BEFORE THE OIL CONSERVATION DIVISION EXAMINER HEARING OCTOBER 12, 2017

CASE NO. 15854

RUSTLER BREAKS SWD NO. 2 WELL

EDDY COUNTY, NEW MEXICO

BLACK RIVER WATER MANAGEMENT COMPANY, LLC



State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez Governor

Ken McQueen Cabinet Secretary

Matthias Sayer Deputy Cabinet Secretary David R. Catanach, Division Director Oil Conservation Division



Administrative Order SWD-1682 July 7, 2017

ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Pursuant to the provisions of Division Rule 19 15 26 8B NMAC, Black River Water Management Company, LLC (the "operator") seeks an administrative order for its proposed Rustler Breaks SWD Well No 2 (API No 30-015-44240) to be located 1064 feet from the North line and 230 feet from the West line, Lot 4 (NW/4 NW/4 equivalent) of Irregular Section 6, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico, for the purpose of commercial disposal of produced water.

THE DIVISION DIRECTOR FINDS THAT.

The application has been duly filed under the provisions of Division Rule 19 15.26 8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objection was received within the required suspense period The applicant has presented satisfactory evidence that all requirements prescribed in Rule 19 15 26.8 NMAC have been met and the operator is in compliance with Rule 19 15 5 9 NMAC

IT IS THEREFORE ORDERED THAT:

The applicant, Black River Water Management Company, LLC (OGRID 371287) is hereby authorized to utilize its proposed Rustler Breaks SWD Well No 2 (API No. 30-015-44240) to be located 1064 feet from the North line and 230 feet from the West line, Lot 4 (NW/4 NW/4 equivalent) of Irregular Section 6, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water (UIC Class II only) through an open-hole interval within Devonian formation from approximately 13700 feet to approximately 14700 feet Injection shall occur through internally-coated tubing and a packer set a maximum of 100 feet above the top of the open-hole interval Injection will occur through either an internally-coated, 4-1/2-inch or smaller tubing and a packer set within 100 feet of the uppermost perforation

This permit does not allow disposal into the Ellenburger formation (lower Ordovician) or lost circulation intervals directly on top and obviously connected to this formation

Prior to commencing disposal, the operator shall submit mudlog and geophysical logs information, to the Division's District geologist and Santa Fe Engineering Bureau office, showing evidence agreeable that only the permitted formation is open for disposal including a summary of depths (picks) for contacts of the formations which the Division shall use to amend this order for a final description of the depth for the injection interval

> 1220 South St Francis Drive • Santa Fe, New Mexico 87505 Phone (505) 476-3441 • Fax (505) 476-3462 • email www.emnrd.state.nm.us/ocd

BEFORE THE OIL CONSERVATION DIVISI Santa Fe, New Mexico Exhibit No. 1 Submitted by: BLACK RIVER WATER MNGT CO, LL(Administrative Order SWD-1682 Black River Water Management Company, LLC July 7, 2017 Page 2 of 3

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 the well construction proposed in the application and any required modifications of construction as required by the Division

The operator shall circulate the cement behind the casing to surface for all surface and intermediate casings

The operator shall run a CBL (or equivalent) across the 7-5/8-inch liner from 500 feet above the liner to the bottom of the liner to demonstrate a good cement across the 7-5/8-inch liner, and good bond between the liner and the 10-3/4-inch casing.

Within two years after commencing disposal, the operator shall conduct an injection survey, consisting of a temperature log or equivalent, over the entire injection interval using representative disposal rates. Copies of the survey results shall be provided to the Division's District I office and Santa Fe Engineering Bureau office

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 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 2740 psi**. 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 Division Director retains the right to require at any time the operator to install, and maintain a chart recorder showing casing and tubing pressures during disposal operations

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 office of the date and time of the installation of disposal equipment and of any MIT 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 Administrative Order SWD-1682 Black River Water Management Company, LLC July 7, 2017 Page 3 of 3

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 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 disposal 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 Rule 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.

DAVID R. CATANACH Director

DRC/mam

CC Oil Conservation Division – Artesia Bureau of Land Management - Carlsbad Well File - 30-015-44240

Why Increase from 4-1/2" to 5-1/2" Tubing?

