

Application

Part *II*

Tables

Table 1	OCD wells within the area of review
Table 2	Mineral Interests and Affected Persons within area of review
Table 3	Produced Water Chemistry of Nearby Wells
Table 4	Formational water quality data

Table 1
Oil and Gas Well Operators within 1 Mile AOR

API	Ogrid	Ogrid Name	Well Type	Status	Well Name	District	ULSTR	Total Depth	Pool ID
30-025-08486	233545	BOLD ENERGY, L.P.	G	P	ANTELOPE RIDGE UNIT #001	1	N-27-23S-34E	14832	[70360] ANTELOPE RIDGE, ATOKA (GAS)
30-025-24003	168687	SIANA OPERATING LLC	S	A	CURRY FEDERAL #002	1	N-22-23S-34E	13500	[96100] SWD, DELAWARE
30-025-24523	209564	WILDCAT ENERGY LLC	O	A	ANTEBELLUM UNIT #001	1	N-21-23S-34E	14207	[70440] ANTELOPE RIDGE, MORROW (GAS); [96322] BELL LAKE, DELAWARE, EAST
30-025-26868	16696	OXY USA INC	G	A	ANTELOPE RIDGE UNIT #008	1	H-28-23S-34E	13850	[70360] ANTELOPE RIDGE, ATOKA (GAS)
30-025-27047	16696	OXY USA INC	G	A	ANTELOPE RIDGE UNIT #007	1	G-27-23S-34E	13574	[70360] ANTELOPE RIDGE, ATOKA (GAS); [70450] ANTELOPE RIDGE, STRAWN (GAS)
30-025-28872	25575	EOG Y RESOURCES, INC.	G	P	KELLER ATF STATE #001	1	G-21-23S-34E	14000	[2209] ANTELOPE RIDGE, BONE SPRING, WEST; [2215] ANTELOPE RIDGE, CHERRY CANYON, SOUTH; [70360] ANTELOPE RIDGE, ATOKA (GAS); [70450] ANTELOPE RIDGE, STRAWN (GAS)
30-025-32543	4323	CHEVRON U S A INC	O	A	PAPAGAYO FEDERAL #001	1	M-27-23S-34E	8900	[96034] WILDCAT, GROUP 3; [96322] BELL LAKE, DELAWARE, EAST
30-025-33808	4323	CHEVRON U S A INC	O	A	BONANZA FEDERAL #001	1	I-28-23S-34E	7810	[96322] BELL LAKE, DELAWARE, EAST
30-025-34109	21712	STRATA PRODUCTION CO	O	P	BONANZA FEDERAL #002	1	P-28-23S-34E	7700	
30-025-34338	4323	CHEVRON U S A INC	O	A	BONANZA FEDERAL #003	1	B-28-23S-34E	8959	[96322] BELL LAKE, DELAWARE, EAST
30-025-37616	4323	CHEVRON U S A INC	O	A	KELLER 33 STATE #002	1	A-33-23S-34E	8800	[96322] BELL LAKE, DELAWARE, EAST
30-025-37625	16696	OXY USA INC	G	A	ANTELOPE RIDGE UNIT #012	1	A-33-23S-34E	13450	[70440] ANTELOPE RIDGE, MORROW (GAS)
30-025-37866	4323	CHEVRON U S A INC	O	A	KELLER 34 STATE #002	1	D-34-23S-34E	8800	[96403] WILDCAT, BONE SPRING; [97621] ANTELOPE RIDGE, BONE SPRING, SW
30-025-37903	147179	CHESAPEAKE OPERATING, INC.	O	P	KELLER 22 FEDERAL #001	1	O-22-23S-34E	8850	[96322] BELL LAKE, DELAWARE, EAST
30-025-37905	4323	CHEVRON U S A INC	O	A	KELLER 27 FEDERAL #001	1	L-27-23S-34E	8883	[96322] BELL LAKE, DELAWARE, EAST
30-025-37906	147179	CHESAPEAKE OPERATING, INC.	O	P	KELLER 27 FEDERAL #002	1	K-27-23S-34E	8750	[96322] BELL LAKE, DELAWARE, EAST
30-025-37907	4323	CHEVRON U S A INC	O	C	KELLER 27 FEDERAL #003C	1	F-27-23S-34E	0	
30-025-38243	4323	CHEVRON U S A INC	O	C	KELLER 27 FEDERAL #006C	1	E-27-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-38257	147179	CHESAPEAKE OPERATING, INC.	O	C	KELLER 28 FEDERAL #001P	1	P-28-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-38331	4323	CHEVRON U S A INC	O	C	KELLER 28 FEDERAL #002C	1	H-28-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-38359	4323	CHEVRON U S A INC	O	C	KELLER 27 FEDERAL #007C	1	N-27-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-39137	147179	CHESAPEAKE OPERATING, INC.	O	C	KELLER 28 FEDERAL #001P	1	P-28-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-42556	14744	MEWBOURNE OIL CO	O	C	WILDCAT 21 MP FEDERAL COM #001C	1	M-21-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-42954	229137	COG OPERATING LLC	O	A	BROADCASTER 29 FEDERAL #004H	1	P-20-23S-34E	11563	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-43397	14744	MEWBOURNE OIL CO	O	A	GAZELLE 22 B3MD FEDERAL COM #001H	1	M-22-23S-34E	11498	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-43398	14744	MEWBOURNE OIL CO	O	N	GAZELLE 22 B3NC FEDERAL COM #002H	1	N-22-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-43399	372165	CENTENNIAL RESOURCE PRODUCTION, LLC	O	N	DANDIE 22 FEDERAL COM #602H	1	O-22-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST
30-025-44941	14744	MEWBOURNE OIL CO	O	A	GAZELLE 22 B2MD FEDERAL COM #002H	1	M-22-23S-34E	10454	[2209] ANTELOPE RIDGE, BONE SPRING, WEST; [98307] NEEDMORE TANK, BONE SPRING
30-025-45646	14744	MEWBOURNE OIL CO	O	N	GAZELLE 22 B2NC FEDERAL COM #002H	1	N-22-23S-34E	0	[2209] ANTELOPE RIDGE, BONE SPRING, WEST

