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STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised 4-1-98

AMENDED APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance ___X___ Disposal _____ Storage
Application qualifies for administrative approval? ___X___ Yes _____ No

II. 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.

IV. Is this an expansion of an existing project? _____ Yes ___X___ No
If yes, give the Division order number authorizing the project: _____

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.

IX. 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 Engineer

SIGNATURE: DR Lankford DATE: 3/20/02

* 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 (30-007-20302)
Section 5, T31N, 19E
Colfax County, New Mexico

AMENDED 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 Size	Setting Depth	Sacks Cement	Hole Size	Top of Cement
16"	330' KB	223 sx	18"	Surface
10 3/4"	2,681' KB	833 sx	13 ½"	Surface
7 5/8"	6038' KB	812 sx	9 7/8"	Into 10 ¾" Casing Annulus
5 ½"	7,133' KB	160 sx	6 ¾"	Into 7 5/8" Casing Annulus

3. Tubing: 3 ½", 9.3 ppf, L-80, JMLS, RTS 8, 2.867" Drift/ 4.5" OD @ +/- 6,100'

4. Packer: 5 ½" x 3 ½" nickel plated Loc Set w/ carbide slips @ +/- 6,100'

Section B:

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

   Field Name: Vermejo Park Ranch

2. Injection Interval: Dakota/Purgatoire Sandstone 6,120'-6,320', Entrada Sandstone 6,730'- 6,830', Glorieta Sandstone 7,090'- 7,160'

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.

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 # 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 Section 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	Cell	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.

Status: 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

Material	Description	Depth	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	
2nd 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 ½"Flush Jt	7370'	7740	
On/Off Tool	3 ¾" nickel plated on/off tool w/1.875" F profile	6600'		
Packer	5 ½" x3 ½" 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		

VENDOR DATA

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

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 ¼" 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 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.
2. 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 <u>not</u> 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 ¾" annulus = .6381 cuft/ft x 320' = 204.2 cuft 204.2 cuft/2.04 cuft/sk = 100 sks; 13 1/2"x 10 ¾" 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

1. PU 9 7/8" bit, hammer, two stands of 8" drill collars and the remaining drilling assembly as 6" on 4 ½" 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.

2. 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 <u>not</u> 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 displacement. Drop the plug on the fly. WOC 8 hrs. (Cement Requirements: 10 ¾" 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 deterimine 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 ½" drillpipe using the mouse hole. **Do not run 4 ½" drill pipe in 7 5/8" casing** due to tight tollerance.
7. PU 6 ¾" bit, drill collars on 3 ½" 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.

1. PU 6 ¾" bit, hammer and 4 ¾" 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.
2. 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.

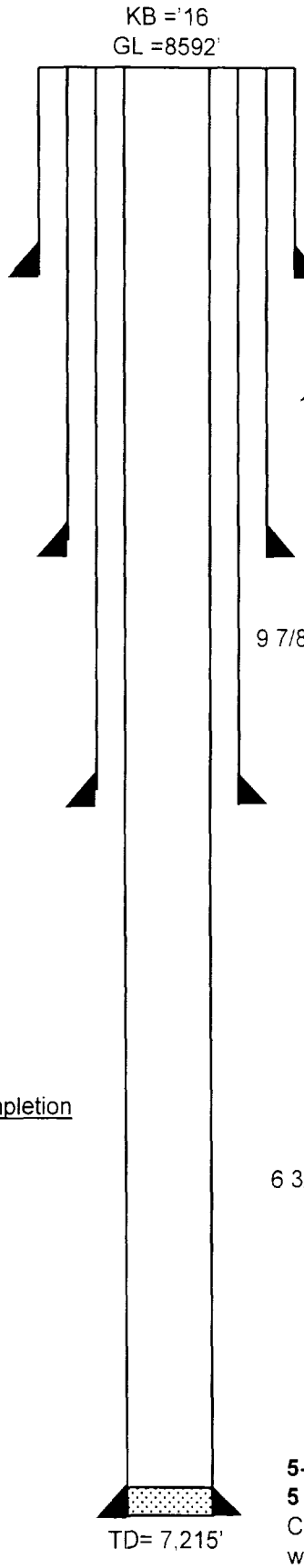
3. RU casing crew and run 5 1/2", 17 ppf, L-80 to surface with the first 1350' consisting of flush joint casing. Run a guide shoe on bottom with a float collar one joint above. Threadlock the guide shoe and both sides of the float collar. Put a centralizer on every other collar above the flush joint pipe using 6 centralizers in all. **Do <u>not</u> 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.

<u>Completion</u>

1. MIRU CU. RU Power Swivel and reverse circulating unit. PU 6 ¾" 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 ¾" bit, 3 - 3 1/8" drill collars on 2 7/8" and drill cement to PBTD (10' above float collar).

WELLBORE SCHEMATIC

Lease: VPRE 34 WDW
Field: VPR - York Canyon
County: Colfax
State: New Mexico



Tree: 2-1/16" 5,000 psi
Packer Fluid: Produced fluids
Tubing: 3 1/2" @ 6,100'

18" Hole

16", 65 ppf, H-40 @ 330'
Cement w/ 223 sks Midcon II mixed 14 ppg with 1.66 cuft/sk yield (100% excess)

13 1/2" Hole

10 3/4", 45.5 ppf, J-55 @ 2,681'
Cement w/lead 596 sks Midcon II mixed 12.5 ppg with 2.29 cuft/sk yield; tail 237 sks Midcon II mixed 13 ppg with 2.04 cuft/sk yield (75% excess)

9 7/8" Hole

7 5/8", 29.4 ppf, N-80, KB-5,397'
7 5/8", 26.4 ppf, N-80, 5,397'-6,038'
DV Tool @ 3953'
Stage 1:Cement w/506 sks Prem SD-300 mixed 15.8 ppg with 1.15 cuft/sk yield
Stage 2: Cement w/306 sks STD type I&II mixed 13 ppg with 2.03 cuft/sk yield. (40% excess)

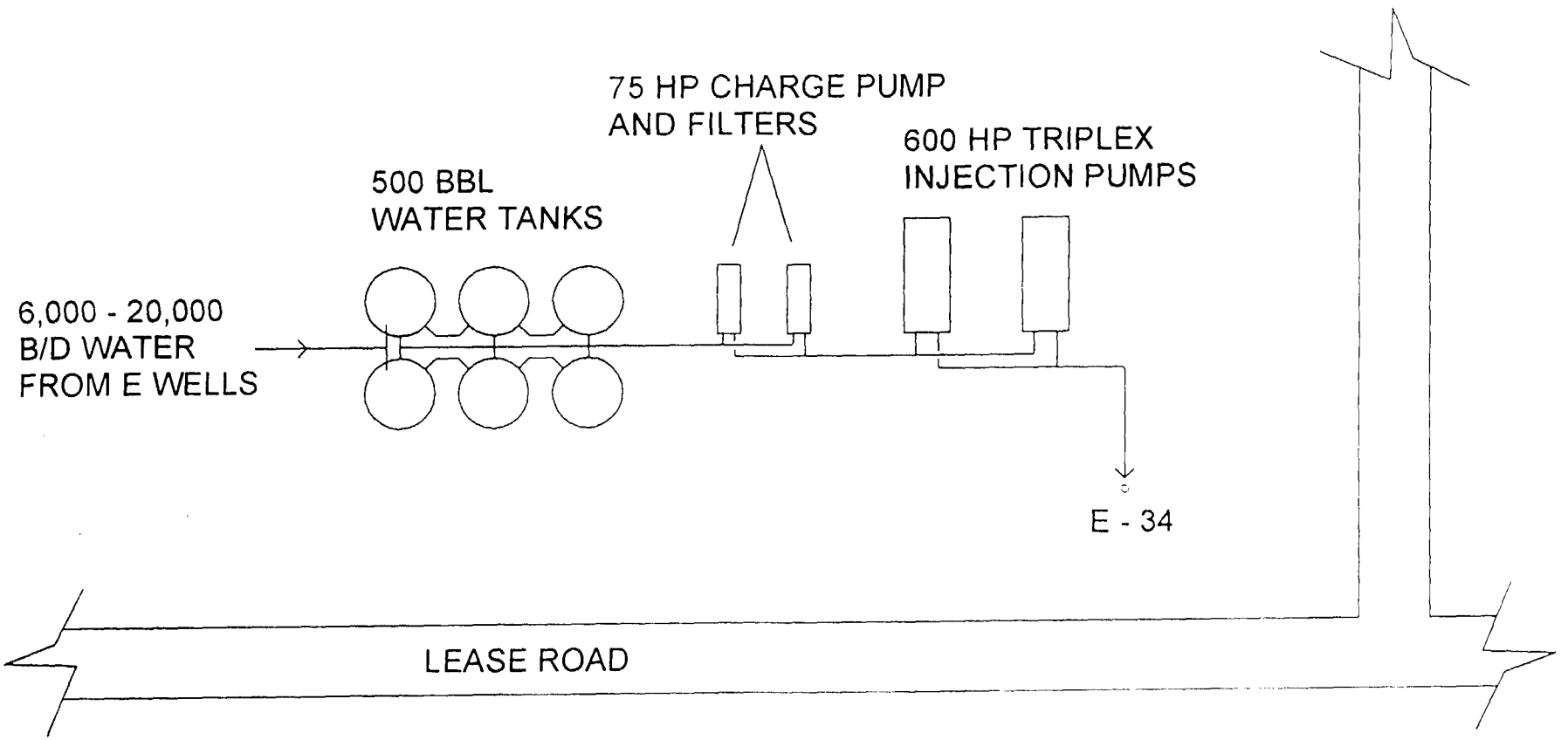
Injection Zones Proposed for Completion

Dakota	6120'-6320'
Entrada	6730'-6830'
Glorieta	7090'-7160'

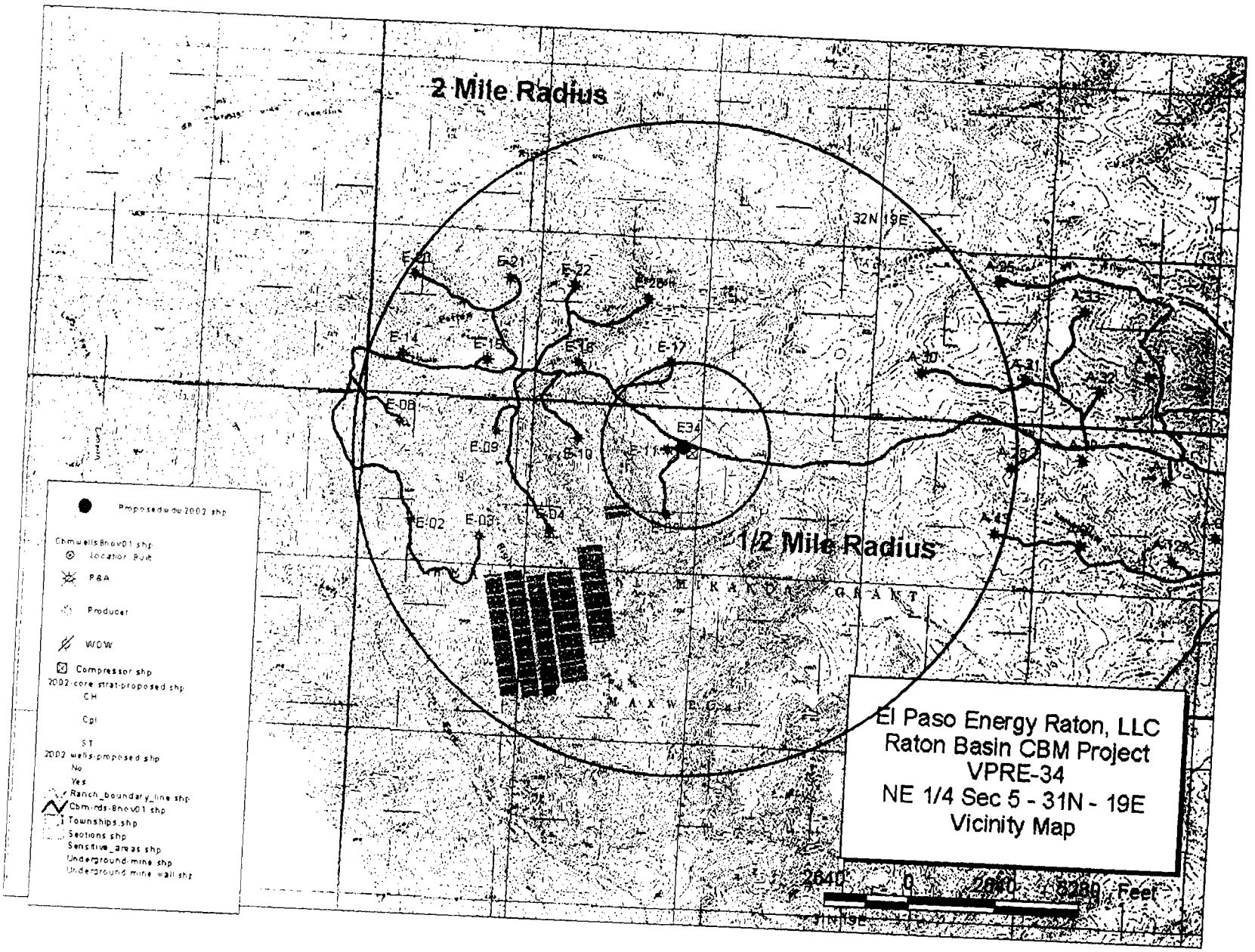
6 3/4" Hole

5-1/2", 17 ppf, L-80, LT&C, KB-5727'
5 1/2", 17 ppf, P110, SLT flush jt, 5727'-7133'
Cement w/160 sks Prem SD-300 mixed 15.9 ppg with 1.5 cuft/sk yield. (35% excess)

Prepared by: William M. Ordemann
Date: March 20, 2002


75 HP CHARGE PUMP
AND FILTERS
600 HP TRIPLEX
INJECTION PUMPS
500 BBL
WATER TANKS
6,000 - 20,000
B/D WATER
FROM E WELLS
E - 34
LEASE ROAD

"ATTACHMENT B"



El Paso Energy Raton, LLC
GEOLOGIC WELL DRILLING REPORT

DATE: 2/20/02
RIG: Unit Rig #1
SUPV: Sierra
REPORT BY: Mike Korte

WELL NAME: VPR E - 34 WDW **API number:**

FIELD	RATON BASIN CBM PROJECT	SEC.	5	TW.	31N	RANGE	19E
FEET FNL:		FEET FWL:		POD	E	AREA	YORK CANYON
COUNTY:	COLFAX	STATE:	NM				
ELEV. GL.:	8,592	SPUD:	2/4/01	TD:		LOG:	
PROJECT SPECIFIC:	WATER DISP. WELL						
MUD LOGGERS:	no mud logging	CSG PT. GEOLOGIST:	MIKE KORTE	OP. HOLE LOGGERS:			

Elevation is est. (survey has been completed) requires updated elevation and survey loc. Description

DRILLERS DEPTH:	2,742	13"bit / surface 18.5" bit		Surface Csg.:	16"	Set @:	328	ft.
LOGGERS DEPTH:		no open hole log run		Intermediate Csg.:	10 3/4"	Set @:	2674	ft.
First significant gas:		subsea:	8592 ft.	Cement Inter. Csg.:		Circ. Cmt.:	to surface	
RATON FM. TOP:	50	subsea:	8542 ft.					
VERMEJO FM. TOP:	2,220	subsea:	6372 ft.	Basal Vermejo coal 2,532'-2,539'			Raton fm. CBM (ft.)	
TRINIDAD FM. TOP:	2,552	subsea:	6040 ft.	Pierre transition 2,655', Pierre Shale 2,670'			Vermejo fm. CBM (ft.)	

DRILLERS DEPTH:	6,065			Intermediate Csg.:		Set @:	ft.
LOGGERS DEPTH:				Cement Inter. Csg.:		Circ. Cmt.:	
First significant gas:	3,588	subsea:	5004 ft.				
PIERRE FM. TOP:	2,655	subsea:	5937 ft.				
Lower Pierre member:	4,340	subsea:	4252 ft.	Intermediate 10 3/4 tops are based on drilling through to depth 6,065, 2/20/02			
NIOBRARA FM. TOP:	4,955	subsea:	3637 ft.	Intermediate 5 1/2" tops are projections			
Smokey Hill Member:	4,955	subsea:	3637 ft.				
Timpas Member:	5,570	subsea:	3022 ft.	gas flows while drilling			
Fort Hayes Member:	5,716	subsea:	2876 ft.	Gas estimates: 3,588' 500 Mcfd rate			
BENTON FM TOP:	5,740	subsea:	2852 ft.	Gas estimates: 4,790' 600 Mcfd rate			
Codell Member:	5,740	subsea:	2852 ft.	Gas estimates: 5,018' 4,000 - 5,000 Mcfd rate			
Carlile Sh. Member:	5,784	subsea:	2808 ft.				
Greenhorn Ls. Member:	5,910	subsea:	2682 ft.				
Graneros Sh. Member:	5,934	subsea:	2658 ft.				
Dakota silt zone:	6,065	subsea:	2527 ft.				
DAKOTA FM TOP:		subsea:	8592 ft.				

based on CFI correlation well the Dakota ss may be as high as 6090'

DRILLERS DEPTH:				Production Liner:		Set @:	ft.
LOGGERS DEPTH:				Cement Liner in place:			
First Injection zone:	6,120	subsea:	2472 ft.				
DAKOTA FM TOP:	6,120	subsea:	2472 ft.				
Dakota SS A member:	6,120	subsea:	2472 ft.	SS med to coarse grained sli calc, silica cement with minor carbonaceous shale, trace of coal			
Dakota SS B member:	6,190	subsea:	2402 ft.	SS as above A member, mostly crs grained, minor chert conglomeratic ss and carb shale			
Purgatoire SS member:	6,250	subsea:	2342 ft.	SS poorly sorted med-crse conglomeratic quartz grained friable, sli calc.			
MORRISON FM TOP:	6,320	subsea:	2272 ft.	Jurassic Age: SH & SS Variegated shales, red green, gray maroon, minor tan hard ls, wh f-m gr ss			
Wanakah member:	6,680	subsea:	1912 ft.	SS f gr wh to orange mod cmt sli calc glauconitic fspr, *minor gypsum, bcn oolitic ls*			
ENTRADA FM TOP:	6,730	subsea:	1862 ft.	SS wh -lt gn f-m gr calc. well rd and sorted frsted grains minor uncons SS			
DOCKUM FM TOP:	6,830	subsea:	1762 ft.	Triassic Age: SHALE Variegated (red) *mica calc, minor thin beds of f gr limy gray SS*			
Glorieta ss member:	7,090	subsea:	1502 ft.	Permian Age. SS orange to pink to white med grained silica cement			
Yeso member:	7,160	subsea:	1432 ft.	*SS orange and dolomitic cemented silty, may become coarse arkosic ss*			
SANGRE DE CRISTO FM:	7,230	subsea:	1362 ft.	SHALE AND ARKOSIC SS (WASH) dominantly red shale, siltstone and red arkosic crs sediments			

NOTE: Injection zones expected to be encountered

- **Dakota SS A member:**
- **Dakota SS B member:**
- **Purgatoire SS member:**
- **ENTRADA FM TOP:**
- **Glorieta ss member:**

NOTE: VPR E-34 WDW injection zones are projections based on drilling E 34 to 6065, VPR A-42, Arco CF&I (sec. 15-35s-68w)

Rocky Mountain Region
1675 Broadway, Suite 1500
Denver, CO 80202
(303) 573-2772
Lab Team Leader - Sheila Hernandez
(915) 495-7240

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 Vermejo Coals 912'- 2260'		
Sample Point:	WELLHEAD		

Summary	
Sampling Date:	11/28/01
Analysis Date:	12/7/01
Analyst:	JAMES AHRLETT
TDS (mg/l or g/m3):	3526.8
Density (g/cm3, tonne/m3):	1.002
Anion/Cation Ratio:	1
Carbon Dioxide:	
Oxygen:	
Comments:	

Analysis of Sample 176413 @ 75 °F

Anions	mg/l	meq/l	Cations	mg/l	meq/l
Chloride:	159.0	4.48	**Sodium:**	994.3	43.25
Bicarbonate:	2313.0	37.91	**Magnesium:**	0.1	0.
Carbonate:	39.0	1.3	**Calcium:**	0.1	0.
Sulfate:	4.0	0.08	**Strontium:**	0.3	0.01
Phosphate:			**Barium:**	2.0	0.03
Borate:			**Iron:**	9.0	0.33
Silicate:			Potassium:	6.0	0.15
			Aluminum:		
Hydrogen Sulfide:			Chromium:		
pH at time of sampling:			Copper:		
pH at time of analysis:		8.41	Lead:		
pH used in Calculation:		8.41	Manganese:		
			Nickel:		

Conditions		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	-6.2*	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

Rocky Mountain Region
1675 Broadway, Suite 1500
Denver, CO 80202
(303) 573-2772
Lab Team Leader - Sheila Hernandez
(915) 495-7240

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 Coals 1025' - 2411'		
Sample Point:	WELLHEAD		

Summary	
Sampling Date:	11/28/01
Analysis Date:	12/7/01
Analyst:	JAMES AHRLETT
TDS (mg/l or g/m3):	2258.1
Density (g/cm3, tonne/m3):	1.001
Anion/Cation Ratio:	1
Carbon Dioxide:	
Oxygen:	
Comments	

Analysis of Sample 195614 @ 75 °F

Anions	mg/l	meq/l	Cations	mg/l	meq/l
Chloride:	130.0	3.67	**Sodium:**	633.7	27.56
Bicarbonate:	1478.0	24.22	**Magnesium:**	0.1	0.
Carbonate:	0.0	0.	**Calcium:**	0.1	0.
Sulfate:	3.0	0.06	**Strontium:**	0.2	0.
Phosphate:			**Barium:**	1.0	0.01
Borate:			**Iron:**	5.0	0.18
Silicate:			Potassium:	7.0	0.18
			Aluminum:		
Hydrogen Sulfide:			Chromium:		
			Copper:		
pH at time of sampling:			Lead:		
pH at time of analysis:		8.21	Manganese:		
pH used in Calculation:		8.21	Nickel:		

Conditions		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	-1.30	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.

Rocky Mountain Region
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Denver, CO 80202
(303) 573-2772
Lab Team Leader - Sheila Hernandez
(915) 495-7240

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		
Formation:	~~UNKNOWN~~ Raton and Vermejo Coals 1172' - 2496'		
Sample Point:	WELLHEAD		

Summary	
Sampling Date:	11/28/01
Analysis Date:	12/7/01
Analyst:	JAMES AHRLETT
TDS (mg/l or g/m3):	4133.5
Density (g/cm3, tonne/m3):	1.002
Anion/Cation Ratio:	1
Carbon Dioxide:	
Oxygen:	
Comments:	

Analysis of Sample 182107 @ 75 °F

Anions	mg/l	meq/l
Chloride:	252.0	7.11
Bicarbonate:	2693.0	44.14
Carbonate:	0.0	0.
Sulfate:	3.0	0.06
Phosphate:		
Borate:		
Silicate:		
Hydrogen Sulfide:		
pH at time of sampling:		
pH at time of analysis:		8.29
pH used in Calculation:		8.29

Cations	mg/l	meq/l
Sodium:	1167.3	50.78
Magnesium:	0.1	0.
Calcium:	0.5	0.02
Strontium:	0.6	0.01
Barium:	2.0	0.03
Iron:	7.0	0.25
Potassium:	8.0	0.2
Aluminum:		
Chromium:		
Copper:		
Lead:		
Manganese:		
Nickel:		

Conditions		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	-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 nearly the same as the CO2 partial pressure.

Well File

Champion
Technologies, Inc.
Committed To Improvement

Water Analysis Report

Customer: El Paso Energy 05/05/2000

Address: Box 190

City: Raton State: NM Zip: 87740-

Attention: Larry Casey Date Sampled: 05/01/2000

CC1: Date Received: 05/05/2000

CC2: SALESMAN NAME: Larry Stanley

LEASE: VPC SAMPLE POINT: Wellhead

WELL: 39 WDW REMARKS: Entrada Formation and Glorieta Fmt.
SE¼ Sec. 4, 35S, 66E Las Animas County, Colorado (10.3 mi. NE)

CHLORIDE (MG/L):	33936
SULFATE (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 pH:	5.7
TEMPERATURE:	100
DISSOLVED C02 (PPM):	2
MOLE PERCENT CO2 IN GAS:	0.00
DISSOLVED H2S (PPM):	0.0
PRESSURE (PSIA):	25
SODIUM (PPM):	14365
TDS (MG/L):	55742
RESISTIVITY:	0.1148
IONIC STRENGTH:	0.97

CALCITE (CaCO3) SI:	-0.92	CALCITE PTB:	N/A
GYPSUM (CaSO4) SI:	-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 calculated at STP.

Rocky Mountain Region
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Lab Team Leader - Sheila Hernandez
(915) 495-7240

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 Vermejo Coals 932' - 2284'		
Sample Point:	WELLHEAD		

Summary	
Sampling Date:	11/28/01
Analysis Date:	12/7/01
Analyst:	JAMES AHRLETT
TDS (mg/l or g/m3):	3720
Density (g/cm3, tonne/m3):	1.002
Anion/Cation Ratio:	1.000000
Carbon Dioxide:	
Oxygen:	
Comments:	

Analysis of Sample 182109 @ 75 °F

Anions	mg/l	meq/l
Chloride:	165.0	4.65
Bicarbonate:	2481.0	40.66
Carbonate:	13.0	0.43
Sulfate:	3.0	0.06
Phosphate:		
Borate:		
Silicate:		
Hydrogen Sulfide:		
pH at time of sampling:		
pH at time of analysis:		8.33
pH used in Calculation:		8.33

Cations	mg/l	meq/l
Sodium:	1047.2	45.55
Magnesium:	0.1	0.
Calcium:	0.1	0.
Strontium:	0.5	0.01
Barium:	2.0	0.03
Iron:	0.1	0.
Potassium:	8.0	0.2
Aluminum:		
Chromium:		
Copper:		
Lead:		
Manganese:		
Nickel:		

Conditions		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	-1.09	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	-3.82	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.

ATTACHMENT D"

Rocky Mountain Region
1675 Broadway, Suite 1500
Denver, CO 80202
(303) 573-2772
Lab Team Leader - Sheila Hernandez
(915) 495-7240

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 Coal 1001'-1224'	
Sample Point:	WELLHEAD		

Summary	
Sampling Date:	11/28/01
Analysis Date:	12/7/01
Analyst:	JAMES AHRLETT
TDS (mg/l or g/m3):	1799.3
Density (g/cm3, tonne/m3):	1.001
Anion/Cation Ratio:	0.999999
Carbon Dioxide:	
Oxygen:	
Comments:	

Analysis of Sample 195611 @ 75 °F

Anions	mg/l	meq/l	Cations	mg/l	meq/l
Chloride:	85.0	2.4	**Sodium:**	515.0	22.4
Bicarbonate:	1148.0	18.81	**Magnesium:**	0.1	0.
Carbonate:	40.0	1.33	**Calcium:**	0.1	0.
Sulfate:	3.0	0.06	**Strontium:**	0.0	0.
Phosphate:			Barium:	1.0	0.01
Borate:			**Iron:**	0.1	0.
Silicate:			Potassium:	7.0	0.18
			Aluminum:		
Hydrogen Sulfide:			Chromium:		
pH at time of sampling:			Copper		
			Lead:		
pH at time of analysis:		8.52	Manganese:		
pH used in Calculation:		8.52	Nickel:		

Conditions		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	-1.09	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.

"Attachment E"

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 December, 2002.

DR Lankford

Donald R. Lankford, Petroleum Engineer
El Paso Energy Raton, L.L.C.
PO Box 190
Raton, NM 87740

Legal Notices

1 LEGALS

tice of Application for id Injection Well rmit

Paso Raton, L.L.C., ie Greenway Plaza, uston, Texas 77046, seeking administra- approval from the w Mexico Oil nservation Division complete their rmejo Park Ranch #07 as a water dis- sal well. The well is ated in Section 01, 1N, R19E, Colfax unty New Mexico. proposed disposal ervals are the kota/Purgatoire ndstone 6,400' - 90'. Entrada ndstone 6,940' - 40', and Glorieta ndstone 7,320' - 20'. El Paso Raton, C. intends to inject naximum of 18,000 s of produced forma- water per day at a ximum injection ssure of 2,000 psi. rested parties must objections or uest for hearing with Oil Conservation sion, 1220 S. St. ncis, Santa Fe, New xico 87505 within 15 s of this notice.

ink you,

DR Lankford

nald R. Lankford, roleum Engineer

Paso Raton, L.L.C.

