Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOCD
Hobbs
HOBBS OCD
DEC 02 2016
RECEIVED

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM134080

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
MUSIC MASTER 27 FEDERAL 3H

2. Name of Operator
ENDURANCE RESOURCES LLC
Contact: TINLEE TILTON
E-Mail: tinlee@endurance resourcesllc.com

9. API Well No.
30-025-43387-00-X1

3a. Address
MIDLAND, TX 79701

3b. Phone No. (include area code)
Ph: 432.242.4680

10. Field and Pool, or Exploratory
WILDCAT

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 27 T25S R35E SWSE ~~150FSL 1980FEL~~
330 FNL 2250 FEL

11. County or Parish, and State
LEA COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☒ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Endurance Resources LLC respectfully requests to change the casing design of the Music Master 27 Fed #3H. The changes are noted in the attached drilling plan. The updated directional plan is also attached to match the approved plat. It is requested that a multi-bowl wellhead also be used on this well. This is encompassed in the drilling plan.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #352124 verified by the BLM Well Information System
For ENDURANCE RESOURCES LLC, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 09/28/2016 (16PP1217SE)

Name *(Printed/Typed)* TINLEE TILTON — Title ENGINEER

Signature (Electronic Submission) — Date 09/22/2016

APPROVED
NOV 9 2016
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title _____ Date _____

Conditions of approval, if any, are attached. Approval of this notice 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.

Office

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

ENDURANCE
RESOURCES, LLC

Endurance Resources LLC

DRILLING & OPERATIONS PROGRAM

Music Master 27 Fed 3H
SHL: 330' FNL & 2250' FEL
Sec 27-25S-35E
BHL: 330' FSL & 2200' FEL
Sec 34-25S-35E
Lea Co, NM

1. Geological Name of Surface Formation
   Quaternary

2. Estimated Tops of Important Geological Markers

Fresh Water	400'
Rustler	882'
Top of Salt	1,473'
Lamar Limestone	5,186'
Delaware	5,204' - Oil
Brushy canyon	7,706' - Oil

   TVD: 8,941'; MD: 18,592'

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: 400'. Minimum depth: 0'. Max: 400'. As reported from the New Mexico Office of the State Engineer website.

   Oil & Gas: 5,255' – 9,000' (Bell Canyon through Brushy Canyon)
   No other formations are expected to give up oil, gas, or fresh water in measurable quantities.

ENDURANCE
RESOURCES, LLC

4. Proposed Casing Program:

Hole Size	Casing Size	Depth	#/ft	Grade	Connection	Collapse	Burst	Tension
17 ½"	13 3/8"	0 - 940'	54.5	J-55	BTC	2.31	5.59	10.03
12 ¼"	9 5/8"	0 - 4350'	40	HCL-80	~~J-55~~ HCL80	1.26	1.94	2.99
12 ¼"	9 5/8"	4350' – 5190'	40	HCL-80	LT&C	1.59	2.37	3.50
8 ¾"	7"	0 - 8350'	29	HCP-110	BTC/TTRS-1	2.50	2.87	3.50
8 ¾"	5 ½"	8350' - 18592'	20	HCP-110	BTC/TTRS-1	2.92	3.02	1.79

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, INTERMEDIATE, and PRODUCTION CASING.

5. Proposed Cement Program:
   a. 13-3/8" Surface
      Lead: 635 sks ExtendaCem Class C (13.7 ppg / 1.694 cuft/sk)
      Tail: 315 sks HalCem Class C (14.8 ppg / 1.326 cuft/sk)
      **Calculated w/ 100% excess on OH volume
   b. 9-5/8" Intermediate
      Lead: 990 sxs EconoCem Class C + 0.4% HR-800 Retarder + 0.125 lbm/sk Poly-E-Flake Lost Circulation Additive (12.9 ppg / 1.887 cuft/sk)
      Tail: 390 sks HalCem Class C (14.80 ppg / 1.326 cuft/sk)
      **Calculated w/ 50% excess on OH volumes
   c. 7" X 5 1/2" Production – TOC @ 4000'
      Lead: 420 sks NeoCem Class H (11.0 ppg / 3.167 cuft/sk)
      Tail: 1500 sks NeoCem Class H (14.5 ppg / 2.162 cuft/sk)
      **Calculated w/ 20% excess in OH

NOTE: THE ABOVE CEMENT VOLUMES COULD BE REVISED PENDING FLUID CALIPER & CALIPER LOG DATA. ALL VOLUMES ARE DESIGNED TO CIRCULATE TO SURFACE OR OFF THE TOP OF THE LINER HANGER.

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6. Minimum Specifications for Pressure Control:

13-5/8 (10M) working pressure BOP system consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer (please see BOP schematic). A 5M choke manifold & 120 gallon accumulator with floor and remote operating stations & auxiliary power system. Rotating head as needed. A KC 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 surface casing through running of production casing, the well will be equipped with a 10M BOP system. Below the surface casing shoe, this 10M system will be equipped with a 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 surface casing, BOP will be tested by an independent surface company to 250 psi low & 5000 psi high. Hydril will be tested to 250 psi low and 2500 psi high. Surface casing will be tested to 1500 psi and intermediate casing will be tested to 2000 psi. 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 & 30 minutes without a test plug.

