

Application

Part *II*

Tables

Table 1	OCD wells within the area of review
Table 2a	BLM leases within the area of review
Table 2b	State leases within the area of review
Table 2c	Surface Owner
Table 3	Produced Water Chemistry of Nearby Wells
Table 4	Formational water quality data

Table 1
NM Oil and Gas Wells within 2 Miles

API	OGRID	OGRID Name	Status	Well Type	Well Name	UL-S-T-R	Total Depth	Associated Pools
30-025-08355	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	P-06-23S-33E	5204	<Null>
30-025-08356	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	4-07-23S-33E	5131	<Null>
30-025-08357	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	4-18-23S-33E	5227	<Null>
30-025-08358	270329	ENDURANCE RESOURCES LLC	P	O	MARSHALL #001	4-19-23S-33E	5237	[14910] CRUZ, DELAWARE
30-025-08359	270329	ENDURANCE RESOURCES LLC	P	S	MARSHALL #002	K-19-23S-33E	5216	[14910] CRUZ, DELAWARE; [96100] SWD, DELAWARE
30-025-08360	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #003	N-19-23S-33E	5324	<Null>
30-025-08361	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #004	3-19-23S-33E	5230	[14910] CRUZ, DELAWARE
30-025-20153	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	I-24-23S-32E	5168	[14910] CRUZ, DELAWARE
30-025-20424	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	P-20-23S-33E	5344	<Null>
30-025-20804	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	M-17-23S-33E	5415	<Null>
30-025-21397	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	B-18-23S-33E	5241	<Null>
30-025-24893	229137	COG OPERATING LLC	P	G	BRINNINSTOOL UNIT #001	G-20-23S-33E	15950	[14865] CRUZ, BONE SPRING; [72880] BRINNINSTOOL, MORROW (GAS)
30-025-25000	270329	ENDURANCE RESOURCES LLC	P	O	MARSHALL #005	F-19-23S-33E	5180	[14910] CRUZ, DELAWARE
30-025-25151	270329	ENDURANCE RESOURCES LLC	P	O	MARSHALL #006	B-19-23S-33E	5250	[14910] CRUZ, DELAWARE
30-025-25201	270329	ENDURANCE RESOURCES LLC	P	O	MARSHALL #007	C-19-23S-33E	5235	[14910] CRUZ, DELAWARE
30-025-25202	214263	PRE-ONGARD WELL OPERATOR	C	O	PRE-ONGARD WELL #008	G-19-23S-33E	0	<Null>
30-025-25518	229137	COG OPERATING LLC	A	S	BEBIDAS 16 STATE SWD #001	L-16-23S-33E	15950	[14865] CRUZ, BONE SPRING; [96100] SWD, DELAWARE
30-025-25553	229137	COG OPERATING LLC	A	G	BRINNINSTOOL UNIT #002	F-21-23S-33E	15800	[72880] BRINNINSTOOL, MORROW (GAS)
30-025-25642	270329	ENDURANCE RESOURCES LLC	P	O	MARSHALL #008	3-19-23S-33E	5300	[14910] CRUZ, DELAWARE
30-025-26034	214263	PRE-ONGARD WELL OPERATOR	P	G	PRE-ONGARD WELL #003	O-19-23S-33E	15760	[72880] BRINNINSTOOL, MORROW (GAS)
30-025-28005	214263	PRE-ONGARD WELL OPERATOR	C	O	PRE-ONGARD WELL #004	J-21-23S-33E	0	<Null>
30-025-28223	229137	COG OPERATING LLC	A	O	NEW MEXICO DL STATE #001	I-18-23S-33E	9030	[14910] CRUZ, DELAWARE; [66253] LEA UNDESIGNATED, GROUP 6
30-025-28272	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	F-08-23S-33E	5295	<Null>
30-025-28579	214	ADAMS OIL & GAS PRODUCERS	P	O	FEDERAL #001	E-17-23S-33E	5300	[14910] CRUZ, DELAWARE
30-025-28607	229137	COG OPERATING LLC	A	O	NEW MEXICO DL STATE #002	O-18-23S-33E	5428	[14910] CRUZ, DELAWARE
30-025-28608	270329	ENDURANCE RESOURCES LLC	P	O	NEW MEXICO DL STATE #003	H-18-23S-33E	5301	[14910] CRUZ, DELAWARE
30-025-28609	229137	COG OPERATING LLC	A	O	NEW MEXICO DL STATE #004	N-18-23S-33E	5312	[14910] CRUZ, DELAWARE
30-025-28610	270329	ENDURANCE RESOURCES LLC	P	O	NEW MEXICO DL STATE #005	J-18-23S-33E	5320	[14910] CRUZ, DELAWARE
30-025-28659	270329	ENDURANCE RESOURCES LLC	P	O	NEW MEXICO DL STATE #006	P-18-23S-33E	5275	[14910] CRUZ, DELAWARE
30-025-28667	214	ADAMS OIL & GAS PRODUCERS	P	O	FEDERAL #002	D-17-23S-33E	5300	[14910] CRUZ, DELAWARE
30-025-28680	229137	COG OPERATING LLC	A	O	NEW MEXICO EF STATE #001	L-17-23S-33E	5253	[14910] CRUZ, DELAWARE
30-025-28681	270329	ENDURANCE RESOURCES LLC	P	O	NEW MEXICO DL STATE #007	A-18-23S-33E	5251	[14910] CRUZ, DELAWARE
30-025-28686	214263	PRE-ONGARD WELL OPERATOR	C	O	PRE-ONGARD WELL #008	G-18-23S-33E	0	<Null>
30-025-28696	214263	PRE-ONGARD WELL OPERATOR	C	O	PRE-ONGARD WELL #002	C-17-23S-33E	0	<Null>
30-025-28697	229137	COG OPERATING LLC	H	I	NEW MEXICO EF STATE #003	M-17-23S-33E	5407	[14910] CRUZ, DELAWARE
30-025-28698	214263	PRE-ONGARD WELL OPERATOR	C	O	PRE-ONGARD WELL #004	F-17-23S-33E	0	<Null>
30-025-28927	215099	CIMAREX ENERGY CO.	A	O	PRONGHORN AAP FEDERAL #001	M-08-23S-33E	5370	[14910] CRUZ, DELAWARE
30-025-29230	214263	PRE-ONGARD WELL OPERATOR	C	O	PRE-ONGARD WELL #001	C-08-23S-33E	0	<Null>
30-025-29321	214263	PRE-ONGARD WELL OPERATOR	P	O	PRE-ONGARD WELL #001	E-08-23S-33E	5310	<Null>
30-025-33424	3474	C W TRAINER	P	O	THISTLE UNIT #002	E-28-23S-33E	15850	[96689] BRINNINSTOOL, WOLFCAMP, WEST; [96838] DRY AND ABANDONED
30-025-34076	20305	DEVON SFS OPERATING INC	C	O	THISTLE UNIT #003	G-21-23S-33E	0	<Null>
30-025-36931	17891	POGO PRODUCING CO	C	O	FOXGLOVE 30 FEDERAL #001	H-30-23S-33E	0	<Null>
30-025-40010	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #018H	C-28-23S-33E	8942	[96193] BRINNINSTOOL, DELAWARE
30-025-40057	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	THISTLE UNIT #019C	B-28-23S-33E	0	[96193] BRINNINSTOOL, DELAWARE
30-025-40136	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	THISTLE UNIT #025C	A-21-23S-33E	0	[96193] BRINNINSTOOL, DELAWARE
30-025-40173	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	BLACK MAMBA 15 STATE COM #002H	D-15-23S-33E	11230	[14865] CRUZ, BONE SPRING; [96724] CRUZ, DELAWARE, NORTHEAST
30-025-40743	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	TAIPAN 10 STATE COM #001H	D-15-23S-33E	11220	[7320] BRINNINSTOOL, BONE SPRING; [14865] CRUZ, BONE SPRING; [96724] CRUZ, DELAWARE, NORTHEAST
30-025-40854	217955	COG PRODUCTION, LLC	A	O	BEBIDAS STATE #001H	M-16-23S-33E	11068	[14865] CRUZ, BONE SPRING
30-025-40855	217955	COG PRODUCTION, LLC	A	O	BEBIDAS STATE #002H	N-16-23S-33E	11175	[14865] CRUZ, BONE SPRING
30-025-40856	217955	COG PRODUCTION, LLC	A	O	BEBIDAS STATE #003H	O-16-23S-33E	10827	[14865] CRUZ, BONE SPRING
30-025-40857	217955	COG PRODUCTION, LLC	A	O	BEBIDAS STATE #004H	P-16-23S-33E	11202	[14865] CRUZ, BONE SPRING
30-025-41147	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #030H	D-28-23S-33E	9684	[59900] TRIPLE X, BONE SPRING; [96193] BRINNINSTOOL, DELAWARE
30-025-41329	229137	COG OPERATING LLC	A	O	JAZZMASTER 17 STATE #004H	A-17-23S-33E	11081	[14865] CRUZ, BONE SPRING
30-025-41371	229137	COG OPERATING LLC	A	O	BRINNINSTOOL UNIT #003H	O-20-23S-33E	11044	[14865] CRUZ, BONE SPRING
30-025-41425	270329	ENDURANCE RESOURCES LLC	C	O	JAZZMASTER 17 STATE #002C	C-17-23S-33E	0	[14865] CRUZ, BONE SPRING
30-025-41426	229137	COG OPERATING LLC	A	O	JAZZMASTER 17 STATE #003H	B-17-23S-33E	10973	[14865] CRUZ, BONE SPRING
30-025-41427	270329	ENDURANCE RESOURCES LLC	C	O	JAGUAR 18 STATE #001C	1-18-23S-33E	0	[14865] CRUZ, BONE SPRING
30-025-41428	229137	COG OPERATING LLC	A	O	JAGUAR 18 STATE #002H	N-18-23S-33E	12162	[14865] CRUZ, BONE SPRING

