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

APPLICATION OF DELAWARE WATER MANAGEMENT COMPANY, LLC FOR AUTHORIZATION TO INJECT INTO THE E MURPHY FEDERAL SWD No. 1 WELL FOR PURPOSES OF DISPOSAL, LEA COUNTY, NEW MEXICO.

APPLICATION

Delaware Water Management Company, LLC ("Delaware Water Management"), OGRID No. 374146, through its undersigned attorneys, hereby files this application with the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-12(B)(15), for an order authorizing injection of produced salt water for purposes of disposal. In support, Delaware Water Management states the following:

- 1. Attached is a complete Form C-108 application for authorization to inject which contains all the information necessary to authorize the requested approval to inject. *See* C-108, attached as **Exhibit A**, and incorporated herein.
- 2. Delaware Water Management proposes to drill a new commercial salt water disposal well to be named **E Murphy Federal SWD No. 1 Well** (API No. 30-025-PENDING), which will be located 2,443 feet from the north line and 2,634 feet from the west line (Unit F), Section 1, Township 23 South, Range 32 East, NMPM, Lea County, New Mexico.
- 3. The proposed injection disposal interval would be within the Devonian formation through an open-hole completion between approximately 16,314 feet and 17,294 feet below the surface. Disposal fluid will be produced salt water from producing oil and gas wells in the area.

- 4. The estimated average disposal volume will be 40,000 barrels of water per day with a maximum anticipated volume of 45,000 barrels of water per day. The average surface injection pressure is expected to be approximately 2,500 psi with a maximum surface injection pressure of 3,262 psi.
- 5. The State Land Office protested this application which was filed administratively. Accordingly, Delaware Water Management requests that it be set for hearing.
- 6. The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, Delaware Water Management Company, LLC requests that this application be set for hearing before an Examiner of the Oil Conservation Division on October 3, 2019, and, after notice and hearing as required by law, the Division enter an order approving this application.

Respectfully submitted,

HOLLAND & HART LLP

3(y:

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Adam G. Rankin

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ATTORNEYS FOR DELAWARE WATER MANAGEMENT COMPANY, LLC

CASE : Application of Delaware Water Management Company, LLC For Authorization to Inject into the E Murphy Federal SWD No. 1 Well For Purposes of Disposal, Lea County, New Mexico. Applicant in the abovestyled cause seeks an order authorizing it to drill and operate an injection well for purposes of disposing produced salt water to be named the E Murphy Federal SWD No. 1 Well (API No. 30-025-pending), to be located 2,443 feet from the north line and 2,634 feet from the west line (Unit F), Section 1, Township 23 South, Range 32 East, NMPM, Lea County, New Mexico. Injection will be into the Devonian formation through an open-hole completion between approximately 16,314 feet and 17,294 feet below the surface. Disposal fluid will be produced water from producing oil and gas wells in the area. Average disposal volume will be 40,000 bpd with a maximum of 45,000 bpd. Average surface injection pressure will be 2,500 psi with a maximum surface injection pressure of 3,262 psi. The subject well will be located approximately 28 miles west-southeast of Eunice, N.M.

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	Water Management Compan	y.LLC		D Number: <u>374146</u>
/ell Name: E Murp	phy FederalSWD I		API: 30	
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Brian Wood	To the second		Daio	
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K	Chool		Phone Number	
			brian@permitswe	st.com
Signature			e-mail Address	

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505 FORM C-108 Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: Secondary Recovery Pressure Maintenance XXX Disposal Storage Application qualifies for administrative approval? XXX Yes No
11.	OPERATOR: DELAWARE WATER MANAGEMENT COMPANY, LLC
	ADDRESS: 5400 LBJ FREEWAY, SUITE 1500, DALLAS TX 75240
	CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-812
Шж	WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project? Yes XXX No If yes, give the Division order number authorizing the project:
V.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail. E MURPHY FEDERAL SWD 1
VII.	Attach data on the proposed operation, including: Devonian (96101)
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
*VIII	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
lΧ.	Describe the proposed stimulation program, if any.
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted)
*XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
XIV.	Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	NAME: BRIAN WOOD TITLE: CONSULTANT
	SIGNATURE:DATE: AUG. 7, 2019
٠.	E-MAIL ADDRESS: brian@permitswest.com
	If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
 - (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.
 - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated,
 - (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.



INJECTION WELL DATA SHEET

Tul	oing Size: 5.5" Lining Material; IPC
Ту	pe of Packer: STAINLESS STEEL &/OR NICKEL
Pac	cker Setting Depth: 16,214' - 16,314'
Otł	ner Type of Tubing/Casing Seal (if applicable):
	Additional Data
1.	Is this a new well drilled for injection?XXXYesNo
	If no, for what purpose was the well originally drilled?
2.	Name of the Injection Formation:DEVONIAN
3.	Name of Field or Pool (if applicable): SWD; DEVONIAN (POOL CODE 96101)
4.	Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used
5.	Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:
	OVER: BRUSHY CANYON (7226'), BONE SPRING (8844'), WOLFCAMP (12,125')
	UNDER: none

PAGE 1

I. Goal is to drill a 17,294' deep commercial saltwater disposal well. Disposal interval will be 16,314' - 17,294' in the SWD; Devonian (96101). See Exhibit A for C-102 and map. Well is on BLM surface and minerals.

