Initial Application Part I

Received 10/27/20

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

MEWBOURNE
OIL COMPANY

October 27, 2020

New Mexico Oil Conservation Division
Engineering Bureau
Attn: Mr. Phillip Goetze
1220 South St. Francis Dr.
Santa Fe, NM 87505

Re: C-108 Application for Modification of SWD-1425
Derringer Federal SWD #1
660' FSL & 1980' FWL, Unit N
Section 18, Township 20 South, Range 29 East
Eddy County, New Mexico

Dear Mr. Goetze:

Attached is a C-108 Application to modify the injection interval of Mewbourne Oil's Derringer Federal SWD #1, that is located in Sec 18 Twp 20S, Rge 29E, N.M.P.M., Eddy County, New Mexico. This well has been active since April 2014, and we are requesting permission to deepen the well by 190' in the Devonian-Silurian formations.

Similar application exhibits were sent to offset operators and offsetting lessees, and confirmations of receipt will be e-mailed to you later this week. The public notice of this application was published in the Carlsbad Current-Argus on October 25th and an Affidavit of Publication is enclosed.

Should you have any questions, please contact us at (903) 534-7647.

Sincerely yours,

MEWBOURNE OIL COMPANY

Tim Harrington
Reservoir Engineer
tharrington@mewbourne.com

MEWBOURNE OIL COMPANY
DERRINGER FEDERAL SWD #1 (SWD-1425)
SWD PERMIT MODIFICATION APPLICATION

LIST OF ATTACHMENTS:

Administrative Checklist

Copy of existing administrative Order SWD-1425

Form C-108

Copy of Yates Federal #18 (original wellbore) Form C015

Copy of Derringer Federal SWD #1 Form 3160

Copy of approved Form 3160 to add perforations

Derringer Federal SWD #1 current well schematic

Derringer Federal SWD #1 proposed well schematic

Well Plat

Tabulation of wells within 1 mile radius (NOTE: no wells currently penetrate the Devonian)

Fresh Water well map

Tabulation of nearby fresh water wells – (Source: NM Office of the State Engineer)

Fresh Water Well Water Analysis

Producing Well Water Analysis – Wolfcamp, & Bone Spring

Surface Ownership Map

Offset Operator Map

Listing of Notified Persons

Affidavit of Publication – Carlsbad Current-Argus

Hydrologic Affirmation

Seismicity Statement

Historical Seismicity, Fault Map and Devonian SWD Offset Map

Geological Cross Section

Revised March 23, 2017

V3PVR-201027-C-1080

RECEIVED: 10/27/20	REVIEWER:	TYPE: SWD	APP NO: pBL2030149269

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Geological & Engineering Bureau –
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: Mewboure Oil Company **OGRID Number:** 14744
Well Name: Derringer Federal SWD #1 **API:** 30-015-30828
Pool: SWD; DEVONIAN-SILURIAN **Pool Code:** 97869

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II] SWD-2397
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☒ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ☒ Application requires published notice
D. ☐ Notification and/or concurrent approval by SLO
E. ☒ Notification and/or concurrent approval by BLM
F. ☐ Surface owner
G. ☒ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

October 26, 2020
Date

Timothy R. Harrington
Print or Type Name

903-534-7647
Phone Number

Timothy R. Harrington
Signature

tharrington@mewbourne.com
e-mail Address

State of New Mexico
Energy, Minerals and Natural Resources Department

Administrative Order SWD-1425
July 3, 2013

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Pursuant to the provisions of 19.15.26.8B NMAC, Mewbourne Oil Company (the "operator"), seeks an administrative order to utilize its Derringer Federal SWD No. 1 with a location of 660 feet from the South line and 1980 feet from the West line, Unit letter N of Section 18, Township 20 South, Range 29 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of 19.15.26.8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

IT IS THEREFORE ORDERED THAT:

The applicant, Mewbourne Oil Company (ORID 14744), is hereby authorized to utilize its Derringer Federal SWD Well No. 1 (API 30-015-30828) with a location of 660 feet from the South line and 1980 feet from the West line, Unit letter N of Section 18, Township 20 South, Range 29 East, NMPM, Eddy County, for disposal of oil field produced water (UIC Class II only) into the Devonian formations through open hole from approximately 12600 feet to 13200 feet. Injection will occur through internally coated tubing and a packer set within 100 feet of the permitted interval.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the approved disposal interval and is not permitted to escape to other formations or onto the surface. This includes all changes in well construction proposed and described in the application.

The operator shall supply the Division's Engineering Bureau with a copy of a mud log over the permitted disposal interval and an estimated insitu water salinity for the permitted disposal interval developed from open-hole log correlations. If significant hydrocarbon shows occur while drilling, the operator shall receive permission in writing from the Division prior to commencing disposal.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 2520 psig.** In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test.

The operator shall notify the supervisor of the Division's district II office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district II office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two (2) years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written

request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

JAMI BAILEY
Director

JB/prg

cc: Oil Conservation Division – Artesia District Office
United States Bureau of Land Management – Carlsbad Office

DERRINGER FEDERAL SWD #1
Additional Details

VI. There are no other wells within the 1 mile area of review (AOR) that have penetrated the Devonian

VII. 1. Proposed average rate of 20,000 bwpd and maximum rate of 25,000 bwpd.

2. Non-commercial SWD (closed system).

3. Proposed average injection pressure is approximately 2,000 psi and the maximum injection pressure is approximately 2,520 psi (0.2 psi/ft x 12,600 ft).

4. This well is a private SWD, therefore all the injected fluid will be formation water from Mewbourne Oil Company operated wells currently producing or planned in the area. Representative water samples from the Wolfcamp and Bone Spring formations are attached.

5. We will be injecting into the Devonian formation. Devonian formation water is known to be compatible with the formation water of the Bone Spring and Wolfcamp. No Devonian water analysis are available within the immediate area. The following data is the closest produced water analysis that is available on the USGS

IDUSGS	IDORIG	IDDB	SOURCE	LATITUDE	LONGITUDE	API	COUNTY	FIELD	WELLNAME	TOWNRANGE
35292	30000310	USGSBREIT	Pan American Petroleum Corporation	32.183	-103.7766	30015108590000	Eddy	Poker Lake South	Poker Lake Unit #36	S 24 E 31 28

DATESAMPLE	METHOD	FORMATION	DEPTHUPPER	DEPTHLOWER	SG	SPGRAV	RESIS	RESIST	PH	TDSUSGS	TDS
1967-04-06	Separator	Devonian	16578	16660	1.086	1.086	0.067	77	6.6	120326	120326

VIII. 1. The current well is disposing into the Devonian formation from a depth of 12,660' – 13,200' and we propose to deepen the well (open-hole) to a depth of 13,390' and add perforations: 12620'- 12645'. The base of the new injection zone will be approximately 410' above the top of the Ellenburger.

Other Projected Formation Tops:

Devonian (Actual)	12,614'
CURRENT TD	13,200'
PROPOSED NEW TD	**13,390'**
Montoya	13,400'
Simpson	13,675'
Ellenburger	13,800'

2. The underground fresh water aquifers (unnamed) are present at shallow depths (per review of well records, within 2 miles of the proposed SWD, on the NM Office of the State Engineers website) with the deepest water being encountered at a depth of 140', the shallowest water at a depth of 52' and the average water depth at 86'. There are no known fresh water intervals underlying the injecting formation.

IX. The proposed stimulation is an open-hole acid treatment of 20,000 gallons of 15% HCL.

IX. A gamma-ray / neutron log will be run from the new TD to approximately 12,500 in order to tie into prior logs.

X. There are two fresh water wells on record with the NM State Engineers Office that are within 1 mile of the Derringer SWD but we were unable to secure water samples. A previously submitted fresh water analysis, taken from a well located in Section 1, Twp 20S, Rge 28E, is therefore attached.

XI. Mewbourne Oil Company has examined geologic and engineering data and has found that there is no evidence of faulting between the proposed disposal zone and any underground sources of drinking water. A signed affidavit is attached.

XII. See attached Proof of Notice

Side 1

INJECTION WELL DATA SHEET

OPERATOR: **Mewbourne Oil Company**

WELL NAME & NUMBER: **Derringer Federal SWD #1 (SWD-1425)**

WELL LOCATION:	**660' FSL & 1980' FWL**	**N**	**18**	**20S**	**29E**
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC *(See Attached)*

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: **26"**

Casing Size: **20" (94 #) @ 375'**

Cement with: **1000 sx**

Top of Cement: **Surface**
(1" – circ 25 sx to surface)

Intermediate Casing

Hole Size: **17 1/2"**

Casing Size: **13 3/8" (54.5#) @ 1,245'**

Stage 1: **1350 sx (circ 431 sx)**

Top of Cement: **Surface (Visual)**

Intermediate Casing

Hole Size: **12 1/4"**

Casing Size: **9 5/8" (36#) @ 3,229'**

Stage 1: **1250 sx (circ 452 sx)**

Top of Cement: **Surface**
Top of Cement: **Surface (Visual)**

Production Casing

Hole Size: **8 3/4"**

Casing Size: **7" (26#) @ 12,660'**

Stage 1: **500 sx**

Top of Cement: Surface (CBL)

Stage 2: **1100 sx**

DV Tool @ 9,000
Top of Cement: **Surface (CBL)**

Top of Devonian: 12,614'
Current Injection Interval: 12,660'- 13,200'
Proposed Inj Interval: 12,620' – 13,390'
Current Permitted Inj. Interval: 12,600' - 13,200'
Proposed Permitted Inj. Interval: 12,600' – 13,390'

Side 2

INJECTION WELL DATA SHEET

Tubing Size: **4 ½", 12.75#, 13CRHP110** Lining Material: **fiberglass**

Type of Packer: **2 7/8" x 4 1/2" Model R Packer w/ carbide slips**

Packer Setting Depth: **+/- 12,605'**

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

Additional Data

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

   If no, for what purpose was the well originally drilled? **Dryhole drilled for production in 1999**

2. Name of the Injection Formation: **Devonian-Silurian (Open Hole Completion)**

3. Name of Field or Pool (if applicable): **97869 SWD; Devonian-Silurian**

4. Has the well ever been perforated in any other zone(s)? **No.**

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Overlying potentially productive zone tops – **Yates (885'), Delaware (3,168'), Bone Spring (5,664'), Wolfcamp (9,149), & Morrow (11,213')**

   Underlying producing zone – **N/A**

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: _____Secondary Recovery _____Pressure Maintenance ____X____Disposal _____Storage
Application qualifies for administrative approval? ____X_____Yes _____No

II. OPERATOR: **Mewbourne Oil Company**

ADDRESS: **3620 Old Bullard Road**
Tyler, TX 79701
CONTACT PARTY: **Tim Harrington** PHONE: **903-534-7647**

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: **Tim Harrington** TITLE: **Reservoir Engineer**

SIGNATURE: Tim R. Harrington DATE: 10/26/2020

E-MAIL ADDRESS: **tharrington@mewbourne.com**

* 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

Side 2

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.

-158

Submit to Appropriate District Office
State Lease - 6 copies
Fee Lease - 5 copies

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 Pacheco St.
Santa Fe, NM 87505

Form C-105
Revised 1-1-89

WELL API NO. 30-015-30828

5. Indicate Type Of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

JAN 2000 RECEIVED OCD ARTESIA

1a. Type of Well: OIL WELL ☐ GAS WELL ☐ DRY ☒ OTHER

b. Type of Completion: NEW WELL ☐ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF RESVR ☐ OTHER

7. Lease Name or Unit Agreement Name: YATES FEDERAL

8. Well No. 18

2. Name of Operator: Marathon Oil Company

9. Pool name or Wildcat: BURTON FLATS MORROW

3. Address of Operator: P.O. Box 552, Midland, TX 79702

4. Well Location
Unit Letter N : 660 Feet From The SOUTH Line and 1980 Feet From The WEST Line
Section 18 Township 20-S Range 29-E NMPM EDDY County

10. Date Spudded	11. Date T.D. Reached	12. Date Compl. (Ready to Prod.)	13. Elevations (DF & RKB, RT, GR, etc.)	14. Elev. Casinghead
111/13/99	12/6/99		3265' - KB	3251'

15. Total Depth	16. Plug Back T.D.	17. If Multiple Compl. How Many Zones?	18. Intervals Drilled By	Rotary Tools	Cable Tools
11,800'				XXX	

19. Producing Interval(s), of this completion - Top, Bottom, Name: NONE

20. Was Directional Survey Made: NO

21. Type Electric and Other Logs Run: PFE/HALS/NGT

22. Was Well Cored: NO

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

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
20"	94#	375'	26"	1000 SX "C". CIRC. 25 SX	-0-
13 3/8"	54.5#	1245'	17 1/2"	1350 SX "C". CIRC 431 SX	-0-
9 5/8"	36#	3229'	12.25"	1250 SX "C". CIRC 452 SX	-0-

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

25. TUBING RECORD

SIZE	DEPTH SET	PACKER SET

26. Perforation record (interval, size, and number)

Wrong Form Record Only

27. ACID, SHOT, FRACTURE, CEMENT, SQEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

PRODUCTION

28

Date First Production	Production Method (Flowing, gas lift, pumping - Size and type pump)	Well Status (Prod. or Shut-in)

Date of Test	Hours Tested	Choke Size	Prod'n For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API -(Corr.)

