## Catanach, David

From: Sent: To: Cc: Subject: Johnson, Roy Wednesday, February 27, 2002 10:56 AM 'bill.ordemann@elpaso.com'; Catanach, David 'james.duckworth@elpaso.com'; Wrotenbery, Lori Well No. VPR 'E' 34 and Administrative Order SWD-826

Dear Bill,

As we discussed on Monday night this office will require additional information on the subject well prior to any injection. The amended application for injection needs to address the changes in well bore construction and the formations that are to be injected into. In light of the fact that this well has encountered so much gas in formations below the Trinidad Sandstone and that Devon has a 100% interest in these formations this office will require a waiver from Devon that states they have no objection to the disposal of produced water into this well bore. There also may be an issue that Vermejo Park Ranch may require notification and you may want to review this with your legal staff.

If you have any questions please contact me at this office.

Roy Johnson District Supervisor

*			pKRV0201727053	SWD	
	IAN I G	•			

1/31/02

	JAN	1	υ	2004	۰.
STATE OF NEW MEXIC	CO				

ENERGY, MINERALS AND NATURAL 1220 South S RESOURCES DEPARTMENT Santa Fe, New

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108 Revised 4-1-98

#### **APPLICATION FOR AUTHORIZATION TO INJECT**

Į.	PURPOSE:Application qualifies for ac	_Secondary Recovery dministrative approval?	Pressure Maintena	nce <u>X</u> Dis	sposal	_Storage
11.	OPERATOR:	El Paso Energy Raton.	L.L.C			
	ADDRESS:	PO BOX 190				
	CONTACT PARTY:	Donald R. Lankford		PHONE:	505-445-6721	
III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.					ijection.	

- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
  - 1. Proposed average and maximum daily rate and volume of fluids to be injected;
  - 2. Whether the system is open or closed;
  - 3. Proposed average and maximum injection pressure;
  - 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  - 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- 1X. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME:	Donald R. Lankford	_TITLE:	Petroleum E	ngineer
SIGNATURE:	DR Lach		DATE:	12/28/01

If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

\*

El Paso Energy Raton, L.L.C. Vermejo Park Ranch "E", Well #34 Water Disposal 1268.5' FNL & 368.2' FEL Section 5, T31N, 19E Colfax County, New Mexico

#### Attachment A

#### III. WELL DATA

Section A:

1. Leave Name: Vermejo Park Ranch "E" Well #34 (Water Disposal)

Location: 1268.5' FNL & 368.2' FEL, Sec 05, T31N, R19E, Colfax County, NM

2. Casing & Cementing (Drilling Procedure and Wellbore/Well Location Schematic Attached)

Proposed:

Casing	Setting	Sacks	Hole Size	Top of
Size	Depth	Cement		Cement
15"	330'	143 sx	18"	Surface
10 3/4"	2,725'	850 sx	13 1/2"	Surface
7 5/8"	6,230'	850 sx	9 7/8"	Into 10 3/4" Casing Annulus
5 1⁄2"	7,370'	115 sx	6 ¾"	Into 7 5/8" Casing Annulus

3. Tubing: 3 1/2". 9.3 ppf, N-80, Butt IPC, 2.867" Drift/ 4.5" OD @ + - 6,600"

4. Packer:  $5\frac{1}{2}$ " x  $3\frac{1}{2}$ " nickel plated Loc Set w/ carbide slips (a = -6.600"

#### Sectior B:

1. Injection Formation: The Dakota/Purgatoire, Entrada, and Glorieta Sandstone

Field Name: Vermejo Park Ranch

- 2. Injection Interval: Dakota/Purgatoire Sandstone 6,250'-6,430', Entrada Sandstone 6,850'-6,950', Glorieta Sandstone 7,220'- 7,340'
- 3. Original Purpose of Well: Drilled for the purpose of disposing of produced formation water.
- 4. No other perforated intervals.
- 5. Next Higher gas/oil zone: Vermejo Coal Next Lower gas/oil zone: None
- IV. This is not an expansion of an existing project.
- V. Map Attached "Attachment B", two mile & ½ mile radius area of review.
- VI. Area of Review:

There are no wells within one half mile of the proposed disposal well that penetrate the target formation. The VPR E 11 completed in the Raton and Vermejo Coals is within ½ mile.

Page 2 El Paso Energy Raton, L.L.C. Vermejo Park Ranch "E" Weil # 34 WDW

- VII. Operation Data:
  - 1. Proposed average daily injection volume: 18,000 BWPD Proposed maximum daily injection volume: 18,000 BWPD
  - 2. This well will be a closed system.
  - 3. Proposed average daily injection pressure: 2,000 psi Proposed maximum daily injection pressure: 2,000 psi
  - 4. Sources of injection/disposal water will be from the Vermejo and Raton Formation CBM wells that have been drilled or are scheduled to be drilled on the Vermejo Park Ranch.
  - 5. Chemical analysis of water zones will be obtained by Baker Petrolite Laboratories and Roy Johnson, District 4, Oil Conservation Division, Santa Fe, NM.
- VIII. Geological Data (Geologic Well Prognosis Report Attachment C)

Information pertaining to the lithological details and thickness have been estimated based on correlation with VPR A 42 in Section 1, T31N, R 19E.

IX. Stimulation Program

Anticipated frac job will be  $250,000 \neq 16.30$  sand.

X. Logs and Test Data

Logs and test data will be submitted to: The Oil & Gas Conservation Division. Att: Roy Johnson, Santa Fe, NM 87501

XI. Fresh Water "Attachment D"

Roy Johnson, OGCD, will take fresh water samples during drilling.

XII. Statement

To the best of our current knowledge of the area, there is no evidence of open faults or other hydrologic connection between and disposal zone and underground sources of drinking water.

XIII. Proof of Notice attached as "Attachment E"

El Paso Energy Raton, L.L.C. offsets Sectior. 1 on all sides.