II. Operator: Delaware Water Management Company, LLC [OGRID 374146]

Operator phone number: (972) 371-5420

Operator address: 5400 LBJ Freeway, Suite 1500, Dallas TX 75240

Contact for Application: Brian Wood (Permits West, Inc.)

Phone: (505) 466-8120

III. A. (1) Lease name: E Murphy Federal SWD

Well name and number: E Murphy Federal SWD 1

Location: 2443' FNL & 2634' FWL Section 1, T. 23 S., R. 32 E.

A. (2) Surface casing (20", 94# & 106.5#, J-55, BTC) will be set at 1,305' in a 26" hole and cemented to GL with 1,850 sacks (based on 50% OH excess).

First intermediate casing (13.375", 72#, P-110 HC, BTC) will be set at 5,112' in a 17.5" hole and cemented to GL with 3,080 sacks (based on 50% OH excess).

Second intermediate casing (9.625", 40#, P-110 EC, BTC) will be set at 12,700' in a 12.25" hole and cemented to 4,912 with 1,880 sacks (based on 40% OH excess).

Production liner (7.625", 33.7# P-110 HP, USS Liberty FJM) will be set from 12,200' to 16,314' in an 8.75" hole and cemented to 12,200' (CBL) with 390 sacks.

A 6.5" open hole will be drilled from 16,314' to 17,294'.



- A. (3) Tubing will be IPC lined, 5.5", 20#, P-110 HC, BTC. Setting depth will be \geq 16,214'. (Disposal interval will be 16,314' to 17,294'.)
- A. (4) A stainless steel and/or nickel packer will be set at ≥16,214' (top of the open hole which will be at 16,314').
- B. (1) Disposal zone will be the Devonian (SWD; Devonian (96101) pool). Estimated fracture gradient is ≈0.62 to ≈0.68 psi per foot. Variation depends on whether limestone or dolomite.
- B. (2) Disposal interval will be open hole from 16,314' to 17,294'.
- B. (3) Well has not been drilled. It will be drilled as a saltwater disposal well.
- B. (4) No perforated intervals are in the well.
- B. (5) Productive zones in the area of review and above the Devonian (16,304') are the Brushy Canyon (7,226'), Bone Spring (8,831'), and Wolfcamp (12,125'). No oil or gas zone is below the Devonian in the area of review.
- IV. This is not an expansion of an existing injection project. It is disposal only.
- V. Exhibit B shows and tabulates the 20 existing wells (13 oil + 6 P&A + 1 SWD; Delaware) within a mile radius. Exhibit C shows all 87 existing wells (65 oil or gas wells + 20 P & A wells + 2 disposal wells) within a two-mile radius. Closest SWD; Devonian APD (30-025-45605) is 1.62 miles south. It is Delaware Water Management's R Wallman State SWD 1. C-108 approval is pending. The 2 active SWD wells within 2 miles are Delaware wells.

All leases within a one-mile radius are BLM or State. Exhibit D shows and tabulates all the leases within a mile. Exhibit E shows all lessors within a two-mile radius. Two-mile radius leases are BLM or NMSLO.



PAGE 3

- VI. No Devonian penetrator is within a mile. Deepest existing or proposed well within a mile is a 10,860' Bone Spring well.
- VII. 1. Average injection rate will be ≈40,000 bwpd. Maximum injection rate will be 45,000 bwpd.
 - 2. System will be open and closed. Water will both be trucked and piped.
 - Average injection pressure will be ≈2,500 psi
 Maximum injection pressure will be 3,262 psi (= 0.2 psi/foot x 16,314' (top of open hole)).
 - 4. Disposal water will be produced water, mainly from Bone Spring, Delaware, and Wolfcamp wells. There are 459 approved Bone Spring wells, 192 approved Delaware wells, and 38 approved Wolfcamp wells in T. 23 S., R. 32 and 33 E. The well will take other Permian Basin waters. A summary of produced water analyses from T. 23 S., R. 33 E. is in Exhibit F. Devonian produced water analyses (in mg/L) from wells in T. 23 S., R. 37 E. are in the table below. Compatibility problems are not expected.

API	Section	UL	TDS	chloride	bicarbonate	sulfate
3002510717	14	К	118979	71280	462	2593
3002510945	34	Α	112959	67390	288	2765
3002510947	34	Н	35639			
3002510950	34	Α	236252	147000	129	781

5. No Devonian production is within ten miles.

VIII. The Devonian (estimated 1,200' thick) is comprised of limestone and dolomite. Closest possible underground source of drinking water above the proposed disposal interval is the Quaternary at the surface. There has been some interest in developing the <1280' deep brackish Dewey Lake.

According to State Engineer records (Exhibit G), no water well is within two miles. None were found within during a March 15, 2019 field inspection. No underground source of drinking water is below the proposed disposal interval.



