STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

Flush #7
F-2-26N-13W

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: 610 Reilly Avenue, Farmington, NM 87401

Contact party: Connie Dinning Phone: 327-9801 x 126

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 NA
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.).

JUN 2000
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DIST. 3

*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: Connie S. Dinning Title Engineer

Signature: _____ Date: June 1, 2000

* 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. _____

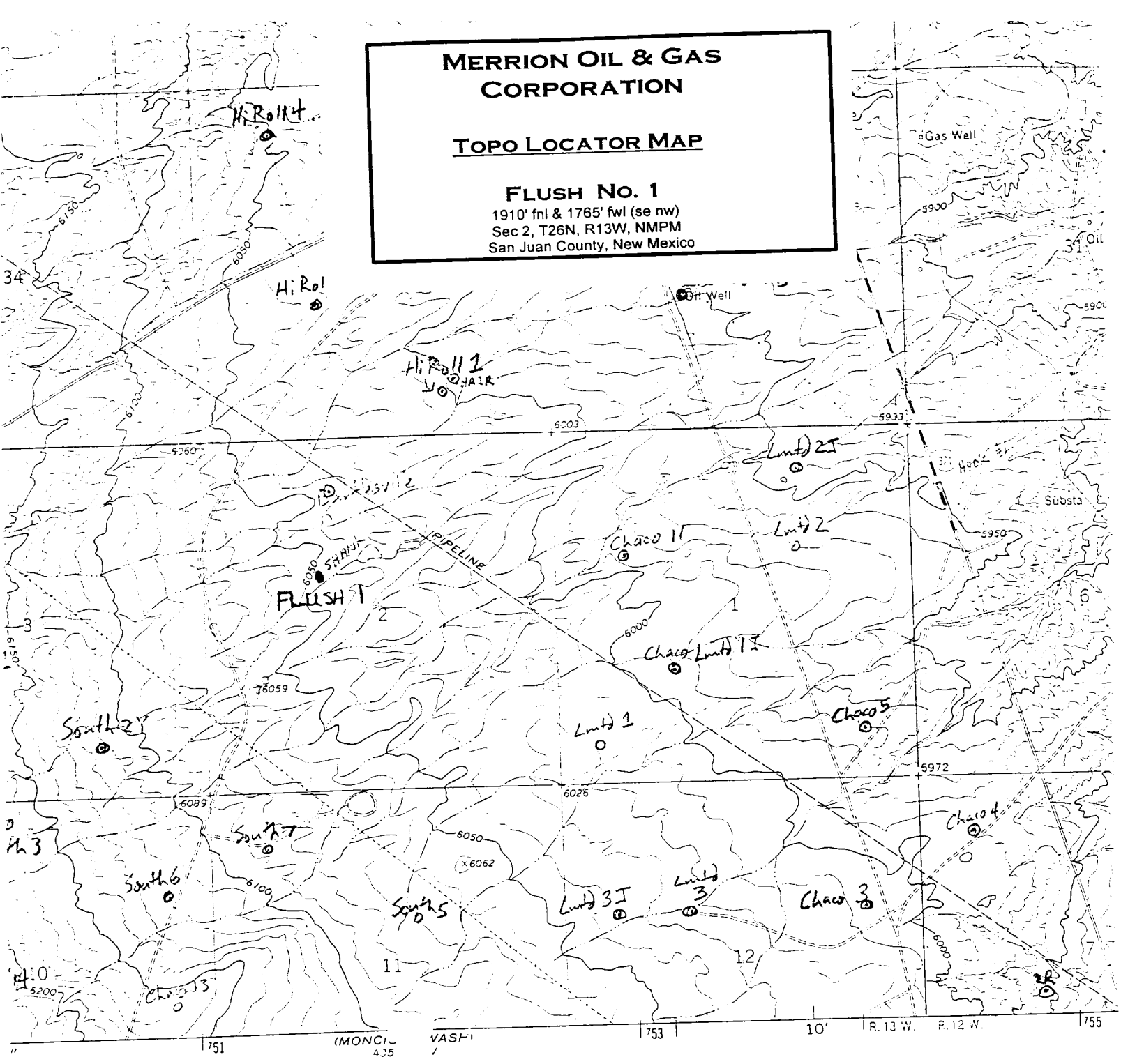
DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

MERRION OIL & GAS CORPORATION

TOPO LOCATOR MAP

FLUSH No. 1

1910' fnl & 1765' fwl (se nw)
Sec 2, T26N, R13W, NMPM
San Juan County, New Mexico



SCALE 1:24 000

1 MILE
1 KILOMETER
7000 FEET

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

APPLICATION FOR AUTHORIZATION TO INJECT SECTION III - WELL DATA

Flush No. 1, New Drill, Salt Water Disposal Well

III. Well Data

A.

