Hydrogen Sulfide Drilling Operations Plan Colibri Federal 27H Cimarex Energy Co. UL: A, Sec. 10, 23S, 32E Lea Co., NM

- 1 <u>All Company and Contract personnel admitted on location must be trained by a qualified</u> <u>H2S safety instructor to the following:</u>
 - A. Characteristics of H₂S
- B. Physical effects and hazards
- C. Principal and operation of H2S detectors, warning system and briefing areas.
- D. Evacuation procedure, routes and first aid.
- E. Proper use of safety equipment & life support systems
- F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.
- 2 H₂S Detection and Alarm Systems:
 - A. H2S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may play placed as deemed necessary.
 - В.
- An audio alarm system will be installed on the derrick floor and in the top doghouse.
- 3 Windsock and/or wind streamers:
 - A. Windsock at mudpit area should be high enough to be visible.
 - Β.
 - Windsock on the rig floor and / or top doghouse should be high enough to be visible.
- 4 Condition Flags and Signs
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H₂S present in dangerous concentration). Only H2S trained and certified personnel admitted to location.
- 5 Well control equipment:
 - A. See exhibit "E-1"

6 <u>Communication:</u>

- A. While working under masks chalkboards will be used for communication.
- B. Hand signals will be used where chalk board is inappropriate.
- C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
- 7 Drillstem Testing:

No DSTs r cores are planned at this time.

- 8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
- 9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

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H₂S Contingency Plan Colibri Federal 27H Cimarex Energy Co. UL: A, Sec. 10, 23S, 32E Lea Co., NM

Emergency Procedures

In the event of a release of gas containing H_2S , 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 H_2S 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
 - 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 (SO_2). 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.

Characteristics of H₂S and SO₂

Please see attached International Chemical Safety Cards.

Contacting Authorities

Cimarex Energy Co. of Colorado's personnel must liaise 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 including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

H₂S Contingency Plan Emergency Contacts Colibri Federal 27H Cimarex Energy Co. UL: A, Sec. 10, 23S, 32E Lea Co., NM

Company Office				R	
Cimarex Energy Co. of Colorado		800-969-4789	800-969-4789		
Co. Office and After-Hours Menu					
				l	
Key Personnel				1	
Name	Title	Office		Mobile	
Larry Seigrist	Drilling Manager	432-620-1934		580-243-8485	
Doug McQuitty	Drilling Superintendent	432-620-1933		806-640-2605	
Scott Lucas	Drilling Superintendent	432-620-1989		432-894-5572	
Roy Shirley	Construction Superintendent			432-634-2136	
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Artesia					
Ambulance	N	911			
State Police		575-746-2703			
City Police		575-746-2703]	
Sheriff's Office		575-746-9888			
Fire Department	575-746-2701		i		
Local Emergency Planning (575-746-2122				
New Mexico Oil Conservation Division		575-748-1283			
, , ,				r 	
Carlsbad					
Ambulance		911		ļ	
State Police		575-885-3137			
City Police		575-885-2111		i	
Sheriff's Office		575-887-7551			
Fire Department		575-887-3798			
Local Emergency Planning Committee		575-887-6544		8	
US Bureau of Land Management		575-887-6544			
Santa Fe		•		1	
New Mexico Emergency Re	505-476-9600				
New Mexico Emergency Re	505-827-9126		i		
New Mexico State Emerger	505-476-9635				
National					
National Emergency Response Center (Washington, D.C.)		800-424-8802			
Medical					
Flight for Life - 4000 24th St.; Lubbock, TX		806-743-9911		I	
Aerocare - R3, Box 49F; Lubbock, TX		806-747-8923			
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM		505-842-4433			
SB Air Med Service - 2505 (Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949			
1				l l l l l l l l l l l l l l l l l l l	
Other					
Boots & Coots IWC		800-256-9688	or	281-931-8884	
Cudd Pressure Control		432-699-0139	or	432-563-3356	
Halliburton		575-746-2757		i	
B.J. Services		575-746-3569			
				1	



Access Road



OCT 1 5 2014

Surface Use Plan **Colibri Federal #27H** Cimarex Energy Co. UL: A, Sec. 10, 23s, 32e lea Co., NM

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what is submitted in this surface use plan without approval. If any other disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be submitted for approval prior to any new surface disturbance.

1.Existing Roads:

Area access roads and general road maps:

- Exhibit B: General Highway Map
- Exhibit C: USGS Topographic Map
- Exhibit C-1: Public Access Road Map
- Exhibit C-2: Existing and proposed access roads plat

The maximum width of the driving surface will be 14.' The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.

Existing access road route to the proposed project is depicted on the public access point map if applicable. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwiswe noted in the New or Reconstructed Access Roads section of the surface use plan.