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

30. List Attachments

31. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief

Signature Walter J. Dueease Jr. Printed Name R. J. LONGMIRE Title DRLG SUPERINTENDEN Date 1/17/00

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northeastern New Mexico	
T. Anhy		T. Canyon	-0-	T. Ojo Alamo	T. Penn. "B"
T. Salt	440	T. Strawn	10303	T. Kirtland-Fruitland	T. Penn. "C"
B. Salt	762	T. Atoka	10630	T. Pictured Cliffs	T. Penn. "D"
T. Yates		T. Miss		T. Cliff House	T. Leadville
T. 7 Rivers	962	T. Devonian		T. Menefee	T. Madison
T. Queen		T. Silurian		T. Point Lookout	T. Elbert
T. Grayburg		T. Montoya		T. Mancos	T. McCracken
T. San Andres		T. Simpson		T. Gallup	T. Ignacio Otzte
T. Glorieta		T. McKee		Base Greenhorn	T. Granite
T. Paddock		T. Ellenburger		T. Dakota	T.
T. Blinebry		T. Gr. Wash		T. Morrison	T.
T. Tubb		T. Delaware Sand	3118	T. Todilto	T.
T. Drinkard		T. Bone Springs	5650	T. Entrada	T.
T. Abo		T.	MORROW 11204	T. Wingate	T.
T. Wolfcamp	9140	T.	L MORROW 11532	T. Chinle	T.
T. Penn	9987	T.		T. Permain	T.
T. Cisco (Bough C)		T.		T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from ---- to ---- No. 3, from ---- to ----

No. 2, from ---- to ---- No. 4, from ---- to ----

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ---- to ---- feet ----

No. 2, from ---- to ---- feet ----

No. 3. from ---- to ---- feet ----

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness in Feet	Lithology	From	To	Thickness in Feet	Lithology
440	762	332	SALT & ANHYDRITE	10668	11430	762	SHALE & LIMESTONE
762	962	200	SHALE & LIMESTONE	11430	11800	370	SHALE & SANDSTONE
962	3118	2156	LIMESTONE				
3118	5650	2532	SANDSTONE & SHALE				
5650	5930	280	LIMESTONE & SHALE				
5930	6058	128	SHALE				
6058	6912	854	LIMESTONE				
6912	7092	180	SHALE & LIMESTONE				
7092	7510	418	LIMESTONE				
5410	7886	376	SANDSTONE				
7886	8710	824	LIMESTONE				
8710	9307	597	SANDSTONE & SHALE				
9307	9390	83	LIMESTONE				
9390	10300	910	SHALE				
10300	10668	368	LIMESTONE & SHALE				

Print Reset

Form 3160-4
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. NMNM01165

1a. Type of Well ☐ Oil Well ☐ Gas Well ☐ Dry ☒ Other
b. Type of Completion: ☐ New Well ☐ Work Over ☒ Deepen ☐ Plug Back ☐ Diff. Resvr.,
Other: SWD

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator: Mewbourne Oil Company

8. Lease Name and Well No.: Derringer Federal SWD #1

3. Address: PO Box 5270, Hobbs NM 88241

3a. Phone No. (include area code): 575-393-5905

9. API Well No.: 30-015-30828

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface 660' FSL & 1980' FWL, Sec 18, T20S, R29E

At top prod. interval reported below

At total depth 660' FSL & 1980' FWL, Sec 18, T20S, R29E

RECEIVED
MAY 12 2014
NMOCD ARTESIA

10. Field and Pool or Exploratory: SWD Devonian 96101

11. Sec., T., R., M., on Block and Survey or Area: Sec 18, T20S, R29E

12. County or Parish: Eddy

13. State: NM

14. Date Spudded: 02/27/14

15. Date T.D. Reached: 03/08/14

16. Date Completed: 04/09/14 ☐ D & A ☐ Ready to Prod.

17. Elevations (DF, RKB, RT, GL)*: 3255'

18. Total Depth: MD 13200' TVD

19. Plug Back T.D.: MD TVD

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
GR/CCL/CBL/CNL

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit report)
Directional Survey? ☒ No ☐ Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
8 3/4"	7" P110	26#	0	12660'	NA	1600	597	Surface	NA

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
3 1/2"	12638'	12631'						

25. Producing Intervals

Formation	Top	Bottom	26. Perforation Record: Perforated Interval	Size	No. Holes	Perf. Status
A) Devonian	12614		12660' - 13200'		OPEN	HOLE
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
12660' - 13200'	5000 gals 15% HCl

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
									NA. Injection well. See remarks section

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

*(See instructions and spaces for additional data on page 2)

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

29. Disposition of Gas *(Solid, used for fuel, vented, etc.)*

30. Summary of Porous Zones (Include Aquifers):

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.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				T. Salt	440'
				B. Salt	639'
				Yates	885'
				Capitan	1082'
				Delaware	3168'
				Bone Spring	5664'
				Wolfcamp	9149'
				Strawn	10312'
				Atoka	10639'
				Morrow	11213'
				Barnett	11689'
				Devonion	12614'

32. Additional remarks (include plugging procedure):

March 22, 2014 Swab tested to prove no commercial hydrocarbons. Rec 210 BW w/0% oil cut, no gas.

May 03, 2014 1000 BPD @ 46#, 2000 BPD @ 645#, 3000 BPD 1061#
5000 BPD @ 1733#, 7000 BPD @ 2475#, 9000 BPD 3033#
11000 BPD @ 3457#, 11500 BPD @ 3700#

33. Indicate which items have been attached by placing a check in the appropriate boxes:

☒ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☐ Directional Survey
☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name *(please print)* Jackie Lathan Title Regulatory

Signature Jackie Lathan Date 05/09/14

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
OCD Artesia

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM01165

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other: INJECTION

8. Well Name and No.
DERRINGER FEDERAL SWD 1

2. Name of Operator
MEWBOURNE OIL COMPANY
Contact: JACKIE LATHAN
E-Mail: jlathan@mewbourne.com

9. API Well No.
30-015-30828-00-S1

3a. Address
P O BOX 5270
HOBBS, NM 88241

3b. Phone No. (include area code)
Ph: 575-393-5905

10. Field and Pool or Exploratory Area
WILDCAT

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 18 T20S R29E SESW 0660FSL 1980FWL

11. County or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Mewbourne Oil Company has authority to operate the Derringer Federal SWD #1 per approved Administrative Order (SWD-1425, dated 7/03/2013) for disposal of oil field produced water within the Devonian formations from approximately 12,600 feet to approximately 13,200 feet.

GC 8-10-18
Accepted for record - NMOCD

RECEIVED
AUG 07 2018
DISTRICT II-ARTESIA O.C.D

Mewbourne Oil Company has recently obtained approval the replace the existing 3 1/2" internally coated injection tubing with 4 1/2" internally coated injection tubing and while performing this operation, we intend to perforate the Devonian from and 12,620' - 12,645' and acidize the entire disposal interval with approximately 5,000 gallons of HCL. The Radial Cement Bond Variable Density Log performed on 3/20/14 indicates that there is good cement isolation between the Devonian and Woodford Shale.

Attached is a copy of a section of the Compensated Neutron GR / CCL Log performed on 3/20/14 and

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #427645 verified by the BLM Well Information System
For MEWBOURNE OIL COMPANY, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH MCKINNEY on 07/18/2018 (18DLM0456SE)

Name *(Printed/Typed)* TIM R HARRINGTON — Title RESERVOIR ENGINEER

Signature (Electronic Submission) — Date 07/17/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By **/s/ Jonathon Shepard** — Title Petroleum Engineer — Date AUG 01 2018

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Carlsbad Field Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #427645 that would not fit on the form

32. Additional remarks, continued

the proposed perforation interval is highlighted.

Mewbourne Oil Company (Current Schematic)

Well Name: Derringer Federal SWD #1 Last Updated by: T. Harrington 10/23/2020

SWD - 1425

20" (94#)
Cement w/1000 Sx
Circ to Surface

375'

13 3/8" (54.5#)
Cement w/ 1350 Sx
Circ to Surface

1245'

9 5/8" (36#)
Cement w/ 1350 Sx
Circ to Surface

3229'

DV tool @ 9000'
Cement with 1100 sx
TOC @ surface (CBL)

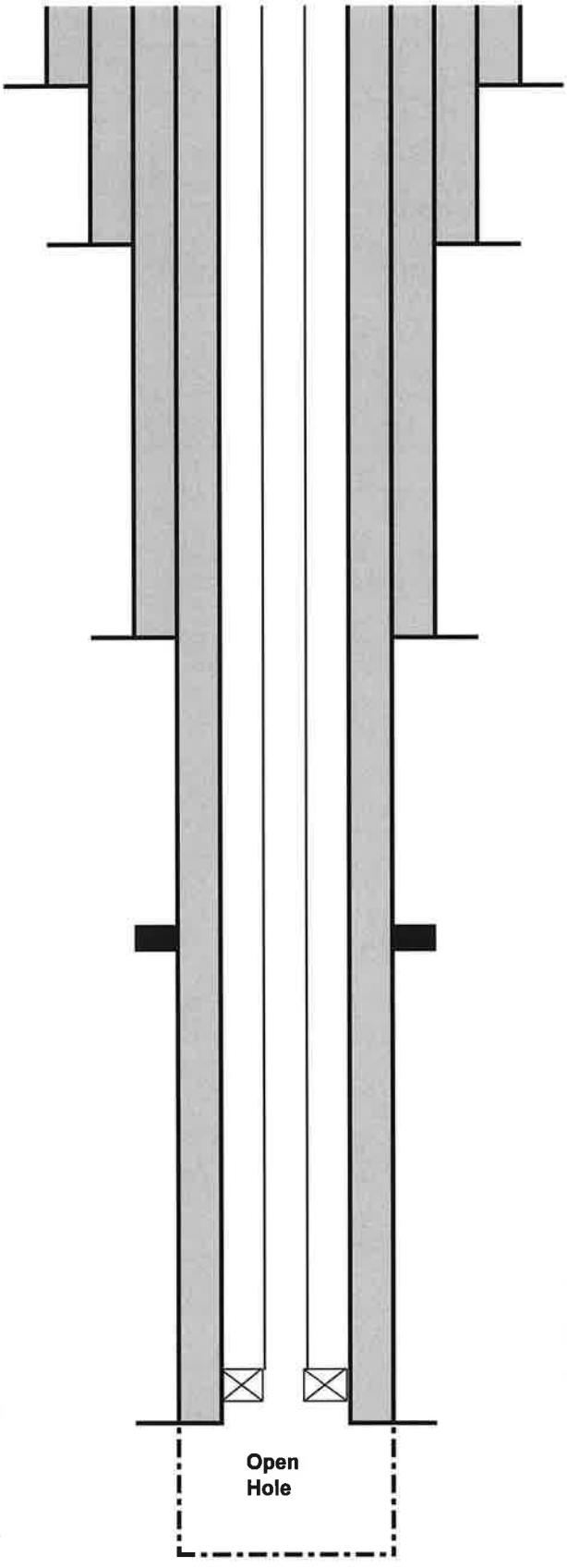
9000'

7" (26 #)
Cement with 500 Sx
TOC @ surface (CBL)

12660'

6 1/2" Open Hole
TD @ 13,200'

13200'



Injection String
4 1/2" 12.75#, 13CRHP110 (Fiberglass Lined)
2 7/8" x 4 1/2" nickel plated crossover
2 7/8" x 7" Model R pkr w/ carbide slips @ 12,605'

Top of Permitted Injection Interval @ 12,600'
Top of Devonian @ 12,614'

Injection Interval 12,660'-13,200'

Mewbourne Oil Company (Proposed)

Well Name: Derringer Federal SWD #1
SWD - 1425

Last Updated by: T. Harrington

10/23/2020

20" (94#)
Cement w/1000 Sx
Circ to Surface

375'

13 3/8" (54.5#)
Cement w/ 1350 Sx
Circ to Surface

1245'

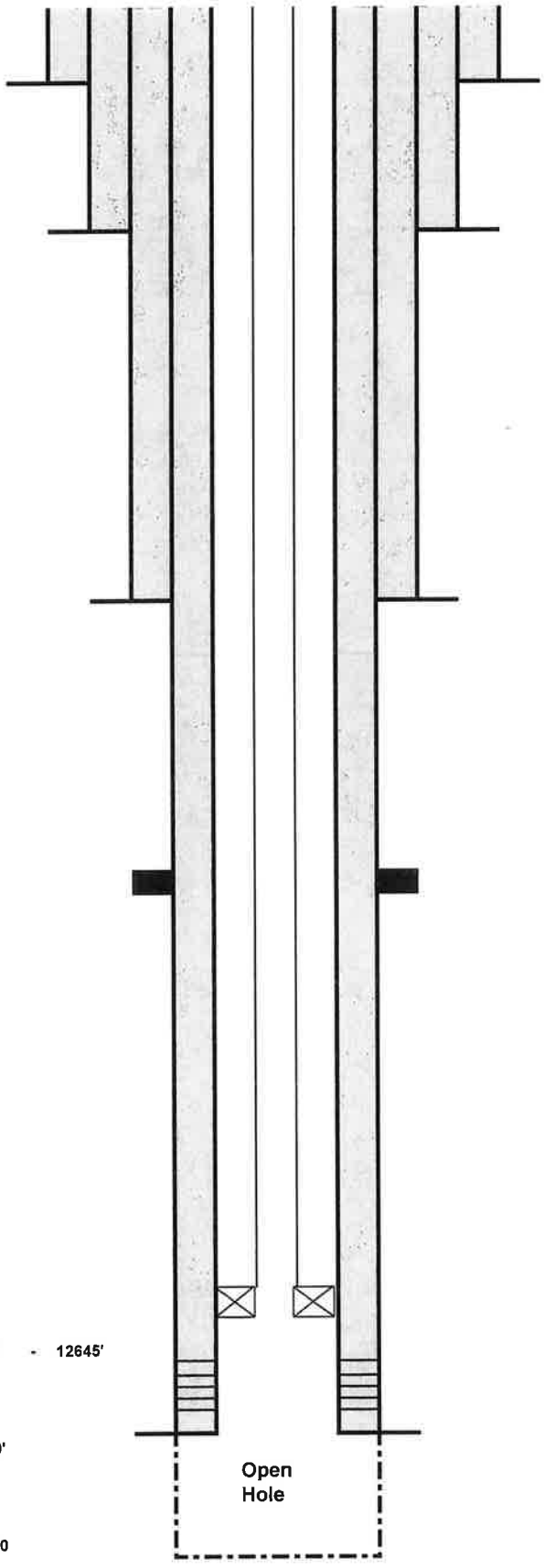
9 5/8" (36#)
Cement w/ 1250 Sx
Circ to Surface