A multi-bowl wellhead is being requested to be used and the BOP will not be retested after intermediate casing is set, unless required by days since pervious test. See attached wellhead schematic.

5M Rated multibowl system.

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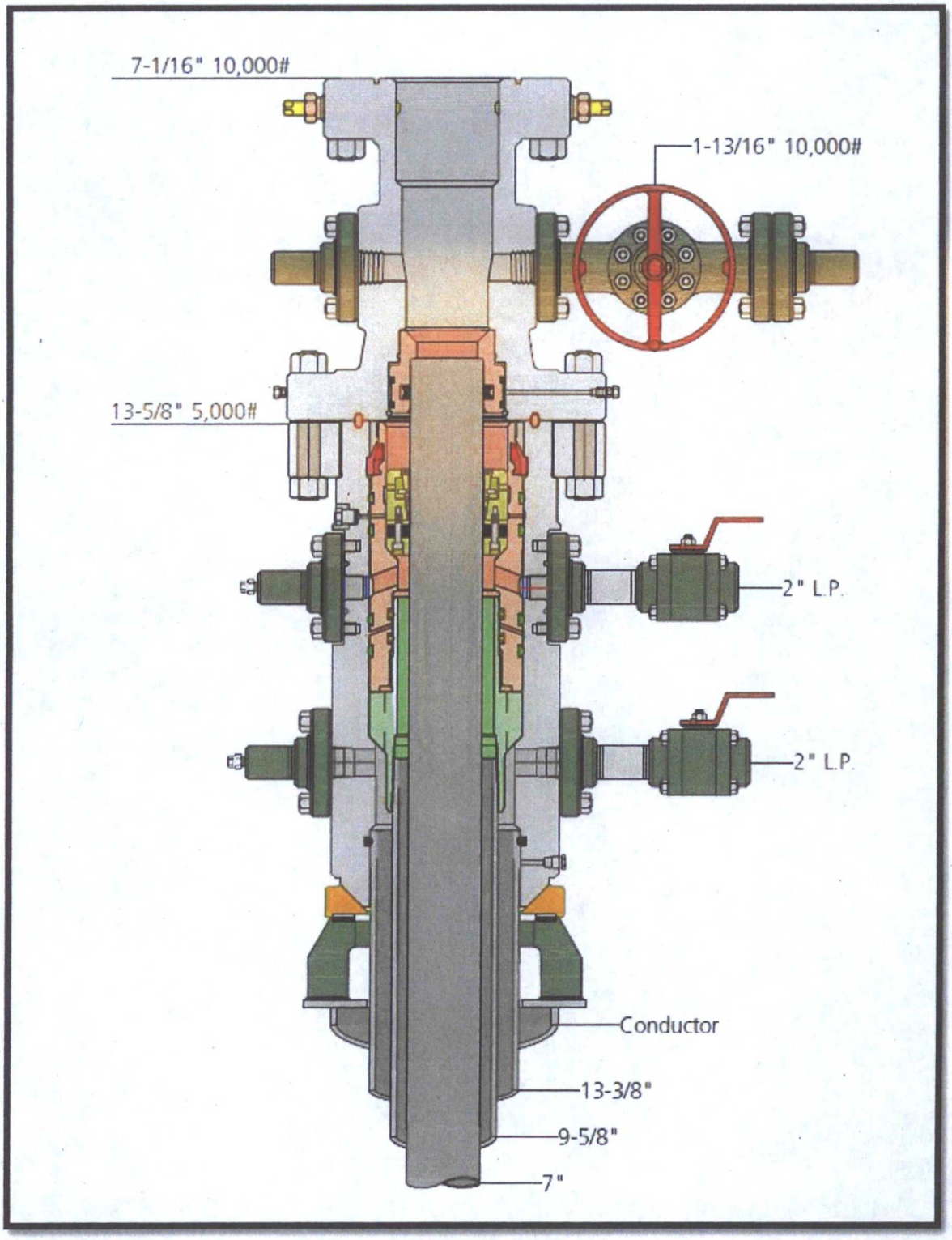

ENDURANCE
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7. Estimated BHP:

4024 psi @ 8,941' 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 – 940'	Fresh	8.4	29-32	NC
940' – 5190'	Brine	10	29-32	NC
5190' – 18,592'	Cut Brine	8.8 - 9.2	28-32	<15

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. A KC will be in the drill string at all times.
   b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times
   c. H2S detection equipment will be in operation & breathing apparatuses will be on location after the drill out of the 9-5/8" casing shoe until the 4-1/2" liner is cemented.

See COA

10. Testing, Logging & Coring Program:
   a. No drill stem tests are planned.
   b. GR/N well log ran from KOP to surface.
   c. No coring is planned.

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 surface 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.

See COA

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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.

