¥		HOBBS OCD Ho				
BUR	UNITED STATES PARTMENT OF THE INTER EAU OF LAND MANAGEN	HOR APR O	2 2014	E 5. Lease Serial No. NM LC 05839		
Do not use this i	NOTICES AND REPORTS form for proposals to drill Use Form 3160-3 (APD) fo	or to re-enter a	n	6. If Indian, Allottee o	or Tribe Name	
SUBMI	T IN TRIPLICATE – Other instruct	tions on page 2.		-	ement, Name and/or No.	=
1. Type of Well				N/A 8. Well Name and No		
2. Name of Operator	VellOther			SC Federal #1 9. API Well No.	11	
ConocoPhillips Co. (P10-4 3a. Address		one No. (include area c	ode)	30-025-40598 10. Field and Pool or		
600 N. Dairy Ashford Rd.,		281)206-5281	Jucy	Maljamar; Yes		1
4. Location of Well (Footage, Sec., T., 400' FSL & 255' FEL; UL F				11. County or Parish, Lea County		/- -
12. CHEC	CK THE APPROPRIATE BOX(ES) 1	O INDICATE NATU	RE OF NOTIC	CE, REPORT OR OTH	ER DATA	
TYPE OF SUBMISSION		T	YPE OF ACT	ION		
X Notice of Intent	Acidize	Deepen Fracture Treat	Recla	uction (Start/Resume)	Water Shut-Off Well Integrity	
Subsequent Report	Casing Repair	New Construction Plug and Abandon		mplete porarily Abandon	Other	
Final Abandonment Notice	Convert to Injection	Plug Back		r Disposal	++	_
plan for this well. The follow	as most recent operator of wing changes are necessar ne well was adjusted becaus 17S, R32E. ocuments: ation rder 2, III.A.2.b y Plan se Plan of Operations	y to drill this well	as part of astructure	our ongoing Yes . The new calls v	o development vill be 435' FSL and	
14. I hereby certify that the foregoing is the	rue and correct. Name (Printed/Typed)					
Susan B. Maunder	~ ~	Title Senio	r Kegulato	ry Specialist		
Signature SUSAN 3	Maunder	Date D	23/13)	-	
	THIS SPACE FOR F	EDERAL OR \$1	ATE OFF	ICE USE		
Approved by Stev Conditions of approval, if any, are attached that the applicant holds legal or equitable to entitle the applicant to conduct operations to	itle to those rights in the subject lease w		FIELD MA	ł	Date MAR 2 6 2014	
Title 18 U.S.C. Section 1001 and Title 43 fictitious or fraudulent statements or repre			and willfully to	make to any departmen	the agency of the United States any fa	lse,
(Instructions on page 2)		رد. بند بیند بند			/	t
				APR 1) 3. 2011/	٢

Operator Certification

HOBBS OCD

APR 02 2014

CONOCOPHILLIPS COMPANY

RECEIVED

CERTIFICATION:

SC Federal #11

API #30-025-40598

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application with bond coverage provided by Nationwide Bond ES0085. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

aunder Date: 10/23/13

Susan B. Maunder Senior Regulatory Specialist

Request Approval to Change Drill Plan ConocoPhillips Company <u>Maljamar; Yeso</u>

SC Federal 11

Lea County, New Mexico

. *1*2

Request:

ConocoPhillips Company respectfully requests approval to revise the casing and cementing program, pressure control equipment, the proposed mud systems, diagram and schematic for BOP and choke manifold equipment, location schematic and rig layout, and updated H2S contingency plan. This request is made under the provision of Onshore Order No. 2 and No. 6.

1. Proposed casing program:

Туре	Hole Size	N	Interval ID RKB (ft)	OD	Wt	Gr	Conn	MIY	Col	Jt Str	Calcu	Safety Fa lated per Co Corporate	onocoPhillips
туре	(in)	From	То	(inches)	(lb/ft)		Collin	(psi)	_(psi)	(klbs)	Burst DF	Collapse DF	Jt Str DF (Tension) Dry/Buoyant
Cond	20	0	40' - 85' (30' - 75' BGL)	16	0.5" wall	В	Line Pipe	N/A	N/A	N/A	NA	NA	NA
Alt. Cond	20	0.	40' ~ 85' (30' - 75' BGL)	13-3/8	48#	H-40	PE	1730	740	N/A	NA	NA	NA
Surf	12-1/4	0	875' - 920'	8-5/8	24#	J-55	STC	2950	1370	244	1.55	3.35	3.53
Option: Prod w/ Bond Coat	7-7/8	3000'	4000'	5-1/2	17#	L-80	LTC	7740	6290	338	NA	NA	NA
Prod	7-7/8	0	7045' 7090'	5-1/2	17# ·	L-80		7740	6290	338	2.10	2.50	1.97

The casing will be suitable for H₂S Service. All casing will be new.

The surface and production casing will be set approximately 10' off bottom and we will drill the hole with a 45' range uncertainty for casing set depth to fit the casing string so that the cementing head is positioned at the floor for the cement job.

The production casing will be set 155' to 200' below the deepest estimated perforation to provide rathole for the pumping completion and for the logs to get deep enough to log the interval of interest.

ConocoPhillips Company respectfully requests the option to run bond coated production casing with the two-stage cementing option for the intension to protect the casing from corrosion if needed.

Casing Safety Factors - BLM Criteria:

Туре	Depth	Wt	MIY	Col	Jt Str	Drill Fluid	Burst	Collapse	Tensile-Dry	Tens-Bouy
Surface Casing	920	24	2950	1370	244000	8.5	7.25	3.37	11.1	12.7
Production Casing	7090	17	7740	6290	338000	10	2.10	1.71	2.80	3.31

Casing Safety Factors – Additional ConocoPhillips Criteria:

ConocoPhillips casing design policy establishes Corporate Minimum Design Factors (see table below) and requires that service life load cases be considered and provided for in the casing design.

ConocoPhillips Corporate Criteria for Minimum Design Factors

		teriaiter internation 2001gir 1 deterio	
	Burst	Collapse	Axial
Casing Design Factors	1.15	1.05	1.4

Change to Drill Plan: SC Federal #11:

