State of New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez Governor

Ken McQueen Cabinet Secretary

Matthias Sayer Deputy Cabinet Secretary

June 16, 2017

Ms. Rhonda Rogers ConocoPhillips Company 3300 N "A" Street Midland, TX 79705

RE: Packer Setting Depth Exception

MCA Unit Well No. 419 (API 30-025-38987)

Unit M, Sec 27, T17S, R32E, NMPM, Lea County, New Mexico

Injection Authority: Administrative Order WFX-886 (dated April 18, 2011); Maljamar Cooperative Agreement (MCA) Unit Waterflood Project

Permitted Interval: Grayburg and San Andres formations (Unitized Formation per Division Order R-2403 (as amended)); perforations from 3955 feet to 4205 feet

Pool: Maljamar; Grayburg-San Andres Pool (Pool code: 43329)

Ms. Rogers:

Reference is made to your request on behalf of ConocoPhillips Company (OGRID 217817; "ConocoPhillips") received by the Division on June 15, 2017, for the above named well. ConocoPhillips applied for exception for setting the packer within 100 feet of the top perforation in the injection interval.

It is our understanding that ConocoPhillips maintained a previous packer setting depth of 3920 feet below surface or approximately 35 feet above the uppermost perforation of the injection well. Following repairs to the injection well, ConocoPhillips stated that the packer was set at 3677 feet below surface to obtain a proper seal for the tubing packer. As a result, ConocoPhillips requests an exception for the current packer depth at 3677 feet below surface. This location of the packer is approximately 278 feet above the shallowest perforation at 3955 feet, and is below the correlated upper limit of the Unitized Formation at 3626 feet below surface.

For the reasons stated in the application and because it appears that correlative rights are protected, waste will not occur and this modification will not endanger any fresh water aquifer or the environment, the exception is granted. The packer location within this well shall not be set higher than 278 feet above the current top perforation depth unless the operator receives written approval from the Division Director. Additionally, any future requests for resetting the packer <u>above 3626 feet</u>

David R. Catanach, Division Director Oil Conservation Division



Packer Setting Depth Exception ConocoPhillips Company June 16, 2017 Page 2 of 2

(the upper contact of the Unitized Formation) shall not be considered by the Division and ConocoPhillips shall be required to conduct corrective actions on the well to allow for closer seating of the packer to the uppermost perforations.

The Division Director may rescind this exception if it becomes apparent that the injected fluid is not being confined to the permitted interval or is endangering any fresh water aquifer.

Sincerely,

DAVID R. CATANACH Director

DRC/prg

cc:

Oil Conservation Division – Hobbs District Office Bureau of Land Management – Carlsbad Office Administrate Order WFX-886 Well File API 30-025-38987

Goetze, Phillip, EMNRD

Erom.		Pogers Phonda	S < Rhonda.S.Rogers@	conoconhillins con		
From: Sent:		· · · · · · · · · · · · · · · · · · ·	14, 2017 1:50 PM	conocophinips.com	ie a traini. Na sp	
Го:		Goetze, Phillip, El	MNRD	· · · · ·	:***	
Subject:	· · · · · · · · · · · · · · · · · · ·	exception of pac	ker setting			
Attachmen	ts:	MCA 419 Schema	atic - Current 6-13-17.	pdf		
			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	• • • •

Phillip, ConocoPhillips Company has this injection well, the MCA Unit 419, that had a Bradenhead test failure. When we repaired the well the packer would not set within the 100' above the top perf at 3955'. We got it to set in the Grayburg formation but 278 feet about the top perf at 3677'. I am attaching a copy of a current schematic. I called the BLM and talk to them about this issue and they advised me to go through the NMOCD, Maxey Brown. I talked to Maxey and he said he is authorized to only stay with the 100' above the top perf and any exception would need to be approved through Santa Fe, NMOCD.

At this point where the packer is set in the wellbore we feel the well will pass a Mechanical Integrity Test and a Bradenhead test because of pre-pressure test.

