

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

RECEIVED
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505 1 6 2004

SUNDRY NOTICES AND REPORTS ON WELLS DIVISION (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.)		WELL API NO. 30-007-20278
1. Type of Well: Oil Well ☐ Gas Well ☒ Other COALBED METHANE		5. Indicate Type of Lease STATE ☐ FEE ☒
2. Name of Operator EL PASO ENERGY RATON, L.L.C.		6. State Oil & Gas Lease No.
3. Address of Operator PO BOX 190, RATON, NM 87740		7. Lease Name or Unit Agreement Name VPR D
4. Well Location Unit Letter P : 1021 feet from the South line and 1119 feet from the East line Section 2 Township 301N Range 17E NMPM Colfax County		8. Well Number 68
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 8357 (GR)		9. OGRID Number 180514
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 Lower Vermejo coal at 1800'- 1812'.
- 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 NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

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

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

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.	PIEL: Lavar con jabón y agua. Quitarse la ropa contaminada. Obtener atención médica si la molestia continúa.
For more information see the Material Safety Data Sheet.	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

PS100 Plastic Fluid

STABILIZED Starcup; — Bio Degradable

MSDS

\$63/BAG 4-5 16 1/2/88L 4 7072
50 # BAG

24-HOUR EMERGENCY PHONE: 505-632-2595

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

RE: VPR D-68 Horizontal Lateral
Vermejo Park Ranch
Colfax County, New Mexico

Authority is requested to drill a horizontal lateral in the Lower Vermejo coal in the VPR D-68 (1800-1812'). This workover is projected to cost \$244,000 net to El Paso with an incremental production gain of 300 Mcfd. Attached please find an AFE for this workover.

CONCLUSIONS:

- Incremental gas production rate can be achieved from the Lower Vermejo coal in the VPR D-68 by drilling a horizontal lateral in the coal. Within a mile to the North of D-68 a horizontal lateral in the Lower Vermejo coal is producing 1400 Mcfd and inclining in D-167.

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)	916
EVA (\$/year)	$\$156,200 - (\$244,000 \times .12) = \$126,900$
Net Operating Profit	\$156,200
$(\$2.5/\text{Mcf} \times 109,500 \text{ Mcf/yr} \times .93 \text{ NRI} \times (1 - .05625) \times (1 - .35))$	
Weighted Average Cost of Capital	12% estimated
Capital Employed	\$244,000
Undiscounted Payout (AFIT, years):	1.2
Development Cost (\$/Mcf)	0.27
ROR	100%

DISCUSSION:

VPR D-68 was drilled and completed in the Lower, Middle and Upper Vermejo Coals in February 2002. The well has cumulative production of 197 MMcf and is currently producing from the Vermejo Coals at 382 Mcfd + 23 bwpd.

A poor cement bond just above the Lower Vermejo interval may have limited the impact of the fracture stimulation performed on the Lower Vermejo coal. It is proposed to drill a horizontal lateral from the D-68 in the 8' Lower Vermejo coal NW 1500' toward D-96 which has a 9' L.V. coal. We will drill up dip from the D-68 L.V. top @ 1800' toward the D-96 L.V. top @ 1500' allowing the produced water to move toward the D-68 wellbore. D-47 offsets D-68 2200' to the NNE and produces 1592 Mcfd + 9 bwpd from the Vermejo Coals including a 10' thick L.V. coal. The Lower Vermejo coal correlates in this area and appears to be continuous. D-96 offsets D-68 one mile to the NW and is currently producing 340 Mcfd + 160 bwpd from the Vermejo coals including a 10' L.V. coal.

El Paso Production Company									
Recompletion-Workover Project Economics									
Date : 06/03/04		Prep'd by : Howard Musgrove							
Operator : El Paso Production Company		Well / Prospect : WORKOVER VPR D-68							
Field : Vermejo Park Ranch		Location : Se. Sec. 2 T30N R17E							
TVD : TMD : LAT DEV : 0		Co. / Ph. : Colfax Co. State : NM							

GEOLOGIC SYNOPSIS

This is a request for funds to drill a horizontal lateral in the 11.1' Basal Vermejo Coals in VPR D-68. VPR D-47 offset well initially flowed 160 MCFPD and has inclined to 15.9 MCFPD + 5 BWPD while the VPR D-68 is making 371 MCF + 48 BWPD.

OWNERSHIP					
ZONE	BPO		APO		Comments
	WI	NRI	WI	NRI	
Zone 1	100.0%	93.0%	100.0%	93.0%	
Zone 2	100.0%	93.0%	100.0%	93.0%	

PROBABILITY OF SUCCESS

(Probability of Completing)

POS (structure) : 100%

POS (hydrocarbon) : 100%

POS (permeability) : 100%

POS (undepleted) : 100%

POS (mechanical) : 50%

POS (other) : 100%

POS : 50%

RESERVE SYNOPSIS

Economics are based on an unrisks incremental 30 MCFPD increasing to 300 MCFPD after 3 months, flat for 3 years and declining to recover 100E MMCF. Economics are based on volumetric calculation of the Basal Coal at 160 acres.