XIV. Certification: Form C-108 "Application for Authorization to Inject".

## VPR E 34 WDW York Canyon Colfax County, New Mexico

## **Drilling Procedure**

Engineer	Office Phone	<u>Cell</u>	Home
Bill Ordemann	(505) 445-6724	(505) 447-1399 & (505) 447-1401	(505) 445-2856

**Objective**: Drill, complete and equip a water disposal well in the York Canyon Pod to inject 18,000 bpd field produced water.

**<u>Status</u>**: This well is to be drilled in the York Canyon Pod and equipped with injection pumps to dispose York Canyon produced water as well as being plumbed to accept water via a high pressure steel line from the South Canadian Pod.

## PROPOSED WELL DATA

<u>Material</u>	Description	<u>Depth</u>	Burst (100%)	Rating SF (80%)
Conductor	20", 94 ppf, H-40, 18.936" Drift/21" OD	40'		
Surface Casing	16", 65 ppf, H-40, 15.062" Drift/17" OD	320'	1640	
Intermediate Casing	10 3/4", 45.5 ppf, J-55, 9.794" Drift/11.75" OD	2725`	3580	
2 <sup>nd</sup> Interm. Casing	7 5/8", 29.7 ppf. N-80, 6.75" Drift/8.5" OD	6230	6890	
Production Casing	5 1/2", 17 ppf, L-80, 4.767" Drift/5 1/2"Flush Jt	7370'	7740	
On/Off Tool	3 <sup>3</sup> / <sub>4</sub> " nickel plated on/off tool w/1.875" F profile	6600'		
Packer	5 1/2" x3 1/2" nickel plated Loc Set w/ carbide slips	6600`		
Tubing	3 1/2",9.3 ppf,N-80, Butt IPC, 2.867"Drift/4.5"OD	6600'	10160	

## PROPOSED FORMATION DATA

Formation	Interval	Form. Press	Gun Size – Type Charges
Raton Coals	320-2180'	N/A	
Vermejo Coals	2250'-2500'	N/A	
Trinidad Sand	2500°-2620°	N/A	
Pierre Shale	2620`	N/A	
Graneros Shale	6000`	N/A	
Dakota Sand	6250'	N/A	
Morrison Sand	6430'	N/A	
Entrada Sand	6850'	N/A	
Dockum	6950*	N/A	
Glorietta	7220*	N/A	

Service	Vendor	Location	Contact	Phone
Cement	Halliburton	Trinidad	Bob Eales	(719) 846-3132
Perforator	Halliburton	Trinidad	Bob Eales	(719) 846-3132
Open Hole Logging	Schlumberger	Fort Morgan	Harvey Greenwood	(970) 768-2584
Ditch Drainage System	Tri County Servies	Oklahoma	Jason Swanson	(580) 938-2915
Rat Hole	Weder Service	Woodward,OK	Herman Crocket	(580) 256-9371
Roustabout Srv./forklift	Chavez	Trinidad	Kieth Mantelli	(719) 868-2215
Casing Crew	S&K Oilfield Svs.	Spearman, TX	Steve Redman	(806) 435-2335
Mud & Chemicals	Baroid	Farmington	Mike Acthison	(505) 325-1896
Drill String Inspection	TICO	Canadian.OK	Jeff Hohertz	(806) 323-6935
Bits	Rock Bit Int.	Liberal, KS	Ed Fuller	(405) 834-4857
Bits	Atlas Rock Bits	OKC, OK	John Waitman	(405) 830-5904
Drill String Rental	Weatherford	Liberal, KS	Tom Steers	(620) 624-6273
Rentals	Weatherford	Elk City, OK	Bruce Byerly	(580) 225-1229
Packer	Packer Sales	Odessa, TX	Clyde Hinton	(915) 557-7963
Flush Joint Pipe	Curley's	Odessa, TX	Butch Gilliam	(915) 580-6607
Trailer	S&S	Elk City	Debbie	(580) 225-2501
Welding, Wtr&Trucking	Ray's Fld Service	Raton	Ray Luksich	(505) 445-5972

## VENDOR DATA

## **General Notes**

- Notify Roy Johnson at the New Mexico Energy, Minerals and Natural Resources Department prior to spudding the well and prior to running each string of casing. Office (505) 476-3470; Cell (505) 690-2365; Home (505) 471-1068.
- All El Paso Energy and Vermejo Park Ranch safety and environmental regulations will be adhered to at all times. Failure to do so will not be tolerated. Each person to be working on the Ranch must view the training vidio and read the pocket handbook prior to startup.
- Location will require a ditch drainage system to ensure oil and diesel do not end up in the pit.
- Pipe and equipment for this hole will be stored at the Raton Yard.

## Rig

MIRU Unit Rig 1 (James Blood is the Pusher (580) 886-4221) with full air package (3 compressors and a booster capable of 2500 cfm @ 800 psi) and 2 mud pumps. Rig has available a full range of **inspected** drillstring including 4 ½" drillpipe and drillcollars. The operator may elect to inspect the drillstring at any time during the operation.

All equipment will need drip pans or plastic placed under the engines to catch any leaking oil.

## **Surface Hole**

1. Drill a 12 <sup>1</sup>/<sub>2</sub>" pilot hole using 8" drill collars and ream the hole to 18" to a depth of 330°. This section of hole will be drilled using Baroid Quick Mud with a Baroid Mud Engineer

on location. Special care is to be taken to ensure this section of hole is vertical and straight. Run as many surveys as necessary to accomplish this.

