ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE 8-29-88

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD X
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 7-3-88

for the Meurion Oil & Gas Co. Campo Largo Unit #125 M-9-24N-6W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

Yours truly,

Leo Gallegos

PH. 505-325-5093

MERRION OIL & GAS CORPORATION

P. O. Box 1017
FARMINGTON, NEW MEXICO 87499

June 29, 1985

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Canyon Largo Unit 125
Water Injection Application

Dear Sir:

We request administrative approval to dispose of produced water from the Gallup and Mesaverde Formation by subsurface injection. Attached is our Application for your consideration.

The proposed disposal well is the Canyon Largo Unit 125 which we plugged after a completion attempt in the Mesaverde. We will drill out cement plugs to below the Cliffhouse. All other cement plugs will remain to isolate the Gallup and Lower Mesaverde.

The proposed injection zone is the Cliffhouse, Mesaverde.

If further is required, please advise.

Sincerely,

MERRION OIL & GAS CORPORATION

Steve S. Dunn, Operations Manager

SSD/am

Enc.

STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

APPLICATION FOR AUTHORIZATION TO INJECT

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

II. Operator: Merrion Oil & Gas Corporation

Address: P.O. Box 840, Farmington, New Mexico 87499

Contact party: Steve Dunn Phone: 325-5093

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. (Attached Exhibit 1.)

* 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: Steve S. Dunn Title Operations Manager

Signature: _____ Date: 6/19/85

* 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.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

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.

VI. Well Data on wells that penetrate proposed injection zone within the area of review.

Canyon Largo Unit 121 - Completion Report Attached
Canyon Largo Unit 122 - Completion Report Attached
Canyon Largo Unit 126 - Completion Report Attached
Canyon Largo Unit 300 - Completion Report Attached

VII. Data on Proposed Operation

1. Volume fluids to dispose of:
   Average Anticipated - 150 BWPD
   Maximum Anticipated - 500 BWPD
2. This will be a closed system with water tank on surface for storage.
3. Proposed Injection Pressures:
   Average - 750 PSIG
   Maximum - 1500 PSIG
4. Sources of Produced Water:
   A. Point Lookout, Mesaverde (analysis attached)
   B. Gallup (analysis attached)
5. Analysis of Cliffhouse Water in the immediate area is not available. However, we have enclosed a water analysis of Cliffhouse produced water from a well we operate in San Juan County, the Carnahan No. 1. The Cliffhouse, Point Lookout and Gallup produced waters appear to be compatible.

