

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

	DEP USE (DNLY
Auth No.	9312	APS No.#
Site No.		PF No.
Client No.		SF No.

DEC 1 6 2019 APPLICATION FOR INACTIVE WELL STATUS

Well Operator	U		DED 011 . 15 11	T		
Well Operator & GA Chevron Appala	S chia IIC		DEP Client ID No.	Well Permit or Registration No.		
Address	Cilia, LLC		279986	37-051-24689		1 -
700 Cherrington	Parkway			Well Farm Name	Well No.	Serial No.
City	1 airway	Chata	7:- 0 - 1-	Edenborn/RGGS B	M15H	37-051-1081
Coraopolis		State PA	Zip Code	County	Municipality	
Telephone No.	Fax No.		15108 rument No.	Fayette		n Twp.
412-865-3489	412-865-24	1		Is this an application for annual extension of inactive status?		☐ Yes ☒ No
				Check here if this application is for conditional inactive status ir association with longwall minin	1	itted
Condition of the Well Describe in detail how the condition of the well \$\\$ 78/78a.102(i), (2)(i) or (ii) and (3). Use add and other information describing well casing, capplication is being submitted in conformance Chain Pillar Development and Longwall Mining may be referenced for all well construction in adjacent longwall mining encroaching within atmosphere and the inactivation procedure mell's condition."				itional sheets if necessary. If ava cement, equipment, and any othe with DEP Technical Guidance I g Adjacent to Unconventional We formation, and all tubing and an 1,500 feet of the well location. F	allable, attacher pertinent in Document 80 ells, the Well nular pressu Finally, all an	n well records, driller's logs, aformation. Note that if this 10-0810-004 <i>Guidelines for</i> Record/Completion Report res should be at 0 prior to half should be open to the
Well Type: ⊠ Gas ☐ Oil ☐ Combination Oil & Gas ☐ Injection ☐ Storage ☐ Disposal					Disposal	
Casing Diameters:		Casing Lengths:		Type and amount of cement (sacks)	used for surface	casing:
30"		50'		782 sacks of Class A		3
20"		441'		Tubing or Production Casing Pressure If an oil well, state the depth to fluid in the surface casing: N/A		
13-3/8"		650'		Annulus Pressure (current - between tubing or production casing and surface casing): N/A		
12-1/4"		2609				
Tubing or production casing diameter: N/A		Tubing or production casing length: N		Are all annuli open to atmo	osphere?	☐ Yes No
Other information abo	out the well's co	ndition:				
Well was di	rilled t	o a depti	h of 7.500	'. No tubing or p	roduct i	on caging
present.				. No caping of p	roddeer	on casing
Patture Use of the Well Describe a viable plan in accordance with 25 Pa. Code §78/78a.102(4) explaining the intended use of the well within a reasonable time. Provide the information requested below and any other information necessary for DEP to make a determination on inactive status for this well. Note that if this application is being submitted in conformance with DEP Technical Guidance Document 800-0810-004 Guidelines for Chain Pillar Development and Longwal Mining Adjacent to Unconventional Wells, the following text may be entered under the section regarding the future plan for the well: "Return well to production subsequent to final panel extraction when mining is at least 1,500 feet beyond well in chain pillar, as per re-entry procedure and TGD."						
Provide certification that	one of the following	ng applies (check o	ne):			
⊠ Significant rese	rves remain ir	place and I pl	an to return the w	ell to production.		
Provide estimate	Significant reserves remain in place and I plan to return the well to production. Provide estimate of reserves: MMcf: Bbls:					
The well will be use	ed for:	oisposal		bservation	overy 🔲 (Other (describe)
This well will be re	eturned to us	e in: Month:	12	Year: 2024		

