Form 3160-4 (August 2007)

## **UNITED STATES** DEPARTMENT OF THE INTERIOR

## **NMOCD** Hobbs

FORM APPROVED OMB No. 1004-0137

(Tagast 2007)			BUREAU	U OF LA							;			Expi	res: Jul	y 31, 2010
	WELL (	COMPL	ETION C	R REC	OMP	LETIC	ON RE	POR	T AND	LOG				ease Serial I IMLC0295		
1a. Type of	f Well	Oil Well	Gas '	Well	☐ Dry		Other						6. If	Indian, All	ottee o	r Tribe Name
b. Type of	f Completion	☑ N Othe	lew Well er	Work	Over	☐ D	eepen	☐ Ph	ig Back		iff. R	esvr.	7. U	nit or CA A	greem	ent Name and No.
2. Name of COG C	Operator OPERATING	LLC			Co	ntact: S	TORMI	DAVIS	•					ease Name		
3. Address	ONE CON		NTER 60 701-4287	0 W ILLII	NOIS A	VENUE			No. (includ 48.6946	de area	code)		9. A	PI Well No		25-43482-00-S1
		T20S R	34E Mer NI	MP			-		ts)*				10. I	Field and Po VC025G08	ool, or 8S203	Exploratory 429P-WOLFCAMP
At surfa			. 2440FWL	32.53634	23 N La	11, 103.5	040749	VV LON					11. 5	Sec., T., R.,	M., or	Block and Survey 20S R34E Mer NM
At total		34 T205	<sup>elow</sup> SR34E Mer SL 1949FW										12. (	County or P		13. State NM
14. Date Sp 12/01/2	oudded		15. Da	ate T.D. F /22/2016				DD8	te Comple & A \sum_2 25/2017	eted Ready	y to Pr	od.	17. I		DF, K 20 GL	B, RT, GL)*
18. Total D	Pepth:	MD TVD	15972 1137	2	19. Plu	g Back 7	ſ.D.:	MD TVD	1	5890 1371		20. Dep	th Bri	dge Plug Se	et:	MD TVD
21. Type E NONE	lectric & Oth	er Mecha	nical Logs R	un (Subm	it copy	of each)	ii				Was I	ell cored ST run? ional Sur		■ No	☐ Ye	s (Submit analysis) s (Submit analysis) s (Submit analysis)
23. Casing an	nd Liner Reco	ord (Repo	ort all strings	set in we	ll)											
Hole Size	Size/G	rade	Wt. (#/ft.)	Top (MD)		Bottom (MD)		Cemente epth	100	of Sks. of Cen		Slurry (BB		Cement '	Гор*	Amount Pulled
17.500		375 J-55	54.5		0	1722	_				1250				0	
12.250		325 J-55	40.0		0	5788	_	363	4		3890		_		0	
8.750	5.50	0 P-110	17.0		0	15962	-		+		2600				0	-
					+				+							
24. Tubing	Record					_							_			
Size 2.875	Depth Set (M	(D) P 0771	acker Depth	(MD) 10762	Size.	Dep	th Set (M	MD)	Packer De	epth (M	(D)	Size	De	pth Set (M	D)	Packer Depth (MD)
25. Produci	ng Intervals					26	. Perfora	tion Red	cord							
	ormation		Тор		Botton		P	erforate	d Interval		+	Size		No. Holes		Perf. Status
A)	WOLFO	AMP	1	1468	15	860			11468 T	O 1586	50	0.00	00	1232	OPE	N
B)		_		-		+					+		+		_	
D)		- 1.		$\neg$		$\top$					+		+			
	racture, Treat	ment, Cer	nent Squeeze	e, Etc.										HC	B	3S OCD
	Depth Interva								Amount ar	nd Type	of M	aterial				
	1146	8 TO 158	860 SEE AT	TACHED										N.	AR	<b>3 1</b> 2017
																0,1,20
			+-						7.					R	FC	EIVED
28. Product	ion - Interval	A														
Date First Produced 01/30/2017	Test Date 01/30/2017	Hours Tested 24	Test Production	Oil BBL 525.0	Gas MCF		Water BBL 2852.0	Соп	Gravity : API		Gas Gravity		Producti	ion Method	VS FR	OM WELL
Choke Size	Tbg. Press. Flwg. 1900	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF		Water BBL	Gas		8	Well St					
28a Produc	stion - Interva	1550.0		525		164	2852				Р	OW				
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF		Water BBL		Gravity : API		Gas Gravity		Producti	ion Method		
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF		Water BBL	Gas: Rati		6		CEPI G SG	p)	DAVIO	RE(	CORD GLASS

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #367579 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

**RECLAMATION DUE:** JUL 25 2017

SI

PETROLEUM ENGINEER

28b. Proc	duction - Interv	al C										
Date First	Test	Hours	Test	Oil	Gas	Water	Oil Gravit		Gas		Production Method	
Produced	Date	Tested	Production	BBL	MCF	BBL	Corr. API		Gravity	(		
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well S	tatus		
Size	SI SI	riess.	- Nate	BBL	MCF	BBL	Katio		1			
28c. Prod	duction - Interv	al D										
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravit Corr. API		Gas Gravity	/	Production Method	
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well S	tatus		
29. Dispo	osition of Gas(S	old, use	d for fuel, vent	ed, etc.)		1						
30. Sumi	mary of Porous	Zones (1	Include Aquife	ers):						31. For	mation (Log) Markers	
tests,	v all important a including depth ecoveries.	ones of n interva	porosity and c l tested, cushic	ontents there on used, time	eof: Cored e tool open	intervals an , flowing an	d all drill-stond shut-in pr	em ressures				
	Formation		Тор	Bottom		Descript	ions, Conter	nts, etc.			Name	Top Meas. Depth
BRUSHY BONE SE BONE SE BONE SE	CANYON CANYON PRING LIME PRING 1ST PRING 2ND PRING 3RD		5786 6742 8606 97.13 10187 11047 11468	6741 8605 9712 10186 11046 11220 15972						TO BA YA SE CA CH BR BO BO BO	STLER P OF SALT SE OF SALT TES VEN RIVERS PITAN REEF ERRY CANYON USHY CANYON NE SPRING LIME NE SPRING 1ST NE SPRING 3RD DLFCAMP	1603 1729 3361 3537 3721 3784 5786 6742 8606 9713 10187 11047 11221