VIII. Geologic Data Injection Zone - Cliffhouse

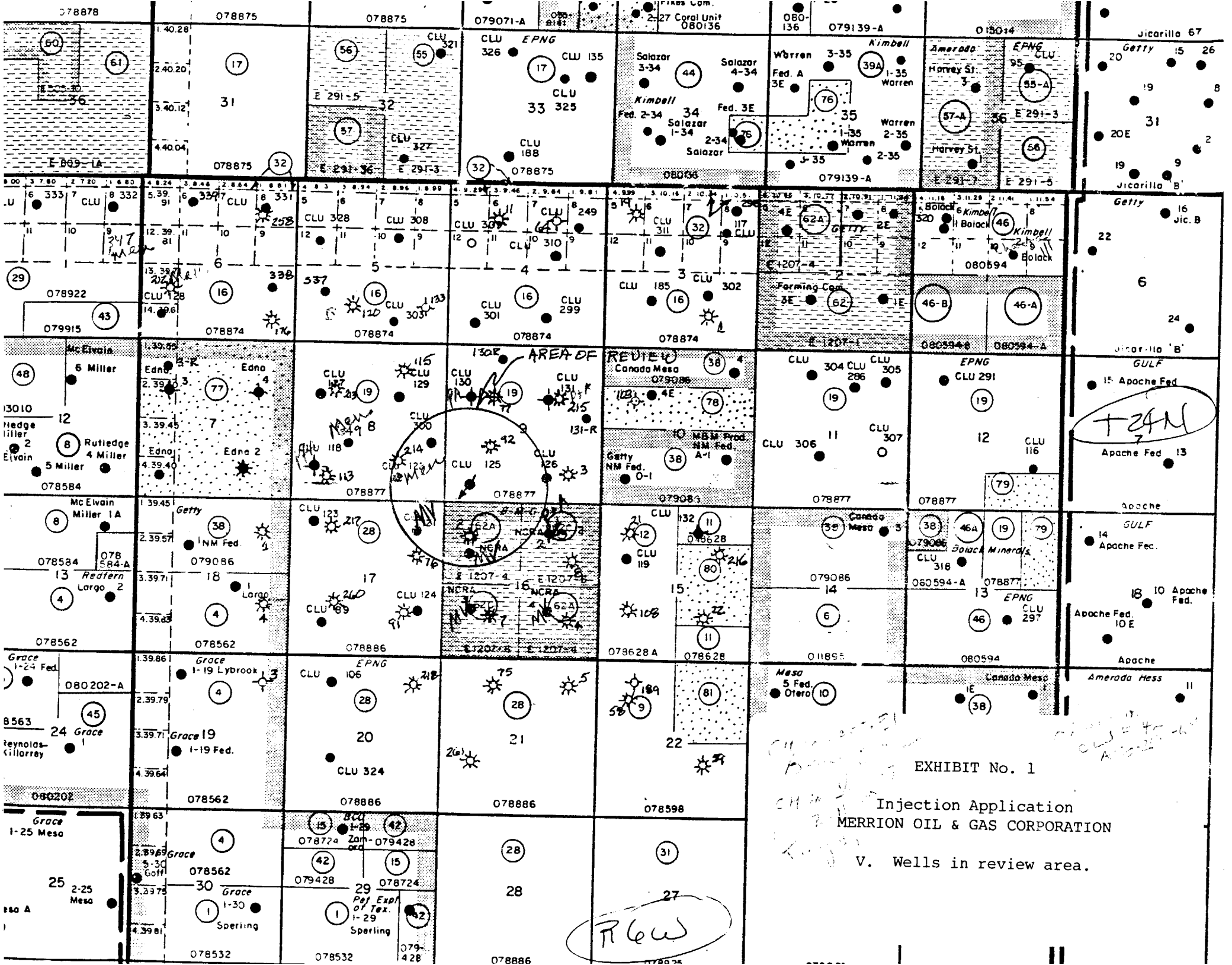
Depth - 3610 - 3686'
Thickness - 76'
Description - White-gray, medium-fine grain, transgressive marine sand.
Fresh Water Aquifer - Ojo Alamo
1600 - 1645' in the Canyon Largo Unit 125

IX. Stimulation Program
Will drill out cement plugs and clean out to 4260'. Perforate Cliffhouse 3630 - 70'. Run Model A packer on 2-3/8" tubing. Load backside with Bactericide and oxygen scavenger. Set packer @ 3600' KB. Establish injection rate and pressures. Acidize perfs if necessary. Commence disposal operations.

X. Logs on file with the New Mexico Oil Conservation Commission.

XI. No fresh water wells within one mile of disposal well to the best of our knowledge.

XII. We 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.


AREA OF REVIEW
EXHIBIT No. 1
Injection Application
MERRION OIL & GAS CORPORATION
V. Wells in review area.

PROPOSED
INJECTION WELL DATA SHEET

OPERATOR	LEASE			
Merrion oil & Gas Corporation	Canyon Largo Unit			
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
125	805' FSL & 530' FWL	9	T24N	R6W

Schematic

Schematic Attached

Tabular Data

Surface Casing

Size 8-5/8" " Cemented with 150 sx.

TOC Surface feet determined by filed report

Hole size 12-1/4"

Intermediate Casing

Size _____" Cemented with _____ sx.

TOC _____ feet determined by _____

Hole size _____

Long string

Size 4-1/2" " Cemented with 579 sx.

