



ENDURANCE RESOURCES LLC

MULTIPOINT SURFACE USE AND OPERATIONS PLAN

Duo Sonic 29 Federal #501H

SHL: 325' FSL & 710' FWL

Sec 29-25S-35E

BHL: 330' FNL & 660' FWL

Sec 29-25S-35E

Lea Co, NM

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above mentioned well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of surface disturbance involved and the procedures to be followed in rehabilitating the surface after the completion of operations, so that a complete appraisal can be made of the environment effect associated with these operations.

Directions: From State Highway 128 and CR #2 Battle Axe, go east on HWY 128 0.2 miles, turn right on caliche road and go south 4.2 miles, turn left and go southeast 1.2 miles, bend right and go south 0.7 miles, turn left and go east 0.91 miles, turn right on sandy trail road and go south 4440' to the proposed road survey and follow flags west 4814' to the proposed southeast pad corner for this location.

1. Existing Roads:

- The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102, page 1. This well was staked by Madron Surveying Inc. from Carlsbad, NM.
- Page 4 of the C-102 packet contains is a Vicinity map showing the well and roads in the vicinity of the proposed location. The proposed well site and the access route is labeled in orange & blue (page 3). The proposed well site and the access route to location are indicated on the Site map (page 2) of C-102 packet. ROW using this existing route is being requested if necessary.
- Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

2. Planned Access Road:

- Endurance Resources LLC will be using the existing access road that turns off State Hwy 128. A 4814' access road from the existing caliche road that turns off Sandy Trail Road to the SE corner of the Duo Sonic 29 Federal 501H planned wellsite is being requested for ROW.
- This planned access road will have a maximum width of 14 feet of driving surface. The road will be crowned & ditched with a 2% slope from the tip of the crown to the edge of the driving



surface. The ditches will be 3ft wide with 3:1 slopes. The driving surface will be made of 6" rolled & compacted caliche.

- This existing road will be rebladed & caliche will be placed into existing holes which will be watered and compacted to prevent surface erosion. The average grade will be approx. 1%. Surface material will be of native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location.
- No cattle guards, gates, or fence cuts will be required. No turnouts are planned.

3. Location of Existing Wells:

- A one mile radius map shows all existing/proposed wells within a one-mile radius of the proposed location. See attached radius plat for more details.

4. Location of Existing and/or Proposed Facilities:

- This location will require "cut & fill" from the south to the north. Well site will be constructed by way of a 475'x 350' location. Topsoil pile will be placed on the north side of location. V-door will be facing north.
- In the event this well is found productive, the production will go to a tank battery with (6) 500 bbl oil tanks, (4) 500 bbl water tanks, (2) separator, heater treater, free water knockout, and gas sales meter on the site of the Duo Sonic "29" Federal Battery which is located adjacent to the Duo Sonic 29 Fed 4H pad and east of the Duo Sonic 29 Fed 3H pad. Necessary production equipment is subject to change once offsetting horizontal production is analyzed. Note: a distance of 100' is required between fired vessels and any combustibles for safety purposes. This battery will potential handle one more additional horizontal well if area is successful.
- All flow lines will adhere to API standards. All oil and gas will be transported from the location by way of the Jazz Bass Area Oil and Gas Pipeline. The oil and gas pipeline consists of a 6 inch buried steel oil pipeline, a 20 inch buried poly gas pipeline, a 8 inch buried steel oil pipeline and a 6 inch buried steel gas pipeline. The pipeline runs through T25S-R35E as outlined in the ROW Grant NM- 133940.
- Power will be supplied by way of existing electrical line constructed as part of the ROW Grant NM-133939, the line will run on a strip of land 50' wide from the top portion of section 29 due south with Sandy Trail road 4440' then turn west and follow flags 4814' to the southeast pad corner for the Duo Sonic 29 Fed 501H.

5. Location and Types of Water Supply:

- This location will be drilled using a combination of water mud systems (outlined in the Drilling program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using existing roads. On occasion, water will be obtained from a pre-existing water well, running a pump directly to the drilling rig. In these cases where a poly line is used to transport water for drilling or completion purposes, the existing and proposed road into location will be utilized.