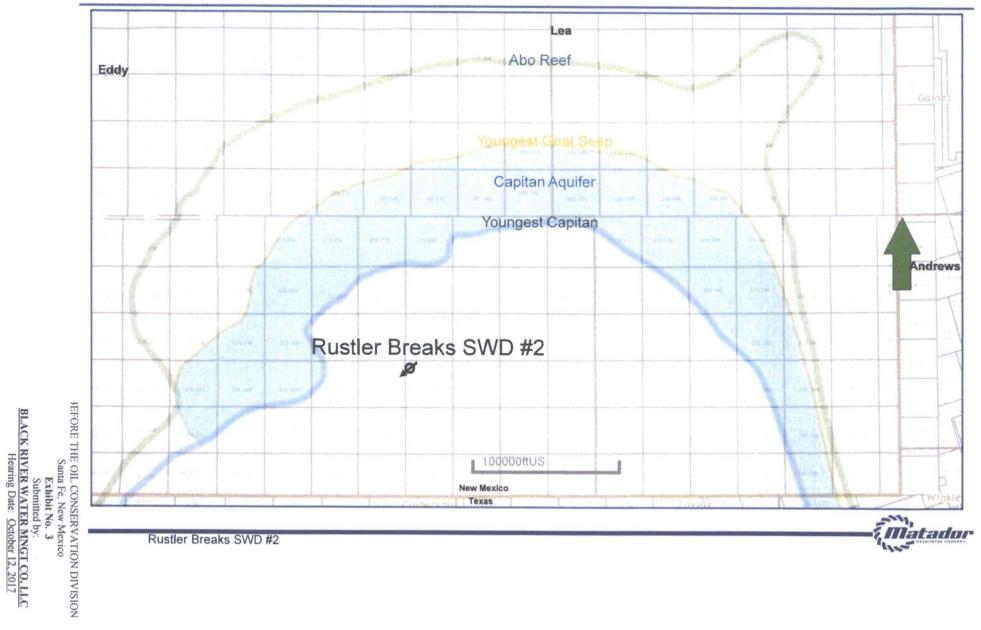
- 85% of injection pressure measured at the surface is due to friction in the 4-1/2" tubing
- Increasing tubing size will decrease friction and increase ability to inject greater volumes

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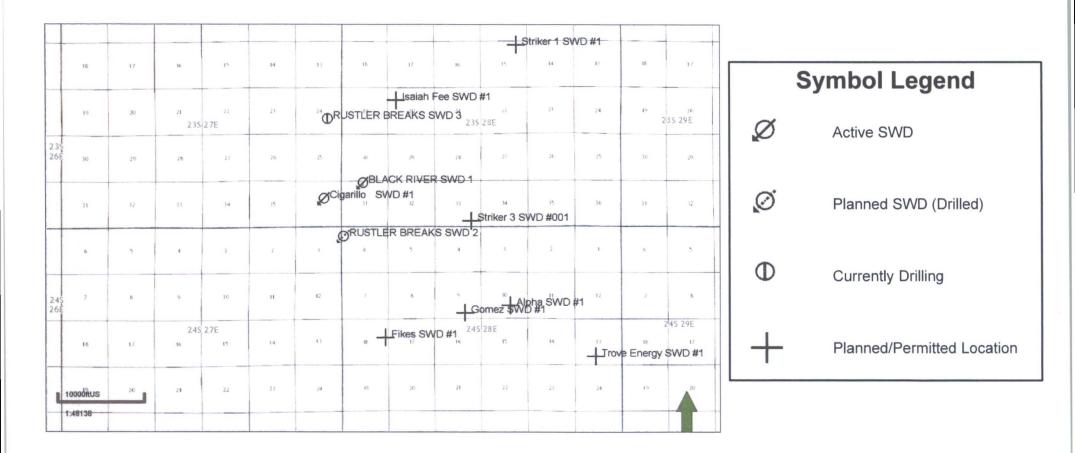
- Larger tubing allows for more water to be disposed with fewer wells
- Reduced surface impact with fewer disposal wells

BEFORE THE OIL CONSERVATION DIVISION BLACK RIVER W Hearing D New Mexico R MNGT CO, LLC October 12, 2017

Rustler Breaks SWD #2 Locator Map Section 6, Township 24 South, Range 28 East



Rustler Breaks SWD #2 Locator Map with Nearby Devonian SWD's Section 6, Township 24 South, Range 28 East

