

Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

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

WELL API NO. 30-007-20231
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name VPR D
8. Well Number 64
9. OGRID Number 180514
10. Pool name or Wildcat

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other **COALBED METHANE**

2. Name of Operator
EL PASO ENERGY RATON, L.L.C.

3. Address of Operator
PO BOX 190, RATON, NM 87740

4. Well Location
Unit Letter **O** : **14** feet from the **South** line and **1981** feet from the **East** line
Section **30** Township **31N** Range **18E** NMPM **Colfax** County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
8652' (GR)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: **Horizontal Lateral**
☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

1. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. Work proposed is as follows.

- Drill a horizontal lateral in the Upper Vermejo coal at 1590'- 1597'.
- The reserve pit will be dug in the original pit area for the drilling solids during drilling operations.
- Steel pits will be used for the drilling fluids, and a shale shaker to remove the drilling solids to the pit.
- The primary drilling fluids will be natural produced water. If hole cleaning problems occur during drilling, we will start the "Clean Faze System" by mixing a 5 to 6 lb per barrel of starch to the produced water. Adding about a ¼ lb per barrel of lime for a ph modifier. To help carry drilling solids to surface, gum will be added as a Viscosifier.
- Drilling fluid additives will be supplied by Basin Fluids (Mike Atchison owner) from Bloomfield N.M.
- After the lateral is TD'd, a 3 ½" perforated liner will be run and set off just outside the 5 ½" production casing. Whipstock will be retrieved.
- A clean out run will be made to the original TVD. Production will be run back to the original setting depth.
- Drilling fluids will be diluted with clean production water and transferred to the VPR B 27 WDW . Drilling solids from the steel pits will be washed and cleaned out in the reserve pit. The reserve pit will not be lined. The pit will be back filled and restored to original ground contour.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOC guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE DR Lambert TITLE Prod. Mgr. DATE 8/13/04

Type or print name _____ E-mail address: _____ Telephone No. _____
For State Use Only

APPROVED BY: [Signature] TITLE **DISTRICT SUPERVISOR** DATE 8/17/04

Conditions of Approval (if any):

CLEAN FAZE

BASIN FLUIDS
Bloomfield, New Mexico

Product of Brazil

RISK: CAUTION! NUISANCE DUST. MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.	RIESGO: ¡CUIDADO! POLVO MOLESTO. PUEDE CAUSAR LA IRRITACIÓN DE LOS OJOS, LA PIEL Y LAS VÍAS RESPIRATORIAS.
PRECAUTIONS: Avoid creating and breathing dust. Avoid contact with eyes, skin and clothing. Supply ventilation adequate to keep exposure below occupational exposure limits (PEL or OES) for nuisance dust. Wear an approved particulate respirator (N95 or P2) when exposure may exceed the limit.	PRECAUCIONES: Evitar generar y respirar polvo. Evitar el contacto con los ojos, la piel y la ropa. Suministrar la ventilación adecuada para mantener la exposición por debajo de los límites de exposición profesional (PEL o OES) para polvos molestos. Usar un respirador aprobado para particulados (N95 o P2) cuando la exposición puede exceder el límite.
FIRST-AID MEASURES:	PRIMEROS AUXILIOS:
EYES: Promptly wash eyes with lots of water while lifting the eye lids. Continue to rinse for as least 15 minutes. Get medical attention.	OJOS: Lavar inmediatamente los ojos con gran cantidad de agua, manteniendo los párpados abiertos. Seguir enjuagando durante por lo menos 15 minutos. Obtener atención médica.
INHALATION: Move to fresh air at once. Perform artificial respiration if breathing has stopped. Get medical attention.	INHALACIÓN: Desplazar inmediatamente la víctima al aire fresco. Administrar respiración artificial si la víctima deja de respirar. Obtener atención médica.
INGESTION: Drink water or milk to dilute. Do NOT induce vomiting unless directed to by a physician. Never give anything by mouth to an unconscious person. Get medical attention.	INGESTIÓN: Beber agua o leche para diluir. NO se debe inducir el vómito a menos que lo ordene un médico. No se debe administrar nada por la boca a una persona inconsciente. Obtener atención médica.
SKIN: Wash with soap and water. Remove contaminated clothing. Get medical attention if discomfort continues. For more information see the Material Safety Data Sheet.	PIEL: Lavar con jabón y agua. Quitarse la ropa contaminada. Obtener atención médica si la molestia continúa. Para más información consultar la Hoja de Datos de Seguridad sobre los Materiales (MSDS).

