NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
BETTY RIVERA
Cabinet Secretary

Lori Wrotenbery
Director
Oil Conservation Division

June 26, 2002

Maralex Disposal, L.L.C.
P.O. Box 338
Ignacio, Colorado 81137

Attention: Mr. Dennis Reimers

Re: OCD Permit No. SWD-782-A

Dear Mr. Reimers:

While conducting a follow-up review of the permitting process for the Trading Post Disposal Well No. 1 (API No. 30-045-21470) located 950 feet from the North line and 1600 feet from the West line (Unit C) of Section 26, Township 25 North, Range 11 West, NMPM, San Juan County, New Mexico, is was determined that certain area of review well data required by Form C-108 was not submitted, and that the Division failed to contact you about this issue prior to approving the amended permit. Item No. VI of Form C-108 requires that:

"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."

It appears that there are Gallup and/or Mesaverde wells within the area of review in which no well data was submitted.

Please provide this office with all well data as required by Form C-108 within 30-days from receipt of this letter.

If you should have any questions, please contact me at (505) 476-3466.

Sincerely,

David Catanach
Engineer

Xc: File SWD-782

SWD 7/18/00
782

MARALEX
Disposal, LLC

P.O. Box 338
Ignacio, Colorado 81137
(970) 563-4000
FAX (970) 563-4116

OIL CONSERVATION DIV.
00 JUL -3 AM 11:41

June 28, 2000

State of New Mexico
Oil Conservation Division
Attn: David Catanach
2040 So. Pacheco Street
Santa Fe, NM 87505

Re: Canyon No. 14
Application for Disposal Well
950' FNL; 1600' FWL
Section 26-T25N-R11W
San Juan County, NM

Mr. Catanach:

Per subsequent discussions with Mickey O'Hare and Dennis Reimers of our office, please find enclosed the original and one copy of Form C-108, Application for Authorization to Inject, plus attachments, in regards to the above-captioned well.

Should you have any questions or require further information, please feel free to contact either of the above or myself. Thank you in advance for your prompt review of this application.

Sincerely,

Carla S. Shaw

Carla S. Shaw
Maralex Disposal, LLC

Encl.

cc: Mickey O'Hare
Dennis Reimers
NMOCD-Aztec, NM

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 SOUTH PACHECO
SANTA FE, NEW MEXICO 87505

FORM C-108
Revised 4-1-98

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. OPERATOR: Maralex Disposal, LLC

ADDRESS: P.O. Box 338, Ignacio, CO 81137

CONTACT PARTY: Dennis R. Reimers PHONE: 970/563-4000

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: A. M. O'Hare TITLE: Managing Member

SIGNATURE: A. M. O'Hare DATE: 06/26/00

* 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

00 JUL -3 AM 11:41
OIL CONSERVATION DIV.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Maralex Disposal, LLC

WELL NAME & NUMBER: Canyon No. 14

WELL LOCATION: 950' FNL; 1600' FWL | C | 26 | 25N | 11W

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12-1/4" **Casing Size:** 8-5/8"

Cemented with: 300 **sx.** ***or*** _____ **ft³**

Top of Cement: _____ **Method Determined:** _____

Intermediate Casing

Hole Size: _____ **Casing Size:** _____

Cemented with: _____ **sx.** ***or*** _____ **ft³**

Top of Cement: _____ **Method Determined:** _____

Production Casing

Hole Size: 7-7/8" **Casing Size:** 5-1/2"

Cemented with: 800 **sx.** ***or*** _____ **ft³**

Top of Cement: _____ **Method Determined:** _____

Total Depth: 6060'

Injection Interval

5960 **feet to** 6032 feet

(Perforated or Open Hole; indicate which)

5960'-5966' and 6014'-6032'

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 2-7/8" **Lining Material:** _____

Type of Packer: _____

Packer Setting Depth: Approximately 5920'