Endurance Resources, LLC

HALLIBURTON
Sperry Drilling

ENDURANCE RESOURCES, LLC

Project: Lea County, NM (NAD 83)
Site: Music Master 27 Fed
Well: Music Master 27 Fed 3H
Wellbore: Wellbore #1
Plan: Plan #3
Rig: Noram 23

SURFACE LOCATION

US State Plane 1983
New Mexico Eastern Zone
Elevation: GL 3181.4' + KB 29.0' @ 3210.40usft (Noram 23)

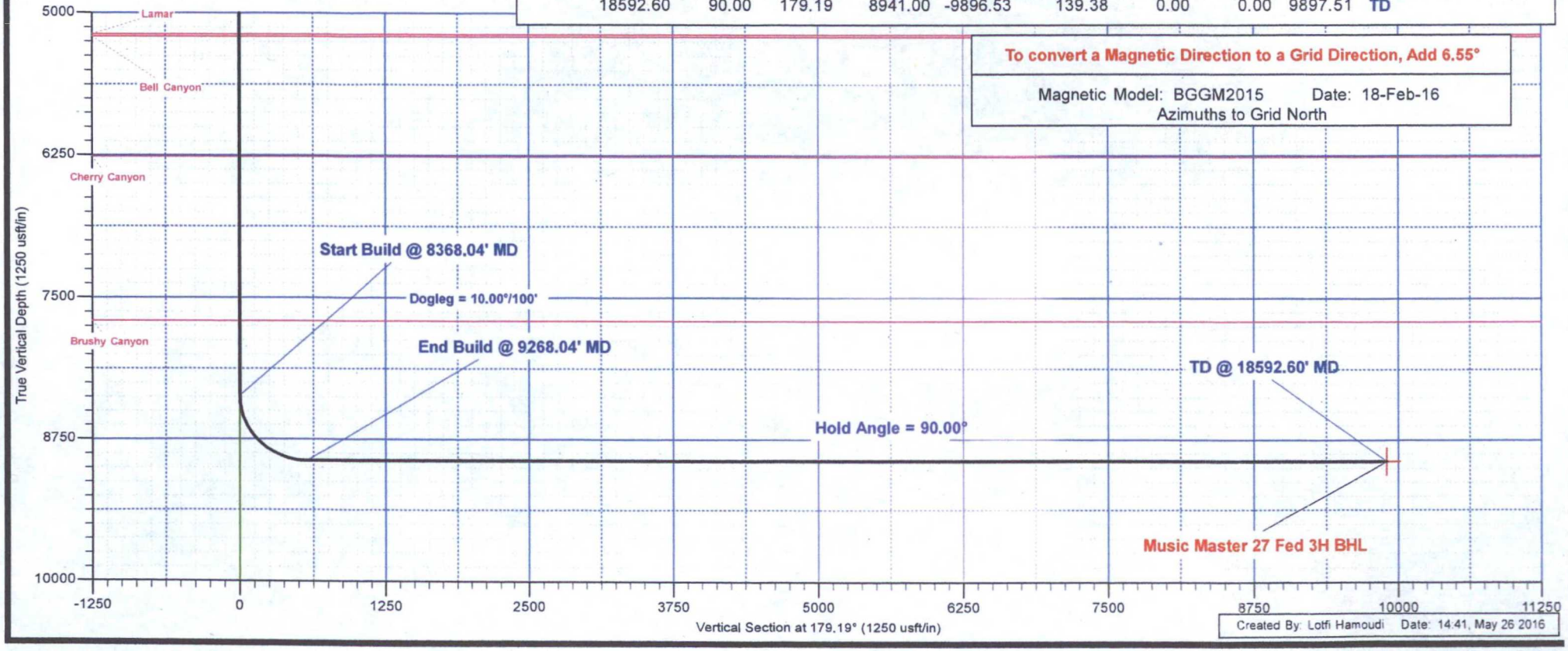
Northing	Easting	Latitude	Longitude
404290.37	844530.03	32° 6' 27.676 N	103° 21' 14.868 W

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Music Master 27 Fed 3H BHL	8941.00	-9896.53	139.38	394393.84	844669.41	32° 4' 49.739 N	103° 21' 14.292 W