Table 1
NM Oil and Gas Wells within 2 Miles

API	OGRID	OGRID Name	Status	Well Type	Well Name	UL-S-T-R	Total Depth	Associated Pools
30-025-41429	229137	COG OPERATING LLC	A	O	JAGUAR 18 STATE #003H	O-18-23S-33E	9775	[14865] CRUZ, BONE SPRING
30-025-41430	270329	ENDURANCE RESOURCES LLC	C	O	JAGUAR 18 STATE #004C	A-18-23S-33E	0	[14865] CRUZ, BONE SPRING
30-025-41794	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #053H	B-28-23S-33E	11211	[59900] TRIPLE X, BONE SPRING
30-025-41795	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #054H	A-28-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-41796	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #059H	B-28-23S-33E	11164	[59900] TRIPLE X, BONE SPRING
30-025-41797	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #060H	A-28-23S-33E	11083	[59900] TRIPLE X, BONE SPRING
30-025-41803	229137	COG OPERATING LLC	A	O	BRINNINSTOOL UNIT #004H	P-20-23S-33E	11027	[14865] CRUZ, BONE SPRING
30-025-41819	229137	COG OPERATING LLC	C	O	BRINNINSTOOL UNIT #006C	N-21-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-41827	16696	OXY USA INC	A	O	FOXGLOVE 29 FEDERAL #004H	D-29-23S-33E	11138	[59900] TRIPLE X, BONE SPRING
30-025-41828	16696	OXY USA INC	A	O	FOXGLOVE 29 FEDERAL #005H	C-29-23S-33E	11154	[59900] TRIPLE X, BONE SPRING
30-025-41850	16696	OXY USA INC	A	O	FOXGLOVE 29 FEDERAL #006H	B-29-23S-33E	11150	[59900] TRIPLE X, BONE SPRING
30-025-41851	16696	OXY USA INC	A	O	FOXGLOVE 29 FEDERAL #007H	A-29-23S-33E	11159	[59900] TRIPLE X, BONE SPRING
30-025-41860	229137	COG OPERATING LLC	C	O	BRINNINSTOOL UNIT #005C	D-21-23S-33E	0	[14865] CRUZ, BONE SPRING
30-025-41896	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #051H	D-28-23S-33E	11189	[59900] TRIPLE X, BONE SPRING
30-025-41897	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #052H	C-28-23S-33E	11229	[59900] TRIPLE X, BONE SPRING
30-025-41913	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	HORNED VIPER 20 FEDERAL COM #001H	N-20-23S-33E	11042	[14865] CRUZ, BONE SPRING
30-025-41914	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	HORNED VIPER 20 FEDERAL COM #002H	M-20-23S-33E	11044	[14865] CRUZ, BONE SPRING
30-025-42277	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	TAIPAN 10 STATE COM #008H	D-15-23S-33E	9296	[96724] CRUZ, DELAWARE, NORTHEAST
30-025-42422	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	BLACK MAMBA 15 STATE COM #006C	D-15-23S-33E	0	[96724] CRUZ, DELAWARE, NORTHEAST
30-025-42474	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	NORTH THISTLE 15 10 STATE COM #001C	M-15-23S-33E	0	[7320] BRINNINSTOOL, BONE SPRING
30-025-42479	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	NORTH THISTLE 15 10 STATE COM #002C	M-15-23S-33E	0	[7320] BRINNINSTOOL, BONE SPRING
30-025-42570	229137	COG OPERATING LLC	N	O	CHIVO 9 FEDERAL #002H	N-09-23S-33E	0	[7320] BRINNINSTOOL, BONE SPRING
30-025-42679	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #094H	D-22-23S-33E	10638	[59900] TRIPLE X, BONE SPRING
30-025-42680	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #109H	D-22-23S-33E	10101	[59900] TRIPLE X, BONE SPRING
30-025-42681	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #124H	D-22-23S-33E	9777	[59900] TRIPLE X, BONE SPRING
30-025-42760	308339	OWL SWD OPERATING, LLC	C	S	BRININSTOOL SWD #003C	4-19-23S-33E	0	<Null>
30-025-42784	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	THISTLE UNIT #096C	A-22-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43024	229137	COG OPERATING LLC	C	O	JAGUAR 18 STATE #503C	O-18-23S-33E	0	[14865] CRUZ, BONE SPRING
30-025-43311	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #110H	C-22-23S-33E	9736	[59900] TRIPLE X, BONE SPRING
30-025-43315	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #114H	C-22-23S-33E	9758	[59900] TRIPLE X, BONE SPRING
30-025-43316	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #115	B-22-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43317	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	THISTLE UNIT #116C	B-22-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43381	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #107H	B-21-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43382	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #122H	B-21-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43437	229137	COG OPERATING LLC	N	O	JAGUAR 18 STATE #001H	1-18-23S-33E	0	[14865] CRUZ, BONE SPRING
30-025-43438	229137	COG OPERATING LLC	N	O	JAGUAR 18 STATE #004H	A-18-23S-33E	0	[14865] CRUZ, BONE SPRING
30-025-43598	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #154H	C-28-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43709	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #105H	A-21-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43710	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #119H	A-21-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43727	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #108H	A-21-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43732	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #121H	A-21-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-43733	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #158H	C-28-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-44000	308339	OWL SWD OPERATING, LLC	N	S	BRININSTOOL SWD #003	4-19-23S-33E	0	[96101] SWD, DEVONIAN
30-025-44066	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	THISTLE UNIT #099C	C-22-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-44068	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C	O	THISTLE UNIT #161C	C-22-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-44069	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #133H	C-22-23S-33E	10088	[59900] TRIPLE X, BONE SPRING
30-025-44070	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	THISTLE UNIT #160	C-22-23S-33E	0	[59900] TRIPLE X, BONE SPRING
30-025-44079	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #086H	C-22-23S-33E	10649	[59900] TRIPLE X, BONE SPRING
30-025-44080	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #125H	C-22-23S-33E	10073	[59900] TRIPLE X, BONE SPRING
30-025-44081	6137	DEVON ENERGY PRODUCTION COMPANY, LP	P	O	THISTLE UNIT #142	D-22-23S-33E	1465	[59900] TRIPLE X, BONE SPRING
30-025-44416	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #099H	C-22-23S-33E	10670	[59900] TRIPLE X, BONE SPRING
30-025-44419	6137	DEVON ENERGY PRODUCTION COMPANY, LP	A	O	THISTLE UNIT #115H	C-22-23S-33E	9744	[59900] TRIPLE X, BONE SPRING
30-025-45392	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	NORTH THISTLE 15 10 STATE COM #001H	M-15-23S-33E	0	[7320] BRINNINSTOOL, BONE SPRING
30-025-45393	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	NORTH THISTLE 15 10 STATE COM #002H	M-15-23S-33E	0	[7320] BRINNINSTOOL, BONE SPRING
30-025-45394	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	NORTH THISTLE 15 10 STATE COM #003H	N-15-23S-33E	0	[7320] BRINNINSTOOL, BONE SPRING
30-025-45395	6137	DEVON ENERGY PRODUCTION COMPANY, LP	N	O	NORTH THISTLE 15 10 STATE COM #004H	O-15-23S-33E	0	[7320] BRINNINSTOOL, BONE SPRING
30-025-45605	374146	Delaware Water Management Company, LLC	N	S	R WALLMAN STATE SWD #001	4-07-23S-33E	0	[96101] SWD, DEVONIAN

Table 2a
BLM Oil and Gas Leases within 1-Mile

Lease Number	Name	Townshipp	Range	Section	Unit Letter
NMLC 0068848	CONOCOPHILLIPS CO	23S	33E	21	C
NMLC 0068848	CONOCOPHILLIPS CO	23S	33E	21	F
NMLC 0068848	CONOCOPHILLIPS CO	23S	33E	19	H
NMLC 0068848	CONOCOPHILLIPS CO	23S	33E	19	A
NMLC 0068848	CONOCOPHILLIPS CO	23S	33E	21	E
NMLC 0068848	CONOCOPHILLIPS CO	23S	33E	19	B
NMLC 0068848	CONOCOPHILLIPS CO	23S	33E	21	D
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	J
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	L
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	H
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	I
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	A
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	B
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	G
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	F
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	D
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	E
NMNM 002386A	DEVON ENERGY PROD CO LP	23S	33E	20	C
NMNM 020073	EOG RESOURCES INC	23S	33E	08	L
NMNM 020073	EOG RESOURCES INC	23S	33E	08	N
NMNM 020073	EOG RESOURCES INC	23S	33E	08	K
NMNM 020073	EOG RESOURCES INC	23S	33E	08	M
NMNM 094187	DEVON ENERGY PROD CO LP	23S	33E	20	K
NMNM 126494	EOG Y RESOURCES INC	23S	33E	17	D
NMNM 126494	EOG Y RESOURCES INC	23S	33E	17	E
NMNM 128834	COG OPERATING LLC	23S	33E	09	N
NMNM 128834	COG OPERATING LLC	23S	33E	09	M
NMNM 128834	COG OPERATING LLC	23S	33E	09	L
NMNM 129265	COG OPERATING LLC	23S	33E	08	J
NMNM 129265	COG OPERATING LLC	23S	33E	08	I
NMNM 129265	COG OPERATING LLC	23S	33E	08	P
NMNM 129265	COG OPERATING LLC	23S	33E	08	O

Table 2b
State Leases within 1-Mile of the SWD

Lease Number	Ogrid	Ogrid Name	Township	Range	Section	Unit Letter
V007310007	229137	COG OPERATING LLC	23S	33E	17	A
V007310007	229137	COG OPERATING LLC	23S	33E	17	B
V007310007	229137	COG OPERATING LLC	23S	33E	17	C
V007310007	229137	COG OPERATING LLC	23S	33E	17	F
V007310007	229137	COG OPERATING LLC	23S	33E	17	G
V007310007	229137	COG OPERATING LLC	23S	33E	17	H
V007310007	229137	COG OPERATING LLC	23S	33E	17	I
V007310007	229137	COG OPERATING LLC	23S	33E	17	J
V007310007	229137	COG OPERATING LLC	23S	33E	17	K
V007310007	229137	COG OPERATING LLC	23S	33E	17	L
V007310007	229137	COG OPERATING LLC	23S	33E	17	M
V007310007	229137	COG OPERATING LLC	23S	33E	17	N
V007310007	229137	COG OPERATING LLC	23S	33E	17	O
V007310007	229137	COG OPERATING LLC	23S	33E	17	P
V007320005	229137	COG OPERATING LLC	23S	33E	18	A
V007320005	229137	COG OPERATING LLC	23S	33E	18	B
V007320005	229137	COG OPERATING LLC	23S	33E	18	G
V007320005	229137	COG OPERATING LLC	23S	33E	18	H
V007320005	229137	COG OPERATING LLC	23S	33E	18	I
V007320005	229137	COG OPERATING LLC	23S	33E	18	J
V007320005	229137	COG OPERATING LLC	23S	33E	18	O
V007320005	229137	COG OPERATING LLC	23S	33E	18	P
VB18120001	296438	COG ACREAGE LP	23S	33E	16	B
VB18120001	296438	COG ACREAGE LP	23S	33E	16	G
VB18120001	296438	COG ACREAGE LP	23S	33E	16	J
VB18120001	296438	COG ACREAGE LP	23S	33E	16	O
VB18130001	296438	COG ACREAGE LP	23S	33E	16	C
VB18130001	296438	COG ACREAGE LP	23S	33E	16	D
VB18130001	296438	COG ACREAGE LP	23S	33E	16	E
VB18130001	296438	COG ACREAGE LP	23S	33E	16	F
VB18130001	296438	COG ACREAGE LP	23S	33E	16	K
VB18130001	296438	COG ACREAGE LP	23S	33E	16	L
VB18130001	296438	COG ACREAGE LP	23S	33E	16	M
VB18130001	296438	COG ACREAGE LP	23S	33E	16	N

