

Initial Application Part I

Received 8/5/21

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



MEWBOURNE
OIL COMPANY

pBL2121754179

August 3, 2021

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 SWD Well
Outback 9 SWD #1
2630' FSL & 2650' FWL, Unit F
Section 9, Township 25 South, Range 28 East
Eddy County, New Mexico

SWD-2446

Dear Mr. Goetze:

Attached is a C-108 Application for administrative approval of Mewbourne Oil's proposed Outback 9 SWD #1 that will be located in Sec 9 Twp 25S, Rge 28E, N.M.P.M., Eddy County, New Mexico. This well will be completed open hole in the Devonian formation and will be operated as a private salt water disposal well.

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 July 17th and an Affidavit of Publication is enclosed.

Should you have any questions, please contact us at (575) 393-5905.

Sincerely yours,

MEWBOURNE OIL COMPANY

Zane Anderson
Engineer
zanderson@mewbourne.com

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.

INJECTION WELL DATA SHEET

OPERATOR: **Mewbourne Oil Company**WELL NAME & NUMBER: **Outback 9 SWD #1**

WELL LOCATION:	2,630' FSL & 2,650' FWL	K	9	25S	28E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC (See Attached)**WELL CONSTRUCTION DATA**Surface CasingHole Size: **26"**Casing Size: **20" (94#) @ 450'**Cement with: **715 sx (100% excess)**Top of Cement: **Surface**Intermediate CasingHole Size: **17 1/2"**Casing Size: **13 3/8" (54.5 & 61#) @ 2,425'**Stage 1: **1155 sx (25% excess)**Top of Cement: **Surface (Calculated)**Production CasingHole Size: **12 1/4"**Casing Size: **9 5/8" (40#) @ 9,350'**Stage 1: **1445 sx (25% excess)**Top of Cement: **DV Tool @ 2,500'**Stage 2: **630 sx (25% excess)**Top of Cement: **Surface (Calculated)**Production LinerHole Size: **8 3/4"**Casing Size: **7 5/8" (33.7#)****Top @ 9,150'****Bottom @ 14,270'**Cement with: **365 sx (25% excess)**Top of Cement: **9,150'****(Proposed: circulated to liner top)****TD @ 15,170'**Permitted Injection Interval 14,270'-15,170'

Mewbourne Oil Company

Well Name: Outback 9 SWD #1
Spud: 2021

20" 94# J-55 BTC
Set @ 450'
Cmt w/ 715 sx

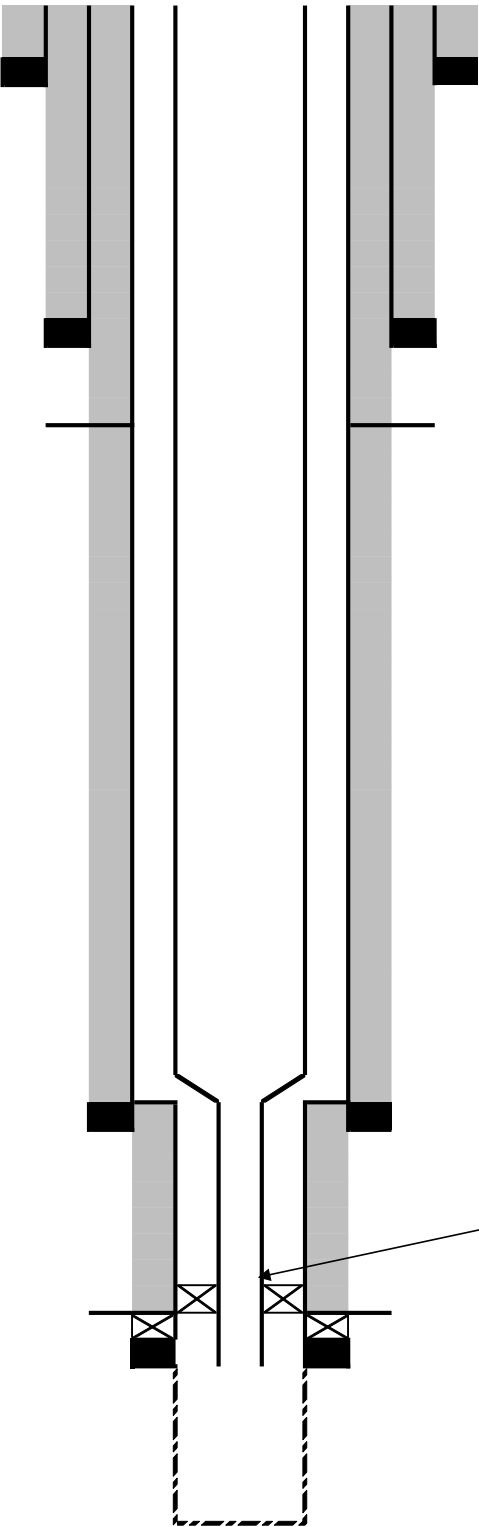
13 3/8" 54.5 & 61# J55 & HCL80 STC
Set @ 2425'
Cmt w/ 1155 sx

ECP/DV Tool @ 2500'
Cmt 2nd stg w/ 630 sx

9 5/8" 40# HCL80 LTC
Set @ 9350'
Cmt 1st stg w/ 1445 sx

7 5/8" 33.7# P-110 UFJ Liner
Set from 9150'-14,270'
Cmt w/ 365 sx

6 1/8" Open Hole
TD @ 15,170'



Injection String
7" P110 UFJ GB & 5 1/2" P110 UFJ GB
Nickel-Plated Pkr Set @ 14,180'

DV Tool @ 14,200'
External Csg Pkr Set @ 14,240'

INJECTION ZONE: DEVONIAN
14270' - 15170'

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INJECTION WELL DATA SHEET

Tubing Size: **7" x 5 ½"** Lining Material: **Duoline**
7", P110 UFJ GB to approximately 9,025'
5 1/2", P110 UFJ GB to 14,180'

Type of Packer: **3 ½" x 7 5/8" Model R Packer (Inconel)**

Packer Setting Depth: **+/- 14,180'**

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

Additional Data

1. Is this a new well drilled for injection? **Yes**

If no, for what purpose was the well originally drilled? **NA**

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

3. Name of Field or Pool (if applicable): **96101 SWD; Devonian**

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 – **Delaware (2,500'), Bone Spring (6,125'), Wolfcamp (9,325'), & Morrow (12,575')**

Underlying producing zone – **N/A**

Outback 9 SWD #1

Additional Details

- VI. There are no wells penetrating the disposal formation within the area of review.
- VII. 1. Proposed average rate of 20,000 bwpd and maximum rate of 30,000 bwpd.
2. Non-commercial SWD (closed system).
3. Proposed average injection pressure is unknown and the maximum injection pressure is approximately 2,854 psi (0.2 psi/ft x 14,270 ft).
4. This well is being permitted as 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 proposed injection interval is within the Devonian formation which is a porous dolomitic limestone from 14,270' to 15,170'. It is estimated that the base of the injection interval should be approximately 645' above the top of the Ellenburger.

Other Projected Formation Tops:

Mississippian	13,875'
Woodford	14,115'
Devonian	14,245'
EST TOTAL DEPTH	15,170'
Montoya	15,195'
Simpson	15,555'
Ellenburger	15,815'

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 50', the shallowest water at a depth of 35' and the average water depth at 43'. There are no known fresh water intervals underlying the injecting formation.
- IX. The proposed stimulation is an open-hole acid treatment of 30,000 gallons of 15% HCL.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name	
4 Property Code		5 Property Name OUTBACK 9 SWD			6 Well Number 1
7 OGRID NO.		8 Operator Name MEWBOURNE OIL COMPANY			9 Elevation 2992'

10 Surface Location

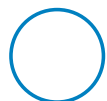
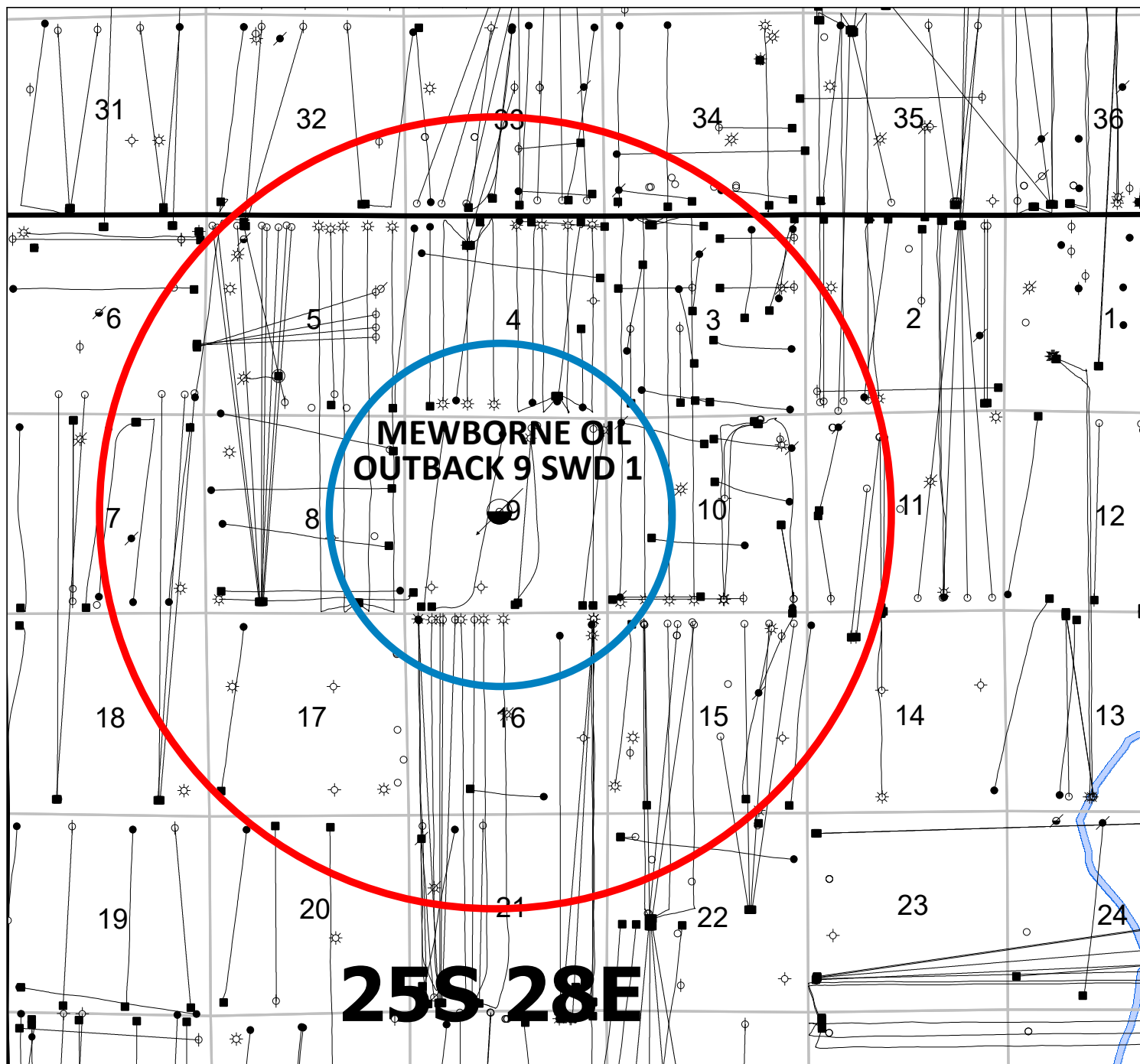
UL or lot no. F	Section 9	Township 25S	Range 28E	Lot Idn	Feet from the 2630	North/South line SOUTH	Feet From the 2650	East/West line WEST	County EDDY
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11 Bottom Hole Location If Different From Surface

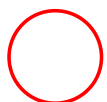
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres		13 Joint or Infill		14 Consolidation Code		15 Order No.			

