Submit 1 Copy To Appropriate District Form C-103 State of New Mexico Office Energy, Minerals and Natural Resources Revised August 1, 2011 District I - (575) 393-6161 WELL API NO. 1625 N. French Dr., Hobbs, NM 88240 District II - (575) 748-1283 30-025-38576 OIL CONSERVATION DIVISION 811 S. First St., Artesia, NM 88210 5. Indicate Type of Lease District III - (505) 334-6178 1220 South St. Francis Dr. STATE 🖂 FEE 1000 Rio Brazos Rd., Aztec, NM 87410 Santa Fe, NM 87505 6. State Oil & Gas Lease No. District IV - (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM V07530-0001 87505 SUNDRY NOTICES AND REPORTS ON WELLS 7. Lease Name or Unit Agreement Name (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A Linam AGI DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 8. Well Number 1 1. Type of Well: Oil Well Gas Well Other Injection 9. OGRID Number 36785 2. Name of Operator DCP Midstream LP 3. Address of Operator 10. Pool name or Wildcat 370 17th Street, Suite 2500, Denver, CO 80202 AGI - Wolfcamp 4. Well Location Unit Letter K: 1980 feet from the South line and 1980 feet from the west line Township 18S Range **NMPM** County Lea Section 11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3736 GR 12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data NOTICE OF INTENTION TO: Per Under Brothal Villettion Control Program Manual PERFORM REMEDIAL WORK PLUG AND ABANDON COMMENGE Packershall be set within our less than 100 **CHANGE PLANS** TEMPORARILY ABANDON PULL OR ALTER CASING MULTIPLE COMPL  $\Box$ ement Job of the uppermost injection perfs or open hole. П DOWNHOLE COMMINGLE П 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. Purpose of this workover is to describe the proposed procedure for the repair of the Linam AGI#1 to address tubing leak and compromised casing. Please see attached detailed description and revised well bore diagram. 1. Run in hole with new Inconel packer and set packer at 8604' within caprock section Run in hole with a new string of tubing and SSSV. Clean out annulus, treat and load annulus with inhibited diesel packer fluid Install new injection tree. Condition of Approval: notify Remove blanking plugs Notify OCD of MIT test. Pressure test casing/tubing annulus to 500 psi. Chart for 30 minu QCD Hobbs office 24 hours Bleed pressure 200# SICP at end of job. prior of running MIT Test & Chart File a C-103 subsequent report with the MIT. I hereby certify that the information above is true and complete to the best of my knowledge and belief. The Oil Conservation Division **MUST BE NOTIFIED 24 Hours** Prior to the beginning of operations Midstream **SIGNATURE** DATE 05/02/2012 Alberto A. Gutierrez, RG, E-mail address: Type or print name aag@geolex.com PHONE: 505-842-8000 For State Use Only TITLE STATEMENT DATE 5-2-2017 APPROVED B Conditions of Approval (if any):

## DCP LINAM AGI #1 WELLBORE SCHEMATIC

ocation:	1980' FSL, 1980' FWL				SURFACE CASING:	
TR	30-T18S-R37E				13 3/8", 48.00#/ft, H40,	STC at 530'
County, St.:	LEA, NE	EW N	1EXICO			
	, A	<b> </b> 0		SSSV at 250'	INTERMEDIATE CAS 9 5/8", 40.00#/ft, J55, L	
			49.	OH = 17 1/2"		-
				13 3/8" at 530'	PRODUCTION CASIN 7", 26.00#/ft, L80, STC : PBTD = 9137'	
İ				OH = 12 1/4"		
				9 5/8" at 4212'	TUBING: Subsurface Safety Valve	at 250 ft
			34	$OH = 8 \ 3/4"$	3 1/2", 9.2#/ft, L80, Hun	ting SLF at 8604'
	انت			DV Tool at 5686'		
			4. A. 4. A. 4. A.	Primary TOC @ 5,955'	PACKER: Permanent Production P Adjustable Choke	acker (2)
		이	~   ~	Profile Nipple	Check valve	
	i : L			3 1/2" to 8604'		
	i X		$\boxtimes$	Packer at 8604'	PERFORATIONS:	
				Casing Corrosion (8620-8650)	Primary Target	Secondary Target
		1	$\mathbf{X}$	Packer at 8650'		
		1		Adjustable Choke (NA)	Lower Bone Springs	Brushy Canyon
		0		Check valve	8710' - 8730'	5000' to 5300'
		l' 'l			8755' - 8765'	(Not perforated)
	!	이			8780' - 8795'	
	i			Perforations	8780' - 8890'	
				8710' to 9085'	8925' - 8930'	
•	ļ				8945' - 8975'	
	, "				8985' - 9000'	
					9045' - 9085'	
	<i>-1</i> , ₹ •					
			<del></del>	7" PBTD at 9137'		
TD:	9213'					



