	•							
Form 3160-5 (June 2015)	UNITED STATES EPARTMENT OF THE INTERI	OR		FORM OMB N Expires: Ja	APPROVED O. 1004-0137 anuary 31, 2018			
в Sundry	NOTICES AND REPORTS C		5. Lease Serial No. NMLC062749B					
Do not use th abandoned we	is form for proposals to drill o II. Use form 3160-3 (APD) for s	r to re-enter an such prod BBS	OCD	6. If Indian, Allottee or Tribe Name				
SUBMIT IN	TRIPLICATE - Other instruction	ns on page 2 JAN 16	2010	7. If Unit or CA/Agree	ement, Name and/or No.			
1. Type of Well Oil Well Gas Well Oth	ler	RECEN	/ 200 00	8. Well Name and No. ZIA HILLS 19 FEI	DERAL COM 111H			
2. Name of Operator CONOCOPHILLIPS COMPAN	Contact: JEREN VY E-Mail: Jeremy.L.Lee@co	MY LEE p.com	ED	9. API Well No. 30-025-44238-0)0-X1			
3a. Address	3b. Pi Ph:- Ph:-	hone No. (include area code) 832-486-2510		10. Field and Pool or WOLFCAMP	Exploratory Area			
4. Location of Well (Footage, Sec., 7	R., M., or Survey Description)	NTD HIMMIN	A	11. County or Parish.	State			
Sec 19 T26S R32E SENW 24 32.028664 N Lat, 103.717667	98FNL 1666FWL W Lon			LEA COUNTY,	NM			
12. CHECK THE AI	PPROPRIATE BOX(ES) TO IN	DICATE NATURE OI	F NOTICE,	REPORT, OR OTH	IER DATA			
TYPE OF SUBMISSION		TYPE OF	ACTION					
Notice of Intent	🗖 Acidize	🗖 Deepen	Product	ion (Start/Resume)	🗖 Water Shut-Off			
Subsequent Demost	Alter Casing	Hydraulic Fracturing	🗖 Reclam	ation	Well Integrity			
U Subsequent Report	Casing Repair	New Construction	🗖 Recomp	olete	Other Change to Original A			
Final Abandonment Notice	Change Plans	Plug and Abandon	Tempor	arily Abandon	PD			
	Convert to Injection	Plug Back		Disposal				
Attach the Bond under which the word following completion of the involved testing has been completed. Final At determined that the site is ready for final ConocoPhillips respectfully re- attached documents: Zia Hills 19 Fed Com 111H Ke Zia Hills 19 Fed Com 111H Ke	operations. If the operation results in a andonment Notices must be filed only a inal inspection. quests to change the approved of ally Cock	multiple completion or reconstruction of reconstruction of reconstruction of reconstruction of the second s	in the	osequent reports must be new interval, a Form 316 n, have been completed a	0-4 must be filed once and the operator has			
Zia Hills 19 Fed Com 111H Cr Zia Hills 19 Fed Com 111H B0	OPE	SE	E ATT	CHED FOR				
Zia Hills 19 Fed Com 111H Ca Zia Hills 19 Fed Com 111H Ca	asing Design	COND	CONDITIONS OF ADDOMAT					
Zia Hills 19 Fed Com 111H Dr	ill Plan	COND	CONDITIONS OF APPKUVAL					
In particular the casing design	is being modified due to availab	ility of casing. As such	we request					
approval at your earliest conve	enience.							
			· · · ·		·			
 I hereby certify that the foregoing is Corr 	true and correct. Electronic Submission #448493 For CONOCOPHILLI Imitted to AFMSS for processing i	verified by the BLM Well PS COMPANY, sent to the by PRISCILLA PEREZ on	Information the Hobbs	n System (19PP0686SE)	ъ.			
Name (Printed/Typed) JEREMY	_EE	Title REGULA	Title REGULATORY COORDINATOR					
Signature (Electronic S	ubmission)	Date 12/19/20	Date 12/19/2018					
	THIS SPACE FOR FE	DERAL OR STATE (OFFICE U	SE	· · · · · · · · · · · · · · · · · · ·			
		······································						
Approved By ZOTA STEVENS	· ···· ··· ··· ··· ··· ··· ···		JM ENGINE	EER	Date 12/21/2018			
Conditions of approval, if any, are attached sertify that the applicant holds legal or equivient would entitle the applicant to condu	 Approval of this notice does not warn itable title to those rights in the subject ct operations thereon. 	rant or lease Office Hobbs						
Fitle 18 U.S.C. Section 1001 and Title 43 States any false, fictitious or fraudulent s	U.S.C. Section 1212, make it a crime for tatements or representations as to any m	r any person knowingly and natter within its jurisdiction.	willfully to ma	ke to any department or	agency of the United			
Instructions on page 2)	SED ** BI M DEVISED ** DI	M REVISED ** PI M	BEVICEN					
			NEVIJEL		- HZ			

Additional data for EC transaction #448493 that would not fit on the form

32. Additional remarks, continued

٠

Thank you for your time spent reviewing this request.

