

APPLICATION FOR AUTHORIZATION TO INJECT

- ✓ I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ No
- ✓ II. OPERATOR: Sonat Raton, L.L.C.
ADDRESS: P. O. Box 190; Raton, NM 87740-0190
CONTACT PARTY: Don Lankford PHONE: 505-445-4621
- ✓ 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 _____ No
If yes, give the Division order number authorizing the project: N/A
- ✓ 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.

APR - 4 2000
OIL CONSERVATION DIVISION

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: Ann E. Ritchie 915 6846381 TITLE: Regulatory Agent
SIGNATURE: [Signature] DATE: 4/3/2000

* 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: 7/22/99

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footacre location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Sonat Raton, L.L.C.
 Vermejo Park Ranch "A", Well #42 Water Disposal
 1619.4' FNL & 2510.6' FWL
 Section 1, T-31N, R-19-E
 Colfax County, New Mexico

Attachment A

III. Well Data

Section A:

1. Lease Name: Vermejo Park Ranch "A", Well #42 (Water Disposal)
 Location: 1619.4' FNL & 2510.6' FWL, Sec. 1, T-31-N, R-19-E, Colfax Co. NM
2. Casing & Cementing (Wellbore Diagram attached)

Proposed:

Casing Size	Setting Depth	Sacks Cement	Hole Size	Top of Cement
13 3/8"	350'	200 sx	17 1/2"	Surface
10 3/4"	2600'	500 sx	12 1/4"	Surface
7 5/8"	6440'	1100 sx	9 7/8"	Surface
5 1/2"	7200'	750 sx	6 3/4"	Surface

3. Tubing: 2 7/8" 6.5# J-55 @ +/- 6350'
4. Packer: Baker Model R-3 @ +/- 6350'

Section B:

1. Injection Formation: Dakota/Entrada Sand
 Field Name: Vermejo Park Ranch
2. Injection Interval: Dakota/Entrada Sandstone +/- 6400' – 7350' (perforated interval)
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 Formation at approximately 2300'
 Next Lower gas/oil zone: None

IV. This is an expansion of an existing project.

V. Map attached – "Attachment B", two mile & 1/2 mile radius area of review.

Sonat Raton, L.L.C.
Vermejo Park Ranch "A", Well #42 Water Disposal
1619.4' FNL & 2510.6' FWL
Section 1, T-31N, R-19-E
Colfax County, New Mexico

VI. Area of Review

There are 4 wells within one half mile of the proposed disposal well, penetration is noted on forms attached.

VII. Operation Data:

1. Proposed average daily injection volume: 14,000 BWPD
Proposed maximum daily injection volume: 20,000 BWPD
2. This well will be a closed system.
3. Proposed average daily injection pressure: 875 psi
Proposed maximum daily injection pressure: 2000 psi due to step rate
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. Chlorides in the Entrada Formation are estimated to be between 1133 to 11,795 PPM as described in the "Attachment C" C-1, C-2 and C-3 Water Analysis Pantechs Laboratories taken from area wells – as available
Chemical analysis of water zones penetrated while drilling were obtained by Roy Johnson, District 4, Oil Conservation Division, Santa Fe, NM.

VII. Geological Data:

Information pertaining to the lithological details and thickness are limited to the Eustace #1, located in Section 36, T-32-N, R-19-E, Unit J, 2500' FSL & 2300' FEL. Logs on the Eustace #1 were previously submitted to the Oil Conservation Division. (Eustace #1 Form C-103 & C-105 attached)

VIII. Stimulation Program

Anticipated frac job will be 200,000# 20/40 sand w/cross linked gell @ 5# per gallon.

X. Logs and Test Data

Well has not been logged to date, the Oil Conservation Division, Att: Roy Johnson, Santa Fe, NM, is on the distribution list for all logs

XI. Fresh Water

Roy Johnson, OCD took fresh water samples, during drilling

Sonat Raton, L.L.C.
Vermejo Park Ranch "A", Well #42 Water Disposal
1619.4' FNL & 2510.6' FWL
Section 1, T-31N, R-19-E
Colfax County, New Mexico

XII. Statement

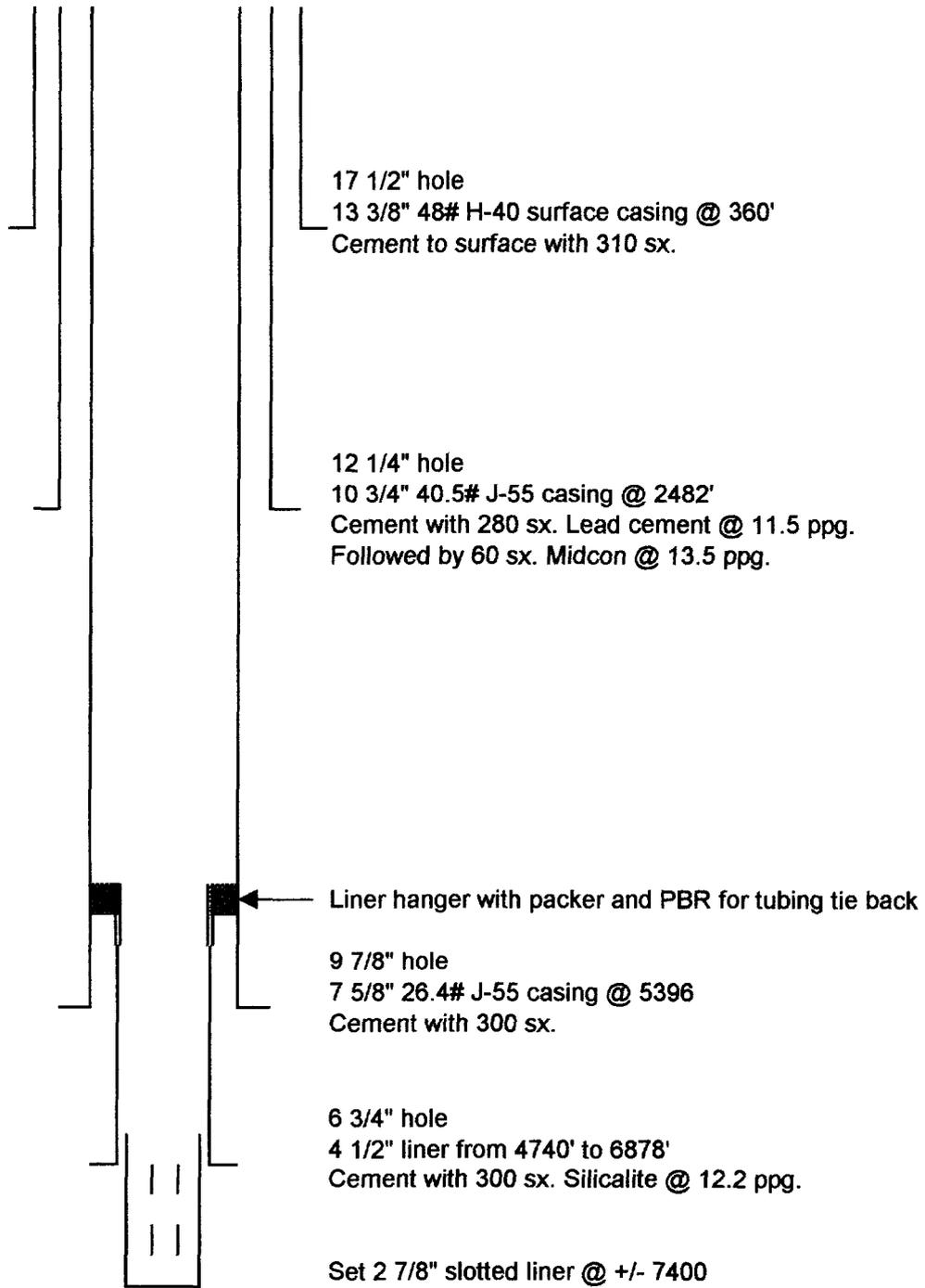
To the best of our current knowledge of the area there is no evidence of open
Faults or other hydrologic connection between and disposal zone and underground
Sources of drinking water.