Addir Bone 1st E 2nd I 3rd E	tional remarks ( eys & perfs/sti tional Tops: e Spring Lm 8 Sone Spring 9 Bone Spring 1 camp 11221'	mulatio 606' 713' 10187'						v				
	e enclosed attac	hments:										
1. El	ectrical/Mechan	nical Log	gs (1 full set re	eq'd.)		2. Geologi	ic Report		3. 1	DST Rep	port 4. Direction	onal Survey
5. St	indry Notice for	r pluggir	ng and cement	verification		6. Core Ar	nalysis		7 (	Other:		
34 I harr	hy certify that	the force	oing and atten	hed informs	tion is com	nlete and a	orrect as det	ermined for	om all a	vailable	records (see attached instructi	one).
J→. I nere	by certify that	are roreg		ronic Submi	ssion #367	579 Verifie	ed by the B	LM Well I	nforma			ousj.
			Committed to	Fo	r COG O	PERATING	G LLC, ser	at to the H	obbs			
Name	e (please print)			AI 14199 101	processii	ig by DUN		Title REGL				
Signa	ature	(Electro	nic Submissi	on)				Date <u>02/20</u>	/2017		-	
						,						
	U.S.C. Section nited States any										to make to any department or a	agency

- 1	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
	15,860	40	14	15,677	64	14	15,548	35	14	15,385	40	14	15,230	36	14
From	15,820	39	12	15,849	33	12	15,504	40	12	15,346	40	12	15,187	39	12
Bottom to		40	10	15,616	33	10	15,464	39	10	15,306	40	10	15,148	40	10
Гор	15,741		8	15,583		8	15,425		8	15,266		8	15,108	-	8
	100000000000000000000000000000000000000			San Carlotte San Carlotte		Total District			Total Control	10,200	-	Exchange has been	ALCOHOLD TO SERVICE AND ADDRESS OF THE PARTY		Charles and the
			Shipping and						Berth States	ACCUSED TO SEC. 10.		FICTOR AND ADDRESS.	Market School Street,		
	Plug to Plug	149	44	Plug to Plug	109	44	Plug to Plug	138	44	Plug to Plug	132	44	Plug to Plug	139	44
	Frac Plug	-	Total Shots		-	Total Shots			Total Shots		THE RESERVE OF THE PERSON NAMED IN	Total Shots		-	Total Shots
1	Frac Frog	19,039	10(2) 3910(8)	Fracting	Injune	Total Shots	Frac Floy	10,000	TOTAL SHOTS	Fracting	10,000	TOTAL SHOUS	riacring	10,041	Total Shots
	Stage 6	Distance Between Perfs	Shots	Stage 7	Distance Between Perfs	Shots	Stage 8	Distance Between Perfs	Shots	Stage 9	Distance Between Perfs	Shots	Stage 10	Distance Between Perfs	Shots
	15,069	39	14	14,908	42	14	14,752	40	14	14,594	39	14	14,436	35	14
From	15,029	39	12	14,871	40	12	14,713	40	12	14,554	39	12	14,396	40	12
Bottom to		40	10	14.831	39	10	14,673	40	10	14,515	44	10	14,356	39	10
Тор	14,950	70	8	14,792	- 03	8	14,633		8	14,471		8	14,317	- 05	8
	17,500		Control of the Control				17,000		Control of Control			0	HSII	_	0
															Residence Control
	Plug to Plug	134	44	Plug to Plug	138	44	Plug to Plug	135	44	Plug to Plug	143	44	Plug to Plug	138	44
	_	- Charles and the same of the	Total Shots	Frac Plug	14,930	Total Shots		14,768	Total Shots		-	Total Shots		14,455	Total Shots
	Frac Plug	13,004	Total Shots	Frac Flug	14,330	Fotal Shots	Frac Frug	14,700	Total Shots	Frac Flug	14,014	Total Shots	Frac Plug	14,400	rotal Shots
	Stage 11	Distance Between Perfs	Shots	Stage 12	Distance Between Perfs	Shots	Stage 13	Distance Between Perfs	Shots	Stage 14	Distance Between Perfs	Shots	Stage 15	Distance Between Perfs	Shots
	14,277	40	14	14,119	45	14	13,960	40	14	13,805	44	14	13,644	40	14
From	14,238	40	12	14,079	39	12	13.921	39	12	13,763	40	12	13,605	40	12
Bottom to		34	10	14,040	40	10	13.882	33	10	13,723	39	10	13,565	40	10
Тор	14,130	34			40	PROGRAMMA SERVICES		23	Manager of the Control of the Contro		23	MATRICIA CONTRACTOR CONTRACTOR	THE RESIDENCE OF THE PERSON NAMED IN	40	
	14,164			14,000		8	13,849		8	13,684		8	13,525		8
9								-							
	DA - A - DI	40.4		Di- A Di-	420	A A	D1 4 D1	424	-	The same	470	44	P1 4 P1	420	
	Plug to Plug	124	44	Plug to Plug		44	Plug to Plug		44	Plug to Plug	138	44	Plug to Plug	130	44
	Frac Plug	14,288	Total Shots	Frac Plug	14,139	Total Shots	Frac Plug	13,970	Total Shots	Frac Plug	13,822	Total Shots	Frac Plug	13,655	<b>Total Shots</b>
	Stage 16	Distance Between Perfs	Shots	Stage 17	Distance Between Perfs	Shots	Stage 18	Distance Between	Shots	Stage 19	Distance Between Perfs	Shots	Stage 20	Distance Between Parfs	Shots
	13,489	36	14	13,328	39	14	13,170	Perfs 37	14	13,011	40	14	12,856	35	14
From	13,446	39	12	13,288	39	12	13,130	40	12	12,972	40	12	12,813	39	12
Bottom to			The Real Property lies and the least lies and the lies and the lies and the least lies and the least lies and the lies and t			THE RESERVE OF THE PERSON NAMED IN		39	The second second	THE RESERVE OF THE PERSON NAMED IN		Witness Co. Laboratory	The second liverage of the second	40	-
