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

# Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan

For

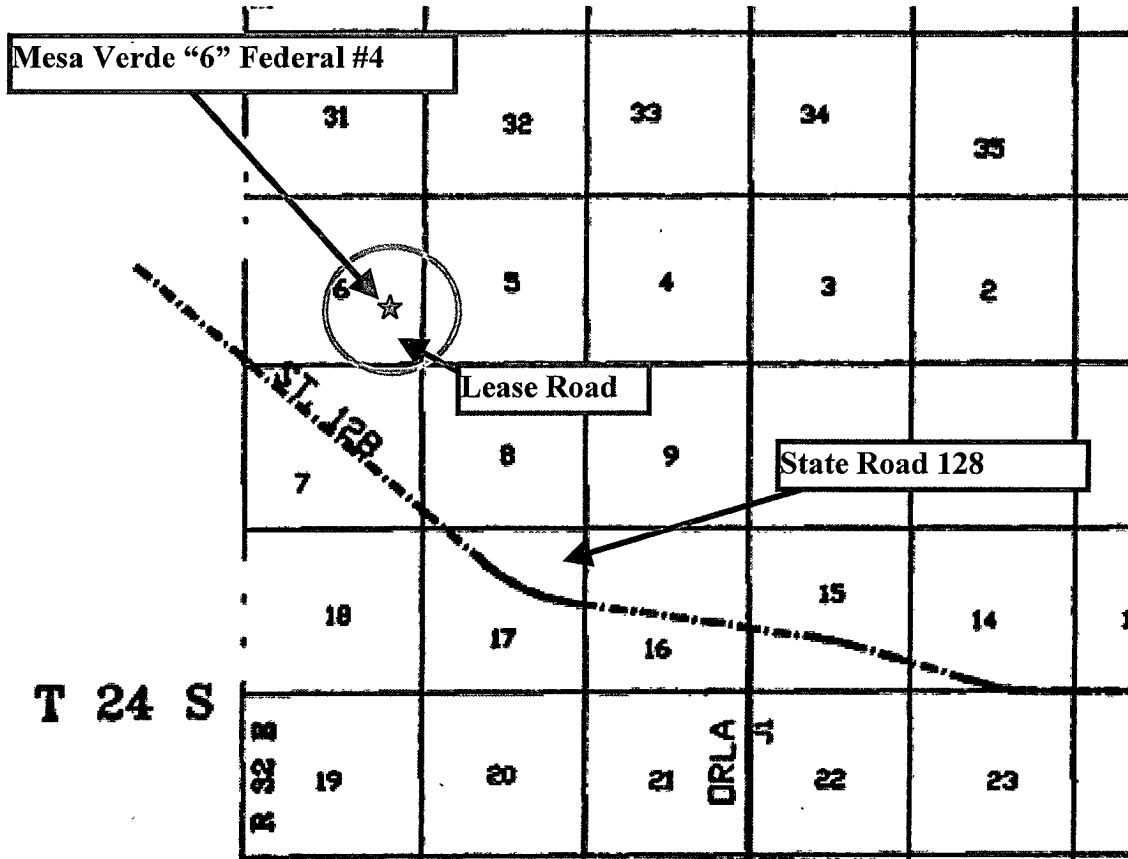
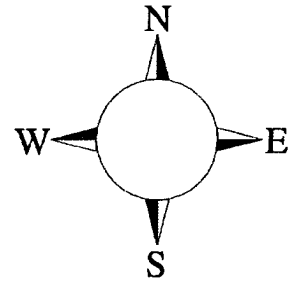
Mesa Verde "6" Federal # 4

1980' FSL & 660' FEL,  
Sec-6, T-24S R-32E

Lea County NM

## Mesa Verde "6" Federal # 4

This is an open drilling site. H<sub>2</sub>S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H<sub>2</sub>S, including warning signs, wind indicators and H<sub>2</sub>S monitor.



**Assumed 100 ppm ROE = 3000' (Radius of Exposure)**  
**100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.**

### Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated South on lease road to County Road 128. Crews should then block entrance to the location from the county 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.