State your plan for future use of the well.								
Drilling activities are planned to return to this well in December 2024.								
Completions ac	ctivities will follow sho	rtly after allowing for production of						
the well later	r in the following year.							
Conditional	For unconventional wells drilled in anticipa	ated chain pillar locations that are being temporarily inactivated to						
Inactive Status	accommodate planned, adjacent longwall r	mining, please provide the items included in the checklist below in information about these items is detailed in DEP Technical Guidance						
	Document 800-0810-004 Guidelines for	normation about these items is detailed in DEP Technical Guidance Chain Pillar Development and Longwall Mining Adjacent to						
Checklist	Unconventional Wells.	Oriain Filial Development and Longwall Milling Aujacent to						
Please include the following iter	ns with the inactive status application:							
		_						
Temporary Well Inact	tivation Procedure 🔲 Temporary Inactivation	on Well Schematic						
Current Well Record	and Completion Report 🏻 🗌 Well Location P	Plat						
☐ Graphical Production History Summary ☐ Well Re-entry Procedure ☐ Post-mining Well Long-term Monitoring Procedure								
	Thetery cultimary Woll the chiry i loced	dure Post-mining well Long-term Monitoring Procedure						
Provide additional details, if		Gure Post-mining Well Long-term Monitoring Procedure						
		Gure						
		Gure Post-mining Well Long-term Monitoring Procedure						
		Gure						
		Gure Dest-mining well Long-term Monitoring Procedure						
		Gure Post-mining Well Long-term Monitoring Procedure						
		Gure Post-mining Well Long-term Monitoring Procedure						
Provide additional details, if	necessary.							
Provide additional details, if	icant (Well Operator)	DEP USE						
Provide additional details, if	necessary.	DEP USE						
Provide additional details, if	licant (Well Operator) Date	DEP USE Approved Denied Date						
Provide additional details, if	icant (Well Operator) Date 12/9/2019_	DEP USE						
Signature of Appl Signature Print or type signer's name and	icant (Well Operator) Date 12/9/2019_	DEP USE Approved Denied Date						



COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS MANAGEMENT

DEP U	SE ONLY	
Site ID	Client le	3
Primary Facility Id	Sub Facilit	y ld

Well Record (Unconventional Operators Only)

					WELI	L INF	OR	MATION					111111	
Well Ope				D	EP ID#		US	Well No. (API No.)		Farm Nan	ne		Vell #	
Address	Appalac	hia, LLC	refer to the heavy program to the control of the control of home by the control of the control o	2	79986			51-24689-00-00		Edenbor	n/RGG	i	√15H	
1	errington I	Parkway				ide (DD		39. 822061	NAD 83	Project Nu	ımber		Serial #	***************************************
City Coraopol				State PA	Zip Muni	itude (E	**********	-79. 896197		County		[3	37-051-10	081
Phone			[Email	I PA	15108 Gerr	nan TV w Pit	мp			Fayette	***************************************	The state of the s	***************************************	2 magas das Justinos moras de la composition della composition del
412-865	-3489		i i	e@chevron.c) IV IV				Carmichae		adrangle map)	Section
Check t	he appro	priate Subm			Well Record	1		☐ Amended Well F	Record	Carrinoria	,10			9
Well Ty	эе	☑ Gas									Mall	oore Conditi	onin -	
	entation	☐ Vertid	cal 🛛 Deviate	d from Vertic	al (Top & Si	de viev	ws &	Deviation Survey mu	ust be at	ttached)			ū	
Drill Me			otary – Air 7500						Other	,	SEE	E ATTACHE	D	
	arted 5/13/	2019	Surface	Elev. 1167 ft.		***************************************	G	W Depth 429 ft.	***************************************					
Drilling Co				ertical Depth	ft.		D	epth of DFGW 429 ft.	***************************************	***************************************				
Date Well	Completed	<u> </u>	Total M	leasured Depti	n 7500 ft.		DI	FGW decided by: 5						
						CEN	IEN	T						
		on surface ca	_	☑ Yes □ No				top of cement and meth						
1				Yes 🗌 No		ide dep	th to	top of cement and meth	od used	to determi	ne:		□NA	
Cement	returned o	on intermedia	ate casing?	Yes No	If No, prov	ide dep	th to	top of cement and meth	od used		ne:		□NA	***************************************
Casin	g String		lass of Cement (Lead/Tail)	Slurry Temp F°	Amount o	of Cen	nent	(sks) (Lead/Tail/Total)	WOC	Wt PPG	Yid //tt3 /sk	Gas Cor	s Migrati ntrols Us	on sed
Conduc	tor	Bill	k / Cement	60°		/		1	8			What control (additives/ har depth applicab	dware. Sper	sed if any cify type and
Surface	***************************************		/ Class A	60°	***************************************		/ 78	32 / 782	8	15.6	1.20	Fluid Loss		s
Coal Pro	otective		/ Class A	60 °	/ 187 / 187 8		15.6	1.20						
Grout Jo	ob #1		/ Class A	60°			/ 56	68 / 568	8	15.6	1.18			
Grout Jo			/ Class A	60 °			/ 5	56 / 56	8	15.6	1.20			
Intermed			/ Class A	60 °			/ 88	36 / 886	8	15.6	1.19	,		
If additiona attach form						T	otal	2479						
	<u> </u>	T	CAS	ING AND	TUBING									
Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type		Amount ir Well (ft.)	co	R	Hardware - Ba		String)		alizers Depth	D-4-	
36	30	118.20	X-42	T - N	50	US	Υ	SEE ATTAC						Run
26	20	94	J-55	T - N	441	IT	Υ	SEE ATTAC		***************************************			7/4/2	2019
17-1/2	13-3/8	54.50	J-55	T - N	650	US	Υ	SEE ATTAC					7/5/2	
12-1/4	9-5/8	40	L-80IC	T - N	2609	US	Υ	SEE ATTAC		***************************************			7/16/	,
	H-1114			T-N	Marian Ma	US	Υ	SEE ATTAC		***************************************			77107.	2019
f any ca	sing is w	elded, prov	ride the name(s	s) of the we	lder(s):		<u> </u>							
						ELLE	OR	E ALTERATION	I					
		Fill Mate	rial & Plugs			Dep			<u> </u>		Ca	sing & Tub	ina	
					Fro	m	T	o Date		Size		Pulled		Left
***************************************			***************************************											
		,		-			Marie de l'arte · · ·			· ·····································				
***************************************	······	***************************************		P-47119-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1									<u>-</u>	