Тор	10,101	40	10	13,249	42	10	13,090			12,932	41	10	12,774	40	10
			Commission - Management			Chickenson Schlemenson		- 00	10					-10	
	13,367		8	13,207		8	13,051		8	12,891		. 8	12,734		8
	13,307		8	13,207		Chickenson Schlemenson			the same of the sa	12,891		8	12,734	,	8
						6	13,051		. ŝ					7	
	Plug to Plug	139	44	Plug to Plug	131	8	13,051 Plug to Plug	138	8	Plug to Plug	130	44	Plug to Plug	139	44
		139		Plug to Plug	131	6	13,051 Plug to Plug	138	. ŝ	Plug to Plug	130			7	
	Plug to Plug	13,506 Distance Between	44	Plug to Plug	13,338 Distance Between	8	13,051 Plug to Plug	138 13,189 Distance Between	8	Plug to Plug	13,021 Distance Between	44	Plug to Plug	139 12,873 Distance Between	44
	Plug to Plug Frac Plug Stage 21	13,506 Distance	44 Total Shota	Plug to Plug Frac Plug	13,338 Distance	8 44 Total Shots	Plug to Plug Frac Plug	138 13,189 Distance	8 44 Total Shots	Plug to Plug Frac Plug Stage 24	13,021 Distance	44 Total Shots	Plug to Plug Frac Plug Stage 25	139 12,873 Distance	44 Total Shots
Fróm	Plug to Plug Frac Plug Stage 21 12.695	13,506 Distance Between Perfs	44 Total Shots Shots	Plug to Plug Frac Plug Stage 22	13,338 Distance Between Parfs	44 Total Shots	Plug to Plug Frac Plug Stage 23	138 13,189 Distance Between Parfs	44 Total Shots	Plug to Plug Frac Plug Stage 24	13,021 Distance Between Perfs	44 Total Shots Shots	Plug to Plug Frac Plug Stage 25	139 12,873 Distance Between Parfa	44 Total Shots Shots
Fróm	Plug to Plug Frac Plug Stage 21 12,695 12,655	Distance Between Perfs 39	44 Total Shots	Plug to Plug Frac Plug Stage 22 12,540 12,497	Distance Between Perfs 35	44 Total Shots Shots	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338	138 13,189 Distance Between Perfs 40	44 Total Shots Shots	Plug to Plug Frac Plug Stage 24 12,224 12,180	Distance Between Peris 35	44 Total Shots Shots	Plug to Plug Frac Plug Stage 25 12,060 12,022	139 12,873 Distance Between Perfs 41	44 Total Shots Shots
Fróm	Plug to Plug Frac Plug Stage 21 12.695 12.655 12.615	Distance Between Perfs 39 40	Shots  14 12 10	Plug to Plug Frac Plug Stage 22 12.540 12.497 12.457	Distance Between Perfs 35 40	44 Total Shots Shots 14 12 10	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299	138 13,189 Distance Between Perfs 40 39	44 Total Shots Shots 14 12 10	Plug to Plug Frac Plug Stage 24 12,224 12,180 12,141	Distance Between Peris 35 39	44 Total Shots Shots 14 12 10	Plug to Plug Frac Plug Stage 25 12.060 12.022 11,982	139 12,873 Distance Between Perfs 41 40	44 Total Shots Shots 14 12 10
Fróm Bottom to	Plug to Plug Frac Plug Stage 21 12,695 12,655	Distance Between Perfs 39 40	44 Total Shota Shots	Plug to Plug Frac Plug Stage 22 12,540 12,497	Distance Between Perfs 35 40	44 Total Shots Shots 14 12	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338	138 13,189 Distance Between Perfs 40 39	44 Total Shots Shots 14 12	Plug to Plug Frac Plug Stage 24 12,224 12,180	Distance Between Peris 35 39	44 Total Shots Shots	Plug to Plug Frac Plug Stage 25 12,060 12,022	139 12,873 Distance Between Perfs 41 40	44 Total Shots Shots
From Bottom to	Plug to Plug Frac Plug Stage 21 12.695 12.655 12.515 12.575	Distance Between Perfs 39 40 40	44 Total Shots Shots 14 12 10 8	Plug to Plug Frac Plug Stage 22 12,540 12,497 12,457 12,418	Distance Between Parts 35 40 39	44 Total Shots Shots 14 12 10 8	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259	138 13,189 Distance Between Perfs 40 39 40	## 44 Total Shots  Shots  14 12 10 8	Plug to Plug Frac Plug Stage 24 12,224 12,180 12,141	Distance Between Peris 35 39 40	44 Total Shots Shots 14 12 10 6	Plug to Plug Frac Plug Stage 25 12,060 12,022 11,962 11,943	139 12,873 Distance Between Perfs 41 40 39	Shots  14 12 10 8
Fróm Bottom to	Plug to Plug Frac Plug Stage 21 12.695 12.655 12.615	Distance Between Perfs 39 40 40	Shots  14 12 10	Plug to Plug Frac Plug Stage 22 12.540 12.497 12.457 12.418	Distance Between Perfs 35 40	44 Total Shots Shots 14 12 10	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug	138 13,189 Distance Between Perfs 40 39	44 Total Shots Shots 14 12 10	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug	Distance Between Peris 35 39	44 Total Shots Shots 14 12 10	Plug to Plug Frac Plug Stage 25 12.060 12.022 11,982	139 12,873 Distance Between Perfs 41 40 39	Shots Shots 14 12 10 8
