1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410

best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines , a general permit , or

Donald R. Lankford De Land

Phone:

an (attached) alternative OCD-approved plan .

E-mail Address: Donald.Lankford@elpaso.com

Production Manager

Printed name:

08/24/04

Title:

Date:

DIGIL OF THEM MICHIGO Energy Minerals and Natural Resources Form C-101 May 27, 2004

Oil Conservation Division 1220 South St. Francis Dr.

Submit to appropriate District Office

RMATION DIVISION

☐ AMENDED REPORT District IV Santa Fe, NM 87505 1220 S. St. Francis Dr., Santa Fe, NM 87505 APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE OGRID Number 180514 Operator Name and Address El Paso Energy Raton, L.L.C.
P.O. Box 190 Raton, New Mexico 87740 1-20540 Property Code 24648 Property Name
Vermejo Park Ranch VPR A 182 WDW Proposed Pool 1 10 Proposed Pool 2 Entrada Glorieta ⁷ Surface Location UL or lot no. Feet from the North/South line Section Township Range Lot Idn Feet from the East/West line County 28 32N **20E** \mathbf{E} E 2166 North 1074 West Colfax ⁸ Proposed Bottom Hole Location If Different From Surface UL or lot no. Feet from the Section Township Range North/South line Feet from the East/West line County Additional Well Information Work Type Code Well Type Code Cable/Rotary ⁴ Lease Type Code ⁵ Ground Level Elevation Air/Rotary 8095' N P ⁶ Multiple ⁷ Proposed Depth 18 Formation 19 Contractor Date <u>73</u>20' Entrada/Glorieta October 1, 2004 No Depth to Groundwater Distance from nearest fresh water well Distance from nearest surface water mils thick Clay Pit Volume: Drilling Method: Liner: Synthetic [Fresh Water Brine Diesel/Oil-based Gas/Air Closed-Loop System ²¹ Proposed Casing and Cement Program Hole Size Casing Size Casing weight/foot Setting Depth Sacks of Cement Estimated TOC 17 1/2" 13 3/8" 48# 350' 200 sks Surface -12 1/4" 10 3/4" 40.5# 2600' Surface -500 sks 9 7/8" 7 5/8" 26.4# 6130' 1100 sks Surface -6 3/4" 5 1/2" 15.5# 7320' 175 sks 5980' ²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary 1. Drill 17 12" surface hole to 350". Set 13 3/8" casing and cement to surface with 200 sks SD 300 cement. 2. Drill 12 1/4" hole to just above Pierre Shale at approximately 2600'. Set 10 1/4" casing with 400 sks SD 300 cement. A cement bond log will be run if unable to circulate cement to surface. 3. Drill 9 7/8" hole to Dakota formation, at approximately 6130'. Set 7 5/8" casing. Cement with 1100 sks SD 300 cement. A cement bond log will be run if unable to circulate cement to surface. 4. Drill 6 ¾" hole through Entrada formation at approximately 7320'. Open hole logs to include induction, resistivity, caliper, density and gamma ray. Set 5 1/2: Liner Cement with 175 sks SD 300 cement. Top of liner at 5980' 5. Perforate Entrada formation and attempt to catch native formation water sample. 6. Conduct injectivity test. 7. Restoration of surface location/site. ²³ I hereby certify that the information given above is true and complete to the

Approved by:

Conditions of Approval Attached Drogroum

1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

Energy, Minerals & Natural Resources Department **OIL CONSERVATION DIVISION** 1220 South St. Francis Dr. Santa Fe, NM 87505

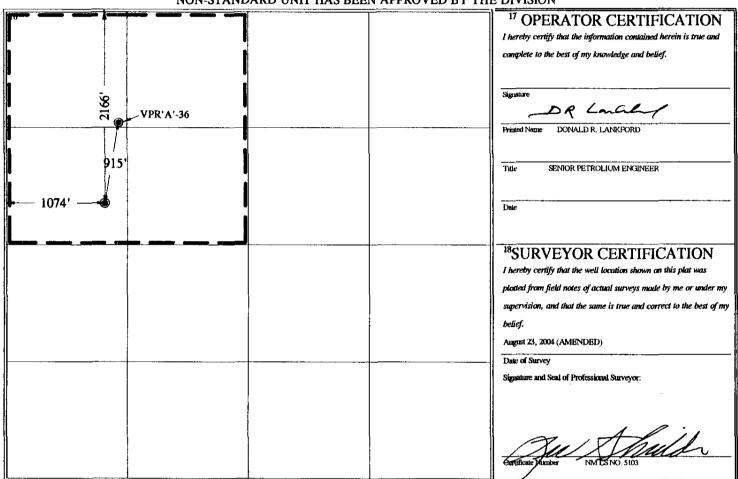
Revised August 15, 2000 Submit to Appropriate District Office State Lease - 4 Copies