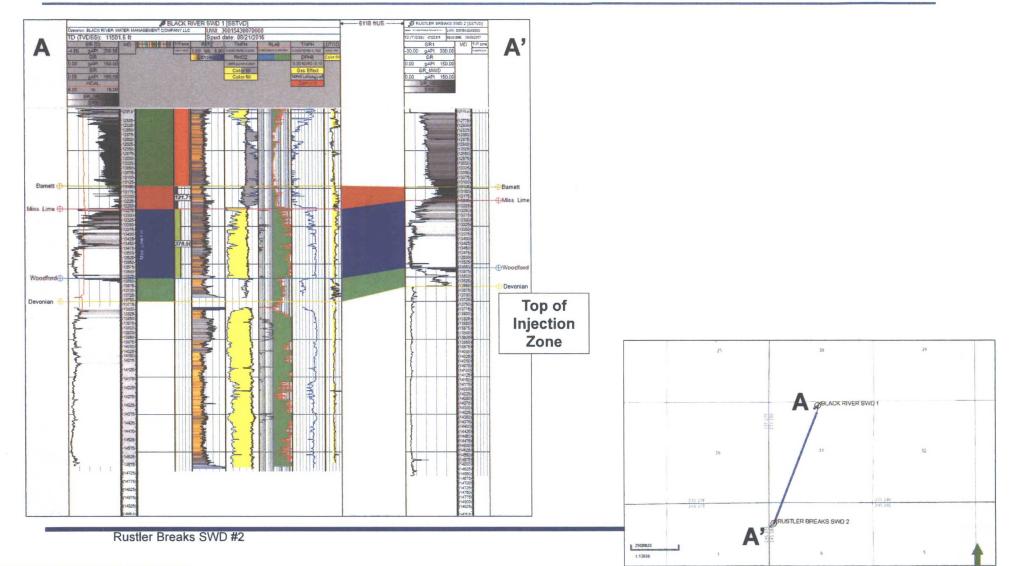


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Rustler Breaks SWD #2

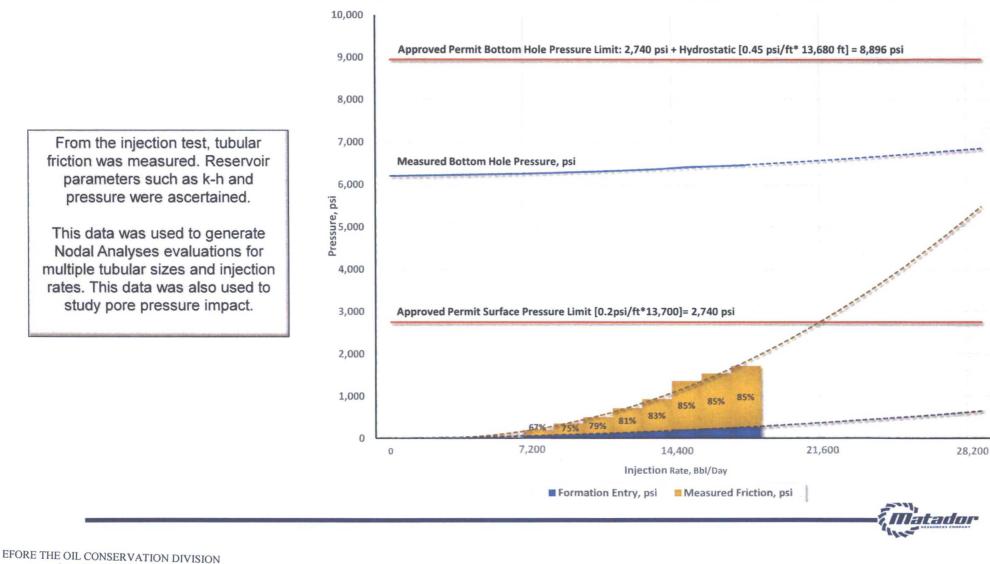
BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 4 Submitted by: BLACK RIVER WATER MNGT CO, LLC Hearing Date: October 12, 2017

Cross Section from Black River SWD #1 to Rustler Breaks SWD #2 Shows Correlative Injection Zone



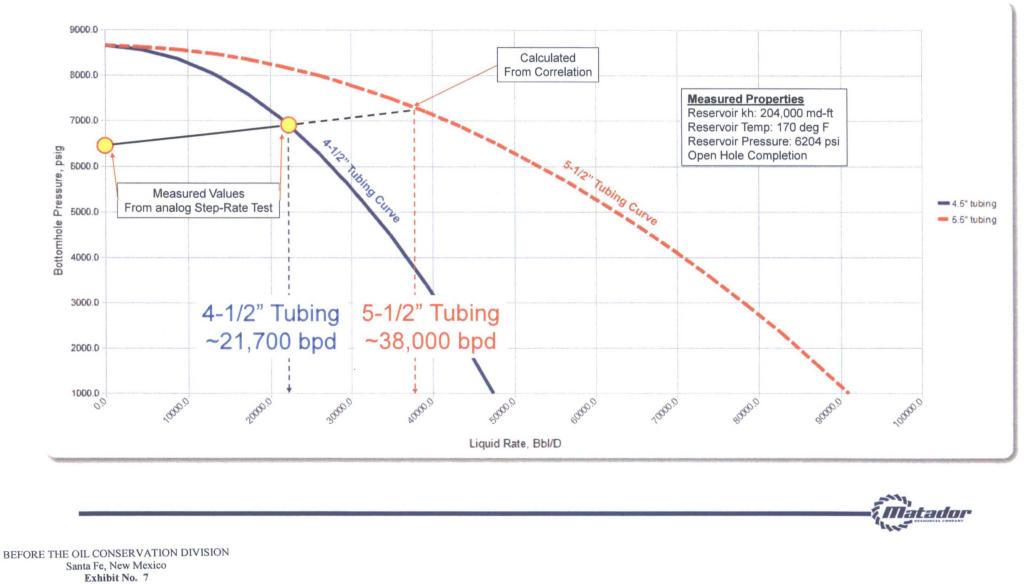
BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 5 Submitted by: BLACK RIVER WATER MNGT CO, LLC Hearing Date: October 12, 2017

Step-Rate Injection Test – from Analog Devonian SWD ~1 mile away



EFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 6 Submitted by: BLACK RIVER WATER MNGT CO, LLC Hearing Date: October 12, 2017

Increasing Tubing Size will Decrease Friction and Increase Ability to Inject Greater Volumes Nodal Analysis of 4-1/2" & 5-1/2" Tubing Pressure