From Bottom to	Plug to Plug Frac Plug  Stage 21  12.695 12.655 12.575  Plug to Plug Frac Plug  Stage 26	Distance Between Perfs 39 40 40	Shots  14 12 10 8  44 Total Shots	Stage 22  12.540 12.497 12.418  Plug to Plug Frac Plug Stage 22	Distance Between Perfs 35 40 39	Shots Shots 14 12 10 6 Total Shots	Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug Stage 28	138 13,189 Distance Between Perfs 40 39 40	Shots  Shots  14  12  10  8  Total Shots	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug	Distance Between Peris 35 39 40	Shots Shots 14 12 10 6	Plug to Plug Frac Plug  Stage 25  12.060 12.022 11.982 11.943  Plug to Plug	139 12,873 Distance Between Perfs 41 40 39	Shots Shots 14 12 10 8
From Bottom to	Plug to Plug Frac Plug  Stage 21  12.695 12.655 12.515 12.575  Plug to Plug Frac Plug	Distance Between Perfs 39 40 40 130 12,705	Shots  14 12 10 8  44  Total Shots	Plug to Plug Frac Plug Stage 22 12.540 12.497 12.418 Plug to Plug Frac Plug	13,338  Distance Between Perfs 35 40 39  138 12,556  Distance Between	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug Stage 23 12,378 12,338 12,299 12,259 Plug to Plug Frac Plug	138 13,189 Distance Between Perfs 40 39 40 131 12,390 Distance Between	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40 139 12,240 Distance Between Between	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug Stage 25 12.060 12.022 11.943 Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 12,770 Distance Between Perfs 41 40 39	Shots Shots 14 12 10 8 Total Shots
From Softon to Top	Plug to Plug Frac Plug  Stage 21  12.695 12.655 12.655 12.575  Plug to Plug Frac Plug  Stage 26  11,908	Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs	Shots  14 12 10 8  44 Total Shots	Stage 22  12.540 12.497 12.418  Plug to Plug Frac Plug Stage 22	13,338  Distance Between Perfs 35 40 39 138 12,556  Distance Between Perfs	Shots Shots 14 12 10 6 Total Shots	Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug Stage 28	138 13,189 Distance Between Paris 40 39 40 131 12,390 Distance Between Peris	Shots  Shots  14  12  10  8  Total Shots	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12240  Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug Stage 25 12.060 12.022 11.943 Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,870 Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots
From Bottom to Top	Plug to Plug Frac Plug  Stage 21  12.695 12.655 12.575  Plug to Plug Frac Plug  Stage 26  11.908 11.864	Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs 35	Shots  14 12 10 8  Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	Plug to Plug Frac Plug  Stage 22  12.540 12.497 12.457 12.418  Plug to Plug Frac Plug  Stage 27  11,745 11,705	13,338  Distance Between Perfs 35 40 39 138 12,556  Distance Between Perfs 39	Shots  14 12 10 8  Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,051  Plug to Plug Frac Plug  Stage 23  12,378  12,338  12,299  12,259  Plug to Plug Frac Plug  Stage 28  11,591  11,547	138 13.189 Distance Between Perfs 40 40 131 12,390 Distance Between Perfs 34	Shots  14 12 10 8 Total Shots  Shots 14 12 10 18 44 Total Shots  Shots 14 12	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12240  Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug Stage 25 12.060 12.022 11.943 Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,870 Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots
From Softon to Top	Plug to Plug Frac Plug  Stage 21  12.695 12.655 12.515 12.575  Plug to Plug Frac Plug  Stage 26  11.908 11.864 11.624	13.506  Distance Between Perfs 39 40 40 130 12,705  Distance Between Perfs 35 40	### A44    Total Shots	Plug to Plug Frac Plug  Stage 22  12.540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27  11,745 11,705 11,666	13,338  Distance Setween Perfs 35 40 39 12,556  Distance Between Perfs 39 39 39 39	## ## ## ## ## ## ## ## ## ## ## ## ##	13,051  Plug to Plug Frac Plug  Stage 23  12,376 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591 11,547 11,506	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs 34 39	## ## ## ## ## ## ## ## ## ## ## ## ##	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12240  Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug Stage 25 12.060 12.022 11.943 Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,870 Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots
From Bottom to Top	Plug to Plug Frac Plug  Stage 21  12.695 12.655 12.575  Plug to Plug Frac Plug  Stage 26  11.908 11.864	13.506  Distance Between Perfs 39 40 40 130 12,705  Distance Between Perfs 35 40	Shots  14 12 10 8  Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	Plug to Plug Frac Plug  Stage 22  12.540 12.497 12.457 12.418  Plug to Plug Frac Plug  Stage 27  11,745 11,705	13,338  Distance Setween Perfs 35 40 39 12,556  Distance Between Perfs 39 39 39 39	Shots  14 12 10 8  Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,051  Plug to Plug Frac Plug  Stage 23  12,378  12,338  12,299  12,259  Plug to Plug Frac Plug  Stage 28  11,591  11,547	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs 34 39	Shots  14 12 10 8 Total Shots  Shots 14 12 10 18 44 Total Shots  Shots 14 12	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12240  Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug Stage 25 12.060 12.022 11.943 Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,870 Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots
From Bottom to Top	Plug to Plug Frac Plug  Stage 21  12.695 12.655 12.515 12.575  Plug to Plug Frac Plug  Stage 26  11.908 11.864 11.624	13.506  Distance Between Perfs 39 40 40 130 12,705  Distance Between Perfs 35 40	### A44    Total Shots	Plug to Plug Frac Plug  Stage 22  12.540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27  11,745 11,705 11,666	13,338  Distance Setween Perfs 35 40 39 12,556  Distance Between Perfs 39 39 39 39	## ## ## ## ## ## ## ## ## ## ## ## ##	13,051  Plug to Plug Frac Plug  Stage 23  12,376 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591 11,547 11,506	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs 34 39	## ## ## ## ## ## ## ## ## ## ## ## ##	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12240  Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug Stage 25 12.060 12.022 11.943 Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,870 Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots
From Bottom to Top	Plug to Plug Frac Plug  Stage 21  12.695 12.655 12.515 12.575  Plug to Plug Frac Plug  Stage 26  11.908 11.864 11.624	13.506  Distance Between Perfs 39 40 40 130 12,705  Distance Between Perfs 35 40	### A44    Total Shots	Plug to Plug Frac Plug  Stage 22  12.540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27  11,745 11,705 11,666	13,338  Distance Setween Perfs 35 40 39 12,556  Distance Between Perfs 39 39 39 39	## ## ## ## ## ## ## ## ## ## ## ## ##	13,051  Plug to Plug Frac Plug  Stage 23  12,376 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591 11,547 11,506	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs 34 39	## ## ## ## ## ## ## ## ## ## ## ## ##	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12240  Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots	Plug to Plug Frac Plug Stage 25 12.060 12.022 11.943 Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,870 Distance Between Perfs 0	Shots Shots 14 12 10 8 Total Shots

## MAS FEDERAL #4H (30-025-43482)

	THE PERIOD IN THE	30 023 4340	,_,
<u>Perfs</u>	7 1/2% Acid (Gal)	Sand (#)	Fluid (Gal)
1	1512	314383	310506
2	4536	314255	343224
3	3024	313277	325458
4	3024	310006	332262
5	3024	313086	334026
6	3024	313597	326970
7	3024	311661	327726
8	3024	310593	322728
9	3066	312890	330204
10	3024	312743	329658
11	3024	313190	339276
12	3024	312420	349776
13	3024	312850	321510
14	3108	313796	328440
15	3234	312911	323484
16	3024	313028	322434
17	3024	311517	326508
18	3066	314088	315966
19	3024	313345	325794
20	3024	312896	325710
21	3024	314584	321048
22	3024	313402	351540
23	3024	314355	322896
24	3024	312318	323064
25	3066	311464	320544
26	3066	310857	321300
27	3024	314641	322602
28	3024	311934	325920
Totals	85134	8760087	9170574

## MAS FEDERAL #4H 30-025-43482

	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
From	15,860	40	14	15,677	64	14	15,548	35	14	15,385	40	14	15,230	36	14
From Bottom to	15,820	39	12	15,649	33	12	15,504	40	12	15,346	40	12	15,187	39	12
ор	15,781 15,741	40	10	15,616 15,583	33	10	15,464	39	10	15,306	40	10	15,148	40	10
	15,741		8	15,583		8	15,425		8	15,266		8	15,108		8
	Plug to Plug	149	44	Plug to Plug	109	44	Plug to Plug	138	44	Plug to Plug	132	44	Plug to Plug	139	44
	Frac Plug	15,890	Total Shots	Frac Plug	15,692	Total Shots	Frac Plug	15,563	Total Shots	Frac Plug	15,398	Total Shots	Frac Plug	15,247	Total Shot
	Stage 6	Distance Between	Shots	Stage 7	Distance Between	Shots	Stage 8	Distance Between	Shots	Stage 9	Distance Between	Shots	Stage 10	Distance Between	Shots
	15,069	Perfs 39	14	14,908	Perfs 42	14	14,752	Perfs 40	14	14,594	Perfs 39	14	14,436	Perfs 35	14
rom	15,029	39	12	14,871	40	12	14,713	40	12	14,554	39	12	14,396	40	12
Bottom to	14,990	40	10	14,831	39	10	14,673	40	10	14,515	44	10	14,356	39	10
Ор	14,950		8	14,792		8	14,633		8	14,471		8	14,317		8
	Plug to Plug	134	44	Plug to Plug	138	44	Plug to Plug	135	44	Plug to Plug	143	44	Plug to Plug	138	44
	Frac Plug	15,084	<b>Total Shots</b>	Frac Plug	14,930	<b>Total Shots</b>	Frac Plug	14,768	<b>Total Shots</b>	Frac Plug	14,614	<b>Total Shots</b>	Frac Plug	14,455	Total Sho