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.


<p>① N 89°23'27" W 2678.25'</p> <p>② N 89°24'41" W 2680.64'</p> <p>③ N 89°48'11" W 2666.64'</p> <p>④ S 89°55'31" W 2673.49'</p> <p>⑤ N 00°19'07" W 2612.27'</p> <p>⑥ N 00°20'04" W 2611.76'</p> <p>⑦ N 00°32'00" W 2646.49'</p> <p>⑧ N 00°30'41" W 2646.34'</p>		<p>16</p> <p>GEODETIC DATA NAD 83 GRID - NM EAST</p> <p>SURFACE LOCATION N 416421.9 - E 615881.1</p> <p>LAT: 32.1445932° N LONG: 104.0924824° W</p> <p>CORNER DATA NAD 83 GRID - NM EAST</p> <p>A: FOUND BRASS CAP "1940" N 413783.4 - E 613255.2</p> <p>B: FOUND BRASS CAP "1940" N 416429.1 - E 613231.6</p> <p>C: FOUND BRASS CAP "1940" N 419074.9 - E 613207.0</p> <p>D: FOUND BRASS CAP "1940" N 419046.4 - E 615884.5</p> <p>E: FOUND BRASS CAP "1940" N 419018.9 - E 618564.4</p> <p>F: FOUND BRASS CAP "1940" N 416407.2 - E 618578.9</p> <p>G: FOUND BRASS CAP "1939" N 413796.1 - E 618594.1</p> <p>H: FOUND BRASS CAP "1939" N 413792.6 - E 615921.2</p> <p>2650'</p> <p>2630'</p> <p>S.L.</p> <p>9</p>		<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature _____ Date _____</p> <p>Printed Name _____</p> <p>E-mail Address _____</p> <p>18 SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>04/27/2021</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>19680</p> <p>Certificate Number</p> <p>Job No.: LS21040384</p>	
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1 MILE AREA OF REVIEW



2 MILE AREA OF REVIEW

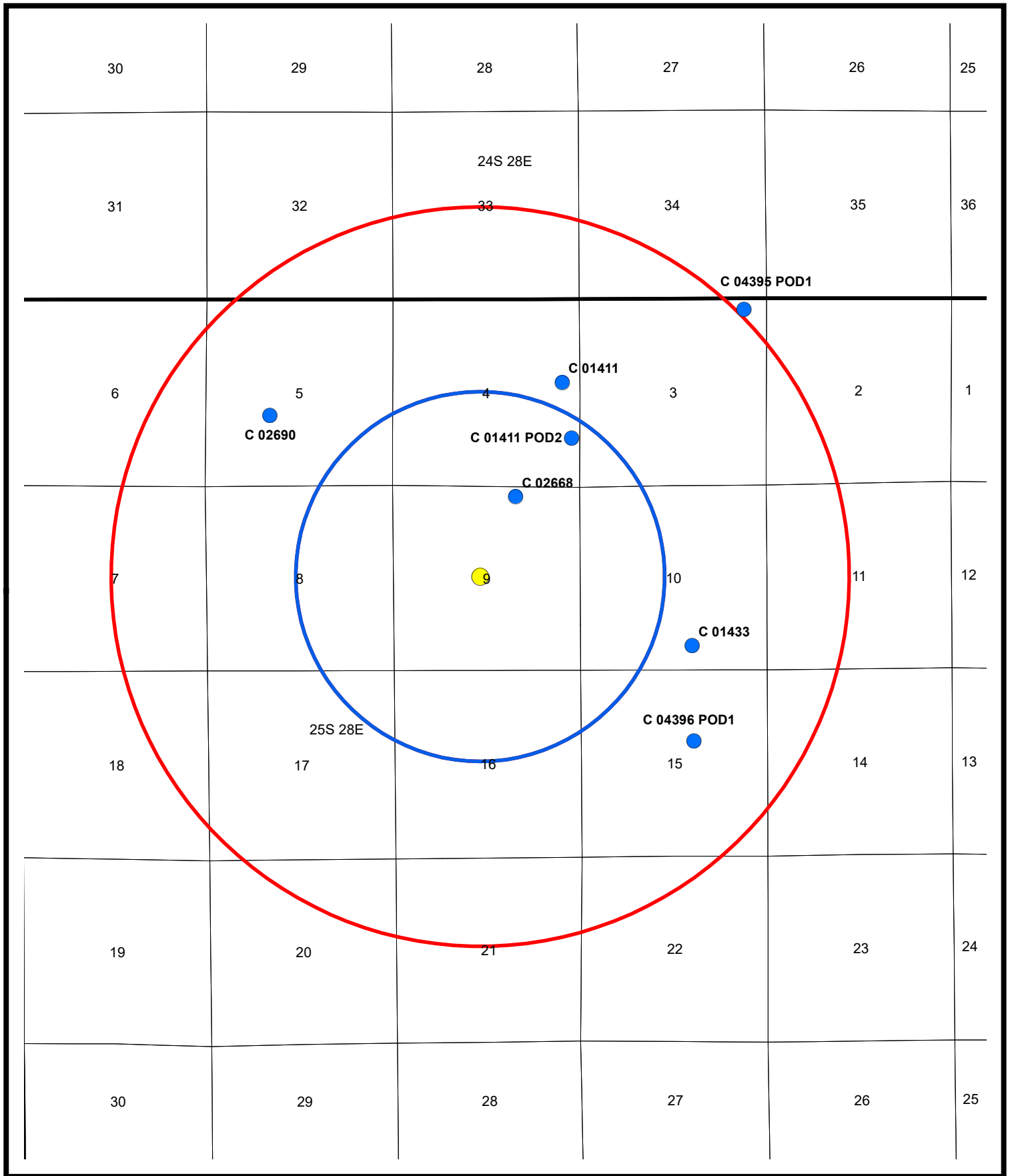
 Mewbourne Oil Company		
<p align="center">OUTBACK 9 SWD #1 2630 FSL & 2650 FEL SECTION 9 25S 28E EDDY CO., NEW MEXICO</p>		
Author: sd		Date: 28 June, 2021