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

Additional Data

1. **Is this a new well drilled for injection?** _____ **Yes** __X__ **No**

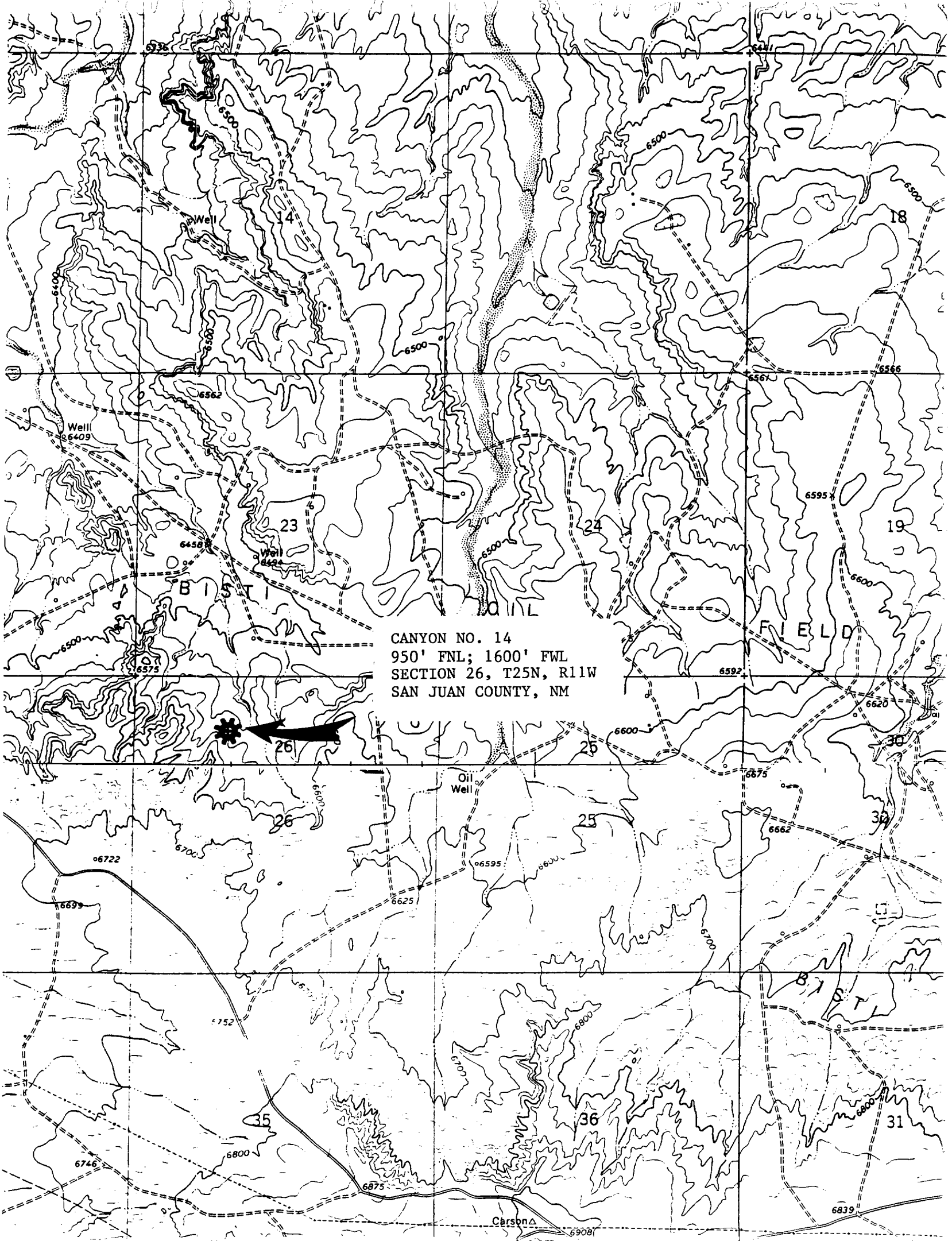
   If no, for what purpose was the well originally drilled? Gas Production

2. **Name of the Injection Formation:** Lower Dakota Sand

3. **Name of Field or Pool (if applicable):** Basin Dakota

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.** Yes
   5879-5883', 5900-5908'. Set retainer at 5816', squeezed with 100 sx.
   5011-5021' (Gallup) squeezed with 50 sx. Currently perforated at 5902-5906'.

5. **Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:** Kirtland, behind surface casing; Fruitland Coal 1335', PC 1355', Mesa Verde Cliffhouse Sand 2100', Menefee 3605', Pt. Lookout 3790', Mancos 3975', Gallup 4820', Greenhorn 5710', Dakota 5807'.


CANYON NO. 14
950' FNL; 1600' FWL
SECTION 26, T25N, R11W
SAN JUAN COUNTY, NM
BISTI
FIELD
Well
Oil Well
Carson
14
18
19
23
24
25
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36

MARALEX DISPOSAL, LLC
CANYON NO. 14
PROPOSED PRODUCED WATER DISPOSAL WELL

WELL DATA
(As Related to Section III of the OCD Application Form C-108)

1. Lease: Federal Lease NM-036252

   Well No: Canyon No. 14 30-045-21470

   Location: 950' FNL; 1600' FWL, Section 26-T25N-R11W
   San Juan County, NM

2. Casing and Cementing Specifications (as completed August 1974)

Depth	Hole Size	Casing & Weight		Cement
608'	12-1/4"	8-5/8"	24 lb/ft	300 sxs & circ.
6060'	7-7/8"	5-1/2"	15.5 lb/ft	1st Stage: 250 sxs ≈ 2246 circ 2nd Stage: 550 sxs

3. New 2-7/8" 6.5 lb/ft of internally coated tubing will be used as the injection string.

4. An injection packer will be set just above the top of the Lower Dakota Sands at a depth of approximately 5920'.

   No wells within the area of review penetrate the Dakota.