LOG OF FORMATIONS US Well No. (API No.): 37-051-24689-00-00 (If you will need more space than this page, please photocopy the blank form before filling it in.) Formation Name Top **Bottom** Gas at Oil at Water at or Lithology (feet) (feet) (feet) (feet) Source of Data (fresh / brine; ft.) Surface --0 104 Geology Washington Rider Coal 104 106 Geology Waynesburg Coal 221 224 Geology F 429 Geology Pittsburgh Coal Mine 604 614 Geology Salt Sand 1357 1618 Geology Mauch Chunk 1618 1734 Geology Big Lime 1734 1793 Geology Loyalhanna 1793 1887 Geology Burgoon 1887 2019 Geology Shenango 2019 2148 Geology Squaw 2148 2365 Geology Murrysville 2365 2410 Geology Gantz 2410 2558 Geology Venango 2558 3005 Geology Upper Bayard 3005 3021 Geology Chadakoin 3021 3057 Geology **Bradford Base** 3057 5466 Geology 5th Elk 5466 6864 Geology Rhinestreet 6864 7194 Geology Sycamore 7194 7500 Geology Current TD 7500 Geology

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
^{Name} Tenaris Global Services U.S.A. Corp.	Name BJ Services	Name Summit Energy Services, Inc.	Name Stratagraph NE Inc
^{Address}	Address	Address	Address
3 Penn Center Boulevard, #124	3415 Millennium Boulevard SE	PO Box 34210	116 Ellsworth Avenue
City – State – Zip	City – State – Zip	City – State – Zip	City – State – Zip
Pittsburgh, PA 15276	Massillon, OH 44646	Fort Worth, TX 76172	Marietta, OH 45750
Phone	Phone	Phone	Phone 740-373-3091
412-620-6388	330-830-2978	817-645-5000	

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78a and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78a.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller		Well Operator's Signat	ture	DEP USE ONLY		
Name SEE ATTACHED	Rig		/	Reviewed by:		
Address		alw I be				
City – State- Zip		Printed Name / Title: Bernard A. Lambie /	Date: 12/6/2019	Comments:		
Phone		Regulatory Compliance Team Lead	12/0/2010			

Well Operator	DEP ID#	Well API #	Well Farm Name	Well #
Chevron Appalachia, LLC	279986	37-051-24689-00-00	Edenborn/RGGS B	M15H

Wellbore Conditioning:

Surface: 25 bbls of get spacer, 8 bbls of freshwater

Surface/Coal Protective: 25 bbls of get spacer, 8 bbls of freshwater

Grout Job #1: no conditioning
Grout Job #2: no conditioning

Intermediate: 25 bbls of 8.6 ppg gel spacer, 10 bbls of 8.3 ppg of freshwater

Production:

Well Operator	DEP ID#	Well API #	Well Farm Name	Well #	l
Chevron Appalachia, LLC	279986	37-051-24689-00-00	Edenborn/RGGS B	M15H	ĺ

WELL SERVICE COMPANIES
(Provide the name, address, and telephone number of all well service companies involved.)

