Energy Minerals and Natural Resources

May 27, 2004

Oil Conservation Division

Submit to appropriate District Office

ORT

1025 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

Brazos Road, Aztec, NM 87410	1220 South St. Francis Dr.	☐ AMENDED REPO
Francis Dr., Santa Fe, NM 87505	Santa Fe, NM 87505	

APPL	ICATI	ON FO	R PERMIT	TO DRIL	L, RE-E	NTER, D	<u>EEPE</u> N	N, PLUGBA	CK, OR		A ZONE
E! Paso Energy Raton, L.L.C							180514				
P.O. Box 190 Raton, New Mexico 87740 3 Property Code 3 Property						ame	 .	30-007-20539 "Well No.			
34235 Vermejo Pa					mejo Párk	Ranch			VPI	R V 01 V	VDW
⁹ Proposed Pool 1 Entrada									osed Pool 2 orieta		
		'		7 (Surface L	Location					
JL or lot no. E	Section 10	Township 30N	Range 19E	Lot Idn Feet from the North/South line Feet from the			Feet from the 384	East/West Wes1			
8 Proposed Bottom Hole Location If Diff								Surface			
JL or lot no.	Section	Township		Lot !dn	Feet from		South line	Feet from the	East/West	line	County
	1			Additio	nal Wel	l Informat	ion				
	Type Code N		12 Well Type Co S	de	13 Cable/F Air/Ro		14	14 Lease Type Code 15 Ground Level Elevatio P 7343'			
	Iultiple		17 Proposed Dep		18 Form	ation		19 Contractor			ud Date
Pepth to Grou	No andwater	<u> </u>	6500'	Distance from	Entrada/(nearest fresh		1	Key Distance from	n nearest sur		r 1, 2004
		Ħ	mils thick Clay	☐ Pit Vo ulme:	bbls	Γ	Orilling Metl	od.	····		<u>-</u>
tit: Liner: Synthetic ☐mils thick Clay ☐ Pit Vo ume:bbls Drilling Method: Closed-Loop System ☐ Fresh Water → Brine ☐ Diesel/Oil-based ☐ Gas/Air ►									/Air 🖳		
			21	Proposed C	Casing an	nd Cement	Progran	n			
Hole S	l f			Casing weight/foot Setting Depth		 		mated TOC			
17 1/2	·,"	13 3/8" 48#			350	,	200 sks Surf		Surface		
12 1⁄4	2 ¼" 10 ¾" 40.5#			ţ.	1600),	500 sks Surfa		Surface		
9 7/8	3"		7 5/8"	26.4#	1	5230	5230' 1100 sks Sui		Surface		
6 3/4			5 1/2"	15.5#		6,500		175 sk		5080'	
Describe the Drill 17 12 Drill 12 ¼ A cement I Drill 9 7/8 be run if u Drill 6 ¾ Set 5 ½: li Perforate E Conduct ir	2" surface h " hole to justioned log wi " hole to Da nable to circ hole throug iner. Ceme	ole to 350' at above Pi above Pi il be run if akota form culate cem th Entrada nt with 17 nation and st.	rogram, if any. Us '. Set 13 3/8" casi erre Shale at approfunable to circulat ation, at approximent to surface. formation at appro/5 sks SD 300 cen attempt to catch n	e additional sheet ing and cement to eximately 2600°. The cement to surfa- ately 6440°. Set eximately 6500°. The content of the content of th	surface with Set 10 ¼" cace. 7 5/8" casing Open hole to at 5080'.	ry. 1 200 sks SD 30 asing with 400 2. Cement with ogs to include i	00 cement. sks SD 30 1100 sks S	0 cement. SD 300 cement. A esistivity, caliper, o	cement bon	d log will	
Thereby certify that the information given above is true and complete to the							.T				
est of my knowledge and belief. I further certify that the drilling pit will be onstructed according to NMOCD guidelines , a general permit , or n (attached) alternative OCD-approved plan .					t will be	Approved by: Approved by:					
rinted name: Donald R. Lankford DR Land						Title: DIS	TRIC	SUPER	/ISOR)	· · · · · · · · · · · · · · · · · · ·
itle: Production Manager						Approval Date	-0/-	5/04 E	xpiration Da	te: 8/8	25/05
-mail Address: Donald Lankford@elpaso.com							10 2it				
Phone: 08/24/04					Conditions of A	Approval At	tached Auro	d mo	d P	10greun	
								desc	rist i	s ,	•

