

SEP 21 1989

APPLICATION FOR AUTHORIZATION TO INJECT

OIL CONSERVATION DIV.
SANTA FE

I. Purpose: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? yes no

II. Operator: Cibola Energy Corporation

Address: PO Box 1668, Albuquerque NM 87103

Contact party: Terrell A. Dobkins Phone: (505)622-0553

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 _____.

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 geological data on the injection zone including appropriate lithologic detail, geological 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 source 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 source 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: Terrell A. Dobkins Title Engineer

Signature: *Terrell A. Dobkins* Date: 4/6/89

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

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 footage 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.

WELL DATA SHEET

Operator: Cibola Energy Corporation, PO Box 1668, Albuquerque, NM 87103
 (Name & Address)

Well name & number: Duncan Federal #1

Wolf Lake San Andres Pool

1980' FNL & 660' FWL

Conversion: Yes

Section 31 Township 8S Range 28E County: Chaves

CASING & TUBING DATA

Well status: shut-in plugged / TA

Pressure Test Information

none

Comments: _____

Next higher or lower producing zone is the Siluro-Devonian at 6600 feet.

ADDITIONAL COMMENTS

Surface cement circulated to surface. Cement top on long string was calc. from cement volume 2 3/8" plastic lined tubing will be run with a Halliburton RTTS packer set at about 2260 feet.

I certify that this information is true and correct to the best of my knowledge and belief.

[Signature] 9/6/89
 (Name) (Date)

Maximum Injection Pressure	<u>900</u>	psi
Estimated Injection Rate	<u>250</u>	Bbl/day

Surface Wellbore	<u>10</u>	in
Cement	<u>415</u>	ft
_____sx		
Kine String Wellbore	_____	in
Cement	_____	ft
_____sx		
Circulated? Y/N		
Long String Wellbore	<u>8</u>	in
Cement	<u>2299</u>	ft
<u>165</u> sx		
Circulated? Y/N		
PBT: <u>2294</u> ft		
TD <u>2300</u> ft		
Surface Casing	<u>8 5/8</u>	in
	<u>20</u>	lb/ft
Kine String	_____	in
	_____	lb/ft
Long String	<u>4 1/2</u>	in
	<u>9.5</u>	lb/ft
Tubing	<u>2 3/8</u>	in
Cmt top est at	<u>2260</u>	ft
	<u>1400'</u>	
Packer set at	<u>2260</u>	ft

Base of Injection Zone(s)	<u>San Andres</u>	
Perforated Interval(s)	<u>2274' to 2282'</u>	
Open Hole Interval	<u>none</u>	

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE (See number instructions on reverse side)

Form approved. Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [] DRY [] Other []
b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [] DEEP-EN [] PLUG BACK [] DIFF. LESVR. [] Other []

2. NAME OF OPERATOR: Coronado Exploration Corp.

3. ADDRESS OF OPERATOR: 1005 Marquette NW Albuquerque, New Mexico 87102

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 1980 FNL & 660 FWL
At top prod. interval reported below same
At total depth same

ACCEPTED FOR RECORD PETER W. CHESTER APR 17 1981 U.S. GEOLOGICAL SURVEY ROSWELL, NEW MEXICO

5. LEASE DESIGNATION AND SERIAL NO. NM 12557
6. IF INDIAN, ALLOTTEE OR TRIBE NAME
7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME Duncan Federal
9. WELL NO. 1
10. FIELD AND POOL, OR WILDCAT Wildcat
11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 31- 8S-28E

14. PERMIT NO. DATE ISSUED
12. COUNTY OR PARISH Chaves
13. STATE NM

15. DATE SPUDDED 10-31-80
16. DATE T.D. REACHED 1-7-81
17. DATE COMPL. (Ready to produce) 3-11-81
19. ELEV. CASING HEAD 3940.6 Gr. 3941.6

20. TOTAL DEPTH, MD & TVD 2300
21. PLUG, BACK T.D., MD & TVD 2294'
22. IF MULTIPLE COMPL., HOW MANY* N/A
23. INTERVALS DRILLED BY
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 2274, 75, 76, 77, 78, 79, 79.5, 80, 81, 82 Slaughter San Andres

