DAVIS N # 1

SALT WATER DISPOSAL WELL

OCD FORM C-108

OPERATOR

CAMBRIAN MANAGEMENT LTD.

DECEMBER 2007

Oil Conservation Division
Case No. 13
Exhibit No. 13

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 June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ____X____Secondary Recovery _____Pressure Maintenance _____Disposal _____Storage
Application qualifies for administrative approval? _____Yes ___X_____No

II. OPERATOR: ____Cambrian Management, Ltd.

ADDRESS: ____P. O. Box 272 Midland TX 79702_____

CONTACT PARTY: ____Lindsay Truesdell_____PHONE: __432-620-9181_____

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).

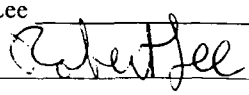
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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: ____Robert Lee_____TITLE: __Consulting Engineer_____

SIGNATURE:  DATE: ___December 6, 2007____

E-MAIL ADDRESS: ____robertlee5@att.net_____

* 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

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 the 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, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, 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.

DAVIS N # 1
APPLICATION FOR INJECTION
NMOCD Form C-108 Section III

III. Data on injection well(s)

A. Injection well information (see attached schematic)

Tabular data

1. Lease: Davis N
Well No: 1
Location: 1980' FNL & 1980' FWL,
Section 18
T-8-S, R-33-E
Chaves County, NM

2. Casing: 13 3/8" surface csg. @ 480', cemented w/450 sx. TOC @ surface, circulated.
8 5/8", intermediate casing @ 4820' cemented w/ 1450 sx. TOC @ 2,100', Temp Survey
5 ½" liner 4,602-9,144', cemented w/400 sx. TOC @ 7,000', Temp Survey

3. Injection tubing: + or - 130 jts 2 3/8", 4.6 lb/ft, J-55 Rice Duoline plastic lined tubing set @ 4170'.

4. Packer: Nickel coated Loc Set Packer set at 4170'.

B. Other well information

1. Injection formation: San Andres - Chaveroo (SA)

2. The injection interval will be the perforated section from 4261-4477'. The well is currently a producing oil well. The San Andres will be completed from 4261-4477' in various intervals with sufficient porosity for water injection.

3. This well was drilled as a Tobac (Penn) in 1968 and recompleted in the San Andres as an oil well in 1975.

4. There are perfs at 8909-8919'. The perfs at 5673-76' were squeezed with 400 sx cement in 10/1975. A CIBP is set @ 4597' w/2 sx cmt, PBTD @ 4,590'.

5. There are no shallow oil and gas zones. The next deepest horizon productive of oil and gas is the Penn @ 8900'.

DAVIS N # 1
CONVERT TO INJECTION
NMOCD Form C-108 Sections VII thru XII

VII. Data on proposed operation.

1. Proposed average injection rate: 600 BWPD per well
   Proposed maximum injection rate: 1000 BWPD per well

2. The system will be a closed system.

3. Proposed average injection pressure: 600 PSI
   Proposed maximum injection pressure: 850 PSI (This is based on a .2 psi/ft gradient).

4. The proposed injection fluid is produced water from the Davis N lease. Water analysis of these waters is attached.

5. There is production from this interval within 1 mile of this well. The Davis N # 1 has produced nearly 75,000 Bbls of oil from the San Andres. It is expected by injecting water into the pay zone an additional 50,000 Bbls of oil can be swept to offsetting producing wells. Once this concept is proved up, the water injection will be expanded to other wells on the lease.