	Stage 11	Distance Between Perfs	Shots	Stage 12	Distance Between Perfs	Shots	Stage 13	Distance Between Perfs	Shots	Stage 14	Distance Between Perfs	Shots	Stage 15	Distance Between Perfs	Shots
	14,277	40	14	14,119	45	14	13,960	40	14	13,805	44	14	13,644	40	14
From	14,238	40	12	14,079	39	12	13,921	39	12	13,763	40	12	13,605	40	12
Bottom to	14,198	34	10	14,040	40	10	13,882	33	10	13,723	39	10	13,565	40	10
Гор	14,164		8	14,000		8	13,849		8	13,684		8	13,525		8
	Plug to Plug	124	44	Plug to Plug	139	44	Plug to Plug	121	44	Plug to Plug	138	44	Plug to Plug	130	44
	Frac Plug	14,288	Total Shots	Frac Plug	14,139	Total Shots	Frac Plug	13,970	Total Shots	Frac Plug	13,822	Total Shots	Frac Plug	13,655	Total Shot
	Stage 16	Distance Between	Shots	Stage 17	Distance Between	Shots	Stage 18	Distance Between	Shots	Stage 19	Distance Between	Shots	Stage 20	Distance Between	Shots
	13,489	Perfs 36	14	13,328	Perfs 39	14	13,170	Perfs 37	14	13,011	Perfs 40	14	12,856	Perfs 35	14
From	13,446	39	12	13,288	39	12	13,130	40	12	12,972	40	12	12,813	39	12
Bottom to	13,407	- 00	1.0-							12,932	41	10			10
Гор		40	10	13.249	42	10	13.090	39	10				12.774	40	
	13,367	40	10	13,249	42	10	13,090	39	10				12,774	40	8
,	13,367	40		13,249 13,207	42	8	13,090	39	8	12,891		8	12,774	40	
			8	13,207		8	13,051		8	12,891		8	12,734		8
,	Plug to Plug	139	8	13,207 Plug to Plug	131	8	13,051 Plug to Plug	138	8	12,891 Plug to Plug	130	8	12,734 Plug to Plug	139	8
,			8	13,207		8	13,051		8	12,891	130	8	12,734 Plug to Plug		8
	Plug to Plug	139	8	13,207 Plug to Plug	131	8	13,051 Plug to Plug	138	8	12,891 Plug to Plug		8	12,734 Plug to Plug	139	8
	Plug to Plug Frac Plug Stage 21	139 13,506 Distance Between Perfs 39	8 44 Total Shots Shots	Plug to Plug Frac Plug Stage 22 12,540	131 13,338 Distance Between Perfs 35	8 44 Total Shots Shots	Plug to Plug Frac Plug Stage 23	138 13,189 Distance Between Perfs 40	8 44 Total Shots Shots	Plug to Plug Frac Plug Stage 24 12,224	Distance Between Perfs 35	44 Total Shots Shots	Plug to Plug Frac Plug Stage 25 12,060	139 12,873 Distance Between Perfs 41	8  44  Total Shots  Shots
From	Plug to Plug Frac Plug Stage 21 12,695 12,655	139 13,506 Distance Between Perfs 39 40	8  44 Total Shots  Shots  14 12	13,207 Plug to Plug Frac Plug Stage 22 12,540 12,497	131 13,338 Distance Between Perfs 35 40	8  44 Total Shots  Shots  14 12	Plug to Plug Frac Plug  Stage 23  12,378  12,338	138 13,189 Distance Between Perfs 40 39	44 Total Shots Shots 14 12	Plug to Plug Frac Plug Stage 24 12,224 12,180	Distance Between Perfs 35 39	8 44 Total Shots Shots 14 12	12,734  Plug to Plug Frac Plug  Stage 25  12,060 12,022	139 12,873 Distance Between Perfs 41 40	44 Total Sho Shots
From Bottom to	Plug to Plug Frac Plug  Stage 21  12,695 12,655 12,615	139 13,506 Distance Between Perfs 39	8  44  Total Shots  Shots  14  12  10	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457	131 13,338 Distance Between Perfs 35	8 Total Shots Shots 14 12 10	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299	138 13,189 Distance Between Perfs 40	8  44  Total Shots  Shots  14  12  10	12,891  Plug to Plug Frac Plug  Stage 24  12,224 12,180 12,141	Distance Between Perfs 35	8 44 Total Shots Shots 14 12 10	12,734  Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982	139 12,873 Distance Between Perfs 41	44 Total Sho Shots 14 12 10
From Bottom to	Plug to Plug Frac Plug Stage 21 12,695 12,655	139 13,506 Distance Between Perfs 39 40	8  44 Total Shots  Shots  14 12	13,207 Plug to Plug Frac Plug Stage 22 12,540 12,497	131 13,338 Distance Between Perfs 35 40	8  44 Total Shots  Shots  14 12	Plug to Plug Frac Plug  Stage 23  12,378  12,338	138 13,189 Distance Between Perfs 40 39	44 Total Shots Shots 14 12	Plug to Plug Frac Plug Stage 24 12,224 12,180	Distance Between Perfs 35 39	8 44 Total Shots Shots 14 12	12,734  Plug to Plug Frac Plug  Stage 25  12,060 12,022	139 12,873 Distance Between Perfs 41 40	44 Total Shot Shots
From Bottom to	Plug to Plug Frac Plug  Stage 21  12,695 12,655 12,615	139 13,506 Distance Between Perfs 39 40	8  44  Total Shots  Shots  14  12  10	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457	131 13,338 Distance Between Perfs 35 40	8 Total Shots Shots 14 12 10	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299	138 13,189 Distance Between Perfs 40 39	8  44  Total Shots  Shots  14  12  10	12,891  Plug to Plug Frac Plug  Stage 24  12,224 12,180 12,141	Distance Between Perfs 35 39	8 44 Total Shots Shots 14 12 10	12,734  Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982	139 12,873 Distance Between Perfs 41 40	44 Total Shot Shots 14 12 10
From Bottom to Top	Plug to Plug Frac Plug Stage 21 12,695 12,655 12,615 12,575	139 13,506 Distance Between Perfs 39 40	8 44 Total Shots Shots 14 12 10 8	13,207 Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418	131 13,338 Distance Between Perfs 35 40 39	8  44  Total Shots  Shots  14  12  10  8	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259	138 13,189 Distance Between Perfs 40 39 40	8 44 Total Shots Shots 14 12 10 8	12,891  Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101	Distance Between Perfs 35 39 40	8 44 Total Shots Shots 14 12 10 8	12,734  Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943	139 12,873 Distance Between Perfs 41 40 39	8  44  Total Shots  Shots  14  12  10  8
From Bottom to	Plug to Plug Frac Plug  Stage 21  12,695 12,655 12,615	139 13,506 Distance Between Perfs 39 40	8  44  Total Shots  Shots  14  12  10	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418  Plug to Plug	131 13,338 Distance Between Perfs 35 40	8 Total Shots Shots 14 12 10	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299	138 13,189 Distance Between Perfs 40 39	8  44  Total Shots  Shots  14  12  10	12,891  Plug to Plug Frac Plug  Stage 24  12,224 12,180 12,141	Distance Between Perfs 35 39	8 44 Total Shots Shots 14 12 10	12,734  Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982	139 12,873 Distance Between Perfs 41 40	44 Total Shot Shots 14 12 10
From Bottom to	Plug to Plug Frac Plug  Stage 21  12,695 12,655 12,615 12,575  Plug to Plug	139 13,506 Distance Between Perfs 39 40 40 130 12,705	8  44  Total Shots  Shots  14  12  10  8	13,207 Plug to Plug Frac Plug  Stage 22 12,540 12,497 12,457 12,418  Plug to Plug	131 13,338 Distance Between Perfs 35 40 39	8  44  Total Shots  Shots  14  12  10  8	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug	138 13,189 Distance Between Perfs 40 39 40	8 44 Total Shots Shots 14 12 10 8	12,891  Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug	13,021  Distance Between Perfs 35 39 40  139 12,240	8  44  Total Shots  Shots  14  12  10  8	12,734  Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943  Plug to Plug	139 12,873 Distance Between Perfs 41 40 39	8 44 Total Sho Shots 14 12 10 8
From Bottom to	Plug to Plug Frac Plug  Stage 21  12,695 12,655 12,615 12,575  Plug to Plug Frac Plug  Stage 26	139 13,506 Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs	Shots Shots  44 Total Shots  14 12 10 8  44 Total Shots	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27	131 13,338 Distance Between Perfs 35 40 39 138 12,556 Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs	Shots Shots 14 12 10 8 Total Shots	12,891  Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug	Distance Between Perfs 35 39 40  139 12,240  Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8	12,734  Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943  Plug to Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,070 Distance Between Perfs	8 44 Total Sho Shots 14 12 10 8
From Bottom to Fop	Plug to Plug Frac Plug  Stage 21  12,695 12,655 12,615 12,575  Plug to Plug Frac Plug  Stage 26  11,908	139 13,506 Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs 35	Shots Shots 14 12 10 8 Total Shots  44 Total Shots	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27	131 13,338 Distance Between Perfs 35 40 39  138 12,556 Distance Between Perfs 39	Shots Shots 14 12 10 8 44 Total Shots	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591	138 13,189 Distance Between Perfs 40 39 40 131 12,390 Distance Between Perfs 34	Shots Shots 14 12 10 8 44 Total Shots	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12,240  Distance Between	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots	Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943  Plug to Plug Frac Plug	139 12,873  Distance Between Perfs 41 40 39  127 12,070  Distance Between	8  44  Total Shots  Shots  14  12  10  8  44  Total Sho
From Bottom to Top	Plug to Plug Frac Plug  Stage 21  12,695 12,655 12,575  Plug to Plug Frac Plug  Stage 26  11,908 11,864	139 13,506 Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs 35 40	Shots Shots  14 12 10 8  44 Total Shots	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27  11,745 11,705	131 13,338 Distance Between Perfs 35 40 39  138 12,556 Distance Between Perfs 39 39	Shots Shots  14 12 10 8  Total Shots  Shots  44 Total Shots	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591 11,547	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs 34 39	Shots Shots  44 Total Shots  14 12 10 8  44 Total Shots  Shots  14 12 12	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12,240  Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots	Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943  Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,070 Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Sho
