<u>District I</u>
1625 N. French Dr., Hobbs, NM 88240
<u>District II</u>
811 S. First St., Artesia, NM 88210

01/23/19

575-748-6962

State of New Mexico Energy, Minerals & Natural Resources

Form C-104 Revised August 1, 2011

District III 1000 Rio Brazos District IV	Rd., Azte	c, NM 87410				tion Division		Su	ibmit o	ne co _l	_	•	District Office
1220 S. St. Franc					Santa Fe, 1	NM 87505					\boxtimes		ED REPORT
<u> </u>	I.		EST FO	R ALI	LOWABL	E AND AU	ГНО				TRAN	SPORT	
Operator na COG Op								² OGRI	D Num	ber	22913	7	
2208 W.	Main S	Street						3 Reason	n for Fi	ling C		ective Date	,
Artesia, ⁴ API Numbe			Name							167	NW		
30 - 025-4 3		P001	Name	Corra	l Canyon; B	one Spring, So	outh			P	ool Code	13354	
⁷ Property Co		8 Proj	perty Nam						-	9 W	ell Num		
3085					Big Papi Fe	ederal Com	_			<u> </u>		12H	
		ocation Township	Range	Lot Idn	Fact from th	e North/South	Line	Foot from	m tha	East/	West line		
B	4	26S	29E	Lot Idii	200	North	Line	206			west ime East		County Eddy
¹¹ Bot	tom H	ole Locatio	n		1						-		
Ul or lot no.	Section	Township	Range	Lot Idn		ne North/South	Line	Feet from	m the	East/	West lin	e (County
0	9	26S	29E		330	South		197			East		Eddy
Lse Code P		cing Method Code	¹⁴ Gas Co Da		¹⁵ C-129 Pe	rmit Number	16 (C-129 Eff	ective D	ate	17 C-	-129 Expira	ation Date
		<u>F</u>	12/6	5/18									
		s Transpoi	rters		19 00							20.0	
18 Transport OGRID	ter				_	orter Name Address						20 0/	/G/W
													O
					A	CC					-		
											<		···
298751						Transfer Street Ste 3700	n. ,					•	G
					-	TX 75201	,				Γ		
				-	· · · · · · · · · · · · · · · · · · ·								
							REC	EIVED			-		
				_				- 1				· · · · · · · · · · · · · · · · · · ·	<u> </u>
							JAN	2 4 201	19				
					_		~=T	**************************************	~~			· · · · · · · · · · · · · · · · · · ·	
IV. Well	Comp	letion Data	1			DISTRI	CI II-	ARTESIA	(O.O.D	7 6			
²¹ Spud Dat	te	22 Ready		1	²³ TD	²⁴ PBTD)		rforation			²⁶ DHC,	MC
9/2/18		12/6/1			18529' <i> 867</i>			1 1	5-18,4	35' ——	ļ <u>.</u>		
27 Ho	le Size		²⁸ Casing	& Tubii	ng Size/	²⁹ De	pth Se	et		a dud	- 30 Sa	cks Cemen	
17	1/2"		1	3 3/8"		3	61'		AO	Ples	ng.	500	arc
12	1/4"			9 5/8"		20	980,		1	000		1475 -	0
												14/3	<u> </u>
8 1	./2"		:	5 1/2"		18	517'					3600 -	cuc
			:	2 7/8"		80)76°						
V. Well	Test D	ata						<u>.</u>					
31 Date New		ata ³² Gas Delive	ry Date	33 *	Test Date	34 Test	Lengt	h	35 Tbg	. Pres	sure	³⁶ Csg.	Pressure
12/6/18	- 1	12/6/1	•	1	12/6/18	24 1	_			850#			700
³⁷ Choke Si	ze	³⁸ Oi	_ 	3	9 Water	40 C	as					41 Test	Method
28/64"		335			2506	103	81	1			İ	Flo	wing
⁴² I hereby cert								OIL CO	NSERV	ATIO	N DIVISI	ION	
been complied	with and	that the info	rmation gi	ven above									
complete to the Signature:	e best of	my Knowledg	e and belie	er.		Approved by:		//			1 .	_	
A	mana	a Ave	ry					Jus	the	1	len)	
Printed name:			0			Title:		/ \ \		7	()m	5000	A
Amanda Av	сгу					Approval Date	:	us	ine,	(AC)	400	2 James	/ -
Regulatory A										<u>-31</u>	10C.	9	
E-mail Address							ام ام	nding BL	Mann	rova	ls will		
aavery@conc	no.com		one:			-		nuing bi					

and scanned

RECEIVED

Form 3160-4

UNITED STATES

FORM APPROVED

(August 2	:007)					J OF L						JAN 2	4 2	019					31, 2010	
		WELL	COMF	PLETIO	N O	R RE	CON	IPLE	TION		ORT	AND L	.OG				ase Serial I IMNM5429			
la. Ty	pe of \	Well ⊠	Oil We	ell 🔲	Gas \	Vell	D D	ry (Othe	r DK	5111 1	CTII A	HEE	HAG	:C.D.	6. If	Indian, All	ottee or	Tribe Nan	ne
b. Ty	pe of (Completion	_	New Wel		☐ Wor	k Ove	r [] Deepe	en 🔲 —) Plug	Back	☐ Di	iff. Re	esvr.	7. U	nit or CA A	greeme	ent Name a	nd No.
2. Nan	ne of O	perator ERATING	3 LLC		E	-Mail: a				NDA AV	/ERY	<u>.</u>		-			ase Name a			12H
		2208 W N ARTESIA	A, NM 8	8210						Ph: 57	5-748		e area c	ode)		9. A	PI Well No.		30-015-4	13779
	ation o	of Well (Re Sec 4 NWNI	T26S F	R29E Mei 200FNL	r NMI 2060	o FEL 32	.0784	09 N L	at, 103							0	Field and Po ORRAL C Sec., T., R.,	AŃYO	N; BONE	SPRIN
		od interval Sec	c 9 T26	l below S R29E N	NWN Mer N	IMP	3 200	FNL 2	060FEI				03.987	378 \	N Lon	12. 0	r Area Sec County or P	c 4 T26	13. Sta	Mer NMP
14. Da	total d te Spu 02/20	dded	VSE LOI	O 330FS	5. Da	te T.D. 29/201	Reach		N Lat,	16.	Date D &	Complet	ed Ready	to Pr	od.		DDY Elevations (297	DF, KE 77 GL	NM B, RT, GL)	·
18. To	tal De	pth:	MD TVD	1 8	8529 758	8678	19. F	lug Ba	ck T.D.	: M	ID VD	18	441 58 -		20. Dej	oth Bri	dge Plug Se		MD 18	450 58
21. Ty	pe Ele	ctric & Otl	her Mecl				nit co _l	py of ea	ich)				V	Was D	ell core ST run? ional Su	1	⊠ No	🗖 Yes	(Submit an (Submit an (Submit an	nalysis)
23. Casi	ng and	Liner Rec	ord (Re	port all st	rings	set in w	ell)													
Hole S	Size	Size/C	Grade	Wt. (#	/ft.)	To _l (ME		Botto (ME		age Cem Depth			of Sks. of Cem		Slurry (BB		Cement	Гор*	Amoun	t Pulled
	.500		3.375 J5		54.5		0		361					500				0		
	.250		0.625 J5		40.0		- 0		980					1475				0	_	Na/
 °	.750	5.5	500 P11	4	17.0		9	10	517					3600				-	$\overline{}$	<i>X</i> //
				<u> </u>					\neg					_					V	√ ₩
																			,	
24. Tu	bing R	lecord		• •												,				
Size 2.87	_	epth Set (1	MD) 8076	Packer D	epth (MD) 8066	Siz	e 1	Depth S	et (MD)	P	acker De	pth (M	D)	Size	De	pth Set (MI	D)	Packer Dep	oth (MD)
25. Pro	ducing	g Intervals							26. Pe	rforation	Reco	rd								
	For	mation		Т	ор		Bott	om		Perfo	rated	Interval			Size	1	No. Holes		Perf. Stat	us
<u>A)</u>		BONE SP	RING			8845		1843 <u>5</u>				8845 TC	1843	5		_	1512			
<u>B)</u>			\rightarrow			_								+		\dashv		ļ		
<u>C)</u>			_																	
D)	J Can	cture, Trea	tmant C	'amant Ca		Eta												<u> </u>		
27. AC				ement sq	ueeze	, ElC.							J T	-614						
	U	epth Interv 88		8435 SE	E AT	TACHE	,				AI	nount and	птуре	OI IVI	alti iäi					
		00-	73 10 1	3733 32		,	•												-	
					•								•							
																			•	
28. Pro	ductio	n - Interva	I A																	
Date First Produced		est Date	Hours Tested	Test Produc	tion	Oil BBL		as ICF	Wate BBL		Oil Gr. Corr. A			Gas Gravity		Producti	on Method			

700.0

Hours

Csg. Press.

24 Hr.

Test Production

24 Hr.

Rate

12/06/2018

28/64

Date First

Produced

Choke

Size

Choke

12/06/2018

Tbg. Press

Flwg

28a. Production - Interval B

Test

Tbg. Press.