Township	Range	Section	Unit Letter	Lease Number	Leasee (O & G Minerals)	Leassor (O & G Minerals)	Surface Owner	UPC
23S	34E	20	I	NMNM 018306	WILLIAMSON J C	BLM (U.S.)	Bureau of Land Management	4199136266266
23S	34E	20	P	NMNM 018306	WILLIAMSON J C	BLM (U.S.)	Bureau of Land Management	4199136266266
23S	34E	21	E	V082410003	COG OPERATING LLC	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	F	V082410003	COG OPERATING LLC	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	G	V082410003	COG OPERATING LLC	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	H	V082410003	COG OPERATING LLC	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	I	NMNM 017446A	TENISON OIL CO	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	J	NMNM 0556297	ASHER RESOURCES	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	K	L043330006	WILDCAT ENERGY LLC	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	L	L043330006	WILDCAT ENERGY LLC	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	M	L043330006	WILDCAT ENERGY LLC	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	N	L043330006	WILDCAT ENERGY LLC	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	O	NMNM 0556297	ASHER RESOURCES	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	21	P	NMNM 0556297	ASHER RESOURCES	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200136266265
23S	34E	22	E	LG76410002	SIANA OIL & GAS CO.	State (NM)	State of New Mexico	4201136265133
23S	34E	22	F	LG76410002	SIANA OIL & GAS CO.	State (NM)	State of New Mexico	4201136265133
23S	34E	22	J	NMNM 132073	Not Listed	BLM (U.S.)	Bureau of Land Management	4201136267397
23S	34E	22	K	NMNM 132073	Not Listed	BLM (U.S.)	Bureau of Land Management	4201136267397
23S	34E	22	L	NMNM 132073	Not Listed	BLM (U.S.)	Bureau of Land Management	4201136267397
23S	34E	22	M	NMNM 132073	Not Listed	BLM (U.S.)	Bureau of Land Management	4201136267397
23S	34E	22	N	NMNM 132073	Not Listed	BLM (U.S.)	Bureau of Land Management	4201136267397
23S	34E	22	O	NMNM 132073	Not Listed	BLM (U.S.)	Bureau of Land Management	4201136267397
23S	34E	27	B	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	C	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	D	NMNM 0155160	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	E	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	F	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	G	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	J	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	K	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	L	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	M	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	N	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	27	O	NMLC 0071949	OXY USA WTP LP	BLM (U.S.)	Bureau of Land Management	4201137266265
23S	34E	28	A	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	B	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	C	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	D	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	E	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	F	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	G	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	H	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	I	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	J	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	K	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	L	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	M	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265

Township	Range	Section	Unit Letter	Lease Number	Leasee (O & G Minerals)	Leassor (O & G Minerals)	Surface Owner	UPC
23S	34E	28	N	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	O	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	28	P	NMLC 0067715	OXY USA WTP LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4200137266265
23S	34E	29	A	NMNM 092199	DEVON ENERGY PROD CO LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4199137266266
23S	34E	29	B	NMNM 092199	DEVON ENERGY PROD CO LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4199137266266
23S	34E	29	G	NMNM 092199	DEVON ENERGY PROD CO LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4199137266266
23S	34E	29	H	NMNM 092199	DEVON ENERGY PROD CO LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4199137266266
23S	34E	29	I	NMNM 092199	DEVON ENERGY PROD CO LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4199137266266
23S	34E	29	P	NMNM 092199	DEVON ENERGY PROD CO LP	BLM (U.S.)	LIMESTONE BASIN PROP RANCH LLC	4199137266266
23S	34E	33	A	K002800003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200138266266
23S	34E	33	B	K021490003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200138266266
23S	34E	33	C	K002800003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200138266266
23S	34E	33	D	K002800003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200138266266
23S	34E	33	F	K002800003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200138266266
23S	34E	33	G	K021490003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200138266266
23S	34E	33	H	K002800003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4200138266266
23S	34E	34	C	OG00200003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4201138279261
23S	34E	34	D	OG00200003	OXY NM LP	State (NM)	LIMESTONE BASIN PROP RANCH LLC	4201138279261