Conor	- Dhil	line				WELL P	LANS	SUMM	ARY					_ V	ersion: 1
Conocornillips				1280 E	1280 Extended Reach Single Lateral								Prepared by: M, Smith		
		74 40 4444					COUNT	Y,STATE:	Lea, Co, I	NM			<u> </u>		AFE: WAF.OND
SURFA	CE LOC:	SENW 19 S26 R	32E	2498' FNL	1666' FWL			API No,:						Drilling Netw Invoice Ha	vork No.: ndier ID: VENNECP
ELEV	ATIONS:	GL	3,182.4'	2010 1 02	1300 1 440		W	H Coord.:		320	1' 43'	43.19" N	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	DRILLING DMPLETION	
			.20,5						LON	BTCN		5.01 **		TOTAL	
	-	FORMATIC	IN TOP:	TVD	SUBSEA			DRIL	LING RIG	PIEN	<u>256</u> LOC	TARGET	FORMATIC	DN <u>Wolfe</u>	camp A Upper
<u>1/-1/2" X 13-3</u>	V8"	Base of Fresh Wat Rustler	ter	300	(2,882) (2,092)	Fresh Water	From the	e intersect	on of U.S.	Hwy 285	and Stat	e Hwy 652 in 1	Orla, TX, go Maxico Col	east on Sta	te Hwy 652 for 16.6 for 2 miles to lease
		Surface Casing F	Point	1,172	(2,039)	Fresh Water	(Directly	west of B	attle Axe F	Road). Tu	m left (W	onto the lese	road and t	ravel 1.1 mile	es to lease road. Tu
		Top of Salt / Salad	o	1,289	(1,922)	Salt	onto the travel 60	lease roa: 00' to the k	and travi cation,	el 1/10 of	a mile to	the location le	ase road, T	'um right (E)	onto location lease
		Delaware Base of	Salt	4,254	1043	Gas / Oil	Lat: 32-	01-42,74N	Long: 103	-43-02,68	SW				
		Cherry Canyon Brushy Canyon		5,165	1954,1487	Gas / Oil Gas / Oil		in the Can		POT	NIAL	HAZARDS	-> MITTG	ATIONS	e I CM
		Bone Springs		8,031	4820.1484	Gas / Oil	Elevated	d pressure	/ gas in th	e Wolfca	mp prior t	o INT setpoint	t -> Set at m	ninimum dep	th of 11460' TVD
ПП		Bone Springs 1st C Avalon A	Carb	8,277 8,556	5066.5503 5344.729	Gas / Oil Gas / Oil	Wellbor Strong f	e instability ormation p	in the PR ush in late	OD hole - ral -> Ma	-> Ready intain with	to elevate MV 1in 30' L/R of I	V. watching ine, putting	gas on conn in quick mai	ections ntenance slides
		Bone Springs 1st S	Sand	9,221	6010.5293	Gas / Oil									
		Bone Springs 2nd	Carb	9,588	6266.2705	Gas / Oil									
	~	Bone Springs 2nd Bone Springs 3rd (Sand Carb	9,929 10 432	6718.3936 7220 706	Gas / Oil Gas / Oil									
	8	Bone Springs 3rd S	Sand	11,060	7848,777	Gas / Oil									
		vvoncamp Wolfcamp A		ד 1,460 11,665	8248.643 8454.276	Gas / Oil Gas / Oil									
		Top Target		11,787	8576.578	Gas / Oil									
		intermediate Casin Bottom Tarcet	g Point	11,792 11,796	8581 8585	Gas / Oil Gas / Oil									
劉惟															
- M 11															
	Ľ.														
		8 1/2"" X 5-1/2"	<u>]</u> T	<u>wswa</u>	32101B.20	BLEL D	CONT	ACTS		· · · ·					·····
		TARG	ET	11,792	8,581	Gas / Oil		Drilling	Engineer:	Matt Sr	nith		<u>0</u> 281-2	<u>ffice</u> 06-5199	<u>Cell</u> 432-269-6432
9 5/8 in, shoe 12	2211 MD														
9 5/8 in, shoe 12 1903' FN	2211' MD	Format	ion Dip Rate: D	est 90.1° 11.792	° (up dip) 8.581	Gas / Oil			Geologist:	Josh D	av		281-2	06-5620	423-512-0347
9 5/8 in, shoe 12 1903' FN	2211' MD /L	Format PBTI	ion Dip Rate: D	est 90.1* 11,792	° (up dip) 8,581	Gas / Oil		onsite Dri	Geologist: ling Rep.:	Josh D Greg R	ay livera		281-2 432-8	06-5620 48-5238	423-512-0347
9 5/8 in, shoe 12 1903' FN	IL	Format PBT(perature (°F):	ion Dip Rate: D 203	est 90.1° 11,792	° (up dip) 8,581	Gas / Oil		onsite Drii Field Drii	Geologist: ling Rep.: ina Supt.:	Josh D Greg R Dennis James	ay livera Hously Tavlor		281-2 432-8 830-5	06-5620 48-5238 83-4828	423-512-0347 956-229-1393
9 5/8 in, shoe 12 1903' FN Estimated BH Si Aax, Anticipated	IL Static Temp d BH Press	Format PBTI berature (°F): sure:	ion Dip Rate: D 203 0.690 psi/ft	est 90.1 ⁴ 11,792 8,136 psi	* (up dip) 8,581	Gas / Oil		onsite Drii Field Drili	Geologist: ling Rep.: ing Supt.:	Josh D Greg R Dennis James Patrick	ay ivera Hously Taylor Wellma	ın	281-2 432-8 830-5	06-5620 48-5238 83-4828	423-512-0347 956-229-1393 432-215-7079
9 5/8 in, shoe 12 1903' FN Estimated BH Si Max, Anticipated Max Anticipated DRILLING FLUI	iL Static Temp d BH Press I Surface F ID:	Format PBTI berature (°F): sure: ?ressure: Type	ion Dip Rate: D 203 0.690 psi/fi	est 90.1 ⁴ 11,792 8,136 psi 5,542 psi Inte	* (up dip) 8,581	Gas / Oil Density	Vis	Onsite Dril Field Drili Drili PV	Geologist: ling Rep.: ing Supt.: ing Supt.: YP	Josh D Greg R Dennis James Patrick Scott N	ay livera Hously Taylor Wellma licholsol FL	in 1 LGS	281-2 432-8 830-5 	06-5620 48-5238 83-4828 06-5392 Remarks	423-512-0347 956-229-1393 432-215-7079 432-230-8010
9 5/8 in, shoe 12 1903' FNI Estimated BH SI Max, Anticipated Max Anticipated DRILLING FLUI	iL Static Temp d BH Press I Surface F ID: Surface:	Format PBT(perature (°F): sure: <u>Pressure:</u> <u>Type</u> Fresh Vi	ion Dip Rate: D 203 0.690 psi/f	est 90.1 11,792 8,136 psi 5,542 psi inte (M Surface	" (up dip) 8,581 (val D) = 1 172	Gas / Oil Density PPg	Vis sec/qt 28-50	Onsite Dril Field Drill Drill PV cP 1-5	Geologist: ling Rep.: ing Supt.: ing Supt.: <u>YP</u> #1100ft2 2-6	Josh D Greg R Dennis James Patrick Scott N <u>pH</u> 7 5-8 5	ay Hously Taylor Wellma <u>licholso</u> <u>FL</u> NC	In 1 <u>LGS</u> % by vol ≤ 5.0	281-2 432-8 830-5 <u>281-2</u> <u>NaCi</u> ppb sol	06-5620 48-5238 83-4828 06-5392 Remarks Bin Tanks	423-512-0347 956-229-1393 432-215-7079 432-230-8010
9 5/8 in, shoe 12 1903' FN Estimated BH Si Aax, Anticipated Aax Anticipated DRILLING FLUI	iL Static Temp d BH Press I Surface F ID: Surface: rmediate:	Format PBTI sure: Pressure: Fresh W Emutsified	ion Dip Rate: D 203 0.690 psi/f 2 /ater I Brine	est 90.1° 11,792 8,136 psi 5,542 psi Inte (M Surface 1172' -	° (up dip) 8,581 P) - 1,172' 12211'	Gas / Oil Density ppg	<u>Vis</u> sec/qt 28-50 28-50	Onsite Dril Field Drili Drili PV cP 1-5 1-5	Geologist: ling Rep.: ing Supt.: <u>YP</u> #1007t2 2-6 2-6 2-6	Josh D Greg R Dennis James Patrick Scott N <u>pH</u> 7.5-8.5 7.5-8.5	ay Hously Taylor Wellma <u>licholsol</u> <u>FL</u> _{ML} NC NC	n 1 <u>LG8</u> % by vol < 5.0 < 5.0	281-2 432-8 830-5 281-2 <u>NaCi</u> ppb sol 10,000 180,000	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks	423-512-0347 956-229-1393 432-215-7079 432-230-8010
9 5/8 in, shoe 12 1903' FN Estimated BH Si Max, Anticipated Max Anticipated NRILLING FLUI Inter Programme Provi	IL Static Temp d BH Press I Surface F ID: Surface: rmediate: roduction: on <i>Fluids F</i>	Format PBTI berature (*F): sure: 'ressure: Fresh W Ermulsified OBM	ion Dip Rate: D 203 0.690 psi/f 2 /ater I Brine	est 90,1° 11,792 6,136 psi 5,542 psi inte (M Surface 1172' - 12211' -	* (up dip) 8,581 • (up dip) 8,581 • (up dip) • (up dip)	Gas / Oil	<u>Vis</u> sec/qt 28-50 28-50 50-70	Consite Dril Field Drill PV cP 1-5 1-5 18-25	Geologist: ling Rep.: ing Supt.: ing Supt.: <u>YP</u> #1100n2 2-6 2-6 8-14	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10	ay Hously Taylor Wellma licholsol <u>FL</u> NC NC NC NC	n 1 % by vol < 5.0 < 5.0 < 8.0	281-2 432-8 830-5 281-2 <u>NaCi</u> ppb sol 10,000 180,000 400 - 00	06-5620 48-5238 83-4828 06-5392 <u>Remarka</u> Rig Tanks Rig Tanks	423-512-0347 956-229-1393 432-215-7079 432-230-8010
9 5/2 in, shoe 12 1903' FN Estimated BH Si Aax, Anticipated Aax Anticipated DRILLING FLUII Inter Prr Reference Drillin CASING:	IL Static Temp d BH Press I Surface F ID: Surface: rmediate: oduction: ng Fluids F	Format PBTI berature (*F): sure: 'ressure: Tresh W Emulsified Program Hole	ion Dip Rate: D 203 0.690 psi/f 2 /ater I Brine 1 TOP (MD)	est 90,1° 11,792 8,136 psi 5,542 psi (M Surface 1172' - 12211' -	(up dip) 8,581 0) - 1,172' 12211' - 22073'	Gas / Oil	Vite sec/qt 28-50 28-50 50-70	Onsite Dril Field Dril Dril PV cP 1-5 1-5 18-25 Grade	Geologist: ling Rep.: ing Supt.: <u>YP</u> ##100m2 2-6 2-6 8-14 <u>Connee</u>	Josh D Greg R Dennis James Patrick Scott N <u>PH</u> 7.5-8.5 7.5-8.5 9.5-10	ay Hously Taylor Wellma licholso <u>FL</u> NC NC NC < 8	10 <u>LQS</u> % by vol < 5.0 < 5.0 < 8.0 BOP:	281-2 432-8 830-5 281-2 <u>NaCI</u> ppb sol 10,000 180,000 400 - 00	06-5620 48-5238 83-4828 06-5392 <u>Remarks</u> Rig Tanks Rig Tanks	423-512-0347 956-229-1393 432-215-7079 432-230-8010
9 5/2 in, shoe 12 1903' FN Estimated BH SI Aax, Anticipated Aax Anticipated Aax Anticipated DRULLING FLUII Inter Pro- Pro- Reference Drillin CASING:	IL Static Temp d BH Press ISurface F ID: Surface: mediate: oduction: ng Fluids F Surface:	Format PBTI berature (*F): sure: 'ressure: Type Fresh W Emulsified Program Hole 17-1/2"	ion Dip Rate: D 203 0.690 psi/f 2 /ater Brine 1 <u>TOP (MD)</u> 29	est 90.1° 11.792 8.136 psi 5.542 psi inte (M Surface 1172' - 12211' - <u>BTM (MD)</u> 1,172'	(up dip) 8,581 D) - 1,172' 12211' - 22073' Length 1,143'	Gas / Oil Density PPa PPa Size 13 3/8	Vis sec/qt 28-50 28-50 50-70 <u>Wt</u> 54,50	Onsite Dril Field Dril PV P 1-5 1-5 18-25 Grade J-55	Geologist: ling Rep.: ing Supt.: ing Supt.: 2-6 2-6 8-14 <u>Conne</u> BT	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C	ay Hously Taylor Wellma licholsol <u>FL</u> MC NC NC < 8	n <u>LGS</u> % by vol < 5.0 < 8.0 BOP: Minimum - Rig -	281-2 432-8 830-5 281-2 NaCi ppb sol 10,000 180,000 400 - 00 400 - 00	06-5620 48-5238 83-4828 83-4828 06-5392 <u>Remarks</u> Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10 M psi Ran	423-512-0347 956-229-1393 432-215-7079 432-230-8010