SECTION DETAILS

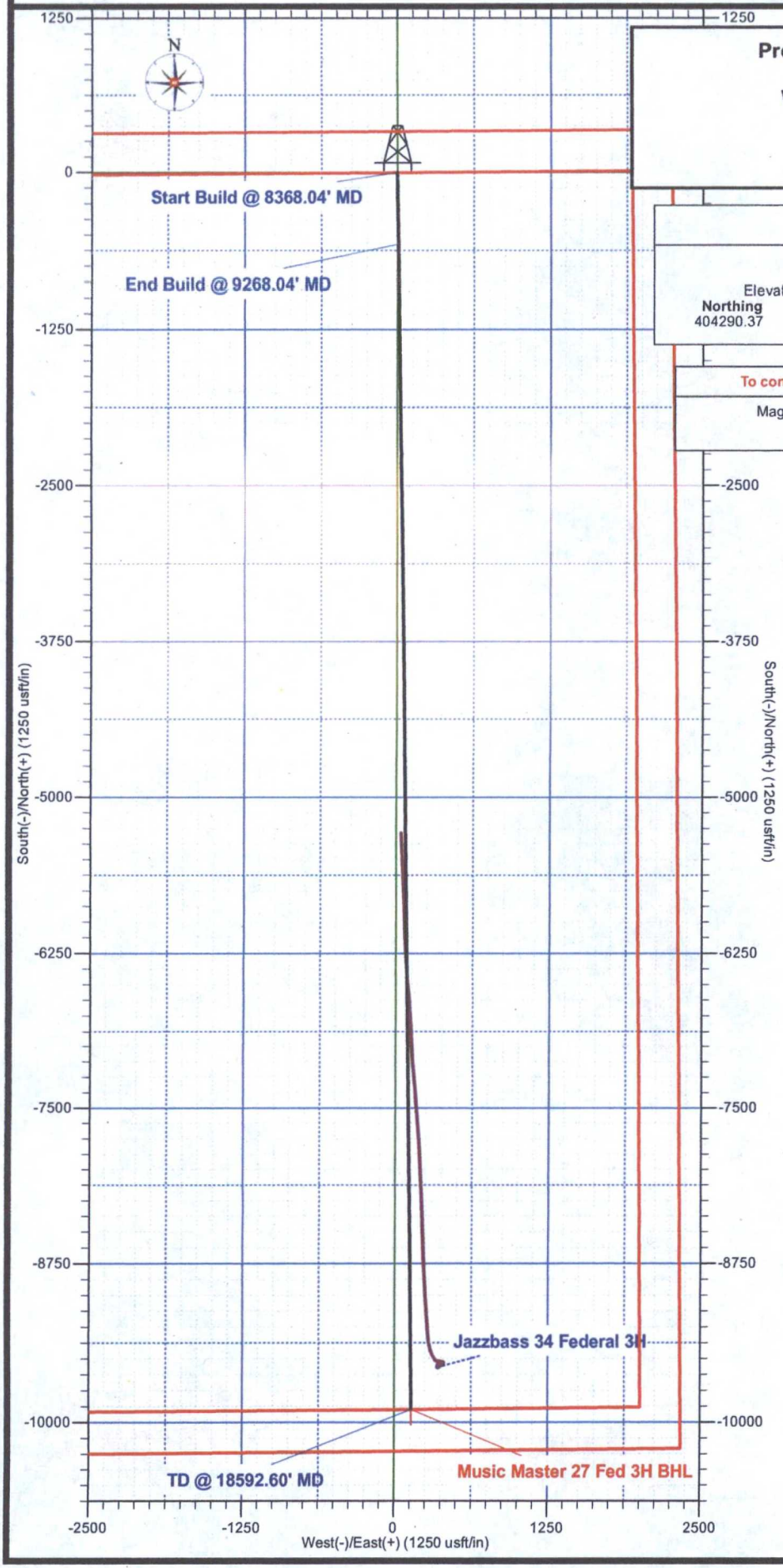
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8368.04	0.00	0.00	8368.04	0.00	0.00	0.00	0.00	0.00	Start Build
9268.04	90.00	179.19	8941.00	-572.90	8.07	10.00	179.19	572.96	End Build
18592.60	90.00	179.19	8941.00	-9896.53	139.38	0.00	0.00	9897.51	TD



Created By: Lotfi Hamoudi Date: 14:41, May 26 2016

Endurance Resources, LLC

HALLIBURTON | Sperry Drilling



Project: Lea County, NM (NAD 83)
Site: Music Master 27 Fed
Well: Music Master 27 Fed 3H
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Rig: Noram 23

SURFACE LOCATION

US State Plane 1983
New Mexico Eastern Zone
Elevation: GL 3181.4' + KB 29.0' @ 3210.40usft (Noram 23)

Northing	Easting	Latitude	Longitude
404290.37	844530.03	32° 6' 27.676 N	103° 21' 14.868 W

To convert a Magnetic Direction to a Grid Direction, Add 6.55°

Magnetic Model: BGGM2015 Date: 18-Feb-16
Azimuths to Grid North

ENDURANCE RESOURCES, LLC

Created By: Lotfi Hamoudi Date: 14:40, May 26 2016

Endurance Resources, LLC

Lea County, NM (NAD 83)
Music Master 27 Fed
Music Master 27 Fed 3H

Wellbore #1

Plan: Plan #3

Sperry Drilling Services

Proposal Report

26 May, 2016

Well Coordinates: 404,290.37 N, 844,530.03 E (32° 06' 27.68" N, 103° 21' 14.87" W)
Ground Level: 3,181.40 usft

Local Coordinate Origin:	Centered on Well Music Master 27 Fed 3H
Viewing Datum:	GL 3181.4' + KB 29.0' @ 3210.40usft (Noram 23)
TVDs to System:	N
North Reference:	Grid
Unit System:	API - US Survey Feet

Version: 5000.1 Build: 81B

HALLIBURTON

Plan Report for Music Master 27 Fed 3H - Plan #3

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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
882.00	0.00	0.00	882.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler										
900.00	0.00	0.00	900.00	0.00	0.00	0.00	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	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	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	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	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	0.00	0.00	0.00
1,473.00	0.00	0.00	1,473.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt										
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	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	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	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	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	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	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	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	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	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	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	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	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	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	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	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	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	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	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	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	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	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	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	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	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	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	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	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	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	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	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	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	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	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	0.00	0.00	0.00
5,186.00	0.00	0.00	5,186.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar										