wellname	api	latitude	longitude	section	township	range	unit	ftgrs	ftgww	county	state	field	formation	samplesource	sampledate	ph	tds_mgl	resistivity_ohm_cm	sodium_mgl	calcium_mgl	iron_mgl	magnesium_mgl	manganese_mgl	chloride_mgl	bicarbonate_mgl	sulfate_mgl	o2_mgl	
RIO BLANCO 4 FEDERAL COM #003	3002536425	32.3309593	-103.4718094	4	23S	34E	J	1650S	1650E	Lea	NM	BELL LAKE NORTH SWD	DEVONIAN DELAWARE	HEATER TREATOR UNKNOWN	9/3/2014 0:00	6.1	179000.8		53519.9	12080.6	38.7	1748.7	2.4	109000	122	0		
BELL LAKE UNIT #006	3002508483	32.3282585	-103.507103	6	23S	34E	O	660S	1980E	LEA	NM					7	71078									42200	500	1000
BELL LAKE UNIT #002	3002508489	32.2701836	-103.5112457	30	23S	34E	N	660S	3300E	LEA	NM						52115									32200	451	529
RIO BLANCO 4 FEDERAL COM #003	3002536425	32.3309593	-103.4718094	4	23S	34E	J	1650S	1650E	Lea	NM				10/15/2015 0:00	7	254017.1	0.025	62818	24835.8	47	4233.5	5.48	160463.8	244	425		
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				10/15/2015 0:00	6.07	185742	0.034	60151.2	9297	80.6	1501	1.68	113474.4	341.6	560		
CABALLO 9 STATE #001	3002534577	32.321888	-103.4814224	9	23S	34E	E	1650N	660W	Lea	NM				9/10/2014 0:00	7.81	71862.4		24399.6	2685.9	462.1	367.8	2.86	42700	576	0		
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				9/10/2014 0:00	6.9	71718.6		23830.8	2540	0	346.3	0	42400	610	170		
RIO BLANCA 4 FEDERAL COM #001	3002534515	32.3354988	-103.4771652	4	23S	34E	F	1980N	1980W	Lea	NM				9/8/2004 0:00	6.1	43388.1		13982.1	1697	363	243		25721	207	574		
RIO BLANCA 4 FEDERAL COM #001	3002534515	32.3354988	-103.4771652	4	23S	34E	F	1980N	1980W	Lea	NM				12/16/2004 0:00	6.1	70316.5		25492.9	1361	7	162		41669	228.1	1011		
RIO BLANCO 9 STATE #001	3002536302	32.3246078	-103.4733582	9	23S	34E	B	660N	2129E	Lea	NM				12/16/2004 0:00	5.6	65810.3		15070.8	6754	28	2137		41261	165.9	277		
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				12/16/2004 0:00	6.2	71521.1		25245.7	1754	5	255		42308	207.4	1176		
RIO BLANCA 4 FEDERAL COM #001	3002534515	32.3354988	-103.4771652	4	23S	34E	F	1980N	1980W	Lea	NM				4/26/2005 0:00	5.7	84267.8		28936.1	2670	64	383		50154	153.7	1230		
RIO BLANCO 9 STATE #001	3002536302	32.3246078	-103.4733582	9	23S	34E	B	660N	2129E	Lea	NM				4/26/2005 0:00	5.9	83217.6		28207.2	2817	1	493		49511	290.4	1188		
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				4/26/2005 0:00	5.8	81393.3		27656.1	2657	9.5	497		48230	331.8	1340		
RIO BLANCA 4 FEDERAL COM #001	3002534515	32.3354988	-103.4771652	4	23S	34E	F	1980N	1980W	Lea	NM				5/23/2005 0:00	5.9	76404.4		25237.5	2495	1087	329		45259	290.4	1093		
RIO BLANCO 9 STATE #001	3002536302	32.3246078	-103.4733582	9	23S	34E	B	660N	2129E	Lea	NM				5/23/2005 0:00	5.9	74771.3		25099.8	2724	5	454		44417	311.1	1123		
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				5/23/2005 0:00	5.8	72187.8		24914.3	2151	7.5	345		42673	331.8	1198		
RIO BLANCA 4 FEDERAL COM #001	3002534515	32.3354988	-103.4771652	4	23S	34E	F	1980N	1980W	Lea	NM				6/30/2005 0:00	6.1	74296		25272.2	2538	47	343		44022	456.3	1031		
RIO BLANCO 9 STATE #001	3002536302	32.3246078	-103.4733582	9	23S	34E	B	660N	2129E	Lea	NM				6/30/2005 0:00	6	74579		25426.9	2472	33	363		44159	414.8	1112		
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				6/30/2005 0:00	6.1	73515.4		25199.7	2394	22	320		43444	456.3	1134		
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				4/10/2007 0:00	6.6	73741.5		24583.3	2814	5	363	0.2	42853	732	1724		
ANTELOPE RIDGE UNIT #003	3002521082	32.2593155	-103.4610748	34	23S	34E	K	1980S	1650W	LEA	NM	ANTELOPE RIDGE	DEVONIAN	UNKNOWN	11/14/1967 0:00	6.9	80187						47900	476	900			
CABALLO 9 STATE #001	3002534577	32.321888	-103.4814224	9	23S	34E	E	1650N	660W	Lea	NM				5/14/2014 0:00	6.9	70554		22500.6	2476.8	0	337.7	0	42521	732	1299		
RIO BLANCO 9 STATE #001	3002536302	32.3246078	-103.4733582	9	23S	34E	B	660N	2129E	Lea	NM				5/14/2014 0:00	6.2	192154		54068.3	13499.7	59.3	1983	2.7	119614	122	943		
BELL LAKE UNIT #009	3002520261	32.3028488	-103.5110779	18	23S	34E	K	1980S	1980W	LEA	NM	BELL LAKE NORTH	BONE SPRING	UNKNOWN			204652						130000	512	260			
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				3/29/2010 0:00	7	77292.8		25964.7	2876	1	378	0.08	45890	244	1186		
MAD DOG 15 FEDERAL COM #001	3002536778	32.299202	-103.4514999	15	23S	34E	P	660S	660E	Lea	NM				8/24/2010 0:00	8.4	69356		24262.3	1833	4.5	298	0.2	40711	366	1404		
CABALLO 9 STATE #001	3002534577	32.321888	-103.4814224	9	23S	34E	E	1650N	660W	Lea	NM				10/14/2010 0:00	7	122402.2		38021	6823	11	1120	1	73600	622.2	1213		
ANTELOPE RIDGE UNIT #002	3002520444	32.2520561	-103.4717407	4	24S	34E	B	660N	1650E	LEA	NM	ANTELOPE RIDGE	ATOKA	HEATER TREATOR		6.7	51475							31000	317	340		
FALCON FEDERAL #001	3002532190	32.244812	-103.4173355	1	24S	34E	I	1980S	660E	LEA	NM	Saunders		WELLHEAD	8/2/1983 0:00	7	60992		33879	2560		240		56000	392	1800	2	

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

August 6, 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 Petes SWD #1 will be located 1,506 feet from the North line and 1,417 feet from the East line, Section 28, Township 23 South, Range 34 East, Lea County, New Mexico. Produced water from area production will be commercially disposed into the Devonian, Fusselman and Montoya Formations at a depth of 15,054 feet to 17,031 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 28.4 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

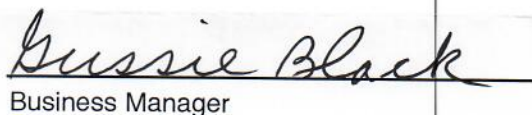
I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
August 06, 2019
and ending with the issue dated
August 06, 2019.



