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

APPLICATION OF LONGWOOD WATER MANAGEMENT COMPANY, LLC FOR AUTHORIZATION TO INJECT INTO THE RANDY ALLEN FEDERAL SWD No. 1 WELL FOR PURPOSES OF DISPOSAL, EDDY COUNTY, NEW MEXICO.

CASE NO. 20484

APPLICATION

Longwood Water Management Company, LLC ("Longwood"), 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. § 70-2-17, for an order authorizing injection of produced salt water for purposes of disposal. In support, Longwood 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. Longwood proposes to drill a new commercial salt water disposal well to be named **Randy Allen Federal SWD No. 1 Well** (API No. 30-015-PENDING), which will be located 133 feet from the south line and 2,588 feet from the east line (Unit O), Section 12, Township 26 South, Range 31 East, NMPM, Eddy County, New Mexico.
- 3. The proposed injection disposal interval would be within the Devonian formation through an open-hole completion between 16,883 feet and 17,863 feet below the ground.
- 4. Disposal fluid would be produced salt water from producing oil and gas wells in the area.

- 5. 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 injection pressure is expected to be approximately 2,500 psi with a maximum injection pressure of 3,376 psi.
- 6. The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, Longwood Water Management Company, LLC requests that this application be set for hearing before an Examiner of the Oil Conservation Division on May 30, 2019, and, after notice and hearing as required by law, the Division enter an order approving this application.

Respectfully submitted,

HOLLAND & HART LLP

By

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ATTORNEYS FOR LONGWOOD WATER MANAGEMENT COMPANY, LLC

CASE : Application of Longwood Water Management Company, LLC For Authorization to Inject into the Randy Allen Federal SWD No. 1 Well For Purposes of Disposal, Eddy 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 Randy Allen Federal SWD No. 1 Well (API No. 30-015-pending), to be located 133 feet from the south line and 2,588 feet from the east line (Unit O), Section 12, Township 26 South, Range 31 East, NMPM, Eddy County, New Mexico. Injection would be into the Devonian formation through an open-hole completion between 16,883 feet and 17,863 feet. 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 injection pressure will be 2,500 psi with a maximum injection pressure of 3,376 psi. The subject well will be located approximately 21 miles southeast of Malaga, N.M.

RECEIVED:	REVIEWER:	TYPE:	APP NO:

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION



NEW MEXICO OIL COINS	7 - 10
- Geological & Engine	
1220 South St. Francis Drive, S	santa Fe, NM 8/505
ADMINISTRATIVE APPLIC	
THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE A REGULATIONS WHICH REQUIRE PROCESSING	
Applicant: Longwood Water Management Company, LLC	OGRID Number: 328484
Well Name: Randy Allen Fed SWD 1	API: 30-025-
Pool: SWD: Devonian	Pool Code: 96101
SUBMIT ACCURATE AND COMPLETE INFORMATION RE INDICATED	
1) TYPE OF APPLICATION: Check those which apply for A. Location – Spacing Unit – Simultaneous Dediction – NSL NSP _(PROJECT AREA)	
B. Check one only for [1] or [1] [1] Commingling – Storage – Measurement DHC CTB PLC PC [11] Injection – Disposal – Pressure Increase – I WFX PMX SWD IPI 2) NOTIFICATION REQUIRED TO: Check those which a A. Offset operators or lease holders B. Royalty, overriding royalty owners, revenue C. Application requires published notice D. Notification and/or concurrent approval be E. Notification and/or concurrent approval be F. Surface owner G. For all of the above, proof of notification of H. No notice required 3) CERTIFICATION: I hereby certify that the information	FOR OCD ONLY pply. Powners Application Content Complete or publication is attached, and/or,
administrative approval is accurate and complete understand that no action will be taken on this approval notifications are submitted to the Division.	to the best of my knowledge. I also
Note: Statement must be completed by an individua	ll with managerial and/or supervisory capacity.
	1-18-19
Brian Wood	Date
Print or Type Name	
Thin or type Northe	505 466-8120
15-Wood	Phone Number
	brian@permitswest.com
Signature	e-mail Address

EXHIBIT - A

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? XXXYes No
П.	OPERATOR: LONGWOOD WATER MANAGEMENT COMPANY, LLC
	ADDRESS: 5400 LBJ FREEWAY, SUITE 1500, DALLAS TX 75240
	CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-812
Ш.	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. Randy Allen Fed SWD 1
VII.	Attach data on the proposed operation, including: Devonian (96101)
	 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.
IX.	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
	NAME: BRIAN WOOD SIGNATURE: DATE: APRIL 16, 2019
	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

OPERATOR: LONGWOOD WATER MANAGEMENT COMPANY,	LLC			
WELL NAME & NUMBER:RANDY ALLEN FED SWD 1				
WELL LOCATION: 133' FSL & 2588' FEL FOOTAGE LOCATION UN	O HT LETTER	12 SECTION	26 S TOWNSHIP	31 E RANGE
WELLBORE SCHEMATIC (not to scale)		WELL CO Surface O	ONSTRUCTION DATA Casing	4
20" 94# & 106.5# in 26" hole @ 1331' TOC (1850 sx) = GL	Cemented with:	26" 1850 sx. SURFACE Intermediate	or	ft ³
13.375" 72# in 17.5" hole @ 4327' TOC (2700 sx) = GL 9.625" 40# in 12.25" hole @ 11950' TOC (1900 sx) = 4127' (CBL)	Cemented with: 27	5" & 12.25 00 & 1900 sx. URFACE & 4936' Production	or	ft ³
7.625" 33.7# in 8.75" hole 11450' - 16883' TOC (237 sx) = 11450' (CBL) Devonian 6.5" open hole	Cemented with: Top of Cement:	8.75" 237 sx. 11,450'	or	ft ³
16883' - 17863'	Total Depth:		Interval 6.5" OPEN	

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Γuł	oing Size: _5.5" Lining Material: IPC
Ту	pe of Packer: STAINLESS STEEL &/OR NICKEL
Pac	cker Setting Depth: 16,783' - 16,883'
Otl	her Type of Tubing/Casing Seal (if applicable):
	Additional Data
1.	Is this a new well drilled for injection? XXX YesNo
	If no, for what purpose was the well originally drilled?
	