During a planned plant turn around at the Linam plant in Hobbs New Mexico the waste stream disposal well was pulled due to a known hole in tubing. When the equipment was pulled severe corrosion was observed on the tubing immediately above the packer. The initial investigation reviled primarily corrosion on the outside diameter of the tubing and consisted of CO<sub>2</sub>, H<sub>2</sub>S and possible MIC corrosion. Sections of the corroded tubing have been collected to be submitted to 3<sup>rd</sup> party metallurgical labs for further investigation.

During the previous installation the annulus of the well above the packer was circulated to surface with diesel fuel and did not contain additional corrosion inhibition chemicals. Some residual water was likely present above the packer which led to the corrosive environment. This area appears to also have been affected by some internal corrosion in the same two tubing ioints above the packer. A wall thickness survey of the entire tubing string revealed that there is no effective wall thickness reduction in the tubing except in the immediate area where the holes have developed in the lowermost two joints of tubing. A microvertilog was done inside the casing after removing the tubing string to evaluate the condition of the casing and only a portion of the lowermost joint has been affected. The reduction in wall thickness in this area indicates that it is prudent to run an additional packer in the well immediately above the affected area of the casing, sting into the lower packer and provide enhanced protection of the well in addition to the proposed revisions in the packer fluid. The relative timing of inside and outside corrosion at this level are the continuing focus of a forensic investigation and root cause analysis. However we have been working with Champion Technologies to develop a treatment and packer fluid strategy that addresses the multiple potential mechanisms of this failure that will minimize the potential for future corrosion.

## **Proposed Workover and Well Repair Procedure**

DCP has developed a targeted systematic approach to mitigate potential corrosion issues in the annulus in the future. This approach consists of a two pronged approach to repair the damage encountered in the well. The strategy and plan are as follows:

- Make a mechanical repair of the well that replaces all tubulars in the well with the
  exception of the SSSV which is fully functional and whose integrity has not been affected
  and adds a new Inconel corrosion-resistant packer above the existing packer identical to
  the current undamaged packer in undamaged casing which will sting directly into the
  packer below providing a double packer system protecting the well in the anticipated
  eventual failure of the affected casing (see attached well bore diagram).
- 2. Develop a well annulus treatment and packer fluid introduction method and composition that addresses the potential multiple causes of the observed damage to the well tubulars over the entire string but especially in the areas where problems have been encountered in the well. (see attached MSDS for treatments and additives)

The initial step of the well bore and annular fluid preparation strategy includes a remedial biocide treatment to accomplish a kill of bacteria that are potentially currently in the well bore. The biocide treatment will consist of 55 gallons of Bactron K-139 in a 50 bbl pill. The calculated concentration of the biocide pill is ~2.6%. At this high concentration the biocide pill can be diluted back with water that is the wellbore and still maintain sufficient concentration to achieve a complete kill.

The second step of the strategy consists of a 200 gallon methanol pad treated 1 gallon of Cortron RU-160 oxygen inhibitor to aid in removing water from the annulus, separate the water





and diesel to prevent water hold up, diesel/water emulsification and prevent oxygen induced corrosion.

The final step in the process is to circulate diesel to the surface with 360 bbls diesel treated with 275 gallons of Cortron R-2525. Cortron R-2525 is an oil soluble, highly water dispersal corrosion inhibitor that was found to partially partition to the water phase with the prescribed application.

All of the products and carrier fluids recommended have been tested in the lab for compatibility and have been found to be compatible (see attached MSDS).

## Procedure for treatment and packer fluid preparation

- 1) Mix 55 gallons of Bactron K-139 in 50 bbls of 10 # Brine
- 2) Pump biocide pill down the tubing
- 3) Mix 1 gallon of Cortron RU-160 in 200 gallons of methanol
- 4) Pump methanol / Cortron RU-160 down mixture the tubing
- 5) Pump 360 bbls of diesel down the tubing treated on the fly with 275 gallons of Cortron R-2525
- 6) Set tubing in packer and close casing valves