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Devon Energy Corporation 20 North Broadway Oklahoma City, Oklahoma 73102-8260

Hydrogen Sulfide (H₂S) Contingency Plan

For

Dinwiddie 1 Federal # 1H

795'FNL & 660' FEL, Sec-1, T-26S R-33E

Lea County NM

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Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated North on lease road to Battle Axe Road, then Northeast to County Road 128. Crews should then block entrance to the location from Battle Axe road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE There are no homes or buildings in or near the ROE.

-E

Assumed 100 ppm ROE = 3000'

100 ppm H₂S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H₂S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H₂S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
 - Detection of H₂S, and
 - o. Measures for protection against the gas,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H₂S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air = 1	2 ppm	N/A	1000 ppm

Characteristics of H₂S and SO₂

Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

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in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Devon Energy Corp. Company Call List

Artesia (575)	Cellular	Office	Home
Foreman–Roger Hernar	ndez748-5238	. 748-0169	396-7169
Asst Foreman – Ernie			
Don Mayberry			
Montral Walker		748-0193	
Engineer – Ron Hays			

Agency Call List

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<u>Lea</u> <u>County</u> (575)	Hobbs392-5588State Police397-9265City Police393-2515Sheriff's Office393-2515Ambulance911Fire Department397-9308LEPC (Local Emergency Planning Committee)393-2870NMOCD393-6161US Bureau of Land Management393-3612
<u>Eddy</u> <u>County</u> (575)	CarlsbadState Police885-3137City Police885-2111Sheriff's Office887 7551Ambulance911Fire Department885-2111LEPC (Local Emergency Planning Committee)887-3798US Bureau of Land Management887-6544New Mexico Emergency Response Commission (Santa Fe)(505)476-960024 HR(505) 827-9126National Emergency Response Center (Washington, DC)(800) 424-8802
	Emergency Services Boots & Coots IWC .1-800-256-9688 or (281) 931-8884 Cudd Pressure Control

Give	Flight For Life - Lubbock, TX	(806) 743-9911
GPS	Aerocare - Lubbock, TX	(806) 747-8923
position	Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
-	Lifeguard Air Med Svc. Albuquerque, NM	(575) 272-3115

Prepared in conjunction with Wade Rohloff of,



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5. Pressure Control Equipment:

BOP DESIGN Will consist of a (10M system) triple ram type (10M psi WP) preventor and a bagtype (Hydril) preventor (10M psi WP) and a rotation head. All units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 5" drill pipe rams on bottom. The mentioned 10M preventer will be installed on the 13 3/8" casing All BOP's will be tested with independent testers before drilling out the associated casing shoes. Prior to drilling out the 9 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2

Pipe rams will be changed to 3 ¹/₂" after setting the 7" casing string. The rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily driller's log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 10000 psi WP rating.

Devon Energy is requesting BOP testing as per BLM Drilling Operations Land Order #2 for the Hole Sections to be as follows

12 ¼" (950'-5,250') 3000 psi 8 ¾" (5,250'-16,500') 5000 psi

The rig has a 10K psi BOP stack; however a 5000K BOP stack will be required.

6. Proposed Mud Circulation System

Depth	Mud Wt.	Visc	<u>Fluid Loss</u>	Type System
0' – 950'	8.4 - 8.8	32-34	NC	Fresh Water
950'- 5250'	9.7-100	28-30	NC	Brine
5250'-12,700'	9.0 - 93	28-30	NC-40 cc	Fresh Water
PH				
11,700'-16,500'	9 5-11 0	40-60		80/20 Oil Base

The necessary mud products for weight addition and fluid loss control will be on location at all times.

7. Auxiliary Well Control and Monitoring Equipment:

- a. A Kelly cock 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. Hydrogen Sulfide detection equipment will be in operation after drilling out the 9 5/8" casing shoe until the 4 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 9 5/8" shoe until total depth is reached



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SURFACE USE PLAN Devon Energy Production Company, LP Dinwiddie 1 Federal 1H

Surface Location: 795' FNL & 660' FEL, Unit A, Sec 1 T26S R33E, Lea, NM Bottom Hole Location: 660' FNL & 660' FWL, Unit D, Sec 1 T26S R33E, Lea, NM

1. Existing Roads:

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- a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by Basin Surveys.
- b. All roads into the location are depicted on Exhibit 3.
- c. Directions to Location: From Co. Rd. # 1 (Orla Rd.) and Co. Rd. # 2 (Battle Axe) go eastnortheast 14.0 miles on Battle Axe road and turn right on caliche road and go south 0.25 miles and bend left and then go east 600' and location is 25' right (south).

