1 *			• -				
Form 3160-5 (March 2012)	UNITED STATES		BEB Har	5203	ORM APPROVED OMB No. 1004-0137		
DE DE	EPARTMENT OF THE IN REAU OF LAND MANA			Expires: October 31, 2014 5. Lease Serial No.			
				NMNM68821			
Do not use this	NOTICES AND REPOF form for proposals to Use Form 3160-3 (AP	drill or to re-ent	er an CD	6. If Indian, Allottee or	r Tribe Name		
SUBM	IIT IN TRIPLICATE – Other in	structions on page 2.	o e 2015	7. If Unit of CA/Agree	ment, Name and/or No.		
I. Type of Well	······	MA	Y 2 6 2015				
	Well Other		RECEIVED	8. Well Name and No. Telecaster 30 Fed			
2. Name of Operator Endurance Resources LLC	/		•	9. API Well No. 30-025-41456			
3a. Address	3	b. Phone No. (include a	area code)	10. Field and Pool or E			
203 West Wall Street Suite 1000 Midland TX		432-242-4680		Antelope Ridge B			
 Location of Well (Footage, Sec., 7 330 FNL & 660 FEL UL A Sec. 30 T235 F 			•	 County or Parish, S Lea County, New 			
12. CHE	ECK THE APPROPRIATE BOX	(ES) TO INDICATE N	ATURE OF NOTIO	CE, REPORT OR OTHE	ER DATA		
TYPE OF SUBMISSION			TYPE OF ACT	TON			
Notice of Intent	Acidize	Deepen	Prod	uction (Start/Resume)	Water Shut-Off		
	Alter Casing	Fracture Treat	Recl	amation	Well Integrity		
Subsequent Report	Casing Repair	New Constructi	on 🔲 Reco	omplete	Other		
	Change Plans	Plug and Abanc		porarily Abandon			
L Final Abandonment Notice	Convert to Injection	Plug Back		er Disposal			
via flowline to the Federal 19		NO. 3U-U25-24676 loc	ated in NE/4 Sec	. 19-1235-R34E, Lea	County, New Mexico.		
14. I hereby certify that the foregoing i	is true and correct. Name (Printed)	-					
M. A. Sirgo, III	P	Title E	ngineer				
Signature L. A.	Juigo in	Date 0	3/12/2015			.	
	竹HIS SPACE F	OR FEDERAL C	OR STATE OF	FICEUSELTIC	D FUR REGUL	TU	
Approved by			1/				
Conditions of approval, if any, are attact that the applicant holds legal or equitab entitle the applicant to conduct operation	le title to those rights in the subject ons thereon.	lease which would O	ffice	MA 14	Parte 1.0 2015 Hever to		
Title 18 U.S.C. Section 1001 and Title fictitious or fraudulent statements or re	43 U.S.C. Section 1212, make it a presentations as to any matter with	crime for any person kno in its jurisdiction.	wingly and willfully	to make t B 却RE執机切开 CARLSB		ites any false,	
(Instructions on page 2)				L		 	
			M	AY 27 201	31	NI	



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON Governor Joanna Prukop Cabitet Secretary Mark E. Fesmire, P.E. Director Oil Conservation Division

ADMINISTRATIVE ORDER SWD-1067

APPLICATION OF RAY WESTALL FOR PRODUCED WATER DISPOSAL, LEA COUNTY, NEW MEXICO

ADMINISTRATIVE ORDER OF THE OIL CONSERVATION DIVISION

Under the provisions of Rule 701(B), RAY WESTALL made application to the New Mexico Oil Conservation Division for permission to utilize for produced water disposal its Federal 19 Well No. 1 (API No. 30-025-24676) located 660 feet from the North line and 660 feet from the East line of Section 19, Township 23 South, Range 34 East, NMPM, Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

(1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;

(2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;

(3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and

(4) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

The applicant is hereby authorized to utilize its Federal 19 Well No. 1 (API No. 30-025-24676) located 660 feet from the North line and 660 feet from the East line of Section 19, Township 23 South, Range 34 East, NMPM, Lea County, New Mexico, in such manner as to permit the injection of produced water for disposal purposes into the Cherry Canyon member of the Delaware Mountain Group through perforations from 6670 feet to 6883 feet and through plastic-lined tubing set with a packer located within 100 feet of the top of the injection interval.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

As preparation for injection, the operator shall plug back the well with cement and cast iron bridge plug to within 200 feet of the bottom permitted injection interval.

The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

After installing injection tubing, the casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The wellhead injection pressure on the well shall be limited to **no more than 1334 psi.** In addition, the injection well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface injection pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the injection formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of disposal equipment and of any mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

<u>PROVIDED FURTHER THAT</u>, jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall provide written notice of the date of commencement of injection to the Hobbs district office of the Division.

The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations. Administrative Order SWD-1067 RAY WESTALL February 6, 2007 Page 3 of 3

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on February 6, 2007.