9 5/2 in, shoe 12 1903' FN Estimated BH SI Aax, Anticipated Aax Anticipated Aax Anticipated DRILLING FLUII Inter Reference Drillin CASING:	22111 MD IL Static Temp d BH Press I Surface: rmediate: oduction: ng Fluids F Surface: rmediate:	Format PBTI berature (*F): sure: Pressure: Fresh W Emulsified Program Hole 17-1/2" 12-1/4" 409(00/5761)	ion Dip Rate: D 203 0.690 psi/f 2 /ater I Brine 1 TOP (MD) 29' 29' 29' 29' 29'	est 90,1' 11,792 8,136 psi 5,542 psi Inte (M Surface 1172' 12211' BTM (MD) 1,172' 12,211'	(up dip) 8,581 rval p) - 1,172' 12211' - 22073' Length 1,143' 12,183' 201	Gas / Oil <u>Density</u> PP0 <u>Size</u> 13 3/8 9 5/8 9 5/8	Vis seciat 28-50 28-50 50-70 <u>Wi</u> 54,50 40,00 40,00	Consite Drill Field Drill PV cP 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5	Geologist: ling Rep.: ing Supt.: <u>YP</u> #/100n2 2-6 8-14 Connes BT BT BT	Josh D Greg R Dennis James Patrick Scott N <u>pH</u> 7.5-8.5 7.5-8.5 9.5-10 C C	ay Hously Taylor Wellma licholso <u>FL</u> NC NC < 8	10 <u>LGS</u> % by vol < 5.0 < 8.0 BOP: Minimum - Rig - Stackup -	281-2 432-8 830-5 281-2 <u>NaCi</u> ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00	06-5620 48-5238 83-4828 06-5392 <u>Remarks</u> Rig Tanks Rig Tanks rig Tanks s 3 Well Cor 10M psi Ran tead, Annuk	423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-8010
9 5/8 in, shoe 12 1903' FN Estimated BH SI Max, Anticipated Max Anticipated Max Anticipated Max, Anticipated	Static Temp d BH Press I <u>Surface</u> F ID: Surface: mediate: oduction: mediate: coduction: surface: mediate: coduction:	Format PBTI Sure: Pressure: Fresh V Emulsified Program Hoje 17-1/2" 12-1/4" 8-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater I Brine 1 7 7 7 9 29' 29' 29' 29'	est 90,1' 11,792 8,136 psi 5,542 psi 1172'- 12211'- 12211'- 1,172'- 12211'- 1,172'- 1,172'- 1,172'- 1,172'- 1,172'- 1,172'- 1,1792'	(up dip) 8,581 0) - 1,172' 12211' - 22073' <u>Length</u> 1,143' 12,183' - 22,045'	Gas / Oil <u>Density</u> ppg <u>Size</u> 13 3/8 9 5/8 9 5/8 5 1/2	Via sec/qt 28-50 28-50 50-70 <u>VVt</u> 54.50 40.00 40.00 23.00	Consite Dril Field Drill PV eP 1-5 1-5 18-25 18-25 Grade J-55 L80-IC L80-IC P-110	Geologist: ling Rep.: ing Supt.: ing Supt.: <u>YP</u> ##100n2 2-6 2-6 8-14 BT BT BT TX	Josh D Greg R Dennis James Patrick Scott N <u>PH</u> 7.5-8.5 7.5-8.5 9.5-10 c C C C	ay Hously Taylor Wellma licholsol NC NC NC < 8	n <u>LGS</u> % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup -	281-2 432-8 830-5 281-2 <u>NaC</u> ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00 COP Class 13-5/8"x Rotating H Pipe Ram Mud Cross	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks s 3 Well Con 10M psi Ran feed, Annuk , Bind Ram, s (Choke & I	423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010
9 5/8 in, shoe 12 1903' FN Estimated BH SI Max, Anticipated Max Anticipated DRILLING FLUI Inter Pro Reference Drillin CASING: Inten CASING: CENTRALIZATI	static Temp d BH Press I <u>Surface F</u> ID: Surface: mediate: oduction: ng <i>Fluids F</i> Surface: mediate: oduction: IDN:	Format PBTI Persture (*F): sure: Pressure: Fresh V Ermulsified Program Hoje 17-1/2" 0BN Program Hoje 17-1/2" 8-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater I Brine 1 7 7 7 7 8 7 7 7 8 7 7 7 8 7 7 7 8 7 7 8 7 7 7 8 7 7 7 7 8 7	est 90,1' 11,792 8,136 psi 5,542 psi 1172'- 12211'- 1172'- 12211'- 12211'- 12,211' 12,211' 22,073'	(up dip) 8,581 rvel 0) - 1,172' 12211' - 22073' <u>Length</u> 1,143' 22,045'	Gas / Oil Density PPQ Size 13 3/8 9 5/8 9 5/8 5 1/2	Vite sec/at 28-50 28-50 50-70 <u>Wt</u> 54.50 40.00 40.00 23.00	Consite Dril Field Drill PU eP 1-5 1-5 18-25 I8-25 <u>Grade</u> J-55 L80-IC L80-IC P-110	Geologist: ling Rep.: ing Supt.: <u>YP</u> #/100n2 2-6 2-6 8-14 BT BT BT TX	Josh D Greg R Dennis James Patrick <u>Scott N</u> 7.5-8.5 7.5-8.5 9.5-10 <u>etton</u> C	ay livera Hously Taylor Wellma licholsol RC NC NC < 8	n <u>LG8</u> % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup -	281-2 432-8 830-5 281-2 <u>NaC</u> ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00 400 - 00 COP Class 13-5/8*x Rotating I Pipe Ram Mud Cros Pipe Ram	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks s 3 Well Con 10M psi Ran fead, Annuk , Bind Ram, s (Choke & I	423-512-0347 956-229-1393 432-215-7079 432-230-8010 trol Requirements ns / 4-1/16"x10M ps ar Preventer, Kill Vatves),
9 5/2 in, shoe 12 1903' FN Estimated BH SI Aax, Anticipated Aax Anticipated DRILLING FLUI Inter Pro Reference Drillin CASING: Inter Pro CASING: Inter Pro CASING:	itatic Temp d BH Press I <u>Surface F</u> D: Surface: mediate: oduction: ng <i>Fluids F</i> Surface: mediate: oduction: IDN:	Format PBTI Pessure: Pressure: Fresh Vk Ermulsified Program Hoje 17-1/2" 12-1/4" 8-1/2" 1 each joint on first Shoe joint. 1 per joi	ion Dip Rate. D 203 0.690 psi/f 2 /ater I Brine 1 <u>TOP (MD)</u> 29' (29' (29' (29') 29' (29') 3 joints. 1 per	 est 80.1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211' 1,722 2,073' 2,0hts from F 7,800,1 pc 2 	(up dip) 8,581 D) - 1,172' 12211' - 22073' <u>Length</u> 12,183' 22,045' - C to 1,700'. 1 joints 7.800'	Gas / Oil Density PP0 PP0 Size Size Size Size Size Size Size Size	Vis sec/at 28-50 28-50 50-70 <u>Wi</u> 54.50 40.00 23.00 m 1,700' 1 4 joints 2	Consite Drill Field Drill PV eP 1-5 1-5 18-25 18-25 L80-IC L80-IC L80-IC P-110 to surface asour to surface	Geologist: ling Rep.: ing Supt.: <u>YP</u> #/100ft2 2-6 2-6 8-14 BT BT BT TX	Josh D Greg R Dennis James Patrick Scott N P.5-8.5 9.5-10 C C C	ay ivera Hously Taylor Wellma licholso <u>EL</u> NC NC NC NC 8	n <u>LG8</u> % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit:	281-2 432-8 830-5 281-2 <u>NaCI</u> ppb sol 10,000 180,000 400 - 00 • COP Class • 13-5/8*x • Rotating H Pipe Ram Mud Cros Pipe Ram	06-5620 48-5238 83-4828 06-5392 <u>Remarks</u> Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran tead, Annuk bend, Annuk s (Choke & I ed Electronic	423-512-0347 956-229-1393 432-215-7079 432-230-8010 trol Requirements ns / 4-1/16"x10M ps ar Preventer, Kill Valves), : PVT with Flow Ser ms +/- 10 BBLS
5 5/5 in, shoe 12 1903' FN Estimated BH SI Aax, Anticipated Aax Anticipated DRILLING FLUI Inter Pro Reference Drillin CASING: Inter Pro CENTRALIZATI Surface Casing: roduction Cesir	itatic Temp d BH Press I <u>Surface F</u> D: Surface: mediate: oduction: ng <i>Fluids F</i> Surface: mediate: ing ing:	Format PBTI Pressure: Type Fresh Vi Ermulsified Program Hoje 17-1/2" 12-1/4" 8-1/2" 1 each joint on first Shoe joint. 1 per joint to TOC	ion Dip Rate. D 203 0.690 psi/f 2 /ater I Brine 1 7 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 9	 est 80,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12,211' 12,210' 12,210' 12,210' 12,210' 12,210' 12,200	(up dip) 8,581 D) - 1,172' 12211' - 22073' <u>Length</u> 1,143' 12,183' 22,045' C to 1,700'. 1 joints 7,800' f	Gas / Oil Density PP3 PP3 Size 13 26 Size 9 5/8 9 5/8 9 5/8 9 5/8 5 1/2 per 4 joints fro 0 2.300'. 1 per	Via sec/at 28-50 28-50 50-70 54.50 40.00 40.00 23.00 m 1,700 f 4 joints 2,	Consite Drill Field Drill PV eP 1-5 1-5 18-25 18-25 L80-IC L80-IC L80-IC P-110 to surface 300' to surface	Geologist: ling Rep.: ing Supt.: <u>YP</u> ##100n2 2-6 2-6 8-14 BT BT BT TX	Josh D Greg R Dennis James Patrick Scott N 2 2 7.5-8.5 9.5-10 C C C C	ay ivera Hously Taylor Wellma licholsol MC NC NC NC 8	n <u>LGS</u> % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Stackup	281-2 432-8 830-5 281-2 NaC ppb sol 10,000 400 - 00 400 - 00 400 - 00 400 - 00 COP Class 13-5/8*x Pipe Ram Mud Cros Pipe Ram	06-5620 48-5238 83-4828 06-5392 <u>Remarka</u> Rig Tanks Rig Tanks Rig Tanks rig Tanks s 3 Well Cor 10M psi Ran tead, Annuk b Bind Ram, s (Choke & I) ed Electronic in Tank, Alai	423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 432-230-800 4000