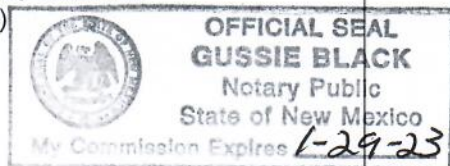
Publisher

Sworn and subscribed to before me this
6th day of August 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 AUGUST 6, 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 Petes SWD #1 will be located 1,506 feet from the North line and 1,417 feet from the East line, Section 28, Township 23 South, Range 34 East, Lea County, New Mexico. Produced water from area production will be commercially disposed into the Devonian, Fusselman and Montoya Formations at a depth of 15,054 feet to 17,031 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 28.4 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
#34528

67115764

00231747

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

August 6, 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 Petes 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 28 Township 23 South, Range 34 East, Lea County, New Mexico. The published notice states that the interval will be from 15,134 feet to 17,061 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 Petes SWD #1 will be located 1,506 feet from the North line and 1,417 feet from the East line, Section 28, Township 23 South, Range 34 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 15,134 feet to 17,061 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 28 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** david@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 1 MILE -RADIUS

ASHER RESOURCES Petes SWD #1 20770 US HWY 281 N #108-615 SAN ANTONIO, TX 78258-7500	Bureau of Land Management Petes SWD #1 620 E. Greene Street Carlsbad, NM 88220-6292	CAZA OPERATING, LLC Petes SWD #1 200 N LORAIN STE 1550 MIDLAND, TX 79701
CENTENNIAL RESOURCE PROD, LLC Petes SWD #1 1001 17th Street, Suite 1800 Denver, CO 80202	CHESAPEAKE OPERATING, INC. Petes SWD #1 P. O. BOX 18496 OKLAHOMA CITY, OK 73154-0496	CHEVRON U S A INC Petes SWD #1 6301 DEAUVILLE BLVD MIDLAND, TX 79706
COG OPERATING LLC Petes SWD #1 600 W Illinois Ave Midland, TX 79701	DEVON ENERGY PROD COMPANY, LP Petes SWD #1 333 West Sheridan Ave. Oklahoma City, OK 73102	ENDEAVOR ENERGY RESOURCES, LP Petes SWD #1 110 NORTH MARIENFELD SUITE 200 MIDLAND, TX 79701
ENDURANCE RESOURCES LLC Petes SWD #1 15455 DALLAS PARKWAY SUITE 1050 ADDISON, TX 75001	EOG RESOURCES INC Petes SWD #1 P.O. Box 2267 Midland, TX 79702	EOG Y RESOURCES, INC. Petes SWD #1 104 S 4TH ST ARTESIA, NM 88210
J C WILLIAMSON Petes SWD #1 PO BOX 16 MIDLAND, TX 79702	KAISER-FRANCIS OIL CO Petes SWD #1 6733 S YALE AVE TULSA, OK, OK 74136	LIMESTONE BASIN PROP RANCH LLC Petes SWD #1 18 DESTA DRIVE MIDLAND, TX 79705
MARATHON OIL PERMIAN LLC Petes SWD #1 5555 SAN FELIPE STREET HOUSTON, TX 77056	MATADOR PRODUCTION COMPANY Petes SWD #1 One Lincoln Centre 5400 LBJ Freeway, Ste 1500 Dallas, TX 75240	MEWBOURNE OIL CO Petes SWD #1 P.O. BOX 7698 TYLER, TX 75711
New Mexico State Land Office Petes SWD #1 310 Old Santa Fe Trail Santa Fe, NM 87501	OXY NM LP Petes SWD #1 PO BOX 809050 DALLAS, TX 75380-9050	OXY USA INC Petes SWD #1 PO BOX 4294 HOUSTON, TX 77210
OXY USA WTP LP Petes SWD #1 5005 LBJ FREEWAY P.O. BOX 809050 DALLAS, TX 75380	RAY WESTALL Petes SWD #1 PO BOX 4 LOCO HILLS, NM 88255	SIANA OIL & GAS CO. Petes SWD #1 12012 WICKCHESTER LANE SUITE 410 HOUSTON, TX 77079
SIANA OPERATING LLC Petes SWD #1 P.O. BOX 10303 MIDLAND, TX 79702	STRATA PRODUCTION CO Petes SWD #1 PO DRAWER 1030 ROSWELL, NM 88202	TENISON OIL CO Petes SWD #1 1925 HOSPITAL PLACE ABILENE, TX 79606
WILDCAT ENERGY LLC Petes SWD #1 P.O. BOX 13323 ODESSA, TX 79768		