Driller		Driller	Driller		Driller		
Name Rocky Mountain Drilling	Rig	Name Highlands Drilling LLC	Rig 12	Name Precision Drilling Holdings Company	Rig		
^{Address} 185 North Vernal Ave, Suite 2		Address 900 Virginia Street East		Address 10350 Richmond Avenue, Suite	700		
City – State – Zip Vernal, UT 84078		City – State – Zip Charleston, WV 25301		City – State – Zip Houston, TX 77042			
Phone 435-789-3320		Phone 304-380-0114		Phone 713-435-6100			
Portion Drilled 0'- 74'	Portion Drilled 74'- 7500'		Portion Drilled				

Cementing Company	Cementing Com	pany Cementing Company
Name	Name	Name
Address	Address	Address
City – State – Zip	City – State – Zip	City – State – Zip
Phone	Phone	Phone

Casing Source Casing Source Casing Source						
Name	Name	Name				
Address	Address	Address				
City - State - Zip	City - State - Zip	City – State – Zip				
Phone	Phone	Phone				



Wellbore Details

Well Name Edenborn/RG			Lease				Field Na Sham				Business Unit Appalachia	n Mount	oin		
1,155.00				RKB Elevation (ft)			Current RKB Elevation 1,179.00, 7/3/2019				Mud Line Elevation (ft) Water De		Depth (ft)		
Current KB to Gro 24.00	ound (ft)		Current KB	o Mud Line	d Line (ft)			Current KB to Csg Flange (ft)				Current KB to Tubing Head (ft)			
Logs					THE REPORT OF										
Туре				Loggi	Logging Company			Date			Plan			Cased?	
Wellbore				Job						Depth Top (MD)	(ftKB)	Bottom	Depth (ft	KB)	
Comment															
Wellbores													7500		
Wellbore Name			Parent Wellb				Direction	al Type			Start Depth (MI	D) (ftKB)			
Original Hole Original Hole				The state of the same				Horizontal			12				
Alt. Wellbore Identifier TAML Classification N/A					n.			TAML Functionality			Casing Configuration Class 4				
Bottom Hole Legal Location Wellbore UWI 37051246890					00			Wellbore ChevNo XX0000-00			Vertical Section Direction (°) 317,08				
Wellbore Sec	Control of the Contro														
Hole Size (in)	Start D	ate	End (Date		Act Top (ftKB)	Act B	tm (ftKB)	Pr	op Top (ftKB)		Prop	Btm (ftKB)	
8 1/2											6.80	0.0		19,190.0	
36 5	36 5/11/2019 13:00 5/		5/11/2019 17	/11/2019 17:00					7	74.0	12.0		2.00	52.0	
26 7	/3/2019 19:1	5	7/4/2019 07:	00			74.0			0.0		1			
17 1/2 7	/5/2019 09:3	10	7/5/2019 15:	15						(2000 and 1	52.			450.0	
	/14/2019 06:	KV LAND LEEP CONTRACTOR	7/15/2019 08				460.0			2.0		0.0		719.0	
		COMPANY OF THE PARK T					712.0		2,657.0		719.0			2,650.0	
Kick Offs & K	/16/2019 21: (ev Denths	15	7/20/2019 05	:00			2,657.0		7,50	0.0	2,65	0.0		6,800.0	
Date	ay Departe	Туре		Point o	or Interval		Top Dept	th (ftKB)		Depth Top (TVD)	(ftKB)	Method		1.44	
Last 5 PBTD's	S	NEW REAL PROPERTY													
Туре		Date	PBTD (ftKB)	Dep	oth (TVD) (ft	KB) N	Method				Com				
Geologic Hor	izons						08.00000000000	01 NOVE NO. 1910 - 1910 -							
			Prog Top	TVD SS)	1		Prog E	3tm (TVD SS)	1						
Formation Name Override (ft((ft(elv))	lv)) Prog Top (TVD) (ftKB)		Override (ft(elv)) Prog B		tm (TVD) (ftKB)	Drill Top MD (ftKB)		Drill	Btm MD (ftKB)			
Directional Si	urveys										charles and the second		SE NORM		
Description		Date		Definiti	ve?		Planned?			Job					
zimuth Tie In (°) MD Tie In (ftKB)			В)	Inclinat	ation Tie In (°)		NSTie In	NSTie In (ft)		EWTie In (ft)		TVDTie In (ftKB)			
Comment		EZ (NAMES ESTE SALE)							March Co.						
Survey Data					7.30		17. 10 Late								
Date			Azm (°)	TVD (ft	tKB) VS (ft)		NS (ft) EW (E)A((B)	[B] 0 (0/16-1/1					
				. 40 (11	,)	VO (II)	145	(11)	EW (ft)	DLS (°/100ft)	Method		Surv	ey Company	
ones															
Zone Name	Top (ftKB)	Btm (ftl	KB)	Zone Comp	Mothed		0 1 11	0							
	, 55 (11,10)	Dun (Iti		Zorie Comp	Meniod		Completion	n ChevNo		Completion U	W	Con	pletion Li	cense No.	
				THE HARM				about the same							