Mewbourne Oil Company
Outback 9 SWD #1 C-108 Application

1 MILE AOR WELLS ESTIMATED TOP OF DEVONIAN = 14,245'

API	Lease Name	Well Num	Operator Name	Current Operator	Location	Footage	Field Name	State	County	Play Name	Final Status	Last Activity	Driller Td	Form at TD Name	Formation Producing Name	Proj Depth	Proj Form	Spud Date	Comp Date	Final Drill Date	Latitude	Longitude
30015302290000	CHAPARRAL '10'	1	SANTA FE ENERGY RESOURCES INC	CONTANGO RESOURCES CO	25S 28E 10 SE NW	1980 FNL 1980 FWL CONGRESS SECTION	WILLOW LAKE SW	NM	EDDY	DELAWARE	OIL PRODUCER	2021-05-20	13275	MORROW CLASTIC	DELAWARE	13400	DELAWARE	1998-05-10	1998-10-02	1998-07-02	32.14622427	-104.0768526
30015302290001	CHAPARRAL 10	1	LRE OPERATING LLC	CONTANGO RESOURCES CO	25S 28E 10 SE NW	1980 FNL 1980 FWL CONGRESS SECTION	SWD	NM	EDDY	SALT WATER DISPOSAL	SWD-WO	2021-05-20	13275	MORROW CLASTIC			DELAWARE	2012-06-18	2012-07-18		32.14622427	-104.0768526
30015329140000	SHRIKE COM 10-H	1	SOUTHWESTERN ENERGY PRODUCTION CO	CONTANGO RESOURCES CO	25S 28E 10 SE NW SW	1964 FSL 1189 FWL CONGRESS SECTION	WILLOW LAKE SW	NM	EDDY	DELAWARE	OIL PRODUCER	2021-03-26	7051	CHERRY CANYON		4816	DELAWARE	2003-11-22	2004-01-07	2003-12-06	32.14264637	-104.0793948
30015394070000	DEVON '8' FEE	1H	OCCIDENTAL PERMIAN LTD	OCCIDENTAL PERMIAN LTD	25S 28E 8	990 FNL 330 FEL CONGRESS SECTION	HAY HOLLOW NORTH	NM	EDDY	BONE SPRING	OIL PRODUCER	2021-05-20	12387	BONE SPRING 2 /SD/	BONE SPRING	10897	BONE SPRING	2011-11-25	2012-03-22	2011-12-12	32.14907107	-104.1016335
30015394077000	DEVON 8 FEE	1	OCCIDENTAL PERMIAN LTD	OCCIDENTAL PERMIAN LTD	25S 28E 8	990 FNL 330 FEL CONGRESS SECTION	HAY HOLLOW NORTH	NM	EDDY	BONE SPRING	PILOT HOLE	2021-05-28	8650	BONE SPRING 2 /SD/			BONE SPRING	2011-11-10	2011-11-18	2011-11-18	32.14907107	-104.1016335
30015403470000	DEVON '8' FEE	2H	OCCIDENTAL PERMIAN LTD	OCCIDENTAL PERMIAN LTD	25S 28E 8	1771 FSL 467 FEL CONGRESS SECTION	HAY HOLLOW NORTH	NM	EDDY	BONE SPRING	OIL PRODUCER	2021-04-01	12121	BONE SPRING	BONE SPRING	12121	BONE SPRING	2012-08-11	2012-11-08	2012-09-04	32.14211744	-104.1020186
30015404010000	SAN LORENZO 9 PA FEE	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 9	170 FSL 660 FEL CONGRESS SECTION	SAN LORENZO	NM	EDDY	BONE SPRING	OIL PRODUCER	2021-05-20	12650	BONE SPRING	BONE SPRING	12650	BONE SPRING	2012-07-15	2012-09-21	2012-08-17	32.13771471	-104.0853503
30015404020000	SAN LORENZO 15 DM	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 15	330 FNL 660 FWL CONGRESS SECTION	UNNAMED	NM	EDDY	WOLFCAMP DELAWARE	OIL PRODUCER	2021-05-20	14560	WOLFCAMP	WOLFCAMP	14750	WOLFCAMP	2012-07-23	2012-12-06	2012-08-25	32.13632806	-104.0811094
30015407490000	SAN LORENZO 9 NC FEE	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 9	150 FSL 660 FWL CONGRESS SECTION	SAN LORENZO	NM	EDDY	BONE SPRING	OIL PRODUCER	2021-05-20	13450	BONE SPRING	BONE SPRING	12675	BONE SPRING	2013-01-04	2013-05-19	2013-01-29	32.13766	-104.0983397
30015411240000	BLACK LAKE 5 PA STATE COM	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 5	150 FSL 330 FEL CONGRESS SECTION	WILLOW LAKE	NM	EDDY	BONE SPRING	OIL PRODUCER	2021-01-11	12575	BONE SPRING	BONE SPRING	12650	BONE SPRING	2013-08-07	2013-10-01	2013-08-22	32.1522055	-104.1016536
30015413040000	SAN LORENZO 9 OB FEE	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 9	200 FSL 2450 FEL CONGRESS SECTION	UNNAMED	NM	EDDY	WOLFCAMP DELAWARE	OIL PRODUCER	2019-05-17	14850	WOLFCAMP	WOLFCAMP	15000	WOLFCAMP	2014-02-09	2014-04-24	2014-03-27	32.13779194	-104.0911619
30015413050000	SAN LORENZO 9 MD FEE	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 9	150 FSL 380 FWL CONGRESS SECTION	SAN LORENZO	NM	EDDY	BONE SPRING	OIL PRODUCER	2020-11-30	12740	BONE SPRING	BONE SPRING	12650	BONE SPRING	2013-08-01	2013-09-23	2013-08-21	32.13765996	-104.0992445
30015413110000	ODIE 4 STATE	1H	DEVON ENERGY PRODUCTION CO LC	RAYBAW OPERATING LLC	25S 28E 4	210 FSL 660 FWL CONGRESS SECTION	WILLOW LAKE	NM	EDDY	BONE SPRING	OIL PRODUCER	2021-03-26	12615	BONE SPRING	BONE SPRING	12613	BONE SPRING	2013-12-31	2014-05-14	2014-01-19	32.1523519	-104.098453
30015426420000	DEVON '8' FEE	4H	OCCIDENTAL PERMIAN LTD	OCCIDENTAL PERMIAN LTD	25S 28E 8	1980 FNL 370 FEL CONGRESS SECTION	HAY HOLLOW NORTH	NM	EDDY	BONE SPRING	OIL PRODUCER	2021-05-20	12655	BONE SPRING	BONE SPRING	12605	BONE SPRING	2014-11-14	2015-03-09	2014-11-26	32.1463325	-104.1017633
30015438790000	DEVON 8 W2PM FEE	1H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 9	530 FSL 185 FWL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-05-20	15270	WOLFCAMP	WOLFCAMP	15294	WOLFCAMP	2016-12-07	2017-03-23	2016-12-23	32.13869111	-104.0999083
30015450900000	RICK DECKARD 4 WXY STATE	012H	MARATHON OIL PERMIAN LLC	MARATHON OIL PERMIAN LLC	25S 28E 4	519 FSL 1350 FEL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-05-20	14298	WOLFCAMP	WOLFCAMP	14368	WOLFCAMP	2018-09-20	2019-02-25	2018-11-14	32.15307	-104.087653
30015450910000	DECKARD RICK 4 WXY STATE	018H	MARATHON OIL PERMIAN LLC	MARATHON OIL PERMIAN LLC	25S 28E 4	520 FSL 1290 FEL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-05-20	14310	WOLFCAMP	WOLFCAMP	14344	WOLFCAMP	2018-09-18	2019-02-25	2018-11-04	32.15307	-104.087459
30015450920000	DECKARD RICK 4 WA STATE	014H	MARATHON OIL PERMIAN LLC	MARATHON OIL PERMIAN LLC	25S 28E 4	520 FSL 1260 FEL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-05-20	14420	WOLFCAMP	WOLFCAMP	14471	WOLFCAMP	2018-09-17	2019-02-25	2018-10-30	32.15307	-104.087362
30015450930000	DECKARD RICK 25-28-4 WA STATE	015H	MARATHON OIL PERMIAN LLC	MARATHON OIL PERMIAN LLC	25S 28E 4	520 FSL 1320 FEL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-05-20	14292	WOLFCAMP	WOLFCAMP	14393	WOLFCAMP	2018-09-19	2019-02-25	2018-11-09	32.15307	-104.087556
30015469160000	PALE RIDER 8-5 W1OB ST COM	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 8	260 FSL 1330 FEL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-05-26	19550	WOLFCAMP		19550	WOLFCAMP	2020-09-02	2021-03-01	2020-09-19	32.13795071	-104.1047958
30015469200000	PALE RIDER 8-5 WOOB STATE COM	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 8	260 FSL 1360 FEL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-07-19	19399	WOLFCAMP		19453	WOLFCAMP	2020-08-14	2021-03-15	2020-08-30	32.13795052	-104.1048923
30015469210000	PALE RIDER 8-5 W0PA STATE COM	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 8	260 FSL 1300 FEL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-05-27	19422	WOLFCAMP		19426	WOLFCAMP	2020-09-22	2021-03-01	2020-10-09	32.13795051	-104.1046988
30015469220000	PALE RIDER 8-5 W1PA STATE COM	001H	MEWBOURNE OIL CO	MEWBOURNE OIL CO	25S 28E 8	260 FSL 1270 FEL CONGRESS SECTION	PURPLE SAGE	NM	EDDY	WOLFCAMP DELAWARE	GAS PRODUCER	2021-05-28	19629	WOLFCAMP		19617	WOLFCAMP	2020-10-15	2021-03-01	2020-11-03	32.13795021	-104.1046017
30015481790000	MOODY STATE COM	502H	COG OPERATING LLC	COG OPERATING LLC	25S 28E 17	1115 FNL 270 FEL CONGRESS SECTION	HAY HOLLOW NORTH	NM	EDDY	BONE SPRING	WELL PERMIT	2021-04-26				17867	BONE SPRING				32.13416946	-104.1013423
30015481820000	MOODY STATE COM	501H	COG OPERATING LLC	COG OPERATING LLC	25S 28E 17	1085 FNL 270 FEL CONGRESS SECTION	HAY HOLLOW NORTH	NM	EDDY	BONE SPRING	WELL PERMIT	2021-04-26				17964	BONE SPRING				32.13425194	-104.1013429


THERE ARE NO WELLS WITHIN THE 1 MILE RADIUS OF REVIEW (AOR) THAT PENETRATE THE DEVONIAN FORMATION



 WATER WELLS

 OUTBACK 9 SWD

INFORMATION COURTESY OF
THE NEW MEXICO STATE ENGINEER
NM WATER RIGHTS REPORTING SYSTEM

 Mewbourne Oil Company		
OUTBACK 9 SWD #1 2630 FSL & 2650 FEL SECTION 9 25S 28E EDDY CO., NEW MEXICO		
Author: sd		Date: 29 June, 2021

MEWBOURNE OIL COMPANY
OUTBACK 9 SWD #1 APPLICATION
LIST OF NEARBY WATER WELLS (2 MILE AOR)

POD Number	POD Subbasin	County	Source	q64	q16	q4	Sec	Tws	Rng	X	Y	LAT	LONG	Start Date	Finish Date	Log File Date	Depth Well	Depth Water	Driller
C 04395 POD1	C	EDDY		NE	NE	NE	03	25S	28E	587870	3559167	32.165556	-104.068055						
C 01411	C	EDDY	Shallow	SE	SE	NE	04	25S	28E	586289	3558522	32.15986	-104.084883	10/07/1969	10/15/1969	10/20/1969	69	35	WHITE, QUINCE L.
C 01411 POD2	C	EDDY	Shallow	SE	NE	SE	04	25S	28E	586374	3558036	32.155472	-104.084027	02/09/2020	02/20/2020	02/21/2020	90	50	TAYLOR, CLINTON E.
C 02690	C	EDDY			NE	SW	05	25S	28E	583745	3558219	32.157319	-104.111886						
C 02668	C	EDDY		NE	NW	NE	09	25S	28E	585890	3557525	32.150897	-104.089203	11/08/1999	11/08/1999	11/23/1999	150		CONES, RICKEY
C 01433	C	EDDY			SW	SE	10	25S	28E	587436	3556238	32.139169	-104.072929						
C 04396 POD1	C	EDDY		SE	SW	NE	15	25S	28E	587457	3555406	32.131667	-104.072778						



Powered by: Water Lens™

Sample Information			
Date of Sample Analysis:	2021/07/06	Technician Name:	vfuentes
Date Sample was Taken:	07/01/2021	Sample Name:	Outback 9 Fed SWD#1
Analysis Performed by:	EPD	API Well Number:	
Client:	Mewbourne Oil Company	Well Name:	Fresh Water
Reader Number:		Test Number:	C-01411-POD2
Water Lens Batch Number:	B41		

Metals			
	Dilution Factor	mg/L	meq/L
Barium	10	7	0
Calcium	Calc	1240	61.8
Iron II (Fe ²⁺)	1	Less than 0.03	Less than 0.0016
Iron III (Fe ³⁺)	Calc	Less than 0.03	Less than 0.0016
Total Dissolved Iron	1	Less than 0.03	Less than 0.0016
Magnesium	1,000	679.00	55.80
Sodium	Calc	1100	50
Strontium	n/a	Test Not Run	-
Manganese	n/a	Test Not Run	-
Boron		Test Not Run	-
Potassium	10	74	1.9

Anions			
	Dilution Factor	mg/L	meq/L
Chloride	1	1,818	51
Sulfate	100	5,500	115
Nitrate	n/a	Test Not Run	-
Phosphate	10	8.07	0.26
Unfiltered Phosphate	n/a	Test not run	Test not run
Filtered Phosphate	n/a	Test not run	Test not run
Delta Phosphate		Test Not Run	-
Carbonate (as CO ₃ ²⁻)	Calc	-	-
Bicarbonate (as HCO ₃ ⁻)	Calc	49	0.8
Acetates/Formates (as Acetate)	Calc	28	0.5
Hydroxide (as OH ⁻)	Calc	0	0
Sulfide (Total)	n/a	Test not run	Test not run

