Submit I Copy To Appropriate District	State of New	Mexico		Form C-103
District 1 - (575) 393-6161 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Natural Resources 525 N. French Dr., Hobbs, NM 88240		WELL API NO.	Revised July 18, 2013
District II - (575) 748+1283 811 S. First St., Artesia, NM 88210	<b>OIL CONSERVATI</b>	ON DIVISION	30-045-28653	
District III - (505) 334-6178	1220 South St. I	Francis Dr.	STATE	FEE X
1000 Rio Brazos Rd., Aztec, NM 87410         Santa Fe, NM 87505           District IV - (505) 476-3460         Santa Fe, NM 87505           1220 S. St. Francis Dr., Santa Fe, NM         Santa Fe, NM 87505			6. State Oil & Gas Lea	se No.
87505 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			7. Lease Name or Unit Sunco Disposal	Agreement Name
1. Type of Well: Oil Well Gas Well Other SWD Class I			8. Well Number #1	
2. Name of Operator Agua Moss, LLC			9. OGRID Number 247130	
3. Address of Operator			10. Pool name or Wild	cat
PO Box 600 Farmington, NM 8749	,		SWD-MV	
4. Well Location	feet from the North	line and 1005	feet from the Wes	line
Section 2 Tow	nshin 29N Range 12	W NMP	County San	Iuan
	11. Elevation (Show whether	DR, RKB, RT, GR, etc.	.)	Juan .
Kenne and the second	51	859' GL		
PERFORM REMEDIAL WORK	PLUG AND ABANDON CHANGE PLANS MULTIPLE COMPL COMPL COMPL COMPL CHANGE operations. (Clearly state k). SEE RULE 19.15.7.14 NM mpletion.	REMEDIAL WOF COMMENCE DR CASING/CEMEN OTHER: all pertinent details, an MAC. For Multiple Co e Sunco Disposal #1, P	AK     ALTH       ILLING OPNS.     P AN       IT JOB     P       Fall Off Test     P       Id give pertinent dates, incompletions: Attach wellbo       Please see the attached deta	RING CASING
Spud Date:	Rig Release	e Date:		
I hereby certify that the information a	bove is true and complete to th	e best of my knowledg	e and belief.	
SIGNATURE MALUIA	Jull ATTLE_	_Regulatory Complian	ce Specialist DATE	9/11/2018_
Type or print namePhilana Thom For State Use Only	pson E-mail address:p	thompson@merrion.bz	PHONE:505-4	36-1171_
APPROVED BY: Carl, ( Conditions of Approval (if any):	have TITLE E	wiroment of Z	minuer DATE	9/18/2018
- Must achieve	2 pseudo-stendy	state inject	in vale bet	A
- Must achier	in at least	40 gpm	injection Va	ne.

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# Fall Off Test Procedure:

## **Prepare Well for Fall Off Test**

- 1. Arrange for adequate injection fluid storage 2. Accumulate 3000 bbls of produced water
- 3. Perform MIT
- 4. MIRU wireline
- 5. RIH w/ Gauge ring to SN
- 6. POOH w/ Gauge ring and PU impression block (or something to run thru SN)
- 7. RIH tag and record fill depth
- 8. If no restrictions exist and fill is below the perfs continue on to FOT. Otherwise remediate problem or adjust FOT procedure before continuing.

#### **Conduct Fall Off Test**

- 9. POOH pick up pressure gauges
- 10. RIH and hang gauges off @ 4405' KB
- 11. Begin injection, (125 bph) 3000 bwpd, Record time
- 12. Inject for 50 hrs, total of 6250 bbls. Record start and stop time
- a. Ensure injection pressures have stabilized before proceeding 13. S/D injection pump and close valve @ wellhead, Record time
  - a. Once surface pressure stabilizes record start time of fall off
- 14. Record pressure data for 164 hrs, Record start and stop time
- 15. POOH making gradient stops @ 4000', 3000', 2000', 1000' and surface
- 16. Secure well and bleed pressure off lubricator
- 17. R/D wireline
- 18. Put well back into service for normal operation.

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Winning/Shared/OTHER CORPS, PARTNERSHIPS, & LLCSAGUA MOSSV2 - Sunce/Permits/01 - UICH005 - Inj Weil/FOT/2017/2017-05-28 Sunce SWD (FOT Plan and Procedure V2).docx

#### AGUA MOSS, LLC TEST PLAN FOR PRESSURE FALL-OFF TEST (FOT)

Well Information					
Well:	Sunco DI	sposal 1	Field:	Mesaverde SWD	
Location:	1595' fnl &1005' fwl S2, T29N, R12W San Juan Co. New Mexico		Elevations:	5859' GL 5872' RKB	
			Depths:	4706' KB PBTD 4760' KB TD	
			Engineer:	J. Ryan Davis (505,324,5335)	
API:	30-045-28653		Date:	9/6/2018	
Surface Casing:	8-5/8" @ 209' KB W/ 150sx; Circ to surface		Production Casing:	5-1/2" @ 4750' KB w/ 230 sx stage 1, 515 sx stage 2, circ 25 sx to surf, DV tool @ 2244' KB	
Tubulars:	2-7/8" 6.5# EUE (Epoxy Coated) @ 4282' KB		Packer:	Arrow XL-W retrievable seal bors @ 4282' KB.	
Perforation	ns (MV)	4350-4460' KB 2	spf (2000 gals 15	% HCL, Frac w/ 100,000# 20/40)	
	11-1-2	Additio	onal Perforations		
Perforations (MV) None					