XIII. Proof of Notice attached as "Attachment D"

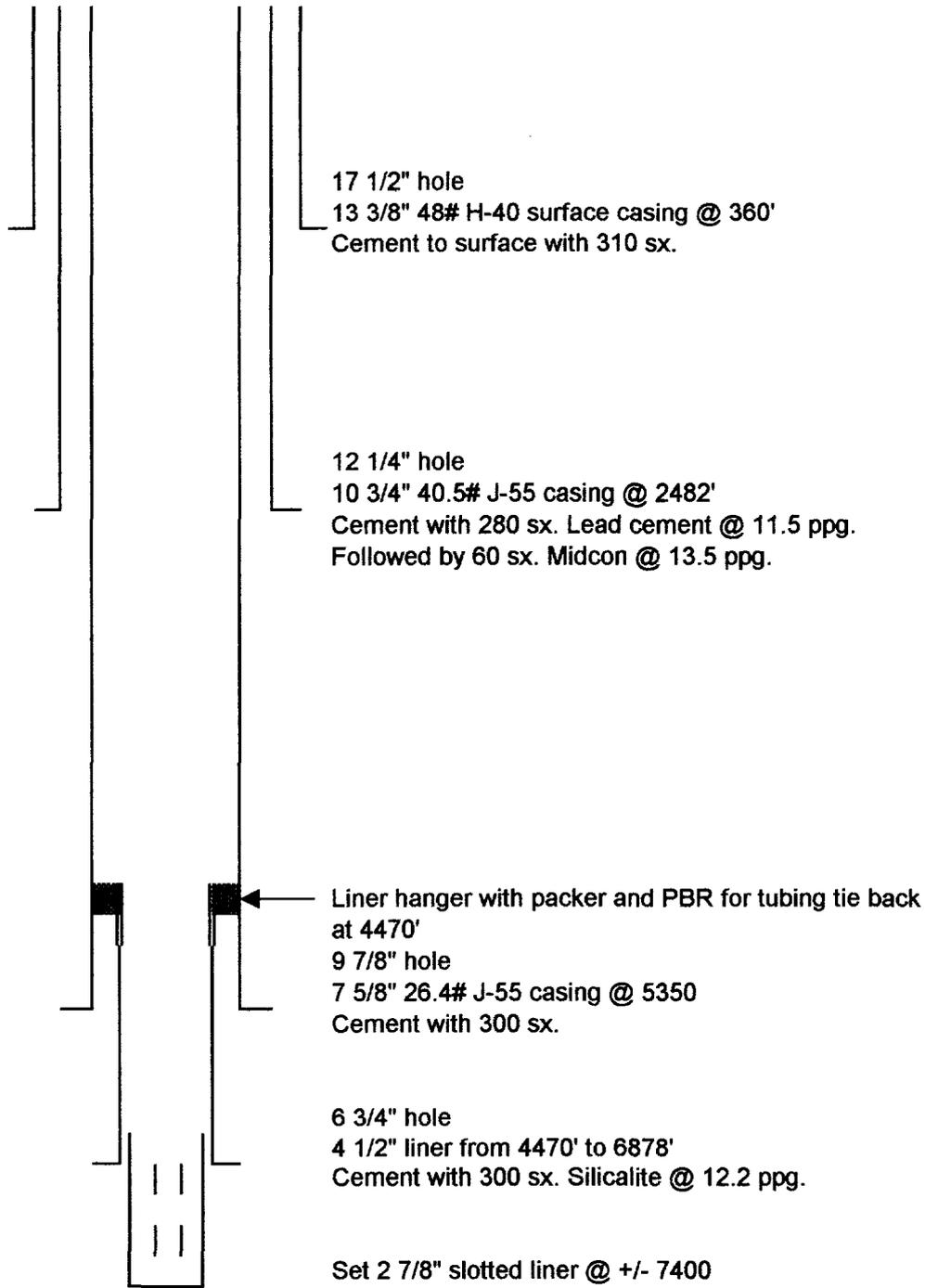
Sonat Raton, L.L.C. offsets Section 1 on all sides.