Fee Lease - 3 Copies

☐ AMENDED REPORT 1220 S. St. Francis Dr., Santa Fe, NM 87505

		W	ELL LO	CATIO	N AND ACE	REAGE DEDIC	CATION PLA	AT .	
API Number				² Pool Code ³ Pool Name 96970 STUBBLEFIELD CANYON - VER					as
4 Property (24648	Code			Well Number VPR'A'-182 WDW					
⁷ OGRID 1 180514	ło,			' Elevation 8095'±					
				_	10 Surface	Location		·····	
UL or lot no. E	Section 28	Township T 32 N	Range R 20 E	Lot Idn E	Feet from the 2166	North/South line NORTH	Feet from the 1074	East/West line WEST	County COLFAX
			11 Bc	ttom Ho	le Location I	f Different From	m Surface		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	3 Joint o	r Infill M C	Consolidation	Code LS Or	der 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



		E) PRELIMINA	l Paso En	REPORT		DATE: RIG:	08/19/04				
		7 11021111111						SUPV:	Donny Trimble		
WELL NAME:			VPR A182	2 WDW		API number:		REPORT BY:	Mike Korte		
7 7	20 5 4			· "\	\		7 .1.	4 44			
FIELD		ASIN CBM PROJ		SEC	28	TW. 32N		RANGE	20E		
FEET FNL:	1,320	FEET FWL:	1,320	POD_	A	AREA Canadian River	<u> </u>	_COUNTY:	COLFAX STATE: NM		
ELEV. GL.:	8,120	. Est Spud:	2004	EST TD_	7,610	LOG:			CT SPECIFIC: Water Injection Well		
MUD LOGGERS:	iminam I acati	n Floretian is	etimated from		EOLOGIST:	Shields Lat 36.981029 N Long -104.	823927 W		LE LOGGERS:		
Intermediate 9 5/8"		, , , , , , , , , , , , , , , , , , ,	Control II Old	Topogramme.	w.car pr						
DRILLERS DEPTH:		2,600	12 1/4"bi	t 3 1/2 days di	rilling	Surface Cag.:	13 3/8"	Set @	: 350 ft.		
LOGGERS DEPTH:						Intermediate Csg.:	9 5/8"	Set @			
First significant gas:		700	subsea:	u		Cement Inter, Csg.:		Circ. Cmt.:	to surface		
RATON FM. TOP:		350	subsea:	7770 n		Comment Inter Cago		_Cna cmm.			
VERMEJO FM. TOP	" :	2,000	subsea:	6120 R		Į.			Raton fm. CBM (ft.)		
TRINIDAD FM. TOP		2,280	subsca:	5840 n					Vermejo fm. CBM (ft.)		
Intermediate 7" Pie	rre - Granero	s Section '			:	, See		* , 2,			
DRILLERS DEPTH:						Intermediate Csg.:	7"	Set @	:ft.		
LOGGERS DEPTH:						Cement Inter, Csg.;		Circ. Cmt.;			
TRINIDAD FM. TO	?:	2,280	subsea:	5840 n		l '					
PIERRE FM. TOP:		2,380 subsea: 5740 ft.			SHALE dark gr./bl. firm mod calc, car	rb. minor sandy	sh tr. bent and py	roffset gas correlates 3,440° & 4,580°			
Lower Pierre member		4,490 subsea: 3630 ft.				SHALE AS ABOVE with silty shale n	ormally first g	as flow			
NIOBRARA FM. TO	P:	4,815 subsea: 3305 ft.]					
Smøkey Hill Member:		4,815 subsea: 3305 ft.			dark gray firm hard calcareous shale with minor gray arg Is and sdy sh, tr. bent and pyr						
Timpas Member:						SHALE dark gray cale. firm mica pyr becoming silty to vfg sd in lower parts, minor arg is					
Fort Hayes Member:		5,670 subsen:2450ft.				LS tan microcrystalline to chalky limes	stone and gray	calcareous shale			
BENTON FM TOP:		5,690	subsen:	2430 n		Su e ss 1 1	M		and Chilaria Carana		
Codell Member:		5,690 subsea: 2430 ft.			SH & SS dark gray carb shale, minor fine grained sandstone with thin beds of black limestone						