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

SAN ANTONIO, TX 78258

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

ASHER RESOURCES

Sent To Petes SWD #1

Street and Apt. No., or PO Box No. 20770 US HWY 281 N

#108-615

City, State, ZIP+4® SAN ANTONIO, TX 78258-7500

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

DENVER, CO 80202

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

CENTENNIAL RESOURCE

Sent To Petes SWD #1

Street and Apt. No., or PO Box No. 1001 17th Street, Suite 1800

City, State, ZIP+4® Denver, CO 80202

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

MIDLAND, TX 79701

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

COG OPERATING LLC

Sent To Petes SWD #1

Street and Apt. No., or PO Box No. 600 W Illinois Ave

City, State, ZIP+4® Midland, TX 79701

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

ADDISON, TX 75001

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

ENDURANCE RESOURCES LLC

Sent To Petes SWD #1

Street and Apt. No., or PO Box No. 15455 DALLAS PARKWAY

City, State, ZIP+4® SUITE 1050

ADDISON, TX 75001

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

MIDLAND, TX 79702

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

J C WILLIAMSON

Sent To Petes SWD #1

Street and Apt. No., or PO Box No. PO BOX 16

City, State, ZIP+4® MIDLAND, TX 79702

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

HOUSTON, TX 77056

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

MARATHON OIL PERMIAN LLC

Sent To Petes SWD #1

Street and Apt. No., or PO Box No. 5555 SAN FELIPE STREET

City, State, ZIP+4® HOUSTON, TX 77056

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

7018 0680 0002 0795 7112

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®

SANTA FE, NM 87501

OFFICIAL USE

Certified Mail Fee	\$3.50
Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

Postmark Here
 AUG - 6 2019
 USPS

08/06/2019

Sent To: **New Mexico State Land Office**
Petes SWD #1
310 Old Santa Fe Trail
Santa Fe, NM 87501
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 0680 0002 0795 7105

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®

DALLAS, TX 75380

OFFICIAL USE

Certified Mail Fee	\$3.50
Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

Postmark Here
 AUG - 6 2019
 USPS

08/06/2019

Sent To: **OXY USA WTP LP**
Petes SWD #1
5005 LBJ FREEWAY
P.O. BOX 809050
DALLAS, TX 75380
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 0680 0002 0795 7099

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®

MIDLAND, TX 79702

OFFICIAL USE

Certified Mail Fee	\$3.50
Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

Postmark Here
 AUG - 6 2019
 USPS

08/06/2019

Sent To: **SIANA OPERATING LLC**
Petes SWD #1
P.O. BOX 10303
MIDLAND, TX 79702
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 0680 0002 0795 7082

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®

ODESSA, TX 79768

OFFICIAL USE

Certified Mail Fee	\$3.50
Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

Postmark Here
 AUG - 6 2019
 USPS

08/06/2019

Sent To: **WILDCAT ENERGY LLC**
Petes SWD #1
P.O. BOX 13323
ODESSA, TX 79768
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 0680 0002 0795 7075

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®

CARLSBAD, NM 88220

OFFICIAL USE

Certified Mail Fee	\$3.50
Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

Postmark Here
 AUG - 6 2019
 USPS

08/06/2019

Sent To: **Bureau of Land Management**
Petes SWD #1
620 E. Greene Street
Carlsbad, NM 88220-6292
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7018 0680 0002 0795 5736

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
 Domestic Mail Only

For delivery information, visit our website at www.usps.com®

OKLAHOMA CITY, OK 73154

OFFICIAL USE

Certified Mail Fee	\$3.50
Extra Services & Fees (check box, add fee as appropriate)	\$2.80
☐ Return Receipt (hardcopy)	\$0.00
☐ Return Receipt (electronic)	\$0.00
☐ Certified Mail Restricted Delivery	\$0.00
☐ Adult Signature Required	\$0.00
☐ Adult Signature Restricted Delivery	\$0.00
Postage	\$0.55
Total Postage and Fees	\$6.85

Postmark Here
 AUG - 6 2019
 USPS

08/06/2019

Sent To: **CHESAPEAKE OPERATING, INC.**
Petes SWD #1
P.O. BOX 18496
OKLAHOMA CITY, OK 73154-0496
City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

OKLAHOMA CITY, OK 73102

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$2.80
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

DEVON ENERGY PROD COMPANY, LP

Petes SWD #1

Sent To 333 West Sheridan Ave.

Street and Apt. No., or PO Box No. Oklahoma City, OK 73102

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

MIDLAND, TX 79702

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$2.80
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

EOG RESOURCES INC

Petes SWD #1

Sent To P.O. Box 2267

Street and Apt. No., or PO Box No. Midland, TX 79702

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

TULSA, OK 74136

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$2.80
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

KAISER-FRANCIS OIL CO

Petes SWD #1

Sent To 6733 S YALE AVE

Street and Apt. No., or PO Box No. TULSA, OK, OK 74136

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

DALLAS, TX 75240

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$2.80
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

MATADOR PRODUCTION COMPANY

Petes SWD #1

Sent To One Lincoln Centre

Street and Apt. No., or PO Box No. 5400 LBJ Freeway, Ste 1500

City, State, ZIP+4® Dallas, TX 75240

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

DALLAS, TX 75380

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$2.80
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

OX NM LP

Petes SWD #1

Sent To P.O. BOX 809050

Street and Apt. No., or PO Box No. DALLAS, TX 75380-9050

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

LOCO HILLS, NM 88255

Certified Mail Fee \$3.50
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$2.80
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