MARK E. FESMIRE, P.E. Director

MEF/wvjj

cc: Oil Conservation Division – Hobbs Bureau of Land Management – Carlsbad



Permian Basin Area Laboratory 2101 S Market Street Bldg. B

Report Date: 3/20/2015

Complete Water Analysis Report _{SSP v.8}								
Customer:	ENDURANCE RESOURCES LLC	Sample Point Name	Federal 19 # 1 SWD					
District:	New Mexico	Sample ID:	201501009579					
Sales Rep:	Wayne C Peterson	Sample Date:	2/25/2015					
Lease:	DELEWARE BASIN	Log Out Date:	3/20/2015					
Site Type:	Facility	Analyst:	Samuel Newman					
Sample Point Description:	TRANSFER PUMP	·····						

ENDURANCE RESOURCES LLC, DELEWARE BASIN, Federal 19 # 1 SWD

Field	Data		Analysis of Sample						
			Anions;	mg/L meq/L		Cations;	mg/L	meq/L	
nitial Temperature (°F):		250	Chloride (Cl'):	72820.3	2054.2	Sodium (Na'):	40648.5	1768.	
Final Temperature (°F):		80	Sulfate (SO4 ²⁻):	1783.0	37.1	Potassium (K ⁺):	722.4	18.	
nitial Pressure (psi):		100	Borate (H ₃ BO ₃):	234.0	3.8	Magnesium (Mg ²⁺):	897.9	73.9	
Final Pressure (psi):		15	Fluoride (F'):	ND		Calcium (Ca ²⁺):	5839.0	291.	
			Bromide (Br ⁻):	ND		Strontium (Sr ²⁺):	304.2	6.	
pH:			Nitrite (NO ₂):	ND		Barium (Ba ² *):	0.0	0.0	
		Nitrate (NO3):	ND		Iron (Fe ²⁺):	64.7	2.3		
			Phosphate (PO4 3'):	ND		Manganese (Mn ²⁺):	1.1	Q.	
			Silica (SiO ₂):	ND		Lead (Pb ²⁺):	ND		
						Zinc (Zn ²⁺):	0.0	0.	
Alkelinity by Titration:	mg/L	meq/L							
Bicarbonate (HCO3):	488.0	8.0				Aluminum (Al ³⁺):	ND		
Carbonate (CO3 ²⁻):	ND					Chromium (Cr ³⁺):	ND		
Hydroxide (OH [*]): ND						Cobalt (Co ²⁺):	ND		
			Organic Acids:	mg/L	meg/L	Copper (Cu ²⁺):	ND		
aqueous CO ₂ (ppm):		400.0	Formic Acid:	ND		Molybdenum (Mo ²⁺):	ND		
aqueous H ₂ S (ppm):		68.0	Acetic Acid:	ND		Nickel (Ni ²⁺):	ND		
aqueous O ₂ (ppb):		ND	Propionic Acid:	ND		Tin (Sn²+):	ND		
			Butyric Acid:	ND		Titanium (Ti ²⁺):	ND		
Calculated TDS (mg/L):		123803	Valeric Acid:	ND		Vanadium (V ²⁺):	ND		
Density/Specific Gravity (g	/cm³):	1.0805				Zirconium (Zr ²⁺):	ND		
Measured Density/Specific	: Gravity	1.0877							
Conductivity (mmhos): ND					Total Hardness:	18643	N/		
Resistivity:		ND							
MCF/D:		No Data							
BOPD: No Data					Į				
BWPD: No Data			Anion/Cation Ratio:		0.97	ND = Not	Determined		

Conditions Barite		(BaSO ₄)	Calcite (CaCO ₃)		Gypsum (CaSO ₄ ·2H ₂ O)		Anhydrite (CaSO ₄)		
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi		0.000	1.49	106.196	-0.03	0.000	-0.21	0.000
99°F	24 psi		0.000	1.51	106.669	-0.01	0.000	-0.12	0.000
118°F	34 psi		0.000	1.56	107.754	0.00	0.000	-0.02	0.000
137°F	43 psi		0.000	1.61	108.961	0.01	25.047	0.08	135.473
156°F	53 psi		0.000	1.67	110.192	0.02	49.911	0.19	282.401
174°F	62 psi		0.000	1.74	111.443	0.03	74.606	0.29	405.899
193°F	72 psi		0.000	1.81	112.729	0.04	98.558	0.40	507.573
212°F	81 psi		0.000	1.88	114.165	0.06	120.664	0.52	589.633
231°F	91 psi		0.000	1.96	115.692	0.06	139.477	0.63	654.685
250°F	100 psi		0.000	2.04	117.245	0.07	153.306	0.74	705.459

Cond	itions	Celestite (SrSO ₄)		Halite (NaCl)		Iron Sulfide (FeS)		Iron Carbonate (FeCO ₃)	
Temp	Press.	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)	Index	Amt (ptb)
80°F	15 psi	0.41	125.399	-1.31	0.000	4.01	35.659	1.18	40.238
99°F	24 psi	0.42	127.780	-1.33	0.000	3.86	35.654	1.26	41.175
118°F	34 psi	0.43	129.921	-1.34	0.000	3.77	35.651	1.35	42.105
137°F.	43 psi	0.44	132.244	-1.35	0.000	3.72	35.650	1.43	42.869
156°F	53 psi	0.46	135.010	-1.35	0.000	3.68	35.649	1.51	43.468
174°F	62 psi	0.47	138.335	-1.36	0.000	3.66	35.649	1.58	43.930
193 ° F	72 psi	0.50	142.220	-1.36	0.000	3.66	35.649	1.64	44.283
212°F	81 psi	0.52	146.576	-1.36	0.000	3.67	35.651	1.69	44.581
231°F	91 psi	0.55	151.252	-1.36	0.000	3.69	35.653	1.74	44.817
250°F	100 psi	0.58	156.061	-1.36	0.000	3.72	35.655	1.77	44.992

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the eight (8) scales Note 3: Saturation index predictions on this sheet use pH and akalinity. %CO2 is not included in the calculations.



<u>A daos o</u> SculoSoftPitzer^{1M} SSP2010

Comments: