estimated BHP:

5539 psi @ 12,320' TVD



8. Mud Program: The applicable depths & properties of this system are as follows:

Depth	Type of System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0 - 970' ¹⁰²⁰	Fresh	8.4 - 9.4	32-34	NC
970' - 5304'	Brine	10.0 - 10.2	28-39	NC
5250 5304' - TD	Cut Brine	8.3 - 9.3	28-32	NC-12

NOTE: NECESSARY MUD PRODUCTS FOR WEIGHT ADDITION & FLUID LOSS WILL BE ON LOCATION AT ALL TIMES. VISUAL MUD MONITORING EQUIPMENT (I.E. TRIP TANK) WILL BE IN PLACE TO DETECT VOLUME CHANGES INDICATING LOSS OR GAIN OF CIRCULATION VOLUME WITH ALARMS.

9. Auxiliary Well Control & Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times
- H₂S detection equipment will be in operation & breathing apparatuses will be on location after the drill out of the 13-3/8" casing shoe until the 5-1/2" casing is cemented.

10. Testing, Logging & Coring Program:

- No drill stem tests are planned.
- GR/N well log ran from KOP to surface.

11. Potential Hazards:

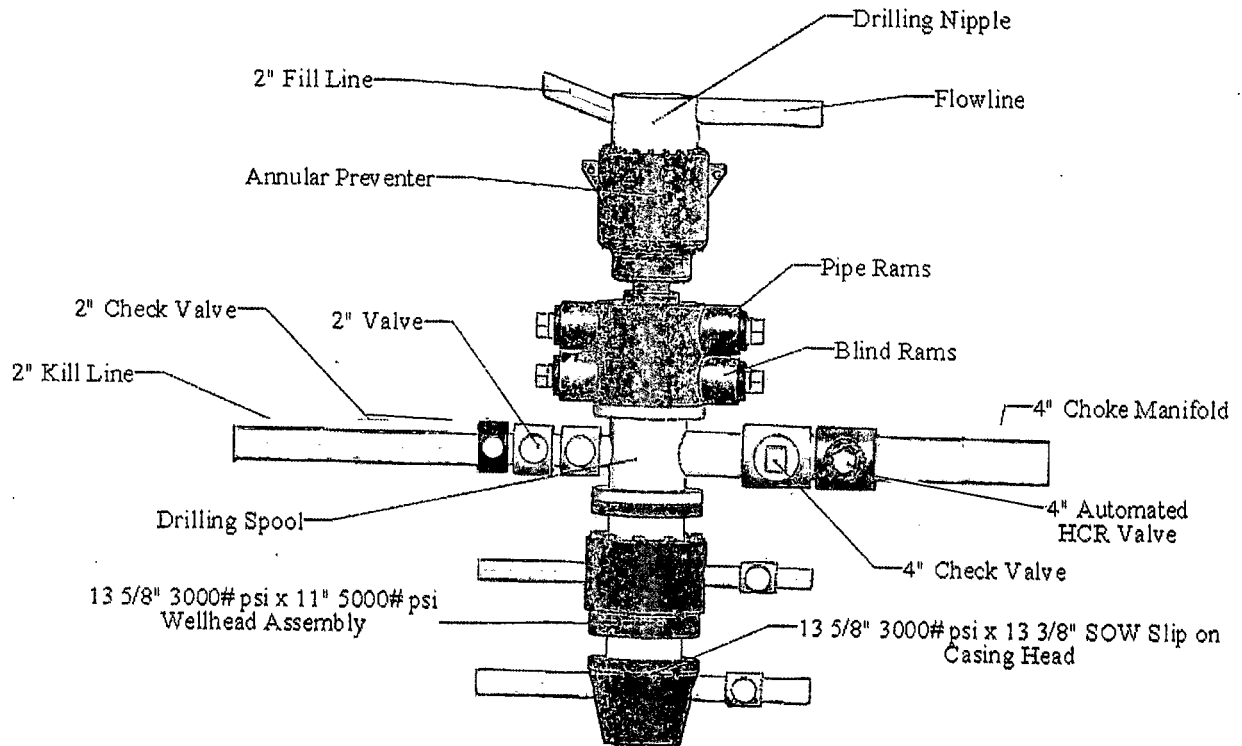
No abnormal pressures or temperatures are expected. If H₂S is encountered, Endurance Resources LLC will comply with Onshore Order #6. Regardless, all personnel will be trained & qualified with H₂S safety. Rig safety equipment will all also be checked daily once drill out of the 13-3/8" casing shoe to TD. It has been noted that H₂S has been encountered in the salt section. If H₂S is encountered, measurements & formations will be reported to the BLM.