3229'

DV tool @ 9000'
Cement with 1100 sx
TOC @ surface (CBL)

9000'

7" (26 #)
Cement with 500 Sx
TOC @ surface (CBL)



New Perforations 12620' - 12645'

12660'

6 1/2" Open Hole
TD @ 13,390'

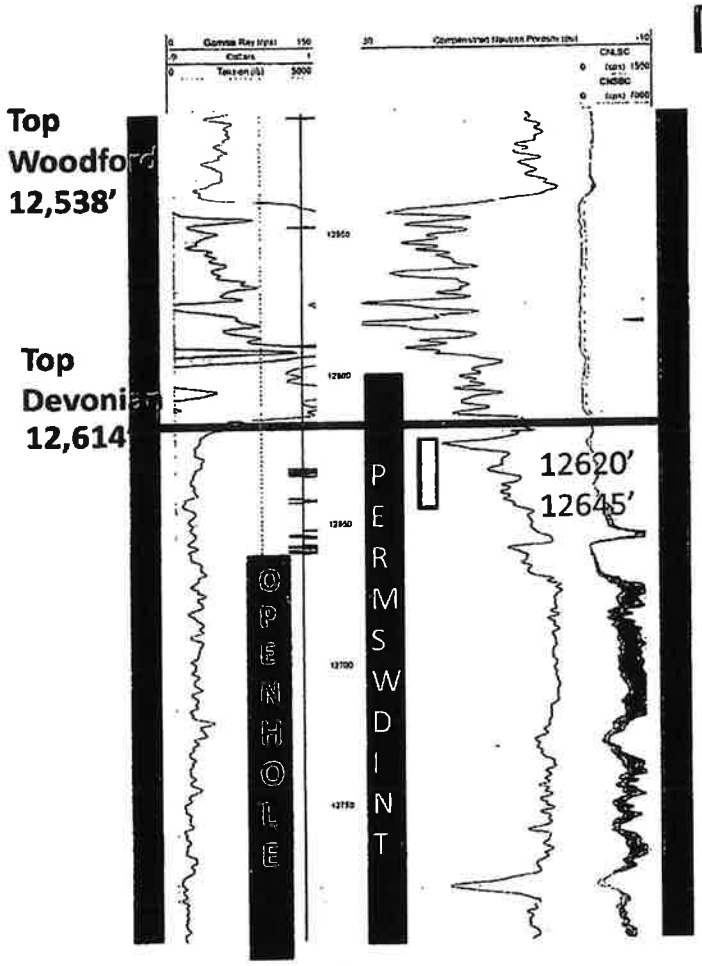
13,390

Injection String
4 1/2" 12.75#, 13CRHP110 (Fiberglass Lined)
2 7/8" x 4 1/2" nickel plated crossover
2 7/8" x 7" Model R pkr w/ carbide slips @ 12,605'

Top of Permitted Injection Interval @ 12,600'
Top of Devonian @ 12,614'

Revised
Injection Interval 12,660'-13,390'

DERRINGER SWD



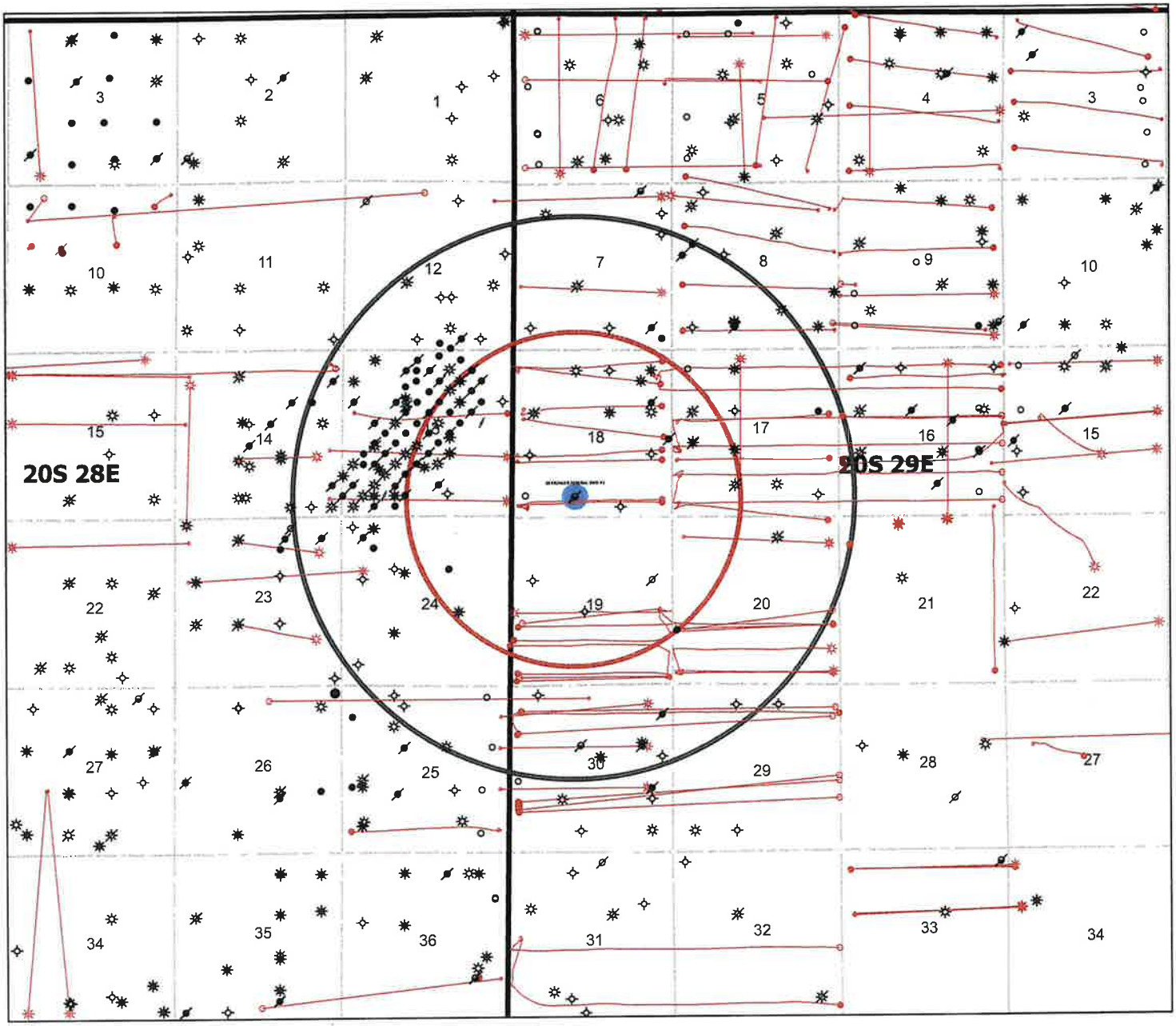
SWD -1425:
INTERVAL 12,600 – 13,200 (TD)
NO TBG SIZE SPECIFIED
MAX PRESSURE 2520 PSIG

7", 26# CASING SET AT 12,660'

3.5", 9.3# TBG SET AT 12,620'

31. Formation (Log) Markers

Name	Top Meas. Depth
T. Salt	440'
B. Salt	639'
Yates	885'
Capitan	1082'
Delaware	3168'
Bone Spring	5664'
Wolfcamp	9149'
Strawn	10312'
Atoka	10639'
Morrow	11213'
Barnett	11689'
Devonion	12614'



TWO MILE AOR

ONE MILE AOR

Mewbourne Oil Company

DERRINGER FEDERAL SWD #1
660' FSL & 1980' FWL SEC. 6-20S-29E
EDDY CO., NEW MEXICO

Date: 22 October, 2020

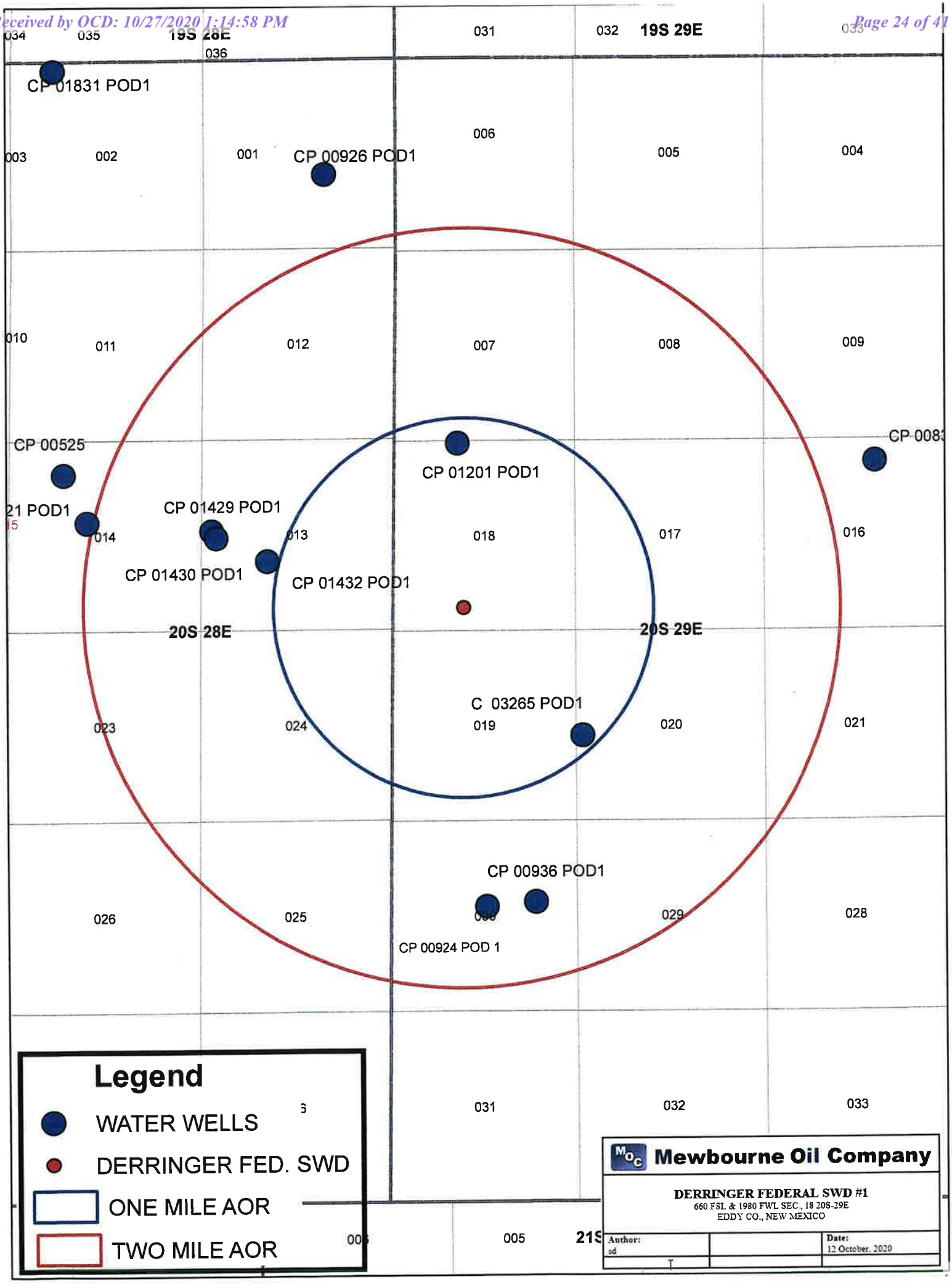
Tech:

Scale: 1" = 10000'