2. New or Reconstructed Access Roads:

- a. The well site layout, Form C-102 shows the existing trail road.
- b. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
- c. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
- d. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

3. Location of Existing Wells:

One Mile Radius Plat shows all existing and proposed wells within a one-mile radius of the proposed location. See attached plat.

4. Location of Existing and/or Proposed Production Facilities:

- a. In the event the well is found productive, a tank battery would be utilized and the necessary production equipment will be installed at the well site. See Production Facilities Layout diagram.
- b. If necessary, the well will be operated by means of an electric prime mover. Electric power poles will be set along side of the access road.
- c. We intend to have a production facility on site. All flowlines will adhere to API standards.
- d. If the well is productive, rehabilitation plans are as follows:
 - i. A closed loop system will be used.
 - ii. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

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 the existing and proposed roads shown in the C-102. On occasion, water will be obtained from a pre-existing water well, running a pump directly to the drill rig. In these cases where a poly pipeline is used to transport water for drilling purposes, proper authorizations will be secured. If a poly pipeline is used, the size, distance, and map showing route will be provided to the BLM via sundry notice.

6. Construction Materials:

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All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. 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:

- a. Drill cuttings will be disposed of in a closed loop system.
- b. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary landfill.
- c. The supplier, including broken sacks, will pick up salts remaining after completion of well.
- d. A Porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- e. Remaining drilling fluids will be sent to a closed loop system. Water produced during completion will be put in a closed loop system. Oil and condensate produced will be put in a storage tank and sold.
- f. Disposal of fluids to be transported by the following companies:
 - i. American Production Service Inc, Odessa TX
 - ii. Gandy Corporation, Lovington NM
 - iii. I & W Inc, Loco Hill NM
 - iv. Jims Water Service of Co Inc, Denver CO
- 8. Ancillary Facilities: No campsite or other facilities will be constructed as a result of this well.

9. Well Site Layout

- a. Exhibit D shows the proposed well site layout with dimensions of the pad layout.
- b. This exhibit indicated proposed location of a closed loop system and living facilities.
- c. A closed loop system will be used.

10. Plans for Surface Reclamation:

a. After concluding the drilling and/or completion operations, if the well is found non-commercial, caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The reserve pit area will be broken out and leveled after drying to a condition where these efforts are feasible. The

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original top soil will again be returned to the pad and contoured, as close as possible, to the original topography. We will use a closed loop system.

- b. The location and road will be reclaimed as recommended by the BLM.
- c. If the well is deemed commercially productive, caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

11. Surface Ownership

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- a. The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is multiple uses with the primary uses of the region for the grazing of livestock and the production of oil and gas.
- b. The proposed road routes and the surface location will be restored as directed by the BLM.

12. Other Information:

- a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, sagebrush, yucca and miscellaneous weeds. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
- b. There is no permanent or live water in the general proximity of the location. .
- c. There are no dwellings within 2 miles of location.
- d. A Cultural Resources Examination may be completed by Southern New Mexico Archaeological Services, Inc. and forwarded to the BLM office in Carlsbad, New Mexico.

13. Bond Coverage:

Bond Coverage is Nationwide; Bond # is CO-1104



Operators Representative:

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below.

Ron Hays - Operations Engineer Devon Energy Production Company, L.P. 20 North Broadway Oklahoma City, OK 73102-8260 (405) 552-8150 (office) (405) 464-4214 (Cellular)

Don Mayberry - Superintendent Devon Energy Production Company, L.P. Post Office Box 250 Artesia, NM 88211-0250 (575) 748-3371 (office) (575) 746-4945 (home)

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this 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 Devon Energy Production Company, L.P. 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.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this _6th__ day of _July, 2010. Printed Name: Judy A. Barnett Signed Name: Position Title: Regulatory Analyst Address: 20 North Broadway, OKC OK 73102 Telephone: (405)-228-8699 Field Representative Roger Hernandez Address 6478 Seven Rivers Hwy, Artesia, NM Telephone 575-748-0169