Other			
	Dilution Factor		
Hydrogen Sulfide (H ₂ S)	Calc	0.5	mg/L
Turbidity	1	Less than 7	NTU's
Total Hardness	100.0	5,940.00	mg/L CaCO ₃
Oxidation/Reduction Potential (ORP)		15	millivolts
Temperature		77	Fahrenheit
Stiff & Davis Scaling Index (S&DSI)		-0.57	
Langelier Scaling Index (LSI)		0.18	
Larson-Skold Index		251.70	
Skillman Index		1.251	
Barite Saturation Index		3.23	
Gypsum Saturation Index		1.10	
ATP (picograms/mL)	Calc	Test not run	
Dissolved CO ₂ (ppm)	Calc	10	
pH	n/a	7.18	
Total Alkalinity	1	64	mg/L CaCO ₃
Total Dissolved Solids (TDS)	Calc	10,500	mg/L
Electrical Conductivity	Calc	14,300	uS/cm
Electrical Resistivity	Calc	70.0	Ohm*cm
Manganese/Iron Ratio		Test Not Run	
Specific Gravity		1.0070	

Comments	



Powered by: Water Lens™

Sample Information

Date of Sample Analysis:	2021/07/06	Technician Name:	vfuentes
Date Sample was Taken:	07/01/2021	Sample Name:	Outback 9 Fed SWD#1
Analysis Performed by:	EPD	API Well Number:	
Client:	Mewbourne Oil Company	Well Name:	Produced
Reader Number:		Test Number:	Devon 6 W2AD Fee #1H
Water Lens Batch Number:	B41		

Metals

	Dilution Factor	mg/L	meq/L
Barium	10	Less than 20	Less than 0.29
Calcium	Calc	4110	205.2
Iron II (Fe ²⁺)	100	27.50	0.98
Iron III (Fe ³⁺)	Calc	1.60	Less than 0.16
Total Dissolved Iron	100	29.10	1.56
Magnesium	1,000	528.00	43.40
Sodium	Calc	37000	1610
Strontium	n/a	Test Not Run	-
Manganese	n/a	Test Not Run	-
Boron		Test Not Run	-
Potassium	100	414	10.6

Anions

	Dilution Factor	mg/L	meq/L
Chloride	100	65,440	1,846
Sulfate	1	150	3
Nitrate	n/a	Test Not Run	-
Phosphate	100	31.85	1.01
Unfiltered Phosphate	n/a	Test not run	Test not run
Filtered Phosphate	n/a	Test not run	Test not run
Delta Phosphate		Test Not Run	-
Carbonate (as CO ₃ ²⁻)	Calc	-	-
Bicarbonate (as HCO ₃ ⁻)	Calc	172	2.8
Acetates/Formates (as Acetate)	Calc	101	1.7
Hydroxide (as OH ⁻)	Calc	0	0
Sulfide (Total)	n/a	Test not run	Test not run

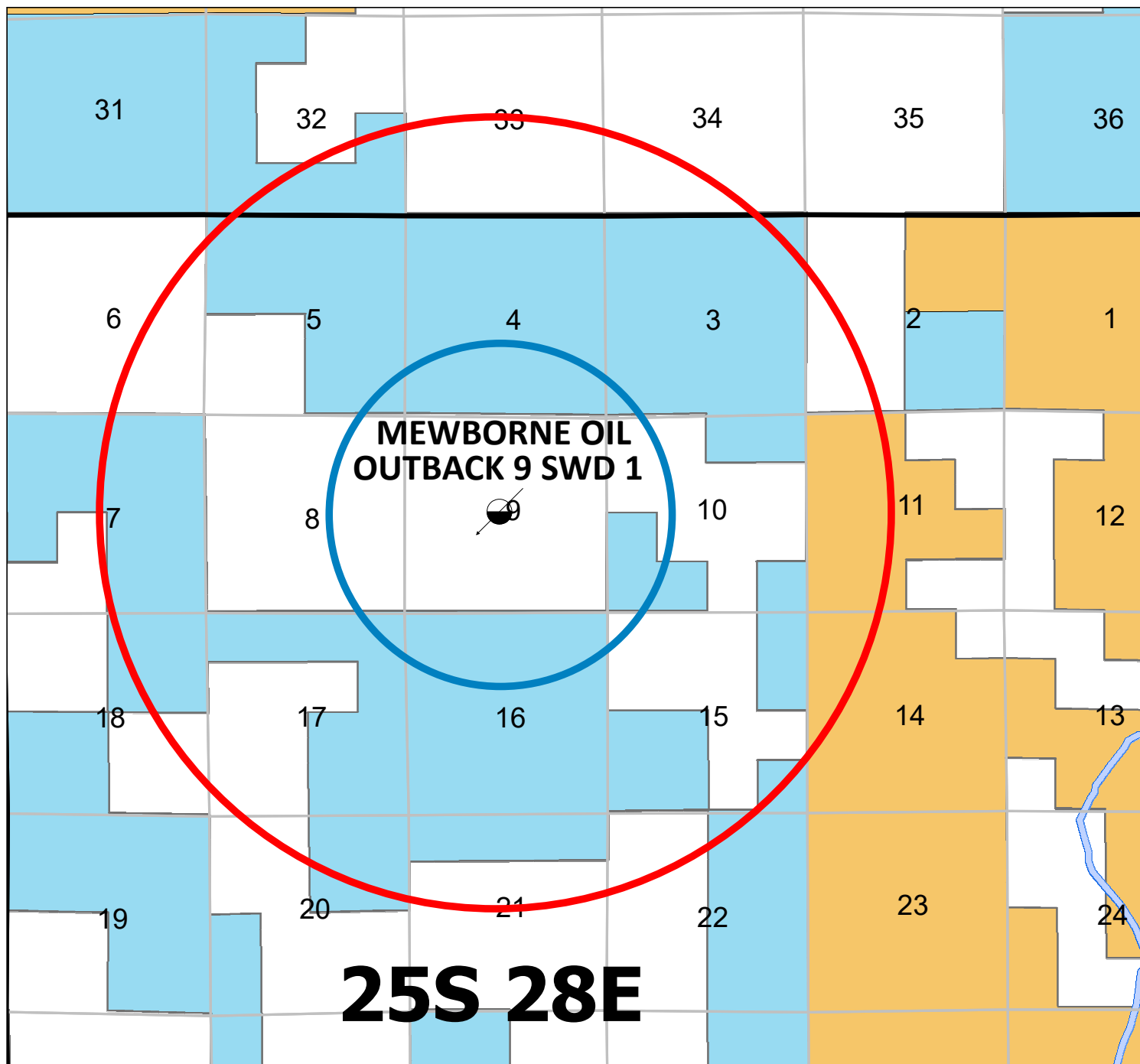
Other

	Dilution Factor				Dilution Factor		
Hydrogen Sulfide (H ₂ S)	Calc	1.0	mg/L		ATP (picograms/mL)	Calc	Test not run
Turbidity	1	64	NTU's		Dissolved CO ₂ (ppm)	Calc	205
Total Hardness	1,000.0	12,450.00	mg/L CaCO ₃		pH	n/a	6.54
Oxidation/Reduction Potential (ORP)		-49	millivolts		Total Alkalinity	1	226 mg/L CaCO ₃
Temperature		77	Fahrenheit				
Stiff & Davis Scaling Index (S&DSI)		-0.70			Total Dissolved Solids (TDS)	Calc	107,900 mg/L
Langelier Scaling Index (LSI)		0.51			Electrical Conductivity	Calc	144,500 uS/cm
Larson-Skold Index		799.77			Electrical Resistivity	Calc	6.9 Ohm*cm
Skillman Index		1.251			Manganese/Iron Ratio		Test Not Run
Barite Saturation Index		1.12			Specific Gravity		1.0750
Gypsum Saturation Index		-0.59					

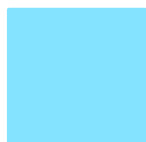
Comments

Mewbourne Oil Company
Outback 9 SWD #1 C-108 Application
Bone Springs Produced water Analysis

Company	Mewbourne Oil NM
Lease	Oxbow 26/25
Well	B2DA Fee Com 1H
Sample Location	Wellhead
Sample Date	12/11/2020
Date_Taken_To_Lab	12/16/2020
pH	6.28
Temperature	84.4
HCO3	61
CO3	0
O2	0
CO2	200
H2S	3.42
Lab Boron	35.21
Lab dissolved O2	0
Lab Calcium	7091
Lab_Magnesium	1089
Lab Sodium	0
Lab Barium	0.804
Lab Manganese	0.51
Lab Strontium	317
Lab_Potassium	925
Lab Hydroxyl	0
Lab_Carbonate	0
Lab_Bicarbonate	61
Lab Sulfate	284
Lab Chloride	16740
Lab Total Iron	19.61
Lab Total Dissolved Solids	30005
Lab Total Hardness as CaCO3	0
Lab Conductivity MICROMHOS PER CM	33822
Resistivity	29.57
Lab pH	6.28
Lab Specific Gravity 6060F	1.12



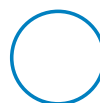
FEDERAL LANDS



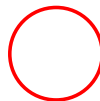
STATE LANDS




PUBLIC LANDS

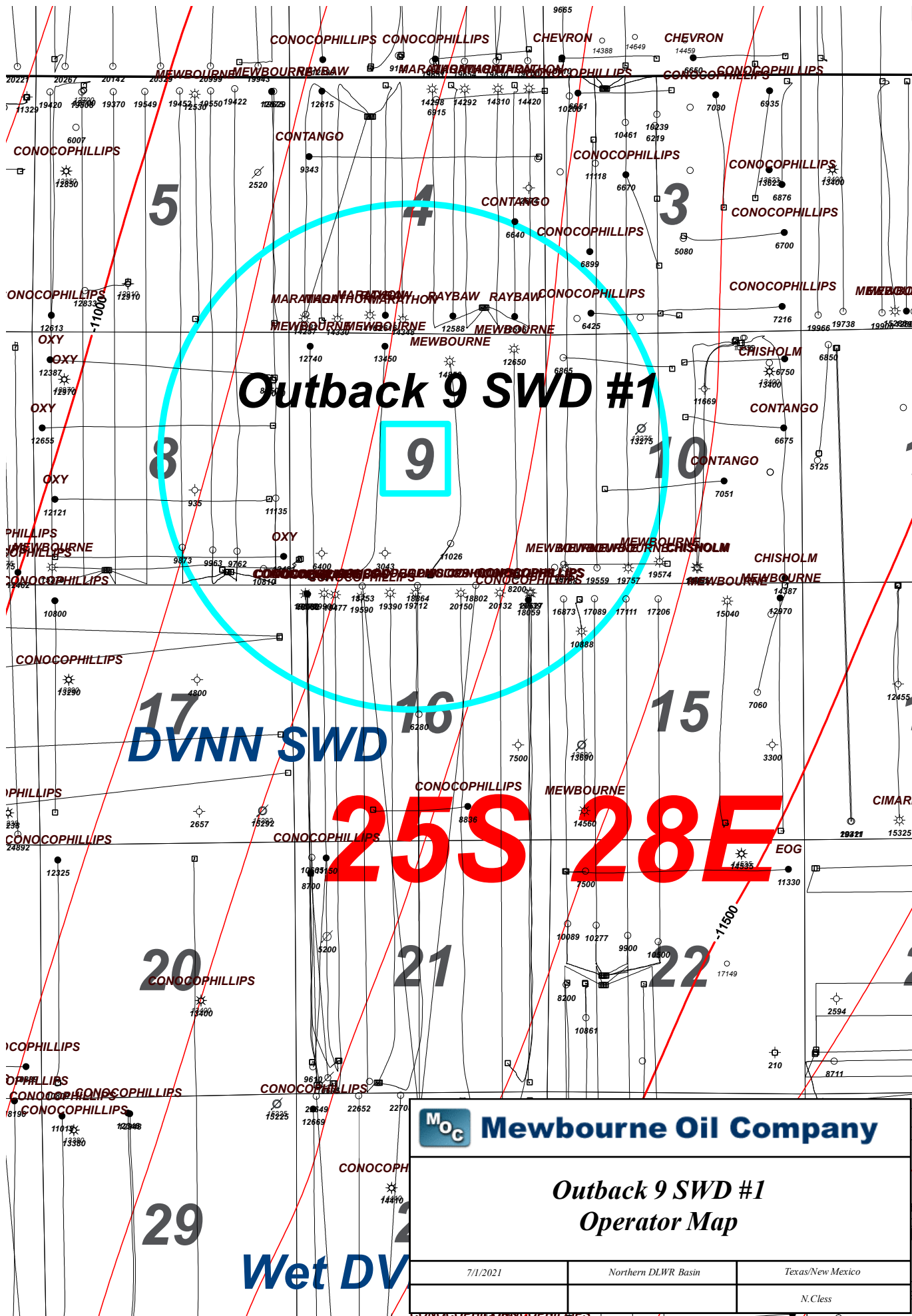


1 MILE AREA OF REVIEW



2 MILE AREA OF REVIEW

 Mewbourne Oil Company		
OUTBACK 9 SWD #1 2630 FSL & 2650 FEL SECTION 9 25S 28E EDDY CO., NEW MEXICO		
Author: sd		Date: 28 June, 2021



MOC Mewbourne Oil Company		
Outback 9 SWD #1 Operator Map		
7/1/2021	Northern DLWR Basin	Texas/New Mexico
		N. Cless

Listing of Notified Persons

**Outback 9 SWD #1 Application
2630' FSL, 2650' FWL
Section 9, 25S, 28E, Eddy County, NM**

Surface Owner

Surface: New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87504-1148

Devon Energy Production Company, LP
333 W. Sheridan Ave.
Oklahoma City, OK 73102

Offsetting Operators Within 1 Mile AOR

Sec 3, T25S, R28E

Operator: COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

Operator: Endeavor Energy Resources, LP
110 N. Marienfeld Street, Suite 200
Midland, Texas 79701

Sec 4, T25S, R28E

Operator: Marathon Oil Permian LLC
5555 San Felipe Street
Houston, Texas 77056

Operator: Contango Resources, Inc.
717 Texas Avenue, Suite 2900
Houston, Texas 77002

Operator: Raybaw Operating, LLC
2626 Cole Avenue, Suite 300
Dallas, Texas 75204

Operator: COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

Sec 5, T25S, R28E

Operator: COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

Sec 8, T25S, R28E

Operator: Devon Energy Production Company, LP
333 W. Sheridan Ave.
Oklahoma City, OK 73102

Operator: Occidental Permian Ltd.;
OXY USA WTP Limited Partnership
5 Greenway Plaza, Suite 110
Houston, Texas 77046-0521

Sec 9, T25S, R28E Units (All)

Operator: Devon Energy Production Company, LP
333 W. Sheridan Ave.
Oklahoma City, OK 73102

Sec 10, T25S, R28E

Operator: EOG Resources, Inc.
5509 Champions Drive
Midland, TX 79706

Operator: Contango Resources, Inc.
717 Texas Avenue, Suite 2900
Houston, Texas 77002

Operator: Chisholm Energy Operating, LLC
801 Cherry Street, Suite 1200-Unit 20
Ft. Worth, Texas 76102

Sec 15, T25S, R28E

Operator: EOG Resources, Inc
5509 Champions Drive
Midland, TX 79706

Operator: COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

Sec 16, T25S, R28E

Operator: COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

Sec 17, T25S, R28E

Operator: COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701

Operator: Solaris Water Midstream, LLC
9811 Katy Freeway, Suite 700
Houston, Texas 77024

Affidavit of Publication

Ad # 0004826328

This is not an invoice

MEWBOURNE OIL COMPANY

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:

07/17/2021


Legal Clerk

Subscribed and sworn before me this July 17, 2021:


State of WI, County of Brown
NOTARY PUBLIC

1-7-25
My commission expires

KATHLEEN ALLEN
Notary Public
State of Wisconsin

NOTICE

Mewbourne Oil Company has filed a form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval to drill and complete the Outback 9 SWD #1 as a salt water disposal well.

The Outback 9 SWD #1 is located 2,630' FSL and 2,650' FWL, Unit Letter K, Section 9, Township 25 South, Range 28 East, NMPM, Eddy County, New Mexico. The well will dispose of water produced from nearby operated oil and gas wells into the Devonian formation into an open-hole interval from a depth of 14,270 feet to 15,170 feet. Expected maximum injection rates are 30,000 BWPD at a maximum injection pressure of 2,854 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 Zane Anderson, Mewbourne Oil Company, 4801 Business Park Blvd, Hobbs, New Mexico 88240, (575)-393-5905. The well is located approximately 20 miles Southeast of Carlsbad, New Mexico. #4826328, Current Argus, July 17, 2021

Ad # 0004826328

PO #:

of Affidavits 1

This is not an invoice



July 25, 2021

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

Re: Outback 9 SWD #1
Sec 9, Twp 25S, Rge 28E
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 zanderson@mewbourne.com or call me at (575) 393-5905.

Sincerely,

MEWBOURNE OIL COMPANY



Zane Anderson
Engineer
zanderson@mewbourne.com

STATEMENTS REGARDING SEISMICITY AND WELL SPACING

Historically, the area nearby our proposed Outback 9 SWD #1 has not seen a significant amount of seismic activity. There has been one seismic event (per USGS database) in this area in 1974 (magnitude 3.9) that was located 11.8 miles north of our proposed SWD.

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 et al. (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 2.4 miles southwest of our proposed SWD.

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 less than a 10% probability of being critically stressed so as to create an induced seismicity event. The main reason for this low probability is due to the relationship of the strike of this fault to the regional Shmax orientation in study area 3 (see Figure #2) is approximately N 35 deg in this area.

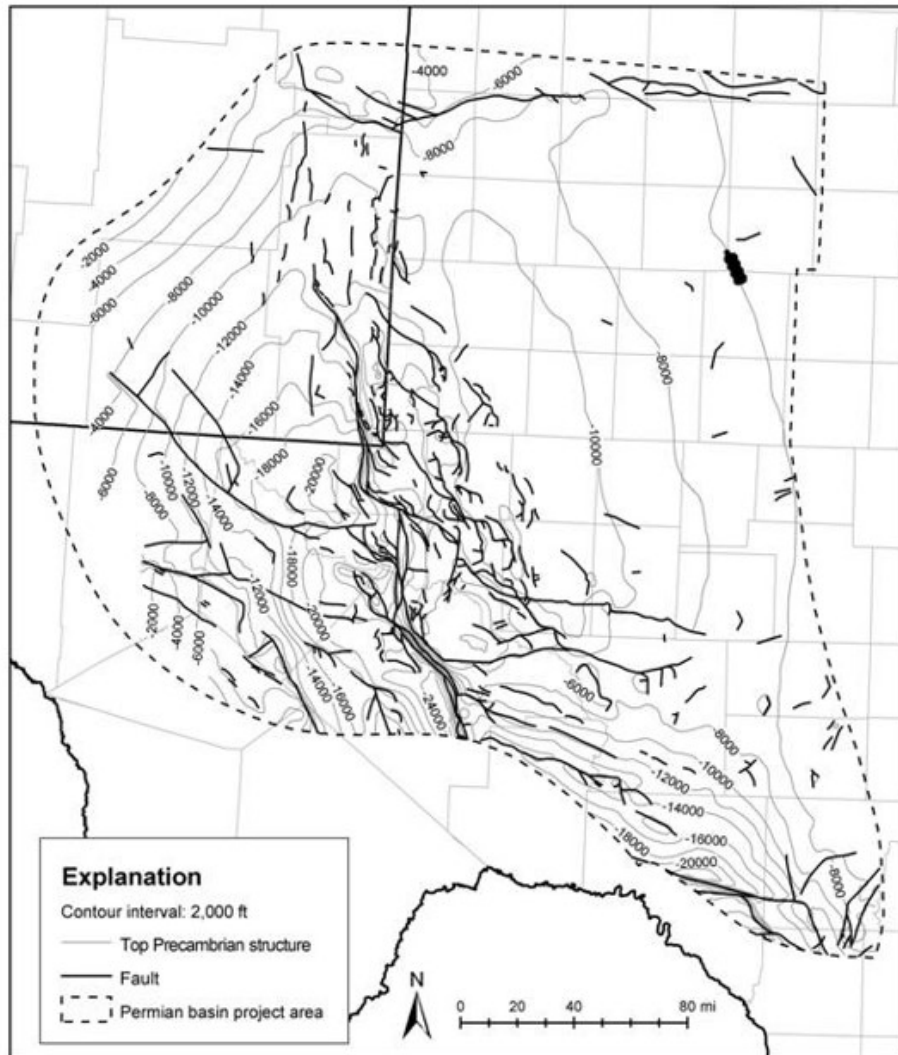
Figure 3 from the Snee and Zoback paper highlights additional faults in this area that trend more in a NE/SW direction. There is a high probability that these mapped faults are actually surface faults as the apparent source of these fault traces is from a Geological Map of New Mexico (see Figure 4).

The Outback 9 SWD #1 is located over 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 Outback (miles)
Solaris Water Midstream	Willow 17 St. SWD #1	Active	1.52
Solaris Water Midstream	Lobo 285 St. SWD #1	Active	2.07
Mewbourne Oil Company	Hoss 11 SWD #1	Active	2.57

Zane Anderson

Engineer
zanderson@mewbourne.com
575-393-5905



Precambrian Structure Map In the Permian Basin (Ruppel et al.)

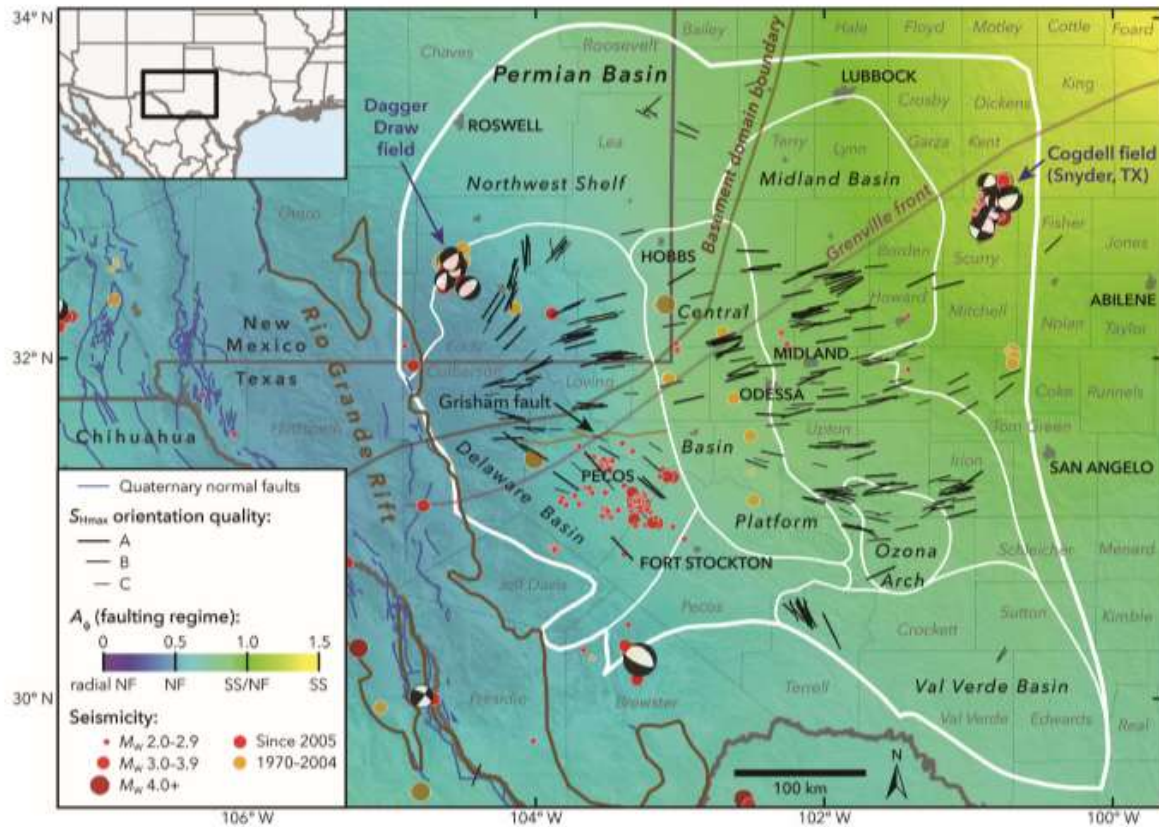


Figure 1. State of stress in the Permian Basin, Texas and New Mexico. Black lines are the measured orientations of S_{\max} , with line length scaled by data quality. The colored background is an interpolation of measured relative principal stress magnitudes (faulting regime) expressed using the A_0 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).

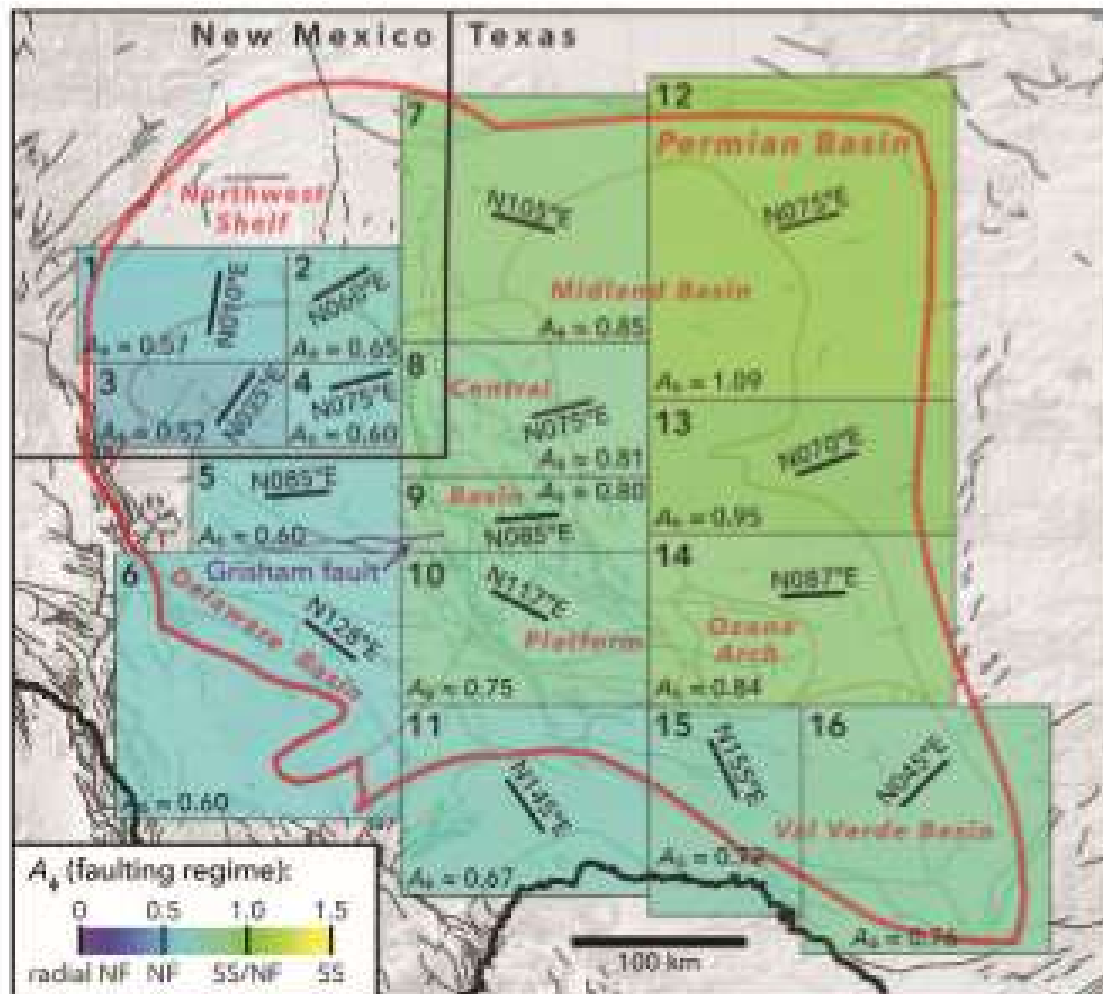


Figure 2. Map of study areas chosen for FSP analysis on the basis of broadly similar stress conditions. Text annotations indicate representative S_{max} orientation and relative principal stress magnitudes (A_1 parameter) for each study area based on the data presented in Figure 1. Gray lines in the 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.



Figure 3. Results of our probabilistic FSP analysis across the Permian Basin. Data sources are as in Figures 1 and 2.

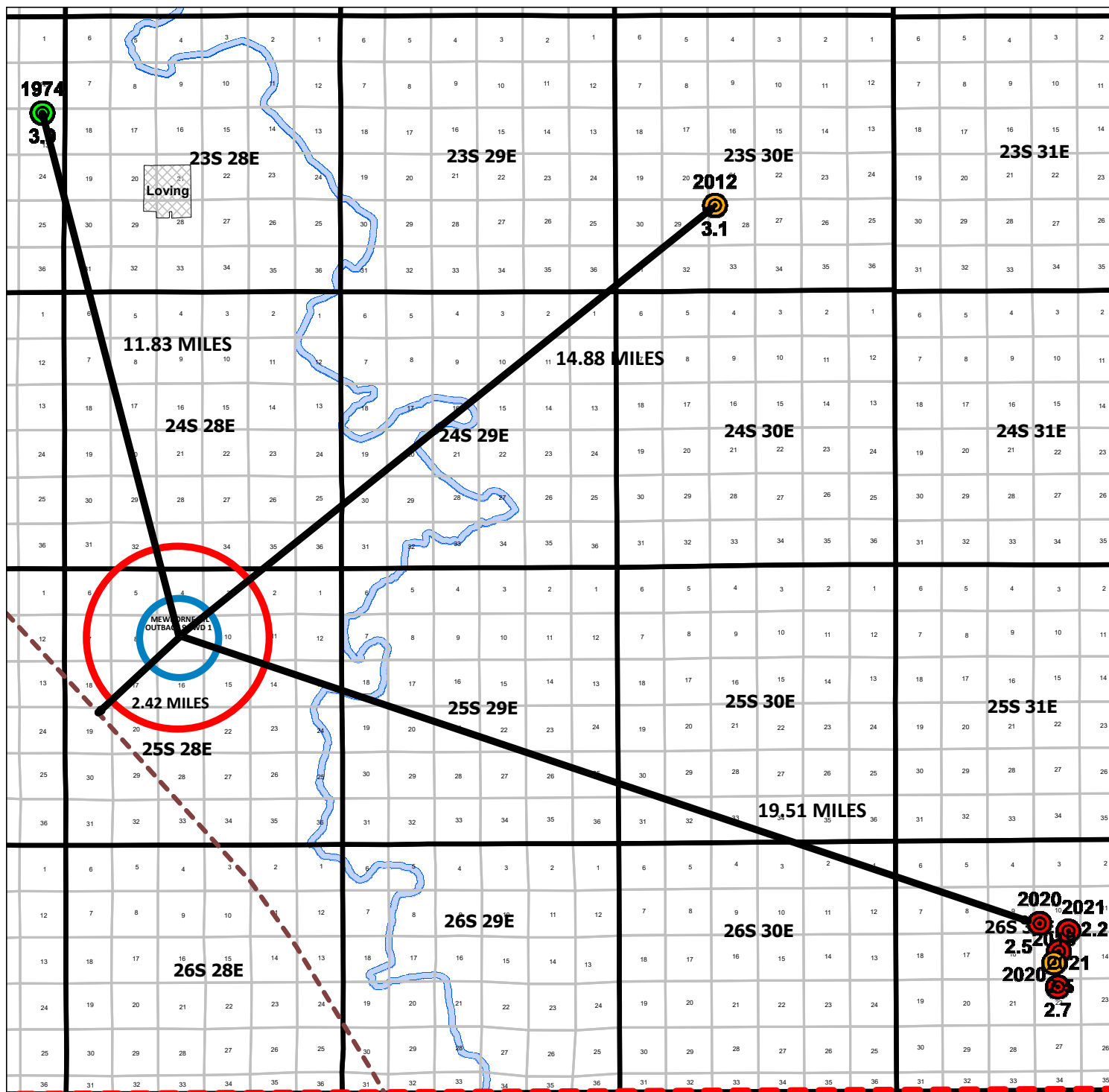
References

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.