12. Anticipated starting date & Duration of Operations:

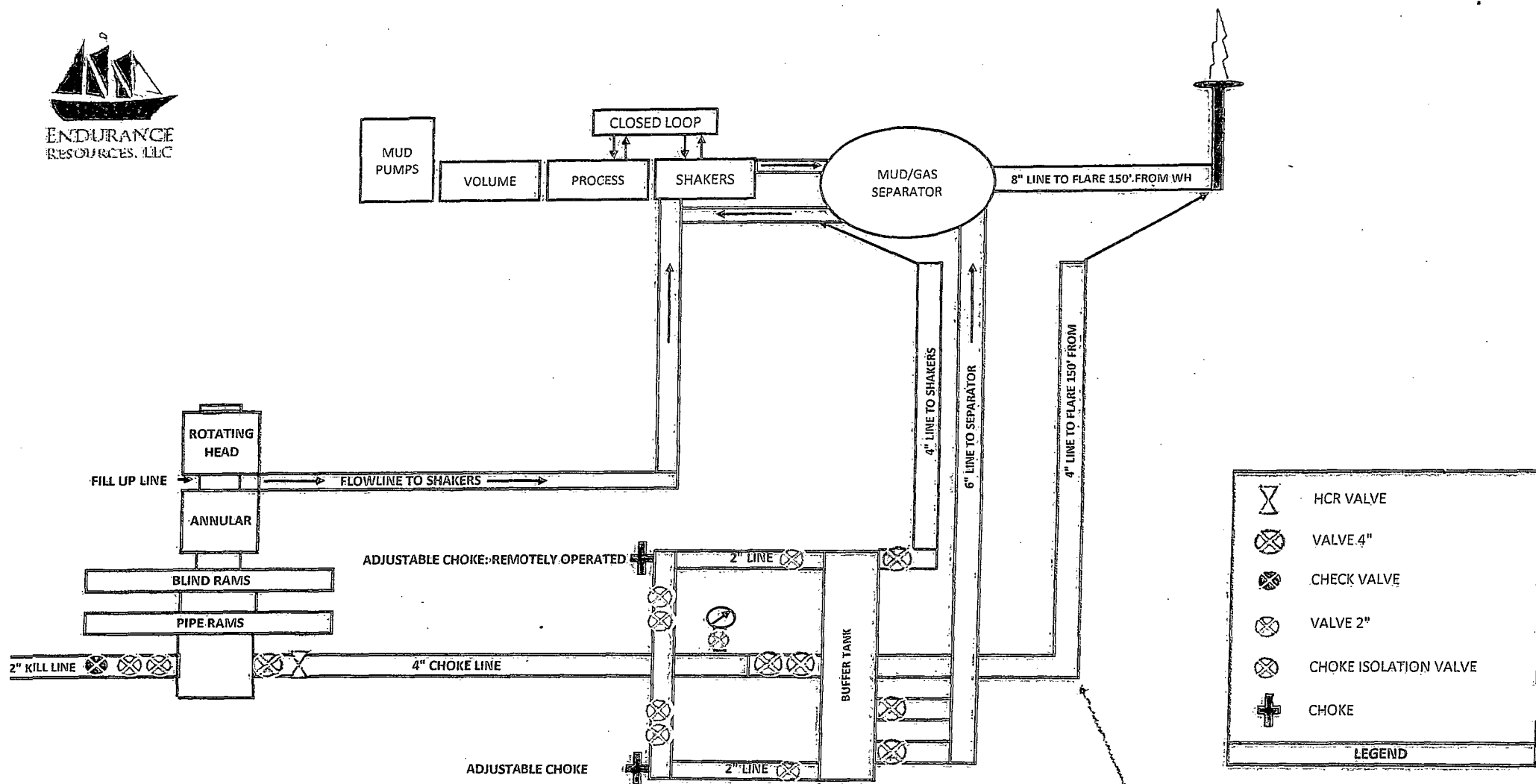
Road & location construction will begin after the BLM has approved the APD. Anticipated spud date will begin after BLM approval & after a drilling rig is secured. Move in operations & drilling is expected to take no more than 45 days. An additional 30-50 days will be needed to complete this well & construct surface facilities and/or lay flow lines in order to place well on production.