FOR INDUSTRIAL USE ONLY

HMIS HEALTH 1 FLAMMABILITY 1 REACTIVITY 0 PERSONAL PROTECTION E

34 U/S

PSUON PLASTIC FIBER

STABILIZED STARCHES — BIO DEGRADABLE

513/BAG 4.5 lbs/BAG 51072
50 # BAG

24-HOUR EMERGENCY PHONE: 505-632-2595

00000000

To: Don Lankford
From: Bill Ordemann
Date: August 2, 2004

RE: VPR D-64 Horizontal Lateral
Vermejo Park Ranch
Colfax County, New Mexico

Authority is requested to drill a horizontal lateral in the Upper Vermejo coal in the VPR D-64 (1590-1597'). This workover is projected to cost \$244,000 net to El Paso with an incremental production gain of 200 Mcfd. Attached please find an AFE for this workover.

CONCLUSIONS:

- Incremental gas production rate can be achieved from the Upper Vermejo coal in the VPR D-64 by drilling a horizontal lateral in the coal. The production rate on D 64 has declined exponentially from 900 -300 Mcfd indicating a damaged coal. A horizontal lateral should bypass the suspected damage and restore the production rate this well has demonstrated it is capable of.

RECOMMENDATIONS:

Please find the attached AFE for a net of \$244,000 to El Paso's 100% working interest.

Economics (100% W.I. & 93% N.R.I.)	
Net Investment (M\$)	244
Est. Net Reserves (MMCFE)	542
EVA (\$/year)	\$104,100 - (\$244,000 x .12) = \$74,800
Net Operating Profit	\$104,100
(\$2.5/Mcf x 73000 Mcf/yr x .93 NRI x (1 - .05625) x (1 - .35))	
Weighted Average Cost of Capital	12% estimated
Capital Employed	\$244,000
Undiscounted Payout (AFIT, years):	2.1
Development Cost (\$/Mcf)	0.45
ROR	95%

DISCUSSION:

VPR D-64 was drilled and completed in the Lower, Middle and Upper Vermejo Coals during the Spring of 2001. This well was the first well frac'd with coil tubing on the Vermejo project. Sandwedge was added to the frac sand to prevent sand flowback. The well was pulled 5 times in the first year to change out pumps and cleanout the wellbore. The production rate is declining exponentially indicating potential damage to the coal. A coal response to stimulation usually includes a flat or inclining production profile during the first 3 years. The well has cumulative production of 513 MMcf and is currently producing from the Vermejo Coals at 295 Mcfd + 40 bwpd.

It is proposed to drill a horizontal lateral from the D-64 in the 7' Upper Vermejo coal N 2000' toward the D-37 which has a 7' U.V. coal. We will drill up dip from the D-64 U.V. top @ 1590' toward the D-37 U.V. top @ 1282' allowing the produced water to move toward the D-64 wellbore. D-71 offsets D-64 ½ mile to the WNW and produces 850 Mcfd + 220 bwpd from the Vermejo Coals including a 6' thick U.V. coal. The Upper Vermejo coal correlates in this area and appears to be continuous. D-37 offsets D-64 3200' to the NW and was successfully recompleted February 2004 in the Upper Vermejo coal adding 100 Mcfd incremental production rate. The D-37 currently produces 430 Mcfd + 80 bwpd and the production rate is inclining.