Formation tops are:

Quaternary = 0' Rustler anhydrite = 1280' Salt top = 1769' Castile = 3730Salt base = 5007'Bell Canyon = 5062' Cherry Canyon = 5859' Brushy Canyon = 7226' Bone Spring limestone = 8844' Wolfcamp = 12125' Strawn = 13310' Atoka = 13792'Morrow = 13993'Barnett = 14725Mississippian limestone = 15740' Woodford shale = 16104' Devonian carbonate = 16304' disposal interval = 16314' - 17294' TD = 17294(Montoya = 17304')

No water wells are within a 2-mile radius according to State Engineer records (Exhibit G) and a March 15, 2019 field inspection. There will be >2.8 miles of vertical separation and shale, salt, and anhydrite intervals between the bottom of the only likely underground water source (Dewey Lake) and the top of the Devonian.

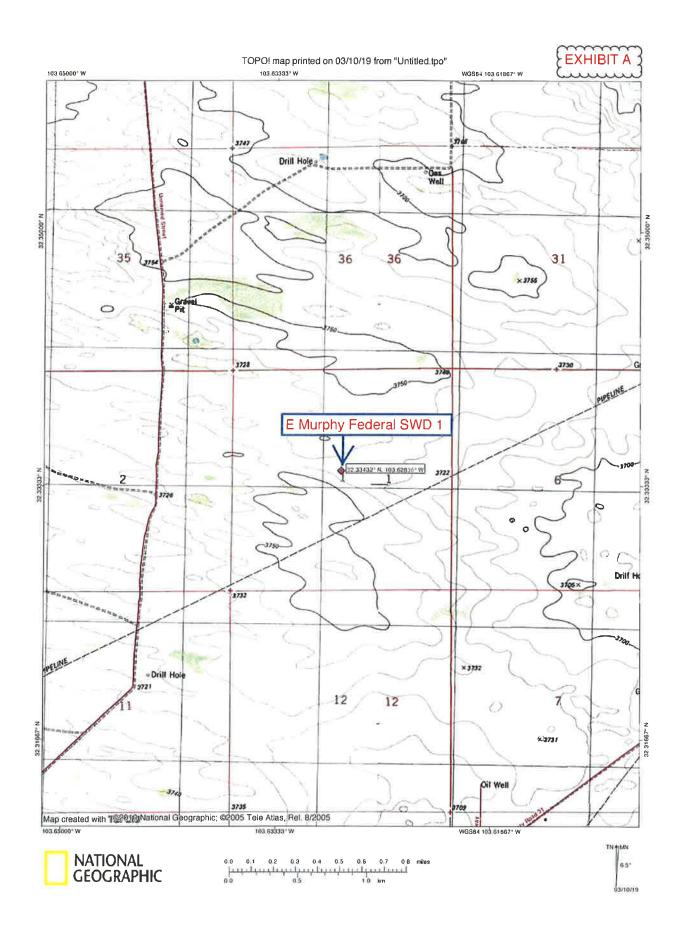
- IX. The well will be stimulated with acid.
- X. GR log will be run from the third intermediate to TD.



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- XI. No water well was found within a mile during a March 15, 2019 field inspection.
- XII. Delaware Water Management Company, LLC (Exhibit H) is not aware of any geologic or engineering data that may indicate the Devonian is in hydrologic connection with any underground sources of water. Deepest water well within a 3-mile radius is 525'. It is 2.12 miles west. There are 155 active Devonian SWD wells in New Mexico.
- XIII. A legal ad (see Exhibit I) was published on July 30, 2019. Notice (this application) has been sent (Exhibit J) to the surface owner (BLM) and all operators, lessees, and unleased mineral interest owners within a mile who are required to receive notice.





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

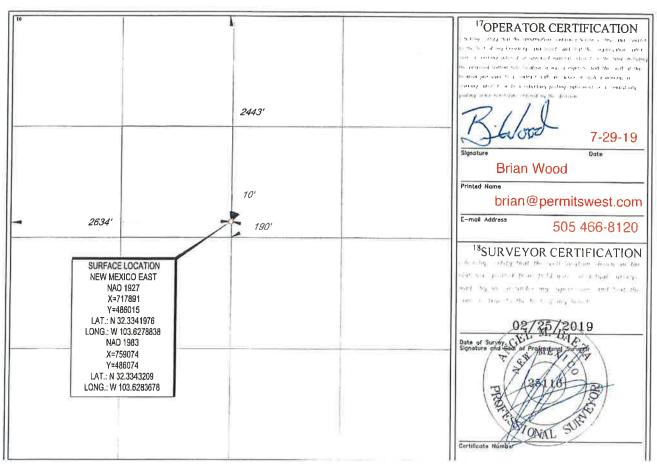
State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