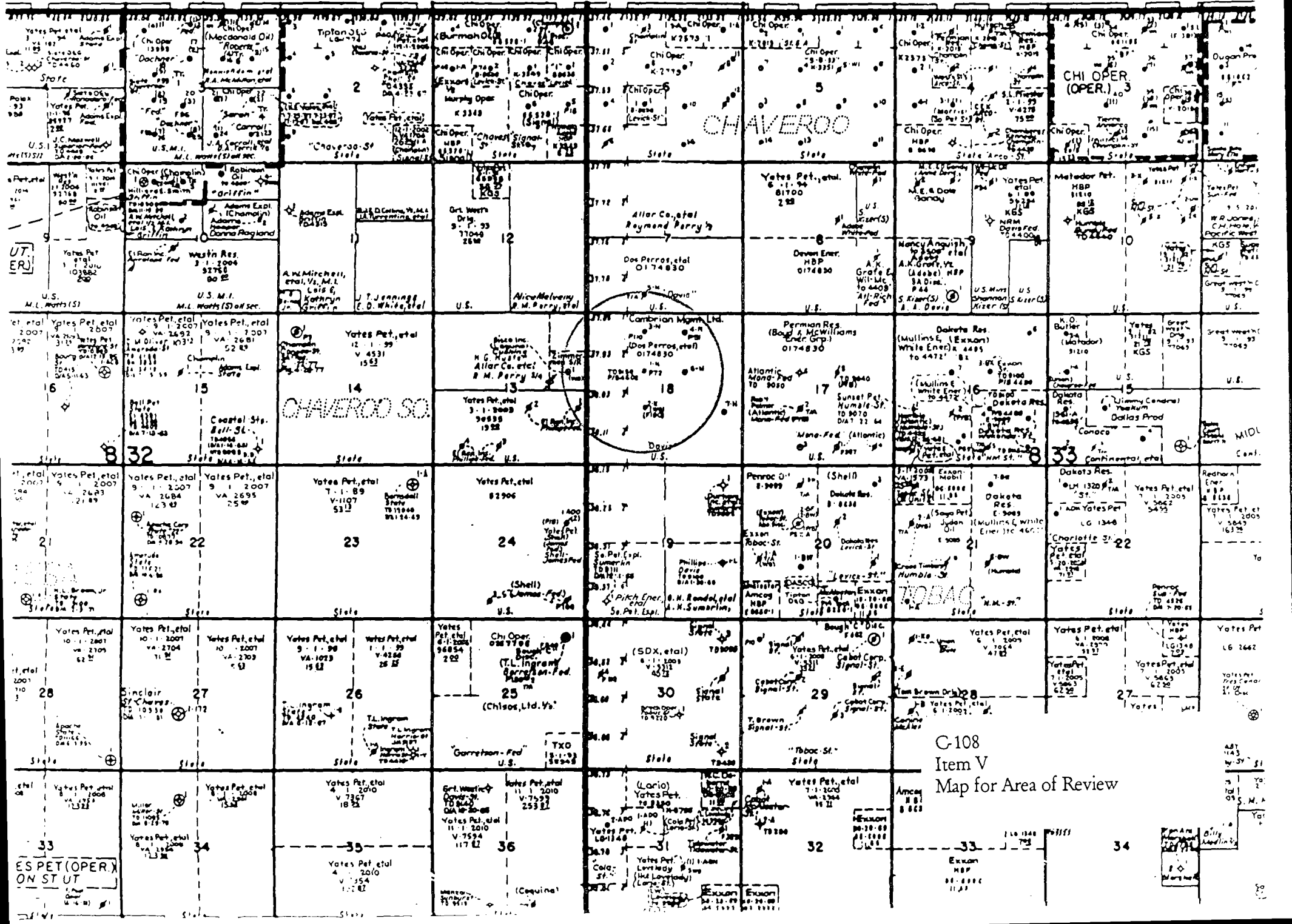
VIII. The proposed injection interval is located in the San Andres formation. The San Andres is a Permian age Dolomite reservoir that is 1000' thick in this area. The top of the San Andres is at 3608' and the base is at 4600'. The interval to be injected into is 4261-4477'. There are no fresh water wells within one mile of the proposed salt-water disposal well based on the OSE website.