5 5/5 in, shoe 12 1903' FN Estimated BH SI Aax, Anticipated Aax Anticipated DRILLING FLUI Inter Pro Reference Drillin CASING: Inter Pro CENTRALIZATI Burface Casing: Intermediate Casi roduction Casin EMENT:	A construction of the second s	Format PBTI berature (*F): sure: 'ressure: Fresh W Emutsified Program Blog 17-1/2" 12-1/4" 6-1/2" 1 each joint on first shoe joint 1 per joint t per joint to TOC Hole	ion Dip Rate: 203 0.690 psi/f 2 /ater 1 Brine 1 70P (MD) 29' 29' 29' 29' 29' 3 joints, 1 per nt from FC to MD	 est 80,11 11,792 8,136 psi 5,542 psi International statement Surface 1172 - 12211'. ETM (MD) 11,712' 12,211' 2,073' 2 joints from F 7,800'.1 per 2 	(up dip) 8,581 (val D) - 1,172' 12211' - 22073' Length 1,143' 12,183' 22,045' C to 1,700'.1 joints 7,800'1 Sec	Gas / Oil Prod P	Via sec/qt 28-50 28-50 50-70 <u>VVt</u> 54.50 40.00 23.00 m 1,700 t 4 joints 2,	Consite Drift Field Drift PV eP 1-5 1-5 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 19-119-1	Geologist: ling Rep.: ing Supt.: <u>YP</u> ##100n2 2-6 2-6 8-14 ET BT BT BT TX	Josh D Greg R Dennis James Patrick Scott N <u>pH</u> 7.5-8.5 7.5-8.5 9.5-10 C C C C P	ay Ivera Hously Taylor Wellma licholso EL mL NC NC NC × 8	n <u>LGS</u> % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Stackup Mud Pit: Wellhead:	281-2 432-8 830-5 281-2 <u>NaCI</u> ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00 COP Class 13-5/8 ⁺ x Flipe Ram Flipe Ram Flipe Ram Flipa Ram Sravity T 13-5/8 ⁺ x	06-5620 48-5238 83-4828 06-5392 <u>Remarka</u> Rig Tanks Rig Tanks Rig Tanks rig Tanks s 3 Well Cor 10M psi Ran lead, Annukk s Gloke & I ed Electronic in Tank, Alai 10M psi (Car <u>COM</u>	423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 sing Head - "A" Section Service Section S
5 5/8 in, shoe 12 1903' FN Estimated BH SI Max, Anticipated Max Anticipated DRILLING FLUI Inter Pro Reference Drillin CASING: Inter Pro CENTRALZATI Inter Pro CENTRALZATI SUNFACE Casing: Intermediate Casi Production Casin CEMENT:	Static Temp d BH Press Surface F D: Surface: mediate: oduction: ng <i>Fluids F</i> Surface: mediate: oduction: tDN: sing: sing: Surface:	Format PBTI Derature (*F): sure: Pressure: Fresh W Ermutsified Program OBW Program 17-1/2* 12-1/4* 6-1/2* 12-1/4* 6-1/2* 1 each joint on first Shoe joint 1 per joint to roc Hola 17-1/2*X13-3/8*	ion Dip Rate: 203 0.690 psi/f 2 /ater 1 Brine 1 <u>70P (MP)</u> 29' 29' 29' 29' 29' 29' 29' 29'	 est 80,11 11,792 8,136 psi 5,542 psi International statement Surface 1172 - 12211'. ETM (MD) 11,72' 12,211' 2,073' 2 joints from F 7,800'.1 per 2 	(up dip) 8,581 0) - 1,172' 12211' - 22073' Length 1,143' 12,183' 22,045' C to 1,700'.1 joints 7,800'1 Sec 20 b	Gas / Oil Prod P	Via sec/qt 28-50 28-50 50-70 Wt 54.50 40.00 40.00 23.00 0m 1,700' f 4 joints 2,	Consite Drift Field Drift PV eP 1-5 1-5 1-5 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 18-25 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-5 1-	Geologist: ing Rep.: ing Supt.: <u>YP</u> ##100ft2 2-6 2-6 8-14 <u>Connee</u> BT BT TX acce. acce.	Josh D Greg R Dennis James Patrick Scott N <u>pH</u> 7.5-8.5 7.5-8.5 9.5-10 C C C C C P	ay Ivera Hously Taylor Wellma icholso EL mL NC NC NC × 8	Minimum - Stackup - Mud Pit: Wellhead: 14.8 ppg 1.32	281-2 432-8 830-5 281-2 <u>NaCI</u> ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00 COP Class 13-5/8*x Float Bass Gravity T 13-5/8* x + adds f*3/sk	06-5620 48-5238 83-4828 06-5392 <u>Remarka</u> Rig Tanks Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran tead, Annukk Bind Ram, s (Choke & I ed Electronic in Tank, Alai 10M psi (Car COMM Cemer Add Fi	423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 sr Preventer, Kill Valves), c PVT with Flow Ser ms +/- 10 BBLS sing Head - "A" Sect <u>ENTS</u> ted to surface w/ 10 berBlock
9 5/2 in, shoe 12 1903' FN Estimated BH SI Aax, Anticipated Jax Anticipated Jax Anticipated Jax Anticipated Jax Anticipated Internetion Casing: Internetiate Casing: Thermediate Casing: The Casing: The Casing Casi	A surface: mediate: a surface: a surfac	Format PBTI berature (*F): sure: 'ressure: Fresh W Emulsified OBM 'rogram Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first Shoe joint. 1 per joi 1 per joint to TOC Hole 17-1/2"X13-3/8" 12-1/4"X9-5/8"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 4 <u>TOP (MD)</u> 29' 29' 29' 3 joints. 1 per int from FC to <u>MD</u> 1,172' 12,211'	 est 90,1' 11,792 8,136 psi 5,542 psi Inte (M Surface 1172'- 12211'- 12211'- <u>BTM (MD)</u> 1,172' 12,211' 2,073' 2 joints from F 7,800' 1 per 2 <u>TVD</u> 1,172' 11,792 	<pre>(up dip) 8,581 8,581 D) -1,172' 12211' -22073' Length 1,143' 12,183' 22,045' C to 1,700', 1 joints 7,800'1 Sop 20 bbl 20 bbls 10.</pre>	Gas / Oil Density PP0 Size 13 3/8 9 5/8 9 5/8 5 1/2 per 4 joints fro o 2.300°.1 per acer bis FW 5 ppg spacer	Via sec/at 28-50 28-50 28-50 28-50 28-50 28-50 28-50 40.00 23.00 m 1,700' 1 4 joints 2, 5 5	Consite Dril Field Drill PV eP 1-5 1-5 18-25 E80-IC P-110 to surface 300° to surface 300° to surface 12.8 ppg 2 250 sx Cla 11 ppg 2 250 sx Cla	Geologist: ing Rep.: ing Supt.: ing Supt.: <u>YP</u> #100n2 2-6 8-14 <u>Connes</u> 8-14 <u>BT</u> BT: BT: TX ace. ace. ace.	Josh D Greg R Dennis James Patrick Scott N 7.5-8.5 9.5-10 C C C C C C C	ay ivera Hously Taylor Wellma licholso NC < 8 < 8	Mud Pit: Wellhead: Wellhead: Wellhead: Wellhead: 13.8 ppg 1.32 to sxClass C	281-2 432-8 830-5 281-2 ppb sol 10,000 180,000 400 - 00 400 - 00 COP Class COP Class Pipe Ram Float Bass Gravity Tr 13-5/8" x + adds ft ⁴³ /sk CO1+FP+Fs 813/sk	06-5620 48-5238 83-4828 06-5392 <u>Remarks</u> Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ram, s 3 Well Cor 10M psi Ram, s (Chake & I ed Electronic ip Tank, Alai 10M psi (Car Commer Add Fi Cemer 30%T	423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-8010 432-230-8010 (1) Valves), CPVT with Flow Ser rms +/- 10 BLS sing Head - "A" Sect <u>ENTS</u> ted to surface w/ 11 berBlock tted to Surface w/ 12,25"
9 5/8 in, shoe 12 1903' FN Estimated BH SI Max. Anticipated Max. Anticipated Max. Anticipated DRILLING FLUII Inter Pro- Reference Drillin CASING: Internediate Casing: Internediate Casing: Internedia	2211 MD IL Static Temp d BH Press I Surface: mediate: oduction: mediate: ing: Surface: mediate: Surface: mediate: Surface: sing: Surface: mediate: Surface: Sufface: Sufface: Sufface: Sufface: Sufface: Sufface: Su	Format PBTI Persture (*F): sure: <u>Type</u> Fresh Vk Emulsified 270gram <u>Hole</u> 17-1/2" 12-1/4" 8-1/2" 1 each joint on first Shoe joint 1 per joint 8-1/2" 12-1/4"X9-5/8" 8-1/2"X5-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2	 est 80.1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12211'- 12,211'- 22,073' 2,0073' 2,0073' 2,0073' 2,0073' 1,172' 1,172' 1,172' 1,1792' 	(up dip) 8,581 rval p) -1,172' 12211' -22073' <u>Length</u> 1,143' 22,045' -22,045' -20 bil 20 bbls 10. -30 bbls 14	Gas / Oil Density PP0 Size 13 3/8 9 5/8 9 5/8 9 5/8 5 1/2 per 4 joints fro o 2,300'. 1 per acer bis FW 5 ppg spacer	Via sec/at 28-50 28-50 50-70 <u>Wi</u> 54.50 40.00 23.00 23.00 m 1,700 f 4 joints 2, 5 1 2661 sx	Consite Dril Field Drill PV eP 1-5 1-5 18-25 18-25 18-25 L80-IC L80-IC L80-IC P-110 to surface 300 stx Class 12.8 ppg 2 250 stx Class 11 ppg 2 Class H+Ff	Geologist: ing Rep.: ing Supt.: ing Supt.: ing Supt.: ing Supt.: 2-6 2-6 8-14 Conne BT BT BT BT TX ace. ad s C + add 97 ft3/sk riber+Retz iber+Retz	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 9.5-10 C C C C C C C C C S S	ay ivera Hously Taylor Wellma licholso RE NC < 8 < 8 766 sx in s + adds	In <u>LGS</u> % by vol < 5.0 < 8.0 BOP: Minimum - Rig - Stackup - Stackup - Mud Pit: Wellhead: <u>Tail</u> ISO sxClass C 14.8 ppg 1.16	281-2 432-8 830-5 281-2 NaC ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 Fipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Sravity Tr 13-5/8" x + adds ftr3/sk CO1+FP+F	06-5620 48-5238 83-4828 06-5392 <u>Remarks</u> Rig Tanks Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran tead, Annuk , Bind Ram, b Bind Ram, comer Add Fi Cemer 30%T Add Fi Cemer	423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 520-2010 520-