Report Printed: 12/4/2019 7000 -200 0009 Surface ChevNo XX0000 -400 EW (ft) 5000 -600 4000 -800 Surface UWI 3705124689 Wellbore UWI -1000 3000 -200-400 200 0 (ff) SN Plan 2000 Business Unit Appalachian Mountain Total Depth of Wellbore (ftKB) ---- VS vs TVD - Edenborn/RGGS B M15H - Original Hole **Directional Plot** 1000 VS (ft) Page 1/1 -1000 -2000 -3000 -4000 -5000 Company Confidential - Restricted -6000 Well Name Edenborn/RGGS B M15H Wellbore Name 1000 -2000-3000 5000 -- 0002 4000 - 0009 Vertical Section 0 Chevron TVD (fikb)



Casing Summary

Well Name Edenborn/RGGS B M15H			Lease			Field Name Shamrock				ness Unit alachian Mountain		
Ground Elevation (ft) Original RKB (ft) 1,155.00			Current RKB Ele 1,179.00, 7/3					Mud Line Elevation (ft) Water Depth (ft)				
ro	duction Casing, Planne	ed2-V <denth< th=""><th>htm\ftKD</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></denth<>	htm\ftKD									
et D	epth (MD) (ftKB)	Set Tension		String I	Nominal OD (in	String Min Drift (in) <u>[c</u>	entralizers		Scratchers		
										Coratoricis		
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	Len (ft)	P Burst (psi)	P Collaps (psi)	
on	ductor, Planned?-N, 50	OftKB										
et D 0	epth (MD) (ftKB)	Set Tensio	n (kips)	String N	Nominal OD (in	String Min Drift (in	String Min Drift (in) Centralizers 0			Scratchers		
Jts	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	l on (ft)	D. Durent (n)	P Collaps	
1	Casing Joint	30	29.250	118.20		. ep illioud	(WD) (IINB) 8.6		Len (ft) 41.41	P Burst (psi) 3,790.0	(psi) 2,600	
urf	ace, Planned?-N, 441f	tKB								9,100.0	2,00	
	epth (MD) (ftKB)	Set Tension	n (kips)	String N	Iominal OD (in)	String Min Drift (in 18.937	Ce 5	entralizers		Scratchers		
Its	Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth (MD) (ftKB)	Btm Depth (MD) (ftKB)	1 (6)		P Collaps	
	Hanger	20	19.125	94.00	A STREET OF STREET OF STREET	BTC	32.1	32.6	Len (ft) 0.53	P Burst (psi) 2,110.0	(psi) 520	
	Hanger Pup	20	19.125	94.00	J-55	BTC	32.6			2,110.0	520	
7	Casing Joint	20	19.125	94.00	J-55	BTC	36.9	The second second second second second		2,110.0	520	
	Float Collar	20	19.125	94.00	J-55	BTC	358.5	398.9	The state of the s	2,110.0	520	
1	Float Shoe	20	19.125	94.00	J-55	BTC	398.9	441		2,110.0	520	
ter	mediate Casing 1, Pla	nned?-N, 650	.7ftKB									
t Depth (MD) (ftKB) Set Tens					lominal OD (in)	String Min Drift (in)	String Min Drift (in) Centralizers			Scratchers		
50.7				112 210	11. 11.					Ociatoricis		
50.				13 3/8			7					
	/ Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Top Depth	Btm Depth	Len (ft)	D Burst (pai)		
ts 1	Item Des Casing Hanger		ID (in) 12.625		Grade	Top Thread	Top Depth (MD) (ftKB)	(MD) (ftKB)	Len (ft)	P Burst (psi)	P Collaps (psi)	