Plan Report for Music Master 27 Fed 3H - Plan #3

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 (°)
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,204.00	0.00	0.00	5,204.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon										
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	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	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	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	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	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	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	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	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	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	0.00	0.00	0.00
6,262.00	0.00	0.00	6,262.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon										
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	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	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	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	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	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	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	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	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	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	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	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	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	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	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7,706.00	0.00	0.00	7,706.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon										
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	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	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	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	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	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	0.00	0.00	0.00
8,368.04	0.00	0.00	8,368.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build @ 8368.04' MD - Dogleg = 10.00°/100'										
8,400.00	3.20	179.19	8,399.98	-0.89	0.01	0.89	10.00	10.00	0.00	179.19
8,450.00	8.20	179.19	8,449.72	-5.85	0.08	5.85	10.00	10.00	0.00	0.00
8,500.00	13.20	179.19	8,498.84	-15.13	0.21	15.13	10.00	10.00	0.00	0.00
8,550.00	18.20	179.19	8,546.96	-28.65	0.40	28.65	10.00	10.00	0.00	0.00
8,600.00	23.20	179.19	8,593.72	-46.31	0.65	46.32	10.00	10.00	0.00	0.00
8,650.00	28.20	179.19	8,638.76	-67.98	0.96	67.99	10.00	10.00	0.00	0.00
8,700.00	33.20	179.19	8,681.74	-93.49	1.32	93.50	10.00	10.00	0.00	0.00
8,750.00	38.20	179.19	8,722.33	-122.66	1.73	122.67	10.00	10.00	0.00	0.00
8,800.00	43.20	179.19	8,760.23	-155.25	2.19	155.26	10.00	10.00	0.00	0.00
8,850.00	48.20	179.19	8,795.14	-191.01	2.69	191.03	10.00	10.00	0.00	0.00
8,900.00	53.20	179.19	8,826.80	-229.69	3.23	229.71	10.00	10.00	0.00	0.00
8,950.00	58.20	179.19	8,854.97	-270.97	3.82	271.00	10.00	10.00	0.00	0.00
9,000.00	63.20	179.19	8,879.44	-314.56	4.43	314.59	10.00	10.00	0.00	0.00
9,050.00	68.20	179.19	8,900.01	-360.10	5.07	360.14	10.00	10.00	0.00	0.00
9,100.00	73.20	179.19	8,916.53	-407.27	5.74	407.31	10.00	10.00	0.00	0.00
9,150.00	78.20	179.19	8,928.88	-455.70	6.42	455.75	10.00	10.00	0.00	0.00
9,200.00	83.20	179.19	8,936.96	-505.03	7.11	505.08	10.00	10.00	0.00	0.00
9,250.00	88.20	179.19	8,940.72	-554.86	7.81	554.92	10.00	10.00	0.00	0.00
9,268.04	90.00	179.19	8,941.00	-572.90	8.07	572.96	10.00	10.00	0.00	0.00