Table 2c
Surface Owners within 1-Mile of the SWD

Township	Range	Section	Unit Letter	UPC	Name	Address	City	State	Zip
23S	33E	07	P	4192134262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	08	I	4193134266265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	08	J	4193134266265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	08	K	4193134266265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	08	L	4193134266265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	08	M	4193134266265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	08	N	4193134266265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	08	O	4193134266265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	08	P	4193134266265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	09	L	4194134265265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	09	M	4194134265265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	09	N	4194134265265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	B	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	C	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	D	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	E	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	F	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	G	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	J	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	K	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	L	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	M	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	N	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	16	O	4194135265266	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	A	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	B	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	C	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	D	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	E	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	F	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	G	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	H	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	I	4193135399396	LIMESTONE BASIN PROP RANCH LLC	18 DESTA DRIVE	MIDLAND	TX	79705
23S	33E	17	J	4193135399396	LIMESTONE BASIN PROP RANCH LLC	18 DESTA DRIVE	MIDLAND	TX	79705
23S	33E	17	K	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	L	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	M	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	N	4193135221221	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	17	O	4193135399396	LIMESTONE BASIN PROP RANCH LLC	18 DESTA DRIVE	MIDLAND	TX	79705
23S	33E	17	P	4193135399396	LIMESTONE BASIN PROP RANCH LLC	18 DESTA DRIVE	MIDLAND	TX	79705
23S	33E	18	A	4192135262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	18	B	4192135262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	18	G	4192135262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	18	H	4192135262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	18	I	4192135262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	18	J	4192135262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	18	O	4192135262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	18	P	4192135262265	New Mexico State	310 Old Santa Fe Trail	Santa Fe	NM	87501
23S	33E	19	A	4192136262265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	19	B	4192136262265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	19	H	4192136262265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221

Table 2c
Surface Owners within 1-Mile of the SWD

Township	Range	Section	Unit Letter	UPC	Name	Address	City	State	Zip
23S	33E	20	A	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	B	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	C	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	D	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	E	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	F	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	G	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	H	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	I	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	J	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	K	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	20	L	4193136266265	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	21	C	4194136265266	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	21	D	4194136265266	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	21	E	4194136265266	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221
23S	33E	21	F	4194136265266	HUGHES PROPERTIES LLC	PO BOX 5097	CARLSBAD	NM	88221

Township	Range	Section	Unit Letter	Mineral Owner	Description
23S	33E	07	P	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	08	I	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	08	J	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	08	K	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	08	L	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	08	M	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	08	N	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	08	O	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	08	P	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	09	L	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	09	M	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	09	N	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	16	B	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	C	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	D	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	E	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	F	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	G	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	J	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	K	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	L	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	M	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	N	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	16	O	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	A	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	B	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	C	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	D	BLM (USA)	Other minerals are owned by the BLM (U.S.)
23S	33E	17	E	BLM (USA)	Other minerals are owned by the BLM (U.S.)
23S	33E	17	F	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	G	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	H	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	I	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	J	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	K	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	L	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	M	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	N	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	O	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	17	P	State (NM)	No minerals are owned by the BLM (U.S.)

Township	Range	Section	Unit Letter	Mineral Owner	Description
23S	33E	18	A	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	18	B	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	18	G	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	18	H	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	18	I	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	18	J	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	18	O	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	18	P	State (NM)	No minerals are owned by the BLM (U.S.)
23S	33E	19	A	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	19	B	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	19	H	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	A	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	B	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	C	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	D	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	E	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	F	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	G	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	H	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	I	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	J	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	K	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	20	L	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	21	C	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	21	D	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	21	E	BLM (USA)	All minerals are owned by the BLM (U.S.)
23S	33E	21	F	BLM (USA)	All minerals are owned by the BLM (U.S.)

Table 3
Produced Water

wellname	api	section	township	range	unit	county	state	company	field	formation	samplesource	watertype	sampledate	analysisdate	ph	specificgravity	tds_mgl	resistivity_ohm_cm	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl	CorrectFlag
DIAMONDTAIL 24 FEDERAL #001	3002533344	24	23S	32E	L	Lea	NM						8/12/2014 0:00		8.5		172490.2	59465.3	5813.5	121.6	1016.4	2.3	103630	199.2	2	700	FALSE	
TOMCAT 21 FEDERAL #001	3002533356	21	23S	32E	F	Lea	NM						1/27/2015 0:00		5.4		246335.6	67632.8	16223.4	47.5	2611.1	3.16	157130.6	61	0	440	FALSE	
TOMCAT 21 FEDERAL #003	3002533911	21	23S	32E	E	Lea	NM						1/27/2015 0:00		5.6		258460.4	66996.2	21006.5	27.5	3246.8	4.96	163589.5	85.4	0	460	FALSE	
TOMCAT 17 FEDERAL #001	3002534690	17	23S	32E	P	Lea	NM						1/27/2015 0:00		5.4		254754.8	75267	19088.7	38.3	3181.3	3.69	154115.3	109.8	0	410	FALSE	
TOMCAT 17 FEDERAL #002	3002534691	17	23S	32E	O	Lea	NM						1/27/2015 0:00		5.6		259999.9	71731	19634.8	33.2	3172.9	4.66	162178.7	73.2	0	350	FALSE	
TOMCAT 17 FEDERAL #003	3002534692	17	23S	32E	I	Lea	NM						1/27/2015 0:00		5.7		264290.8	70140.2	21551.8	30	3406.5	5.31	165588.8	85.4	0	410	FALSE	
TOMCAT 16 STATE #003	3002534809	16	23S	32E	L	Lea	NM						1/27/2015 0:00		5.51		282155.2	71636.9	27669.4	42.4	4186.8	15.6	175393.6	52.8	0	560	FALSE	
TOMCAT 17 FEDERAL #004	3002534812	17	23S	32E	J	Lea	NM						1/27/2015 0:00		6		214893.4	56533.4	20158.6	47.9	3255	6.51	131133.5	158.6	0	440	FALSE	
TOMCAT 16 STATE #007	3002534923	16	23S	32E	K	Lea	NM						1/27/2015 0:00		5.6		244760.3	71577.7	14674.1	78.8	2396.2	3.39	153409.7	73.2	0	450	FALSE	
TOMCAT 16 STATE #008	3002534924	16	23S	32E	N	Lea	NM						1/27/2015 0:00		5.6		234317.5	71909.8	14412.9	43.1	2385.3	2.59	142924.3	97.6	0	450	FALSE	
TOMCAT 20 FEDERAL #002	3002534926	20	23S	32E	B	Lea	NM						1/27/2015 0:00		5.4		270134.8	77379.6	21951.6	35.2	3491.7	5.17	163530.8	97.6	0	450	FALSE	
TOMCAT 16 STATE #006	3002534949	16	23S	32E	H	Lea	NM						1/27/2015 0:00		5.4		277945.7	73900.1	24711.5	37.9	3853.4	7.16	171388.5	85.4	0	460	FALSE	
TOMCAT 16 STATE #010	3002535045	16	23S	32E	B	Lea	NM						1/27/2015 0:00		5.6		279186.4	77799.6	25199.4	36.1	3983.2	7.97	167901	73.2	0	540	FALSE	
TOMCAT 17 FEDERAL #005	3002535069	17	23S	32E	N	Lea	NM						1/27/2015 0:00		5.8		263310.1	72419.8	20760.4	31.3	3336.6	4.62	163470.4	61	0	560	FALSE	
TOMCAT 17 FEDERAL #006	3002535070	17	23S	32E	K	Lea	NM						1/27/2015 0:00		6		212591.3	55454.4	19593.7	47.4	3169.4	6.31	130585.8	170.8	0	510	FALSE	
TOMCAT 21 FEDERAL #004	3002535103	21	23S	32E	D	Lea	NM						1/27/2015 0:00		5.8		267412.2	72365.2	22048.5	68.1	3505.6	6.22	165712.8	85.4	0	490	FALSE	
TOMCAT 20 FEDERAL #003	3002535145	20	23S	32E	H	Lea	NM						1/27/2015 0:00		5.6		268827.3	80098	22840.1	36.5	3635.1	5.35	158372.6	61	0	450	FALSE	
TOMCAT 20 FEDERAL #004	3002535233	20	23S	32E	G	Lea	NM						1/27/2015 0:00		5.7		286428.9	81700.4	25986.7	38.8	4121.7	7.63	170121.3	85.4	0	440	FALSE	
TOMCAT 20 FEDERAL #005	3002535234	20	23S	32E	I	Lea	NM						1/27/2015 0:00		5.8		289125	82158.6	27842	40.5	4402.1	12.29	170749.7	73.2	0	460	FALSE	
TOMCAT 16 STATE #013	3002535411	16	23S	32E	A	Lea	NM						1/27/2015 0:00		5.7		281858.5	76891.4	24467.2	30.2	3873.1	7.57	172401.4	73.2	0	440	FALSE	
TOMCAT 20 FEDERAL #006	3002535525	20	23S	32E	J	Lea	NM						1/27/2015 0:00		5.8		289144.8	80888.6	27354.5	38.6	4324.5	11.81	172664.1	61	0	490	FALSE	
TOMCAT 21 FEDERAL #008	3002535526	21	23S	32E	L	Lea	NM						1/27/2015 0:00		5.8		263615.7	71175.7	23328.1	40.7	3550.5	6.23	161630.3	85.4	0	460	FALSE	
TOMCAT 20 FEDERAL #007	3002537296	20	23S	32E	P	Lea	NM						1/27/2015 0:00		5.8		271016.7	67263	23647	33	3691	10.14	173080.7	61	0	520	FALSE	
FALCON 32 STATE #003	3002535640	32	23S	32E	K	Lea	NM						1/28/2015 0:00		5.5		249184.8	71161.3	16116.1	33	2496.1	3.96	156337.9	85.4	0	410	FALSE	
FALCON 32 STATE #004	3002536555	32	23S	32E	C	Lea	NM						1/28/2015 0:00		5.8		241993.3	72965.6	14328.7	29.4	2268.5	3.28	149603.8	97.6	0	340	FALSE	
FALCON 32 STATE #005Y	3002539661	32	23S	32E	M	Lea	NM						1/28/2015 0:00		5.9		239678.9	74767.3	13436.5	40.6	2234	2.32	146645.4	73.2	0	420	FALSE	
TRESNOR MITCHELL 30 FEDERAL #001	3002532688	30	23S	32E	N	Lea	NM			DELAWARE-BRUSHY CANYON			2/6/2015 0:00		5.6		249571.5	64522.7	19862.2	37.7	3105.9	6.36	159003.4	73	0	500	FALSE	
FREIDA AFR FEDERAL #001	3002532197	3	23S	32E	A	LEA	NM	YATES DRILLING CORP.	CAPROCK QUEEN	QUEEN	WELLHEAD	PRODUCED	2/1/1989 0:00	2/2/1989 0:00	6.2		149595	85000	2110	0	1000		147800	95	2450		FALSE	
FREIDA AFR FEDERAL #001	3002532197	3	23S	32E	A	LEA	NM	Yates Drilling Corp.	CAPROCK QUEEN	QUEEN	WELLHEAD	PRODUCED	8/30/1984 0:00		6.65		141520	84893	2000	0	1000		136000	80	2440		FALSE	
THYME APY FEDERAL #002	3002533529	1	23S	32E	G	LEA	NM			BONE SPRING			11/27/2001 0:00		6.1	1.15	172896		0	0	2025		104976	781	1150		TRUE	
DIAMONDTAIL 23 FEDERAL #002	3002533653	23	23S	32E	H	Lea	NM						8/6/2003 0:00		5.5		254950.9	68892.9	20721	15	3986		157297	54	386		FALSE	
TOMCAT 21 FEDERAL #003	3002533911	21	23S	32E	E	Lea	NM						8/6/2003 0:00		5.77		271021.3	74712.7	22456	29	3204		166833	36.6	414	410	FALSE	
TOMCAT 17 FEDERAL #001	3002534690	17	23S	32E	P	Lea	NM						8/6/2003 0:00		5.92		191165.8	56534.2	12620	26	2197		117118	36.6	675	240	FALSE	
TOMCAT 16 STATE #004	3002534810	16	23S	32E	E	Lea	NM						8/6/2003 0:00		6.02		271775.9	74413.3	21773	23	3968		167535	36.6	471	420	FALSE	
TOMCAT 20 FEDERAL #003	3002535145	20	23S	32E	H	Lea	NM						8/6/2003 0:00		5.71		306731	86277.4	23540	26	3870		188841	36.6	422	410	FALSE	
FALCON 32 STATE #003	3002535640	32	23S	32E	K	Lea	NM						8/6/2003 0:00		6.25		257563.7	75558.1	17577	28	2869		158008	97.6	564	480	FALSE	
TRESNOR MITCHELL 30 FEDERAL #001	3002532688	30	23S	32E	N	Lea	NM						11/12/2014 0:00		6.6		268970.5	72128.3	21665.9	39.2	3444	6.81	168477.5	148	34	440	FALSE	
BOUNDARY RAIDER 6 FEDERAL #002H	3002541884	7	23S	32E	A	Lea	NM			BONE SPRING 2ND SAND			4/21/2015 0:00		5.5		198828.3	63822.8	9826.5	65.2	1403.5	2.6	121113.4	183	17	480	FALSE	
TRESNOR MITCHELL 30 FEDERAL #002	3002532754	30	23S	32E	F	Lea	NM						12/10/2003 0:00		6.5		253732	66510.2	21000	300	6587		159281	48.8	5	0	FALSE	
TRESNOR MITCHELL 30 FEDERAL #002	3002532754	30	23S	32E	F	Lea	NM						6/1/2004 0:00		7		274346.8	69620.8	25364	191	4427		168593	83	1202	1500	FALSE	
TOMCAT 16 STATE #002	3002534306	16	23S	32E	M	Lea	NM						6/16/2004 0:00		6.03		258574.8	71555.9	21503	21	3027		159299	24.4	388	120	FALSE	
TOMCAT 17 FEDERAL #001	3002534690	17	23S	32E	P	Lea	NM						6/16/2004 0:00		5.7		273483	74547.8	23392	23	3428		168676	12.2	366	130	FALSE	
TOMCAT 15 FEDERAL COM #001	3002533801	15	23S	32E	L	Lea	NM						6/24/2004 0:00		6.5		301084.5	109935.3	1670	13	3466		180000	104	4800		FALSE	
DIAMONDTAIL 24 FEDERAL #001	3002533344	24	23S	32E	L	Lea	NM						3/1/2005 0:00		6.4		204001.8	63879.5	10949	52	1736		124319	331.8	561	260	FALSE	
DIAMONDTAIL 23 FEDERAL #002	3002533653	23	23S	32E	H	Lea	NM						3/1/2005 0:00		6.1		250482.4	68273	20951	35	3279		154286	124.4	407	220	FALSE	
HORNET 6 FEDERAL #001	3002536486	6	23S	32E	A	Lea	NM						1/24/2007 0:00		5.5		274093.6	76944.1	20940	29	3694	5	168926	41.5	363		FALSE	
TOMCAT 16 STATE #003	3002534809	16	23S	32E	L	Lea	NM						12/21/2007 0:00		6.5		257411.4	68023.5	21922	21	4210	9.5	158521	767.4	260	340	FALSE	
TRESNOR MITCHELL 30 FEDERAL #003	3002532891	30	23S	32E	C	Lea	NM						6/17/2014 0:00		5.8		254589.4	76656.7	17566	53.7	2979.1	3.53	154409	61	2.5	40	FALSE	
BOUNDARY RAIDER 6 FEDERAL #002H	3002541884	7	23S	32E	A	Lea	NM			BONE SPRING 2ND SAND			12/30/2014 0:00		6		117284.4	36911	5399.2	88.1	706.6	1.33	71443.9	378	17	200	FALSE	
CORIANDER AOC STATE #002	3002533574	1	23S	32E	H	LEA	NM		LIVINGSTON RIDGE	BONE SPRING			7/17/2000 0:00		5.23	1.193			24176	0	3815		167962	61.1	165		TRUE	
APRIL APZ STATE #001	3002533354	12	23S	32E	A	LEA	NM		LIVINGSTON RIDGE	BONE SPRING			9/26/2000 0:00		5.21				20.1	0	12.2		35.5	61.1	48.8		TRUE	
TOMCAT 20 FEDERAL #001	3002534693	20	23S	32E	A	Lea	NM						6/2/20															