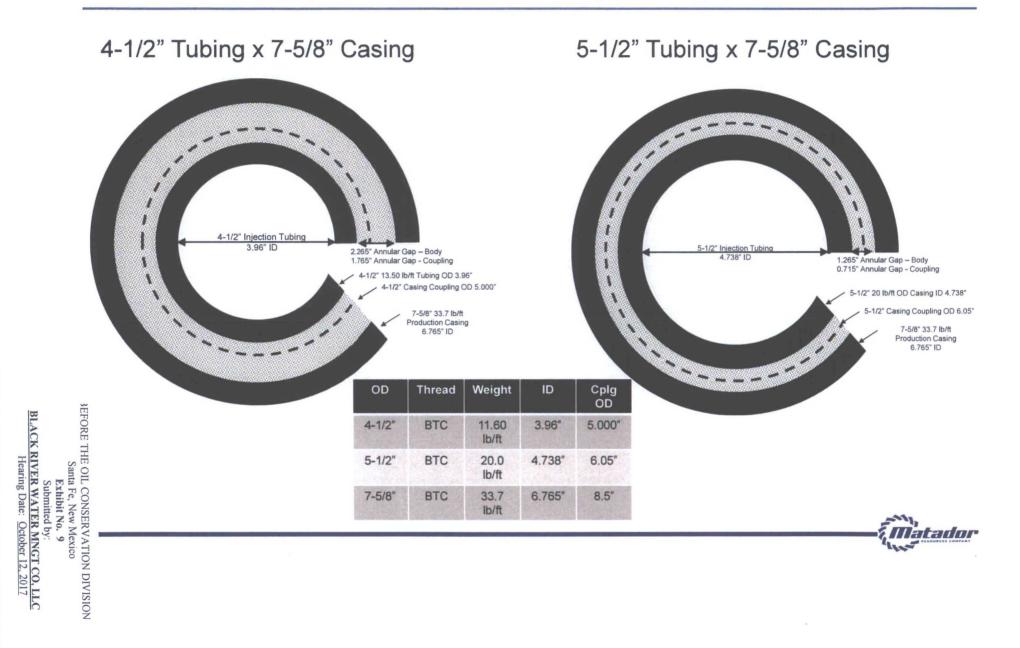
Submitted by: <u>BLACK RIVER WATER MNGT CO, LLC</u> Hearing Date: <u>October 12, 2017</u>

Pore Pressure Impact Over 20 Years Increased Injection Rates will Not Greatly Increase Pore Pressure in the Formation

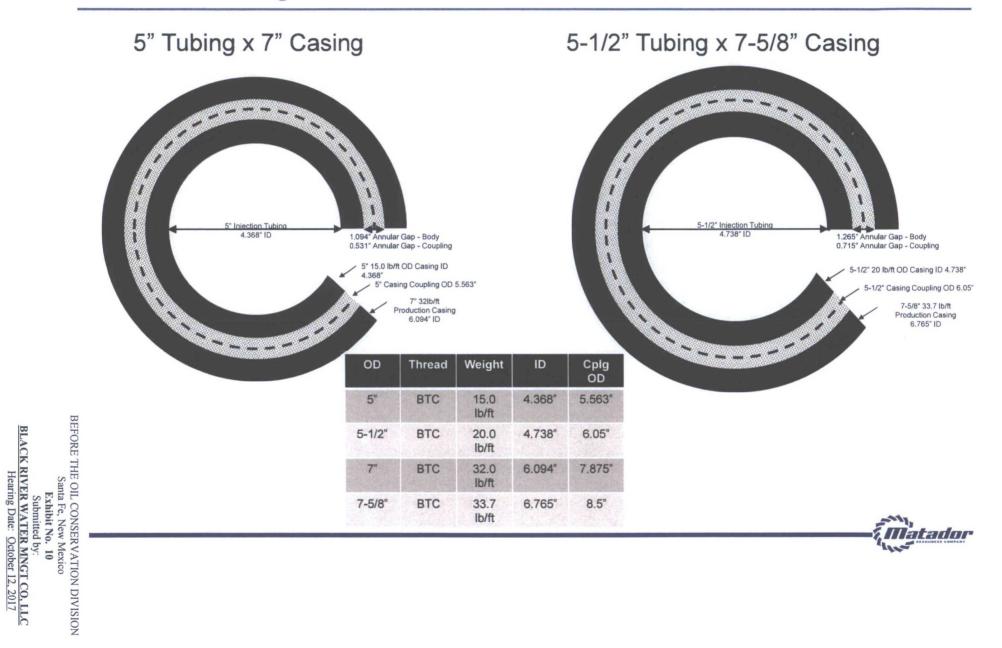
250

----- 30,000 bpd 200 **Calculated Pore Pressures, psi** These model runs suggest that less than 250 psi of elevated near-wellbore 150 pore pressure is generated after 20 years of injection at 40,000 bpd. Less than 50 psi of elevated pore pressure is modeled at a distance of 10 kilometers from the well in 20 years at 40,000 bpd 100 injection rate. 20,000 bpd 50 BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 8 Submitted by: BLACK RIVER WATER MINGT CO, LLC Hearing Date: October 12, 2017 0 10 0 2 4 6 8 12 14 16 18 20 Distance from Wellbore, km latador

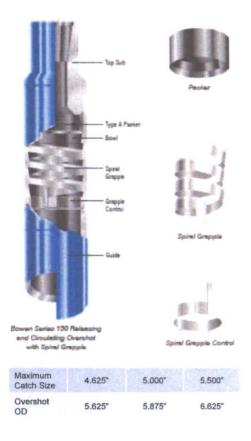
Rustler Breaks SWD #2 Cross-Sectional Comparison Inside 7-5/8" Casing