IX. The injection zone will be the perforated interval in San Andres at 4261-4477'. The injection string will be 2 3/8" plastic lined tubing set at 4170' with a nickel coated Loc Set packer. Stimulation planned for the injection interval is to pump 3000 gals 15% HCl acid after conversion.

X. Logs have been submitted to the OCD.

XI. There are no fresh water wells within one mile of the proposed conversion. The information for this area as provided by the OSE website.

XII. An examination of this area has determined there are no open faults or other hydrologic connection between the disposal zone and any underground drinking water. These shallow formations are generally not faulted. The casing and cement should isolate the migration of salt water up the borehole.


CHAVEROO
CHAVEROO SO.
CHI OPER. (OPER.)
MIDL
TOBAC
C-108
Item V
Map for Area of Review

Cambrian Management, Ltd. C-108 ITEM VI Tabulation of Wells Within the Area of Review

	OPERATOR	CURRENT WELL NAME	API # 30-005	LOC'N	S-T-R T-8-S	STATUS	SPUD DATE	COMP DATE	TD	PBTD	ZONE	CASING PROGRAM	TOC (Calc.)	COMP. INTERVAL	TRTMT.	IP
1	Cambrian Mgmt	Davis N #1	20228	1980 FNL 1980 FWL	Sec 18 R-33-E	Oil	2/7/1968	3/19/1968	9150'	4150'	San Andres	13 3/8" @ 408' w/450 sx 8 5/8" @ 4820' w/1450 sx 5 1/2" Liner @ 9144' w/400 sx	Circ 2100' (TS) 7000' (TS)	4261-4474' 8909-8919'	4500 gal 15% NE 8000 gal acid	6 BO, 89 BLW
2	Cambrian Mgmt	Davis N #2	20254	1980 FSL 1980 FWl	Sec 18 R-33-E	Oil	5/25/1982 8/23/1968	5/26/1982 9/27/1968	9000'	4506'	San Andres	13 3/8" @ 404' w/475 sx 8 5/8" @ 3882' w/950 sx 4 1/2" @ 8998' w/1280 sx	Circ 1950' (TS) 3600' (TS)	4259-4456' 8917-30'	2000 gal Acid	21 BO, 17 MCF, 37 BW
3	Cambrian Mgmt	Davis N #3	20527	660 FNL 1980 FWL	Sec 18 R-33-E	Oil	2/5/1976	2/19/1976	4540'	4503'	San Andres	8 5/8" @ 400' w/400 sx 4 1/2" @ 4540' w/600 sx	Circ 2675' (TS)	4240-4294'	2000 gal 15% NE HCl	110 BO, 44 MCF, 2 BW
4	Cambrian Mgmt	Davis N #4	20846	660 FNL 1980 FEL	Sec 18 R-33-E	Oil	2/15/1982	4/21/1982	4620'	4550'	San Andres	8 5/8" @ 604' w/400 sx 4 1/2" @ 4620' w/1825 sx	Circ Circ	4253-4532'	7000 gal NEFE HCl	51 BO, 38 MCF, 86 BW
5	Cambrian Mgmt	Davis N #5	20847	660 FSL 1980 FWL	Sec 7 R-33-E	P&A	1/28/1982	3/22/2002	4600'	4527'	San Andres	8 5/8" @ 614' w/400 sx 4 1/2" @ 4579' w/1245 sx	Circ 1260' (TS)	4268-4498'		20 BO, 116 BW, 17 MCF
6	Cambrian Mgmt	Davis N #6	20548	1980 FNL 1980 FEL	Sec 18 R-33-E	Oil	3/9/1982	5/3/1982	4820'	4750'	San Andres	8 5/8" @ 615' w/400 sx 4 1/2" @ 4819' w/2025 sx	Circ Circ	4260-4654'	7000 15% NEFE HCL	26 BO, 19 MCF, 107 BW
7	FJ Ran Inc	Phillips Federal #1	20679	330 FEL 1980 FSL	Sec 13 R-32-E	P&A	5/17/1979	6/9/1979	4478'	4477'	San Andres	8 5/8" @ 1697' w/550 sx 4 1/2" @ 4477' w/225 sx	Circ 3489' Calc.	4268-4362'	7500 gal 20% LST acid	35 BO, 40 MCF, 80 BW
8	Dwight A. Tipton	Cushing 13 #1	20733	1980 FNL 660 FEL	Sec 13 R-32-E	Oil	9/28/1984	10/1/1984	4424'	4136'	San Andres	8 5/8" @ 442' w/250 sx 4 1/2" @ 4424' w/2780 sx	Circ Circ	4273-4343'	1500 Gals 15% NE 500 gal Gypsol	33 BO, 10 BW

