

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.  
Deputy Cabinet Secretary

Jami Bailey, Division Director  
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 7-8-13

Well information;

Operator Running Horse, Well Name and Number Tenneco Federal #1R

API# 30-045-35490, Section 8, Township 26N, Range 12W

Conditions of Approval:

(See the below checked and handwritten conditions)

- Notify Aztec OCD 24hrs prior to casing & cement.
- Hold C-104 for directional survey & "As Drilled" Plat
- Hold C-104 for NSL, NSP, DHC
- Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

\* Hold C-104 for 5.9 compliance

Continued on Page 2

State of New Mexico  
Energy, Minerals and Natural Resources Department

---

**Susana Martinez**  
Governor

**David Martin**  
Cabinet Secretary-Designate

**Brett F. Woods, Ph.D.**  
Deputy Cabinet Secretary

**Jami Bailey, Division Director**  
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

## Page 2 Conditions

Add open hole plug from 5930-6030' +100% excess

Add open hole plug for the Graneros top from 5694-5794 +100% excess

Add open hole plug for the Mancos pool top from 4212-4312 +100% excess

Plugs will need to be adjusted based on actual formation tops determined after drilling consult with Agencies prior to cementing

  
\_\_\_\_\_  
NMOCD Approved by Signature

11-4-2014  
Date  
*ye*

RECEIVED

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

JUL 19 2013

APPLICATION FOR PERMIT TO DRILL OR REENTER <sup>Permitting Field Office</sup>  
<sup>Bureau of Land Management</sup>

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-93255
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name Navajo Indian Tribe
2. Name of Operator Running Horse Production Company		7. If Unit or CA Agreement, Name and No.
3a. Address P. O. Box 369 Ignacio, CO 81137		8. Lease Name and Well No. Tenneco Federal #1R
3b. Phone No. (include area code) (970) 563-5152		9. API Well No. 30-045-35490
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 809' FSL & 897' FWL of Section 8 At proposed prod. zone		10. Field and Pool, or Exploratory Gallegos Wash, Farmington, West
14. Distance in miles and direction from nearest town or post office* 17 miles south of Farmington		11. Sec., T. R. M. or Blk. and Survey or Area Section 8, T26N, R12W
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 809'	16. No. of acres in lease <del>920</del> 477.92	12. County or Parish San Juan
17. Spacing Unit dedicated to this well S/2 of Section 8	13. State NM	OIL CONS. DIV DIST. 3
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. NA	19. Proposed Depth 6,100'	20. BLM/BIA Bond No. on file <del>6021834</del> NOV 03 2014 NM 2446
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6,001' GL	22. Approximate date work will start* 10/01/2013	23. Estimated duration 20 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification
- Such other site specific information and/or plans as may be required by the BLM.

25. Signature 	Name (Printed/Typed) Jerry Elgin	Date 07/08/2013
Title Senior Engineering Advisor		
Approved by (Signature) 	Name (Printed/Typed) AFM	Date 9/24/14
Title AFM	Office FFO	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

\*(Instructions on page 2)

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS".

NMOCDA

BLM'S APPROVAL OR ACCEPTANCE OF THIS  
ACTION DOES NOT RELIEVE THE LESSEE AND  
OPERATOR FROM OBTAINING ANY OTHER  
AUTHORIZATION REQUIRED FOR OPERATIONS  
ON FEDERAL AND INDIAN LANDS

This action is subject to technical  
and procedural review pursuant to  
43 CFR 3165.3 and appeal  
pursuant to 43 CFR 3165.4

CONFIDENTIAL

OIL CONSERVATION DIVISION  
1220 South St. Francis Drive  
Santa Fe, NM 87505

AMENDED REPORT

JUL 29 2013

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-35490</b>		*Pool Code <b>96372</b>	*Pool Name <b>GALLEGOS WASH, FARMINGTON</b>
*Property Code <b>32387</b>	*Property Name <b>TENNECO FEDERAL</b>		*Well Number <b>1R</b>
*OGRID No. <b>217680</b>	*Operator Name <b>RUNNING HORSE PRODUCTION COMPANY</b>		*Elevation <b>6001'</b>