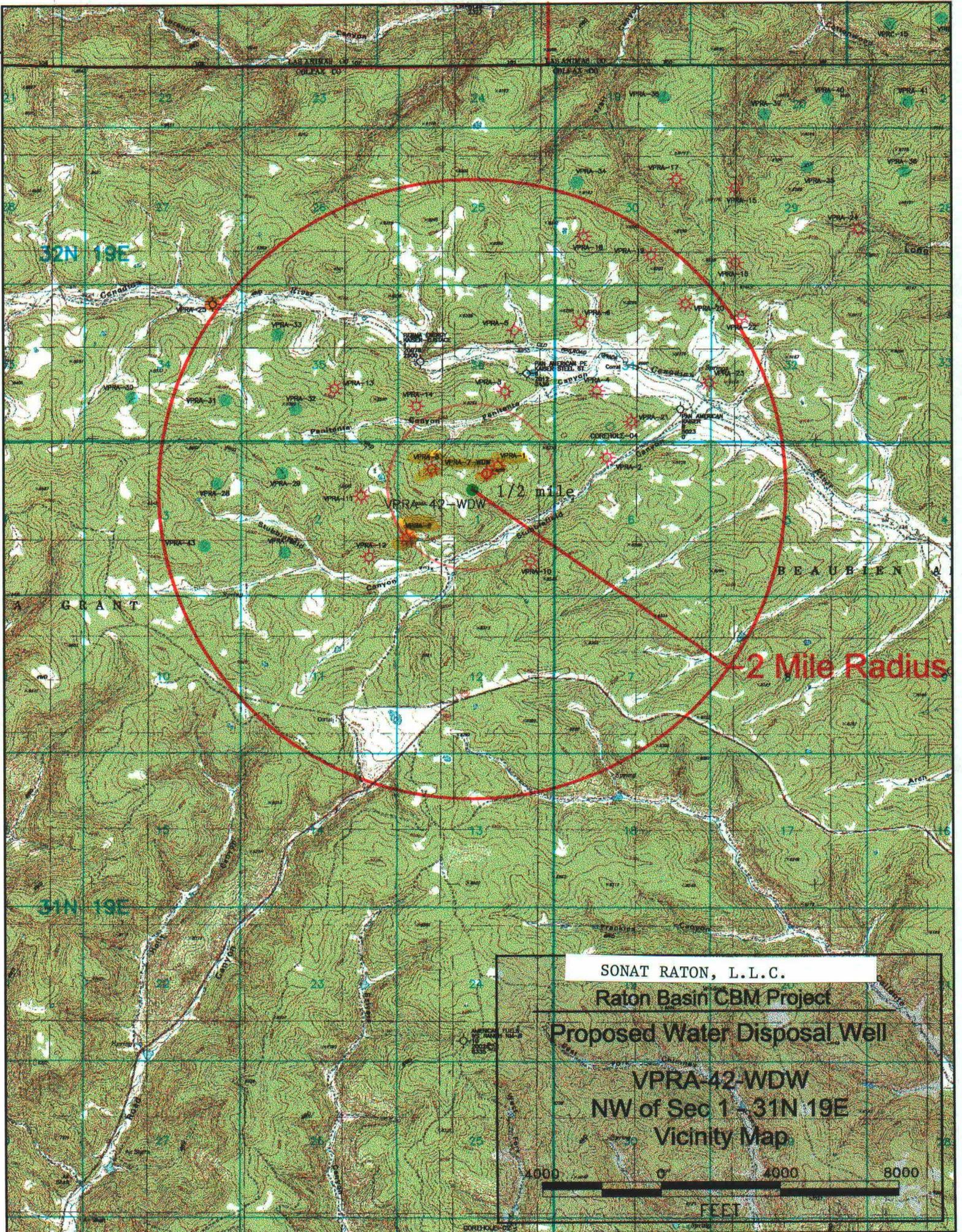
XIV. Certification: Form C-108 "Application for Authorization to Inject"

VPR'A' -42 WDW
Revised Casing & Cementing Program



VPR'A' -42 WDW
Revised Casing & Cementing Program





32N 19E

31N 19E

SONAT RATON, L.L.C.
 Raton Basin CBM Project
 Proposed Water Disposal Well
 VPRA-42-WDW
 NW of Sec 1 - 31N 19E
 Vicinity Map

4000 0 4000 8000
 FEET

2 Mile Radius

1/2 mile

VPRA-42-WDW

BEAUBIEN

GRANT

DEAN SPERRY
WATER DISTRICT

DAN AMERSON
WATER DISTRICT

CORRIQUE-04

District II
French Dr., Hobbs, NM 87240
District III
11 South First, Artesia, NM 87210
District IV
1000 Rio Brazos Rd., Aztec, NM 87410
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

WELL API NO. 30-007-20116
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name:
8. Well No. VPR 'A' 7
9. Pool name or Wildcat
10. Elevation (Show whether DR, RKB, RT, GR, etc.) 8272'(GR)

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:
Oil Well Gas Well Other Coalbed Methane

2. Name of Operator
SONAT RATON, L.L.C.

3. Address of Operator
P.O. Box 190; Raton, NM 87740

4. Well Location
Unit Letter B 1074 feet from the North line and 2276 East Line.
Section 1 Township 31 N Range 19 E NMPM Colfax County

11. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input checked="" type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input checked="" type="checkbox"/>	
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompilation.

7/1/99: RU Thornton Rig 9. Spud well at 5 am.
7/2/99: Drill 17 1/2" hole to 356'
7/3/99: Ran and set 13 3/8" 48# H-40 surface casing at 350'
Cement with 300 sx. Cement. Circ. 32 sx. to surface.
7/6/99: Drill 12 1/4" hole to 2662'. Ran open hole logs.
Ran and set 9 5/8" 36# J-55 surface casing at 2662'
Cement with 525 sx. No circ. To surface.
7/8/99: Pumped Bradenhead squeeze with 300 sx. Cement to surface.
7/15/99: Drilled 8 3/4" hole to 6416'. Ran open hole logs DIL/Caliper/GR.
7/19/99: Conditioning hole to run 7" casing.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE DR Lankford TITLE Sr. Petroleum Engineer
DATE 7/21/99

Type or print name Donald R. Lankford Telephone No. (505)445-4620
This space for State Use
APPROVED BY [Signature] TITLE DISTRICT SUPERVISOR DATE 7/22/99
Conditions of approval, if any:

District I
1625 N. French Dr., Hobbs, NM 87240
District II
811 South First, Artesia, NM 87210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

WELL API NO. 30-007-20116
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name: VPR 'A'
8. Well No. - 07
9. Pool name or Wildcat
10. Elevation (Show whether DR, RKB, RT, GR, etc.) 8275'(GR)

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:
Oil Well Gas Well Other Coalbed Methane

2. Name of Operator
SONAT RATON, L.L.C.

3. Address of Operator
P.O. Box 190; Raton, NM 87740

4. Well Location
Unit Letter B : 1074 feet from the North line and 2276 feet from the East line
Section 01 Township 31N Range 19 E NMPM Colfax
County

11. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
PLUG AND ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input checked="" type="checkbox"/>
CHANGE PLANS <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input checked="" type="checkbox"/>
MULTIPLE COMPLETION <input type="checkbox"/>	OTHER: <input type="checkbox"/>
OTHER: <input type="checkbox"/>	

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.
07/25/99: Ran and set 7", 23#, J-55 casing at 5745'. Cement with 330 sx. RDMO United Rig #9.
08/02/99: MIRU Leed Rig #91
08/15/99: Wash to T.D. of 6620'. Condition hole.
08/16/99: Run open hole logs. Ran and set 5", 18#, P-110 liner @ 6619' (Top of liner 5562').
08/17/99: Cement with 200 sx.
08/18/99: CO liner to 6575'.
08/20/99: Squeeze liner top with 200 sx cement.
08/21/99: Perforate 4370-72 with 45PF. Cement with 500 sx.
08/22/99: Perforate 3150-52' with 4 SPF. Set cement retainer at 3039'. Cement with 500 sx. with 60-100% returns.
08/26/99: C.O. to linertop @ 5562'. Run CBL
08/27/99: C.O. to 6575'.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE W. P. Patscher TITLE Petroleum Eng. Advisor DATE 9/2/99

Type or print name W. P. Patscher Telephone No. 505-445-46

APPROVED BY R. E. Johnson TITLE DISTRICT SUPERVISOR DATE 9/27/99

Conditions of approval, if any:

District I
 1625 N. French Dr., Hobbs, NM 87240
 District II
 811 South First, Artesia, NM 87210
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION
 2040 South Pacheco
 Santa Fe, NM 87505

WELL API NO.
 30-007-20123

5. Indicate Type of Lease
 STATE FEE

State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:
 OIL WELL GAS WELL DRY OTHER COALBED METHANE

b. Type of Completion:
 NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. RESVR. OTHER

7. Lease Name or Unit Agreement Name
 VPR 'A'

2. Name of Operator
 SONAT RATON, L.L.C.

8. Well No. 09

3. Address of Operator
 P.O. BOX 190: RATON, NM 87740

9. Pool name or Wildcat

4. Well Location
 Unit Letter L : 1979 Feet From The South Line and 368 Feet From The West Line
 Section 01 Township 31N Range 19E NMPM Coffax
 County

10. Date Spudded 07/29/99	11. Date T.D. Reached 07/31/99	12. Date Compl. (Ready to Prod.) 09/22/99	13. Elevations (DF& R(B. RT, GR, etc.) 8274' (GR)	14. Elev. Casinghead 8273'
15. Total Depth 2520'	16. Plug Back T.D. 2368'	17. If Multiple Compl. How Many Zones? Zones?	18. Intervals Drilled By O-TD	Rotary Tools O-TD
19. Producing Interval(s), of this completion - Top, Bottom, Name 1378 - 1382; 1346 - 1350; 1300 - 1304; 1286 - 1290; 1127 - 1131; 1113 - 1118; 1086 - 1091; 1032 - 1036 RATON COALS				20. Was Directional Survey Made NO
21. Type Electric and Other Logs Run CDL; Induction Log; CBL			22. Was Well Cored NO	

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8	23#	353'	11"	100 SKS	28' NONE
5 1/2	15.50#	2369'	7 7/8"	300 SKS	939' NONE

24. LINER RECORD				25. TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET
					2 7/8	1406

26. Perforation record (interval, size, and number) Shot 4 SPF .48 dia. 1378 - 1382; 1346 - 1350; 1300 - 1304; 1286 - 1290 1127 - 1131; 1113 - 1118; 1086 - 1091; 1032 - 1036 136 holes	27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	1032 - 1382	2500 GAL OF 71/2% hcl; 160,000 lbs of 20/40; 131,000 lbs. of 16/30; 1,689,000 scf of N2 (70 quality foam)

28. PRODUCTION

Date First Production 10/01/99		Production Method (Flowing, gas lift, pumping - Size and type pump) 30-N-095 PC PUMP			Well Status (Prod. or Shut-in) PROD.		
Date of Test 09/23/99	Hours Tested 24	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF TSTM	Water - Bbl. 88	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure 7 PSI	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF TSTM	Water - Bbl. 88	Oil Gravity - API - (Corr.)	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)
 Used for fuel or vented N2

Test Witnessed By
 LARRY CASEY

30. List Attachments

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

Signature 	Printed Name Donald R. Lankford	Title Sr. Petroleum Engineer	Date 09/30/99
---------------	------------------------------------	---------------------------------	------------------

French Dr., Hobbs, NM 87240
District II
811 South First, Artesia, NM 87210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

WELL API NO.
30-007-20110

5. Indicate Type of Lease
STATE FEE

State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:
OIL WELL GAS WELL DRY OTHER COALBED METHANE

b. Type of Completion:
NEW WORK WELL OVER DEEPEN PLUG BACK DIFF. RESVR. OTHER

7. Lease Name or Unit Agreement Name
VPR 'A'

2. Name of Operator
SONAT RATON, L.L.C.

8. Well No. **01**

3. Address of Operator
P.O. BOX 190: RATON, NM 87740

9. Pool name or Wildcat

4. Well Location
Unit Letter **B** : **974** Feet From The **North** Line and **1858** Feet From The **East** Line
Section **01** Township **31N** Range **19E** NMPM Colfax
County

10. Date Spudded 06/15/99 11. Date T.D. Reached 06/17/99 12. Date Compl. (Ready to Prod.) 09/22/99 13. Elevations (DF& R(B. RT, GR, etc.) 8272' GR 14. Elev. Casinghead 8271'

15. Total Depth 2547' 16. Plug Back T.D. 2490' 17. If Multiple Compl. How Many Zones? 18. Intervals Drilled By 19. Rotary Tools O-TD 20. Cable Tools

19. Producing Interval(s), of this completion - Top, Bottom, Name
2426 - 2444; 2376 - 2380; 2386 - 2390; 2250 - 2253;
2264 - 2270; 2276 - 2279; 2291 - 2294
VERMEJO COALS

20. Was Directional Survey Made
No

21. Type Electric and Other Logs Run
CDL; Induction Log; CBL

22. Was Well Cored
NO

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8	24#	353'	11"	152 SKS	NONE
5 1/2	17#	2492'	7 7/8"	300 SKS	NONE

24. LINER RECORD				25. TUBING RECORD			
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 7/8	2435	

26. Perforation record (interval, size, and number)			27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
Interval	Size	Number	Depth Interval	Amount and Kind Material Used
2426 - 2444; 2264 - 2270	48" dia.	Shot 4 SPF	2291 - 2444	1500 gals of 71/2 HCL; 250,000 lbs. of 20/40; 50,000 lbs of 16/30 1,245,000
2376 - 2380; 2276 - 2279		48" dia. Holes		SCF OF N2 (70 QUALITY FOAM)
2386 - 2390; 2291 - 2294		164 holes total		
2250 - 2253				

28. PRODUCTION

Date First Production 10/01/99 Production Method (Flowing, gas lift, pumping - Size and type pump) 30-N-095 PC PUMP Well Status (Prod. or Shut-in) PROD.

Date of Test 09/23/99 Hours Tested 24 Choke Size Prod'n For Test Period Oil - Bbl Gas - MCF TSTM Water - Bbl. 185 Gas - Oil Ratio

Flow Tubing Press. Casing Pressure 7 PSI Calculated 24-Hour Rate Oil - Bbl. Gas - MCF TSTM Water - Bbl. 185 Oil Gravity - API - (Corr.)