Conductor Surface Casing (8-5/8" 24# J-55 STC) Production Casing (5-1/2" 17# L-80 LTC)	85		65 35000) -	-	43296	Id MW	Burst		Ten	7				
Production Casing (5-1/2" 17# L-80 LTC)			24 2950	137	0 244000	38100	0 8.5								
4	7090		17 7740	629	0 338000	39700	0 10	0 2.1	0 2.5	0 1.9	7]				
Burst – ConocoPhillips Required Load Cases															
The maximum internal (burst) load on the Surface Casing occurs when the								ementa).							
The maximum internal (burst) load on the Production Casing occurs during (MAWP) is the pressure that would fit ConocoPhilips Corporate Criteria fo			on waere in	e maximi	IM Allowable 1	vorking hie	ssure								
Surface Casing Test Pressure =	1500	psi			licted Pore Pr				5 PPS						
Surface Rated Working Pressure (BOPE) = Field SW =	3000	psi ppg		Predict	ed Frac Grad	ent al Shoe	(CSFG) =	19.2	3 999						
Surface Casing Burst Safety Factor = API Burst Rating / Ma Production Casing (JAWP for the Fracture Slimutation = API	ximum Predici	led Surf				n Aliowable	Surface Pre	essure (Masp)						
-	Dalat Kating J	corpor		50131.04	aight actor										
Surface Casing Burst Safety Factor: Case #1. MPSP (MWhyd next section) =	920		0.052	x	10	=	478								
Case #2. MPSP (Field SW @ Bullhead _{CSFG} + 200 psi) =	920		0.052	×	19.23	-	478	+	200	=	642				
Case #3. MPSP (Kick Vol @ next section TD) = Case #4. MPSP (PPTD - GG) =	7090 7090		0.052 0.052	x x	8.55 8.55		617 709	=	407 2443	-	2129				
Case #3 & #4 Limited to MPSP (CSFG + 0.2 ppg) =	920	x	0.052	× (19.23	+	0.2)=	930						
MASP (MWhyd + Test Pressure) = Burst Safety Factor (Max, MPSP or MASP) =	920 2950		0.052 1907	× =	8,5 1,55	+	1500	9	1907						
Production Casing Burst Safety Factor:	2500	,	1507	-											
Case #1. MPSP (MWhyd TD) ≠	7090		0.052	x	10	=	3686.8								
Case #4. MPSP (PPTD - GG) = Burst Safety Factor (Max. MPSP) =	7090 7740		0.052 3687	× =	8.55 2.10	-	709	=	2443						
MAWP for the Fracture Stimulation (Corporate Criteria) =	7740		1.15] =	6730										
Collapse - ConocoPhillips Required Load Cases The maximum collapse load on the Surface Casing occurs when cementin	a ta surface	1/3 aua	cuation in the	e nevt ce	sinn setline d	enth, or dea	enest denis	of experi	ure (fuil e	acuation)					
The maximum collapse load on the Sorrace Casing occurs when cementin The maximum collapse load on the Production Casing occurs when cemen								or exhips	1010 (t018)						
therefore, the external pressure profile for the evacuation cases should be								WC BSS	umed to be	PPTD.					
Surface Casing Collapse Safety Factor = API Collapse Railing Production Casing Collapse Safety Factor = API Collapse Rai								menline	in Surface						
Cement Displacement Fluid (FW) =	8.34	₽₽ ₽				coment to S		manary	10 30/1020						
Surface Comoni Lead =	13.6				nt Lead =		B PPg								
• Surface Cement Tall = • Top of Surface Tall Cement =	14.8 300				ent Tall = Cement =	520	i ppg) ft								
Surface Cesing Collapse Safety Factor:					-										
Full Evacuation Diff Pressure =	920	x	0.052	x	8.55	=	409								
Cementing Diff Lift Pressure ≠	lt	620		0.052	×	13.6) + (300	x	0.052	x	14.6) -	399] = 27
Collapse Safety Factor = Production Casing Collapse Safety Factor:	1370	1	409	=	3.35										
1/3 Evacuation Diff Pressure =	K	7090		0.052	x	8.55) - (7090	1	3	x	0.052	×	8.34)] = 21
Cementing Diff Lift Pressure = Collapse Safety Factor =	[(6290	-1890 /	x 2519	0.052 =	x 2.50	11.0) + (5200	×	0.052	х	16.4) -	3075] = 25
		•	,												
<u> Tensial Strength - ConocoPhillips Required Load Cases</u>															
Tensial Strength - Conocor minutes Required Load Cases															
The maximum axial (tension) load occurs if casing were to get stuck and p	ulled on to try	to get i	t unstuck,												
The maximum axial (lension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe	Yield Strengt	h Raling	/ Corporate			Factor									
The maximum axial (tension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Stree	Yield Strengt ngth Rating / (h Raling Corpora) / Corporate te Ulnimum A	viat Des	ga Factor	Factor									
The maximum axial (lension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe	Yield Strengt ngth Rating / (ax Load) = M	h Raling Corpora aximum) / Corporate te Minimum A Allowable A:	xiaf Desi xial Load	ga Factor	Factor									
The maximum axial (tension) load pocurs if casing were to get stluck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Stre Maximum Allowable Hook Load (Linited to 75% of Rig M Maximum Allowable Overput Margin = Maximum Allowable Tensial Safety Factor = API Pipe Yield 'OR' API Joint Stre	Yield Strengt ngth Rating / (ax Load) = M ble Hook Load ngth 'OR' Rig	h Raling Corpora aximum 1 - Bouy Max Lo) / Corporate te Minimum A Allowable A: ant Wt of the	xial Des xial Load String	gn Factor		verpull Requ	uired)							
The maximum axial (lension) load occurs if casing were to get atuck and p Maximum Aliowabie Axial Load for Pipe Yield = API Pipe Maximum Aliowabie Axial Load for Joint = API Joint Sire Maximum Aliowabie Hook Load (Limited to 75% of Rig M Maximum Aliowabie Overpull Margin = Maximum Aliowab	Yield Strengt ngth Rating / (ax Load) = M ble Hook Load	h Raling Corpora aximum 1 - Bouy Max Lo Ibs) / Corporate te Minimum A Allowable A: ant Wt of the	xial Des xial Load String	gn Factor		iverpull Requ	uired)							
The maximum axial (tension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Stre Maximum Allowable Nock Load (Linited to 75% of Rig M Maximum Allowable Overpul Margin = Maximum Atowa Tensial Safety Factor = API Pipe Yield 'OR' API Joint Stre Rig Max Load (300,000 lbs) x 75% = Minimum Overpul Required = Surface Casing Tensial Strength Safety Factor:	Yield Strengt ngth Railing / i ax Load) = M ble Hook Load ongth 'OA' Rig 225000 50000	h Raling Corpora aximum 1 - Bouy Max Lo Ibs) / Corporate te Minimum A Allowable A: ant Wt of the	xial Des xial Load String	gn Factor		verpull Requ	vired)							
The maximum axial (lension) load occurs if casing were to get stuck and p Maximum Aliowabie Axial Load for Pipe Yield = API Pipe Maximum Aliowabie Kook Load (Linted to 75% of Rig M Maximum Aliowabie Kook Load (Linted to 75% of Rig M Maximum Aliowabie Kook Load (Strongher Maximum Atawat Tensial Safety Factor = API Pipe Yield 'OR' API Join Stre . Rig Max Load (Strongho Ibs) x 75% = . Mainimum Overput Required = Surface Casing Tensial Strength Safety Factor: Air Wt =	Yield Strengt ngth Railng / i ax Load) > M ble Hook Load ongth 'OA' Rig 225000 50000 22080	h Rating Corpora aximum 1 - Bouy Max Lo Ibs Ibs	y / Corporate te Minimum A Allowable A: ant Wt of the ad Rating / (xiat Des xial Load String Bouyant	gn Factor W1 of String - a	Minimum Q	verpuli Requ	uired)							
The maximum axial (tension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Stre Maximum Allowable Nock Load (Linited to 75% of Rig M Maximum Allowable Overpul Margin = Maximum Atowa Tensial Safety Factor = API Pipe Yield 'OR' API Joint Stre Rig Max Load (300,000 lbs) x 75% = Minimum Overpul Required = Surface Casing Tensial Strength Safety Factor:	Yield Strengt ngth Railing / i ax Load) = M ble Hook Load ongth 'OA' Rig 225000 50000	h Raling Corpora aximum 1 - Bouy Max Lo Ibs) / Corporate te Minimum A Allowable A: ant Wt of the	xial Des xial Load String	gn Factor Wiof Siring -	Minimum Q	verpull Requ	uired)							
The maximum axial (lension) load occurs if casing were to get stuck and p Maximum Allowsbie Axial Load for Pipe Yield = API Pipe Maximum Allowsbie Axial Load for Joint = API Joint Stree Maximum Allowsbie Kook Load (Linited to 75% of Rig M Maximum Allowsbie Kook Load (Linited to 75% of Rig M Maximum Allowsbie Kook Load (200,000 bs) x 75% = 	Yield Sirengi ngth Rating / i ax Load) = M ble Hook Load ongth 'OR' Rig 225000 50000 22080 22080 381000 244000	h Rating Corpora aximum 1 - Bouy Max Lo Ibs Ibs	I Corporate to Minimum A Allowable A ant Wt of the ad Rating I (0.870	xiat Des xiat Load String Bouyant = =	gn Factor Wi of String - 4 19215	Minimum Q	iverpuli Requ	vired)							
The maximum axial (lension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Stre Haximum Allowable Kook Load (Linted to 75% of Rig M Maximum Allowable Kook Load (Linted to 75% of Rig M Maximum Allowable Kook Load (Linted to 75% of Rig M Maximum Allowable Overput Margin = Maximum Atowabl Tensial Safety Factor = API Pipe Yield 'OF' API Joint Stre Rig Max Load (300,000 lbs) x 75% = Minimum Overput Required = Surface Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Dint) = Max. Allowable Axial Load (Dint) =	Yield Sirengi ngth Rating / i ax Load) = M ble Hook Load angth 'OR' Rig 225000 50000 22080 22080 281000 244000 174286	h Rating Corpora aximum 1 - Bouy Max Lo Ibs Ibs Ibs <i>x</i> <i>1</i>	0.870	xiaf Desi xial Load String Bouyant = = =	gn Factor Wt of String - 4 19215 272143 174286	Minimum O		uired)							
The maximum axial (lension) load occurs if casing were to get stuck and p Maximum Aliowable Axial Load for Pipe Yield = API Pipe Maximum Aliowable Axial Load for Joint = API Joint Stree Maximum Aliowable Kook Load (Lintaed to 75% of Rig M Maximum Aliowable Kook Load (Lintaed to 75% of Rig M Maximum Aliowable Kook Load (200000 lbs) x 75% = 	Yield Sirengi ngth Rating / i ax Load) = M ble Hook Load ongth 'OR' Rig 225000 50000 22080 22080 381000 244000	h Rating Corpora aximum 1 - Bouy Max Lo ibs ibs ibs	of Corporate te Liinimum A Allowable A: ant Wt of the ad Rating / (0.870 1.40	ixiat Desi xiat Load s Siring Bouyant = =	gn Factor Wi of String 4 19215 272143	Minimum Q	verpull Requ 155071 3,53	uired)							
The maximum axial (lension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Stre Maximum Allowable Klock Load (Linted to 75% of Rig M Maximum Allowable Klock Load (Linted to 75% of Rig M Maximum Allowable Klock Load (Street - API Pipe Yield 'OR' API Joint Stre Rig Max Load (300,000 lbs) x 75% = Minimum Overput Required = Surface Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (200,001) = Max. Allowable Cverput Margin = Tensial Safety Factor = Production Casing Tensial Strength Safety Factor:	Yield Sirengi ngth Railing / ax Losd) > IA bile thosk Losed) > IA bile thosk Losed 22080 22080 22080 244000 174286 244000	h Rating Corpora aximum J - Bouy Max Lo Ibs Ibs X <i>f</i> / /) / Corporate to Lilnimum A Allowable A: ant Vit of the ad Rating / (0.870 1.40 1.40 22060	xiaf Desi xiai Load Siring Bouyant = = = X	gn Factor Wi of String 19215 272143 174286 0.870	Minimum () ,	155071	uired)							