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County
M	8	26N	12W		809	SOUTH	897	WEST	SAN JUAN

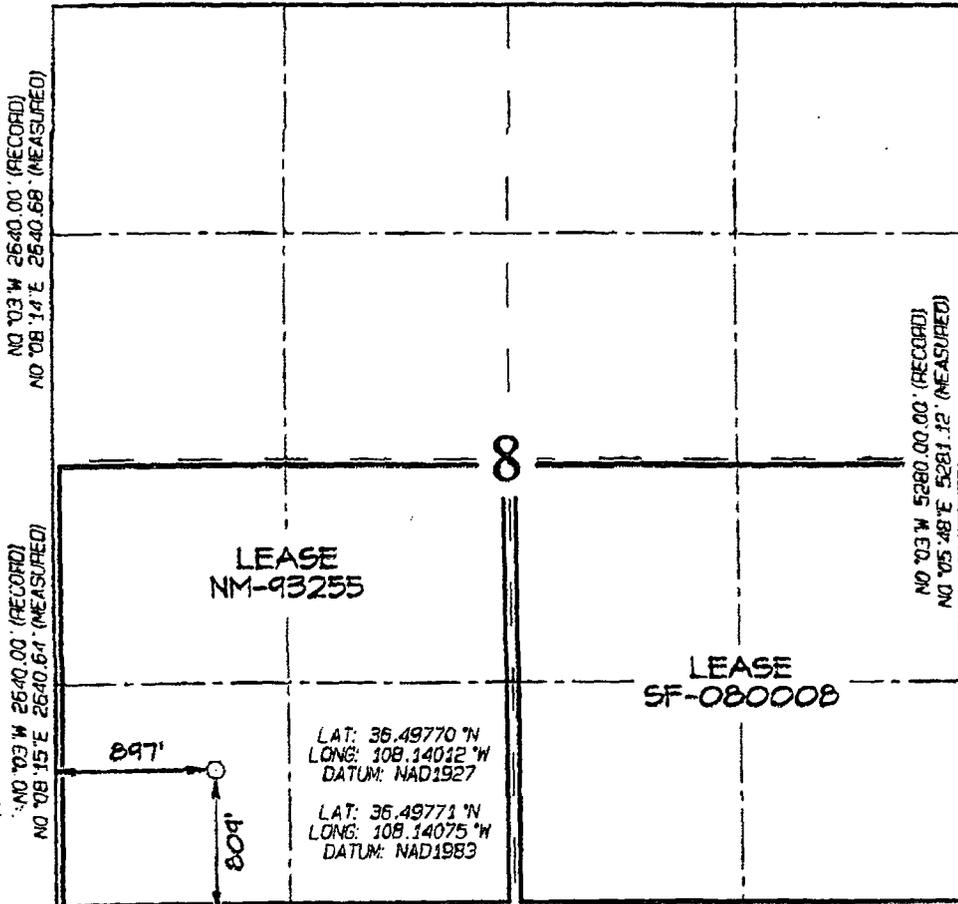
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ion	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres <b>160 SW 1/4 320.0 Acres - 5/2</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--	-------------------------------	----------------------------------	-------------------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<sup>16</sup> N89°59'W 2632.74' (RECORD) N89°59'W 2632.74' (RECORD)  
N89°46'49"W 2631.24' (MEASURED) N89°47'16"W 2632.11' (MEASURED)



<sup>17</sup> OPERATOR CERTIFICATION  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unless mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Jerrey Edgin* 7/24/13  
Signature Date  
Jerrey Edgin  
Printed Name

E-mail Address  
<sup>18</sup> SURVEYOR CERTIFICATION  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: MARCH 22, 2013  
Survey Date: NOVEMBER 9, 2012  
Signature and Seal of Professional Surveyor