Jazzbass 34 Fed 2H

5000# BOP

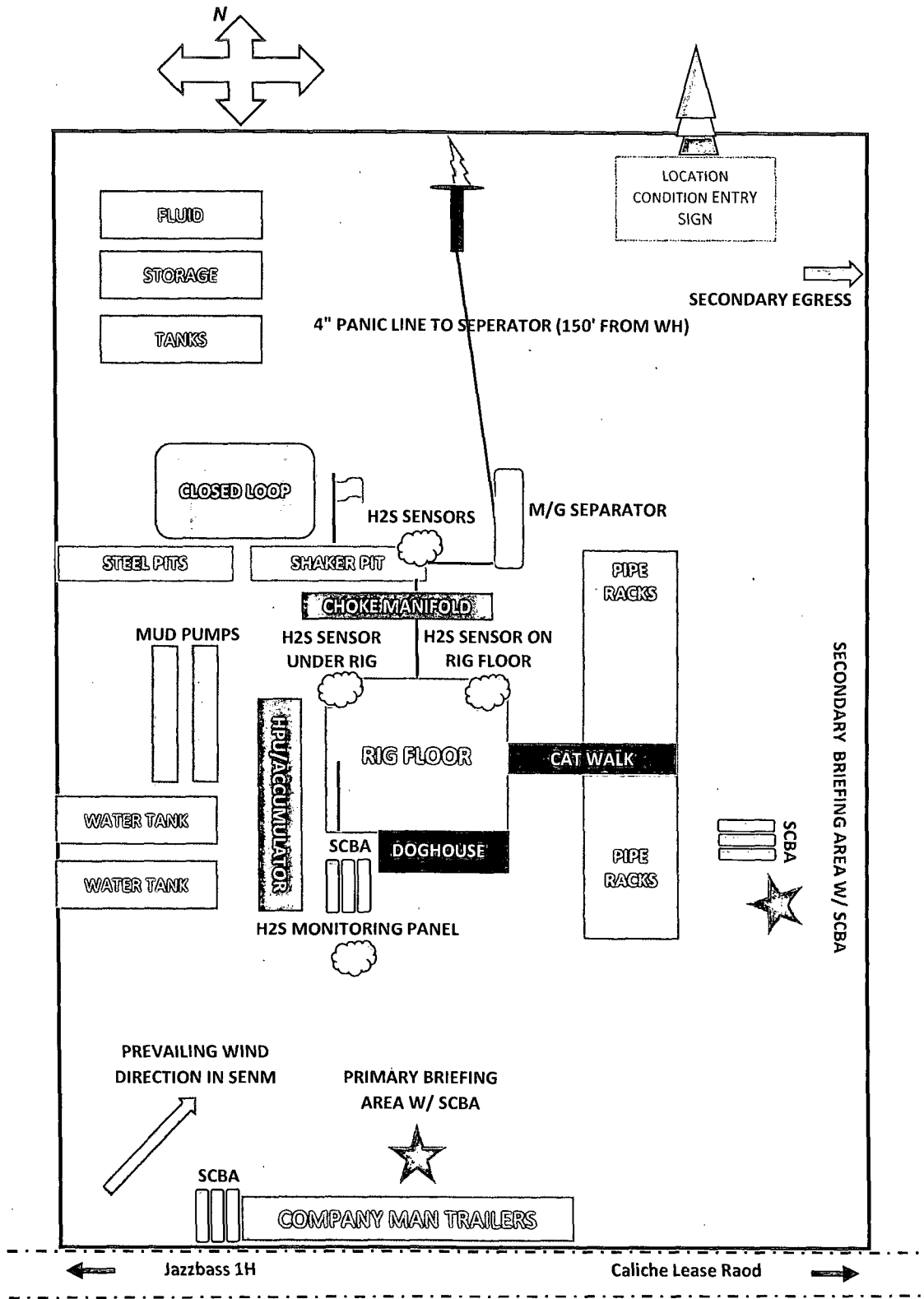


5M BOP, 5M CHOKE MANIFOLD, AND CLOSED LOOP EQUIPMENT SCHEMATIC FOR 13-5/8 BOP SYSTEM TESTED TO 3M PER ONSHORE ORDER #2



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



Endurance Resources LLC

HALLIBURTON

Sperry Drilling Services

Project: Lea County, NM (NAD 83)
 Site: Jazzbass 34 Federal
 Well: Jazzbass 34 Federal 2H
 Wellbore: Jazzbass 34 Federal 2H
 Design: Plan #1
 Rig: Patriot 4