**Assumed 100 ppm ROE = 3000'**

**100 ppm H<sub>2</sub>S concentration shall trigger activation of this plan.**

### **Emergency Procedures**

**In the event of a release of gas containing H<sub>2</sub>S, 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<sub>2</sub>S 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 H<sub>2</sub>S, 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<sub>2</sub>). 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 H<sub>2</sub>S and SO<sub>2</sub>**

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

### **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)

## Devon Energy Corp. Company Call List

<u>Artesia (575)</u>	<u>Cellular</u>	<u>Office</u>	<u>Home</u>
Foreman-Roger Hernandez. ..	748-5238 .....	748-0169 .....	396-7169
Asst. Foreman – Ernie Duran...	513-1768 .....	748-0191 .....	746-4589
Don Mayberry.....	748-5235 .....	748-0164 .....	746-4945
Montral Walker.....	390-5182 .....	748-0193 .....	936-414-6246
Engineer – Ron Hays.....	(405) 464-4214....	(405) 552-8150....	(405) 359-7015

## Agency Call List

<u>Lea</u>	<b>Hobbs</b>	
<u>County</u>	State Police .....	392-5588
<u>(575)</u>	City Police .....	397-9265
	Sheriff's Office .....	393-2515
	Ambulance.....	911
	Fire Department.....	397-9308
	LEPC (Local Emergency Planning Committee).....	393-2870
	NMOCD .....	393-6161
	US Bureau of Land Management .....	393-3612
<u>Eddy</u>	<b>Carlsbad</b>	
<u>County</u>	State Police .....	885-3137
<u>(575)</u>	City Police .....	885-2111
	Sheriff's Office .....	887-7551
	Ambulance.....	911
	Fire Department.....	885-2111
	LEPC (Local Emergency Planning Committee).....	887-3798
	US Bureau of Land Management .....	887-6544
	New Mexico Emergency Response Commission (Santa Fe) ...	(505)476-9600
	24 HR .....	(505) 827-9126
	National Emergency Response Center (Washington, DC) ..	(800) 424-8802

### **Emergency Services**

	Boots & Coots IWC .....	1-800-256-9688 or (281) 931-8884
	Cudd Pressure Control.....	(915) 699-0139 or (915) 563-3356
	Halliburton .....	(575) 746-2757
	B. J. Services.....	(575) 746-3569
<i>Give</i>	Flight For Life - Lubbock, TX .....	(806) 743-9911
<i>GPS</i>	Aerocare - Lubbock, TX .....	(806) 747-8923
<i>position:</i>	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;



## **SURFACE USE PLAN**

Devon Energy Production Company, LP

### **Mesa Verde 6 Federal 4**

Surface Location: 1980' FSL & 660' FEL, Unit I, Sec 6 T24S R32E, Lea, NM

Bottom Hole Location: 1980' FSL & 660' FEL, Unit I, Sec 6 T24S R32E, Lea, NM

#### **1. Existing Roads:**

- 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 junction of Hwy 128 and Buck Jackson, go northwest for 0.6 miles to lease road, on lease road go northeasterly for 0.7 miles then turn right and go easterly 0.4 miles; then turn left and go southeasterly to well pad and proposed lease road.

#### **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 lay flowlines from the Mesa Verde 6 Federal 4 well to the Mesa Verde 6 Federal 2 tank battery located at 1980' FSL & 1980' FEL of Sec 6 T24S R32E following lease roads. 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:**

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

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**

- 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.

James Cromer  
Operations Engineer

Don Mayberry  
Superintendent

Devon Energy Production Company, L.P.  
20 North Broadway  
Oklahoma City, OK 73102-8260

Devon Energy Production Company, L.P.  
Post Office Box 250  
Artesia, NM 88211-0250

(405) 228-4464 (office)  
(405) 694-7718 (Cellular)

(505) 748-3371 (office)  
(505) 746-4945 (home)

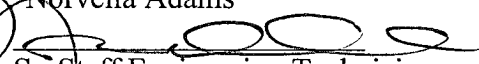
**Certification**

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 22nd day of February, 2010.