**JASON C. EDWARDS**  
NEW MEXICO  
REGISTERED PROFESSIONAL SURVEYOR  
15269

**JASON C. EDWARDS**  
Certificate Number 15269

N89°47'00"W 2633.30' (MEASURED) N89°47'22"W 2633.79' (MEASURED)  
N89°58'W 2634.06' (RECORD) N89°58'W 2634.06' (RECORD)

CONFIDENTIAL

District I  
1625 N. French Drive, Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

District II  
811 S. First Street, Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV  
1220 S. St. Francis Drive, Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department

Form C-102  
Revised August 1, 2011

Submit one copy to  
Appropriate District Office

OIL CONSERVATION DIVISION  
1220 South St. Francis Drive  
Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-045-35490</b>		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code <b>32387</b>	*Property Name TENNECO FEDERAL		*Well Number 1R
*OGRID No. 217680	*Operator Name RUNNING HORSE PRODUCTION COMPANY		*Elevation 6001'

<sup>10</sup> Surface Location

U. or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
M	8	26N	12W		809	SOUTH	897	WEST	SAN JUAN

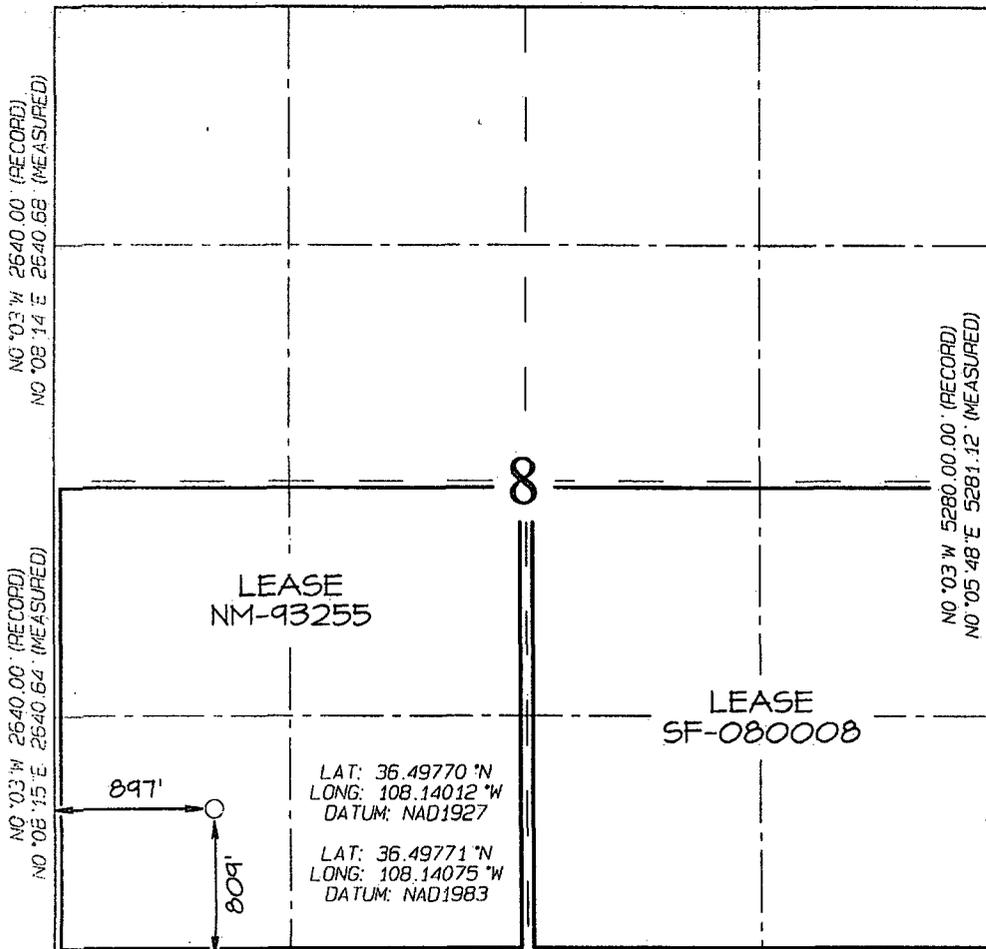
<sup>11</sup> Bottom Hole Location If Different From Surface