From Bottom to Top From Bottom to	Plug to Plug Frac Plug  Stage 21  12,695 12,615 12,575  Plug to Plug Frac Plug  Stage 26  11,908 11,864 11,824	139 13,506 Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs 35	8  44  Total Shots  Shots  14  12  10  8  Total Shots  Shots  14  12  10  10  10  10  10  10  10  10  10	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27  11,745 11,705 11,666	131 13,338 Distance Between Perfs 35 40 39  138 12,556 Distance Between Perfs 39	8  44  Total Shots  Shots  14  12  10  8  Total Shots  Shots  14  12  10  10  10  10  10  10  10  10  10	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591 11,547 11,508	138 13,189 Distance Between Perfs 40 39 40 131 12,390 Distance Between Perfs 34	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots  Shots  14  12  10  10	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12,240  Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots	Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943  Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,070 Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Sho
From Bottom to Top	Plug to Plug Frac Plug  Stage 21  12,695 12,655 12,575  Plug to Plug Frac Plug  Stage 26  11,908 11,864	139 13,506 Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs 35 40	Shots Shots  14 12 10 8  44 Total Shots	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27  11,745 11,705	131 13,338 Distance Between Perfs 35 40 39  138 12,556 Distance Between Perfs 39 39	Shots Shots  14 12 10 8  Total Shots  Shots  44 Total Shots	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591 11,547	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs 34 39	Shots Shots  44 Total Shots  14 12 10 8  44 Total Shots  Shots  14 12 12	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12,240  Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots	Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943  Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,070 Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Sho
From Bottom to Γορ From Bottom to	Plug to Plug Frac Plug  Stage 21  12,695 12,615 12,575  Plug to Plug Frac Plug  Stage 26  11,908 11,864 11,824	139 13,506 Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs 35 40	8  44  Total Shots  Shots  14  12  10  8  Total Shots  Shots  14  12  10  10  10  10  10  10  10  10  10	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27  11,745 11,705 11,666	131 13,338 Distance Between Perfs 35 40 39  138 12,556 Distance Between Perfs 39 39	8  44  Total Shots  Shots  14  12  10  8  Total Shots  Shots  14  12  10  10  10  10  10  10  10  10  10	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591 11,547 11,508	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs 34 39	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots  Shots  14  12  10  10	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12,240  Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots	Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943  Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,070 Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Sho
From Bottom to Fop	Plug to Plug Frac Plug  Stage 21  12,695 12,615 12,575  Plug to Plug Frac Plug  Stage 26  11,908 11,864 11,824	139 13,506 Distance Between Perfs 39 40 40 130 12,705 Distance Between Perfs 35 40	8  44  Total Shots  Shots  14  12  10  8  Total Shots  Shots  14  12  10  10  10  10  10  10  10  10  10	13,207  Plug to Plug Frac Plug  Stage 22  12,540 12,497 12,457 12,418  Plug to Plug Frac Plug  Stage 27  11,745 11,705 11,666	131 13,338 Distance Between Perfs 35 40 39  138 12,556 Distance Between Perfs 39 39	8  44  Total Shots  Shots  14  12  10  8  Total Shots  Shots  14  12  10  10  10  10  10  10  10  10  10	13,051  Plug to Plug Frac Plug  Stage 23  12,378 12,338 12,299 12,259  Plug to Plug Frac Plug  Stage 28  11,591 11,547 11,508	138 13,189 Distance Between Perfs 40 39 40  131 12,390 Distance Between Perfs 34 39	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots  Shots  14  12  10  10	Plug to Plug Frac Plug  Stage 24  12,224  12,180  12,141  12,101  Plug to Plug Frac Plug	Distance Between Perfs 35 39 40  139 12,240  Distance Between Perfs	8  44  Total Shots  Shots  14  12  10  8  44  Total Shots	Plug to Plug Frac Plug  Stage 25  12,060 12,022 11,982 11,943  Plug to Plug Frac Plug	139 12,873 Distance Between Perfs 41 40 39 127 12,070 Distance Between Perfs	8  44  Total Sho  Shots  14  12  10  8  44  Total Sho