Plan Report for Music Master 27 Fed 3H - Plan #3

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 (°)
End Build @ 9268.04' MD - Hold Angle = 90.00°										
9,300.00	90.00	179.19	8,941.00	-604.86	8.52	604.92	0.00	0.00	0.00	0.00
9,400.00	90.00	179.19	8,941.00	-704.85	9.93	704.92	0.00	0.00	0.00	0.00
9,500.00	90.00	179.19	8,941.00	-804.84	11.34	804.92	0.00	0.00	0.00	0.00
9,600.00	90.00	179.19	8,941.00	-904.83	12.74	904.92	0.00	0.00	0.00	0.00
9,700.00	90.00	179.19	8,941.00	-1,004.82	14.15	1,004.92	0.00	0.00	0.00	0.00
9,800.00	90.00	179.19	8,941.00	-1,104.81	15.56	1,104.92	0.00	0.00	0.00	0.00
9,900.00	90.00	179.19	8,941.00	-1,204.80	16.97	1,204.92	0.00	0.00	0.00	0.00
10,000.00	90.00	179.19	8,941.00	-1,304.79	18.38	1,304.92	0.00	0.00	0.00	0.00
10,100.00	90.00	179.19	8,941.00	-1,404.78	19.78	1,404.92	0.00	0.00	0.00	0.00
10,200.00	90.00	179.19	8,941.00	-1,504.77	21.19	1,504.92	0.00	0.00	0.00	0.00
10,300.00	90.00	179.19	8,941.00	-1,604.76	22.60	1,604.92	0.00	0.00	0.00	0.00
10,400.00	90.00	179.19	8,941.00	-1,704.75	24.01	1,704.92	0.00	0.00	0.00	0.00
10,500.00	90.00	179.19	8,941.00	-1,804.74	25.42	1,804.92	0.00	0.00	0.00	0.00
10,600.00	90.00	179.19	8,941.00	-1,904.73	26.83	1,904.92	0.00	0.00	0.00	0.00
10,700.00	90.00	179.19	8,941.00	-2,004.72	28.23	2,004.92	0.00	0.00	0.00	0.00
10,800.00	90.00	179.19	8,941.00	-2,104.71	29.64	2,104.92	0.00	0.00	0.00	0.00
10,900.00	90.00	179.19	8,941.00	-2,204.70	31.05	2,204.92	0.00	0.00	0.00	0.00
11,000.00	90.00	179.19	8,941.00	-2,304.69	32.46	2,304.92	0.00	0.00	0.00	0.00
11,100.00	90.00	179.19	8,941.00	-2,404.68	33.87	2,404.92	0.00	0.00	0.00	0.00
11,200.00	90.00	179.19	8,941.00	-2,504.67	35.28	2,504.92	0.00	0.00	0.00	0.00
11,300.00	90.00	179.19	8,941.00	-2,604.66	36.68	2,604.92	0.00	0.00	0.00	0.00
11,400.00	90.00	179.19	8,941.00	-2,704.65	38.09	2,704.92	0.00	0.00	0.00	0.00
11,500.00	90.00	179.19	8,941.00	-2,804.64	39.50	2,804.92	0.00	0.00	0.00	0.00
11,600.00	90.00	179.19	8,941.00	-2,904.63	40.91	2,904.92	0.00	0.00	0.00	0.00
11,700.00	90.00	179.19	8,941.00	-3,004.62	42.32	3,004.92	0.00	0.00	0.00	0.00
11,800.00	90.00	179.19	8,941.00	-3,104.61	43.72	3,104.92	0.00	0.00	0.00	0.00
11,900.00	90.00	179.19	8,941.00	-3,204.60	45.13	3,204.92	0.00	0.00	0.00	0.00
12,000.00	90.00	179.19	8,941.00	-3,304.59	46.54	3,304.92	0.00	0.00	0.00	0.00
12,100.00	90.00	179.19	8,941.00	-3,404.58	47.95	3,404.92	0.00	0.00	0.00	0.00
12,200.00	90.00	179.19	8,941.00	-3,504.57	49.36	3,504.92	0.00	0.00	0.00	0.00
12,300.00	90.00	179.19	8,941.00	-3,604.56	50.77	3,604.92	0.00	0.00	0.00	0.00
12,400.00	90.00	179.19	8,941.00	-3,704.55	52.17	3,704.92	0.00	0.00	0.00	0.00
12,500.00	90.00	179.19	8,941.00	-3,804.54	53.58	3,804.92	0.00	0.00	0.00	0.00
12,600.00	90.00	179.19	8,941.00	-3,904.53	54.99	3,904.92	0.00	0.00	0.00	0.00
12,700.00	90.00	179.19	8,941.00	-4,004.52	56.40	4,004.92	0.00	0.00	0.00	0.00
12,800.00	90.00	179.19	8,941.00	-4,104.51	57.81	4,104.92	0.00	0.00	0.00	0.00
12,900.00	90.00	179.19	8,941.00	-4,204.50	59.21	4,204.92	0.00	0.00	0.00	0.00
13,000.00	90.00	179.19	8,941.00	-4,304.49	60.62	4,304.92	0.00	0.00	0.00	0.00
13,100.00	90.00	179.19	8,941.00	-4,404.48	62.03	4,404.92	0.00	0.00	0.00	0.00
13,200.00	90.00	179.19	8,941.00	-4,504.47	63.44	4,504.92	0.00	0.00	0.00	0.00
13,300.00	90.00	179.19	8,941.00	-4,604.46	64.85	4,604.92	0.00	0.00	0.00	0.00
13,400.00	90.00	179.19	8,941.00	-4,704.45	66.26	4,704.92	0.00	0.00	0.00	0.00
13,500.00	90.00	179.19	8,941.00	-4,804.44	67.66	4,804.92	0.00	0.00	0.00	0.00
13,600.00	90.00	179.19	8,941.00	-4,904.43	69.07	4,904.92	0.00	0.00	0.00	0.00
13,700.00	90.00	179.19	8,941.00	-5,004.42	70.48	5,004.92	0.00	0.00	0.00	0.00
13,800.00	90.00	179.19	8,941.00	-5,104.41	71.89	5,104.92	0.00	0.00	0.00	0.00
13,900.00	90.00	179.19	8,941.00	-5,204.40	73.30	5,204.92	0.00	0.00	0.00	0.00
14,000.00	90.00	179.19	8,941.00	-5,304.39	74.71	5,304.92	0.00	0.00	0.00	0.00
14,100.00	90.00	179.19	8,941.00	-5,404.38	76.11	5,404.92	0.00	0.00	0.00	0.00
14,200.00	90.00	179.19	8,941.00	-5,504.37	77.52	5,504.92	0.00	0.00	0.00	0.00
14,300.00	90.00	179.19	8,941.00	-5,604.36	78.93	5,604.92	0.00	0.00	0.00	0.00
14,400.00	90.00	179.19	8,941.00	-5,704.35	80.34	5,704.92	0.00	0.00	0.00	0.00
14,500.00	90.00	179.19	8,941.00	-5,804.34	81.75	5,804.92	0.00	0.00	0.00	0.00
14,600.00	90.00	179.19	8,941.00	-5,904.33	83.15	5,904.92	0.00	0.00	0.00	0.00
14,700.00	90.00	179.19	8,941.00	-6,004.32	84.56	6,004.92	0.00	0.00	0.00	0.00
14,800.00	90.00	179.19	8,941.00	-6,104.31	85.97	6,104.92	0.00	0.00	0.00	0.00
14,900.00	90.00	179.19	8,941.00	-6,204.30	87.38	6,204.92	0.00	0.00	0.00	0.00
15,000.00	90.00	179.19	8,941.00	-6,304.29	88.79	6,304.92	0.00	0.00	0.00	0.00