MEWBOURNE OIL COMPANY
DERRINGER FEDERAL SWD #1
TABULATION OF WELLS WITHIN 1 MILE AREA OF REVIEW
10/20/2020

Dir	API	Lease Name	Well Num	Original Operator	Current Operator	Sec	Twp	Rge	Footage	Final Status	IP Prod Form Name	TD (ft)	TVD (ft)	Form at TD Name	Prod Form	Permit Date	Spud Date	Comp Date	P&A Date
V	30015023530000	TURNER-FEDERAL (RUSSELL USA #007)	3	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	1980 FSL 1968 FEL	P&A OIL	YATES	869	869	YATES		1942-01-01	1943-01-11	1943-02-25	8/2/2012
V	30015023540000	WILLS	5X	TURNER GEORGE	TURNER GEORGE	13	20S	28E	1980 FSL 1980 FEL	D&A		380	380	UNKNOWN		1942-11-28	1942-12-08	1943-01-06	1942
V	30015023560000	WILLS-FEDERAL (RUSSELL USA #009)	3	BARBER OIL EXPLORATION INC	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	1980 FNL 1980 FEL	SI OIL	YATES	845	845	YATES	YATES	1943-07-04	1943-07-14	1943-09-14	
V	30015023590000	WILLS	5	TURNER GEORGE	TURNER GEORGE	13	20S	28E	705 FSL 2025 FEL	D&A		1028	1028	UNKNOWN		1943-05-01	1943-05-11	1943-07-13	X/X/1943
V	30015023610000	TURNER-FEDERAL (RUSSELL USA #013)	7	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	990 FSL 2310 FEL	P&A OIL	YATES	838	838	YATES		1944-07-29	1944-08-08	1944-09-25	6/6/2013
V	30015023620000	WILLS-FEDERAL (RUSSELL USA #014)	7	BARBER OIL EXPLORATION INC	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	1650 FNL 2310 FEL	ACTIVE OIL	YATES	839	839	YATES		1945-01-07	1945-01-17	1945-08-23	
V	30015023630000	WILLS-FEDERAL (RUSSELL USA #015)	8	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	996 FNL 1005 FEL	P&A OIL	YATES	878	878	YATES		1945-04-21	1945-05-01	1945-05-27	8/24/2013
V	30015023640000	WILLS	9	WILLS NEIL	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	1656 FNL 1005 FEL	D&A		880	880	YATES		1945-05-23	1945-06-02	1945-06-09	1947
V	30015023640001	WILLS-FEDERAL (RUSSELL USA #016)	9	BARBER OIL EXPLORATION INC	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	1656 FNL 1005 FEL	ACTIVE OIL	YATES	900	900	YATES		1955-02-19	1955-03-01	1955-04-11	
V	30015023730000	WILLS-FEDERAL (RUSSELL USA #024)	19	BARBER OIL EXPLORATION INC	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	2322 FNL 2333 FEL	SI OIL?	YATES	849	849	YATES	YATES	1947-06-11	1947-06-21	1947-06-29	
V	30015023740000	WILLS-FEDERAL (RUSSELL USA #025)	20	BARBER OIL EXPLORATION INC	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	2322 FNL 1665 FEL	ACTIVE OIL	YATES	847	847	YATES	YATES	1947-06-19	1947-06-29	1947-07-08	
V	30015023750000	WILLS-FEDERAL (RUSSELL USA #026)	21	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	1656 FNL 1665 FEL	P&A OIL	YATES	855	855	YATES	YATES	1947-07-03	1947-07-13	1947-07-20	8/12/2013
V	30015023760000	WILLS-FEDERAL (RUSSELL USA #027)	22	BARBER OIL EXPLORATION INC	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	996 FNL 1665 FEL	ACTIVE OIL	YATES	870	870	YATES	YATES	1947-07-12	1947-07-22	1947-07-29	
V	30015023820000	TURNER-FEDERAL (RUSSELL USA #033)	10	BARBER OIL EXPLORATION INC	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	2322 FSL 2337 FEL	ACTIVE OIL	YATES	870	870	YATES		1945-03-22	1945-04-01	1945-05-06	
V	30015023880000	TURNER-FEDERAL (RUSSELL USA #039)	12	BARBER OIL EXPLORATION INC	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	2223 FSL 2339 FWL	SI WIW?	YATES	852	852	YATES		1945-06-26	1945-07-06	1945-07-27	
V	30015023890000	TURNER-FEDERAL (RUSSELL USA #040)	17	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	1658 FSL 2338 FEL	P&A OIL	YATES	844	844	YATES		1947-01-10	1947-01-20	1947-02-28	12/8/2012
V	30015023920000	TURNER-FEDERAL (RUSSELL USA #043)	20	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	1658 FSL 2339 FWL	P&A OIL	YATES	824	824	YATES	YATES	1948-06-10	1948-06-20	1948-07-20	8/13/2013
V	30015023930000	WILLS (RUSSELL USA #044)	21	WILLS NEIL	APOLLO ENERGY LP	13	20S	28E	1656 FNL 1665 FEL	P&A OIL	YATES	854	854	YATES	YATES	1947-07-03	1947-07-13	1947-07-25	10/29/2012
V	30015023940000	WILLS (RUSSELL USA #045)	22	WILLS NEIL	APOLLO ENERGY LP	13	20S	28E	996 FNL 1665 FEL	P&A OIL	YATES	870	870	YATES	YATES	1947-07-12	1947-07-22	1947-08-05	8/12/2013
V	30015061870000	WILLS (RUSSELL USA #050)	026	WILLS NEIL H	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	1305 FNL 1980 FEL	SI OIL	YATES	846	846	YATES	YATES	1951-02-24	1951-03-06	1951-03-15	
V	30015061870001	WILLS (RUSSELL USA #050)	026	WILLS NEIL H	LLJ VENTURES LLC DBA MARKER OIL	13	20S	28E	1305 FNL 1980 FEL	SI WIW	YATES	846	846	YATES		1963-08-31	1963-09-10	1963-09-23	
V	30015061910000	WILLS FEDERAL (RUSSELL USA #053)	WI-30	COLLIER PETROLEUM CORP	COLLIER PETROLEUM CORP	13	20S	28E	2310 FNL 990 FEL	P&A WIW		884	884	YATES		1957-01-21	1957-01-31	1957-02-05	6/4/2013
V	30015102170000	FEDERAL	31	WILLS NEIL	WILLS NEIL	13	20S	28E	1650 FNL 330 FEL	D&A		924	924	UNKNOWN		1963-04-26	1963-05-06	1963-05-22	1963
V	30015102400000	WILLS-FEDERAL (RUSSELL USA #059)	36	BARBER OIL EXPLORATION IN	APOLLO ENERGY LP	13	20S	28E	660 FNL 1310 FEL	ABD-OW	YATES	881	881	YATES	YATES	1963-09-20	1963-09-30	1963-10-28	6/6/2012
V	30015102500000	WILLS-FEDERAL (RUSSELL USA #059)	32	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	1980 FSL 2630 FEL	P&A OIL	YATES	848	848	YATES	YATES	1963-05-25	1963-06-04	1963-08-01	8/23/2013
V	30015104210000	WILLS-FEDERAL (RUSSELL USA #061)	39	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	2630 FNL 1980 FEL	P&A OIL	YATES	863	863	YATES	YATES	1964-05-23	1964-06-02	1964-09-02	8/12/2013
V	30015104220000	WILLS-FEDERAL (RUSSELL USA #062)	40	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	1980 FNL 1310 FEL	P&A OIL	YATES	861	861	YATES	YATES	1964-06-22	1964-07-02	1964-09-02	8/12/2013
V	30015104230000	WILLS-FEDERAL (RUSSELL USA #063)	41	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	13	20S	28E	1310 FNL 1310 FEL	P&A OIL	YATES	865	865	YATES	YATES	1964-08-25	1964-09-04	1964-12-15	7/24/2013
V	30015202300000	WILLS-FEDERAL (RUSSELL USA #066)	44	BARBER OIL EXPLORATION INC	APOLLO ENERGY LP	18	20S	28E	2635 FNL 2635 FEL	P&A OIL	YATES	850	850	YATES	YATES	1969-05-26	1969-06-05	1969-08-07	10/30/2012
HZ	30015408800000	GOVERNMENT AC "13" FEDERAL	5H	OXY USA WTP LP	OXY USA WTP LP	13	20S	28E	1980 FNL 350 FWL		BONE SPRING	11978	7690	BONE SPRING	BONE SPRING	12187	2014-08-22	2014-12-08	
HZ	30015475170000	CHARLIE CHOCOLATE 13-14 FEDERAL COM	032H	OXY USA WTP LP	OXY USA WTP LP	13	20S	28E	1680 FSL 930 FEL	WELL PERMIT		19632	9100	WOLFCAMP		2020-09-30			
HZ	30015475180000	CHARLIE CHOCOLATE 13-14 FEDERAL COM	311H	OXY USA WTP LP	OXY USA WTP LP	13	20S	28E	1300 FNL 370 FEL	WELL PERMIT		13998	8854	BONE SPRING		2020-09-21			
V	30015270700000	SPIKE FEDERAL	1	OLYMPIA OIL & GAS CO LTD	CFM OIL LLC	24	20S	28E	1650 FNL 1980 FEL	ACTIVE OIL	DELAWARE	5725	5725	BONE SPRING	DELAWARE	1992-09-08	1992-09-18	1992-11-09	
V	30015209690000	YATES FEDERAL	3	TEXAS OIL & GAS CORP	MARATHON OIL CO	17	20S	29E	1980 FNL 660 FWL	P&A GAS	MORROW	11751	11751	MISSISSIPPIAN	MORROW	1974-01-11	1974-01-21	1974-03-08	
V	30015209690001	YATES FEDERAL	3	TEXAS OIL & GAS CORP	MARATHON OIL CO	17	20S	29E	1980 FNL 660 FWL	P&A GAS	MORROW	11751	11751	MORROW	MORROW	1980-09-07	1980-09-17	1980-09-19	
V	30015209690002	YATES FEDERAL	3	TXO PRODUCTION CORP	MARATHON OIL CO	17	20S	29E	1980 FNL 660 FWL	P&A OIL	DELAWARE	11751	11751	MORROW	DELAWARE	1989-07-26	1989-08-05	1989-08-15	4/17/2002
V	30015245090000	YATES FEDERAL	5	TXO PRODUCTION CORP	MARATHON OIL CO	17	20S	29E	990 FSL 1980 FWL	P&A GAS	MORROW	11770	11770	MORROW	MORROW	1983-07-31	1983-08-10	1983-12-09	
V	30015245090001	YATES FEDERAL	5	MARATHON OIL CO	MARATHON OIL CO	17	20S	29E	990 FSL 1980 FWL	P&A GAS	WOLFCAMP	11770	11770	MORROW	WOLFCAMP	1990-02-11	1990-02-21	1990-04-07	4/17/2002
V	30015267470000	YATES FEDERAL	17	MARATHON OIL CO	MARATHON OIL CO	17	20S	29E	2310 FSL 660 FWL	P&A OIL	DELAWARE	3700	3700	DELAWARE	DELAWARE	1991-05-11	1991-05-21	1991-08-01	
HZ	30015414170000	GLOCK 17 MP FEDERAL	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	17	20S	29E	400 FSL 200 FWL	ACTIVE OIL	BONE SPRING	12390	7804	BONE SPRING	BONE SPRING	2013-05-29	2013-09-24	2013-11-24	
HZ	30015421150000	GLOCK 17 LI FEDERAL	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	17	20S	29E	1760 FSL 150 FWL	ACTIVE OIL	BONE SPRING	12255	7814	BONE SPRING	BONE SPRING	2014-02-19	2014-04-18	2014-05-29	
HZ	30015426640000	GLOCK 17 B2EH FEDERAL	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	17	20S	29E	2320 FNL 170 FWL	OIL PRODUCER	BONE SPRING	12145	7803	BONE SPRING	BONE SPRING	2014-09-18	2014-10-08	2014-11-30	
HZ	30015465870000	GLOCK 17 16 B3MP FEDERAL COM	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	17	20S	29E	1300 FSL 230 FWL	ACTIVE OIL	BONE SPRING	19368	9178	BONE SPRING	BONE SPRING	2020-01-03	2020-01-22	2020-09-11	
HZ	30015465880000	GLOCK 17 16 B3EH FEDERAL COM	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	17	20S	29E	2090 FSL 230 FWL	ACTIVE OIL	BONE SPRING	19408	9153	BONE SPRING	BONE SPRING	2020-01-06	2020-03-25	2020-08-31	
HZ	30015467330000	GLOCK 17 16 WOMP FEDERAL COM	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	17	20S	29E	1270 FSL 230 FWL	ACTIVE OIL	WOLFCAMP	19581	9414	WOLFCAMP	WOLFCAMP	2020-02-07	2020-02-27	2020-09-11	
HZ	30015467460000	GLOCK 17 16 WOLI FEDERAL COM	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	17	20S	29E	2060 FSL 230 FWL	ACTIVE OIL	WOLFCAMP	19558	9416	WOLFCAMP	WOLFCAMP	2020-02-11	2020-04-20	2020-08-31	
V	30015036510000	YATES	1	DAYA OPERATING CO	DAYA OPERATING CO	18	20S	29E	660 FNL 1980 FEL	D&A		1146	1146	UNKNOWN		1960-10-16	1960-10-26	1961-05-24	7/14/1961
V	30015036520000	YATES	1	MCKENZIE WR	MCKENZIE WR	18	20S	29E	1980 FSL 540 FWL	D&A		1040	1040	UNKNOWN		1943-02-05	1943-02-15	1943-04-17	1943
V	30015036780000	SP YATES	2	WILLS NEIL	WILLS NEIL	18	20S	29E	330 FSL 1650 FEL	D&A		1020	1020	YATES		1962-06-02	1962-06-12	1962-06-27	6/27/1962
V	30015209700000	YATES-FEDERAL	2	TEXAS OIL & GAS CORP	MARATHON OIL CO	18	20S	29E	1980 FNL 660 FWL	P&A GAS	MORROW	11760	11760	MISSISSIPPIAN	MORROW	1973-09-14	1973-09-24	1973-12-15	5/14/2002
V	30015210680000	YATES FEDERAL	4	TEXAS OIL & GAS CORP	OXY USA WTP LP	18	20S	29E	1980 FNL 660 FEL	P&A GAS	MORROW	11690	11690	BARNETT /SH/	MORROW	1974-04-22	1974-05-02	1974-06-23	
V	30015210680001	YATES FEDERAL	4	TXO PRODUCTION CORP	OXY USA WTP LP	18	20S	29E	1980 FNL 660 FEL	ACTIVE GAS	STRAWN	11690	11690	BARNETT /SH/	STRAWN	1989-06-10	1989-06-20	1989-06-22	
V	30015261910000	YATES FEDERAL	6	TXO PRODUCTION CORP	TXO PRODUCTION CORP	18	20S	29E	1980 FSL 660 FEL	DRY & ABAN		3700	3700	DELAWARE		1989-09-30	1989-10-10	1989-10-26	
V	30015261910001	YATES FEDERAL	6	MARATHON OIL CO	MARATHON OIL CO	18	20S	29E	1980 FSL 660 FEL	DRY & ABAN	DELAWARE	3700	3700	DELAWARE		2003-12-11	2004-04-20	2005-02-10	2/10/2005
V	30015262550000	YATES FEDERAL	10	TXO PRODUCTION CORP	OXY USA WTP LP	18	20S	29E	1680 FNL 660 FEL	P&A OIL	DELAWARE	3404	3404	DELAWARE	DELAWARE	1990-01-16	1990-01-26	1990-02-17	8/15/2012
V	30015264740000	YATES FEDERAL	16	TXO PRODUCTION CORP	OXY USA WTP LP	18	20S	29E	2450 FSL 100 FEL	P&A OIL	DELAWARE	3700	3700	DELAWARE	DELAWARE	1990-09-12	1990-09-22	1990-11-21	8/6/2012
V	30015308280000	YATES FEDERAL	18	MARATHON OIL CO	MEWBOURNE OIL CO	18	20S	29E	660 FSL 1980 FWL	DRYHOLE		11800	11800	MORROW LOWER		1999-11-05	1999-11-13	1999-12-12	12/12/1999
V	30015343620000	DERRINGER 18 FEDERAL	1	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	660 FNL 1980 FWL	ACTIVE GAS	MORROW	11735	11735	BARNETT /SH/	MORROW	2005-09-26	2005-10-21	2005-12-31	
HZ	30015397580000	DERRINGER "18" FEDERAL COM	2H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	2150 FNL 330 FWL	ACTIVE OIL	BONE SPRING	11880	7706	BONE SPRING	BONE SPRING	2011-12-07	2012-10-14	2013-01-23	
HZ	30015414310000	DERRINGER 18 DA FEDERAL	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	545 FNL 150 FWL	ACTIVE OIL	BONE SPRING	12130	7715	BONE SPRING	BONE SPRING	2013-06-05	2013-07-05	2013-09-04	
HZ	30015419510000	DERRINGER 18 LI FEDERAL	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	1800 FSL 150 FWL	ACTIVE OIL	BONE SPRING	12048	7691	BONE SPRING	BONE SPRING	2014-01-16	2014-05-15	2014-07-16	
HZ	30015429690000	DERRINGER 18 B3DA FEDERAL	2H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	665 FNL 150 FWL	ACTIVE OIL	BONE SPRING	13168	8974	BONE SPRING	BONE SPRING	2015-03-05	2015-07-09	2015-09-10	
HZ	30015434110000	GLOCK 17-16 W0DA FED COM	003H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	824 FNL 582 FEL	ACTIVE OIL	WOLFCAMP	19935	9359	WOLFCAMP	WOLFCAMP	2015-09-28	2019-05-22	2019-08-01	
HZ	30015435780000	DERRINGER 18 B3EH FEDERAL	002H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	1850 FNL 330 FWL	ACTIVE OIL	BONE SPRING	13100	8996	BONE SPRING	BONE SPRING	2016-01-08	2017-02-15	2017-05-24	
HZ	30015439020000	DERRINGER 18 B2MP FEDERAL	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	330 FSL 475 FWL	ACTIVE OIL	BONE SPRING	12215	7898	BONE SPRING	BONE SPRING	2016-08-26	2018-03-28	2018-09-07	
HZ	30015444310000	DERRINGER 18 B3LI FEDERAL	2H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	1980 FSL 150 FWL	ACTIVE OIL	BONE SPRING	13410	9000	BONE SPRING	BONE SPRING	2017-08-18	2017-09-17	2018-01-06	
HZ	30015448160000	DERRINGER 18 B3MP FEDERAL	002H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	290 FSL 475 FWL	ACTIVE OIL	BONE SPRING	13350	9017	BONE SPRING	BONE SPRING	2018-03-05	2018-04-20	2018-09-08	
HZ	30015457940000	GLOCK 17-16 B3DA FEDERAL COM	002H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	18	20S	29E	800 FNL 600 FEL	ACTIVE OIL	BONE SPRING	19705	9104	BONE SPRING	BONE SPRING	2019-02-28	2019-04-08	2019-08-24	
V	30015036530000	STEBBINS	1	BRYANT ED	BRYANT ED	19	20S	29E	2310 FSL 2310 FWL	D&A		1028	1028	UNKNOWN		1935-07-20	1935-07-30	1938-02-12	1935?
V	30015036540000	YATES	2	STOLTZ DEANE		19	20S	29E	1980 FNL 660 FWL	D&A		1049	1049	UNKNOWN		1960-10-25	1960-11-04	1960-11-20	11/20/1960
V	30015036790000	SP YATES	1	WILLS NEIL	WILLS NEIL	19	20S	29E	1980 FNL 660 FEL	D&A		907	907	UNKNOWN		1962-05-18	1962-05-28	1962-06-12	6/5/1962
HZ	30015441700000	STEBBINS 19 FED COM	123H	MATADOR PRODUCTION CO	MATADOR PRODUCTION CO	19	20S	29E	2317 FSL 410 FEL	ACTIVE OIL	BONE SPRING	12470	7740	BONE SPRING	BONE SPRING	2017-05-10	2017-10-19	2017-12-04	
HZ	30015441710000	STEBBINS 19 FED COM	227H	MATADOR PRODUCTION CO	MATADOR PRODUCTION CO	19	20S	29E	2377 FSL 410 FEL	WELL PERMIT	BONE SPRING	11053	7065			2017-05-10			
HZ	30015441730000	STEBBINS 19 FED COM	203H	MATADOR PRODUCTION CO	MATADOR PRODUCTION CO	19	20S	29E	2347 FSL 410 FEL	ACTIVE GAS	WOLFCAMP	14020	9328	WOLFCAMP	WOLFCAMP	2017-05-10	2019-05-16	2019-09-10	
HZ	30015441740000	STEBBINS 19 FED COM	127H	MATADOR PRODUCTION CO	MATADOR PRODUCTION CO	19	20S	29E	2347 FSL 440 FEL	ACTIVE OIL	BONE SPRING	12502	7581	BONE SPRING	BONE SPRING	2017-05-10	2019-05-18	2019-09-27	
HZ	30015441870000	STEBBINS 19 FED	137H	MATADOR PRODUCTION CO	MATADOR PRODUCTION CO	19	20S	29E	210 FSL 140 FEL	ACTIVE OIL	BONE SPRING	13940	9067	BONE SPRING	BONE SPRING	2017-05-04	2019-04-04	2019-09-10	