29. Disposition of Gas (Sold, used for fuel, vented, etc.) Used for fuel or vented N2 Test Witnessed By LARRY CASEY

30. List Attachments

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

Signature *DR Lankford* Printed Name Donald R. Lankford Title Sr. Petroleum Engineer Date 09/30/99

Case - 5 copies

District I
1625 N. French Dr., Hobbs, NM 87240
District II
811 South First, Artesia, NM 87210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

WELL API NO.
30-007-20117

5. Indicate Type of Lease
STATE FEE

State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:
OIL WELL GAS WELL DRY OTHER COALBED METHANE

b. Type of Completion:
NEW WELL WORK OVER DEEPEN PLUG BACK DIFF. RESVR. OTHER

2. Name of Operator
SONAT RATON, L.L.C.

3. Address of Operator
P.O. BOX 190: RATON, NM 87740

7. Lease Name or Unit Agreement Name
VPR 'A'

8. Well No. 08

9. Pool name or Wildcat

4. Well Location
Unit Letter D 950 Feet From The North Line and 1195 Feet From The West Line
Section 01 Township 31N Range 19E NMPM Colfax
County

10. Date Spudded 07/29/99	11. Date T.D. Reached 07/30/99	12. Date Compl. (Ready to Prod.) 09/22/99	13. Elevations (DF& R(B. RT, GR, etc.) 8274' (GR)	14. Elev. Casinghead 8273'
15. Total Depth 2618'	16. Plug Back T.D. 1775'	17. If Multiple Compl. How Many Zones? Zones?	18. Intervals Drilled By Rotary Tools O-TD	Cable Tools
19. Producing Interval(s), of this completion - Top, Bottom, Name 2349 - 2353; 2246 - 2250; 1459 - 1463; 1409 - 1413; 1397 - 1401; 1236 - 1240; 1207 - 1212; 1182 - 1185 VERMEJO COALS			20. Was Directional Survey Made NO	
21. Type Electric and Other Logs Run CDL; Induction Log; CBL			22. Was Well Cored NO	

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8	23#	351'	11"	100 SKS	26' NONE
5 1/2	15.50#	2593'	7 7/8"	300 SKS	1163' NONE

24. LINER RECORD

25. TUBING RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2 7/8	2370	

26. Perforation record (interval, size, and number)
2349 - 2353; 2246 - 2250; 2236 - 2240;
1459 - 1463; 1409 - 1413; 1397 - 1401;
1236 - 1240; 1207 - 1212; 1182 - 1185
Shot 4 SPF
48" DIA HOLES
144 HOLES

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.
DEPTH INTERVAL | AMOUNT AND KIND MATERIAL USED
1182 - 2353 | 1500 GAL OF 15% hcl; 141 500 lbs of 20/40;
156,500 lbs. of 16/30;
1,157,000 scf of N2 (70 quality foam)

28. PRODUCTION

Date First Production 10/01/99		Production Method (Flowing, gas lift, pumping - Size and type pump) 30-N-095 PC PUMP			Well Status (Prod. or Shut-in) PROD.		
Date of Test 09/23/99	Hours Tested 24	Choke Size	Prod'n For Test Period	Oil - Bbl	Gas - MCF TSTM	Water - Bbl. 180	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure 7 PSI	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF TSTM	Water - Bbl. 180	Oil Gravity - API - (Corr.)	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)
Used for fuel or vented N2

Test Witnessed By
LARRY CASEY

30. List Attachments

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

Signature: DR Lankford
Printed Name: Donald R. Lankford
Title: Sr. Petroleum Engineer
Date: 09/30/99

PANTLEIS LABORATORIES

P. O. BOX 2439 TEL. 806 669-6821 PAMPA, TEXAS 79066-2439
 P. O. BOX 3246 TEL. 806 797-4325 LUBBOCK, TEXAS 79452-3246

WATER ANALYSIS

SAMPLING DATA

Lab #.....0689
 Customer.....VERNEJO MINERALS CORP.
 Sample ID.....Well # B
 Produced Water
 Date sampled.....3-1-90
 Sampling point.....--
 Sample temp (deg. F).....75
 Sampled by.....Vernejo
 Analysis date.....3-7-90

ANALYTICAL DATA

pH.....8.09
 Specific gravity @ 75 deg. F.....1.0031
 Resistivity (ohm-cm).....1.19
 Filterable solids (mg/l).....166.8
 Carbon dioxide (CO2) mg/l.....NA
 Sulfide (as H2S) mg/l.....NA
 Total hardness (as CaCO3) mg/l.....NA

REMARKS:

* Cimarron, New Mexico Area
 Color:
 Gray, cloudy; suspended Solids

DISTRIBUTION

3-Vernejo Minerals Corporation
 Rte 1 Box 68
 Cimarron, New Mexico 87714
 Mr Larry Williamson

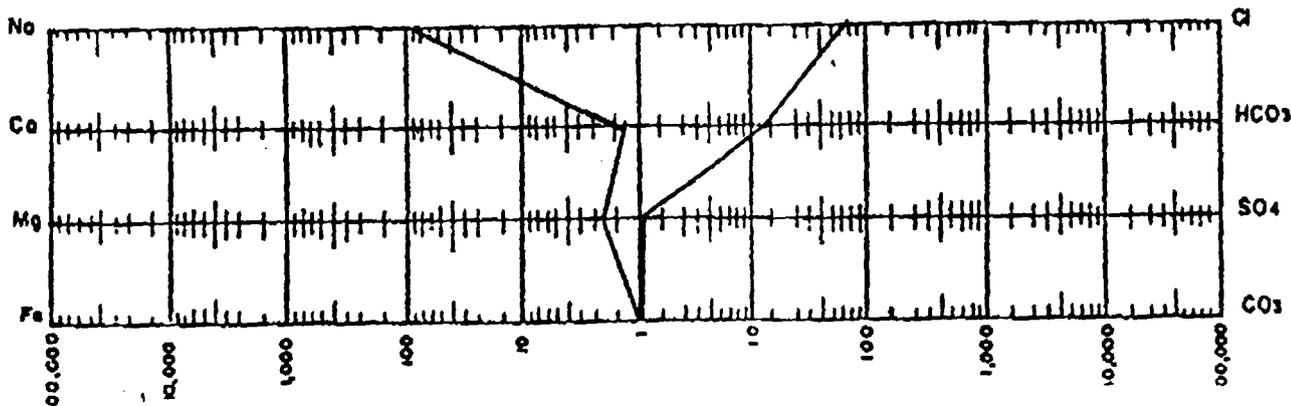
DISSOLVED SOLIDS

Cations	meq/l	mg/l	ppm
Sodium (Na)	85.4	1963	1957
Calcium (Ca)	1.5	30	30
Magnesium (Mg)	2.5	30	30
Iron (Fe), total	.7	20	20
Potassium (K)	NA	NA	NA
Barium (Ba)	NA	NA	NA
Anions			
Chloride (Cl)	71.2	2524	2516
Sulfate (SO4)	0	0	0
Carbonate (CO3)	0	0	0
Bicarbonate (HCO3)	18.9	1153	1149
Hydroxide (OH)	0	0	0
Total dissolved solids (calculated)	180.2	5720	5702

Analysis By: Steve Hopkins

ILLEGIBLE

Water Patterns (meq/l)
 Logarithmic



PANTLICH'S LABORATORIES

P. O. BOX 2439 TEL. 806 669-6821 PAMPA, TEXAS 79066-2439
 P. O. BOX 3246 TEL. 806 797-4325 LUBBOCK, TEXAS 79452-3246

WATER ANALYSIS

SAMPLING DATA

Lab #.....0687
 Customer.....VERNEJO MINERALS CORP.
 Sample ID.....# Well # 1
 Produced Water
 Date sampled.....3-1-90
 Sampling point.....--
 Sample temp (deg. F).....75
 Sampled by.....Vernejo
 Analysis date.....3-7-90