GENERAL COMMENTS	
Horizontal lateral from existing wellbore in a well with thick resources but less than expected results.	

WELLBORE SCHEMATIC

Lease: VPRD 64
Field: VPR - Castlerock
County: Colfax
State: New Mexico

Tree: Independent 1500 psi head

2-14-01 Spud. Dring 11" hole to 330'. Ran 8 5/8' csg to 321'. Cmt w/100 sks. Circ 7 bbls cmt to pit.
 2-16-01 Drl 7 7/8" hole to 2085'.
 2-17-01 Ran 48 jts 5 1/2", 15.5#, WC-50, LT&C csg @ 2007'. Cmt w/335 sks. Bump plug. Circ 10 bbls cement.
 3-28-01 RU CU and ran bit & scraper to 2007'.
 4-2-01 Patterson ran bond log. TOC at surf.
 4-23-01 Fert Stage 1: 1873-80' w/ 4 spt 28 holes
 Pmp 397 gals 7.5% HCL acid, 70 nitro foam w/ 57852 lbs of 16/30 mesh sand, total 17790 gal pmpd, ISIP 430 psi.
 Fert Stage 2: 1826-30' w/ 4 spt 16 holes
 Pmp 220 gals 7.5% HCL acid, 70 nitro foam w/ 32967 lbs of 16/30 mesh sand at 8-10 bpm, total 15260 gal pmpd, ISIP 575 psi.
 Fert Stage 3: 1791-94' w/ 4 spt 12 holes
 Pmp 183 gals 7.5% HCL acid, 70 nitro foam w/ 27062 lbs of 16/30 mesh sand at 8-10 bpm, total 8613 gal pmpd, ISIP 750 psi.
 Fert Stage 4: 1771-74' w/ 4 spt 12 holes
 Pmp 175 gals 7.5% HCL acid, 70 nitro foam w/ 25043 lbs of 16/30 mesh sand at 10 bpm, total 9660 gal pumped, ISIP 450 psi.
 Fert Stage 5: 1590-97' w/ 4 spt 28 holes
 Pmp 388 gals 7.5% HCL acid, 70 nitro foam w/ 40956 lbs of 16/30 mesh sand at 8-10 bpm, total 11332 gal pumped, ISIP 500 psi.
 5-12-01 RIH w/ 45 PCP
 6-5-01 Stuck pump. Ran 65 PCP. Bailed 75' fill.
 6-22-01 Pmp stuck. Ran 95 PCP. Bailed 87' fill.
 1-25-02 Stuck pump. Ran 1 1/2" IP. Install 57 PU. Bailed 87' fill.
 4-11-02 Pump stuck. Ran 11/2" IP. Bail 60' fill.
 8-25-02 Bad pump. Ran 1 1/2" IP. Bail 36' fill.

11" Hole

8 5/8", 24 ppf, J-55 ST&C @ 321'
 Cement w/ 100 sks

7 7/8" Hole

Stage 5 1590-97' w/ 4 spt 28 holes

Pmp 388 gals 7.5% HCL acid, 70 nitro foam w/ 40956 lbs of 16/30 mesh sand at 8-10 bpm, total 11332 gal pumped, ISIP 500 psi.

Stage 4 1771-74' w/ 4 spt 12 holes

Pmp 175 gals 7.5% HCL acid, 70 nitro foam w/ 25043 lbs of 16/30 mesh sand at 10 bpm, total 9660 gal

Stage 3 1791-94' w/ 4 spt 12 holes

Pmp 183 gals 7.5% HCL acid, 70 nitro foam w/ 27062 lbs of 16/30 mesh sand at 8-10 bpm, total 8613 gal pmpd, ISIP 750 psi.

Stage 2 1826-30' w/ 4 spt 16 holes.