RAY WESTALL

Petes SWD #1

Sent To PO BOX 4

Street and Apt. No., or PO Box No. LOCO HILLS, NM 88255

City, State, ZIP+4®

PS Form 3800, April 2015 PSN 7530-02-000-9047

See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

ROSWELL, NM 88202

OFFICIAL USE

Certified Mail Fee \$3.50

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$2.80

☐ Return Receipt (electronic) \$0.00

☐ Certified Mail Restricted Delivery \$0.00

☐ Adult Signature Required \$0.00

☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

08/06/2019

Sent To Petes SWD #1

Street and Apt. No., or PO Box No. PO DRAWER 1030

City, State, ZIP+4® ROSWELL, NM 88202

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

MIDLAND, TX 79701

OFFICIAL USE

Certified Mail Fee \$3.50

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$2.80

☐ Return Receipt (electronic) \$0.00

☐ Certified Mail Restricted Delivery \$0.00

☐ Adult Signature Required \$0.00

☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

08/06/2019

Sent To CAZA OPERATING, LLC

Street and Apt. No., or PO Box No. 200 N. LORRAINE

City, State, ZIP+4® STE 1550
MIDLAND, TX 79701

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

MIDLAND, TX 79706

OFFICIAL USE

Certified Mail Fee \$3.50

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$2.80

☐ Return Receipt (electronic) \$0.00

☐ Certified Mail Restricted Delivery \$0.00

☐ Adult Signature Required \$0.00

☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

08/06/2019

Sent To CHEVRON U S A INC

Street and Apt. No., or PO Box No. Petes SWD #1
6301-DEAUVILLE BLVD

City, State, ZIP+4® MIDLAND, TX 79706

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

MIDLAND, TX 79701

OFFICIAL USE

Certified Mail Fee \$3.50

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$2.80

☐ Return Receipt (electronic) \$0.00

☐ Certified Mail Restricted Delivery \$0.00

☐ Adult Signature Required \$0.00

☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

08/06/2019

Sent To ENDEAVOR ENERGY RESOURCES, LP

Street and Apt. No., or PO Box No. Petes SWD #1
110 NORTH MARIENFELD

City, State, ZIP+4® SUITE 200
MIDLAND, TX 79701

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

ARTESIA, NM 88210

OFFICIAL USE

Certified Mail Fee \$3.50

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$2.80

☐ Return Receipt (electronic) \$0.00

☐ Certified Mail Restricted Delivery \$0.00

☐ Adult Signature Required \$0.00

☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

08/06/2019

Sent To EOG Y RESOURCES, INC.

Street and Apt. No., or PO Box No. Petes SWD #1
104 S 4TH ST

City, State, ZIP+4® ARTESIA, NM 88210

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®

MIDLAND, TX 79705

OFFICIAL USE

Certified Mail Fee \$3.50

Extra Services & Fees (check box, add fee as appropriate)

☐ Return Receipt (hardcopy) \$2.80

☐ Return Receipt (electronic) \$0.00

☐ Certified Mail Restricted Delivery \$0.00

☐ Adult Signature Required \$0.00

☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

08/06/2019

Sent To LIMESTONE BASIN PROP RANCH LLC

Street and Apt. No., or PO Box No. Petes SWD #1
18 DESTA DRIVE

City, State, ZIP+4® MIDLAND, TX 79705

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for instructions

U.S. Postal ServiceTM CERTIFIED MAIL[®] RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com.

TYLER, TX 75711

Certified Mail Fee \$3.50
\$2.80
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

Sent To MEWBORNE OIL CO
Petes SWD #1
P.O. BOX 7698
Street and Apt. No., or PO Box No. TYLER, TX 75711
City, State, ZIP+4[®]

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal ServiceTM CERTIFIED MAIL[®] RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com.

HOUSTON, TX 77210

Certified Mail Fee \$3.50
\$2.80
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

Sent To OXY USA INC
Petes SWD #1
PO BOX 4294
Street and Apt. No., or PO Box No. HOUSTON, TX 77210
City, State, ZIP+4[®]

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal ServiceTM CERTIFIED MAIL[®] RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com.

HOUSTON, TX 77079

Certified Mail Fee \$3.50
\$2.80
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

Sent To SIANA OIL & GAS CO.
Petes SWD #1
12012 WICKCHESTER LANE
Street and Apt. No., or PO Box No. SUITE 410
City, State, ZIP+4[®] HOUSTON, TX 77079

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

U.S. Postal ServiceTM CERTIFIED MAIL[®] RECEIPT

Domestic Mail Only

For delivery information, visit our website at www.usps.com.

ABILENE, TX 79606

Certified Mail Fee \$3.50
\$2.80
Extra Services & Fees (check box, add fee as appropriate)
☐ Return Receipt (hardcopy) \$0.00
☐ Return Receipt (electronic) \$0.00
☐ Certified Mail Restricted Delivery \$0.00
☐ Adult Signature Required \$0.00
☐ Adult Signature Restricted Delivery \$0.00

Postage \$0.55

Total Postage and Fees \$6.85

Sent To TENISON OIL CO
Petes SWD #1
1925 HOSPITAL PLACE
Street and Apt. No., or PO Box No. ABILENE, TX 79606
City, State, ZIP+4[®]

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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

August 5, 2019

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

RE: AWR Disposal LLC Petes SWD #1
UL G, Section 28 T23S R34E, 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

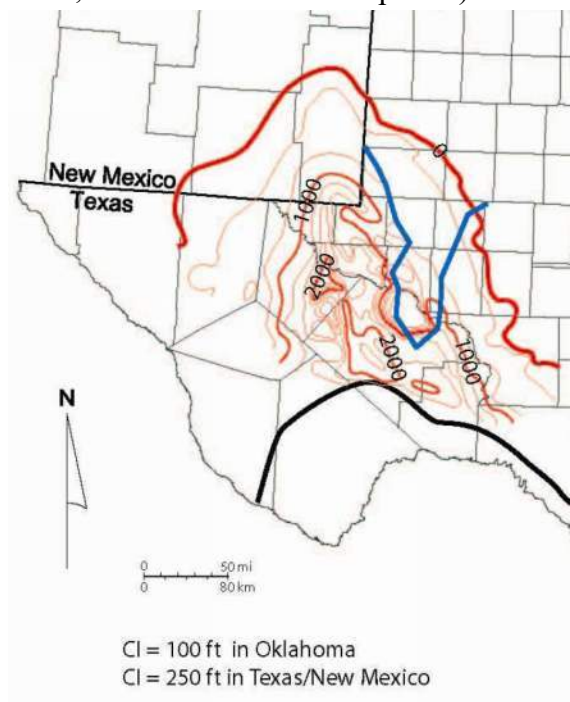
1. Fault traces based upon the references provided above for which Dr. Snee and Dr. Zoback provide a value of the fault slip potential (FSP)
2. Areas of documented seismic activity, and a magnitude 2.0-2.9 earthquake that occurred between 1970-2004 about 9 miles south of the proposed Petes SWD #1. A slightly larger magnitude and more recent seismic event is reported about 22 miles west of the Petes 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 2 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 Petes 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 Petes SWD #1, the OCD database shows about 4 active and 2 new Devonian SWDs, which translates into an average density of about one SWD for every 18 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 Petes SWD #1 would be dominantly north-south normal faults, as is common in Lea County. The data on Plate 6 permit a



August 5, 2019

Page 3

conclusion that faults near the Petes 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 Petes 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 Petes SWD #1 would cause an increase in pore pressure to trigger a seismic event of sufficient magnitude to cause damage is very low.

