

Submit 3 Copies To Appropriate District Office  
District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
May 27, 2004

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

WELL API NO. 30-015-28659
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. 7. K-6854-2
7. Lease Name or Unit Agreement Name Avalon (Delaware) Unit
8. Well Number 238
9. OGRID Number 7673
10. Pool name or Wildcat Avalon; Delaware 3715

RECEIVED  
NOV 11 2009  
NMOCD ARTESIA

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 ☐

2. Name of Operator EXXON MOBIL CORPORATION

3. Address of Operator  
P.O. BOX 4358, CORP-MI-0203, HOUSTON, TX 77210

4. Well Location  
Unit Letter K: 2301 feet from the SOUTH line and 1485 feet from the WEST line  
Section 30 Township 20S Range 28E NMPM EDDY County

11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3648 GR  
3295' GR

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type \_\_\_\_\_ Depth to Groundwater \_\_\_\_\_ Distance from nearest fresh water well \_\_\_\_\_ Distance from nearest surface water \_\_\_\_\_

Pit Liner Thickness: \_\_\_\_\_ mil Below-Grade Tank: Volume \_\_\_\_\_ bbls; Construction Material \_\_\_\_\_

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

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
OTHER: <input checked="" type="checkbox"/> STEP RATE TEST PROCEDURE	P AND A <input type="checkbox"/>
	CASING/CEMENT JOB <input type="checkbox"/>
	OTHER: TEMPORARY ABANDONMENT <input type="checkbox"/>

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Exxon Mobil requests approval to perform the attached "Step-Rate Test" to determine latest formation injection properties.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Mark Del Pico TITLE STAFF REGULATORY SPECIALIST DATE 11/11/2009

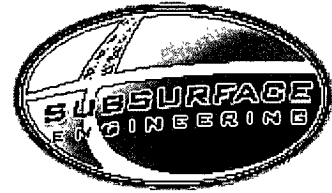
Type or print name MARK DEL PICO E-mail address: mark\_delpico@exxonmobil.com Telephone No. 281-654-1926

For State Use Only

APPROVED BY: Richard Ingle TITLE Compliance Officer DATE 12/11/09  
Conditions of Approval (if any):



EXXONMOBIL US PRODUCTION  
WELL WORK PROCEDURE  
ADU 503, 238, 642, 516, 505, 507, 537, 523  
Avalon Delaware Unit



**CURRENT STATUS:** Well is currently injecting.  
Well will be shut in at least 48 hours prior to beginning of step-rate test.  
ExxonMobil will contact NM OCD no less than 48 hours prior to beginning of test.

**OBJECTIVE:** Perform Step-Rate tests on water injectors to determine latest formation injection properties.

**Risk Assessment:**

Injection well. Producing wells in the area have been known to have  $\pm 5000$  ppm H<sub>2</sub>S concentration in their flow stream. Caution should be taken to prevent un-expected H<sub>2</sub>S exposure.

**RECOMMENDED PROCEDURE:**

1. Ensure ExxonMobil has notified NM OCD of step rate test (48 hours in advance) and shut in the well for a minimum of 48 hours prior to testing. Execute energy Isolation procedures on all equipment, machinery and valves associated within work scope.
2. Check status of rig anchor test. Move in and rig up wireline unit and pump truck.
3. Kill well by bull heading field salt water down tubing until assured well is dead.
4. Nipple down tree. MIRU BOP and lubricator and test.
5. Make wireline run to TD with a tool of analogous O.D. as down-hole pressure gauge to ensure that we have the clearance to run the pressure gauge.
6. Set pressure gauge at appropriate depth (see Table 1 below). Consult attached wellbore diagrams for individual well down-hole configurations.
7. Start injection at lowest rate (Step 1 of Table 2) and continue to inject at higher rates according to the specifications in Table 2 (below). Each step will last one hour (8 hours total pump time).
8. Finish final step rate and stop pumping. Ensure well is dead. Keep kill (or pump) truck on location as needed. ND BOP and lubricator; NU WH.
9. RDMO wireline unit and pump truck; RWTI. Return well to previous injection state. NM OCD needs to review the test data before an increase in injection rate or pressure can be approved and implemented.

# ADU Step-Rate Tests

2/2

Well	U. Cherry Perfs		U. Brushy Perfs		Gauge Depth
	Top ft	Bottom ft	Top ft	Bottom ft	
238	2632	2754	3428	3604	2582
503	2628	2704	3486	3666	2578
505	2546	2662	3514	3564	2578
507	2498	2610	3426	3600	2448
516	2576	2690	3602	3670	2526
523	2556	2682	3542	3738	2506
537	2544	2688	3586	3642	2494
642	2534	2668	3646	3678	2484

**Table 1: Step-Rate Test Information**

Well	Inj Water Rate bpd	Inj Pressure psi	Step 1 30%		Step 2 60%		Step 3 90%		Step 4 120%		Step 5 150%		Step 6 180%		Step 7 210%		Step 8 240%		Total Bbls for Test bbls
			Bbl/d	Bbls/hr	Bbl/d	Bbls/hr	Bbl/d	Bbls/hr	Bbl/d	Bbls/hr	Bbl/d	Bbls/hr	Bbl/d	Bbls/hr	Bbl/d	Bbls/hr	Bbl/d	Bbls/hr	
238	475	480	142.5	6	285	12	427.5	18	570	24	712.5	30	855	36	997.5	42	1140	48	214
503	430	430	129	5	258	11	387	16	516	22	645	27	774	32	903	38	1032	43	194
505	240	480	72	3	144	6	216	9	288	12	360	15	432	18	504	21	576	24	108
507	215	480	64.5	3	129	5	193.5	8	258	11	322.5	13	387	16	451.5	19	516	22	97
516	350	480	105	4	210	9	315	13	420	18	525	22	630	26	735	31	840	35	158
523	175	460	52.5	2	105	4	157.5	7	210	9	262.5	11	315	13	367.5	15	420	18	79
537	240	480	72	3	144	6	216	9	288	12	360	15	432	18	504	21	576	24	108
642	200	480	60	3	120	5	180	8	240	10	300	13	360	15	420	18	480	20	90

**Table 2: Injection Test Specifications for All 8 Wells**