2.	Name of the Injection Formation:
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.
	NO
5.	Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:
	OVER: DELAWARE (4,277'), BONE SPRING (8,249'), WOLFCAMP (11,514')
	UNDER: none

- I. Goal is to drill a 17,863' deep commercial saltwater disposal well on BLM. Disposal interval will be 16,883' 17,863' in the SWD; Devonian (96101). See Exhibit A for C-102 and map.
- II. Operator: Longwood Water Management Company, LLC [OGRID 328484] 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 (BLM): NMNM-120904 Lease Size: 360 acres Lease Area: SWSW Sec. 10, SE Sec. 12, NE Sec. 13; T. 26 S., R 31 E. Well name and number: Randy Allen Fed SWD 1 Location: 133' FSL & 2588' FEL Section 12, T. 26 S., R. 31 E.
 - A. (2) Surface casing (20", 94 & 106.5#, J-55, BTC) will be set at 1,331' 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 4,327' in a 17.5" hole and cemented to GL with 2,700 sacks (based on 50% OH excess).

Second intermediate casing (9.625", 40#, P-110 HC, BTC) will be set at 11,950' in a 12.25" hole and cemented to 4,127' with 1,900 sacks (based on 40% OH excess).

Production liner (7.625", 33.7#, P-110 HP, USS Liberty FJM) will be set from 11,450' to 16,883' in an 8.75" hole and cemented to 11,450' (CBL) with 237 sacks.

A 6.5" open hole will be drilled from 16,883' to 17,863'.



- A. (3) Tubing will be IPC lined, 5.5", 20#, P-110 IC, BTC. Setting depth will be \geq 16,783'. (Disposal interval will be 16,883' to 17,863'.)
- A. (4) A stainless steel and/or nickel packer will be set at ≥16,783' (top of the open hole which will be at 16,883').
- 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 16,883' to 17,863'.
- 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) Only zones producing in the area of review and above the Devonian (16,873') are the Delaware (4,277'), Bone Spring (8,249'), and Wolfcamp (11,514'). 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 24 existing wells (23 oil or gas + 1 P&A) and 5 approved, but not yet spudded, wells within a 1-mile radius. Deepest well within a mile is 12,100' TVD. Exhibit C shows all 119 existing wells (90 oil or gas wells + 18 P & A wells + 4 disposal wells + 7 water wells) within a 2-mile radius. Closest SWD; Devonian well (30-025-43379) is 1.63 miles northeast. Closest Devonian oil or gas well is >3 miles away.

All leases within a one-mile radius are BLM or fee. 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, fee, or NMSLO.



VI. No Devonian penetrator is within a mile. Deepest existing or proposed well within a mile is 12,100'. That well bottomed in the Wolfcamp.

- 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.
 - 3. Average injection pressure will be ≈2,500 psi
 Maximum injection pressure will be 3,376 psi (= 0.2 psi/foot x 16,883'
 (top of open hole)).
 - 4. Disposal water will be produced water, mainly from Bone Spring, Delaware, and Wolfcamp wells. There are 158 approved Bone Spring wells, 141 approved Wolfcamp wells, and 84 approved Delaware wells in T. 26 S., R. 31 and 32 E. The well will take other Permian Basin waters. A summary of produced water analyses from T. 26 S., R. 31 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. At least 11,973,863 barrels of water have been disposed in a Devonian; SWD (30-025-43379) that is 1.63 miles northeast.

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

5. No Devonian production is within >3 miles.

VIII. The Devonian (estimated 1,000' 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 brackish Dewey Lake which is below the Quaternary.

According to State Engineer records (Exhibit G), no water well is within a mile. However, a windmill not in the records was found ≈ 2800 ' southeast and



sampled on March 6, 2019. No underground source of drinking water is below the proposed disposal interval.

Formation tops are:

Quaternary = 0'Rustler anhydrite = 1306' Salado = 1832' Castile = 2250Bell Canyon = 4277' Cherry Canyon = 5228' Brushy Canyon = 6492' Bone Spring = 9134' Wolfcamp = 11514Strawn = 13901Atoka = 14019'Morrow = 14963Barnett = 16226Mississippian limestone = 16418' Woodford = 16754Devonian carbonate = 16873' disposal interval = 16883' - 17863' TD = 17863(Montoya = 17873')

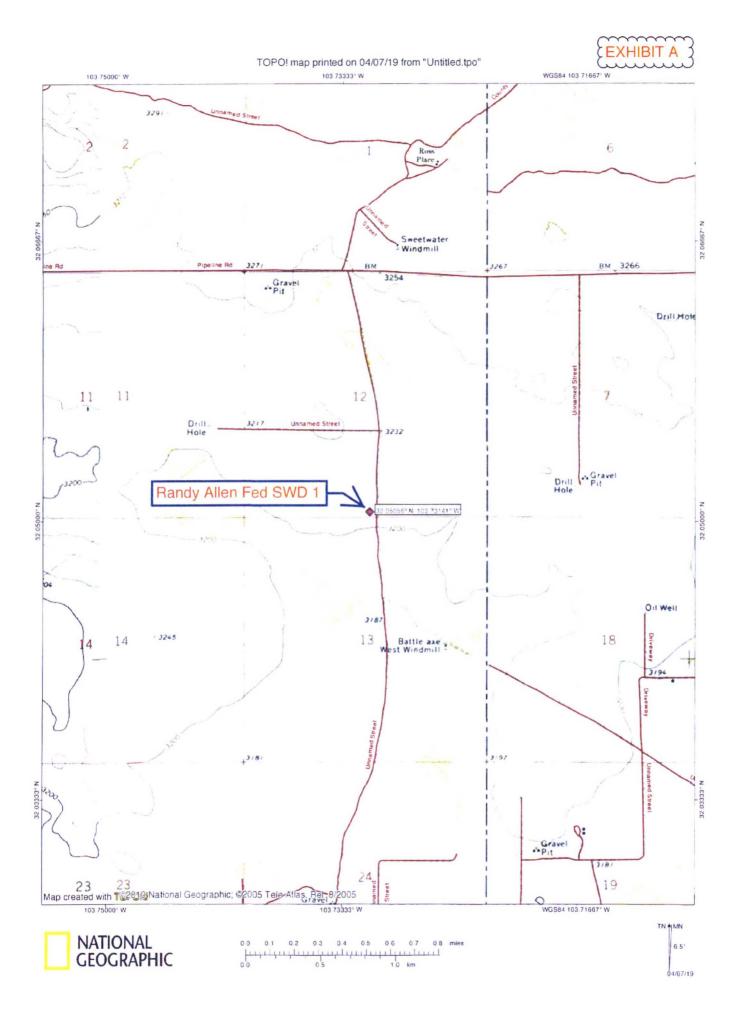
No water well is within a 1-mile radius according to State Engineer records (Exhibit G). A windmill not in the records was found ≈ 2800 ' southeast and sampled on March 6, 2019. Same records show 7 water wells within a 2-mile radius, deepest of which is 700'. There will be >2.9 miles of vertical separation 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.