PROPOSED OPERATION:
(As Related to Section VII of the OCD Application Form C-108)

1. The well was drilled and completed as an upper Dakota producer. It has depleted the gas reserves from this area. We propose to perforate and test the Lower Dakota Sands. If it is water productive, as the open hole logs indicate, the well will be re-completed as a produced water disposal well. The initial volume of water to be injected is approximately 1000 BWPD, which will decline, as the existing producing wells are de-watered. In two to three years the water production from wells initially tied into this disposal well will probably be less than 500 BWPD. The well will most likely be used to dispose of coal seam water from additional Fruitland wells that may be drilled in this area. Maximum daily rate of injection could be as high as 2000 BWPD.

2. The disposal system will operate totally contained. Water from some of the producing wells will be pumped through a pipeline to the proposed disposal site, where it will be filtered before it is disposed of in the injection well. Produced water from some of the further extensions wells will be trucked to the disposal site. There will not be any open-top water pit or tanks.

3. A step rate injectivity test will be conducted on the new disposal well to determine the maximum injection pressure the water can be injected below the fracture gradient of the Lower Dakota Sands. Typical wells in this area have seen a fracture gradient of approximately 0.64 psi/ft. The step rate test will be submitted to the NMOCD to establish a maximum injection pressure.

4. Water analysis are included with the application showing the Fruitland coal seam water quality from our surrounding Trading Post wells. There are no known compatibility issues associated with the mixing of coal seam water with the Lower Dakota formation.

5. After perforating the Lower Dakota, a water analysis will be obtained and submitted to the NMOCD. Offsetting this area, the Lower Dakota has proven to be non-hydrocarbon productive. No known compatibility problems are evidenced between the Fruitland produced water and native waters from the Lower Dakota.

GEOLOGICAL DESCRIPTION – LOWER DAKOTA SANDS:
(As Related to Section VIII of the OCD Application Form C-108)

The proposed target interval for disposing of the produced water is the Lower Dakota Sands. The formations in this area, with their tops as picked and following the original completion, are as follows: (Depths are measured from KB to the top of each formation) KB level = 6564'.

	Depth	Thickness	Lithology
Dakota	5807'	148'	Interbedded sandstones, siltstones and shales
Lower Dakota	5954'	96'	Interbedded sandstones, siltstones and shales

As the attached maps show, there are a number of wells drilled in the immediate vicinity but not many Dakota completions. The closest Dakota well is approximately ¾ mile away and was D&A'd. All of the Dakota wells in this part of the San Juan Basin have been productive in only the Upper Dakota Sands. We

plan to perforate the Lower Dakota and ensure that it is not hydrocarbon productive. Cross-section A-A' indicates that there is little likelihood of commercial production in these zones in either the proposed well or in any of the offset Dakota wells. There are no known underground sources of drinking water in this area. However, produced Fruitland water from our Trading Post wells contains less than 10,000 PPM TDS at a depth to the bottom of that zone in this well of 1355'.

PROPOSED STIMULATION PROGRAM:
(As Related to Section IX of the OCD Application Form C-108)

The Lower Dakota will be fracture stimulated to allow the lower pressure disposal of produced water. Good formation barriers exist both above and below the Lower Dakota. The frac will be designed to place approximately 100,000 lbs of proppant. The induced fracture will allow water to be disposed into the Lower Dakota Sands under matrix pressures.

LOGGING AND TESTING PROGRAM:
(As Related to Section X of the OCD Application Form C-108)

A Dual Induction-Laterlog and an FDC-CNL log were originally run on this well and presumably submitted to the NMOCD.

POTENTIAL FRESH WATER ZONES:
(As Related to Section XI of the OCD Application Form C-108)

There are no known fresh water wells within a one-mile radius of the proposed disposal well.

