

Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised August 1, 2011

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-015-22754
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name CULEBRA BLUFF SWD ✓
8. Well Number 1 ✓
9. OGRID Number 147179 ✓
10. Pool name or Wildcat SWD; Delaware

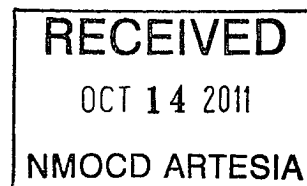
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS)	
1. Type of Well: Oil Well ☐ Gas Well ☒ Other SWD ✓	
2. Name of Operator Chesapeake Operating, Inc. ✓	
3. Address of Operator P.O. Box 18496 Oklahoma City, OK 73154-0486	
4. Well Location Unit Letter <u>E</u> : 1980' feet from the <u>North</u> line and <u>860'</u> feet from the <u>West</u> line Section <u>2</u> Township <u>23S</u> Range <u>28E</u> NMPM County <u>Eddy</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3008.5'	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
OTHER: ☒ Acidize		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Please find Chesapeake's procedure to optimize injection into the Delaware formation, current well-bore diagram, and NMOCD's C-144 (CLEZ) pit permit. A 24 hour notice will be provided in order to provide the opportunity to witness the MIT.



Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Bryan Arrant TITLE Sr. Regulatory Compliance Sp. DATE 10/13/2011
Type or print name Bryan Arrant E-mail address: Bryan.arrant@chk.com PHONE: 405-935-3782

For State Use Only

APPROVED BY: Richard Innes TITLE COMPLIANCE OFFICER DATE 10/20/11
Conditions of Approval (if any):

40

Culebra Bluff SWD
Property No: 891198

Procedure

- 1) **Safety is the highest priority.** Hold wellsite safety meetings prior to each significant operation. Review critical parameters and objectives as well as emergency action plans.
- 2) MIRU Slickline Unit. RIH w/ 1.5" Sample bailer on fishing string (wt bars, jars, etc.) and tag PBTD. Report same. (Note: If hole is filled disregard step 7. If hole is clean disregard step 6.)
- 3) Prep location, MIRU PU and conduct rig inspection.
- 4) ND wellhead. NU BOP and enviro dish/vac.
- 5) RIH w/ gauge ring and check TBG I.D. to packer. POOH and RD Slickline.
- 6) If Slickline tags fill:
 - a) Release packer at 4,245 ftKB. TOOH w/ 2-7/8" IPC injection tubing, on off-tool, and packer. (Note: Have thread protectors installed on all pins as we TOOH w/ IPC tubing.)
 - b) PU and RIH w/ bit, tubing cavity, and bailer on 2-7/8" workstring.
 - c) Clean out to PBTD of 5,765 ftKB.
 - d) POOH and remove, tubing cavity and bailer.
 - e) RIH w/ packer, F-nipple, and on-ff tool on open ended workstring to 4,245'. Set packer.
- 7) If hole is clean:
 - a) TOOH w/ 2-7/8" IPC injection tubing.
 - b) RBIH w/ 2-7/8" workstring and latch onto packer.
- 8) MIRU Cudd Acidizing Services with 5k pump truck, 500 gal of Xylene, 5,000 gal of 15% NEFE, and 100 bbls of brine.
- 9) Check all connections and tree to ensure maximum pressure rating of 3,000#.
- 10) Pressure up on Csg. to 500# and monitor throughout job. Pressure Test lines to 3,000#. (Max treating pressure for job is 2,500#)
- 11) Pump 500 gallons of Xylene, a total of 5,000 gallons of 15% NEFE and drop rock salt as a diverter between each 1,667 gallons of acid. See pump schedule for details.



**Culebra Bluff SWD
Acid Job
Eddy County, NM
Property No: 891198**

Objective

To decrease near wellbore damage and effectively increase injection into the Delaware interval.