- XI. One water well was found within a mile during a March 6, 2019 field inspection.
- XII. Longwood 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 2-mile radius is 700'. There are 259 approved Devonian SWD wells and 11 approved Devonian water injection wells in New Mexico. Closest Quaternary fault is \approx 68 miles west-southwest (Exhibit H).
- XIII. A legal ad (see Exhibit I) was published on February 27, 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
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1220 S St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

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

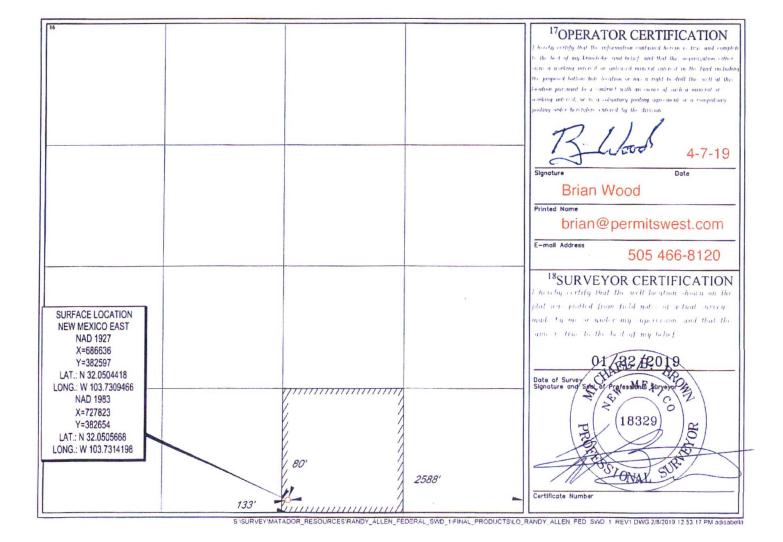
EXHIBIT A

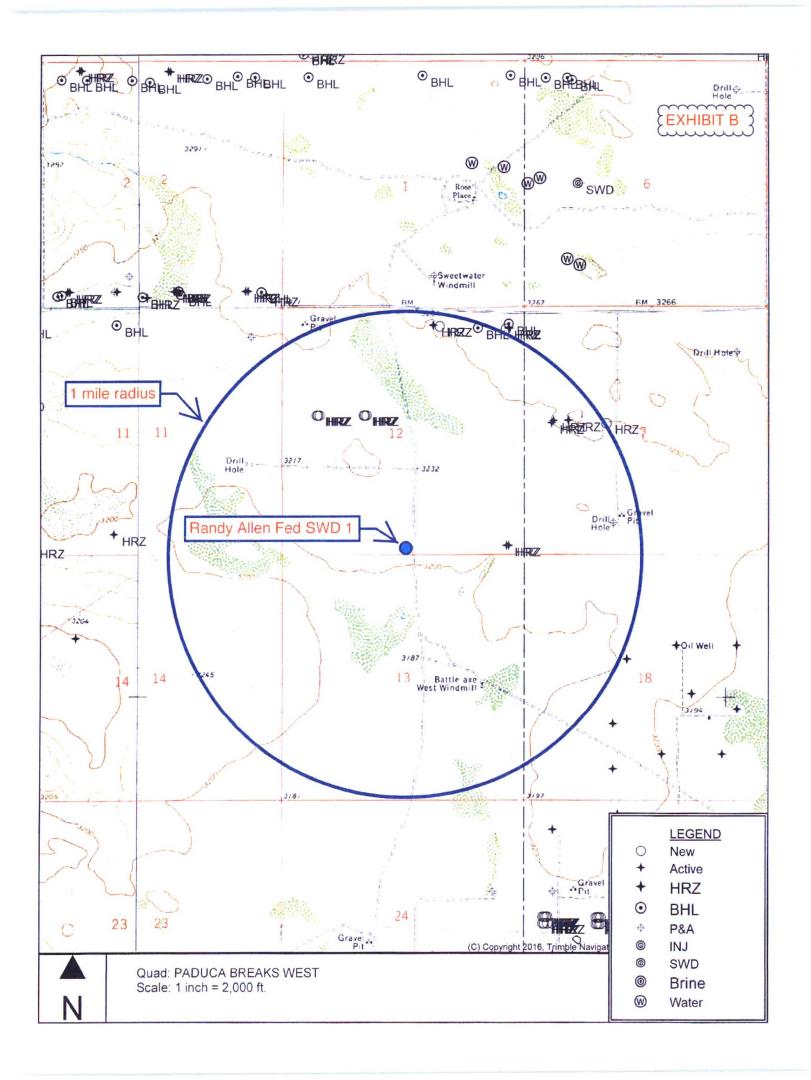
FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

		W	ELL LO	OCATIO	N AND ACR	EAGE DEDIC	ATION PLA	Τ	
	API Numbe	r		² Pool Code			³ Pool Na	me	
30-015-				96101			SWD; Devo	onian	
⁴ Property (ode				5Property N	ame		611	ell Number
				RA	NDY ALLEN	FED SWD			1
⁷ OGRID I	No.	L	ONGWO	OD WAT	Operator N CER MANAG	Same EMENT COME	PANY, LLC		Elevation 3208'
					¹⁰ Surface Lo	ocation			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	12	26-S	31-E	-	133'	SOUTH	2588'	EAST	EDDY
		,	11	Bottom Ho	le Location If D	oifferent From Sur	face		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
-	_	-	-	-	-	-	-	_	-
¹² Dedicated Acres	13 Joint or I	Infill 14Con	solidation Co	de 15Ord	er No.				