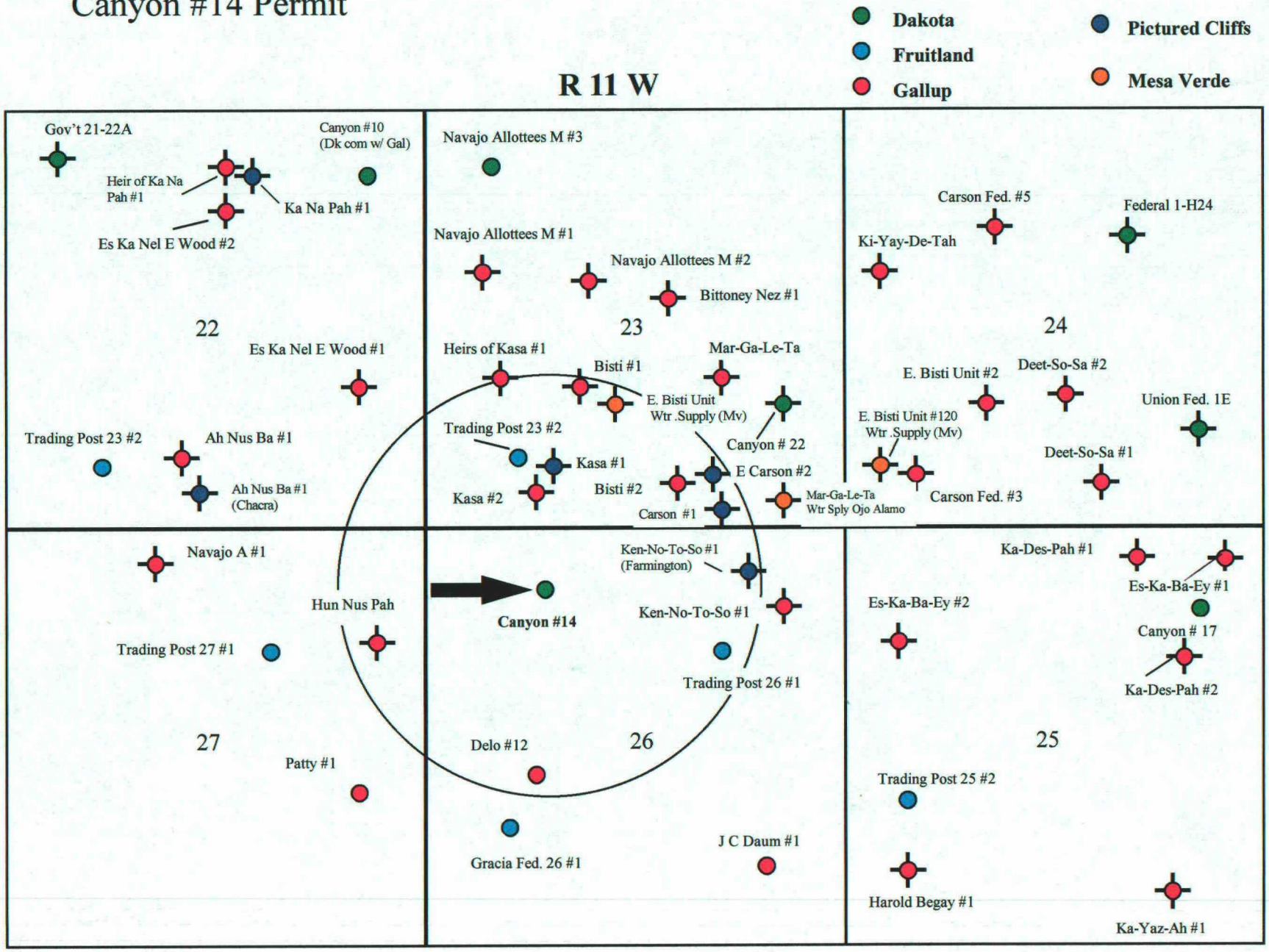
AFFIRMATIVE STATEMENT
(As Related to Section XII of the OCD Application Form C-108)

Certification:

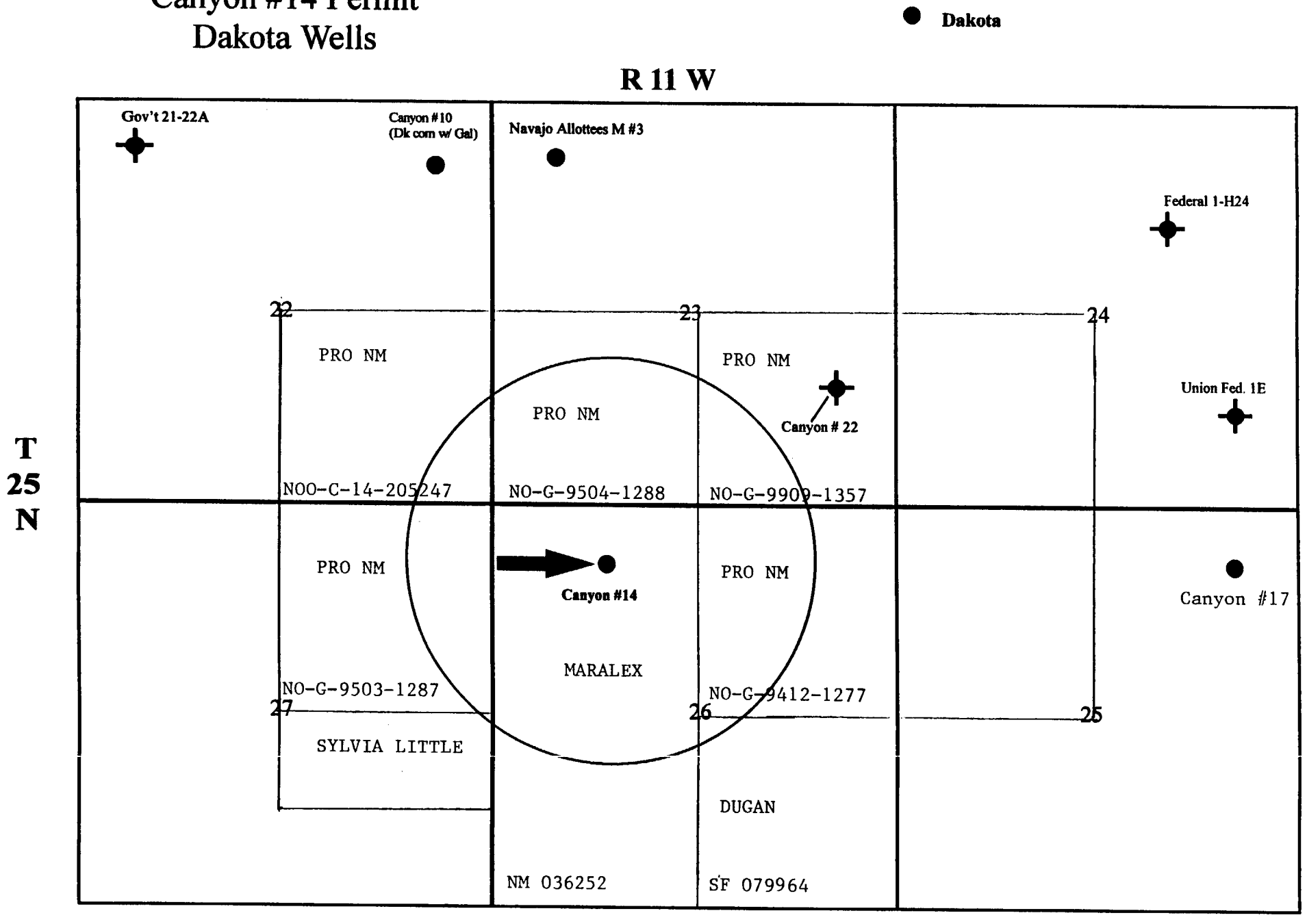
I hereby certify that I, or persons under my direct supervision, have inspected the proposed produced water disposal well site and found no evidence of open faults or any other hydrologic connection between the proposed disposal zone and any underground sources of drinking water and, that I am familiar with the conditions which currently exist and that the statements made in this application are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Maralex Disposal, LLC, and its contractors and subcontractors in conformity with this application and the terms and conditions under which it is approved.