1) **Well** : Flush #1 **Location**: 1910' fnl & 1765' fwl, Sec 2, T26N, R13W San Juan County, New Mexico

2) **Casing:**

Size	*Depth Set*	*Hole Size*	*Cement*	*TOC*
10 3/4"	280'	12 1/4"	88 sx	Circulate
7"	3950'	8 7/8"	491 sx	Circulate

3) **Tubing:** 3 1/2", 9.3#, EUE, Set @ approximately 2,000' KB, plastic lined

4) **Packer:** Baker Lok Set (or equivalent), Retrievable Casing Packer Set @ approximately 2,000' KB

B.

1) **Name of Pool/Formation:** Undesignated Mesaverde

2) **Injection Interval:** 2110' - 3900', perforated w/ 0.34" shots, to be chosen after logging

3) **Original Purpose of Well:** New Drill as SWD

4) **No other perforations in the well**

5) **The Fruitland Coal is productive in the area. The Mesaverde is about 1000' below the Coal we do not anticipate communication. There are a few Gallup producers to the northeast, but the Gallup is about 1000' below the injection interval and we do not anticipate communication.**

Merrion Oil & Gas Corporation

Wellbore Schematic

Flush No. 1, SWD

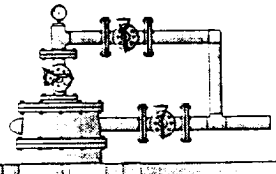
Proposed Wellbore Configuration

Location: 1910' fnl & 1765' fwl (se nw)
Sec 2, T26N, R13W
San Juan Co, New Mexico

May 31, 2000

Elevation: 6,047' GL
6,052' RKB

By: Connie Dinning



Tertiary

Cretaceous

Top of Cmt @ Surface

Undifferentiated Tertiary - Surface

Bit Size - 12 1/4"

Kirtland - 76'

9 5/8" Surface Csg @ 280' KB w/ 134sx; 158(cf) Class B

Circulate Cement to Surface

Fruitland - 800'

Bit Size 8 3/4"

Pictured Cliffs - 1233'

.3 1/2" EUE Internally Plastic Coated Tubing @ w/ RCP ~2050'KB

Mesaverde - 2106'

Proposed Mesaverde Perfs ~2110' - 3950' ; 0.34", Number of holes to be determined from logs