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.



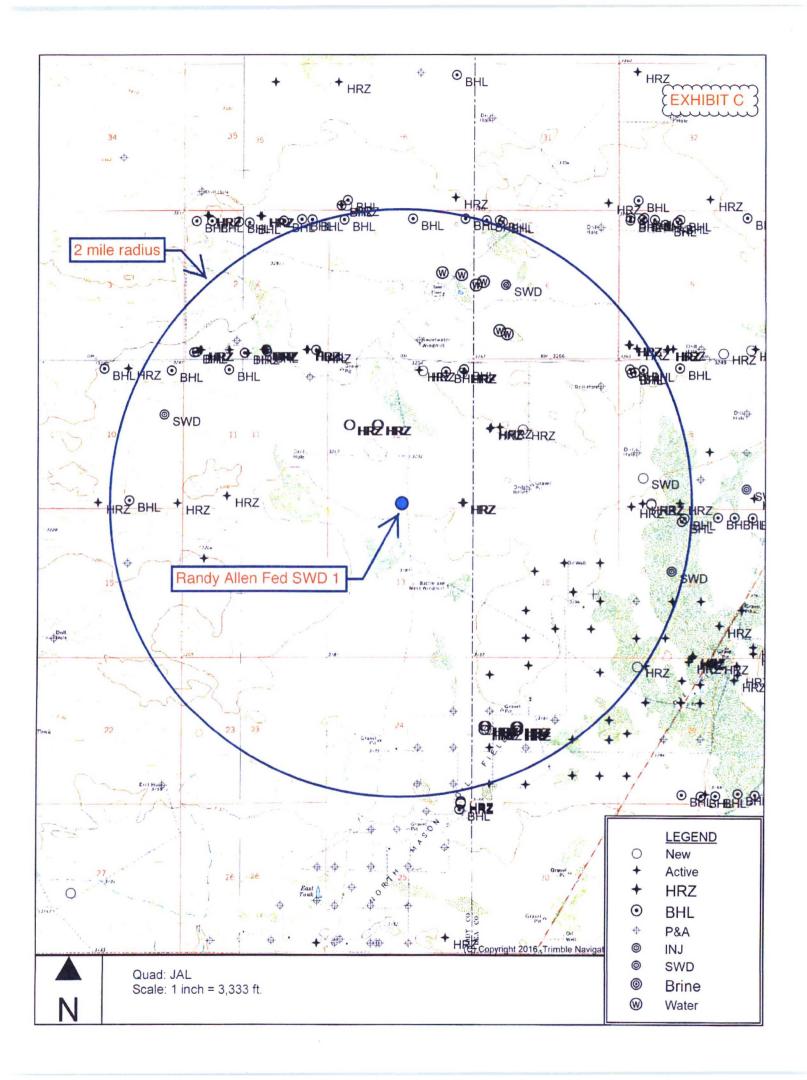


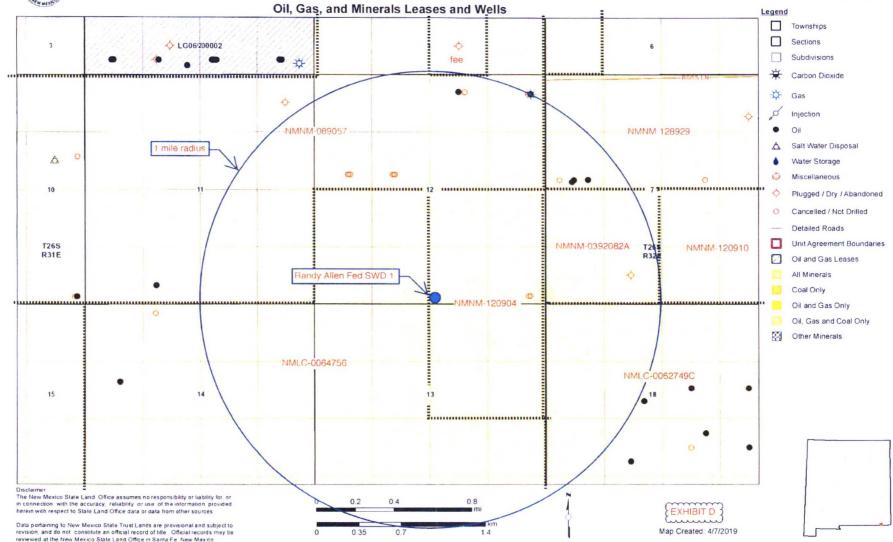
SORTED BY DISTANCE FROM RANDY ALLEN FED SWD 1