TOC 1900' (last stage feet determined by Temperature Survey

Hole size 7-7/8"

Total depth 5625'

Injection interval (Perforated)

3610' feet to 3690' feet
(perforated or open-hole, indicate which)

Tubing size 2-3/8" lined with _____ set in a
(material)

Baker Model A packer at 3600 feet
(brand and model)

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Cliffhouse - Mesaverde

2. Name of Field or Pool (if applicable) Devils Fork

3. Is this a new well drilled for injection? /7 Yes /XX No

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

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

   4338 - 49' - Mesaverde (non productive) plugged w/10 sx

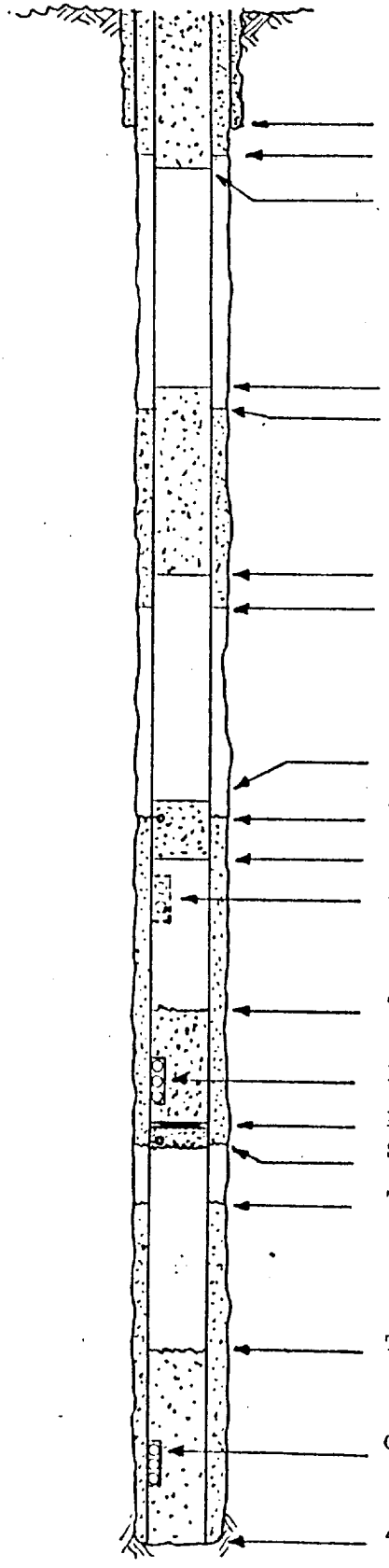
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Pictured Cliffs - 2130', Point Lookout - 4350 +, Gallup - 5370'

WELLBORE SCHEMATIC

Canyon Largo Unit 125

LOCATION: 805' FSL & 530' FWL
Sec. 9, T24N, R6W
Rio Arriba Co., NM

ELEVATION: 6541' GR



8-5/8" @ 169' w/150 sx TOC - Surface

50 sx Plug in Bradenhead to 200' est.

Cement Plug 220' to Surface

Top of Cement - 1845'

Top of Cement - 1900' Temperature Survey

25 sx Plug @ 2175'

Stage Tool @ 2265' w/100 sx.

Top of Cement - 3528'

Top of Cement - 3568' SqzD w/20 sx

10 sx Plug @ 3660'

Proposed Injection Perfs - Cliffhouse - 3630' - 70'

Top of Cement - 4260'

Point Lookout Perfs - 4338 - 49' (P&A)

Retainer @ 4400'

Sqz. Hole @ 4410' w/309 sx H

Top of Cement - 4600' Calculated

Top of Cement - 5150 - 35' sx

Gallup Perfs - 5568 - 88' (P&A)

4-1/2" 10,5 #/ft @ 5625' w/150 sx

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: SF 078886

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [X] DIFF. RESVR. [ ] Other

7. UNIT AGREEMENT NAME: Canyon Largo Unit

8. FARM OR LEASE NAME:

2. NAME OF OPERATOR: J. Gregory Merrion and Robert L. Bayless

9. WELL NO.: 121

3. ADDRESS OF OPERATOR: P.O. Box 507 Farmington, New Mexico 87401

10. FIELD AND POOL, OR WILDCAT: Devils Fork Mesaverde

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 990' FNL and 990' FEL
At top prod. interval reported below: Same
At total depth: Same