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Cambrian Management Ltd.

WELL NAME & NUMBER: Davis N #1

WELL LOCATION: 1980 FNL & 1980 FWL | F | 18 | 8S | 33E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 ½" Casing Size: 13 3/8" set @ 408'

Cemented with: 450 sx. *or* _____ ft^3

Top of Cement: Surface Method Determined: Circulated

Intermediate Casing

Hole Size: 11" Casing Size: 8 5/8" set @ 4820'

Cemented with: 1450 sx. *or* _____ ft^3

Top of Cement: 2100' Method Determined: Temp Survey

Production Casing

Hole Size: 7 7/8" Casing Size: 5 ½"liner set @ 9144'

Cemented with: 400 sx. *or* _____ ft^3

Top of Cement: 7000' Method Determined: Temp Survey

Total Depth: 9,150'

Injection Interval

4261' feet to 4477' Perforated

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8" Lining Material: Plastic

Type of Packer: Loc Set

Packer Setting Depth: 4,170'

Other Type of Tubing/Casing Seal (if applicable):

Additional Data

1. Is this a new well drilled for injection? Yes X No

   If no, for what purpose was the well originally drilled? Oil producer

2. Name of the Injection Formation: San Andres

3. Name of Field or Pool (if applicable): Chaveroo San Andres

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. 8909-8919', 5673-76' (sqzd w/400 sx), CIBP @ 4597' w/2 sx of cmt, PBTD 4590'

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Lower: Tobac (Penn) Upper: N/A

DAVIS N #1

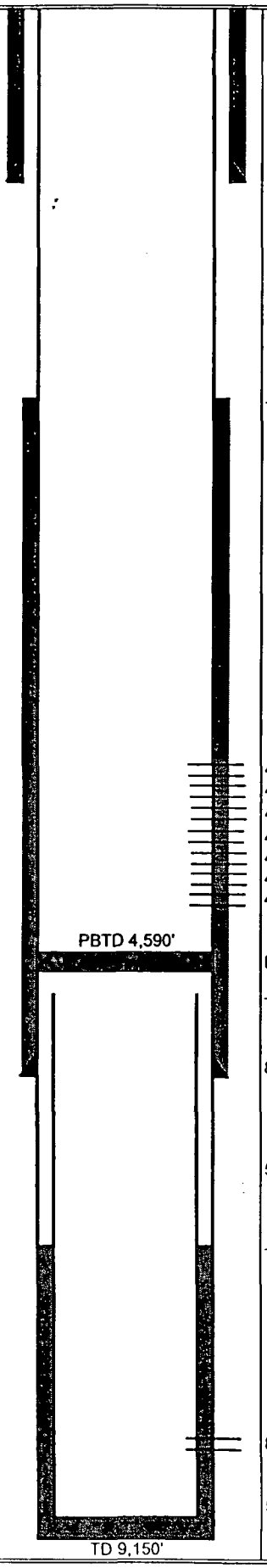
CURRENT WELLBORE DIAGRAM

Cambrian Management Ltd

SU-T-R	18F-8S-33E	API #:	30-005-20228
POOL:			
CO, ST:	CHAVES, NEW MEXICO		
STATUS:	Oil		

LOG ELEVATION: 4,447' DF
GROUND ELEVATION: 4,434'