Flwg.

s. Csg. 850 Press.

subsequently be reviewed (See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #451506 VERIFIED BY THE BLM WELL INFORMATION SYSTI and scanned

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

335.0

335

Oil

BBL

Oil BBL

Oil BBL

1081.0

1081

Gas MCF

Gas MCF

Gas MCF

2506.0

2506

Gas:Oil

Oil Gravity

Corr. API

Gas:Oil Ratio

Well Status

POW

pending BLM approvals will

Water

BBL

Water BBL

Water BBL

GAS LIFT

28h Prod	luction - Interv	al C									
Date First	Test	Hours	Test	Oil	Gas	Water e.	Oil Gravity	· I	Gas	Production Method	-
Produced	Date	Tested	Production	BBL	MCF	BBL 🗓	Сотт. АРІ		Gravity		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		Well Status		
28c. Prod	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(S	Sold, used	for fuel, vent	ed, etc.)		-		'			
30. Sumn	nary of Porous	Zones (In	lude Aquife	rs):					31. For	mation (Log) Markers	
tests,	all important a including depti ecoveries.	zones of po h interval (prosity and contested, cushic	ontents there on used, time	eof: Cored e tool open	intervals and a , flowing and	all drill-sten shut-in pres	n sures			
	Formation		Тор	Bottom		Description	ns, Contents	, etc.		Name	Top Meas. Depth
LAMAR BELL CAI CHERRY BRUSHY BONE SF BONE SF	OF SALT	(include pl	622 2762 2960 2992 3843 5160 6704 7644	edure):					BO LAI BE CH BR BO	P OF SALT TTOM OF SALT MAR LL CANYON ERRY CANYON USHY CANYON NE SPRING LIMESTONE NE SPRING 1ST	622 2762 2960 2992 3843 5160 6704 7644
	enclosed attac		/1 6.U+			2 Control	D		1 DOTE	4 751 11	1 6
	ectrical/Mechaindry Notice for	•	•	• ′		Geologic ICore Anal	-		3. DST Rep 7 Other:	port 4. Directio	nal Survey
34. I here	by certify that	the forego	_	onic Subm	ission #451	nplete and con 1506 Verified ERATING L	by the BLN	4 Well Inf	formation Sy	records (see attached instructions stem.	ons):
Name	(please print)	<u>AMANDA</u>	AVERY				Tit	le <u>AUTHC</u>	RIZED REP	RESENTATIVE	
Signa	ture	(Electron	ic Submissi	on)			Da	te <u>01/23/2</u>	019		
	J.S.C. Section ited States any									to make to any department or a	gency

Form 3/x60-5

(June 2015)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 201

SUNDRY NOTICES AND REPORTS ON WELLS

5. Lease Serial No. NMNM54291

Do not use thi	s form for proposals to	drill or to ro	onfor on		14101141010-1201	
abandoned wel	I. Use form 3160-3 (APE)) for such p	roposals.		6. If Indian, Allottee of	r Tribe Name
SUBMIT IN 1	TRIPLICATE - Other inst	ructions on	page 2		7. If Unit or CA/Agree	ement, Name and/or No.
1. Type of Well ☑ Oil Well ☐ Gas Well ☐ Oth	er				8. Well Name and No. BIG PAPI FEDER	AL COM 12H
2. Name of Operator COG OPERATING LLC	Contact: / E-Mail: aavery@co	AMANDA AV ncho.com	ERY		9. API Well No. 30-015-43779	
3a. Address 2208 W MAIN STREET ARTESIA, NM 88210		3b. Phone No Ph: 575-74	(include area cod 8-6940	e)	10. Field and Pool or I CORRAL DRAV	Exploratory Area V; BONE SPRING
4. Location of Well (Footage, Sec., T.	., R., M., or Survey Description)				11. County or Parish,	State
Sec 4 T26S R29E Mer NMP N	WNE 200FNL 2060FEL				EDDY COUNTY	′, NM
12. CHECK THE AF	PPROPRIATE BOX(ES)	TO INDICA	ΓE NATURE (OF NOTICE	, REPORT, OR OTH	IER DATA
TYPE OF SUBMISSION			ТҮРЕ (OF ACTION		
☐ Notice of Intent	☐ Acidize	☐ Dee	en	☐ Produc	ction (Start/Resume)	■ Water Shut-Off
_	Alter Casing	☐ Hyd	raulic Fracturing	Reclan	nation	■ Well Integrity
Subsequent Report	□ Casing Repair	☐ New	Construction	☐ Recom	plete	Other
☐ Final Abandonment Notice	□ Change Plans	Plug	and Abandon	□ Tempo	orarily Abandon	Hydraulic Fracture
	□ Convert to Injection	Plug	Back	■ Water	Disposal	
If the proposal is to deepen directions Attach the Bond under which the wor following completion of the involved testing has been completed. Final Abdetermined that the site is ready for fit 10/23/18 Test annulus to 150 10/30/18 to 11/09/18 Perf 8,84 & 17,527,341 gal fluid. 11/11/18 to 11/13/18 Drilled of 11/14/18 - 11/15/18 Set 2 7/8" 12/6/18 Began flowing back &	k will be performed or provide operations. If the operation respondent Notices must be file that inspection. O# Set CBP @ 18,450' and 15-18,435' (1512). Acdz wout CFP's. Clean down to 6.5# L-80 tbg @ 8,076'	the Bond No. or ults in a multipled only after all of test csg to 1/161,864 gal PBTD @ 18, packer @ 8,0	file with BLM/Ble completion or re- requirements, inclusion of the second of the secon	IA. Required st completion in a ading reclamation test. //19,562,680	ubsequent reports must be new interval, a Form 316 on, have been completed a	filed within 30 days 0-4 must be filed once
14. I hereby certify that the foregoing is	true and correct	<u> </u>				
14. I hereby termy that the foregoing is	Electronic Submission #4	51509 verifie PERATING L	by the BLM W.C, sent to the (ell Informatio Carlsbad	on System	
Name (Printed/Typed) AMANDA	AVERY		Title AUTH	ORIZED RE	PRESENTATIVE	
Signature (Electronic S	Submission)		Date 01/23/	2019		
	THIS SPACE FO	R FEDERA	L OR STATE	OFFICE L	Jer will	
				N N	approvalewed	-
_Approved By			Title De	nding BLIVE	y be revis	
Conditions of approval, if any, are attached certify that the applicant holds legal or equivalent would entitle the applicant to conductive th	itable title to those rights in the		Office 5	ubsequerri and scanne	approvals will approvals will when the reviewed d	
Title 18 U.S.C. Section 1001 and Title 43 States any false, fictitious or fraudulent s			rson knowingly		to any department or	agency of the United

Big Papi Federal Com #12H

<u>Perfs</u>	7 1/2% Acid (Gal)	Sand (#)	Fluid (Gal)
rens	V 1/2/0 Acid (Gail		
1	0	360700	315294
2	3054	361450	324648
3	3000	361930	314985
4	3024	361020	319536
5	3024	360280	312690
6	3024	360630	315714
7	3012	360610	313602
8	3012	360670	314694
9	3024	360330	313488
10	3024	360180	316134
11	3024	360810	312082
12	3012	360400	322338
13	3024	360320	309876
14	3024	361180	310632
15	3012	360100	310158
16	3024	360270	306852
17	3012	360540	309528
18	3024	360120	309288
19	3000	360111	310272
20	3024	360440	307398
21	3024	360560	307062
22	4536	360410	311178
23	3000	360500	308083
24	3012	360370	308310
25	3024	360400	307524
26	3066	360310	305760
27	3024	360460	305256
28	3024	360690	305340
29	3012	360220	303860
30	3012	360430	338084
31	3012	360340	353208
32	3024	360540	345198 342027
33	3024	360530	337332
34 35	3012	360190	337332 334980
36	3012 3024	360630 360370	345314
30 37	3012	360370	333636
38	3024	361380	335538
39	3024	360710	335993
40	3012	360030	344136
41	3108	359458	340830
42	3012	359307	336366
43	3024	359970	319872
44	3024	360530	335244
45	3024	360100	336672
46	2982	360520	351414
47	3066	360705	328230
48	3150	360808	331758
49	3024	362140	333186
50	3024	363433	347634
51	3024	361650	343434
52	3024	361860	322896
53	3024	388749	366198
54	3066	421919	356580