Zone	First Sales	Unrisked IP		P10 Gross mmcf	P90 Gross mmcf	MOST LIKELY (Mean) RESERVES				Net mmcf	Booked Proven mmcf
		Gross mcf/d	Net mcf/d			Gross					
						mmcf	mbo	mbbl	mmcf		
Vermejo Coal	8/1/2004	30	28	na	na	1,008	0	0	1,008	916	0
						1,008	0	0	1,008	916	0

CAPITAL (\$000)

	UNRISKED		RISKED	
	Gross	Net	Gross	Net
LSG & SEIS :	0	0	0	0
REC. Or Workover:	244	244	244	244
COMPLETION :	0	0	0	0
FACILITIES :	0	0	0	0
TOTAL :	244	244	244	244
FUTURE CAPITAL :	0	0	0	0
"ALL-IN" TOTAL :	244	244	244	244

MODEL ASSUMPTIONS

SPUD DATE : 8/1/2004

INIT GROSS O&M (\$/mo) : 1,093

ETU / SCF : 1,000

INIT GASIF (\$/mmbtu) : \$4.50

BASIN DIFFER (GASP) : \$0.73

INIT OILF (\$/bbl) : \$24.50

OILF DEDUCT : na

INIT PLANTF (\$/bbl) : na

ECONOMIC RESULTS SUMMARY

	UNRISKED		RISKED		ROR	ETAX		ATAX	
	916	\$244	916	\$244		100%	100%		
NET RESERVES (MMCFE)	916	\$244	916	\$244	ROI (undisc)	12.1	8.2		
NET DRILL & EVAL (\$000)	\$244	\$244	\$244	\$244	ROI (12% disc)	9.2	6.3		
TOTAL NET CAPITAL (\$000)	\$0.27	\$0.27	\$0.27	\$0.27	PV (undisc-\$M)	\$2,698	\$1,754		
TOTAL DEV COST (\$/MCFE)	\$244	\$244	\$244	\$244	PV (12% disc-\$M)	\$1,861	\$1,200		
"ALL-IN" NET CAPITAL (\$000)	\$0.27	\$0.27	\$0.27	\$0.27	PAYOUT (Yrs)	1.2	1.2		

GENERAL COMMENTS

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

WELLBORE SCHEMATIC

Lease: VPRD 68
Field: VPR - Castlerock
County: Colfax
State: New Mexico

KB = GL
GL = 8357'

Tree: Independent 1500 psi head

11" Hole

8 5/8", 23 ppf, J-55 ST&C @ 327'
Cement w/ 85 sks

7 7/8" Hole

1-7-02 Spud. Drig 11" hole to 335'. Ran 8 5/8" csg to 327'.
Cmt with 85 sk. Drilled 7 7/8" hole to 2072'. Began mistg
@ 930'. Ran 5 1/2" 15.5' 15.5 ppf csg to 2015'. Cmt
w/260 sk. Circ 21 bbls cmt to surf.
1-18-02 RU CU and ran bit & scraper. PBTD 2006'.
Ran CBL. TOC surf.
2-2-02 Fert Stage 1: 1808-13', 1799-1803', 1750-52'
w/4 spf 44 holes.
2-4-02 BD w/550 gal 7.5% NEFe. Frac dn
5 1/2" csg @ 14-21 bpm w/70Q N2 foam w/30# linear gel.
Containing 90,480 lbs 16/30 sd 1-4 ppg. ATP 1465 psi,
ISIP 857 psi. Total 28,025 bbls pumped.
Fert Stage 2: 1712-14', 1700-02' w/4 spf 16 holes.
BD w/200 gal 7.5% NEFe. Frac dn
5 1/2" csg @ 10-16 bpm w/70Q N2 foam w/30# linear gel.
Containing 16,020 lbs 16/30 sd 1-4 ppg. ATP 1805 psi,
ISIP 1049 psi. Total 8763 bbls pumped.
2-5-02 Fert Stage 3: 1591-93', 1581-83', 1571-76' w/4 spf
36 holes. BD w/450 gal 7.5% NEFe. Frac dn
5 1/2" csg @ 14-22 bpm w/70Q N2 foam w/30# linear gel.
Containing 64,520 lbs 16/30 sd 1-4 ppg. ATP 1516 psi,
ISIP 1036 psi. Total 21832 bbls pumped.
2-6-02 RU Sanjel 1 1/2" CTU. Retrieve BP and C/O hole
to 2006'.
2-18-02 Run 45 PCP.
5-14-02 Install PU. Bail 68' fill. Ran 1 1/4" IP.

Stage 3 1591-93', 1581-83', 1571-76' w/4 spf 36 holes.
BD w/500 gal 7.5% NEFe. Frac dn csg @ 16.1 bpm w/25#
Delta 140 x-link gel containing 100,750 lbs 16/30 sd 1-5 ppg.
ATP 1320 psi, ISIP 995 psi.

Stage 2 1712-14', 1700-02' w/4 spf 16 holes.
BD w/200 gal 7.5% NEFe. Frac dn csg @ 10-16 bpm 70Q
N2 foam w/30# Linear gel containing 16,020 lbs 16/30 sd
1-4 ppg; ATP 1805 psi, ISIP 1049 psi.

Stage 1 1808-13', 1799-1803', 1750-52' w/4 spf 44 holes.
BD w/550 gal 7.5% NEFe. Frac dn csg @ 14-21 bpm
w/70Q N2 foam w/30# Linear gel containing 90,480 lbs
16/30 sd 1-4 ppg; ATP 1465 psi, ISIP 857 psi.

5-1/2", 15.5 ppf, M-50, LT&C @ 2015'.
Cement w/260 sks.

TD= 2072'
PBTD=2006'

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



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,
Pocka Quay,
Fouldes,
Aberdeen, AB11 5DQ
Tel: 44 (0)1224 - 584336
Fax: 44 (0)1224 - 576119
EMERGENCY TELEPHONES: 001 281 581 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 7732-18-6		- 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 (CO ₂), 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 (CO ₂), 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.
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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/m ³ Respirable Dust, 10 mg/m ³ Total Dust.
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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 %/M:** 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/kg

Acute 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:

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:

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./REF. L. SDS GENERATED:

2

PRINTING DATE:

2003-04-04

REPHRASES (Full Text)

Not classified. R-43 May cause sensitization 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.