DISTICL 1 State of them intextoo 1625 N. French Dr., Hobbs, NM 88240 Revised August 15, 2000 Energy, Minerals & Natural Resources Department District II OIL CONSERVATION DIVISION 1301 W. Grand Avenue, Artesia, NM 88210

District III 1220 South St. Francis Dr. 1000 Rio Brazos Rd., Aztec, NM 87410 Santa Fe, NM 87505 District IV

Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

☐ AMENDED REPORT

1220 S. St. Francis Dr., Santa Fe, NM 87505

t API Number				² Pool Code		³ Pool Name				
				96970		STUBI	BLEFIELD CANYO	N – VERMEJO GAS		
⁴ Property (⁵ Property Name					Well Number		
24648		VERMEJO PARK RANCII							VPR'V'-01 WDW	
'OGRID	Vo.	* Operator Name							* Elevation	
180514			EL PASO ENERGY RATON, L.L.C.						7343'	
					10 Surface	Location				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line County		
E	10	T 30 N	R 19 E	E	1640	NORTH	384	WEST	COLFAX	
		<u> </u>	11 Bc	ottom Hol	e Location I	Different From	m Surface	<u></u>	<u> </u>	
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
Dedicated Acres	: ¹³ Joint o	r Infill M Co	onsolidation	Code ¹⁵ Or	der No.		<u></u>	<u> </u>		

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

	OTTE OTTE IN DEBUTE IN THE OTTE DE TE	
		¹⁷ OPERATOR CERTIFICATION
	í í	I hereby certify that the information contained herein is true and
		complete to the best of my knowledge and belief.
.040,		Signature
		DR Landel
		Printed Name DONALD R. LANKFORD
384'		Title SENIOR PETROLIUM ENGINEER
304	a	
		Date
la l		
		18SURVEYOR 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.
		August 23, 2004 (AMENDED)
		Date of Survey
		Signature and Seal of Professional Surveyor:
		a 411
		Mulh.
		Certificate Number NM-LS NO. 5103
		J/