Totals

161,864

19,562,680

17,527,341

		Distance			Distance			Distance			Distance			Distance	
	Stage 1	Between	Shots	Stage 2	Between	Shots	Stage 3	Between	Shots	Stage 4	Between	Shots	Stage 5	Between	Shots
		Perfs			Perfs			Perfs			Perfs			Perfs	
]	18,435	23	4	18,254	22	4	18,072	26	4	17,898	29	4	17,720	22	4
L	18,412	22	4	18,232	23	4	18,054	23	4	17,876	23	4	17,698	23	4
From	18,390	23	4	18,209	22	4	18,031	23	4	17,853	23	4	17,675	22	4
Bottom to	18,367	23	4	18,187	22	4	18,008	21	4	17,830	21	4	17,653	22	4
Тор	18,344	22	3	18,165	22	3	17,987		3	17,809	22	3	17,631	22	3
	18,322	23	3	18,143	23	3	17,960	18	3	17,787	23	3	17,609	23	3
ŀ	18,299	23	3	18,120	22	3	17,942	15	3	17,764	22	3	17,586	22	3
l	18.276		3	18.098		3	17,927		3	17,742		3	17,564		3
i	Plug to Plug	83	28	Plug to Plug	78	28	Plug to Plu	74	28	lug to Plu	79	28	Plug to Plug	78	28
	Frac Plug		Total Shots			Total Shots		18,082	Total Shots			Total Shots			Total Shot
	riac riug	10,430	i otali Snot	riac riug	10,203	i otal Silot	Frac Flug	10,002	potar Snot	riac riug	17,505	i uai siluu	riac riug	11,131	OLAI SHOU
		Distance			Distance			Distance			Distance			Distance	
	Stage 6	Distance	Shots	Stage 7	Distance Between	Shots	Stage 8	Distance Between	Shots	Stage 9	Distance Between	Shots	Stage 10	Distance Between	Shots
li .	Stage	Between Perfs	311013	Stage /	Perfs	311013	Junger	Perfs	Silots	Stage 5	Perfs	311013	Stage IV	Perfs	Silots
	17,542	22	4	17,359	27	4	17,186	22	4	17,000	30	4	16,830	28	4
	17,520	23	4	17,342	19	4	17,164	22	4	16,986	22	4	16,804	18	4
From	17,497	22	4	17,323	26	4	17,142	23	4	16,964	23	4	16,786	26	4
Bottom to	17,475	22	4	17,297	28	4	17,119	22	4	16,941	22	4	16,760	19	4
Тор	17,453						17,119	22			17				3
'		22	3	17,269	19	3			3	16,919		3	16,741	25	
I	17,431	23	3	17,250	19	3	17,075	22	3	16,902	27	3	16,716	19	3
I	17,408	22	3	17,231	23	3	17,053	23	3	16,875	17	3	16,697	23	3
1	17,386		3	17,208		3	17,030	<u> </u>	3	16,858		3	16.674		3
	Plug to Plu	78	28_	Plug to Plug	78	28	lug to Plu	80	28	lug to Plu	68	28	Plug to Plug	81	28
	Frac Plug	17,553	Total Shots	Frac Plug	17,375	Total Shots	Frac Plug	17,199	Total Shots	Frac Plug	17,009	Total Shots	Frac Plug	16,841	Total Shots
		Distance			Distance			Distance			Distance		I	Distance	
ŀ	Stage 11	Between	Shots	Stage 12	Between	Shots	Stage 13	Between	Shots	Stage 14	Between	Shots	Stage 15	Between	Shots
ľ		Perfs			Perfs			Perfs			Perfs			Perfs	
l	16,652	22	4	16,474	22	4	16,296	23	4	16,118	23	4	15,940	23	4
	16,630	22	4	16,452	22	4	16,274	22	. 4	16,096	22	4	15,918	22	4
From	16,608	23	4	16,430	22	4	16,252	22	4	16,074	22	4	15,896	22	4
Bottom to	16,585	22	4	16,408	23	4	16,230	23	4	16,052	23	4	15,874	23	4
Тор	16,563	22	3	16,385	22	3	16,207	22	3	16,029	22	3	15,851	22	3
ŀ	16,541	22	3	16,363	22	3	16,185	22	3	16,007	22	3	15,829	22	3
İ	16,519	23	3	16,341	22	3	16,163	22	3	15,985	22	3	15,807	22	3
	16,496		3	16,319		3	16,141		3	15,963		3	15,785		3
	Plug to Plug	78	28	Plug to Plug	77	28	Plug to Plu	77	28	Plug to Plug	77	28	Plug to Plug	78	28
	Frac Plug	16,663		Frac Plug		Total Shots		16,307	Total Shots			Total Shots			Total Shots
	riac Piug	10,003	I OLAI SHOU	Frac Flug	10,403	otal Shot	rrac Plug	10,307	potal Shots	Frac Flug	10,123	i otal Silot	Frac Piug	13,532	i otali onote
	ĭ	61-4			5 1-4			61-1			61-4	,	1	5 1-4	
1	Stone 16	Distance	Chata	Stano 17	Distance	Chata	Stage 19	Distance	Shoto	Stano 10	Distance	Shoto	Stage 20	Distance	Shoto
	Stage 16	Between	Shots	Stage 17	Between	Shots	Stage 18	Between	Shots	Stage 19	Between	Shots	Stage 20	Between	Shots
		Between Perfs			Between Perfs			Between Perfs			Between Perfs			Between Perfs	
	15,762	Between Perfs 23	4	15,584	Between Perfs 23	4	15,407	Between Perfs 22	4	15,229	Between Perfs 22	4	15,051	Between Perfs 22	4
From	15,762 15,740	Between Perfs 23 22	4	15,584 15,562	Between Perfs 23 22	4	15,407 15,384	Between Perfs 22 22	4	15,229 15,206	Between Perfs 22 22	4	15,051 15,028	Between Perfs 22 22	4
From Bottom to	15,762 15,740 15,718	Between Perfs 23 22 22	4 4	15,584 15,562 15,540	Between Perfs 23 22 22	4 4	15,407 15,384 15,362	Between Perfs 22 22 22	4 4	15,229 15,206 15,184	Between Perfs 22 22 22	4 4	15,051 15,028 15,006	Between Perfs 22 22 22	4 4
Bottom to	15,762 15,740 15,718 15,696	Between Perfs 23 22 22 23	4 4 4	15,584 15,562 15,540 15,518	Between Perfs 23 22 22 22 22	4 4 4	15,407 15,384 15,362 15,340	Between Perfs 22 22 22 22 22 22	4 4 4 4	15,229 15,206 15,184 15,162	Between Perfs 22 22 22 22 22	4 4 4	15,051 15,028 15,006 14,984	Between Perfs 22 22 22 22 22	4 4 4
	15,762 15,740 15,718 15,696 15,673	Between Perfs 23 22 22 23 22 23 22	4 4 4 4 3	15,584 15,562 15,540 15,518 15,496	Between Perfs 23 22 22 22 23	4 4 4 4 3	15,407 15,384 15,362 15,340 15,318	Between Perfs 22 22 22 22 22 23	4 4 4 4 3	15,229 15,206 15,184 15,162 15,140	Between Perfs 22 22 22 22 23	4 4 4 3	15.051 15,028 15,006 14,984 14,962	Between	4 4 4 4 3
Bottom to	15,762 15,740 15,718 15,696 15,673 15,651	Perfs 23 22 22 23 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3	15,584 15,562 15,540 15,518 15,496 15,473	Between Perfs 23 22 22 22 23 23 22	4 4 4 4 3 3	15,407 15,384 15,362 15,340 15,318 15,295	Between Perfs 22 22 22 23 22 22 23 22	4 4 4 4 3 3	15,229 15,206 15,184 15,162 15,140 15,117	Between Perfs 22 22 22 22 22 22 22 23 22 22	4 4 4 4 3 3	15.051 15,028 15,006 14,984 14,962 14,939	Between Perfs 22 22 22 22 23 22 22	4 4 4 4 3 3
Bottom to	15,762 15,740 15,718 15,696 15,673 15,651 15,629	Between Perfs 23 22 22 23 22 23 22	4 4 4 4 3 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451	Between Perfs 23 22 22 22 23	4 4 4 4 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273	Between Perfs 22 22 22 22 22 23	4 4 4 4 3 3 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095	Between Perfs 22 22 22 22 23	4 4 4 3 3 3 3 3	15.051 15,028 15,006 14,984 14,962 14,939 14,917	Between	4 4 4 4 3 3 3
Bottom to	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607	Between Perfs 23 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429	Between Perfs 23 22 22 22 22 23 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073	Between Perfs 22 22 22 22 22 23 22 22 22 22	4 4 4 4 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895	Between Perfs 22 22 22 22 22 23 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3
Bottom to	15.762 15,740 15,718 15,696 15,673 15,651 15,629 15,607	Between Perfs 23 22 22 22 22 22 22 78	4 4 4 4 3 3 3 3 3 28	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plus	Between Perfs 23 22 22 22 22 23 22 23 22 78	4 4 4 4 3 3 3 3 3 28	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug	Between Perfs 22 22 22 22 22 23 22 22 22 78	4 4 4 4 3 3 3 3 3 28	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plu	Between Perfs 22 22 22 22 22 23 22 23 78	4 4 4 4 3 3 3 3 3 28	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895	Between Perfs 22 22 22 22 23 22 22 22 78	4 4 4 4 3 3 3 3 28
Bottom to	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607	Between Perfs 23 22 22 22 22 22 22 78	4 4 4 4 3 3 3 3 3 28	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429	Between Perfs 23 22 22 22 22 23 22 23 22 78	4 4 4 4 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug	Between Perfs 22 22 22 22 22 23 22 22 22 78	4 4 4 4 3 3 3 3 3 28	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073	Between Perfs 22 22 22 22 22 23 22 23 78	4 4 4 4 3 3 3 3 3 28	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895	Between Perfs 22 22 22 22 23 22 22 22 78	4 4 4 4 3 3 3 3 28
Bottom to	15.762 15,740 15,718 15,696 15,673 15,651 15,629 15,607	Between Perfs 23 22 22 22 23 22 22 22 22 25 78 15,774	4 4 4 4 3 3 3 3 3 28	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plu	Between Perfs 23 22 22 22 22 23 22 22 25 78 15,596	4 4 4 4 3 3 3 3 3 28	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug	Between Perfs 22 22 22 22 22 23 22 22 22 15,418	4 4 4 4 3 3 3 3 3 28	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plu	Between Perfs 22 22 22 22 22 22 23 22 22 22 15,240	4 4 4 4 3 3 3 3 3 28	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895	Between Perfs 22 22 22 22 22 23 22 23 22 27 30 22 22 31 32 32 32 32 32 32 32 32 32 32 32 32 32	4 4 4 4 3 3 3 3 28
Bottom to	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug	Between Perfs 23 22 22 22 22 22 22 22 D15,774	4 4 4 3 3 3 3 3 28 Total Shots	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug	Between Perfs 23 22 22 22 22 23 22 22 22 Distance	4 4 4 3 3 3 3 3 28 Total Shots	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,251 Plug to Plug	Between Perfs 22 22 22 22 23 22 23 21 20 20 20 20 78 15,418	4 4 4 3 3 3 3 3 28 Total Shots	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 Description 78 15,240	4 4 4 3 3 3 3 3 28 Total Shots	15.051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 Distance	4 4 4 3 3 3 3 3 28 Total Shots