7" 23# J55 Production Csg @ 3950' w/ 327 sx (653cf) Litecrete

TD @ ~3950'KB

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APPLICATION FOR AUTHORIZATION TO INJECT, SECTION VI

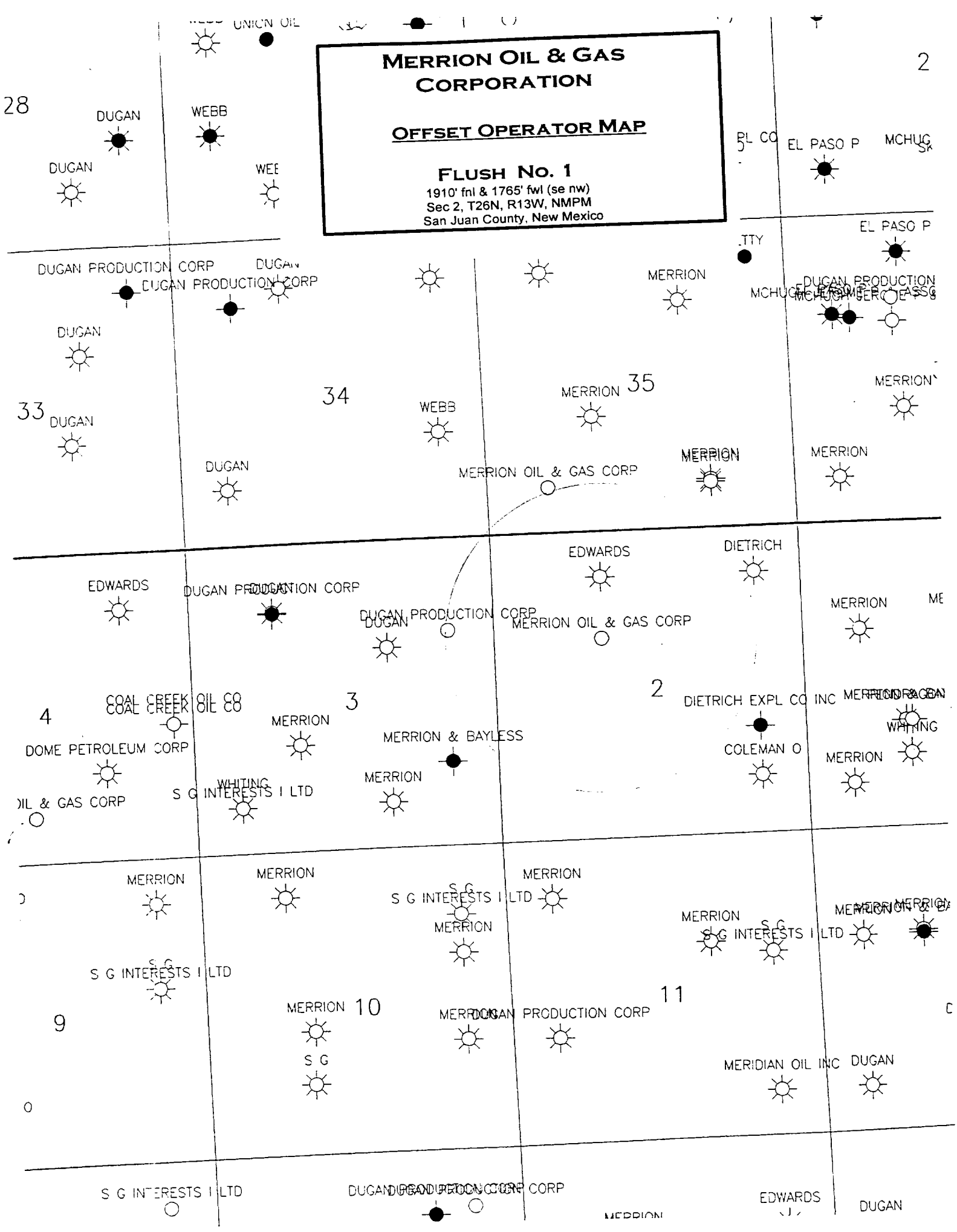
Flush No. 1, New Drill, Salt Water Disposal Well

Wells Within Area of Notification

The three well listed below are within a one half mile radius of the subject well.
Copies of this permit application will be sent to these operators.
These three wells do not penetrate the proposed injection formation.

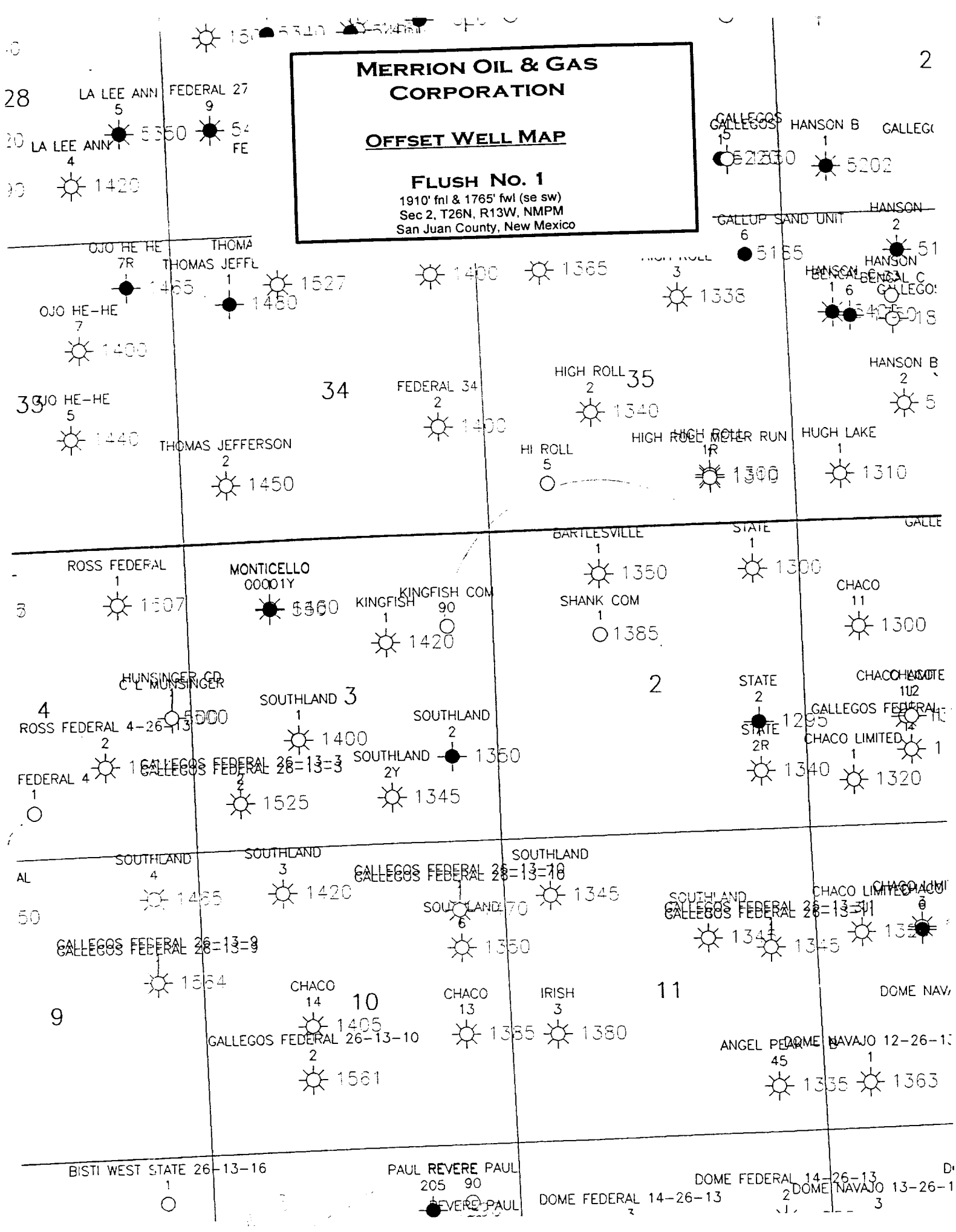
Well Name	Operator	TD
Bartlesville No.1	J.K Edwards	1350'
Shank Com No. 1	Merrion Oil & Gas	1385'
Kingfish Com No. 1	Dugan Production	1420'