SECTION DETAILS

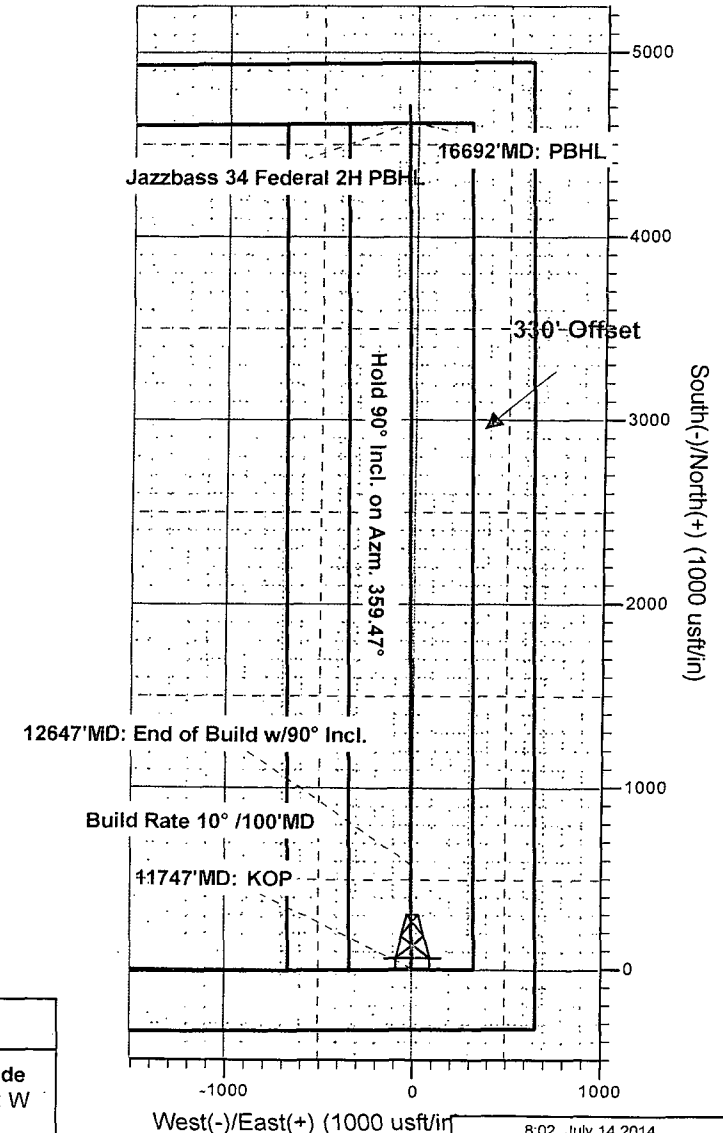
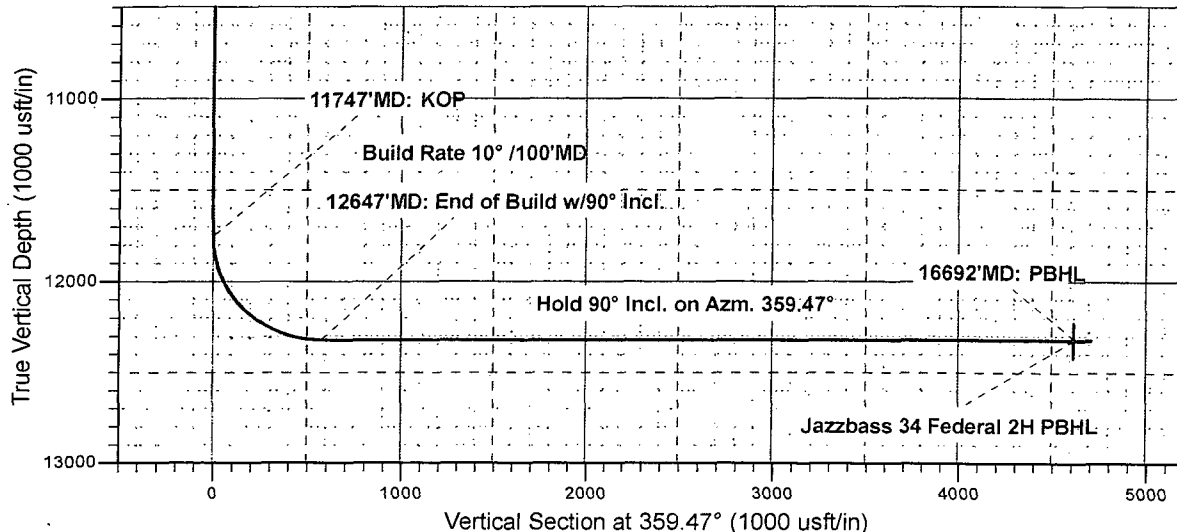
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
11747.04	0.00	0.00	11747.04	0.00	0.00	0.00	0.00	0.00	11747'MD: KOP
12647.04	90.00	359.47	12320.00	572.93	-5.33	10.00	359.47	572.96	12647'MD: End of Build w/90° Incl.
16691.93	90.00	359.47	12320.00	4617.65	-42.98	0.00	0.00	4617.85	16692'MD: PBHL

Surface Location:

US State Plane 1983
 New Mexico Eastern Zone
 Elevation: 3180.9' + 22.5' KBE @ 3203.40usft (Patriot 4)
 Northing 394384.63 Easting 843565.88 Latitude 32° 4' 49.747 N Longitude 103° 21' 27.118 W

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

Magnetic Model: BGGM2014 Date: 14-Jul-14
 Azimuths to Grid North



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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Jazzbass 34 Federal 2H PBHL	12320.00	4617.65	-42.98	399002.28	843522.90	32° 5' 35.442 N	103° 21' 27.132 W

8:02, July 14 2014

Endurance Resources LLC

Lea County, NM (NAD 83)

Jazzbass 34 Federal

Jazzbass 34 Federal 2H

Jazzbass 34 Federal 2H

Plan: Plan #1

Sperry Drilling Services Standard Report

14 July, 2014

Well Coordinates: 394,384.63 N, 843,565.88 E (32° 04' 49.75" N, 103° 21' 27.12" W)

Ground Level: 3,180.90 usft

Local Coordinate Origin:	Centered on Well Jazzbass 34 Federal 2H
Viewing Datum:	3180.9' + 22.5' KBE @ 3203.40usft (Patriot 4)
TVDs to System:	N
North Reference:	Grid
Unit System:	API - US Survey Feet