Bottom to	15.762 15,740 15,718 15,696 15,673 15,651 15,629 15,607	Between Perfs 23 22 22 22 22 22 22 22 Distance Between	4 4 4 4 3 3 3 3 3 28	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plu	Between Perfs 23 22 22 22 22 22 22 D15,596 Distance Between	4 4 4 4 3 3 3 3 3 28	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 D5,418 Distance Between	4 4 4 4 3 3 3 3 3 28	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plu	Between Perfs 22 22 22 22 22 23 22 22 78 15,240 Distance Between	4 4 4 4 3 3 3 3 3 28	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895	Between Perfs 22 22 22 22 22 22 22 22 Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28
Bottom to	15.762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 22 22 D15,774 Distance Between Perfs	4 4 4 3 3 3 3 3 28 Total Shots	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 23 22 22 22 Distance Between Perfs	4 4 4 3 3 3 3 3 28 Total Shots	15,407 15,384 15,362 15,348 15,295 15,273 15,273 15,251 Plug to Plug Stage 23	Between Perfs 22 22 22 22 22 23 22 22 22 Distance Between Perfs	4 4 4 3 3 3 3 3 28 Total Shots	15,229 15,206 15,184 15,164 15,161 15,117 15,095 15,073 Plug to Plug Stage 24	Between Perfs 22 22 22 22 22 22 22 22 22 D15,240 Distance Between Perfs	4 4 4 3 3 3 3 28 Total Shots	15,051 15,028 15,006 14,982 14,992 14,97 14,895 Plug to Plug Frac Plug	Between Perfs 22 22 22 23 22 23 22 27 30 22 20 78 15,062 Distance Between Perfs	4 4 4 3 3 3 3 3 3 28 Total Shots
Bottom to	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 22 D15,774 D1stance Between Perfs 22	4 4 4 3 3 3 3 3 28 Total Shots	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 22 22 22 Distance Between Perfs 22	4 4 4 4 3 3 3 3 3 28 Total Shots	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,279 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 7 28 Total Shots	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,075 15,07 Plug Frac Plug Stage 24	Between Perfs 22 22 22 22 22 22 22 22 D15.240 DIstance Between Perfs 22	4 4 4 3 3 3 3 28 Total Shots	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 23 22 22 23 22 Distance Between Perfs 22	4 4 4 4 3 3 3 3 3 3 28 Total Shots
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Stage 21 14,873 14,850	Between Perfs 23 22 22 22 22 22 DIstance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Total Shots	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 7 28 Total Shots	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug Stage 23 14,517 14,495	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 7 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317	Between Perfs 22 22 22 22 22 22 23 22 22 Distance Between Perfs 22 23	4 4 4 3 3 3 3 28 Total Shots	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Total Shots
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Stage 21 14,873 14,850 14,828	Between Perfs 23 22 22 23 22 22 27 27	4 4 4 3 3 3 3 3 28 Total Shots	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,650	Between Perfs 23 22 22 22 23 22 25 25 25 25 25 25 25 25 25 25 25 25	4 4 4 3 3 3 3 7 28 Total Shots	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Pluy Frac Plug Stage 23 14,517 14,495 14,472	Between Perfs 22 22 22 22 23 22 25 25 25 25 25 25 25 25 25 25 25 25	4 4 4 4 3 3 3 3 7 28 Total Shots	15,229 15,206 15,182 15,182 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4	15,051 15,028 15,008 14,984 14,962 14,939 14,917 14,895 Plug to Plug Stage 25 14,161 14,134 14,116	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 5 28 Total Shots 4 4
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,808	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Total Shots	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,650 14,628	Between Perfs 23 22 22 22 23 22 25 25 25 25 25 25 25 25 25 25 25 25	4 4 4 3 3 3 3 3 7 28 Total Shots 4 4 4	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plu Frac Plug Stage 23 14,517 14,495 14,472 14,450	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Total Shots 4 4 4 4	15,229 15,206 15,182 15,182 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294 14,271	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 3 3 3 28 Total Shots Shots 4 4 4 4 4
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,866 14,784	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots \$\$4 4 4 4 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Pluy Frac Plug Stage 22 14,695 14,672 14,662 14,628	Between Perfs 23 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,251 Plug to Plug Frac Plug Stage 23 14,517 14,472 14,450 14,428	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Fotal Shots 4 4 4 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,294 14,271	Between Perfs 22 22 22 22 23 22 25 78 15,240 Distance Between Perfs 22 23 21 22 23 21 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,1090 14,072	Between Perfs 22 22 22 23 22 23 22 78 15,062 Distance Between Perfs 22 18 26 18 29	4 4 4 3 3 3 3 28 Total Shots 4 4 4 3
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,784 14,761	Between Perfs 23 22 22 22 22 22 22 22 78 15,774 Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,652 14,666 14,583	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,251 Plug to Plug Stage 23 14,517 14,495 14,472 14,450 14,428	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Total Shots Shots 4 4 4 3 3 3 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,224 14,221 14,220 14,228	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 4 4 4 4 4 4 3 3 3 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043	Between Perfs 22 22 22 23 22 23 22 27 78 15,062 Distance Between Perfs 22 18 26 18 26 18	4 4 4 3 3 3 3 Shots Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,806 14,761 14,739	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,650 14,628 14,606 14,583 14,556	Between Perfs 23 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 4 4 4 4 4 4 4 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,273 15,273 14,577 14,495 14,472 14,450 14,428 14,466 14,383	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 3 3 3 3 3 3 3 3 3 4 4 4 4 3 3 3 3 3 3 3 3 3 3 4	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,075 10g to Plug Stage 24 14,339 14,317 14,294 14,271 14,228 14,205	Between Perfs 22 22 22 22 23 22 25 78 15,240 Distance Between Perfs 22 23 21 22 23 21 22	4 4 4 3 3 3 3 3 4 4 4 4 4 4 3 3 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug to Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025	Between Perfs 22 22 22 23 22 23 22 78 15,062 Distance Between Perfs 22 18 26 18 29	4 4 4 3 3 3 3 3 4 4 4 4 4 4 3 3 3 3 3 3
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,806 14,784 14,761 14,739 14,717	Between Perfs 23 22 22 23 22 27 28 29 29 29 29 29 29 29	4 4 4 3 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,650 14,628 14,608 14,563 14,556 14,539	Between Perfs 23 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 4 4 4 4 4 4 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 19ug to Plug Frac Plug Stage 23 14,517 14,495 14,472 14,450 14,428 14,406 14,383 14,361	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 4 4 4 4 4 4 3 3 3 3 3 3 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,228 14,205 14,183	Between Perfs 22 22 22 23 22 22 24 25 25 26 26 26 26 26 26	4 4 4 3 3 3 3 4 4 4 4 4 4 3 3 3 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 4 4 4 4 4 4 4 3 3 3 3 3 3
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Stage 21 14,873 14,850 14,784 14,764 14,761 14,739 14,777 Plug to Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Total Shots Shots 4 4 4 4 4 3 3 3 3 2 8 2 8 2 8 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,675 14,628 14,606 14,533 14,550 14,553	Between Perfs 23 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug Frac Plug Stage 23 14,517 14,495 14,472 14,450 14,486 14,361 Plug to Plug	Between Perfs 22 22 22 23 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Shots	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 4 4 4 4 4 4 3 3 3 3 3 2 28	15.051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008 Plug to Plu	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 4 4 4 4 4 4 4 4 3 3 3 3 3