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Section 17, T24N, R6W NMPM

14. PERMIT NO. | DATE ISSUED

12. COUNTY OR PARISH: Rio Arriba | 13. STATE: New Mexico

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
3-2-63	3-11-63	11-27-76	6546 KB	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5613			→		

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
Mesaverde

25. WAS DIRECTIONAL SURVEY MADE

26. TYPE ELECTRIC AND OTHER LOGS RUN
Casing Inspection Log - Gamma Ray Neutron Log

27. WAS WELL CORED

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24#	173	17 1/4"	150 sax	
4 1/2"	10.5#	5612	7 7/8"	150 sax First Stage	
				100 sax Second Stage	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*)
4312-4322, 20 holes, 0.33"

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
4312-4322	Sand-oil fracked with 385 bbls. gelled oil and 21,000# sand.

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
3-1-77	Pumping	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
3-29-77	24			10	TSTM	0	--

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24 HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
			10	TSTM	0	43

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)
Sold

TEST WITNESSED BY: Merle Ellsaesser

35. LIST OF ATTACHMENTS
~~NMX~~ None

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

SIGNED Original Signed J. Gregory Merrion TITLE Co-Owner DATE August 31, 1977

*(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.
			Same as original report

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-683636

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: SF 078877

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [X] DIFF. RESVR. [ ] Other

7. UNIT AGREEMENT NAME: Canyon Largo Unit

8. FARM OR LEASE NAME:

2. NAME OF OPERATOR: J. Gregory Merrion and Robert L. Bayless

9. WELL NO.: 122

3. ADDRESS OF OPERATOR: P.O. Box 507 Farmington, New Mexico 87401

10. FIELD AND POOL, OR WILDCAT: Devils Fork Mesaverde

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 790' FSL and 1650' FEL
At top prod. interval reported below: Same
At total depth: Same

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Section 8, T24N, R6W

14. PERMIT NO. | DATE ISSUED

12. COUNTY OR PARISH: Rio Arriba | 13. STATE: New Mexico

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
3-14-63	3-27-63	12-1-76	6507 KB	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5575	5220		→		

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: Mesaverde 4260

25. WAS DIRECTIONAL SURVEY MADE:

26. TYPE ELECTRIC AND OTHER LOGS RUN: ES Induction and Sonic GR

27. WAS WELL CORED:

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24#	173	12 1/4"	175 sax	
4 1/2"	10.5#	5574	7 7/8"	150 first stage	
				100 second stage	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8		

31. PERFORATION RECORD (*Interval, size and number*)
4 holes @ 4260

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
	None

RECEIVED
SEP 1 1977
U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
12-1-76	Pumping	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
1-6-77	24			26	9.3	0	357

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
			26	9.3	0	43

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Sold

TEST WITNESSED BY: Merle Ellsaesser

35. LIST OF ATTACHMENTS: None

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

SIGNED (Original Signed) J. Gregory Merrion TITLE Co-Owner DATE August 31, 1977

*(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), 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				38. GEOLOGIC MARKERS	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP MEAS. DEPTH
			Same as original report		

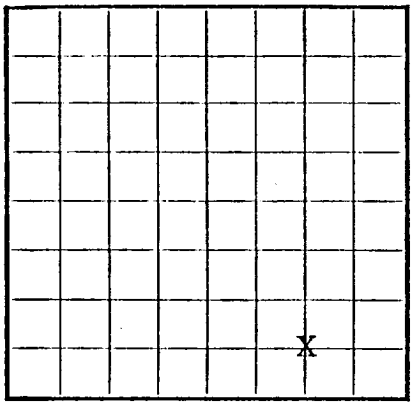
U.S. GOVERNMENT PRINTING OFFICE: 1963—O-683636

Mailed 6-18-63

Bud[illegible]ureau No. 42-R355.4.
App[illegible]. expires 12 31 60.

Form 9-330

U. S. LAND OFFICE SF
SERIAL NUMBER 078877
LEASE OR PERMIT TO PROSPECT



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company El Paso Natural Gas Products Co. Address P.O. Box 1560, Farmington, New Mexico

Lessor or Tract Canyon Largo Unit Field Devils Fork Gallup State New Mexico

Well No. 126 Sec. 9 T. 24N R. 6W Meridian NMPM County Rio Arriba

Location 790 ft. {N.} of S Line and 1850 ft. {E.} of E Line of Section 9 Elevation 6553'
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed ORIGINAL SIGNED BY: JOHN J. SIROJEK

Date _____ Title Petroleum Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling April 27, 1963 Finished drilling May 7, 1963

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 5605' to 5623' No. 4, from _____ to _____

No. 2, from _____ to _____ No. 5, from _____ to _____

No. 3, from _____ to _____ No. 6, from _____ to _____

IMPORTANT WATER SANDS

No. 1, from _____ to _____ No. 3, from _____ to _____

No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From	Perforated To	Purpose
8-5/8"	24.0 #	8rd	J-55	161'	Texas Pattern				Surface Csg.
4-1/2"	10.50#	8rd	J-55	5653'	Texas Pattern		5605'	5623'	Prod. Csg.

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8-5/8"	174'	150	Circulated		
4-1/2"	5664'	150-1st Stage	Pump and		
		100-2nd Stage	Plug		

REMARKS

FOI

Heaving plug—Material ..... Length ..... Depth set .....

Adapters—Material ..... Size .....

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
		See "Well History"				

TOOLS USED

Rotary tools were used from 0 feet to 5665' feet, and from ..... feet to ..... feet

Cable tools were used from ..... feet to ..... feet, and from ..... feet to ..... feet

DATES

May 18, 1963 Put to producing May 25, 1963

The production for the first 24 hours was 102 barrels of fluid of which 100 % was oil; 0 % emulsion; 0 % water; and 0 % sediment.

Gravity, ~~Bé.~~ 39.8° API

If gas well, cu. ft. per 24 hours ..... Gallons gasoline per 1,000 cu. ft. of gas .....

Rock pressure, lbs. per sq. in. .....

EMPLOYEES

....., Driller ....., Driller

....., Driller ....., Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	1532	1532	Wasatch: Interbedded ss & micaceous shale.
1532	1682	150	Ojo Alamo: White, coarse grained sand.
1682	1898	216	Kirtland: Gy. sh. inbd. w/tight gy. FG ss.
1898	2117	219	Fruitland: Gy. carb. sh., scat. coals, coals & gy. tight FG ss.
2117	2190	73	Pictured Cliffs: Gy., FG, tight varicolored soft ss.
2190	3636	1446	Lewis: Gy. to white ds. sh. w/silty to shaly ss. breaks.
3636	3733	97	Cliff House: Gy., FG, ds. silty ss.
3733	4340	607	Menefee: Gy., FG sd, Carb. Shale & Coal. shale breaks.
4340	4577	237	Point Lookout: Gy., v/fn. silty ss with frequent shale breaks.
4577	5408	831	Mancos: Gy. carb shale.
5408	5665	257	Lower Gallup: Lt. gy. to brn. calc. carb. mic. glauconitic. Very fn. to med. gr. ss. w/irreg inbd. shale.

TOPS ARE PICKED FROM ELECTRIC & RADIO ACTIVITY LOGS.

FROM— TO— TOTAL FEET FORMATION

(OVER)

16—45084-4

FORMATION RECORD—Continued

10—43094-2 U. S. GOVERNMENT PRINTING OFFICE

HISTORY OF OIL OR GAS WELL

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

5/6/63 Core No. 1 from 5580' to 5631', Cut 51', Recovered 27' sand and 24' shale.

5/17/63 Sandoil fractured Gallup perforated interval 5605'-5623' with 29,274 Gals. lease crude and 40,000# sand with 0.05#/Gal. Adomite Mark II. Flushed with 3958 Gals. lease crude. IR: 27.2 BPM. BDP 3500 psi, MTP 2950 psi, ATP 2800 psi. Spotted 250 Gals. of 15% Spearhead acid ahead of frack job.

5/26/63 Initial Potential: Flowing 102 BOPD, 139 MCFD GOR 1364:1, FTP 180, FCP 540, 18/64" Choke.

LOG OF OIL OR GAS WELL

GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR

UNITED STATES

Form 9-331
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

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

WELL COMPLETION OR COMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: SF-078877

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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. RESVR. [ ] Other

7. UNIT AGREEMENT NAME: Canyon Largo Unit

2. NAME OF OPERATOR: J. Gregory Merrion & Robert L. Bayless

8. FARM OR LEASE NAME: Canyon Largo Unit

3. ADDRESS OF OPERATOR: P. O. Box 507, Farmington, NM 87401

9. WELL NO.: 300

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 1980' FSL & 500' FEL
At top prod. interval reported below: same
At total depth: Same

10. FIELD AND POOL, OR WILDCAT: Devils Fork Gallup

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Section 8, T24N, R6W

RECEIVED
MAR 19 1981
U.S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

14. PERMIT NO. | DATE ISSUED

12. COUNTY OR PARISH: Rio Arriba | 13. STATE: New Mexico

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
10-17-80	10-25-80	3-15-81	6478 GL 6491 KB	6478

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5660' KB	5608		→	0-5660	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
5352 - 5544, Gallup

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN
Birdwell ES Induction and GR Density

27. WAS WELL CORED: No

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

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8	28	198	12-1/4	160 sx	
4-1/2	10.5	5660	7-7/8	825 sx	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-3/8	5593	none

31. PERFORATION RECORD (*Interval, size and number*)
0.43" holes - 5544, 5536, 5423, 5405, 5363 and 5356
0.34" holes - 5540, 5532, 5419, 5401, and 5352

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

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5352-5544	52,248 gal gelled oil with 111,000# 20/40 sand and 10,000# 10/20 sand

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
3-15-81	flowing	Shut in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
3-16-81	24	3/4		17	176	0	10,353

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
20	230		17	176	0	39

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*)
Vented

TEST WITNESSED BY: Don Wood

35. LIST OF ATTACHMENTS

ACCEPTED FOR RECORD
MAR 24 1981
FARMINGTON DISTRICT
BY

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

SIGNED J. Gregory Merrion TITLE Co-Owner DATE 3-17-81

(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.
Ojo Alamo	1460	1600	
Fruitland	1850	2078	
~~Tertiary~~	~~0~~	~~1600~~	~~Porous fresh water sands~~
Pictured Cliffs	2078	2142	Tite gas sand
Chacra	2864	3076	Tite, salt water
Mesaverde	3560	4488	Tite, salt water
Gallup	5378	5550	Tite, oil and gas

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Pictured Cliffs	2078	same
Chacra	2864	same
Mesaverde	3560	same
Mancos	4488	same
Gallup	5378	same
Marye	5525	same

U.S. GOVERNMENT PRINTING OFFICE: 1963—O 3636
GPO 837-497

871-233

ANALYSIS NO. 2 Q 17 85

FIELD RECEIPT NO. _____

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company	Sample No.	Date Sampled
MERRION OIL & GAS	1	4-25-85

Field	Legal Description	County or Parish	State
DEVILS FORK			

Lease or Unit	Well	Depth	Formation	Water, B/D
	CLU #349		PT. LOOKOUT	

Type of Water (Produced, Supply, etc.)	Sampling Point	Sampled By
PRODUCED		

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	5545	241.13 ppm
Calcium, Ca	0	0
Magnesium, Mg	389	31.89
Barium, Ba	0	0
Potassium, K^+	48	1.23

ANIONS		
Chloride, Cl	8076	227.49
Sulfate, SO_4	25	.19
Carbonate, CO_3	0	
Bicarbonate, HCO_3	2841	46.57

Total Dissolved Solids (calc.) 16924

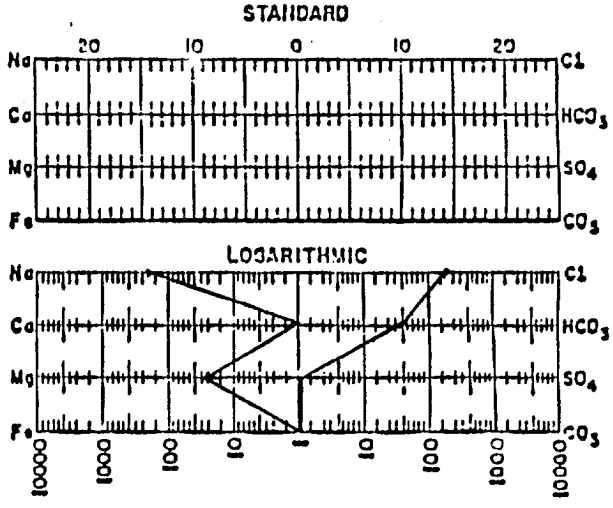
Iron, Fe (total)	0
Sulfide, as H_2S	0

OTHER PROPERTIES

pH	7.2
Specific Gravity, 60/60 F.	1.014
Resistivity (ohm-meters) 68 F.	.43
Total hardness	1600

R_w = 0.25 @ 140°

WATER PATTERNS — me/l



REMARKS & RECOMMENDATIONS:

ANALYST: Russell Pyeatt
RUSS PYEATT

THE WESTERN COMPANY OF
NORTH AMERICA, FARMINGTON, NM
(505) 327-6222

Please refer any questions to: Clay Terry, District Engineer or
Tom Burris, Field Engineer

N[illegible] Inc.
P.O. Box 1675 Houston, Texas 77001

REPORT OF TEST

BAROID TREATING CHEMICALS

			SHEET NUMBER
COMPANY: Merrion and Bayless			DATE: 5-6-75
FIELD OR PLANT		COUNTY OR PARISH	STATE: New Mexico
LEASE OR UNIT	WELL(S) NAME & NO.: Canyon Largo	SAMPLE SOURCE: Production unit	
TYPE SAMPLE: Produced water GALLUP FORMATION		TYPE TEST	
REASON FOR TEST			

RESULTS:

Sulfates ppm	100
Chlorides ppm	5,500
Total Dissolved Solids ppm	17,500

REMARKS & RECOMMENDATIONS:

SALES ENGINEER: Bob Cudd	DIST. NO.: 12	ADDRESS: Farmington NM	OFFICE PHONE: 325-5701	HOME PHONE: 334-2254
TESTED BY: Cudd	DATE	DISTRIBUTION: ☐ CUSTOMER ☐ AREA OR ☐ DISTRICT OFFICE ☐ SALES ENGINEER OR ☐ CHEM. LAB ☐ CHEM. SALES SUPERVISOR		

N L Industries, Inc.
P.O. Box 1675 Houston, Texas 77001

REPORT OF TEST

BAROID TREATING CHEMICALS

COMPANY: MERRION AND BAYLESS			SHEET NUMBER:
FIELD OR PLANT:		COUNTY OR PARISH: SAN JUAN	STATE: NEW MEXICO
LEASE OR UNIT:	WELL(S) NAME & NO.: CARNHAN	SAMPLE SOURCE: PRODUCTION UNIT	DATE: APRIL 30, 1975
TYPE SAMPLE: PRODUCED WATER		TYPE TEST: CHLORIDE, SULFATE, TDS	
REASON FOR TEST:			

RESULTS:

Chloride, mg/l	22,000
Sulfate, mg/l	1550
Total Dissolved Solids, mg/l	24,300

REMARKS & RECOMMENDATIONS:

SALES ENGINEER: BOB CUDD	DIST. NO.	ADDRESS: FARMINGTON NM	OFFICE PHONE	HOME PHONE	
TESTED BY: HEATHER MANN	DATE: 4-30-75	DISTRIBUTION: ☐ CUSTOMER ☐ AREA OR ☐ DISTRICT OFFICE ☐ SALES ENGINEER OR ☐ CHEM. LAB ☐ CHEM. SALES SUPERVISOR			