Version: 5000.1 Build: 72

HALLIBURTON

HALLIBURTON**Plan Report for Jazzbass 34 Federal 2H - 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

HALLIBURTON**Plan Report for Jazzbass 34 Federal 2H - 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

HALLIBURTON**Plan Report for Jazzbass 34 Federal 2H - 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
11,700.00	0.00	0.00	11,700.00	0.00	0.00	0.00	0.00
11,747.04	0.00	0.00	11,747.04	0.00	0.00	0.00	0.00
11747'MD: KOP							
11,747.05	0.00	359.47	11,747.05	0.00	0.00	0.00	0.00
Build Rate 10° /100'MD							
11,800.00	5.30	359.47	11,799.92	2.45	-0.02	2.45	10.00
11,900.00	15.30	359.47	11,898.19	20.30	-0.19	20.30	10.00
12,000.00	25.30	359.47	11,991.86	54.94	-0.51	54.94	10.00
12,100.00	35.30	359.47	12,078.10	105.32	-0.98	105.32	10.00
12,200.00	45.30	359.47	12,154.27	169.90	-1.58	169.91	10.00
12,300.00	55.30	359.47	12,218.07	246.74	-2.30	246.75	10.00
12,400.00	65.30	359.47	12,267.56	333.48	-3.10	333.50	10.00
12,500.00	75.30	359.47	12,301.24	427.51	-3.98	427.52	10.00
12,600.00	85.30	359.47	12,318.07	525.95	-4.90	525.97	10.00
12,647.04	90.00	359.47	12,320.00	572.93	-5.33	572.96	10.00
12647'MD: End of Build w/90° Incl.							
12,647.05	90.00	359.47	12,320.00	572.94	-5.33	572.97	0.00
Hold 90° Incl. on Azm. 359.47°							
12,700.00	90.00	359.47	12,320.00	625.89	-5.83	625.92	0.00
12,800.00	90.00	359.47	12,320.00	725.88	-6.76	725.92	0.00
12,900.00	90.00	359.47	12,320.00	825.88	-7.69	825.92	0.00
13,000.00	90.00	359.47	12,320.00	925.88	-8.62	925.92	0.00
13,100.00	90.00	359.47	12,320.00	1,025.87	-9.55	1,025.92	0.00
13,200.00	90.00	359.47	12,320.00	1,125.87	-10.48	1,125.92	0.00
13,300.00	90.00	359.47	12,320.00	1,225.86	-11.41	1,225.92	0.00
13,400.00	90.00	359.47	12,320.00	1,325.86	-12.34	1,325.92	0.00
13,500.00	90.00	359.47	12,320.00	1,425.85	-13.27	1,425.92	0.00
13,600.00	90.00	359.47	12,320.00	1,525.85	-14.20	1,525.92	0.00
13,700.00	90.00	359.47	12,320.00	1,625.85	-15.13	1,625.92	0.00
13,800.00	90.00	359.47	12,320.00	1,725.84	-16.06	1,725.92	0.00
13,900.00	90.00	359.47	12,320.00	1,825.84	-16.99	1,825.92	0.00
14,000.00	90.00	359.47	12,320.00	1,925.83	-17.93	1,925.92	0.00
14,100.00	90.00	359.47	12,320.00	2,025.83	-18.86	2,025.92	0.00
14,200.00	90.00	359.47	12,320.00	2,125.82	-19.79	2,125.92	0.00