- 2. We are required to run 300' or more (this should be 8 or 9 joints) 16". 65 ppf. H-40 surface casing. Use a landing joint provided by Ray's Field Service to eliminate the need to weld bell nipple. Have a bell nipple available for back up. Bell out the end of the bottom joint of casing and run a centralizer across the first collar then every other collar. (4 centralizers total). Plan on the rig running this casing string. No casing crew needed.
- 3. RU Halliburton and cement using the Trinidad surface cement slurry. Lead off with 20 bbls water followed by Midcon II w/6% salt, 5 lb/sk Gilsonite and .2% Versaset mixed 14 ppg with a yield of 1.66 cuft/sk. Pump the job at 3 bpm reducing the rate to 2 bpm during the displacement. Leave at least 75' of cement in the casing. WOC 8 hrs. (Cementing Requirements: 18"x16" annulus = .3709 cuft/ft x 320' x 2.0 excess = 237.4 cuft 237.4 cuft/1.66 cuft/sk = 143 sks).
- 4. Stabilize top joint with neat cement or gravel poured down the 18" x 16" annulus.
- 5. NU 16" Wellhead x 3M wellhead and annular BOP. Test to 500 psi.

## **Intermediate Hole**

- 1. PU 13 1/2" bit, hammer and 8" drilling assembly. Drill to a TD of 2725' or 225' below the top of the Trinidad Sand (drilling supervisor will pick TD). When the hole gets wet begin rnisting with Quick Foam and Barcat added to the mist tank. At TD double the dose of Quick Foam and Barcat in the mist tank and circulate the hole with air for 30 minutes. Consult with Mike Acthison with Baroid for additive volumes: office(505) 325-1896; cell (505)320-8407; home (505) 632-7191.
- RU casing crew and run 10 ¾", 45.5 ppf, J-55 casing dry (run 4 joints of pipe in Raton yard on bottom). Run guide shoe on bottom with a float collar one joint above. Threadlock the guide shoe and both ends of float collar. Run a centralizer on the first collar above float collar and every other collar up to 900° (21 centralizers). Do not drive the pipe into the bottom of the hole! Run in the hole slow for the last 5 joints. Tag and pick up at least 10°. Do not attempt to load the hole with fluid/mud prior to running casing.
- 3. Notify Roy Johnson 12 hrs prior to cement job. RU Halliburton and cement using the Trinidad production cement slurry. Lead off with 20 bbls water with 5 gal LGC 8 plus 100 lbs Baracarb and 120 lbs Magmafiber followed by Midcon II w/6% salt, 5 lb/sk Gilsonite, 2 lb/sk Granulite, .2% Versaset and .1% Super CBL mixed 13 ppg with a yield of 1.66 cuft/sk. Pump the job at 3 bpm reducing the rate to 2 bpm 10 bbls into the displacement. Drop the plug on the fly. WOC 8 hrs. (Cementing Requirement: 16" x 10 <sup>3</sup>/4" annulus = .6381 cuft/ft x 320" = 204.2 cuft 204.2 cuft/2.04 cuft/sk = 100 sks; 13 1/2"x 10 <sup>3</sup>/4" annulus = .3637 cuft/ft x 2405' x 1.75 excess = 1530 cuft 1530 cuft/2.04 cuft/sk = 750 sks; Total cement required 850 sks.)
- 4. Set slips and NU 16" x 11" x 3M "B" section. NU BOP's and rotating head. Test to 500 psi.

## Second Intermediate Hole

 PU 9 7/8" bit, hammer, two stands of 8" drill collars and the remaining drilling assembly as 6" on 4 <sup>1</sup>/<sub>2</sub>" drill pipe. Drill to a TD of 6230' in the Graneros Shale. We do not want to drill the top of the Dakota Sandstone. Geologist Mike Korte will assist us in picking TD (405) 706-6625. When the hole gets wet begin misting with Quick Foam and Barcat added to the mist tank. At TD double the dose of Quick Foam and Barcat in the mist tank and circulate the hole with air for 30 minutes. Consult with Mike Acthison with Baroid for additive volumes: office(505) 325-1896; cell (505)320-8407; home (505) 632-7191.

- RU casing crew and run 7 5/8", 29.7 ppf, N-80 casing (run the 36 joints of 26.4 ppf 7 5/8" casing in the yard on bottom). Run a float on bottom with a float collar one joint above and a DV tool (mechanically activated) at 4000" with cement basket 1 joint below. Threadlock the guide shoe and both sides of the float collar. Put one centralizer on the first collar above float collar and then every third collar up to 2800" (30 centralizers). Do not attempt to load the hole with fluid/mud prior to running casing.
- 3. Notify Roy Johnson 12 hrs prior to cement job. RU Halliburton and cement using the Trinidad production cement slurry. Lead off Stage 1 with 20 bbls water with 5 gal LGC 8 plus 100 lbs Baracarb and 120 lbs Magmafiber followed by 300 sks Midcon II w/6% salt, 5 lb/sk Gilsonite. 2 lb/sk Granulite. .2% Versaset and .1% Super CBL mixed 13 ppg with a yield of 2.04 cuft/sk (This will fill 2000' of annular space with 40% excess). Pump the job at 3 bpm reducing the rate to 2 bpm 10 bbls into the displacement. Drop the plug on the fly. Drop the bar to open DV tool. Lead off Stage 2 with 20 bbls water with 5 gal LGC 8 plus 100 lbs Baracarb and 120 lbs Magmafiber followed by 550 sks Midcon II w/6% salt, 5 lb/sk Gilsonite, 2 lb/sk Granulite, .2% Versaset and .1% Super CBL mixed 13 ppg with a yield of 2.04 cuft/sk. Pump the job at 3 bpm reducing the rate to 2 bpm 10 bbls into the cisplacement. Drop the plug on the fly. WOC 8 hrs. (Cement Requirements: 10 <sup>3</sup>/<sub>4</sub>" x 7 5/8" annulus = .2338 cuft/ft x 2725' = 637 cuft 637 cuft/2.04 cuft/sk = 312 sks; 9 7/8" x 7 5/8" annulus = .2184 cuft/ft x 3595' x 1.4 excess = 1099 cuft 1099 cuft/2.04 cuft/sk = 538 sks; Total cement required = 850 sks)
- 4. RU HES WL. Run temperature survey to determine the top of cement. Consult with Raton engineer to determine if cement is adequate.
- 5. Set slips and NU tubing spool. NU BOP's and rotating head. Test to 500 psi.
- 6. Lay down 4 <sup>1</sup>/<sub>2</sub>" drillpipe using the mouse hole. Do not run 4 <sup>1</sup>/<sub>2</sub>" drill pipe in 7 5/8" casing due to tight tollerance.
- PU 6 <sup>3</sup>/<sub>4</sub>" bit, drill collars on 3 <sup>1</sup>/<sub>2</sub>" drill pipe and drill out the DV tool. TIH to PBTD 10" above float collar and circulate the hole clean. Pressure test casing and DV tool to 500 psi. TOOH.