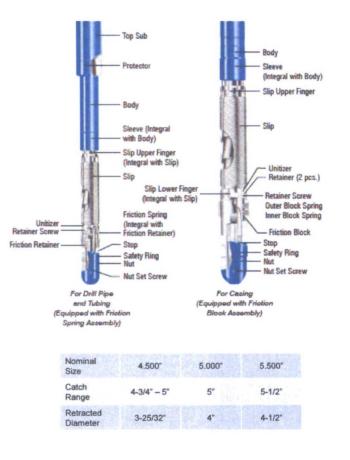


Cross-Sectional Comparison with 5" Tubing inside 7" Casing and 5-1/2" Tubing inside 7-5/8" Casing



5-1/2" tubing inside 7-5/8" 33.7 lb/ft Casing can be Fished with Conventional Fishing Tools Overshot & Spear Tools to Fish 5-1/2" Casing





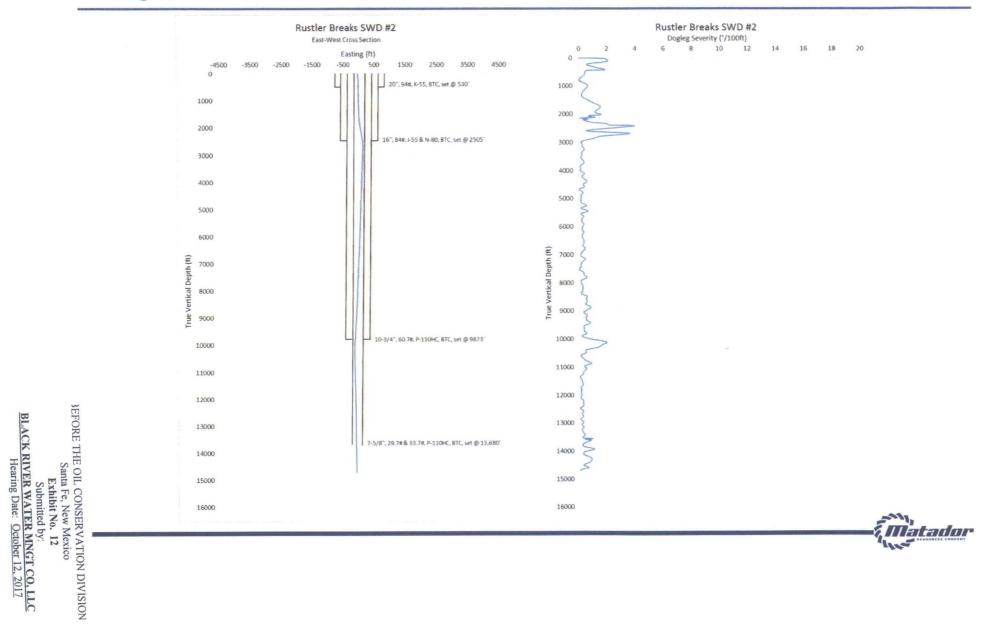
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BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 11 Submitted by: BLACK RIVER WATER MNGT CO. LLC Hearing Date: October 12, 2017

Rustler Breaks SWD #2 Wellbore Deviation Fishing in Deviated Hole Not an Issue



STATE OF NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES **OIL CONSERVATION DIVISION**

APPLICATION OF BLACK RIVER WATER MANAGEMENT COMPANY, LLC TO AMEND ADMINISTRATIVE ORDER SWD-1682 FOR A SALT WATER DISPOSAL WELL IN EDDY COUNTY, NEW MEXICO.

CASE NO. 15854

AFFIDAVIT

STATE OF NEW MEXICO)) SS. COUNTY OF SANTA FE

Adam G. Rankin, attorney in fact and authorized representative of Black River Water Management Company, LLC, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Application has been provided under the notice letters and proof of receipts attached hereto.

Adam G. Rankin

SUBSCRIBED AND SWORN to before me this 11th day of October, 2017, by Adam G.

Rankin.

Notary Public

BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 13 Submitted by: **RIVER WATER MNGT CO, LLC** Hearing Date: October 12, 2017



Adam G. Rankin Associate Phone (505) 988-4421 Fax (505) 983-6043 agrankin@hollandhart.com

September 22, 2017

VIA CERTIFIED MAIL CERTIFIED RECEIPT REQUESTED

TO: AFFECTED PARTIES

Re: Application of Black River Water Management Company, LLC to Amend Administrative Order SWD-1682 for a Salt Water Disposal Well Located in Eddy County, New Mexico.

Ladies & Gentlemen:

This letter is to advise you that Black River Water Management Company, LLC has filed the enclosed application with the New Mexico Oil Conservation Division. This application will be set for hearing before a Division Examiner at 8:15 a.m. on October 12, 2017. The hearing will be held in Porter Hall in the Oil Conservation Division's Santa Fe Offices located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 19.15.4.13.B to file a Prehearing Statement four business days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this matter please contact Dana Arnold at (972) 371-5284 or darnold@matadorresources.com.

incerely. Adam G. Rankin

ATTORNEY FOR BLACK RIVER WATER MANAGEMENT COMPANY, LLC

Holland & Hart LLP

Phone [505] 988-4421 Fax [505] 983-6043 www.hollandhart.com

110 North Guadalupe Suite 1 Santa Fe, New Mexico 87501 Mailing Address P.O. Box 2208 Santa Fe, NM 87504-2208

Aspen Boulder Carson City Colorado Springs Denver Denver Tech Center Billings Boise Cheyenne Jackson Hole Las Vegas Reno Salt Lake City Santa Fe Washington D C @