	EI	DATE:	08/19/04					
	PRELIMINA	Y GEOLOGIC WELL PROGNO	OSIS REPORT	RIG:				
				SUPV:	Donny Trimble			
WELL NAME:		VPR V01 WDW	API number:	REPORT BY:	Mike Korte			
					and the second second			
	BASIN CBM PROJE		TW. 30N	RANGE	19E			
FEET FSL: ELEV. GL.: 7,300	Est Spud:	POD V 2004 EST TD 6,420	AREA East Van Bren LOG:		COLFAX STATE: NM CT SPECIFIC: Water Injection Well			
MUD LOGGERS:		CSG PT. GEOLOG		_	E LOGGERS:			
	ationElevation is e	timated from Topograghic Map Lat						
Intermediate 9 5/8"		* * * * * * * * * * * * * * * * * * * *		the second second	on as the state of			
DRILLERS DEPTH:	1,600	12 1/4"bit 3 1/2 days drilling	Surface Cag.:	13 3/8" Set @:				
LOGGERS DEPTH:		run logs	Intermediate Csg.:	9 5/8" Set @:				
First significant gas: RATON FM. TOP:		subsca: ft. subsca: 7300 ft.	Cement Inter. Csg.:	Circ. Cmt.:	to surface			
VERMEJO FM. TOP:	1,060	subsea: 7300 ft. subsea: 6240 ft.			Raton fm. CBM (ft.)			
TRINIDAD FM. TOP:	1,330	subsea: 5970 ft.			Vermejo fm. CBM (ft.)			
					verma, o ma constitut			
Intermediate 7" Pierre - Gran	eros Section	, , , , , , , , , , , , , , , , , , ,	The second section of the second					
DRILLERS DEPTH:			Intermediate Cag.:	7" Set @:	ft.			
LOGGERS DEPTH:			Cement Inter. Csg.:	Circ. Cmt.:				
TRINIDAD FM. TOP:	1,330	subsea: 5970 ft.						
PIERRE FM. TOP:	1,430	subsea: 5870 ft.	_		offset gas correlates 3,440' & 4,580'			
Lower Pierre member: NIOBRARA FM. TOP:	3,590	subsea: 3710 ft. subsea: 3385 ft.	SHALE AS ABOVE with silty shale	normany tirst gas flowoffset gas	correlates to 4,780			
Smokey Hill Member:	3,915	subsca: 3385 ft.	dark gray firm hard calcareous shale	with minor gray are is and solveh to	r. bent and nyr			
Timpas Member:	4,525	subsea: 2775 ft.	SHALE dark gray calc. firm mica pyr					
Fort Hayes Member:	4,770	subsea: 2530 ft.	LS tan microcrystalline to chalky lim					
BENTON FM TOP:	4,790	subsea: 2510 ft.						
Codell Member:	4,790	subsea: 2510 ft.	SH & SS dark gray carb shale, minor	•				
Cartile Sh. Member: Greenhorn La. Member:	4,810 5,010	subsea: 2490 ft. subsea: 2290 ft.	SHALE chalky to limy dark gray calc		-			
Graneros Sh. Member:	5,035	subsea: 2290 ft. subsea: 2265 ft.	SHALE dark gray abnt pyr limy, min- SHALE dark gray to black noncalcan					
Dakota silt zone:	5,230	subsea: 2070 ft.	may encounter thin beds of siltstone,		_			
DAKOTA FM TOP:	5,230	subsea: 2070 ft.	Primary Gas Zone	- *				
Tops based on Vermejo 2 offset								
Intermediate (Liner) DRILLERS DEPTH:		<u> </u>	Production I town	5.0				
LOGGERS DEPTH:			Production Liner: Cement Liner in place:	Set @:	n.			
DAKOTA FM TOP:	5,230	subsea: 2070 ft.	Concin Date in place.					
Dakota SS A member:	5,230	subsea: 2070 ft.	As Dakota Silt or SS med to coarse g	rained sli calc, silica cement w/min	or carb shale, trace of coal			
Dakota SS B member:	5,280	subsea: 2020 ft.	SS as above A member, mostly crs gr					
Purgatoire SS member:	5,325	subsen: 1975 ft.	SS poorly sorted med-crse conglomeratic quartz grained friable, sli calc.					
MORRISON FM TOP:	5,395	subsea: 1905 ft.	Jurassic Age: SH & SS Variegated shales, red green, gray maroon, minor tan hard Is, wh f-m gr ss					
Wanakah member:	5,770	subsen: 1530 ft.	SS f gr wh to orange mod cmt sli cale glauconitic fspr, minor gypsum, fxn oolitic ls					
ENTRADA FM TOP:	5,810	subsen: 1490 ft.	SS wh -lt gn f-m gr calc. well rd and soned frsted grains minor uncons SS					
DOCKUM FM TOP: Glorieta ss member:	5,915 6,190	subsen: 1385 ft. subsen: 1110 ft.	Triassic Age: SHALE Variegated (red) mica calc, minor thin beds of f gr limy gray SS					
Giorieta ss member: Yeso member:	6,270	subsea: 1110 ft. subsea: 1030 ft.	Permian Age: SS orange to pink to white med grained silica cement SS orange and dolomitic cemented silty, may become coarse arkosic ss					
Est. TD 150' below Glorieta	6,420	subsen: 880 ft.	SHALE AND ARKOSIC SS (WASH		nd red arkosic crs sediments			
Glorietta SS. In Sangre de Cristo					in ten arroste ets scottigents			
MUD LOG/GEOLOGIC DRI	LLING NOTES	and the same of the same of	, , , , , , , , , , , , , , , , , , ,	in a wigh	7			
	-		of CBM fieldDakota SS appears 3,900 ft	bellow the top of Trinidad SS as ma	apped.			
Dakota, Entrada	and Glorieta sandstones	are the primary and proven injection w	ell horizons					
The most important geologic key to success for both deep WDWs is that, after running casing to Trinidad and air drilling ahead, the well is								
drilled deep enough to penetrate the upper 5' or so of the T/Dakota before second string run. Just scratch T/Dakota however because water flows								
can be be expected. Do not expose the Pierre/Niobrara/Greenhorn to any formation or drilling fluid. This cannot be over-stressed and is a major								
reason why historically these WDWs have been so costly. Recommend that have Korte out on location along w/ Tom Doupe as mudlogger.								
Mudlogger important on have on location below Trinidad to better characterize potential 'deep play' shows as well as help pick DK casing point.								
Mudlogger important on h	ave on location be	low Trinidad to better charac	cterize potential 'deep play' show	vs as well as help pick DK	casing point.			
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