ts 1	Item Des Casing Hanger Hanger Pup	OD (in)	The second secon	Wt (lb/ft)	Grade	Top Thread	(MD) (ftKB)		2.22	P Burst (psi)		
1 1 3	Item Des Casing Hanger Hanger Pup Casing Joint	OD (in) 13 3/8	12.625	Wt (lb/ft) 54.50	Grade J-55 J-55		(MD) (ftKB) 29.3	(MD) (ftKB) 31.5 35.7	2.22 4.19	P Burst (psi)		
1 1 3	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar	OD (in) 13 3/8 13 3/8	12.625 12.625	Wt (lb/ft) 54.50 54.50	Grade J-55 J-55 J-55	BTC	(MD) (ffKB) 29.3 31.5	(MD) (ftKB) 31.5	2.22 4.19 529.79	P Burst (psi)		
ts 1 1 1 1 3 1 1	Item Des Casing Hanger Hanger Pup Casing Joint	OD (in) 13 3/8 13 3/8 13 3/8	12.625 12.625 12.625	Wt (lb/ft) 54.50 54.50 54.50	Grade J-55 J-55 J-55	BTC BTC	(MĎ) (fiKB) 29.3 31.5 35.7	(MD) (ff.kB) 31.5 35.7 565.5	2.22 4.19	P Burst (psi)	P Collaps (psi)	
ts 1 1 1 1 3 1 1 1	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar Float Shoe	OD (in) 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8	12.625 12.625 12.625 12.625 12.625	Wt (lb/ft) 54.50 54.50 54.50 54.50	Grade J-55 J-55 J-55 J-55	BTC BTC BTC	(Mb) (rikB) 29.3 31.5 35.7 565.5	(MD) (fiks) 31.5 35.7 565.5 607.9	2.22 4.19 529.79 42.40	P Burst (psi)		
ts	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar Float Shoe mediate Casing 2, Plan pth (MD) (ffKB)	OD (in) 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8	12.625 12.625 12.625 12.625 12.625	Wt (lb/ft) 54.50 54.50 54.50 54.50 54.50 54.50	Grade J-55 J-55 J-55 J-55	BTC BTC BTC	(Mb) (ffkB) 29.3 31.5 35.7 565.5 607.9	(MD) (ftkB) 31.5 35.7 565.5 607.9 650.7	2.22 4.19 529.79 42.40 42.83	P Burst (psi)		
1 1 3 1 1 1 1 1 De 609	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar Float Shoe mediate Casing 2, Plan pth (MD) (ffKB)	OD (in) 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 Set Tension	12.625 12.625 12.625 12.625 12.625 12.625 9.2ftKB	Wt (lb/ft) 54.50 54.50 54.50 54.50 54.50 54.50 String N 9 5/8	Grade J-55 J-55 J-55 J-55 J-55 Ominal OD (in)	BTC BTC BTC BTC String Min Drift (in)	(Mb) (ffkB) 29.3 31.5 35.7 565.5 607.9	(MD) (fikB) 31.5 35.7 565.5 607.9 650.7	2.22 4.19 529.79 42.40 42.83	Scratchers	(psi)	
1 1 3 1 1 1 1 1 Dec 609	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar Float Shoe mediate Casing 2, Plan pth (MD) (ftKB)	OD (in) 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 nned?-N, 2609	12.625 12.625 12.625 12.625 12.625	Wt (lb/ft) 54.50 54.50 54.50 54.50 54.50 String N	Grade J-55 J-55 J-55 J-55 J-55	BTC BTC BTC String Min Drift (in) Top Thread	(Mb) (ffkB) 29.3 31.5 35.7 565.5 607.9 Ce 21 Top Depth (MD) (ftkB)	(MD) (ftikB) 31.5 35.7 565.5 607.9 650.7 htralizers Btm Depth (MD) (ftikB)	2.22 4.19 529,79 42.40 42.83		(psi)	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar Float Shoe