TOP OF DEVONIAN = 12,614' - THERE ARE NO OTHER WELLS WITHIN THE 1 MILE AREA OF REVIEW THAT PENETRATE THE DEVONIAN-SILURIAN FORMATION


19S 28E
19S 29E
CP 01831 POD1
CP 00926 POD1
CP 00525
CP 01201 POD1
CP 01429 POD1
CP 01430 POD1
CP 01432 POD1
20S 28E
20S 29E
C 03265 POD1
CP 00936 POD1
CP 00924 POD 1
Legend
WATER WELLS
DERRINGER FED. SWD
ONE MILE AOR
TWO MILE AOR
Mewbourne Oil Company
DERRINGER FEDERAL SWD #1
660 FSL & 1980 FWL SEC., 18 20S-29E
EDDY CO., NEW MEXICO
Author:
sd
Date:
12 October, 2020

NEW MEXICO OFFICE OF THE STATE ENGINEER
TABULATION OF FRESH WATER WELLS
10/27/2020

POD Number	County	q64	q16	q4	Sec	Twp	Rge	LONG	LAT	Depth Well	Depth Water
CP 00926 POD1	EDDY		NW	SE	1	20S	28E	-104.1278324	32.601023	300	
CP 01831 POD1	EDDY	NE	NW	NW	02	20S	28E	-104.1520913	32.609181		
CP 01429 POD1	EDDY	SW	SW	NW	13	20S	28E	-104.138055	32.573861		
CP 01430 POD1	EDDY	NW	NW	SW	13	20S	28E	-104.137644	32.573325		
CP 01432 POD1	EDDY	SE	NE	SW	13	20S	28E	-104.133033	32.57155		
CP 00525	EDDY	SW	NE	NW	14	20S	28E	-104.151325	32.578214	171	140
CP 00421 POD1	EDDY	SE	SE	NW	14	20S	28E	-104.149239	32.574556		
CP 00833 POD1	EDDY		NW	NE	16	20S	29E	-104.077891	32.578879	100	
CP 01201 POD1	EDDY	NE	NE	NW	18	20S	29E	-104.115861	32.580444	140	100
C 03265 POD1	EDDY	NW	NW	SW	20	20S	29E	-104.104691	32.558055	89	52
CP 00936 POD1	EDDY	SW	SE	NE	30	20S	29E	-104.108981	32.545366	70	52
CP 00924 POD1	EDDY	SW	SW	NE	30	20S	29E	-104.113262	32.545369		
CP 00963 POD1	EDDY	SW	SE	NE	30	20S	29E	-104.108981	32.545366		
									AVERAGE	145	86

ANALYSIS ATTACHED

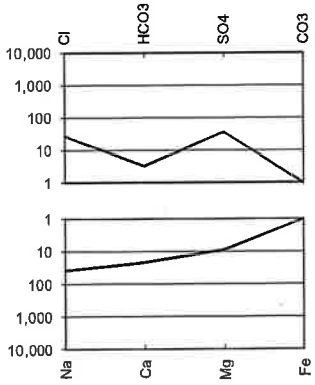
CARDINAL LABORATORIES
SCALE INDEX WATER ANALYSIS REPORT

Company : LONQUIST FIELD SERVICES
Lease Name : CLARA ALLEN SWD #1
Well Number : C-00926-POD1 (H901060-01)
Location : 32.59391 / -104.114741

Date Sampled : 03/19/19
Company Rep. : TYLER MOEHLMAN

ANALYSIS						
1. pH	7.79					
2. Specific Gravity @ 60/60 F.	1.0040					
3. CaCO3 Saturation Index @ 80 F.	+0.497	'Calcium Carbonate Scale Possible'				
@ 140 F.	+1.197	'Calcium Carbonate Scale Possible'				
Dissolved Gasses						
4. Hydrogen Sulfide	0.000	PPM				
5. Carbon Dioxide	ND	PPM				
6. Dissolved Oxygen	ND	PPM				
Cations		/	Eq. Wt.	=	MEQ/L	
7. Calcium (Ca++)	429.00	/	20.1	=	21.34	
8. Magnesium (Mg++)	109.00	/	12.2	=	8.93	
9. Sodium (Na+)	502	/	23.0	=	38.39	
10. Barium (Ba++)	0.000	/	68.7	=	0.00	
Anions						
11. Hydroxyl (OH-)	0	/	17.0	=	0.00	
12. Carbonate (CO3=)	0	/	30.0	=	0.00	
13. Bicarbonate (HCO3-)	205	/	61.1	=	3.36	
14. Sulfate (SO4=)	1,840	/	48.8	=	37.70	
15. Chloride (Cl-)	980	/	35.5	=	27.61	
Other						
16. Total Iron (Fe)	1.210	/	18.2	=	0.07	
17. Total Dissolved Solids	3,040					
18. Total Hardness As CaCO3	1,520.0					
19. Calcium Sulfate Solubility @ 90 F.	1,548					
20. Resistivity (Measured)	2.010	Ohm/Meters	@ 77	Degrees (F)		

Logarithmic Water Pattern



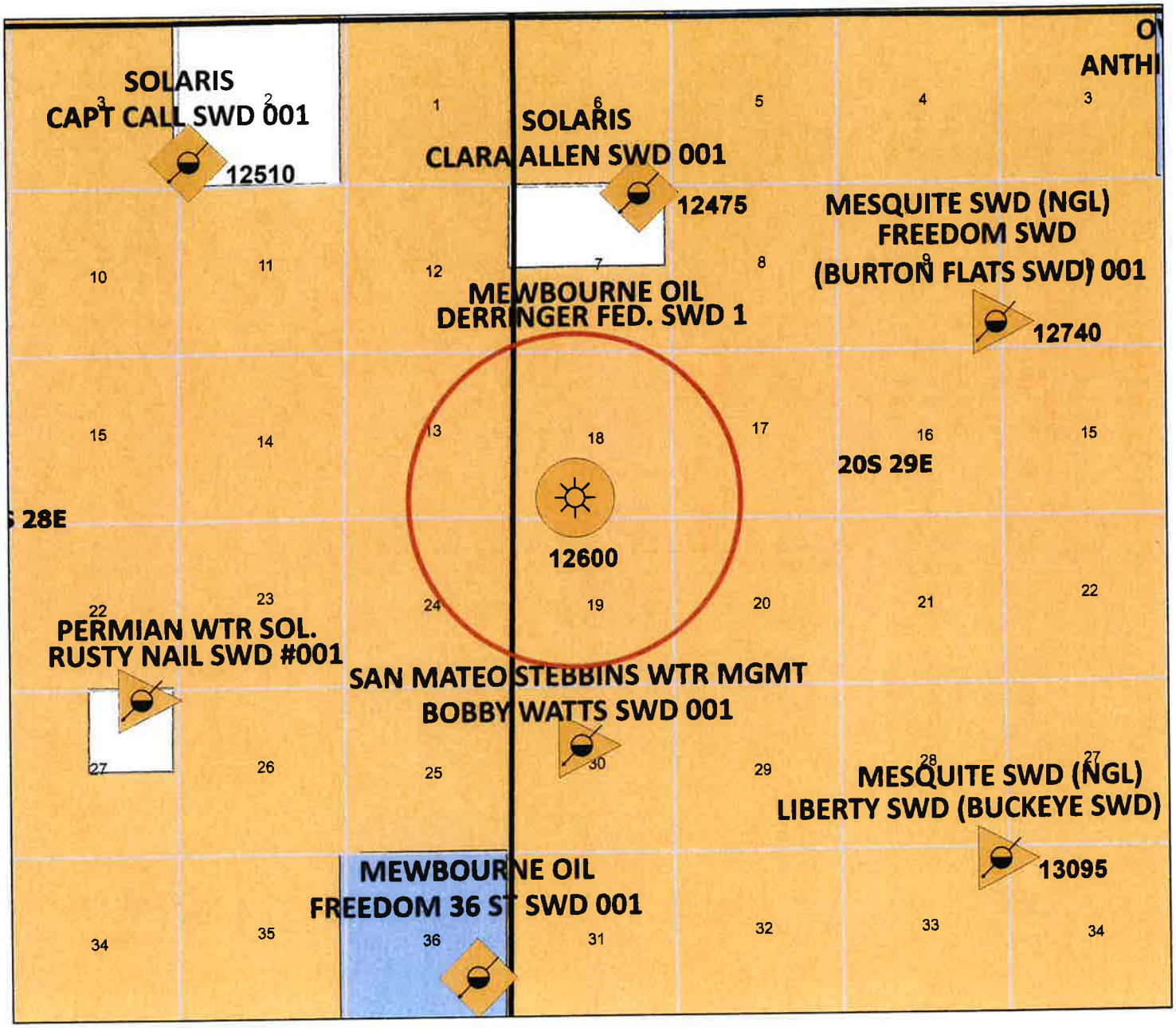
PROBABLE MINERAL COMPOSITION

COMPOUND	Eq. Wt.	X	MEQ/L	=	mg/L
Ca(HCO3)2	81.04	X	3.36	=	272
CaSO4	68.07	X	17.99	=	1,224
CaCl2	55.50	X	0.00	=	0
Mg(HCO3)2	73.17	X	0.00	=	0
MgSO4	60.19	X	8.93	=	538
MgCl2	47.62	X	0.00	=	0
NaHCO3	84.00	X	0.00	=	0
NaSO4	71.03	X	10.78	=	766
NaCl	58.46	X	27.61	=	1,614

ND = Not Determined

MEWBOURNE OIL COMPANY
DERRINGER 18 FEDERAL SWD #1
PRODUCING FORMATION WATER ANALYSIS

Well	Well #	S	TWP	RGE	Formation	Date	SG	pH	Na	Ca	Mg	Fe	CL	SO4	HCO3
Avalon Ridge 33 Fed Com	2H	33	20S	28E	1st Bone Spring	6/14/2012	1.13	6.65	60,885	2,000	1,200	10	100,000	250	312
Savage 5 EH Fed	1H	5	20S	29E	1st Bone Spring	4/30/2014	1.16	7.00	69,127	4,800	2,640	0	122,000	350	132
Burton 4 Fed	3H	4	20S	29E	2nd Bone Spring	3/5/2013	1.15	6.49	65,926	8,000	1,680	8	120,000	250	122
Burton 4 PM Fec Com	2H	4	20S	29E	2nd Bone Spring	2/24/2014	1.14	6.87	59,673	9,200	2,880	2	116,000	350	68
Derringer 18 Fed	2H	18	20S	29E	2nd Bone Spring	4/11/2013	1.17	6.79	67,801	8,000	4,800	0	132,000	350	73
Glock 16 B2AD Fed Com	1H	16	20S	29E	2nd Bone Spring	4/19/2016	1.14	5.93	41,055	8,755	20,271	23	138,500	525	244
Henry 18 PM Fed Com	1H	8	20S	29E	2nd Bone Spring	7/18/2014	1.17	5.68	64,258	11,600	3,120	0	128,000	350	29
Perazzi 9 B2EH Fed	1H	9	20S	29E	2nd Bone Spring	4/14/2016	1.14	5.89	44,712	8,894	16,406	19	132,850	525	244
Ruger 31 DA Fed	1H	31	19S	29E	2nd Bone Spring	4/28/2014	1.15	6.80	63,211	10,000	1,920	0	120,000	350	98
Derringer 18 B3DA Fed	2H	18	20S	29E	3rd Bone Spring	4/18/2016	1.15	5.44	56,741	11,070	8,848	41	133,150	325	122
Styx 17 W2PA Fee Com	1H	17	23S	28E	Wolfcamp	4/11/2018	1.07	6.01	34,798	4,245	615	25	62,669	120	122
Loving Townsite 21 W0PA	2H	21	23S	28E	Wolfcamp	11/12/2018	1.08	7.16	36,690	5,483	800	11	68,675	110	122



BLM LEGEND

- FEDERAL LANDS
- PRIVATE LANDS
- STATE LANDS

ONE MILE AOR

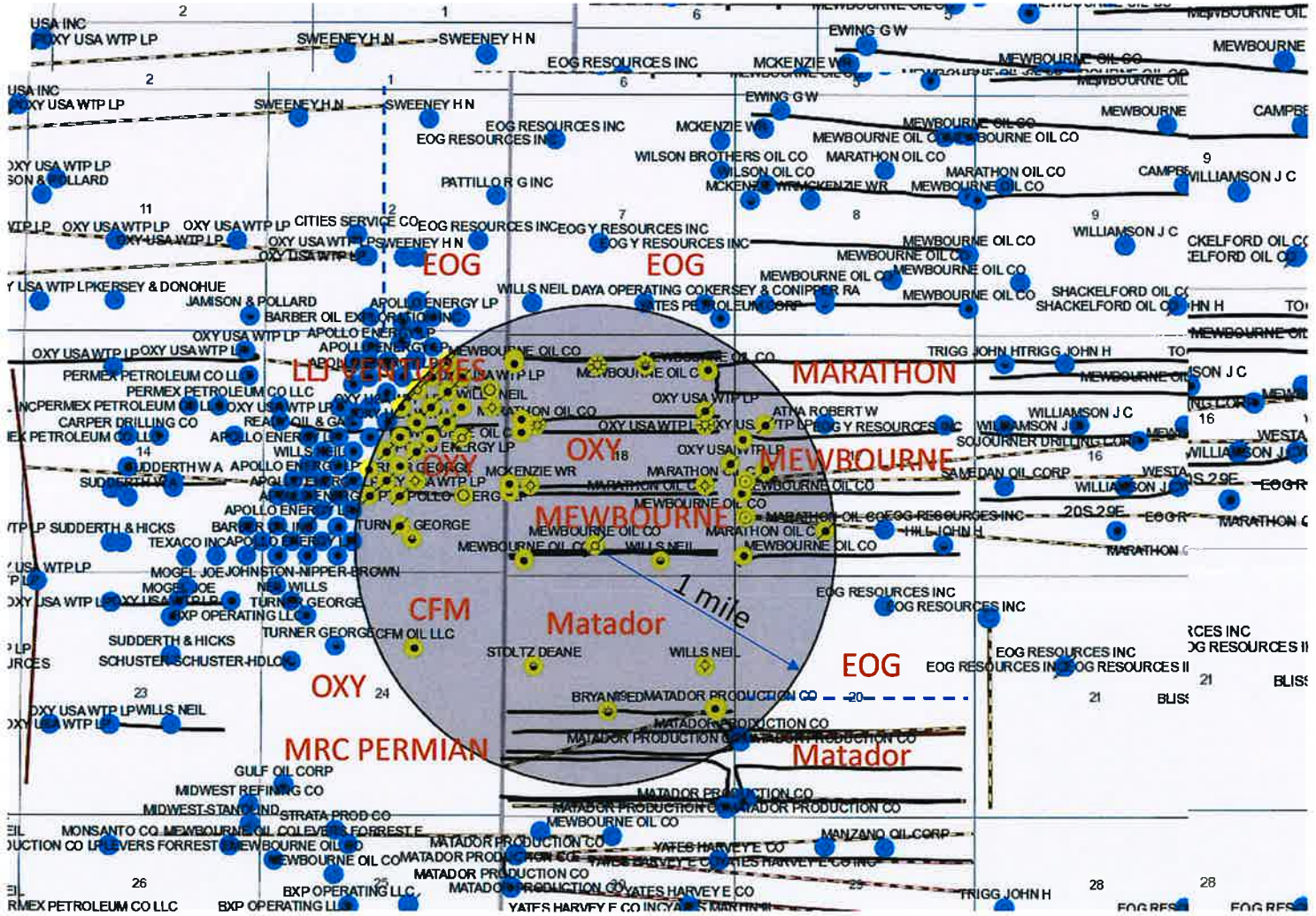
Mewbourne Oil Company

DERRINGER FEDERAL SWD #1
660 FSL & 1980 FWL SEC., 18 20S-29E
EDDY CO., NEW MEXICO

Author:		Date:
sd		12 October, 2020

OFFSET OPERATOR / LESSEE MAP

20S, 28E



20S, 29E

Listing of Notified Persons

Derringer Federal SWD #1 SWD Permit Modification Application SWD-1425
660' FSL & 1980' FWL
Section 18, T20S, R29E, Eddy County, NM

Surface Owner
Bureau of Land Management
620 E. Greene St.
Carlsbad, NM 88220

Offsetting Operators Or Leasehold Owners Within 1 Mile

E/2, Section 12, 20S, 28E
EOG Resources Inc.
5509 Champions Dr.
Midland, TX 79706

Section 13, 20S, 28E
LLJ Ventures, LLC
701 W. Country Club Rd
Roswell, NM 88201

OXY USA WTP Limited Partnership
5 Greenway Plaza
Houston, TX 77046

Section 24, 20S, 28E
CFM Oil, LLC
422 W. Main St
Artesia, NM 88210

OXY USA WTP Limited Partnership
5 Greenway Plaza
Houston, TX 77046

MRC Permian Co.
5400 LBJ Freeway, Suite 1500
One Lincoln Center
Dallas, TX 75240

S2, Section 7, 20S, 29E
EOG Resources Inc.
5509 Champions Dr.
Midland, TX 79706

Section 17, 20S, 29E
Marathon Oil Permian LLC
5555 San Felipe St.
Permian Regulatory Team, Building D
Houston, TX 77056

Mewbourne Oil Company
P.O. 7698
Tyler, TX 75711

Section 18, 20S, 29E

Mewbourne Oil Company
P.O. Box 7698
Tyler, TX 75711

OXY USA WTP Limited Partnership
5 Greenway Plaza
Houston, TX

Section 19, 20S, 29E
Matador Production Company
5400 LBJ Freeway, Suite 1500
One Lincoln Center
Dallas, TX 75240

Section 20, 20S, 29E
Matador Production Company
5400 LBJ Freeway, Suite 1500
One Lincoln Center
Dallas, TX 75240
Matador

EOG Resources Inc.
5509 Champions Dr.
Midland, TX 79706

Carlsbad Current Argus.

Affidavit of Publication

Ad # 0004437048

This is not an invoice

MEWBOURNE OIL COMPAN Y
3901 S BROADWAY AVE

TYLER, TX 75701

I, a legal clerk of the **Carlsbad Current Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

10/25/2020

Legal Clerk

Subscribed and sworn before me this October 25, 2020:

State of WI, County of Brown
NOTARY PUBLIC

8-25-23
My commission expires

SHELLY HORA
Notary Public
State of Wisconsin

Ad # 0004437048
PO #: C-108 NMICD
# of Affidavi s1

This is not an invoice

NOTICE
Mewbourne Oil Company has filed a form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking authority to modify the depth of the injection interval.
The Derringer Federal SWD #1 is located 600' FSL and 1980' FWL, Unit Letter N, Section 18, Township 20 South, Range 29 East, NMPM, Eddy County, New Mexico. The well will dispose of water produced from nearby operated oil and gas wells into the Devonian-Silurian formation into an open-hole interval from a depth of 12,600 feet to 13,390 feet. Expected maximum injection rates are 25,000 BWPD at a maximum injection pressure of 2,520 psi.
Interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days. The name and address of the contact party for the applicant is Tim Harrington, Mewbourne Oil Company, 3620 Old Bullard Road, Tyler, Texas 75701, (903)-534-7647. The well is located approximately 12 miles northeast of Carlsbad, New Mexico.
#4437048, Current Argus, Oct. 25, 2020

MEWBOURNE
OIL COMPANY

October 26, 2020

Engineering and Geological Services Bureau, Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Attn: Mr. Phillip Goetze

Re: Derringer Federal SWD #1
Sec 18, Twp 20S, Rge 29E
Eddy County, NM

Mr. Goetze,

In accordance with item XII on Mewbourne Oil Company's C-108 filed for the captioned salt water disposal well, Mewbourne Oil Company has examined geologic and engineering data and has found that there is no evidence of faulting or any other hydrologic connection between the proposed disposal zone and any underground sources of drinking water.