Pmp 220 gals 7.5% HCL acid, 70 nitro foam w/ 32967 lbs of 16/30 mesh sand at 8-10 bpm, total 15260 gal pmpd, ISIP 575 psi.

Stage 1 1873-80' w/ 4 spt 28 holes

Pmp 397 gals 7.5% HCL acid, 70 nitro foam w/ 57852 lbs of 16/30 mesh sand, total 17790 gal pmpd, ISIP 430 psi.

5-1/2", 15.5 ppf, J-55, LT&C @ 2007'.
 Cement w/ 335 sks.

Prepared by: William M. Ordemann
Date: August 3, 2004

KB=GL
 GL=8652'
 TD= 2085'
 PBTD=2007'



SAFETY DATA SHEET

DUOVIS

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME: DUOVIS
SYNONYMS, TRADE NAMES: Xanthan Gum
APPLICATIONS: Viscosifier
SUPPLIER: M-I Drilling Fluids UK Ltd,
Pocra Quay,
Fouldes,
Aberdeen, AB11 5DQ
Tel: 44 (0)1224 - 584336
Fax: 44 (0)1224 - 576119
EMERGENCY TELEPHONES: 001 281 661 1600 (USA)

2. COMPOSITION/INFORMATION ON INGREDIENTS

NAME	EINECS Nr.:	CLASSIFICATION	CONTENT
CAS No.: GLYOXAL 107-22-2		XI R-43, 36/38	<1 %
XANTHAN GUM 11138-66-2		-	85-95 %
WATER 7732-18-5		- Not classified.	5-15 %

The Full Text for all R-Phrases are Displayed in Section 16

COMPOSITION COMMENTS: This product formulation is not classified as hazardous in accordance with the EU Directives.

3. HAZARDS IDENTIFICATION

Not regarded as a health hazard under current legislation.

4. FIRST AID MEASURES

INHALATION: Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

INGESTION:	First aid is not normally required. Rinse mouth thoroughly. Drink plenty of water.
SKIN:	Wash skin thoroughly with soap and water. Remove contaminated clothing. Get medical attention if any discomfort continues.
EYES:	Promptly wash eyes with plenty of water while lifting the eye lids. Get medical attention if any discomfort continues.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:	Carbon dioxide (CO2), Dry chemicals, Foam, Water spray, fog or mist.
SPECIAL FIRE FIGHTING PROCEDURES:	Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures.
UNUSUAL FIRE & EXPLOSION HAZARDS:	High concentrations of dust may form explosive mixture with air.
HAZARDOUS COMBUSTION PRODUCTS:	Asphyxiating gases/vapors/fumes of: Carbon dioxide (CO2), Carbon monoxide (CO).

6. ACCIDENTAL RELEASE MEASURES

SPILL CLEANUP METHODS:	Collect in containers and seal securely. Flush clean with lots of water. Be aware of potential for surfaces to become slippery. Avoid generation and spreading of dust. Wear necessary protective equipment.
------------------------	--

7. HANDLING AND STORAGE

USAGE PRECAUTIONS:	Avoid handling which leads to dust formation. Provide good ventilation.
STORAGE PRECAUTIONS:	Store at moderate temperatures in dry, well ventilated area.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENT COMMENTS:	This material is considered a nuisance dust, OES TWA 4mg/m3 Respirable Dust, 10 mg/m3 Total Dust.
----------------------	---

PROTECTIVE EQUIPMENT:



VENTILATION:	Provide adequate general and local exhaust ventilation.
RESPIRATORS:	Respiratory protection must be used if air concentration exceeds acceptable level. Dust filter P2 (for fine dust).
PROTECTIVE GLOVES:	No specific hand protection noted, but gloves may still be advisable. For prolonged or repeated skin contact use suitable protective gloves. Butyl rubber or polyvinyl acetate.

EYE PROTECTION:

Wear dust resistant safety goggles where there is danger of eye contact.

OTHER PROTECTION:

Wear appropriate clothing to prevent repeated or prolonged skin contact. Provide eyewash station.