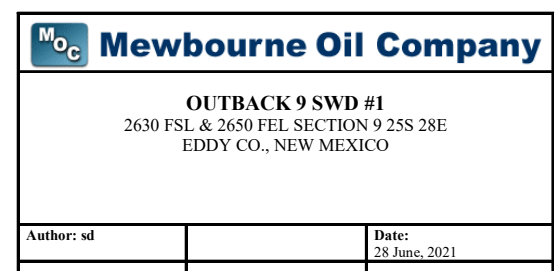


1974
3.9

EARTHQUAKE LOCATIONS
PROVIDED BY USGS

FAULT LOCATIONS SOURCED FROM
THE UNIVERSITY OF TEXAS BUREAU OF
ECONOMIC GEOLOGY

 Mewbourne Oil Company		
OUTBACK 9 SWD #1 2630 FSL& 2650 FEL SECTION 9 25S 28E EDDY CO., NEW MEXICO		
Author: sd	Scale: 1" = 16,500'	Date: 28 June, 2021



A

A'

300154420200
CHEVRON
DIGNITAS 26 STATE SWD 1
Reference=KB
Datum=3108.00
1920 FSL & 200 FE
TWP: - Range: - Sec.

300154180600
COG OPERATING LLC
WILLOW 17 STATE SWD 1
Reference=KB
Datum=3038.00
660 FSL/660 FEL
TWP: 25 S - Range: 28 E - Sec. 17

OUTBACK 9 SWD 1
MOC
OUTBACK 9 SWD 1
Reference=KB
Datum=3020.00
2630 FS 2650 FW
TWP: 25 S - Range: 28 E - Sec. 9

300154466600
MEWBOURNE
HOSS 11 SWD 1
Reference=KB
Datum=2974.00
200 FN 215 FE
TWP: - Range: - Sec.

26 I/25S/27E
10/24/19 DVNN SWD Completion
Open Hole Completion: 13945-15000
Inj Cum: 10 MMBWI
Still Active

17 P/25S/28E
5/23/14 DVNN SWD Completion
Open Hole Completion: 14292-15292
Inj Cum: 22 MMBWI
Still Active

9 K/25S/28E
Outback 9
SWD #1

11 A/25S/28E
8/28/18 DVNN SWD Completion
Open Hole Completion: 14530-15650
Inj Cum: 21 MMBWI
Still Active

500

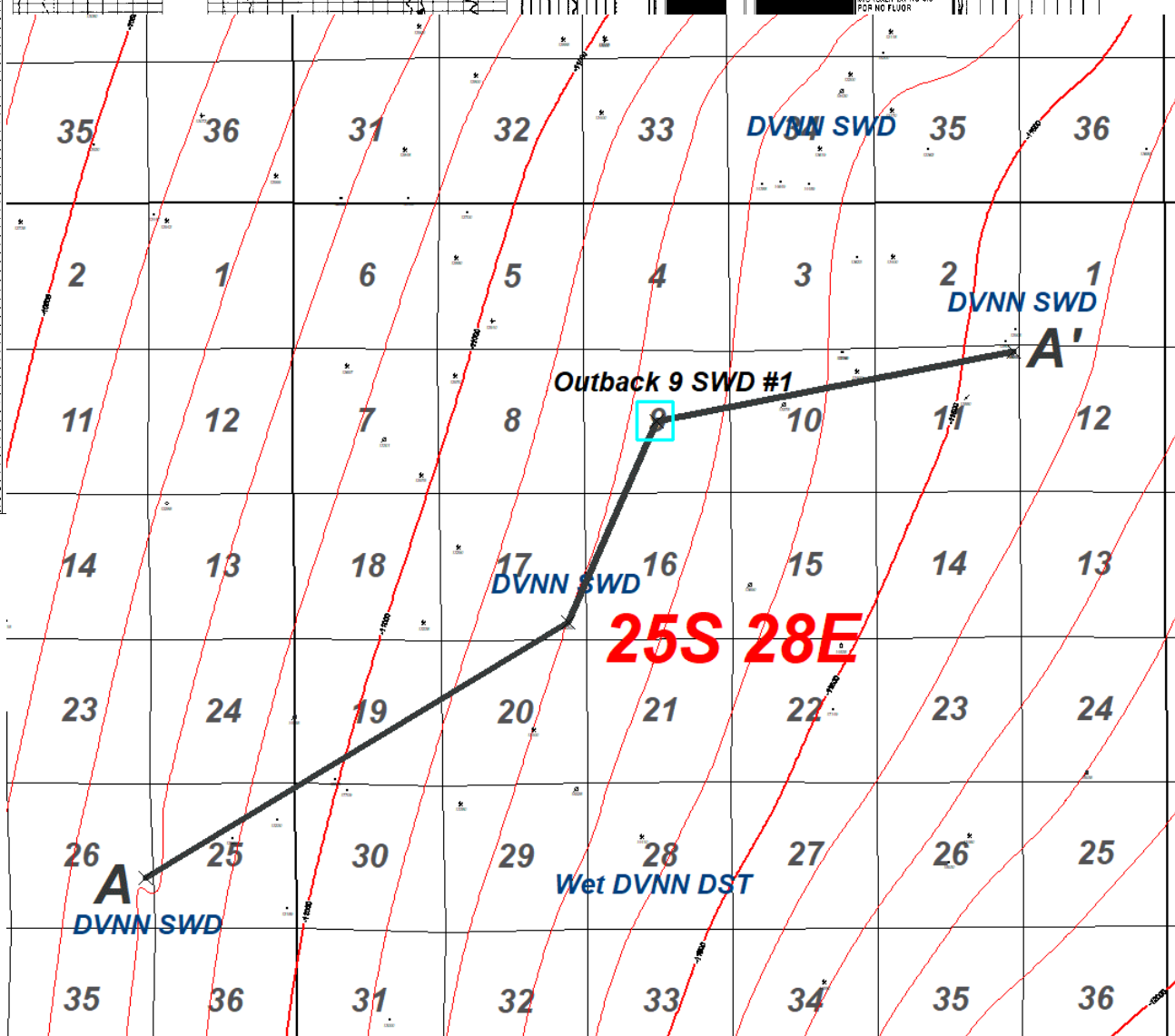
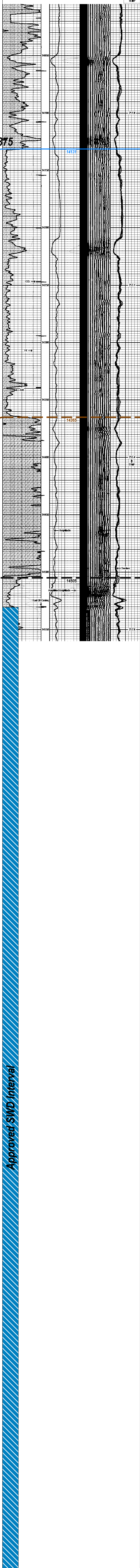
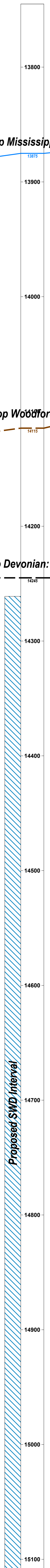
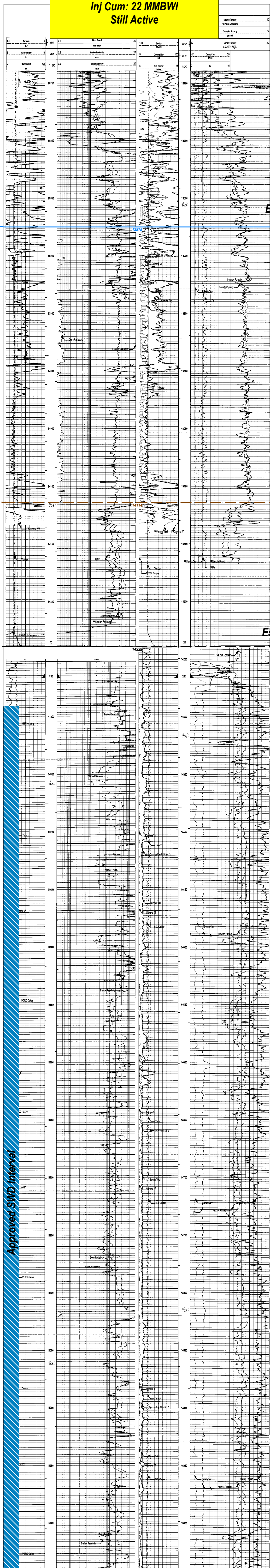
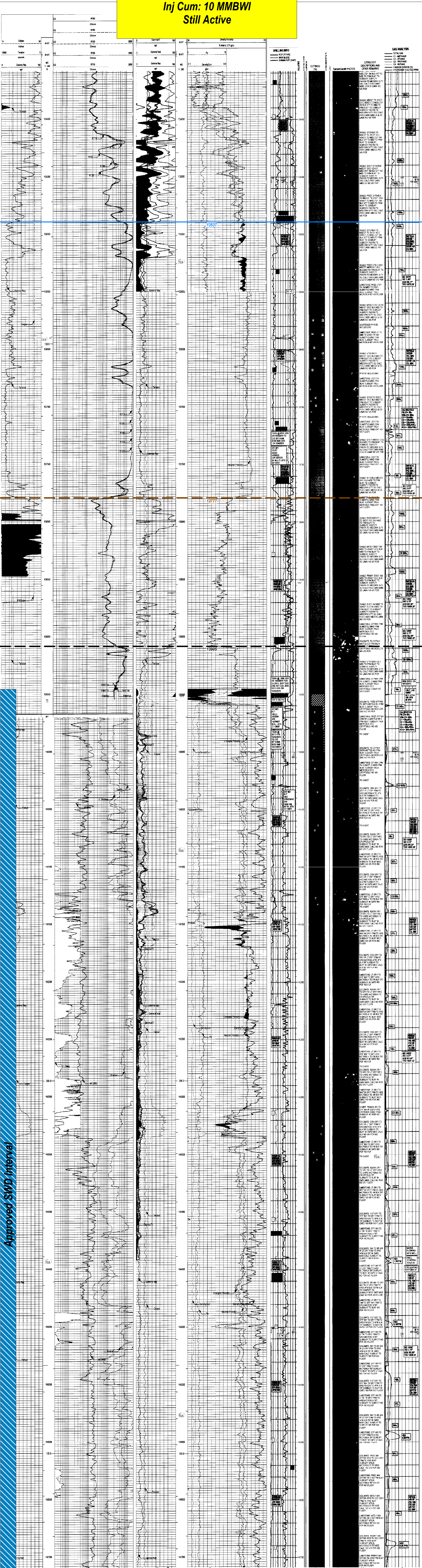
0