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

 AMENDED REPORT)
EXHIBIT A	}
"Well Number	

API Numbe		DEE EO		ANDACK	EAGE DEDICA			www			
200				SWD; Devonian							
Code			E MI				aM.6	l Number			
OGRID No. 374146 DELAWARE WATER MANAGEMENT COMPANY, LLC 3742'											
				10 Surface Lo	cation						
Section	Township	Range	Lat Idn	Feet from the	North/South line	Feet from the	East/West line	County			
1	23-S	32-E	-	2443'	NORTH 2634		WEST	LEA			
		11Bc	ttom Hole	Location If Di	fferent From Surf	face	-				
Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	Eust/West line	County			
¹³ Joint or I	nAll ¹⁴ Con	solidation Code	15 Order	Na.							
	Section	API Number Code	API Number Tode No. 16 DELAWAR Section Township Range 1 23-S 32-E 11 Bo Section Township Range	Pool Code 96101 Pool Code Pool Code 96101 Pool Code Pool Code 96101 Pool Code 96101 Pool Code Pool Cod	Property No. Prop	API Number Pool Code 96101 Tode EMURPHY FEDERAL SWD No. Poperator Name EMURPHY FEDERAL SWD **Operator Name **Operator Name DELAWARE WATER MANAGEMENT COMP **Section Township Range Let Idn Feet from the North/South line 1 23-S 32-E - 2443' NORTH **IBottom Hole Location If Different From Surface In Section Township Range Let Idn Feet from the North/South line North/South line North/South line In Section Township Range Let Idn Feet from the North/South line	Pool Code 96101 SWD; Devo	API Number 96101 SWD; Devonian SWD; Devonian Property Name E MURPHY FEDERAL SWD No. Poperator Name BE DELAWARE WATER MANAGEMENT COMPANY, LLC Surface Location Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line NORTH 2634' WEST 10 Surface Location Feet from the North/South line Feet from the East/West line NORTH 2634' WEST 11 Bottom Hole Location If Different From Surface Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line NORTH 2634' WEST			