The maximum axial (lension) load pocurs if casing were to get stuck and p Maximum Aliowable Axial Load for Pipe Yield = API Pipe Maximum Aliowable Axial Load for Joint = API Joint Street Maximum Aliowable Kook Load (Limited to 75% of Rig M Maximum Aliowable Kook Load (Limited to 75% of Rig M Maximum Aliowable Kook Load (Joint) OF API Joint Street Rig Max Load (300,000 los) x 75% = Minimum Overput Required = Surface Casing Tensial Strength Safety Factor: Max. Allowable Axial Load (Joint) = Max. Allowable Overput Margin = Tensial Safety Factor =	Yield Sirengi ngih Raling / i ax Load) = M Jole Hook Load Ingih / DR' Rig 225000 50000 22080 22080 281000 244000 174286 174286	h Rating Corpora aximum J - Bouy Max Lo Ibs Ibs X <i>f</i> / /) / Corporate to Lilnimum A Allowable A: ant Vit of the ad Rating / (0.870 1.40 1.40 22060	xiaf Desi xiai Load Siring Bouyant = = = X	gn Factor Wi of String 19215 272143 174286 0.870	Minimum () ,	155071	uiređ)							
The maximum axial (lension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Stree Maximum Allowable Klock Load (Lintaed to 75% of Rig M Maximum Allowable Klock Load (Lintaed to 75% of Rig M Maximum Allowable Klock Load (200000 lbs) x 75% = Rig Max Load (20000 lbs) x 75% = Minimum Overpul Required = Surface Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (2000 lbc) x 75% of Rig Max Load) = Max. Allowable Axial Load (2010 lbc) x 75% of Rig Max Load) = Max. Allowable Axial Load (2010 lbc) x 75% of Rig Max Load) = Max. Allowable Axial Load (2010 lbc) x 75% of Rig Max Load) = Max. Allowable Coerpuil Margin = Droduction Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Bouyant Wt =	Yield Sirengi ngth Reling / i ax Load) = M be Hook Load 22080 22080 22080 22080 22080 22080 22080 22080 174286 174286 244000 174286 244000 174286 244000	h Rating Corpora aximum 1 - Bouy Max Lo Iba Iba Iba Iba Iba Iba - (/ / / / / / / / /) / Corporate te Minhum A Allowable A and IV do the ad Rating / (0.870 1.40 1.40 19215 0.847 1.40	xiat Desi xiat Load String Bouyant = = = X + =	gn Factor Wi of String - 19215 272143 174286 0.870 50000 102128 283571	Minimum () ,	155071	vired)							
The maximum axial (lension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Sire Maximum Allowable Mok Load (Limited to 75% of Rig M Maximum Allowable Nok Load (Limited to 75% of Rig M Maximum Allowable Overpul Margin = Maximum Atowabl Tensial Safety Factor = API Pipe Yield 'OF' API Joint Sire Rig Max Load (300,000 bs) x 75% = Minimum Overpul Required = Surface Casing Tensial Strength Safety Factor: Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Cverpul Margin = Tensial Safety Factor: Production Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Joint) =	Yield Sirengi ngth Railing / i ax Load) = M be Hook Load 20000 22080 22080 22080 22080 244000 174286 174286 244000 120530 397000	h Rating Corpora aximum 1 - Bouy Max Lo Ibs Ibs / / / / / / / / /) / Corporate te Minimum A Allowable A and Wit of the ad Rating / (0.870 1.40 1.40 22060 19215 0.847	xial Desi xial Load String Bouyant = = = x +	gn Factor Wi of String - 19215 272143 174286 0.870 50000 102128	Minimum () ,	155071	uired)							
The maximum axial (lension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield = API Pipe Maximum Allowable Axial Load for Joint = API Joint Stree Maximum Allowable Klock Load (Lintaed to 75% of Rig M Maximum Allowable Klock Load (Lintaed to 75% of Rig M Maximum Allowable Klock Load (200000 lbs) x 75% = Rig Max Load (20000 lbs) x 75% = Minimum Overpul Required = Surface Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (2000 lbc) x 75% of Rig Max Load) = Max. Allowable Axial Load (2010 lbc) x 75% of Rig Max Load) = Max. Allowable Axial Load (2010 lbc) x 75% of Rig Max Load) = Max. Allowable Axial Load (2010 lbc) x 75% of Rig Max Load) = Max. Allowable Coerpuil Margin = Droduction Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Bouyant Wt =	Yield Sirengi ngth Reling / i ax Load) = M be Hook Load 22080 22080 22080 22080 22080 22080 22080 22080 174286 174286 244000 174286 244000 174286 244000	h Rating Corpora aximum 1 - Bouy Max Lo Iba Iba Iba Iba Iba Iba - (/ / / / / / / / /) / Corporate te Minhum A Allowable A and IV do the ad Rating / (0.870 1.40 1.40 19215 0.847 1.40	xiat Desi xiat Load String Bouyant = = = X + =	gn Factor Wi of String - 19215 272143 174286 0.870 50000 102128 283571	Minimum () ,	155071	uired)							
The maximum axial (lension) load accurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Hook Load (Limited to 75% of Rig M Maximum Allowable Hook Load (Limited to 75% of Rig M Maximum Allowable Hook Load (Limited to 75% of Rig M Maximum Allowable Hook Load (Cimited to 77% of Rig M Maximum Allowable Overpul Margin = Maximum Allowable Rig Max Load (300,000 lbs) x 75% o Maximum Overpul Required = Surface Casing Tensial Strength Safety Factor: Max. Allowable Axial Load (Dipe Yield) = Max. Allowable Axial Load (Dipe Yield) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Joint) = Production Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Cipe Yield) = Max Allowable Axial Load (Cipe Yield) = Max Allowable Axial Load (Cipe Yield) = Max A	Yield Sirengi ngth Railing / ax Load) = M be Hook Load 22080 22080 22080 22080 381000 244000 174286 244000 120530 120530 397000 338000 225000	h Rating Corpora aximum I - Bouy Max Lo ibs bs / / / / (/ (/ / / / / / /	0.870 0.870 0.870 0.870 0.870 0.870 0.870 0.870 0.870 0.847 0.847 1.40 1.40	xiat Desi xiat Load String Bouyant = = = X + = =	gn Factor WI of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429	Minimum () ,) =) =	155071 3.53	vired)							
The maximum axial (lension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Axial Load for Joint - API Joint Street Maximum Allowable Note Load (Limited to 75% of Rig M Maximum Allowable Note Load (Limited to 75% of Rig M Maximum Allowable Note Load (Limited to 75% of Rig M Maximum Allowable Factor - API Pipe Yield 'OF' API Joint Street Rig Max Load (300,000 lbs) x 75% - Minimum Overput Required - Surface Casing Tensial Strength Safety Factor: Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Oripe Yield) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Joint) = Tensial Safety Factor = Production Casing Tensial Strength Safety Factor = Bouyant Wt = Bouyant Wt = Max. Allowable Axial Load (Joint) =	Yield Sirengi ngh Railing / i ask Load) = M bie Hook Load 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 244000 174286 174286 244000 174286 244000 174286 397000 338000 225000 300000	h Rating Corpora aximum 1 - Bouy Max Lo Ibs Ibs / / / / / / / / / / / / / / / / / / /	0.870 0.870 1.40 22060 19215 0.847 1.40 1.20530	xial Desi xial Load 9 String Bouyant = = X + = = X X	gn Factor Wi of Siring - 272143 174286 0.870 50000 102128 283571 241429 0.847	Minimum () ,) =) =	155071 3.53 122872	uired)							
The maximum axial (tension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kok Load (Limited to 75% of Rig M Maximum Allowable Kok Load (Limited to 75% of Rig M Maximum Allowable Kok Load (Limited to 75% of Rig M Maximum Allowable Kok Load (Dolo be) x 75% = Rig Max Load (300,000 be) x 75% = Mainimum Overpul Required = Surface Casing Tensial Strength Safety Factor - Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Dioint) = Max. Allowable Coreput Margin = Max. Allowable Coreput Margin = Max. Allowable Coreput Margin = Bouyant Wit = Bouyant Wit = Max. Allowable Coreput Margin = Max. Allowable Coreput Margin = Max. Allowable Coreput Margin = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Dioint) = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Dioint) = M	Yield Sirengi ngth Reling / i ax Load) = M be Hook Load 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 24000 174286 174286 244000 174286 174286 244000 338000 225000 300000	h Rating Corpora aximum 1 - Bouy Max Lo ibs ibs ibs - (/ (/ / / / / / / / / /	0.670 0.670 0.670 0.670 0.670 0.670 0.670 0.670 0.670 0.670 0.670 0.670 0.2060 19215 0.847 1.40 1.20530 1.02128	xial Desi xial Load 9 String Bouyant = = X + = = X X	gn Factor Wi of Siring - 272143 174286 0.870 50000 102128 283571 241429 0.847	Minimum () ,) =) =	155071 3.53 122872	uired)							
The maximum axial (lension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Jon (Dipe Yield OF API Join Stree .Rig Max Load (300,000 lbs) x 75% - .Rig Max Load (300,000 lbs) x 75% - .Minimum Overput Required = Surface Casing Tensial Strength Safety Factor: Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Oripe Yield) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Joint) = Tensial Safety Factor = Production Casing Tensial Strength Safety Factor = Production Casing Tensial Strength Safety Factor = Max. Allowable Axial Load (Joint) =	Yield Sirengi ngth Railing / i ax Load) = M be Hook Loed 225000 22080 22080 22080 22080 244000 174286 174286 174286 174286 174286 244000 120530 397000 398000 225000 308000 225000 300000	h Rating Corpora axinum 1 - Bouy Max Lo Ibs Ibs - (1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	0 / Corporate le Minhum A Allowable A and Wo of the ad Rating / (0.870 1.40 1.40 1.40 19215 0.847 1.40 102128 120530 102128	xial Desi xial Load 9 String Bouyant = = X + = = X X	gn Factor Wi of Siring - 272143 174286 0.870 50000 102128 283571 241429 0.847	Minimum () ,) =) =	155071 3.53 122872)							
The maximum axial (lension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Stoloo) be) x 75% = 	Yield Sirengi ngh Reling / i ax Load) = M be Hook Load 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 244000 174286 174286 244000 174286 244000 174286 244000 174286 244000 120530 120530 397000 397000 309000 225000 225000 225000 225000 225000 300000	h Rating Corpora aximum Max Lo bibs bibs / / / / / / / / / / / / / / / / / / /	0.870 0.870 0.870 1.40 22060 19215 0.847 1.40 120530 102128 conductor te load o the load.	xial Desi Xal Load STring Bouyant = = X + = = X + X +	ga Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000	Minimum () ,) =) =	155071 3.53 122872)							
The maximum axial (tension) load pocurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Jon 2000 be) x 75% - Rig Max Load (300,000 be) x 75% - Minimum Overpul Required - Rig Max Load (300,000 be) x 75% - Max. Allowable Axial Load (Dipe Yield) = Max. Allowable Axial Load (Dipe Yield) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Dipe Yield) = Max. Allowable Axial Load (Joint) = Max. Allowable Overpull Margin = Tensial Safety Factor = Compression Strength - ConocoPhillips Required Load C The maximum axial (compression) bad for the velis where the surface c with a support of a plate or landing ring. The surface casing is also calcula	Yield Sirengi ngh Reling / i ax Load) = M be Hook Load 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 244000 174286 174286 244000 174286 244000 174286 244000 174286 244000 120530 120530 397000 397000 309000 225000 225000 225000 225000 225000 300000	h Rating Corpora aximum Max Lo Ibs bs k x / / / / / / / / / / (/ (/ (/ (/) / (/) / (/ / / /	0.870 0.870 0.870 1.40 22060 19215 0.847 1.40 120530 102128 conductor te load o the load.	xial Desi Xal Load STring Bouyant = = X + = = X + X +	ga Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000	Minimum () ,) =) =	155071 3.53 122872)							