Should you have any questions, please email me at tharrington@mewbourne.com or call me at (903) 534-7647.

Sincerely yours,

MEWBOURNE OIL COMPANY

Timothy R. Harrington

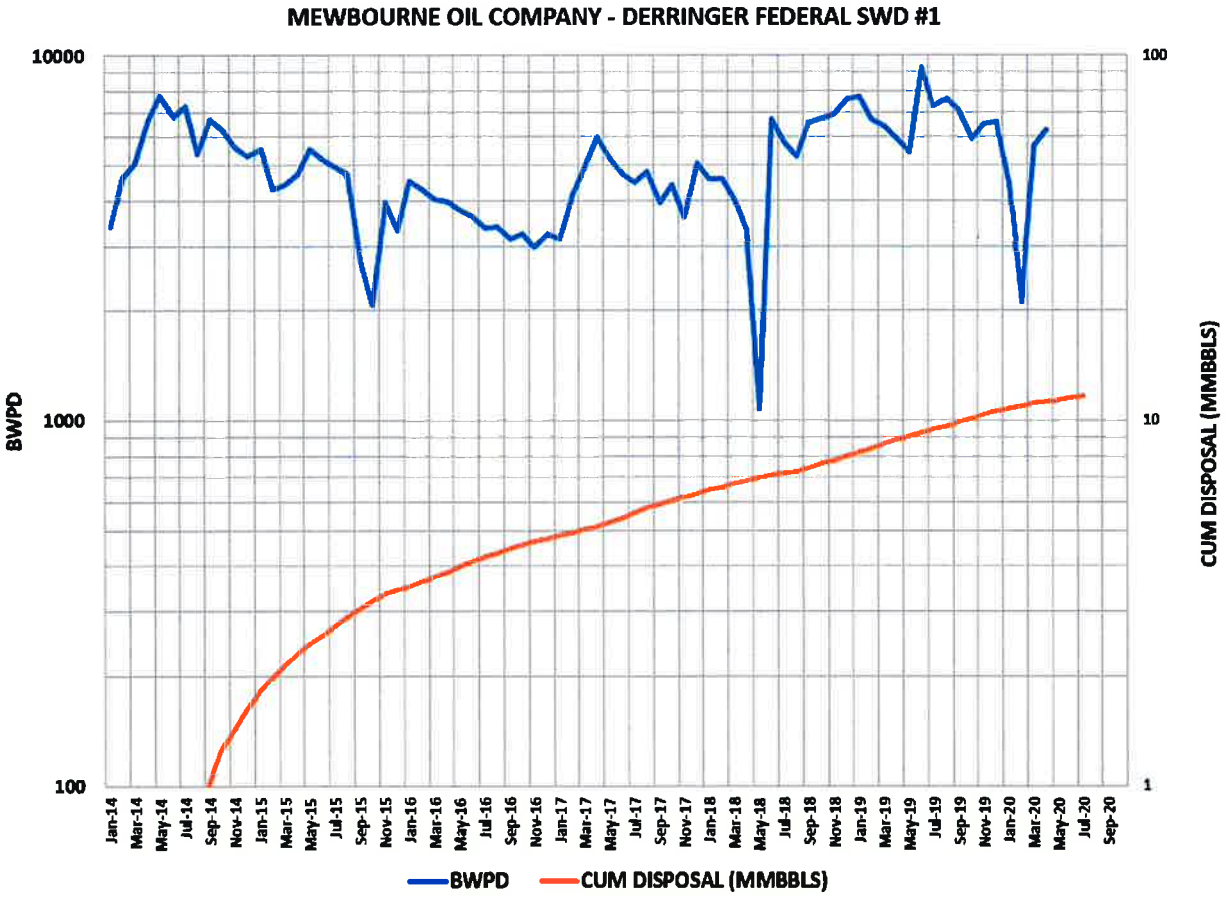
Tim Harrington
Reservoir Engineer
tharrington@mewbourne.com

Mewbourne Oil Company
Derringer Federal SWD #1
C-108 Attachment
October 26, 2020

STATEMENTS REGARDING SEISMICITY AND WELL SPACING

Historically, the area nearby our proposed Derringer Federal SWD #1 has not seen a significant amount of seismic activity. The closest recorded seismic event (per USGS database) in this area occurred in November 1979 (magnitude 3.9) and was located 17.7 miles south of our proposed SWD (see attached map).

First injection into the Derringer Federal SWD #1 occurred in April 2014 and approximately 11 MMbbls of water has been injected through September 2020.



Mewbourne Oil Company does not own 2D or 3D seismic data near our proposed SWD therefore our fault interpretation is based on subsurface mapping and data obtained from public technical sources. Our publicly sourced faults data is from a 2005 paper by Ruppel etal. (map attached). Based off our subsurface mapping of the deep formations, Mewbourne has not interpreted any faults in the immediate area. The closest known mapped "deep" fault, that is documented in public data, is approximately 18.2 miles southwest of our proposed SWD.

Mewbourne Oil Company
Derringer Federal SWD #1
C-108 Attachment
October 26, 2020

A very recent technical paper written by Snee and Zoback , "State of Stress in the Permian, Basin, Texas and New Mexico: Implications for induced seismicity", that was published in the February 2018 edition of The Leading Edge, evaluates the strike-slip probability, using probabilistic FSP analysis, of known Permian Basin faults. This study predicts that the Precambrian fault located on our map has a 24-33% chance of being critically stressed so as to create an induced seismicity event. Injection into the Derringer Federal SWD will have no impact on the stress of this fault since the proposed SWD is located over 18 miles away.

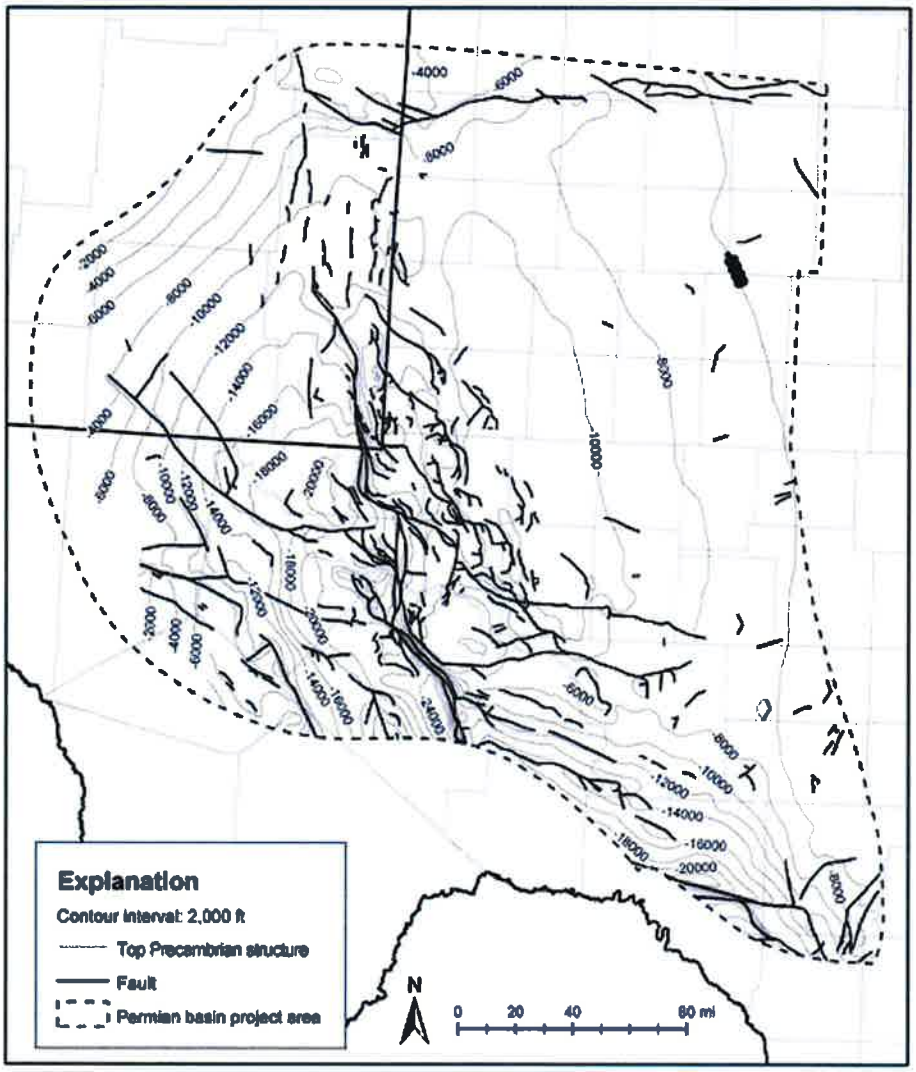
The Derringer Federal SWD #1 is located greater than 1.5 miles away from any active, permitted or pending Devonian SWD application (see map), to meet current OCD and industry recommended practices.

Operator	Well Name	Status	Distance from Derringer Fed SWD (miles)
San Mateo Stebbins Wtr Mgmt	Bobby Watts Fed SWD #1	Application	1.5 (S)
Solaris Midstream	Clara Allen SWD #1	Permit	1.9 (N)
San Mateo Stebbins Wtr Mgmt	Shinnery Oak SWD #3	Active	5.0 (SE)
Devon	Burton Flat Deep Unit #44	Active	5.4 (SW)
Mewbourne Oil Company	Freedom 36 State SWD #1	Permit	2.9 (S)
OWL SWD	Anthill State SWD #5	Active	4.4 (NE)

Timothy R. Harrington

Reservoir Engineer
tharrington@mewbourne.com
903-534-7647

Mewbourne Oil Company
Derringer Federal SWD #1
C-108 Attachment
October 26, 2020



Precambrian Structure Map In the Permian Basin (Ruppel etal.)

Mewbourne Oil Company
Derringer Federal SWD #1
C-108 Attachment
October 26, 2020

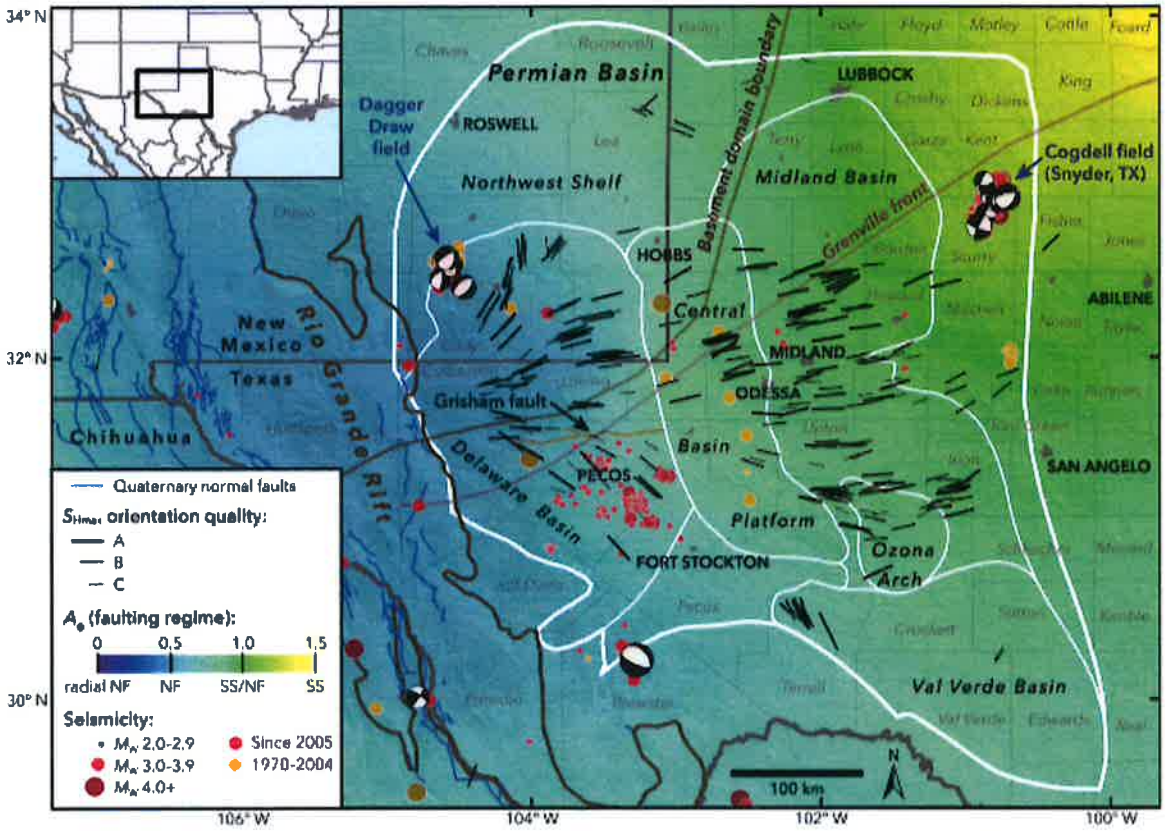


Figure 1. State of stress in the Permian Basin, Texas and New Mexico. Black lines are the measured orientations of S_{Hmax}, with line length scaled by data quality. The colored background is an interpolation of measured relative principal stress magnitudes (faulting regime) expressed using the A_ϕ parameter (see text for details) of Simpson (1997). Blue lines are fault traces known to have experienced normal-sense offset within the past 1.6 Ma, from the USGS Quaternary Faults and Folds Database (Crone and Wheeler, 2000). The boundary between the Shawnee and Mazatzal basement domains is from Lund et al. (2015), and the Precambrian Grenville Front is from Thomas (2006). The Permian Basin boundary is from the U.S. Energy Information Administration, and the subbasin boundaries are from the Texas Bureau of Economic Geology Permian Basin Geological Synthesis Project. Earthquakes are from the USGS National Earthquake Information Center, the TexNet Seismic Monitoring Program, and Gan and Frohlich (2013). Focal mechanisms are from Saint Louis University (Herrmann et al., 2011).