Casing Detail

OD (in)	Weight (lbs/ft)	Grade / Conn	Depth (MD – ft)	Drift (in)	ID (in)	Capacity (bbls/ft)	80% SF Collapse (psi)	80% SF Burst (psi)
7-5/8"	33.7	S-95	19 – 11,450	6.640	6 765	0.0444	7,040	7,504

Tubing Detail

OD (in)	Weight (lbs/ft)	Grade / Conn	Depth (MD – ft)	Drift (in)	ID (in)	Capacity (bbls/ft)	80% SF Collapse (psi)	80% SF Burst (psi)
2-7/8			4,245					

Workstring Detail

OD (in)	Weight (lbs/ft)	Grade / Conn	Depth (MD – ft)	Drift (in)	ID (in)	Capacity (bbls/ft)	80% SF Collapse (psi)	80% SF Burst (psi)
2-7/8	8.7	N-80	-	2.165	2.259	0.00387	12,240	12,000

Wellbore Data

Latitude: 32.33639

Longitude: -104.06341

Directions: From Loving head North to Hwy 31. Follow 31 East to US Refinery Rd. Turn left and follow US Refinery Rd for 2.2 miles. Location will be on the left.

RKB Elevation: 19 ft

Injection Perforations: 4,300 – 4,800 (ftKB)

TD: 12,900 (ftKB)

PBTD: 5,765 (ftKB)

Pump Schedule

Well name: Culebra Bluff SWD

Stage: 1

Treat Schedule

Stg. #	Fluid	Stg. Type	Clean Vol. (bbls)	Clean Vol. (gals)	Slurry Rate	Proppant	Cum. Prop. (lbs)	Prop. Conc. (lb/gal)	Stg. Time (min.)	Cum. Time (min.)	Time Remaining (min.)
1	Xylene	Formation Treatment	11.9	500	6.0	N/A	0	0.00	2.0	2.0	34.3
3	15% NEFE	15% Acid	39.7	1667	6.0	N/A	0	0.00	6.6	8.6	32.3
4	Brine	500# Rocksalt Sweep	23.8	1000	6.0	N/A	0	0.00	4.0	12.6	25.7
5	15% NEFE	15% Acid	39.7	1667	6.0	N/A	0	0.00	6.6	19.2	21.7
6	Brine	500# Rocksalt Sweep	23.8	1000	6.0	N/A	0	0.00	4.0	23.2	15.1
7	15% NEFE	15% Acid	39.7	1666	6.0	N/A	0	0.00	6.6	29.8	11.1
8	Brine	Flush	27.0	1134	6.0	N/A	0	0.00	4.5	34.3	4.5

Totals

Brine (bbls)	Brine (gals)	15% NEFE (bbls)	15% NEFE (gals)	Xylene (bbls)	Xylene (gallons)
74.6	3134	119.0	5000	11.9	500.0

- 12) Record ISIP, 5, 10, and 15 minute shut in pressures.
- 13) RDMO Cudd Acidizing Services and clean location
- 14) RIH & set F-Plug in F-Nipple, release from on-off tool, TOOH, and lay down work string.
- 15) MIRU Hydrotesters and hydrotest 2-7/8" IPC tubing above slips to 5,000# while RIH w/ tubing.
(Note: Use poly stabbing cup while making connections during TIH.)
- 16) Stop above packer at 4,245 ftKB.
- 17) Circulate hole w/ 175 BBL of packer fluid and 2%KCL.
- 18) Re engage on-off tool. Test backside to 500#. If pressure holds ND BOP and enviro dish/vac. Set tubing in 10 pts of tension and NU wellhead.
- 19) RDMO PU and pump truck, and clean location.
- 20) RU Slickline. RIH and release F-Plug TOOH w/ F-Plug and RD Slickline.
- 21) Call OCD 24 Hrs prior to MIT. Run MIT test prior to resuming injection.
- 22) Resume injection.