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,806 14,784 14,761 14,739 14,717	Between Perfs 23 22 22 23 22 27 28 29 29 29 29 29 29 29	4 4 4 3 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,675 14,628 14,606 14,533 14,550 14,553	Between Perfs 23 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 4 4 4 4 4 4 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug Frac Plug Stage 23 14,517 14,495 14,472 14,450 14,486 14,361 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 4 4 4 4 4 4 3 3 3 3 3 2 28	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 4 4 4 4 4 4 4 3 3 3 3 3 3 2 8 2 8
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Stage 21 14,873 14,850 14,784 14,764 14,761 14,739 14,777 Plug to Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Total Shots Shots 4 4 4 4 4 3 3 3 3 2 8 2 8 2 8 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,675 14,628 14,606 14,533 14,550 14,553	Between Perfs 23 22 22 22 23 22 22 22 22 22 23 27 17 78 14,706	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug Frac Plug Stage 23 14,517 14,495 14,472 14,450 14,486 14,361 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Shots	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug	Between Perfs 22 22 22 22 23 22 22 78 15,240 Distance Between Perfs 22 23 21 22 23 21 22 79 14,350	4 4 4 3 3 3 4 4 4 4 4 4 3 3 3 3 3 2 28	15.051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008 Plug to Plu	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 4 4 4 4 4 4 4 3 3 3 3 3 3 2 8 2 8
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,761 14,739 14,717 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,548 15,473 15,451 15,429 Plug to Plug Stage 22 14,695 14,672 14,650 14,628 14,606 14,583 14,556 14,539 Plug to Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 27 78 15,596 Distance Between Perfs 22 22 22 22 22 27 17 78 14,706 Distance	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,273 15,273 14,517 14,495 14,472 14,450 14,428 14,466 14,383 14,361 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294 14,271 14,225 14,183 Plug to Plug Frac Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 4 4 4 4 4 4 4 3 3 3 3 3 28 Total Shots	15,051 15,028 15,006 14,934 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 4 4 4 4 4 4 3 3 3 3 3 3
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Stage 21 14,873 14,850 14,784 14,764 14,761 14,739 14,777 Plug to Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Total Shots Shots 4 4 4 4 4 3 3 3 3 2 8 2 8 2 8 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,675 14,628 14,606 14,533 14,550 14,553	Between Perfs 23 22 22 22 23 22 22 22 22 23 27 17 78 14,706 Distance Between Perfs 22 22 25 25 27 17 78 14,706 Distance Between Perfs 14,706 Distance Between Perfs 14,706	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug Frac Plug Stage 23 14,517 14,495 14,472 14,450 14,486 14,361 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Shots	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug	Between Perfs 22 22 22 22 23 22 22 22 22 22 22 22 22	4 4 4 3 3 3 4 4 4 4 4 4 3 3 3 3 3 2 28	15.051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008 Plug to Plu	Between Perfs 22 22 22 23 22 22 22 25 25 22 22 22 22 22 22 22 22	4 4 4 3 3 3 4 4 4 4 4 4 4 3 3 3 3 3 3 2 8 2 8
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,784 14,761 14,739 14,717 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 28 Total Shots Shots Shots	15,584 15,562 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Pluy Frac Plug Stage 22 14,695 14,672 14,650 14,583 14,556 14,583 14,556 14,593 Plug to Pluy Frac Plug	Between Perfs 23 22 22 22 23 22 22 22 22 22 23 27 17 78 14,706 Distance Between Perfs 20 20 20 20 20 20 20 20 20 20 20 20 20	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 28 Total Shots Shots	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 Plug to Plug Frac Plug Stage 23 14,517 14,495 14,466 14,383 14,466 14,383 14,361 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Fotal Shots 4 4 4 3 3 3 3 3 Shots Shots Shots Shots	15,229 15,206 15,184 15,162 15,140 15,117 15,093 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,228 14,205 14,183 Plug to Plug Frac Plug Stage 29	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,934 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,161 14,030 14,072 14,043 14,025 14,00	Between Perfs 22 22 22 23 22 23 22 78 15,062 Distance Between Perfs 22 18 29 18 17 82 14,172 Distance Between Perfs	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 Shots 5 Total Shots 5 Shots
Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,784 14,761 14,739 14,779 15,779 16,779 17,77	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 Shots 4 4 4 4 4 4 4 5 Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,584 15,562 15,540 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Pluy Frac Plug Stage 22 14,695 14,672 14,656 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583	Between Perfs 23 22 22 22 23 22 22 22 22 22 23 27 17 78 14,706 Distance Between Perfs 22 22 22 23 27 17 78 14,706 Distance Between Perfs 29 29 29	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,251 Plug to Plu Frac Plug Stage 23 14,517 14,472 14,450 14,428 14,406 14,383 14,361 Plug to Plu Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 Cast of the shots 4 4 4 4 4 4 5 Total Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug Frac Plug Stage 29 13,449	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 28 Total Shots 4 4 4 3 3 3 3 3 Shots 4 4 4 4 4 5 4 5 Total Shots Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
From Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,761 14,739 14,77 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,658 14,539 Plug to Plug Frac Plug Stage 27 13,805 13,780	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,273 14,517 14,495 14,472 14,450 14,486 14,383 14,361 Plug to Plu Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 5 5 1 5 1 1 1 1 1 1 1 1 1 1 1 1	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug Stage 29 13,449 13,427	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,934 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,008 Plug to Plug Frac Plug Stage 30 13,265 13,246	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 5 3 3 3 3 5 Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
From Bottom to Top	15,762 15,740 15,740 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,808 14,761 14,779 14,717 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 Shots 4 4 4 4 4 4 4 5 Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,584 15,562 15,540 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Pluy Frac Plug Stage 22 14,695 14,672 14,656 14,583 14,556 14,583 14,556 14,599 Plug to Pluy Frac Plug Stage 27 13,805	Between Perfs 23 22 22 22 23 22 22 22 22 22 23 27 17 78 14,706 Distance Between Perfs 22 22 22 23 27 17 78 14,706 Distance Between Perfs 29 29 29	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,251 Plug to Plu Frac Plug Stage 23 14,517 14,472 14,450 14,428 14,406 14,383 14,361 Plug to Plu Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 Cast of the shots 4 4 4 4 4 4 5 Total Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug Frac Plug Stage 29 13,449	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 28 Total Shots 4 4 4 3 3 3 3 3 Shots 4 4 4 4 4 5 5 Total Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
From Bottom to Top	15,762 15,740 15,740 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,808 14,761 14,779 14,717 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,658 14,539 Plug to Plug Frac Plug Stage 27 13,805 13,780	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,273 14,517 14,495 14,472 14,450 14,486 14,383 14,361 Plug to Plu Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 5 5 1 5 1 1 1 1 1 1 1 1 1 1 1 1	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug Stage 29 13,449 13,427	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,934 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,008 Plug to Plug Frac Plug Stage 30 13,265 13,246	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 5 3 3 3 3 28 Total Shots 5 Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
From Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,607 14,807 14,807 14,850 14,828 14,806 14,739 14,717 Plug to Plug Frac Plug Stage 21 14,873 14,828 14,761 14,739 14,717 Plug to Plug Frac Plug	Between Perfs 23 22 22 22 22 23 25 25	4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,548 15,496 15,473 15,451 15,429 Plug to Plug Stage 22 14,695 14,672 14,650 14,658 14,539 Plug to Plug Frac Plug Stage 27 13,805 13,780 13,760	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,257 14,517 14,495 14,472 14,450 14,483 14,361 Plug to Pluy Frac Plug Stage 28 14,517 14,456 14,488 14,406 14,383 14,361 Plug to Pluy Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 3 28 Total Shots 4 4 4 3 3 3 3 5 28 Fotal Shots Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug Stage 29 13,449 13,427 13,400	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Ptug Stage 25 14,161 14,134 14,116 14,090 14,072 14,008 Plug to Ptug Frac Ptug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Total Shots 4 4 4 3 3 3 3 Total Shots Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
From Bottom to Top	15,762 15,740 15,740 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,806 14,784 14,761 14,739 14,717 Plug to Plug Frac Plug Stage 26 13,983 13,961 13,938 13,916	Between Perfs 23 22 22 22 22 22 23 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Total Shots 4 4 4 5 Shots 4 4 4 4 4 4 4 4 4 5 Shots 5 Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,584 15,562 15,540 15,548 15,496 15,473 15,451 15,429 Plug to Plug Stage 22 14,695 14,672 14,650 14,628 14,539 Plug to Plug Frac Plug Stage 27 13,805 13,780 13,760 13,738	Between Perfs 23 22 22 22 23 22 22 22 23 27 78 15,596 Distance Between Perfs 22 22 22 23 27 17 78 14,706 Distance Between Perfs 29 20 22 22 22 22 22 23 27 27 27 27 27 27 27 27 27 27 27 27 27	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,251 15,251 10 pt o Plug Frac Plug Stage 23 14,517 14,495 14,472 14,450 14,426 14,383 14,361 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Total Shots 4 4 4 3 3 3 3 5 Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,229 15,209 15,209 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug Stage 29 13,449 13,427 13,400 13,382	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,092 14,008 Plug to Plug Frac Plug Stage 30 13,265 13,246 13,221 13,200	Between Perfs 22 22 22 23 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 28 Total Shots 4 4 4 5 3 3 3 3 Shots 4 4 4 4 4 4 4 4 4 4 4 5 Shots Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
From Bottom to Top	15,762 15,740 15,718 15,696 15,673 15,651 15,629 15,629 15,629 14,873 14,873 14,850 14,828 14,806 14,784 14,761 14,739 14,719 Frac Plug Stage 26 13,983 13,961 13,988 13,916 13,988 13,988 13,988	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 28 Total Shots Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,540 15,518 15,496 15,473 15,451 15,429 Plug to Pluy Frac Plug Stage 22 14,695 14,672 14,650 14,583 14,556 14,583 14,556 14,593 Plug to Pluy Frac Plug Stage 27 13,805 13,780 13,780 13,780 13,760 13,760 13,760 13,760	Between Perfs 23 22 22 22 23 22 22 22 23 27 17 78 14,706 Distance Between Perfs 29 20 22 22 23 27 27 27 27 27 27 27 27 27 27 27 27 27	4 4 4 4 3 3 3 28 Total Shots 4 4 4 3 3 3 28 Total Shots 5 4 4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,251 Plug to Plug Frac Plug Stage 23 14,517 14,495 14,472 14,450 14,428 14,406 14,333 14,361 Plug to Plug Frac Plug Stage 28 13,627 13,605 13,583 13,560 13,538	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Fotal Shots 4 4 4 3 3 3 28 Fotal Shots 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,295 14,228 14,205 14,128 14,129 Stage 29 13,449 13,427 13,400 13,382 13,385 13,338	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4	15,051 15,028 15,006 14,934 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,161 14,090 14,072 14,043 14,025 14,043 14,025 14,043 13,205 13,265 13,246 13,220 13,176 13,158	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
From Bottom to Top	15,762 15,740 15,740 15,718 15,696 15,673 15,651 15,629 15,629 14,873 14,873 14,850 14,784 14,761 14,739 14,719 Frac Plug Stage 26 13,983 13,961 13,938 13,961 13,8894 13,868 13,855	Between Perfs 23 22 22 22 22 22 23 22 22 22 23 22 22	4 4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 28 Total Shots Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,540 15,541 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,656 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,560 13,760 13,760 13,760 13,760 13,760 13,769 13,776	Between Perfs 23 22 22 22 23 22 22 23 27 17 78 14,706 Distance Between Perfs 29 20 22 20 22 23 27 27 27 20 22 20 20 22 20 20 22 20 20 22 20 20	4 4 4 4 3 3 3 28 Total Shots 4 4 4 3 3 3 3 28 Total Shots Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,251 Plug to Plug Frac Plug Stage 23 14,517 14,495 14,472 14,450 14,433 14,361 14,466 14,383 14,360 13,583 13,560 13,593 13,566 13,494	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Pluy Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,228 14,205 14,183 Plug to Pluy Frac Plug Stage 29 13,449 13,427 13,400 13,382 13,338 13,316	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 28 Total Shots 5 Shots 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,934 14,962 14,939 14,917 14,895 Plug to Pluy Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008 14,072 14,043 14,025 14,009 14,072 14,043 14,025 14,009 14,072 14,043 14,025 14,009 13,265 13,246 13,221 13,206 13,126 13,138 13,133	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 28 Total Shots 4 4 4 3 3 3 3 28 Total Shots 5 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
From Bottom to Top	15,762 15,740 15,740 15,778 15,696 15,673 15,651 15,629 15,607 Plug to Plug Frac Plug Stage 21 14,873 14,850 14,828 14,828 14,761 14,739 14,77 Plug to Plug Stage 26 13,983 13,961 13,938 13,961 13,898 13,868 13,855 13,834	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,584 15,562 15,540 15,540 15,541 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,652 14,656 14,539 Plug to Plug Frac Plug Stage 27 13,805 13,780 13,780 13,780 13,780 13,780 13,780 13,780 13,780 13,780 13,780 13,780 13,780 13,693 13,671 13,649	Between Perfs 23 22 22 22 22 22 23 27 17 78 14,706 Distance Between Perfs 22 22 22 22 22 22 23 27 27 27 22 22 22 23 27 27 27 27 28 28 29 20 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,340 15,318 15,295 15,273 15,273 15,273 14,495 14,472 14,495 14,472 14,450 14,481 14,406 14,383 14,361 Plug to Plug Stage 28 13,627 13,605 13,583 13,560 13,583 13,516 13,494 13,471	Between Perfs 22 22 22 22 23 22 22 23 22 22 22 23 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Plug Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,183 Plug to Plug Stage 29 13,449 13,427 13,400 13,382 13,365 13,338 13,316 13,293	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,051 15,028 15,006 14,984 14,962 14,939 14,917 14,895 Plug to Plug Frac Plug Stage 25 14,161 14,134 14,116 14,030 14,072 14,043 14,025 14,008 Plug to Plug Stage 30 13,265 13,246 13,221 13,200 13,1768 13,133 13,115	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
From Bottom to Top	15,762 15,740 15,740 15,718 15,696 15,673 15,651 15,629 15,629 14,873 14,873 14,850 14,784 14,761 14,739 14,719 Frac Plug Stage 26 13,983 13,961 13,938 13,961 13,8894 13,868 13,855	Between Perfs 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 3 28 Total Shots Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,584 15,562 15,540 15,540 15,541 15,496 15,473 15,451 15,429 Plug to Plug Frac Plug Stage 22 14,695 14,672 14,656 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,556 14,583 14,560 13,760 13,760 13,760 13,760 13,760 13,769 13,776	Between Perfs 23 22 22 22 23 27 22 23 27 22 22 23 27 22 22 23 27 27 27 27 27 27 27 27 27 27 27 27 27	4 4 4 4 3 3 3 28 Total Shots 4 4 4 3 3 3 3 28 Total Shots Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	15,407 15,384 15,362 15,318 15,295 15,273 15,257 15,257 14,495 14,472 14,450 14,488 14,488 14,406 14,383 14,361 Plug to Plug Frac Plug Stage 28 13,627 13,605 13,583 13,580 13,588 13,518 13,519 13,494 13,471 Plug to Plu	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Fotal Shots Shots 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	15,229 15,206 15,184 15,162 15,140 15,117 15,095 15,073 Plug to Pluy Frac Plug Stage 24 14,339 14,317 14,294 14,271 14,250 14,228 14,205 14,183 Plug to Pluy Frac Plug Stage 29 13,449 13,427 13,400 13,382 13,338 13,316	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 3 3 3	15,051 15,028 15,006 14,934 14,962 14,939 14,917 14,895 Plug to Pluy Frac Plug Stage 25 14,161 14,134 14,116 14,090 14,072 14,043 14,025 14,008 14,072 14,043 14,025 14,009 14,072 14,043 14,025 14,009 14,072 14,043 14,025 14,009 13,265 13,246 13,221 13,206 13,126 13,138 13,133	Between Perfs 22 22 23 22 22 22 22 22 22 22 22 22 22	4 4 4 4 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

		6			Bistoria						D1-4			Distance of	1
	Stage 31	Distance Between Perfs	Shots	Stage 32	Distance Between Perfs	Shots	Stage 33	Distance Between Perfs	Shots	Stage 34	Distance Between Perfs	Shots	Stage 35	Distance Between Perfs	Shots
	13,090	25	4	12,905	32	4	12,729	30	4	12,559	27	4	12,373	45	4
	13,071	22	4	12,893	22	4	12,710	17	4	12,537	22	4	12,355	18	4
From	13,049	23	4	12,871	23	4	12,693	22	4	12,515	22	4	12,337	22	4
Bottom to	13,026	22	4	12,848	22	4	12.671	23	4	12,493	23	4	12,315	23	4
liob	13,004	22	3	12,826	22	3	12,648	22	3	12,470	22	3	12,292	22	3
1	12,982	22	3	12,804	22	3	12,626	22	3	12,448	22	3	12,270	22	3
]	12,960	23	3	12,782	23	3	12,604	18	3	12,426	8	3	12,248	20	3
	12,937		3	12,759		3	12,586	<u> </u>	3	12,418		3	12.228		3
Ц	Plug to Plu	78	28	Plug to Plug	68	28	lug to Plu	67	28	Plug to Plu	85	28	Plug to Plu	67	28
	Frac Plug	13,104	Total Shots	Frac Plug	12,916	Total Shots	Frac Plug	12,738	Total Shots	Frac Plug	12,578	Total Shots	Frac Plug	12,382	Total Shots
	Stage 36	Distance Between	Shots	Stage 37	Distance Between	Shots	Stage 38	Distance Between	Shots	Stage 39	Distance Between	Shots	Stage 40	Distance Between	Shots
	12,196	Perfs 32	4	12,018	Perfs 30	4	11840	Perfs 30	4	11,665	Perfs 27	4	11,492	Perfs 28	4
	12,178	19	4	12,018	22	4	11825	22	4	11,665	22	4	11,472	25	4
From	12,159	22	4	11,981	22	4	11803	22	4	11,625	28	4	11,447	28	4
Bottom to	12,137	23	4	11,959	23	4	11781	22	4	11,597	16	4	11,419	16	4
Тор	12,114	22	3	11,936	22	3	11759	23	3	11.581	27	3	11,403	20	3
1	12,092	22	3	11,914	22	3	11736	22	3	11,554	18	3	11,383	25	3
	12,070	22	3	11,892	22	3	11714	22	3	11,536	16	3	11,358	18	3
	12,048		3	11.870	<u> </u>	3	11692		3	11,520	· · · · · ·	3	11,340		3
	lug to Plu	68	28	Plug to Plug	68	28	Plug to Plu	78	28	lug to Plu	79	28	lug to Plu	84	28
	Frac Plug	12,205	Total Shots	Frac Plug	12,027	Total Shots	Frac Plug	11,859	Total Shots	Frac Plug	11,676	Total Shots	Frac Plug	11,503	Total Shots
		Distance		_	Distance			Distance			Distance			Distance	
	Stage 41	Between	Shots	Stage 42	Between	Shots	Stage 43	Between	Shots	Stage 44	Between	Shots	Stage 45	Between	Shots
	11,311	Perfs 29	4	11,134	Perfs 26	4	10,958	Perfs 28	4	10,780	Perfs 22	4	10,593	Perfs 31	4
]	11,293	29	4	11,113	22	4	10,933	20	4	10,758	20	4	10,580	20	4
From	11,269	19	4	11,091	25	4	10,933	28	4	10,738	25	4	10,560	25	4
Bottom to	11,250	25	4	11,066	19	4	10,885	20	4	10,733	19	4	10,535	20	4
Тор	11,225	20	3	11,047	26	3	10,865	18	3	10,694	25	3	10,515	24	3
	11,205	25	3	11,021	19	3	10,847	23	3	10,669	20	3	10,491	23	3
]	11,180	20	3	11,002	16	3	10,824	22	3	10,649	25	3	10,468	22	3
1	11,160		3	10,986		3	10.802		3	10,624		3	10,446		3
	Plug to Plug	72	28	lug to Plu	78	28	lug to Plu	84	28	lug to Plu	78	28	tug to Plus	78	28
	Frac Plug	11,322	Total Shots		11,144	Total Shots		10,969	Total Shots		10,791	Total Shots	Frac Plug	10,613	Total Shots
		-			D1.4.			Distance			Distance				
	Stage 46	Distance Between Perfs	Shots	Stage 47	Distance Between Perfs	Shots	Stage 48	Between Perfs	Shots	Stage 49	Between Perfs	Shots	Stage 50	Distance Between Perfs	Shots
:	10,424	Between Perfs 22	4	10,237	Between Perfs 31	4	10,068	Between Perfs 28	4	9,890	Perfs 25	4	9,712	Between Perfs 25	4
From	10,424 10,402	Between Perfs 22 19	4	10,237 10,224	Between Perfs 31 18	4	10,068 10,046	Between Perfs 28 23	4	9,890 9,861	Perfs 25 15	4	9,712 9,694	Between Perfs 25 26	4
From Bottom to	10,424 10,402 10,383	Between Perfs 22 19 26	4 4	10,237 10,224 10,206	Between Perfs 31 18 27	4 4	10,068 10,046 10,023	Between Perfs 28 23 22	4 4 4	9,890 9,861 9,846	Perfs 25 15 29	4 4	9,712 9,694 9,668	Between Perfs 25 26 28	4 4
From Bottom to Top	10,424 10,402 10,383 10,357	Between Perfs 22 19 26 20	4 4 4	10,237 10,224 10,206 10,179	Between Perfs 31 18 27 19	4 4 4 4	10,068 10,046 10,023 10,001	Between Perfs 28 23 22 22	4 4 4 4	9,890 9,861 9,846 9,817	Perfs 25 15 29 17	4 4 4	9,712 9,694 9,668 9,640	Between Perfs 25 26 28 17	4 4 4
Bottom to	10,424 10,402 10,383 10,357 10,337	Between Perfs 22 19 26 20 24	4 4 4 3	10,237 10,224 10,206 10,179 10,160	Between Perfs 31 18 27 19 25	4 4 4 4 3	10,068 10,046 10,023 10,001 9,979	Between Perfs 28 23 22 22 22 22	4 4 4 4 3	9,890 9,861 9,846 9,817 9,800	25 15 29 17 27	4 4 4 3	9,712 9,694 9,668 9,640 9,623	Perfs 25 26 28 17 22	4 4 4 3
Bottom to	10.424 10,402 10,383 10,357 10,337 10,313	Between Perfs 22 19 26 20 24 23	4 4 4 4 3 3	10,237 10,224 10,206 10,179 10,160 10,135	Between Perfs 31 18 27 19 25 23	4 4 4 4 3 3	10,068 10,046 10,023 10,001 9,979 9,957	Between Perfs 28 23 22 22 22 23	4 4 4 4 3 3	9,890 9,861 9,846 9,817 9,800 9,773	25 15 29 17 27 18	4 4 4 4 3 3	9,712 9,694 9,668 9,640 9,623 9,601	Between Perfs 25 26 28 17 22 22	4 4 4 4 3 3
Bottom to	10,424 10,402 10,383 10,357 10,337 10,313 10,290	Between Perfs 22 19 26 20 24	4 4 4 4 3 3 3	10,237 10,224 10,206 10,179 10,160 10,135 10,112	Between Perfs 31 18 27 19 25	4 4 4 4 3 3 3	10,068 10,046 10,023 10,001 9,979 9,957 9,934	Between Perfs 28 23 22 22 22 22	4 4 4 4 3 3 3	9,890 9,861 9,846 9,817 9,800 9,773 9,755	25 15 29 17 27	4 4 4 3 3 3 3 3	9,712 9,694 9,668 9,640 9,623 9,601 9,579	Perfs 25 26 28 17 22	4 4 4 3 3 3 3 3
Bottom to Top	10,424 10,402 10,383 10,357 10,337 10,313 10,290 10,268	Between Perfs 22 19 26 20 24 23 22	4 4 4 4 3 3 3 3 3	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096	Between Perfs 31 18 27 19 25 23 16	4 4 4 4 3 3 3 3	10,068 10,046 10,023 10,001 9,979 9,957 9,934 9,915	Between Perfs 28 23 22 22 22 23 19	4 4 4 4 3 3 3 3	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737	Perfs 25 15 29 17 27 18 18	4 4 4 4 3 3 3 3	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556	Between Perfs 25 26 28 17 22 22 23	4 4 4 3 3 3 3 3 3
Bottom to Top	10,424 10,402 10,383 10,357 10,337 10,313 10,290 10,268 Plug to Plug	Between Perfs 22 19 26 20 24 23 22 78	4 4 4 4 3 3 3 3 3 28	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug	Between Perfs 31 18 27 19 25 23 16 78	4 4 4 4 3 3 3 3 3 28	10.068 10.046 10.023 10.001 9,979 9,957 9,934 9,915 Plug to Plug	Between Perfs 28 23 22 22 22 19 83	4 4 4 4 3 3 3 3 3 28	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug	Perfs 25 15 29 17 27 18 18 84	4 4 4 4 3 3 3 3 3 28	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 28
Bottom to Top	10,424 10,402 10,383 10,357 10,337 10,313 10,290 10,268	Between Perfs 22 19 26 20 24 23 22 78	4 4 4 4 3 3 3 3 3 28	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096	Between Perfs 31 18 27 19 25 23 16 78	4 4 4 4 3 3 3 3 3 28	10,068 10,046 10,023 10,001 9,979 9,957 9,934 9,915	Between Perfs 28 23 22 22 22 19 83	4 4 4 4 3 3 3 3	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug	Perfs 25 15 29 17 27 18 18 84	4 4 4 4 3 3 3 3	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 28
Bottom to Top	10,424 10,402 10,383 10,357 10,337 10,313 10,290 10,268 Plug to Plug	Between Perfs 22 19 26 20 24 23 22 78	4 4 4 4 3 3 3 3 3 28	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug	Between Perfs 31 18 27 19 25 23 16 78	4 4 4 4 3 3 3 3 3 28	10.068 10.046 10.023 10.001 9,979 9,957 9,934 9,915 Plug to Plug	Between Perfs 28 23 22 22 22 19 83	4 4 4 4 3 3 3 3 3 28	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug	Perfs 25 15 29 17 27 18 18 84	4 4 4 4 3 3 3 3 3 28	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 28
Bottom to Top	10.424 10.402 10.383 10.357 10.337 10.313 10.290 10,268 Plug to Plug	Between Perfs 22 19 26 20 24 23 22 78 10,435	4 4 4 3 3 3 3 3 28 Total Shots	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug	Between Perfs 31 18 27 19 25 23 16 78 10,257 Distance Between	4 4 4 3 3 3 3 3 28 Total Shots	10,068 10,046 10,023 10,001 9,979 9,957 9,934 9,915 Plug to Plug	Between Perfs 28 23 22 22 22 23 19 83 10,084 Distance Between	4 4 4 4 3 3 3 3 3 28 Total Shots	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug	Perfs 25 15 29 17 27 18 18 18 09 19 Distance Between	4 4 4 3 3 3 3 3 28 Total Shots	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 28
Bottom to Top	10,424 10,402 10,383 10,357 10,337 10,313 10,290 10,268 Plug to Plug Stage 51 9,534 9,512	Between Perfs 22 19 26 20 24 23 22 78 10,435 Distance Between Perfs 22 22 22	4 4 4 3 3 3 3 Control Shots 4 4	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug Frac Plug Stage 52 9,356 9,334	Between Perfs 31 18 27 19 25 23 16 78 10,257 Distance Between Perfs 22 22	4 4 4 3 3 3 3 3 28 Total Shots	10,068 10,046 10,023 10,001 9,979 9,957 9,934 9,915 Plug to Plug Frac Plug Stage 53 9,169 9,156	Between Perfs 28 23 22 22 22 23 19 83 10,084 Distance Between Perfs 31 21	4 4 4 3 3 3 3 3 7 28 Total Shots	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug Frac Plug Stage 54 9,002 8,978	Perfs 25 15 29 17 27 18 18 18 9,901 Distance Between Perfs 22 22	4 4 4 3 3 3 3 3 7 28 Total Shots	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 28
Bottom to Top	10,424 10,402 10,387 10,387 10,337 10,313 10,290 10,268 Plug to Plug Stage 51 9,534 9,512 9,490	Between Perfs 22 19 26 20 24 23 22 78 10,435 Distance Between Perfs 22 22 23	4 4 4 3 3 3 3 7 28 Total Shots 4 4 4	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug Frac Plug Stage 52 9,356 9,334 9,312	Between Perfs 31 18 27 19 25 23 16 T8 10,257 Distance Between Perfs 22 22 23	4 4 4 3 3 3 3 3 28 Total Shots	10,068 10,046 10,023 10,001 9,979 9,957 9,915 1ug to Plug Frac Plug Stage 53 9,169 9,156 9,135	Between Perfs 28 28 23 22 22 22 29 29 19 83 10,084 Distance Between Perfs 31 21 24	4 4 4 3 3 3 3 28 Total Shots	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug Frac Plug \$tage 54 9,002 8,978 8,956	Perfs 25 15 29 17 27 18 18 18 9,901 Distance Between Perfs 22 22	4 4 4 3 3 3 3 3 28 Total Shots	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 4 3 3 3 3 3 28
Bottom to Top From Bottom to	10,424 10,402 10,383 10,357 10,337 10,313 10,290 10,268 Plug to Plug Stage 51 9,534 9,512 9,490 9,467	Between Perfs 22 19 26 20 24 23 22 78 10,435 Distance Between Perfs 22 22 23 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4	10,237 10,226 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug Frac Plug Stage 52 9,356 9,334 9,312 9,289	Between Perfs 31 18 27 19 25 23 16 78 10,257 Distance Between Perfs 22 22 23 20	4 4 4 4 3 3 3 3 3 7 28 Total Shots 4 4 4	10,068 10,066 10,023 10,001 9,979 9,957 9,915 Plug to Plug Frac Plug Stage 53 9,169 9,156 9,135 9,111	Between Perfs 28 28 23 22 22 22 23 19 83 10,084 Distance Between Perfs 31 24 20	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plu Frac Plug Stage 54 9,002 8,978 8,956 8,934	Perfs 25 15 29 17 27 18 18 84 9,901 Distance Between Perfs 22 22 23	4 4 4 4 3 3 3 3 3 3 28 Total Shots Shots 4 4 4 4 4 4	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 4 3 3 3 3 3 28
Bottom to Top	10,424 10,402 10,383 10,357 10,337 10,313 10,290 10,268 Plug to Pluy Frac Plug Stage 51 9,534 9,512 9,490 9,467 9,445	Between Perfs 22 19 26 20 24 23 22 78 10,435 Distance Between Perfs 22 22 22 22 22 22 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 3	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug Frac Plug Stage 52 9,356 9,334 9,312 9,289 9,269	Between Perfs 31 18 27 19 25 23 16 78 10,257 Distance Between Perfs 22 22 23 20 24	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 3	10,068 10,046 10,023 10,001 9,979 9,957 9,935 Plug to Plug Frac Plug Stage 53 9,169 9,156 9,111 9,091	Between Perfs 28 23 22 22 22 23 19 83 10,084 Distance Between Perfs 31 21 24 20 24	4 4 4 3 3 3 28 Total Shots Shots 4 4 4 4 3 3	9,890 9,861 9,846 9,817 9,800 9,773 9,753 Plug to Plug Frac Plug Stage 54 9,002 8,978 8,956 8,934 8,911	Perfs 25 15 29 17 27 18 18 18 84 9,901 Distance Between Perfs 22 22 22 23 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 4 3	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 4 3 3 3 3 3 28
Bottom to Top From Bottom to	10,424 10,402 10,383 10,357 10,313 10,290 10,268 Plug to Pluy Frac Plug Stage 51 9,534 9,512 9,490 9,497 9,445 9,423	Between Perfs 22 19 26 20 24 23 22 22 22 22 22 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 3 3 3 3	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug Frac Plug Stage 52 9,356 9,334 9,312 9,289 9,269 9,269	Between Perfs 31 18 27 19 25 23 16 78 10,257 Distance Between Perfs 22 22 23 20 24 22	4 4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3	10,068 10,046 10,023 10,001 9,979 9,957 9,934 9,934 9,109 Stage 53 9,169 9,156 9,156 9,135 9,111 9,991	Between Perfs 28 23 22 22 22 23 19 83 10,084 Distance Between Perfs 31 21 24 20 24 21	4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug Frac Plug Stage 54 9,002 8,978 6,956 8,934 8,911 8,889	Perfs 25 15 29 17 27 18 18 18 84 9,901 Distance Between Perfs 22 22 22 22 23 22 22	4 4 4 4 3 3 3 3 28 Total Shots Shots 4 4 4 4 4 3 3	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 28
Bottom to Top From Bottom to	10,424 10,402 10,383 10,357 10,313 10,290 10,268 Plug to Plug Frac Plug Stage 51 9,534 9,512 9,490 9,467 9,445 9,423 9,401	Between Perfs 22 19 26 20 24 23 22 78 10,435 Distance Between Perfs 22 22 22 22 22 22 22	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3 3	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug Frac Plug Stage 52 9,356 9,334 9,312 9,289 9,269 9,245 9,223	Between Perfs 31 18 27 19 25 23 16 78 10,257 Distance Between Perfs 22 22 23 20 24	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3 3	10,068 10,046 10,023 10,001 9,979 9,957 9,934 9,915 Plug to Plug Frac Plug Stage 53 9,169 9,156 9,135 9,111 9,067 9,046	Between Perfs 28 23 22 22 22 23 19 83 10,084 Distance Between Perfs 31 21 24 20 24	4 4 4 3 3 3 3 3 4 4 4 4 4 4 3 3 3 3 3 3	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug Frac Plug Stage 54 9,002 8,978 8,956 8,931 6,889 8,867	Perfs 25 15 29 17 27 18 18 18 84 9,901 Distance Between Perfs 22 22 22 23 22	4 4 4 3 3 3 3 3 3 4 4 4 4 4 4 4 4 3	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 28
Bottom to Top From Bottom to	10,424 10,402 10,383 10,357 10,337 10,313 10,290 10,268 Plug to Plug Stage 51 9,534 9,512 9,490 9,467 9,467 9,423 9,401 9,378	Between Perfs 22 19 26 20 24 23 22 22 22 23 22 23 3 22 23 3 22 23 3 22 23 3 22 23 3 22 23 3 22 23 3 22 23 3 23 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4 4 4 3 3 3 3 3 Control Shots Shots 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug Frac Plug Stage 52 9,356 9,334 9,312 9,289 9,289 9,245 9,223 9,223	Between Perfs 31 18 27 19 25 23 16 78 10,257 Distance Between Perfs 22 23 20 24 22 23	4 4 4 3 3 3 3 3 Cotal Shots Shots 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	10,068 10,046 10,023 10,001 9,979 9,957 9,934 9,915 Plug to Plug Frac Plug Stage 53 9,169 9,156 9,135 9,111 9,091 9,067 9,046 9,024	Between Perfs 28 28 23 22 22 22 29 29 29 29 29 29 29 29 29 29	4 4 4 3 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug Stage 54 9,002 8,978 8,978 8,956 8,934 8,911 8,989 8,867 8,845	Perfs 25 15 29 17 27 18 18 18 9,901 Distance Between Perfs 22 22 22 23 22 22 22 22 22	4 4 4 3 3 3 3 3 7 28 Total Shots 4 4 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 3
Bottom to Top From Bottom to	10,424 10,402 10,383 10,357 10,313 10,290 10,268 Plug to Plug Frac Plug Stage 51 9,534 9,512 9,490 9,467 9,445 9,423 9,401	Between Perfs 22 19 26 20 24 23 22 22 22 23 78	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3 3	10,237 10,224 10,206 10,179 10,160 10,135 10,112 10,096 Plug to Plug Frac Plug Stage 52 9,356 9,334 9,312 9,289 9,269 9,245 9,220 Plug to Plug	Between Perfs 31 18 27 19 25 23 16 78 10,257 Distance Between Perfs 22 23 20 24 22 23 78	4 4 4 3 3 3 3 28 Total Shots 4 4 4 4 4 3 3 3 3 3 28 28 28 28 28 28 28 28 28 28 28 28 28	10,068 10,046 10,023 10,001 9,979 9,957 9,934 9,915 Plug to Plug Frac Plug Stage 53 9,169 9,156 9,135 9,111 9,067 9,046	Between Perfs 28 28 23 22 22 22 29 29 29 29 29 29 29 29 29 29	4 4 4 3 3 3 4 4 4 4 4 4 4 4 3 3 3 3 3 3	9,890 9,861 9,846 9,817 9,800 9,773 9,755 9,737 Plug to Plug Frac Plug Stage 54 9,002 8,978 8,956 8,931 6,889 8,867	Perfs 25 15 29 17 27 18 18 18 84 9,901 Distance Between Perfs 22 22 22 23 22 22 22 27 79	4 4 4 3 3 3 3 3 3 4 4 4 4 4 4 4 4 3	9,712 9,694 9,668 9,640 9,623 9,601 9,579 9,556 Plug to Plu	Between Perfs 25 26 28 17 22 22 23 83	4 4 4 3 3 3 3 3 28