9 5/8 im, shoe 12 1903' FN Estimated BH SI Max, Anticipated Max, Anticipated Max, Anticipated DRILLING FLUII Inter Pro- CASING: Inter CASING: Inter CENTRALIZATI Surface Casing: Internetiate Casing: TerMENT: Inter Surface Casing: Internetiate Casing: Internetiat	2211 MD L L L L L L L L L L L L L	Format PBTI Pressure: Type Fresh Vk Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first it per joint to TOC Hole 17-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 4 <u>TOP (MD)</u> 29' 29' 3 joints. 1 per int from FC to <u>MD</u> 1,172' 12,211' 22,073'	 est 90,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 1,172'- 2,00nts from F 7,800', 1 per 2 <u>TVD</u> 1,172'- 11,792'- 	 (up dip) 8,581 (up dip) 8,581 (up dip) 0) -1,172 22073 22074 2004 204 3004 304 <lii< td=""><td>Gas / Oil <u>Density</u> ppg <u>Size</u> 13 3/8 9 5/8 9 5/8 9 5/8 5 1/2 per 4 joints fro 0 2,300°. 1 per <u>acer</u> ppg spacer ppg spacer</td><td>Via sec/at 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700' 1 4 joints 2, 5 1 2661 sx</td><td>Consite Dril Field Drill PV eP 1-5 1-5 18-25 Carade Grade Grade Grade Carad</td><td>Geologist: ing Rep.: ing Supt.: ing Supt.: <u>YP</u> ##100n2 2-6 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Reta 1,9ft3/sk</td><td>Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C</td><td>ay ivera Hously Taylor Wellma iicholso R NC < 8 < 8 766 sx in is + adds</td><td>Mud Pit: Wellhead: 14.8 ppg 1.16 13.8 ppg 1.16</td><td>281-2 432-8 830-5 281-2 NaC ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 13-5/8"x COP Class 13-5/8"x Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Float Bass Gravity Tr 13-5/8" x + adds ft³/sk</td><td>06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran fead, Annuk b Bind Ram, b Bind Ram, b Choke & I ed Electronic ip Tank, Alai 10M psi (Car Cemer Add Fi Cemer 30% T Add Fi Cemer on 8.5</td><td>423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 sistematic statematic sistematic statematic sist</td></lii<>	Gas / Oil <u>Density</u> ppg <u>Size</u> 13 3/8 9 5/8 9 5/8 9 5/8 5 1/2 per 4 joints fro 0 2,300°. 1 per <u>acer</u> ppg spacer ppg spacer	Via sec/at 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700' 1 4 joints 2, 5 1 2661 sx	Consite Dril Field Drill PV eP 1-5 1-5 18-25 Carade Grade Grade Grade Carad	Geologist: ing Rep.: ing Supt.: ing Supt.: <u>YP</u> ##100n2 2-6 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Reta 1,9ft3/sk	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Wellma iicholso R NC < 8 < 8 766 sx in is + adds	Mud Pit: Wellhead: 14.8 ppg 1.16 13.8 ppg 1.16	281-2 432-8 830-5 281-2 NaC ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 13-5/8"x COP Class 13-5/8"x Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Float Bass Gravity Tr 13-5/8" x + adds ft ³ /sk	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran fead, Annuk b Bind Ram, b Bind Ram, b Choke & I ed Electronic ip Tank, Alai 10M psi (Car Cemer Add Fi Cemer 30% T Add Fi Cemer on 8.5	423-512-0347 956-229-1393 432-215-7079 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 432-230-8010 sistematic statematic sistematic statematic sist
9 5/8 im, shoe 12 1903' FN Estimated BH SI Max. Anticipated Max Anticipated DRILLING FLUI Inter Pro- CASING: Inter CASING: Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter Inter CENTRALIZATI Surface Casing: Inter Inter CENTRALIZATI Surface Casing: Inter	2211 MD IL Static Temp d BH Press I Surface: mediate: oduction: ng Fluids F Surface: mediate: ing: Surface: sing: Surface: mediate: oduction: sing: Surface: surface: sing: Surface: surface: Surf	Format PBTI Pressure: Type Fresh Vk Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first per joint to TOC Hole 17-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 1 7 <u>OP (MD)</u> 29' 29' 29' 29' 29' 3 joints. 1 per int from FC to <u>MD</u> 1,172' 12,211' 22,073'	est 90,1' 11,792 8,136 psi 5,542 psi 1172'- 12211'- 1172'- 12211'- 1172'- 22,073' 2 joints from F 7,800'. 1 per 2 11,772' 11,792' 11,792'	<pre>(up dip) 8,581 </pre>	Gas / Oil Density PP0 Size Size Size Size Size Size Size Size	Via sec/at 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700' 1 4 joints 2, 5 1 2561 sx	Consite Dril Field Drill PV eP 1-5 1-5 18-25 Carade J-55 18-25 Carade L80-IC L80-IC L80-IC L80-IC P-110 to surface 300 'to surface 12.8 ppg 2 250 sx Class 11 ppg 2 Class H+F 15.6 ppg Fu'	Geologist: ing Rep.: ing Supt.: ing Supt.: 2-6 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Retz 1.19ft3/sk	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Wellma licholson EL mL NC < 8 < 8 766 sx In Is + adds	Mud Pit: Wellhead: 13.8 ppg 1.16 13.8 ppg 1.16	281-2 432-8 830-5 281-2 NaC ppb sol 10,000 180,000 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 13-5/8*x Fipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Float Bass Gravity Tr 13-5/8* x + adds ft*3/sk	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran fead, Annuk b Bind Ram, b Bind Ram, s (Choke & I ed Electronic ip Tank, Alau 10M psi (Cau Comm Comm Comm Comm Comm Comm Comm Com	423-512-0347 956-229-1393 432-215-7079 432-230-8010 43
9 5/8 im, shoe 12 1903' FN Hax: Anticipated Max: Anticipated Max: Anticipated DRILLING FLUI Inter Pro- CASING: Inter Pro- CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI INTO INTO INTO INTO INTO INTO INTO IN	2211 MD AL Static Temp d BH Press I Surface: mediate: oduction: ng Fluids F Surface: mediate: ing: Surface: sing: Surface: sing: sing: Surface: surface: sing: Surface: surface: surface: Surface:	Format PBTI Pressure: Type Fresh Vk Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 12-1/4" 8-1/2" 1 each joint on first per joint to TOC Hole 17-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 1 70P (MD) 29' 29' 29' 29' 29' 3 joints. 1 per int from FC to <u>MD</u> 1,172' 12,211' 22,073' <u>MD</u> (ft)	 est 90,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12211'- 22,073' 2 joints from F 7,800'. 1 per 2 11,772' 11,792' 11,792' 11,792' (deg) 	<pre>(up dip) 8,581 8,581 - - - 1,172 1,172 12211' - 22073' Length 1,143 12,183' 22,045' C to 1,700', 1 joints 7,800' f Sec 20 bbls 20 bbls 10, 30 bbls 14 AZJ (deg)</pre>	Gas / Oil Density PP0 Size Size Size Size Size Size Size Size	Via sec/at 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700'1 4 joints 2, 5 1 25661 sx NS (ft)	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Carade Grade J-55 18-25 Carade L80-IC L80-IC L80-IC L80-IC L80-IC 12.8 ppg 2 250 sx Class 11 ppg 2 Class H+F 15.6 ppg EW (11)	Geologist: ing Rep.: ing Supt.: ing Supt.: 2-6 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Retz 1.19ft3/sk PLS (Y100')	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Wellma icholson RL NC < 8 < 8 766 sx In is + adds	Mud Pit: Wellhead: 13.8 ppg 1.16 EC-T-R	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 13-5/8*x Float Bass Gravity Tr 13-5/8*x * + adds ft*3/sk CO1+FP+F5 ft*3/sk	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran tead, Annuk b Bind Ram, b Bind Ram, b Bind Ram, comer Add Fi Cemer 30% T Add Fi Cemer 30% T	423-512-0347 956-229-1393 432-215-7079 432-215-7079 432-230-8010 the sequirements as / 4-1/16"x10M ps ar Preventer, Kill Valves), c PVT with Flow Ser ms +/- 10 BBLS sing Head - "A" Sect ENTS ted to surface w/ 10 berBlock ted to surface w/ 11 Scale'd on 12.25" berBlock ted to TOC w/ 15% 'hole.
9 5/8 im, shoe 12 1903' FN Estimated BH SI Max, Anticipated Max Anticipated ORILLING FLUII Inter Pro- Pro- CASING: Inter Pro- CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI Surface Casing: Inter Pro- CENTRALIZATI Surface Casing: Inter Pro- Centraliate Casi Sector Pro- Sector Pro- Sector Pro- Sector Pro- Sector Pro- Sector Pro- Sector Pro- Sector Pro- Centraliate Casi Inter Pro- Centraliate Casi Inter Inter Pro- Centraliate Casi Inter Inter Pro- Sector Pro- Inter Pro- Sector Pro- Sector Pro-	2211 MD IL Static Temp d BH Press I <u>Surface</u> : mediate: oduction: ng <i>Fluids F</i> Surface: mediate: ising: Surface: surface: mediate: surface: <i>DN</i> : <i>Surface</i> : <i>CDN</i> : <i>Surface</i> : <i>CDN</i> : <i>Surface</i> : <i>Surf</i>	Format PBTI Pressure: Type Fresh Vk Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first per joint to TOC Hole 17-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 1 7 <u>OP (MD)</u> 29' 29' 3 joints. 1 per int from FC to <u>MD</u> 1,172' 12,211' 22,073' <u>MD</u> (ft) 4.800' 5 (67)	 est 80,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 1,172'- 2,0hts from F 7,800'. 1 per 2 TVD 1,172'- 11,792'- 11,792'- (deg) 0 4 	<pre>(up dip) 8,581 8,581 - 1,172 - 1,172 12211' - 22073' Length 1,143 12,183' 22,045' C to 1,700', 1 joints 7,800' f See 20 bb(s 10, 30 bb(s 14</pre>	Gas / Oil <u>Density</u> ppg <u>Ppg</u> <u>Size</u> 133/6 9 5/8 9 5/8 9 5/8 9 5/8 9 5/8 5 1/2 per 4 joints fro 0 2,300'. 1 per <u>acer</u> ppg spacer <u>TVD</u> (11) 4,800' 5,065' (11) 4,800' 5,065' (11)	Via sec/at 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700'1 4 joints 2, 5 1 25661 sx NS (ft) 0 3	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Crade Grade J-55 18-25 L80-IC L80-IC L80-IC L80-IC L80-IC P-110 to surface 300 'to surface 300 'to surface 11 2.8 ppg 2 250 sx Class 11 ppg 2 Class H+F 15.6 ppg EW (11) 0 9	Geologist: ing Rep.: ing Supt.: ing Supt.: <u>YP</u> 2-6 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Rets 1.19ft3/sk <u>DLS</u> (Y100') 0 1.5	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Weilma iicholso RE NC NC < 8 < 8 766 sx In is + adds Si 19 5	In <u>LG8</u> % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit: <u>Tail</u> 150 sxClass C 14.8 ppg 1.32 EgraCem Lite 13.8 ppg 1.16 EC-T-R i26 R32E i26 R32E	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 5 COP Class 13-5/8*x 400 - 00 7 Spise Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Section CO1+FP+F 3 R3/sk Section 2498' F 2501' E	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks S Well Cor 10M psi Ran tead, Annuk B Bind Ram, S (Choke & I ed Electronic ip Tank, Alai 10M psi Can Comm Comm Comm Comm Comm Comm Comm Com	423-512-0347 956-229-1393 432-215-7079 432-230-8010 43