Table 3
Produced Water

wellname	api	section	township	range	unit	county	state	company	field	formation	samplesource	watertype	sampledate	analysisdate	ph	specificgravity	tds_mgl	resistivity_ohm_cm	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	co2_mgl	CorrectFlag
THISTLE UNIT #064H	3002541468	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			5/6/2015 0:00		6.4			58238	3662	50	740	0.9	98000	171	599	440	FALSE	
THISTLE UNIT #061H	3002541487	22	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			5/6/2015 0:00		6.3			51734	13895	0	1692	1.4	109000	122	494	440	FALSE	
THISTLE UNIT #055H	3002541488	22	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			5/6/2015 0:00		6.3			56352	9467	37	1271	1.2	107000	122	556	396	FALSE	
THISTLE UNIT #051H	3002541896	28	23S	33E	D	Lea	NM			BONE SPRING 2ND SAND			5/6/2015 0:00		6.6			51318	7868	29	1149	0.81	96000	183	557	418	FALSE	
THISTLE UNIT #052H	3002541897	28	23S	33E	C	Lea	NM			BONE SPRING 2ND SAND			5/6/2015 0:00		6.4			51627	10603	46	1359	1.9	102000	195	468	396	FALSE	
THISTLE UNIT #020H	3002540015	27	23S	33E	D	Lea	NM			DELAWARE-BRUSHY CANYON			5/7/2015 0:00		5.9			60914	21590	26	5449	3.7	148000	61	220	660	FALSE	
THISTLE UNIT #043H	3002540898	33	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			5/7/2015 0:00		6.2			48663	10816	76	1497	2	98000	134	792	462	FALSE	
THISTLE UNIT #044H	3002541032	33	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			5/7/2015 0:00		6.4			54541	8845	28	1236	1.1	103000	146	534	330	FALSE	
THISTLE UNIT #046H	3002541118	33	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			5/7/2015 0:00		6.7			54205	8584	33	1249	1.2	102000	146	608	330	FALSE	
THISTLE UNIT #048H	3002541253	34	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			5/7/2015 0:00		6.6			56181	7137	15	1083	0.59	102000	122	626	330	FALSE	
THISTLE UNIT #049H	3002541254	34	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			5/7/2015 0:00		6.5			53470	8231	38	1196	0.9	100000	183	695	330	FALSE	
THISTLE UNIT #050H	3002541302	34	23S	33E	P	Lea	NM			BONE SPRING 2ND SAND			5/7/2015 0:00		6.7			60221	6449	42	772	1.4	106000	195	717	330	FALSE	
BLACK MAMBA 15 STATE COM #002H	3002540173	15	23S	33E	D	Lea	NM			BONE SPRING 2ND SAND			4/29/2014 0:00		6.2	178123		56623.9	9930.2	65.4	985.2	1.6	108363	183	752	350	FALSE	
TAIPAN 10 STATE COM #001H	3002540743	15	23S	33E	D	Lea	NM			BONE SPRING 2ND SAND			4/29/2014 0:00		6.1	179067		55815.4	9602.9	89	997.5	2.3	109984	122	684	300	FALSE	
THISTLE UNIT #061H	3002541487	22	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			5/1/2014 0:00		6.7	154843.8		51189.4	8662.8	20.4	924.1	1.5	91763	122	0	250	FALSE	
THISTLE UNIT #055H	3002541488	22	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			5/1/2014 0:00		6.4	144752.8		47940.9	7687.8	36.9	847.7	1.92	85978	122	0	300	FALSE	
BLACK MAMBA 15 STATE COM #002H	3002540173	15	23S	33E	D	Lea	NM			BONE SPRING 2ND SAND			12/17/2014 0:00		6.75			78099	12696	75	1273	1.4	148309	122	480	130	FALSE	
THISTLE UNIT #047H	3002541252	34	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			12/17/2014 0:00		6.25			77109	10168	43	1135	0.1	141623	110	580	130	FALSE	
THISTLE UNIT #057H	3002541341	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			12/17/2014 0:00		6.5			79448	10789	52	1174	1.2	146515	122	520	120	FALSE	
THISTLE UNIT #058H	3002541342	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			12/17/2014 0:00		6.5			60347	10265	60	1130	1.3	115793	134	560	100	FALSE	
THISTLE UNIT #064H	3002541468	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			1/8/2015 0:00		6.2			47696	7829	32	888	0.85	90068	61	540	190	FALSE	
THISTLE UNIT #055H	3002541488	22	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			1/8/2015 0:00		6.2			52748	8257	44	911	1	98911	73	460	190	FALSE	
PRONGHORN AHO FEDERAL #001	3002526496	6	23S	33E	G	LEA	NM		LIVINGSTON RIDGE	STRAWN			9/26/2000 0:00		5.5	1.148			20.1	0	12.2			61.1	48.8		TRUE	
THISTLE UNIT #065H	3002541303	33	23S	33E	P	Lea	NM			BONE SPRING 2ND SAND			5/7/2015 0:00		6.5			53029	9452	70	1354	1.7	102000	122	668	330	FALSE	
TAIPAN 10 STATE COM #001H	3002540743	15	23S	33E	D	Lea	NM			BONE SPRING 2ND SAND			5/14/2015 0:00		6.7			57680	10931	52	1378	1.1	112000	134	492	660	FALSE	
SEA SNAKE 35 STATE #002H	3002541599	35	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			5/14/2015 0:00		6.8			49141	6084	22	921	0.62	89000	220	269	440	FALSE	
SEA SNAKE 35 STATE #001H	3002541625	35	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			5/14/2015 0:00		6.9			48857	6766	26	1090	1.8	90000	183	655	440	FALSE	
THISTLE UNIT #053H	3002541794	28	23S	33E	B	Lea	NM			BONE SPRING 2ND SAND			5/14/2015 0:00		6.9			49335	11192	46	1560	1.3	100000	195	594	264	FALSE	
THISTLE UNIT #059H	3002541796	28	23S	33E	B	Lea	NM			BONE SPRING 2ND SAND			5/14/2015 0:00		6.6			59742	11512	106	1633	2.1	117000	220	363	374	FALSE	
THISTLE UNIT #043H	3002540898	33	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			7/16/2015 0:00		7		155146.4	0.041	51155.5	7420	35.9	868.5	1.25	94478.7	183	600	900	FALSE
THISTLE UNIT #046H	3002541118	33	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			7/16/2015 0:00		7		166100.9	0.039	55345.3	7538	8.9	884.9	1.68	101077.2	244	635	500	FALSE
THISTLE UNIT #048H	3002541253	34	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			7/16/2015 0:00		6.7		162709.3	0.039	53857.8	7649	29.6	877.2	1.03	98977.7	244	675	300	FALSE
THISTLE UNIT #050H	3002541302	34	23S	33E	P	Lea	NM			BONE SPRING 2ND SAND			7/16/2015 0:00		6.68		146169.4	0.044	47938.1	7126	53.7	824.4	1.43	88480	488	880	500	FALSE
THISTLE UNIT #065H	3002541303	33	23S	33E	P	Lea	NM			BONE SPRING 2ND SAND			7/16/2015 0:00		6.73		159590.4	0.04	52593.6	7634	38.6	905.6	1.28	97178.1	183	635	450	FALSE
SEA SNAKE 35 STATE #001H	3002541625	35	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			7/16/2015 0:00		7		146173.6	0.044	48514.2	6777	38.9	763.1	1.51	88880	207.4	635	60	FALSE
SEA SNAKE 35 STATE #003H	3002542283	35	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			7/23/2015 0:00		7		118969.6	0.054	39811	5202	26.1	612.4	1.05	71983.8	231.8	820	40	FALSE
THISTLE UNIT #018H	3002540010	28	23S	33E	C	Lea	NM			DELAWARE-BRUSHY CANYON			9/9/2015 0:00		6.5		182009	0.035	56667.9	11090	47.3	1461	2	111474.9	61	600	260	FALSE
THISTLE UNIT #020H	3002540015	27	23S	33E	D	Lea	NM			DELAWARE-BRUSHY CANYON			9/9/2015 0:00		6.5		167967.8	0.038	53995.6	9118	40.6	1014	1.19	102676.8	73.2	425	200	FALSE
TAIPAN 10 STATE COM #001H	3002540743	15	23S	33E	D	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		6.5		183673.6	0.035	59642.2	9492	48.1	1067	1.08	111974.8	61	765	230	FALSE
THISTLE UNIT #056H	3002541340	22	23S	33E	O	Lea	NM						9/9/2015 0:00		5.43		135196.2	0.047	43673.3	7109	54.7	790.2	1.15	81881.5	500.2	765	600	FALSE
THISTLE UNIT #057H	3002541341	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		7		130630.5	0.049	47917.4	2149	12.9	341.3	0.3	78382.3	561	710	210	FALSE
THISTLE UNIT #058H	3002541342	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		5.63		172311.7	0.037	54411.1	10120	45.1	1126	1.24	105276.3	305	425	550	FALSE
THISTLE UNIT #062H	3002541466	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		7.54		106744.9	0.06	32885.4	5523	0.8	1747	0.1	64285.5	976	1205	600	FALSE
THISTLE UNIT #063H	3002541467	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		5.62		164203.7	0.039	53030.1	8746	37.1	968.7	1.11	100077.4	193	635	670	FALSE
THISTLE UNIT #064H	3002541468	22	23S	33E	O	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		5.03		184017	0.035	59935.2	9356	57.2	1065	1.28	111874.8	256.2	940	810	FALSE