## **Production Hole**

- Obtain samples of water produced as we drill thru the Morrison, Entrada and Glorieta formations. Label (time, date, depth, well, drilling conditions ie air/mist/hvy wtr) and turn in samples to drilling engineer in Raton field office.
- PU 6 <sup>3</sup>/<sub>4</sub>" bit, hammer and 4 <sup>3</sup>/<sub>4</sub>" drilling assembly on 3 1/2" drill pipe. Drill to a TD of 7370' or 150' below the base of the Glorietta Sand. Geologist Mike Korte will assist us in picking TD (405) 706-6625. When the hole gets wet begin misting with Quick Foam and Barcat added to the mist tank. At TD double the dose of Quick Foam and Barcat in the mist tank and circulate the hole with air for 30 minutes. Consult with Mike Acthison with Baroid for additive volumes: office(505) 325-1896: cell (505)320-8407; home (505) 632-7191.
- Log well with Schlumberger Platform Express (slim hole tools). Harvey Greenwood Office (970) 867-5676; Cell (970) 768-2584; Home (970) 867-7156 or Geoff Capes Cell (970) 867-5676.

- 3. RU casing crew and run 5 1/2", 17 ppf. L-80 to surface with the first 1350' consisting of flush joint casing. Run a guide shoe on bottom with a float collar one joint above. Threadlock the guide shoe and both sides of the float collar. Put a centralizer on every other collar above the flush joint pipe using 6 centralizers in all. Do not attempt to load the hole with fluid/mud prior to running casing.
- 4. RU Halliburton and cement per the attached Cementing Procedure. (Cement Requirements: 7 5/8" x 5 ½" annulus = .0999 cuft/ft x 1000' = 100 cuft 100 cuft/2.04 cuft/sk = 49 sks; 6 ¾" x 5 ½" annulus = .0835 cuft/ft x 1140' x 1.4 excess = 133 cuft 133 cuft/2.04cuft/sk = 65 sks; Total cement required = 115 sks.)
- 5. Lay down 2 7/8" drill pipe.
- 6. RDMO Drilling Rig.

## **Completion**

MIRU CU. RU Power Swivel and reverse circulating unit. PU 6 <sup>3</sup>/<sub>4</sub>" bit and 6 - 3 1/8" drill collars on 2 7/8" drill pipe and drill cement to the top of the liner. PU liner mill and 3 1/8" drill collars on 2 7/8" drill pipe and dress the top of the liner. PU 4 <sup>3</sup>/<sub>4</sub>" bit. 3 - 3 1/8" drill collars on 2 7/8" and drill cement to PBTD (10' above float collar).

# WELLBORE SCHEMATIC



Date:

December 19, 2001





	El Paso Energy Raton, LLC						
	GEOLOGIC WELL	PROGNOSIS REPOR	RT (Preliminary H	Report)			
WELL NAME:			<b>VPR E - 34</b>	WDW		_	
FIELD	RATO	N BASIN CBM PROJEC	Т	S	EC. 5	-31N-19E	
FEET FNL:		FEET FEL:		Р	OD	E	
ELEV. GL.:	8,592	EST. SPUD:	2/02	EST	ГD:	7,370	
PROPOSED COMMISSION	FILING TD:	7,800		Elevation	based on	E11 pad	
Intermediate 10 3/4"							
ESTIMATE DRILLING DE	PTH TOPS:		Estimated	Tops		·	
Poison Canyon		0	subsea:	8592	ft.		
RATON FM. TOP:		50	subsea:	8542	 ft.		
VERMEJO FM. TOP:		2,180	subsea:	6412	 ft.		
TRINIDAD FM. TOP:		2,500	subsea:	6092	ft.		
Intermediate 7 5/8"							
ESTIMATE OF TOPS:			Estimated	Tops			
PIERRE FM. TOP:		2,620	subsea:	5972	ft.		
Lower Pierre member:		4,180	subsea:	4412	ft.		
NIOBRARA FM. TOP:		4,880	subsea:	3712	ft.		
Smokey Hill Member:		4,880	subsea:	3712	ft.		
Timpas Member:		5,490	subsea:	3102	ft.		
Fort Hayes Member:		5,720	subsea:	2872	ft.		
BENTON FM TOP:		5,740	subsea:	2852	ft.		
Codell Member:		5,740	subsea:	2852	ft.		
Carlile Sh. Member:		5,780	subsea:	2812	ft.		
Greenhorn Ls. Member:		5,950	subsea:	2642	ft.		
Graneros Sh. Member:		6,000	subsea:	2592	ft.		
Intermediate TD (within Low	ver Graneros)	6,230	subsea:	2362	<u>ft.</u>		
Infordation of 1203							
ESTIMATE OF TOPS:			Estimated	Tops			
DAKOTA FM TOP:		6,250	subsea:	2342	ft.		
Dakota SS A member:		6,250	subsea:	2342	ft.		
Dakota SS B member:		6,300	subsea:	2292	ft.		
Purgatoire SS member:		6,350	subsea:	2242	ft.		
MORRISON FM TOP:		6,430	subsea:	2162	ft.		
Wanakah member:		6,810	subsea:	1782	ft.		
ENTRADA FM TOP:		6,850	subsea:	1742	ft.		
DOCKUM FM TOP:		6,950	subsea:	1642	ft.		
Glorieta ss member:		7,220	subsea:	1372	ft.		
Yeso member:		7,340	subsea:	1252	ft.		
SANGRE DE CRISTO FM:		7,410	subsea:	1182	ft.		
TD WELL FOR SUFFICIEN	NT RAT HOLE TO CO	OMPLETE IN GLORIE	FA (150' below Glo	orieta Top)			
Injection Zones Proposed	for Completion						
Dakota/Purgatoire SS: 6.250' -	6,430' estimated 100 fee	et net porous sand					
Entrada fm SS: 6,850' - 6.950'	with an estimated 40 fee	t net porous sand					
Glorieta SS: 7,220' - 7,340' wi	th an estimated 50 feet r	net porous sand					

. .

# Water Analysis Report by Baker Petrolite

Company:	EL PASO ENERGY RATON LLC	Sales RDT:	44610
Region:	ROCKY MOUNTAINS	Account Manager:	BRYAN ENNS (620) 786-5732
Area:	RATON, NM	ID #:	23054
Lease/Platform:	VERMEJO PARK RANCH	Analysis Cost	\$40.00
Entity (or well #):	E 5		
Formation:		Raton Coa	1001'-1224'
Sample Point:	WELLHEAD		

Summary	Analysis of Sample 195611 @ 75 °F					
Sampling Date: 11/28/0	Anions	mg/l	m <b>eq/l</b>	Cations	mg/l	meq/l
Analysis Date: 12/7/0 Analyst: JAMES AHRLET	Chloride: Bicarbonate:	85.0 1148.0	2.4 18.81	Sodium: Magnesium:	515.0 0.1	22.4 0.
TDS (mg/l or g/m3):     1799.3       Density (g/cm3, tonne/m3):     1.00       Anion/Cation Ratio:     0.999993	Carbonate: Sulfate: Phosphate: Borate: Silicate:	40.0 3.0	1.33 0.06	Calcium: Strontium: Barium: Iron: Potassium:	0.1 0.0 1.0 0.1 7.0	0. 0. 0.01 0. 0.18
Carbon Dioxide: Oxygen: Comments:	Hydrogen Sulfide: pH at time of sampling pH at time of analysis <b>pH used in Calculat</b>	: : ion:	8.52 <b>8.52</b>	Aluminum: Chromium: Copper: Lead: Manganese: Nickel:		

Condi	tions		Values Ca	lculated a	culated at the Given Conditions - Amounts of Scale in Ib/1000 bbl										
Temp	Gauge Press.	Gauge Calcite Press. CaCO3		Gypsum CaSO4*2H20		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4		CO2 Press			
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi			
80	0	-1.09	0.00	-6.12	0.00	-6.20	0.00	0.00	0.00	-0.26	0.00	0.05			
100	0	-1.05	0.00	-6.14	0.00	-6.14	0.00	0.00	0.00	-0.39	0.00	0.08			
120	0	-1.01	0.00	-6.14	0.00	-6.06	0.00	0.00	0.00	-0.50	0.00	0.13			
140	0	-0.97	0.00	-6.12	0.00	-5.96	0.00	0.00	0.00	-0.58	0.00	0.19			

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2. Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

# Water Analysis Report by Baker Petrolite

Company:	EL PASO ENERGY RATON LLC	Sales RDT:	44610
Region:	ROCKY MOUNTAINS	Account Manager:	BRYAN ENNS (620) 786-5732
Area:	RATON, NM	ID #:	23055
Lease/Platform:	VERMEJO PARK RANCH	Analysis Cost	\$40.00
Entity (or well #):	E 10		
Formation:	UNKNOWN Raton and Varmejo	Coals 932 - 2	284'

Sample Point:

WELLHEAD

Summary		Analysis of Sample 182109 @ 75 °F								
Sampling Date: 11/28/	D1 Anions	mg/l	meq/l	Cations	mg/l	meq/l				
Analysis Date: 12/7/ Analyst: JAMES AHRLE	<sup>D1</sup> Chloride: □ Bicorbonato:	165.0	4.65	Sodium:	1047.2	45.55				
TDS (mg/l or g/m3): 37	Carbonate:	13.0	0.43	Calcium:	0.1	0. 0.				
Density (g/cm3, tonne/m3): 1.0	D2 Sulfate: D2 Phosphate:	3.0	0.06	Strontium: Barium:	0.5 2.0	0.01 0.03				
Anion/Cation Ratio: 1.0000	Borate:			Iron:	0.1	0.				
	Silicate:			Potassium: Aluminum:	8.0	0.2				
Carbon D oxide:	Hydrogen Sulfide:			Chromium:						
Oxygen: Comments:	pH at time of sampling	pH at time of sampling:								
	pH at time of analysis		8.33	Manganese:						
	pH used in Calculat	pH used in Calculation:		Nickel:						

Condi	tions		Values Ca	Iculated at the Given Conditions - Amounts of Scale in Ib/1000 bbl										
Temp	Gauge Press.	auge Calcite ress. CaCO3		Gypsum CaSO4*2H20		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4		CO2 Press		
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi		
80	0	-1.09	0.00	-6.31	0.00	-6.38	0.00	-3.84	0.00	-0.13	0.00	0.16		
100	0	-1.06	0.00	-6.34	0.00	-6.34	0.00	-3. <b>82</b>	0.00	-0.27	0.00	0.26		
120	0	-1.04	0.00	-6.35	0.00	-6.27	0.00	-3.78	0.00	-0.38	0.00	0.4		
140	0	-1.00	0.00	-6.35	0.00	-6.18	0.00	-3.74	0.00	-0.46	0.00	0.61		

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

......

P.02

.....