mediate Casing 2, Plan pth (MD) (fiKB) .2	OD (in) 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 Set Tension OD (in)	12.625 12.625 12.625 12.625 12.625 12.625 9.2ftKB (kips)	Wt (lb/ft) 54.50 54.50 54.50 54.50 54.50 \$4.50 String N 9 5/8 Wt (lb/ft)	Grade J-55 J-55 J-55 J-55 J-65 Grade	BTC BTC BTC BTC String Min Drift (in) Top Thread	(Mb) (ffkB) 29.3 31.5 35.7 565.5 607.9 Ce 21 Top Depth (MD) (ftkB) 29.1	(MD) (ftikB) 31.5 35.7 565.5 607.9 650.7 htralizers Btm Depth (MD) (ftikB) 31.2	2.22 4.19 529,79 42.40 42.83 Len (ft)	Scratchers	(psi)	
1 1 3 1 1 1 1 Dec 609 s 1 1 1	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar Float Shoe mediate Casing 2, Plan pth (MD) (fiKB) .2 Item Des Hanger	OD (in) 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 OD (in) 9 5/8	12.625 12.625 12.625 12.625 12.625 12.625 3.2ftKB (kips)	Wt (lb/ft) 54.50 54.50 54.50 54.50 54.50 \$4.50 String N 9 5/8 Wt (lb/ft) 40.00	Grade J-55 J-55 J-55 J-55 J-65 Grade L-80IC	BTC BTC BTC String Min Drift (in) Top Thread BTC BTC	(Mb) (ffkB) 29.3 31.5 35.7 565.5 607.9 Ce 21 Top Depth (MD) (ffkB) 29.1 31.2	(MD) (fikB) 31.5 35.7 565.5 607.9 650.7 htralizers Btm Depth (MD) (fikB) 31.2 36	2.22 4.19 529,79 42.40 42.83 Len (ft) 2.10 4.80	Scratchers	(psi)	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar Float Shoe mediate Casing 2, Plar pth (MD) (ftKB) .2 Item Des Hanger Hanger Pup	OD (in) 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 OD (in) 9 5/8 9 5/8	12.625 12.625 12.625 12.625 12.625 12.625 3.2ftKB (kips)	Wt (lb/ft) 54.50 54.50 54.50 54.50 54.50 \$\$\text{String N} \text{9 5/8}\$\$ Wt (lb/ft) 40.00 40.00	Grade J-55 J-55 J-55 J-55 J-65 Grade L-80IC L-80IC	BTC BTC BTC String Min Drift (in) Top Thread BTC BTC BTC	(Mb) (ffkB) 29.3 31.5 35.7 565.5 607.9 Ce 21 Top Depth (MD) (fikB) 29.1 31.2 36	(MD) (fikB) 31.5 35.7 565.5 607.9 650.7 httalizers Btm Depth (MD) (fikB) 31.2 36 50.8	2.22 4.19 529.79 42.40 42.83 Len (ft) 2.10 4.80 14.80	Scratchers	(psi)	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Item Des Casing Hanger Hanger Pup Casing Joint Float Collar Float Shoe mediate Casing 2, Plar pth (MD) (ftKB) .2 Item Des Hanger Hanger Pup Pup	OD (in) 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 13 3/8 Cod (in) 9 5/8 9 5/8 9 5/8	12.625 12.625 12.625 12.625 12.625 12.625 3.2ftKB (kips)	Wt (lb/ft) 54.50 54.50 54.50 54.50 54.50 \$tring N 9 5/8 Wt (lb/ft) 40.00 40.00	Grade J-55 J-55 J-55 J-55 J-65 Grade L-80IC	BTC BTC BTC String Min Drift (in) Top Thread BTC BTC	(Mb) (ffkB) 29.3 31.5 35.7 565.5 607.9 Ce 21 Top Depth (MD) (ffkB) 29.1 31.2	(MD) (fikB) 31.5 35.7 565.5 607.9 650.7 htralizers Btm Depth (MD) (fikB) 31.2 36	2.22 4.19 529,79 42.40 42.83 Len (ft) 2.10 4.80	Scratchers	(psi)	