Printed Name: Norvella Adams

Signed Name: 

Position Title: Sr. Staff Engineering Technician

Address: 20 North Broadway, OKC OK 73102

Telephone: (405) 552-8198

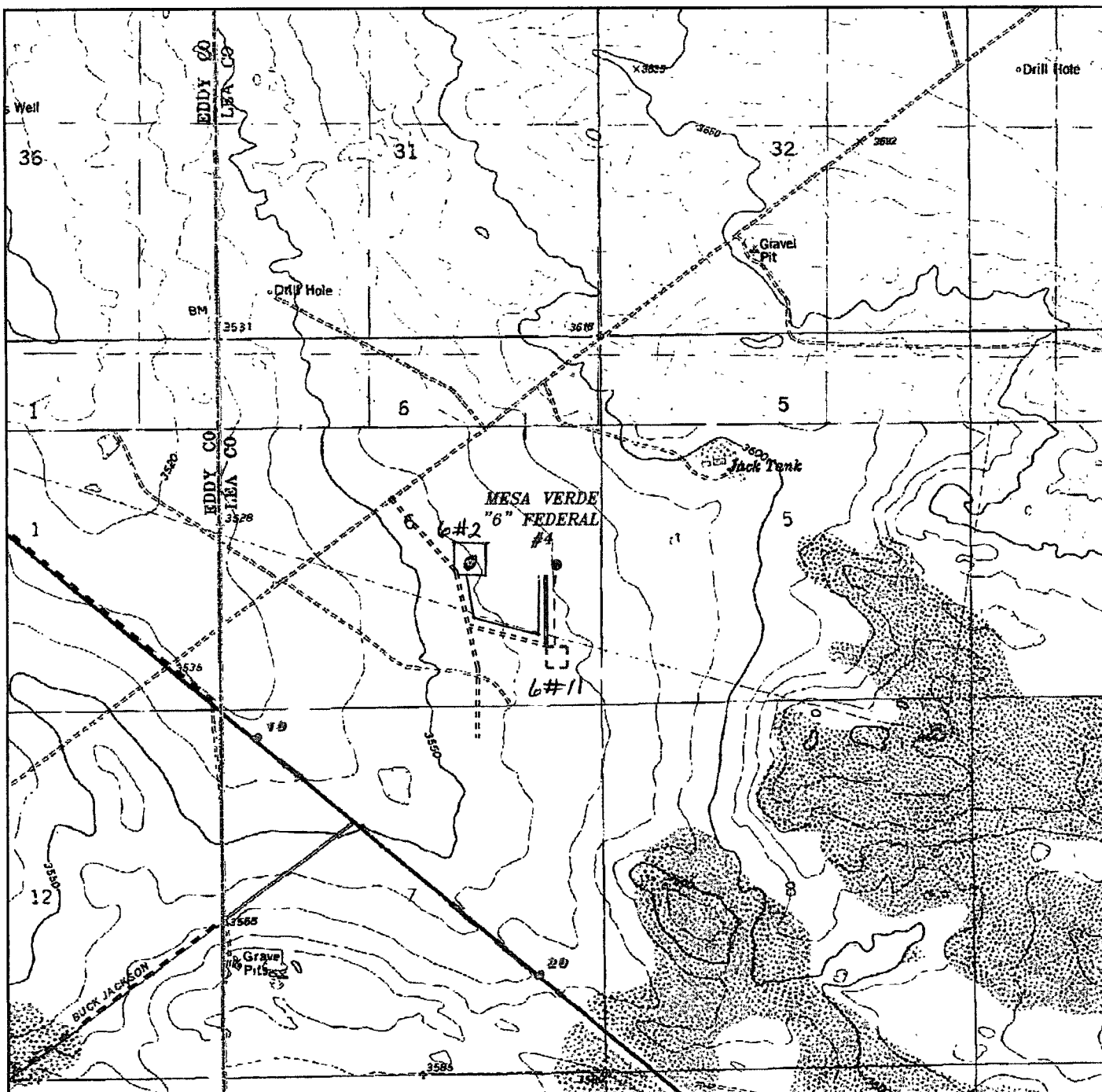
Field Representative: Roger Hernandez

Address: 6478 Seven Rivers Hwy, Artesia, NM

Telephone: 575-748-0169

E-mail: norvella.adams@dvn.com





MESA VERDE "6" FEDERAL #4 --- 1020' Electric Line  
 Located 1980' FSL and 660' FEL --- 2100' Flow Line - 3" poly  
 Section 6, Township 24 South, Range 32 East,  
 N.M.P.M., Lea County, New Mexico.