9 5/8 im, shoe 12 1903' FN Hat, Shi	2211 MD IL Sufface: mediate: surface: mediate: surface: mediate: surface: mediate: surface: mediate: surface: sur	Format PBTI Pressure: Type Fresh Vk Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first Noso joint. 1 per joint to TOC Hole 17-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 4 <u>TOP (MD)</u> 29' 29' 3 joints. 1 per int from FC to <u>MD</u> 1,172' 12,211' 22,073' <u>MD</u> (R1) 4.800' 5.067' 9.634'	 est 80,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12211'- 22,073' 2 johts from F 7,800'. 1 per 2 17,72' 11,792' 11,792' (deg) 0 4 4 	<pre>(up dip) 8,581 8,581 - 1,172 - 1,172 12211' - 22073' Length 1,143 12,183' 22,045' C to 1,700'.1 30 bbls 10 20 bbls 10 30 bbls 14 4 4 4 4 0 1 11 </pre>	Gas / Oil	Via sec/at 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700'1 4 joints 2, 5 1 2661 sx NS (ft) 0 - 3 -118	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Crade Grade J-55 18-25 Construct L80-IC L80-IC L80-IC L80-IC L80-IC L80-IC P-110 to surface 300 % to surface 11 2.8 ppg 2 2250 sx Class 11 ppg 2 Class H+F 15.6 ppg EW (11) 0 9 306	Geologist: ing Rep.: ing Supt.: <u>YP</u> ##100n2 2-6 2-6 8-14 Conne BT BT BT TX No. SC + add 97 ft3/sk iber+Retz 1.19ft3/sk <u>DLS</u> (*100°) 0 1.5 0	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Weilma iicholso REL ML NC < 8 < 8 766 sx In is + adds is + adds is + adds	In <u>LG8</u> % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit: <u>Tail</u> 150 sxclass C 14.8 ppg 1.32 EgraCem Lite 13.8 ppg 1.16 EC-T-R S26 R32E 26 R32E 26 R32E 26 R32E 26 R32E 26 R32E	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 400 - 00 400 - 00 400 - 00 COP Class 13-5/8*x Rotating H Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Signa Signa H Signa Signa H Signa	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran tead, Annuk b Bind Ram, s (Choke & I ed Electronic ip Tank, Alai 10M psi Can Com Com Add Fi Cemer Add Fi Cemer 30% T Add Fi Ce	423-512-0347 956-229-1393 432-215-7079 432-230-8010 43
9 5/8 in, shoe 12 1903' FN 1903' FN Estimated BH SI Max, Anticipated Max Anticipated Nature Protection Casing: Internetiate Casing:	2211 MD IL Static Temp d BH Press I <u>Surface</u> : mediate: oduction: ng <i>Fluids F</i> Surface: mediate: ising: Surface: ton: Surface: mediate: oduction: enting Rec PLAN: 12 24 */100' 24 */100' urve LP	Format PBTI Pressure: Type Fresh Vk Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first per joint to TOC Hole 17-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 29' 29' 3 joints. 1 per int from FC to <u>MD</u> 1,172' 12,211' 22,073' <u>MD</u> (ft) 4,800' 5,067' 9,634' 11,086' 12,211'	 est 80,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 1,172' 2,0hts from F 7,800'. 1 per 2 1,172' 11,792' 11,792' (deg) 0 4 4 0 90 	<pre>(up dip) 8,581 </pre>	Gas / Oil Density PP0 PP0 PP0 Size Size Size Size Size Size Size Size	Via sec/at 28-50 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700'1 4 joints 2, 5 1 25661 sx NS (ft) 0 - 3 -118 -121 555	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Crade Grade J-55 18-25 L80-IC L80-IC L80-IC L80-IC L80-IC P-110 to surface 300° to surface 300° to surface 11 ppg 2 Class H+F 15.6 ppg EW (11) 0 9 306 315 310	Geologist: ing Rep.: ing Supt.: ing Supt.: 2-6 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Rets 1.19ft3/sk DLS (*100*) 0 1.5 10	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Weilma iicholso REL mL NC < 8 < 8 766 sx In is + adds is + adds is + adds is + adds	In LGS % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit: Wellhead: Tail 150 sxClass C 14.8 ppg 1.32 EgraCem Lite 13.8 ppg 1.16 EC-T-R 26 R32E 26 R32E 26 R32E 26 R32E 26 R32E 26 R32E 26 R32E	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 13-5/8*x Fipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Section CO1+FP+F 3 ft3/sk Section 2498' F 2501' F 2501' F 2501' F	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks S Well Cor 10M psi Ran tead, Annuk B Electronic ip Tank, Alai 10M psi Can Comm Comm Comm Comm Comm Comm Comm Com	423-512-0347 956-229-1393 432-215-7079 432-230-8010 43
9 5/8 in, shoe 12 1903' FN 1903' FN Handle State Max. Anticipated Max. Anticipated Max. Anticipated DRILLING FLUI Internet Reference Drillin CASING: Internetiate Casi CENTRALIZATI Surface Casing: Internetiate Casi CENTRALIZATI Surface Casing: Internetiate Casi CENTRALIZATI Surface Casing: Internetiate Casi CENTRALIZATI Surface Casing: Internetiate Casi Commant Seference Common DIRECTIONAL F Commant Build (@ 1.5', End Build (@ Drop @ 1.5') Intermediate Casi Cos Seever Too Sheever Too Sheever Too Sheever Too Sheever	2211 MD IL Static Temp d BH Press I Surface: mediate: oduction: ng Fluids F Surface: mediate: ising: Surface: ising: Surface: mediate: oduction: enting Rec PLAN: 1 2 1000 2 4 2 1000 2 4 2 1000 2 4 2 1000 2 4 2 1000 1000 100	Format PBTI Pressure: Type Fresh Vi Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first 9 regiont to TOC Hole 17-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 1 7 <u>OP (MD)</u> 29' 29' 29' 29' 29' 29' 29' 29' 29' 29'	 est 90,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12211'- 22,073' 2 joints from F 7,800'. 1 per 2 11,792' 11,792' 11,792' (deg) 0 4 0 90 90 90 90 90 90 90 90 90	<pre>(up dip) 8,581 9) 1,172 1,172 1,172 12211' 22073' 22,045' 22,045' 22,045' 20 bbis 10 30 bbis 10 30 bbis 14 4 4 4 4 3 59 359 359 36 36</pre>	Gas / Oil Density PP0 PP0 PP0 PP0 PP0 PP0 PP0 PP0 PP0 PP	Via sec(at 28-50 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700'1 4 joints 2, 1 25661 sx NS (ft) 0 - 3 -118 -121 595 10252 10052	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Crade Grade J-55 18-25 Carade L80-IC L80-IC L80-IC L80-IC L80-IC P-110 to surface 300° to surface 300° to surface 11 ppg 2 Class H+F 15.6 ppg EW (11) 0 9 306 315 310 248 225	Geologist: ing Rep.: ing Supt.: ing Supt.: 2-6 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Retz (19ft3/sk iber+Retz 1.19ft3/sk (100') 0 1.5 10 0 0 1.5 10 0 0 1.5 10 0 0 1.5 10 0 0 1.5 10 0 0 1.5 10 0 0 1.5 10 0 0 1.5 10 0 0 1.5 10 0 0 1.5 10 0 0 10 10 10 10 10 10 10	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Weilma iicholso REL mL NC < 8 < 8 766 sx In is + adds is + adds is + adds is - 19 S 19 S 19 S 19 S 19 S 19 S 19 S 19 S	In LGS % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit: Wellhead: Tail 13.8 ppg 1.32 Ec-T-R 126 R32E 126 R32	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 13-5/8"x + adds fr3/sk CO1+FP+F 3 ft3/sk 2498' F 2616' F 2610' F 2010' F 200'	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks s 3 Well Cor 10M psi Ran tead, Annuk b Bind Ram, b Bind Ram, b Bind Ram, comer Add Fi Cemer Add Fi Cemer 30% T Add Fi Add Fi Cemer 30% T Add Fi Cemer 3	423-512-0347 956-229-1393 432-215-7079 432-215-7079 432-230-8010 432-230-8010 x3