U. or lot no.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres 320.0 Acres - S/2	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--	-------------------------------	----------------------------------	-------------------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<sup>16</sup> N89°59'W 2632.74' (RECORD) N89°59'W 2632.74' (RECORD)  
N89°46'49"W 2631.24' (MEASURED) N89°47'16"W 2632.11' (MEASURED)



<sup>17</sup> OPERATOR CERTIFICATION  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *[Signature]* Date: 11/4/2014  
Printed Name: MARVIN SEALE  
E-mail Address: mscale@rwp.com

<sup>18</sup> SURVEYOR CERTIFICATION  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: OCTOBER 29, 2014  
Survey Date: NOVEMBER 9, 2012

Signature and Seal of Professional Surveyor

**JASON C. EDWARDS**  
REGISTERED PROFESSIONAL SURVEYOR  
15269

**JASON C. EDWARDS**  
Certificate Number 15269

N89°47'00"W 2633.30' (MEASURED) N89°47'22"W 2633.79' (MEASURED)  
N89°58'W 2634.06' (RECORD) N89°58'W 2634.06' (RECORD)

**Drilling Program**  
**Running Horse Production Company**  
**Tenneco Federal #1R**  
**809' FSL & 897' FWL**  
**Section 8, T26N, R12W**  
**San Juan County, New Mexico**

The estimated top of geological markers are as follows:

<u>Formation</u>	<u>Depth to Top</u>	
GL: 6001'      Est KB: ~6013'	<u>Measured Depth</u>	<u>Subsea Depth</u>
Kirtland	359	+5654'
Fruitland	946'	+5067'
Basal Fruitland Coal (target):	1188'	+4825'
Pictured Cliffs	1212'	+4801'
Lewis	1356'	+4657'
Cliff House	2717'	+3296'
Point Lookout	3762'	+2251'
Mancos	3987'	+2026'
Niobrara/El Vado	4723'	+1290'
Gallup	4805'	+1208'
Juana Lopez	5299'	+714'
Greenhorn	5687'	+326'
Graneros	5744'	+269'
Dakota	5773'	+240"
TD:	6030'	

**Estimated depth of fresh water and hydrocarbons:**

**Water:**            Fresh water will be protected by setting surface casing at 380' and cementing to the surface of the ground.

**Hydrocarbons:** Oil and gas may be encountered in the noted formations above. These zones will be protected by casing and cement as warranted.

**Pressure control equipment:**

A 2,000 psi WP annular blowout preventer will be installed on the 13-3/8" surface casing. A 3,000 psi double ram blowout preventer will be installed on the 9-5/8" intermediate casing. Pressure tests will be conducted on all casing strings prior to drilling into new open hole. BOP controls will be installed prior to drilling under the surface casing and will remain in use until the conclusion of drilling operations. Blow out preventers will be inspected and operated per Onshore Order No. 2. A kelly cock will be installed on drilling equipment and a full opening valve with connections to fit the drill pipe and collars will be kept on the rig floor in the open position when the kelly is not in use.

Operator requests a waiver of the low pressure test requirement on the 13-3/8" annular preventer so that testing of the equipment can be conducted with the rig pump to 70% of the burst rating of the surface casing.

The blowout preventer and associated equipment on the 9-5/8" casing will be tested with a third party tester to 3,000 psi on the double ram blowout preventer and to 1,500 psi on the annular blow out preventer before drilling below the 9-5/8" shoe per the requirements of Onshore Order No. 2.

**Proposed casing and cementing program:****Casing:**

<u>Hole Size</u>	<u>Casing</u>	<u>Weight</u>	<u>Grade</u>	<u>Depth</u>	<u>Thread</u>
17-1/2"	13-3/8"	48#	<del>J-55 H-40</del>	0-380'	ST&C
12-1/4"	9-5/8"	40#	J-55	0-1,500'	ST&C

Minimum casing design parameters: Collapse 1.125, burst 1.0, tensile strength 1.8.