Personnel / Phone List

Production Superintendent	Danny Hunt	Office: (575) 391-1462 Mobile: (817) 526-2322
Production Foreman	Ralph Skinner	Office: (575) 391-1462 Mobile: (575) 441-4921
Field Engineer	Donny Lowry	Office: (575) 391-1462 Mobile: (575) 942-8511

CURRENT WELLBORE SCHEMATIC



WELL: CULEBRA BLUFF SWD
 FIELD: HERRADURA BEND
 COUNTY: EDDY STATE: NEW MEXICO
 LOCATION: 1,980.0 FNL & 860.0 FWL SEC 2, BLK ,
 ELEVATION: 3,009.0 GR -- 3,028.0 RKB
 TD: 12,900.0 PBD: Original Hole - 5765.0

PROP #: 891198
 API: 3001522754
 SPUD DATE: 12/13/1978
 RIG RELEASE: 12/9/1985
 FIRST SALES:
 WELLBORE TYPE: VERTICAL

Well Config: - Original Hole, 10/12/2011 8:51:33		Casing String: Liner							
Schematic - Actual		Set Depth (ftKB)	Wellbore Original Hole						
		12,900.0							
		String Top Connection	ST&C						
		Item Description	OD (in) ID (in) Dnft (in) Wt (lbs/ft) Grade Top (ftKB) Btm (ftKB)						
		Liner Hanger	5 1/2				11,115.0	11,125.0	
		Casing Joints	5 1/2	4.892	4.767	17.93	M-80	11,125.0	12,899.0
		Float Shoe	5 1/2					12,899.0	12,900.0
Performations									
Date	Zone	Top (ftKB)	Btm (ftKB)	Shot Dens (shots/ft)	Phasing (%)				
4/13/1993	DELAWARE, Original Hole	4,300.0	4,800.0						
12/9/1985	BRUSHY CANYON LWR, Or	6,062.0	6,126.0	4.0					
3/25/1991	BRUSHY CANYON LWR, Or...	6,178.0	6,225.0						
1/6/1982	BONE SPRING, Original Hole	6,349.0	6,382.0	4.0					
1/6/1982	BONE SPRING, Original Hole	6,440.0	6,445.0	4.0					
1/6/1982	BONE SPRING, Original Hole	6,442.0	6,480.0	2.0					
1/6/1982	BONE SPRING, Original Hole	6,492.0	6,520.0	4.0					
1/6/1982	BONE SPRING, Original Hole	6,688.0	6,718.0	2.0					
6/28/1981	BONE SPRING SAND, Origi...	7,654.0	7,680.0	2.0					
6/28/1981	BONE SPRING LWR, Origin...	8,740.0	8,790.0	1.0					
4/18/1979	ATOKA, Original Hole	11,512.0	11,516.0	4.0					
4/3/1979	ATOKA, Original Hole	11,722.0	11,730.0	4.0					
2/19/1979	MORROW, Original Hole	12,326.0	12,423.0	4.0					
Tubing String: <Tubing Description>									
Set Depth (ftKB)		Wellbore Original Hole		Run Date					
4,245.0		Original Hole							
Tubing String: Tubing - Production									
Set Depth (ftKB)		Wellbore Original Hole		Run Date					
4,245.0		Original Hole							
Stimulations									
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		12,326.0	12,423.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		11,722.0	11,730.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		11,512.0	11,516.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		7,654.0	7,680.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		8,740.0	8,790.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		6,349.0	6,718.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		6,062.0	6,126.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		6,178.0	6,225.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Acidizing	11/12/2003		4,300.0	4,800.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Sand Frac	4/13/1993		6,062.0	6,126.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Sand Frac	4/13/1993		6,178.0	6,225.0					
Stim Details									
Type	Date	Zone	Top (ftKB)	Bottom (ftKB)					
Sand Frac	4/13/1993		4,300.0	4,800.0					
Attachments									
Date	Type 1	Description							
12/18/2008		Culebra Bluff SWD SS							