REMARKS:

• Clearon, New Mexico Area

Color:
 Yellow; cloudy; suspended solids

DISTRIBUTION

3-Vernejo Minerals Corporation
 Rte 1 Box 68
 Clearon, New Mexico 87714
 Mr Larry Williamson

ANALYTICAL DATA

pH.....8.14
 Specific gravity @ 75 deg. F.....1.0005
 Resistivity (ohm-cm).....1.98
 Filterable solids (mg/l).....10.8
 Carbon dioxide (CO₂) mg/l.....NA
 Sulfide (as H₂S) mg/l.....NA
 Total hardness (as CaCO₃) mg/l.....NA

DISSOLVED SOLIDS

Cations	meq/l	mg/l	ppm
Sodium (Na)	53.7	1235	1234
Calcium (Ca)	.9	18	18
Magnesium (Mg)	.7	9	9
Iron (Fe), total	0	0	0
Potassium (K)	NA	NA	NA
Barium (Ba)	NA	NA	NA

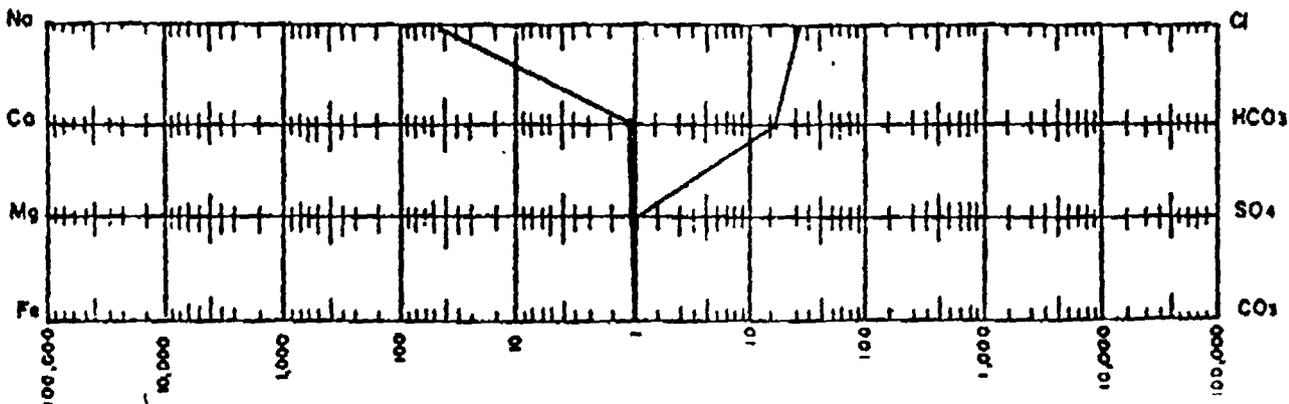
Anions

Chloride (Cl)	32	1134	1133
Sulfate (SO ₄)	0	0	0
Carbonate (CO ₃)	0	0	0
Bicarbonate (HCO ₃)	23.3	1421	1420
Hydroxide (OH)	0	0	0
Total dissolved solids (calculated)	110.6	3817	3814

ILLEGIBLE

Analysis By: _____ Steve Hopkins _____

Water Patterns (meq/l)
Logarithmic



PANTI CHS LABORA ORIES

P. O. BOX 2439 TEL. 806 669-6821 PAMPA, TEXAS 79066-2439
 P. O. BOX 3246 TEL. 806 797-4325 LUBBOCK, TEXAS 79452-3246

Attachment C-3
WATER ANALYSIS

SAMPLING DATA

Lab #.....0586
 Customer.....VERNEJO MINERALS CORP.
 Sample ID.....# Well # P
 Produced Water
 Date sampled.....1-30-90
 Sampling point.....--
 Sample temp (deg. F).....75
 Sampled by.....Vernejo
 Analysis date.....2-3-90

REMARKS:

* Cimarron, New Mexico Area

Color:
 Orange W/Suspended Solids

DISTRIBUTION

J-Vernejo Minerals Corporation
 Rte 1 Box 68
 Cimarron, New Mexico 87714

 Mr Larry Williamson

ANALYTICAL DATA

pH.....6.37
 Specific gravity @ 75 deg. F.....1.0141
 Resistivity (ohm-cm)......31
 Filterable solids (mg/l).....566
 Carbon dioxide (CO2) mg/l.....NA
 Sulfide (as H2S) mg/l.....NA
 Total hardness (as CaCO3) mg/l.....NA

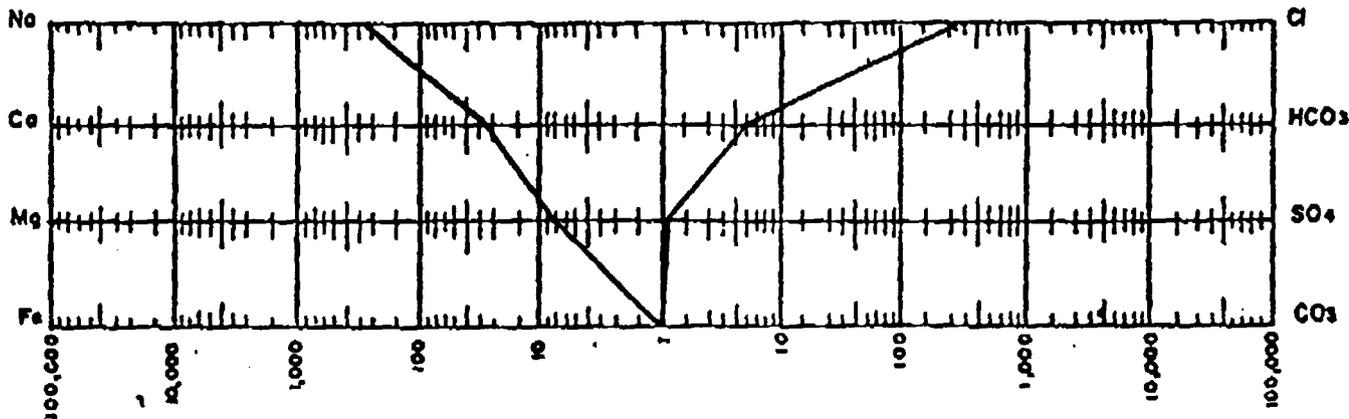
DISSOLVED SOLIDS

Cations	mg/l	mg/l	ppm
Sodium (Na)	302.2	6948	6851
Calcium (Ca)	32.6	653	644
Magnesium (Mg)	7.6	92	91
Iron (Fe), total	1.1	31	31
Potassium (K)	NA	NA	NA
Barium (Ba)	NA	NA	NA
<u>Anions</u>			
Chloride (Cl)	337.4	11961	11795
Sulfate (SO4)	.1	5	5
Carbonate (CO3)	0	0	0
Bicarbonate (HCO3)	6	366	361
Hydroxide (OH)	0	0	0
Total dissolved solids (calculated)	687	20056	19770