### Version 1 : Procedure subject to change based on changing well conditions.

# **Proposed Test Schedule:**

Date	Event	Remarks
Wednesday, September 12ª 2018	Check conditions; Perform MIT and Begin mection (50 hrs)	TD, Fill, Restrictions and hang Gauges
Friday, September 14, 2018	End Injection and Begin FOT	Shutein and monitor
Wednesday, September 21* 2017	164 http://	Could pull gauges at 10am
The state of the s	The second secon	

#### **Test Considerations:**

The triplex pump at the facility is capable of maintaining a constant rate of 3000 bpd against the anticipated V.1 injection pressures.

V.2 The injection rate of \$600 bpd ( 87.5 gpm) will be sufficient to produce valid test data. (For reference: During normal injection at 3600 bpd (8 hrs) the surface pressure build up is approx. 200 psi with a mirrored fall off over a 8 hr period.)

V.3 The normal waste liquid will be used during the FOT due to the cost effectiveness and availability.

The total volume of fluid needed for the FOT is \$250 bbls. V.4

a) A total of 3600 bbls will be onsite prior to starting the Injection for the FOT and water will continue to be hauled to facility in the case that more fluid is needed during the injection period. b) Lowering the injection rate will be considered if well conditions merit a change or storage of fluid becomes a constraint.

c) City water will be purchased for the FOT if it becomes necessary to make up the volume required for the test.

The gauges will be RIH and the injection period will be a minimum of 50 hrs to ensure radial flow and V.5 stabilization. A total of 15 hrs was calculated using the EPA Region 6 UIC Pressure Falloff Testing Guideline design calculations found on pg A-4. The fall off portion will be a minimum of 72 hrs justified by this being the time frame used on the previous FOT.

There will be adequate storage capacity for waste water for the duration of the FOT. V.6

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V.7 There is one offset well completed in the Point Lookout disposal formation. The McGrath #4 is a class II disposal operated by ConocoPhillips approx 1.25 miles to the north west of the Sunco #1. The well has been P&A'd, so there will not be any injection activity from offset wells during the FOT.

V.8 Crown valve is currently in-place on the Sunco #1 wellhead. The gauges will be RIH through a lubricator prior to the injection period.

V.9 A shut-in valve is located on the injection riser approx 3-feet from the wellhead. This valve can be shut quickly to reduce erratic pressure response and minimize the wellbore storage.

V.10 Prior to the FOT a gauge ring will be run through the tubing to ensure no restrictions in the tubing and slickline will also be used to tag up and determine wellbore fill. Test parameters will be adjusted accordingly or the needed the repairs will be made to remedy the situation.

V.11 Surface readout gauges will not be used in the FOT data collection due to cost and the fact Key performed the 2010 FOT with tandem memory down hole gauges with successful data collection. The gauges used will be latest available technology from Teftiller, inc which will meet or exceed the pressure range, accuracy and resolution requirements. The gauges will be setup on auto resolution capture based on pressure change. Each gauge will be

setup with a different auto resolution range to ensure all data in captured accurately.

V.12 A test log will be kept during the test and submitted with the FOT results. The log will include key events with date and times.

- Gauge ring run
- Tag depth
- Gauge activation
- Gauges on bottom
- Injection start
- Injection stop
- Well isolation
- Pressure stabilization
- End of Fall Off

V.13 Surface pressures will be recorded continuously using a chart recorder during the FOT. If any abnormal surface pressure change occurs the test validity will be questioned and the test will be aborted if deemed invalid.
V.14 The memory gauges being used for the FOT have auto resolution capability that changes the resolution based on rate of pressure change. First gauge will be configured to obtain data every 15 seconds and adjust to every one minute. The second gauge will be configured to obtain data every 30 seconds and adjust to every two minutes. Memory capacity is 35 day and 69 days respectfully. The minimum 15 second resolution was used during the 2010 FOT and proved to be acceptable. The length of the fall off portion is based on the 2016 FOT, 120 hours proved to be adequate.

V.15 The tri-plex injection pump at the facility that is normally used for injection will be used for the FOT. It is a positive displacement pump running at a constant RPM which will ensure constant injection rate during the FOT. A constant injection rate of approximately 3000 bpd will be sufficient to create a minimum of 100 psi differential between final injection pressure and shut-in pressure. The rate will be carefully monitored prior to shut down to ensure a steady state injection is maintained prior to beginning the fall-off portion of the test.

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