Plan Report for Music Master 27 Fed 3H - Plan #3

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 (°)
15,100.00	90.00	179.19	8,941.00	-6,404.28	90.20	6,404.92	0.00	0.00	0.00	0.00
15,200.00	90.00	179.19	8,941.00	-6,504.27	91.60	6,504.92	0.00	0.00	0.00	0.00
15,300.00	90.00	179.19	8,941.00	-6,604.26	93.01	6,604.92	0.00	0.00	0.00	0.00
15,400.00	90.00	179.19	8,941.00	-6,704.25	94.42	6,704.92	0.00	0.00	0.00	0.00
15,500.00	90.00	179.19	8,941.00	-6,804.24	95.83	6,804.92	0.00	0.00	0.00	0.00
15,600.00	90.00	179.19	8,941.00	-6,904.23	97.24	6,904.92	0.00	0.00	0.00	0.00
15,700.00	90.00	179.19	8,941.00	-7,004.22	98.65	7,004.92	0.00	0.00	0.00	0.00
15,800.00	90.00	179.19	8,941.00	-7,104.21	100.05	7,104.92	0.00	0.00	0.00	0.00
15,900.00	90.00	179.19	8,941.00	-7,204.20	101.46	7,204.92	0.00	0.00	0.00	0.00
16,000.00	90.00	179.19	8,941.00	-7,304.19	102.87	7,304.92	0.00	0.00	0.00	0.00
16,100.00	90.00	179.19	8,941.00	-7,404.18	104.28	7,404.92	0.00	0.00	0.00	0.00
16,200.00	90.00	179.19	8,941.00	-7,504.17	105.69	7,504.92	0.00	0.00	0.00	0.00
16,300.00	90.00	179.19	8,941.00	-7,604.16	107.09	7,604.92	0.00	0.00	0.00	0.00
16,400.00	90.00	179.19	8,941.00	-7,704.15	108.50	7,704.92	0.00	0.00	0.00	0.00
16,500.00	90.00	179.19	8,941.00	-7,804.14	109.91	7,804.92	0.00	0.00	0.00	0.00
16,600.00	90.00	179.19	8,941.00	-7,904.13	111.32	7,904.92	0.00	0.00	0.00	0.00
16,700.00	90.00	179.19	8,941.00	-8,004.12	112.73	8,004.92	0.00	0.00	0.00	0.00
16,800.00	90.00	179.19	8,941.00	-8,104.11	114.14	8,104.92	0.00	0.00	0.00	0.00
16,900.00	90.00	179.19	8,941.00	-8,204.10	115.54	8,204.92	0.00	0.00	0.00	0.00
17,000.00	90.00	179.19	8,941.00	-8,304.09	116.95	8,304.92	0.00	0.00	0.00	0.00
17,100.00	90.00	179.19	8,941.00	-8,404.08	118.36	8,404.92	0.00	0.00	0.00	0.00
17,200.00	90.00	179.19	8,941.00	-8,504.07	119.77	8,504.92	0.00	0.00	0.00	0.00
17,300.00	90.00	179.19	8,941.00	-8,604.06	121.18	8,604.92	0.00	0.00	0.00	0.00
17,400.00	90.00	179.19	8,941.00	-8,704.05	122.59	8,704.92	0.00	0.00	0.00	0.00
17,500.00	90.00	179.19	8,941.00	-8,804.04	123.99	8,804.92	0.00	0.00	0.00	0.00
17,600.00	90.00	179.19	8,941.00	-8,904.03	125.40	8,904.92	0.00	0.00	0.00	0.00
17,700.00	90.00	179.19	8,941.00	-9,004.02	126.81	9,004.92	0.00	0.00	0.00	0.00
17,800.00	90.00	179.19	8,941.00	-9,104.01	128.22	9,104.92	0.00	0.00	0.00	0.00
17,900.00	90.00	179.19	8,941.00	-9,204.00	129.63	9,204.92	0.00	0.00	0.00	0.00
18,000.00	90.00	179.19	8,941.00	-9,303.99	131.03	9,304.92	0.00	0.00	0.00	0.00
18,100.00	90.00	179.19	8,941.00	-9,403.98	132.44	9,404.92	0.00	0.00	0.00	0.00
18,200.00	90.00	179.19	8,941.00	-9,503.97	133.85	9,504.92	0.00	0.00	0.00	0.00
18,300.00	90.00	179.19	8,941.00	-9,603.96	135.26	9,604.92	0.00	0.00	0.00	0.00
18,400.00	90.00	179.19	8,941.00	-9,703.95	136.67	9,704.92	0.00	0.00	0.00	0.00
18,500.00	90.00	179.19	8,941.00	-9,803.94	138.08	9,804.92	0.00	0.00	0.00	0.00
18,592.60	90.00	179.19	8,941.00	-9,896.53	139.38	9,897.51	0.00	0.00	0.00	0.00