Box 190

on, NM 87740

5) 445-6721

5) 445-6788 Fax

Legal No. 375501

olished in The Raton ange: 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 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,

/s/ DR Lankford

Dorald R. Lankford, PE

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: December 31, 2001

151 LEGALS

COLFAX COUNTY

BOARD OF COMMISSIONERS

Regular Meeting

January 8, 2002

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

5. Statutory Requirements

1. Resolution 2002-01 – Approve Open Meetings Resolution

2. Request Statement of Receipts & Expenses

3. Establish County Depository

4. Establish County Investment Policy

6. Reports – CCDC, Road, DWI & E-911

7. 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

13. Audit – Fiscal

151 LEGALS

14. Ordinance 2002-01 – Noxious Weed Ordinance – Introduction

15. Dispatch Agreement – City of Raton

16. Road Review Committee – CR – C-49 & C-50 – 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 & Balance

6. Resolution 2002-07 – Budget Increase – E.N. Ambulance Carry Over Difference in Encumbered & 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 Raton Range: December 31, 2001

"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 Lankford

Donald R. Lankford, PE
El Paso 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)

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

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

J.M. Duckworth
Project Manager

devon
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

J.M. Duckworth
Project Manager

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised 4-1-98

AMENDED APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal _____Storage
Application qualifies for administrative approval? ___X___Yes _____No

II. 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.

IV. Is this an expansion of an existing project? _____Yes ___X___No
If yes, give the Division order number authorizing the project: _____

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.

IX. 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 Engineer

SIGNATURE: _____ DATE: _____

* 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

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 # 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.

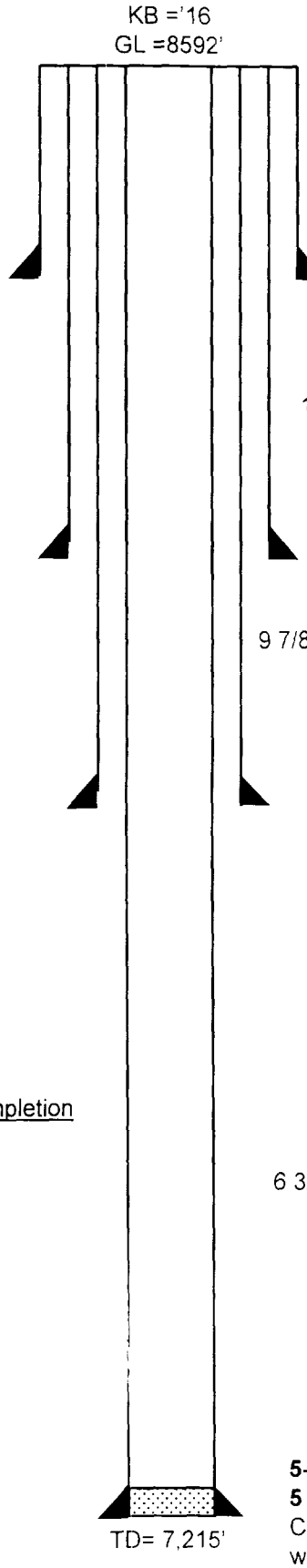
XIII. Proof of Notice attached as "Attachment E"

E. Paso Energy Raton, L.L.C. offsets Section 1 on all sides.

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

WELLBORE SCHEMATIC

Lease: VPRE 34 WDW
Field: VPR - York Canyon
County: Colfax
State: New Mexico



Tree: 2-1/16" 5,000 psi
Packer Fluid: Produced fluids
Tubing: 3 1/2" @ 6,100'

16", 65 ppf, H-40 @ 330'
Cement w/ 223 sks Midcon II mixed 14 ppg with 1.66 cuft/sk yield (100% excess)

10 3/4", 45.5 ppf, J-55 @ 2,681'
Cement w/lead 596 sks Midcon II mixed 12.5 ppg with 2.29 cuft/sk yield; tail 237 sks Midcon II mixed 13 ppg with 2.04 cuft/sk yield (75% excess)

7 5/8", 29.4 ppf, N-80, KB-5,397'
7 5/8", 26.4 ppf, N-80, 5,397'-6,038'
DV Tool @ 3953'
Stage 1:Cement w/506 sks Prem SD-300 mixed 15.8 ppg with 1.15 cuft/sk yield
Stage 2: Cement w/306 sks STD type I&II mixed 13 ppg with 2.03 cuft/sk yield. (40% excess)

Injection Zones Proposed for Completion

Dakota	6120'-6320'
Entrada	6730'-6830'
Glorieta	7090'-7160'

5-1/2", 17 ppf, L-80, LT&C, KB-5727'
5 1/2", 17 ppf, P110, SLT flush jt, 5727'-7133'
Cement w/160 sks Prem SD-300 mixed 15.9 ppg with 1.5 cuft/sk yield. (35% excess)

Prepared by: William M. Ordemann
Date: March 20, 2002

El Paso Energy Raton, LLC
GEOLOGIC WELL DRILLING REPORT

DATE: 2/20/02
RIG: Unit Rig #1
SUPV: Sierra
REPORT BY: Mike Korte

WELL NAME: VPR E - 34 WDW API number:

FIELD: RATON BASIN CBM PROJECT SEC. 5 TW. 31N RANGE 19E
FEET FNL: FEET FWL: POD E AREA YORK CANYON COUNTY: COLFAX STATE: NM
ELEV. GL.: 8,592 SPUD: 2/4/01 TD: LOG: PROJECT SPECIFIC: WATER DISP. WELL
MUD LOGGERS: no mud logging CSG PT. GEOLOGIST: MIKE KORTE OP. HOLE LOGGERS:
Elevation is est. (survey has been completed) requires updated elevation and survey loc. Description

DRILLERS DEPTH: 2,742 13"bit / surface 18.5" bit
LOGGERS DEPTH: no open hole log run

First significant gas:		subsea:	8592	ft.
RATON FM. TOP:	50	subsea:	8542	ft.
VERMEJO FM. TOP:	2,220	subsea:	6372	ft.
TRINIDAD FM. TOP:	2,552	subsea:	6040	ft.

Surface Csg.: 16" Set @: 328 ft.
Intermediate Csg.: 10 3/4" Set @: 2674 ft.
Cement Inter. Csg.: Circ. Cmt.: to surface

Basal Vermejo coal 2,532'-2,539'
Pierre transition 2,655', Pierre Shale 2,670'

Raton fm. CBM (ft.)
Vermejo fm. CBM (ft.)

DRILLERS DEPTH: 6,065
LOGGERS DEPTH:

First significant gas:	3,588	subsea:	5004	ft.
PIERRE FM. TOP:	2,655	subsea:	5937	ft.
Lower Pierre member:	4,340	subsea:	4252	ft.
NIOBRARA FM. TOP:	4,955	subsea:	3637	ft.
Smokey Hill Member:	4,955	subsea:	3637	ft.
Timpas Member:	5,570	subsea:	3022	ft.
Fort Hayes Member:	5,716	subsea:	2876	ft.
BENTON FM TOP:	5,740	subsea:	2852	ft.
Codell Member:	5,740	subsea:	2852	ft.
Carlile Sh. Member:	5,784	subsea:	2808	ft.
Greenhorn Ls. Member:	5,910	subsea:	2682	ft.
Graneros Sh. Member:	5,934	subsea:	2658	ft.
Dakota silt zone:	6,065	subsea:	2527	ft.
DAKOTA FM TOP:		subsea:	8592	ft.

based on CFI correlation well the Dakota ss may be as high as 6090'

Intermediate Csg.: Set @: ft.
Cement Inter. Csg.: Circ. Cmt.:

Intermediate 10 3/4 tops are based on drilling through to depth 6,065, 2/20/02
Intermediate 5 1/2" tops are projections

gas flows while drilling
Gas estimates: 3,588' 500 Mcfd rate
Gas estimates: 4,790' 600 Mcfd rate
Gas estimates: 5,018' 4,000 - 5,000 Mcfd rate

DRILLERS DEPTH:
LOGGERS DEPTH:

First Injection zone:	6,120	subsea:	2472	ft.
DAKOTA FM TOP:	6,120	subsea:	2472	ft.
Dakota SS A member:	6,120	subsea:	2472	ft.
Dakota SS B member:	6,190	subsea:	2402	ft.
Purgatoire SS member:	6,250	subsea:	2342	ft.
MORRISON FM TOP:	6,320	subsea:	2272	ft.
Wanakah member:	6,680	subsea:	1912	ft.
ENTRADA FM TOP:	6,730	subsea:	1862	ft.
DOCKUM FM TOP:	6,830	subsea:	1762	ft.
Glorieta ss member:	7,090	subsea:	1502	ft.
Yeso member:	7,160	subsea:	1432	ft.
SANGRE DE CRISTO FM:	7,230	subsea:	1362	ft.

Production Liner: Set @: ft.
Cement Liner in place:

SS med to coarse grained sli calc, silica cement with minor carbonaceous shale, trace of coal
SS as above A member, mostly crs grained, minor chert conglomeratic ss and carb shale
SS poorly sorted med-crse conglomeratic quartz grained friable, sli calc.
Jurassic Age: SH & SS Variegated shales, red green, gray maroon, minor tan hard ls, wh f-m gr ss
SS f gr wh to orange mod cmt sli calc glauconitic fspr, minor gypsum, fxn oolitic ls
SS wh -lt gn f-m gr calc. well rd and sorted frsted grains minor uncons SS
Triassic Age: SHALE Variegated (red) mica calc, minor thin beds of f gr limy gray SS
Permian Age: SS orange to pink to white med grained silica cement
SS orange and dolomitic cemented silty, may become coarse arkosic ss
SHALE AND ARKOSIC SS (WASH) dominantly red shale, siltstone and red arkosic crs sediments

NOTE: Injection zones expected to be encountered

Dakota SS A member:
Dakota SS B member:
Purgatoire SS member:
ENTRADA FM TOP:
Glorieta ss member:

NOTE: VPR E-34 WDW injection zones are projections based on drilling E 34 to 6065, VPR A-42, Arco CF&I (sec 15-35s-68w)