Cartile Sh. Member:		5,710 subsea: 2410 ft. 5,910 subsea: 2210 ft.				SHALE chalky to limy dark gray calc soft smooth shale with minor is and calcareous sandy shale					
Greenhorn Ls. Member: Graneros Sh. Member:		5,910 subsea: 2210 ft. 5,935 subsea: 2185 ft.		SHALE dark gray abnt pyr limy, minor hard crystalline dark gray ls, minor gray calc shale-arg. 1.s SHALE dark gray to black noncalcareous sli silty, minor bentonite, limestone and silt-fg sandstone							
Graneros Sn. Memmer: Dakota silt zone:		6,130 subsea: 1990 ft.		may encounter thin beds of siltstone, brown hard mica carb arg siltstone, minor fg ss							
DAKOTA FM TOP:		6,130 subsea: 1990 ft.			may encounter the constant of the same index extends of succession of the constant of the cons						
Tops based on nearby	deep wells					L					
Intermediate (Liner) .	4 44				and the second s		. was as the house of	ar a set of the second		
DRILLERS DEPTH;						Production Liner:		Set @	t N.		
LOGGERS DEPTH:						Cement Liner in place:		_			
DAKOTA FM TOP:		6,130	subsea:	f1		1					
Dakota SS A member	:	6,130	subsea:	1990 n		As Dakota Silt or SS med to coarse grained sli calc, silica cement w/minor carb shale, trace of coal					
Dakota SS B member:	:	6,180 subsen: 1940 ft.			SS as above A member, mostly crs grained, minor chert conglomeratic ss and carb shale						
Purgatoire SS membe	r:	6,225 subsea: 1895 ft.			SS poorly sorted med-crse conglomeratic quartz grained friable, sli calc.						
MORRISON FM TOP:		6,295 subsea: 1825		1825f	.	Jurassic Age: SH & SS Variegated shales, red green, gray m			on, minor tan hard is, wh f-m gr ss		
Wanakah member:		6,670 subsea: 1450		1450ft	.	SS f gr wh to orange mod cmt sli calc;	glauconitic fap	r, minor gypsum, i	fxn oolitic Is		
ENTRADA FM TOP	:					SS wh -lt gn f-m gr calc, well rd and so	orted frated gra	rted frsted grains minor uncons SS			
DOCKUM FM TOP:		6,815 subsea:		1305 ft.		Triassic Age: SHALE Variegated (red) mica calc, minor thin beds of f gr limy gray SS					
Glorieta ss member:					Permian Age: SS orange to pink to wh	ite med graine	1				
Yeso member:						SS orange and dolomitic comented silty, may become coarse arkosic ss					
Est, TD 150' below Gi		7,320	subsca:	<u>800</u> n	.	SHALE AND ARKOSIC SS (WASH) dominantly n	ed shale, siltstone a	and red arkosic crs sediments		
Glorietta SS. In Sangi											
MUD LOG/GEOLO	OGIC DRILL	ING NOTES		. " .	. ,		<u> </u>	^	<u> </u>		
-						BM fieldDakota SS appears 3,850 ft b	below the top o	of Trinidad SS as r	napped.		
Dak	ota, Entrada and	l Glorieta sandstone	s are the prima	ry and proven in	jection well be	orizons					
TIL		4	C b d d	11775117 2				u a			
						r running casing to Trinidad o					
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.											
reason why historicany these with its nave been so costly. Recommend that have note out on location along wi tom Doupe as mullogger.											
Mudlogger important on have on location below Trinidad to better characterize potential 'deep play' shows as well as help pick DK casing point.											
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