BEGINNING AT THE INTERSECTION OF JAL HIGHWAY / HWY 128 AND AN EXISTING ROAD TO THE NORTHEAST LOCATED IN THE SE 1/4 OF SECTION 1, T24S, R31E, N.M.P. M. PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 5.6 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHWEST; TURN LEFT AND PROCEED IN A NORTHWESTERLY DIRECTION APPROXIMATELY 1.4 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE NORTHEAST; TURN RIGHT AND PROCEED IN A NORTHEASTERLY , THEN NORTHERLY DIRECTION APPROXIMATELY 1.5 MILES TO THE BEGINNING OF THE P ROP OSED ACCESS FOR THE COLIBRI FEDERAL #20H TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY , THEN WESTERLY DIRECTION AP P ROXIMATELY 3,827' TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE NORTH; FOLLOW ROAD FLAGS IN A NORTHERLY DIRECTION APPROXIMATELY 15' TO THE PROPOSED LOCATION.

If existing roads are used, the operator will improve or maintain existing roads in a condition the same as or better than before the operations began. The operator will repair pot holes, etc. All existing structures on the entire access route such as cattleguards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deterioated beyond practical use.

The operator will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or other events. The operator will obtain written BLM approval prior to the application of surfactants, binding agents, or other dust suppression chemicals on the roadways.

2. New or Reconstructed Access Roads:

A new road will be constructed for this project.

Cimarex Energy plans to construct 4301.31' of new on-lease access road to service the well. The planned access road does not cross lease boundaries, a right of way grant will not be acquired from the BLM.

The maximum width of the driving surface will be 14'. The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.

Proposed and existing access road route to the proposed wellsite is depicted on Exhibit C-2. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done without prior approval from the BLM.

The operator will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or other events.

3. Planned Electric Line:

No new electric lines are planned.

4. Location of Existing Well in a One-Mile Radius -Exhibit A:

- Water Wells None known
- Disposal Wells None known
- Drilling Wells None known
- Producing Wells As shown on Exhibit A
- Abandoned Wells As shownd on Exhibit A

Surface Use Plan Colibri Federal #27H Cimarex Energy Co. UL: A, Sec. 10, 23s, 32e lea Co., NM

5. Location of Existing or Proposed Production Facilities:

If on completion this well is a producer, a tank battery will be used and the necessary production equipment will be installed and production will be sent to the Colibri Federal #20H. Cimarex Energy proposes to install two 4 inch buried HP polylines down existing lease road to the Colibri Federal #20H battery.

Cimarex Energy plans to construct on lease flowlines to service the well.

Specifications of Polyline: 1 HP polyline for oil, gas, and water production. 1 HP polyline for gas lift.

Both lines will be buried 25'-35' North of the access road.

Length: 3720'

MAOP: 1500 psi. Anticipated working pressure: 200-300 psi.

Allocation will be based on well test. Route is on lease, please see Exhibit G. Any changes to on lease route will be submited via sundry notice. If route is off lease, a right of way will be submitted to the BLM for approval.

6. Location and Type of Water Supply:

Water will be purchased locally from a commercial source and trucked over the access roads.

7. Source of Construction Material:

If possible, native caliche will be obtained from the excavation of drill site. The primary way of obtaining caliche will be by "turning over" the location. This means caliche will be obtained from the actual well site. A caliche permit will be obtained from BLM prior to pushing up any caliche. 2400 cu yds is the max amount of caliche needed for pad and roads. Amount will vary for each pad. The procedure below has been approved by BLM personnel:

- The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.
- An approximate 120' x 120' area is used within the proposed well site to remove caliche.
- Subsoil is removed and piled alongside the 120' by 120' area within the pad site.
- When caliche is found, material will be stockpiled within the pad site to build the location and road.
- Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.
- Once well is drilled, the stockpiled top soil will be used for interim reclamation and spread along areas where caliche is
 picked up and the location size is reduced. Neither caliche nor subsoil will be stockpiled outside of the well pad. Topsoil will
 be stockpiled along the edge of the pad as depicted in Exhibit D Rig Layout Diagram.

In the event that no caliche is found onsite, caliche will be hauled in from a BLM-approved caliche pit.

8. Methods of Handling Waste

- Drilling fluids, produced oil, and water from the well during drilling and completion operations will be stored safely and disposed of properly in a NMOCD approved disposal facility.
- Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around well site will be collected for disposal.
- Human waste and grey water will be properly contained and disposed of properly at a state approved disposal site.
- After drilling and completion operations, trash, chemicals, salts, frac sand and other waste will be removed and disposed of properly at a state approved disposal site.
- The well will be drilled utilizing a closed loop system. Drill cuttings will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

9. Ancillary Facilities:

No camps or airstrips to be constructed.

10. Well Site Layout:

- Exhibit D: Rig Layout
- Exhibit D-2: Well Site layout plat
- Mud pits in the closed circulation system will be steel pits and the cuttings will be stored in steel containment pits.
- Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility.
- If the well is a producer, those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements. Exhibit D-1: Interim Reclamation Diagram.