API	OPERATOR	WELL	ТҮРЕ	SHL UNIT- SECTION	TVD	ZONE @ TD	FEET FROM RANDY ALLEN FED SWD 1 (to SHL unless otherwise shown)
30-015-44858	ConocoPhillips	Revolver 24 13 Federal Com 4H	G	P-24	11530	Wolfcamp	1608 (BHL)
30-015-44857	ConocoPhillips	Revolver 24 13 Federal Com 3H	G	P-24	11530	Wolfcamp	1936 (BHL)
30-015-45071	Mewbourne	Sumideros 12 W1PA Federal Com #002H	G	P-12	11718	Wolfcamp	2208
30-015-45070	Mewbourne	Sumideros 12 W1PA Federal Com #001H	G	P-12	12009	Wolfcamp	2258
30-015-44856	ConocoPhillips	Revolver 24 13 Federal Com 2H	G	P-24	11530	Wolfcamp	2265 (BHL)
30-015-44855	ConocoPhillips	Revolver 24 13 Federal Com 1H	G	P-24	11530	Wolfcamp	2594 (BHL)
30-025-44215	ConocoPhillips	Zia Hills 19 Federal Com #101H	G	2-19	11842	Wolfcamp	2594 (BHL)
30-015-44758	Devon	Snapping 12 1 Federal #523H	0	F-12	9148	Bone Spring	3009
30-015-44722	Devon	Snapping 12 1 Federal #533H	0	F-12	9478	Bone Spring	3018
30-015-44738	Devon	Snapping 12 1 Federal #522H	0	F-12	9285	Bone Spring	3027
30-015-44740	Devon	Snapping 12 1 Federal #623H	G	F-12	Plan: 11541	Wolfcamp	3027
30-015-44739	Devon	Snapping 12 1 Federal #532H	0	E-12	Plan: 8973	Bone Spring	3456
30-015-44737	Devon	Snapping 12 1 Federal #521H	0	E-12	Plan: 8713	Bone Spring	3473
30-015-44721	Devon	Snapping 12 1 Federal #531H	0	E-12	Plan: 8983	Bone Spring	3490
30-025-44216	ConocoPhillips	Zia Hills 19 Federal Com #102H	G	2-19	11994	Wolfcamp	3832 (BHL)
30-025-44217	ConocoPhillips	Zia Hills 19 Federal Com #103H	G	2-19	11820	Wolfcamp	4088 (BHL)
30-025-43217	Mewbourne	Paduca 7 6 W1ED Federal Com #003H	G	2-07	12094	Wolfcamp	4196
30-025-43216	Mewbourne	Paduca 7 6 W1ED Federal Com #002H	G	2-07	12094	Wolfcamp	4255

SORTED BY DISTANCE FROM RANDY ALLEN FED SWD 1

30-025-44218	ConocoPhillips	Zia Hills 19 Federal Com #104H	G	2-19	12012	Wolfcamp	4356 (BHL)
30-025-42320	Mewbourne	Paduca 7 6 A2ED Federal Com #001H	0	2-07	8863	Bone Spring	4516
30-025-08252	Lovelady	Contiental Federal #001	P&A	N-07	4471	Delaware	4591
30-025-44236	ConocoPhillips	Zia Hills 19 Federal Com #109H	G	F-19	11619	Wolfcamp	4631 (BHL)
30-015-42712	Mewbourne	Big Sinks 1 A30B Fee #002H	0	B-12	9132	Bone Spring	4837
30-025-44237	ConocoPhillips	Zia Hills 19 Federal Com #110H	G	F-19	11619	Wolfcamp	4912 (BHL)
30-025-45600	Mewbourne	Paduca 7 6 W1FC Federal Com #003H	G	F-7	12100	Wolfcamp	5145
30-025-44238	ConocoPhillips	Zia Hills 19 Federal Com #111H	G	F-19	11619	Wolfcamp	5200 (BHL)
30-015-43725	Mewbourne	Big Sinks 1 B2 PA Federal Com #003H	0	A-12	Plan: 10317	Bone Spring	5222
30-015-43800	Mewbourne	Big Sinks 1 W1PA Federal Com #002H	G	A-12	12065	Wolfcamp	5254
30-015-42694	Mewbourne	Big Sinks 1 A2 PA Federal Com #001H	0	A-12	8838	Bone Spring	5254
30-025-31016	Sahara	Conoco D Federal #004	0	F-18	4373	Delaware	5422

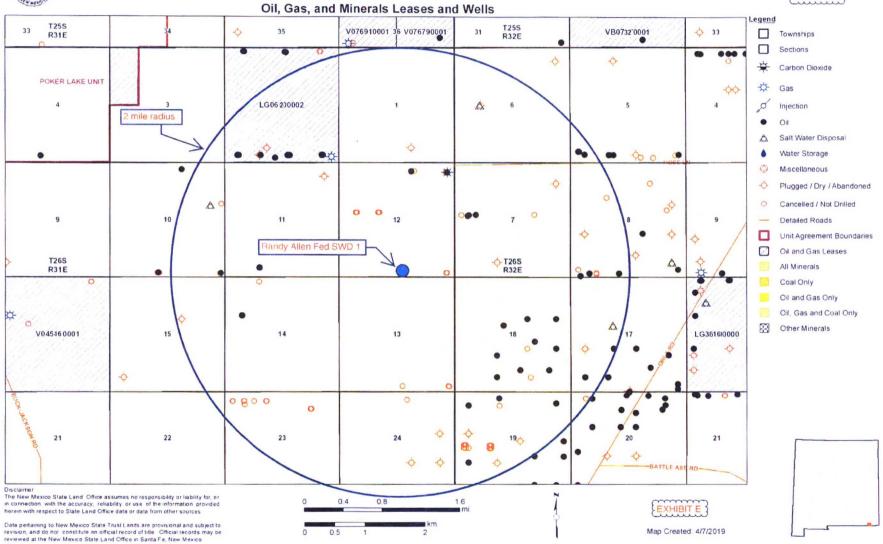




RANDY ALLEN FED SWD 1 AREA OF REVIEW LEASES

Aliquot Parts in Area of Review	Lessor	Lease	Lessee of Record	Operators (all shallower than Devonian)
SESW 1-26s-31e	BLM	NMNM-089057	Devon	Devon
SWSE 1-26s-31e	fee	Big Sinks 1	Mewbourne	Mewbourne
NENE, S2NE4, & SE4 11-26s-31e	BLM	NMNM-089057	Devon	Devon
N2 12-26s-31e	BLM	NMNM-089057	Devon	Devon, Mewbourne
SE4 12-26s-31e	BLM	NMNM-120904	Chevron	N/A
SW4 12-26s-31e	BLM	NMLC-0064756	Penroc	Mewbourne
NE4 13-26s-31e	BLM	NMNM-120904	Chevron	ConocoPhillips
NW4 & S2 13-26s-31e	BLM	NMLC-0064756	Penroc	ConocoPhillips
NE4, N2SE4, & SESE 14-26s-31e	BLM	NMLC-0064756	Penroc	ConocoPhillips
NWNW & S2NW4 7-26s-32e	BLM	NMNM-128929	Occidental Permian	Mewbourne
SWSE 7-26s-32e	BLM	NMNM-120910	COG	N/A
SW4 7-26s-32e	BLM	NMNM-0392082A	Magnum Hunter	ConocoPhillips
NWNE, NW4, N2SW4, & SWSW 18-26s-32e	BLM	NMLC-0062749C	ConocoPhillips	ConocoPhillips, Sahara