Application of Black River Water Management, LLC to Amend Administrative Order SWD-1682 Case No. 15854 Affected Parties (16)

COG OPERATING LIMITED LIABILITY CORP 600 W. Illinois Avenue Midland, TX 79701

EOG HNG OIL COMPANY P.O. Box 2267 Midland, TX 79702

MARBOB ENERGY CORPORATION PO DRAWER 227 ARTESIA, NM 88211

MEWBOURNE OIL COMPANY PO BOX 7698 TYLER, TX 75711

Mobil Oil Corp P.O. Box 633 Midland, TX 79701

Mobil Oil Corp 810 Houston Street Ft. Worth, TX 76102

EOG Y Resources Inc P.O. Box 2267 Midland, TX 79702

EOG Resources, Inc. P.O. Box 2267 Midland, TX 79702

EOG Y Resources, Inc P.O. Box 2267 Midland, TX 79702

OGX RESOURCES LLC PO BOX 2064 MIDLAND, TX 79702 DEVON ENERGY PRODUCTION COMPANY LP PO BOX 108838 OKLAHOMA CITY, OK 73101-8838

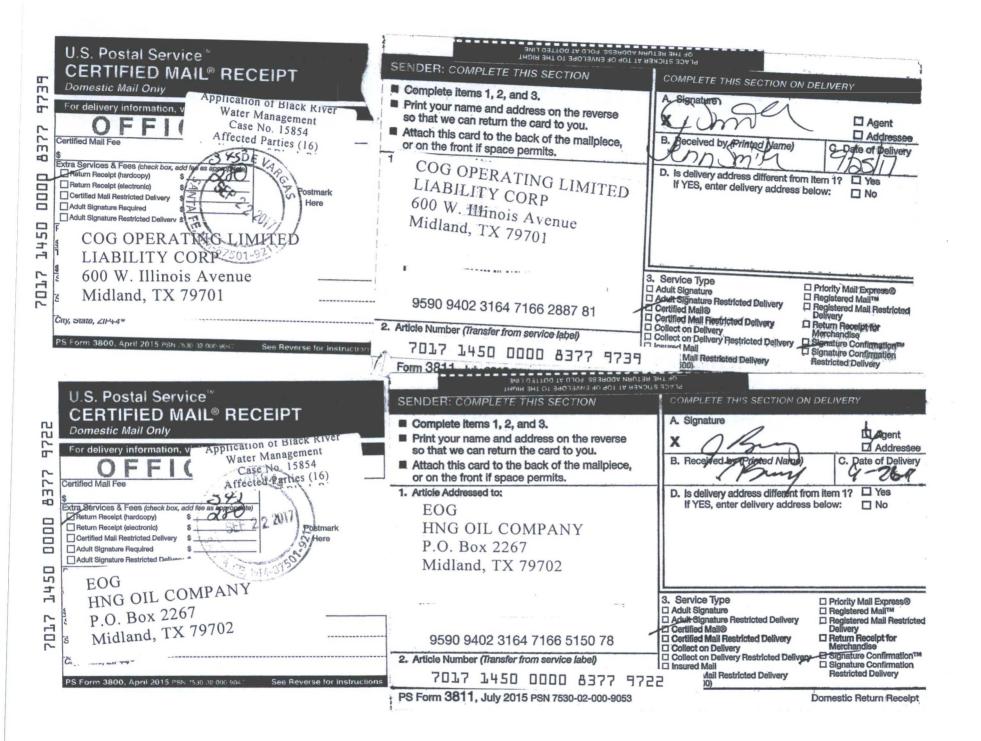
OGX ACREAGE FUND LP PO BOX 2064 MIDLAND, TX 79702