THISTLE UNIT #061H	3002541487	22	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		4.63		236468.1	0.027	65180.9	19100	44.5	4014	3.95	146666.9	75.2	425	640	FALSE
THISTLE UNIT #055H	3002541488	22	23S	33E	M	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		5.72		217107.3	0.029	62587.2	15640	25.7	3227	3.22	133869.8	256.2	635	1100	FALSE
THISTLE UNIT #059H	3002541796	28	23S	33E	B	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		5.1		140110.6	0.046	47035.8	5996	30.2	763	1.97	84880.9	439.2	740	780	FALSE
THISTLE UNIT #051H	3002541896	28	23S	33E	D	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		5.16		101658.2	0.063	34198.8	4245	13.2	578.6	0.37	61286.2	158.6	1030	170	FALSE
THISTLE UNIT #052H	3002541897	28	23S	33E	C	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		6.5		161549.2	0.04	51767.5	8900	56.2	1004	1.25	98777.7	73.2	425	250	FALSE
HORNED VIPER 20 FEDERAL COM #001H	3002541913	20	23S	33E	N	Lea	NM			BONE SPRING 2ND SAND			9/9/2015 0:00		7		130154.4	0.049	49951.8									

Table 4 - Chemistry of Produced Water from Formations

wellname	api	section	township	range	unit	county	state	field	formation	depth	samplesource	sampledate	ph	specificgravity	specificgravity_temp_F	tds_mgL	resistivity_ohm_cm	resistivity_ohm_cm_temp_F	conductivity	conductivity_temp_F	sodium_mgL	calcium_mgL	magnesium_mgL	chloride_mgL	bicarbonate_mgL	sulfate_mgL
MCKITTRICK FED #1	3001500135	25	22S	25E	G	EDDY	NM		DEVONIAN		DST					16200							8762	290	1175	
MCKITTRICK FED #1	3001500135	25	22S	25E	G	EDDY	NM		DEVONIAN		DST					17510							9389	664	982	
CARNERO PEAK UT #001	3001510053	31	22S	25E	A	EDDY	NM		DEVONIAN		DST					14601							7236	515	1487	
CARNERO PEAK UT #001	3001510053	31	22S	25E	A	EDDY	NM		DEVONIAN		DST					15780							8126	336	1467	
CARNERO PEAK UT #001	3001510053	31	22S	25E	A	EDDY	NM		DEVONIAN		DST					15580							7853	487	1488	
BANDANA POINT UT #001	3001500044	13	23S	23E	O	EDDY	NM	BANDANA POINT	DEVONIAN		DST					15500							8020	500	1190	
TORTOISE ASB COM #001	3001510490	29	23S	24E	G	EDDY	NM		DEVONIAN		DST					17861							7760	490	3100	
TORTOISE ASB COM #001	3001510490	29	23S	24E	G	EDDY	NM		DEVONIAN		DST					15601							7780	476	1600	
REMUDA BASIN UNIT #001	3001503691	24	23S	29E	J	EDDY	NM	REMUDA	DEVONIAN		SWAB					64582							37500	610	1700	
REMUDA BASIN UNIT #001	3001503691	24	23S	29E	J	EDDY	NM	REMUDA	DEVONIAN		SWAB					56922							29000	1740	4980	
BELL LAKE UNIT #006	3002508483	6	23S	34E	O	LEA	NM	BELL LAKE NORTH	DEVONIAN		HEATER TREATER		7			71078							42200	500	1000	
ANTELOPE RIDGE UNIT #003	3002521082	34	23S	34E	K	LEA	NM	ANTELOPE RIDGE	DEVONIAN		UNKNOWN	14/11/1967 0:00	6,9			80187							47900	476	900	
ANTELOPE RIDGE UNIT #003	3002521082	34	23S	34E	K	LEA	NM	ANTELOPE RIDGE	DEVONIAN		UNKNOWN	14/11/1967 0:00	6,9			80187							47900	476	900	
CLINE FEDERAL #001	3002510717	14	23S	37E	K	LEA	NM	CLINE	DEVONIAN		PRODUCTION TEST					118979							71280	462	2593	
E C HILL B FEDERAL #001	3002510945	34	23S	37E	A	LEA	NM	TEAGUE	DEVONIAN		UNKNOWN					112959							67390	288	2765	
E C HILL D FEDERAL #001	3002510947	34	23S	37E	H	LEA	NM	TEAGUE	DEVONIAN		UNKNOWN					35639										
E C HILL D FEDERAL #004	3002510950	34	23S	37E	A	LEA	NM	TEAGUE	DEVONIAN		UNKNOWN					236252							147000	129	781	
HUAPACHE #003	3001500020	22	24S	22E	F	EDDY	NM		DEVONIAN		DST					3110							48	246	2020	
JURNEGAN POINT #001	3001510280	5	24S	25E	M	EDDY	NM	WILDCAT	DEVONIAN		DST	14/12/1964 0:00	7			229706							136964	198	2511	
JURNEGAN POINT #001	3001510280	5	24S	25E	M	EDDY	NM	WILDCAT	DEVONIAN		DST	14/12/1964 0:00	7			203100							121100	175	2220	
WHITE CITY PENN GAS COM UNIT 1 #001	3001500408	29	24S	26E	A	EDDY	NM		DEVONIAN		DST	01/03/1960 0:00	7	1,012	60		0,36	75	25596	64	6072	1002	132	10120	653	1336
STATE B COM #001	3002509716	36	24S	36E	C	LEA	NM	CUSTER	DEVONIAN		UNKNOWN					176234							107400	128	1004	
ELLIOTT H FEDERAL #001	3002512272	31	24S	38E	H	LEA	NM	DOLLARHIDE	DEVONIAN		WELLHEAD					58687										
ELLIOTT H FEDERAL #001	3002512272	31	24S	38E	H	LEA	NM	DOLLARHIDE	DEVONIAN		WELLHEAD					57018										
WEST DOLLARHIDE DEVONIAN UNIT #104	3002512297	32	24S	38E	I	LEA	NM	DOLLARHIDE	DEVONIAN		WELLHEAD					50858							30200	183	980	
WESTATES FEDERAL #004	3002511389	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		DST	17/06/1961 0:00	6			80880							46200	340	3050	
WESTATES FEDERAL #004	3002511389	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		DST					84900							48600	840	2650	
WESTATES FEDERAL #004	3002511389	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		DST					72200							41000	370	2960	
WESTATES FEDERAL #004	3002511389	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		DST					80900							46200	340	3050	
WESTATES FEDERAL #004	3002511389	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		DST					77600							44000	550	3240	
WESTATES FEDERAL #004	3002511389	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		DST					135000							77000	650	5810	
WESTATES FEDERAL #004	3002511389	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		DST					114000							65000	280	5110	
WESTATES FEDERAL #004	3002511389	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		DST					135000							77000	500	5320	
WESTATES FEDERAL #008	3002511393	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		UNKNOWN					91058							51020	376	4783	
WESTATES FEDERAL #008	3002511393	1	25S	37E	E	LEA	NM	JUSTIS NORTH	FUSSELMAN		UNKNOWN					86847							50450	363	2544	
STATE NJ A #001	3002511398	2	25S	37E	A	LEA	NM	JUSTIS NORTH	DEVONIAN		DST					105350							59300	660	4950	
NEW MEXICO BM STATE #002	3002511407	2	25S	37E	I	LEA	NM	JUSTIS NORTH	MONTOYA		UNKNOWN					77770							45500	1800	2400	
HALE STATE #003	3002512581	2	25S	37E	H	LEA	NM	JUSTIS NORTH	MONTOYA		WELLHEAD					64916							37000	813	2500	
SOUTH JUSTIS UNIT #016F	3002511556	13	25S	37E	F	LEA	NM	JUSTIS	FUSSELMAN		UNKNOWN					57675							34030	595	1211	
LEARCY MCBUFFINGTON #008	3002511569	13	25S	37E	N	LEA	NM	203MNTY, 259FSLM	FUSSELMAN	7052		02/01/1900 0:00	7,6	1,037	78	67909			81429	67		2603	684	38887	742	2489
LEARCY MCBUFFINGTON #008	3002511569	13	25S	37E	N	LEA	NM	JUSTIS	MONTOYA		UNKNOWN					67898							38880	742	2489	
A B COATES C FEDERAL #014	3002511736	24	25S	37E	G	LEA	NM	JUSTIS	MONTOYA		UNKNOWN					39261							22840	871	1030	
SOUTH JUSTIS UNIT #023C	3002511760	25	25S	37E	C	LEA	NM	JUSTIS	FUSSELMAN		SEPARATOR					63817							35870	360	3442	
CARLSON A #002	3002511764	25	25S	37E	I	LEA	NM	JUSTIS	FUSSELMAN		DST					208280							124000	510	3400	
STATE Y #009	3002511777	25	25S	37E	A	LEA	NM	JUSTIS	FUSSELMAN		DST	17/03/1961 0:00	7,3			219570							129000	960	4630	
STATE Y #009	3002511777	25	25S	37E	A	LEA	NM	JUSTIS	FUSSELMAN		DST	18/03/1961 0:00	6,8			163430							96000	290	3780	
CARLSON B 25 #004	3002511784	25	25S	37E	P	LEA	NM	JUSTIS	FUSSELMAN		SEPARATOR					184030							112900	68	1806	
COPPER #001	3002511818	28	25S	37E	J	LEA	NM	CROSBY	DEVONIAN		UNKNOWN					27506							15270	1089	1079	
ARNOTT RAMSAY NCT-B #003	3002511863	32	25S	37E	A	LEA	NM	CROSBY	DEVONIAN	8797		02/01/1900 0:00		1,142	70							17244	5345	100382	476	
ARNOTT RAMSAY NCT-B #003	3002511863	32	25S	37E	A	LEA	NM	CROSBY	DEVONIAN		UNKNOWN					158761										
WEST DOLLARHIDE DEVONIAN UNIT #110	3002512386	5	25S	38E	B	LEA	NM	DOLLARHIDE	DEVONIAN		UNKNOWN					56776										
FARNSWORTH FEDERAL #006	3002511950	4	26S	37E	A	LEA	NM	CROSBY	DEVONIAN		UNKNOWN					31931							20450	302	591	