CASING			LINER	
Hole	17 1/2"	11"	7 7/8"	
Pipe	13 3/8"	8 5/8"	5 1/2"	
Weight				
Depth	408'	4,820'	9,144'	



2/6/68 Spud. 3/19/68 Initial Completion
Perf 8909-8919' (20 holes)
Acidized w/2000 gal 10% & 1000 gal 3% NE &
5000 gals 15% NE acid
10/1975 Set retainer @ 5800'
Perf 5673-76' w/12 holes.
Sqzd perfs 5673-76'.
Perf 4261-4477' (97 holes).
BP @ 4597' w/2 sx cmt on top to 4590'
Acidized w/4500 gals 15% NE HCL w/ball sealers

DAVIS N #1

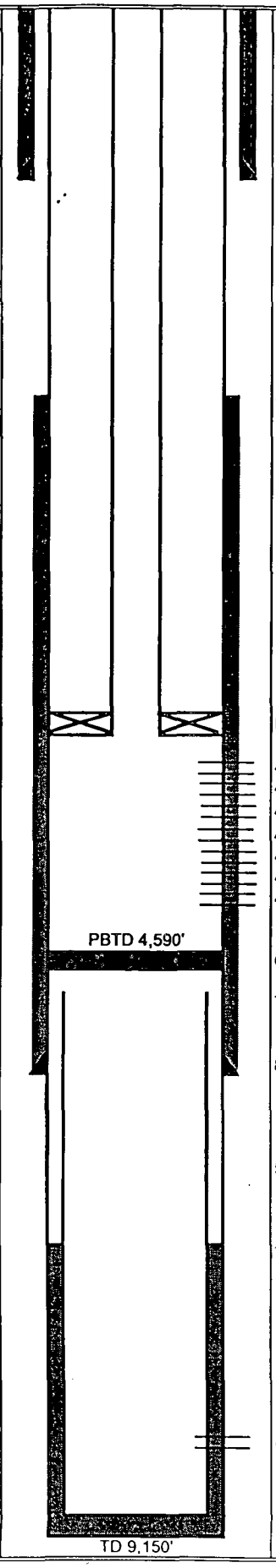
PROPOSED WELLBORE DIAGRAM

Cambrian Management Ltd

SU-T-R	18F-8S-33E	API #:	30-005-20228
POOL:			
CO, ST:	CHAVES, NEW MEXICO		
STATUS:	Injection		

LOG ELEVATION: 4,447' DF
GROUND ELEVATION: 4,434'

	CASING		LINER	TUBING
Hole	17 1/2"	11"	7 7/8"	2 3/8"
Pipe	13 3/8"	8 5/8"	5 1/2"	
Weight				
Depth	408'	4,820'	9,144'	4,170'



13 3/8" @ 408'
w/450 sx, circ

TOC @ 2,100' (TS)

Pkr @ 4170'

4261-88'
4327-46'
4354-57'
4367-73'
4403-13'
4439-61'
4474-77'

CIBP @ 4597' w/2 sx cmt on top 10/75

Top of Liner @ 4,602'

8 5/8" @ 4,820' w/1450 sx Cmt

5673-76' (sqzd 10/75)

TOC @ 7000' (TS)

8909-8919'

5 1/2" Liner @ 9,144' w/400 sx Cmt

2/6/68 Spud. 3/19/68 Initial Completion
Pkr set @ 4170'
2 3/8" tbg set @ 4170'
Acidize w/3000 gals 15% HCl during conversion

CATALYST
Oilfield Services

Water Analysis Report

Company:	Cambrian Operating	Sample #:	9132
Area:	Odessa	Analysis ID #:	641
Lease:	Davis N Fed		
Location:	6 0		
Sample Point:	Wellhead		