The maximum axial (lension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Cinited to 75% of Rig M Maximum Allowable Kook Load (Cinited to 75% of Rig M Maximum Allowable Kook Load (Cinited to 75% of Rig M Maximum Allowable Kook Load (Cinited to 75% of Rig M Max. Allowable Axial Load (Olo Ibs) x 75% - Max. Allowable Axial Load (Olo Ibs) x 75% - Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Dint) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Joint) = Tensial Safety Factor = Production Casing Tensial Strength Safety Factor = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Diont) = Max. Allowable Axial Load (D	Yield Sirengi ngth Railing / i ax Load) = M be Hook Load 22000 22000 22000 22000 22000 22000 22000 22000 22000 244000 174286 174286 244000 120530 397000 3090000 3090000 225000 300000 225000 300000	h Rating Corpora aximum Max Lo Ibs bs k x / / / / / / / / / / (/ (/ (/ (/) / (/) / (/ / / /	0.870 0.870 0.870 1.40 22060 19215 0.847 1.40 120530 102128 conductor te load o the load.	xial Desi Xal Load STring Bouyant = = X + = = X + X +	ga Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000	Minimum () ,) =) =	155071 3.53 122872)							
The maximum axial (lension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Cinited to 75% of Rig M Maximum Allowable Kook Load (Cinited to 75% of Rig M Maximum Allowable Kook Load (Cinited to 75% of Rig M Maximum Allowable Kook Load (Cinited to 75% of Rig M Max. Allowable Axial Load (Olo Ibs) x 75% - Max. Allowable Axial Load (Olo Ibs) x 75% - Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Dint) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Joint) = Tensial Safety Factor = Production Casing Tensial Strength Safety Factor = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Pipe Yield) = Max. Allowable Axial Load (Diont) = Max. Allowable Axial Load (D	Yield Sirengi ngth Railing / i ax Load) = M be Hook Load 22080 22080 22080 22080 22080 22080 22080 244000 174286 174286 244000 120530 120530 397000 338000 2255000 2255000 300000 0 0 0 0 0 0 0 0 0 0 0 0 0 0	h Rating Corpora aximum Max Lo Ibs bs k x / / / / / / / / / / (/ (/ (/ (/) / (/) / (/ / / /) / Corporato le Minimum A Allowable A: and IVI of the ad Rating / (0.670 1.40 1.40 1.40 19215 0.847 1.40 102128 0.847 1.40 102128 0.047 1.40 102128	xial Desi Xal Load STring Bouyant = = X + = = X + X +	gn Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000 0.847 50000	Minimum () ,) =) =	155071 3.53 122872 1.97)							
The maximum axial (tension) load pocurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Jinited to 75% of Rig M Maximum Allowable Kook Load (Jinited to 75% of Rig M Maximum Allowable Kook Load (Jinited to 75% of Rig M Max Load (300,000 lis) × 75% = Rig Max Load (300,000 lis) × 75% = Max. Allowable Axial Load (Jinited Cippe Yield) = Max. Allowable Axial Load (Jinited Ternsial Safety Factor = Production Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Jinited Cippe Yield) = Max. Allowable Axial Load (Jinited Ternsial Safety Factor = Max. Allowable Axial Load (Jinited To 75% of Rig Max Load) = Max. Allowable Axial Load (Jinited To 75% of Rig Max Load) = Max. Allowable Axial Load (Jinited To 75% of Rig Max Load) = Max. Allowable Axial Load (Cipe Yield) = Max. Allowable Axial Load (Cipe Yield) = Max. Allowable Axial Load (Cipe Yield) = Max. Allowable Axial Load (Diott) = Max. Allowable Overpull Margin = Tensial Safety Factor = Compression Strength — ConocoPhillips Required Load C The maximum axial (compression) bad for the wells where the surface co with a support of a pile or fanding ring. The surface ceasing is also calculu but not finked. Any other axial loads such as a subbing unt or other woul Compression Safety Factor = API Axial Joint Sirength Factor Surf Casing Wt (Bouyant) = Prod Casing Wt (Bouyant) = Prod Casing Wt (Bouyant) =	Yield Sirengi ngh Railing / i ax Load) = M bie Hook Load (22000) 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 120530 120530 120530 120530 337000 338000 225000 300000 81889 120530 120530 120530 120530 225000 300000 81889 120530 225000 300000 (((h Rating Corpora aximum 1 - Bouy Max Lo Ibs Ibs - ((/ (/ / / / / / / / / / / / / / / /	0.670 0.670 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.2050 102128 0.847 1.40	xial Desi Xial Load Siring Bouyant = = x + = = x + t cted Load	gn Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000 0.847 50000	Minimum () ,) =) =) =	155071 3.53 122872 1.97)							
The maximum axial (tension) load occurs if casing were to get stuck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Linited to 75% of Rig M Maximum Allowable Kook Load (Dirolo be) x 75% = 	Yield Sirengi ngh Reling / i ax Load) = M be Hook Load 22080 20000 20000 2000 2000000	h Rating Corpora aximum i - Bouy Max Lo ibs bs - ((/ (/ / (/ / / / / / / / / / / / /	0.670 0.670 0.670 1.40 1.40 22060 19215 0.847 1.40 120530 102128 conductor the load of the load. ximum Predic	xial Desi xial Load 9 String Bouyant = = - - - - - - - - - - - - - - - - -	gn Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000 0.847 50000 102128 283571 241429 0.847 50000 102128 283571 241429 0.847 50000 102128 283571 241429 0.847 50000 102128 283571 241429 0.847 50000 102128 283571 241429 0.847 50000 102128 283571 241429 0.847 50000 102128 102188	Minimum () ,) =) =) = 19215 102128	155071 3.53 122872 1.97		244	1 42 -	11304			· · · · · · · · · · · · · · · · · · ·	
The maximum axial (tension) load occurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Linited to 75% of Rig M Maximum Allowable Kolk Load (Jon (Dipe Yield OF API Join Stree Rig Max Load (300,000 lbs) x 75% = Mainimum Overpul Required = Surface Casing Tensial Strength Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Oripe Yield) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Joint) = Max. Allowable Axial Load (Joint) = Tensial Safety Factor: Air Wt = Bouyant Wt = Max. Allowable Axial Load (Joint) = Max. Allowable Overpull Margin = Tensial Safety Factor = Compression Strength - ConocoPhillips Required Load C The maximum axial (compression) bad for the wells where the surface ce with a support of a piele or fanding ring. The surface ceasing is also calculu but not Emited. Any other axial loads such as a snubbing unt or other woul Compression Safety Factor = API Axial Joint Slrength Factor Surf Casing Wt (Bouyant) = Prod Casing Wt (Bouyant) = Prod Casing Wt (Bouyant) =	Yield Sirengi ngh Railing / i ax Load) = M bie Hook Load (22000) 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 120530 120530 120530 120530 337000 338000 225000 300000 81889 120530 120530 120530 120530 225000 300000 81889 120530 225000 300000 (((h Rating Corpora aximum 1 - Bouy Max Lo Ibs Ibs - ((/ (/ / / / / / / / / / / / / / / /	0.670 0.670 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.2050 102128 0.847 1.40	xial Desi Xial Load Siring Bouyant = = x + = = x + t cted Load	gn Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000 0.847 50000	Minimum () ,) =) =) =) = 19215	155071 3.53 122872 1.97	X +	2.441 11301] ^2 =	11301 181729			· · · · · · · · · · · · · · · · · · ·	
The maximum axial (tension) load accurs if casing were to get sluck and p Maximum Allowable Axial Load for Pipe Yield - API Pipe Maximum Allowable Hook Load (Limited to 75% of Rig M Maximum Allowable Hook Load (Limited to 75% of Rig M Maximum Allowable Hook Load (Limited to 75% of Rig M Maximum Allowable Hook Load (Limited to 75% of Rig M Maximum Allowable Overpul Margin = Maximum Allowable Rig Max Load (300,000 lbs) x 75% - Rig Max Load (300,000 lbs) x 75% - Maintum Overpul Required = Surface Casing Tensial Strength Safety Factor: Air Wt = Max. Allowable Axial Load (Joint) = Compression Strength — ConocoPhillips Required Load C The maximum mxial (compression) bad for the vvel is where the surface c with a support of a plate or handing ring. The surface casing is also calcule but not limited. Any other axial loads such as a snubbing unit or other woul Compression Safety	Yield Sirengi ngth Railing / i ax Load) = M be Hook Load 22000 22000 22000 22000 22000 22000 22000 22000 22000 244000 174286 174286 174286 174286 174286 174286 174286 174286 38000 225000 300000 300000 300000 225000 300000 225000 300000 200000 200000 200000 2000000	h Rating Corpora aximum 1 - Bouy Max Lo Ibs 1 - Buy Max Lo Ibs 1 - Couy Max Lo Ibs) / Corporate le Minimum A Allowable A and IVI of the ad Rating / (0.870 1.40 1.40 1.40 120500 19215 0.847 1.40 102128 0.847 1.20530 102128 0.647 1.20530 102128 0.65 0.052	xial Desi xial Load > String Bouyant = = - - - - - - - - - - - - - - - - -	gn Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000 0.847 50000 102128 283571 241429 0.847 50000 102128 28555 102128 102128 28555 102128 102128 102128 10255 10	Minimum () ,) =) =) = 19215 102128 ×	155071 3.53 122872 1.97 0.7854	x							
The maximum axia (tension) load occurs if casing were to get stuck and p Maximum Allowabile Axisi Load for Pipe Yield – API Pipe Maximum Allowabile Axisi Load for Pipe Yield – API Pipe Maximum Allowabile Axisi Load for John = API John Stree Maximum Allowabile Overpul Margin = Maximum Atawal Tensisi Safety Factor = API Pipe Yield 'OR API Joint Stre Rig Max Load (300,000 ibs) × 75% = Minimum Overpul Required = Maximum Allowabile Cold (Limited to 75% of Rig Max Load (300,000 ibs) × 75% = Minimum Overpul Required = Max. Allowabile Axial Load (Pipe Yield) = Max. Allowabile Axial Load (Dinit) = Max. Allowabile Axial Load (Joint) = Max. Allowabile Axial Load (Joint) = Max. Allowabile Axial Load (Joint) = Max. Allowabile Overpul Margin = Tensial Safety Factor: Max. Allowabile Overpul Margin = Max. Allowabile Axial Load (Joint) = Max. Allowabile Axial Load (J	Yield Sirengi ngh Railing / i ax Load) = M bie Hook Load (22000) 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 22080 120530 120530 120530 120530 337000 338000 225000 300000 81889 120530 120530 120530 120530 225000 300000 81889 120530 225000 300000 (((h Rating Corpora aximum 1 - Bouy Max Lo Ibs Ibs - ((/ (/ / / / / / / / / / / / / / / /	0.670 0.670 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.40 1.2050 102128 0.847 1.40	xial Desi Xial Load Siring Bouyant = = x + = = x + t cted Load	gn Factor Wi of Siring - 19215 272143 174286 0.870 50000 102128 283571 241429 0.847 50000 0.847 50000	Minimum () ,) =) =) =) = 19215	155071 3.53 122872 1.97)						·	