I am requesting a packer exception and that COPC be allowed to leave the packer at this depth in the interval and return this well to injection. We will conduct a witnessed MIT and a BH test and submit to the district office before returning to injection. This well is shut in.

Thank you for your consideration.

MCA Unit 419 API # 30-025-38987 Injection interval: Grayburg – San Andrea Top perf @ 3955' Packer set @ 3677' We show top of Grayburg @ 3626' R-2403-B/WFX-886

Sincerely

Rhonda Rogers Staff Regulatory Technician CONOCOPHILLIPS COMPANY/MCBU 3300 N "A" Street, Midland TX 79705 Phone #: 432-688-9174 Fax #: 432-688-6017 rogerrs@conocophillips.com Visit the new Lower 48 website:

www.conocophillipsuslower48.com

ConocoPhillips Schematic - Current MCA 419												
	Field Name	API / UWI 3002538987	County	/ State/Province NEW MEXICO								
PERMIAN CONVENTION Original Spud Date	Surface Legal Location	East/West Distance (ft)	East/West Reference	North/South Distance (ft) North/South Reference								
12/23/2008	Section 27, Township 17 S, Range 32 E	145.00	FWL	660.00 FSL								
VERTICAL - Original Hole, 6/13/2017 4:26:43 PM												
MD (ftKB)		0	schematic (actual)	M								
5.9												
36.1				Conductor; 13.0-80.0 Conductor Cement; 13.0-80.0; 11/27/2008								
50.9				Auto cement plug; 80.0; Automatically created cement plug from the casing cement because it had a tagged depth.;								
52.5				11/27/2008 Casing Joints: 13.0-962.2								
962.3				Float Collar; 962.2-963.8 Casing Joints; 963.7-1,006.0								
1,005.9	Tubing IPC TK-99; 13.			TEXAS PATTERN SH0E; 1,006.0-1,007.0 Surface Casing Cement; 13.0-1,007.0; 12/24/2008								
1,017.1	OPY* On-Off Tool W/1.875" > (Nickel Pla; 3,676.4	E Contraction of the second second		Casing Joints; 13.0-3,792.1								
3,625.3 *CO	PY* Injection Packer 5 1/2 X 2											
3,677.5	(Nickel; 3,677.4 Tubing; 3,685.4		2008	Marker Joint; 3,792.1-3,835.2 Perforated; 3,955.0-3,957.0; 1/13/2009								
3,689.3	Pump Out Plug; 3,689.	4-3,689.9		Perforated; 3,959.0-3,965.0; 1/13/2009 Perforated; 3,971.0-3,985.0; 1/13/2009								
3,739.5				Hydraulic Fracture; 3,955.0-4,032.0; LOAD WELL W/ 500 GAL WF110. PUMP 10,000 GAL YF 125ST PAD, 2000 GAL								
3,809.1 3.821.9				YF 1 PPG 16/30 JORDAN SAND, 2000 GAL YF 2 PPG SAND, 3000 GAL YF 3 PPG SAND, 3000 GAL YF 4 PPG								
3,883.5				SAND, 3000 GAL YF 5 PPG SAND W/ 1.25% PROPNET, 3000 GAL YF 6 PPG SAND W/ 1.50% PROPNET, FLUSH								
3,897.6				W/ 3782 GAL WF110. AVG RATE- 24 BPM. MAX PRESSURE- 2611 PSI. AVG PRESSURE- 2084 PSI. ISIP- 2087 PSI. 15 MIN SIP- 1719 PSI. SLURRY VOLUME- 834								
3,912.4				BBL: 1/15/2009 Perforated; 4,000.0-4,010.0; 1/13/2009								