25. WAS DIRECTIONAL SURVEY MADE No
26. TYPE ELECTRIC AND OTHER LOGS RUN Dual Induction Focused Log, Sidewall Neutron-GR, Comp. Densilog
27. WAS WELL CORED No

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

Table with 6 columns: CASING SIZE, WEIGHT, LB./FT., DEPTH SET (MD), HOLE SIZE, CEMENTING RECORD, AMOUNT PULLED. Rows include 8 5/8" 20# 415 10" 200 sx Class "C" and 4 1/2" 9.5# 2299 8" 165 sx Class "C", 6# salt.

29. LINER RECORD and 30. TUBING RECORD tables with columns for SIZE, TOP (MD), BOTTOM (MD), SACKS CEMENT, SCREEN (MD), SIZE, DEPTH SET (MD), PACKER SET (MD).

31. PERFORATION RECORD (Interval, size and number) 2274, 75, 76, 77, 78, 79, 79.5, 80, 81, 82
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) 2274-2282 AMOUNT AND KIND OF MATERIAL USED 4000 gals 28% HCL

33.* PRODUCTION DATE FIRST PRODUCTION 3/7/81 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Pumping WELL STATUS (Producing or shut-in) Prod.

Table with 8 columns: DATE OF TEST, HOURS TESTED, CHOKE SIZE, PROD'N. FOR TEST PERIOD, OIL—BBL., GAS—MCF., WATER—BBL., GAS-OIL RATIO. Includes flow, tubing press., casing pressure, calculated 24-hour rate, oil—bbl., gas—mcf., water—bbl., oil gravity-API (corr.).

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) TEST WITNESSED BY Antonio Segala

35. LIST OF ATTACHMENTS Logs as listed above

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED [Signature] TITLE Production Secretary DATE 4-7-81

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:

SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	38. NAME	38. GEOLOGIC MARKERS	
					MEAS. DEPTH	TRUE VERT. DEPTH
Yates	500	1100	V.F. Sand and Shale			
Queen	1100	1630	Sand and shale and salt			
San Andres	1630	2248	Anhydrite and dolomite			
Slaughter	2248	TD	Dolomite			

Duncan Federal #1
Proposed Operation

1. Maximum Daily Rate Expected: 400 BWPD
Average Daily Rate Expected: 250 BWPD
2. System will be closed, with a holding tank on location for water storage.
3. Maximum Injection Pressure Expected: 900 psi
Average Injection Pressure Expected: 100 psi
4. Source of injection water: Siluro Devonian formation at Aciete
Negra #4
San Andres formation at Duncan
Federal #2

Compatibility test between Siluro Devonian water and San Andres water is attached.

5. Chemical analyses of disposed waters are attached.

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24

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21

R27E

R28E

26

25

30

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35

36

Cibola
● 1 Duncan Federal
3-31-81
TD 230031

32
⊕ Midwest Oil
1 State N
11-1-67
TD 3070

33

2

EIK Oil
⊕ 1 Graham St. Com.
TD 10620
2-2-82

1

Read+Stevens
⊕ 1 Palma Mesa Fed.
TD 7425 6

5

4

11

12 Cibola
2 Agua Negra
TD 7150

7

Cibola
⊕ Agua Negra 1
1-9-83
8

9

Cibola
4 Agua Negra ●
6-85
TD 6996

Cibola
● Duncan Federal 2
8-15-88
TD 2317

14

13

18

⊕ Cibola
Agua Negra 2

17

16

DUNCAN FEDERAL No. 1
CHAYES CO., NEW MEXICO

Scale 1"=2000'