PRODUCED WATER SAMPLES FROM T. 26 S., R. 31 E. (in mg/l)

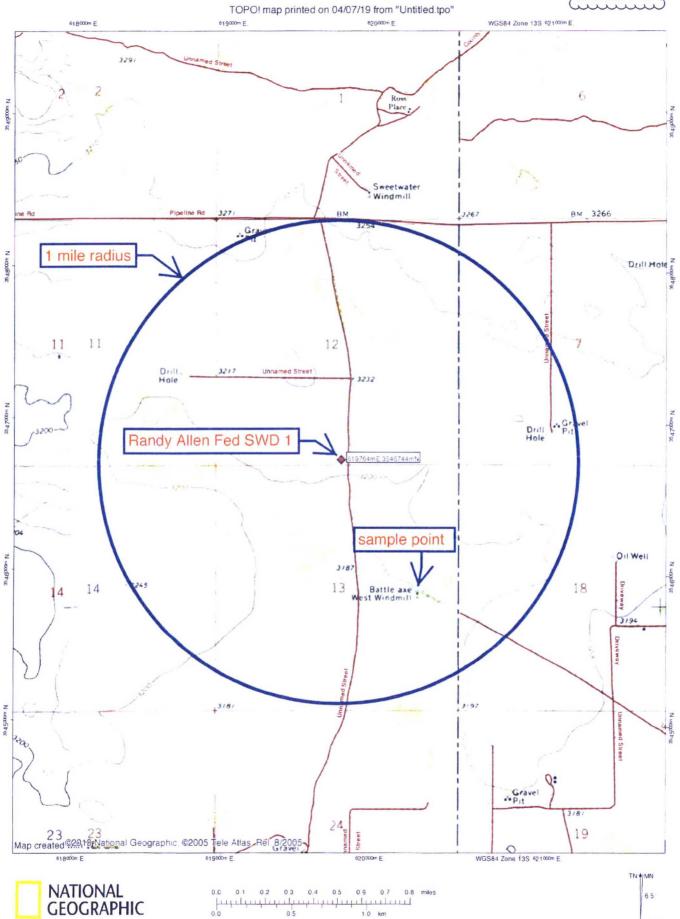
API	Section	UL	Formation	TDS	Sodium	Calcium	Iron	Magnesium	Chloride	Sulfate
3001539036	2	M	AVALON UPPER	223019	76002	10438	210	1922	131072	632
3001539104	2	N	AVALON UPPER	162560	57137	3886	42	776	97161	756
3001539162	2	0	AVALON UPPER	179789	71576	617	22	110	101374	0
3001539162	2	0	AVALON UPPER	179938	71576	617	22	110	101374	844
3001537899	10	В	AVALON UPPER	199639	68948	7560	111	1523	118195	0
3001537899	10	В	AVALON UPPER	209352	70090	7327	203	1557	127230	600
3001538193	11	N	AVALON UPPER	225190	77011	8744	636	1649	134075	0
3001538193	11	N	AVALON UPPER	196577	68797	5059	12	1066	118943	872
3001538193	11	N	AVALON UPPER	203079	72261	4407	112	904	122172	658
3001539866	10	N	BONE SPRING 2ND SAND	152439	48496	6731	29	801	94055	0
3001540994	10	Р	BONE SPRING 2ND SAND	138162	44459	6281	30	781	84470	0
3001540994	10	Р	BONE SPRING 2ND SAND	138376	44459	6281	30	781	84470	618
3001542113	2	N	BONE SPRING 3RD SAND	94966	31353	3679	32	484	57490	0
3001542113	2	N	BONE SPRING 3RD SAND	94518	30032	3403	20	439	58782	355
3001542113	2	N	BONE SPRING 3RD SAND	94864	30225	3424	15	444	59015	365

PRODUCED WATER SAMPLES FROM T. 26 S., R. 31 E. (in mg/l)

API	Section	UL	Formation	TDS	Sodium	Calcium	Iron	Magnesium	Chloride	Sulfate
3001542113	2	N	BONE SPRING 3RD SAND	91289	28721	3441	16	437	56957	328
3001505886	26	0	DELAWARE	212112					132100	425
3001542688	2	Р	WOLFCAMP	81366	26319	2687	26	327	50281	400



04/07/19





New Mexico Office of the State Engineer EXHIBIT G



Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,

O=orphaned, C=the file is

closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

		POD		0											
		Sub-		_	_	Q								V	Vater
POD Number	Code	basin	County	64	16	4	Sec	Tws	Rng	X	Y	DistanceDep	othWellDep	thWater Co	olumn
<u>C 02090</u>		C	ED		4	4	01	26S	31E	620329	3548533*	1876	350	335	15
C 04209 POD2		C	LE	2	3	3	06	26S	32E	620818	3548657	2184	340	155	185
C 04209 POD1		CUB	LE	2	3	3	06	26S	32E	620903	3548619	2194	360	155	205
C 03554 POD1		CUB	ED	2	1	4	01	26S	31E	620547	3549148	2529	630	300	330
C 03639 POD1		CUB	ED	3	4	2	01	26S	31E	620168	3549279	2567	700	365	335
C 04256 POD1		C	ED	4	4	2	10	26S	31E	620384	3549257	2588	666	340	326
C 03829 POD1		CUB	LE	3	3	1	06	26S	32E	620628	3549186	2590	646	350	296

Average Depth to Water:

285 feet

Minimum Depth:

155 feet

Maximum Depth:

365 feet

Record Count: 7

UTMNAD83 Radius Search (in meters):

Easting (X): 619764

Northing (Y): 3546744

Radius: 3220

*UTM location was derived from PLSS - see Help

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.

4/7/19 1:08 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Analytical Report Lab Order 1903306 Date Reported: 3/21/2019

Hall Environmental Analysis Laboratory, Inc.