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



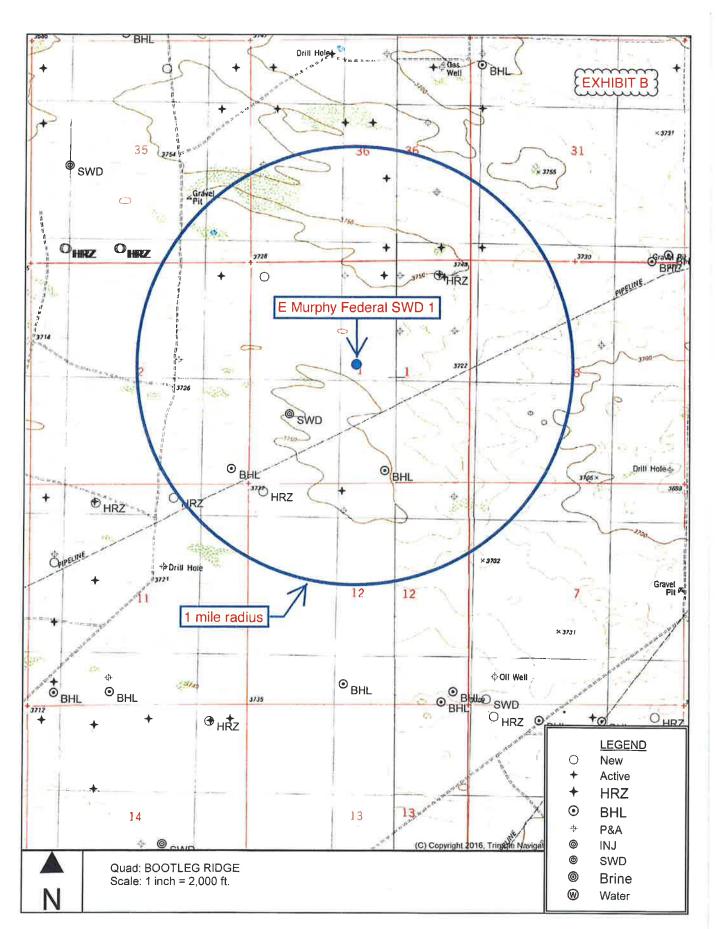


EXHIBIT A

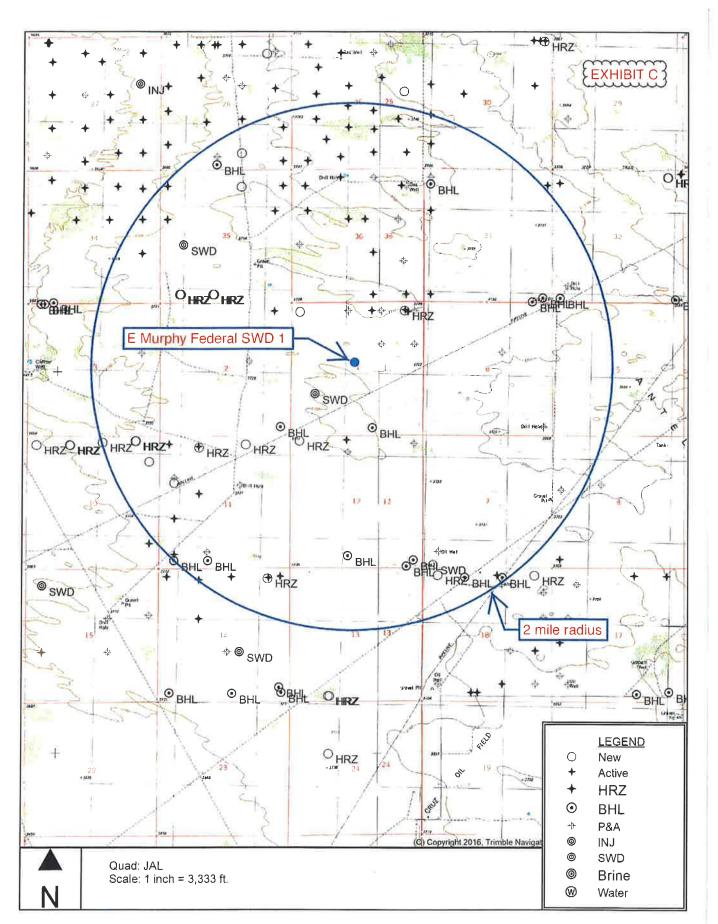


EXHIBIT A

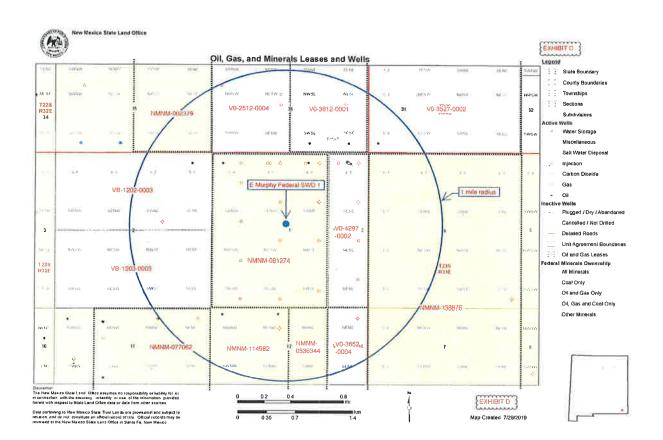


EXHIBIT A

E MURPHY FEDERAL SWD 1 AREA OF REVIEW LEASES

Aliquot Parts in Area of Review	Lessor	Lease	Lessee(s) of Record	Operators (all shallower than Devonian)
NESE & S2SE4 35-22s-32e	BLM	NMNM-002379	OXY USA	Matador
SWNE & SE4 36-22s-32e	NMSLO	V0-3812-0001	EOG	EOG
S2NW4 & SW4 36-22s-32e	NMSLO	V0-2512-0004	OXY USA	OXY
W2SW4 & SESW 31-22s-33e	NMSLO	V0-3527-0002	OXY USA	OXY USA
E2E2 1-23s-32e	NMSLO	V0-4297-0002	Cimarex	Cimarex
W2E2 & W2 1-23s-32e	BLM	NMNM-081274	Cimarex	Cimarex
NE4 & SENW 2-23s-32e	NMSLO	VB-1202-0003	COG	COG
SE4 & NESW 2-23s-32e	NMSLO	VB-1203-0003	COG	COG
N2NE4 & SENE 11-23s-32e	BLM	NMNM-077062	Cimarex	Marathon
E2NE4 12-23s-32e	NMSLO	V0-3652-0004	Cimarex	Cimarex
W2NE4 & NWNE 12-23s-32e	BLM	NMNM-0536344	ConocoPhillips	COG
W2 6-23s-33e	BLM	NMNM-138876	Federal Abstract	none
N2NW4 & SWNW 7-23s-33e	BLM	NMNM-138876	Federal Abstract	none