ILLEGIBLE

Analysis By Steve Hopkins

Water Patterns (mg/l)
 Logarithmic



Submit to Appropriate District Office
 State Lease - 6 copies
 Fee Lease - 5 copies
DISTRICT I
 P.O. Box 1980, Hobbs, NM 88240

State of New Mexico
 Energy, Minerals and Natural Resources Department

Form C-105
 Revised 1-1-89

OIL CONSERVATION DIVISION
 P.O. Box 2088
 Santa Fe, New Mexico 87504-2088

DISTRICT II
 P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
 1000 Rio Brazos Rd., Artesia, NM 87410

WELL API NO.
 30-007-20076

5. Indicate Type of Lease
 STATE FEE

6. State Oil & Gas Lease No.
 NA

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:
 OIL WELL GAS WELL DRY OTHER _____

b. Type of Completion:
 NEW WELL WORK OVER DEEPEN PLUG BACK DEPT. RESERVE OTHER P & A _____

7. Lease Name or Unit Agreement Name
 NA

2. Name of Operator
 Pennzoil Exploration & Production Company

8. Well No.
 Eustace #1

3. Address of Operator
 P.O. Box 2967, Houston, TX 77252

9. Pool name or Wildcat
 Wildcat

4. Well Location
 Unit Letter J : 2500 Feet From The South Line and 2300 Feet From The East Line

Section 36 Township 32 N Range 19 E NMPM Colfax County

10. Date Spudded 4/27/85 11. Date T.D. Reached 5/14/85 12. Date Compl. (Ready to Prod.) 11/15/89 13. Elevations (OP & RKB, RT, GR, etc.) 8069 GR 14. Elev. Casinghead 8071 GR

15. Total Depth 2497 16. Plug Back T.D. 2008 17. If Multiple Compl. How Many Zones? _____ 18. Intervals Drilled By Rotary Tools 0-2497 Cable Tools _____

19. Producing Interval(s), of this completion - Top, Bottom, Name
1894-1986 Coal

20. Was Directional Survey Made
 No

21. Type Electric and Other Logs Run
Unknown

22. Was Well Cored
 Yes

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8	24	327	12 1/4	225 Sacks	0
5 1/2	14	2464	7 7/8	325 sacks foam cement	0

24. LINER RECORD **25. TUBING RECORD**

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number)

1894-1904	1951-1955	4 SPF
1920-1922	1963-1970	
1924-1934	1978-1986	
1939-1945		

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
1894-1986	150,000 sand

28. PRODUCTION

Date First Production 11/15/89 Production Method (*Flowing, gas lift, pumping - Size and type pump*) Pumping Well Status (*Prod. or Shut-in*) Shut-in

Date of Test	Hours Tested	Choke Size	Prod's For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
12/17/89	24	NA		0	10	244	NA

Flow Tubing Pres.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	OU Gravity - API - (Corr.)
NA	20		0	10	244	NA

29. Disposition of Gas (*Sold, used for fuel, vented, etc.*) Vented Test Witnessed By L. D. Williamson

30. List Attachments

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature L. D. Williamson Printed Name L. D. Williamson Title Operations Supt. Date 6/01/90

penetrated top of Trinidad

EUSTACE
 Submit 3 Copies
 to Appropriate
 District Office

State of New Mexico
 Energy, Minerals and Natural Resources Department

Form C-103
 Revised 1-1-89

DISTRICT I
 P.O. Box 1960, Hobbs, NM 88240

DISTRICT II
 P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
 1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
 P.O. Box 2088
 Santa Fe, New Mexico 87504-2088

WELL API NO. 30-007-20076
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER	7. Lease Name or Unit Agreement Name NA
2. Name of Operator Pennzoil Exploration & Production Company	8. Well No. Eustace #1
3. Address of Operator P.O. Box 2967, Houston, TX 77252	9. Pool name or Wildcat Wildcat

4. Well Location
 Unit Letter J : 2500 Feet From The South Line and 2300 Feet From The East Line
 Section 36 Township 32 N Range 19 E NMPM Colfax County

10. Elevation (Show whether DP, RKB, RT, GR, etc.)
 8069 GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>		CASING TEST AND CEMENT JOB <input type="checkbox"/>	
OTHER: _____ <input type="checkbox"/>		OTHER: _____ <input type="checkbox"/>	

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1101.

4-20-90. Set CIBP @ 1850'. Set 100' cement plug w/ 12 sks of class A @ 15.6 ppg from 1850' to 1750'. Fill hole with 8.8 ppg Bentonite mud. Set 100' cement plug w/12 sks of class A @ 15.9 ppg from 975 to 875 across known casing leak. Set CIBP @ 850'. Set 50' surface plug and marker w/6 sks class A 15.6 ppg. Location cleared and leveled.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE L. D. Williamson TITLE Operations Superintendent DATE 6/1/90

TYPE OR PRINT NAME L. D. Williamson TELEPHONE NO. (505) 376-281

(This space for State Use)

APPROVED BY [Signature] TITLE DISTRICT SUPERVISOR DATE 6-5-90

CONDITIONS OF APPROVAL, IF ANY:

Attachment "D"

XIII. Proof of Notice

Surface Owner:

Vermejo Park, L.L.C.
P. O. Drawer E
Raton, NM 87740

Working/Offset & Royalty Owners:

Sonat Raton, L.L.C.
Sonat Exploration
P. O. Box 1513
Houston, Texas 77251-1513
Attn: Stephen P. Guerin, P.E.

Vermejo Minerals Corp.
C/o Devon Energy Corp.
P. O. Box 4616
Houston, Texas 77210-4616
Attn: Ken Gray

Copies of the Oil Conservation Division, Form C-108 have been sent to the above stated parties by certified mail on the the 3rd day of April, 2000.



Ann E. Ritchie Regulatory Agent
Sonat Raton, L.L.C.
P. O. Box 190
Raton, New Mexico 87740

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF COLFAX)

The undersigned, being first duly sworn according to law, on his/her oath deposes and says that he/she is the business manager of the newspaper named "The Raton Range" and that he/she has personal knowledge of the facts stated herein; that the said "The Raton Range" is a twice-weekly newspaper of general paid circulation printed and published in the County of Colfax and State of New Mexico and entered under the Second class postal privilege in said County, and having been uninterruptedly and continuously printed and published in said County during the period of more than six months to the date of publishing of the first issue of the publication next prior or notice concerning which this affidavit is made and a copy of which is hereto attached; that said newspaper is duly qualified for that purpose under the laws of the state of New Mexico; that the publication, a printed copy of which is hereunto attached and made a part of this affidavit, was published in said newspaper once each week for 2 successive weeks, said paid publication having been made on the following dates, to-wit:

- First publication: The 24 day of March, 2000
- Second publication: The 28 day of March, 2000
- Third publication: The ___ day of _____, 2000
- Fourth publication: The ___ day of _____, 2000
- Fifth publication: The ___ day of _____, 2000
- Sixth publication: The ___ day of _____, 2000

Margaret Massin
Business Manager

Subscribed and sworn to before me this 28th day of March, 2000.