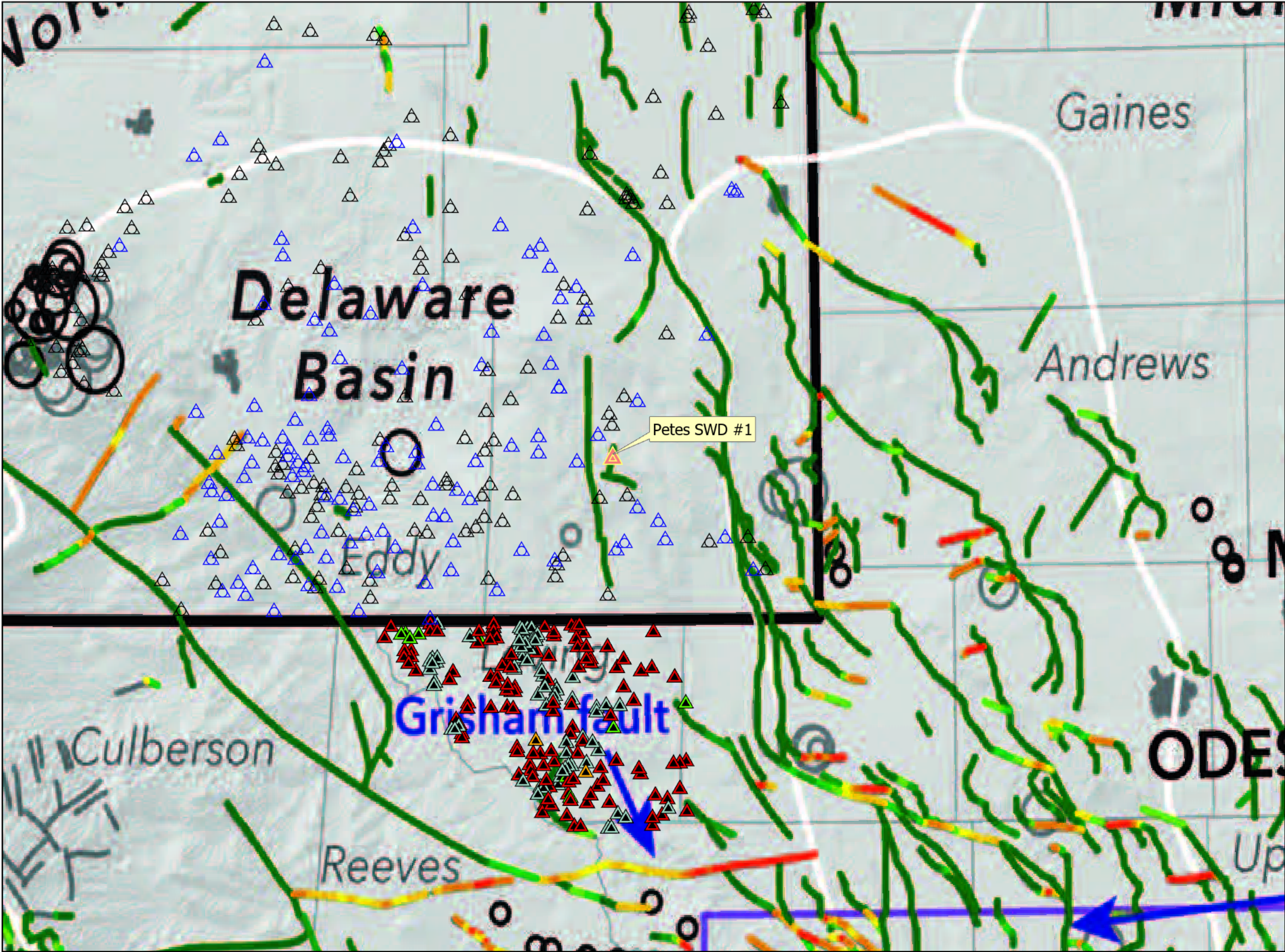
The users of this letter should recognize the uncertainties of using seismic maps of the Permian Basin to determine probability that injection of wastewater into a single SWD well could cause seismic events of sufficient magnitude to cause damage. However, on a regional basis injection by numerous wells 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 Petes 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".

Randall T. Hicks
Principal

Copy: AWR Disposal LLC



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).