9 5/8 in, shoe 12 1903' FN 1903' FN Hassing and the signal day. Anticipated Max. Anticip	2211 MD IL Static Temp d BH Press I Surface: mediate: oduction: ng Fluids F Surface: mediate: oduction: IDN: ISING: Surface: mediate: oduction: IDN: Surface: mediate: oduction: IDN: Surface: mediate: oduction: IDN: Surface: mediate: oduction: IDN: Surface: Surface: Sur	Format PBTI Pressure: Type Fresh Vi Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first 8-1/2" 1 each joint on first 12-1/4"X9-5/8" 8-1/2"X13-3/8" 12-1/4"X9-5/8"	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 2 / 29' 3 joints. 1 per int from FC to 29' 3 joints. 1 per int from FC to 29' 1,172' 12,211' 22,073' <u>MD</u> (R) 4,800' 5,067' 9,634' 11,066' 12,211' 21,21868' 21,913' 22,073'	 est 80,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12211'- 22,073' 2 joints from F 7,800'. 1 per 2 1,172' 11,792' 11,792' (deg) 0 4 4 0 90 90 90 90 	<pre>(up dip) 8,581 </pre>	Gas / Oil	Via sec/at 28-50 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700'1 4 joints 2, 1 25661 sx 1 25661 sx 1 25661 sx 1 25661 sx	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Crade Grade J-55 18-25 Carade L80-IC L80-IC L80-IC L80-IC L80-IC P-110 to surface 300° to surface 300° to surface 11 ppg 2 Class H+F 15.6 ppg EW (11) 0 9 306 315 310 248 248 248	Geologist: ing Rep.: ing Supt.: ing Supt.: 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Retz 1.19ft3/sk iber+Retz 1.19ft3/sk DLS (*100*) 0 1.5 0 0 0 0 0 0 0 0 0 0 0 0 0	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Wellma iicholso REL mL NC < 8 < 8 766 sx In is + adds is + adds is + adds is + adds in 5 in 9 5 in	In LGS % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit: Wellhead: Tail 150 sxClass C 14.8 ppg 1.32 EgraCem Lite 13.8 ppg 1.16 EC-T-R 26 R32E 26 R32E 27	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 13-5/8*x 7 Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Scattig fr3/sk CO1+FP+F 3 ft3/sk Sactio C01+FP+F 3 ft3/sk Sactio C01+FP+F 3 ft3/sk	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks S Well Cor 10M psi Ran tead, Annuk B Electronic ip Tank, Alau 10M psi Cau comer Add Fi Cemer Add Fi Cemer Soft Tank, Alau 10M psi Cau comer Add Fi Cemer Soft Tanks Comer Add Fi Cemer Soft Tanks Comer Soft Tanks Comer S	423-512-0347 956-229-1393 432-215-7079 432-215-7079 432-230-8010 432-230-8010 x3
9 5/8 in, shoe 12 1903' FN 1903' FN Estimated BH SI Max, Anticipated Max Anticipated Max Anticipated Nature FLUI Internet Reference Drillin CASING: Internetiate Casing: Internetiate Casing: Inter	2211 MD IL Static Temp d BH Press I Surface: mediate: oduction: ng Fluids F Surface: mediate: ising: Surface: ising: Surface: mediate: oduction: enting Rec PLAN: 1 0 4 1/100' 2 4 2 1/100' 2 4 2 1/100' 2 4 2 1/100' 2 4 1/100' 2 4 1/100' 2 4 1/100' 2 4 1/100' 2 4 1/100' 2 4 1/100' 2 4 1/100' 2 4 1/100' 2 4 1/100' 2 1/10' 1/1	Format PBTI Pressure: Type Fresh Vi Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 12-1/4" 8-1/2" 12-1/4" 8-1/2" 12-1/4" 8-1/2" 12-1/4" 8-1/2" 12-1/4" 8-1/2" 12-1/4" 8-1/2" 12-1/4"X9-5/8" 8-1/2"X5-1/2" 000000000000000000000000000000000000	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 2 / 29' 3 joints. 1 per int from FC to 29' 3 joints. 1 per int from FC to 29' 1,172' 12,211' 22,073' <u>MD</u> (R1) 4,800' 5,067' 9,634' 11,086' 12,211' 21,21868' 21,913' 22,073'	 est 80,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12,211' 22,073' 2 joints from F 7,800'. 1 per 2 1,172' 11,792' 11,792' (deg) 0 4 4 0 90 90 90 90 90 90 90 90 90	<pre>(up dip) 8,581 8,581 - 1,172 1,172 12211' - 22073' Length 1,143 12,183' 22,045' 22,045' C to 1,700', 1 10 20 bbls 10, 30 bbls 10, 30 bbls 14 0 111 0 359 359 359 ys will be tab </pre>	Gas / Oil	Via sec/at 28-50 28-50 28-50 50-70 40.00 40.00 23.00 m 1,700'1 4 joints 2, 1 2661 sx 1 2661 sx 1 1 2661 sx 1 1 2661 sx 1 1 2 5 5 10252 10252 10257 10457 10457 10457	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Carade Grade L80-IC L90-IC L9	Geologist: ing Rep.: ing Supt.: ing Supt.: 2-6 8-14 Conne BT BT BT BT TX ace. ad s C + add 97 ft3/sk iber+Reta 1.19ft3/sk iber+Reta 1.19ft3/sk DLS (*100*) 0 1.5 0 0 0 0 0 0 0 0 0 0 0 0 0	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Weilma jicholso REL mL NC < 8 < 8 766 sx in is + adds is + adds is + adds is - adds in 5 in 9 5 in	In LGS % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit: Wellhead: Tail 150 sxClass C 14.8 ppg 1.32 EgraCem Lite 13.8 ppg 1.16 EC-T-R 26 R32E 26 R32E 27	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 135/8*x Fipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Scattion COP Class Gravity Tr 13-5/8*x * adds fr3/sk CO1+FP+F 3 ft3/sk CO1+FP+F 3 ft3/sk Section 2498' F 2501' F 2616' F 2616' F 2483' F 2690' F 2	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks S Well Cor 10M psi Ran tead, Annuk B Bind Ram, S (Choke & I ed Electronic ip Tank, Alai 10M psi (Can Comm Comm Comm Comm Comm Comm Comm Com	423-512-0347 956-229-1393 432-215-7079 432-230-8010 43
9 5/8 in, shoe 12 1903' FN 1903' FN Estimated BH SI Max. Anticipated Max Anticipated Max Anticipated Nature FLUIN Internetion FLUIN CASING: Internetiate Casing: Internetiate	2211 MD IL Static Temp d BH Press I <u>surface</u> F Surface: mediate: oduction: <i>ng Fluids</i> F Surface: mediate: oduction: IDN: sing: Surface: mediate: oduction: <i>conserved</i> Surface: <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>conserved</i> <i>co</i>	Format PBTI Pressure: Type Fresh Vk Emulsified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first 12-1/4"X9-5/8" 8-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2" commendation	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 1 7 7 9 7 9 7 9 7 9 7 9 7 9 7 9 7 7 7 7	 est 80,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12211'- 12,211' 22,073' 2,0hts from F 7,800'.1 per 2 12,211' 12,211' 12,211' 12,211' 12,211' 11,792' 11,792' (deg) 0 4 4 0 90 90 90 90 90 90 90 90 90	<pre>(up dip) 8,581 8,581 10) - 1,172 12211' 22073' Length 1,143 12,183' 22,045' 20 bb 20 bb1s 10. 30 bb1s 10. 30 bb1s 14 0 111 111 0 359 35</pre>	Gas / Oil	Via sec/at 28-50 28-50 28-50 40.00 40.00 23.00 m 1,700'1 4 joints 2, 5 1 2661 sx NS (ft) 0 - 3 -118 -121 595 10252 10257 10457 rval belov	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Carade J-55 18-25 L80-IC L80-	Beologist: ing Rep.: ing Supt.: <u>YP</u> 2-6 2-6 8-14 Conne BT BT BT TX ace. ad s C + add 05 ft ⁴ 3/sk iber+Retz 1.19ft3/sk <u>PLS</u> (*100') 0 1.5 10 0 0 0 0 0 0 0 0 0 0 0 0 0	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Weilma iicholso REL mL NC < 8 < 8 766 sx in is + adds is + adds is + adds is = 19 S i 9 S i	In LGS % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit: Wellhead: Tail 150 sxclass C 14.8 ppg 1.32 Ec-T-R 126 R32E 126 R32E 127 R3 127	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 400 - 00 COP Class 13-5/8*x Rotating H Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Scotlid CO1+FP+F 3 ft3/sk CO1+FP+F 3 ft3/sk Soctlid 2498' F 22616' F 2261	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks S Well Cor 10M psi Ran tead, Annuk Bind Ram, S (Choke & I ed Electronic ip Tank, Alai 10M psi (Car Comm Camer Add Fi Retarc Cemer 30% T Add Fi Retarc Ce	423-512-0347 956-229-1393 432-215-7079 432-215-7079 432-230-8010 432-230-8010 x3
9 5/8 in, shoe 12 1903' FN 1903' FN Estimated BH SI Max. Anticipated Max Anticipated Max Anticipated Max Anticipated PRILLING FLUI Internetion CASING: Interneticate Casing: Interneticate Casing:	211 MD IL Static Temp d BH Press I Surface: mediate: oduction: ng Fluids F Surface: mediate: oduction: IDN: Surface: mediate: oduction: IDN: Surface: mediate: oduction: IDN: Surface: mediate: oduction: Surface: mediate: oduction: Surface: The surface: Surfac	Format PBTI Pressure: Type Fresh Vi Errussified Program Hole 17-1/2" 12-1/4" 8-1/2" 1 each joint on first 12-1/4"X9-5/8" 8-1/2"X13-3/8" 12-1/4"X9-5/8" 8-1/2"X5-1/2" commendation	ion Dip Rate. D 203 0.690 psi/f 2 /ater Brine 1 7 7 9 7 9 7 9 7 7 7 7 7 7 7 7 7 7 7 7	 est 80,1' 11,792 8,136 psi 5,542 psi (M Surface 1172'- 12211'- 12211'- 12211'- 12211'- 12,211' 2,0015 from F 7,800'.1 per 2 2,0015 from F 7,800'.1 per 2 11,792' 11,792' 11,792' (deg) 0 4 4 0 90 90 90 90 90 90 90 90 90	<pre>(up dip) 8,581 8,581 10) - 1,172' 12211' 22073' Length 1,142' 1,143' 12,183' 22,045' 20 bb 10, 30 bbls 10, 30 bbls 10, 30 bbls 11, 111 1 0 359 35</pre>	Gas / Oil	Via sec/at 28-50 28-50 28-50 40.00 40.00 23.00 m 1,700'1 4 joints 2, 1 26661 sx NS (ft) 0 -3 -118 -555 10252 10257 10457 rval belov	Consite Drift Field Drift PV eP 1-5 1-5 18-25 Carade J-55 18-25 L80-IC L80-	Beologist: ing Rep.: ing Supt.: <u>YP</u> 2-6 2-6 8-14 Conne BT BT BT TX ace. ace. ace. ace. ace. <u>BT</u> BT BT BT BT BT BT BT BT BT BT	Josh D Greg R Dennis James Patrick Scott N PH 7.5-8.5 9.5-10 C C C C C C C C C C C C C C C C C C C	ay ivera Hously Taylor Wellma iicholso REL mL NC < 8 < 8 766 sx In s + adds is + adds is + adds is = 19 S i 9 S i	In LGS % by vol < 5.0 < 5.0 < 8.0 BOP: Minimum Rig Stackup Mud Pit: Wellhead: Tail 150 sxclass C 14.8 ppg 1.32 Ec-T-R Stackup 1.16 Ec-T-R Stackup 26 R32E 26 R32E 27 R32E	281-2 432-8 830-5 281-2 NaCl ppb sol 10,000 400 - 00 400 - 00 COP Class 13-5/8*x Rotating I Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Mud Cros Pipe Ram Scottio CO1+FP+F 3 ft3/sk CO1+FP+F 3 ft3/sk Sectio 2498' F 2261' F	06-5620 48-5238 83-4828 06-5392 Remarks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks Rig Tanks S Well Cor 10M psi Ran- tead, Annuk B Bind Ram, S (Choke & I Bind Ram, S (Choke & I	423-512-0347 956-229-1393 432-215-7079 432-215-7079 432-230-8010 432-230-8010 x3