EXHIBIT D

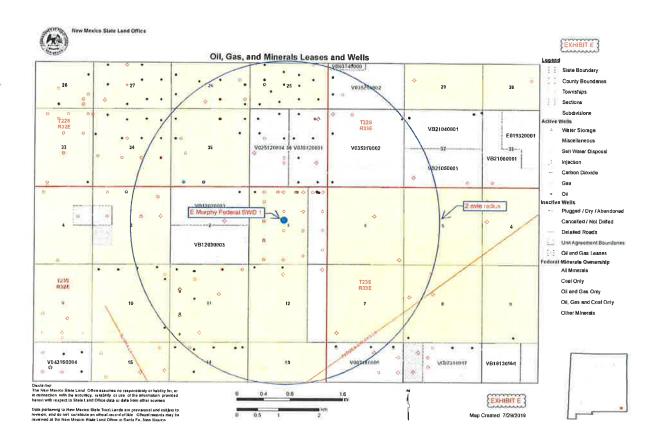


EXHIBIT A

API	Section	UL	Formation	TDS	Sodium	Calcium	Iron	Magnesium	Chloride	Bicarbonate	Sulfate
3002542425	27	Α	Bone Spring 1st Sand	171476	55363	9140	40	1023	104576	244	560
3002540173	15	D	Bone Spring 2nd Sand	178123	56624	9330	65	985	108363	183	752
3002540743	15	D	Bone Spring 2nd Sand	179067	55815	9603	89	998	109984	122	684
3002540173	15	D	Bone Spring 2nd Sand		78099	12696	75	1273	148309	122	480
3002540743	15	D	Bone Spring 2nd Sand		57680	10931	52	1378	112000	134	492
3002540743	15	D	Bone Spring 2nd Sand	183674	59642	9492	48	1067	111975	61	765
3002541914	20	M	Bone Spring 2nd Sand	272936	76650	21050	35	4456	169062	40	600
3002541913	20	N	Bone Spring 2nd Sand	130154	49952	721	11	140	78282	159	740
3002541487	22	М	Bone Spring 2nd Sand		84834	7818	12	927	146896	146	480
3002541487	22	М	Bone Spring 2nd Sand		87007	9441	27	1109	154055	110	460
3002541488	22	M	Bone Spring 2nd Sand		84044	9093	39	1085	149239	122	500
3002541487	22	M	Bone Spring 2nd Sand		51734	13895	0	1692	109000	122	494
3002541488	22	М	Bone Spring 2nd Sand		56352	9467	37	1271	107000	122	556
3002541487	22	M	Bone Spring 2nd Sand	154844	51189	8663	20	924	91763	122	0
3002541488	22	М	Bone Spring 2nd Sand	144753	47941	7688	37	848	85978	122	0
3002541488	22	M	Bone Spring 2nd Sand		52748	8257	44	911	98911	73	460
3002541487	22	М	Bone Spring 2nd Sand	236468	65181	19100	45	4014	146667	75	425
3002541488	22	M	Bone Spring 2nd Sand	217107	62587	15640	26	3227	133870	256	635
3002541342	22	0	Bone Spring 2nd Sand	165330	52113	8757	23	937	101300	183	0
3002541466	22	0	Bone Spring 2nd Sand		45038	7608	34	833	86371	122	680
3002541467	22	0	Bone Spring 2nd Sand		47247	8197	19	896	90999	244	600
3002541468	22	0	Bone Spring 2nd Sand		47592	7723	16	841	90540	98	660
3002541340	22	0	Bone Spring 2nd Sand		85421	9052	22	1111	151169	122	570
3002541466	22	0	Bone Spring 2nd Sand		79770	8893	58	1105	142227	122	550
3002541467	22	0	Bone Spring 2nd Sand		75949	9227	44	1171	137451	122	590
3002541468	22	0	Bone Spring 2nd Sand		76951	8551	42	1055	137246	85	570
3002541340	22	0	Bone Spring 2nd Sand		55815	9341	28	1275	106000	122	499
3002541341	22	0	Bone Spring 2nd Sand		53627	10505	67	1394	105000	171	508
3002541466	22	0	Bone Spring 2nd Sand		53998	10179	69	1422	105000	232	563
3002541467	22	0	Bone Spring 2nd Sand		55684	8960	34	1264	105000	232	531

EXHIBIT F

API	Section	UL	Formation	TDS	Sodium	Calcium	Iron	Magnesium	Chloride	Bicarbonate	Sulfate
3002541468	22	0	Bone Spring 2nd Sand		58238	3662	50	740	98000	171	599
3002541341	22	0	Bone Spring 2nd Sand		79448	10789	52	1174	146515	122	520
3002541342	22	0	Bone Spring 2nd Sand		60347	10265	60	1130	115793	134	560
3002541468	22	0	Bone Spring 2nd Sand		47696	7829	32	888	90068	61	540
3002541341	22	0	Bone Spring 2nd Sand	130631	47917	2149	13	341	78382	561	710
3002541342	22	0	Bone Spring 2nd Sand	172312	54411	10120	45	1126	105276	305	425
3002541466	22	0	Bone Spring 2nd Sand	106745	32885	5523	1	1747	64286	976	1205
3002541467	22	0	Bone Spring 2nd Sand	164204	53030	8746	37	969	100077	193	635
3002541468	22	0	Bone Spring 2nd Sand	184017	59935	9356	57	1065	111875	256	940
3002541794	28	В	Bone Spring 2nd Sand		82792	8583	29	1027	146363	122	500
3002541796	28	В	Bone Spring 2nd Sand		87646	8631	66	1030	154089	73	520
3002541794	28	В	Bone Spring 2nd Sand		49335	11192	46	1560	100000	195	594
3002541796	28	В	Bone Spring 2nd Sand		59742	11512	106	1633	117000	220	363
3002541796	28	В	Bone Spring 2nd Sand	140111	47036	5996	30	763	84881	439	740
3002541897	28	С	Bone Spring 2nd Sand		71047	8062	27	970	127280	146	560
3002541897	28	С	Bone Spring 2nd Sand		51627	10603	46	1359	102000	195	468
3002541897	28	С	Bone Spring 2nd Sand	161549	51768	8900	56	1004	98778	73	425
3002541896	28	D	Bone Spring 2nd Sand		51318	7868	29	1149	96000	183	557
3002541896	28	D	Bone Spring 2nd Sand	101658	34199	4245	13	579	61286	159	1030
3002540898	33	М	Bone Spring 2nd Sand	143879	46057	7296	80	821	86700	244	0
3002540898	33	М	Bone Spring 2nd Sand		48663	10816	76	1497	98000	134	792
3002540898	33	М	Bone Spring 2nd Sand	155146	51156	7420	36	869	94479	183	600
3002541118	33	N	Bone Spring 2nd Sand	163164	52348	8192	46	890	99400	122	0
3002541032	33	N	Bone Spring 2nd Sand		55748	7983	68	924	103965	171	740
3002541032	33	N	Bone Spring 2nd Sand		74216	6933	14	882	129179	122	430
3002541032	33	N	Bone Spring 2nd Sand		77388	9133	27	1113	138954	98	640
3002541118	33	N	Bone Spring 2nd Sand		70262	10319	26	1543	131655	122	620
3002541032	33	N	Bone Spring 2nd Sand		54541	8845	28	1236	103000	146	534
3002541118	33	N.	Bone Spring 2nd Sand		54205	8584	33	1249	102000	146	608
3002541118	33	N	Bone Spring 2nd Sand	166101	55345	7538	9	885	101077	244	635