TD @ 18592.60' MD - Music Master 27 Fed 3H BHL

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,368.04	8,368.04	0.00	0.00	Start Build @ 8368.04' MD
8,368.04	8,368.04	0.00	0.00	Dogleg = 10.00°/100'
9,268.04	8,941.00	-572.90	8.07	End Build @ 9268.04' MD
9,268.04	8,941.00	-572.90	8.07	Hold Angle = 90.00°
18,592.60	8,941.00	-9,896.53	139.38	TD @ 18592.60' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	Origin +E/-W (usft)	Start TVD (usft)
TD	No Target (Freehand)	179.19	Slot	0.00	0.00	0.00

Plan Report for Music Master 27 Fed 3H - Plan #3

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	18,592.60	Plan #3	MWD+SC

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
882.00	882.00	Rustler		0.00	359.46
1,473.00	1,473.00	Top of Salt		0.00	359.46
5,186.00	5,186.00	Lamar		0.00	359.46
5,204.00	5,204.00	Bell Canyon		0.00	359.46
6,262.00	6,262.00	Cherry Canyon		0.00	359.46
7,706.00	7,706.00	Brushy Canyon		0.00	359.46

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Music Master 27 Fed 3H BHL	8,941.00	-9,896.53	139.38	Point

North Reference Sheet for Music Master 27 Fed - Music Master 27 Fed 3H - Wellbore #1

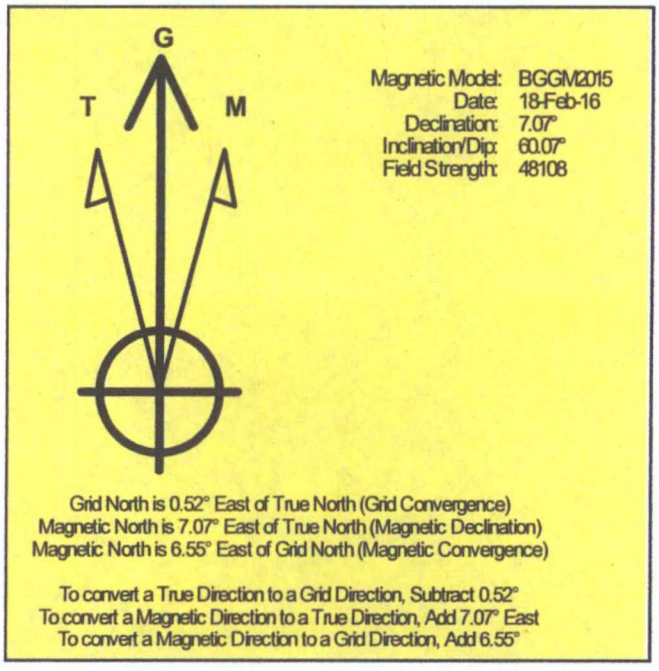
All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.
Vertical Depths are relative to GL 3181.4' + KB 29.0' @ 3210.40usft (Noram 23). Northing and Easting are relative to Music Master 27 Fed 3H
Coordinate System is US State Plane 1983, New Mexico 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: 1.00001438

Grid Coordinates of Well: 404,290.37 usft N, 844,530.03 usft E
Geographical Coordinates of Well: 32° 06' 27.68" N, 103° 21' 14.87" W
Grid Convergence at Surface is: 0.52°

Based upon Minimum Curvature type calculations, at a Measured Depth of 18,592.60usft
the Bottom Hole Displacement is 9,897.51usft in the Direction of 179.19° (Grid).

Magnetic Convergence at surface is: -6.55° (18 February 2016, , BGGM2015)



PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Endurance Resources LLC
LEASE NO.:	NM134080
WELL NAME & NO.:	3H-Music Master 27 Federal
SURFACE HOLE FOOTAGE:	150'/S & 1980'/E
BOTTOM HOLE FOOTAGE	330'/N & 1980'/E
LOCATION:	Section 27, T. 25 S., R. 35 E., NMPM
COUNTY:	Lea County, New Mexico

The original COAs still stand with the following drilling modifications:

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion, or soon as possible. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water flows in the Castile and Salado.
Possibility of lost circulation in the Red Beds, Rustler, and Delaware.

1. The **13-3/8** inch surface casing shall be set at approximately **940** feet **(a minimum of 25 feet into the Rustler Anhydrite, and if salt is encountered, set casing at least 25 feet above the salt)** and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

3. The minimum required fill of cement behind the **7 X 5-1/2** inch production casing is:

    ☒ Cement as proposed. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.

2. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.**
    a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
    b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
    c. **Manufacturer representative shall install the test plug for the initial BOP test.**
    d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
    e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

d. The results of the test shall be reported to the appropriate BLM office.

e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUID

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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