Duncan Federal #1
Wells Within Area of Review

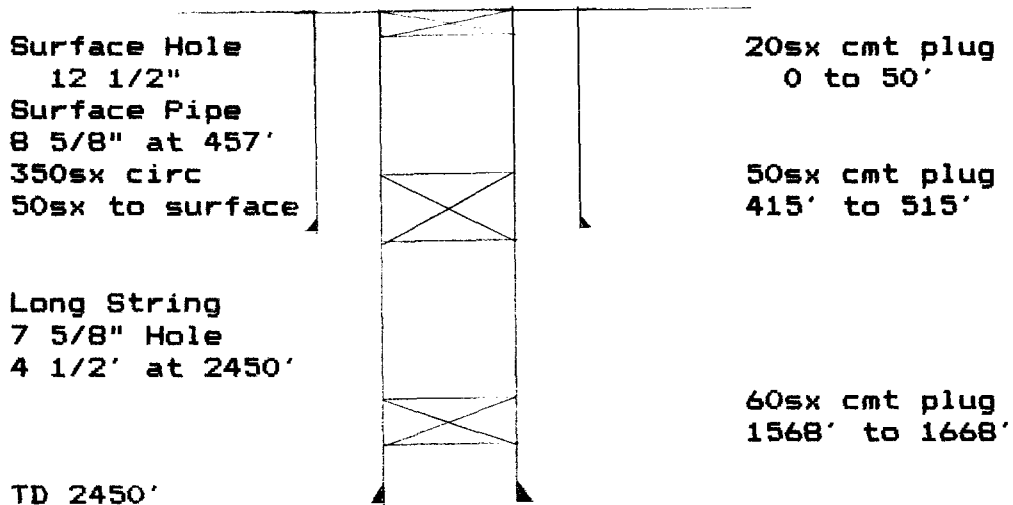
Well Name	Location	Status	Date Drilled	Depth	Completion Interval
Midwest Oil State N #1	NESW 32 T8S R28E	Plugged	11/1/67	3070'	None
Read & Stevens Palma Mesa Federal #1	SWNW 6 T9S R28E	Plugged	11/29/83	2450'	None
Elk Oil Graham State Com. #1	SWNE 2 T9S R27E	Plugged	8/2/82	6620'	None

Wells are not in area of review

COMMENT: We do not have details of plugging on the Midwest Oil and Elk Oil wells.

Plugged Well Schematic

Read & Stevens	Date Plugged 11/29/83
Palma Mesa Federal #1 SWNW 6 T9S R29E	Date Plugged 11/18/83



Duncan Federal #1
Geological Summary

Injection Zone: San Andres, Slaughter

Perforated Interval: 2274' to 2282'

Formation Top: 2248'

Formation Gross Thickness: 52'

Lithologic Character: Dolomite

Sources of drinking water: Santa Rosa Sand, 0 to 450'

Proposed Stimulation

Acidize perforations with 1000 gallons of 28% HCL.
Additional stimulations will be performed as needed.

Well Logging and Test Data

Well logs were submitted upon completion.
Completion report is attached.
The well has been shut-in as uneconomic to operate since 1988.

85. 28E. 34. 130

ANALYTICAL STATEMENT - GW COUNTY

LAB NO. 14902

Duncan Federal #1
Sec 34-85-28E
San Andres wtr

Location
LEASE # 12557
D. Fed #1
Source (type of well) Oil
Owner Mark Hamilton

Date drld _____ Cased to _____ ft
Depth _____ Diam _____
WBT PSA
Water level _____ ft
Sampled after pumping _____ hrs
Yield _____ GPM (meas or est)
Pt of coll _____
Appearance clr w/ large amt oil
Temp (°F) _____ Use oil well
Collector GBR/SR
Chemist K2
Date completed _____
Checked by _____
Date transmitted _____

Date of collection 11/17/85
Ignition Loss _____ Color _____
Dissolved Solids:
Residue at 180°C _____
Calculated (Sum) _____
Tons per Acre Foot _____
Hardness as CaCO₃ _____
Non-carbonate Hardness _____
T Na _____ SAR _____ pH _____
Specific Conductance
(micromhos at 25°C) 170,919
1990 FNL
660 FNL
Phone 622-9062

	e pm	ppm
SiO ₂		
Fe		
Ca		
Mg		
NO		
K		
Na+K		
HCO ₃		
CO ₃		
SO ₄		
Cl		124,500
F		
NO ₃		

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION
EXHIBIT NO. _____
CASE NO. _____

95. 27E. 12. 44341

ANALYTICAL STATEMENT - GW COUNTY

LAB NO. 14903

Archie Negra #4
Sec 12-95-27E
Devonian wtr

Location
lease # 18611
Negra #4
Source (type of well) Oil
Owner Mark Hamilton

Date drld _____ Cased to _____ ft
Depth _____ Diam _____
WBT Dev.
Water level _____ ft
Sampled after pumping _____ hrs
Yield _____ GPM (meas or est)
Pt of coll _____
Appearance clr w/ small amt oil
Temp (°F) _____ Use oil well
Collector JBAC
Chemist JT
Date completed _____
Checked by _____
Date transmitted _____

Date of collection 11/12/85
Ignition Loss _____ Color _____
Dissolved Solids:
Residue at 180°C _____
Calculated (Sum) _____
Tons per Acre Foot _____
Hardness as CaCO₃ _____
Non-carbonate Hardness _____
T Na _____ SAR _____ pH _____
Specific Conductance
(micromhos at 25°C) 67,857
330 FSL
940 FEL
Phone 622-9062

	e pm	ppm
SiO ₂		
Fe		
Ca		
Mg		
NO		
K		
Na+K		
HCO ₃		
CO ₃		
SO ₄		
Cl		29,900
F		
NO ₃		

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery (Extra charge)

3. Article Addressed to: MESA LIMITED PARTNERSHIP ONE MESA SQUARE P.O. BOX 2009 AMARILLO, TX 79189	4. Article Number P. 140-464-640 Type of Service: <input checked="" type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X Fudon	
7. Date of Delivery AUG 24 1989	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Carl Schelling P.O. Box 447 Roswell NM 88202	4. Article Number P. 567-648-120 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X R. Fine	
7. Date of Delivery 8-28-89	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery (Extra charge)

3. Article Addressed to: ELK OIL CO. P.O. BOX 310 ROSWELL, NM 88202-0310	4. Article Number P. 140-464-641 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery 8-24-89	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

AFFIDAVIT OF PUBLICATION

County of Chaves }
State of New Mexico, }

I, Jean M. Pettit
Manager,

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico, do solemnly swear that the clipping hereto attached was published once a week in the regular and entire issue of said paper and not in a supplement thereof for a period

of one time

weeks

beginning with the issue dated 4th

September, 19 89

and ending with the issue dated 4th

September, 19 89

Jean M. Pettit
Manager

Sworn and subscribed to before me

this 4th day of

September, 19 89

Marylon S. Skipper
Notary Public

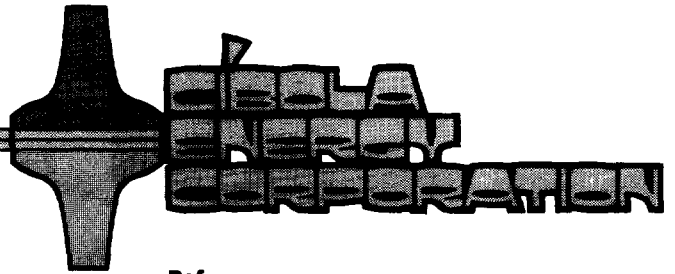
My commission expires

July 21, 19 90

(Seal)


Publish September 4, 1989
NOTICE OF APPLICATION
Cibola Energy Corporation, P.O. Box 1668, Albuquerque, NM 87103, has filed to the Oil Conservation Division to convert to Duncan Federal #1 to an injection well. The Duncan Federal #1, 1980'FNL and 660'FWL, Sec. 31-8S-28E, Chaves County, will be converted for the purpose of salt water disposal into the San Andres Formation 2275' to 2282'. The maximum inject will be 400 Bbls/day; maximum pressure 900#. Any questions should be directed to Terrell A. Dobkins at (505)622-0553. Interested parties must file objections or requests for hearing with NMOCD, P.O. Box 2088, Santa Fe, NM 87504-2088 within 15 days.

Post Office Box 1668 / Albuquerque, New Mexico 87103 / (505) 843-6762



Reference _____

I, Terrell A. Dobkins, engineer, 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 source of drinking water.


Terrell A. Dobkins
Engineer
September 8, 1989