.

•

2. Proposed cementing program:

16" or 13-3/8" Conductor:

Cement to surface with rathole mix, ready mix or Class C Neat cement. (Note: The gravel used in the cement is not to exceed 3/8" diameter) TOC at surface.

8-5/8" Surface Casing Cementing Program:

The intention for the cementing program for the Surface Casing is to:

- Place the Tail Slurry from the casing shoe to 300' above the casing shoe,
- Bring the Lead Slurry to surface.

Spacer: 20 bbls Fresh Water

	Slurry		vals MD	Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	Class C	Surface	575' – 620'	13.6	300	510	2% Extender 2% CaCl ₂ 0.125 ib/sx LCM if needed 0.2% Defoamer Excess =75% based on gauge hole volume	1.70
Tail	Class C	575' – 620'	875' – 920'	14.8	200	268	1% CaCl2 Excess = 100% based on gauge hole volume	1.34

Displacement: Fresh Water.

Note: In accordance with the Pecos District Conditions of Approval, we will Wait on Cement (WOC) for a period of not less than 18 hrs after placement or until at least 500 psi compressive strength has been reached in both the Lead Slurry and Tail Slurry cements on the Surface Casing, whichever is greater.

5-1/2" Production Casing Cementing Program – Single Stage Cementing Option:

The intention for the cementing program for the Production Casing - Single Stage Cementing Option is to:

- Place the Tail Slurry from the casing shoe to above the top of the Paddock,
- Bring the Lead Slurry to surface.

Spacer: 20 bbls Fresh Water

	Slurry Intervals Ft MD						Vol Cuft	Additives	Yield ft ³ /sx
Lead	50:50 Poz/C	Surface	5200'	11.8.	700	1820	10% Bentonite 5% Salt 0.2%-0.4% Fluid loss additive 0.125 lb/sx LCM if needed Excess = 220% or more if needed based on gauge hole volume	2.6	
Tail	Class H	5200'	7045' – 7090'	16.4	400	428	 0.2% Fluid loss additive 0.3% Dispersant 0.15% Retarder 0.2% Antifoam Excess = 100% or more if needed based on gauge hole volume 	1.07	

Displacement: Fresh Water with approximately 250 ppm gluteraldehyde biocide.

Change to Drill Plan: SC Federal #11:

5-1/2" Production Casing Cementing Program – Two-Stage Cementing w/ Comingle Option:

ConocoPhillips Company respectfully requests the options to our cementing program. The intention for the cementing program for the Production Casing – Two-Stage Cementing Option is to:

- Provide a contingency plan for using a Stage Tool and Annulus Casing Packer(s) to isolate losses or water flow if either of these events occurs while drilling the well.
- Place the Stage 1 Cement from the casing shoe to the stage tool,
- Bring Stage 2 Cement from the stage tool to surface.

Spacer: 20 bbls Fresh Water

.

.

Stag	ge 1 - Slurry		ervals t MD	Weight ppg	Sx	Vol Cuft	Additives	Yield ft ³ /sx
Lead	50:50 Poz/H	3000'	7045' 7090'	13.2	800	1120	 0.5% Fluid loss additive 0.10% Retarder 0.2% Antifoam 0.125 lb/sx LCM if needed Excess = 150% or more if needed based on gauge hole volume 	1.40

Stag	ge 2 - Slurry	Intervals Weight Sx Ft MD ppg		Sx	Vol Cuft	Additives	Yield ft ³ /sx	
Lead	50:50 Poz/C	Surface	Stage Tool ~ 3000'	11.8	500	1300	+ 10 % Extender + 5 % NaCl + 0.2 % Defoamer + 5 lb/sx LCM/Extender + 0.125 lb/sx Lost Circulation Control Agent + 0.5 % Fluid Loss Excess = 50 % or more if needed based on gauge hole volume	2.6

Displacement: Fresh Water

Proposal for Option to Adjust Production Casing Cement Volumes:

The production casing cement volumes for the proposed single stage and two-stage option presented above are estimates based on gauge hole. We will adjust these volumes based on the caliper log data for each well and our trends for amount of cement returns to surface. Also, if no caliper log is available for any particular well, we would propose an option to possibly increase the production casing cement volume to account for any uncertainty in regard to the hole volume.

3. Pressure Control Equipment:

A <u>11" 3M</u> system will be installed, used, maintained, and tested accordingly as described in Onshore Oil and Gas Order No. 2.