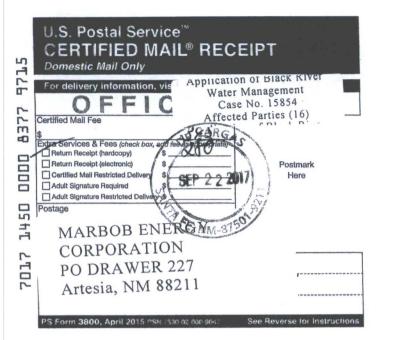
FEATHERSTONE DEVELOPMENT CORPORATION P.O. BOX 429 ROSWELL, NM 88202

MRC PERMIAN COMPANY ONE LINCOLN CENTER 5400 LBJ FREEWAY SUIT E1500 Dallas, TX 75240

MRC PERMIAN CO ONE LINCOLN CENTER 5400 LBJ FREEWAY SUIT E1500 Dallas, TX 75240

BIG THREE ENERGY GROUP LLC PO BOX 429 Roswell, NM 88202

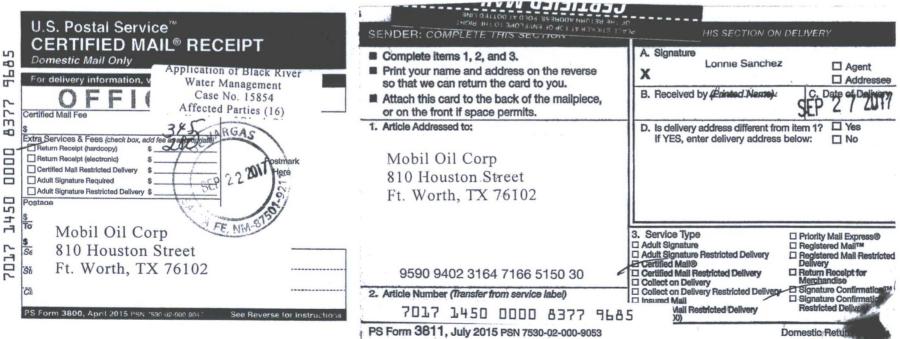


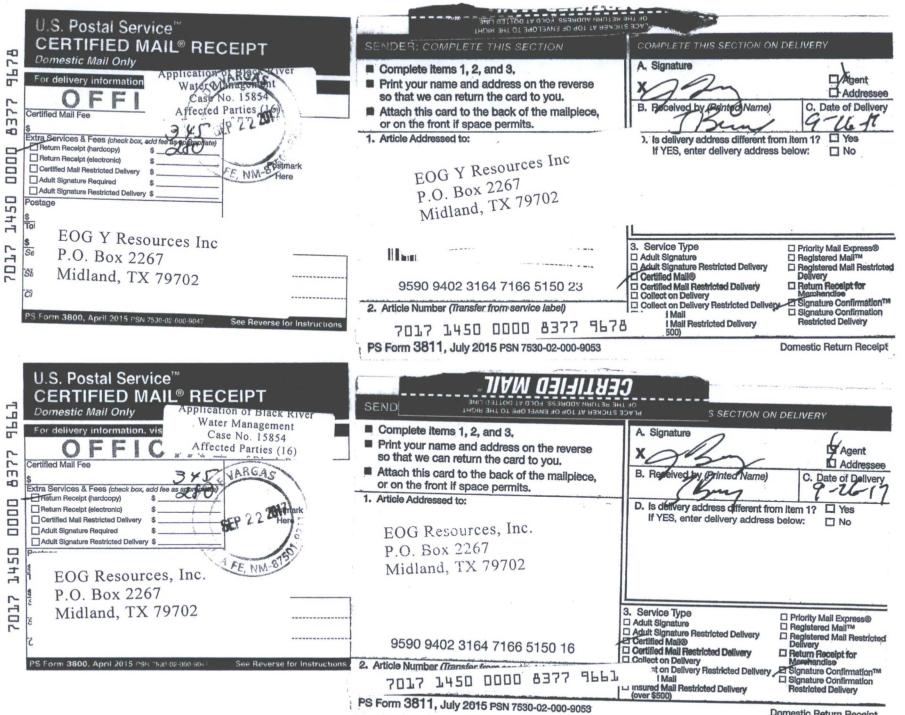




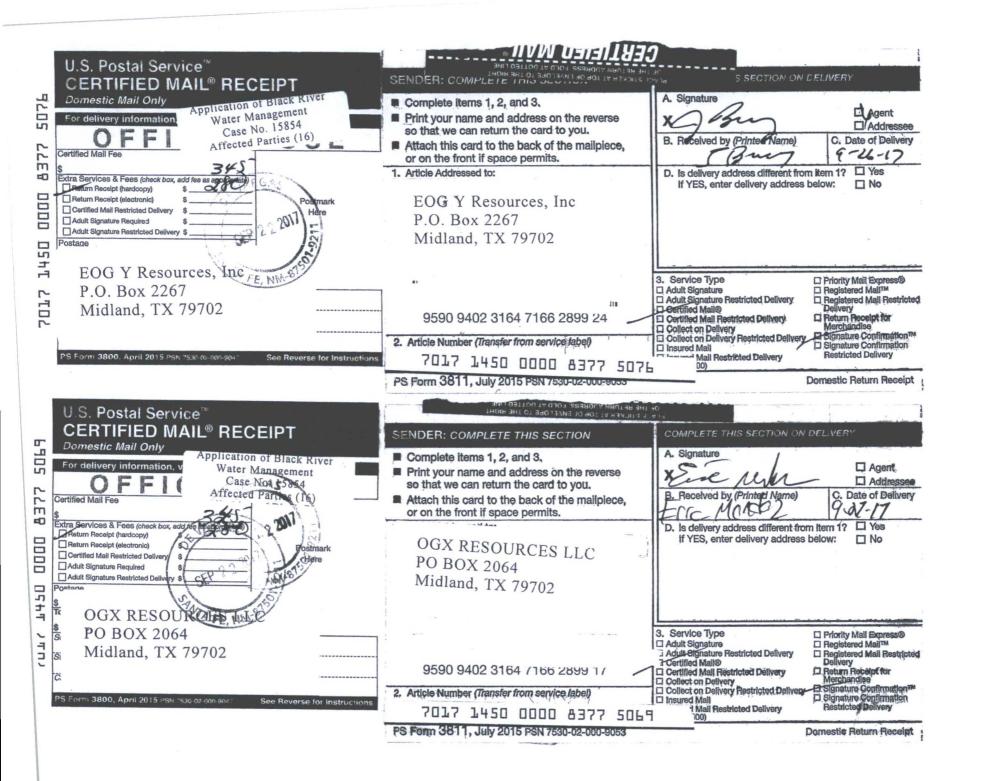
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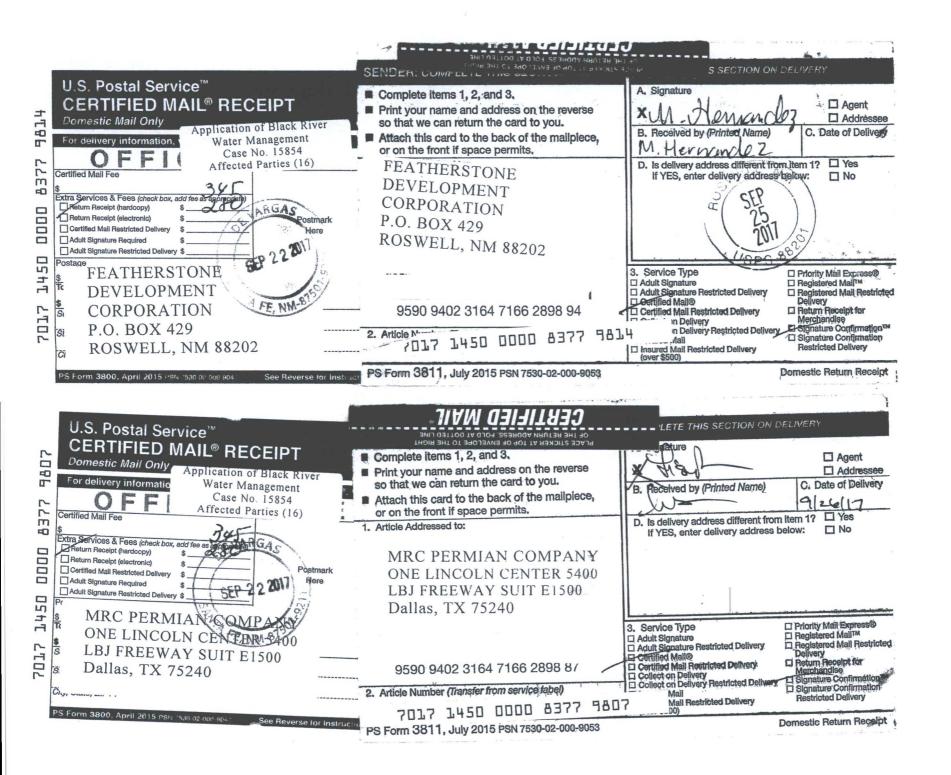