		Anions	mg/l	meq/l	Cations	mg/l	meq/l
Sampling Date:	12/13/07	**Chloride:**	**116828.0**	**3295.29**	**Sodium:**	**60158.0**	**2616.73**
Analysis Date:	12/18/07	**Bicarbonate:**	**256.6**	**4.21**	**Magnesium:**	**2274.0**	**187.07**
Analyst:	Mitchell Labs	**Carbonate:**			**Calcium:**	**10218.8**	**509.92**
TDS (mg/l or g/m3):	190421.8	**Sulfate:**	**685.0**	**14.26**	**Strontium:**		
Density (g/cm3):	1.132				**Barium:**		
					Iron:	**1.1**	**0.04**
Hydrogen Sulfide:	68				**Manganese:**	**0.290**	**0.01**
Carbon Dioxide:							
Comments:		pH at time of sampling:		6.22			
		pH at time of analysis:					
		pH used in Calculation:		**6.22**			
		Temperature @ lab conditions (F):		**75**	**Conductivity (micro-ohms/cm):**		**219500**
					Resistivity (ohm meter):		**.0456**

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.34	13.70	-0.26	0.00	-0.24	0.00	0.00	0.00	0.00	0.00
100	0.43	16.91	-0.33	0.00	-0.25	0.00	0.00	0.00	0.00	0.00
120	0.51	20.41	-0.39	0.00	-0.22	0.00	0.00	0.00	0.00	0.00
140	0.60	23.91	-0.44	0.00	-0.18	0.00	0.00	0.00	0.00	0.00

SAN ANDRES

CATALYST
Oilfield Services

Water Analysis Report

Company:	Cambrian Operating	Sample #:	9134
Area:	Odessa	Analysis ID #:	642
Lease:	Davis N Fed		
Location:	7 0		
Sample Point:	Wellhead		

Sampling Date:	12/13/07
Analysis Date:	12/18/07
Analyst:	Mitchell Labs
TDS (mg/l or g/m3):	88725.9
Density (g/cm3):	1.062
Hydrogen Sulfide:	
Carbon Dioxide:	
Comments:	

Anions	mg/l	meq/l
Chloride:	**54259.6**	**1530.47**
Bicarbonate:	**219.9**	**3.6**
Carbonate:		
Sulfate:	**210.0**	**4.37**

Cations	mg/l	meq/l
Sodium:	**28191.3**	**1226.25**
Magnesium:	**634.4**	**52.19**
Calcium:	**5209.9**	**259.98**
Strontium:		
Barium:		
Iron:	**0.5**	**0.02**
Manganese:	**0.270**	**0.01**

pH at time of sampling:	6
pH at time of analysis:	
pH used in Calculation:	**6**
Temperature @ lab conditions (F):	**75**
Conductivity (micro-ohms/cm):	**133000**
Resistivity (ohm meter):	**.0752**

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	-0.29	0.00	-0.91	0.00	-0.94	0.00	0.00	0.00	0.00	0.00
100	-0.19	0.00	-0.95	0.00	-0.92	0.00	0.00	0.00	0.00	0.00
120	-0.08	0.00	-0.99	0.00	-0.87	0.00	0.00	0.00	0.00	0.00
140	0.03	1.28	-1.01	0.00	-0.80	0.00	0.00	0.00	0.00	0.00

PENN

Addresses of people to send C-108 to:

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
ATTN: Mr. Will Jones
(505)- 476-3448

New Mexico Oil Conservation Division
1301 West Grand Avenue
Artesia, NM 88210
ATTN: Mr. Bryan Arrant
(505)-748-1283
Fax (505)-748-9720

SURFACE OWNER
New Mexico State Office
Bureau of Land Management
1474 E Rodeo Road
Santa Fe, NM 87505

Cc: Roswell Field Office
2909 W 2nd Street
Roswell NM 88201-2019

Offset Operators

Dwight A Tipton
P O Box 1025
Lovington NM 88260

Yates Petroleum Corporation
105 S 4th St.
Artesia NM 88210