OSE Well Logs – NO WATER SUPPLY WELLS

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996
Artesia ▲ Carlsbad ▲ Durango ▲ Midland

July 23, 2019

Hobbs News Sun
201 N. Thorp
P.O. Box 850
Hobbs, N.M. 88240

LEGAL NOTICE

AWR Disposal LLC, 3300 N. A Street, Ste. 220, Midland, TX 79705 filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Mutumbo State SWD #1 will be located 2294 feet from the South line and 2250 feet from the East line, Section 17, Township 23 South, Range 33 East, Lea County, New Mexico. Produced water from area production will be commercially disposed into the Silurian, Fusselman and Montoya Formations at a depth of 16,930 feet to 18,671 feet at a maximum surface pressure of 3,000 psi and an average injection rate of 30,000 barrels per day. The proposed SWD well is located approximately 40 miles southwest of Eunice, New Mexico.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, NM 87505 (505) 476-3460 within 15 days of the date of this notice.

Additional information can be obtained by contacting Mr. Randall Hicks, agent for Accelerated Water Resources, LP, at 505-238-9515.

Sincerely,
R.T. Hicks Consultants



Randall Hicks
Principal

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
July 23, 2019
and ending with the issue dated
July 23, 2019.



Publisher

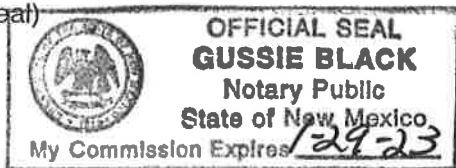
Sworn and subscribed to before me this
23rd day of July 2019.



Business Manager

My commission expires
January 29, 2023

(Seal)



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGALS

LEGAL NOTICE JULY 23, 2019

AWR Disposal LLC, 3300 N. A Street, Ste. 220, Midland, TX 79705 filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Mutumbo State SWD #1 will be located 2294 feet from the South line and 2250 feet from the East line, Section 17, Township 23 South, Range 33 East, Lea County, New Mexico. Produced water from area production will be commercially disposed into the Silurian, Fusselman and Montoya Formations at a depth of 16,930 feet to 18,671 feet at a maximum surface pressure of 3,000 psi and an average injection rate of 30,000 barrels per day. The proposed SWD well is located approximately 40 miles southwest of Eunice, New Mexico.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, NM 87505 (505) 476-3460 within 15 days of the date of this notice.

Additional information can be obtained by contacting Mr. Randall Hicks, agent for Accelerated Water Resources, LP, at 505-238-9515.

Sincerely,
R.T. Hicks Consultants
Randall Hicks
Principal
#34480

67115764

00231121

RANDALL HICKS
R.T. HICKS CONSULTANTS, LTD
901 RIO GRANDE BLVD NM
SUITE F-142
ALBUQUERQUE, NM 87104

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996
Artesia ▲ Carlsbad ▲ Durango ▲ Midland

July 22, 2019

NOTIFICATION TO INTERESTED PARTIES

Via U.S. Certified Mail – Return Receipt Requested

To Whom It May Concern:

AWR Disposal LLC, Midland, Texas, has made application to the New Mexico Oil Conservation Division to drill and complete, for salt water disposal, the Mutumbo State SWD #1. The proposed commercial operation will be for produced water disposal from area operators. As indicated in the notice below, the well is located in Section 17, Township 23 South, Range 33 East, Lea County, New Mexico.

The published notice states that the interval will be from 16,930 feet to 18,671 feet into the Silurian, Fusselman and Montoya Formations.

LEGAL NOTICE

AWR Disposal LLC, 3300 N. A Street, Ste. 220, Midland, TX 79705 filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Mutumbo State SWD #1 will be located 2294 feet from the South line and 2250 feet from the East line, Section 17, Township 23 South, Range 33 East, Lea County, New Mexico. Produced water from area production will be commercially disposed into the Silurian, Fusselman and Montoya Formations at a depth of 16,930 feet to 18,671 feet at a maximum surface pressure of 3,000 psi and an average injection rate of 30,000 barrels per day. The proposed SWD well is located approximately 40 miles southwest of Eunice, New Mexico.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, NM 87505 (505) 476-3460 within 15 days of the date of this notice.

You have been identified as a party who may be interested as an offset lessee or operator. **IF YOU WOULD LIKE AN ELECTRONIC COPY OF THE ENTIRE PERMIT PACKAGE, PLEASE SEND YOUR REQUEST TO r@rthicksconsult.com** (request a read receipt to avoid your email becoming stuck in spam).

Thank you for your attention in this matter.

Sincerely,
R.T. Hicks Consultants



Randall Hicks
Principal

OPERATORS, LEASEHOLDERS AND SURFACE OWNERS WITHIN 2 MILES -RADIUS

DATA EXTRACTED FROM TABLES 1, 2A, 2B AND 2C

ADAMS OIL & GAS PRODUCERS Mutumbo State SWD #1 PO BOX 433 WINK, TX BAD ADDR	Bureau of Land Management Mutumbo State SWD #1 620 E. Greene Street Carlsbad, NM 88220-6292	C W TRAINER Mutumbo State SWD #1 PO BOX 3788 MIDLAND, TX 79702
CHEVRON USA INC Mutumbo State SWD #1 AS WARREN PETROLEUM COMPANY P O BOX 1589 TULSA, OK 74102 Bad address	CIMAREX ENERGY CO. Mutumbo State SWD #1 600 N. Marienfeld Street Suite 600 Midland, TX 79701	COG ACREAGE LP Mutumbo State SWD #1 1293 C R 305 MIDLAND, TX 79701 Post office did not find address in system
COG OPERATING LLC Mutumbo State SWD #1 1293 C R 305 Midland, TX 79701 Post office did not find address in system	COG PRODUCTION, LLC Mutumbo State SWD #1 ONE CONCHO CENTER 600 W. ILLINOIS AVENUE MIDLAND, TX 79701	CONOCO PHILLIPS COMPANY Mutumbo State SWD #1 960 PLAZA OFFICE BLDG BARTLESVILLE, OK 74004
Delaware Water Mngt. Company Mutumbo State SWD #1 5400 LBJ Freeway Ste. 1500 Dallas, TX 75240	DEVON ENERGY PRODUCTION CO. Mutumbo State SWD #1 333 W. SHERIDAN AVENUE OKLAHOMA CITY, OK 73102	DEVON ENERGY PROD. COMPANY, LP Mutumbo State SWD #1 333 West Sheridan Ave. Oklahoma City, OK 73102
DEVON SFS OPERATING INC Mutumbo State SWD #1 20 N. BROADWAY STE 1500 OKLAHOMA CITY, OK 73102	ENDURANCE RESOURCES LLC Mutumbo State SWD #1 15455 DALLAS PARKWAY SUITE 1050 ADDISON, TX 75001	EOG RESOURCES INC Mutumbo State SWD #1 P.O. Box 2267 Midland, TX 79702
EOG Y RESOURCES, INC. Mutumbo State SWD #1 104 S 4TH ST ARTESIA, NM 88210	HUGHES PROPERTIES LLC Mutumbo State SWD #1 PO BOX 5097 CARLSBAD, NM 88221	LIMESTONE BASIN PROP RANCH Mutumbo State SWD #1 18 DESTA DRIVE MIDLAND, TX 79705
New Mexico State Land Office Mutumbo State SWD #1 310 Old Santa Fe Trail Santa Fe, NM 87501	OWL SWD OPERATING, LLC Mutumbo State SWD #1 8214 WESTCHESTER DR STE 850 DALLAS, TX 75225	OXY USA INC Mutumbo State SWD #1 PO BOX 4294 HOUSTON, TX 77210
POGO PRODUCING CO Mutumbo State SWD #1 PO BOX 10340 MIDLAND, TX 797027340		

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Postage

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Sent To

ADAMS OIL & GAS PRODUCERS
Mutumbo State SWD #1

Street and Apt. No., or PO Box No.

PO BOX 433

City, State, ZIP+4®

WINK, TX 79789

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Bureau of Land Management
Mutumbo State SWD #1

Street and Apt. No., or PO Box No.

620 E. Greene Street

City, State, ZIP+4®

Carlsbad, NM 88220-6292

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CW TRAINER
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CHEVRON USA INC
Mutumbo State SWD #1

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AS WARREN PETROLEUM COMPANY

City, State, ZIP+4®

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TULSA, OK 74102

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CIMAREX ENERGY CO.
Mutumbo State SWD #1

Street and Apt. No., or PO Box No.

600 N. Marienfeld Street

City, State, ZIP+4®

Suite 600

Midland, TX 79701

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COG ACREAGE
Mutumbo State SWD #1

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1293 C.R. 305

City, State, ZIP+4®

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COG OPERATING LLC

Sent To Mutumbo State SWD #1

1293 C R 305

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COG PRODUCTION, LLC

Sent To Mutumbo State SWD #1

ONE CONCHO CENTER

Street and Apt. No., or PO Box No. 600 W. ILLINOIS AVENUE

City, State, ZIP+4® MIDLAND, TX 79701

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Postage \$0.55

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NOCO PHILLIPS COMPANY

Sent To Mutumbo State SWD #1

960 PLAZA OFFICE BLDG

Street and Apt. No., or PO Box No. BARTLESVILLE, OK 74004

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Postage \$0.55

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Delaware Water Mngt. Company

Sent To Mutumbo State SWD #1

5400 LBJ Freeway

Street and Apt. No., or PO Box No. Ste. 1500

City, State, ZIP+4® Dallas, TX 75240

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OK ENERGY PROD. COMPANY, LP

Sent To Mutumbo State SWD #1

333 West Sheridan Ave.

Street and Apt. No., or PO Box No. OKLAHOMA CITY, OK 73102

City, State, ZIP+4®

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Postage \$0.55

Total Postage and Fees \$6.85
OK ENERGY PRODUCTION CO.

Sent To Mutumbo State SWD #1

333 W. SHERIDAN AVENUE

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Postage \$0.55

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DEVON SFS OPERATING INC
Mutumbo State SWD #1

Sent To 20 N. BROADWAY
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City, State, ZIP+4® OKLAHOMA CITY, OK 73102

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Postage \$0.55

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DURANCE RESOURCES LLC
Mutumbo State SWD #1

Sent To 15455 DALLAS PARKWAY
SUITE 1050
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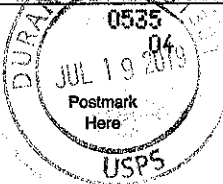
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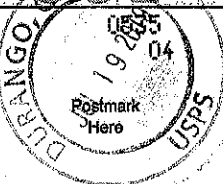
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July 18, 2019

Mr. Phillip Goetze, P.G.
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: AWR Disposal LLC Mutumbo State SWD#1
UL M, Section 17 T23S R33E, Lea County

Dear Mr. Goetze:

On behalf of AWR Disposal LLC, R.T. Hicks Consultants is providing data and an opinion regarding the probability that injection of wastewater in the above referenced well at the proposed rates will cause seismic events of sufficient magnitude to create damage. It is our understanding that OCD is interested in such an opinion as part of the SWD approval process. We elected to provide this opinion as a separate submission as the C-108 does not specifically require such an opinion.

We relied upon the following data to develop our opinion

- State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity, Jens-Erik Lund Snee and Mark D. Zoback, The Leading Edge, February 2018¹
- Plate 5, which is reproduced from the Snee and Zoback publication, which uses the following references
 - Crone, A. J., and R. L. Wheeler, 2000, Data for Quaternary faults, liquefaction features, and possible tectonic features in the Central and Eastern United States, east of the Rocky Mountain front; U.S. Geological Survey Open-File Report.
 - 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, a digital geologic map of New Mexico in ARC/INFO format: U.S. Geological Survey Open-File Report.
 - 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: USGS Order no. 04CRSA0834 and Requisition no. 04CRPR01474.
 - NMOCD database of oil and gas wells
- Plate 5, which shows the distribution of active and new SWD wells in the area of the proposed AWR Disposal SWD well
- Stratigraphic and lithologic information from two deep wells in the Delaware Basin
- Data on the thickness and lithology of the Simpson Group from the Texas Bureau of Economic Geology²

¹ https://scits.stanford.edu/sites/default/files/3702_tss_lundsnee_v2.pdf

² http://www.beg.utexas.edu/resprog/permianbasin/PBGSP_members/writ_synth/Simpson.pdf

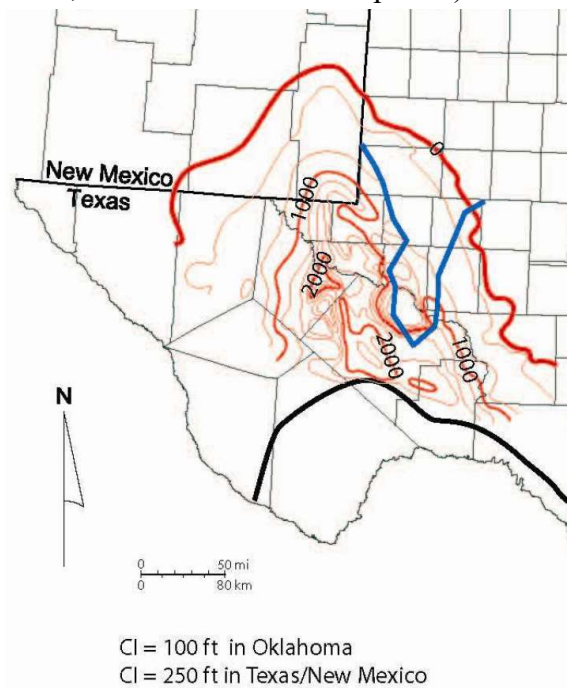
Plate 5 reproduces Figure 3 of the 2018 publication of Snee and Zoback and shows

1. Fault traces based upon the references provided above for which Dr. Snee and Dr. Zoback provide a value of the fault slip potential (FSP)
2. Areas of documented seismic activity, and a magnitude 2.0-2.9 earthquake that occurred between 1970-2004 about 11 miles south of the proposed Mutumbo State SWD #1. A slightly larger magnitude and more recent seismic event is reported about 15 miles West of the Mutumbo State SWD #1 well location.
3. Although Plate 5 does not show faults that may be identified in confidential seismic data owned by oil and gas operators, the closest mapped basement fault that was re-activated during Woodford time is about 4 miles to the east) exhibits a low FSP (less than 5%) based upon the modeling and analysis of Snee and Zoback referenced above
4. Other mapped faults in southern Lea County shown on Plate 5 also show a low FSP, except for part of southwest-northeast trending fault about 32 miles north-northwest of the Mutumbo State SWD #1 well that has a FSP of about 25 – 33% in the central portion of this fault trace.

Plate 6 reproduces the major elements of Plate 5 in the inset map and also shows that within an 6-mile radius around the proposed Mutumbo SWD #1, the OCD database shows about 0 active and 5 new Devonian SWDs, which translates into an average density of about one SWD for every 23 square miles.

Figure 4 from the referenced Bureau of Economic Geology (The Middle-Upper Ordovician Simpson Group of the Permian Basin: Deposition, Diagenesis, And Reservoir Development) is attached to this letter and the portion of that figure for the Delaware Basin is shown to the right. In southern Lea County the mapped thickness appears to be 500-1500 feet thick (note one contour line appears to be missing on the map). This unit, which is clay-rich carbonate interbedded with shale and sandstone, provides an excellent permeability/pressure barrier between the injection zone and the basement faults that were re-activated during Woodford time.

Data from the Amoco Federal CW Com 1 (3002528119) show that the thickness of the Simpson in the Antelope Ridge area of Lea County (Section 3 24S 34E) is about 450 feet thick with. This is consistent with Figure 4 of the BEG paper (probably because this well was used to produce the isopach map).



We contend that the data permit conclusion that unmapped faults (which may be located by confidential seismic data that AWR Disposal does not possess) near the Mutumbo State SWD #1 would be dominantly north-south normal faults, as is common in Lea County. The data on Plate

July 18, 2019

Page 3

6 permit a conclusion that faults near the Mutumbo State SWD #1 are also most likely to exhibit a low FSP, like the mapped faults shown on Plate 5.

Given the density of Devonian SWDs (planned/new and active) near the proposed Mutumbo State SWD #1 well and the high likelihood that any unmapped faults in the area would exhibit a low FSP, the probability that injection into the Mutumbo State SWD #1 would cause an increase in pore pressure to trigger a seismic event of sufficient magnitude to cause damage is very low.

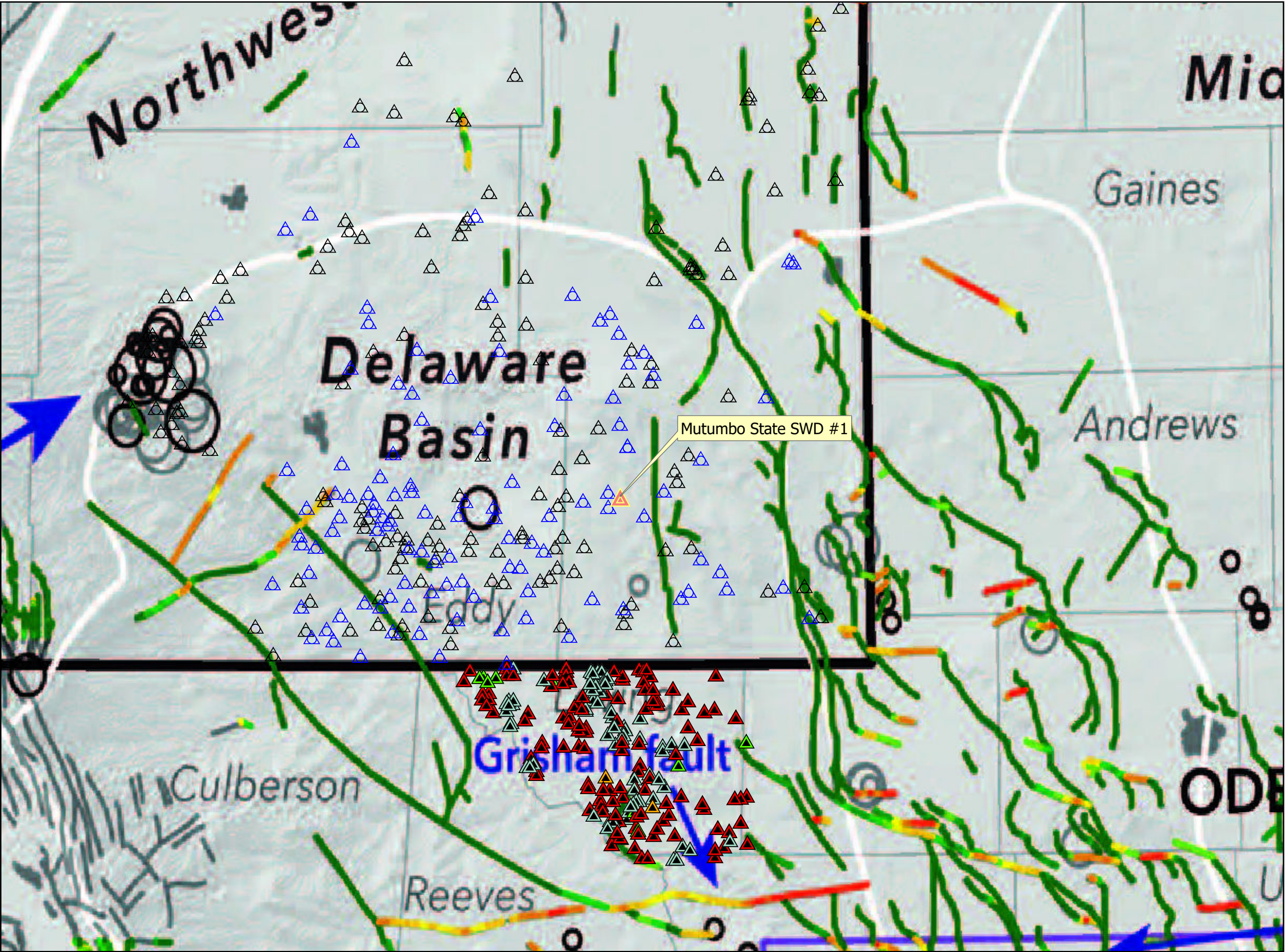
The users of this letter should recognize the uncertainties of using seismic maps of the Permian Basin to determine probability that injection of wastewater into a single SWD well could cause seismic events of sufficient magnitude to cause damage. However, on a regional basis injection by numerous wells into the Devonian/Fusselman/Montoya interval will raise the hydrostatic pressure. If pressure increases sufficiently, fluid could migrate from the injection zone along fault planes, up and down. Downward fluid migration will be intercepted first by the sandstone units of the Simpson Group. After fluid pressure increases in these sandstones, fluid would migrate downward into the Ellenberger Formation, which lies beneath the Simpson Group. This downward migration will next enter the permeable units of the Ellenberger and, over time, increase the fluid pressure. After fluid pressure in the Ellenberger is sufficiently large to cause downward migration along fault planes or other conduits, the migrating fluid will, in some areas, enter a thinner horizon of granite wash. Downward migrating fluids from the injection zone could then enter basement fault planes if the pressure in the granite wash horizon is sufficient, and reduce the frictional resistance (lubricate the faults). Reduction in the frictional force in faults due to fluid invasion can and has caused seismic events. In my opinion, the probability that injection into the Mutumbo State SWD will measurably contribute to the events described above and will cause a seismic event resulting in damage is so low as to be nil.

Sincerely,
R.T. Hicks Consultants

A handwritten signature in black ink, appearing to read "Randall T. Hicks". The signature is stylized with a large, looped "R" and a cursive "H".

Randall T. Hicks
Principal

Copy: AWR Disposal LLC



- SWD
- Oil and Gas (NMOCD)
- Salt Water Injection, Active
- Salt Water Injection, New
- Loving, Tx Oil and Gas Wells
- Injection/Disposal From Gas
- Injection/Disposal From Oil
- Injection/Disposal From Oil/Gas
- Injection/Disposal Well

- Seismicity:**
- M_w 2.0-2.9
 - M_w 3.0-3.9
 - M_w 4.0+
 - Since 2005
 - 1970-2004
- Fault slip potential (%):**
- 0
 - 10
 - 20
 - 30
 - 40
 - 50+

Seismic and Fault Slip Potential-
Ewing et al. (1990), Green and Jones (1997), Ruppel
et al. (2005), and the USGS Quaternary Faults and
Folds Database (Crone and Wheeler, 2000).



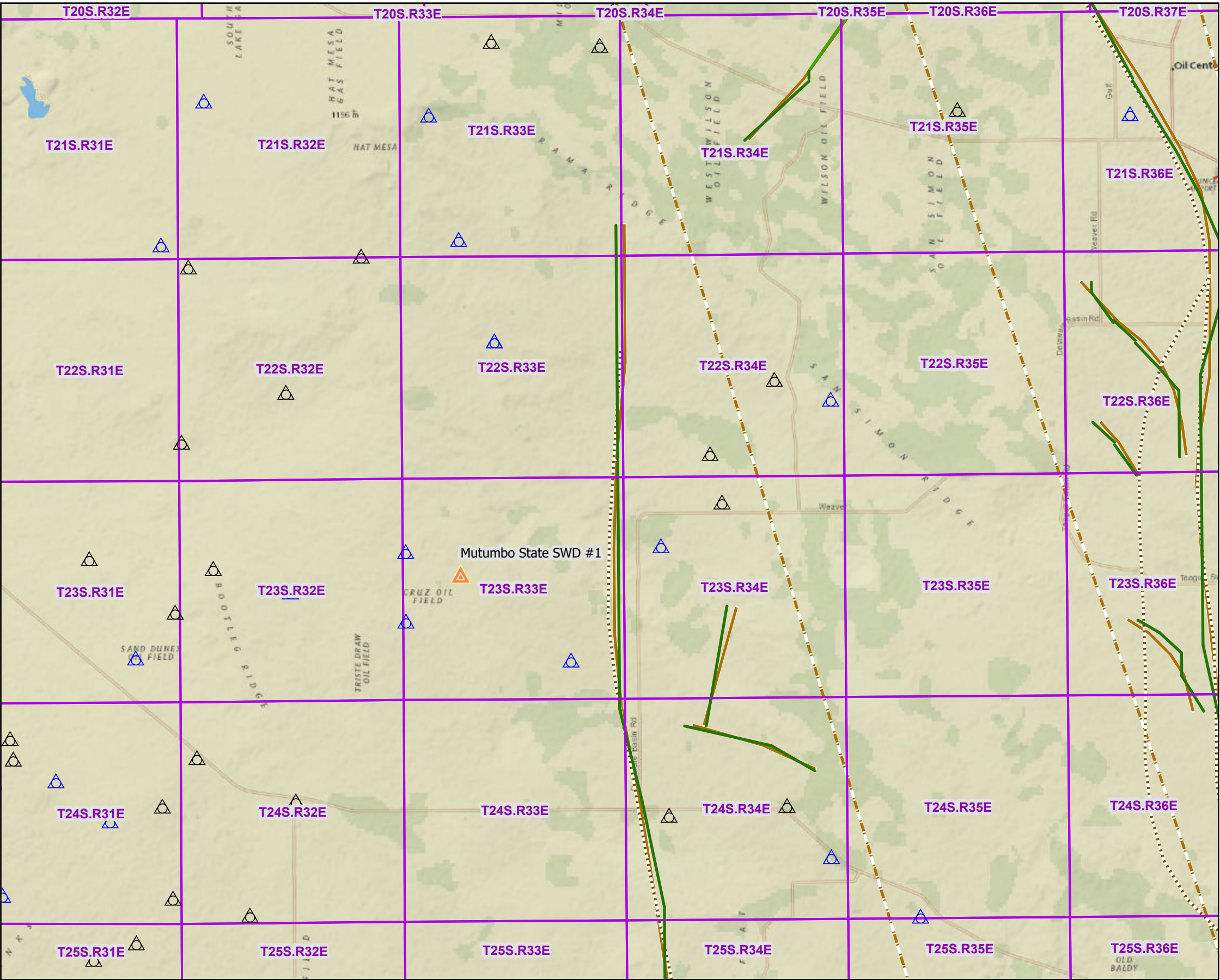
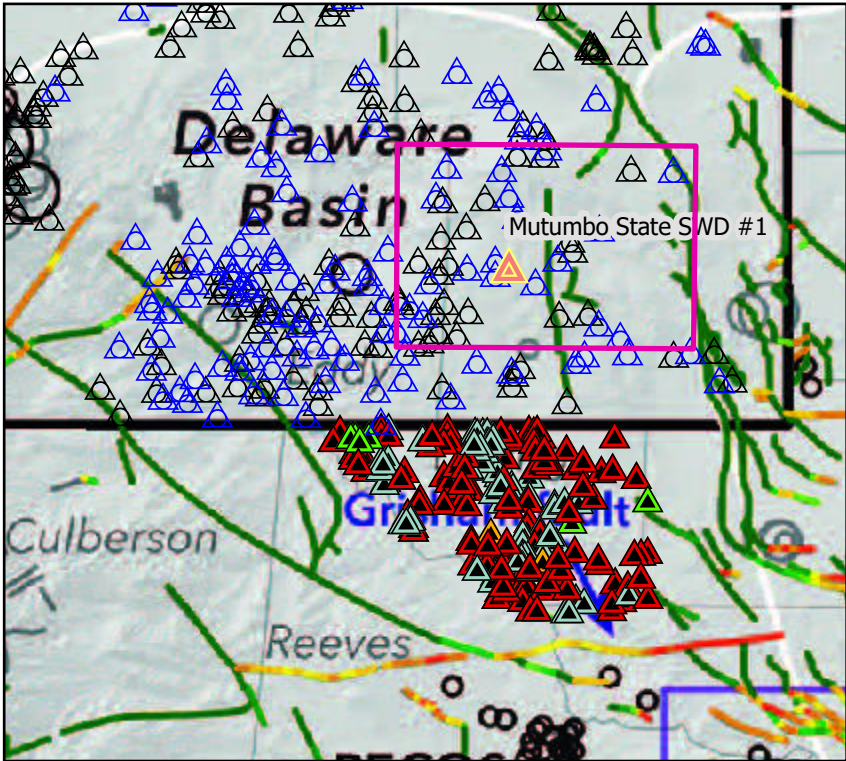
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901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Seismicity and Fault Slip Potential

AWR Disposal, LLC
Mutumbo State SWD #1

Plate 5

July 2019



- SWD
- OCD Wells
- Salt Water Injection, Active
- Salt Water Injection, New
- Faults
- Fault - Woodford
- Fault - Precambrian
- Fault - Basement
- Fault Slip Potential (%)
- <5
- 5 - 10
- 10 - 15

Seismic and Fault Slip Potential-
Ewing et al. (1990), Green and Jones (1997), Ruppel
et al. (2005), and the USGS Quaternary Faults and
Folds Database (Crone and Wheeler, 2000).



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Fault Slip Potential
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Plate 6
July 2019