A.M. O'Hare
Maralex Disposal, LLC

Maralex Disposal, LLC.
San Juan County, N.M.
Canyon #14 Permit



Maralex Disposal, LLC
San Juan County, N.M.
Canyon #14 Permit
Dakota Wells

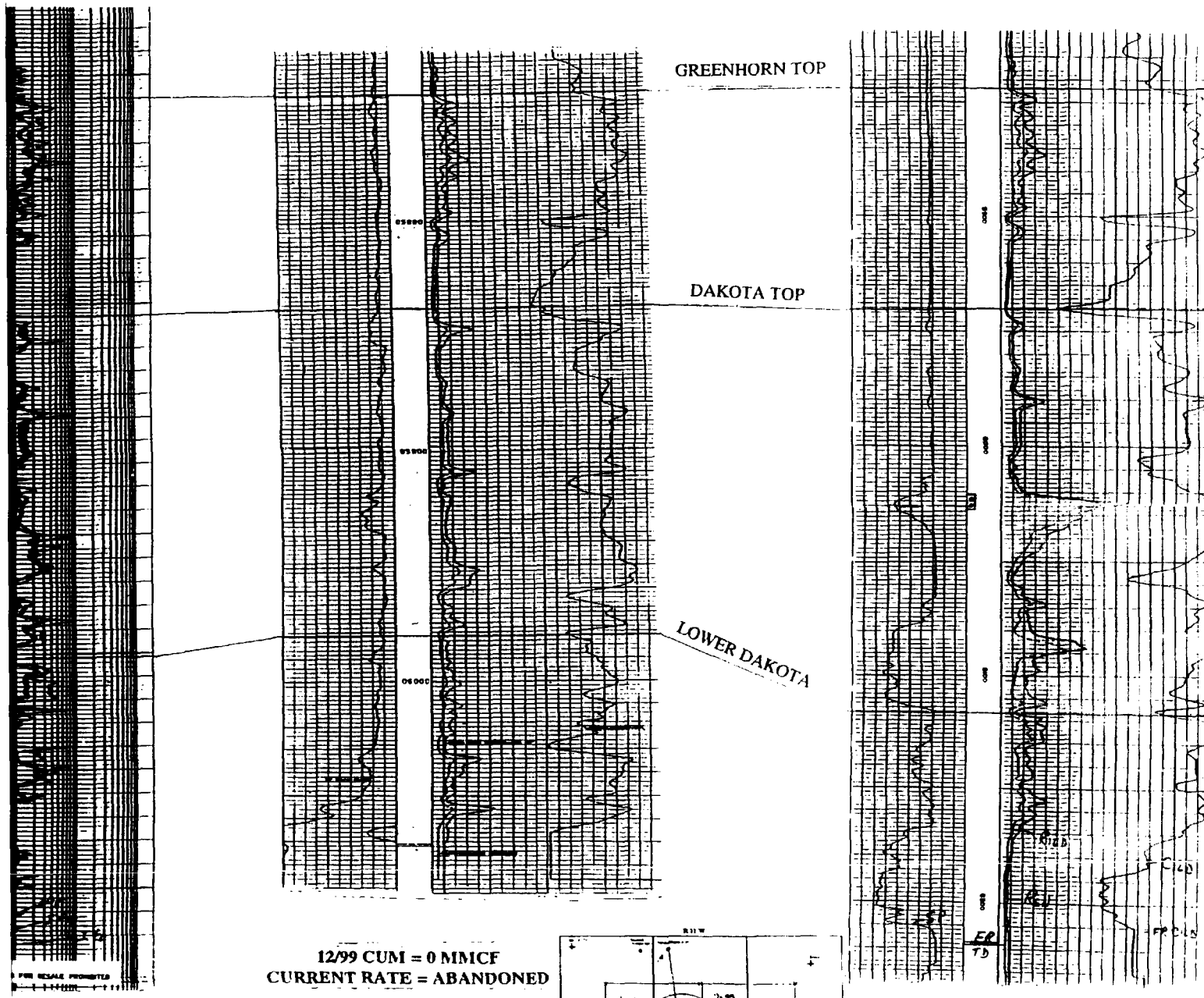


A'

***
74
, T25N, R11W

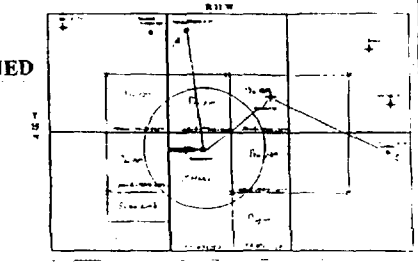
CANYON #22
D&A 10/76
1850' FSL, 790' FEL, SEC 23, T25N, R11W

CANYON #17
COMPLETED 9/74
800' FNL, 800' FEL, SEC 25, T25N, R11W



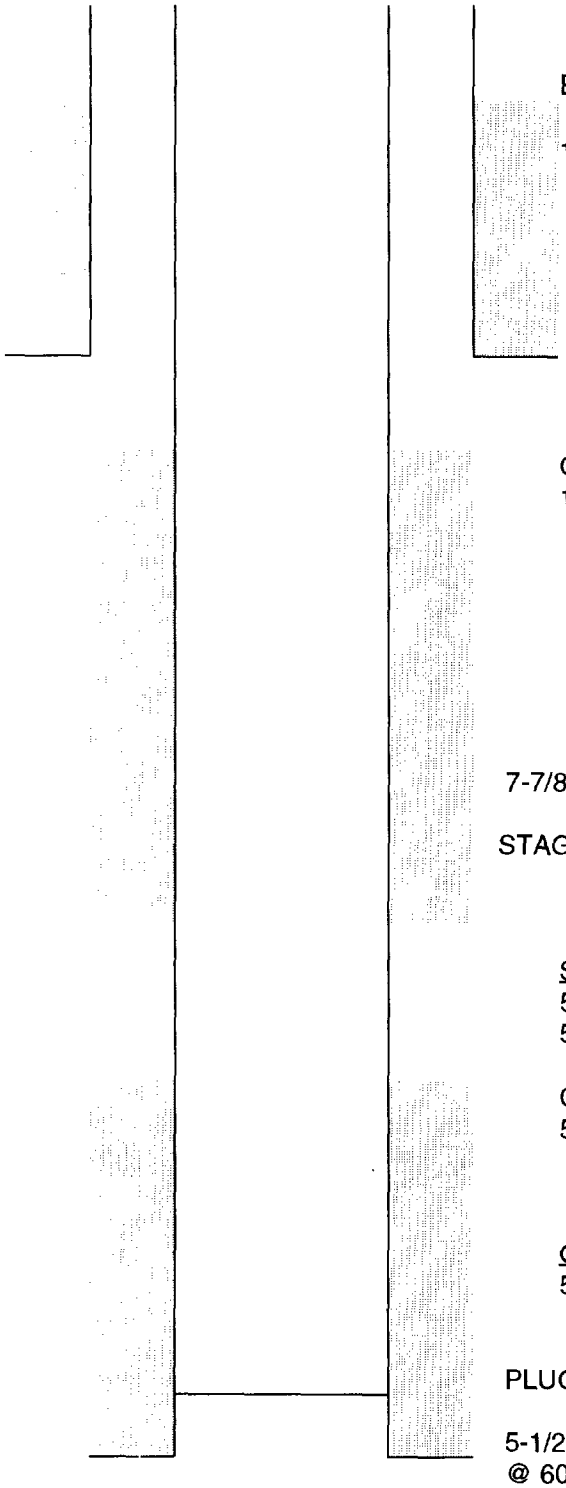
ICF
MCFD

12/99 CUM = 0 MMCF
CURRENT RATE = ABANDONED



12/99 CUM = 562 MMCF
CURRENT RATE = 65 MCFD

MARALEX RESOURCES, INC.
CANYON NO. 14
WELLBORE DIAGRAM
CURRENT CONFIGURATION



ESTIMATED TOP OF CEMENT: 176'

12-1/4" HOLE

8-5/8", 24# casing
@ 608' w/ 300 sacks

CALCULATED TOP OF 2ND STAGE CEMENT:
1355' (assuming stage tool @ 3700'.)

7-7/8" HOLE

STAGE TOOL @ ?

SQUEEZED PERFORATIONS:	DATE SQUEEZED:
5879'-5883, 5900'-5908'	07/25/1974
5011'-5021'	03/05/1976

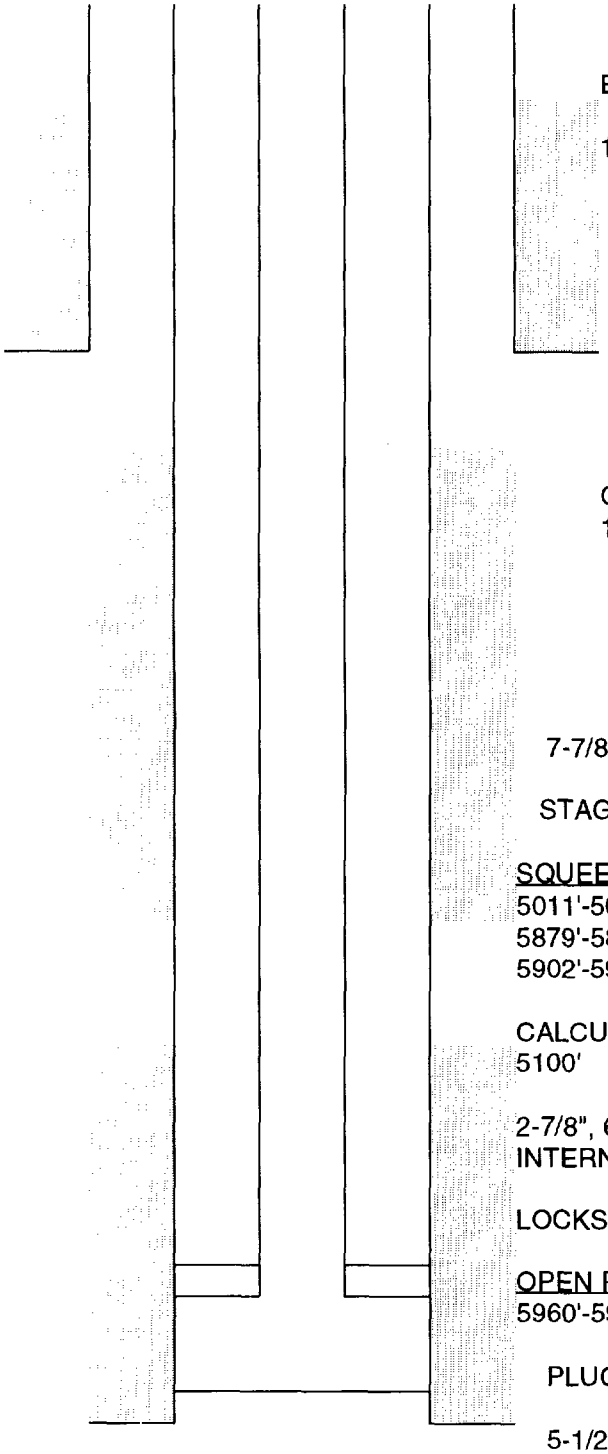
CALCULATED TOP OF 1ST STAGE CEMENT:
5100'

OPEN PERFORATIONS:
5902'-5906'

PLUG BACK DEPTH 6017'

5-1/2", 15.5# casing
@ 6060' w/ 800 sacks in 2 stages

MARALEX RESOURCES, INC.
CANYON NO. 14
WELLBORE DIAGRAM
DISPOSAL CONFIGURATION



ESTIMATED TOP OF CEMENT: 176'

12-1/4" HOLE

8-5/8", 24# casing
@ 608' w/ 300 sacks

CALCULATED TOP OF 2ND STAGE CEMENT:
1355' (assuming stage tool @ 3700'.)

7-7/8" HOLE

STAGE TOOL @ ?