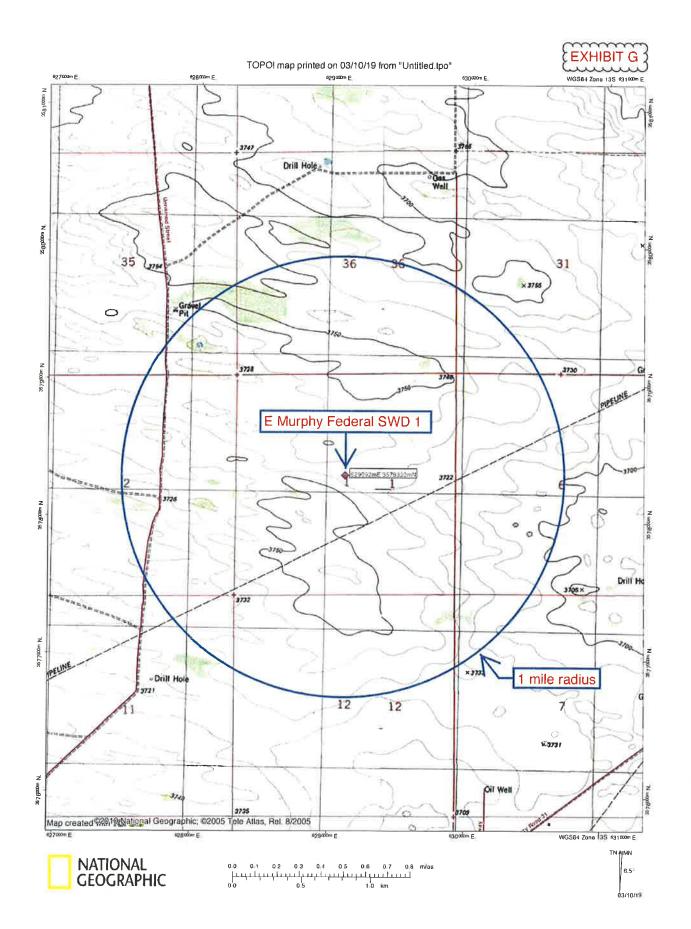
EXHIBIT F

API	Section	UL	Formation	TDS	Sodium	Calcium	Iron	Magnesium	Chloride	Bicarbonate	Sulfate
3002541303	33	Р	Bone Spring 2nd Sand		80875	6665	79	871	138579	183	470
3002541303	33	Р	Bone Spring 2nd Sand		87039	9224	50	1170	154348	98	700
3002541303	33	Р	Bone Spring 2nd Sand		89233	8044	45	1013	154983	159	690
3002541303	33	Р	Bone Spring 2nd Sand		53029	9452	70	1354	102000	122	668
3002541303	33	Р	Bone Spring 2nd Sand	159590	52594	7634	39	906	97178	183	635
3002541254	34	N	Bone Spring 2nd Sand		51720	8636	84	1117	98474	183	690
3002541253	34	N	Bone Spring 2nd Sand	161403	51347	7893	19	857	99100	122	0
3002541254	34	Ν	Bone Spring 2nd Sand	161244	50960	7851	22	845	99300	122	0
3002541252	34	Ν	Bone Spring 2nd Sand		85383	8644	36	1037	150004	85	650
3002541253	34	Ν	Bone Spring 2nd Sand		59257	8179	13	1002	108767	110	630
3002541253	34	N	Bone Spring 2nd Sand		56181	7137	15	1083	102000	122	626
3002541254	34	N	Bone Spring 2nd Sand		53470	8231	38	1196	100000	183	695
3002541252	34	N	Bone Spring 2nd Sand		77109	10168	43	1135	141623	110	580
3002541253	34	N	Bone Spring 2nd Sand	162709	53858	7649	30	877	98978	244	675
3002541302	34	Р	Bone Spring 2nd Sand	158786	51054	8122	11	875	96500	122	0
3002541302	34	Р	Bone Spring 2nd Sand		83406	8769	52	1081	147503	122	540
3002541302	34	Р	Bone Spring 2nd Sand		60221	6449	42	772	106000	195	717
3002541302	34	P	Bone Spring 2nd Sand	146169	47938	7126	54	824	88480	488	880
3002541625	35	M	Bone Spring 2nd Sand		48857	6766	26	1090	90000	183	655
3002541625	35	М	Bone Spring 2nd Sand	146174	48514	6777	39	763	88880	207	635
3002541599	35	N	Bone Spring 2nd Sand		49141	6084	22	921	89000	220	269
3002542283	35	0	Bone Spring 2nd Sand	118970	39811	5202	26	612	71984	232	820
3002508358	19	М	Delaware	238931					148600	127	156
3002542431	22	М	Del Brushy Canyon	133985	45519	5227	38	673	80482	972	880
3002540015	27	D.	Del Brushy Canyon		85224	22553	30	4475	183663	85	250
3002540015	27	D	Del Brushy Canyon		60914	21590	26	5449	148000	61	220
3002540015	27	D	Del Brushy Canyon	167968	53996	9118	41	1014	102677	73	425
3002540015	27	D	Del Brushy Canyon	245475	66848	20494	40	3559	151089	61	990
3002540010	28	С	Del Brushy Canyon		93485	22643	31	4570	195932	73	270
3002540010	28	С	Del Brushy Canyon	254703	70207	20688	48	3452	157600	122	0