Client Sample ID: Sec 13 Tank

CLIENT: Permits West Project: Matador Allen and Hammock Collection Date: 3/6/2019 11:13:00 AM

1903306-001 Received Date: 3/7/2019 9:40:00 AM Lab ID: Matrix: AQUEOUS

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 1664B					Analys	t: plr
N-Hexane Extractable Material	ND	11.2	mg/L	1	3/11/2019 9:16:00 AM	43604
EPA METHOD 300.0: ANIONS					Analyst	: MRA
Chloride	16	0.50	mg/L	1	3/7/2019 4:04:04 PM	R58208
SM2540C MOD: TOTAL DISSOLVED SOLIDS					Analyst	: KS
Total Dissolved Solids	383	20.0	mg/L	1	3/13/2019 6:02:00 PM	43630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers: Value exceeds Maximum Contaminant Level. Analyte detected in the associated Method Blank Sample Diluted Due to Matrix E Value above quantitation range D Analyte detected below quantitation limits Page 1 of 4 H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit Sample pH Not In Range PQL Practical Quanitative Limit RL Reporting Detection Limit % Recovery outside of range due to dilution or matrix Sample container temperature is out of limit as specified

QC SUMMARY REPORT

1903306

Hall Environmental Analysis Laboratory, Inc.

21-Mar-19

Client:

Permits West

Project:

Matador Allen and Hammock

Result

Sample ID: MB-43604

SampType: MBLK

TestCode: EPA Method 1664B

TestCode: EPA Method 1664B

Client ID: PBW

Batch ID: 43604

RunNo: 58295

Prep Date:

3/11/2019

Analysis Date: 3/11/2019

SeqNo: 1955297

Units: mg/L

Analyte

PQL

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD

RPDLimit

Qual

Qual

N-Hexane Extractable Material

ND 10.0

SampType: LCS

RunNo: 58295

Client ID: LCSW

Sample ID: LCS-43604

Batch ID: 43604

Prep Date: 3/11/2019

Analysis Date: 3/11/2019

SeqNo: 1955298

Units: mg/L

SPK value SPK Ref Val %REC HighLimit **RPDLimit** 40.00 N-Hexane Extractable Material 32.2 10.0 80.5 78 114

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded H
- Not Detected at the Reporting Limit ND
- Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH Not In Range
- Reporting Detection Limit
- Sample container temperature is out of limit as specified

Page 2 of 4

QC SUMMARY REPORT



Hall Environmental Analysis Laboratory, Inc.

21-Mar-19

Client:

Permits West

Project:

Matador Allen and Hammock

Sample ID: MB

SampType: mblk

TestCode: EPA Method 300.0: Anions

Client ID: PBW

Batch ID: R58208

RunNo: 58208

Prep Date:

Analysis Date: 3/7/2019

SeqNo: 1952228

Units: mg/L

Analyte

Result

SPK value SPK Ref Val %REC LowLimit

HighLimit %RPD

RPDLimit Qual

Chloride

ND 0.50

Sample ID: LCS

SampType: Ics Batch ID: R58208

RunNo: 58208

TestCode: EPA Method 300.0: Anions

Client ID: LCSW Prep Date

Units: mg/L

Analyte

Analysis Date: 3/7/2019

SeqNo: 1952229

HighLimit

%RPD

RPDLimit Qual

Result

Chloride

PQL 4.7 0.50

5.000

SPK value SPK Ref Val %REC

94.8

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- Not Detected at the Reporting Limit ND
- Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix
- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- Sample container temperature is out of limit as specified

Page 3 of 4

QC SUMMARY REPORT

WO#:

1903306

21-Mar-19

Hall Environmental Analysis Laboratory, Inc.

Client:

Permits West

Project:

Matador Allen and Hammock

Sample ID: MB-43630

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

PBW

Batch ID: 43630

RunNo: 58346

Units: mg/L

Prep Date: Analyte

3/12/2019

Analysis Date: 3/13/2019

SeqNo: 1957077 SPK value SPK Ref Val %REC LowLimit

HighLimit %RPD

RPDLimit

Qual

Total Dissolved Solids

Result PQL ND

20.0

Sample ID: LCS-43630

SampType: LCS Batch ID: 43630

RunNo: 58346

TestCode: SM2540C MOD: Total Dissolved Solids

Analyte

Client ID:

Prep Date: 3/12/2019

LCSW

Analysis Date: 3/13/2019

SeqNo: 1957078

Units: mg/L

Qual

PQL

Total Dissolved Solids

1010

120

80

1000

%RPD

RPDLimit

HighLimit

20.0

SPK value SPK Ref Val

%REC 101

LowLimit

H

PQL

Qualifiers:

Holding times for preparation or analysis exceeded

% Recovery outside of range due to dilution or matrix

Value exceeds Maximum Contaminant Level. Sample Diluted Due to Matrix

Practical Quanitative Limit

- Not Detected at the Reporting Limit ND

E

- В Analyte detected in the associated Method Blank Value above quantitation range
- Analyte detected below quantitation limits P Sample pH Not In Range
- Reporting Detection Limit RL

Sample container temperature is out of limit as specified

Page 4 of 4



Longwood Water Management Company, LLC

One Lincoln Centre • 5400 LBJ Freeway • Suite 1500 • Dallas, Texas 75240 Voice 972.371.5200 • Fax 972.371.5201 jharrington@matadorresources.com