Our BOP equipment will be:

- o Rotating Head
- o Annular BOP, 11" 3M
- o Blind Ram, 11" 3M
- o Pipe Ram, 11" 3M

After nippling up, and every 30 days thereafter or whenever any seal subject to test pressure is broken followed by related repairs, blowout preventors will be pressure tested. BOP will be inspected and operated at least daily to insure good working order. All pressure and operating tests will be done by an independent service company and recorded on the daily drilling reports. BOP will be tested using a test plug to isolate BOP stack from casing. BOP test will include a low pressure test from 250 to 300 psi for a minimum of 10 minutes or until requirements of test are met, whichever is longer. Ram type preventers and associated equipment will be tested to 50 percent of rated working pressure of 3000 psi isolated by test plug. Annular type preventers will be tested to 50 percent of rated working pressure, and therefore will be tested to 1500 psi. Pressure will be held for at least 10 minutes or until provisions of test are met, whichever is longer. Valve on casing head below test plug will be open during testing of BOP stack. BOP will comply with all provisions of Onshore Oil and Gas Order No. 2 as specified. **See Attached BOPE Schematic.** The BOPE may be configured to use flexible hose. Pressure test data and hose specification information will be provided to BLM prior to site construction.

()

4. Proposed Mud System:

The mud systems that are proposed for use are as follows:

DEPTH	TYPE	Density ppg	FV sec/qt	API Fluid Loss cc/30 min	pН	Vol bbl
0 – Surface Casing Point	Fresh Water or Fresh Water Native Mud in Steel Pits	8.5 - 9.0	28 – 40	N.C.	N.C.	120 – 160
Surface Casing Point to TD	Brine (Saturated NaCl ₂) in Steel Pits	10	29	N.C.	10 – 11	1250 - 2500
Conversion to Mud at TD	Brine Based Mud (NaCl ₂) in Steel Pits	10	34 – 45	5 – 10	10 – 11	0 - 1250

Proposal for Option to Not Mud Up at TD:

FW, Brine, and Mud volume presented above are estimates based on gauge 12-1/4" or 7-7/8" holes. We will adjust these volume based on hole conditions. We do not plan to keep any weighting material at the wellsite. Also, we propose an option to not mud up leaving only brine in the hole.

Drilling mud containing H2S shall be degassed in accordance with API RP-49, item 5.14. The gases shall be piped into the flare system. Gas detection equipment and pit level flow monitoring equipment will be on location. Gas detecting equipment will be installed in the mud return system and will be monitored. A mud gas separator will be installed and operable before drilling out from the Surface Casing.

In the event that the well is flowing from a waterflow, then we would discharge excess drilling fluids from the steel mud pits through a fas-line into steel frac tanks at an offset location for containment. Depending on the rate of waterflow, excess fluids will be hauled to an approved disposal facility, or if in suitable condition, may be reused on the next well.

No reserve pit will be built.

Change to Drill Plan: SC Federal #11:

Anticipated starting date and duration of operations:

Well pad and road constructions will begin as soon as all agency approvals are obtained. Anticipated date to drill these wells in 2013 after receiving approval of the APD.

z +1

Attachments:

.

- Attachment # 1 BOP and Choke Manifold Schematic 3M System
- Attachment # 2..... Diagram of Choke Manifold Equipment

Contact Information:

Sundry Request proposed 16 October 2013 by: James Chen Drilling Engineer, ConocoPhillips Company Phone (832) 486-2184 Cell (832) 768-1647



Attachment # 2



Drawn by: Steven O. Moore Chief Drilling Engineer, Mid-Continent Business Unit, ConocoPhillips Company Date: 25-Sept-2012

Change to Drill Plan: SC Federal #11:

July 2, 2013

Page 8 of 8



.

H₂S Contingency Plan

H₂S Contingency Plan Holders:

Attached is an H₂S Contingency Plan for COPC Permian Drilling working in the West Texas and Southeastern New Mexico areas operated by ConocoPhillips Company.

....

If you have any questions regarding this plan, please call Tom Samarripa at ConocoPhillips Company, 432.368.1263.

HOBBS OCD

APR 02 2014

RECEIVED

. .-

Table of Contents

Section

_r:

I. Purpose

II. Scope

III. Procedures

IV. Emergency Equipment and Maintenance

Emergency Equipment Suppliers General Information H2S Safety Equipment and Monitoring Systems

V. Emergency Call List

VI. Public/Media Relations

VII. Pubic Notification/Evacuation

VIII. Forms/Reports



HYDROGEN SULFIDE (H₂S) OPERATIONS

Contingency Plan For Permian Drilling Operations

ConocoPhillips Company Mid-Continent Business Unit Permian Asset Area

I. PURPOSE

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of H_2S into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the supervisor and will depend on the severity and extent of H_2S release. Release of H_2S must be reported to the Drilling Superintendent and documented on the IADC and in Wellview.

1 :

11

II. SCOPE

This Contingency plan shall cover the West Texas and Southeastern New Mexico areas, which contain H2S gas and could result in a release where the R.O.E. is greater than 100 ppm at 50' and less than 3000' and does not include a public area and 500 ppm R.O.E. does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H_2S could exist under specific weather conditions.

III. PROCEDURES

First Employee on Scene

Ċ,

_____ Assess the incident and <u>ensure your own safety</u>.

Note the following:

- —— Location of the incident.
- _____ Nature of the incident.
- Wind direction and weather conditions.
- _____ Other assistance that may be needed.
- _____ Call local supervisory personnel (refer to Section V: Emergency Call List) until personal contact is made with a person on the list.
- Perform emergency assessment and response as needed. The response may include rescue and/or evacuation of personnel, shutting in a system and/or notification of nearby residents/public (refer to Section VII: Public Notification/Evacuation).

Secure the site.

Follow the direction of the On-scene Incident Commander (first ConocoPhillips supervisor arriving on-scene).

First Supervisor on Scene (ConocoPhillips On-scene Incident Commander)

- ----- Becomes ConocoPhillips' On-scene Incident Commander upon arrival to location.
- Follow the principles of the **D.E.C.I.D.E.** process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).

DETECT the problem ESTIMATE likely harm without intervention CHOOSE response objectives IDENTIFY action options DO the best option EVALUATE the progress

- _____ Complete the Preliminary Emergency Information Sheet (refer to Section VIII: Forms/Reports).
- _____ Call your supervisor (refer to Section V: Emergency Call List).

Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public (refer to Section VII: Public Notification/Evacuation), requesting assistance from ConocoPhillips personnel or outside agencies (refer to Section V: Emergency Call List) and obtaining any safety equipment that may be required (refer to Section IV: Emergency Equipment and Maintenance).

Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies. (refer to Section V: Emergency Call List).

—— Ensure site security.

- Set barricades and /or warning signs at or beyond the calculated 100 ppm H₂S radius of exposure (ROE). All manned barricades must be equipped with an H₂S monitor and a 2-way radio.
- ----- Set roadblocks and staging area as determined.
- Establish the Incident Command Structure by designating appropriate on-scene response personnel as follows:

Recording Secretary Public Information Officer	
Safety/Medical Officer Decontamination Officer	

- Have the "Recording Secretary" begin documenting the incident on the "Incident Log" (refer to Section VIII: Forms/Reports).
- ——— If needed, request radio silence on all channels that use your radio tower stating that, until further notice, the channels should be used for emergency communications only.
- —— Perform a Site Characterization and designate the following:

Hot Zone	 Hazardous Area
Warm Zone	 Preparation & Decontamination Area
Cold Zone	 Safe Area

On-Scene Incident Command Post Public Relations Briefing Area Staging Area Triage Area Decontamination Area

ċ

(Cold Zone) (Cold Zone) (Cold Zone) (Cold Zone) (Warm Zone)

—— Refer all media personnel to ConocoPhillips' On-Scene Public Information Officer (refer to Section VI: Public Media Relations).

Coordinate the attempt to stop the release of H_2S . You should consider closing upstream and downstream valves to shut-off gas supply sources, and/or plugging or clamping leaks. Igniting escaping gas to reduce the toxicity hazard should be used **ONLY AS A LAST RESORT**. (It must first be determined if the gas can be safely ignited, taking into consideration if there is a possibility of a widespread flammable atmosphere.)

Once the emergency is over, return the situation to normal by:

Confirming the absence of H₂S and combustible gas throughout the area,

Discontinuing the radio silence on all channels, stating that the emergency incident is over,

Removing all barricades and warning signs,

Allowing evacuees to return to the area, and

Advising all parties previously notified that the emergency has ended.

Ensure the proper regulatory authorities/agencies are notified of the incident (refer to Section V: Emergency Call List).

Clean up the site. (Be sure all contractor crews have had appropriate HAZWOPER training.)

Report completion of the cleanup to the Asset Environmentalist. (Environmentalist will report this to the proper State and/or Federal agencies.) Fill out all required incident reports and send originals to the Safety Department. (Keep a copy for your records.)

• Company employee receiving occupational injury or illnesses.

• Company employee involved in a vehicle accident while driving a company vehicle.

• Company property that is damaged or lost.

• Accident involving the public or a contractor; includes personal injuries, vehicle accidents, and property damage. Also includes any situation, which could result in a claim against the Company.

- Hazardous Material Spill/Release Report Form-
- Emergency Drill Report

ò

- Assist the Safety Department in the investigation of the incident. Review the factors that caused or allowed the incident to occur, and modify operating, maintenance, and/or surveillance procedures as needed. Make appropriate repairs and train or retrain employees in the use and operation of the system.
- If this incident was simulated for practice in emergency response, complete the Emergency Drill Report found in Section VIII: Forms/Reports and submit a copy to the Drilling Manager. (Keep one copy in area files to document exercising of the plan.)