SQUEEZED PERFORATIONS:
5011'-5021'
5879'-5883, 5900'-5908'
5902'-5906'

CALCULATED TOP OF 1ST STAGE CEMENT:
5100'

2-7/8", 6.5#, J-55, EUE,
INTERNALLY COATED TUBING @ 5920'

LOCKSET PACKER @ 5920'

OPEN PERFORATIONS:
5960'-5966', 6014'-6032'

PLUG BACK DEPTH 6055'

5-1/2", 15.5# casing
@ 6060' w/ 800 sacks in 2 stages

HALLIBURTON

Water Analysis Report

To:	Maralex Resources	Date:	05/06/2000
Submitted by:	Halliburton Energy Services	Date Rec:	05/05/2000
Attention:		Report #:	BLMM0209
Well Name:	Trading Post# 1	Formation:	well Head

Fresh Water: NO KCl

Specific Gravity	1.010	
pH	7.26	
Resistivity	0.43	@ 70° F
Iron (Fe)	0	Mg / L
Potassium (K)	100	Mg / L
Sodium (Na)	1712	Mg / L
Calcium (Ca)	100	Mg / L
Magnesium (Mg)	58	Mg / L
Chlorides (Cl)	2560	Mg / L
Sulfates (SO_4)	0	Mg / L
Carbonates (CO_3)	0.0	Mg / L
Bicarbonates (HCO_3)	895	Mg / L
Total Dissolved Solids	5425	Mg / L

Respectfully: A.J. Jahangiri

Title: QA/Qc

Location: Farmington, NM

HALLIBURTON

Water Analysis Report

To:	Maralex Resources	Date:	05/08/2000
Submitted by:	Halliburton Energy Services	Date Rec:	05/05/2000
Attention:		Report #:	BLMM0208
Well Name:	Trading Post# 22-1	Formation:	well Head

Fresh Water; NO KCl

Specific Gravity	1.005	
pH	7.29	
Resistivity	0.36	@ 70° F
Iron (Fe)	0	Mg / L
Potassium (K)	150	Mg / L
Sodium (Na)	1064	Mg / L
Calcium (Ca)	100	Mg / L
Magnesium (Mg)	66	Mg / L
Chlorides (Cl)	1840	Mg / L
Sulfates (SO_4)	0	Mg / L
Carbonates (CO_3)	0.0	Mg / L
Bicarbonates (HCO_3)	529	Mg / L
Total Dissolved Solids	3749	Mg / L

Respectfully: A.J. Jahangiri

Title: QA/Qc

Location: Farmington, NM

HALLIBURTON

Water Analysis Report

To:	Maralex Resources	Date:	05/06/2000
Submitted by:	Halliburton Energy Services	Date Rec:	05/05/2000
Attention:		Report #:	BLMM0207
Well Name:	Trading Post# 26-1	Formation:	wall Head

Fresh Water; NO KCl

Specific Gravity	1.010	
pH	7.43	
Resistivity	0.41	@ 70° F
Iron (Fe)	0	Mg / L
Potassium (K)	100	Mg / L
Sodium (Na)	1214	Mg / L
Calcium (Ca)	100	Mg / L
Magnesium (Mg)	59	Mg / L
Chlorides (Cl)	1840	Mg / L
Sulfates (SO_4)	0	Mg / L
Carbonates (CO_3)	0.0	Mg / L
Bicarbonates (HCO_3)	813	Mg / L
Total Dissolved Solids	4127	Mg / L

Respectfully: A.J. Jahangiri

Title: QA/Qc

Location: Farmington, NM

ATTACHMENT B

HALLIBURTON

Water Analysis Report

To:	Maralex	Date:	9/9/99
Submitted by:	Halliburton Energy Services	Date Rec:	9/9/99
Attention:	Jim Graves: 970-563-4000 (FX- 4116)	Report #:	WF-990-0210
Well Name:	Gracia Navajo 27-1 (Trading Post)	Formation:	Flow back Water

Specific Gravity	1.000	
pH	7.10	
Resistivity	0.74	@ 70° F
Iron (Fe)	0	Mg / L
Potassium (K)	200	Mg / L
Sodium (Na)	6132	Mg / L
Calcium (Ca)	104	Mg / L
Magnesium (Mg)	41	Mg / L
Chlorides (Cl)	9500	Mg / L
Sulfates (SO_4)	0	Mg / L
Carbonates (CO_3)	0.0	Mg / L
Bicarbonates (HCO_3)	773	Mg / L
Total Dissolved Solids	16750	Mg / L

Respectfully: Bill Londenridge

Title: Field Chemist II

Location: Farmington, NM

HALLIBURTON

Water Analysis Report

To:	Maralex Resources	Date:	05/06/2000
Submitted by:	Halliburton Energy Services	Date Rec:	05/06/2000
Attention:		Report #:	BLMM0208
Well Name:	Trading Post# 28-1	Formation:	well Head

Fresh Water: NO KCl

Specific Gravity	1.010	
pH	7.31	
Resistivity	0.41	@ 70° F
Iron (Fe)	0	Mg / L
Potassium (K)	75	Mg / L
Sodium (Na)	1104	Mg / L
Calcium (Ca)	116	Mg / L
Magnesium (Mg)	46	Mg / L
Chlorides (Cl)	1640	Mg / L
Sulfates (SO_4)	0	Mg / L
Carbonates (CO_3)	0.0	Mg / L
Bicarbonates (HCO_3)	813	Mg / L
Total Dissolved Solids	3795	Mg / L

Respectfully: A.J. Jahangiri

Title: QA/Qc

Location: Farmington, NM