Domestic Return Receipt







Affidavit of Publication

State of New Mexico, County of Eddy, ss.

Danny Fletcher, being first duly sworn, on oath says:

That he is the Publisher of the Carlsbad Current-Araus. а 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 advertisements and 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:

September 27

2017

That the cost of publication is **\$142.84** and that payment thereof has been made and will be

assessed as court/cests.

Subscribed and sworn to before me this 29 day of <u>September</u>, 2017

My commission Expires 🖂

Notary Public



September 27, 2017 STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION SANTA FE, NEW MEXICO

The State of New Mexico through its Oil Conservation Division hereby gives notice pursuant to law and the Rules and Regulations of the Division of the following public hearing to be held at 8:15 A.M. on October 12, 2017, in the Oil Conservation Division Hearing Room at 1220 South St. Francis, Santa Fe, New Mexico, before an examiner duly appoint for the hearing. If you are an individual with a disability who is in need of a reader, amplifier, qualified sign language interpretar, or any other form of auxiliary aid or service to attend or participate in the hearing, please contact: Florene Davidson at 505-476-3458 or through the New Mexico Relay Network, 1-800-659-1779 by October 2, 2017. Public documents including the agenda and minutes, can be provided in various accessible forms. Please contact Florene Davidson if a summary or other type of accessible form is needed.

STATE OF NEW MEXICO TO; All named parties and persons having any right, title, interest or claim in the following cases and notice to the public.

(NOTE: All land descriptions herein refer to the New Mexico Principal Meridian whether or not so stated.)

To: All affected persons, including: Mobil Oil Corp; Mobil Pro-

ducing TX & NM Inc.; COG Operating LLC; HNG Oil Company; Marbob Energy Corporation; Mewbourne Oil Company; OGX Resources LLC; Devon Energy Production Company LP; Featherstone Development Corporation; Big Three Energy Group LLC.

Case No. 15854: Application of Black River Water Management Company, LLC to Amend Administrative Order SWD-1682 for a Salt Water Disposal Well Located in Eddy County, New Mexico. Applicant in the above-styled cause seeks an order amending Administrative Order SWD-1682 to increase the diameter of the injection tubing in its Rustler Breaks SWD No. 2 well (API No. 30-015-44240) from 4-½ inches to 5-½ inches. Administrative Order SWD-1682 currently only allows for tubing that is 4-½ inches or smaller. The subject well is located in Lot 4 (NW/4 NW/4 equivalent) of Irregular Section 6, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico. All other approved well designs and permit conditions under Administrative Order SWD-1682 are proposed to remain unchanged. The Rustler Breaks SWD No. 2 well is located approximately 4 miles northwest of Malaga, N.M.

> 3EFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 14 Submitted by: <u>BLACK RIVER WATER MNGT CO, LLC</u> Hearing Date: <u>October 12, 2017</u>