3,919.6				Perforated; 4,021.0-4,032.0; 1/13/2009								
3,955.1		338 1 3200	388 	Perforated; 4,061.0-4,065.0; 1/13/2009 Perforated; 4,070.0-4,076.0; 1/13/2009								
3,959.0		ition Disc	1998) 1998)	Casing Joints; 3,835.2-4,317.8 Acidizing; 3,955.0-4,205.0; SPOTTED 500 GALLONS OF								
3,971.1		·····		15% ACID @ 2 BBLS. WELL ON VACUUM. FLUSHED								
4,000.0				BOP & FLUSHED ONOTHER 25 BBLS OF FLUSH.; 8/13/2010								
4,003.0		1000	888	Acidizing; 4,061.0-4,106.0; CLOSE BYPASS & BREAK DOWN SA 7TH (UPPER) PERFS @ 2652 PSI. PERFS								
4,021.0		0000 1 2000 2000	3282 9485 2595	COMMUNICATED UPWARD AFTER PUMPING ADDTL 23 BBLS ACID, FLUSH W/ 5 BBLS 10# BRINE, MOVE RBP TO								
4,045.3				4050'. RESET PKR @ 3900'. BREAK DOWN GRAYBURG 6TH @ 1675 PSI @ 5 BPM. PUMP REMAINING 20% ACID								
4,065.0		3034	4955	(26 BBLS) & 53 BBLS 15% HCL ACID. FLUSH W/ 26 BBLS 10# BRINE. ISIP- 1224 PSI/ 5 MIN- 925 PSI/ 10 MIN- 679 PSI/ 15 MIN- 478 PSI. FRAC GRADIENT- 8, 1/14/2009								
4,076.1 4.089.9		18429 18670	600	Perforated; 4,078.0-4,090.0; 1/13/2009								
4,098.1		(086) (3679)	19762 19262	Perforated; 4,096.0-4,098.0; 1/13/2009 Perforated; 4,100.0-4,106.0; 1/13/2009								
4,103.0		0000 0000	1998 1888	Perforated; 4,135.0-4,142.0; 1/13/2009 Perforated; 4,153.0-4,156.0; 1/13/2009								
4,106.0		2000 1990		Perforated; 4,159.0-4,160.0; 1/13/2009 Perforated; 4,167.0-4,170.0; 1/13/2009								
4,142.1			3455	Acidizing; 4,135.0-4,205.0; SET PKR @ 4125', OPEN BYPASS. BREAK CIRC, PUMP 23 BBLS 20% HCL ACID								
4,155.8		States -	1993	DOWN TBG. CLOSE BYPASS, BREAK DOWN SAN ANDRES 7TH (LOWER) PERFS @ 2908 PSI @ 5 BPM,								
4,160.1		- 6544 - 6588	- 45451 C	PUMPING 3000 TOTAL GAL ACID. FLUSH W/ 31 BBLS 10# BRINE. MOVE RBP TO 4125' & SET RBP. MOVE PKR TO								
4,169.9		1000 - 10000 - 10000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 -	19985 C	4025' & RESET PKR. OPEN BYPASS, SPOT 23 BBLS 20% HCL ACID DOWN TBG.; 1/14/2009								
4,174.9				Perforated; 4,172.0-4,175.0; 1/13/2009								
4,186.0		9000 9000 12000	8000 8000 8000	Perforated; 4,186.0-4,187.0; 1/13/2009								
4,191.9				Perforated; 4, 192.0-4, 205.0; 1/13/2009								
4,205.1			1									
4,211.9				Float Collar; 4,317.8-4,319.3								
4,228.0 4,317.9				Casing Joints; 4,319.3-4,359.0 Float Shoe; 4,359.0-4,360.0								
4,317.9		Sector Se	· · · · · · · · · · · · · · · · · · ·	Auto cement plug; 4,317.8-4,360.0; Automatically created cement plug from the casing cement because it had a tagged								
4,359.9				depth, 12/28/2008 Production Casing Cement; 13.0-4,360.0; 12/28/2008								
		Page	1/1	Report Printed: 6/13/2017								