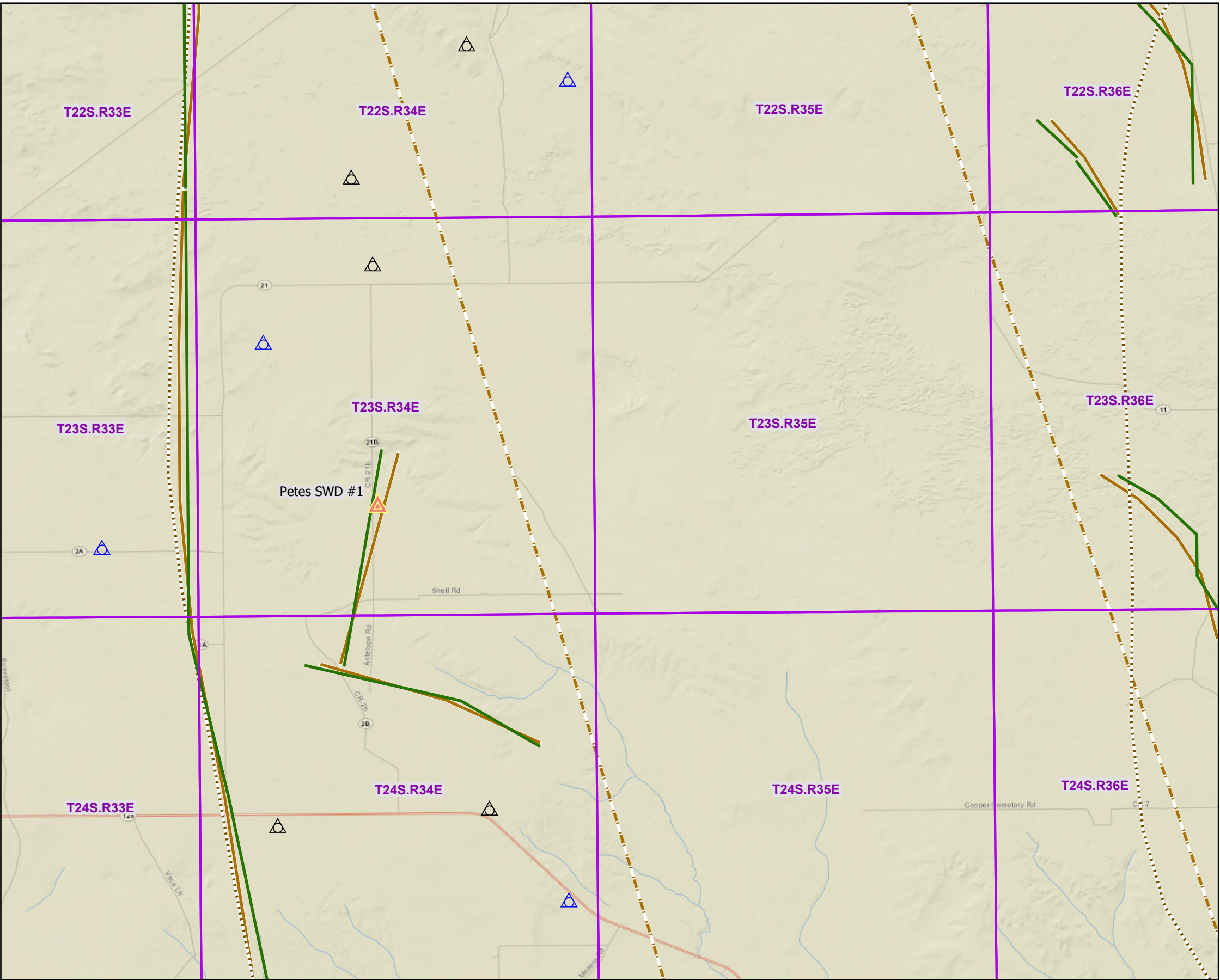
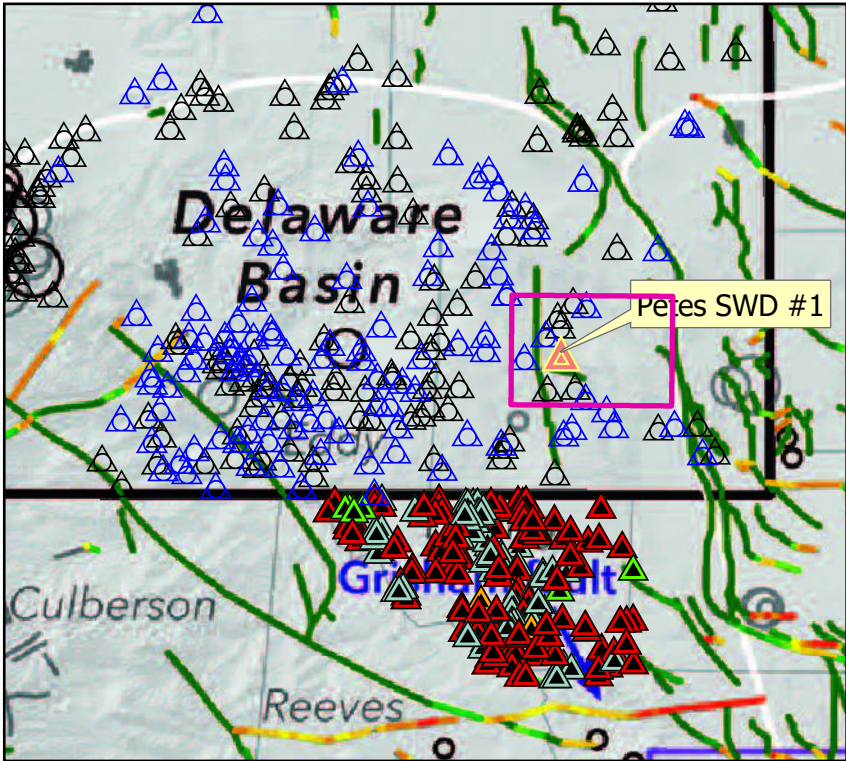
R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Seismicity with Fault Slip Potential

AWR Disposal, LLC
Petes SWD #1

Plate 5

August 2019



 SWD

Oil and Gas (NMOCD)

 Salt Water Injection, Active

 Salt Water Injection, New

Faults

 Fault - Basement

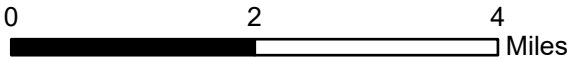
 Fault - Precambrian

 Fault - Woodford

Fault Slip Potential (%)

 <5

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).



R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Fault Slip Potential

AWR Disposal, LLC
Petes SWD #1

Plate 6

August 2019