Note: This well is permitted, but has not been drilled to date.


MERRION OIL & GAS CORPORATION
OFFSET OPERATOR MAP
FLUSH No. 1
1910' fnl & 1765' fwl (se nw)
Sec 2, T26N, R13W, NMPM
San Juan County, New Mexico
UNION OIL
28
DUGAN
WEBB
DUGAN
WEE
2
EL PASO P
MCHUG
DUGAN PRODUCTION CORP
DUGAN PRODUCTION CORP
DUGAN
MERRION
EL PASO P
DUGAN PRODUCTION
33
DUGAN
34
WEBB
MERRION
35
MERRION
DUGAN
MERRION OIL & GAS CORP
MERRION
MERRION
EDWARDS
DUGAN PRODUCTION CORP
DUGAN PRODUCTION CORP
DUGAN
MERRION OIL & GAS CORP
EDWARDS
DIETRICH
MERRION
4
COAL CREEK OIL CO
COAL CREEK OIL CO
3
2
DIETRICH EXPL CO INC
WHITING
DOME PETROLEUM CORP
MERRION
MERRION & BAYLESS
COLEMAN O
MERRION
WHITING
S G INTERESTS I LTD
MERRION
MERRION
MERRION
MERRION
S G INTERESTS I LTD
MERRION
MERRION
S G INTERESTS I LTD
S G INTERESTS I LTD
9
MERRION
10
MERRION
DUGAN PRODUCTION CORP
11
S G
MERIDIAN OIL INC
DUGAN
S G INTERESTS I LTD
DUGAN PRODUCTION CORP
EDWARDS
DUGAN

APPLICATION FOR AUTHORIZATION TO INJECT, SECTION VI

Flush No. 1, New Drill, Salt Water Disposal Well					
Wells Within Area of Review					
Well Data					
There are no wells within the area of review which penetrate the subject formation.					