sake of convenience, percentages have been employed whether or not the interest as created is expressed in terms of percentage or as a fractional interest, and each party hereto commits the entire interest in fact owned by him to this agreement whether or not the percentage employed to indicate his interest is wholly correct. Operator, as such, is relieved of any responsibility for any defect in or failure of any title or interest hereunder. Exhibits "A" and "B" may be revised by the Operator as hereinafter provided whenever changes in the Participating Area renders such revisions necessary, or when requested by the 011 and Gas Supervisor, hereinafter referred to as "Supervisor," or when requested by the Commissioner of Public Lands of the State of New Mexico, hereinafter referred to as "Commissioner," and not less than seven copies of the revised exhibits shall be filed with the Supervisor and one copy thereof shall be filed with the Commissioner and one copy with the New Mexico Oil Conservation Commission, hereinafter referred to as "Commission."

III

SUBSTANCES FULLY UNITIZED: <u>All oil and gas</u> produced from the Grayburg-San Andres formations underlying the Participating Area, as herein defined, are hereby fully unitized and are hereinafter referred to as "fully unitized substances."

For the purpose of this agreement, the unitized formations (also referred to in this agreement as the Grayburg-San Andres Formations) are identified and limited to that part of the Grayburg and San Andres Formations from the top thereof (found at the stratigraphic equivalent of 3419 feet on the Gamma Ray-Neutron Log of the Baish "B" well No. 36 located 554 feet from the north and west lines of Section 28, T-17-S, R-32-E, N.M.P.M.) to a depth of -700 feet subsea.

-6-

110 m 316 (April 200	14)	LL COI		DEPARTM BUREAU (NITED STA [®] ENT OF TH OF LAND MA RECOMPLE	E INTEI NAGEM	ENT	AND L	APR APR	14 PSC	[FORM API OMB NO. Expires: Mar e Serial No. 2 - 057210	PROVED 1004-0137 ch 31, 2007
la. Type	of Well		Well	Gas Well		Other				DÔf	 ₽-			or Tribe Name
b. Type of Completion X New Well Work Over Deepen Plug Back Diff. Resvr,											ment Name and no			
2. Name	2. Name of Operator													
	ConocoPhillips Company - 8. Lease Name and Well No.													
3. Address 3300 N. "A" St., Bldg. 6 Midland TX 79705 (432)688-6813 9. API Well No.											<u> </u>			
4. Location of Well (Report location clearly and in accordance with Federal requirement									30-025-38987					
At Surface Sec 27, T17S, R32E, SWSW, UL "M", 660 FSL & 145 FWL Malajamar; Grayburg-San Andres														
At top prod. interval reported below Sec 27, T17S, R32E, SWSW, UL "M", 660 FSL & 145 FWL At top prod. interval reported below Sec 27, T17S, R32E, SWSW, UL "M", 660 FSL & 145 FWL 11. Sec., T, R, M., on Block and Survey or Arca Sec 27, T17S, R32E, SWSW, UL "M", 660 FSL & 145 FWL										n Block and ec 27, T17S, R32E				
12. County or Parish 13. State											13. State NM			
14. Date Spudded 15. Date T.D. Reached 16. Date Completed											vations (DF, I	RKB, RT, GL)*		
12/23	8/2008			12/27/2008	8		01/08/		X] Keady	to Prod		3959' (GR	
18. Total	Depth: N		5'	19	Plug Back T.D	.: MD TVD	4318'		20. Dep	th Brid	ge Plug S		ID VD	
TVD TVD 21. Type of Electric & Other Mechanical Logs Run (Submit copy of each) PE/TDLD/CN/GR ; PE/HRLA/MCFL/GR ; CL 22. Was well cored? X No Yes (Submit analysis) Was DST run? X No Yes/(Submit analysis) Directional Survey? X No Yes (Submit copy)										nit analysis)				
23. Casin	g and Line	r Record	Report a	ll strings set i	n well)								1	
Hole Size	Size/Gra	ade Wt	: (#/ft)	Top (MD)	Bottom (M		e Cementer Depth		f Sks. & f Cement		rry Vol. BBL)	Сете	int Top*	Amount Pulled
12-1/4"	8-5/8"	24		Surface	1007'		570 sx C							
7-7/8"	5-1/2"	17#	<u>+</u>	Surface	4360'			715 sx	<u>. C</u>					<u> </u>
	1													
	} 													
24. Tubir	ng Record	I	d					L		ł		I	II	
Size		h Set (MD)) Pack	er Depth (MD)) Size	Dept	h Set (MD) Packer Depth (MD) Siz			Size	Dep	oth Set (MD)	Packer Depth (MD)	
2.875 25. Produc	<u>4228</u>	ls		<u> </u>		26	Perforation	Record		1		<u> </u>		I
	Formatio			Тор	Bottom		Perforated 1	ted Interval Size				No Holes Perf. Status		
<u> </u>	urg-San	Andres	39	55'	4205'		135' - 4205' 061' - 4106'			3 spf	3 spf open 3 spf open			
B) C)							5 - 4032'			3 spt		**************************************		
D)				Sqeeze, Etc.	L									
	Depth Inter								Type of					······································
	- <u>'4205'</u> - <u>'</u> 4106'				0 gals 20% H bls 20% HC							L		
	4032				00 gals YF 12							gals W	/F110	
						<u></u>						_, .		
28. Produ Date First Produced	ction - Inte Test Date	Tested	Test Produc	tion BBL	Gas MCF	Water BBL	Oil Gravi Corr AP	ty	Gas Gravity		roduction	Method		1
1/20/09	2/24/09			57	1 1	286	39.7				Jumping	STED	FORF	RECORD
Choice Size	Tbg Press. Flwg	Csg Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas · Oil Ratio		Well Status / 100					
SI 250 300														
Date First	ction - Inte Test	Hours	Test	 	Gas	Water	Oil Gravi	ty	Gas	┥╌	Toduction	APR	1_2_200)9
Produced	Date	Tested	Product		Gas MCF	BBL	Oil Gravi Cott. AP	ľ	Gravity	Gas Product Gravity		Im	>	
Choke Size	Tbg Press Flwg SI	Csg. Press	24 Hr. Rate		Gas MCF	Water BBL	Gas . Oil Ratio /		Well Stat	us	BURE	AU OF L ARLSBA	AND MAN	AGEMENT FFICE
(See Instruc	tions and spa	ices for add	utional da	ita on page 2)	· · · · · · · · ·		1/							