Emergency Procedures <u>Responsibility</u>

In the event of a release of potentially hazardous amounts of H2S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The COPC Drilling Rep. will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate people and agencies.

- 1. In an emergency situation, the Drilling Rep. on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.
- 2. The Toolpusher will assume all responsibilities of the Drilling Rep. in an emergency situation in the event the Drilling Rep. becomes incapacitated.
- 3. Advise each contractor, service company, and all others entering the site that H2S may be encountered and the potential hazards that may exist.
- 4. Authorize the evacuation of local residents if H2S threatens their safety.
- 5. Keep the number of persons on location to a minimum during hazardous operations.
- 6. Direct corrective actions to control the flow of gas.
- 7. Has full responsibility for igniting escaping gas to reduce the toxicity hazard. This should be used **ONLY AS A LAST RESORT**.

v

IV. EMERGENCY EQUIPMENT and MAINTENANCE

Emergency Equipment Suppliers

ί

Safety International – Odessa, Tx.

H₂S monitors Breathing air includes cascade systems First aid and medical supplies Safety equipment H2S Specialist

Total Safety US Odessa, Tx/ Hobs, NM

H₂S monitors Breathing air includes cascade systems Fire fighting equipment First aid and medical supplies Safety equipment

Indian Fire & Safety - Hobbs, NM

H₂S monitors Breathing air including cascade systems trailer mounted 30 minute air packs Safety Equipment 432.580.3770

432.561.5049 Odessa, Tx. 575.392.2973 Hobbs, NM

575.393.3093

Emergency Equipment and Maintenance (continued)

General Information

Materials used for repair should be suitable for use where H_2S concentrations exceed 100 ppm. In general, carbon steels having low-yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

Appropriate signs should be maintained in good condition at location entrance and other locations as specified in Texas Rule 36 and NMOCD Rule 118.

All notification lists should be kept current with changes in names, telephone numbers, etc.

All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

All personnel working in H_2S areas shall have received training on the hazards, characteristics, and properties of H_2S , and on procedures and safety equipment applicable for use in H_2S areas.

H2S Safety Equipment and Monitoring Systems

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will contain at a minimum the following:

- 3 Fixed H2S sensors located as follows:
 - 1 on the rig floor
 - 1 at the Bell Nipple
 - 1 at the Shale Shaker or Flowline

1 -<u>Entrance Warning Sign</u> located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.

- $2 \underline{\text{Windsocks}}$ that are clearly visible.
- 1 Audible warning system located on rig floor
- 2 <u>Visual</u> warning systems (Beacon Lights)
 - 1 -located at the rig floor
 - 1 -located in the mud mixing room

Note: All alarms (audible and visual) should be set to alarm at 10 ppm.

- 2 <u>Briefing areas</u> clearly marked
 - 2 SCBA's at each briefing area
 - 1- SCBA located at the Drilling Reps office

<u>Note:</u>

- 1. All SCBA's must be positive pressure type only!!!
- 2. All SCBA's must either be Scott or Drager brand.
- 3. All SCBA's face pieces should be <u>size large</u>, unless otherwise specified by the Drilling Supervisor.
- 5 <u>Emergency Escape Paks</u> located at Top Doghouse.

Note: Ensure provisions are included for any personnel working above rig floor in derrick.

 $1 - \underline{\text{Tri or Quad gas monitor}}$ located at the Drilling Reps office. This will be used to determine if the work area if safe to re-enter prior to returning to work following any alarm.

V. EMERGENCY CALL LIST:

The following is a <u>priority</u> list of personnel to contact in an emergency situation:

Supervisory Personnel	Office No.	Home	Cellular
R.W. "Cottton" Hair Permian Drilling Supt.	432.368.1302	432.563.9467	432.556.9116
Dennis Paschall Permian Drilling Field Supt.	432.368.1517	432.683.9400	432.238.3150
Tom Samarripa WSER	423.368.1263	432.367.4961	432.556.9113
Ty Maxey Permian Asset Operations Manager	432.368.1100		281.217.8492
Leo Gatson Safety and Environmental Coordinator	432.368.1248		432.631.066
Lynn Dooley Drilling Mngr.	832.486.2567	281.225.8063	281.435.3517

EMERGENCY CALL LIST: State Officials

Regulatory Agencies

New Mexico Oil Conservation Commission

Office: 575.393.6161

P. O. Box 1980 Hobbs, New Mexico 88240-1980

Bureau of Land Mngt.

Carlsbad Field Office	Office	: 575.234.5972
620 E. Greene St.	Fax:	575.885.9264
Carlsbad, NM 88220	BLM 24 Hr on call # Lea County:	575-393-3612

EMERGENCY CALL LIST: Local Officials

Refer to the Location Information Sheet Note: The LIS should include any area residents (i.e. rancher's house, etc)

ConocoPhillips Emergency Call List and Location Information Sheet

. . .

ConocoPhillips- 281-293-3600

۰,

Drilling Superintendent	Cotton Hair	Office: 432-368-1302
		Cell: 432-556-9116
Safety (WSER)	Tom Samarripa	Office: 432-368-1263
		Cell: 432-556-9113
Drilling Engineer	Steve Moore	Office: 832-486-2459
		Cell: 281-467-7596
Regulatory Contact	Susan Maunder	Office: 432-688-6913
		Cell: 432-556-6501

Emergency Numbers

Hospital: Lea Co. Regional Medical Center (Hobbs)	
Ambulance: Hobbs Fire Dept.	575-397-9308
Air Ambulance: Care Star	
Aero Star	
Fire Dept. (Hobbs)	
(Maljamar non-emerg)	
State Police (Artesia)	
(Hobbs)	
Sheriff (Lovington)	
Police (Lovington)	
NMOCD	
(Emerg)	575-370-3186
BLM Switchboard	
BLM 24 Hr on Call, Lea County	
New Mexico Emergency Response Comm (Santa Fe)	
New Mexico State Emerg Ops Ctr	505-476-9635
National Emerg Response Center	800-424-8802

Number of Residences within 1 mile of Well: There are no residences within one mile of the well to be drilled.

VI. Public Media Relations

The **Public Information Officer** becomes the ConocoPhillips on-scene contact (once designated by the Phillips On-Scene Incident Commander).

Confers with Houston Office's Human Relations Representative, who is responsible for assisting in the coordination of local public relations duties.

Answer media questions honestly and <u>only with facts</u>, do not speculate about the cause, amount of damage, or the potential impact of the incident of the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- " "I do not know. I will try to find out."
- I am not qualified to answer that question, but I will try to find someone who can."
- "It is under investigation."

Note:

۰.

Do Not Say "No Comment." (This implies a cover-up.)

Do Not Disclose Names of Injured or Dead! Confer with the Houston Office's Human Relations Representative, who is responsible for providing that information.

Alert and/or Evacuate People within the Exposure Area

 <u>Public Notification</u> – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person <u>first</u> observing the leak should take <u>immediate</u> steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

Note: Bilingual employees may be needed to assist in notification of residents.

2. <u>Evacuation Procedures</u> – Evacuation will proceed upwind from the source of the release of H₂S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

Roadblocks and the staging area should be established as necessary for current wind conditions.

1 .

Note: In all situations, consideration should be given to wind direction and weather conditions. H_2S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

VIII. FORMS & REPORTS

. .'

I. Incident Log

£

- II. Preliminary Emergency Information Sheet
- III. Emergency Drill Report
- IV. Onshore Hazardous Material Spill/Release Report Form
- V. Immediate Report of Occupational Injury or Illness Report of Accident-Public Contractor Report of Loss or Damage to Company Property Report of Automotive Incident

1 -

ConocoPhillips Location Schematic and Rig Layout for Closed Loop System

PICTURE NOT TO SCALE!

Drawn by: "Jameis Chen Drilling Engineer, ConocoPhillips Company Data: 12-Novembér-2012 (updated March 2013)

NOTE: There are two muster areas (primary & scondary) depending on the prevailing wind direction. The muster area that is furthest upwindforbsewind will be the designated area for briefing and assessing the situation. In the situation that a full evacuation is deemed necessary, as personnel will exit the location on the main access road. Otherwise, if the main access road is blocked off, they will exit on the secondary road or walk off road in the upwindcrosswind direction.



.

.

L

Request for Variance

1. .

HOBBS OCD

ConocoPhillips Company Lease Number: USA LC 058395 Well: SC Federal #11 Location: Sec. 22, T17S, R32E Date: 10-16-13

APR 02 2014

RECEIVED

Request:

.

ConocoPhillips Company respectfully requests a variance to install a flexible choke line instead of a straight choke line prescribed in the Onshore Order No. 2, III.A.2.b Minimum standards and enforcement provisions for choke manifold equipment. This request is made under the provision of Onshore Order No. 2, IV Variances from Minimum Standard. The rig to be used to drill this well is equipped with a flexible choke line if the requested variance is approved and determined that the proposed alternative meets the objectives of the applicable minimum standards.

Justifications:

The applicability of the flexible choke line will reduce the number of target tees required to make up from the choke valve to the choke manifold. This configuration will facilitate ease of rig up and BOPE Testing.

