3/20/17

575-748-6946

								7747					
									HOBBS MAR 2 9 20 CES				
									Sac	One			
District I 1625 N. French	Dr., Ho	obbs, NM	88240	Г	,	State of Ne	w Mexico		MAR 2920	17	्रे <sup>न</sup>	R	Form C-104 evised August 1, 2011 priate District Office
District II 811 S. First St.,	Artesia	NM 882	10	Eı	nergy, I	Minerals &	Natural Re	sour	ces	17		10	evised ridgust 1, 2011
District III					Oi	1 Conservat	ion Division	1	Submi	t one cop	py to a	pprop	oriate District Office
1000 Rio Brazos District IV	Rd., A	ztec, NM	87410		122	20 South St.	Francis Dr				$\boxtimes$	AN	MENDED REPORT
1220 S. St. Fran	cis Dr.,	Santa Fe	, NM 87	7505		Santa Fe, N						2 114	ALIADED REFORT
	I.	RI	E <b>QU</b> I	EST FO	R ALI	LOWABLE	AND AUT	НО	RIZATIO	N TO	TRA	NSP	ORT
<sup>1</sup> Operator n									<sup>2</sup> OGRID N	ımber			
COG O <sub>I</sub> 2208 W.									<sup>3</sup> Reason for	Filing C	2291.		ua Data
Artesia,								-	Reason for	rining C	NW		ve Date
<sup>4</sup> API Number			<sup>5</sup> Pool	Name						6 P	ool Cod		
30 - 025-43			8 70	4 37		Hills; Bone	Spring, Nort	h		9 77	7 11 NT	_	6434
<sup>7</sup> Property C 316			Prop	perty Nan		Sombrero Fe	deral Com			' W	ell Nu		4H
II. 10 Sur		Location	on										
Ul or lot no.		on Tow	- 1	Range	Lot Idn		North/South	Line			West li	ne	County
M	13		4S	34E		460	South		380	'	Vest		Lea
Ul or lot no.		Hole L			Lot Idn	Foot from the	North/South	T !	Foot forms the	E	West li		Country
L L	Section 12		nship 4S	Range 34E	Lot Ian	2436	South	Line	377		West II Vest	ne	County Lea
12 Lse Code	13 Pro	oducing M	ethod	14 Gas Co		<sup>15</sup> C-129 Per	mit Number	<sup>16</sup> C	2-129 Effective	e Date	17 (	C-129	<b>Expiration Date</b>
F		Code F		3/8									-
III. Oil a	and G	as Tra	nspor										
18 Transpor			and pos			19 Transpo	rter Name						<sup>20</sup> O/G/W
OGRID						and A	ddress						
					Aln	ha Crude Co	nnector Pipel	ine					0
							inicotor ripo						
24650					Ta	rga Midstrea	m Services, I	P					G
						1000 Louisian Houston,							
						nouston,	1A //002						
												erinka era ana	
IV. Well	l Com	nlotion	Doto										
<sup>21</sup> Spud Da			Ready			<sup>23</sup> TD	<sup>24</sup> PBTD		<sup>25</sup> Perfor	ations	T	26	DHC, MC
12/13/16			3/5/1		1	16640'	16535'		9738-16	5510'			
<sup>27</sup> Ho	le Size			<sup>28</sup> Casing	& Tubin	ng Size	<sup>29</sup> De <sub>l</sub>	oth Se	et		<sup>30</sup> S	acks (	Cement
17	1/2"			1	3 3/8"		11	28'				87	0
			-										
12	1/4"				9 5/8"		53	26'				141	10
8 3	3/4"				5 1/2"		160	533'				297	75
			+		2 7/8"		00	35'					
					2 7/6			33					
V. Well  31 Date New			Dolivo	ry Date	33 7	Test Date	<sup>34</sup> Test I	onatl	35 7	bg. Pres	CHERO	3	<sup>36</sup> Csg. Pressure
3/8/17	Oil	Gas	3/8/1			/12/17	24 I			150#	sure		1050#
<sup>37</sup> Choke Si	ize		<sup>38</sup> Oil <b>81</b>			Water 3095	<sup>40</sup> G 75						41 Test Method Flowing
<sup>42</sup> I hereby cert	tify the	t the rule		e Oil Cone					OIL CONSE	RVATION	I DIVIO	SION	8
been complied	with a	nd that th	he infor	rmation gi	ven above				OIL CONSE	CVILLIOI	, DIVI	7011	
complete to the	e best o	of my kn	owledge	e and belie	ef.		Approved by:						
Signature	5	10	u.				approved by:		The	ille			
Printed name:							Title:	/		1			Carines
Stormi Davi	1S						Approval Date:		/		Petr	oleu	m Engineer
Regulatory	Analy	st					Approvat Date:		04/2	5/1	17		
E-mail Address	s:								• •				
sdavis@con	cho.co	<u>om</u>	Pho	ne:									

Form 3160-5 (June 2015)

## UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

HOBBS OCD

FORM APPROVED OMB NO. 1004-0137 Expires: January 31, 2018

SUNDRY Do not use thi abandoned wel	NOTICES AND REPOI s form for proposals to II. Use form 3160-3 (APL	RTS ON WE drill or to re D) for such p	ELLS Enter an proposals	717	NMNM123527  6. If Indian, Allottee or	Tribe Name
	TRIPLICATE - Other inst				7. If Unit or CA/Agree	ment, Name and/or No.
Type of Well     ☐ Gas Well ☐ Oth	ner				8. Well Name and No. SOMBRERO FEDI	ERAL COM 4H
Name of Operator     COG OPERATING LLC		STORMI DA'	VIS		9. API Well No. 30-025-43286	
3a. Address 2208 WEST MAIN ARTESIA, NM 88210		3b. Phone No Ph: 575-74	. (include area code) 8-6946		10. Field and Pool or E RED HILLLS; BC	xploratory Area DNE SPRING N
4. Location of Well (Footage, Sec., T.	, R., M., or Survey Description)				11. County or Parish, S	tate
Sec 13 T24S R34E Mer NMP	SWSW 460FSL 380FWL				LEA COUNTY, N	MM
12. CHECK THE AF	PPROPRIATE BOX(ES)	TO INDICA	TE NATURE OF	NOTICE,	REPORT, OR OTH	ER DATA
TYPE OF SUBMISSION			TYPE OF	ACTION		
☐ Notice of Intent	☐ Acidize	☐ Dee	pen	☐ Product	ion (Start/Resume)	☐ Water Shut-Off
_	☐ Alter Casing	☐ Hyd	raulic Fracturing	□ Reclam	ation	■ Well Integrity
Subsequent Report	☐ Casing Repair	□ New	Construction	□ Recomp	olete	Other
☐ Final Abandonment Notice	☐ Change Plans	Plug	g and Abandon	☐ Tempor	arily Abandon	
	☐ Convert to Injection	Plug	g Back	☐ Water I	Disposal	
13. Describe Proposed or Completed Ope If the proposal is to deepen directions Attach the Bond under which the wor following completion of the involved testing has been completed. Final At determined that the site is ready for final 1/22/17 to 2/3/17 Load & test 16535' & test csg to 8375#. Gw/13,073,048# sand & 18,486 2/6/17 to 2/8/17 Drilled out Cf 2/18/17 Set 2 7/8" 6.5# L-80 to 3/5/17 Began flowing back & 3/8/17 Date of first production 14. I hereby certify that the foregoing is	ally or recomplete horizontally, it will be performed or provide to operations. If the operation respondent Notices must be file inal inspection.  annulus to 1500#. Good Good test. Perf 9738-1651 (792 gal fluid.)  FP's. Wash down to CBP (1998) (19	give subsurface the Bond No. or sults in a multiple ed only after all test. Ran Cl 10' (1980). A @ 16535'.	locations and measure file with BLM/BIA. To completion or recording the completion of recording the completion of recording the completion of the completion	ed and true very Required su Required su nnjetion in a nnjetion in a log reclamation. Set CBF al 7 1/2%; finding the sum of the sum	ertical depths of all pertine beequent reports must be 1 new interval, a Form 3160 n, have been completed at 0 @ rac	ent markers and zones. Tiled within 30 days 1-4 must be filed once
14. Thereby certify that the foregoing is	Electronic Submission #3	371111 verifie OPERATING I	d by the BLM Well .LC, sent to the H	Information obbs	n System	
Name (Printed/Typed) STORMI	DAVIS		Title PREPAR	RER		
Signature (Electronic S	Submission)		Date 03/27/20	)17		
	THIS SPACE FO	R FEDERA	AL OR STATE (	OFFICE U	SE	
Approved By			Title			Date
Conditions of approval, if any, are attache certify that the applicant holds legal or equ which would entitle the applicant to condu	uitable title to those rights in the	not warrant or subject lease	Office			

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

HOBBS OCD

Form 3160-4 (August 2007)

UNITED STATES MAR 2 9 2017 DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED OMB No. 1004-0137 Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG 5. Lease Serial No. NMNM123527 la. Type of Well Gas Well Other 6. If Indian, Allottee or Tribe Name □ Dry Oil Well New Well b. Type of Completion ■ Work Over Deepen ☐ Plug Back □ Diff. Resvr. 7. Unit or CA Agreement Name and No. Other Name of Operator
 COG OPERATING LLC Contact: STORMI DAVIS Lease Name and Well No. SOMBRERO FEDERAL COM 4H E-Mail: sdavis@concho.com 3a. Phone No. (include area code) Ph: 575-748-6946 3. Address 2208 WEST MAIN 9. API Well No. ARTESIA, NM 88210 30-025-43286 Location of Well (Report location clearly and in accordance with Federal requirements)\* Sec 13 T24S R34E Mer NMP 10. Field and Pool, or Exploratory RED HILLS; BONE SPRING, N SWSW 460FSL 380FWL At surface 11. Sec., T., R., M., or Block and Survey or Area Sec 13 T24S R34E Mer NMP At top prod interval reported below Sec 12 T24S R34E Mer NMP At total depth NWSW 2436FSL 377FWL 12. County or Parish 13. State NM LFA 14. Date Spudded 12/13/2016 17. Elevations (DF, KB, RT, GL)\* 15. Date T.D. Reached 16. Date Completed 01/15/2017 3475 GL 18. Total Depth: MD 16640 19. Plug Back T.D.: MD 16535 20. Depth Bridge Plug Set: MD 16535 TVD 9312 TVD 9317 TVD 9317 21. Type Electric & Other Mechanical Logs Run (Submit copy of each) CNL No No No 22 Was well cored? Yes (Submit analysis) Was DST run? Yes (Submit analysis) Directional Survey? Yes (Submit analysis) 23. Casing and Liner Record (Report all strings set in well) Bottom Stage Cementer No. of Sks. & Slurry Vol. Amount Pulled Hole Size Size/Grade Wt. (#/ft.) Cement Top\* Type of Cement (BBL) (MD) (MD) Depth 17.500 13.375 J55 54.5 0 1128 870 0 12.250 9.625 J55 40.0 0 5326 1410 0 0 16633 2975 4350 8.750 5.500 P110 17.0 24. Tubing Record Depth Set (MD) Packer Depth (MD) Size Depth Set (MD) Packer Depth (MD) Size Depth Set (MD) Packer Depth (MD) 2.875 9035 25. Producing Intervals 26. Perforation Record Perforated Interval No. Holes Perf. Status Top A) **BONE SPRING** 9738 16510 9738 TO 16510 0.430 1980 **OPEN** B) C) D) 27. Acid, Fracture, Treatment, Cement Squeeze, Etc. Amount and Type of Material Depth Interval 9738 TO 16510 SEE ATTACHED 28. Production - Interval A Date First Oil Gravity Test Test Gas Hours MCF Produced Date Tested Production BBL BBL. Corr. API Gravity 03/08/2017 03/12/2017 81.0 75.0 3095.0 FLOWS FROM WELL Gas:Oil 24 Hr. Well Status Choke Tbg. Press. Water Csg. Gas Ratio Flwg. BBL MCF BBL 150 1050.0 81 75 3095 POW 28a. Production - Interval B Water Date First Gas MCF Oil Gravity Gas Production Method Test BBL BBL Corr. API Gravity Produced Date Tested Production 24 Hr. Choke Tbg. Press Csg. Gas:Oil Well Status Size Flwg. Rate BBL MCF BBL Ratio

	duction - Interv	_	Т	lou.	C	Iw	Oil Gravity		Ic		Production Method	
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Corr. API		Gas Gravity		Production Method	
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well Status			
28c. Proc	luction - Interv	al D										
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API		Gas Gravity		Production Method	
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well Status			
29. Dispo	osition of Gas(	Sold, used	d for fuel, vent	ed, etc.)								
30. Sumi	nary of Porous	Zones (I	nclude Aquife	rs):					31.	. Forn	nation (Log) Markers	
tests,	all important including dept ecoveries.											
	Formation		Тор	Bottom		Descript	tions, Conten	ts, etc.			Name	Top Meas Depth
	NYON CANYON CANYON		5543 5575 6513 8063	5574 6512 8062 9415						CHE	IAR L CANYON ERRY CANYON JSHY CANYON	Meas. Depth 5543 5575 6513 8063
1ST BON 2ND BON	PRING LM IE SPRING NE SPRING NE SPRING		9416 10500 11191 12092	10499 11190 12091 12533						1ST 2ND	NE SPRING LM BONE SPRING BONE SPRING BONE SPRING BONE SPRING	9416 10500 11191 12092
Surv	tional remarks eys, log & per tional Tops: camp: 12534	fs/stimu										
33. Circl	e enclosed atta	chments:										
	lectrical/Mecha					2. Geolog			3. DS7	•	ort 4. Directio	nal Survey
5. Si	undry Notice fo	r pluggin	ig and cement	verification		6. Core A	nalysis		7 Othe	er:		
34. I here	eby certify that	the foreg	going and attac	hed informa	tion is co	mplete and c	correct as dete	ermined fro	om all avai	lable	records (see attached instruction	ons):
			Electi	ronic Submi Fo	ssion #37 or COG (	71121 Verifi OPERATIN	ed by the BI G LLC, sen	LM Well I t to the H	nformatio obbs	n Sys	tem.	
Nam	e(please print)	STORM	II DAVIS				Т	itle PREF	PARER			
Signa	ature	(Electro	nic Submissi	on)			D	ate <u>03/27</u>	/2017			
Title 18 of the Ur	U.S.C. Section nited States any	1001 and false, fic	Title 43 U.S.	C. Section 1 ulent statem	212, makents or re	e it a crime f presentations	or any person s as to any ma	knowing	ly and willf n its jurisdi	fully t	to make to any department or a	igency

## SOMBRERO FEDERAL COM #4H (30-025-43286)

<u>Perfs</u>	7 1/2% Acid (Gal)	Sand (#)	Fluid (Gal)
1	1512	234830	354354
2	3024	281400	353892
3	3024	287900	525882
4	3024	198220	481026
5	3024	274810	422436
6	3024	293410	536340
7	3024	224310	350700
8	3024	298340	391146
9	3024	270120	444822
10	3024	279570	469644
11	3024	292340	430668
12	3024	298210	383544
13	3024	284670	417858
14	3024	278910	353724
15	3024	298920	419076
16	3024	301360	390222
17	3024	312950	740292
18	3024	298550	578676
19	3024	294940	637686
20	3024	305740	590730
21	3024	288458	500052
22	3024	299430	380604
23	3024	298450	406938
24	3024	297610	348474
25	3024	305270	505890
26	3024	299490	393918
27	3024	298740	355236
28	3024	299370	350028
29	3024	307500	355152
30	3024	301070	355656
31	3024	300070	351666
32	3024	299290	348768
33	3024	291940	344694
34	3024	300270	346878
35	3024	298500	342342
36	3024	296610	342048
37	3024	297620	408954
38	3012	293140	343170
39	3024	302380	346668
40	3024	296330	340284
41	3024	298340	336966
42	3024	301190	377118
43	3024	295020	345450
44	3024	303270	343812
45	3024	294190	343308
Totals	124 556	12 072 048	19 496 702

**Totals** 

134,556 13,073,048 18,486,792

See a se					-			-		_					
Free	01	Distance	Ob -t-	C4 0	Distance	Oh ste	C4 2	Distance	Chata	Ctore 4	Distance	Chata	Carro F	Distance	Chata
-	Stage 1	Between	Shots	Stage 2	Between	Shots	Stage 3	Between	Shots	Stage 4	Between	Shots	Stage 5	Between	Shots
Francis	40.540	Perfs	14	16,340	Perfs	14	16,207	Perfs 38	14	16,053	Perfs	14	15,905	Perfs 38	14
From	16,510	38			57						41				
Bottom to	16,472	38	12	16,321	38	12	16,170	38	12	16,022	42	12	15,867	38	12
Тор	16,434	37	10	16,283	38	10	16,132	38	10	15,980	37	10	15,829	38	10
	16,397	*	8	16,245		8	16,094		8	15,943		8	15,791		8
	Plug to Plug	138	44	Plug to Plug	115	44	Plug to Plug	138	44	Plug to Plug	132	44	Plug to Plug	133	44
	Frac Plug	16,535	Total Shots	Frac Plug	16,360	Total Shots	Frac Plug	16,232	Total Shots	Frac Plug	16,075	Total Shots	Frac Plug	15,924	Total Shots
	Tracriag	10,000	Total ollots	Tracting	10,000	Total Ollots	Traditing	101202	Total Ollots	Tracting	10,010	Total Ollots	Tracting	10,021	Total ollots
		Distance			Distance			Distance			Distance			Distance	
	Stage 6	Between	Shots	Stage 7	Between	Shots	Stage 8	Between	Shots	Stage 9	Between	Shots	Stage 10	Between	Shots
	Stage 0	Perfs	Silots	Otage /	Perfs	011013	Stage 0	Perfs	Silots	Stage 5	Perfs	Silots	Stage 10	Perfs	Silots
	15,753	38	14	15,602	40	14	15,451	38	14	15,294	43	14	15,148	38	14
From	15,716	38	12	15,564	38	12	15,413	38	12	15,262	38	12	15,110	38	12
Bottom to				_		-									Name and Address of the Owner, where
Тор	15,678	36	10	15,526	37	10	15,375	38	10	15,224	38	10	15,072	37	10
	15,642		8	15,489		8	15,337		8	15,186		8	15,035		8
	Plug to Plug	130	44	Plug to Plug	132	44	Plug to Plug	133	44	Plug to Plug	132	44	Plug to Plug	124	44
	Frac Plug	15,772	Total Shots	Frac Plug	15,621	Total Shots	Frac Plug	15,470	<b>Total Shots</b>	Frac Plug	15,318	Total Shots	Frac Plug	15,159	Total Shots
,															
		Distance			Distance			Distance			Distance			Distance	
	Stage 11	Between	Shots	Stage 12	Between	Shots	Stage 13	Between	Shots	Stage 14	Between	Shots	Stage 15	Between	Shots
		Perfs			Perfs			Perfs	0		Perfs	55.15		Perfs	55
	14,997	38	14	14,840	43	14	14,694	36	14	14,543	38	14	14,391	38	14
From	14,959	38	12	14,808	38	12	14,656	38	12	14,505	38	12	14,354	38	12
Bottom to															
Тор	14,921	38	10	14,770	40	10	14,618	37	10	14,467	38	10	14,316	38	10
	14,883		8	14,730		8	14,581		8	14,429		8	14,278		8
	Plug to Plug	133	44	Plug to Plug	124	44	Plug to Plug	132	44	Plug to Plug	133	44	Plug to Plug	132	44
	Frac Plug	15,016	Total Shots	Frac Plug	14,854	Total Shots	Frac Plug	14,713	Total Shots	Frac Plug	14,562	Total Shots	Frac Plug	14,410	Total Shots
-	lug	. 2,010		au. iug		. C.a. Onota	ug				. HOUL	. otal ollots		. 7,-10	1010101010
		Dietanas			Dietanas			Dietanas			Dietaras			Dietaras	
	Stone 40	Distance	Shot	Stone 47	Distance	Shots	Stone 40	Distance	Chata	Stone 40	Distance	Chat	Stone 20	Distance	Shot
	Stage 16	Between	Shots	Stage 17	Between	Shots	Stage 18	Between	Shots	Stage 19	Between	Shots	Stage 20	Between	Shots
	44.040	Perfs		44.000	Perfs		40.000	Perfs		40.000	Perfs	44	40.004	Perfs	4000
From	14,240	38	14	14,089	38	14	13,937	38	14	13,786	38	14	13,625	48	13654
Bottom to	14,202	38	12	14,051	38	12	13,897	31	12	13,748	38	12	13,597	38	
Тор	14,164	37	10	14,013	38	10	13,866	42	10	13,710	37	10	13,559	30	
	14,127		8	13,975		8	13,824		8	13,673		8	13,529		
	Plug to Plug	132	44	Plug to Plug	133	44	Plug to Plug	132	44	Plug to Plug	132	44	Plug to Plug	112	13654
	Frac Plug	14,259	Total Shots	Frac Plug	14,108	Total Shots	Frac Plug	13,956	Total Shots			Total Shots		-	
,	Frac Plug	14,209	Total Shots	Frac Plug	14,100	Total Shots	Frac Plug	13,900	Total Shots	Frac Plug	13,805	Total Shots	Frac Plug	13,641	Total Shots
		-													
		Distance			Distance			Distance			Distance			Distance	
	Stage 21	Between	Shots	Stage 22	Between	Shots	Stage 23	Between	Shots	Stage 24	Between	Shots	Stage 25	Between	Shots
		Perfs			Perfs			Perfs			Perfs			Perfs	
E	13,483	46	14	13,324	46	14	13,181	35	14	13,029	38	14	12,873	43	14
From															
From Bottom to	13,446	38	12	13,294	38	12	13,143	38	12	12,992	38	12	12,840	38	12
Bottom to	13,446	38	12	13,294 13,256	38 40	12 10	13,143 13,105	38 38	12 10	12,992 12,954	38	12	12,840 12,802	38 37	12
	13,408		10	13,256		10	13,105		10	12,954		10	12,802		10
Bottom to						The state of the s			-						
Bottom to	13,408 13,370	38	10 8	13,256 13,216	40	10 8	13,105 13,067	38	10 8	12,954 12,916	38	10 8	12,802 12,765	37	10
Bottom to	13,408 13,370 Plug to Plug	132	10 8	13,256 13,216 Plug to Plug	124	10 8	13,105 13,067 Plug to Plug	133	10 8	12,954 12,916 Plug to Plug	132	10 8	12,802 12,765 Plug to Plug	132	10 8 44
Bottom to	13,408 13,370	38	10 8	13,256 13,216	40	10 8	13,105 13,067	38	10 8	12,954 12,916	38	10 8	12,802 12,765	37	10 8
Bottom to	13,408 13,370 Plug to Plug	132 13,502	10 8	13,256 13,216 Plug to Plug	124 13,340	10 8	13,105 13,067 Plug to Plug	133 13,200	10 8	12,954 12,916 Plug to Plug	132 13,048	10 8	12,802 12,765 Plug to Plug	132 12,897	10 8 44
Bottom to	13,408 13,370 Plug to Plug Frac Plug	132 13,502 Distance	10 8 44 Total Shots	13,256 13,216 Plug to Plug Frac Plug	124 13,340 Distance	10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug	133 13,200 Distance	10 8 44 Total Shots	12,954 12,916 Plug to Plug Frac Plug	132 13,048	10 8 44 Total Shots	12,802 12,765 Plug to Plug Frac Plug	132 12,897 Distance	10 8 44 Total Shots
Bottom to	13,408 13,370 Plug to Plug	132 13,502 Distance Between	10 8	13,256 13,216 Plug to Plug	124 13,340 Distance Between	10 8	13,105 13,067 Plug to Plug	133 13,200 Distance Between	10 8	12,954 12,916 Plug to Plug	132 13,048 Distance Between	10 8	12,802 12,765 Plug to Plug	132 12,897 Distance Between	10 8 44
Bottom to	13,408 13,370 Plug to Plug Frac Plug	132 13,502 Distance Between Perfs	10 8 44 Total Shots	13,256 13,216 Plug to Plug Frac Plug Stage 27	124 13,340 Distance Between Perfs	10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug	133 13,200 Distance Between Perfs	10 8 44 Total Shots	12,954 12,916 Plug to Plug Frac Plug	132 13,048 Distance Between Perfs	10 8 44 Total Shots	12,802 12,765 Plug to Plug Frac Plug Stage 30	132 12,897 Distance Between Perfs	10 8 44 Total Shots
Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725	132 13,502 Distance Between Perfs 40	10 8 44 Total Shots Shots	13,256 13,216 Plug to Plug Frac Plug Stage 27	124 13,340 Distance Between Perfs 38	10 8 44 Total Shots Shots	13,105 13,067 Plug to Plug Frac Plug Stage 28	133 13,200 Distance Between Perfs 40	10 8 44 Total Shots Shots	12,954 12,916 Plug to Plug Frac Plug Stage 29 12,273	132 13,048 Distance Between Perfs 38	10 8 44 Total Shots Shots	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121	132 12,897 Distance Between	10 8 44 Total Shots Shots
Bottom to Top	13,408 13,370 Plug to Plug Frac Plug	132 13,502 Distance Between Perfs	10 8 44 Total Shots	13,256 13,216 Plug to Plug Frac Plug Stage 27	124 13,340 Distance Between Perfs	10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug	133 13,200 Distance Between Perfs	10 8 44 Total Shots	12,954 12,916 Plug to Plug Frac Plug	132 13,048 Distance Between Perfs	10 8 44 Total Shots	12,802 12,765 Plug to Plug Frac Plug Stage 30	132 12,897 Distance Between Perfs	10 8 44 Total Shots
From Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725	132 13,502 Distance Between Perfs 40	10 8 44 Total Shots Shots	13,256 13,216 Plug to Plug Frac Plug Stage 27	124 13,340 Distance Between Perfs 38	10 8 44 Total Shots Shots	13,105 13,067 Plug to Plug Frac Plug Stage 28	133 13,200 Distance Between Perfs 40	10 8 44 Total Shots Shots	12,954 12,916 Plug to Plug Frac Plug Stage 29 12,273	132 13,048 Distance Between Perfs 38	10 8 44 Total Shots Shots	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121	132 12,897 Distance Between Perfs 38	10 8 44 Total Shots Shots
Bottom to Top	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725 12,689	132 13,502 Distance Between Perfs 40 38	10 8 44 Total Shots Shots	13,256 13,216 Plug to Plug Frac Plug Stage 27 12,575 12,538 12,500	124 13,340 Distance Between Perfs 38 38	10 8 44 Total Shots Shots 14 12	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348	133 13,200 Distance Between Perfs 40 38	10 8 44 Total Shots Shots	12,954 12,916 Plug to Plug Frac Plug Stage 29 12,273 12,235 12,197	132 13,048 Distance Between Perfs 38 38	10 8 44 Total Shots Shots	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121 12,083 12,041	132 12,897 Distance Between Perfs 38 42	10 8 44 Total Shots Shots 14 12
From Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725 12,689 12,651	132 13,502 Distance Between Perfs 40 38	10 8 44 Total Shots Shots 14 12	13,256 13,216 Plug to Plug Frac Plug Stage 27 12,575 12,538	124 13,340 Distance Between Perfs 38 38	10 8 44 Total Shots Shots 14 12 10	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386	133 13,200 Distance Between Perfs 40 38	10 8 44 Total Shots Shots 14 12 10	12,954 12,916 Plug to Plug Frac Plug Stage 29 12,273 12,235	132 13,048 Distance Between Perfs 38 38	10 8 44 Total Shots Shots 14 12 10	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121 12,083	132 12,897 Distance Between Perfs 38 42	10 8 44 Total Shots Shots 14 12 10
From Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725 12,689 12,651 12,613	132 13,502 Distance Between Perfs 40 38 38	10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216 Plug to Plug Frac Plug Stage 27 12,575 12,538 12,500 12,464	124 13,340 Distance Between Perfs 38 38 36	10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311	133 13,200 Distance Between Perfs 40 38 37	10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916 Plug to Plug Frac Plug Stage 29 12,273 12,235 12,197 12,159	132 13,048 Distance Between Perfs 38 38 38	10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121 12,083 12,041 12,008	132 12,897 Distance Between Perfs 38 42 33	10 8 44 Total Shots Shots 14 12 10 8
From Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725 12,689 12,651 12,613	132 13,502 Distance Between Perfs 40 38 38	10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216 Plug to Plug Frac Plug Stage 27 12,575 12,538 12,500 12,464 Plug to Plug	124 13,340 Distance Between Perfs 38 38 36	10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311	133 13,200 Distance Between Perfs 40 38 37	10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38	10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121 12,083 12,041 12,008 Plug to Plug	132 12,897 Distance Between Perfs 38 42 33	10 8 44 Total Shots Shots 14 12 10 8
From Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725 12,689 12,651 12,613	132 13,502 Distance Between Perfs 40 38 38	10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216 Plug to Plug Frac Plug Stage 27 12,575 12,538 12,500 12,464	124 13,340 Distance Between Perfs 38 38 36	10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311	133 13,200 Distance Between Perfs 40 38 37	10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916 Plug to Plug Frac Plug Stage 29 12,273 12,235 12,197 12,159	132 13,048 Distance Between Perfs 38 38 38	10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121 12,083 12,041 12,008	132 12,897 Distance Between Perfs 38 42 33	10 8 44 Total Shots Shots 14 12 10 8
From Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725 12,689 12,651 12,613	132 13,502 Distance Between Perfs 40 38 38 38	10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216 Plug to Plug Frac Plug Stage 27 12,575 12,538 12,500 12,464 Plug to Plug	124 13,340 Distance Between Perfs 38 38 36	10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311	133 13,200 Distance Between Perfs 40 38 37	10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38 38 132	10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121 12,083 12,041 12,008 Plug to Plug	132 12,897 Distance Between Perfs 42 33	10 8 44 Total Shots Shots 14 12 10 8
From Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725 12,689 12,651 12,613 Plug to Plug Frac Plug	38  132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,256 13,216 Plug to Plug Frac Plug Stage 27 12,575 12,538 12,500 12,464 Plug to Plug Frac Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug	38  133  13,200  Distance Between Perfs 40 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121 12,083 12,041 12,008 Plug to Plug Frac Plug	37  132 12,897 Distance Between Perfs 38 42 33  134 12,142 Distance	Shots  14 12 10 8  44 Total Shots
From Bottom to	13,408 13,370 Plug to Plug Frac Plug Stage 26 12,725 12,689 12,651 12,613	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs	10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216 Plug to Plug Frac Plug Stage 27 12,575 12,538 12,500 12,464 Plug to Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Between	10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311	38  133 13,200  Distance Between Perfs 40 38 37  132 12,443  Distance Between Between	10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug	38  132 13,048  Distance Between Perfs 38 38 38 132 12,291  Distance Between Between Between Between Between Between Between Between	10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765 Plug to Plug Frac Plug Stage 30 12,121 12,083 12,041 12,008 Plug to Plug	37  132 12,897  Distance Between Perfs 38 42 33  134 12,142  Distance Between Between Between Between Between Between Between	10 8 44 Total Shots Shots 14 12 10 8
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34	132 13,048 Distance Between Perfs 38 38 38 112,291 Distance Between Perfs	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970	132 13,502 Distance Between Perfs 40 38 38  127 12,740 Distance Between Perfs 38	10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 44 Total Shots	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39	Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894	132 13,502 Distance Between Perfs 40 38 38  127 12,740 Distance Between Perfs 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10	13,105 13,067  Plug to Plug Frac Plug  Stage 28  12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33  11,659 11,630 11,592	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 38 40	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44 38 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,443	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug	38  132  13,502  Distance Between Perfs 40 38 38  127  12,740  Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703  Plug to Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,552 11,554  Plug to Plug	38  133  13,200  Distance Between Perfs 40 38 37  132  12,443  Distance Between Perfs 44 38 38 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,384 11,330 11,289 11,251  Plug to Plug	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 38 40	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44 38 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,443	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug	38  132  13,502  Distance Between Perfs 40 38 38  127  12,740  Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703  Plug to Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,552 11,554  Plug to Plug	38  133  13,200  Distance Between Perfs 40 38 37  132  12,443  Distance Between Perfs 44 38 38 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,384 11,330 11,289 11,251  Plug to Plug	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug	38  132  13,502  Distance Between Perfs 40 38 38  127  12,740  Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703  Plug to Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,552 11,554  Plug to Plug	38  133  13,200  Distance Between Perfs 40 38 37  132  12,443  Distance Between Perfs 44 38 38 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,384 11,330 11,289 11,251  Plug to Plug	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  14 12 10 8 14 12 10 8 44 44 44
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703  Plug to Plug	124 13,340 Distance Between Perfs 38 38 36 12,594 Distance Between Perfs 38 40 135 11,838	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,552 11,554  Plug to Plug	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 1132 11,686	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38 121 11,524	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,384 11,330 11,289 11,251  Plug to Plug	132 12,897 Distance Between Perfs 38 42 33 11,34 12,142 Distance Between Perfs 39 41 38 11,384	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  14 12 10 8 14 12 10 8 44 44 44
From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Between Perfs	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,783 11,703  Plug to Plug Frac Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 Distance	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 38  132 11,686 Distance Between Between Perfs	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38 121 11,524 Distance Between Perfs	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38 11,384 Distance Between Perfs Company Co	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots
From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 37 11,740 Distance	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,783 11,703  Plug to Plug Frac Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 135 11,838	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44 38 38 38  132 11,686 Distance	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38 121 11,524 Distance	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38 11,384 Distance	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots
From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36  11,214	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37 11,059	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 Distance Between Perfs 41	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 Shots	13,105 13,067 Plug to Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug  Stage 38 10,911	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 11,686 Distance Between Perfs 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608	132 12,897 Distance Between Perfs 38 42 33 12,142 Distance Between Perfs 39 41 38  11,384 Distance Between Perfs 41	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  44 Total Shots  Shots  44 Total Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 14 14 15 16 16 16 16 16 16 16 16 16 16 16 16 16
From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,661 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,783 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 38 40 Distance Between Perfs 41 40	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 8 44 Total Shots	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554  Plug to Plug Frac Plug  Stage 38 10,911 10,872	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44 38 38 38  Distance Between Perfs 38 38 37	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37 36	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  11,384 Distance Betwefn Perfs 41 37	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  44 Total Shots  Shots  44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  5hots  41 Total Shots
From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,256 13,216  Plug to Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,793 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 Distance Between Perfs 41	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554  Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 11,686 Distance Between Perfs 38	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533	132 12,897 Distance Between Perfs 38 42 33 12,142 Distance Between Perfs 39 41 38  11,384 Distance Between Perfs 41	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 4 Total Shots  Shots  14 12 10 8 8 44 Total Shots  14 12 10 10 8 8 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,661 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,783 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 38 40 135 11,838 Distance Between Perfs 41 40	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 8 44 Total Shots	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554  Plug to Plug Frac Plug  Stage 38 10,911 10,872	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44 38 38 38  Distance Between Perfs 38 38 37	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37 36	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  11,384 Distance Betwefn Perfs 41 37	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  44 Total Shots  Shots  44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  5hots  41 Total Shots
From Bottom to Top  From Bottom to Top	13,408 13,370 Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots  14 12 10 8 44 11 10 8 8 44 11 10 8 8	13,256 13,216 Plug to Plug Frac Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464 Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703 Plug to Plug Frac Plug  Stage 37 11,059 11,027 10,987 10,949	124 13,340 Distance Between Perfs 38 38 36 12,594 Distance Between Perfs 38 40 Distance Between Perfs 41 40 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 11,686 Distance Between Perfs 38 37 38	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 46 37 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 10 10 10 10 10 10 10 10 10 10 10 10 10	12,802 12,765  Plug to Plug Frac Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38 11,384 Distance Between Perfs 39 41 38 38 133 133 133 133 133 133 133 133	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 8 8 14 10 8 8 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,256 13,216  Plug to Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 38 40 135 11,838 Distance Between Perfs 41 40	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554  Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44 38 38 38  Distance Between Perfs 38 38 37	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37 36	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  11,384 Distance Betwefn Perfs 41 37	10 8 44 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top	13,408 13,370 Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots  14 12 10 8 44 11 10 8 8 44 11 10 8 8	13,256 13,216 Plug to Plug Frac Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464 Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703 Plug to Plug Frac Plug  Stage 37 11,059 11,027 10,987 10,949	124 13,340 Distance Between Perfs 38 38 36 12,594 Distance Between Perfs 38 40 Distance Between Perfs 41 40 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 11,686 Distance Between Perfs 38 37 38	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 46 37 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 10 10 10 10 10 10 10 10 10 10 10 10 10	12,802 12,765  Plug to Plug Frac Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38 11,384 Distance Between Perfs 39 41 38 38 133 133 133 133 133 133 133 133	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 8 14 12 10 8 8 14 10 8 8 14 10 8 8 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 38	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Plug to Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 Distance Between Perfs 41 40 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 10 8 10 8 10 8 10 8 10 8 10	13,105 13,067 Plug to Plug Frac Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797 Plug to Plug	133 13,200 Distance Between Perfs 40 38 37  132 12,443  Distance Between Perfs 44 38 38  132 11,686  Distance Between Perfs 38 37 38	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 10 8  44 Total Shots  Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 Distance Between Perfs 46 37 38  121 11,524	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  11,384 Distance Between Perfs 39 41 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Plug to Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 135 11,838 Distance Between Perfs 41 40 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 10 8 10 8 10 8 10 8 10 8 10	13,105 13,067 Plug to Plug Frac Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797 Plug to Plug	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 38 132 11,686 Distance Between Perfs 38 37 31 31 31 31	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 10 8  44 Total Shots  Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37 38 121 121 121 121 122 122 123 124 125 125 127 127 129 10,778	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  133 11,384 Distance Between Perfs 41 37 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top	13,408 13,370 Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,661 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 37 132 11,989 Distance Between Perfs 37 38 38 37 Distance Distance Distance Detween Perfs 37 38 38 38 Distance Distance Detween Perfs 37 38 Distance Distance Distance Detween Perfs 37 38 Distance	10 8 44 Total Shots Shots 14 Total Shots  Shots 14 Total Shots  Shots 14 Total Shots  14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots	13,256 13,216 Plug to Plug Frac Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37 11,059 11,027 10,987 10,949  Plug to Plug Frac Plug	124 13,340 Distance Between Perfs 38 38 36 12,594 Distance Between Perfs 38 38 40 135 11,838 Distance Between Perfs 41 40 38 132 11,081	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797 Plug to Plug Frac Plug	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 1132 11,686 Distance Between Perfs 38 37 38 37 38 10,930 Distance	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 47 38  121 Distance Between Perfs 48 37 38  121 Distance Distance Distance Distance Distance Distance	10 8 44 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots	12,802 12,765  Plug to Plug Frac Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38 11,384 Distance Between Perfs 41 37 38 132 10,627	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 17 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37 132 11,989 Distance Between Perfs 38 38 37 Distance Between Perfs 38 38 37 Distance Between Perfs 38 38 38 Distance Between Perfs 38 38 Between Perfs 37 Between Perfs 38 Between Perfs 38 Between Perfs 38 Between Perfs 38 Between Perfs Between Perfs Between Perfs	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Plug to Plug	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 38 40 Distance Between Perfs 41 40 38 132 11,081 Distance Between Perfs	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 10 8 10 8 10 8 10 8 10 8 10	13,105 13,067 Plug to Plug Frac Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797 Plug to Plug	133 13,200 Distance Between Perfs 40 38 37  132 12,443 Distance Between Perfs 44 38 38  132 11,686 Distance Between Perfs 38 37 38  130,930 Distance Between	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 10 8  44 Total Shots  Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 Distance Between Perfs 37 36 34  129 10,778	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug	132 12,897 Distance Between Perfs 38 42 33  134 12,142 Distance Between Perfs 39 41 38  133 11,384 Distance Between Perfs 41 37 38  132 10,627 Distance Between	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 12 10 8 14 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 8 14 14 15 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,6613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 38 11,28 Distance Between Perfs 77 12,740	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  Shots  14 12 10 8  Shots  Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Frac Plug  Stage 42	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 135 11,838 Distance Between Perfs 41 40 38 132 11,081 Distance	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots Shots 44 Total Shots  Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,552 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797 Plug to Plug Frac Plug	38  133 13,200  Distance Between Perfs 40 38 37  132 12,443  Distance Between Perfs 44 38 38 38  132 11,686  Distance Between Perfs 38 37 38  133 10,930  Distance Between Perfs	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots  Shots  Shots  Shots  44 Total Shots  Shots  44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  11,524 Distance Between Perfs 37 36 34  129 10,778 Distance Between Perfs	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots Shots Shots Shots Shots Shots Shots Shots Shots Shots Shots Shots Shots Shots Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug  Stage 45	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  133 11,384 Distance Between Perfs 41 37 38  132 10,627 Distance Between Perfs	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 4 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  Shots  44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  15 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18
From Bottom to Top  From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31  11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 41  10,457	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 37  122 Distance Between Perfs 37 38 38 38 37 37 38 38 38 37	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Frac Plug  Stage 42 10,306	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 135 11,838  Distance Between Perfs 41 40 38 132 11,081	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots  14 Total Shots  Shots 14 12 10 8 44 Total Shots	13,105 13,067  Plug to Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311  Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,592 11,554  Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797  Plug to Plug Frac Plug  Stage 43 10,154	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 38 132 11,686 Distance Between Perfs 38 37 37 38 10,930 Distance Between Perfs 38 37 38 37 38	10 8  44 Total Shots  Shots  14 12 10 8  44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 44 10,003	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  11,524 Distance Between Perfs 37 36 31 11,524 Distance Between Perfs 37 36 39	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots Shots Shots 14 Total Shots Sho	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug  Stage 45 9,852	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  11,384  Distance Between Perfs 41 37 38  11,384  Distance Between Perfs 41 37 38  132 10,627	10 8 44 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots  Shots 14 Total Shots  Shots 14 12 10 8  44 Total Shots
From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370 Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 41 10,457 10,419	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 38 37  Distance Between Perfs 37 38 38 39	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,743 11,703  Plug to Plug Frac Plug  Stage 37 11,059 11,027 10,987 10,949  Plug to Plug Frac Plug  Stage 42 10,306 10,268	124 13,340 Distance Between Perfs 38 38 36 12,594 Distance Between Perfs 38 40 11,838 Distance Between Perfs 41 40 38 11,838 Distance Between Perfs 41 40 38 132 11,081	10 8 44 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 44 Total Shots  Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,552 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797 Plug to Plug Frac Plug  Stage 43 10,154 10,116	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 11,686 Distance Between Perfs 38 37 38 10,930 Distance Between Perfs 38 44 40	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 5hots 14 12 10 8  44 Total Shots	12,954 12,916  Plug to Plug Frac Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 44 10,003 9,965	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37 36 34  129 10,778 Distance Between Perfs 39 38	10 8 44 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 10 8  44 Total Shots  Shots 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug  Stage 45 9,852 9,814	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  133 11,384 Distance Between Perfs 41 37 38  132 10,627 Distance Between Perfs 37 37 35	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  44 Total Shots  Shots  14 12 10 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
From Bottom to Top  From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 41 10,457 10,419 10,380	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 37  122 Distance Between Perfs 37 38 38 38 37 37 38 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Frac Plug  Stage 42  10,306 10,268 10,230	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 40 135 11,838  Distance Between Perfs 41 40 38 132 11,081	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug Stage 38 10,911 10,872 10,835 10,797 Plug to Plug Frac Plug Stage 43 10,154 10,116 10,076	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 38 132 11,686 Distance Between Perfs 38 37 37 38 10,930 Distance Between Perfs 38 37 38 37 38	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 44 10,003 9,965 9,927	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  11,524 Distance Between Perfs 37 36 31 11,524 Distance Between Perfs 37 36 39	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug  Stage 45 9,852 9,814 9,779	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  11,384  Distance Between Perfs 41 37 38  11,384  Distance Between Perfs 41 37 38  132 10,627	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 14 12 10 8 8 14 12 10 8 14 12 10 8 16 15 16 16 16 16 16 16 16 16 16 16 16 16 16
From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370 Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 41 10,457 10,419	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 38 37  Distance Between Perfs 37 38 38 39	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27 12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32 11,819 11,743 11,703  Plug to Plug Frac Plug  Stage 37 11,059 11,027 10,987 10,949  Plug to Plug Frac Plug  Stage 42 10,306 10,268	124 13,340 Distance Between Perfs 38 38 36 12,594 Distance Between Perfs 38 40 11,838 Distance Between Perfs 41 40 38 11,838 Distance Between Perfs 41 40 38 132 11,081	10 8 44 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 44 Total Shots  Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Frac Plug Frac Plug  Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug  Stage 33 11,659 11,630 11,552 11,554 Plug to Plug Frac Plug  Stage 38 10,911 10,872 10,835 10,797 Plug to Plug Frac Plug  Stage 43 10,154 10,116	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 11,686 Distance Between Perfs 38 37 38 10,930 Distance Between Perfs 38 44 40	10 8 44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 5hots 14 12 10 8  44 Total Shots	12,954 12,916  Plug to Plug Frac Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 44 10,003 9,965	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37 36 34  129 10,778 Distance Between Perfs 39 38	10 8 44 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  444 Total Shots  Shots 14 12 10 8  44 Total Shots  Shots 14 12 10 10 8  44 Total Shots  Shots 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug  Stage 45 9,852 9,814	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  133 11,384 Distance Between Perfs 41 37 38  132 10,627 Distance Between Perfs 37 37 35	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 41 10,457 10,419 10,380	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 38 37  Distance Between Perfs 37 38 38 39	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Frac Plug  Stage 42  10,306 10,268 10,230	124 13,340 Distance Between Perfs 38 38 36 12,594 Distance Between Perfs 38 40 11,838 Distance Between Perfs 41 40 38 11,838 Distance Between Perfs 41 40 38 132 11,081	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug Stage 38 10,911 10,872 10,835 10,797 Plug to Plug Frac Plug Stage 43 10,154 10,116 10,076	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 11,686 Distance Between Perfs 38 37 38 10,930 Distance Between Perfs 38 44 40	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 44 10,003 9,965 9,927	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37 36 34  129 10,778 Distance Between Perfs 39 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug  Stage 45 9,852 9,814 9,779	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  133 11,384 Distance Between Perfs 41 37 38  132 10,627 Distance Between Perfs 37 37 35	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 10 8 8 14 12 10 10 8 10 10 10 10 10 10 10 10 10 10 10 10 10
From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 41 10,457 10,419 10,380 10,347	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 38 37	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Frac Plug  Stage 42  10,306 10,268 10,230 10,192	124 13,340 Distance Between Perfs 38 38 36 130 12,594 Distance Between Perfs 38 38 40 135 11,838 Distance Between Perfs 41 40 38 132 11,081 Distance Between Perfs 41 38 38	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug Stage 33 11,659 11,630 11,554 Plug to Plug Frac Plug Stage 38 10,911 10,872 10,835 10,797 Plug to Plug Frac Plug Stage 43 10,154 10,154 10,116 10,078	38  133 13,200  Distance Between Perfs 40 38 37  132 12,443  Distance Between Perfs 44 38 38 38  132 11,686  Distance Between Perfs 38 37 38  10,930  Distance Between Perfs 38 40 34	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,883 10,649	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  111,524 Distance Between Perfs 37 36 34  129 10,778 Distance Between Perfs 37 36 34 38 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,384 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug  Stage 45 9,852 9,814 9,779 9,738	132 12,897 Distance Between Perfs 38 42 33  134 12,142 Distance Between Perfs 39 41 38  133 11,384  Distance Between Perfs 41 37 38  132 10,627  Distance Between Perfs 41 37 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots
From Bottom to Top  From Bottom to Top  From Bottom to Top	13,408 13,370  Plug to Plug Frac Plug  Stage 26 12,725 12,689 12,651 12,613  Plug to Plug Frac Plug  Stage 31 11,970 11,932 11,894 11,857  Plug to Plug Frac Plug  Stage 36 11,214 11,176 11,138 11,100  Plug to Plug Frac Plug  Stage 41 10,457 10,419 10,380	132 13,502 Distance Between Perfs 40 38 38 127 12,740 Distance Between Perfs 38 38 37  132 11,989 Distance Between Perfs 37 38 38 38 37  Distance Between Perfs 37 38 38 39	10 8 44 Total Shots Shots 14 12 10 8 44 Total Shots	13,256 13,216  Plug to Plug Frac Plug Frac Plug  Stage 27  12,575 12,538 12,500 12,464  Plug to Plug Frac Plug  Stage 32  11,819 11,781 11,743 11,703  Plug to Plug Frac Plug  Stage 37  11,059 11,027 10,987 10,949  Plug to Plug Frac Plug  Stage 42  10,306 10,268 10,230	124 13,340 Distance Between Perfs 38 38 36 12,594 Distance Between Perfs 38 40 11,838 Distance Between Perfs 41 40 38 11,838 Distance Between Perfs 41 40 38 132 11,081	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots 14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	13,105 13,067 Plug to Plug Frac Plug Stage 28 12,424 12,386 12,348 12,311 Plug to Plug Frac Plug Stage 33 11,659 11,630 11,592 11,554 Plug to Plug Frac Plug Stage 38 10,911 10,872 10,835 10,797 Plug to Plug Frac Plug Stage 43 10,154 10,116 10,076	133 13,200 Distance Between Perfs 40 38 37 132 12,443 Distance Between Perfs 44 38 38 11,686 Distance Between Perfs 38 37 38 10,930 Distance Between Perfs 38 44 40	10 8 44 Total Shots  Shots 14 12 10 8 44 Total Shots	12,954 12,916  Plug to Plug Frac Plug  Stage 29 12,273 12,235 12,197 12,159  Plug to Plug Frac Plug  Stage 34 11,508 11,478 11,441 11,403  Plug to Plug Frac Plug  Stage 39 10,760 10,719 10,683 10,649  Plug to Plug Frac Plug  Stage 44 10,003 9,965 9,927	132 13,048 Distance Between Perfs 38 38 38 132 12,291 Distance Between Perfs 46 37 38  121 11,524 Distance Between Perfs 37 36 34  129 10,778 Distance Between Perfs 39 38	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 10 10 10 10 10 10 10 10 10 10 10 10	12,802 12,765  Plug to Plug Frac Plug  Stage 30 12,121 12,083 12,041 12,008  Plug to Plug Frac Plug  Stage 35 11,364 11,330 11,289 11,251  Plug to Plug Frac Plug  Stage 40 10,608 10,570 10,533 10,495  Plug to Plug Frac Plug  Stage 45 9,852 9,814 9,779	132 12,897 Distance Between Perfs 38 42 33 134 12,142 Distance Between Perfs 39 41 38  133 11,384 Distance Between Perfs 41 37 38  132 10,627 Distance Between Perfs 37 37 35	10 8 44 Total Shots  Shots  14 12 10 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 8 8 44 Total Shots  Shots  14 12 10 10 8 8 14 12 10 10 8 10 10 10 10 10 10 10 10 10 10 10 10 10