٠

•

Tat Cement Description: S BWOW Naci S BWOW Naci D,01galar FP-6L D,01galar FP-6L D,01galar FP-6L D,01galar FP-6L Mix Weight 12.6 ppg Mix Weight 12.6 ppg Displacement Votume (obts) Lead Volume (bbis) Tait volume (bbis)

0.01gal/sk FP-6L Class C 125 Brisk integraSed Fiber 201gal/sk FP-6L

.

Calculated Total Volume (Cu. FL) Calculated Volume (Cu. FL) Calculated Volume (Cu. FL) Calculated Volume (Sx) Shoe Volume (Cu. FI) Tail feet of cemeni Yield Tead (Cu, FL/Sx) Yield Lead (Cu, FL/Sx) Shoe Joint (Ft) <u>13.248° Surface Cesting</u> Surface Cesting Depth (F1) Surface Cesting Depth (F1) Surface Cesting 1D (In) Holde O.D. (In) Excess (%) Podar Tel (Cu, FJ/St)

> SERVE 18 S26 R32E HILLGIHZ

~

1231 620'l 069 001+ 1.1+E 50 C ZE'I %0001 Z/1 L1 S19 Z1 B/E E1 Z/1

40 507 ANNO Less (CLL FL/Sx) 571.1

0.571

101.0

o, 75 BWOR Sodium Metalificate 1 BWOR Sypeum 10 BWOB Bentonite

intermediate Lead Cerneri Description: Mix Weight 11 ppg , 125 Ebek IntegraSeal Fiber , 125 Ebek IntegraSeal Fiber of Teahek Fibed

0'2 BMOB CD-35 0'2 BMOB CD-35 0'2 BMOB LT-25

0.1 GM/4K FP-6L

in the second (sidd) emuloV bee.J 100 J Cate, Lead Volume (Sx) 789,£ Calculated Total Lead (Cu. FL) *1*67 P seals Properties of shared and the static properties of the static static static properties of the static stat 4'500. 100% 15 52 15 52 6'652

Shoe Volume (Cu. F1)

22-11 BOWB #.0

0.4 BWOB FL-52 0.1 BWOB FL-52 0.1 BWOB FL-51 0.25 Ibrik FP-61 0.25 Ibrik FP-61

Wix Weight 13.6 ppg

incitionand frament Description;

(stidd) ermatov liaT (x8) emuloV fisT behispeA (J.F. Lei Volume (Cu. FL) Top Tail (Ft) - 1000' above KOP Yield Tail (Cu. FL/Sx) Steld Tail (Cu. FL/Sx) <u>3.58° intermediata Craing (1,83):</u> Intermediata Casing (2,0, (n,) Intermediata Casing (1, (n) Intermediata Casing (1, (n) NOP KOP (0)

nabiscement Actimus (ppts)

£06 38/3 30% 11'0% 30% 11'0% 30% 11'0% 30% 11'5% 112,21 258,8 258,8

(x8) enuitoV bas-l betiupeS Calc. Lead Volume (Cu. FL) (XSUA TO) INT NOV (sostiud) trianso qoT Steps 3 State (Suffice) Surves Cased (Suffice) Surves Cased (D(M) Surves Cased (Suffice) Surves C

Displacement Volume (bbis) Lead Volume (bbis)

MS: 2,322 *l*ΖΈ .52 1008 1522 8'822 8'822 9'822 9'822 9'822 1'112

(x8) emutoV itsT betupeSt Calc. Tail Volume (Cu. FL) Excess (%) Yield Tai (Cu. FL/Sx) Shoe Volume (Cu. Fl) Shoe Volume (Cu. Fl)

/910890199 1503 291°C 871 021 611 9651 05'8 822 22.013 9.625 9.625 9.625 9.625 9.625 9.625

Production Liner Tell Cement Description:

A01-A6 60W6 7.0 0'4 BMOB CD-35 0'12 BMOB B'51

Maxwell (1998) Maxwel

0.5 BWOB CD-23 0.4 BWOB CD-23 0.4 BWOB FL-66 1.0 Direk BM-60 1.0 Direk BM-60 1.0 Direk BM-60 1.0 Direk BM-60 1.0 Direk D

ethomas Bowe 01 3.5 BWOB Gypaum M multipog Sodium M CC-CC-BOAGE CD-35

BOPE Configuration & Specifications 13-5/8" x 10,000 psi System

.



4-1/16" x 10k psi Inner Manual Valve 4 - 1/16" x 10k psi Outer Remote HCR

> 2" x 5k psi Gate Valves Pressure Testing Lines

.

Choke Manifold 10M psi

.

.



Heles B garage diagonation

the **IBOP** valves



PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

CONOCOPHILLIPS COMPANY
NMLC062749B
111H –ZIA HILLS 19 FEDERAL COM
2498'/N & 1666'/W
2618'/S & 1980'/W; 7
Section 19 T.26 S., R.32 E., NMP
LEA County, New Mexico

СОА

All previous COAs still apply expect the following:

H2S	r Yes	r No	
Potash	None	C Secretary	C R-111-P
Cave/Karst Potential	C Low		High High
Variance	None	Flex Hose	C Other
Wellhead	Conventional	Multibowl	C Both
Other	☐ 4 String Area	Capitan Reef	F WIPP

A. Hydrogen Sulfide

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

- 1. The 17 1/2 inch surface casing shall be set at approximately 1172 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 will be a minimum of <u>8</u>
 <u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

- 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.

Operator shall fill 1/3rd of the casing with fluid while running intermediate casing.

2. The minimum required fill of cement behind the 9 5/8 inch intermediate casing is:

Operator has proposed an with a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:Cement to surface. If cement does not circulate, contact the appropriate BLM office.
- In <u>High Cave/Karst Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
- 2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
- 3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9 5/8 intermediate casing shoe shall be 10,000 (10M) psi.

GENERAL REQUIREMENTS

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

- 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. 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.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) 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.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24 hours</u>. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. 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.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- **B. 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. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. 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. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
- 5. 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. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be

initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

- c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. 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.
- f. 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. This test shall be performed prior to the test at full stack pressure.
- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. 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.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

ZS 122118

٢

.