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**MULTIPOINT SURFACE USE AND OPERATIONS PLAN**

**Duo Sonic 29 FED 4H**

**SHL: 150' FSL & 660' FEL (P)**

**BHL: 330' FNL & 660' FEL (A)**

**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 highway 128 .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 .7 miles, turn left and go east 0.91 miles, turn right on Sandy Trail Road and go south 4440' miles to existing trail road, turn left and follow proposed road survey flags west 849' to the southeast corner of the Duo Sonic 29 Federal 4H proposed pad.

**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 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 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 15' access road that extends west from the upgraded 4440' Sandy Trail Road, located in Sec 28-25S-35E, this access road will be approximately 849'. The proposed access road will extend from section 28-25S-35E into 29-25S-35E where it will intersect the Duo Sonic 29 Federal Battery and extend to the Duo Sonic 29 Federal 4H pad; see attached survey. The access road will intersect the Duo Sonic 29 Fed 4H on the southeast corner of the pad.
- Endurance Resources, LLC will be using 15' access road to connect the Duo Sonic 29 Fed 1H, 2H, 3H, 4H, and battery pads. These pads are multi-well pads, all located on the south side of section 29-25S-35E. The proposed access road will extend from the north west corner of the Duo Sonic 29 Federal 4H pad and intersect the 3H, 2H, and 1H pads on the northeast corner and will extend from the Duo Sonic 29 Fed 3H and 2H pads from the northwest corner. This proposed access road will intersect the Duo Sonic 29 Federal 1H pad and stop. Refer to the attached plat titled, "Multi-Use ROW to connect Duo Sonic 29 Federal 1H, 5H, 2H, 6H, 7H, 3H, 8H, 9H, 4H, and 10H well locations to Duo Sonic "29" federal battery".
- 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 road will be bladed & 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 350'x475' location. Topsoil pile will be placed on the north side of location. V-door will be facing east.
- Endurance Resources, LLC will be utilizing a consolidated battery pad called the Duo Sonic 29 Federal Battery located in Sec 29-25S-35E. This battery pad will be constructed by way of 300'x300' location to provide production facilities for the Duo Sonic 29 Fed Lease. This location will require "cut & fill" from the south to the north. Top soil pile will be placed on the north side of the location. Please refer to attached "Duo Sonic 29 Federal Battery" survey maps for reference.
- In the event this well is found productive, the production will go to a tank battery with (6) 500 bbl oil tanks, (2) 500 bbl water tanks, (2) separators, a heater treater, a free water knockout, a gas sales meter, gas scrubber, and a vapor recovery unit if needed on the Duo Sonic 29 Federal Battery location. Necessary production equipment is subject to change once offsetting horizontal



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production is analyzed. Note: a distance of 100' is required between fired vessels and any combustibles for safety purposes. This battery will potentially handle one or more additional horizontal well if area is successful.

- All flow lines will adhere to API standards.
- Power will be supplied by way of electrical power line located in T26S-R35E. This is an Xcel owned power line. A multi-use ROW for this electrical line is being requested to follow an existing access road located in Sec 3-26S-35E. This existing access road runs north into Sec 27-25S-35E and turns west into Sec 28-25S-35E. The power line will follow the existing access road until it intersects the proposed Duo Sonic 29 Fed 4H access road, in Sec 28-25S-35E, where it will then run south and then west to the federal battery pad and then continue west to supply power to the Duo Sonic 29 Fed 1H, 2H, 3H, and 4H locations. A multi-use ROW is being requested for power, disposal water takeaway, gas takeaway, crude takeaway and polyline from the fresh water pond to follow proposed and existing access roads.

#### **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, fresh water will be obtained from a pre-existing water well. Water well fresh water will be stored in a fresh water pond located in Sec 29-25S-35E, it will be pumped directly to the drilling rig. In these cases where a poly line is used to transport fresh 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 waster 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 land fill. Sewage from living quarters will drain into holding tanks & be cleaned out periodically and hauled to a waste disposal facility.



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- 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 350'x475' location. Topsoil pile will be placed on the north side of location. V-door will be facing east.
- If the well is a producer, those areas of the location not essential to production and operations 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.

**11. Surface Ownership:**

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

**12. Onsite Inspection:**

- The onsite inspection was performed November 20, 2013 by Trishia Bad Bear of the BLM and Endurance Engineer, Kale Jackson .



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**13. 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.