Ruby Contreras
Notary Public



OFFICIAL SEAL
RUBY J. CONTRERAS
NOTARY PUBLIC
STATE OF NEW MEXICO
MY COMMISSION EXPIRES: 1-24-04

PUBLISHER'S BILL

55 lines, 8pt. type, 2 Times, 48.56
3.39
51.95

Notice of Application
for Fluid Injection
Well Permit

Sonat Raton, L.L.C., P.O. Box 953, Raton, New Mexico 87740 is desiring administrative approval from the New Mexico Oil Conservation Division to complete Vermejo Park Ranch "A," Well No. 25, located in Section 31-N, R-19-E, Vermejo Park Ranch, Well No. 25, located in Section 5, T-30-N, R-18-E, Vermejo Park Ranch "B," Well No. 27, Section 36, T-30-N, R-18-E, Colfax County, New Mexico as water disposal wells. The proposed interval is the Dakota/Entrada Sand from an estimated depth of 6400'-7350'. Sonat Raton, L.L.C. intends to inject a maximum of 20,000 bbls of produced formation water per day per well at a maximum injection pressure of 1240 psi.

Interested parties must file objections or request for hearing with the Oil Conservation Division, 2040 S. Pacheco, Santa Fe, N.M. 87505 within 15 days of this notice.

Ann E. Ritchie, Regulatory Agent
Sonat Raton, L.L.C.
C/o P.O. Box 953
Midland, Texas 79702
1-800-432-2967, (915) 682-1458 fax
e-mail: Ar1tc19676@aol.com

Legal No. 295100.
Published in The Raton Range March 24 and 28, 2000.

ILLEGIBLE

(3 pages)

March 31, 2000

Roy Johnson
Oil Conservation Division
State of New Mexico
Santa Fe, NM
Fax # 505 827 8177

RE: Sonat Raton, LLC

Dear Mr. Johnson,

Please see fax below – we requested that the notice for the current applied for injection/disposal wells in Colfax County be republished under the name of Sonat Raton instead of El Paso Raton – I can't read it so I am sure it is illegible to you. The Raton Range said that they sent the notice as published to us on Tuesday, March 28th – we have not received it in the mail to date.

Surely, we will get it on Monday – please let us know if we need to overnight the article and anything else to you as Don L. said that you would be running some type of test on Tuesday. Thank you for your help.

Yours truly,



Ann E. Ritchie, Regulatory Agent
El Paso/Sonat Raton, LLC
C/o Box 953
Midland, TX 79702
1-800-432-2967, (915) 682-1458

FAX COVERSHEET

No. of Pages (including cover): 2

Date: 3/31/00

To: Anne Ritzkey

Of: _____

Fax: 915-682-1458

Tel.# _____

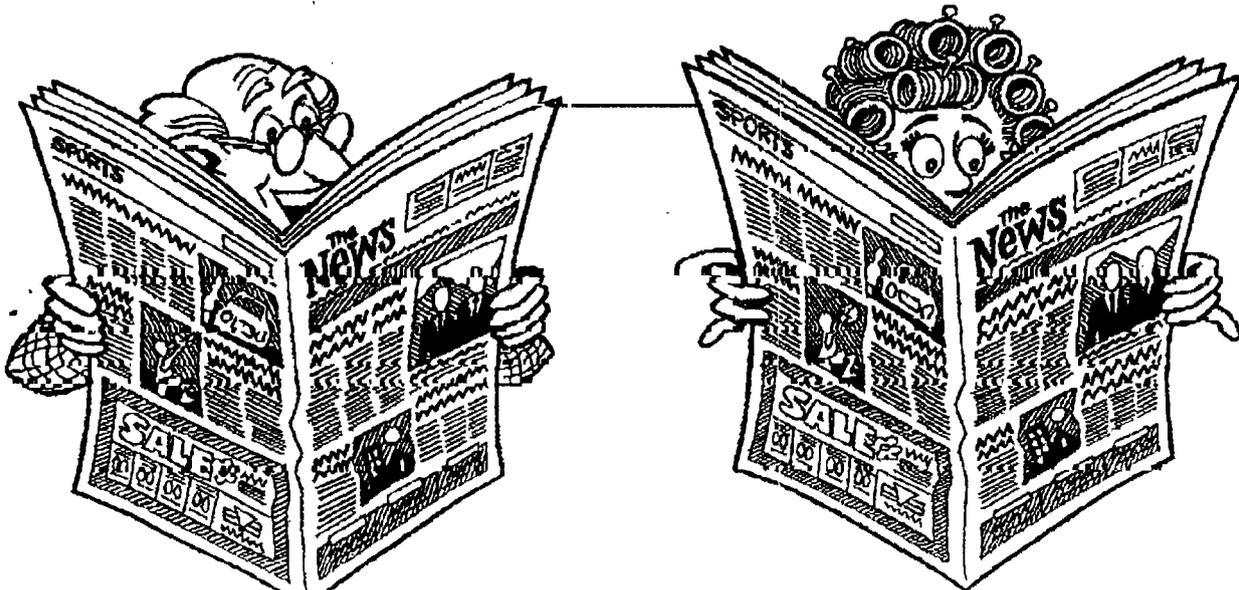
From: Margaret Massie

The Raton Range/Trinidad Plus/Advertiser

Fax: (505)445-2723

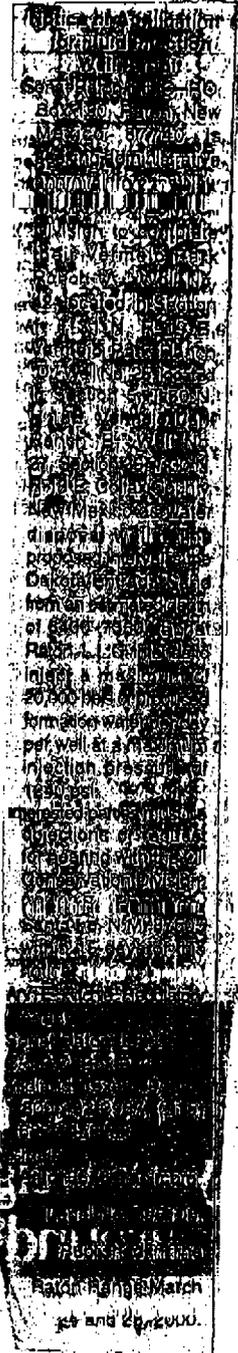
Tel.# (505)445-2721

Regarding: legal in newspaper.
Sonat Raton, U.C.



Jo:

Anne
Ritchey



ILLEGIBLE