EXHIBIT F

API	Section	UL	Formation	TDS	Sodium	Calcium	Iron	Magnesium	Chloride	Bicarbonate	Sulfate
3002540010	28	C	Del Brushy Canyon		96068	22248	20	4460	199245	61	300
3002540010	28	С	Del Brushy Canyon		67920	21017	20	4509	155000	61	303
3002540010	28	С	Del Brushy Canyon	182009	56668	11090	47	1461	111475	61	600
3002539893	33	0	Del Brushy Canyon		89832	22107	15	4443	189304	73	200
3002539893	33	0	Del Brushy Canyon	283085	71469	25489	54	3894	179335	427	0
3002539893	33	0	Del Brushy Canyon		82059	19233	14	3716	169603	61	640
3002539893	33	0	Del Brushy Canyon	249358	68908	19792	108	3609	153350	61	1010
3002540016	33	Р	Del Brushy Canyon	256045	68991	20375	31	3375	160600	122	0
3002540016	33	Р	Del Brushy Canyon		91267	22892	11	4435	193029	37	250

EXHIBIT F





New Mexico Office of the State Engineer EXHIBIT G



Water Column/Average Depth to Water

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

No records found.

UTMNAD83 Radius Search (in meters):

Ensting (X): 629092

Northing (V): 3578320

Rudius: 3220

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/10/19 9:24 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



Delaware Water Management Company, LLC

One Lincoln Centre • 5400 LBJ Freeway • Suite 1500 • Dallas, Texas 75240
Voice 972,371,5200 • Fax 972,371,5201
dbrugioni@matadorresources.com

Jake Harrington Senior Geologist

July 31, 2019

NM Oil Conservation Division 1220 S. St. Francis Dr. Santa Fe, NM 87505

> Re: Geology Statement E Murphy Federal SWD #1 Section 1, T. 23S, R. 32E Lea County, New Mexico

To whom it may concern:

Available geologic and engineering data related to the proposed Well have been thoroughly reviewed, and no evidence for a hydrological connection between the proposed deep Devonian injection zone, located at approximately 16,314 ft., and any underground sources of drinking water has been found.

Sincerely, Delaware Water Management Company, LLC

Jake Harrington

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 30, 2019 and ending with the Issue dated July 30, 2019.

Publisher

Sworn and subscribed to before me this 30th day of July 2019.

Business Manager

My commission expires January 29, 2023. OFFICIAL SEAL (Seal) GUSSIE BLACK Notary Public State of New Mexic ACTE IN THE RESIDENCE OF THE OWNER OF THE PROPERTY OF THE PROP

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 30, 2019

Delaware Water Management Company, LLC is applying to drill the E Murphy Federal SWD 1 as a saltwater disposal well. The well is staked at 2443 FNL 8 2634 FWL Sec. 1, T, 23 S, R, 32 E., Lea County and is 28 miles west-southwest of Eunice, NM. Disposal will be in the Devonian from 16,314 to 17,294 Maximum disposal rate will be 45,000 bwpd. Interested parties must file objections or requests for hearing with the NM Oil Conservation Division, 1220 South Saint Francis Dr. Santa Fe, NM 87505 within 15 days Additional information can be obtained by contacting. 3rd and Wood, Permits West, inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120. #34509

02108485

BRIAN WOOD PERMITS WEST 37 VERANO LOOP SANTA FE, NM 87508 00231426





August 7, 2019

BLM 620 E Greene Carlsbad NM 88220

TYPICAL LETTER

Delaware Water Management Company, LLC is applying (see attached application) to drill the E Murphy Federal SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) rules, I am notifying you of the following proposed saltwater disposal well. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: E Murphy Federal SWD 1 (BLM surface / BLM lease) <u>TD</u> = 17,294' Proposed Disposal Zone: Devonian (from 16,314' to 17,294') Location: 2443' FNL & 2634' FWL Sec. 1, T. 23 S., R. 32 E., Lea County, NM Approximate Location: 28 miles west-southwest of Eunice, NM Applicant: Delaware Water Management Company, LLC (972) 371-5420 Applicant's Address: 5400 LBJ Freeway, Suite 1500, Dallas TX 75240

<u>Submittal Information:</u> Application for a saltwater disposal well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. NMOCD address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Phone is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Brian Wood