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 in the oilfield

P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
 basinsurveys.com

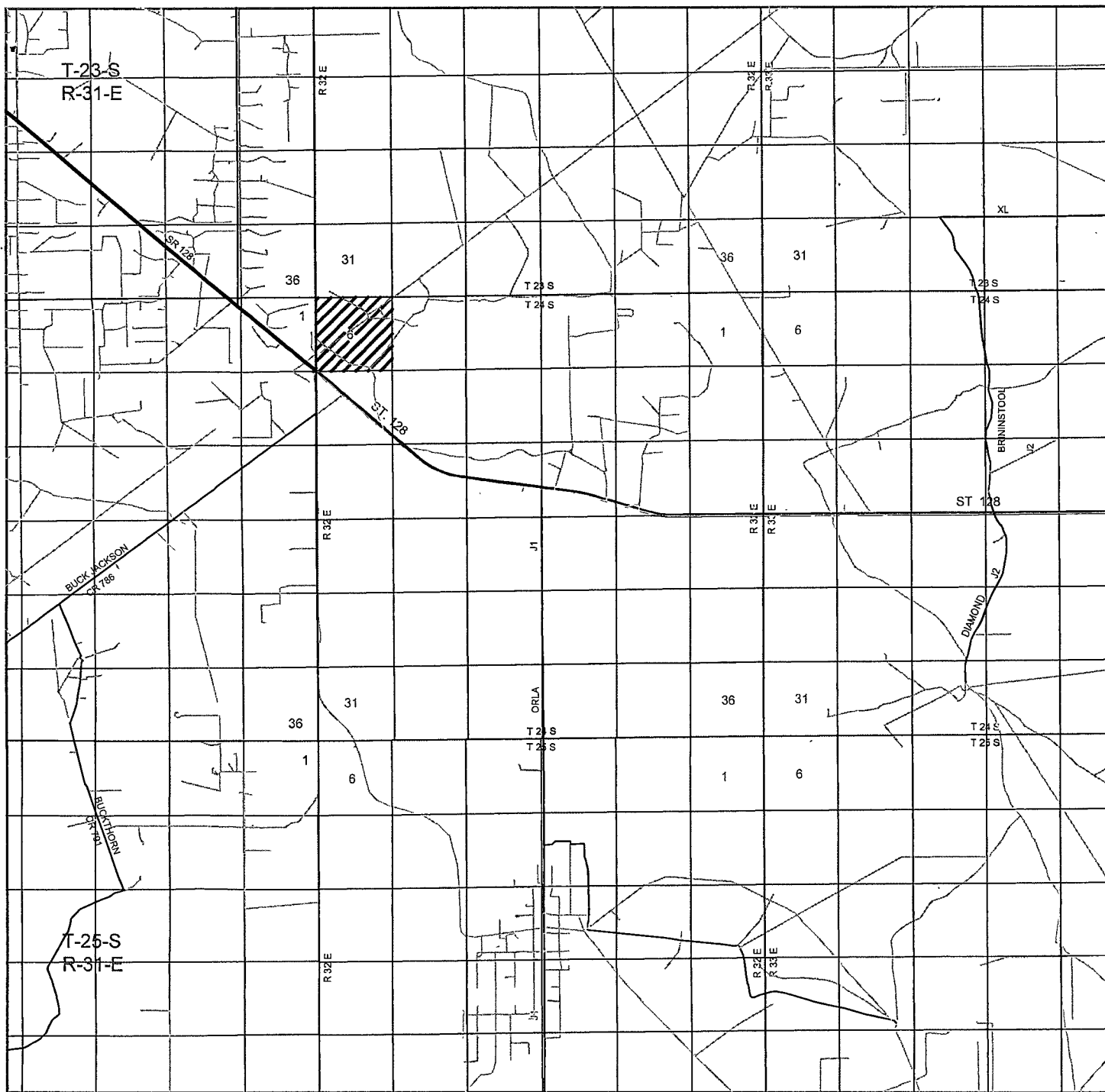
W.O. Number: JMS 22361

Survey Date: 02-09-2010

Scale: 1" = 2000'

Date: 02-10-2010

DEVON ENERGY  
 PRODUCTION  
 COMPANY, L.P.