FORM [illegible]

PH. 505-325-5093

MERRION OIL & GAS CORPORATION

P. O. Box 1017
FARMINGTON, NEW MEXICO 87499

June 20, 1985

Mr. Van Gobel
El Paso Natural Gas Co.
P. O. Box 4289
Farmington, New Mexico 87499

Re: Canyon Largo Unit 125
Application for Subsurface Injection

Dear Mr. Gobel,

Enclosed please find our Application for Administrative Approval to convert the Canyon Largo Unit 125 well to an injection well for the purpose of water disposal in the Canyon Largo area. This application will be filed with the State of New Mexico.

Please review this application and if you have any questions please call. (505/325-5093) If you approve, you may write the New Mexico Oil Conservation Division in Santa Fe to indicate approval. However, this is not required. Additionally, the State allows 15 days from receipt to file any objections with their office.

Thank you for your assistance.

Sincerely,

MERRION OIL & GAS CORPORATION

Steve S. Dunn, Operations Manager

SSD/am

Enc.

PS Form 3811, July 1982

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
   - ☐ Show to whom and date delivered ..... ____¢
   - ☒ Show to whom, date, and address of delivery .. ____¢
2. ☐ RESTRICTED DELIVERY..... ____¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ ____

3. **ARTICLE ADDRESSED TO:**

Mr. Van Gobel P. O. Box 4289
El Paso Natural Gas Co. Farmington, NM

4. **TYPE OF SERVICE:**
   - ☐ REGISTERED ☐ INSURED
   - ☒ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER
P 554 067 538

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

Joe McKee

5. **DATE OF DELIVERY**
6-24-85

POSTMARK (Must be on reverse side)
JUN 1985 Niii.

6. **ADDRESSEE'S ADDRESS** *(Only if requested)*

7. **UNABLE TO DELIVER BECAUSE:**

7a. **EMPLOYEE'S INITIALS**

RETURN RECEIPT

☆ GPO: 1982-379-593

PH. 505-325-5093

MERRION OIL & GAS CORPORATION

P. O. Box 1017
FARMINGTON, NEW MEXICO 87499

June 20, 1985

Bureau of Land Management
Caller Service 4104
Farmington, New Mexico 87499

Re: Canyon Largo Unit 125
Water Injection Application

Dear Sir:

We request administrative approval to dispose of produced water from the Gallup and Mesaverde Formation by subsurface injection. Attached is our Application for your consideration.

The proposed disposal well is the Canyon Largo Unit 125 which we plugged after a completion attempt in the Mesaverde. We will drill out cement plugs to below the Cliffhouse. All other cement plugs will remain to isolate the Gallup and Lower Mesaverde.

The proposed injection zone is the Cliffhouse, Mesaverde.

If further is required, please advise.

Sincerely,

MERRION OIL & GAS CORPORATION

Steve S. Dunn, Operations Manager

SSD/am

Enc.

PS Form 3811, July 1983

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 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 service(s) requested.

1. ☒ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Bureau of Land Management
Caller Service 4104
Farmington, New Mexico 87499

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number
P 554 067 537

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X Jean Classen

7. Date of Delivery
6-24-85

8. Addressee's Address *(ONLY if requested and fee paid)*

201 LEGALS

MERRION OIL & GAS CORPORATION
205 Petroleum Club Building
PO Box 840
Farmington, New Mexico 87499
505/325-5093

Propose to convert to Water Injection Well Canyon Largo Unit 125, 805' FSL & 530' FWL, Sec. 9, T24N, R6W, Rio Arriba Co., New Mexico. Injection Zone - Cliffhouse. Depth - 3610 - 86'. Aniticipated Rate 150 BWPD. Anticipated Pressure - 750. Interested parties must file objections or requests for hearing with the Oil Conservation Division, PO Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Legal No. 9694 published in the Farmington Daily Times, Farmington, New Mexico on Monday, June 24, 1985.

Farmington Daily Times

June 24, 1985