KZ

27b. Produ		1			1							
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method			
Choke Size	Tbg. Press. Flwg. SI	Csg Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas Oil Ratio	Well Status				
28c. Produc	ction - Inter	val D										
Date First Produced	Test Date	Hours Tested	Test Production	Oıl BBL	Gas MCF	Water BBL	Oıl Gravity Corr API	Gas Gravity Production Method				
Choke Size	Tbg Press Flwg SI	Csg. Press	24 Hr. Rate	Onl BBL	Gas MCF	Water BBL	Gas : Oil Ratio	Well Status				
-	29. Disposition of Gas (Sold, used for fuel, vented, etc.) flared											
30. Sumn												
tests,							nd all drill-stem and shut-in pressures					
Forma	ation	Тор	Bottom		Descri	ptions, Conte	Name	Top Meas. Depth				
									·····	940		
				1				Salado		1125		
								Tansill		2129		
								Yates	2281			
								Seven Riv	ers	2635		
								Queen		3256		
								Grayburg		3625		
								San Andre	s	4045		
32. Additi	onal remark	s (include	plugging pro	ocedure).						I		
					a check in th	ne appropriate	e boxes:	_				
Image: Sundry Notice for plugging and cement verification Image: Geological Report Image: DST Report Image: DST Report Image: Sundry Notice for plugging and cement verification Image: Core Analysis Image: Other												
34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*												
Name (please print) Jalyn N. Fiske Title Regulatory Specialist												
Signati	SignatureAlight N. Este Date03/24/2009											
Title 18 U. States and	Title 18 U.S.C. Section 101 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States and false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.											

(Form 3160-4, page 2)