Mewbourne Oil Company
Derringer Federal SWD #1
C-108 Attachment
October 26, 2020

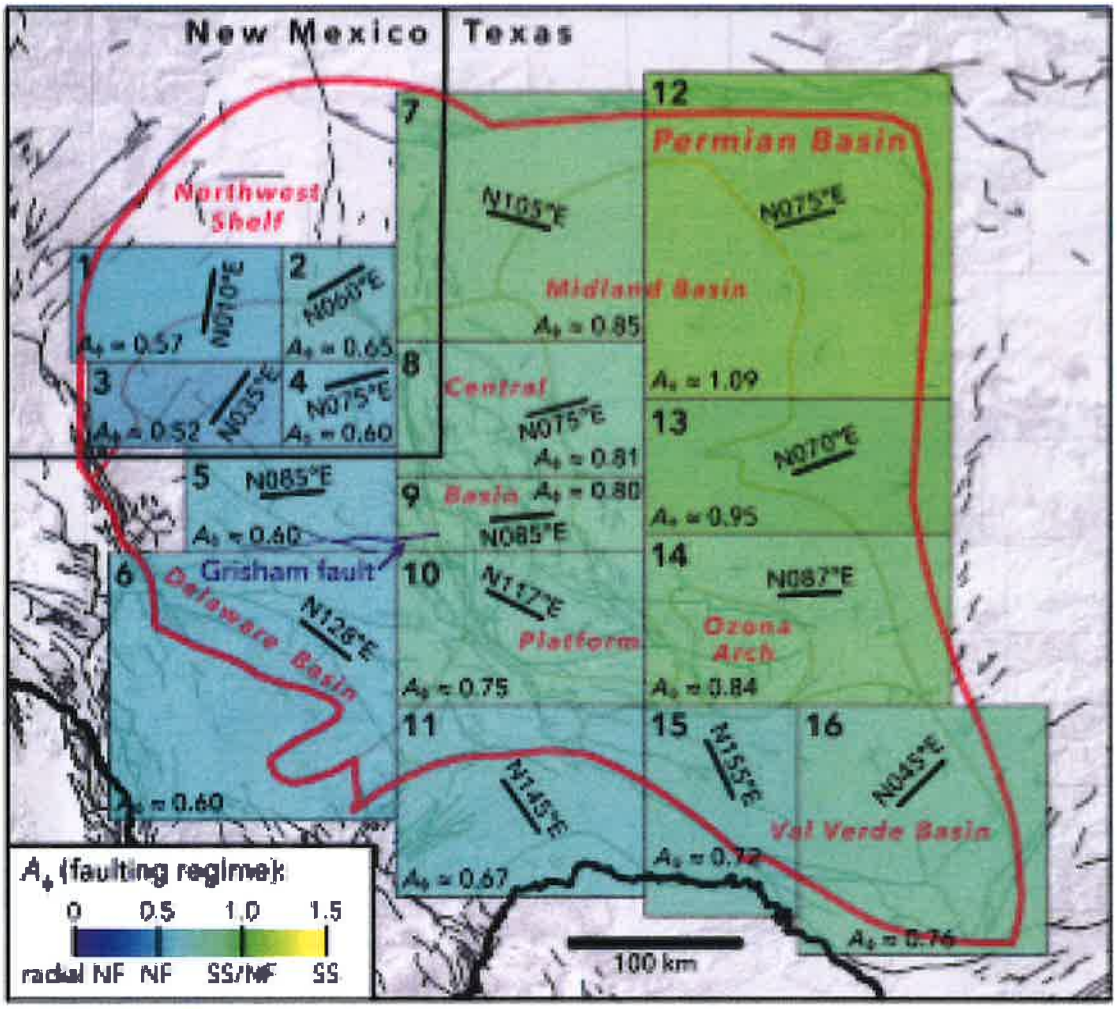
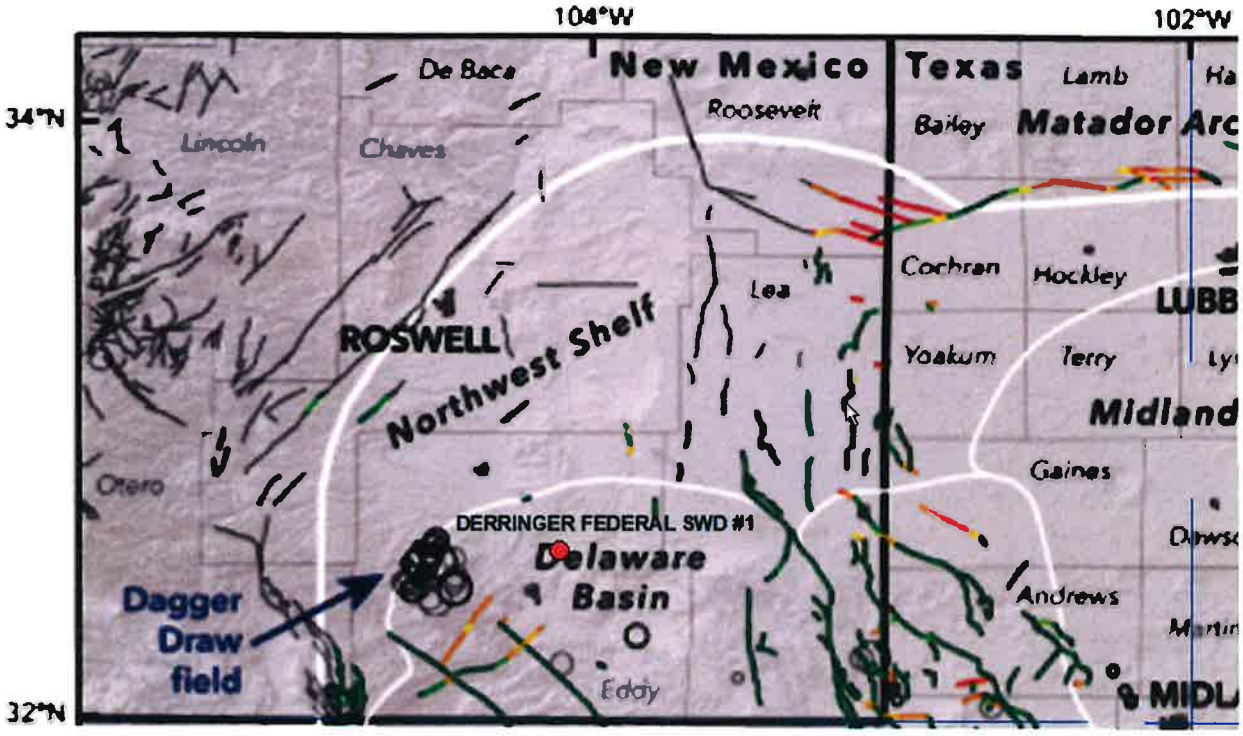


Figure 2. Map of study areas chosen for FSP analysis on the basis of broadly similar stress conditions. Text annotations indicate representative S_{Hmax} orientation and relative principal stress magnitudes (A_ϕ parameter) for each study area based on the data presented in Figure 1. Gray lines in the background indicate fault traces compiled from Ewing et al. (1990), Green and Jones (1997), Ruppel et al. (2005), and the USGS Quaternary Faults and Folds Database (Crone and Wheeler, 2000), to which we apply FSP analysis.

Mewbourne Oil Company
Derringer Federal SWD #1
C-108 Attachment
October 26, 2020



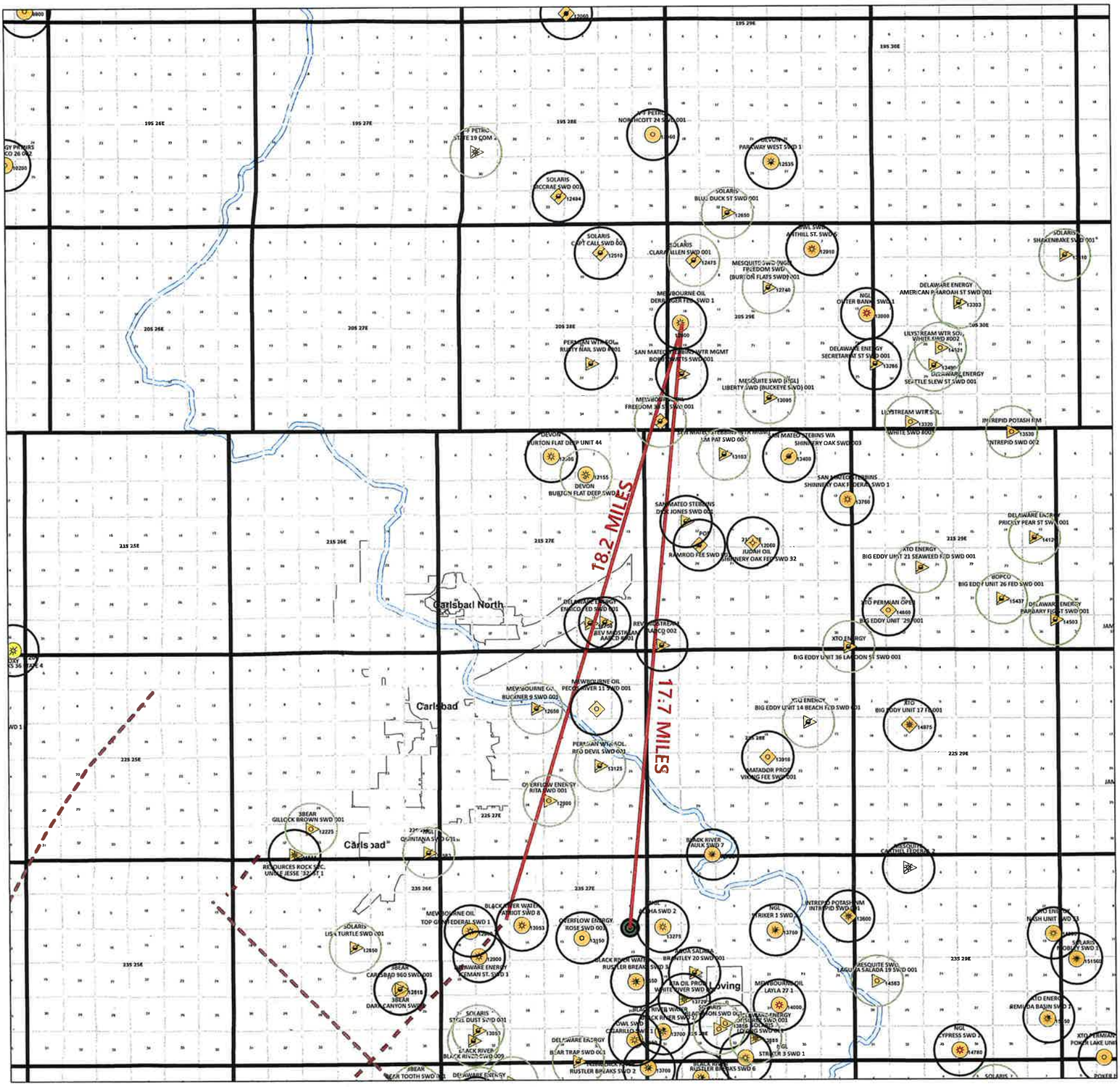
References

Ewing, T.E., R.T. Budnik, J.T. Ames, and D.M. Ridner, 1990, Tectonic Map of Texas: Bureau of Economic Geology, University of Texas at Austin.

Green, G.N., and G.E. Jones, 1997, The digital geologic map of New Mexico in ARC/INFO format: U.S. Geological Survey Open-File Report.

Jens-Erik Lund Snee and Mark D. Zoback, 2018, State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity: The Leading Edge, February 2018.

Ruppel, S.C., R.H. Jones, C.L. Breton, and J.A. Kane, 2005 Preparation of maps depicting geothermal gradient and Precambrian structure in the Permian Basin: Bureau of Economic Geology, Jackson School of Geosciences, The University of Texas at Austin, Austin, TX.



ACTIVE DEVONIAN SWD WELLS

TOP INTERVAL

THREE QUARTER MILE RADIUS

SIX MILE CIRCLE

PERMITTED DISPOSAL WELL

ACTIVE DISPOSAL WELL

PLUGGED DISPOSAL WELLS

TEMPORARILY ABANDON

SHUT – IN

SWD WELLS IN APPLICATION PROCESS

OCD PENDING APPLICATIONS

Mewbourne Oil Company

DERRINGER FEDERAL SWD #1
Sec. 18-20S-29E
660 FSL, & 1980 FWL
EDDY, NEW MEXICO

		Date: 12 October, 2020
Tech: sd	Scale: 1" = 17,000'	Derringer Fed SWD Seismic Events & Faults