Jake Harrington Geologist

April 9, 2019

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

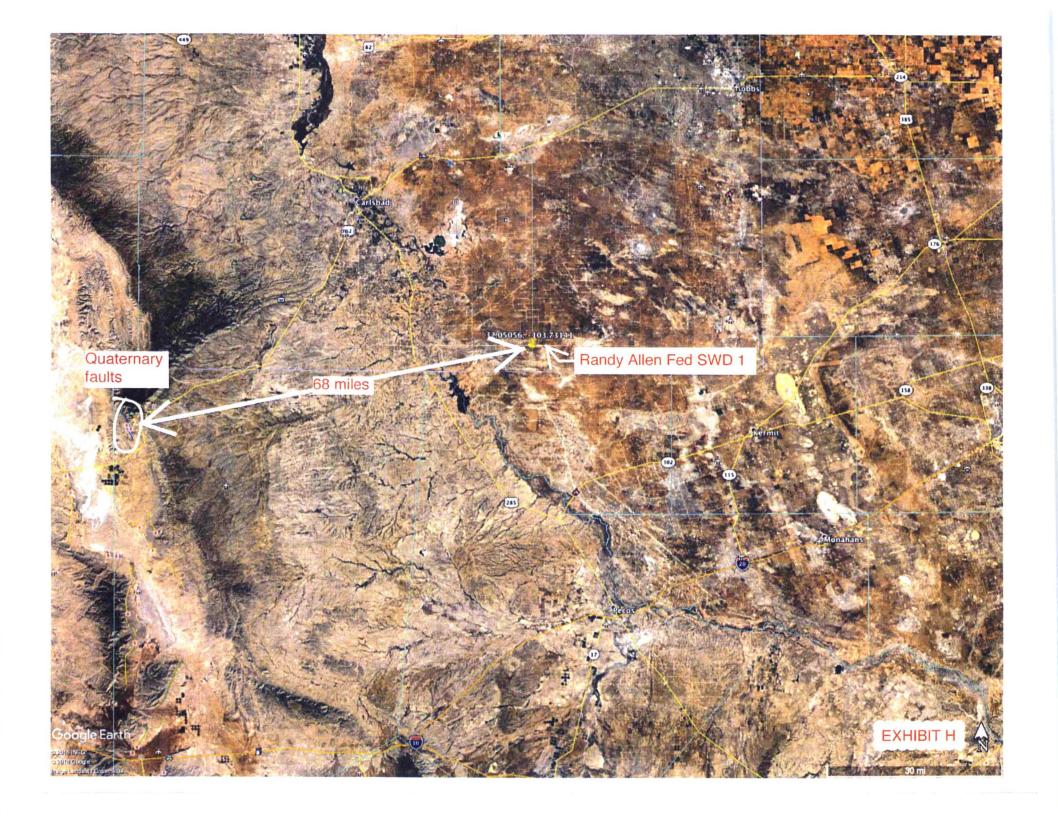
> Re: Geology Statement Randy Allen Fed SWD #1 Section 12, T. 26S, R. 31E Eddy County, New Mexico

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 16,883 ft., and any underground sources of drinking water has been found.

Sincerely, Longwood Water Management Company, LLC

Jake Harrington



CURRENT-ARGUS



AFFIDAVIT OF PUBLICATION

Ad No. 0001278510

PERMITS WEST, INC. 37 VERANO LOOP

SANTA FE NM 87508

I, a legal clerk of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

02/27/19

Legal Olerk

Subscribed and sworn before me this 27th of February 2019.

State of WI, County of Brown NOTARY PUBLIC

My Commission Expires

Longwood Water Management Company, LLC is applying to drill the Randy Allen Fed SWD 1 as a saltwater disposal well. The well is staked at 133' FSL & 2588' FEL Sec. 12, T. 26 S., R. 31 E., Eddy County. This is 23 miles southeast of Malaga, NM and 18 miles northeast of Orla, TX. Disposal will be in the Devonian from 16,883' to 17,863'. Maximum injection pressure will be 3,376 psi. 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: Brian Wood, Permits West, Inc., 37 Verano Loop, Santa Fe, NM 87508. Phone number is (505) 466-8120.

Pub: February 27, 2019 #1278510







April 16, 2019

BLM 620 E. Greene Carlsbad NM 88220

TYPICAL LETTER

Longwood Water Management Company, LLC is applying (see attached application) to drill the Randy Allen Fed 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: Randy Allen Fed SWD 1 (BLM surface & lease) TD = 17,863'

Proposed Disposal Zone: Devonian (from 16,883' to 17,863')

Location: 133' FSL & 2588' FEL Sec. 12, T. 26 S., R. 31 E., Eddy County, NM Approximate Location: 23 miles southeast of Malaga, NM Applicant: Longwood Water Management Company, LLC (972) 371-5420

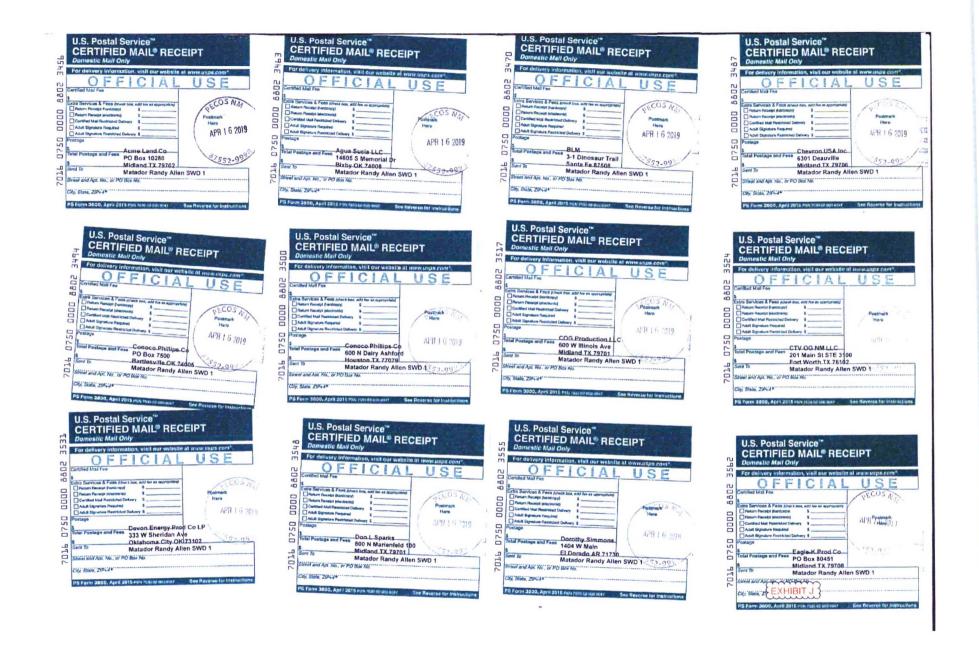
Applicant's Address: 5400 LBJ Freeway, Suite 1500, Dallas TX 75240

<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





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