Well File



# Water Analysis Report

Customer: El Paso Energy			05/05/2000
Address: Box 190			
City: Raton State: NM	Zip: 87740-		
Attention: Larry Casey	Da	ate Sampled:	05/01/2000
CCI:	Da	te Received:	05/05/2000
CC2:	SALESMAI	N NAME: La	irry Stanley
	26 C DOINT. 33/-00		
LEASE: VFC SAMI	LE POINT: Weinea	a	
WELL: 39 WDW SEVA Sec. 4 358 (1) E /or A	REMARKS:	Entrada Forma	ation and Glorieta Fmt.
	nimas County, C 	olorado	(10.3 mi. NE)
SHLFATE (MG/L	). 698		
BICARBONATE (PPM	): 19		
CALCIUM (MG/L	): 6360		
MAGNESIUM (MG/L	): 364		
IRON (PPM)	: 1		
BARIUM (MG/L	): 0		
STRONTIUM (MG/L	): 0		
MEASURED pl	<b>1:</b> 5.7		
TEMPERATUR	E: 100		
DISSOLVED C02 (PPM	): 2		
MOLE PERCENT CO2 IN GA	S: 0.00		
DISSOLVED H2S (PPM	): • 0.0		
PRESSURE (PSIA	.): 25		
SODIUM (PPM)	14365		
TDS (MG/L	): 55742		
RESISTIVITY	<b>:</b> 0.1148		
IONIC STRENGTI	ł: 0.97		
CALCITE (CaCO3) SI: -0.92	CALCITE PTB:	N/A	
<b>GYPSUM (CaSO4) \$1:</b> -0.37	GYPSUM PTB:	N/A	
BARITE (BaSO4) SI: N/A	BARITE PTB;	N/A	
CELESTITE (SrSO4) SI: N/A	CELESTITE PTB:	N/A	
SI calculations based on Tomson-Oddo	Resistivity calculate	d at STP.	

# Water Analysis Report by Baker Petrolite

Company:	EL PASO ENERGY RATON LLC	Sales RDT:	44610
Region:	ROCKY MOUNTAINS	Account Manager:	BRYAN ENNS (620) 786-5732
Area:	RATON, NM	ID #:	23056
Lease/Platform:	VERMEJO PARK RANCH	Analysis Cost	\$40.00
Entity (or well #):	E 11		

UNKNOWH Raton and Varmejo Coals 1172 - 2496.

### Formaticn:

Sample Point:

WELLHEAD

Summary	Analysis of Sample 182107 @ 75 °F								
Sampling Date: 11/28/01	Anions	mg/l	meq/l	Cations	mg/l	meq/l			
Analysis Date: 12/7/01 Analyst: JAMES AHRLETT	Chloride: Bicarbonate:	252.0 2693.0	7.11 44.14	Sodium: Magnesium:	1167.3 0.1	50.78 0.			
TDS (mg/l or g/m3):     4133.5       Density (g/cm3, tonne/m3):     1.002       Anion/Cation Ratio:     1	Carbonate: Sulfate: Phosphate: Borate: Silicate:	0.0 3.0	0. 0.06	Calcium: Strontium: Barium: Iron: Potassium:	0.5 0.6 2.0 7.0 8.0	0.02 0.01 0.03 0.25 0.2			
Carbon Dioxide: Oxygen: Comments:	Hydrogen Sulfide: pH at time of sampling: pH at time of analysis: <b>pH used in Calculatio</b>	n:	8.29 <b>8.29</b>	Aluminum: Chromium: Copper: Lead: Manganese: Nickel:					

Condi	tions		Values Calculated at the Given Conditions - Amounts of Scale in Ib/1000 bbl											
Temp	Gauge Press.	auge Calcite ress. CaCO3		Gypsum CaSO4*2H20		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4		CO2 Press		
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi		
80	0	-0.41	0.00	-5.64	0.00	-5.71	0.00	-3.79	0.00	-0.16	0.00	0.19		
100	0	-0.39	0.00	-5.67	0.00	-5.67	0.00	-3.77	0.00	-0.30	0.00	0.3		
120	0	-0.36	0.00	-5.68	0.00	-5.60	0.00	-3.73	0.00	-0.41	0.00	0.47		
140	0	-0.33	0.00	-5.68	0.00	-5.52	0.00	-3.69	0.00	-0.49	0.00	0.71		

Note 1. When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales

Note 3: "The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually hearly the same as the CO2 partial pressure.

# Water Analysis Report by Baker Petrolite

Company:	EL PASO ENERGY RATON LLC	Sales RDT:	44610
Region:	ROCKY MOUNTAINS	Account Manager:	BRYAN ENNS (620) 786-5732
Area:	RATON, NM	ID #:	23057
Lease/Platform:	VERMEJO PARK RANCH	Analysis Cost	\$40.00
Entity (or well #):	E 17		
Formation:	UNKNOWN Raton and Vermejo	Cocls 1025'.	2411'
Sample Point:	WELLHEAD		

Summary		An	alysis of Sa	ample 195614 @ 75	°F	
Sampling Date: 11/28/01	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date: 12/7/01	Chloride:	130.0	3.67	Sodium:	633.7	27.56
Analyst: JAMES AHRLETT	Bicarbonate:	1478.0	24.22	Magnesium:	0.1	0.
<b>TDS</b> (moder a/m <sup>2</sup> ): 2258 1	Carbonate:	0.0	0.	Calcium:	0.1	0.
Density (along tenno/m2): 1001	Sulfate:	3.0	0. <b>0</b> 6	Strontium:	0.2	0.
Anion/Cotion Datio:	Phosphate:			Barium:	1.0	0.01
Amon/Cation Ratio:	Borate:			Iron:	5.0	0.18
	Silicate:			Potassium:	7.0	0.18
				Aluminum:		
Carbon Dioxide:	Hydrogen Sulfide:			Chromium:		
Oxygen:	nU at time of compliant			Copper:		
Comments:	pri at time of sampling.			Lead:		
	pH at time of analysis:		8.21	Manganese:		
	pH used in Calculation	8.21	Nickel:			