HALLIBURTON**Plan Report for Jazzbass 34 Federal 2H - Plan #1**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
14,300.00	90.00	359.47	12,320.00	2,225.82	-20.72	2,225.92	0.00
14,400.00	90.00	359.47	12,320.00	2,325.81	-21.65	2,325.92	0.00
14,500.00	90.00	359.47	12,320.00	2,425.81	-22.58	2,425.92	0.00
14,600.00	90.00	359.47	12,320.00	2,525.81	-23.51	2,525.92	0.00
14,700.00	90.00	359.47	12,320.00	2,625.80	-24.44	2,625.92	0.00
14,800.00	90.00	359.47	12,320.00	2,725.80	-25.37	2,725.92	0.00
14,900.00	90.00	359.47	12,320.00	2,825.79	-26.30	2,825.92	0.00
15,000.00	90.00	359.47	12,320.00	2,925.79	-27.23	2,925.92	0.00
15,100.00	90.00	359.47	12,320.00	3,025.78	-28.16	3,025.92	0.00
15,200.00	90.00	359.47	12,320.00	3,125.78	-29.09	3,125.92	0.00
15,300.00	90.00	359.47	12,320.00	3,225.78	-30.02	3,225.92	0.00
15,400.00	90.00	359.47	12,320.00	3,325.77	-30.96	3,325.92	0.00
15,500.00	90.00	359.47	12,320.00	3,425.77	-31.89	3,425.92	0.00
15,600.00	90.00	359.47	12,320.00	3,525.76	-32.82	3,525.92	0.00
15,700.00	90.00	359.47	12,320.00	3,625.76	-33.75	3,625.92	0.00
15,800.00	90.00	359.47	12,320.00	3,725.75	-34.68	3,725.92	0.00
15,900.00	90.00	359.47	12,320.00	3,825.75	-35.61	3,825.92	0.00
16,000.00	90.00	359.47	12,320.00	3,925.75	-36.54	3,925.92	0.00
16,100.00	90.00	359.47	12,320.00	4,025.74	-37.47	4,025.92	0.00
16,200.00	90.00	359.47	12,320.00	4,125.74	-38.40	4,125.92	0.00
16,300.00	90.00	359.47	12,320.00	4,225.73	-39.33	4,225.92	0.00
16,400.00	90.00	359.47	12,320.00	4,325.73	-40.26	4,325.92	0.00
16,500.00	90.00	359.47	12,320.00	4,425.72	-41.19	4,425.92	0.00
16,600.00	90.00	359.47	12,320.00	4,525.72	-42.12	4,525.92	0.00
16,691.93	90.00	359.47	12,320.00	4,617.65	-42.98	4,617.85	0.00

16692'MD: PBHL

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
11,747.04	11,747.04	0.00	0.00	11747'MD: KOP
11,747.05	11,747.05	0.00	0.00	Build Rate 10° /100'MD
12,647.04	12,320.00	572.93	-5.33	12647'MD: End of Build w/90° Incl.
12,647.05	12,320.00	572.94	-5.33	Hold 90° Incl. on Azm. 359.47°
16,691.93	12,320.00	4,617.65	-42.98	16692'MD: PBHL

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	359.47	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	16,691.93	Plan #1	MWD+SC

HALLIBURTON**Plan Report for Jazzbass 34 Federal 2H - Plan #1****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
Jazzbass 34 Federal 2 - plan hits target center - Point	0.00	0.00	12,320.00	4,617.65	-42.98	399,002.28	843,522.90	32° 5' 35.442 N	103° 21' 27.132 W

HALLIBURTON**North Reference Sheet for Jazzbass 34 Federal - Jazzbass 34 Federal 2H -
Jazzbass 34 Federal 2H**

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

Vertical Depths are relative to 3180.9' + 22.5' KBE @ 3203.40usft (Patriot 4). Northing and Easting are relative to Jazzbass 34 Federal 2H

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: 1.00001371

Grid Coordinates of Well: 394,384.63 usft N, 843,565.88 usft E

Geographical Coordinates of Well: 32° 04' 49.75" N, 103° 21' 27.12" W

Grid Convergence at Surface is: 0.52°

Based upon Minimum Curvature type calculations, at a Measured Depth of 16,691.93usft
the Bottom Hole Displacement is 4,617.85usft in the Direction of 359.47° (Grid).

Magnetic Convergence at surface is: -6.73° (14 July 2014, , BGGM2014)