6. Construction Materials:

- All caliche utilized for the drilling pad and access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. If deposits are found underneath the proposed location, topsoil will be pushed back from the drill site & existing



caliche will be ripped and compacted. Then topsoil will be stockpiled on location as depicted on the rig layout. All roads will be constructed of 6" rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

7. Methods of Handling Waste Material:

- All trash, junk, & other material will be removed from the well site within 30 days after finishing drilling/completion operations. All waste material will be contained in trash bins to prevent scattering. When the job is completed, all contents will be removed and disposed of in an approved sanitary landfill.
- The supplier, including broken sacks, will pick up slats remaining after completion of the well.
- A porto-john will be utilized for handling all gray water waste material. The equipment will be properly maintained during the drilling and completion operations, and will be removed when all operations are completed. Contents will be removed and disposed of in an approved sanitary landfill. Sewage from living quarters will drain into holding tanks & be cleaned out periodically and hauled to a waste disposal facility.
- Drill cuttings will be separated by a series of solids removal equipment and stored in steel containment pits and then hauled to a state approved disposal facility.
- Drilling fluids will be contained in steel pits in a closed loop circulating system. Fluids will be cleaned and reused. Water produced during testing will be contained in the steel pits & disposed of at a state approved disposal facility. Any oil or condensate produced will be stored in test tanks until sold & hauled from site.

8. Ancillary Facilities:

- No campsites or other facilities will be constructed as a result of this well.

9. Wellsite Layout:

- Attached is the proposed well site layout with dimensions of the pad layout & topsoil pile.
- Mud pits in the active circulating system will be steel pits and a closed loop system will be utilized.
- This location will require "cut & fill" from the south to the north. Well site will be constructed by way of a 475'x 350' pad. Topsoil pile will be placed on the north side of location. V-door will be facing north.
- If the well is a producer, those areas of the location not essential to production facilities will be reclaimed & seeded per BLM requirements.

10. Plans for Surface Reclamation:

- After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations or roads. The road will be reclaimed as directed by the BLM. The well site will be properly contoured, as close as possible, to the original topography. Topsoil from the spoil pile will be placed over the distributed area. Revegetation procedures will comply with BLM standards.
- The location and road will be rehabilitated as recommended by the BLM.



- If the well is deemed commercially productive, caliche from areas of the drill pad not required for *safe* operations, will be removed. These unused areas of the drill pad will be contoured as close as possible to match the original topography. The original topsoil will be returned to the area of the drilling pad not necessary to operate the well. These areas will then be seeded per BLM requirements.
- See attached site reclamation diagram for more details.
- Interim reclamation will be completed within 6 months of abandonment.

11. Surface Ownership:

- The surface is owned by the BLM and administered by the BLM. The surface is multiple use with primary uses of the region for the grazing of livestock, as well as oil & gas production.

12. Other Information:

- The area surrounding the well site is made up of grassland & mesquite trees. The topsoil is packed soils and sand. No wildlife was observed, but free range cattle, deer, dove/quail, & small rodents are likely to traverse the area.
- There is no permanent or live water in the general proximity of this location.
- There are no dwellings within 1 mile of this location.



6. Minimum Specifications for Pressure Control:

13-5/8 (5M) 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 13-3/8" csg through running of production casing, the well will be equipped with a 10M BOP system. Below the 9-5/8 csg shoe, this 5M 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 13-3/8 surface casing, BOP will be tested by an independent service company to 250 psi low & 3000 psi high. Hydril will be tested to 250 psi low and 2500 psi high. Before drilling out the 9-5/8 intermediate shoe BOP will be tested by an independent service company to 250 psi low and 5000 psi high. Hydril 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 & 30 minutes without a test plug.

7. Estimated BHP:

4962 psi @ 11,026' 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 – 1,103'	Fresh	8.4	29-32	NC
1,103' – 5,252'	Brine	10.0	28-32	NC
5,252' – 15,404'	Cut Brine	8.3 – 9.3	28-32	NC-12



ENDURANCE
RESOURCES, LLC

Operator's Certification:

Endurance Resources LLC representatives responsible for ensuring compliance of the surface use plan are listed below.

Tinlee Tilton

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Certification:

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in the APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

3-15-2016

Date

M. A. Sirgo III

M A. Sirgo III

Engineer

Endurance Resources LLC

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