Attachments:

- Attachment # 1 Specification from Manufacturer
- Attachment # 2 Mill & Test Certification from Manufacturer

Contact Information:

Program prepared by: James Chen Drilling Engineer, ConocoPhillips Company Phone (832) 486-2184 Cell (832) 768-1647 Date: 26 September 2012 Attachment # 1



Attachment # 2



SC Federal #11

HOBBS OCD

APR 02 2014

nê.

Changes to the Approved Surface Use Plan of Operations

RECEIVED

The following changes are respectfully requested. No additional surface disturbance is needed for pad construction. Approximately 48' of road is needed for access.

- 1.A The well site survey and location plat package were updated and are enclosed for BLM record purposes.
- 4.B.1 Please see the enclosed preliminary plot plan provide for BLM record purposes.
- 4.B.4 Produced fluid will utilize a flow line to the new facility planned for this well. The enclosed survey plat shows approximately 3550' of above ground new flow line following lease road(s). The line will be <4", Fiberspar operated within BLM specifications.
- 4.B.6 Electricity will be tied to existing COPC infrastructure. There is existing power line that will be re-routed around the pad. About 168' of overhead new power line will be installed to connect and to existing power source. Power line will follow lease road. See enclosed survey plat. Approximately 150' of buried power line will be installed in the well pad.
- 10.A. Please include the following phrase in your approval. "...production operations. <u>The approximate dimensions following interim reclamation are planned as</u> <u>200'x200'</u>. The portions of the pad...".
- 13. Bond Coverage is provided via ConocoPhillips Company ES0085.
- 14. ConocoPhillips Company representatives responsible for the implementation of this surface use plan are:

Dennis Paschall,	Donald Blair,
Permian Drilling Field Superintendent	Superintendent Operations – Permian SENM
4001 Penbrook	4001 Penbrook
Odessa, TX 79762	Odessa, TX 79762
Phone: 432-368-1517 (office)	Phone: 432-688-9150 (office)
432-238-3150 (cell)	

Additional Information

- A. ConocoPhillips Company intends to request that this well location be covered under the BLM MOA NM-930-2008-003 at a later date.
- B. ConocoPhillips Company will be responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites or for collecting artifacts. If historic or archaeological materials are uncovered, ConocoPhillips Company will suspend all operations that might further disturb such materials and immediately contact the Authorized Officer, Bureau of Land Management.

Within five (5) working days the Authorized Officer will inform ConocoPhillips Company as to whether the materials appear eligible for the National Register of Historic Places; the mitigation measures the operator will likely have to undertake before the site can be used (assuming in site preservation is not necessary); and a time frame for the Authorized

Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the Authorized Officer are correct and that mitigation is appropriate.

- C. ConocoPhillips Company will protect, in place, all public land survey monuments, private property corner, and Forest service boundary markers. In the event that any such land markers or monuments are destroyed in the exercise of their rights, depending on the type of monument destroyed, the operator shall see that they are reestablished or referenced in accordance with (1) the procedures outlined in the "Manual of Instructions for the Survey of the Public Land of the United States", (2) the specifications of the county surveyor, or (3) the specification of the BLM.
- D. ConocoPhillips Company will comply with additional Conditions of Approval provided by BLM.



District I 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

40

Ù

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

30-025	-025-40598 ³ Pool Code 44500 Maljamar; Yeso West ³ Pool Name					ame				
⁴ Property Code				⁵ Property Name SC FEDERAL				⁶ Well Number 11		
⁷ OGRID I 217817	vo.	(Operator Name oPhillips Company			⁹ Elevation 3978'	
					¹⁰ Surface	Location		н. -		
UL or lot no. P	Section 22	Township 17 S	Range 32 E	Lot Idn	Feet from the 435	North/South line SOUTH	Feet from the 204	East/West line EAST	County LEA	
			11	Bottom H	ole Location I	f Different From	Surface			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
12 Dedicated Acr	es ¹³ Jo	int or Infill	14 Conso	lidation Code	15 Order No.	l	<u>ــــــا</u>		L	

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.


District I 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-40598	er 40598 ² Pool Code 8 44500 Maljamar; Yeso West				
⁴ Property Code	⁵ Property Name SC FEDERAL ⁶ Well Number 11				
⁷ OGRID No. 217817	*Operator Name * Elevation ConocoPhillips Company 3978'				

					"Surface	Location			
UL or lot no. P	Section 22	Township 17 S	Range 32 E	Lot Idn	Feet from the 435	North/South line SOUTH	Feet from the . 204	East/West line EAST	County LEA
"Bottom Hole Location If Different From Surface									

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acre	s 13	Joint or Infill	14 Conse	lidation Code	¹⁵ Order No.				
40									

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.













i. .)





ĺ,



¥. .



L



ConocoPhillips Company SC FEDERAL 11 SECTION 22, T17S, R32E, N.M.P.M.

PROCEED IN A SOUTHERLY DIRECTION FROM MALJAMAR, NEW MEXICO ALONG MALJAMAR ROAD/COUNTY ROAD 126 APPROXIMATELY 3.0 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 1.0 MILE TO THE JUNCTION OF THIS ROAD AND AN EXISTING ACCESS FOR THE EXISTING MCA UNIT 341 TO THE NORTH; TURN LEFT AND PROCEED IN A NOTHERLY DIRECTION APPROXIMATELY 122' TO THE BEGINNING OF THE PROPOSED ACCESS FOR THE MCA UNIT 535 PAD TO THE NORTHEAST; FOLLOW ROAD FLAGS IN A NORTHEASTERLY DIRECTION APPROXIMATELY 154' TO THE BEGINNING OF THE PROPOSED ACCESS TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION 48' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM MALJAMAR, NEW MEXICO TO THE PROPOSED LOCATION IS APPROXIMATELY 4.1 MILES.



	412010 H		NT VI W	
T17S	DR	012214	DETAIL "A"	EXISTING POWER LINE
A072T			r	
	COH CH	51,011		
	- nto			
4057	99261978			
	4077	T 40.2%		PROPOSED ACCESS 48' +/-
4059 Anex		- N SV	MCA UNIT	
	ON CON		341	PROPOSED ACCESS FOR MCA UNIT 535 154' +/-
		1-5-p-1		4069
	- Charles ave	+ /\		
			<u>034:</u>	
Solution of the second s		J. A.		
44-99-7 W				
1013 N V	In the second			Alexander 198 Alexander Pite
	4007		4018 12	2076 04
	4001	···· •		A CARLANDA A
	0 4004 HEL			7 403 - 14040
WAR I	BLM			BLM
		ن 22 ش	W/24	
		- (- 3		and and
	PROPOSED LOCAT			WH
	SC FEDERAL II		SEE DETAIL "A"	and the second sec
	· · · · · · · · · · · · · · · · · · ·	22' +/-		
1402/17	S. E. 1396		MCA-UNIT-535	
	1.0 MI. +/-		MCA UNIT 341	
		nthe fi		
LEGEND:		out tot	- PE	
EXISTING ROAD		7-4-14	New Control	
	e" 11 1	XXII		R
PROPOSED ACCE (SERVICING OTH		人と学生	24 3948	26 32
BLM LANDS		<u></u>	+	
	し。 AS BEEN OBTAINED FROM VAR	IOUS SOURCES	A THE REPORT OF STREET, SALES STREET,	FOR MAPPING, GRAPHIC AND PLANNING
PURPOSES ONLY. NO W	ARRANTY IS MADE BY UINTAH E			S) FOR ACCURACY OF THE PARCEL DATA.
SCALE: 1" = 2000' REV DRAWN BY: J.C.	ISED:	— N	ConocoPhillips	ConocoPhillips Company
DATE DRAWN: 10-02-13			l	
	-,		SEC	SC FEDERAL 11 CTION 22, T17S, R32E, N.M.P.M.
	Corporate Office * 85 South 200			435' FSL 204' FEL
ENGINEERING & LAND SURVEYING	Vernal, UT 84078 * (435) 789-7	1017	ACCES	S ROAD MAP TOPO B

т., КЛ - У







CONDITIONS OF APPROVAL

OPERATOR'S NAME:	ConocoPhillips Co.
LEASE NO.:	LC058395
WELL NAME & NO.:	SC Federal 10
SURFACE HOLE FOOTAGE:	940'/ FSL & 1880'/ FEL
LOCATION:	Section 22, T.17 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

RECEIVED

HOBBS OCD

APR 02 2014

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Lea County Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

- 1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the Grayburg formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.
- 2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. If the drilling rig is removed without approval an Incident of Non-Compliance will be written and will be a "Major" violation.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible water and brine flows in the Salado and Artesia groups. Possible lost circulation in the Grayburg and San Andres formations.

- 1. The **8-5/8** inch surface casing will be set at approximately **920** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

- 2. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Operator has proposed contingency DV tool/ECP at a depth of 3000'. Operator is to submit sundry if DV tool depth varies by more than 100' from approved depth.

- a. First stage to DV tool:
- Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.
- b. Second stage above DV tool:

Cement to surface. If cement does not circulate, contact the appropriate BLM office.

3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000** (**3M**) psi.

- 4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
 - c. The results of the test shall be reported to the appropriate BLM office.
 - d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
 - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 011514