**MESA VERDE "6" FEDERAL #4**  
 Located 1980' FSL and 660' FEL  
 Section 6, Township 24 South, Range 32 East,  
 N.M.P.M., Lea County, New Mexico.

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P.O. Box 1786  
 1120 N. West County Rd.  
 Hobbs, New Mexico 88241  
 (575) 393-7316 - Office  
 (575) 392-2206 - Fax  
[basinsurveys.com](http://basinsurveys.com)

W.O. Number: JMS 22361

Survey Date: 02-09-2010

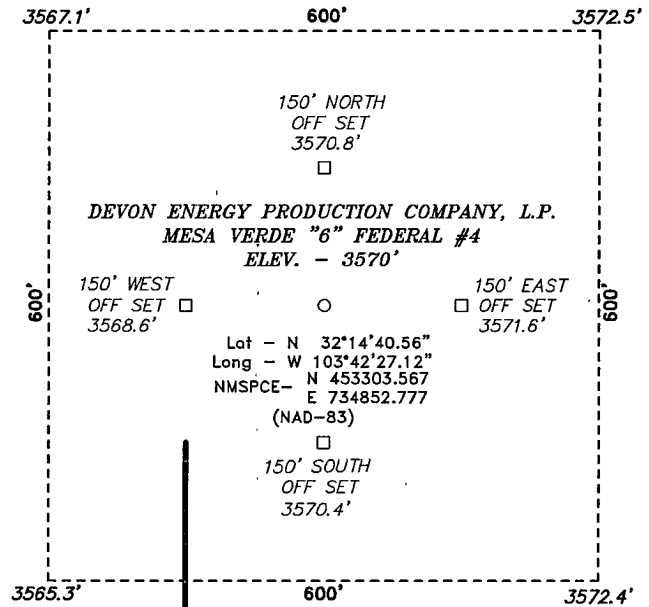
Scale: 1" = 2 Miles

Date: 02-10-2010



**DEVON ENERGY**  
**PRODUCTION**  
**COMPANY, L.P.**

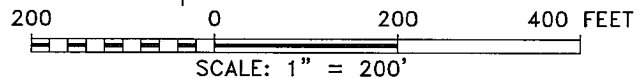
SECTION 6, TOWNSHIP 24 SOUTH, RANGE 32 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



Lot - N 32°14'40.56"  
Long - W 103°42'27.12"  
NMSPC- N 453303.567  
E 734852.777  
(NAD-83)

PROPOSED LEASE ROAD 1020.0'

MESAVERDE #11



Directions to Location:

FROM THE JUNCTION OF HWY 128 AND BUCK JACKSON, GO NORTHWEST FOR 0.6 MILES TO LEASE ROAD, ON LEASE ROAD GO NORTHEASTERLY FOR 0.7 MILES THENCE TURN RIGHT AND GO EASTERLY 0.4 MILES; THENCE TURN LEFT AND GO SOUTHEASTERLY TO WELL PAD AND PROPOSED LEASE ROAD.

**DEVON ENERGY PRODUCTION COMPANY, L.P.**

REF: MESA VERDE "6" FEDERAL #4 / WELL PAD TOPO

THE MESA VERDE "6" FEDERAL #4 LOCATED 1980'

FROM THE SOUTH LINE AND 660' FROM THE EAST LINE OF

SECTION 6, TOWNSHIP 24 SOUTH, RANGE 32 EAST,

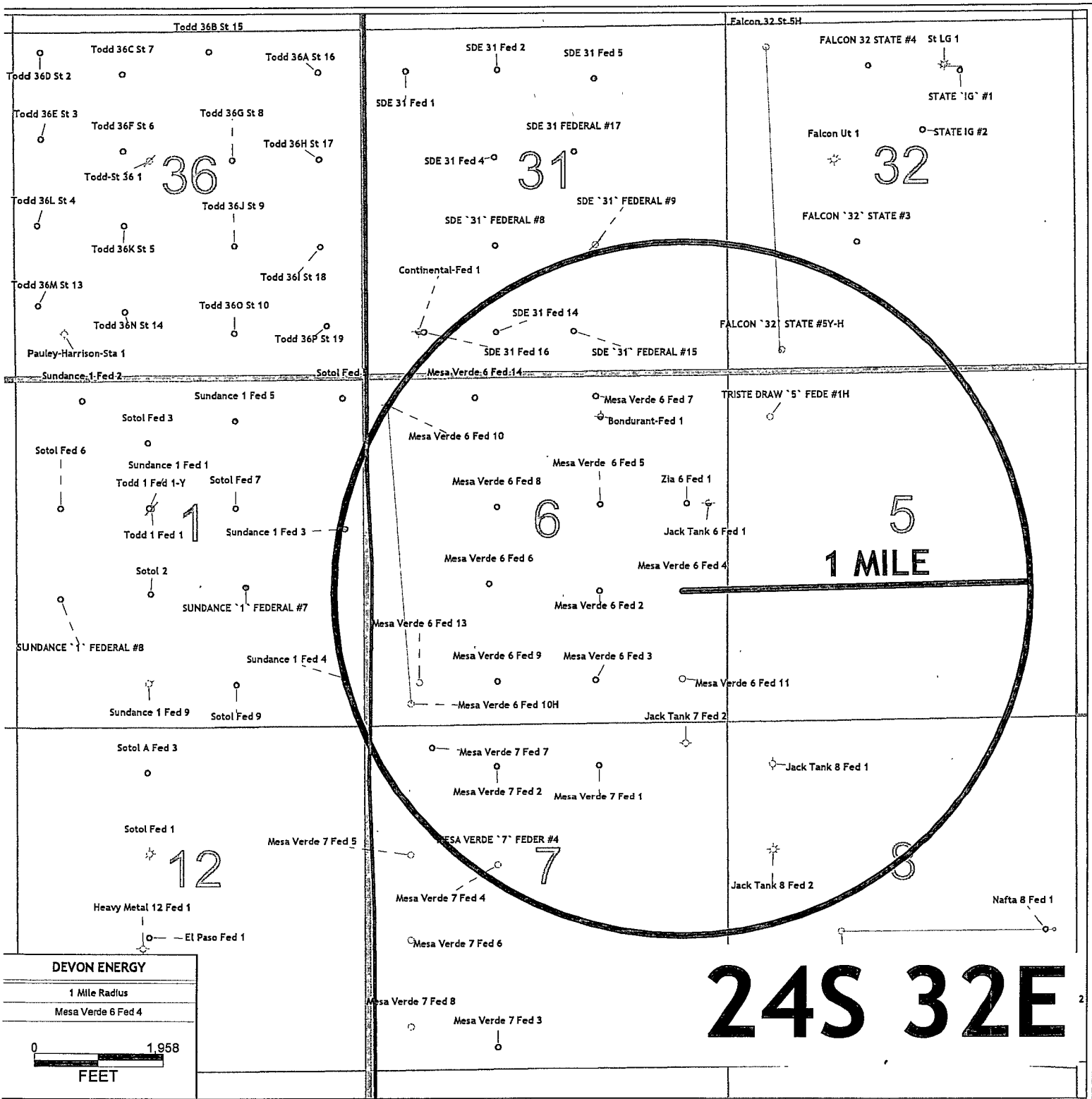
N.M.P.M., LEA COUNTY, NEW MEXICO.

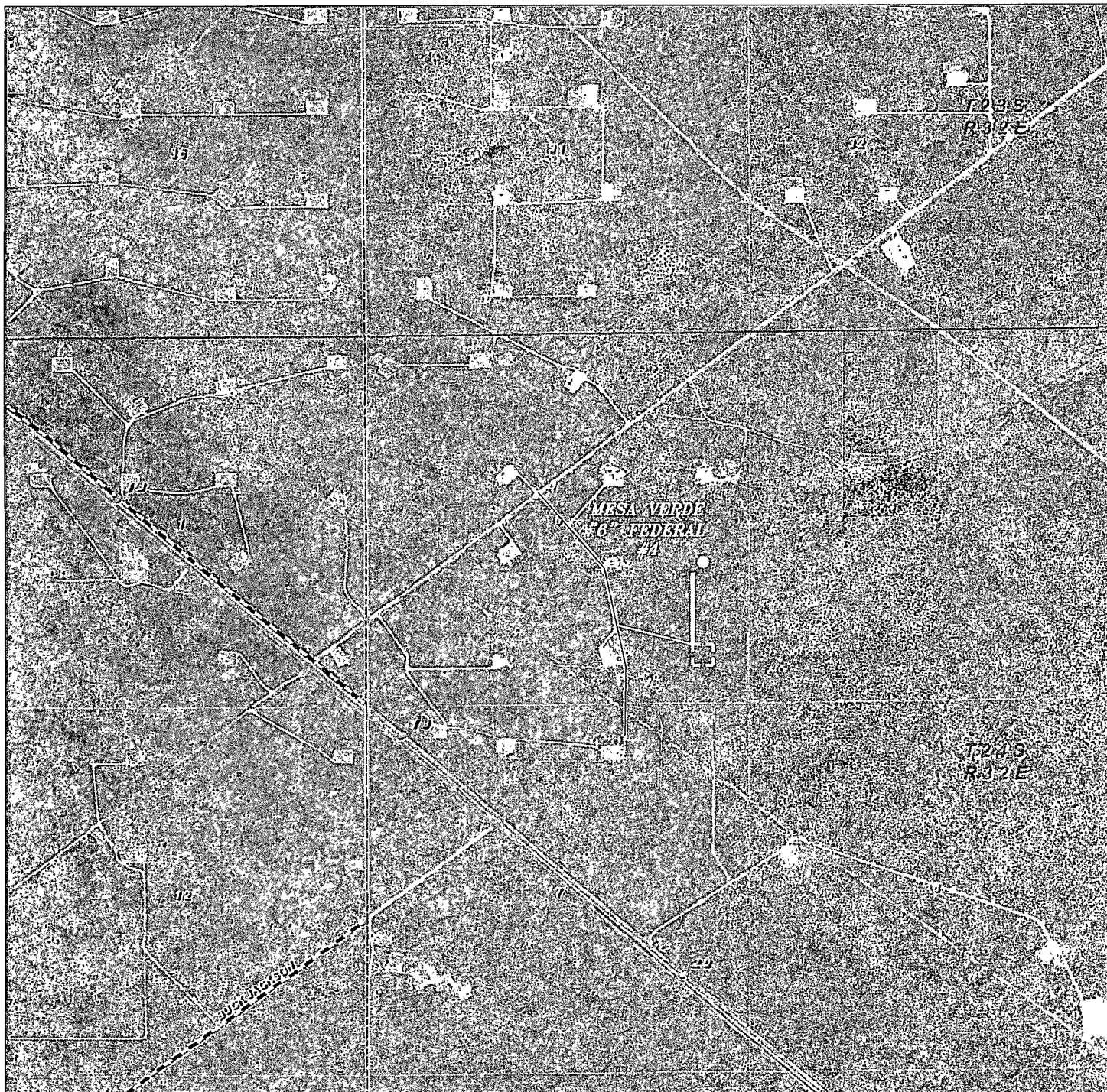
**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 22361 Drawn By: J. SMALL

Date: 02-10-2010 Disk: JMS 22361

Survey Date: 02-09-2010 Sheet 1 of 1 Sheets





MESA VERDE "6" FEDERAL #4  
 Located 1980' FSL and 660' FEL  
 Section 6, Township 24 South, Range 32 East,  
 N.M.P.M., Lea County, New Mexico.

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W.O. Number: JMS 22361

Scale: 1" = 2000'

YELLOW TINT - USA LAND  
 BLUE TINT - STATE LAND  
 NATURAL COLOR - FEE LAND

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 PRODUCTION  
 COMPANY, L.P.