MERRION OIL & GAS CORPORATION
OFFSET WELL MAP
FLUSH No. 1
1910' fnl & 1765' fwl (se sw)
Sec 2, T26N, R13W, NMPM
San Juan County, New Mexico
LA LEE ANN 5 5350
FEDERAL 27 9
LA LEE ANN 4 1420
GALLEGOS 15
HANSON B 1 5202
GALLUP SAND UNIT 6 5165
HANSON 2
OJO HE HE 7R
THOMAS JEFFL 1 1460
1527
1400
1365
1338
HANSON BENGAL C 1 6
OJO HE-HE 7 1400
HANSON B 2
OJO HE-HE 5 1440
34
FEDERAL 34 2 1400
HIGH ROLL 2 35 1340
THOMAS JEFFERSON 2 1450
HI ROLL 5
HIGH ROLL METER RUN 1R 1300
HUGH LAKE 1 1310
ROSS FEDERAL 1 1607
MONTICELLO 00001Y
KINGFISH 1
KINGFISH COM 90 1420
BARTLESVILLE 1 1350
SHANK COM 1 1385
STATE 1 1300
CHACO 11 1300
HUNSINGER CD
C L MUNSINGER 1
SOUTHLAND 3
SOUTHLAND 1 1400
SOUTHLAND 2 1360
ROSS FEDERAL 4-26-13 2
GALLEGOS FEDERAL 26-13-3 2 1525
SOUTHLAND 2Y 1345
2
STATE 2 1295
STATE 2R 1340
GALLEGOS FEDERAL
CHACO LIMITED 1 1320
FEDERAL 4 1
SOUTHLAND 4 1465
SOUTHLAND 3 1420
GALLEGOS FEDERAL 26-13-10
SOUTHLAND 1345
SOUTHLAND 6 1350
GALLEGOS FEDERAL 26-13-9 1 1564
CHACO 14 1405
10
CHACO 13 1385
IRISH 3 1380
11
GALLEGOS FEDERAL 26-13-10 2 1561
ANGEL PEAK 45 1335
DOME NAVAJO 12-26-1 1 1363
9
BISTI WEST STATE 26-13-16 1
PAUL REVERE PAUL 205 90
DOME FEDERAL 14-26-13
DOME NAVAJO 13-26-1

APPLICATION FOR AUTHORIZATION TO INJECT

Flush #1, New Drill, Salt Water Disposal Well

VII. Operational Data

1) **Ave Rate:** 2.75 - 3 BPM **Daily Rate:** 4000 bpd (max)

2) **Open System**

3) **Ave. Pressure:** 1800 psi **Max Pressure:** 2000 psi

4) **Injection water is produced from Fruitland Coal (Analysis attached)**

5) **Formation water salinity, gathered from Burlington Resources Study of Rw values. In this area the Mesaverde Rw is 0.2 ohms. This translates to about 25,000 ppm TDS.**

VIII. Geological Data

Injection Zone: Mesaverde

Thickness: approx. = 1800'

Top: +/- 2106' KB

IX. Stimulation Program

The well will be fractured with slick water and about 100,000# of 20/40 sand to improve conductivity. (completion procedure/stimulation will be designed after drilling)

X. Logging and Test Data

All offset logs are on file with the OCD office in Aztec

Gamma Ray, Porosity and Induction logs will be run to locate the injection zone.

XI. Fresh Water Analysis

There are no known water zones <10,000 ppm in the area of review except the formation from which the water is produced.

XII. Egineering and Geology Review to Protect Fresh Water

According to engineering and geological review, there are no known formations in the area of review below the Mesaverde which contain water with < 10,000 ppm TDS. The Fruitland Coal produces water that has a TDS of about 20000 ppm. It is 1000' above the Mesaverde, and it is a producing gas zone. There is no reason to believe the injected water would migrate back up to the coal zone however if it did, it would be returning to its point of origin. According to logs in the area, the Rw of the Mesaverde is about 0.2 ohms, this translates to almost 25,000 ppm TDS. There are no domestic water wells in the area of review, according to the local State Engineer's Office.

AFFIDAVIT OF PUBLICATION

Ad No. 42814

STATE OF NEW MEXICO
County of San Juan:

ALETHIA ROTHLISBERGER, being duly sworn says: That she is the Classified Manager of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the meeting of Chapter 167 of the 1937 Session Laws of the State of New Mexico for publication on the following day(s):

Sunday, May 21, 2000

And the cost of the publication is: $22.72

Alethia Rothlisberger

ON 6/15/2000 ALETHIA ROTHLISBERGER appeared before me, whom I know personally to be the person who signed the above document.

Nancy L. Slade

My Commission Expires April 10, 2004

COPY OF PUBLICATION

918 Legals

PUBLIC NOTICE

Merrion Oil & Gas
610 Reilly Avenue
Farmington, NM 87401
Attention: Connie Dinning

Merrion Oil & Gas proposes to drill a new water injection well to dispose of produced water from the Fruitland Coal formation.

Injection Well Location: 1910' fnl & 1770' fwl, Section 2, T26N, R13W, San Juan County, New Mexico

Injection Formation:
Mesaverde
Depth of Injection Zone:
3815'
Maximum Pressure:
1000 psi.
Maximum Rate:
2000 bpd

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

Legal No. 42814 published in the Daily Times, Farmington, New Mexico, Sunday, May 21, 2000.