-500

500

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-500



Est Top Montoya: 15195
Est Top Simpson: 15555
Est Top Ellenburger: 15815

Outback 9
SWD #1

MEWBOURNE OIL COMPANY
Outback 9 SWD #1

PLUGGING RISK ASSESSMENT

5 ½" Flush Joint Injection Tubing Inside of 7 ⅝" Casing

Specs

5 ½" 17# P110 Flush Joint Tubing	OD (in)	ID (in)	Drift (in)	LINED ID (in)	FLARE DRIFT (in)
Coupling	N/A	N/A	N/A	N/A	N/A
Body	5.500	4.892	4.767	4.520	4.275
7 ⅝" 39# P110 Casing	OD (in)	ID (in)	Drift (in)	Wall Thickness (in)	5 ½" Flush Jt. Clearance (in)
	7.625	6.625	6.500	0.500	0.562

*All fishing procedures are subject to well conditions. Determinations are made onsite on a case by case scenario.

Overshot Fishing Procedure

A 6.625" O.D. Bowen Series 150 overshot (Assembly 8625) with a spiral grapple will be utilized to perform this overshot operation. ***NOTE: (The 6.625" O.D. will be turned down to 6.500" O.D. prior to commencing operation).** Details on the overshot are noted below.

Series 150 Overshots

Tools are listed in order of maximum catch size.

The following table shows only a partial listing of available NOV Dowhole Bowen® overshots.

NOTE: Nitralloy Grapples are available upon request.

Bowen Series 150 Releasing and Circulation Overshots
 Maximum Catch Size 4" to 5" Inclusive

Maximum Catch Size (Spiral)		4"	4"	4"	4"	5"	5"	5"
Maximum Catch Size (Basket)		3 ¾"	4"	4"	4"	4"	4"	4 ½"
Overshot O.D.		5 ⅝"	5 ⅝"	5 ⅝"	5 ⅝"	5 ⅝"	6 ⅝"	6 ⅝"
Type		F.S.	S.H.	S.H.	S.F.S.	S.H.	F.S.	S.H.
Complete Assembly	Part No.	5898	5898	C-5168	8975	C-5171	C-4825	8825
(Dressed Spiral Parts)	Weight	130	130	133	138	140	182	185
Replacement Parts								
Top Sub	Part No.	5897	5899	A-5169	8976	A-5172	B-4826	8826
Bowl	Part No.	5898	5700	B-5170	8977	B-5173	B-4827	8817
Packer	Part No.	189	1140	B-2199	8114	L-5950	L-4505	8818
Spiral Grapple	Part No.	185	1135	B-2201	8112	B-4389	M-1071	8819
Spiral Grapple Control	Part No.	186	1137	B-2202	8113	B-4370	M-1072	8820
Standard Guide	Part No.	187	1143	B-2203	8121	B-4371	L-1074	8821
Basket Parts								
Basket Grapple	Part No.	185	1135	B-2201	8112	B-4389	M-1071	8819
Basket Grapple Control	Part No.	186	1137	B-2202	8113	B-4370	M-1072	8820
Mill Control Packer	Part No.	189-R	1140-R	B-2199-R	8114-R	L-5950-R	M-4505	L-8818-R

In the Event of a Connection Break

1. If dressing is needed, trip in hole with a mill and mill connection to allow for (above listed) turned-down overshot to be latched onto the body of the tubing. If no milling is required, trip in hole with (above listed) turned-down overshot and latch onto fish.
2. Once latched onto fish, pick up string weight and straight pull to release Model R packer.
3. Once packer is released, trip out of hole with fish.

In the Event of a Body Break

1. If dressing is needed, trip in hole with a mill and mill tubing to allow for (above listed) turned-down overshot to be latched onto the body of the tubing. If no milling is required, trip in hole with (above listed) turned-down overshot and latch onto fish.
2. Once latched onto fish, pick up string weight and straight pull to release Model R packer.
3. Once packer is released, trip out of hole with fish.

*NOTE: (Wash pipe with a mill may be substituted for dressing off a break instead of a standard mill to ensure pipe stabilization and to ensure that the casing is not damaged due to milling.)

In the Event a Mill Cannot be Used

If an inadequate fishing neck is looking up and a mill cannot be used to dress the fish, a cutting tool may be utilized to cut off the damaged portion of tubing and a spear used to retrieve the cut-off piece. Once the cut-off piece is retrieved, the (above listed) turned-down overshot may be utilized to retrieve the fish and release the packer.

Spear Fishing Procedure

In the event the (above listed) turned-down overshot cannot be used or the fishing neck is inadequate, a spear may be used to spear into the fish. In the case of insert lined pipe, a smaller spear will be utilized to go inside the insert liner and pull out the lining. Once the lining has been removed, trip out of hole with insert liner. Pick up the proper sized spear for the pipe ID. Trip in hole with tubing spear, spear the fish, pick up string weight and straight pull to release the packer. Trip out of hole with fish and packer assembly.

7" Flush Joint Injection Tubing Inside of 9 5/8" Casing

Specs

7" 26# HCP110 Flush Joint Tubing	OD (in)	ID (in)	Drift (in)	LINED ID (in)	FLARE DRIFT (in)
Coupling	N/A	N/A	N/A	N/A	N/A
Body	7.000	6.276	6.151	6.080	5.815
9 5/8" 43.5# HCL80 Casing	OD (in)	ID (in)	Drift (in)	Wall Thickness (in)	7" Flush Jt. Clearance (in)
	9.625	8.755	8.599	0.435	0.877

*All fishing procedures are subject to well conditions. Determinations are made onsite on a case by case scenario.

Overshot Fishing Procedure

A Bowen Series 150 overshot (Assembly 9217) with a spiral grapple will be utilized to perform this overshot operation. Details on the overshot are noted below.

Bowen Series 150 Releasing and Circulation Overshots

Maximum Catch Size 6 5/8" to 7 1/4" Inclusive

Maximum Catch Size (Spiral)		6 5/8"	6 3/4"	7	7 1/4"
Maximum Catch Size (Basket)		5 7/8"	6 1/8"	6 5/8"	6 5/8"
Overshot O.D.		8 1/4"	7 3/4"	8 1/4"	8 5/8"
Type		F.S.	S.H.	S.H.	S.H.
Complete Assembly	Part No.	C-3032	C-5222	9217	C-5354
(Dressed Spiral Parts)	Weight	280	243	251	260

Replacement Parts

Top Sub	Part No.	A-3033	A-5223	9218	A-5355
Bowl	Part No.	B-3034	B-5224	9219	B-5356
Packer	Part No.	A-1814	B-5225	9224	B-5357
Spiral Grapple	Part No.	N-84	B-5227	9222	B-5359
Spiral Grapple Control	Part No.	M-89	A-5228	9223	B-5360
Standard Guide	Part No.	A-1818	A-5229	9226	A-5361

Basket Parts

Basket Grapple	Part No.	N-84	B-5227	9222	B-5359
Basket Grapple Control	Part No.	M-89	A-5228	9223	B-5360
Mill Control Packer	Part No.	A-1814-R	B-5225-R	9224-R	B-5357-R

In the Event of a Connection Break

1. If dressing is needed, trip in hole with a mill and mill connection to allow for (above listed) overshot to be latched onto the body of the tubing. If no milling is required, trip in hole with (above listed) overshot and latch onto fish.
2. Once latched onto fish, pick up string weight and straight pull to release Model R packer.
3. Once packer is released, trip out of hole with fish.

In the Event of a Body Break

1. If dressing is needed, trip in hole with a mill and mill tubing to allow for (above listed) overshot to be latched onto the body of the tubing. If no milling is required, trip in hole with (above listed) overshot and latch onto fish.
2. Once latched onto fish, pick up string weight and straight pull to release Model R packer.
3. Once packer is released, trip out of hole with fish.

*NOTE: (Wash pipe with a mill may be substituted for dressing off a break instead of a standard mill to ensure pipe stabilization and to ensure that the casing is not damaged due to milling.)

In the Event a Mill Cannot be Used

If an inadequate fishing neck is looking up and a mill cannot be used to dress the fish, a cutting tool may be utilized to cut off the damaged portion of tubing and a spear used to retrieve the cut-off piece. Once the cut-off piece is retrieved, the (above listed) overshot may be utilized to retrieve the fish and release the packer.

Spear Fishing Procedure

In the event the (above listed) overshot cannot be used or the fishing neck is inadequate, a spear may be used to spear into the fish. In the case of insert lined pipe, a smaller spear will be utilized to go inside the insert liner and pull out the lining. Once the lining has been removed, trip out of hole with insert liner. Pick up the proper sized spear for the pipe ID. Trip in hole with tubing spear, spear the fish, pick up string weight and straight pull to release the packer. Trip out of hole with fish and packer assembly.

Abandonment Procedure in-the-Event that Injection Tubing Cannot be Fished

The operator will need to ensure that geological formations are properly isolated to prevent future fluid communication. The operator will first insure that the injection tubing I.D. is open and clear. Once injection tubing I.D. is confirmed to be open and clear, run in hole with a wireline set profile plug and set plug inside of the packer assembly. This plug would allow for cement to fill both the I.D. of the injection tubing and the tubing-to-casing annulus to provide isolation between the different geological formations. Next, run in hole with wireline conveyed perforating guns and shoot perforations at the deepest depth that the injection tubing is still in the wellbore. Trip in hole with a workstring and latch onto the injection tubing with an overshot, spear, cement retainer or any other tool that would ensure a work string-to-injection tubing seal and allow the operator to pump cement down the remaining injection tubing. Rig up cement truck and cement the annulus between the injection tubing and casing to surface.