9. PHYSICAL AND CHEMICAL PROPERTIES**APPEARANCE:**

Powder, dust.

COLOUR:

Cream.

ODOUR/TASTE:

Mild (or faint).

DENSITY/SPECIFIC GRAVITY (g/ml):

1.5

Temperature (°C):

20

pH-VALUE, DILUTED SOLUTION:

7

Concentration %/Ml:

1

SOLUBILITY DESCRIPTION:

Very soluble in water.

AUTO IGNITION TEMP. (°C):

> 200

10. STABILITY AND REACTIVITY**STABILITY:**

Normally stable.

CONDITIONS TO AVOID:

Not known.

MATERIALS TO AVOID:

Strong oxidizing agents.

HAZARDOUS DECOMP. PRODUCTS:Fire or high temperatures create: Asphyxiating gases/vapours/fumes of: Carbon dioxide (CO₂). Carbon monoxide (CO).**11. TOXICOLOGICAL INFORMATION****Toxicological data**Acute toxicity, LD₅₀. Oral, Rat. > 5000 mg/kgAcute toxicity, LC₅₀. 1 hour. Inhalation, Rat. > 21 mg/l

Skin Irritation Draize Skin, Rabbit. Slight irritant

Eye Irritation Draize Eye, Rabbit. Slight irritant

Sensitization, Buehler Skin, Guinea pig. Not a sensitizer

INHALATION:

Dust may irritate respiratory system or lungs.

INGESTION:

May cause discomfort if swallowed.

SKIN:

Powder may irritate skin.

EYES:

Particles in the eyes may cause irritation and smarting.

12. ECOLOGICAL INFORMATION**ECOLOGICAL INFORMATION:**Not regarded as dangerous for the environment.
OSPAR have defined this chemical as PLONOR.**BIO ACCUMULATION:**

No bioaccumulation is expected.

DEGRADABILITY: Biodegrades.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Recover and reclaim or recycle, if practical. Dispose of on site landfill area. Dispose of in accordance with Local Authority requirements.

14. TRANSPORT INFORMATION

ROAD TRANSPORT NOTES: Not Classified
 RAIL TRANSPORT NOTES: Not Classified.
 SEA TRANSPORT NOTES: Not Classified.
 AIR TRANSPORT NOTES: Not Classified.

15. REGULATORY INFORMATION

RISK PHRASES: Not classified.
 SAFETY PHRASES: Not classified.
 STATUTORY INSTRUMENTS: Chemicals (Hazard Information and Packaging) Regulations. Control of Substances Hazardous to Health.

16. OTHER INFORMATION

INFORMATION SOURCES: Material Safety Data Sheet, Misc. manufacturers. Sax's Dangerous Properties of Industrial Materials, 9th ed., Lewis, R.J. Sr., (ed.), VNR, New York, New York, (1997).
 ISSUED BY: Sarah Glover
 REVISION DATE: 04-04-03
 REV. NO./REPL. SDS GENERATED: 2
 PRINTING DATE: 2003-04-04
 R-PHRASES (Full Text): Not classified. R-43 May cause sensitisation by skin contact. R-36/38 Irritating to eyes and skin.
 DISCLAIMER: MSDS furnished independent of product sale. While every effort has been made to accurately describe this product, some of the data are obtained from sources beyond our direct supervision. We cannot make any assertions as to its reliability or completeness; therefore, user may rely on it only at user's risk. We have made no effort to censor or conceal deleterious aspects of this product. Since we cannot anticipate or control the conditions under which this information and product may be used, we make no guarantee that the precautions we have suggested will be adequate for all individuals and/or situations. It is the obligation of each user of this product to comply with the requirements of all applicable laws regarding use and disposal of this product. Additional information will be furnished upon request to assist the user; however, no warranty, either expressed or implied, nor liability of any nature with respect to this product or to the data herein is made or incurred hereunder.