**Cement:**

1. Surface casing: 550 sacks Type III cement containing 3% CaCl and ¼ lb/sack cellophane flakes mixed 15.2 lbs/gal, with yield of 1.28 ft<sup>3</sup>/sack. Cement to be circulated to the surface.
2. Production casing: 200 sacks Type III cement containing ½ lbs/sack cellophane flakes, 3 lbs/sack LCM, and 2% sodium metasilicate mixed 12.5 lbs/gal, with yield of 2.14 ft<sup>3</sup>/sack, followed by 150 sacks Type III cement containing ½ lbs/sack cellophane flakes, 3 lbs/sack LCM, and 2% sodium metasilicate mixed 13.5 lbs/gals, with yield of 1.73 ft<sup>3</sup>/sack. Cement to be circulated to the surface.
3. Open hole: Open hole to be plugged in compliance with BLM regulations as follows:

Plug #1 – Gallup Formation, 4,767-4,667' with 50 sacks Type III cement mixed 14.8 lbs/gal with yield 1.32 ft<sup>3</sup>/sack.

Plug #2 – Cliffhouse Formation, 2,044-1,944' with 50 sacks Type III cement mixed 14.8 lbs/gal with yield 1.32 ft<sup>3</sup>/sack

Volume of cement may be adjusted as warranted by caliper log. Depths of cement plugs may be adjusted based upon formation tops as determined by open hole logs.

**Mud Program:**

<u>Interval</u>	<u>Type System</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0-380'	Fresh water native	8.3-9.0	30-35	Not controlled
380-1,500'	Fresh water, LSND	8.7-9.2	40-50	<10
1,500-5,200'	LSND	8.7-9.6	40-50	<10

**Evaluation Program:**

Samples: 30' samples from base of surface casing to TD.  
Logging: Induction/CNDL-Triple Combo from base of surface casing to TD.  
Additional specialty logs may be run in the deeper part of the hole.  
Coring: Possible conventional core of Mancos Shale, percussion sidewall cores as warranted by logs, rotary sidewall cores of potential pay zones.  
Drill Stem Tests: None anticipated.

**Downhole Challenges:**

Zones of Abnormal Pressure: None anticipated  
Zones of Lost Circulation: None anticipated  
Maximum BHT: 145° F  
Maximum BHP: 9.6 lbs/gal gradient or less

**Anticipated Starting Date:**

Operator intends to commence activity as soon as practical after receiving approval of this application. Approximately 12 days of drilling activity and an additional 14 days of completion activity are anticipated on this project.

Operator will proceed with a completion attempt in the Fruitland Coal within 14 days of cessation of drilling activities.

Operator will evaluate information gained through open hole logs and cores in the Mancos Formation to determine the feasibility of further exploration efforts. Based upon this evaluation, operator may re-enter this well and drill a horizontal Mancos Formation test at a future date, potentially within two years.

**Directions from the Intersection of US Hwy 550 & US Hwy 64**  
**in Bloomfield, NM to Running Horse Production Company Tenneco Federal #1R**  
**809' FSL & 897' FWL, Section 8, T26N, R12W, N.M.P.M., San Juan County, NM**

**Latitude: 36.49771°N Longitude: 108.14075°W Datum: NAD1983**

From the intersection of US Hwy 550 & US Hwy 64 in Bloomfield, NM, travel Southerly on US Hwy 550 for 11.9 miles to County Road #7100 (aka. Chaco Plant Road) @ Mile Marker 139.8;

Go right (Westerly) on County Road #7100 for 9.8 miles to intersection in road;

Go right (Northerly) on B.I.A. Road N-4123 for 0.5 miles to fork in road;

Go left (Westerly) towards agricultural field for 0.4 miles to fork in road;

Go left (South-Westerly) around agricultural field for 0.2 miles to Y in road;

Go right (South-Westerly) staying next to agricultural field for 0.4 miles to Y in road;

Go left (North-Westerly) leaving agricultural field through gate for 0.3 miles to Y in road;

Go right (North-Easterly) for 0.1 miles to staked location which overlaps Running Horse Production Tenneco Federal #1 wellpad.

**CONFIDENTIAL**