Condi	tions		Values Calculated at the Given Conditions - Amounts of Scale in Ib/1000 bbl											
Temp	Gauge Press.	Calcite CaCO3		Gypsum CaSO4*2H20		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4		CO2 Press		
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi		
80	0	-1.30	0.00	-6.15	0.00	-6.22	0.00	-4.09	0.00	-0.29	0.00	0.13		
100	0	-1.25	0.00	-6.16	0.00	-6.17	0.00	-4.07	0.00	-0.43	0.00	0.19		
120	0	-1.19	0.00	-6.17	0.00	-6.09	0.00	-4.03	0.00	-0.54	0.00	0.28		
140	0	-1.12	0.00	-6.17	0.00	-6.00	0.00	-3.99	0.00	-0.63	0.00	0.41		

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure

# Water Analysis Report by Baker Petrolite

Company:	EL PASO ENERGY RATON LLC	Sales RDT:	44610	
Region:	ROCKY MOUNTAINS	Account Manager:	BRYAN ENNS (620) 786-5732	_
Area:	RATON, NM	ID #:	23060	
Lease/Platform:	VERMEJO PARK RANCH	Analysis Cost	\$40.00	-
Entity (or well #):	E 23	_		-
Formation:	UNKNOWN Raton and Verma	jo Coals 912'- 22	60'	

Sample Point:

WELLHEAD

Summary	Analysis of Sample 176413 @ 75 °F							
Sampling Date: 11/28/01	Anions	mg/l	meq/l	Cations	mg/l	meq/l		
Analysis Date: 12/7/01	Chloride:	159.0	4.48	Sodium:	994.3	43.25		
Analyst: JAMES AHRLETT	Bicarbonate:	2313.0	37.91	Magnesium:	0.1	0.		
TDS (mail or a/m2): 3526 8	Carbonate:	39.0	1.3	Calcium:	0.1	0.		
Density (g/am2_tenne/m2): 1002	Sulfate:	4.0	0.08	Strontium:	0.3	0.01		
Anion(Cotion Batio)	Phosphate:			Barium:	2.0	0.03		
Amon/Cation Ratio.	Borate:			Iron:	9.0	0.33		
	Silicate:			Potassium:	6.0	0.15		
				Aluminum:				
Carbon Dioxide:	Hydrogen Sulfide:			Chromium:				
Oxygen:	pH at time of sampling:			Copper:				
Commerts:				Lead:				
	pH at time of analysis: 8.		8.41	Manganese:				
	pH used in Calculation:			Nickel:				
1	1							

Condi	tions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl									
Temp Gauge Press.		Calcite CaCO3		Gypsum CaSO4*2H20		Anhydrite CaSO4		Celestite SrSO4		Barite BaSO4		CO2 Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-1.04	0.00	-6.19	0.00	-6.26	0.00	-3.93	0.00	0.00	0.00	0.13
100	0	-1.02	0.00	-6.21	0.00	-6.21	0.00	-3.91	0.00	-0.13	0.00	0.2
120	0	-1.00	0.00	-6.22	0.00	-6.14	0.00	-3.87	0.00	-0.24	0.00	0.33
140	0	-0.97	0.00	-6.21	0.00	-6.05	0.00	-3.83	0.00	-0.33	0.00	0.51

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3 The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

XIII. Proof of Notice

Surface Owner:

Vermejo Park, L.L.C. PO Drawer E Raton, NM 87740

Working/Offset & Royalty Owners:

El Paso Energy Corporation Nine Greenway Plaza Houston, TX 77046 Attn: Steve Hochstein

Vermejo Mineral Corporation 20 North Broadway, Suite 1500 Oklahoma City, OK 73102 Attn: David Frank

Copies of the Oil Conservation Division, Form C-108 have been sent to the above stated parties by Certified Mail on this \_ 28 day of Hermber, 2002.

DR Lackford, Petroleum Engineer El Paso Energy Raton, L.L.C. PO Box 190 Raton, NM 87740

## THE RATON RANGE • MONDAY, DECEMBER 31, 2001 -

1899 Natices

#### 151 LEGALS

Notice of Application for Fluid Injection Well Permit

El Paso Raton, L.L.C., Nine Greenway Plaza, Houston, Texas 77046. is seeking administrative approval from the New Mexico Oil Conservation Division to complete their Vermeio Park Ranch "A", #07 as a water disposal well. The well is located in Section 01. T31N, R19E, Colfax County New Mexico. The proposed disposal intervals are the Dakota/Purgatoire Sandstone 6.400' 6,590'; Entrada Sandstone 6.940 7.040', and Glorieta Sandstone 7,320' 7,420'. El Paso Raton, L.L. C. intends to inject a maximum of 18,000 bbls of produced formation water per day at a maximum injection pressure of 2,000 psi. Interested parties must objections file or request for hearing with the Oil Conservation Division, 1220 S. St. Francis, Santa Fe, New Mexico 87505 within 15 days of this notice. Thank you, /s/ DR Lankford Donald R. Lankford Petroleum Engineer El Paso Baton, i, L.C. PO Box 190

Raton, NM 87740

(505) 445-6721

(505) 445-6788 Fax

Legal No. 375501

Published in The Raton Range: December 31, 2001

#### 151 LEGALS

Notice of Application for Fluid Injection Well Permit

El Paso Raton, L.L.C., Nine Greenway Plaza, Houston, Texas, is seeking administrative approval from the New Mexico Oil **Conservation Division** to complete their Vermejo Park Ranch "E". #34 as a water disposal well. The well is located in Section 05, T31N, R19E, Colfax County New Mexico. The proposed disposal interval is the Dakota/Purgatoire Sandstone 6,250' -6.430': Entrada Sandstone 6.850' -6.950', and Glorieta Sandstone 7,220' -7,340'. El Paso Raton, L.L. C. intends to inject a maximum of 18,000 bbls of procuced formation water per day at a maximum injection pressure of 2,000 psi. Interested parties must file objections or request for hearing with the Oil Conservation Division. 1220 S. St. Francis, Santa Fe, New Mexico 87505 within 15 days of this notice. Thank you, /s/ DR Lankford Donald R. Lankford, PF El Paso Raton, L.L.C. PO Box 190 Raton, NM 87740 (505) 445-6721 (505) 445-6788 Fax Legal No. 375401 Published in The Raton Range:

#### 151 LEGALS COLFAX COUNTY 14. Ordinance 2002-01 BOARD OF Noxious COMMISSIONERS Ordinance

**Regular Meeting** January 8, 2002

151 LEGALS

PUBLIC NOTICE IS HEREBY GIVEN that the Colfax County Board oí Commissioners will meet in Regular Session on Tuesday, January 8, 2002 at 9:00 a.m., MST, in the Commission Chambers at the County Colfax Courthouse Raton. NM for the following:

1. Elect Chairman & Vice Chairman

2. Approve Agenda 3. Approve Minutes and Expenditures

4. Recognize Visitors -Business Discussed later

Statutory Requirements

1. Resolution 2002-01 Approve Open Meetings Resolution

2. Request Statement Receipts of 8 Expenses

3. Establish County Depository

4. Establish County Investment Policy

6. Reports - CCDC. Road, DWI & E-911

YES Coordinator Contract

8. NMNRD - Grant Agreement Approval

9. Set Liquor License Fees for 2002

10. Voting Machine Technician Contracts

11. Set Solid Waste **Disposal Fees for 2002** 

12. Award of Fire **Excise Tax Tankers** December 31, 2001. 13. Audit - Fiscal

Introduction 15 Dispatch Agreement - City of Raton

Weed

Road Review 16 Committee - CR - C-C-50 49 & Recommendation

17. Resolution to be Approved

1. Resolution 2002-02 Budget Increase Commissioners **Professional Service** 

2. Resolution 2002-03 - Budget Increase Sheriff - OBD Grant & Insurance Recovery

3. Resolution 2002-04 Budget Adjustment --Fire Excise Tax Fund

4. Resolution 2002-05 - Budget Adjustment -Repeater - Lease -Line Item

5. Resolution 2002-06 Budget Increase Eagle Nest Fire Carry Over Difference in Encumbered ደ Balance

6. Resolution 2002-07 Budget Increase -E.N. Ambulance Carry Over Difference in Encumbered ዲ Balance

7. Resolution 2002-08 - Budget Transfer -Taos Pines Road District 18 Commissioners'

Docket

19. Manager's Docket 20. Attorney's Docket

Done this 28th of December 2001.

Kathy M. Trujillo, County Manager

Legal No. 375601

Published in The Baton Banner

December 31, 2001.



# You shouldn't have to fight to get the story. Let us do that for you.

You should be able to get the story with every issue of The Raton Range. We at The Range make a promise to report the news of our community honestly, fairly and with integrity. We promise to give our readers useful, interesting information in every edition. We promise to edit and publish the news of our community without exclusion. And above all, to do what is right and to treat our readers, advertisers and employees as we would like to be treated ourselves.

Subscribe to The Raton Range for one year - \$45 6 months - \$25 3 months - \$17,50

Call today.

#### "Notice of Application for Fluid Injection Well Permit"

El Paso Raton, L.L.C., Nine Greenway Plaza, Houston, Texas is seeking administrative approval from the New Mexico Oil Conservation Division to complete their Vermejo Park Ranch "E", #34 as a water disposal well. The well is located in Section 05, T31N, R19E. Colfax County New Mexico. The proposed disposal interval is the Dakota/Purgatoire Sandstone 6,250'-6,430', Entrada Sandstone 6,850'-6,950', and Glorieta Sandstone 7,220' – 7,340'. El Paso Raton, L.L.C. intends to inject a maximum of 18,000 bbls of produced formation water per day at a maximum injection pressure of 2,000 psi. Interested parties must file objections or request for hearing with the Oil Conservation Division, 1220 S. St. Francis, Santa Fe, New Mexico 87505 within 15 days of this notice.

Thank you,

DR Lacked

Donald R. Lankford, PE El Pasc Raton, L.L.C. PO Box 190 Raton, NM 87740 (505) 445-6721 (505) 445-6788 Fax

Legal No. \_\_\_\_\_\_ Published in the Raton Range: (Date)



December 28, 2001

Vermejo Park Ranch P. O. Drawer E Raton, New Mexico 87740

Attn: Mr. David Vackar

Subject: Drilling Permit for VPR E 34 Water Disposal Well

Dear Mr. Vackar:

According to the New Mexico Oil Conservation Division, Rules and Regulations. 701.B.2, we are required to furnish you with Applications for Permit to Drill for the water injection well as submitted to the New Mexico Oil Conservation Division.

Please be advised that we are currently submitting an APD for the VPR E 34 Water Disposal Well. Find enclosed a copy of that submittal.

Sincerely,

Devon Energy Corporation

M. Duckworth Project Manager

# DEVOIL ENERGY CORPORATION P.O. Box 190 Raton, New Mexico 87740

December 28, 2001

Mr. David Frank Vermejo Minerals Corporation 20 North Broadway Oklahoma City, OK 73102

Subject: Drilling Permit For VPR E 34 Water Disposal Well

Dear Mr. Frank:

According to the New Mexico Oil Conservation Division, Rules and Regulations, 701.B.2, we are required to furnish you with Applications for Permit to Drill for the water injection well as submitted to the New Mexico Oil Conservation Division.

Please be advised that we are currently submitting an APD for the VPR E 34 Water Disposal Well. Find enclosed a copy of that submittal.

Sincerely,

Devon Energy Corporation

M. Duckworth Project Manager